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New Jersey State Library

Notice of Appeal.

(Filed February 25, 1927.)

New Jersey Supreme Court

HUDSON COUNTY.

EDWARD WILLIAM HOPPER and EDWARD HENRY HOPPER, Plaintiffs, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant.	Action at Law.

To William George, Esq., Attorney of Plaintiff, Edward William Hopper, or to whom it may concern:

Sir:

PLEASE TAKE NOTICE that the defendant, Charles Cooper & Company, Inc., appeals to the Court of Errors and Appeals in the last resort in all causes in New Jersey from the whole of the judgment entered in favor of Edward William Hopper and against it in this cause.

Respectfully yours,

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant.

Grounds of Appeal.

(Filed March 25, 1927.)

NEW JERSEY COURT OF ERRORS AND APPEALS.

EDWARD WILLIAM HOPPER, Plaintiff and Respondent, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant and Appellant.	Action at Law.

The appellant states the following grounds of appeal:

1. The judgment is contrary to law.

2. The trial court erred in giving judgment in favor of the said plaintiff and against the defendant.

3. The trial court refused to non-suit the said plaintiff.

4. The trial court refused to direct a verdict in favor of the defendant.

5. The trial court refused to charge the jury as follows:

There is no evidence in this case that the accident was the result of the presence or lack of paraffin on the cork used.

6. The trial court refused to charge the jury as follows:

The jug having been furnished by the purchaser the defendant had the right to assume that it was in fit condition to be filled with hydrofluoric acid.

7. The trial court refused to charge the jury as follows:

Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it.

8. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled.

9. The trial court refused to charge the jury as follows:

If you find that the accident was the result of foreign matter in the jug the defendant, under the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

10. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any foreign matter such as would naturally and proximately cause the accident which occurred.

11. The trial court refused to charge the jury as follows:

If you find that the accident was the result of the action of the hydrofluoric acid placed in the

jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

12. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred.

13. The trial court refused to charge the jury as follows:

Under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them.

14. The trial court refused to charge the jury as follows:

If you find that defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it.

15. The trial court charged the jury as follows:

There can be no doubt from the testimony in these cases, that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling, and handling of the jug in question at this time.

16. The trial court charged the jury as follows:

Furthermore, you must remember that the test with respect to inspection of the jug before filling, is not whether there was some possible infallible test, nor can the defendant be held for failure to apply some infallible test, because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved.

17. The trial court charged the jury as follows:

The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug.

Grounds of Appeal.

18. The trial court charged the jury as follows:

In order to establish proximate cause, it is necessary in the first place that there be a causal connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.

Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the chain of circumstances leading up to the injury, and which in the natural, continuous sequence, unbroken by any new independent cause, produced the injury.

19. The trial court charged the jury as follows:

Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterization that I make with respect to that, that the danger involved is limited in that respect.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant-Appellant.

J. EDWARD ASHMEAD,
Of Counsel.

Summons.

(Filed February 1, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

THE STATE OF NEW JERSEY—to—CHARLES COOPER & Co., INC., a Corporation of the State of New Jersey.

YOU ARE SUMMONED to answer the annexed complaint of EDWARD WILLIAM HOPPER and EDWARD HENRY HOPPER, in an action at law in the New Jersey Supreme Court, Hudson County, AND TAKE NOTICE, that unless you file your answer to said complaint with the Clerk of the said New Jersey Supreme Court, at Trenton, N. J., within twenty (20) days after service upon you of this Writ, and the annexed complaint, the plaintiff may proceed in the suit, and judgment may be entered against you.

WITNESS, WILLIAM S. GUMMERE, Chief Justice of the New Jersey Supreme Court, Trenton, N. J., this 19th day of January, 1926.

EDWARD J. KELLEHER,
Clerk.

WILLIAM GEORGE,
Attorney for Plaintiffs.

Complaint.

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

EDWARD WILLIAM HOPPER and EDWARD HENRY HOPPER, Plaintiffs, *vs.* CHARLES COOPER & COMPANY, INC., a Corporation of the State of New Jersey, Defendant.	Action at Law.

Plaintiffs, residing in the City of Jersey City, County of Hudson and State of New Jersey, say:

FIRST COUNT.

1. On or about June 23rd, 1925, prior thereto and ever since said date, the defendant was and still is a Corporation organized and existing under the laws of the State of New Jersey.

2. On or about said June 23rd, 1925, the plaintiff, Edward William Hopper, who is the son of Edward Henry Hopper, called at the plant of the defendant company, at Newark, Essex County, New Jersey, for the purpose of purchasing a quantity of Hydrofluoric acid.

3. At said time and place, defendant, its agents or servants, agreed and did undertake to sell the quantity of hydrofluoric acid as requested by plaintiff, Edward William Hopper, for which plaintiff agreed to and did pay defendant the purchase price therefor, and said defendant, its agents or servants, in pursuance of said sale of hydrofluoric acid to the plaintiff, Edward William Hopper, did undertake and agree to fill certain lead jugs or containers with said hydrofluoric acid and place the same in the automobile of the plaintiff, Edward Henry Hopper then and there operated by the said plaintiff, Edward William Hopper.

4. Defendants, its agents or servants, in its undertaking to fill said jugs or containers, filled said jugs or containers in a negligent and careless manner, by reason of which the said acid then and there placed in said jugs or lead containers, was caused to explode and the plaintiff, Edward William Hopper, was seriously and severely injured.

5. The negligence of the defendant, its agents or servants, consisted in this:

(a) That it failed to use due and proper care and caution in the handling of the said hydrofluoric acid, then and there known to the said defendant, its agents or servants, to be a highly dangerous and explosive substance.

(b) It failed to exercise due and proper care and caution in cleansing and scouring the said lead containers or jugs, before refilling them with the said hydrofluoric acid.

(c) It failed to properly seal and cork said lead jugs or containers, so that gases would not form in them and thus cause an explosion.

(d) That it, well knowing the dangerous and explosive character and propensity of the said hydrofluoric acid, failed to use due and reasonable care and caution to protect the plaintiff, Edward William Hopper, from injury.

6. As a result of the explosion of the said hydrofluoric acid then and there in the said lead jugs or containers negligently and carelessly filled by the said defendant, its agent or servant, the plaintiff, Edward William Hopper, sustained severe, painful and permanent injuries, consisting of severe burns about the head, neck, body, arms, legs and shoulders, his eyesight is permanently impaired, has been subjected to noxious and injurious gases which he was suffered to inhale by reason of said explosion, and has suffered and is still suffering from the effect of said burns and the inhalation of the gases aforesaid, from all of which he was sick, sore and disabled for a long period of time, and has suffered great pain and agony and has sustained injuries from which he never will wholly recover, and in addition to the great pain and agony he has suffered from the time of said explosion and the sustaining of said injuries, he will be obliged to suffer great pain for a long time in the future, and plaintiff, Edward William Hopper, further will be obliged to suffer, for the rest of his life, permanent disfigurement of his face.

7. By reason of the injuries sustained by the plaintiff, Edward William Hopper, as a result of the carelessness and negligence of the defendant, its agent or servant, as aforesaid, the plaintiff, Edward William Hopper, has been obliged to expend large sums of money for medical attention and expenses, and will be obliged to expend large sums of money in the future for such medical attention and expenses, in order to relieve his pain aforesaid, or to bring about a cure of his injuries, and plaintiff was also caused to suffer the loss of his income or earnings from his business or labors,

and in addition thereto suffered the loss of his personal wearing apparel.

Plaintiff, Edward William Hopper, demands as damages, on the First Count, the sum of $100,000.00.

SECOND COUNT.

1. The plaintiff, Edward Henry Hopper, repeats and reiterates Paragraphs 1, 2, 3 and 4 of the First Count, in the within complaint, and makes the same a part hereof.

2. Plaintiff, Edward Henry Hopper, is the father of plaintiff, Edward William Hopper.

3. On said June 23rd, 1925, plaintiff, Edward Henry Hopper, was the owner of a Studebaker Sedan Automobile which, on that day, was practically new, and which this plaintiff permitted the plaintiff, Edward William Hopper to use for the purpose of calling at defendant's plant in Newark to purchase the hydrofluoric acid aforesaid.

4. As a result of the explosion of the said hydrofluoric acid purchased by the plaintiff, Edward William Hopper, from the defendant, its agents or servants, which said explosion was caused by the negligence and carelessness of the defendant, its agents or servants, in refilling said jugs or containers, the acid or gases thus exploded caused great damage to the said automobile of said plaintiff, Edward Henry Hopper, as a result of which the plaintiff, Edward Henry Hopper was obliged to expend large sums of money to put his said automobile in good repair.

Plaintiff, Edward Henry Hopper, demands as damages, $2,000.00 on the Second Count.

WILLIAM GEORGE,
Attorney for Plaintiffs.

Answer.

(Filed February 8, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

EDWARD WILLIAM HOPPER and EDWARD HENRY HOPPER,
Plaintiffs,

vs.

CHARLES COOPER & COMPANY, INC., a corporation,
Defendant.

Action at Law.

Defendant, Charles Cooper & Company, Inc., a corporation of the State of New Jersey, having its principal office and place of business at No. 348 Van Buren Street, in the City of Newark, Essex County, New Jersey, answering plaintiffs' complaint filed herein says that:

ANSWER TO FIRST COUNT.

1. It admits the allegations of paragraph 1.

2. It admits the allegations of paragraph 2, except that it has no knowledge or information sufficient to form a belief as to whether Edward William Hopper is the son of Edward Henry Hopper.

3. Defendant admits that Edward William Hopper on June 23, 1925 called at defendant's factory for the purpose of having certain jugs which he brought with him filled with hydrofluoric acid.

Answer.

Defendant, by its agent, as requested by the said Edward William Hopper, filled two of said jugs with hydrofluoric acid and placed the same in a certain automobile as directed by the said Edward William Hopper. Defendant was paid for said hydrofluoric acid. It has no knowledge or information sufficient to form a belief as to who owned or operated said automobile. Except as hereinbefore admitted, the allegations of paragraph 3 are denied.

4. It denies the allegations of paragraphs 4, 5, 6 and 7.

ANSWER TO SECOND COUNT.

5. Answering the allegations of paragraph 1, defendant repeats its answers to paragraphs 1, 2, 3 and 4 of the first count.

6. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 2 and 3.

7. It denies the allegations of paragraph 4.

FIRST SEPARATE DEFENSE TO FIRST AND SECOND COUNTS.

8. Plaintiff, Edward William Hopper, was guilty of contributory negligence.

SECOND SEPARATE DEFENSE TO FIRST AND SECOND COUNTS.

9. Plaintiff, Edward William Hopper, was familiar with and assumed any and all risks and dangers incident to the transportation and handling of such jugs of hydrofluoric acid.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant.

Reply.

(Filed February 16, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

EDWARD WILLIAM HOPPER and EDWARD HENRY HOPPER,
Plaintiffs,

vs.

CHARLES COOPER & COMPANY, INC.,
a Corporation,
Defendant.

Action at Law.

Plaintiffs, replying to defendant's answer, say:

1. They deny the allegations contained in the first and second separate defenses to plaintiffs complaint.

WILLIAM GEORGE,
Attorney for Plaintiffs.

Postea.

(Filed February 15, 1927.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

EDWARD WILLIAM HOPPER,
Plaintiff,

vs.

CHARLES COOPER & COMPANY, INC.,
a Corporation,
Defendant.

Action at Law.

This case was tried before Judge Henry E. Ackerson, Jr., with a jury, at the Hudson Circuit, on February 7th, 8th, 9th, 10th and 11th, 1927.

The jury rendered a general verdict against the defendant and in favor of the plaintiff for Twelve Thousand ($12,000.00) Dollars.

Dated: Feb. 14, 1927.

HENRY E. ACKERSON, JR.,
Judge.

A true copy
EDWARD J. KELLEHER,
Clerk.

Judgment.

(Entered February 15, 1927.)

NEW JERSEY SUPREME COURT.

EDWARD WILLIAM HOPPER,
Plaintiff,

vs.

CHARLES COOPER & COMPANY, INC.,
a Corporation,
Defendant.

Action at Law.

On Postea.
WILLIAM GEORGE,
Attorney.

$ 12,000.00

$

Judgment entered this fifteenth day of February, A. D. nineteen hundred and twenty-seven in favor of plaintiff and against the defendant for the sum of twelve thousand dollars damages and ..... costs.

WM. S. GUMMERE,
C. J.

Notice of Appeal.

(Filed February 25, 1927.)

NEW JERSEY SUPREME COURT,
HUDSON COUNTY.

JOHN CARROLL,
Plaintiff,

vs.

CHARLES COOPER & COMPANY, INC., a corporation, and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN,
Defendants.

Action at Law.

To Messrs. Armstrong & Mullen, Attorneys of Plaintiff, or to whom it may concern:

Sirs:

PLEASE TAKE NOTICE that the defendant, Charles Cooper & Company, Inc., appeals to the Court of Errors and Appeals in the last resort in all causes in New Jersey from the whole of the judgment entered against it in this cause.

Respectfully yours,

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant, Charles Cooper & Company, Inc.

Grounds of Appeal.

(Filed March 25, 1927.)

NEW JERSEY COURT OF ERRORS AND APPEALS.

JOHN CARROLL, Plaintiff and Respondent, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant and Appellant.	Action at Law.

The Appellant states the following grounds of appeal.

1. The judgment is contrary to law.

2. The trial court erred in giving judgment in favor of the plaintiff and against the defendant.

3. The trial court refused to non-suit the plaintiff.

4. The trial court refused to direct a verdict in favor of the defendant.

5. The trial court refused to charge the jury as follows:

There is no evidence in this case that the accident was the result of the presence or lack of paraffin on the cork used.

6. The trial court refused to charge the jury as follows:

The jug having been furnished by the purchaser the defendant had the right to assume that it was in fit condition to be filled with hydrofluoric acid.

7. The trial court refused to charge the jury as follows:

Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it.

8. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled.

9. The trial court refused to charge the jury as follows:

If you find that the accident was the result of foreign matter in the jug the defendant, under the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

10. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident, contained any foreign matter such as would naturally and proximately cause the accident which occurred.

11. The trial court refused to charge the jury as follows:

If you find that the accident was the result of the action of the hydrofluoric acid placed in the jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held

responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

12. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred.

13. The trial court refused to charge the jury as follows:

Under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them.

14. The trial court refused to charge the jury as follows:

If you find that defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it.

15. The trial court charged the jury as follows:

There can be no doubt from the testimony in these cases, that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that

degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling, and handling of the jug in question at this time.

16. The trial court charged the jury as follows:

Furthermore, you must remember that the test with respect to inspection of the jug before filling, is not whether there was some possible infallible test, nor can the defendant be held for failure to apply some infallible test, because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved.

17. The trial court charged the jury as follows:

The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug.

18. The trial court charged the jury as follows:

In order to establish proximate cause, it is necessary in the first place that there be a causal connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.

Grounds of Appeal.

Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the chain of circumstances leading up to the injury, and which in the natural, continuous sequence, unbroken by any new independent cause, produced the injury.

19. The trial court charged the jury as follows:

Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterization that I make with respect to that, that the danger involved is limited in that respect.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant-Appellant.

J. EDWARD ASHMEAD,
Of Counsel.

Summons.

(Filed December 28, 1925.)

THE STATE OF NEW JERSEY to CHARLES COOPER & COMPANY, INC., J. K. WEIDIG, agent for service of process, Corner of Clifford & Van Buren Sts., Newark, N. J.

"Elizabeth" Entermann, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN, 328 Ocean Avenue, Jersey City, N. J.

YOU ARE SUMMONED, to answer the annexed complaint of JOHN CARROLL in an action at law, in the New Jersey Supreme Court, Hudson County.

AND TAKE NOTICE that unless you file your answer to said complaint with the Clerk of the said New Jersey Supreme Court, at Trenton, N. J. within twenty (20) days after service upon you of this Writ, and the annexed complaint, the plaintiff may proceed in the suit, and judgment may be entered against you.

WITNESS, WILLIAM S. GUMMERE, Chief Justice of the New Jersey Supreme Court, Trenton, N. J., this 14th day of December, 1925.

EDWARD J. KELLEHER,
Clerk.

ARMSTRONG & MULLEN,
Attorneys for Plaintiff.

Complaint.

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JOHN CARROLL, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., and "ELIZABETH" ENTERMANN, the first name being fictitious, and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN. Defendants.	Action at Law.

The plaintiff, a resident of the City of Jersey City, County of Hudson and State of New Jersey, for his complaint against the defendants above named, alleges as follows:

FIRST COUNT.

1. The defendant, Charles Cooper & Company, Inc., at all times mentioned in the complaint, was and still is a corporation organized and existing under the laws of the State of New Jersey.

2. At all times mentioned in the complaint, the defendant, "Elizabeth" Entermann, the first name being fictitious and the true first name being unknown doing business under the firm name and style of L. K. Entermann, was and still is engaged in the florist, greenhouse and horticultural business, in the City of Jersey City, County of Hudson and State of New Jersey.

3. On or about the 23rd day of June, 1925, the plaintiff, John Carroll was a passenger and invitee in a certain automobile owned by one "Hopper" whom he accompaned on a ride to the plant or works or factory of the defendant Charles Cooper & Company, Inc. Said "Hopper" called at the factory or plant of said defendant, Charles Cooper & Company, Inc., for the purpose of obtaining a quantity of hydrofluoric acid.

4. Said defendant, Charles Cooper & Company, Inc., by its agents or servants, did on or about the 23rd day of June, 1925, undertake to fill certain lead containers with hydrofluoric acid, and place the same in the automobile then and there operated by the said "Hopper". The filling of said jugs or containers by the said defendant, Charles Cooper & Company, Inc., was so negligently and carelessly done, that the acid then and there in the said lead containers, was caused to explode, and the plaintiff herein seriously injured. The negligence of the said Charles Cooper & Company, Inc., consisted in this:

(a) That it failed to use due and proper care and caution in the handling of the said hydrofluoric acid, then and there known to the said defendant, Charles Cooper & Company, Inc., to be a highly dangerous and inflammable and explosive substance.

(b) It failed to exercise due care and caution in cleansing and scouring the said lead containers before refilling them with the said hydrofluoric acid.

(c) It failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That it well knowing the dangerous and inflammable propensity of the said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff herein from injury.

5. As a result of the explosion of the said acid then and there in the lead containers, filled by the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the misconduct of the defendant, Charles Cooper & Company, Inc., the plaintiff herein sustained severe personal injuries consisting in part of severe burns about the head, neck, body, arms, legs and shoulders, impairment of vision, has been subjected to noxious and injurious gases, and has inhaled the same, and has suffered, and is still suffering from the effect of said burns and the inhalation of the gases aforesaid, from all of which, he was sick, sore and disabled for a long period of time, and has suffered injuries from which he never will wholly recover, and was obliged to expend large sums of money, and will be obliged in the future to expend further large sums of money for medical attendance and expenses, and has lost his entire time from his business, and in addition thereto suffered the loss of his personal clothing, and equipment upon the date of the accident aforesaid.

Wherefore, plaintiff demands judgment against the defendant, Charles Cooper & Company, Inc., on the first count in the sum of $100,000.00 and costs of Court.

Second Count.

1. The plaintiff herein, repeats and reiterates each and every allegation and statement contained in the First count of this complaint with the same force and effect as though the same were herein again fully and at large set forth.

2. On the 23rd day of June, 1925, the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, was engaged in the florist, greenhouse and horticultural business, in the City of Jersey City, N. J.

3. On the said date, the said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, was the owner of certain lead jugs or containers. On said date, said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, his or her agents or servants, requested one "Hopper" to bring said lead jugs or containers to the factory, office or works of the defendant Charles Cooper & Company, Inc., for the purpose of having two of said lead jugs or containers filled with hydrofluoric acid. On said date, the plaintiff herein was a passenger and invitee in the automobile of said "Hopper" and rode with the said "Hopper" to the plant, factory, office or works of the said defendant, Charles Cooper & Company, Inc.

4. At the time and place aforesaid, said lead jugs or containers, the property of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, were in the automobile of the said "Hopper".

5. Said jugs were filled with the said hydrofluoric acid by the defendant, Charles Cooper & Company, Inc., its agents or servants, and placed in the automobile of said "Hopper" and shortly thereafter the explosion occurred in which the plaintiff herein was severely and seriously injured.

6. The said explosion as aforesaid was accomplished by reason of the negligence of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, his or her agents or servants, which negligence consisted in this:

(a) That he or she failed to use due, proper care and caution in the preparation of the said containers for hydrofluoric acid, well knowing said acid to be a highly dangerous and inflammable and explosive substance.

(b) That he or she failed to exercise due care and caution, in that he or she failed to cleanse, scour and properly seal the said containers, so that no foreign substance, dirt, or other material could get into said containers.

(c) That he or she failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That he or she, well knowing the dangerous and inflammable propensity of said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff herein from injury.

7. As a result of the explosion of the said acid then and there in the lead containers, filled by

the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the misconduct of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, the plaintiff herein sustained severe personal injuries consisting in part of severe burns about the head, neck, body, arms, legs and shoulders, impairment of vision, has been subjected to noxious and injurious gases and has inhaled the same, and has suffered, and is still suffering from the effect of said burns and the inhalation of the gases aforesaid from all of which he was sick, sore and disabled for a long period of time, and has suffered injuries from which he never will wholly recover, and was obliged to expend large sums of money, and will be obliged in the future to expend further large sums of money for medical attendance and expenses, and has lost his entire time from his business, and in addition thereto suffered the loss of his personal clothing, and equipment upon the date of the accident aforesaid.

WHEREFORE, plaintiff demands judgment against the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, on the second count, in the sum of $100,000.00 and costs of Court.

THIRD COUNT.

1. The plaintiff herein, repeats and reiterates each and every allegation and statement contained in the first and second counts of this complaint, with the same force and effect as though the same were herein again fully and at large set forth.

2. On the 23rd day of June, 1925, the defendant Charles Cooper & Company, Inc., was and still is a corporation existing under and by virtue of the laws of the State of New Jersey.

3. On the 23rd day of June, 1925, the defendant, "Elizabeth" Entermann, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, was engaged in the florist, greenhouse, and horticultural business, in the City of Jersey City, County of Hudson and State of New Jersey.

4. On the said date, the said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, was the owner of certain lead jugs or containers, which the said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann sent to the defendant, Charles Cooper & Company, Inc., in the City of Newark, County of Essex and State of New Jersey, for the purpose of having the same filled with hydrofluoric acid. Said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, requesting one "Hopper" to bring said lead jugs to the factory, office or works of the defendant, Charles Cooper & Company, Inc., and the plaintiff herein, was a passenger and invitee of the said "Hopper" in the automobile used by said "Hopper" for the purpose of transporting said jugs to and from the office, factory or works of the defendant, Charles Cooper & Company, Inc., for the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann.

5. On the said date, the plaintiff herein accompanied the said "Hopper" to the office, factory or works of the defendant, Charles Cooper & Company, Inc., for the purpose of having the jugs or containers of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, filled with the said hydrofluoric acid, sold and furnished by the defendant, Charles Cooper & Company, Inc.

6. On the said date, said jugs were filled with the said hydrofluoric acid by the defendant, Charles Cooper & Company, Inc., its agents or servants, at its office, factory or works, in the City of Newark, County of Essex and State of New Jersey, and were then and there placed in the automobile of the said "Hopper", and thereafter an explosion occurred, in which the plaintiff was severely and seriously injured.

7. The said explosion as aforesaid was accomplished by reason of the negligence of the defendants, "Elizabeth" Entermann, the first name being fictitious, and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, his or her agents, or servants, and Charles Cooper & Company, Inc., which negligence consisted in this:

(a) That it, he or she failed to use due, proper, care and caution in the preparation of the said containers for hydrofluoric acid, well knowing said acid to be a highly dangerous and inflammable and explosive substance.

(b) That it, he or she failed to exercise due care and caution, in that it, he or she failed to cleanse, scour and properly seal the said containers, so that no foreign substance,

dirt, or other material could get into said containers.

(c) That it, he or she failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That it, he or she, well knowing the dangerous and inflammable propensity of said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff herein from injury.

8. As a result of the explosion of the said acid then and there in the lead containers, filled by the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the misconduct of the defendants, Charles Cooper & Company, Inc., and "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, the plaintiff herein sustained severe personal injuries consisting in part of severe burns about the head, neck, body, arms, legs and shoulders, impairment of vision, has been subjected to noxious and injurious gases, and has inhaled the same, and has suffered, and is still suffering from the effect of said burns and the inhalation of the gases aforesaid, from all of which, he was sick, sore and disabled for a long period of time, and has suffered injuries from which he never will wholly recover, and was obliged to spend large sums of money, and will be obliged in the future to expend further large sums of money for medical attendance and expenses, and has lost his entire time from his business, and in addition thereto, suffered the loss of

his personal clothing, and equipment upon the date of the accident aforesaid.

WHEREFORE, plaintiff herein demands damages against the defendants, "Elizabeth" Entermann, the first name being fictitious, and the true first name being unknown, doing business under the firm name and syle of L. K. Entermann, and Charles Cooper & Company, Inc., on the third count, in the sum of $100,000.00 and costs of Court.

ARMSTRONG & MULLEN,
Attorneys for Plaintiff.

Dated: Jersey City, N. J., December 14th, 1925.

Answer of Defendant Charles Cooper & Company, Inc.

(Filed January 11, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JOHN CARROLL,
Plaintiff,

vs.

CHARLES COOPER & COMPANY, INC., and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN,
Defendants.

Action at Law.

Defendant, Charles Cooper & Company, Inc., a corporation of the State of New Jersey, having its principal office and place of business at No. 348 Van Buren Street, Newark, Essex County, New Jersey, answering plaintiff's complaint filed herein, says that:

ANSWER TO FIRST COUNT.

1. It admits the allegations of paragraph 1.

2. It has no knowledge or information sufficient to form a belief as to the allegations of paragraph 2.

Answer.

3. It admits that "Hopper" called at its factory or plant for the purpose of obtaining a quantity of hydrofluoric acid. It has no knowledge or information sufficient to form a belief as to the remaining allegations of paragraph 3.

4. It admits that on or about the 23rd day of June, 1925, it filled certain lead containers with hydrofluoric acid and placed the same in a certain automobile, but has no knowledge or information sufficient to form a belief as to whether said automobile was being operated by "Hopper". It denies the remaining allegations of paragraph 4.

5. It denies the allegations of paragraph 5.

ANSWER TO SECOND COUNT.

6. Answering paragraph 1 thereof this defendant repeats its answers to each of the paragraphs of the first count.

7. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 2, 3 and 4.

8. It admits that said jugs were filled with hydrofluoric acid and placed in a certain automobile by Charles Cooper & Company, Inc., its agents or servants. As to the remaining allegations of paragraph 5 it has no knowledge or information sufficient to form a belief.

9. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 6 and 7.

Answer.

ANSWER TO THIRD COUNT.

10. Answering the first count thereof this defendant repeats its answers to each of the paragraphs of the first and second counts.

11. It admits the allegations of paragraph 2.

12. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 3, 4 and 5.

13. It admits that on or about the 23d day of June, 1925, it filled said lead containers with hydrofluoric acid and placed them in a certain automobile but has no knowledge or information sufficient to form a belief as to the remaining allegations of paragraph 6.

14. It has no knowledge or information sufficient to form a belief as to the alleged negligence of "Elizabeth" Entermann doing business under the firm name and style of L. K. Entermann. It denies the remaining allegations of paragraphs 7 and 8.

FIRST SEPARATE DEFENSE TO FIRST, SECOND AND THIRD COUNTS.

15. Plaintiff was guilty of contributory negligence.

SECOND SEPARATE DEFENSE TO FIRST, SECOND AND THIRD COUNTS.

16. Plaintiff was familiar with and assumed any and all risks and dangers incident to the transportation and handling of such jugs of hydrofluoric acid.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant Charles Cooper & Company, Inc.

Reply.

(Filed January 16, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JOHN CARROLL,
Plaintiff,

vs.

CHARLES COOPER & COMPANY, INC., and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN,
Defendants.

Action at Law.

The plaintiff, above named, for his reply to the answer of the defendant, Charles Cooper & Company, Inc., says that:

1. Paragraphs 15 and 16, in said answer, are denied.

ARMSTRONG & MULLEN,
Attorneys for Plaintiff.

Dated: Jersey City, N. J., January 13th, 1926.

Postea.

(Filed February 15, 1927.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JOHN CARROLL, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., Defendant.	Action at Law.

This case was tried before Honorable Henry E. Ackerson, Jr., Judge, with a jury, at the Hudson Circuit, on the 7th day of February, 1927, and continuing thereafter on the eighth, ninth, tenth and eleventh day of February, 1927.

The jury rendered a general verdict against the defendant and in favor of the plaintiff, for Three thousand ($3,000.00) Dollars.

Dated: Jersey City, N. J., February 14, 1927.

HENRY E. ACKERSON, JR.,
Judge.

A true copy
EDWARD J. KELLEHER,
Clerk.

Judgment.

(Entered February 15, 1927.)

NEW JERSEY SUPREME COURT,

JOHN CARROLL, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., Defendant.	Action at Law.

On Postea.
ARMSTRONG & MULLEN,
Attorneys.

$3000.00	Judgment entered this fifteenth day of February, A. D. nineteen hundred and twenty-seven in favor of plaintiff and against the defendant for the sum of three thousand dollars damages and sixty-six dollars costs.
66.00	
$3066.00	

WM. S. GUMMERE,
C. J.

Notice of Appeal.

(Filed February 25, 1927.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JAMES KELLY, Administrator *ad prosequendum* of James M. Kelly, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, Defendants.	Action at Law.

To Messrs. Armstrong & Mullen, Attorneys of Plaintiff, or to whom it may concern:

Sirs:

PLEASE TAKE NOTICE that the defendant, Charles Cooper & Company, Inc., appeals to the Court of Errors and Appeals in the last resort in all causes in New Jersey from the whole of the judgment entered against it in this cause.

Respectfully yours,

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant, Charles Cooper & Company, Inc.

Grounds of Appeal.

(Filed March 25, 1927.)

NEW JERSEY COURT OF ERRORS AND APPEALS.

JAMES KELLY, Administrator *ad prosequendum* of James M. Kelly, deceased, Plaintiff and Respondent, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant and Appellant.	Action at Law.

The Appellant states the following grounds of appeal.

1. The judgment is contrary to law.

2. The trial court erred in giving judgment in favor of the plaintiff and against the defendant.

3. The trial court refused to non-suit the plaintiff.

4. The trial court refused to direct a verdict in favor of the defendant.

5. The trial court refused to charge the jury as follows:

There is no evidence in this case that the accident was the result of the presence or lack of paraffin on the cork used.

6. The trial court refused to charge the jury as follows:

The jug having been furnished by the purchaser the defendant had the right to assume that it was in fit condition to be filled with hydrofluoric acid.

7. The trial court refused to charge the jury as follows:

Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it.

8. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled.

9. The trial court refused to charge the jury as follows:

If you find that the accident was the result of foreign matter in the jug the defendant, under the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

10. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any foreign matter such as would naturally and proximately cause the accident which occurred.

11. The trial court refused to charge the jury as follows:

If you find that the accident was the result of the action of the hydrofluoric acid placed in the

jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

12. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred.

13. The trial court refused to charge the jury as follows:

Under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them.

14. The trial court refused to charge the jury as follows:

If you find the defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it.

15. The trial court charged the jury as follows:

There can be no doubt from the testimony in these cases, that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling, and handling of the jug in question at this time.

16. The trial court charged the jury as follows:

Furthermore, you must remember that the test with respect to inspection of the jug before filling, is not whether there was some possible infallible test, nor can the defendant be held for failure to apply some infallible test, because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved.

17. The trial court charged the jury as follows:

The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug.

18. The trial court charged the jury as follows:

In order to establish proximate cause, it is necessary in the first place that there be a causal connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.

Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the chain of circumstances leading up to the injury, and which in the natural, continuous sequence, unbroken by any new independent cause, produced the injury.

19. The trial court charged the jury as follows:

Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterization that I make with respect to that, that the danger involved is limited in that respect.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant-Appellant.

J. EDWARD ASHMEAD,
Of Counsel.

Summons.

(Filed December 28, 1925.)

THE STATE OF NEW JERSEY to CHARLES COOPER & COMPANY, INC., J. K. WEIDIG, agent for service of process. Corner of Clifford & Van Buren Sts., Newark, N. J.

"Elizabeth" Entermann, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, 328 Ocean Avenue, Jersey City, N. J.

(L. S.)

YOU ARE SUMMONED, to answer the annexed complaint of JAMES KELLY, Administrator, Ad Prosequendum of James M. Kelly, deceased, in an action at law, in the New Jersey Supreme Court, Hudson County.

AND TAKE NOTICE, that unless you file your answer to said complaint with the Clerk of the said New Jersey Supreme Court, at Trenton, N. J., within twenty (20) days after service upon you of this Writ, and the annexed complaint, the plaintiff may proceed in the suit, and judgment may be entered against you.

WITNESS, WILLIAM S. GUMMERE, Chief Justice of the New Jersey Supreme Court, Trenton, N. J., this 16th day of December, 1925.

EDWARD J. KELLEHER,
Clerk.

ARMSTRONG & MULLEN,
Attorneys for Plaintiff.

A true copy
EDWARD J. KELLEHER,
Clerk.

Complaint.

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JAMES KELLY, Administrator, ad prosequendum of JAMES M. KELLY, Deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN, Defendants.	Action at Law.

The plaintiff above named, who resides in the City of Jersey City, County of Hudson and State of New Jersey, for his complaint against the defendants above named, alleges as follows:

FIRST COUNT.

1. The defendant, Charles Cooper & Company, Inc., at all times mentioned in the complaint, was and still is a corporation organized and existing under the laws of the State of New Jersey.

2. At all times mentioned in the complaint, the defendant, "Elizabeth" Entermann, the first name being fictitious and the true first name being

unknown, doing business under the firm name and style of L. K. Entermann, was and still is engaged in the florist, greenhouse and horticultural business, in the City of Jersey City, County of Hudson and State of New Jersey.

3. On or about the 23rd day of June, 1925, the said James M. Kelly, deceased, was a passenger and invitee in a certain automobile owned by one "Hopper" whom he accompanied on a ride to the plant or works or factory of the defendant, Charles Cooper & Company, Inc. Said "Hopper" called at the factory or plant of said defendant, Charles Cooper & Company, Inc., for the purpose of obtaining a quantity of hydrofluoric acid.

4. Said defendant, Charles Cooper & Company, Inc., by its agents or servants, did on or about the 23rd day of June, 1925, undertake to fill certain lead containers with hydrofluoric acid, and place the same in the automobile then and there operated by the said "Hopper". The filling of said jugs or containers by the said defendant, Charles Cooper & Company, Inc., was so negligently and carelessly done, that the acid then and there in the said lead containers was caused to explode, and the plaintiff herein seriously injured. The negligence of the said Charles Cooper & Company, Inc., consisted in this:

(a) That it failed to use due, and proper care and caution in the handling of the said hydrofluoric acid, then and there known to the said defendant, Charles Cooper & Company, Inc., to be a highly dangerous and inflammable and explosive substance.

(b) It failed to exercise due care and caution in cleansing and scouring the said lead

containers before refilling them with the said hydrofluoric acid.

(c) It failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That it well knowing the dangerous and inflammable propensity of the said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff's intestate from injury.

5. As a result of the explosion of the said acid, then and there in the lead containers, filled by the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the misconduct of the said defendant, Charles Cooper & Company, Inc., the plaintiff's intestate herein, suffered severe burns about the head, neck, body, arms and shoulders, and was subjected to noxious and injurious gases which were inhaled by him, from the result of which, the plaintiff's intestate died a short time thereafter.

6. That the plaintiff herein, is the administrator *ad prosequendum* of the Estate of James M. Kelly, deceased, and letters of administration, *ad prosequendum* have been issued to him by the Surrogate of the County of Hudson in the State of New Jersey, which letters he held, and now brings into Court.

7. That the plaintiff's intestate left him surviving the following named next of kin:

James Kelly, father,
Ellen Kelly, mother
Mary Kelly, sister,

who have suffered great pecuniary loss and injury by reason of the death of the said James M. Kelly, whereby and wherefore, under the statutes in such cases made and provided, an action has accrued to the said plaintiff, as administrator *ad prosequendum* of James M. Kelly, deceased.

8. Plaintiff's action against said defendant was commenced within twenty-four calendar months from the date of the decease of the said James M. Kelly.

WHEREFORE, plaintiff demands judgment against the defendant, Charles Cooper & Company, Inc., on the first Count in the sum of $100,000.00 and costs of Court.

SECOND COUNT.

1. The plaintiff herein, repeats and reiterates each and every allegation and statement contained in the First Count of this complaint, with the same force and effect as though the same were hereinagain fully and at large set forth.

2. On the 23rd day of June, 1925, the defendant "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, was engaged in the florist, greenhouse and horticultural business, in the City of Jersey City, N. J.

3. On the said date, the said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, was the owner of certain lead jugs or containers. On said date, said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, his or her agents or servants, requested one "Hopper" to bring said lead jugs or containers to the factory, office or works of the defendant Charles Cooper & Company, Inc., for the purpose of having two of said lead jugs or containers filled with hydrofluoric acid. On said date, the plaintiff's intestate was a passenger and invitee in the automobile of said "Hopper" and rode with the said "Hopper" to the plant, factory, office or works of the said defendant, Charles Cooper & Company, Inc.

4. At the time and place aforesaid, said lead jugs or containers, the property of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, were in the automobile of the said "Hopper".

5. Said jugs were filled with the said hydrofluoric acid by the defendant, Charles Cooper & Company, Inc., its agents or servants, and placed in the automobile of said "Hopper" and shortly thereafter the explosion occurred in which the said James M. Kelly, deceased, was severely and seriously injured, from the result of which, the said James M. Kelly died a short time thereafter.

6. The said explosion as aforesaid was accomplished by reason of the negligence of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, his or her agents or servants, which negligence consisted in this:

(a) That he or she failed to use due, proper, care and caution in the preparation of the said containers for hydrofluoric acid, well knowing said acid to be a highly dangerous and inflammable and explosive substance.

(b) That he or she failed to exercise due care and caution, in that he or she failed to cleanse, scour and properly seal the said containers, so that no foreign substance, dirt, or other material could get into said containers.

(c) That he or she failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That he or she, well knowing the dangerous and inflammable propensity of said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff's intestate from injury.

7. As a result of the explosion of the said acid, then and there in the lead containers, filled by the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the misconduct of the said defendant, Charles Cooper & Company, Inc., the plaintiff's intestate herein suffered severe burns about the head, neck, body, arms and shoulders, and was subjected to noxious and injurious gases which were inhaled by him, from the result of which, the plaintiff's intestate died a short time thereafter.

8. That the plaintiff herein, is the administrator *ad prosequendum* of the Estate of James M. Kelly, deceased, and letters of administration, *ad prosequendum* have been issued to him by the Surrogate of the County of Hudson in the State of New Jersey, which letters he held, and now brings into Court.

9. That the plaintiff's intestate left him surviving the following named next of kin:

James Kelly,	father
Ellen Kelly,	mother
Mary Kelly,	sister

who have suffered great pecuniary loss and injury by reason of the death of the said James M. Kelly, whereby and wherefore under the statutes in such cases made and provided, an action has accrued to the said plaintiff, as administrator *ad prosequendum* of James M. Kelly, deceased.

10. Plaintiff's action against said defendant was commenced within twenty-four calendar months from the date of the decease of the said James M. Kelly.

WHEREFORE, plaintiff demands judgment against the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, on the second count in the sum of $100,000.00 and Costs of Court.

THIRD COUNT.

1. The plaintiff herein repeats and reiterates each and every allegation and statement contained in the first and second counts of this complaint, with the same force and effect as though the same were herein again fully and at large set forth.

2. On the 23rd day of June, 1925, the defendant Charles Cooper & Company, Inc., was and still is a corporation existing under and by virtue of the laws of the State of New Jersey.

3. On the 23rd day of June, 1925, the defendant, "Elizabeth" Entermann, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, was engaged in the florist, greenhouse and horticultural business, in the City of Jersey City, County of Hudson and State of New Jersey.

4. On the said date, the said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann was the owner of certain lead jugs or containers, which the said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, sent to the defendant, Charles Cooper & Company, Inc., in the City of Newark, County of Essex and State of New Jersey, for the purpose of having the same filled with hydrofluoric acid. Said defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, requesting one, "Hopper" to bring said lead jugs to the factory, office or works of the defendant, Charles Cooper & Company, Inc., and the plaintiff's intestate was a passenger and invitee of the said "Hopper" in the automobile used by said "Hopper" for the purpose of transporting said jugs to and from the office, factory or works of the defendant, Charles Cooper & Company, Inc., for the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann.

5. On the said date, the plaintiff's intestate accompanied the said "Hopper" to the office, factory or works of the defendant, Charles Cooper & Company, Inc., for the purpose of having the

jugs or containers of the defendant, "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, filled with the said hydrofluoric acid, sold and furnished by the defendant, Charles Cooper & Company, Inc.

6. On the said date, said jugs were filled with the said hydrofluoric acid, by the defendant Charles Cooper & Company, Inc., its agents or servants, at its office, factory or works, in the City of Newark, County of Essex and State of New Jersey, and were then and there placed in the automobile of the said "Hopper" and thereafter an explosion occurred, in which the plaintiff's intestate, was severely and seriously injured, from the result of which, he died shortly thereafter.

7. The said explosion as aforesaid was accomplished by reason of the negligence of the defendants, "Elizabeth" Entermann, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, his or her agents, or servants, and Charles Cooper & Company, Inc., which negligence consisted in this:

(a) That it, he or she failed to use due, proper, care and caution in the preparation of the said containers for hydrofluoric acid, well knowing said acid to be a highly dangerous and inflammable and explosive substance.

(b) That it, he or she failed to exercise due care and caution, in that it, he or she failed to cleanse, scour and properly seal the said containers, so that no foreign substance, dirt, or other material could get into said containers.

(c) That it, he or she failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That it, he or she, well knowing the dangerous and inflammable propensity of said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff's intestate from injury.

8. As a result of the explosion of the said acid then and there in the lead containers, filled by the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the misconduct of the defendants, Charles Cooper & Company, Inc., and "Elizabeth" Entermann, doing business under the firm name and style of L. K. Entermann, the plaintiff's intestate herein suffered severe burns about the head, neck, body, arms and shoulders, and was subjected to noxious and injurious gases which were inhaled by him, from the result of which the plaintiff's intestate died a short time thereafter.

9. That the plaintiff herein, is the administrator *ad prosequendum* of the Estate of James M. Kelly, deceased, and letters of administration, *ad prosequendum* have been issued to him by the Surrogate of the County of Hudson in the State of New Jersey, which letters he held, and now brings into Court.

10. That the plaintiff's intestate left him surviving the following named next of kin:

James Kelly,	father
Ellen Kelly,	mother
Mary Kelly,	sister

who have suffered great pecuniary loss and injury by reason of the death of the said James M. Kelly, whereby and wherefore, under the statutes in such cases made and provided, an action has accrued to the said plaintiff, as administrator *ad prosequendum* of James M. Kelly, deceased.

11. Plaintiff's action against said defendant was commenced within twenty-four calendar months from the date of the decease of the said James M. Kelly.

WHEREFORE, plaintiff demands judgment against the defendants, "Elizabeth" Entermann, the first name being fictitious, and the true first name being unknown, doing business under the firm name and style of L. K. Entermann, and Charles Cooper & Company, Inc., on the third count, in the sum of $100,000.00 and costs of Court.

ARMSTRONG & MULLEN,
Attorneys for Plaintiff.

Dated: Jersey City, N. J., December 14th, 1925.

Answer of Defendant Charles Cooper & Company, Inc.

(Filed January 11, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JAMES KELLY, Administrator *ad prosequendum* of JAMES M. KELLY, deceased,
Plaintiff,

vs.

CHARLES COOPER & COMPANY, INC., and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN,
Defendants.

Action at Law.

Defendant, Charles Cooper & Company, Inc., a corporation of the State of New Jersey, having its principal office and place of business at No. 348 Van Buren Street, Newark, Essex County, New Jersey, answering plaintiff's complaint filed herein, says that:

ANSWER TO FIRST COUNT.

1. It admits the allegations of paragraph 1.

2. It has no knowledge or information sufficient to form a belief as to the allegations of paragraph 2.

Answer.

3. It admits that "Hopper" called at its factory or plant for the purpose of obtaining a quantity of hydrofluoric acid. It has no knowledge or information sufficient to form a belief as to the remaining allegations of paragraph 3.

4. It admits that on or about the 23rd day of June, 1925, it did undertake to fill certain lead containers with hydrofluoric acid and placed the same in a certain automobile, but it has no knowledge or information sufficient to form a belief as to whether said automobile was then and there operated by the said "Hopper". It denies the remaining allegations of paragraph 4.

5. It denies the allegations of paragraph 5.

6. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 6 and 7.

7. It admits the allegations of paragraph 8.

ANSWER TO SECOND COUNT.

8. Answering paragraph 1 thereof this defendant repeats its answers to each of the paragraphs of the first count.

9. It has no knowledge or information sufficient to form a belief as to the allegations contained in paragraphs 3 and 4.

10. It admits that said jugs were filled with hydrofluoric acid and placed in a certain automobile by Charles Cooper & Company, Inc., its agents or servants. As to the remaining allegations of paragraph 5 it has no knowledge or information sufficient to form a belief.

Answer.

11. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 6, 7, 8 and 9.

12. It admits the allegations of paragraph 10.

ANSWER TO THIRD COUNT.

13. Answering the first count thereof this defendant repeats its answers to each of the paragraphs of the first and second counts.

14. It admits the allegations of paragraph 2.

15. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 3, 4, and 5.

16. It admits that on or about the 23rd day of June, 1925, it filled said lead containers with hydrofluoric acid and placed them in a certain automobile. It has no knowledge or information sufficient to form a belief as to the remaining allegations of paragraph 6.

17. It has no knowledge or information sufficient to form a belief as to the alleged negligence of "Elizabeth" Entermann doing business under the firm name and style of L. K. Entermann. It denies the remaining allegations of paragraphs 7 and 8.

18. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs 9 and 10.

19. It admits the allegations of paragraph 11.

Answer.

FIRST SEPARATE DEFENSE TO FIRST, SECOND AND THIRD COUNTS.

20. Plaintiff's intestate was guilty of contributory negligence.

SECOND SEPARATE DEFENSE TO FIRST, SECOND AND THIRD COUNTS.

21. Plaintiff's intestate was familiar with and assumed any and all risks and dangers incident to the transportation and handling of such jugs of hydrofluoric acid.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant,
Charles Cooper & Company, Inc.

Reply.

(Filed January 16, 1926.)

NEW JERSEY SUPREME COURT.

HUDSON COUNTY.

JAMES KELLY, administrator, *ad prosequendum* of JAMES M. KELLY, Deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., and "ELIZABETH" ENTERMANN, the first name being fictitious and the true first name being unknown, doing business under the firm name and style of L. K. ENTERMANN, Defendants.	Action at Law.

The plaintiff, above named, for his reply to the answer of the defendant, Charles Cooper & Company, Inc., says that:

1. Paragraphs 20 and 21 in said answer are denied.

ARMSTRONG & MULLEN,
Attorneys for Plaintiff.

Dated: Jersey City, N. J., January 13th, 1926.

Postea.

(Filed February 15, 1927.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

JAMES KELLY, Administrator *ad prosequendum* of JAMES M. KELLY, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., Defendant.	Action at Law.

This case was tried before Honorable Henry E. Ackerson, Jr., Judge, with a jury, at the Hudson Circuit on the 7th day of February, 1927, and continuing thereafter on the eighth, ninth, tenth and eleventh days of February, 1927.

The jury rendered a general verdict against the defendant and in favor of the plaintiff, for Nine thousand ($9,000.00) Dollars.

Dated: Jersey City, N. J., February 14, 1927.

HENRY E. ACKERSON, JR.,
Judge.

A true copy

EDWARD J. KELLEHER,
Clerk.

Judgment.

(Entered February 15, 1927.)

NEW JERSEY SUPREME COURT.

JAMES KELLY, Administrator *ad prosequendum* of JAMES M. KELLY, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., Defendant.	Action at Law. On Postea. ARMSTRONG & MULLEN, Attorneys.

Judgment entered this fifteenth day of February, A. D. nineteen hundred and twenty-seven in favor of plaintiff and against the defendant for the sum of nine thousand dollars damages and sixty-six dollars and twenty-eight cents costs.

$9000.00
66.28
$9066.28

WM. S. GUMMERE,
C. J.

Notice of Appeal.

(Filed March 3, 1927.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

CHARLES J. O'NEILL, Administrator *ad prosequendum* of JOHN P. O'NEILL, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., a Corporation, Defendant.	Action at Law.

To George E. Cutley, Attorney of Plaintiff, or to whom it may concern:

Sir:

PLEASE TAKE NOTICE that the defendant, Charles Cooper & Company, Inc., appeals to the Court of Errors and Appeals in the last resort in all causes in New Jersey from the whole of the judgment entered against it in this cause.

Respectfully yours,

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant.

New Jersey State Library

Grounds of Appeal.

(Filed March 25, 1927.)

NEW JERSEY COURT OF ERRORS AND APPEALS.

CHARLES J. O'NEILL, Administrator *ad prosequendum* of John P. O'Neill,
Plaintiff and Respondent,

vs.

CHARLES COOPER & COMPANY, INC., a Corporation,
Defendant and Appellant.

Action at Law.

The Appellant states the following grounds of appeal:

1. The judgment is contrary to law.

2. The trial court erred in giving judgment in favor of the plaintiff and against the defendant.

3. The trial court refused to non-suit the plaintiff.

4. The trial court refused to direct a verdict in favor of the defendant.

5. The trial court refused to charge the jury as follows:

There is no evidence in this case that the accident was the result of the presence or lack of paraffin on the cork used.

6. The trial court refused to charge the jury as follows:

The jug having been furnished by the purchaser the defendant had the right to assume that it was in fit condition to be filled with hydrofluoric acid.

7. The trial court refused to charge the jury as follows:

Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it.

8. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled.

9. The trial court refused to charge the jury as follows:

If you find that the accident was the result of foreign matter in the jug the defendant, under the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

10. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident, contained any foreign matter such as would naturally and proximately cause the accident which occurred.

11. The trial court refused to charge the jury as follows:

If you find that the accident was the result of the action of the hydrofluoric acid placed in the jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

12. The trial court refused to charge the jury as follows:

There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred.

13. The trial court refused to charge the jury as follows:

Under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them.

14. The trial court refused to charge the jury as follows:

If you find that defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it.

15. The trial court charged the jury as follows:

There can be no doubt from the testimony in these cases that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling and handling of the jug in question at this time.

16. The trial court charged the jury as follows:

Furthermore, you must remember that the test with respect to inspection of the jug before filling, in not whether there was some possible infallible test, nor can the defendant be held for failure to apply some infallible test, because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved.

17. The trial court charged the jury as follows:

The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug.

Grounds of Appeal.

18. The trial court charged the jury as follows:

In order to establish proximate cause, it is necessary in the first place that there be a causal connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.

Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the chain of circumstances leading up to the injury, and which in the natural continuous sequence, unbroken by any new independent cause, produced the injury.

19. The trial court charged the jury as follows:

Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterization that I make with respect to that, that the danger involved is limited in that respect.

LINDABURY, DEPUE & FAULKS,
Attorneys for Defendant-Appellant.

J. EDWARD ASHMEAD,
Of Counsel.

Summons.

(Filed March 29, 1926.)

STATE OF NEW JERSEY—to—CHARLES COOPER & COMPANY, INC., a corporation.

You are hereby summoned to answer the annexed complaint of CHARLES J. O'NEILL, Administrator *ad prosequendum* of John P. O'Neill deceased, in an action at law in the New Jersey Supreme Court.

(L. S.) AND TAKE NOTICE that unless you file your answer to said complaint with the Clerk of the New Jersey Supreme Court at Trenton, within TWENTY DAYS after service upon you of this writ and the annexed complaint, the plaintiff may proceed in the suit and judgment may be entered against you.

WITNESS, WILLIAM S. GUMMERE, Chief Justice of the Supreme Court at Trenton, this day of March, Nineteen hundred twenty-six.

EDWARD J. KELLEHER,
Clerk.

GEORGE E. CUTLEY,
Attorney.

Complaint.

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

CHARLES J. O'NEILL, Administrator *Ad Prosequendum* of JOHN P. O'NEILL, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., a Corporation, Defendant.	Action at Law.

The plaintiff above named, who resides in the City of Jersey City, County of Hudson and State of New Jersey, for his complaint against the defendant above named, alleges as follows:

FIRST COUNT.

1. The defendant, Charles Cooper & Company, Inc., at all times mentioned in this complaint, was and still is a corporation organized and existing under the laws of the State of New Jersey.

2. On or about the 23rd day of June, 1925, the said John P. O'Neill, deceased, was a passenger and invitee in a certain automobile owned by one Edward Hopper, Sr., and driver by Edward Hopper, Jr., whom he accompanied on a ride to the plant or works or factory of the defendant, Charles Cooper & Company, Inc., for the purpose of obtaining a quantity of hydrofluoric acid.

3. Said defendant, Charles Cooper & Company, Inc., by its agents or servants, did on or about the 23rd day of June, 1925, undertake to fill certain lead containers with hydrofluoric acid, and place the same in the automobile then and there operated by the said Edward Hopper, Jr. The filling of said jugs or containers by the said defendant, Charles Cooper & Company, Inc., was so negligently and carelessly done, that the acid then and there in the said lead containers was caused to explode, and the plaintiff herein seriously injured. The negligence of the said Charles Cooper & Company, Inc., consisted in this:

(a) That it failed to use due and proper care and caution in the handling of the said hydrofluoric acid, then and there known to the said defendant, Charles Cooper & Company, Inc., to be a highly dangerous and inflammable and explosive substance.

(b) It failed to exercise due care and caution in cleansing and scouring the said lead containers before refilling them with the said hydrofluoric acid.

(c) It failed to properly seal and cork said lead containers, so that gases would not form in them and thus cause an explosion.

(d) That it well knowing the dangerous and inflammable propensity of the said hydrofluoric acid, failed to use reasonable care and caution to protect the plaintiff's intestate from injury.

4. As a result of the explosion of the said acid, then and there in the lead containers, filled by the said defendant, Charles Cooper & Company, Inc., and by reason of the negligence and the miscon-

duct of the said defendant, Charles Cooper & Company, Inc., the plaintiff's intestate herein suffered severe burns about the head, neck, body, arms and shoulders, and was subjected to noxious and injurious gases which were inhaled by him, from the result of which the plaintiff's intestate died a short time thereafter.

5. That the plaintiff herein is the administrator *ad prosequendum* of the Estate of John P. O'Neill, deceased, and letters of administration, *ad prosequendum* have been issued to him by the Surrogate of the County of Hudson in the State of New Jersey, which letters he held, and now brings into Court.

6. That the plaintiff's intestate left him surviving the following named next of kin: Charles J. O'Neill, father; Margaret O'Neill, mother; James O'Neill, brother; Joseph O'Neill, brother; Veronica O'Neill, sister; Dorothy O'Neill, sister; Margaret O'Neill, sister, who have suffered great pecuniary loss and injury by reason of the death of the said John P. O'Neill, whereby and wherefore under the statute in such cases made and provided, an action has accrued to the said plaintiff, as Administrator *ad prosequendum* of John P. O'Neill, deceased.

7. Plaintiff's action against said defendant was commenced within twenty-four calendar months from the date of the decease of the said John P. O'Neill.

WHEREFORE plaintiff demands judgment against the defendant, Charles Cooper & Company, Inc., in the sum of One hundred thousand ($100,000.00) Dollars and costs of Court.

GEORGE E. CUTLEY,
Attorney of Plaintiff.

Dated: March , 1926.

Answer.

(Filed April 15, 1926.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

CHARLES J. O'NEILL, Administrator *Ad Prosequendum* of John P. O'Neill, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant.	Action at Law.

The defendant, Charles Cooper & Company, Inc., a corporation of the State of New Jersey, having its principal office and place of business at 348 Van Buren Street, in the City of Newark, County of Essex and State of New Jersey, answering the plaintiff's complaint filed herein, says that:

ANSWER TO FIRST COUNT.

1. It admits the allegations of paragraph one.

2. It has no knowledge or information sufficient to form a belief as to the allegations of paragraph two.

3. It admits that on or about the 23rd day of June, 1925, it did undertake to fill certain lead containers with hydrofluoric acid and placed same in a certain automobile, but it has no knowledge or information sufficient to form a belief as to

Answer.

whether said automobile was then and there operated by Edward Hopper, Jr. It denies the remaining allegations of paragraph three.

4. It denies the allegations of paragraph four.

5. It has no knowledge or information sufficient to form a belief as to the allegations of paragraphs five and six.

6. It admits the allegations of paragraph 7.

First Separate Defense to First Count.

7. Plaintiff's intestate was guilty of contributory negligence.

Second Separate Defense to First Count.

8. Plaintiff's intestate was familiar with and assumed any and all risks and dangers incident to the transportation and handling of such jugs of hydrofluoric acid.

Lindabury, Depue & Faulks,
Attorneys for Defendant.

Reply.

(Filed April 20, 1926.)

NEW JERSEY SUPREME COURT,

Hudson County.

Charles J. O'Neill, Administrator *Ad Prosequendum* of John P. O'Neill, deceased, Plaintiff, *vs.* Charles Cooper & Company, Inc., a corporation, Defendant.	Action at Law.

Replying to the answer of the defendant in the within cause of action, plaintiff says that:

1. He denies the allegations contained in the First Separate Defense to First Count.

2. He denies the allegations contained in the Second Separate Defense to First Count.

George E. Cutley,
Attorney for Plaintiff.

Dated, April 20, 1926.

Postea.

(Filed February 26, 1927.)

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

CHARLES J. O'NEILL, Administrator *Ad Prosequendum* of JOHN P. O'NEILL, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant.	Action at Law.

This action was tried before Honorable Henry E. Ackerson, Jr., with a jury at the New Jersey Supreme Court, Hudson County, on February 7-8-9-10 & 11, 1927.

This cause having been heard and submitted to the jury, they returned their verdict as follows:

The jury returned a verdict in favor of the plaintiff and against the defendant in the sum of Nine thousand ($9,000.00) Dollars.

Whereupon, it is adjudged that the plaintiff recover of the defendant the sum of Nine thousand ($9,000.00) Dollars, with costs to be taxed.

HENRY E. ACKERSON, JR.,
Judge.

Date: February 17, 1927.
On motion of George E. Cutley.

A true copy,

EDWARD J. KELLEHER,
Clerk.

Judgment.

(Entered February 26, 1927.)

NEW JERSEY SUPREME COURT.

CHARLES J. O'NEILL, Administrator *Ad Prosequendum* of JOHN P. O'NEILL, deceased, Plaintiff, *vs.* CHARLES COOPER & COMPANY, INC., a corporation, Defendant.	Action at Law.

On Postea.

GEORGE E. CUTLEY,
Attorney.

$9000.00

$

Judgment entered this twenty-sixth day of February, A. D. nineteen hunteen hundred and twenty-seven in favor of plaintiff and against the defendant for the sum of nine thousand dollars damages and..... costs.

WM. S. GUMMERE,
C. J.

Testimony.

NEW JERSEY SUPREME COURT,

HUDSON COUNTY.

EDWARD WILLIAM HOPPER, JR., and
EDWARD HENRY HOPPER

vs.

CHARLES COOPER & Co., INC.

JOHN CARROLL,

vs.

CHARLES COOPER & Co., INC.
and "ELIZABETH" ENTERMANN.

JAMES KELLY, Administrator *ad prosequendum* of James M. Kelly, deceased,

vs.

CHARLES COOPER & Co., INC.
and "ELIZABETH" ENTERMANN.

CHARLES J. O'NEILL, Administrator *ad prosequendum* of John P. O'Neill, deceased,

vs.

CHARLES COOPER & Co., INC.

Before:

HON. HENRY E. ACKERSON, JR.,
Judge, and a Jury.

Jersey City, N. J.

February 7-11, 1927.

Testimony.

Appearances:

WILLIAM GEORGE, Esq., for the Plaintiff Hopper.

ARMSTRONG & MULLEN, Esqrs., for the Plaintiffs Kelly and Carroll, by THOMAS J. ARMSTRONG, Esq.

GEORGE CUTLEY, Esq., for the Plaintiff, O'Neill.

LINDABURY, DEPUE & FAULKS, Esqrs., for the Defendant, Charles Cooper & Co., Inc., by J. EDWARD ASHMEAD, Esq., and JOHN MILTON, Esq., of Counsel

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Mr. Armstrong: If your Honor will refer to the Transcript, you will find that Mr. Justice Minturn has ordered a severance as against the defendant Entermann.

Therefore, I ask that in cases numbered four and five in the List be marked "day", in view of the severance, and that we proceed as against the defendant Charles Cooper & Co., Inc.

The Court: The Order of the Court will be that as to the defendant Elizabeth Entermann, as set forth in cases 4 and 5, that they be tried separately and not at this time.

(It was stipulated by and between Counsel for the respective plaintiffs and Counsel for the Defendant, that the four cases be tried together as against the Charles Cooper & Co., Inc.)

A Jury was duly empanelled; being found satisfactory, they were sworn.

Counsel opened to the Jury.

EDWARD W. HOPPER, sworn as a witness for the Plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Where do you live? A. 335 Ocean Avenue, Jersey City.

Q. How long have you lived in Jersey City? A. All my life.

Q. How old are you? A. Twenty-eight now.

Q. When were you twenty-eight? A. Last May.

Q. You live with your father and mother? A. Yes, sir.

Q. On Ocean Avenue? A. Yes, sir.

Q. What is your business now? A. Monumental lettering, but I am not at that business.

Q. I say, what is your business now? A. Monumental lettering.

Q. Do you do monumental lettering now? A. No.

Q. I ask you, what is your business now, what are you doing for a living? A. Nothing at all; only just selling.

Q. Well, that is something? A. Well, I am not cutting stone.

Q. You are making a living at it? A. Yes, sir.

Q. That is something; selling what? A. Monuments for my father.

Q. For how long have you been a monumental letterer? A. I have worked at it for about nine years.

Q. Have you worked at it since June 23rd, 1925? A. No, sir.

Q. Now at that time that I just mentioned, did you go to Newark? A. Yes, sir.

Q. In an automobile? A. Yes, sir.

Q. Whose automobile? A. My father's.

Q. What sort of car was it? A. Seven passenger Studebaker sedan.

Q. Did anyone go with you? A. Yes, sir.

Q. Who? A. Mr. Carroll, Mr. O'Neill and Mr. Kelly.

Q. O'Neill and Kelly are now dead? A. Yes, sir.

Q. What did you go to Newark for? A. To purchase acid; hydrofluoric acid.

Q. From whom? A. Charles Cooper Company, Van Beuren Street, Newark.

Q. Had you ever purchased hydrofluoric acid there before? A. Yes, sir.

Q. For how long a period prior to the time I have mentioned? A. About eight or nine years.

Q. What did you use it for? A. For cleaning monuments.

Q. Did you have anything in the car with you in which you expected to carry the acid? A. Yes, four jugs.

Q. How many jugs did you get filled? A. Two.

Q. Why did you carry four? A. To get a rebate on two.

Q. Where did you get them originally? A. From my home where I live, my own house.

Q. To go back; did you own the jugs? A. No.

Q. Who owned the jugs? A. Entermann, the florist.

Q. Did you ever buy jugs? A. Yes, we have some of our own.

Q. Did you ever buy acid from the Charles Cooper Company which you carried out of their plant in jugs other than those purchased from the Cooper Company? A. No, sir.

Q. All the acid you ever bought there and transporated from that Company, was contained in

jugs purchased by you from the Cooper Company? A. Yes, sir.

Q. How much did you pay for the jugs? A. The jugs I think are $3.50 and the acid $3.50.

Q. Why did you want a rebate on the two in excess of the number that you intended to have filled? A. Well, we had no further use for them.

Q. You wanted to get your money back? A. Yes, sir.

Q. How much acid were you going to buy? A. Two gallons of acid.

Q. Costing how much? A. $3.50 a gallon.

The Court: How much acid were you to buy?

The Witness: Two gallons of acid, ten pounds to the gallon, for $3.50.

Q. At ten pounds to the gallon? A. The strength.

Q. Used in that line of business? A. It is the strength of the acid.

Q. That is the description, a certain strength? A. Yes, sir.

Q. Did you buy it sometimes in other strengths too? A. Well, yes, if you don't want it so strong.

Q. Where did you stop your car with respect to the Cooper Company's plant? A. Right opposite the office door of the Company.

Q. How were you transporting the jugs as you were on your way to the Cooper Company? A. Right in back of my front seat, and two of them were in a box.

Q. In the rear part of the car? A. Yes, in the back of the car.

Q. Were they lying on the floor? A. Yes, standing on the floor.

Q. In anything? A. In a box; two in a box.

Q. What kind of box? A. A box with no top.

The Court: Two were in a box and two out singly?

The Witness: Yes, sir.

Q. Would you recognize the jugs you carried over there that day? A. I would.

Q. I show you a jug and ask you if you recognize this as being one of those that you had? (Handing witness.) A. Yes, sir.

Mr. George: I offer that in evidence.

Accepted and marked as Exhibit P-G-1 of this date.

Q. I show you another jug and ask you if that is one of them that you had? A. Yes, sir.

Q. You recognize it? A. Yes, sir.

Mr. George: I offer that in evidence.

Accepted and marked as Exhibit P-G-2 of this date.

Q. I show you another one and ask you what that is? A. One I brought back.

Q. That is one of those you brought over there? A. Yes, sir.

Q. That is one of them? A. Yes, sir.

Mr. George: I offer that in evidence.

Accepted and marked as Exhibit P-G-3 of this date.

Q. I show you another jug and ask you if you recognize this? A. Yes, sir.

Q. That is one of the jugs you brought over there? A. Yes, sir.

Mr. George: I offer that in evidence.

Accepted and marked as Exhibit P-G-4 of this date.

Q. Now, Mr. Hopper, were these jugs filled? A. Empty.

Q. That is the jugs marked Exhibits P-G-3 and P-G-4? A. Yes, sir.

Q. You refer to them merely as jugs you took over there to the Cooper Company and not entirely in their present condition? A. No.

Q. In what respect? A. Didn't have corks in them.

Q. None of them had corks? A. None of them when I brought them there.

Mr. George: The jugs are offered in evidence without corks; four un-corked jugs.

Q. You say they were all standing up in the box? A. Two in the box and two out of the box.

Q. Which were the two you intended to seek a rebate on? A. Wanted them to fill the best two; if there was any rebate on the others, to give it to me; if there was not, to bring them back.

Q. Do you know which were the best two? A. These two here.

Q. Marked Exhibits P-G-1 and P-G-2? A. Yes, sir.

Q. Do you know which of the two were filled by the defendant corporation? A. These two.

Q. P-G-1 and P-G-2? A. Yes, sir.

Q. Did you ask for a rebate? A. Yes, sir.

Q. Whom did you ask for it? A. The teller in the office, the man that takes the order.

Q. Do you know who he is? A. I don't know his name.

Q. Do you see him in Court? A. No, sir.

Q. Did you get a rebate? A. No; told me he could not use them.

Q. What did you do with them? A. Brought them two empty ones back.

Q. What did you do with them when you brought them back? A. Placed them in my car.

Q. In the box or on the floor? A. On the floor.

Q. Did you pay for the acid that you purchased or intended to purchase? A. Yes, $7.

Q. Before or after you received the acid? A. Before I received the acid.

Q. Did you give these two jugs, Exhibits P-G-1 and P-G-2 to the man there with your money? A. I paid the man in the office. He calls another man, I believe the foreman, to come get the jugs and fill them with acid.

Q. Did the foreman take the jugs? A. He took the best two jugs.

Q. And you paid the $7. What did you do then? A. Went outside to wait for them.

Q. How much time elapsed between the time you brought the jugs there to purchase two gallons of acid and the time they were actually delivered back to you? A. About twenty minutes.

The Court: That is to say, twenty minutes from the time you gave the jugs in and the time you got them back again?

The Witness: Yes, sir.

Q. Do you mean that to be twenty minutes between the time you went in there? A. After I paid the money, I walked right out; after fifteen or twenty minutes, they came out of the office.

Q. How much time actually elapsed between the jugs being taken by the foreman, or whoever it was of the Charles Cooper Company's plant, for

the purpose of filling and the time they were actually delivered back to you, filled? A. About twenty minutes.

Q. Where were you at the time they were brought back? A. Sitting in my car, waiting for them.

Q. In what part of the car? A. I was on the driver's seat.

Q. Who was sitting beside you? A. Mr. Kelly.

Q. Where were Carroll and O'Neill? A. In the rear of the car; in the back seat.

Q. When the jugs were brought out by someone connected with the defendant corporation, were the doors of the automobile open or closed? A. Closed; the windows were all open.

Q. All of the windows open? A. As far as the side windows, they were open; it was a hot day in June.

Q. How about the windows in the rear part? A. They didn't come down all the way; they only opened about three inches from the top.

Q. Were they open at the time? A. Yes, sir.

Q. Is that true on both the right and left sides? A. Yes, they were all down for the air; on a hot day they would not be closed.

Q. How about the front windows; were they open? A. They were all the way down.

Q. These jugs were brought out, and who opened the door for the purpose of receiving them in the car? A. The man set them down.

Q. Who opened the door? A. The fellow who brought the jugs over there.

Q. How did he carry them? A. One in each hand.

Q. By the handle? A. By the handle.

Q. Were the jugs corked at the time? A. Yes, sir.

Q. What did he do? A. Placed them in the box that I had brought with me for that purpose.

Q. Standing upright? A. Standing upright, alongside of one another.

Q. Did he say anything? A. Well, he said——

Mr. Ashmead: I object.

Q. Yes, or no? A. Yes, sir.

Q. Were you looking at him when he said something to you? A. I was.

Q. You say Carroll was seated in the back? A. Yes, sir.

Q. After this man said something, without telling what he said, did you see Carroll do anything? A. Yes, sir.

Q. What? A. Placed his hand to the jug.

The Court: His what?

The Witness: His hand to the jug; the back of his hand.

Q. Do you know whether he touched the jug? A. Yes, sir; said they were hot.

The Court: How do you know that?

The Witness: Because I stood there and saw him do it.

The Court: Did you feel them?

The Witness: Surely.

The Court: You yourself felt them?

The Witness: I certainly did.

Q. You felt them after he made this remark? A. Yes, sir.

The Court: Which jug?

The Witness: Both jugs.

The Court: Both hot?

The Witness: Yes, sir; one more so than the other.

Q. Can you tell which is the two? A. This one here, the smallest one.

Mr. George: That is Exhibit P-G-2.

Q. When you say it was hot, just what do you mean; very hot? A. You would not want to hold your hand there any definite period of time, it was good and hot. I spoke to the man at the time about it.

Mr. George: Never mind what you said to him.

Mr. Ashmead: I ask that that be stricken out.

Mr. George: I consent to it.

The Court: Strike it out. The Jury will disregard these matters that are stricken out, just as though they had never been said.

Q. Then he closed the door, you say? A. Yes, sir.

Q. And you started off? A. Yes, sir.

The Court: Who closed the door?

The Witness: The man closed the door; the man that was delivering the jugs.

Q. Then you started the car? A. I looked around to see if everything was all right.

Q. By the way, when your car was standing there while you were waiting to get these two jugs of acid, which direction was your car facing? A. Facing south I would say; the office here, I was facing that way. (Indicating.)

Q. Facing Newark? A. Facing out of Newark;

facing out of Newark towards Elizabeth, facing south. I have to turn around to get out of that street, because it is a closed street. It is the end of the block.

Q. Were you facing in the direction of Jersey City or Elizabeth? A. Facing the direction of Elizabeth.

Q. In order to get back home, you had to turn your car around? A. Yes, sir.

Q. In the process of starting your car, did you put your car in first gear? A. Yes; I looked around to see if there was anything coming, so that I could turn around.

Q. Having seen nothing, I take it, you then proceeded? A. Absolutely.

Q. In what speed? A. In first speed I started.

Q. How far had you gotten before your attention was called to something, or you were attracted by something? A. I looked around; as I looked around, to see if anything was coming, like that, (indicating) it blew up in my face.

Q. What blew up? A. The acid.

Q. The acid from what? A. From the small jug.

Q. The small jug marked Exhibit P-G-2? A. Yes, sir.

Q. What did you do then? A. Got out of the car.

Q. By the way, how much time elapsed between the time the jugs were placed in your car and the time it blew in your face? A. About two minutes, or two minutes and a half's time; enough to start up.

Q. What happened to you? A. Why it struck me in the face and eyes, the acid did, and I ran into the chemical plant.

Q. And the mouth? A. Yes; mouth, hands and feet.

Q. What did you do? A. Run for help.

Q. Did you open the door? A. Yes, sir.

Q. Did you say anything? A. I told them to run for water; I hollered, "Run for water".

Q. Did you holler that to any particular person or a general holler? A. A general holler to get it.

Q. Because of your condition? A. Yes, sir.

Q. Do you know what happened to O'Neill? A. They followed me shortly into the Company's office. We ran for help, for water.

Q. How about Kelly? A. He came in also.

Q. And Carroll? A. Also.

Q. And then you were taken to the hospital? A. Yes, sir.

Q. Before we get to the hospital, let's go back. How long prior to the time of this explosion was it that you had been purchasing hydrofluoric acid from the Cooper Company? A. About eight or nine years.

Q. Did you always bring your jugs? A. Yes, sir.

Q. Did you ever bring any of your own, that is jugs purchased by you in any place other than from the Cooper Company? A. No, never brought any.

Q. How long did you have to wait on these other occasions? A. About an hour and a half or two hours; I used to have to wait until it was made up, I understood.

Q. You don't know whether it was made up or not; you know you had to wait? A. About an hour and a half or two hours.

Q. Did you ever receive jugs containing hydrofluoric acid on any of the other occasions of your purchasing from the defendant Company in less than an hour and a half? A. No, sir.

Q. And this was less than half an hour? A. Yes. And they were with paraffin wax around the corks.

The Court: Wait a minute.

Q. When you put your hand on the jugs, when your attention was called to the fact that they were hot did you notice whether there were corks in the jugs? A. There was two corks in the jugs.

Q. Did you notice anything peculiar or was there anything unusual? A. I didn't see wax, paraffined paper stick up.

Q. Did you see any wax? A. No, sir; there was nothing around the cork; just the plain cork.

Q. Nothing around them? A. Not a thing that I could see.

The Court: Both corks?

The Witness: Yes, sir.

Q. Were you able to detect any treatment of the corks? A. None.

Q. So far as you were able to observe, you say, they were merely plain corks? A. Yes, sir.

Q. On the other occasions for eight or nine years that you had been purchasing jugs of acid from the defendant Company, did you notice anything about the corks which you compared with the corks that were in the jugs on the occasion of the explosion? A. Yes, sir.

Q. What was the difference? A. They had paraffin paper around them that protruded far above the cork; they were wrapped in paper and tied with twine. I used to carry them in the trolley car when I hadn't the car.

Q. Did you ever, prior to the occasion of this explosion, receive acid from the defendant Cor-

poration which didn't have the paraffin paper around it that you describe? A. No, sir; at no time.

Q. This was the only instance in all the eight or nine years? A. Yes, sir.

Q. This was a nice June day up to the time the accident happened? A. Yes, sir; warm, clear day.

Q. How did Carroll, O'Neill and Kelly come to be with you? A. Because it was a nice day and they wanted to take a ride over with me.

Q. What day of the week was it? A. Tuesday, June 23rd.

Q. Did you tell them where you were going? A. Yes, sir.

Q. Where? A. Just going over for some acid and to take a ride over.

Q. Did you tell them what kind of acid you were going to buy? A. I don't really think I said exactly. I might have said hydrofluoric acid, but they would not know what it was anyway.

The Court: Did you name the acid?

The Witness: I can't say whether I named the exact name of it or not; I don't know.

Q. You say you brought four jugs to the Cooper plant for the purpose of having two of them filled and endeavoring to obtain a rebate on the other two; is that so? A. Yes, sir.

Q. You said you were going to ask for a rebate or have the best two filled? A. Yes, sir.

Q. Who decided which were the best two of the four? A. Their foreman; he selected them. He selected the best two jugs to refill.

Q. Now, you went to the hospital, didn't you? A. Yes, surely.

Q. What hospital? A. St. James Hospital.

Q. How long were you there? A. Five weeks and some odd days I believe it was. Five weeks confined to bed.

Q. What were you treated for? A. Hydrofluoric acid burns.

Q. Where? A. My eyes, head and face; on my back, and my hands and feet; in fact all over me. It splashed all over me.

Q. How about your mouth? A. My mouth and tongue.

Q. Is there any difference between the condition of your face today and prior to the accident? A. Yes, sir.

Q. I show you what purports to be a photograph and ask you if you know anything about that? A. Well, that is me before the accident.

Q. How long before the accident? A. A year or so.

Q. Does this represent a true likeness of you as taken a year before the accident? A. Yes, sir.

Mr. George: I offer it in evidence.

The Court: Does it represent a true likeness of yourself immediately before the accident?

The Witness: Yes, sir.

The Court: As you looked before the accident?

The Witness: Well, yes; I could not say the day or week before.

The Court: I am asking you now, whether, just before the accident, you looked just like that picture shown you?

The Witness: Yes, sir.

The Court: No difference.

Accepted and marked as Exhibit P-G-5 of this date.

Q. Who treated you in St. James Hospital? A. Dr. Beier and Dr. Lee Hughes of Newark.

Q. Did you notice any change in your sense of taste since the accident? A. Well, I can't taste things as strongly as I did before. I have no teeth up above; it is a plate.

Q. Let's do one thing at a time; is there any change in your capacity to taste? A. Yes, sir.

Q. Is it much of a change? A. Well, I think it is. I have to taste in quantities, in order to know what it is.

Q. You say you have no teeth in your upper jaw? A. No, they are false.

Q. False teeth all the way around? A. All the way around.

Q. Did you have teeth in the upper jaw before the accident? A. Surely.

Q. Did you have any out? A. I think I had a couple out. I had a little bridge and all my other teeth were intact.

Q. Do you have any pain in your mouth now? A. Well, soreness.

Q. Where? A. The roof of my mouth and gums, with my plate, soreness and my lower teeth are always bothering me; the gums are sore.

Q. Did they bother you before the accident? A. Never at any time.

Q. Did you wear eyeglasses before the accident? A. No, sir.

Q. Can you see without your eyeglasses? A. No.

Q. What is the condition of your nervous system now? A. Well, I am nervous; easily aroused.

Q. Easily excited? A. Yes, sir.

Q. Do you sleep well? A. Not very well.

Q. Do you work steadily? A. Well, I am on the go. I don't work all the time.

Q. Why can't you work all days; you say you seem not able to get—— A. I just can't get my mind down to things. I can't stand it, that's all. I have to go away.

Q. How does that condition compare with your condition before the accident? A. I had worked steady all the time, all my life.

Q. Do you feel any difference now? A. Yes, a great deal.

Q. What is the difference; are you nervous? A. Yes, very much.

Q. Do you have headaches? A. Absolutely, all the time.

Q. Every day? A. Every day, from the hole in my head.

Q. Did you have headaches prior to the accident? A. No, sir; not any length of time. I would have a headache at casual times.

Q. Anything the matter with your head? A. I have holes there.

Mr. George: I will ask permission to have the witness step down and let the jurors feel his head. I think that we can avoid the necessity of having this man's hair cut off, which we could do, to make the same visible to the Jury.

(The Witness's head exhibited to the Jury.)

The Court: Did that condition exist before the accident?

The Witness: No, sir.

(Recess to 2 p. m.)

(After Recess, 2 P. M.)

Edward W. Hopper, Jr., resumed the stand:

Direct examination by Mr. George (continued):

Mr. George: I will make the similar request that I be permitted to show the Jury the plaintiff's tongue.

(Presented to the Jury.)

Q. In what respect does your tongue differ now, if there is a difference from what it was before the accident? A. It was all cut up; it was sore for a long time, at first, very sensitive now. Anything hot, anything that is extremely hot, I can't drink anything hot. You must make it either warm or cold.

Q. Is there any difference in the condition of your tongue with respect to its having deep ridges or grooves in the tongue? A. Yes, sir.

Q. Were they there prior to the accident? A. Not to my knowledge.

Q. You said there was an explosion of acid, is that so? A. Yes, sir.

Q. Do you know whether any of the acid had gotten on to the windows of your automobile? A. All over the windows.

Q. Were any of the windows broken as a result either of the explosion or because one or more of the men that were in the car broke the window? A. I don't know whether they were broken or not because I didn't really wait to see.

Q. Have you any part of that glass in Court here? A. Yes, sir; I brought one of the glasses.

Q. One of the glass windows of your automobile? A. Yes, sir.

Q. Which window is it, I mean front or rear? A. Front window.

Q. Right side or left? A. Right side.

Q. I show you this glass and ask you where you ever saw this before? A. It has been in my home ever since the accident.

Q. Where did it first come from? A. My automobile.

Q. The car in which you were riding at the time? A. Yes, sir.

Q. What part of the front or rear? A. Front rear.

Q. What was the condition of the glass prior to the explosion? A. Clear.

Q. Is there any change between the condition of this glass as it now appears and shortly after the accident or at the time of the accident? A. Positively; it is frosted and burnt.

The Court: You saw that glass right after the accident?

The Witness: Yes, sir, I did.

The Court: Is there any difference now?

The Witness: Yes, sir.

The Court: Wait. What was its appearance right after the accident, or is it the same as it is now?

The Witness: No, it is the same.

Q. Did you have this glass removed from your automobile? A. Yes, sir.

Q. What did you do with it after it was removed? A. Put it in my home.

Q. Has it been in your home ever since?

Mr. Milton: We don't dispute it is the same glass.

Mr. George: I offer it in evidence.

Accepted and marked as Exhibit P-G-6 of this date.

Q. Do you know what a monumental sculptor gets now? A. $60.50 a week.

Q. How much do you receive a week? A. Now, $25.

Q. What is the highest amount of money you received per week since the accident? A. $25.

Q. Are you able to do monumental sculpture or lettering? A. Not lettering.

Q. Why not? A. I can't hold my hand steady enough.

Q. In the cutting of letters for monumental stone work, is a steady hand required? A. Yes, sir.

The Court: Have you said how long it was before you were able to take up any work?

The Witness: I was laid up about three months from the accident.

The Court: During which time you didn't do anything?

The Witness: No, I was in the hospital most of the time.

Q. Are you married or single? A. Single.

Q. You are twenty-eight years of age? A. Yes, sir.

Q. You never wore glasses before the accident? A. Never.

Q. You can't see without glasses now? A. No sir.

Q. Do you speak with the same force now as before the accident? A. I can't say; I talk.

Q. Of course we know you talk. Do you talk

with the same clarity and tone, and the same force or vigor? A. No, I don't I am short winded.

Q. What effect has the accident had upon your throat, if any? A. It affects my breathing.

Q. Just what do you mean by that? A. Well, I seem to take shorter breaths. In fact, if I walk quickly, it is forcible.

Q. How does that condition compare with your condition before the accident? A. I never had any trouble like that before.

Q. Were you strong? A. Yes, sir.

Q. Wind good? A. Yes, sir, very.

Q. Are you able to work any reasonable length of time without suffering fatigue or nervousness? A. No, I am not.

Q. How does that compare with your condition before the accident? A. I worked steady before; eight hours a day.

Q. Stone cutting and stone polishing, monumental stone is pretty heavy work? A. I should say.

Q. Requires considerable strength? A. Yes, sir.

Q. Are you now able to do that kind of work? A. No, sir; I am not.

The Court: During this time you were in the hospital, what were your physical feelings? How did you feel?

The Witness: I was burned very badly. It was a burning condition all the time.

The Court: Did it hurt you?

The Witness: I should say.

The Court: How long did you have pain?

The Witness: For about seven weeks, that is steady pain and now, for that matter, it is a burning feeling on damp days; if the weather is damp, there is that burning feeling on the side of my face all the time, and the head.

Q. Did you have much pain during the period you were in the hospital? A. Yes, sir; very much.

Q. For how long a period? A. Six weeks at least. I was sitting up in bed for six weeks, before I could lay down on my back.

Q. Why? A. I was burnt on my back; my breathing was impaired by this acid.

Q. Have you any scars on your body? A. I have a few; hardly noticeable, if you want to see them.

Q. You say you suffered severe pain for six weeks after the accident? A. Yes, sir.

Q. Did you continue to suffer pain after that six weeks' period? A. In the back after the treatment after I was discharged for many weeks, and with the holes in my head that were open.

Q. Does the hole in your head bother you now? A. Yes, sir.

Q. How long was the hole in your head open? A. About seventeen weeks before it healed up.

The Court: Do you refer to one hole?

The Witness: Many holes.

The Court: I thought you had indicated there were several?

The Witness: Yes, there is.

Q. Do you mean the hole or holes in your head? A. Holes, plural.

Q. They were open for seventeen weeks, you say? A. Seventeen weeks, yes, sir.

Q. You had to go back to St. James' Hospital? A. For change of dressing and attention.

Q. Do you have any pain in the head now? A. Yes, sir.

Q. Where the holes were? A. Yes, sir; headaches.

Q. Do you have any pains in the immediate vicinity of the holes? A. Yes, sir.

Q. That is on top of the head? A. Yes, sir.

Q. And the sides, where the holes are? A. Yes, sir.

Q. You say you don't sleep well? A. No, sir.

Q. Can't taste well? A. No, sir.

Q. You suffer pain in the tongue when it comes in contact with something that is warm? A. Yes, spicy; anything spicy.

Q. Were you able to eat spicy foods before the accident? A. Yes, sir.

Q. Without the difficulty you now have? A. Yes, sir.

Mr. George: Cross-examine.

Cross-examination by Mr. Ashmead:

Q. This place that you speak of in your head is covered by hair? A. No, not the holes, the hair is growing.

Q. What do you mean by that? A. The removal of part of the scalp that came out with the hair, when they cut it off and shaved me.

Q. You don't mean there is a hole there? A. Well, there is a hole, an indentation, the hole or excavation.

Q. You don't mean there was a hole in your skull? A. I don't know how far that hole goes in, because I can't see.

Q. So that when you speak of a hole, that was a hole or depression in your scalp?

The Court: A depression in your skull?

The Witness: Yes, sir; it is a depression.

Q. What were you getting at the time of the accident? A. $49.50 a week; that is the scale of wages at the time.

Q. Now, you had been, you say, working for your father? A. Positively.

Q. How long had you been working for your father? A. For about eight or nine years on and off; my grandfather, my father's step-father, he was in the same business where I learned my trade.

Q. During all that time you had occasion to use hydrofluoric acid? A. Positively.

Q. You used that in your daily work? A. Yes, sir.

Q. You had observed that it was an acid that was corrosive; you know what "corrosive" means? A. I don't know what you mean by corrosive.

Q. Did you ever have any on your hands? A. No, I didn't get it on there. It would burn them; because I am careful with it.

Q. Why were you careful? A. Because it would burn.

Q. You knew that it would burn? A. Yes, if it was put on there in the pure form, without dilution.

Q. You had observed its action on sand when it had fallen on the ground? A. Yes, sir.

Q. What was the action that you had observed during this course? A. Formed a white vapor, formed fumes.

Q. When the undiluted acid came in contact with the sand, there would be a fuming, a sort of burning, would there not? A. Surely.

Q. You had observed that during all the years you had worked? A. No, because when we used the acid for cleaning, we diluted it. In other words, we had added a quantity of water, but very little acid to this water and when you put that on the stone, it does not fume; it is too weak.

Q. If it is diluted for that purpose? A. That is cleaning the stone.

Q. You had occasion to observe the undiluted acid come in contact with the ground? A. Yes, sir.

Q. Where you spilled it? A. Yes, sir.

Q. You knew that action was more or less violent, active? A. Yes, active.

Q. Now, how long had you been getting acid from the Charles Cooper Company? A. About eight years.

Q. You had been getting it there from time to time in the same way that you came this time? A. Yes, sir.

Q. You had brought your jugs to be refilled? A. Yes, sir.

Q. The situation was such that if you went there to buy a new jug, you would pay for the jug as well as the acid and take both away with you? A. If I needed one.

Q. When you took a jug there and the jug had been used, they would simply refill your jug? A. If it was good enough to be refilled; otherwise they would make me buy a new one.

Q. They would refill your jug? A. If it was fit to be filled.

Q. Now, on this occasion that you went there, where did these jugs come from that you took there this time? A. I was getting it, this acid, for a florist as a favor. They asked me to get it for them.

Q. A florist; what was the name? A. Entermann.

Q. Where was her business? A. About a block away on Ocean Avenue.

Q. What did she do, carry on a florist business there? A. Yes, sir.

Q. Do you know what use she made of the acid? A. They clean glass with it to my knowledge.

Q. Cleaning glass with it? A. Yes, sir.

Q. So that when you dilute it, you can clean glass with it? A. I don't know how much they dilute it. I don't know what strength they clean it with.

Q. Notwithstanding the condition of the glass that has been shown here, which you say was affected by the undiluted acid, if diluted it could be used to clean glass? A. I don't know how it would act on glass. I never worked with it on glass. I know about the condition on stone.

Q. And on sand? A. Dirt or sand or anything.

Q. When in your jugs, you keep them stoppered? A. We have the original cork that came with the jug. We might use the acid one month, in fact one gallon gives us a year or a year and a half's use, because we use it very little; we have very little use for it.

Q. You kept the stoppers in them? A. Yes, corked to keep the strength.

Q. When the jugs were brought over, you did not see them brought over? A. What is that?

Q. From Mrs. Entermann; you didn't see the jugs brought over? A. No, I wasn't there at the time.

Q. Where did you get your knowledge that they came from there? A. Because Mr. Kruse, the man that brought them over, he put them in the hall to go get acid for him.

Q. Did they have any stoppers in them? A. None.

Q. Did all four of these jugs come from there? A. Yes, sir.

Q. Did you make any inspection of these jugs? A. It wasn't necessary, that I know of.

Q. You didn't make any inspection? A. No; I put them in my car.

Q. You knew at the time you were going to take them to the Charles Cooper Company to be filled with acid? A. Yes, sir.

Q. Did you attempt to clean them? A. No, that is not my place to clean them.

Q. I just want to know?

The Court: Did you?

The Witness: No.

Q. Now, having received these jugs unstoppered, you put them in your car ? A. Yes, sir.

Q. Had you started for the plant of the Charles Cooper Company when you met these other gentlemen? A. Yes, sir.

Q. Did you tell them where you were going? A. Yes, sir.

Q. Did you tell them you were going for acid? A. I did.

Q. Did they see the jugs? A. They did.

Q. When you got over to the plant, you took all four jugs to the office, did you? A. I did.

Q. Now, the gentleman you saw there was merely a clerk? A. A cashier I imagine, or clerk.

Q. You told him that you wanted 20 pounds of acid? A. Twenty pounds of acid for the florist. He didn't put the name on the receipt of the florist. He put my name on.

Q. The four jugs were there, were they? A. They were.

Q. You had never had any experience, had you, of ever getting a rebate from the Cooper Company on any old jugs? A. No, I never got any rebate from them.

Q. They refused to give you any rebate at that time, didn't they? A. They did.

Q. Now, I believe that you said that the two best jugs were selected. The two were selected that were the least bent? A. I imagine that was the procedure.

Q. That was what you mean; those two were the best jugs? A. The best looking jugs to my knowledge.

Q. So that there was no examination made by you or anybody as to which was the best jug, except for the fact that two of them were bent and the other two were not?

Mr. George: I object to that on the ground that it is improper cross-examination. On direct examination, the testimony of this witness with respect to the selection was merely that a representative of the defendant corporation made a selection of two of the best jugs, and upon what conclusion or what basis he arrived at the conclusion resulting in the two selected, this witness is not competent to say. Therefore the question is objectionable.

The Court: There can't be any objection to what he observed or what he did.

Q. He took the two jugs that were not bent? A. He took the two best jugs.

Q. What you considered the best jugs? A. Yes, sir.

Mr. George: I object to that.

The Court: I don't know whether it would make any difference what two.

(To the witness) He took the two that were not bent?

The Witness: He did.

The Court: The other two were not bent?

The Witness: They were not as good looking.

The Court: Did this gentleman look them over?

The Witness: Yes; all four of them.

The Court: Did he make the selection, or did you?

The Witness: He did.

Q. You say that you took two of the jugs out to the automobile? A. Two empty ones.

Q. The other jugs were still sitting on the floor when you picked these two jugs up which you took out of the automobile? A. Yes, they were there He took two of them for the acid, and I took these two and went right out.

Q. They were still sitting on the floor, the other two jugs when you picked up the two that you took out to the automobile? A. Yes, sir.

Q. And they were the bent jugs which you took out; the bent jugs were the two that you took out? A. Yes, sir.

Q. Now, you remained out in the automobile there, didn't you? A. Waiting for the acid, yes, sir.

Q. When they came out, didn't you place these jugs in the box? A. What is that?

Q. When the jugs were delivered to the automobile, didn't you place them in the box that was in the car? A. No, your man did.

Q. Didn't you so testify? A. No, I said I helped him place them.

Q. Just a moment ago and that is how you came to feel they were hot? Where were you at the time you felt the jugs? A. Inside the car at that time.

Q. In the rear of the car? A. Yes, sir.

Q. What were you doing in the rear of the car; you were driving, weren't you? A. Yes, sir.

Q. What were you doing in the rear of the car? A. To show the box, to see they would not tip over or fall.

Q. You were there to see the jugs were placed? A. Properly.

Q. In connection with that, you handled the jugs? A. I did; I felt them.

Q. So that you were standing over them at the time you handled the jugs? A. I was standing near them.

Q. Now, I believe you said you felt both of these jugs? A. I did.

Q. And I think you said this morning that both of them were hot? A. Yes, sir, I did.

Q. You didn't so testify before? A. I said one was warmer than the other.

Mr. George: I object to that; he said one was hotter than the other; not that both of them were hot.

Q. What did you say now? A. I still say, no.

Q. You testified in a prior trial in which this same accident was involved. You were then asked, "Q. Both of them were hot?" and you answered, "That I couldn't say." Do you remember testifying to that? A. I might have said that.

Q. Which is true; you could not tell that both of them were hot. You were then asked: "Q. Which one? A. I imagine the other one. Q. This jug? (Indicating P-1)" which was the tall jug.

Mr. George: May I have you refer to the page.

Mr. Ashmead: Pages 58 and 59.

Q. Did you so testify? A. I didn't hear your question. I said this morning that the smaller jug was the hotter, hotter than the taller.

Q. Before you testified that the taller jug was hotter? A. You might have misunderstood me; that does not say I said that.

Q. Do you now say that both jugs were hot? A. I do.

Q. Notwithstanding the fact that you said before when you were asked if both of them were hot, you answered "That I couldn't say"?

Mr. George: I think that is unfair to the witness unless at least two or three questions that preceded were given and those subsequent to the specific question that was asked.

A. What about it; right.

Q. What do you mean by "right"? A. I might have said at that time. The question might have been put to me. This is a year before when I was in that case than it is now.

Q. You admit saying that at the time? A. You have it there; I must have said it.

Q. Now you claim that both jugs were hot? A. I do.

Q. Each bottle you indicated? A. The one nearest to me was the one that blew up in my face; that was the smaller jug of the two.

Q. Is this the jug, Exhibit P-G-2? A. The small one.

Q. That is the jug you say blew up? A. The smallest, that is of the two that were filled; the smaller one of the two.

Q. Now, before you testified that it was the other jug that blew up, didn't you?

Mr. George: I wish counsel would refer to what he means by the other jug.

Q. That is the tall jug, P-G-1, blew up? A. You mean this morning?

Q. This one, which you say blew up? A. The smaller one of the two that were filled.

Q. That is now marked P-G-2? A. Yes, sir.

Q. Now, before, did you not say, in speaking of the hot jug, "I imagine the other one", and indicate P-G-1, that is, the tall jug?

Mr. Armstrong: I object to that on behalf of Kelly and Carroll. There is no evidence as to which was P-G-1 in the prior case now before the Court.

The Court: I think you ought to disclose which is which.

Q. Now, to which do you now refer? A. It looks to me as though it was the smaller jug that blew up.

Q. Are you sure of that? A. I would say of course, looking down at the thing, it looked as if it was the lower of the two. There was four there when I looked.

Q. You are not very definite about that. I don't want to confuse you. The fact is, this is the jug that blew up (indicating)? A. I would not say that.

Mr. Armstrong: That is not a question and answer; that is testimony.

The Court: Which do you say, according to your recollection?

The Witness: The smaller one of these two.

Q. And that is the one which has the larger opening? A. That one (indicating).

Q. All that you know about that is what you might have observed, after this stuff had hit you in the face? A. As I went to drive off with the car, I looked around to see if everything was all right and this blew up in my face. I went to start off with the car; I looked around to see if anything was coming. Then I looked over my friend's side, towards the jugs to see if they were all right before I started off. As I did, this jug blew up in my face. It looked as though it were the smaller one of the two. I didn't stand there looking after. I didn't see them no more.

Q. You are not certain of that? A. It blew up in my face. It looked to me the small one.

Q. You are not certain? A. I am as certain as that can be.

Q. You said at that time the jug was very hot? A. It was.

Q. Now you say that both jugs were warm? A. They were both warm to the hand.

Q. One very much hotter than the other? A. Yes, sir.

Q. You knew that at the time you handled them in the car? A. They were warm, yes, sir.

Q. Did you go into the office, or did you start right off with the jugs? A. I held conversation with your man for a minute.

Q. Just answer my question. Did you go back to the office? A. No, I was assured they were all right.

Mr. Ashmead: I move to strike that out.

The Court: Strike it out.

Q. This man that came out was a man with overalls on, was he not? A. He was.

Q. Had you ever seen him before? A. Only the once.

Q. He simply brought the jugs out to the car? A. That's all.

Q. You don't know who he was? A. I didn't know his name, or anything like that.

Q. You didn't know what position he held? A. No, not in the least.

Q. All you knew of him at that time was the fact that he was the man that delivered the jugs to the car? A. That's all.

Q. Now, when you went there; I believe you also used the word foreman, the foreman that took the jugs to be filled. You don't know that any foreman took them? A. Yes; he is the fellow that brought me to the hospital after I was hurt. That is the fellow, I believe, that looked in the jugs. It looked very much like him.

Q. You don't know what his position was? A. No, I can't say. Looked like a foreman.

Q. The fact is, isn't it, that while you were there, there wasn't anybody took the jugs from where you placed them? A. I didn't look where they took the jugs after I left. There was a man came and took the jugs. I walked out immediately, because I had paid him for the acid, and there was no use my waiting there; it was too warm that day.

Q. Before you came out in the street, the jugs had already been taken away? A. Yes, sir.

Q. You don't know who took the jugs away? A. I know he selected two jugs.

Q. What is that? A. I know who was talking to me. I knew who I was doing business with.

Q. You say that a foreman took them? A. I imagine he was a foreman. I didn't know who he was.

Q. That you were doing business with in front of the office? A. I didn't pay him.

Q. Haven't you already testified in this case it was the cashier? A. That is while I was in the office. I had paid the cashier and then the man came in brown overalls.

Q. Who did you give the order to? A. The cashier, as I should.

Q. Then you picked up the two jugs and went out into the street with them? A. Then I went, after asking if there wasn't any rebate.

Q. After you gave the order, you took two of the jugs out to the automobile? A. I did, yes, sir.

Q. You had taken these two jugs out to the automobole before anybody at all came after the other jugs? A. What happened to them after I went there I don't know.

Q. You don't know who came to take your two jugs? A. No.

Q. Then when you said the foreman came to take them, that was something you are not sure of? A. Well, I was talking to him in the cab.

Q. Just answer my question. You could not say it was the foreman? A. I can't say he was the foreman. He might be the President of the Company. I don't know who he was.

Q. In fact, you don't say who took them? A. No.

Mr. Ashmead: That will be all now. When I have time to re-read his previous testimony, I might then want to recall this witness.

Re-direct examination by Mr. George:

Q. Mr. Hopper, you were asked something by Mr. Ashmead about your former testimony with

respect to the jugs being hot. Do you recall having been asked this question, on page 58:

"Q. Did you see him come from the plant? A. Right out of the office door".

Do you remember saying that? A. The fellow that took the jugs?

Q. (Reading) "What did he do with the jugs? A. He brought them to my car, put them in this box, and made them fit very closely. I tried them and felt they were solid."? A. Yes, sir.

Mr. Ashmead: I object to that; there is no reason for this on re-direct examination.

The Court: You have a right, of course, to bring out any matter that tends to show something different than the question and answer given on cross-examination. I don't see that you are doing that.

Mr. George: I am coming to that.

Q. Then this question: "Q. Did you notice anything particular about that? A. They were hot".

Mr. Ashmead: I object to that, going into this man's other testimony.

Mr. George: I limit myself now to the question, if the Court please, which was the question in the record exactly preceding the one which Mr. Ashmead asked.

The Court: Read the one he asked.

Mr. George: The one Mr. Ashmead referred to was this question: "Both of them were hot? A. That I couldn't say." Now, this question precedes that one.

The Court: Read the question.

Mr. George: "Did you notice anything particular about that? A. They were hot."

Mr. Ashmead: I object to him telling the answer.

The Court: Objection overruled.

Mr. Ashmead: Exception.

Q. You remember being asked that: "Did you notice anything particular about that? A. They were hot." A. I do.

The Court: Did you so testify?

The Witness: Yes, sir.

The Court: That is admitted for the purpose of getting at the question and answer asked by Mr. Ashmead; only for that purpose, in order that this Jury may have the full story. Not as intending to prove any assertion made there that is not evidential at all, but in order that the Jury may have the full story.

Q. Do you remember having testified in the previous proceeding, involving this very case, Mr. Hopper, and this question being asked of you and your answer?

The Court: In conjunction with what has gone before, in order that the whole story may be told, you should read the question and the answer.

Q. (Reading) "Did you notice anything particular about that? A. They were hot." Did you so testify? A. I did.

Q. Did you further say, in answer to the question being asked, "How hot, can you describe it? A. Well, you wouldn't hold your hand on it very long, as you couldn't hold your hand on it and leave them there." Then, "Q. Both of them were

hot? A. That I couldn't say. Q. Which one (indicating jugs)? A. I imagine the other one. Q. This jug? (Indicating P-1)? A. Yes''? A. Yes, sir.

The Court: You may have an exception.

Mr. Ashmead: That is all right.

Q. As you outlined, in reference to the jugs, and at the time you felt them, which time you said you felt they were both hot, and one hotter than the other, which way did you turn, to the right or left? A. To the right.

Q. What kind of car were you driving, right or left hand drive? A. Left hand drive car.

Q. So you turned to the right? A. Yes, sir.

Q. What side of your face was turned? A. My right side.

Q. Will you step down here, please. These marks on your face were all produced by the burns of the acid? A. Yes, sir.

Q. Was your face so scarred before the accident? A. No.

Q. Some weeks after the accident, did you have photographs made of yourself? A. I did.

Q. Where? A. On Newark Avenue.

Q. How long after the accident? A. About eight or nine weeks after.

Q. That was after you were discharged from the hospital? A. Yes, sir.

Q. I show you a picture and ask you if that photograph represents a true likeness of yours at the time you mentioned? A. It is.

Mr. George: I offer it in evidence.

Accepted and marked as Exhibit P-G-7 of this date.

Q. I show you another picture and ask you if that was taken at the same time? A. Yes, sir.

Q. By the same photographer? A. By the same photographer.

Q. I ask you if this represents a correct likeness of yours as far as you can tell at the time it was taken? A. It is.

Mr. George: I offer it in evidence.

Accepted and marked as Exhibit P-G-8 of this date.

Dr. Edward F. Bogdan, called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Doctor, you are connected with St. James Hospital in Newark? A. Yes, sir.

Q. And have been for how long? A. For eight months.

Q. Were you in the hospital in June, 1925? A. Not at St. James.

Q. Have you charge of the records of St. James Hospital? A. I have not charge. We just supervise them. I have supervised them in the last eight months.

Q. Do you have custody of the records? A. No, sir; I have of the two cases involved.

Q. Do you know anything about these records? A. Yes, sir.

Q. Will you please refer to the case of Edward Hopper, and tell us if what you have in your possession now are the official records of the St. James Hospital? A. Yes, sir.

Q. Will you tell us what that record contains with respect to the condition in which Hopper was at the time he was brought into the hospital?

Mr. Milton: That is objected to.
The Court: Sustained.

Q. Who keeps these records, doctor? A. The Chart Care-keeper.

Q. That is his name, the official designation? A. Well, that is the designation used in our hospital.

Q. You mean the registrar? A. Yes, sir.

Q. Do you know who made those records? A. You mean the admitting clerk?

Q. Who has the official custody of those records? A. Sister Catiani.

Q. Is she the Registrar of the Hospital? A. Yes, sir.

Q. She makes the entries? A. Yes, sir.

Q. You were subpoenaed to produce the records, weren't you? A. Yes, sir.

Q. You know nothing about that? A. Nothing except what is stated on the chart.

Q. You don't know whether that is a true record or not? A. No, sir.

Mr. Milton: No questions.

Dr. William J. Arlitz, called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Doctor, where do you live? A. 518 Hudson Street, Hoboken.

Q. You have been practicing medicine how long? A. Thirty-five years in the County of Hudson.

Q. Have you limited your practice to medicine, or have you included surgery? A. In the last twenty years, I have limited my work to surgery and neurology.

Mr. Milton: You need not spend any time qualifying the doctor.

Q. You are a graduate of what college? A. University of Maryland.

Q. Is that the only college that you studied in? A. Yes, sir.

Q. Have you had any experience in lecturing? A. Yes, I have done some lecturing.

Q. During the thirty-five years that you have been admitted to practice medicine and surgery? A. Yes, sir.

Q. During the late war, did you have any participation in the army as a surgeon? A. Yes, sir.

Q. For how long a period? A. From 1917 until December 29th, 1918.

Q. Can you tell us approximately how many cases you handled while attached to the United States Army, approximately how many cases came under your supervision? A. The greater part of the time I lectured in the School of Military Surgery.

Q. To whom? A. Medical men.

Q. Medical men attached to the army? A. Yes, sir.

Q. Did you, in addition to your lecturing medical men connected with the army, administer treatment or advise treatment? A. I did, the latter part of that time.

Q. Can you tell us approximately how many cases you treated? A. I could not say at all. I

was attached during the latter part of my service to Camp Joe Wheeler at Macon, Georgia. We had about 2700 cases there.

Mr. Milton: What kind of cases?

The Witness: Ordinary hospital cases, some cases surgical, some influenza.

Q. There were 2700 patients at the hospital? A. Yes, sir.

Q. Who was the head of that hospital? A. Colonel Stein.

Q. Were all these cases under your direction as well? A. Well, I was assistant to the Commanding Officer, and I had something to do with the supervising of the care of these men.

Q. Did you actively practice your profession during the 35 years since you have been admitted to practice? A. All of the time.

Q. Now, doctor, have you had occasion to examine Edward Hopper? A. I did.

Q. When and where? A. I examined him on the 17th of May, 1926.

Q. Where? A. At my office.

Q. What did you find his condition to be? A. I found at the time of the examination that he had a number of depressions of the skull, ferrule-like depressions, which were covered with scar tissue. These ferrule-like depressions were of the outer table of the skull. They were located in the mid-parietal area, that is, right on top of the head. Then there was another like condition in the back of the head, on the right side; another one on the back of the head, in the upper part of the occipital area. Then there were a number of small gutter-like lesions. My best judgment was that all of them had been brought about by some caustic.

Q. Just what do you mean by caustic? A. Something had burned into the bone and it had left very decided grooves.

Q. Are you familiar with the action of hydrofluoric acid? A. No, only I know, have heard that it is caustic. I have had no personal experience with it as a caustic.

Q. Are you able to say whether the condition of the skull you have just described might have been caused by the application of hydrofluoric acid?

Mr. Milton: I object to that.

Mr. George: The question is to determine whether or not it would have been caused.

The Court: You have said, "whether it might have been."

Mr. George: His answer would be yes or no.

The Court: The question is, whether it could probably have been.

Q. From your experience and whatever knowledge you have of the action of hydrofluoric acid, can you say whether the condition you found was caused by hydrofluoric acid? A. My best judgment is that these gutter-like depressions and these scars were brought about by the application of some caustic, or some acid.

Q. Hydrofluoric acid is, according to your definition of the word caustic, a caustic?

Mr. Milton: That is objected to.

The Court: Do you know, doctor?

The Witness: Only from my reading. Not from my personal observation.

The Court: I understand you do not

claim to say you know of the actual action of hydrofluoric acid?

The Witness: Nitric acid could do the same thing.

The Court: It was an acid?

The Witness: I think so, yes, sir.

Q. Proceed? A. In addition to that, I found that he had a number of scars on the entire right side of the face, forehead, nose and on both sides of the jaw. He also had a very decided conjunctivitis of both of his eyes, what would be called a chronic conjunctivitis. This appeared to be of long standing; that is, it may have existed there weeks or months. It did not appear to be acute. During the course of this examination, he also had several coughing attacks. An examination of his chest disclosed that he had a number of large and small rales, which were because of a bronchial condition. My best judgment was that this pulmonary condition was due to the same things, or the same agent that had caused the condition of his eyes, his face and his head.

Q. You mean the contact of some caustic? A. Yes, sir; the inhalation of some acid, and the inhalation of some strong fumes or the inhalation of some powerful chemical.

Q. Did you notice the tongue, doctor? A. I also noticed that he had all of his teeth removed, and his tongue was decidedly furred and grooved, and the tongue tissue tender.

Q. Did the tongue indicate to you that there might have been the application of some caustic there, such as an acid?

Mr. Milton: Don't lead him too much, Mr. George.

A. It was a subnormal tongue. The inference was that the same agency had caused all of these conditions. In addition to that, I found that he had also had at some time, an operation on his spinal column. This operation had occurred some years prior to this accident and it was for the relief of a probable tuberculosis of his spinal column.

Q. Can you tell us how near to the brain the caustic had eaten away the gutters in the skull, as you described it? A. I could not tell that. That can only be determined by radiographs. They might give some idea as to how far or how much of the bone had been destroyed. The brain in itself was not in contact with this agency.

Q. Would you say that the gutter condition of the skull was decided? A. Oh, yes; anybody can feel it.

Q. What effect would the application or inhalation of a caustic, such as would have been likely to produce the condition you found Hopper in, have upon the nervous system? A. I doubt whether the effect would be other than that, which was secondary to the local or toxic effect. A man would suffer with a lot of pain and discomfort in connection with the superficial burns. He would suffer a lot of pain and discomfort in connection with the inhalation of these fumes, and this discomfort would be in the nature of a considerable amount of pain, and pain is an expression of the nervous system. Insofar as affecting his general nervous organization, I don't think it was other than the direct effect that it had at the time.

The Court: You mean any permanent effect. It would wear off with the pain?

The Witness: As the pain subsides. This man is always in considerable discomfort because of his condition, of the condition of his eyes, or was at the time I saw him. And because of the scar tissue in the face.

Mr. Milton: I move to strike out the testimony with respect to the man being always in a state of discomfort. The question was to the effect upon his nervous system.

The Witness: I mean to say that the effect on the nervous system is this discomfort that is produced in any part of the body. It is a local discomfort, instead of a degeneration or loss of function of the nervous system in general.

Q. As a matter of fact, would you consider the indentations in the skull as local? A. I would say he had a number of lesions, which was a general condition; it wasn't local. It was general and involved the greater part of his skull.

Q. Would all of that condition be sufficient to make him nervous

Mr. Milton: I object to that as leading.

The Court: What would that effect be, if any, on his nervous system?

The Witness: The discomfort he would suffer because of these multiple lesions. Discomfort is an expression of the nervous system. In other words, he would have pain here and have pain there (indicating).

Q. Would that pain cause nervousness? A. I have already said that pain is an expression of the nervous system. It it was not because of the nervous system, he would not have any pain.

Q. What I mean, Doctor, when Ispeak of nervousness, I don't mean in the sense of pain as it is commonly known; I mean the general nervous condition? A. Generally, this man suffers with a functional neurosis, not dependent upon any particular injury to his nervous organization. In other words, he is merely high strung or neurotic, because of the suffering he has gone through, and because of the damage to his tissues.

Q. In your opinion, for how long a period would that condition continue? A. I should say it would continue, might continue forever.

Q. Is there a likelihood that it will continue for the rest of his life? A. There is a probability, but I would not specify that; that in itself is not a very disabling thing. He is high strung; he is neurotic.

Q. Aside from whether it is so to him or not; I want to find out just what his condition is. He is abnormal? A. No question about that.

Q. As you observed him on the witness stand today, and in the light of your examination and observations last May, could you still say that even today he is in a high-strung highly nervous condition? A. He is high strung. He is generally sub-standard. He is sub-standard because of the things that have happened to him.

Q. Would the condition of the skull that you found cause headaches? A. Yes, sir.

Q. For how long a period? A. I could not say.

Q. Is there a possibility of continuing headaches, as the result of the condition in which you found the skull?

Mr. Milton: That is objected to.

Mr. George: I withdraw it.

Q. Doctor, would you say that the condition of the skull as you found it, would be likely to cause headaches?

Mr. Milton: That is objected to.

The Court: Sustained.

(To the witness) Would the reasonably probable result be headaches?

The Witness: I would say that the probable cause of the headaches in this particular case is continued trouble with his eyes.

The Court: You say that the headaches, that is the probable result of what has happened to him?

The Witness: Yes, sir.

The Court: Not the possible, but the probable?

The Witness: I think the headaches are intimately related and in all probability due to the continued trauma of his eyes.

Q. Is it your opinion that the condition of the skull would be a contributing factor to the suffering of headaches? A. Probably.

Q. For how long a period do you think the headaches would be the reasonable and probable result of the trauma, or condition of the eyes? A. I could not say; as long as he suffers with that eye condition, he is going to have discomfort. There is no question about that. This man has got a chronic condition there.

Q. That discomfort would include headaches, would it not? A. Yes, sir.

Q. Doctor, what effect would the general condition in which you found Hopper have upon the physical capacity for labor? A. For Labor?

Q. Would it cause any diminution in capacity, as far as normal? A. He is a sub-standard individual. He could not do the same amount of labor.

He could not undergo the same amount of hardship, if I may so term it, that a normal man could. This man has been seriously and badly injured.

Cross-examination by Mr. Milton:

Q. You found a history of tuberculosis in Mr. Hopper? A. I gave it as my best judgment he had it at some time, of the spinal column.

Q. To such an extent that he had to undergo a rather serious operation upon the spinal column? A. Yes, sir.

Q. When was that operation conducted—well, it was at least conducted prior to the happening of the accident in which he was involved? A. Yes, sir.

Q. Would a condition of tuberculosis produce a lowered vitality in a man?

Mr. George: That is objected to upon the ground that there was nothing relating to tuberculosis in the direct examination; therefore cross-examination along that line is objectionable.

Mr. Milton: Dr. Arlitz said that the man had been operated on for tuberculosis.

Mr. George: Of the spine.

The Court: And the doctor also said that this man had rales in the lungs.

The Witness: I have no hesitancy in answering that question.

The Court: I will overrule the objection and allow an exception.

Q. (Question read as follows: Would a condition of tuberculosis produce a lowered vitality in a man?) A. A man suffering with tuberculosis has a lessened resistance. When you add anything to that lessened resistance, which already

exists, you make his resistance so much less. A man who has lessened resistance is a fit subject for the development of almost anything. If a man had latent tuberculosis, or tuberculosis that had been healed and you subject him to a thing of this kind, the probabilities are that his condition will flare up and it will grow worse. That is an accepted fact in medicine and in surgery.

Mr. Milton: Now, I move to strike out the witness's answer and I ask to have the stenographer read the question to him again.

Q. (Question read as follows: Would a condition of tuberculosis produce a lowered vitality in a man?) A. I have said that the resistance is lowered.

Q. If the tubercular condition were progressive, it might affect his ability, or capacity to discharge or perform manual labor? A. That is understood.

Q. So that if Mr. Hopper had a progressive tubercular condition, that in itself, independent of any aggravating cause, might affect his ability to perform work as a stonecutter or monumental sculptor?

Mr. George: That is objected to. It has not been established that Hopper had not been entirely cured of any tubercular condition of the spine. Then I object on the further ground that there is no evidence as to when this operation was performed upon Hopper for the tubercular condition of the spine. For that reason, the answer could not possibly throw any light upon the subject.

The Court: Do you desire to test his qualification, or are you directing it to the proof in the case.

Mr. Milton: The direct proof in the case.

Mr. George: I object further on the ground that there is absolutely no evidence that there was any progressive tubercular condition.

(Argued.)

The Court: Doctor, tell us what rales are?

The Witness: Rales are small noises that are heard in the thorax of an individual whom you examined with the ear or with the stethoscope. These small noises indicate to you that there is abnormal secretion in the air tubes.

Q. And have you found rales in the lungs of persons who are affected with pulmonary tubersulosis? A. Yes, you find them in bronchitis; in pneumonia; you find them in croup.

The Court: Would there be any relevency between the tuberculosis that might have been existent in the spinal chord, and the rales you found in the lungs?

The Witness: None. I believe he had tuberculosis of his vertebra, of his spinal column. In the operation that was performed, a piece of bone was taken from another part of his body and it was put in the process, or ribs, and that piece of bone held in there and the ribs became fixed and the disease eradicated. He has a deformity there, but the active disease was arrested by that operation.

The Court: Doctor, is it probable that

rales such as you found existing in this man's lungs, would come from tuberculosis of the spine?

The Witness: Not at all likely. If a man had pulmonary tuberculosis, I would expect him to have rales of this kind; if a man had bronchial irritation, tubercular or otherwise, as the result of the inhalation of fumes, or this that or the other thing, I would also expect him to have rales.

The Court: Would you expect to find in the blood tubercular bacilli, or bacilli that came from the sputum?

The Witness: If a man had pulmonary tuberculosis, I would. I did not examine this man's sputum.

The Court: How about bacilli getting into the blood from the spinal column?

The Witness: I believe this condition was limited to his bony vertebra; that is my best judgment. Now, I know nothing about this man's lungs prior to this accident. To me he was a sub-standard individual. He was suffering with a number of things, and he had at some time in his life an operation for the cure of a spinal lesion. I don't know anything about his lungs prior to this particular examination.

The Court: Let us find out by the direct question, whether or not it is your opinion that the condition that you found in his lungs was the result of tuberculosis?

The Witness: My best judgment at that time, at the time of my examination is, what he had in his lungs at the time I examined him was a recent affair.

The Court: Was it tubercular?

The Witness: That I could not say. That would have to be determined by a radiograph of the lungs, by having the sputum examined. I did neither of them. I suggested that it be done, but it was not.

The Court: Your testimony is to the effect that you cannot say this was tuberculosis in the lungs; you are only testifying to what you found?

The Witness: The man had a cough, had a number of rales; that's all I can testify to.

Q. Now, the scars on the face, doctor, they have healed, have they not? A. Yes, sir.

Q. And the injuries to the head have healed? A. The wounds have healed, yes, sir.

Q. The wounds to the head have not brought about or produced any permanent injury to the nervous system, have they? A. Why, in this sense; the nerves supplying that particular area of the skull have been destroyed, and the nerve nourishment to that particular part of the skull has been destroyed. They must have been destroyed, because the tissue has been destroyed. It does not exist. What has taken its place is scar tissue. Scar tissue is sub-standard tissue, ill-nourished tissue which takes the place of the healthy tissue, and can never be healthy tissue.

Q. Would it affect a man's capacity to work as a stone cutter? A. That particular thing on the skull?

Q. Yes? A. No.

Q. Now, the scars on the side of the face, they have healed in a kindly fashion? A. If you can call scar tissue kindly tissue. It is ill nourished, impoverished tissue, subject to this particular ef-

fect; if it is ever traumatized and broken down, it is the most difficult thing in the world to heal up. It is healed at this time.

Q. It is now healed? A. Yes, sir.

Q. And in themselves, these scars, I assume, do not affect this man's ability to perform his work as a stone cutter? A. The scars in themselves; that particular scar, not in itself, but taking the individual in general, he is certainly not physically——

Q. Please answer my question and stop volunteering. These scars in themselves do not affect the man's ability to perform his work as a stone cutter, do they? A. No.

Q. Now, he is high strung, neurotic individual, isn't he? A. That is my best judgment.

Q. And this effect upon the nervous system is the result of pain. Suppose I do that, striking my hand on that bar, I get pain, by the striking of this rail or bar here (Indicating)? A. Yes, sir.

Q. That has an effect upon my nervous system, hasn't it? A. Yes, sir.

Q. And when the result of that misguided act which I just did leaves me, and the pain leaves me, the effect upon the nervous system goes? A. No comparison.

Q. Will you please answer my question? A. As far as you are concerned, within a few moments the pain would disappear.

Q. The extent to which the effect of the shock remains, depends upon the character of the shock, of course? A. In proportion to the amount of trauma, right.

Q. With the pain gone, its effect upon the nervous system gradually disappears. Even now my good right hand seems to be about the same as it was; that is true, isn't it? A. When healing takes

place, the manifestations as a rule subside to a very large extent; that is so.

Q. How long is it since this accident took place, eighteen months? A. June 23rd, 1925.

(Recess to 10 a. m., February 8, 1927.)

February 8th, 1927, 10 a. m.

Met pursuant to adjournment.

Dr. William J. Arlitz, resumed the stand:

Cross-examination by Mr. Milton (continued):

Q. You testified yesterday on direct examination that when you made your examination of Mr. Hopper in May, 1926, his teeth had been removed? A. Yes, all of them.

Q. Are you quite certain about that? What are you going to refer to now? A. My notes that I made at the time. No, I can't tell you if all of them were removed, but a number of his teeth were extracted; that is his statement, as a result of the accident.

Q. That is the statement he made? A. Yes, sir.

Q. Aren't you confused by reason of the fact that you heard the young man testify in court that his teeth had been removed because of this accident? A. No, I didn't hear him testify yesterday; only the part of his testimony relating to these two jugs here.

Q. You can't say definitely now whether or not at the time you examined him in May, 1926, all of his teeth had been removed, can you? A. I am not positive, but my best judgment is that all of

his teeth, or the greater part of them had been removed at that time.

Q. That is your best judgment now? A. Yes, sir.

Q. The condition of his tongue, the furred condition of his tongue, is it your desire to have the jury understand that you believe that is due to the inhalation of fumes or this acid?

Mr. George: I object to the form of the question.

The Witness: That was my judgment; his tongue was decidedly abnormal in appearance and it was my judgment that that was brought about by the same agent that caused his other burns.

Q. And the same agent which caused the rales in the lung tissue? A. That was my judgment.

Q. It is true, is it not, that such a condition of the tongue might be the result of typhoid fever? A. It is possible, but not probable.

Q. And of malarial fever? A. I would be inclined to doubt that.

Q. What about dysentery, acute dysentery? A. If a man had the abscessed or lacerated type of dysentery, he might have an abnormality of his tongue.

Q. You say he had an abnormal condition of his tongue; is it still abnormal? A. It was when I saw it.

Q. In May, 1926? A. Yes, sir.

Q. Have you looked at it since? A. No.

Q. The condition you saw in May, 1926, you say in your judgment, is due to the cause that produced the rales in the lung tissue? A. Yes, sir.

Q. What are the names of the passages which lead to the lung tissue in the body? First, the mouth? A. Yes, sir.

Q. Then the glottis? A. Yes, sir.

Q. They are both lined with mucous membrane? A. Yes, sir.

Q. And, as you proceed downward? A. Through the larynx, the trachea and bronchial tubes, the bronchial smaller branches and the air vesicles which are distributed through the lung tissue.

Q. And this agent which produced the abnormal condition of the tongue and produced the rales in the lung tissue, had to pass through the larynx, pharynx and trachea? A. Only would if it was in the nature of a gas.

Q. The bronchial tubes and the bronchus and what next? A. The air vesicles.

Q. Before it reached that portion of the body where the rale you say exists; is that right? A. The rales exist in the bronchial tubes.

Q. Then this agent or agency had to pass through the mouth, the larynx, pharynx, trachea and bronchial tubes; right? A. Yes, it could not get into the lung tissue or into the bronchial tubes without going through the nares or the mouth.

Q. Have you said a single word on this stand which would indicate an affected condition of the larynx, pharynx and trachea of this man? A. Of the mouth, yes, sir.

Q. You heard me; I said the larynx, pharynx, and trachea? A. I have not.

Q. Do you want the jury to understand that the agency which set up the rales in the bronchial tubes and caused the irritated or abnormal condition of the tongue passed through the larynx, phraynx and trachea, without irritating them? A. I have not said that.

Q. Do you want the jury to understand that? A. I could not even assume that.

Q. Do you assume that? A. No. I assume this, if you will permit a word of explanation. If a man inhales a gas, and the lung tissue or bronchial tubes become affected as a result of that, it must pass through these organs that you have mentioned, or these passages, and the probabilities are they will share in the irritation that is caused. Now, I have not examined this man's pharynx. I have not examined the larynx.

Q. You examined this man for the purpose of testifying in this suit? A. Yes, sir.

Q. In order to convince the jury that he should be awarded substantial damages?

Mr. George: I object to that as absolutely improper cross-examination.

The Court: That may be the fact, the purpose or the fact.

A. The purpose was to testify.

Q. To testify as to the condition of the man? A. Yes, sir.

Q. And as to the effect produced upon him by this alleged inhalation of gas, arising from the evulsion of the acid? A. That is right.

Q. And you did not examine his larynx? A. No.

Q. And you did not examine his pharynx? A. No.

Q. And you did not examine his trachea? A. No.

Q. You did not; that is a fact? A. Impossible for me to do it.

Q. You call this man sub-standard? A. Yes, sir.

Q. That means one who is below the ideal standard fixed by insurance companies? A. No; below the average standard.

Q. How old is this man? A. I don't know without referring to my notes, if you want me to give you the exact date.

Q. I would like to have it? A. 28 years old he was at the time of my examination.

Q. And the normal weight or average weight for a man 28 years old is what? A. His weight is in proportion to his height.

Q. How much does Hopper weigh? A. 150.

Re-direct examination by Mr. George:

Q. The fact that a man is over the normal weight, or that which is accepted as the average weight for height, could not have any indication at all as to his capacity for resistance, would it?

Mr. Milton: I object to that upon the ground it is not proper re-direct examination.

The Court: It is very leading.

Mr. George: I will reframe it.

Q. Doctor, what effect had over-weight, that is, weight over the standard or average upon a human being with respect to power of resistance? A. The assumption in medicine and in surgery is that a man who is taking on weight is building up his resistance all of the time, until he reaches a certain point and then he becomes soft and flabby and his resistance is not good.

Q. Is the matter of weight, variance of weight, a few pounds over or under, accepted as an average indication of health? A. Well, that is a disputed question. Insurance people nowadays believe a very thin individual is a better risk.

Q. Why didn't you examine the larynx and trachea? A. It would require an examination with

a certain instrument, certain instruments, electrical instruments, which I don't have. I am frank to say I am not a specialist in that line. I am not sufficiently skillful in that line, I am not sufficiently skillful to make an examination of these particular parts.

The Court: That is a specialty?

The Witness: A specialty, yes, sir.

Q. The condition in which you found this young man and the observation you made in the light of the history of the case, which I take it you based a great deal of your diagnosis on, would you say that the inhalation of gaseous fumes of the kind described in this case would have any effect upon the sense of taste? A. Well, if a man had an injury to his tongue or a burning, or any kind of trauma to his tongue, the probabilities are that the taste bulbs would be materially affected; they might be destroyed to a very large extent.

The Court: From your examination of this man's tongue, as you found it, would you say that it is probable?

The Witness: The sense of taste is a matter of education. This man presents an abnormal tongue. He tells me has lost the sense of taste. I can't say. No one can determine that. It is just what the individual tells you.

Q. Doctor, Mr. Milton has asked you on cross-examination if it is not possible for the furred or abnormal condition of the tongue to be caused by either typhoid, chronic diarrhea or dysentery, or malarial fever?

Mr. Milton: I didn't go into the realms of diarrhea.

Mr. George: Dysentery, if he used that as one of the illustrations.

Q. (Question repeated as follows: Doctor, Mr. Milton had asked you on cross-examination if it is not possible for the furred or abnormal condition of the tongue to be caused by either typhoid, dysentery, or malarial fever) (Continuing) If the tongue is abnormal. Now, would you say that the condition in which you found his tongue, when you examined it last May, might have been produced as the original cause by typhoid. In other words, if it were caused by typhoid or malarial fever, caused the condition in which you found his tongue in May, and if he has still an abnormal condition, would you still say that it might have been caused by typhoid? A. I have said, and I would like to clarify this answer if I may. I have said that this man's tongue, if it were perfectly normal and he did inhale this acid, what he has now might be the result of a burn as the result of the inhalation. On the other hand, if this man had a type of disease that affected this tract, he could have a tongue with an abnormal appearance. I didn't know anything about this man prior to the examination, and I must assume when I examine a man that he didn't have. I can't go into the period between ten and twenty years back. I do know he had trouble some time with the spinal column. I know when I examined his lungs, what I found was the result of this accident. I don't know what happened previous.

Q. Doctor, you testified yesterday that tuberculosis of the spine, which required the removal of part of the vertebra, would not cause the rales as you found them when you examined this young man? A. Not at all; they are separate and independent conditions.

Q. So that, as far as you are able to testify from your observation and diagnosis of this young man when you examined him, would you say that the operation for spinal tuberculosis had any connection whatsoever with the rales that you found in his lungs?

Mr. Milton: That is objected to as not proper re-direct examination. There was no possible suggestion that the operation had anything to do with the existence of rales.

Mr. George: I withdraw the question.

Q. As a result of the observation and examination that you made, would you say that spinal tuberculosis, if he had it some years prior to the accident, might possibly have caused the rales in the lung? A. It would not. I would like to qualify that again. I want to say this, that tubercular bacilli are with us all the time, even with the healthiest.

Q. When you say "bacilli" you mean "bugs"? A. Yes; most individuals have them in their bronchial tubes, in most individuals you examine. You will find they have small area of healed tuberculosis. That is so with almost everybody. Now, if an individual had been subject to tuberculosis in certain parts of his body, and were traumatized by a direct blow or by the inhalation of gas, or by some other means——

Q. Traumatism is injury? A. Injury;—that part would be a prolific field for the development of tuberculosis.

Q. So that one might get along even with the result of a traumatic condition, and for a long period of time, and then come in contact with some violence thereafter, the bar of resistance having

previously been reduced by traumatism, and the patient or individual could be affected by the subsequent violence? A. That is a recognized fact in medicine.

Q. Now, doctor, to what group does hydrofluoric acid belong in medicine or chemicals? A. It is of the same group as bromine and chlorine, called the halogen group.

Q. How many acids are there in that group? A. I could not tell you. I know of the three, there may be more.

Q. Do you know to what group hydrofluoric acid belongs? A. Well, I believe it belongs to the halogen group. I can't say; frankly I don't know much about chemistry. The only thing I can tell you is the experience I have actually had with chlorine.

Q. Do you know, Doctor, whether, and if you don't you can say so, whether hydrofluoric acid etches glass? A. Of my own knowledge, no; from hearsay, yes.

Q. When you say hearsay, what do you mean? A. I have heard it said that it does.

Q. Do you mean amongst the medical profession? A. No, I have heard it said that it is used chemically to etch and engrave glass. I have never seen it done.

Q. It has been stated by counsel in his opening address to the jury, that hydrofluoric acid has the power to etch glass. If hydrofluoric acid can etch glass, and if the acid can eat into glass, what would the probable effect be on the tissues of the lung or the air passages?

Mr. Milton: I object to that, because it is based upon an unwarranted assumption of fact, that this man took the acid, the liquid, imagine, the liquid, into his lungs.

The Court: That is quite different, I should assume. I sustain the objection; the reason is that we are dealing presumably with fumes.

(Question withdrawn.)

Q. Doctor, do you know whether or not hydrofluoric acid gives off fumes? A. I believe it does.

The Court: Mr. George, understand the reason for my sustaining the objection is purely on account of the fact that he has never etched glass—he does not know. That does not preclude him from giving his opinion of the effect of it.

Q. Doctor, do you know whether or not hydrofluoric acid, giving off fumes, if an acid of this kind had come in contact with the tongue or had gotten into the mouth, would the fumes imparted from that acid to the mouth have any effect upon the tissues of the air passages? A. It would primarily produce an irritation or inflammation of the air passages, and would be followed by fibrosis of the lungs. I want to qualify this again. I am not speaking of this particular acid. I am speaking of this group. I am speaking of chlorine, bromine and fluorine. The inhaling of this gas itself produced inflammation and fibrosis of the lungs.

Mr. Milton: I move to strike out the doctor's testimony with respect to the action of gas arising from an evulsion of hydrofluoric acid.

Q. Do you say that hydrofluoric acid belongs to the halogen group? A. I have been so informed. The books say so.

Q. Generally accepted textbooks, accepted by the medical profession? A. I believe it is one of that group.

Q. And the three or four that you mentioned belong to that group, hydrofluoric acid, and chlorine? A. Yes; I want to qualify this again, by saying I am not a chemist, and insofar as my personal observation is concerned, in connection with hydrofluoric acid, I have never seen an individual burnt or injured by the inhalation of this particular gas. When I speak of inflammation of the air passages and fibrosis of the lungs and the condition that follow after that, I am speaking because of my observation of chlorine gas, phosgene gas, which were used a few years ago rather often for the purpose of destroying life.

Q. You mean in the late War? A. Yes, sir.

Q. I want to ask you again; does hydrofluoric acid belong to the halogen group? A. That is my best understanding. I want to qualify that again. I am not sufficiently versed in chemistry to tell you the exact relationship of these gases.

The Court: Doctor, to cut right across the field and get on the other side quickly: are you in a position as an expert to advise us the exact effect that hydrofluoric acid would have, that is the gas arising from it would have upon the tissues?

The Witness: My best judgment is that it would produce or would have an excoriatic effect on the external tissues and it would produce a very decided irritation of the air passages.

Re-cross-examination by Mr. Milton:

Q. Although you have never seen a case of irritation produced by contact with the gas of hydrofluoric acid? A. I never have.

The Court: Just give us the basis of it, so that the Jury may know how to weigh your opinion, doctor?

The Witness: I say that that is——

The Court: Because it is of the same group?

The Witness: Yes, sir.

Q. Your judgment is that it is of the same group of phosgene? A. I said chlorine and bromine.

Q. You are not certain about that? A. That is my best judgment. I said I wasn't a chemist.

Q. It might well be that bromine and chlorine are fundamentally the same, but the combination give entirely different properties? A. It might be so; I could not dispute you there.

Dr. Lee Hughes, being called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Where do you live? A. I live at the Newark Athletic Club, Newark, New Jersey.

Q. Are you a licensed practicing physician of the State of New Jersey? A. I am.

Q. And have been for how long? A. For five and a half years.

Q. What college are you a graduate of? A. Jefferson Medical College, Philadelphia.

Mr. Milton: We are quite willing to concede Dr. Hughes' qualifications.

Q. You were in attendance at St. James Hospital in Newark in the year 1925? A. I was.

Q. In what capacity? A. As the attending eye surgeon.

Q. While there and in that duty did you come in contact with the case of Edward Hopper? A. I did.

Q. Do you know when it was that he first came under your observation? A. Yes, sir.

Q. When please? A. June 23rd, 1925.

Q. What time of the day? A. Between 3:20 and 3:30. I had just completed the clinic.

Q. You are an eye specialist? A. I am.

Q. You limit your activities exclusively to the eye? A. I do not.

Q. Eye, ear, nose and throat? A. Throat, mostly eye.

Q. Mostly eye? A. Yes, sir.

Q. What condition did you find Hopper in on the first occasion that you saw him? A. You are referring now to the eye?

Q. Well, generally, if you can tell us. A. When I saw Mr. Hopper he was in bed. His face was covered over with a cloth I guess, the left eye was exposed, and the other, the cloth was saturated with vaseline. The nurse removed the cover from his eye. I saw the face. The right side was burnt, the upper lid, practically the entire upper lid of the right eye was burnt and I guess at the time there was some swelling of the lids. By opening, spreading the lids, I found that the cor-

nea was burnt a chalky white. Also there was marked burning of the conjunctiva.

Q. Pardon me, Doctor. What is the cornea? A. The cornea is what we speak of as the glassy portion of the eye.

Q. That is the outer surface? A. It is directly in front of the pupil, of the iris which is the colored portion of the eye.

The Court: Which eye was this, Doctor?

The Witness: This was the right eye I am describing. The man at that time was unable to recognize anything except light. He could tell the difference between daylight and darkness. An examination of the eye revealed a slight burning of the supra orbital, which is the arch which is above the eye. There also was a burning of the conjunctiva of the left eye and a very slight burn of the cornea in the lower part. The patient except for the irritation, had practically full vision in that eye at that time I saw him.

Q. Which eye? A. The left eye.

Q. It was burnt, however, was it? A. It was burnt, yes, sir.

Q. Not quite as badly as the right eye? A. By no comparison.

Q. What else did you find about him, Doctor, as far as his condition? A. As far as I could see; I only examined his face. I found that there seemed to be a slight burn of his nasal orifice. His lips were burnt over the entire surface. I also asked him to open his mouth. I saw in his mouth a burn of his tongue, and what we call the buccae muccus membrane on the anterior portion of his mouth.

Q. Do you know whether or not at that time the patient was suffering pain? A. He was in extreme pain.

Q. When did you next see him, Doctor? A. The following day.

Q. And again after that? A. Why, I saw him at two-day intervals the next two weeks and then weekly intervals while he was in the hospital.

Q. How long was he in the hospital to your knowledge? A. He was discharged to my knowledge July 26th, 1925.

Q. Are you sure about that? A. I am not, exactly.

Mr. Milton: The record shows July 28.

The Witness: July 28.

Q. Did you treat him after he was discharged from the hospital? A. I did, sir.

Q. Until when? A. I have seen him at intervals until the present time.

Q. You are still treating him? A. No, I won't say I am treating him. I am examining him from time to time.

Q. Doctor, assuming that Hopper's sight was normal prior to the first occasion of your having seen him, can you tell us what the present condition of his eyesight is? A. I presume you mean in percentage of loss of vision?

Q. Yes. A. Right eye, 28 per cent.

Q. Left. A. 17.

Q. Can you tell us about how long that disability of percentage of vision will continue? A. In my best judgment it will be permanent.

Q. For life? A. Yes, sir.

Q. Could you tell us whether or not the condition of Hopper was an injury to the eyesight which produced the condition that you found when you first saw him, whether that would have any effect upon his nervous system? A. I could not say that.

Cross-examination by Mr. Milton:

Q. Your opinion as to the degree or percentage of loss of vision was predicated upon normal vision existent prior to the contact with acid fumes or acid? A. Yes, sir.

Q. Are you willing to say that this man had normal vision before the accident? A. No, sir.

Q. It might well be that quite some degree or portion of this 28 per cent. in the right eye and 17 per cent. in the left eye of loss had occurred prior to the accident?

Mr. George: That is objected to because the witness knows absolutely nothing about the condition of the eyes prior to the accident and that therefore the only thing the witness can testify to is the degenerated capacity of sight from normal, what in the judgment of the expert and a specialist would constitute normal vision.

The Court: This is cross examination. In order that you may know the basis of his claim, of course we might infer that was the situation. I overrule the objection.

Q. (Question read as follows:) "It might be well that quite some degree or portion of this 28 per cent. in the right eye and 17 per cent. in the left eye of loss had occurried prior to the accident?"

Mr. George: Exception.

A. I may answer that by guess, not knowing the condition of his eyes previous to his accident.

Q. As a matter of fact this young man is far sighted? A. He is at the present time.

Q. There was a pretty good absorption of scar tissue in the conjunctiva of the right eye? A. There have been.

Q. Wouldn't it be a fair inference, then, Doctor, that notwithstanding the present condition of the eyes that a considerable portion of the far sightedness had existed prior to the accident? A. Well, if I might qualify that, what I meant by far sightedness. We speak of it in medicine or in eye work, far sightedness as being hyperopia. Now, a patient might have perfectly normal vision and as the result of some accident or impairment of health, the muscles of accommodation are not as active as they were previous to that and as a result the patient will have to wear glasses because of that. We speak of that as a latent hyperopia.

Q. You are unable to say, as I take it, how much of that impairment of vision had existed prior to the happening of this accident? A. I am unable.

Q. And it would be a fair inference and a fair thing for me to say that quite a considerable portion of the loss of the 28 per cent. in the right eye had existed? A. No, I don't feel so.

Q. Not a very considerable portion? A. No.

Q. Some portion of it? A. A very small portion.

Q. And of the left eye? A. Probably a greater proportion.

Q. A greater proportion of the left eye. You predicate that opinion, I presume, upon the difference in degree to which the respective eyes were turned or exposed to this acid? A. I do.

Q. So that the left eye which suffered the least from the contact of the acid probably had a greater degree or portion of the loss in vision before the accident? A. I would not say.

Q. Greater than the right, I mean? A. Yes, proportionately.

Re-direct examination by Mr. George:

Q. Is it necessary in view of the degenerated capacity for vision that Hopper wears eyeglasses? A. Yes, sir.

Q. And for how long will he have to wear them? A. For life.

Q. Doctor, do you know anything about the action of hydrofluoric acid upon the eye? A. I do not.

Dr. Louis Bleier, being called as a witness for the plaintiff, first duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Where do you live? A. Newark, 365 Walnut Street.

Q. You are a licensed physician and practice your profession of medicine and surgery in the State of New Jersey? A. I do.

Mr. George: Are the qualifications admitted?

Mr. Milton: Surely.

Q. Were you attached to St. James Hospital, Newark, in the month of June, 1925? A. I was.

Q. In what capacity? A. Interne.

Q. Did you treat Edward Hopper when he was brought into the hospital? A. I did.

Q. When was the day that you first saw him? A. I do not remember unless I have the record there.

Q. Are you familiar with the records? A. Yes, sir.

Q. Are the entries in the records made under your supervision? A. I believe most of them are.

Q. I show you the record of St. James Hospital and ask you if these were made under your supervision (handing witness)? A. Yes, sir.

Q. Now, Doctor, will you use that record made under your supervision and refresh your recollection as to the case of Hopper? It will do that, will it? A. It will.

Cross-examination by Mr. Milton:

Q. Were you the only interne in charge of the hospital? A. I was the only interne in charge of Mr. Hopper.

Q. How many nurses were in charge of him? A. That is hard to say.

Q. Who was the attending physician? A. I believe Dr. Sprague was on the staff at the time.

Mr. Milton: Go ahead.

Direct examination by Mr. George:

Q. You may use that to refresh your recollection, Doctor, if it will refresh your recollection as to the time when Hopper came into the hospital. A. Hopper came into the hospital on June 23rd.

Q. In what condition did you find him when he came in? A. I have found acid burns of the head, face and back, legs and feet and I so wrote on the chart.

Q. Did you look in his mouth? A. Well, he smelled of the acid. The mouth was red of course as it usually is from the inhalation of acid, red

and so on. He had the fumes of the acid on him as I remember.

Q. Did you detect or recognize the odor of acid on him? A. I did.

Q. And the character of the acid? A. Well I didn't recognize the character until I was told what it was.

Q. Well, do you know what the acid was that he smalled of? A. Yes, sir.

Q. What? A. Hydrofluoric acid.

Q. Do you know anything about that? A. Well, from what the discussion was.

Q. Do you know anything about it by smelling? A. Smelling? It is a very pungent odor and I remember the odor that day it made.

Mr. Milton: You are stating this from smelling?

The Witness: From smelling it. I got quite a smell of that.

Q. Now, Doctor, when Hopper was first brought in was he in pain? A. Severe pain, yes, sir.

Q. Can you tell for how long a period he suffered pain while in the hospital? A. Very many weeks.

Q. He was discharged from the hospital when? A. July 28th. From June 23rd to July 28th he was there.

Q. About five weeks? A. Yes, sir.

Q. Did you see him after he left the hospital? A. I believe once or twice.

Q. At your office? A. No, not in my office.

Q. Were the burns in the head of any great extent? A. Considerable, taking in the entire scalp from the forehead right back to the occipit, far back.

Q. As you observed the condition of Hopper

as he progressed from the time he was brought into the hospital, would you say that the condition that caused or rather the accident that caused that condition would be likely to create a nervous condition?

Mr. Milton: That is objected to.

The Court: On the ground that it is merely a possibility.

Mr. Milton: Yes, sir.

Mr. George: I withdraw the question.

Q. Doctor, would you say that as a result of the injury which produced the condition which you found him suffering from that nervousness would be the reasonable and probable result therefrom?

Mr. Milton: I object to that if the court please.

The Court: Why?

Mr. Milton: I think the question is leading.

The Court: I overrule the objection.

Mr. Milton: Exception.

A. It would.

Q. For how long a period of time, Doctor? A. That of course I could not state.

Q. Have you seen him this morning? A. Yes, sir, I did.

Q. Talked with him? A. Just about three or four words, good morning, and that's about all.

Q. Were you able during that short period to make any observation as to his condition, nervous condition or otherwise? A. I don't know as I could very well.

Mr. Armstrong: We will take up the matter of Carroll now.

Mr. Milton: I think I would like to cross-examine on this first.

Cross-examination by Mr. Milton:

Q. When did you leave the hospital service? A. I left in August, 1925.

Q. What date in August? A. The first of August.

Q. So that you left the hospital practically or substantially simultaneously with Hopper? A. Approximately, yes, sir.

Q. He left on the 28th of July? A. Yes, sir.

Q. How soon after the first of August, 1925, did you next see Hopper? A. I met Mr. Hopper quite some time later. I shook hands with him very casually. I just don't remember the incident.

Q. It was not a professional meeting? A. No.

Q. It was just social or casual? A. No, socially. It was just a meeting.

Q. So that you made no examination of Mr. Hopper at the time? A. No.

Q. When did you next see him after that meeting? A. I again met him in an offhand way, in just that social manner.

Q. So that am I correct when I say that you have had no professional contact with Mr. Hopper since both of you left the hospital? A. No.

Q. Your knowledge of Mr. Hopper's condition therefore is the result of whatever opportunity you had to observe him while he was in the hospital? A. That's all.

Q. I take it you had no opportunity to read these records of the hospital since you left the hospital? A. Not at all.

Q. And have had no occasion to think about the

Hopper case especially. No reason to do that until you were invited by Mr. George or someone that you were to be called as a witness? A. Until I got my subpoena.

Q. And when was that? A. I think it was the day before yesterday, something like that.

Q. It was a day or two ago? A. Yes, sir.

Q. So that from July 28th, 1925, until a day or two ago, the Hopper case was just one of many hundreds that had passed under your observation while you were an interne in the St. James Hospital? A. Exactly.

Q. In fact your recollection, I think it would be fair for me to say, of the Hopper case would be vague without an opportunity to observe these records? A. In a way.

Mr. George: I object to that.

Mr. Milton: I withdraw it.

Q. Your recollection of the Hopper case without an opportunity to read these records would not be good? A. Well, the incident there, the entire situation.

Q. Would it or not? A. It would be fair; it would be pretty good without the record.

Q. What is your experience, Doctor, with respect to the probability of hair growing on the scalp if an acid burn is a severe one, would hair be likely to come on or probably come in? A. Hardly.

Q. Has Mr. Hopper's hair come in? A. Well, I don't know.

Q. Look him over, will you? A. There is considerable hair here. Where the burns were severe I notice there is quite a depression here.

Q. His hair came in? A. It has not.

Q. Not all was burnt by the acid. A. There

are several areas here, one quite large where there is a deep depression and no hair.

Q. However, there are many places on the scalp where the hair has come in on the head, isn't that so? A. Yes, sir, I dare say it is.

Re-direct examination by Mr. George:

Q. Doctor, can you tell, either from the records or your own recollection whether or not the bony part of the head had been destroyed? A. It is rather obvious in this case, in this instance.

Q. I am not speaking of the scalp, I am speaking of the bones in the skull. A. Yes, it is obvious, it is there.

Q. It is eaten into? A. Yes, it is.

Q. To any appreciable extent? A. Considerably.

(As to James Kelly.)

Direct examination by Mr. Armstrong:

Q. You also attended James Kelly? A. I did.

Q. Did you make a record of the treatment accorded to James Kelly? A. I believe I did.

Q. Is that the record? A. Yes, sir, it is.

Q. Made by your personally? A. Yes, sir.

Q. Do you need it to refresh your recollection? A. I do not.

Q. Do you remember the incident when he was admitted to the hospital? A. Yes, sir, I do.

Q. Will you tell us what you found? A. Well I can give you a very vivid description how the man was.

Q. Just as you found him, not too vivid. A. The man came walking in from an automobile without any clothing on whatever, not a stitch of

clothing. He walked in and he had a wad of cotton before him, over his genitals, and I took him upon on the elevator with Mr. Hopper at the same time.

Q. About what time of the day was that, if you remember? A. I would not say, I am just a little bit cloudy about the time of it.

Q. Does your record show the time of it? A. I don't think it does—three thirty.

Q. Will you tell us just what happened between the time of his admission and all the rest of the case. A. Well, I got him into the emergency room. He immediately dropped to the floor. I began to work on him and we eventually got him into bed. About five minutes after being in bed, he died.

Q. Can you tell us the cause of his death? A. Asphyxiation I think I said.

Q. By that you mean the inhalation of a gas? A. The inhalation of acid gas, yes, sir.

Q. Did you recognize by or from any evidence of any kind or character whatsoever what the cause might have been that killed James Kelly? A. Why, I thought from what I understood later it was hydrofluoric acid gas.

Q. Was there any smell or odor about his body? A. Yes, you could hardly go near him.

Q. Can you tell us the time he died? A. Ten minutes after he got into the hospital.

Mr. Armstrong: I want to offer the record in evidence.

Mr. George: I want to offer this in evidence, too.

Cross-examination by Mr. Milton:

Q. Is this record in your handwriting? A. Most of it.

Q. The nurse's notes are in too? A. The night nurse's I believe and one of the Sisters did some of it.

Mr. George: The same thing is true in the other record.

Q. The record of the Kelly case, the entries under the caption "Physician's orders" are they in your handwriting? A. Yes, that is mine.

Q. The entry under the caption "Nurses notes" I take it are not in your handwriting? A. No.

(Accepted and marked as Exhibit P-A-1 of this date.)

Dr. Edward A. McVay, called as a witness for the Plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. You are a duly licensed physician and surgeon of the State of New Jersey? A. Yes, sir.

Q. Practicing in the City of Newark? A. Yes, sir.

Q. In June, 1925, were you connected with St. James Hospital? A. No, sir.

Q. When were you connected? A. July 17, 1925.

Q. That is when you began your connection? A. Interneship.

Q. Do you know Edward Hopper? A. Yes, sir.

Q. When was the first time you saw him? A. July 18th.

Q. Where? A. St. James Hospital.

Q. Did you treat him? A. Yes, sir.

Q. What condition was he in when you first saw him on July 17th? A. I treated him for infected burns of the head.

Q. What part of the head? A. Why, in the parietal region, right about here (indicating).

Q. What was the character of the burn? A. Well, it was infected at the time that I saw it. It was sort of deep and infected.

Q. Do you know whether or not any of the bony structure of the skull had been destroyed? A. As I saw him, I don't think the bone was showing. I think it passed that—I think fibrous tissue had grown over the bone at that time.

Q. You don't know whether or not the bone tissue had been destroyed or not? A. No, I would not say whether they were or not.

Q. Was he in pain at the time you first saw him? A. Well, he would have pain when the wound was dressed. I don't think he would have pain when he was in bed but I would not be sure I don't think he had any pain then.

Q. Did you treat him for any of his other burns or injuries? A. I don't think I touched any of the other ones.

Q. Did you treat him after he left the hospital? A. Yes, sir.

Q. For how long? A. Well, I think he came back there for about two months, two or three months afterwards.

Q. To the hospital? A. On and off.

Q. At what intervals? A. Well perhaps I think about twice a week.

Q. About twice a week? A. I would say twice a week for a month and once a week for a month after that and then for the second month.

Mr. Milton: No questions.

Mr. George: I will ask leave to produce Dr. Berlberg later and also Dr. Maer.

Mr. Milton: I don't care about the order of proof.

HUGO L. KLEINHANS, being called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Mr. Kleinhans, where do you live? A. Newark, New Jersey.

Q. Are you connected with the defendant corporation, Charles Cooper & Company? A. Yes, I am.

Q. In what capacity? A. I am president of the company.

Q. How long has that corporation been in existence and doing business in New Jersey? A. Since 1857; this is our seventieth year.

Q. Do you know William Moorehead? A. Yes, I do.

Q. Was he in your employ in the month of June, 1925? A. Yes, sir, he was.

Q. Do you know Romain Schmeltz? A. I do.

Q. Was he in your employ in the month of June, 1925? A. He was.

Cross-examination by Mr. Ashmead:

Q. In what capacity was Mr. Moorehead employed?

Mr. George: That is objected to as improper cross-examination.

The Court: I think that is fairly within the scope; I overrule the objection.

Mr. George: I ask for an exception.

A. He is a packer in the shipping room.

Q. Has he ever worked in the acid department?

Mr. Armstrong: I object to that as beyond the scope of the direct examination.

Q. Specify what his duties were. A. His duties are to put up material which comes to the packing room and put it in boxes ready for the trucks.

Q. Does he deal with completed cases? A. Only completed packages, he does not put up any chemicals. He is a packer.

Q. Merely pack them in boxes? A. That's all.

Q. Is that the sole extent of his duties in your place? A That is his entire duty.

Q. What about Mr. Schmeltz? A. Mr. Schmeltz is working in the Acid Department.

Q. What has been his duties with respect to filling jugs? A. His duties always to fill jugs and other acid containers.

The Court: His duty was that?

The Witness: Yes, sir.

Q. How long has he been engaged in such work? A. For twenty odd years, I should say, to the best of my recollection.

Q. Filling jugs with hydrofluoric acid? A. That is among his daily work.

Q. Has that been his daily work over 20 years? A. Yes, sir, it has been.

WILLIAM MOOREHEAD, called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Mr. Moorhead, on June 23rd, 1925, did you carry two jugs, lead jugs similar to these received in evidence (indicating) from the plant of the Cooper Chemical Company to the automobile of Edward Hopper? A. Yes, sir.

Q. What was contained in those two jugs? A. Hydrofluoric acid.

Q. And in jugs similar to those appearing on the stenographer's desk marked Exhibit P-G-1 and P-G-2? A. Well, I can't say that those are the exact jugs.

Q. Are they similar to those? A. They are similar, yes, sir.

Q. You are still in the employ of the defendant corporation, aren't you? A. Yes, sir.

ROMAIN SCHMELTZ, called as a witness by the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Mr. Schmeltz, you live at 28 Carson Street? A. No, Garrison Street.

Q. You are employed by the Cooper Chemical Company? A. Yes, sir.

Q. What is the nature of your employer's business? A. Chemical work.

Q. They make chemicals? A. Yes, sir.

Q. Are your duties at the chemical work for the defendant corporation in the hydrofluoric acid department? A. Fluoric, hydrofluoric.

Q. Fluoric acid? A. Acid department.

Q. On June 23rd, 1925, did you undertake to fill two lead containers of hydrofluoric acid for Mr. Hopper? A. Yes, sir.

Q. Did you undertake to clean them at that time? A. I turned them upside down and tapped them.

Q. To clean them? A. Yes, sir.

Q. What was the purpose of cleaning the jugs before filling them? A. Well, I got that order since I started to work there.

Mr. George: I ask that that be stricken out as not responsive.

The Court: That is hardly responsive. He wants to know why you did that. That is what was the physical reason. What was involved in the reason for doing it?

Mr. Ashmead: Why did you attempt to clean them in the way you say you did?

The Witness: Why, I clean; I got orders, that is orders when I started. I got orders from my foreman to clean each jug before I fill.

Mr. George: Still the answer is not responsive, but I consent that it remain.

The Court: You mean these particular jugs or jugs generally, these two jugs or every jug?

The Witness: Every jug was cleaned.

Q. So that you also tried to clean the two jugs in order to see that there was no foreign matter in the jugs before you filled them with acid, is that so? A. Yes, sir.

Cross-examination by Mr. Ashmead:

Q. How long have you been employed by the Charles Cooper Company? A. 22 years.

Q. Did you work in the Acid Department? A. Yes, sir.

Q. What kind of acid is that? A. Hydrofluoric acid.

Q. What other kinds? A. I work in the pure, c. p. acid.

Q. Does the Charles Cooper Company manufacture hydrofluoric acid? A. They manufactured it before, not now.

Q. How many years since they discontinued manufacturing it? A. I cannot correctly say. It is about 14 years.

Q. They have not made hydrofluoric acid for 14 years? A. Yes, sir.

Q. Do you know where they purchase it? A. I see on the jugs they come from Brooklyn.

Mr. Armstrong: I object to that and ask that it be stricken out.

The Court: Do you know anything about where they purchase of your own knowledge? A. I don't know, correct.

The Court: They don't make it?

The Witness: No, they don't make it.

Q. What was that you say you did with these jugs when you received them? A. Well, I turned them upside down and tapped them and put corks and hit them flat when they was filled.

Q. After they were filled? A. Yes, sir.

Q. I believe you said the reason you turned them and tapped them was because your foreman told you to do that? A. Yes, sir.

Q. When you were first employed there? A. When I came in.

Q. Had you been following that method for the 20 years you have been filling jugs? A. Yes, sir.

Q. Have you ever had a case where the jug evolved gas?

Mr. Armstrong: I object to that as beyond the scope of the direct examination unless he wants to make this man his own witness in order that I may have an opportunity to cross-examine him.

Mr. George: May I respectfully add to that that the direct examination was limited to his conduct in reference to these particular jugs and this specific date. What he did any other day or what his custom was would necessarily be beyond the scope of the direct examination.

The Court: I will sustain the objection at this time.

Mr. Ashmead: I won't insist on it.

Q. When you turned the jugs upside down and tapped them, did anything come out? A. I didn't see nothing. They come all the time a little powder, that is fluoric slag, that is comes out of all of them.

The Court: Did anything come out of these two jugs in question when you tapped them?

The Witness: Them two jugs, I didn't see nothing there.

Q. Out of either jug? A. No.

Dr. Clinton L. Smith, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. George:

Q. You are a licensed dental surgeon practicing in the State of New Jersey? A. Yes, sir.

Q. Did you have occasion to give dental treatment to Mr. Hopper, Edward Hopper, Junior? A. Yes, sir.

Q. When is the first time he came under your observation? A. About the middle of December, 1925.

Q. What was the condition of his mouth? A. He had acute stonatitis, commonly called trench mouth. Trench mouth is a condition of the gums caused by germs which causes the gums to become flabby and bleeding and also causes an absorption of tissues.

Q. Did you examine the upper jaw bone? A. The upper teeth were infected and after extraction of the upper teeth, why the jaw bone instead of being absorbed in a natural way, the entire alveolar process—the alveolar process is a septum of bone which is attached to the upper bone of the head called the maxillary. That upper septum supports the roof of the teeth. After the extraction of the teeth which I deemed absolutely necessary due to the condition of the mouth the upper teeth and that septum, the bone instead of being absorbed in a normal physiological condition, that came out in practically the entire septum, which isn't a natural condition.

Q. Would you say, from your experience and from your knowledge of the jaw bone, that the jaw bone at the time you saw it was in an abnormal condition? A. Yes, sir.

Mr. Milton: I object to that.

Q. What did you conclude to be the condition of the upper jaw bone after you had removed the teeth which you said were absolutely necessary of removal? A. Why, there was very little of what we call the arch left, and the jaw practically—well, it was almost impossible to make a good artificial denture.

Q. Now you say insufficient arch support. When you say that, was that normal or abnormal after the removal of the teeth? A. Abnormal.

Q. Did you make an artificial restoration? A. I made a temporary artificial restoration which will have to be replaced because the absorption was not completed, in order to give the man at least half way mastication. I made this temporary set of teeth which will have to be replaced no doubt.

Q. Is that the entire upper jaw? A. The entire upper artificial denture.

Q. The upper jaw? A. The upper jaw.

Q. What condition did you find the lower jaw in? A. The lower jaw, this condition of the gums was prevalent too but the teeth were not decayed so much, due to the natural physiological action of the saliva which makes the lower teeth self cleansing more so than the upper teeth.

Q. I suppose you made a charge for your services to date? A. Surely.

Q. How much has he paid you from the first time he came under your observation for treatment down to the present date? A. I can't say exactly. It is between sixty and seventy dollars.

Q. And you say it will be necessary to have that plate removed at some future time and replaced?

A. He will practically have to have a new plate made every one or two years.

Q. For how long a period? A. For the rest of his life.

Q. Due to the abnormal condition of the arch supports of the upper jaw bone? A. Yes, sir.

The Court: I don't understand that you told us the probable cause of this condition that you say you found to exist.

Cross-examination by Mr. Milton:

Q. Doctor, do I understand you to say that this trench mouth condition is the result of a germ; is the result from a germ disease?

The Court: Is that what you say?

The Witness: It is a disease that is probably due to lying in bed; the jaw sort of broke down and the symptoms showed that; that is my diagnosis.

The Court: It is a germ disease, due to a germ?

The Witness: The gums, that was the gum condition, but the bone condition was not due to a germ. The bone condition was due to some abnormal effect which caused a degeneration of the bone. The bone did not have the normal physiological ways of repairing itself.

The Court: What do you mean by that. Isn't the way of repairing it through the absorption of the blood?

The Witness: He sort of dug away the lime. All bone is formed from lime, from calcium, lime.

Q. You did not extract this man's teeth until some time after December, 1925? A. I started to extract them I daresay about January, 1926.

Q. When you saw him for the first time professionally, in December, 1925, Mr. Hopper had substantially all his teeth except one or two which might have been out, or a bridge or some ordinary dental work? A. Yes, sir.

The Court: It leaves me a little doubtful as to what impression you wish to leave with us. Did you find anything in this condition which you have described with reference to the arch here which would probably be of traumatic origin?

The Witness: Traumatic origin? Traumatic means mechanical. No, sir. It was not mechanical. It was due to some drug or acid effect which I think had caused it. What we mean by traumatic is a bump or a punch. That's what we consider traumatic. There are two kinds of injuries, traumatic and erosion. Erosion is from chemicals; traumatic is from mechanical means.

The Court: Now, you have mentioned something about acid.

Mr. Milton: Or drugs.

The Court: Or drugs.

The Witness: The septum of bone, physiologically, the bone was not physiological.

The Court: You mean physiologically correct?

The Witness: Yes; what I mean by physiologically correct which the Judge just said is that the bone did not have the proper coordinate parts. The condition that there was there did not give the solutions a

proper chance to form but they just broke away from the maxillary and fell out.

The Court: Can you tell us the probable cause, if you can tell us, of this condition.

The Witness: I think it was due to the acid effect.

The Court: What acid effect; is there such a thing.

The Witness: Acid mouth comes from the stomach, naturally acid mouth would not cause that. It would have to be more speedy than that.

Q. If you had not heard a history. A. I always look for the history before extracting.

Q. If you hadn't heard of a history of an alleged contact with some acid, would you have assumed that acid was the probable cause of this condition of the bone? A. When I found such conditions prevalent I would naturally ask why and what happened.

Q. Eliminate from your mind if it is possible in the assumption, that this man came in contact with acid.

The Court: Might I add; suppose he walked in and said nothing to you and you started to examine him. You found this condition. What would you have ascribed that condition from what you saw and the result of your examination alone, without asking any questions?

The Witness: You never make a diagnosis until you make a history.

The Court: Do you mean to say from that you could not have diagnosed without any questions?

The Witness: You knew there was some pathological condition there. In order to

ascertain where that came from you naturally have to take a history of the case before you can make a diagnosis on the history.

The Court: You are not treating this man now. You are giving us your opinion as to what was the cause of this mouth condition. Of course if it is not a fact that you can tell us without basing it on that history, you may certainly say so.

The Witness: That is what I say; you cannot make a diagnosis unless you have a history of the case.

Q. Over what period of time did the extraction take place; how long did it take? A. About a month. I took out several at a time.

Q. Did you get a history of a tubercularly affected spine from this man? A. No, sir.

Q. You didn't know anything about that? A. No, sir.

Re-direct examination by Mr. George:

Q. Doctor, do I understand you to say that you would not undertake to treat a patient without first the patient giving you a history of the case, particularly where there is an abnormal condition of the mouth? A. Absolutely.

Q. In the case of Hopper did you obtain a history of the case? A. Yes, sir.

Q. Doctor, having done so, can you tell us now what in your opinion as a dental surgeon was the contributing cause or the cause of the condition in which you found Hopper's mouth?

Mr. Milton: Yes or no.

A. Before my extractions?

Q. Can you tell yes or no? A. Before the extraction I attributed the cause to the decay of the teeth due to lying, being confined in bed, which could not give the mouth the proper attention. After the extraction of the teeth, I saw this bone broken away and I attributed it to the acid condition which he told me in the history.

Re-cross-examination by Mr. Milton:

Q. Was that based upon the fact that the subject had told you of alleged contact with acid and you then changed your earlier opinion that five weeks in bed had caused the decayed condition of the teeth? A. No, sir; the confinement in bed caused, I would say, the decay of the teeth which naturally necessitated the removal of the teeth.

Q. Stop right there. Did you understand that this man was confined in bed five weeks? A. Yes, sir.

Q. And is it your professional opinion that five weeks' confinement—— A. Twenty-four hours would cause the decay of the teeth.

Q. Some degree, sufficient in the case of Hopper to justify the removal of all the man's teeth? A. Yes, sir.

The Court: Then you differentiate between the teeth and the jaw bone and you say that the jaw bone now, that that condition you attribute to the acid burns, but not the condition of the teeth. Is that what you leave us to understand.

The Witness: Why, yes, sir, the acid cause the effect on the bone.

The Court: Is it conceded that 60 or 75 dollars would be a proper and reasonable charge?

Mr. Milton: We do not question that.

Mr. George: With the exception of the medical proof of Dr. Maver and Dr. Perlberg I am now through.

Mr. Ashmead: I would like to recall Mr. Hopper to bring out something that was omitted.

EDWARD W. HOPPER, JR., recalled.

Cross-examination by Mr. Ashmead:

Mr. Ashmead: I would like to read into the record what Mr. Armstrong said at the time he introduced the jugs in the other trial.

On page 23 of that record Mr. Armstrong in offering the jug said:

"P-1 is the jug that was in the car and the cork blew out. P-2 is the one that was in the car filled, and the cork did not blow out. Exhibit P-3 and P-4 were returned to the car and were not filled."

Subsequently there were certain questions asked Mr. Hopper and his answers were as follows: I will read first on page 58 to identify the jugs.

"Both of them were hot? A. That I couldn't say."

The Court: You are putting this now to this witness as to whether or not he said that?

Mr. Ashmead (Reading):

"Q. Which one (indicating jugs)? A. I imagine the other one."

"Q. This jug (indicating P-1)? A. Yes, sir."

Q. You so testified, did you not? A. Yes, sir, I did.

Q. Now, on page 73 of the record this question was asked and you answered thus:

"These were the two jugs, were they, that he took (indicating Exhibits P-1 and P-2)? A. Yes, sir."

Then on page 75:

"Q. Now, did you undertake to say on your direct examination which of these jugs was the hot one? A. I believe that tall one was.

"Q. This tall one? A. I believe it was, yes."

Did you so testify? A. Yes, sir.

Re-direct examination by Mr. George:

Q. Did you further, in the very next question answer this question:

"Q. And this other one you felt too? A. Yes, sir."

A. Yes, sir.

"Q. And that was not so hot? A. No."

The Court: Did you say that?

The Witness: I did say that.

(Case of John Carroll.)

John Carroll, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. Where do you live? A. 45 Bidwell Avenue.

Q. Jersey City? A. Yes, sir.

Q. You lived there on June 23rd, 1925? A. Yes, sir.

Q. What is your business now? A. Iron worker.

Q. What was your business then? A. Iron worker.

Q. Union iron worker? A. Yes, sir.

Q. What was the scale of wages that were paid on or about June 23rd? A. $66 a week.

Q. You are a member of the Union? A. Yes, sir.

Q. And that is the Union scale of wages? A. Yes, sir.

Q. Prior to June 23rd, 1925, had you been regularly working as an iron worker? A. Yes, sir.

Q. At the same rate of wages? A. Yes, sir.

Q. Has the rate of wages changed by the way since that date? A. Yes, sir.

Q. To what? A. $14 a day, $77 a week.

Q. On the 23rd of June, 1925, did you know Edward Hopper, the boy who was just on the witness stand? A. Yes, sir.

Q. Did you see him on that day? A. Yes, sir.

Q. In company with others or alone? A. In company with two other fellows.

Q. Who were the two other men? A. John O'Neill and James Kelly.

Q. Was Hopper in an automobile? A. Yes, sir.

Q. Where did you meet him on June 23rd, 1925? A. On Ocean Avenue.

Q. Jersey City? A. Yes, sir.

Q. Can you state more definitely about where? A. Around Bayview, Bayview and Ocean.

Q. Do you remember what time of day it was? A. About two o'clock.

Q. In the afternoon? A. Yes, sir.

Q. Did you have any conversation with Mr. Hopper at that time and on that date? A. Yes, sir.

Q. With respect to going to Newark? A. Yes, sir.

Q. Were you invited to go to Newark? A. Yes, sir.

Q. By whom? A. Edward Hopper.

Q. Did you go to Newark? A. Yes, sir.

Q. In the Hopper automobile? A. Yes, sir.

Q. Now, with reference to Kelly and O'Neill were they in the automobile also? A. Yes, sir.

Q. At Hopper's invitation? A. Yes, sir.

Q. And I take it that all three of you, O'Neill, Kelly and yourself were together? A. Yes, sir.

Q. And that Hopper had met you? A. Yes, sir.

Q. Is that the situation? A. Yes, sir.

Q. Now, did you go to Newark? A. Yes, sir.

Q. And in Newark you went to what street? A. Van Beuren Street.

Q. Can you more accurately describe it; was it at or near the plant of the Charles Cooper Company? A. Quite near the plant.

Q. At the time you were invited to go to Newark, do you know for what purpose you were going? A. No, sir.

Q. Why did you go? A. Because it was a nice sunny day and I was invited for a ride, to cool us off a little.

Q. You went for a ride? A. Yes, sir.

Q. What part of the automobile were you sitting in? A. Back seat.

Q. Right or left side? A. Right.

Q. Was that the nearest or the furthest away from the curb? A. The nearest the curb.

Q. Where did O'Neill sit? A. On the left hand side of me.

Q. Alongside of you? A. Yes, sir.

Q. In the rear compartment? A. Yes, sir.

Q. And Kelly, where did he sit? A. Kelly sat on the right hand side in front.

Q. At the time you got into the automobile, did you notice anything in the automobile? A. Yes, sir.

Q. What did you notice? A. Noticed four jugs and a box.

Q. Showing you Exhibit P-G-1 and P-G-2, were these jugs similar to those that were in the car? A. Yes, sir.

Q. Now looking down at Exhibit P-G-3 and P-G-4 were they also jugs of similar character? A. Yes, sir.

Q. Now, who drove the car? A. Edward Hopper.

Q. Did he drive it all the way down? A. Yes, sir.

Q. When you arrived at Van Beuren Street, did you continue on your journey or did you stop? A. We stopped.

Q. Did anybody get out of the automobile? A. Yes, sir.

Q. Who? A. Edward Hopper.

Q. Did he take anything with him? A. Yes, sir.

Q. What? A. The four jugs.

Q. Where did he go with the four jugs, did you know? A. In the Chemical Company.

Q. By chemical company do you mean the Charles Cooper Company now the defendant in this suit? A. Yes, sir.

Q. And where with reference to their office or building was the automobile located? A. On the opposite side of the street.

Q. Did you notice Hopper go into the factory or office or plant of the Cooper Company? A. Yes, sir.

Q. Did he stay in there or did he return? A. He returned.

Q. Did he have anything with him when he came back? A. He came back with two jugs in his hand.

Q. What did he do, if you know, with the two jugs he had in his hand? A. He placed them in the bottom of the car.

Q. And then what did Hopper do? A. Sat in the car. We sat back for a while. He said, "I got to wait about fifteen or twenty minutes for this stuff."

Mr. Ashmead: I object to that.

Mr. Armstrong: I consent that that part of it be stricken out.

The Court: Strike it out.

Q. After Hopper returned to the automobile did he get into the car? A. Yes, sir.

Q. Did you stay there indefinitely or did something happen shortly thereafter? A. We stood there.

Q. With reference to the other two jugs you saw Hopper bring into the plant of the Cooper Company, did you ever see those or similar jugs again? A. Yes, sir.

Q. About how long after Hopper had brought them into the Cooper Company plant did you then

see two jugs similar in character to these which you saw him bring into the Cooper Company plant? A. About fifteen or twenty minutes after.

Q. Did Hooper bring them out? A. No, sir.

Q. Do you know who brought them out? A. No, sir.

Q. Who was it that brought them out? A. A working man that worked in the chemical plant.

Q. Did he come from the plant of the chemical company? A. Yes, sir.

Q. Who put these two jugs into the car? A. This working man that brought them out.

Q. He put them into the automobile? A. Yes, sir.

Q. By the way, you said that there was a box. Did I understand you to say that there was a box in the car in addition to these jugs? A. Yes, sir.

Q. Was that box covered or uncovered? A. Uncovered.

Q. Can you describe the type of box it was? A. Looked to me like a milk box.

Q. By milk box do you mean a condensed milk box? A. Yes, condensed milk box.

Q. The workman that you say you saw coming from the plant of the Cooper Company, where did he put these jugs? A. In the box in the car.

Q. At the time that he put the jugs in the car was there any conversation between him and anybody in the automobile?

Mr. Ashmead: Answer that yes or no.

Q. Yes or no; was there any conversation? A. Yes, sir.

Q. With whom? A. With the man that placed them in the box.

The Court: Between him and who else?

Q. Between the man who placed them in the box and who else? A. Nobody in particular.

Q. Just a general statement? A. Yes, sir.

Q. How soon after the jugs were placed in the box did the car start, do you know? A. No more than he placed them in the car started.

Q. I beg pardon. A. Right after he placed them in and closed the car.

Q. The car started? A. Yes, sir.

Q. Did anything happen immediately after the car was started? A. Yes, sir.

Q. What? A. The accident.

Q. Now I ask you at the time that this man spoke and made this general statement, what did he say?

Mr. Ashmead: I object.

The Witness: Oh he said, "It's hot stuff, boys."

The Court: Objection sustained.

(Argued.)

Mr. Ashmead: I want to object to it on the ground that it is incompetent and not binding on this defendant.

The Court: Objection sustained.

Mr. Armstrong: Your Honor will allow me an exception.

Mr. Armstrong: May I state my grounds for urging that question. We contend that it is part of the *res gestae*. We contend that there has been evidence proving that agency existed between the man who delivered the jugs to the car and the Cooper Company. First by the President of the Company himself and secondly by the man's own testimony who put them in.

I also press it on the ground, another theory, as to the condition of the jugs at

the time of delivery and that certainly is material.

The Court: I sustain the objection.

Mr. Armstrong: Your Honor will allow me an exception.

Q. Now, Mr. Carroll, I think we were at a point where the automobile had started in motion. Did you observe the jugs after the door of the automobile closed? A. Yes, sir.

Q. Prior to the time that the door of the automobile closed or immediately thereafter did you feel the jugs? A. Yes, sir.

Q. Will you tell us what if anything you noticed or felt as a result of your touching these jugs? A. They were warm.

The Court: How many of them?

Q. Will you describe what you mean by warm. A. Hot.

Q. Now, will you describe what you mean with reference to temperatures, if you can. A. I could not hold my hand there.

Q. When you say that you could not hold your hand on it, can you tell us which of the jugs, with reference to P-G-1 and P-G-2; can you tell us which of the jugs was hotter? A. This one here (indicating).

Q. Indicating the tall jug? A. Yes, sir.

The Court: Which do you say was hotter?

The Witness: The tall one.

Q. Describe the tall jug.

The Court: That is Exhibit P-G-1.

Q. At what period of time with reference to the closing of the sedan door was it that you touched either or both of these jugs Exhibit P-G-1 and Exhibit P-G-2? A. Right after it was placed in the car.

Q. You touched them; how did you come to touch them? A. My attention was called to them.

Q. By whom? A. By the man that brought them out.

Mr. Ashmead: That is objected to.

The Court: Well that is not the statement.

Mr. Ashmead: I withdraw it.

Q. Now, you say this man closed the door, this employee of the Cooper Company, is that so? A. Yes, sir.

Q. And then did the car start? A. Yes, sir.

Q. Will you describe the driving of the automobile between the time of the closing of the door and the explosion which you say subsequently occurred? A. How far it got, you mean?

Q. Yes. A. Well, Van Beuren Street is just like say Newark Avenue——

The Court: About how many feet in a general way.

Q. How many feet generally, did the car go? A. About ten or fifteen feet.

Q. With reference to the curb line, what was the position of the car? A. It was cross-ways in the street.

Q. That is to say Hopper was endeavoring to make a turn? A. Yes, sir.

Q. After the closing of the door, did you notice the jugs again? A. Yes, sir.

Q. Can you describe what you saw if anything

with respect to either P-G-1 or P-G-2? A. Yes, sir.

Q. Well, tell us about it? A. I seen the cork move in the tall jug.

Q. Did you call anybody's attention to that? A. I didn't have time to call anybody's attention. There was an explosion and we all started to smother; we could not get our breath and we were all burnt.

Q. Did you observe anybody else feeling of the jugs? A. Yes, sir.

Q. Who? A. Mr. Hopper.

Q. The gentleman who has just been on the witness stand? A. Yes, sir.

Q. With reference to the windows of this sedan, can you tell their positions at the time of the accident? A. Yes, sir.

Q. Well, tell it to us. A. Well, the back windows was closed, can't get them up. The door windows were half way up and half down.

Q. The door windows, you mean all four doors? A. Yes, sir.

Q. This was on June 23rd, 1925? A. Yes, sir.

Q. Was the day warm or can you describe how it was? A. It was a warm summer's day.

Q. How did you get out of the automobile, Mr. Carroll? A. Through a window.

Q. Which window? A. To the left hand side.

Q. Did anybody else get out of that window with you? A. Yes, sir.

Q. Who? A. John O'Neill.

Q. John O'Neill is one of the men that died? A. One of the men that died.

Q. Did you observe the automobile at any time after the explosion? A. Yes, sir.

Q. When? A. When I was coming along the Charles Cooper Plant in the ambulance.

Q. Did you see anybody around the automobile at the time? A. Yes, sir.

Q. Was there anything at all being done either to the interior or the exterior of the automobile at that moment? A. Yes, sir, there were men playing the hose on it.

Q. Outside or inside? A. Inside.

Q. Now will you describe to me, Mr. Carroll, the sensation at the time of the explosion of that acid, with respect to pain and suffering generally.

Mr. Ashmead: I didn't hear that question.

Mr. Armstrong: I withdraw it.

Q. What happened immediately after the explosion, Mr. Carroll, to you personally? A. felt myself, simply could not get my breath, I felt my legs burning, my arms; we four started to holler for water.

Q. Did you feel any gaseous or liquid substance of any kind or character inside of the sedan? A. Yes, sir.

Q. Immediately after the explosion? A. Yes, sir.

Q. You say your limbs began to burn. Will you tell us what you mean by your limbs? A. My legs.

Q. Both legs? A. Yes, sir.

Q. Did you have any burns anywhere else about your body? A. On my wrist, all my insides were burnt.

Q. "My insides"—what do you mean, will you describe what you mean by that? A. My chest. I got spitting up blood from it.

Q. Where were you taken to immediately after the accident? A. The City Hospital, Newark.

Q. Were you admitted to the hospital? A. Yes, sir.

Q. How long did you stay there? A. Two weeks.

Q. From there where did you go? A. Went home.

Q. Were you able to return to your usual employment? A. No, sir, my mother sent me to the country.

Q. How long did you stay in the country? A. About two weeks.

Q. You then returned to Jersey City? A. Yes, sir.

Q. Did you go to work then? A. No, sir.

Q. How long before you were able to go to work? A. The accident happened in June. I went to work in January next year.

Q. Did they treat you for the burns in the hospital? A. Yes, sir.

Q. What is your weight now, Mr. Carroll? A. About 155.

Q. Can you tell us, within a reasonable time before June 23rd, 1925, what you weighed?

Mr. Milton: What is a reasonable time?

Q. Let us say within a month. A. About 180 pounds.

Q. Within a month's time? A. Yes, sir.

Q. How do you know that to be the fact? A. We always go to the gym and we used to weigh ourselves regularly there.

Q. You state that you weighed about 180 pounds within a month prior to the accident? A. Yes, sir.

Q. Did you ever go back to that weight? A. No, sir.

Q. How old are you now? A. 25.

Q. And at the time of the accident? A. 24.

Q. Why, Mr. Carroll, couldn't you return to your employment until January, 1926? A. I was too weak.

Q. Did you have any difficulty of any kind at all in getting around? A. Yes, sir.

Q. Describe it if you can. A. Going upstairs I used to lose my breath, and could not lift anything.

Q. You were an iron worker I understand before this accident? A. My legs, I could not climb.

Q. How many burns did you get about the legs, if you know? A. There was about 11 holes in the left leg. There is one big irregular scar on the right leg.

Q. Any other burns on any of your other limbs or about your body? A. No, sir.

Q. Do they bother you at all now? A. In cold weather they bother me.

Q. You say you went to work in January, 1926, regularly? A. No, sir.

Q. Why? A. I could not work a full week.

Q. Why not? A. Because I felt too nervous, too weak. I got to work a day and then lay off two days.

Q. What would you say was the average number of days per week of employment since January 1st, 1926, amounted to? A. Two or three days.

Q. A week? A. Yes, sir.

Q. Prior to that time, that is prior to June 23rd, 1925, what was your average number of days employment per week? A. A full week.

Q. Did you have any difficulty in getting employment prior to that time? A. No, sir, only in rainy days they used to stop us.

Q. But on every case when you went to work, did you have any difficulty in getting employment? A. No, sir.

Q. Prior to June 23rd, 1925, did you perform all of the duties that an iron worker usually has to do or is called upon to perform? A. Yes, sir.

Q. Is that light or heavy work? A. Heavy work.

Q. Now since January 1st, 1926, are you kept performing the same duties, all of the duties of an iron worker, that he is called upon to perform? A. No, sir.

Q. Why not, Mr. Carroll? A. I cannot climb. I can't lift as much as I could lift before the accident. I am nervous. I cannot go up in the air.

Q. Is an iron worker required to go up in the air as you call it? A. Yes, that is his business. Through the good graces of the Union they got work for me to do on the ground.

Q. Put you on the ground work? A. Yes, sir.

Q. Did you have any difficulty with your insides or chest as you call it now? A. Yes, sir.

Q. Describe what if anything you have wrong with your insides? A. I got pains all across my chest, mornings I spit blood, a whole lot of blood.

The Court: When?

The Witness: In the morning.

Mr. Armstrong: Your Honor wants to know what degree of frequency.

The Court: You mean at the present time?

The Witness: Yes, sir.

Q. Did you, prior to June 23rd, 1925, ever expectorate blood in the morning or any other time of day? A. No, sir.

The Court: Do you say that still happens?

The Witness: Yes, sir.

Q. When? A. Well, on damp days it pains me worse. Damp days I can hardly get my breath at all.

Q. Do you know, have you, any symptoms, any nervous symptoms at all to-day which you didn't have before June 23rd, 1925?

Mr. Milton: That is objected to.

The Court: How different are you now in respect to your feelings than you were before the accident?

The Witness: I don't feel the same at all.

The Court: That doesn't help us at all.

Q. Can you describe the difference? A. Well, I can't do the work that I did. I cannot work as much as I could, that is now.

Q. With respect to your condition as of June 23rd, 1925, were you able to go up in the air on these high large girders that iron workers are required to do? A. Yes, sir.

Q. Did you ever have any feeling of dizziness? A. No.

Q. Or trouble at that time? A. No, sir.

Q. Can you do that now? A. No, sir.

Q. Why? A. Because my nerves isn't so good.

Q. What do you mean when you saw that your nerves are not so good. Do you experience any sensation? A. I get dizzy. I don't have to go up in the air to get dizzy.

Q. Did you pay any expenses in the hospital during the period you were treated there? A. No, sir.

Q. Did you have any expenses on that trip you made? A. Yes, sir.

Q. What were they? A. About $100.

Q. Is that accurate or just your judgment of the amount? A. No, sir.

Q. You say it was about $100? A. About $100.

Q. Did you have any other doctor? A. Yes, sir.

Q. Who? A. Dr. Blanchard.

Q. Did you pay him? A. Yes, sir.

Q. How many times did you go to see Dr. Blanchard? A. Went to him a month.

Q. How much did you pay him, if you know? A. Two dollars a visit. I went to him about three times a week.

Q. Three times a week at two dollars a visit? A. Yes, sir.

The Court: Is there any objection on the ground of its being an unreasonable charge?

Mr. Milton: No.

Q. What happened to your clothing at the time of the accident? A. The clothing was burnt off me.

Q. Never got it back, did you? A. No, sir.

Q. Can you describe what you wore at the time? A. Yes, sir.

Q. Well tell us. A. A blue suit, a blue serge suit.

Q. How old was that? A. Just after buying it a short time before.

Q. What did you pay for it? A. $40.

Q. Your shoes? A. A pair of oxford ties.

Q. How old were they? A. I don't exactly remember.

Q. What did you pay for them? A. Eight dollars.

Q. What other parts of your clothing did you have? A. Silk shirt and straw hat, underwear and sox.

New Jersey State Library

Q. How old was your hat? A. Just after buying it.

Q. How much did you pay for it? A. Two dollars and eighty-five cents.

Cross-examination by Mr. Milton:

Q. Did I understand you to say Mr. Carroll that since this accident you have not been able to ascend ladders and heights? A. Yes, sir.

Q. That is right, is it? A. Yes, sir.

Q. And for that reason you cannot do the same work you used to do as an iron worker before the accident? A. Yes, sir.

Q. Give me the name of the last job you worked on prior to June 23rd, 1925, as an iron worker. A. The last job?

Q. Yes. A. Before June 23rd, the Passaic Bank in Passaic.

Q. The name of the contractor? A. I don't exactly remember.

Q. Search your recollection for a moment. A. I don't remember his name. I can get it for you.

Q. You cannot tell me now? A. I can get it.

Q. How high was the bank, how many stories? A. About six or seven.

Q. How long were you on that job? A. About two weeks.

Q. Before that job what job did you work on as an iron worker? A. Before the Passaic Bank?

Q. Yes. A. I don't recall it.

Q. Search your recollection a minute or two. A. I never kept track of the jobs I went on.

The Court: What city, what place?

The Witness: Worked all through New Jersey.

Q. Was it Jersey City or Newark or Paterson or Passaic? A. Jersey City I guess.

Q. Are you guessing about it? A. No.

Q. Do you know? A. Yes, sir.

Q. Where was it? A. I don't exactly know. We don't work steady. We get jobs here and we get jobs there. I haven't got a permanent job.

Q. I ask you again Mr. Carroll what job you worked on before the Passaic Bank job? A. I don't exactly remember.

Q. For a year prior to June, 1925, can you give me the names of any jobs you worked on as an iron worker, before June, 1925? A. Yes, sir.

Q. What are they? A. I worked at the Cliffside Iron Works before that.

Q. Where are they? A. Cliffside, New Jersey.

Q. How long did you work for them? A. Well on and off about two weeks I guess.

Q. How many days in this period of two weeks on and off did you work for the Cliffside Iron Works? A. I don't exactly remember.

Q. How much did you get from the Passaic Bank job? A. $12 a day.

Q. How much did you get from the Cliffside? A. $12 a day.

Q. What other jobs within a year prior to June, 1925? A. You are talking about before June 23rd?

Q. I certainly do. A. I don't exactly remember.

Q. Was this Cliffside Iron job prior to June, 1925? A. Yes, sir.

Q. Can you name any other job that you worked at during the whole year prior to June, 1925, except these two, in your work as an iron worker? A. I never kept track of the jobs.

Q. As a matter of fact you are not an iron worker, are you? A. Yes, sir.

Q. How long have you been an iron worker? A. Just a minute and I will show you.

Q. All right, let's have it. A. Since May, 1925.

Q. You testified at the last trial in this case that you had been an iron worker for ten years, didn't you, Mr. Carroll? A. No, sir.

Q. So that for a month prior to June, 1925, you had been an iron worker enjoying this compensation at $66 a week, is that right? A. Yes, sir.

Q. How many times have you been convicted of crime?

Mr. Armstrong: I object to that.

The Court: Sustained, the way it is put.

Q. Have you been convicted of crime? A. Yes, sir.

Q. What crime?

Mr. Armstrong: I object to that. That is part of my examination, if I want to bring that out. He is absolutely limited to that one question and he cannot go further.

(Argued.)

The Court: I sustain the objection for the time being.

Q. Mr. Carroll, did you ever tell anyone that you had worked as a painter? A. Not that I remember.

Q. Do you remember making a statement to Sergt. Edward Gordon of the Jersey City Police on September 15, 1924, in connection with your arrest?

Mr. Armstrong: That is objected to on the ground it is incompetent, irrelevant, immaterial and improper cross-examination.

The Court: Strike out in connection with your arrest and go on with the rest of it.

Do you remember making a statement to him at that place?

The Witness: Yes, now I do.

Q. Didn't you say to him that your occupation was that of a painter?

Mr. Armstrong: I object to that if the court please as improper cross-examination and going beyond the scope of the direct. If there is any record it may be used for the purposes of impeachment and the record speaks for itself and is the best record.

The Court: Overrule the objection.

A. Yes, sir.

Q. You had been a painter for ten years, hadn't you? A. Not ten years.

Q. Did you tell him how long you had been a painter? A. No, sir.

Q. You are sure of that? A. Not that I remember.

Q. Is your memory good? A. Yes, sir.

Q. Average memory? A. Yes, sir.

Q. Well then, perhaps you can remember what you said in 1922 about your occupation. Do you remember making a statement on August 22nd, 1922, to Lieut. Edmund A. Barry of the Jersey City Police Department? A. No, sir, I don't.

Q. You don't remember making the statement? A. No, sir.

Q. Do you remember being in the Jersey City Police Headquarters at any time in August, 1922? A. Yes, sir.

Q. What were you doing there?

Mr. Armstrong: That is objected to upon the ground that it is immaterial what he was doing there.

The Court: What he was doing there I think is immaterial. I sustain the objection.

(Argued.)

Mr. Milton: Exception.

Q. What was the occasion of your being there?

Mr. Armstrong: I object to that on the same ground, if your Honor please.

The Court: I sustain that also.

Mr. Milton: Exception.

Q. Do you know Lieut. Edmund A. Barry of the Jersey City Police Department? A. Yes, sir.

Q. How long have you known him? A. I don't know exactly how long I know him.

Q. Well approximately. A. About five years I guess.

Q. How long were you a painter prior to 1924? A. I used to do odd jobs all the time, painting.

Q. Used to do odd jobs? A. Yes, sir.

Q. What were you doing in August, 1922; what was your occupation? A. I think I was driving a truck.

Q. Driving a truck? A. I am pretty sure.

Q. For the Frick Produce Company? A. Yes, sir.

Q. How long had you worked at that job? A. A couple of years I guess.

Q. May I see that Union card that you produced here?

(Witness hands counsel.)

Q. When did you join this union, Mr. Carroll? A. Joined it in May, 1925.

Q. So that was the beginning of your work as an iron worker? A. Yes, sir.

Q. So that within a month after you joined this Union you were a participant in this accident? A. Yes, sir.

Q. Now, in the month, how many jobs did you work on as an iron worker? A. Quite a few.

Q. How many, can you name them? A. I never kept track of the jobs, because you never knew where you were at.

Q. It is because the one month experience as an iron worker on jobs which you cannot now name that you say the result of the accident was to prevent you from doing the same kind of work; is that right? A. Yes, sir.

Q. How long were you away in the summer of 1925? A. Two weeks.

Q. You spent those two weeks away in the Catskill Mountains? A. Yes, sir.

Q. What two weeks were they? A. I think it was the end of August and the first week of September.

Q. That is the week in which Labor Day falls? A. Yes, I think it was.

Q. Who went with you? A. A couple of friends.

Q. A couple of friends of yours; where did you go to? A. Coxsackie, New York.

Q. You just went on a little pleasure trip? A. No, sir, went up there for more of a rest.

Q. Why didn't you stay longer; were you fully rested in that two weeks? A. Didn't have no more money.

Q. You came back when your money was gone? A. Yes, sir.

Q. You spent a hundred dollars in the two weeks you were there? A. Yes, sir.

Q. At Coxsackie? A. Yes, sir.

Q. After you came back to Jersey City did you work on any more of your own jobs? A. Not until January.

Q. Not until January, 1926? A. Yes, sir.

Q. Did you work at all between September, 1925, and January, 1926? A. No, sir.

Q. How many times in that period from September, 1925, to January, 1926, did you see Dr. Blanchard? A. I seen him for a month after I came out of the hospital.

Q. You came out of the hospital when? A. I think it was July 7th.

Q. July 7th? A. I am pretty sure it was.

Q. So that your visits to Dr. Blanchard ceased sometime in August, 1925. You want to tell this jury, want them to understand that you were so sick and weak and nervous that you could not work from September, 1925, to January, 1926, and in that period you never saw your Doctor?

Mr. Armstrong: I object to that as argumentative, if the court please. It is not a proper question. It is not even framed properly, it is argument.

The Court: I overrule the objection.

Q. Is that right, Carroll? A. Yes, sir.

Q. You had no other Doctor than Dr. Blanchard? A. I went to the City Hospital.

Q. Whom did you see there? A. I don't remember.

Q. How many times did you go there? A. I went to the clinics.

Q. How many times? A. About twice I guess.

Q. Where was the first job you got in January, 1926? A. I don't remember.

Q. Where was the second job you got in 1926? A. I don't remember. I never keep track of the jobs.

Q. Where was any job you got in 1926, January, 1926? A. January, 1926, Western Electric.

Q. Out at Kearny? A. Yes, sir.

Q. Under who? A. Johnny Carr.

Q. Were you working for the Western Electric Company? A. I was working for the contractor doing the work for the Western Electric.

Q. What was the contractor's name? A. I don't remember.

Q. You appreciate of course, Mr. Carroll, that your inability to remember the names of these contractors forecloses me from finding out from these contractors whether you worked for them or not.

Mr. Armstrong: I object to that.

The Court: Sustained.

Mr. Milton: I withdraw it.

Q. Are you able to recollect any job you worked on in February, 1926? A. I don't remember.

Q. How many jobs can you tell me the names of that you worked at during the whole year of 1926? A. Quite a few.

Q. Will you name them, please, and the names of the contractors in each instance that you can give? A. Worked for the Public Service.

Q. Public Service Production Company? A. Production, in Kearny.

Q. The Public Service Production Company in Kearny? A. Yes, sir.

Q. The building of their power plant? A. Yes, sir.

Q. As an iron worker? A. Yes, sir.

Q. When? A. 1926.

Q. The month or months? A. I think it was around June.

Q. How long did you work last? A. I was out there for about two or three months I think.

Q. What other job or jobs in 1926? A. Worked for the Public Service Production Hoboken Avenue cut.

Q. When? A. About a couple of weeks after I got through out there.

Q. That would be what month? A. Around September I guess.

Q. September of 1926. What wages were you paid by the Public Service Production Company in each of these jobs? A. $66 a week.

Q. What other jobs were you employed at during 1926? A. I don't remember. Those are the two biggest jobs I had. That is why I remember them. All the small contractors, I used to go and work for them. It would just last a day or a couple of days and then go back to the Hall and get sent out on another job to another contractor.

Q. Can you tell me how many days in October, 1926, you worked? A. No.

Q. In November? A. Never kept track of them.

Q. You cannot tell that? A. No.

Q. You cannot tell me, in order to shorten this examination how many days in any month in 1926 you worked? A. No, sir.

Q. Nor can you give me the names of any contractors you worked for in 1926 except the Public Service Production Company on the two jobs you have named, some man named Carr and the Western Electric job, is that right? A. Yes, sir. I can give you the names of all the concerns that I worked with but that would be for a day or two days.

Q. You could not tell how long? A. No.

Q. Just give me the names. A. Bonanni Brothers in West New York. I worked over in Englewood.

Q. You worked in Englewood? A. Yes, sir.

Q. Doing what? A. Structural iron work. For the Philippine Iron Works.

Q. Where is that? A. West New York.

Q. In West New York? A. Yes, sir.

Q. All right, any more? A. That's about all I can remember.

Q. What wages did you get in the month from May, 1926, to June, 1926, $66 a week? A. Yes, sir.

Q. From who? A. From the Passaic Company.

Q. That is the Passaic Bank? A. Yes, sir.

Q. Were you employed by the bank? A. No, sir, some contractor.

Q. Some contractor in Passaic whose name you can't remember? A. It was a New York contractor; it wasn't no Passaic contractor.

Q. A contractor whose name you can't remember? A. No, sir.

Q. How do you know you can't go up ladders? A. Because I feel dizzy when I am on the ground.

Q. Are you dizzy now? A. No, sir.

Q. So that as long as you stay down you are all right? A. Look up in the air and I was dizzy.

Q. Even if you are sitting down? A. If I look up in the air now I get dizzy.

Q. So that you assumed therefore when you were on the ground that you would be dizzy up in the air on a ladder? A. Yes, sir.

Q. You never tested it out? A. No.

Q. And no physician advised you that it might be dangerous for you to go up a ladder, did they? A. No.

Q. Did you weigh 180 pounds before this accident, Mr. Carroll? A. Yes, sir.

Q. What gymnasium did you go to weight in at that? A. Barretts up at Armstrong Avenue and Van Cleef.

John Carroll—Cross.

Q. How soon after the accident did you weigh yourself? A. Well about two months after I guess.

Q. Two months after the accident? A. Yes, sir.

Q. How tall are you? A. Five, eleven and a half.

Q. As a matter of fact you are substantially normal weight, 160?

Mr. Armstrong: I object to that, that calls for a conclusion. This witness is not competent to answer.

The Court: I suppose that does call for some knowledge.

Now, you may properly ask what he was convicted of, and whether he was convicted; under authority of State *vs.* Petrucelli, 120 Atlantic 733.

Q. The fact is you have been convicted twice of crime, haven't you? A. Yes, sir.

Mr. Armstrong: Your Honor will note my objection to this series of questions for the purpose of the record.

The Court: Wait until I have an opportunity to make a ruling.

Q. The first time was October, 1924, when you were convicted of the crime of robbery.

Mr. Armstrong: That is objected to unless the circumstances and details are brought out.

The Court: That is not proper according to this opinion. Overruled. You may answer it.

Q. That is correct, isn't it? A. Yes, sir.

John Carroll—Re-direct.

Edward W. Hopper, Jr.—Direct.

Q. The second time you were convicted of driving a car while intoxicated? A. Yes, sir.

Mr. Armstrong: That is not a crime. I ask that that be stricken out.

The Court: I can't do that. It is too late.

Mr. Armstrong: I withdraw the objection.

Re-direct examination by Mr. Armstrong:

Q. On each of the occasions about which you spoke to us that you were convicted of crime, you paid the penalty on each occasion?

Mr. Milton: That is objected to.

The Court: Sustained.

(Recess to two P. M.)

After Recess, Two P. M.

Edward W. Hopper, Jr., recalled.

Direct examination by Mr. George:

Q. There was some testimony here this morning by Dr. Bleier to the effect that at the time he was treating you in July of 1925 your weight was 148 pounds? A. Yes, sir.

Q. When did you last weigh yourself? A. To-day.

Q. In my presence? A. Yes, sir.

Q. In the Court House? A. Yes, sir.

Q. On a scale in the Bureau of Naturalization? A. Yes, sir.

Q. What does the scale show your weight to be?

Mr. Milton: That is objected to.
Mr. George: Withdraw it.

Q. How much did you weigh to-day? A. 143½ pounds.

Q. When did you last weigh yourself? A. To-day.

Q. And was that the weight indicated? A. Yes, sir.

Q. Did you at any time since the accident increase in weight? A. No, sir.

The Court: He said that.
Mr. Milton: No questions.

Dr. Albert E. Edel, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. What is your profession? A. Toxicologist and chemist.

Q. Will you state your educational qualifications as a chemist. A. As a chemist, I was a graduate of the University of Berlin and practiced chemistry ever since. I am 14 years chemist with the Essex County Prosecutor's Office and other counties. I am the official toxicologist for Essex County Physician's Service. I have a laboratory at 837 Broad Street, Newark, New Jersey.

Q. You are the County Chemist of the County of Essex? A. Yes, sir.

Q. On June 23rd, 1925, were you directed by any of the public authorities of Essex County to make an examination or an analysis of certain

jugs alleged to have exploded at the plant of the Charles Cooper Company? A. May I look up my date? On the 24th of June.

Q. 1925? A. 1925.

Q. Did you go to the laboratory of the Charles Cooper Company on that date? A. I did.

Q. Were you directed to certain jugs? A. Yes, sir.

Q. Similar in appearance to Exhibit P-G-1 and P-G-2? A. Yes, sir.

Q. Did you take these jugs into your possession? A. I did, only this jug here.

Q. Indicating Exhibit P-G-1. Did you thereafter take another jug? A. There was a small one pound jug; that pound jug (indicating). Yes, those two jugs.

Mr. Ashmead: May we have them marked in some way?

Mr. Armstrong: I will have it marked for identification.

(Marked Exhibit P-A-2 for identification of this date.)

Q. On that date or subsequently, did you also take into your possession the jug marked Exhibit P-G-2? A. I did not.

Q. That has never been in your possession? A. It was in my possession.

Q. How did you get it? A. Delivered to me by Lieut. Rowe and Sergeant Lacey of the Police Department.

Q. They are members of the Newark Police Department? A. Yes, sir.

Q. And the custody of the jugs P-G-1 and P-G-2 have been in you since then? A. Since that time with the exception of about one week when they were in custody of the court here.

Q. In this court here? A. Yes, sir.

Q. In accordance with the directions of the Prosecutor I believe you said he directed you to the Cooper plant, is that so? A. The Prosecutor's Office.

Q. Did you analyze the contents of Exhibit P-G-1, indicating the tall slim jug? A. I did.

Q. And subsequently, did you make an analysis of the contents of P-G-2, indicating the smaller jug? A. Given to me, the small bottle.

Q. I am talking about P-G-2, that is the small squat jug? A. That was empty as I received it.

Q. Therefore with respect to P-G-2, if it was empty, don't volunteer any information. You did make an analysis, however, of P-G-1? A. Yes, sir.

Q. And on that you made a report, did you, Doctor? A. I did.

Q. Have you that report with you? A. I have.

Q. The original thereof? A. A carbon copy of the original. The original went to the Prosecutor's Office.

Q. The carbon copy to which you are now referring, is that an exact duplicate of the original that you forwarded to the Prosecutor's Office? A. It is.

Q. That is what has been in your custody ever since, in your files, with the exception of a week it was here in court? A. It was.

Q. May I look at it, Doctor?

(Witness hands counsel.)

Mr. Armstrong: I now offer this report in evidence.

Mr. Ashmead: No objection.

(Accepted and marked Exhibit P-A-3 of this date.)

Mr. Armstrong: I now read to you the report that has just been marked in evidence as follows:

(Reading.)

"E 2242. Case of: James Kelly.

I have the privilege of reporting to you my findings on the toxicological examination of the organs of the above mentioned deceased.

Died	June 23, 1925.
Place of autopsy	Mullin's Morgue, Lafayette Street.
Date of autopsy	June 23, 1925.

Autopsy performed by H. S. Martland, M. D.

Specimen received June 24, 1925.

The examination of part of lung tissue shows no characteristic changes, from a chemical standpoint.

Respectfully submitted,
Analytical Chemist.

July 25, 1925."

"2243.

An investigation into the deaths of James Kelly and James O'Neill.

A factory investigation at the Charles Cooper Chemical Plant in the presence of Lieutenant Thomas Rowe, and Sergeant Fred R. Lacey was made by me and an interview there with Dr. Friedmann and Mr. Hugo F. Kleinhans, was obtained by me in order to gain definite details as to the procedure in manufacture and sale of the chemical alleged to be hydrofluoric acid.

On this occasion I brought with me from the factory the container and remaining contents of same, which caused the fatality,

and also a part of the contents of the unexploded container, in a one pound container.

Three further large containers, said to have come from the monument works where the deceased men worked were brought to me on June 25, 1925, by Lieut. Thomas Rowe, two being empty, the third having a small quantity of fuming liquid in it.

In my investigation of the circumstances surrounding the explosion of the hydrofluoric acid container, I directed my efforts towards a comparison between the actual contents of the container involved in the accident, and those of the second container from the car and the others mentioned above.

The results of the different analyses were as follows:

1. Contents of container which exploded in car:

Hydrofluoric Acid. (H. F.) by Weight	39.85%
Sulphuric Acid ($H_2 S_0 4$) by Weight	1.08%
Ash	5.26%

The ash from the above gave the following metals in quantity:

Calcium, iron, aluminum.

The following as traces:

Lead, manganese, magnesium.

2. Part of contents of container from car, which did not explode:

Hydrofluoric acid (H. F.) by Weight	53.57%
Sulphuric Acid ($H_2 S_0 4$) by Weight	1.08%
Ash	0.099%

3. The container which caused the accident, and one of those received on the later date were finally cut open.

The former contained a large quantity of white, scaly, material part of which was doubtless due to the corrosive action of the hydrofluoric acid. It was found, however, to contain large amounts of calcium, iron and aluminum, as well as traces of lead, manganese and magnesium.

The latter container showed a small quantity of a grayish, granular powder, differing altogether in form and quantitative composition from that in the other container. The powder showed lead, iron and calcium in traces only.

CONCLUSION:

The combined results plainly indicate that some mineral was present in the container at the time of filling with hydrofluoric acid. The solvent action of the acid caused a rapid evolution of gas, which produced a high pressure upon the container, resulting in the explosion.

The composition of the mineral residue found indicate a marble, which, on solution in acid, produced carbon dioxide in volume more than sufficient to cause the observed effect.

Respectfully submitted,

Analytical Chemist.

July 22, 1925."

Q. I presume the original was signed? A. It was signed, yes, sir.

Q. 2243, that is your file number? A. My case number.

Q. I notice on that copy that, referring to the part made by you of your chemical analysis there is no signature. Was the original signed by you? A. Yes, sir.

Q. You adopt this the same as though it were the original? A. Yes, sir.

Q. And the same applies to the toxilogical examination? A. Yes, sir.

Q. And those were your chemical findings with respect to the exploded and unexploded jugs? A. On the first part I did not take into consideration the residues in the containers.

Q. You didn't take into consideration the residues in the containers? A. No.

Q. You made an analysis of the acid? A. Subsequently I did.

Q. I haven't asked you yet. A. Yes, I did.

Q. Did I understand that the report you made is based upon an analysis of the acid? A. Of the acid.

Q. And not of the residue? A. Not of the residue.

The Court: This report does not deal with the analysis of the residue?

The Witness: This does not.

Cross-examination by Mr. Ashmead:

Q. What caused your inquiry into this matter? A. By direction of the County Physician and the County Prosecutor.

Q. And you made this investigation in that official capacity? A. In that capacity, yes, sir.

Q. In making the investigation did you go down to the plant? A. I did.

Q. What day did you go down? A. On the 24th of June.

Q. Will you just tell what happened there? A. I met Mr. Kleinhans of course and Dr. Friedmann. With me was Sergeant Lacey and Lieutenant Rowe. I asked for some of the hydrofluoric acid which was responsible for the casualty. I received that and I brought it to the laboratory.

Q. You received that? A. Yes, sir.

Q. Did you take the jugs with you at the time? A. I took that jug and the small jug.

Q. That jug, which one do you refer to? A. This tall jug here.

Q. That is the one in which there was an evolution of gas? A. Yes, sir.

Q. Now you say the small one, what is this, is that the small jug? A. Presumably.

Mr. Armstrong: I object to that and ask that that be stricken. The presumption cannot be relevant in this case.

Q. What is that small jug, Doctor? A. Hydrofluoric acid.

Q. Where did you get it? A. Dr. Friedmann gave it to me.

Q. Out of what jug?

Mr. Armstrong: If you know, Doctor.

The Witness: I don't know.

Q. That was the acid you received at the time you were at the plant? A. At the time at the plant when I received both jugs.

Q. Has that acid been in your possession all the time? A. It was with the exception of that week it was here in the custody of the court.

Q. Has there ever been any evolution of gas

from that acid there; has there been any misbehavior of it?

Mr. Armstrong: I object to that as immaterial. The Doctor is produced here solely for the purpose of identifying a report with respect to the explosion of Exhibit P-G-1.

The Court: Did you examine any of this so-called acid in the little jug Exhibit P-A-2?

The Witness: I did.

Q. And what was the condition?

Mr. Armstrong: I object. There is no evidence at this time as to what the contents of the small jug is, where it came from or in any way related to the contents of Exhibit P-G-1 which is the exploded container. This Doctor is produced solely for the purpose of identifying and specifying his report.

The Court: I presume that is so.

Mr. Armstrong: That is a matter of defense if they wish to produce it.

Q. This jug has been in your possession all of the time? A. It was.

Mr. George: I suggest that for the purpose of the record that counsel refer to the jug number. This is Exhibit P-A-2.

Q. You have made an examination of the acid in that jug? A. I did.

Q. Now Doctor, in respect to the other jug which you took with you at the time, when did you cut it open? A. About a month later.

Q. Exhibit P-G-1, the tall jug, you cut it open a month later? A. Yes, sir.

Q. What did you find to be the condition of that jug?

Mr. Armstrong: That is objected to at this time if the Court please. There is no evidence beyond the direct examination of this witness and the cross-examination must be confined to that direct evidence.

(Argued.)

The Court: This report you have made, am I wrong in assuming that the subject of this report came from this Exhibit P-G-1?

The Witness: Yes, sir.

The Court: It did not come from this?

The Witness: From that jug.

The Court: Isn't that exactly what he is asking?

Mr. George: Now he is asking after the residue.

The Court: Is that what you made an examination of later?

The Witness: That I made later.

The Court: That is not in your report?

The Witness: No.

The Court: I sustain the objection inasmuch as it has not been brought out on direct examination.

Mr. Ashmead: May I have an exception?

The Court: Let it be clear, however, that you are seeking to ask for his analysis of the residuum; that was not the subject of his previous report.

Mr. Ashmead: I have not asked for any analysis. I am asking the witness as to the physical condition of this jug which these gentlemen have already introduced into evi-

dence and which he has testified he took from the Cooper plant and which caused the explosion and has been in his possession ever since. I am asking him what was the physical condition of the jug at the time he took it.

The Court: You are not dealing with the analysis of the residue.

Mr. George: I withdraw my objection if that is the case.

Q. Now, Doctor, you had this jug from the date you took it from the Charles Cooper Company Plant? A. I have.

Q. Except for the short period that you have mentioned? A. Yes, sir.

Q. What did you find to be the physical condition of that jug? A. That jug contained about——

Mr. George: I object to any attempt to analyze the residuum.

The Court: I don't know whether it is the residuum or not. I am going to allow it.

The Witness: It contained about 90 cubic centimeters of muddy liquid.

The Court: That muddy substance is what you examined and made a report of?

The Witness: Yes, sir.

Mr. George: Just a moment if I might interrupt. I don't think it is quite clear on the record. On the direct examination, if I remember correctly and the Doctor will correct me if I am not; did you say you made a test of this acid?

The Witness: Yes.

Mr. George: Did you at that time include the analysis made by you of this 90 cubic centimeters of residuum?

The Witness: I made an analysis of the muddy liquid, all that was in the jug and that is the analysis of it.

Mr. George: Contained in your report.

Q. You subsequently cut open the jug? A. I did.

Q. What did you find to be the physical condition of the jug? A. It was all dried up; there was no liquid in it at the time.

Q. You had taken that out? A. I had taken it all out for examination.

Q. Will you describe the character of the inside of the jug, the inside condition of Exhibit P-G-1?

Mr. George: I object to that question at this time. There may have been chemical changes in it that we know nothing about during the interim.

The Court: It was in your possession all the time?

The Witness: It was.

The Court: Do you know of any change in the condition of the inside of the jug during that time?

The Witness: Not since I cut it open.

The Court: Would there be any more before that from your chemical knowledge?

The Witness: Yes, only if the acid dried out.

The Court: You extracted the acid?

The Witness: I took the acid out and poured it out; certainly some moisture was left.

Q. Now, Doctor, will you describe the condition of the inside of the jug at the time you cut it open? A. It was in the same condition as it is now.

Mr. George: Just a moment, I will object if the Court please. The condition of the jug is no part of the Doctor's report on it on which the direct examination is based.

The Court: The question has been answered.

The Witness: In the same condition.

Q. Did you take anything out of that jug? A. I did.

Q. What did you take out of the jug? A. Some of the loose particles remaining on the bottom.

Mr. Ashmead: The witness now produces two bottles which I would like to have marked for identification. The first is the wide bottle.

(Accepted and marked Exhibit D-1 for Identification.)

Mr. Ashmead: And the other the yellow colored bottle, rather flat.

(Accepted and marked Exhibit D-2 for Identification.)

Q. Now I hand you the Exhibit D-2 for Identification and ask you what that contains. A. That is some of the loose residue and that is some powdered up.

The Court: What is that?

The Witness: That is some of the loose residue I found on the bottom and this is some I powdered up (indicating).

Q. Both came out of that jug? A. Both came out of that jug.

Q. In these two bottles, what quantity of the material did you find? A. That bottle was full and what is in here, it was not weighed.

Q. Is this the material that was attached to the sides of the jug at the time you first opened it? A. I think most of it was on the bottom and some was attached to the side.

Q. Just what was the condition of it as you found it in the jug? A. This loose material?

Mr. Armstrong: I object to that. There is no part of the report.

The Court: Do you think to show the composition of this?

Mr. Ashmead: The question at present is as to the condition of the jug.

The Court: Do you object to that?

Mr. Armstrong: Two bottles were laid before the witness.

The Court: In the analysis what was this?

The Witness: That was loose on the bottom.

Q. Did you make an analysis of this? A. I did.

Mr. Armstrong: I am going to object to that if the Court please.

Q. For what purpose did you make that analysis? A. To check up my first analysis.

Q. What did you find to be the character of that material in that jug?

Mr. Armstrong: That is objected to.

The Court: The witness has said it was to check up his first analysis. Does that

analysis, if you did make an analysis of the residue, of which you have just spoken, did that change your opinion respecting your previous report?

The Witness: Yes, sir, to some extent.

The Court: As to the exact things stated in your previous report?

The Witness: Yes, the cause of the burst.

Mr. Armstrong: I think he should point out with great particularity in what respect his opinion has been changed in order that we may object before any analysis is made.

The Court: In what respects did it change the previous report in your mind?

The Witness: Only in that one thing, that it was not only marble calcium but that some metal, silica was present.

Q. Upon your investigation, Doctor, confirmed by this subsequent examination of the residue in this jug, what did you conclude to be the cause of this evolution of gas? A. Calcium silica.

Q. Now, what is the action of hydrofluoric acid poured on calcium silica? A. Calcium usually denotes calcium carbonate, forming carbon dioxide acting on silica or sand, forming a gaseous compound of silica and fluorid or silicon fluorid.

The Court: Just explain what you mean by that.

The Witness: The calcium produces carbon dioxide and the sand or silica combined produces calcium fluorid.

Q. What in your opinion, was the cause, after your examination, of this accident?

Mr. Armstrong: Both objections are withdrawn.

A. The presence of a foreign mineral in the container or the action of the acid on a foreign mineral.

Q. That was in the container? A. That was in the container, probably marble or sand or both.

Q. At the time it was filled? A. That was in the container at the time it was filled.

Q. Now, this jug Exhibit P-G-2, will you give the history of this?

Mr. Ashmead: Before I do that I would like to have an opportunity to show the jury the condition of this jug, P-G-1.

The Court: It is in evidence?

Mr. Ashmead: Yes sir.

Q. I show you the jug Exhibit P-G-2 and I ask you what that jug is? A. Received from Sergt. Rowe or Lacey, I don't exactly remember who brought it in. I would have to look at my records.

Q. Did you examine this jug? A. I did.

Q. Did it have any acid in at that time you received it? A. Yes sir, it was moist.

Q. As if acid had been taken out of it? A. Yes sir.

Q. What did you find to be—I believe you said in your report that that is the jug. That is the one mentioned in your report, isn't it? A. No, that is the jug (indicating).

Q. That is the one that had the small residue in?

The Court: Did you mention that jug in your report?

The Witness: This is one of the two jugs.

Q. Do you refer to that in your report, to this jug? A. No sir, I referred to this one (indicating Exhibit P-A-2.)

Q. Did you examine this jug when you cut it open? A. Yes sir.

Q. What did you find the condition of Exhibit P-G-2?

Mr. Armstrong: I object to the condition of the P-G-2.

The Court: I think that is fairly within a proper objection.

Mr. Armstrong: Of course if you want to make him your own witness.

Q. You never examined these jugs for the Charles Cooper Company? A. I did not.

Q. And your testimony is of an examination you made in your public capacity as an official of Essex County? A. And checked it up for you, Mr. Armstrong.

Mr. Armstrong: Did I ever ask you to examine them?

The Witness: No, I——

Mr. Armstrong: Did Mr. Ashmead?

The Witness: That was later.

Mr. Armstrong: You are an expert here to-day for Mr. Ashmead, are you not?

The Witness: I am giving my opinion.

Mr. Armstrong: The fact is you are retained as an expert for Lindabury, Depue and Faulks, the attorneys for the Defense in this case, are you not?

The Witness: Yes sir.

Q. You never were consulted by us until just prior to the last trial? A. Yes sir, right.

Q. Prior to that time you were consulted by Mr. Armstrong? A. Yes sir.

Q. Now I want to refer to your report and get

this clear, the part which Mr. Armstrong read and in which you referred to the container which caused the accident and to one of those received at a later part, the contents of which did not explode. You have in there an analysis of that; what is in that analysis? A. I was giving that here as part coming from that container which was in the car.

The Court: P-G-2?

The Witness: Yes sir.

The Court: But you did make an analysis of it?

The Witness: I did make an analysis.

Mr. Ashmead: And it is in his report.

Q. You refer in your report which they have read into evidence in paragraph two, to "Part of the contents of the unexploded container." That was mentioned in the report. That is introduced into evidence, isn't it? A. Yes sir.

Q. Now, when you reported that jug that did not explode did you refer to Exhibit P-G-2? A. It was told me that the acid in this was transferred from that jug.

Q. So that the acid in the small bottle which you have produced and which is marked as Exhibit P-A-2 for identification was obtained, or came from Exhibit P-G-2? A. So I am informed.

Q. You made an analysis of that acid and that is the acid that is referred to in paragraph two of this report? A. It is.

Q. Did you find any foreign matter in that acid? A. No foreign matter.

Q. What did you find there; anything unusual about this? A. Nothing unusual. I had gotten ash .099 percent.

Q. Is that a comparatively small amount of ash?

A. I don't know how commercialized this is but compared with what I found in jug number one it was very small.

Q. Now, after you got this jug Exhibit P-G-2, you are the one that cut it open? A. I did.

Q. Why did you cut it open? A. To examine the residue and check off with that found in number one.

Q. What did you find to be the physical condition of that jug?

Mr. Armstrong: That is objected to as immaterial, because this inquiry is based upon an explosion of the contents of Exhibit P-G-1. What may have been in Exhibit P-G-2 is immaterial because it did not explode, did not go off and nothing has happened with respect to it. I further urge that it is immaterial to this case.

The Court: I presume that your claim is that it is not shown that it is the same as this.

Mr. Armstrong: Yes, sir.

The Court: I suppose that it rests on hearsay and that is what you referred to.

Mr. Ashmead: They have introduced a report and I am asking him to explain what is in that report.

Mr. Armstrong: I don't want to quibble about it.

Mr. Ashmead: I am asking as to the physical condition.

Mr. Armstrong: I withdraw the objection.

(Question read as follows): "What did you find to be the physical condition of that jug?" A. Entirely different, did not have a coating on the

side walls as number one and the residue on the bottom is entirely different physically.

Q. Did you find present any siliceous matter in that? A. No.

Q. You never made any examination? A. Not chemically, no.

Q. The jug is in the same physical condition as when it first came into your possession? A. It is.

Q. It has never been out of your possession except the short time it was in the court? A. Never was.

Q. Now Doctor, what is the character of the coating on this jug; is that the normal action of hydrofluoric acid? A. I believe so.

Q. That is a formation caused by hydrofluoric acid? A. Hydrofluoric acid on lead.

Q. Now, from jug P-G-2, I understand you got no residue? A. I didn't make any examination of the residue.

Q. There was none to make there?

Mr. Armstrong: That is objected to as argumentative.

Q. Is it in the same condition as it was then? A. Yes, sir.

Q. Doctor, suppose you had a jug that was moistened with hydrofluoric acid and sand was put in that jug, what would be the effect of the surface moistened with hydrofluoric acid upon sand?

Mr. Armstrong: I object to that hypothesis unless Mr. Ashmead is willing to make Dr. Edel his own witness. I think it is incompetent on the cross-examination. The direct examination was limited to the examination of the contents of the exploded jug and his report was made thereon on the

direction of the County Physician of the County of Essex and the County Prosecutor which he would be obliged under his duties as a toxicologist of Essex County to make in all cases of death by violence. When it is attempted to show him as an expert of the character of hypothesis based on the effect of hydrofluoric acid, that is clearly objectionable in view of the direct examination.

The Court: I think not. I think he has testified to that in his report and that there was a subsequent examination he made to correct his report and he found sand present in this jug in question.

Mr. Armstrong: I withdraw my objection.

Q. (Question read as follows): "Doctor, suppose you had a jug that was moistened with hydrofluoric acid and sand was put in that jug, what would be the effect of the surface moistened with hydrofluoric acid upon sand?" A. A gas will be evolved.

Q. Would it have any cementing effect if it were dried? A. I could not say. I am not a fluorid expert.

Q. Now, Doctor, in your report you have stated or used the word explosive; was there any explosion in this case? A. No, I don't think it was an explosion in the scientific sense. It was an evolution of gas under pressure.

Q. There was no fire? A. No fire.

Q. Hydrofluoric acid is not a flammable gas?

Mr. George: I object to that on the ground that this witness said he is not an expert on hydroflouride.

Q. You know the character of hydrofluoric acid, don't you? A. Yes, sir, I know some of it. I never manufactured it. I use it extensively in my work.

Q. Will the vapor from it burn? A. I don't know. I never experimented.

Q. When you spoke of an explosion in your report, you did not speak of it in the sense of having a fire? A. Not in the scientific sense. It was an evolution of gas under pressure.

Q. The same as in an ordinary soda water bottle, is that right? A. Yes, sir.

Q. And as to the character of hydrofluoric acid, is there any danger from it if it does not come in contact with your body? A. Is no danger to it.

Q. The danger connected with hydrofluoric acid is simply that it is corrosive? A. Yes, when it comes in contact.

Q. When it gets on the flesh, it will burn? A. It will burn, yes.

Q. Like many other acids? A. It will.

Q. It is a commercial product, you know that? A. It is.

The Court: By that you don't mean that the acid, the fluid itself has to come in contact, but the gas would be dangerous, would it not?

The Witness: It would. Hydrofluoric acid itself is a liquid.

Q. Would there be any great amount of gas from it unless it come in contact with some foreign substance? A. No, it would not.

Q. To create those fumes you would have to bring it in contact with what kind of substance? A. Carbonates or silicas.

The Court: When brought in contact with such substances it will form a gas?

The Witness: It will form a gas.

The Court: Is that gas dangerous to human beings?

The Witness: It is.

The Court: In what way, what effect would it have?

The Witness: Corrosive.

Dr. Harrison S. Martland, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. What is your profession? A. I am a licensed physician of New Jersey.

Q. Will you state your educational qualifications, Doctor? A. I am a graduate of Columbia University College of Physicians and Surgeons of 1905 and have been doing pathological and clinical and laboratory work ever since.

Q. By pathological and clinic and laboratory work, will you explain that so that I can understand it? A. I have been doing pathological work and the examination of blood and various things.

Q. You are the County Physician of Essex County? A. Yes, sir.

Q. Did you perform an autopsy on the body of James Kelly on or about the 23rd day of June, 1925? A. I did.

Q. Did you also sign the death certificate setting forth the cause of death of James Kelly? A. I did.

Q. I show you a paper writing, what is purported to be a certified copy of the death certificate.

Mr. Milton: We will admit it, Mr. Armstrong.

Q. Can you tell us the cause of James Kelly's death? A. The cause of death was extensive burns of the body, the extremities, due to an accidental explosion of hydrofluoric acid, the contributing cause of asphyxiation, choking.

Mr. Armstrong: The certificate is offered in evidence.

(Accepted and marked as Exhibit P-A-4 of this date.)

Q. Did you also perform an autopsy on the body of O'Neill? A. No, I made an examination of the body of O'Neill because the autopsy was not necessary to ascertain the cause of death.

Q. Can you tell us the cause? A. The cause of death was the same.

Q. As in the Kelly case? A. Yes, sir.

Mr. Armstrong: I would like to offer this certificate in evidence.

(Accepted and marked as Exhibit P-A-5 of this date.)

Q. What do you say as to the condition of Kelly's throat? A. Kelly's throat, there was an intense oedema of the glottis, an intense oedema of the mucous membrane, of the larger and smaller bronchial tubes and an irritation, producing and filling up of the lungs and choking.

Q. In your opinion would that be sufficient to cause a man's death? A. Oh yes, a horrible death.

Q. And the same applies to O'Neill? A. Yes, sir.

Mr. George: Such fumes as would be caused by hydrofluoric acid would cause such a condition as you have just described?

The Witness: Yes, sir.

Cross-examination by Mr. Milton:

Q. The inhalation of fumes such as you describe would irritate the larynx and trachea? A. Oh, yes, absolutely.

Q. And produce inflammation? A. Intense acute congestion.

Mr. George: And rales.

The Witness: Oh, yes, sir, if they lived long enough.

DR. ALBERT E. EDEL, recalled.

Direct examination by Mr. George:

Q. Did I understand you to say that hydrofluoric acid is not dangerous? A. It is not dangerous until it comes in contact, as I said, with the skin.

Q. Therefore it is dangerous? A. But not until it comes in contact.

Q. An automobile in Brooklyn isn't dangerous if you are in Jersey City? A. No.

Q. It might be dangerous if you and the automobile come together? A. Oh, yes, sir.

Q. So it is an instrumentality of danger? A. It is.

Q. And so hydrofluoric acid—— A. And other acids.

Q. What is contained in that vessel? A. Hydrofluoric acid.

Q. And while Mr. Armstrong and Mr. Ashmead were quarreling a little while ago about the admission or exclusion of evidence I picked that up and you warned me to put it down, that it was dangerous? A. Yes, if the cork should come out it would burn your fingers away.

Q. So long as it remains in there and the cork remains in there there would be no danger? A. It would be perfectly harmless.

Q. For how long has the acid which is contained in that vessel been in there to your knowledge? A. To my knowledge, I can give you that.

Q. More than a year and a half, isn't it? A. Yes, sir.

Q. And it has been corked for more than a year and a half? A. No, sir.

Q. For how long? A. It was opened here the last time and I guess it was last July.

Q. It has been corked for at least six or eight months? A. Yes, sir, pretty near a year.

Q. With the same acid that it contains from the time that you first took the specimen from one of these containers in June, 1925, until the time of the last trial when it was opened, is that right? A. Yes, sir.

Q. Now, while it sits there passively on the table it won't bother anybody? A. It would not.

Q. If perchance there was some sand or silicate of some kind, it would become dangerous to keep it corked, wouldn't it? A. It would.

Q. Let us assume another content. Let the interior surface dry and drop some sand or silicate in the vessel and then pour acid similar to that,

similar to that now contained in the vessel into the vessel and immediately corked up, will you tell the court and jury what would happen in your opinion? A. It would produce an evolution of gas under pressure.

Q. When the cork is stuck in there and tight it would form a combustion? A. An evolution.

Q. Which means an explosion? A. A force.

Q. The cork would pop out and spray would cover us all, wouldn't it? A. Yes.

Q. So that even you sitting there might suffer a terrible damage and fatality? A. Yes, sir.

Cross-examination by Mr. Ashmead:

Q. I think I can ask you this one more question. This acid contained in this small jug taken from the jug P-G-2, that has behaved normally ever since you have had it? A. It has.

Q. You have had it ever since? A. Since the fatal accident.

Q. When was that? A. I had that opened, yes, sir.

Q. And you examined that acid? A. Yes, sir.

Q. You found it perfectly normal acid? A. Yes, sir.

Q. Commercial acid? A. Commercial acid.

Q. Nothing abnormal about it in any way? A. No.

Re-direct examination by Mr. George:

Q. Just one more question. Before you put the acid which is now contained in that vessel into the vessel you were careful to see that the vessel was clear? A. I didn't put any acid in there. I received it, the acid was in there when I received it.

Q. From whom? A. From the Cooper Chemical Company.

Q. Who is the Cooper Chemical Company, you don't mean that the corporation gave you that? A. No, Dr. Friedman gave me that.

Q. You knew that when I asked you that question that Dr. Friedman, who is the chemist of the Cooper gave you that? A. Yes, sir.

Q. He handed it to you as is? A. That is right.

Q. So that so far as your knowledge is concerned you don't know where the acid came from? A. I don't know.

Q. Let's assume another question. Suppose it were not handed to you completely in the present condition by Dr. Friedman or anybody else and that you were to remove the acid from either of these jugs or any jugs and to place it in that vessel of your own, for other use, analytical or otherwise, wouldn't you be careful that the vessel into which you were placing that acid was clean? A. I surely would.

Q. Because if it were not and you then corked it it would be dangerous, there would then be an explosion? A. It would.

Dr. Percy B. Meerbott, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. Where do you live? A. 766 County Avenue, Secaucus, New Jersey.

Q. What is your business or profession, Doctor? A. Chemist, manufacturing chemist.

Q. How long have you been in that business? A. Since 1906.

Q. Can you tell us your education qualifications? A. I studied at Steven's Institute under Dr. Pond and graduated from there and then following that I taught Industrial Chemistry for 16 years in connection with the manufacture of chemicals.

Q. This Industrial Chemistry about which you speak, will you explain that a little more thoroughly? A. Manufacturing chemistry, manufacturing of chemicals for the Textile Industry such as silk, cotton wool manufacturers.

Q. And that has been your business since when? A. Since 1906. In addition to that, I was associated in various other chemical capacities outside of the textile industry such as the manufacture of silicas and other chemical commodities.

Q. In your business do you or do you not have to do with hydrofluoric acid? A. Oh yes, we do.

Q. With what degree of frequency during the period you spoke of, that is from 1906 to date? A. We use it daily, sometimes as much as 20 to 25 barrels per day.

Q. So that you have handled very large quantities? A. Yes sir, very large quantities.

Q. Will you tell us, chemically, speaking just about hydrofluoric acid, as to its constituent parts and in as simple a manner as you can, try and keep away from the chemical and technical terms if possible.

The Court: You are not a manufacturer?

The Witness: Yes sir.

The Court: Of hydrofluoric acid?

The Witness: No, I don't manufacture it.

The Court: You are a chemist?

The Witness: I am a chemist.

The Court: You know the constituent parts of hydrofluoric acid as a chemist?

The Witness: Yes sir.

Q. Now, will you tell us the constituent parts? A. Hydrofluoric acid is a compound containing hydrogen and fluorin. Hydrogen is an element and so is fluorin. Fluorin belongs to what is known as the halogen group and when we say the halogen group we mean the elements obtained from sea water. There are four of these, that is, there are these four elements obtained from sea water, sea salt, producing these things. They are fluorin, the lightest and the most dangerous, chlorin next, bromin, a liquid, also dangerous but not as dangerous as the other two mentioned, iodin.

Q. To which subdivision of the halogen group is hydrofluoric acid or its gas belong? A. It does not belong to the group at all.

Q. Is it in the halogen group? A. No, it is a compound. It is not an element.

Q. That is to say, fluorin is a constituent part of hydrofluoric acid? A. Yes sir.

Q. Is fluorin a dangerous gas, Doctor? A. I consider it a very dangerous gas.

Mr. Ashmead: I object to that.

Mr. Armstrong: I withdraw the question.

Q. You were telling us about the constituent parts of the acid. Will you continue? A. I mentioned the three of the halogen group. I was mentioning iodin which is a solid. Hydrofluoric acid is produced by the action of sulphuric acid on fluor spar, which produces calcium fluor spar by the acting upon the calcium in the fluor spar

there is a gas created. You have all heard of helium. Helium is a light thin gas which causes balloons to rise in the air and airships. Now fluorin belongs to that light gas, not the heavy gases. When this is dissolved in water it produces hydrofluoric acid. That is how hydrofluoric acid is made.

Q. And hydrofluoric acid, is it a fuming liquid? A. It is what we call an unstable liquid by which we mean that it makes fumes—in other words I mean that the hydroflouric acid is vitalized.

Q. Will you please tell us what you mean. A. A gas.

Q. So that you call a fume and a gas the same, synonymous terms? A. Yes, sir.

Q. Now Doctor, do you know the action of hydrofluoric acid on lead? A. Hydrofluoric acid has a slight action on lead. It acts upon lead to form lead fluoride. After lead has been acted upon, it is lead fluoride. We say in chemistry that polarization takes place, or in other words, no further action can take place. It is localized, a film is formed over it, if I might use that term. After that, after it has acted upon the lead, the lead becomes of such a nature that the acid has no further action on it.

Q. During the process of this coating about which you have just told us, Doctor, coming in contact with this acid, is there any chemical action between the lead and the acid? A. Well, there is a form of coating. There is a chemical action to this extent, that there is lead fluoride and the hydrogen is liberated because hydrofluoric acid contains hydrogen and fluorin and only when the fluorin is combined with lead will the hydrogen escape.

Q. By hydrogen, will you tell us about that,

what you mean? A. Hydrogen is a gas. It is a gas which is highly inflammable. It explodes when brought in contact with flame.

Q. Can you tell us the action of hydrofluoric acid on silica or just explain if you can what silica is? A. Silica is an element, belongs to one of the elements of which we have 80 odd and it is a constituent of sand. Sand is silicon oxide or silica combined with oxygen that is in sand.

Q. Would ordinary soil of a sandy quality contain silica? A. Yes, silica is very freely found in the universe, tremendous quantities, the earth is filled with it.

Q. That is ordinary dirt would be siliceous? A. Yes, sir.

Q. What if anything has the action of this acid on silica, Doctor? A. It is more active on silica than it is on any other element. I might qualify that and say that hydrofluoric acid if it is brought in contact with an alkali such as calcium, such as ordinary lime, it would be extremely active and cause an explosion. But taking it as an element, in the elements, hydrofluoric acid has an affinity for silica and produces what we call silicon fluoride. Silicon fluoride is a gas, very corrosive, causes destruction because it will tissue and destroy bone or anything containing mineral matter such as calcium, magnesium and so on.

Q. What effect would it have on a human being? A. It is corrosive, it destroys life.

Q. I don't believe we have had the word corrosive defined, although it has been often used. Will you tell us what you mean? A. By corrosive we mean that it destroys, changes the chemical composition of a substance.

Q. And that is what hydrofluoric acid will do? A. Hydrofluoric, silicic acid.

Q. Do you say that is a gas? A. That hydrofluoric gas, the siliceous resultant compound is a gas.

Q. Having acted on the silica? A. Yes, sir.

Q. Now what is the residium? A. There would be no residium. The hydrofluoric acid and the silica fluoride which would pass off as a gas, some of it would remain in the solution; if there is water, the gas is thoroughly soluble in water.

Q. You are speaking of pure silica? A. Yes, pure silica.

Q. Assuming Doctor, sand about which you have told us, is that a base of pure silica? A. No, sand is composed of a great many metals, it might contain iron, copper, nickel.

Q. Assuming therefore that hydrofluoric acid acted upon sand containing silica, would your answer be the same with reference to this hydrosilicic acid? A. Yes, if the solution contained any sand which the acid could act upon. The reaction on the silica, the sand, would be additional to the reaction on the other constituent which might be there.

Q. Would there be a residium of the other constituents after the acid—— A. If calcium was present, hydrofluoric acid would act upon the calcium and there would be calcium fluoride there, the reaction would be very similar to the reaction on lead, it would polarize. In other words it would coat that with calcium fluoride. If one was coated with calcium fluoride, there would be no further action take place unless its surface had been removed.

Q. Assuming the complete reaction of this sand containing silica or other mineral matters with the acid and with this sand, would there be any subsequent danger whatever from the hydrofluoric

acid again coming in contact with that residium? A. If the hydrofluoric acid had completely reacted upon the sand, entirely spent all the elements which are there and converted them into fluorides, there could be a further reaction.

Q. But if it had entirely reacted there, would your answer be the same? A. No, if it had been fully reacted upon it would form this cement which would be inactive towards hydrofluoric acid.

Q. That is to say there would be no resultant evolution? A. Not if the action is complete, there can be no further reaction.

Q. As a matter of chemistry, Doctor, is there anything peculiarly difficult in anticipating the result of hydrofluoric acid on silica? A. Yes, sir; if hydrofluoric acid is to act on the silica, we anticipate an evolution of gas.

Q. Most every chemist would anticipate that too? A. That is common chemical knowledge.

Q. Assuming a dirty jug, such as of the type and quality marked Exhibit P-G-1 were presented for filling with hydrofluoric acid, would you consider it good commercial practice to immediately cork that jug?

Mr. Ashmead: I object to that. Have you ever manufactured hydrofluoric acid?

The Witness: No, sir.

Mr. Ashmead: Have you ever made any shipment?

The Witness: No, not as straight hydrofluoric acid.

Mr. Ashmead: Have you ever packed hydrofluoric acid for shipment?

The Witness: No. That is, you are speaking in quantity.

Mr. Armstrong: I will withdraw the the question and reframe it.

Q. Doctor, from your experience as a chemist, do you know whether or not it would be good chemical practice to immediately cork a jug of hydrofluoric acid which jug had never theretofore been used? A. I would consider it very poor chemical practice.

Q. Why? A. Because of the fact that hydrofluoric acid acts upon lead and separates the hydrogen and thereby would cause a pressure in the jug and blow the cork.

Q. With a resultant blowing of the cork; what do you mean by that? A. The pressure within and on the surface of the liquid due to the gas being formed there and being confined to the content, would seek to liberate—that is there would be pressure created there and it would cause pressure against the cork, and cause the cork to be blown from the bottle, and possibly liquid with it.

Q. Would you call that an explosion? A. Oh, yes, sir.

Q. Chemically speaking. Will you define for me scientifically as you know it what an explosion is? A. When a gas is confined and is brought under pressure, if it should burst the container, that would be an explosion. Now an explosion does not necessarily need to be accompanied by fire; a tire under pressure on a car when blowing out is an explosion.

Q. Would you call an evolution of gas such as is alleged to have had happened to Exhibit P-G-1 and the subsequent pop of the cork an explosion scientifically speaking now? A. Absolutely.

Q. Now Doctor, assuming a lead jug which had had hydrofluoric acid in it prior to its delivery to you and which had again been presented for re-filling, and assuming further, Doctor, the presence in that jug of siliceous metals, not pure silica

but a combination of which siliceous matter made up a part, would you consider it good chemical practice to re-cork that jug immediately?

Mr. Ashmead: I object to that, that is not proper examination. I submit that this witness has not shown himself qualified as to the proper practice of filling and refilling.

The Court: I understand he has handled it in great quantities.

The Witness: Yes, sir.

The Court: And in the course of handling this, what sorts of containers have you been acquainted with?

The Witness: Barrels and drums, iron drums.

The Court: How about lead containers?

The Witness: In small quantities in the laboratories. We use a lead container and barrels and also rubber containers in which we pour the acid that we need in the laboratory.

The Court: When you say a small quantity, how much do you mean?

The Witness: In the neighborhood of a pound of acid per container.

The Court: Have you had occasion in dealing with the lead containers to cork them and uncork them?

The Witness: We have. We refill them. Refill the container from the barrels in which we received the acid from the manufacturer. In other words we use acid in the laboratory the same as we do in the plant for manufacturing. When we would refill our container, when the laboratory needed it, we would fill it and allow it to

remain uncorked until the following day.

The Court: Whether you are a manufacturer of it or not, you are pretty much in contact with lead containers other than you have mentioned in the laboratory?

The Witness: Yes, we use lead pans in which we use the hydrofluoric acid which we use in connection with the product we handle. We cannot work with anything else. We can't work with it in wood. We have to have lead to work in.

The Court: Your experience with lead containers is limited to the one, isn't it?

The Witness: No, we have at least a half a dozen of these containers which hold as much as five to ten barrels of hydrofluoric acid, very large lead containers.

The Court: I think he is qualified as to the practice.

Q. What would be the effect of filling a jug containing siliceous matter, not free silica but materials containing siliceous materials, filling this jug with hydrofluoric acid and immediately corking it? A. The hydrofluoric acid would act upon the siliceous material and gas would be made, there would be a rising temperature and as the reaction accelerates, the temperature would proportionately rise until sufficient pressure had been exerted within the container to cause pressure that would force the cork out.

Q. You mean by that rising temperature when the jug got hot? A. Absolutely. There is much heat liberated when hydrofluoric acid acts upon silica, enormous amount of heat is liberated.

The Court: Doctor, how soon would you expect the presence of heat to appear in the

event of hydrofluoric acid being put in Exhibit P-G-1 here, assuming that it contains some silica.

The Witness: That would depend entirely upon the quantity of silica that is there. If there is a small amount of silica, the amount of heat may be very little and possibly not felt. If there is a quantity of silica there then the reaction would accelerate, that is the amount of heat generated and it is possible that if there is a quantity of silica there, you could in a minute or two feel a temperature in the jug.

The Court: Regardless of the exact quantity, would you say that it would be possible to experience or feel heat from the jug within one or two minutes after it was filled?

The Witness: Provided there is sufficient silica there for it to react upon.

The Court: Could you give us an idea—if you object to this, say so—could you give us an idea of the amount of silica that you would expect to produce a heat in exhibit P-G-1 within say three minutes after filling.

The Witness: Why, I think four to six ounces of sand would show a rising temperature in the liquid, which may be felt on the surface of the container.

The Court: With respect to that small container, Exhibit P-A-2, can you tell with reference to the size of that how much four or six ounces would be, using that as a comparison?

The Witness: I should judge that four ounces of sand would be enough to just about coat the bottom of this container a quarter of an inch.

Q. Is there any danger of my juggling this container around? A. I would be very careful with it, I would handle it very carefully.

Q. With reference to that small jug and for the purposes of the record, will you give us in your opinion the diameter and circumference of that jug. A. I would say that is about four inches, three and a half or four inches in diameter. I would say about four inches, and I would say about six inches high or possibly seven inches high.

The Court: A coating of sand of an inch in depth on the bottom of that would be four to six ounces?

The Witness: A quarter of an inch I think would be four ounces. I don't think six ounces.

Q. In your opinion that would be a sufficient quantity of siliceous material to produce the heated effect so that it would be noticeable within three minutes at the outside? A. Yes; I would like to qualify that and say five minutes.

Q. Giving outside, giving an outside of five minutes? A. Yes, sir.

Q. Is there anything particularly difficult chemically about the knowledge of hydrofluoric acid and silica? A. No, that is information that is contained in the elementary text book.

Q. So that it is elementary chemistry? A. The action of hydrofluoric acid on silicon is elementary chemistry.

Q. By the way, I don't think I asked you, do you know the effect of hydrofluoric gas in inhalation? A. Hydrofluoric acid gas is just as destructive as silicon fluoride gas. They are both fluorides and it is fluoride, not the silicon that is

destructive because the silicon is inactive, the metal itself is not active towards the flesh or material or anything. Common sand is inactive.

Q. So that the gas has an effect on the human flesh also? A. Yes, sir.

Q. The tissues and the membrances and the inside of the body, not medically speaking but I mean as a chemist. A. The tissues, membrane and bone.

Q. Has the gas a corrosive effect also? A. Yes, sir.

Cross-examination by Mr. Ashmead:

Q. In reference to the amount of silica contained in the jug and the time with which the action of hydrofluoric acid would produce heat, of course that depends upon varying conditions; the amount of the silica and also the condition in which it is in combination; is that not true? A. Yes, sir.

Q. Hydrofluoric acid as I understand is fluorin dissolved in water and therefore in a large measure is water, is it, that is the liquid, a liquid like water that is colorless? A. No, it appears colorless like water but there are various percentages. The highest percentage for instance is 60 percent in which there is 40 percent water and 60 percent hydrofluoride. Then we have the 30 percent which is 30 percent hydrofluoride and 70 percent water. We use mostly 30 percent for safety reasons. There have been times when we could not get the 30 percent and we were obliged to buy the 60.

The Court: Does it appear whether this liquid was 60 percent?

The Witness: It was strong, 60 percent.

The Court: Is it conceded that it is 60 percent?

The Witness: It was about 60, I think about 58 percent, approximately 60.

Mr. Ashmead: We have an analysis that has not been produced yet.

Q. Hydrofluoric acid would have upon sand, if there was not sufficient hydrofluoric acid to neutralize or polarize all of the sand, a cementing effect, wouldn't it, just the same as water? A. Only if the acid does not react upon the silicon or sand that was there. Then there would be some unacted upon sand that would be probably cemented or coated to the container or it may be encrusted over the surface and not be cemented below.

Q. And be a solid mass? A. Not necessarily a solid mass. It may be simply coated over the surface and the under part of it, the lower part of it would be quite free but the surface no doubt would be coated, a sort of glaze.

Q. Now I think you said on your direct examination, if you had a condition like that, where the sand that had been put in the container had become only partially neutralized, that if you put hydrofluoric acid in and there was enough silicon left on which the hydrofluoric acid could react there would be an evolution of gas? A. Yes, if there was free silicon, the acid would act on whatever was there and cause an evolution of gas.

Q. Mr. Armstrong spoke about having a new jug and putting hydrofluoric acid in that lead jug. Now, that is what is called seasoning a jug? A. Seasoning or pacification.

Q. When you have a new jug and you put hydrofluoric acid in that jug and the hydrofluoric acid acts on the lead, it makes hydrofluoride of lead which is a coating that will protect the jug

from further action of the hydrofluoric acid; is that right? A. You said hydrofluoride of lead. It forms fluoride of lead which will form a coating of fluoride of lead, the hydrogen being liberated, which would escape.

Q. And that fluoride of lead, this coating, is tenacious? A. The fluoride adheres to the lead.

Q. When a jug has been treated that way, by having had hydrofluoric acid stored in it, that neutralization, becomes complete, or do you call that polarization? A. Either polarization or neutralization would be all right. Why, it is complete as long as the acid remains in the jug. If acid has been removed or has been standing there for some time without acid and then it is refilled, there is a possibility of this lead fluoride coming loose from the surface of the lead and for this reason we re-pacify when we re-fill the jug.

Q. This fluoride of lead is very tenacious? A. Yes, it sets very well.

Q. In a jug that has been so treated, you can put hydrofluoric acid in it and there will be no further action except on such small places from which the top coating has been removed? A. If there is no exposed surface in the lead, the reaction would not take place, but if the acid got into the entrices, then it would cause a further reaction, for that reason we re-pacify after filling a second time.

Q. It would only be in case there were coating taken away? A. If the lead was exposed, it would act upon it.

Q. Whether or not there would be any substantial evolution of gas would depend upon the extent to which the coating had been removed? A. Oh, yes, sir.

Q. Coming back to this question of evolution

of gas and the time in which the evolution would take place. That would depend, would it not, upon the condition in which this mass was in at the bottom of the jug? A. It would have to be in such a condition that it became reacted upon by the acid.

Q. If you take a mass of sand which has been partially treated with hydrofluoric acid, but not fully neutralized by the hydrofluoric acid and then allowed to dry, do you know as a matter of your experience whether or not in putting hydrofluoric acid on that mass that the action would be very, very slow at first? A. I should say that if there is an encrustation there there is danger of a crack in the encrustation and then there would be an evolution of gas. If there was a new exposure, wherever hydrofluoric acid came in contact with it the temperature rises and there would be a further stirring up of the mass, the chemical action would continue.

Q. So that it would be very slow in the beginning? A. I don't know, that it is dependent upon the measure it is exposed to.

Q. Then when the action got stronger as time goes on, the action would become stronger, wouldn't it, and the whole amount would spring up? A. Yes, and there would be a temperature, the action would be accelerated.

Q. And the part that was sticking to the container, that would break out from the sides and deposit in the acid? A. Possibly so.

Re-direct examination by Mr. Armstrong:

Q. I think you were asked something about partially acted upon residue or residium in the bottom of the jug and this residium containing siliceous matter. Am I correct? A. Yes, sir.

Q. Do you think that would be acted upon by the acid? A. Yes, the residue, if it contained silicon would be reacted upon by the new acid.

Q. Is that a condition to be reasonably anticipated as present in a jug, Doctor?

Mr. Ashmead: I object to that.

Mr. Armstrong: I withdraw it.

Q. Doctor, siliceous material in a jug, I presume that the action upon that by the acid would depend upon the amount of acid in comparison to the amount of material. A. Of the chemical reaction; all chemical reactions are dependent upon quantity.

Q. If the acid be not of sufficient quantity, then I assume the action would not be complete? A. No, it would only be complete to the extent the acid has been used.

Q. Assuming that the action had not been completed, Doctor, and new acid was poured in, what if any effect would take place then? A. Why, if there was silicon there to be acted upon, the reaction would continue as though there had been some acid there before it was all spent.

Q. Assuming ten pounds of acid poured into Exhibit P-G-1, Doctor, would that act upon the siliceous residue? A. Yes, the acid would act upon it.

Q. Would it be likely to crack it? A. I believe that it would tear out the scale, it would have a tendency to break up the scale in part.

Q. Assuming that the scale contained siliceous material. A. If it contained siliceous material it would form a gas.

Q. Is that reasonably to be anticipated chemically? A. Yes, sir.

The Court: Does that sand necessarily have to contain silica? It may be a new lead surface.

The Witness: That will also liberate hydrogen and gas and pressure but not to the extent, your Honor, as silica will. The action on lead is very slight.

The Court: Very slow?

The Witness: Very slow, not discernible. The action on silica is very active, violent, very rapid rise in temperature.

Re-cross-examination by Mr. Ashmead:

Q. These hydrofluoric acid fumes are not flammable? A. No, neither hydrofluoric acid nor silicon fluoride. As a matter of fact, they will extinguish a flame the same as water will.

Q. So that when you speak of an explosion, it is merely an evolution of gas? A. We understand an explosion simply to be gas confined and offering pressure against the container. In other words the way we explain explosions is due to small particles known as molecules in gas rising and each little molecule hammering against the walls of the vessel and trying to get out. Then they develop such force and this continues so rapidly that they suddenly burst through and strike something open. That is the chemical definition of explosion.

Re-direct examination by Mr. Armstrong:

Q. Then an explosion does not necessarily have to be accompanied by flame? A. Absolutely no.

Re-direct examination by Mr. George:

Q. Assuming a vessel similar to that marked Exhibit P-G-1 into which is placed a gallon or ten pounds of hydrofluoric acid and corked, a 60 percent solution, and 15 or 20 minutes thereafter there is an evolution that blows out the cork, an explosion as described in this case, can you tell us what in your opinion would be the probable cause of such an explosion? A. The chemical reaction of the acid on some ingredients that must be present in the container.

Q. When you say some ingredients, you mean a foreign substance? A. Some foreign substance that will act rapidly with hydrofluoric acid.

Q. Assuming a vessel of that type just described, Exhibit P-G-1, being thoroughly cleaned into which is placed or poured a gallon or 10 pounds of hydrofluoric acid of 60 percent volume, would it be likely to explode within 15 or 20 minutes without the presence of a foreign substance? A. No.

Re-cross examination by Mr. Ashmead:

Q. In the question that was asked you, the suggestion was made to you that the evolution of gas occurred 15 or 20 minutes after it was filled, and in your opinion you say it was due to some foreign substance in there at the time the acid was put into the jug? A. I think, Mr. Ashmead, the violence of the explosion from the description that was given to me there must have been foreign material there in order to create such violence. If there was simply a pacification and the cork was put in there it would not be hot. It would not exhibit such violence as this and eventually explode.

JAMES KELLY, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. Where do you live? A. 95 Dwight Street.

Q. You are the father of James Kelly, junior? A. Yes, sir.

Q. Who died on or about June 23rd, 1925? A. Yes, sir.

Q. You are one of the plaintiffs in this case against the Cooper Corporation, are you not? A. Yes, sir.

Q. Were you on or about the 24th of July, 1925, appointed the administrator ad prosequendum to bring this suit?

Mr. Milton: That is all admitted.

Mr. Armstrong: I offer the letters ad prosequendum in evidence.

(Accepted and marked as Exhibit P-A-4 of this date.)

Q. How old was your son? A. 20 years, six months and three days old.

Q. Did he live with you at the time of his death? A. Yes, sir.

Q. How many were in your family on June 23rd, 1925? A. Four.

Q. Will you name them please? A. My wife, myself, my daughter and son.

Q. What is your wife's name? A. Helen Dolan.

Q. And your daughter's name? A. Mary.

Q. You are about how old? A. 63 next September.

Q. How old were you on June 23rd, 1925, Mr. Kelly? A. I was going on 62.

Q. Do you know your wife's age as of June 23rd, 1925? A. Well, I think about 55.

Mr. Armstrong: Never mind, strike that out.

Q. On or about or immediately preceding June 23rd, 1925, was your son working? A. On that date he was not working.

Q. Was he working shortly before? A. Shortly before that he was working.

Q. How much did he make per week a short time before the accident? A. Well, really I could not say. He made about from twenty-three to twenty-five dollars a week.

Q. Who took care of his money, you or the wife? Did you have anything to do with his earnings? A. No, I didn't have nothing to do with the earnings at all.

Q. It was your wife? A. Yes, sir.

Cross-examination by Mr. Milton:

Q. Mr. Kelly, you are employed now, you are working now? A. Yes, sir.

Q. Since you have been married you have been working practically all the time? A. Yes, sir.

Q. Supporting this little family of yours, your wife and two children? A. Yes, sir.

Q. How old is your daughter? A. She is about 26.

Q. She is working? A. Yes, sir.

Q. She works down in the Air Reduction Sales Company? A. He worked there maybe three months or maybe four.

Q. Where was he working when he was killed? A. At that time he was not working steady. He was looking out for a position.

Q. He was not working when he was killed? A. No.

Q. How long had he been out of a job? A.

About three or four weeks, maybe two weeks or a couple of weeks.

Q. Where had he worked before he got out of work? A. He worked for the Erie Railroad, he worked for the New York Sales Company, I think that is the last place he worked. Really I didn't pay any attention at all. I didn't mind about the boy because he was not of age.

Q. You didn't care much about it? A. Because he explained to me he was looking for a position when he came of age, looking for a position.

Q. He was looking for a position when he came of age? A. And he would work a day or two and he would come home at night and go to night school and get more education, he graduated from grammar school and he went about 15 or 18 months to high school, St. Peter's.

Q. How old was he when he graduated from grammar school? A. About 14.

Q. Where did he go, to St. Peter's High School? A. Yes, sir.

Q. Down on Grand Street? A. Yes, sir.

Q. He went there about 17 or 18 months? A. Something from 14 to 15 months.

Q. So that between the time he was 17 and 18 and the time he was killed he had worked off and on? A. Yes, sir.

Q. You were not particular about his getting a job until he came of age, as I understand you? A. Well now, I wasn't particular, I wasn't particular sticking him into hard work or heavy work. I told him not to do it.

Q. You were quite able to take care of this family yourself? A. To the best advantage I could.

Q. With the girl working? A. Yes, sir.

Q. What did the boy do, did the boy turn in his money regularly or did he keep it for spending

money? A. Well yes, he turned in his money according to when he worked.

Q. When he worked? A. Yes, he gave it to his mother.

Q. You didn't get it? A. Well, no.

Q. Mrs. Kelly was the boss? A. No. I never looked for it, I never asked for it and I didn't get it.

Dr. Francis J. Pond, called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. Have you given your name and address? A. Francis J. Pond, Upper Montclair, New Jersey, is my residence.

Q. What is your profession? A. I am Professor of Chemistry at Stevens Institute of Technology, Hoboken.

Q. How long have you been Professor of Chemistry? A. I was Assistant Professor from 1903 to 1909 and full Professor from 1909 to date. It is my present position.

Q. Who has charge of the chemical department at Stevens Institute? A. I do.

Q. Will you tell us of your educational, preliminary, qualifications, Doctor, before you became Professor of Chemistry?

Mr. Ashmead: We do not dispute Dr. Pond's qualifications.

Mr. Armstrong: You admit Dr. Pond's qualifications as a chemist?

Mr. Ashmead: Yes.

Q. You do hold a degree of chemistry, don't you? A. Yes.

Q. From where? A. The University of Goettingen, Germany, Doctor of Philosophy.

Q. Are you familiar with hydrofluoric acid and hydrofluoric gas? A. I am familiar with hydrofluoric acid and hydrofluorid gas.

Q. Is that the gas that flows from the acid? A. Hydrofluorid is the gas, when it is dissolved in water it forms hydrofluoric acid.

Q. Will you for the benefit of the court and jury, Doctor, explain the constituent of hydrofluoric acid? A. Hydrofluoric acid is made up of two elements, hydrogen and fluorin, that forms the gas hydrogen fluoride. That is prepared from a mineral called fluoride by treating it with sulphuric acid and the resultant gas is dissolved in water. That forms hydrofluoric acid, the liquid.

Q. Coming in contact with human flesh, Doctor, can you tell us what if any effect hydrofluoric acid would have? A. Hydrofluoric acid coming in contact with the flesh produces a very intense, serious and poisonous burn and a drop of hydrofluoric acid, a single drop coming in contact with the flesh would produce a very painful and very serious burn.

Q. The gas, Doctor, about which you have just spoken, and which I am too ignorant to even pronounce, can you tell us what the effect of that gas is on human flesh and membrances if inhaled, chemically I mean.

Mr. Ashmead: Does your experience, Doctor, include the examination of these tissues after being affected by this gas?

The Witness: Only insofar as it has happened to myself. I have had times when I dropped hydrofluoric acid on my

finger and a pretty painful burn is the result. I never inhaled the gas, nor do I want to.

Mr. Armstrong: I withdraw the question.

Q. Doctor, are you familiar with the effect of hydrofluoric acid upon silica? A. Yes, sir.

Q. Can you tell us what if any is the effect of the contact or reaction of this hydrofluoric acid upon silica? A. Hydrofluoric acid is one of the very few substances which will take silica and dissolve it. It acts on silica to form a compound known as silicon fluorid which is a volatile gas that in turn reacts with water and forms other acids. The reaction is very vigorous, produces a large amount of heat and it is very prompt in its action.

Q. Now, Doctor, when you say that the action is very vigorous are we to assume that you mean rapid in that respect? A. Yes, if it comes in contact with silica in such condition so that it can act upon it promptly, it proceeds, accelerating the vigor.

Q. Now, Dictor, in the light of your experience, what in your opinion would be the effect of the inhalation of this gas? A. Well, hydrogen fluorid——

Q. In contact with the air passages of the human body.

The Court: That is a little bit beyond your experience.

Q. Chemically, I am speaking of now, Doctor.

Mr. George: In the light of your experience, Professor, and your knowledge of

the action of hydrofluoric acid and hydrofluorid gas, what effect would the inhalation into the air passages of a human being have been, chemically, by inhalation of fumes or gas of hydrofluoric acid?

Mr. Ashmead: I object to that unless I may ask the Doctor a question.

Have you ever made any investigation along that line?

The Witness: Why, I don't have to. It is self evident.

Mr. Ashmead: You haven't made any?

The Witness: I have never examined a man who has inhaled hydrofluorid gas. I have never seen the resultant tissues. I know from my own chemical knowledge it would be a pretty bad state of affairs after that happened.

Mr. Ashmead: Then all you can say is as to the general action of this gas?

The Court: That's all he has really done.

Mr. George: That is the chemical action. That is what I am asking. What would be the chemical action upon the air passages by the inhalation into them of this gas?

The Witness: I should expect them to be very seriously attacked.

Mr. George: What do you mean by that?

The Witness: An irritated burn.

Q. Doctor, does sand, ordinary sand contain a percentage of silica? A. Yes, a very large percentage of silica.

Q. Would hydrofluoric acid act upon ordinary sand as it would pure silica? A. Yes, sir, very vigorously.

Q. Do I understand you to say that gas would

be formed by this reaction, this reaction cause a gas? A. Yes, sir.

Q. The gas, does it tend to explode or stay quiescent? A. The action of hydrofluoric acid on sand will develop a gas, it will liberate a gas which will be exploded.

Q. And the more gas, the greater the pressure? A. If it is in a closed container.

Q. Assuming it is in a closed container. A. Yes, sir.

Q. During the continued reaction of this hydrofluoric acid upon sand containing siliceous materials, I presume that more gas would be formed until the reaction was complete? A. Presumably.

Q. Assuming it to be in a closed container, Doctor, would that pile up continual greater pressure? A. I should expect it to.

Q. Assuming a container such as Exhibit P-G-1, indicating the tall container here on the stenographer's desk, would gas be formed from that, from contact with this acid, with free sand containing silica, would there be a continued reaction, as I understood you to say that would create pressure, the greater the reaction, the greater the pressure? A. Yes, sir.

Q. Now Doctor, could that pressure blow the cork or a cork which would have been in the neck of that container? A. I should expect it to, if the pressure reached sufficient force.

Q. The resultant effect of the blowing of that cork, Doctor, when it came out, what if anything would come out of the neck of that container? A. I would expect an enlarged content of gas would come out and would cause an ebullition.

Q. Is it in the realm of higher chemistry or is it elementary chemistry that hydrofluoric acid has an affinity or a reaction upon silica? A. No, it is

not very advanced chemistry; it is common knowledge.

Q. It is common knowledge? A. Yes, among chemists.

Q. Doctor, assuming a small quantity of silica, coming in contact with hydrofluoric acid, how soon thereafter will the reaction commence or would it commence immediately upon contact? A. It depends on the condition of the silica.

Q. Let us assume pure silica. A. Pure silica, free, the action would commence approximately at once.

Q. Assuming sand, which I believe you told us contained a large percentage of silica. A. The action probably would commence very promptly.

Q. By very promptly you mean what? A. Very quickly.

The Court: Would it be within the passage of a few seconds or a few minutes?

The Witness: If the sand were loose, where the acid could surround it promptly I should expect the action to commence in a few seconds. If on the other hand the sand might be together so that the acid could not come in contact with pure silica, it might take the action longer, it would take longer to start the certain portions of it, and gradually work in and become more violent all the time.

The Court: If it were easily accessible.

The Witness: If the silica were easily accessible, free silica, it would commence quite promptly, at once. It might not be in great violence at once. It would start on a portion of the silica which it found first and generate and then it would keep on progressing.

The Court: Would it produce heat at the same time as the action on the silica?

The Witness: Absolutely, heat is produced by the reaction.

Mr. Ashmead: That is provided it was loose.

The Witness: Provided it got at it. I might say, your Honor, that frequently—yes, I saw it only recently, I say recently, but last November down at the First National Bank Building in Hoboken where they were cleaning this granite with it; they applied it with a brush and they were pretty careful how they applied it. It was to etch off a section of the granite. They had some iron stains they wanted to remove.

Q. Has glass in its composition any silica? A. Yes, sir. Glass is silica. It is made from silica.

Q. I show you Exhibit P-G-6 in evidence and I ask you if that looks as though it might have been acted upon by hydrofluoric acid? A. It certainly does.

Q. Is that a permanent effect or can it be erased? A. No, sir, that cannot be erased. It is etched into the glass.

Q. Right into the body of the glass? A. That has penetrated into the glass, acted upon the silica in the glass where that etching is.

Q. Now, Doctor, assuming the action of acid to have been complete, what if any is the resulting residuum, assuming now pure silica.

Mr. Armstrong: I withdraw that.

Q. Assuming pure silica and its subsequent reaction or contact with the hydrofluoric acid, is

there any residuum left after the action by the acid upon the pure silica? A. No, sir.

Q. Why? A. Hydrogen fluorid, hydrofluoric acid, acts on the silica to form silicon fluorid and water and the temperature that would be produced will vitalize everything.

Q. So that there would be no resultant residuum if pure silica? A. Not of pure silica.

Q. Assuming the sand, containing as I believe you told us a high percentage of silica and its contact with hydrofluoric acid, would there be an action, would there by any difference between the two? A. Yes, sir.

Q. Would there be residuum then? A. Yes, there probably would be.

Q. Assuming the sand to have been thoroughly wetted, would that have, would the action of the acid, have destroyed the silica in the sand? A. Yes, sir.

Q. And the residuum, Doctor, would that be likely to evolve a further gas, assuming the sand to have been thoroughly acted upon by the acid? A. No, sir, I don't see how the residual fluorid formed could evolve—without hydrofluorid.

Q. Assuming the sand had been thoroughly wetted by this acid, the residuum, would that be dangerous or likely to form further gas if it came in contact with other hydrofluoric acid? A. You say if the silica has all been dissolved?

Q. Yes. A. No, sir, I should not expect it.

Q. That residuum would be harmless? A. I should think so, that is assuming that it is a fluorid form.

Q. Now, Doctor, assuming that sand and hydrofluoric acid had come in contact one with another, what would be the resultant chemical compound; can you tell us? A. The products are, as I have said, silicon fluorid, a gas, and water.

Q. Assuming a residuum in a jug such as Exhibit P-G-1, indicating this tall jug, containing a large percentage of siliceous matter which had not been thoroughly wetted by the acid, can you tell what if any effect would then have been produced? A. I don't believe I understand the question.

Mr. Armstrong: I withdraw the question.

Q. Assuming Doctor, that there was some sand in this Exhibit P-G-1 and we poured on a trifle of hydrofluoric acid, upon it. A. Yes.

Q. Would that acid act upon the sand? A. Yes, sir.

Q. Until it spent, either the silica or the acid, is that my understanding? A. Yes, sir.

Q. Assuming there was not a sufficient quantity of acid to spend the sand, what then would happen to the residuum? A. If my understanding is correct, you are assuming that the jug contains silica or sand rather, and mineral matter and we place in that hydrofluoric acid, commercial acid of a limited quantity. The hydrofluoric acid will act on the sand and form silicon fluorid.

Silicon fluorid then may react with water in there and form a hydro-fluor-silicic acid and some free silicic acid and might mat the whole material down in a mass down on the bottom. Then, if subsequently hydrofluoric acid is added to it and there is still silica for it to act on, the action would go on, probably will not be as fast or rapid in starting in on the matting down of the material that was there on the previous occasion.

Q. The action would continue do I understand you to so state? A. Not until after hydrofluoric acid was used.

Q. During the period the hydrofluoric acid was

present the action would continue? A. Yes, sir.

Q. I think you explained that it was rather elemental chemistry, ordinary chemical knowledge that hydrofluoric acid will act on silicates, did you not? A. Yes, every chemist is familiar with that.

Direct examination by Mr. George:

Q. From your knowledge and experience of hydrofluoric acid and other chemicals and as a Professor of Chemistry, do you know of any gas or fumes that have a higher degree of penetration or more toxic effect than this hydrofluoric acid coming in contact with membrane, such as the linings of the mouth and throat and air passages? A. It is one of the worst.

Q. It is one of the worst? A. Yes, sir.

Cross-examination by Mr. Ashmead:

Q. Doctor, Mr. Armstrong spoke to you first about a case where a foreign substance similar to silica had been placed in a jug and been entirely neutralized by acid and had been dried and subsequently acid had been placed in there, and you said there would be no further effect. That is true if the foreign substance had been fully neutralized? A. Yes, sir.

Q. I understand you to say that if a foreign substance got in a receptacle of hydrofluoric acid, and there was more foreign substance than the acid was sufficient to neutralize or polarize, then the effect would be to make a plastic mass or mat it down. I think you said that? A. I should think it would.

Q. It would form a glazed surface, would it not? A. I don't know of a glazed surface, it might.

Q. It would become a composite mass? A. Yes, it might.

Q. When hydrofluoric acid was poured into the jug in that case the action would be very much slower? A. Yes, it would be slower perhaps I could not say how much slower but it would certainly be slower I should think.

Q. Where the particles of the foreign matter, siliceous in character were loose, it would be almost immediate? A. I should expect it to, yes, sir.

Q. Now, you have spoken about the effect of hydrofluoric acid on different substances. What effect does hydrofluoric acid have on corks? A. On cork, it depends how long the cork, elementary I think,—I think the cork would be completely charred a very short time if you use it. I haven't noticed any effect.

Q. No effect? A. I would not say no effect, but no appreciable effect in a limited time.

Q. Do you know why they sometimes use paraffin on corks of these bottles? A. I should think it would be the only safe way to do, because corks are porous and hydrofluoric acid fumes will go through the pores of the cork.

Q. It is to preserve the cork? A. To preserve the cork?

Q. Yes. A. I don't believe that is the purpose of putting it in originally. I believe it is to make the cork—I don't know.

Q. Do you know? A. That is my belief.

Q. Have you had any experience so that you know what the purpose is? A. I have had paraffin corks and used them in bottles to hold chemicals and I will say the purpose was not to preserve the cork because we don't care for the cork. It would be used for years and years but it is to make the cork dense and non-porous.

Q. You say that the evolution of gas in one of

these jugs becomes greater as the evolution proceeds? A. Yes, sir.

Q. Can you tell me how many pounds pressure would likely be evolved? A. Naturally I cannot tell you the pound pressure.

Q. That would depend? A. On the amount of material acted upon, on the gas given off and the size of the container.

Q. It would be sufficient to blow out either a paraffined cork or one that was not paraffined? A. Yes, I think so, might be that the paraffin cork would blow out a little quicker than the other.

Q. Would hydrofluorin gas be more corrosive, poisonous and injurious than hydrofluoric acid? A. Well, I don't know how many men ever saw free fluorin gas. I never did in my life. There were lots of chemists killed trying to make free fluorin gas.

Q. Would it be more corrosive than chlorine gas? A. How do I know? There was a suggestion during the war that they make chlorine gas, after they started to use chlorine. They said that there is a gas that will put the Germans out of business. Then they went to fluorin and tried for years to isolate fluorin. They knew of its compound and chemists were repeatedly killed trying to prepare fluorin. It wasn't until 1886 when Moissan first isolated fluorin or attempted to. I have never seen it. I should say offhand that they would both be terrible.

Q. Would you say it would be more corrosive than mustard gas? A. I don't want either one of them.

Q. You don't know? A. Fluorin gas would be terribly corrosive. No question. It is the most active element known.

Re-direct examination by Mr. Armstrong:

Q. Assuming this mat or glazed surface about which Mr. Ashmead has been speaking and assuming further that ten pounds of acid were poured onto that mat or mass, into the container such as Exhibit P-1, indicating the tall container, would that be likely to have an effect upon that mat or glazed mass that Mr. Ashmead spoke about? A. If the hydrofluoric acid came in contact with the glaze or the glazed mass containing largely siliceous material it would start acting on it, yes. That is elementary, just the same as it does on glass.

Q. Assuming a dirty jug, a jug containing dirt of let us say sand with a high percentage of silica, in which you would pour hydrofluoric acid, and immediately cork it——

Mr. Ashmead: I object to that.

Mr. Armstrong: That is the expert testimony if your Honor please.

Q. Assuming a container such as Exhibit P-G-1 indicating this tall container, having in it some sand with a high percentage of silica in that sand, what would be the effect, Doctor, of pouring hydrofluoric acid into that container and immediately corking it?

Mr. Ashmead: He has testified to that before.

A. It would certainly lead to action on the silica and generation of gas, blowing out the cork.

Q. Could that effect be avoided in any way?

Mr. Ashmead: I object.

Mr. Armstrong: I withdraw it.

Q. Doctor, if that container were left uncorked for a period of time, would this gas about which you are now telling us—— A. The action would take place and it would blow out of an uncorked container, the gas would flow off.

Q. Would flow out of the neck of the bottle? A. Probably.

Q. That of course seems very elemental to you? A. Yes, I don't think that is difficult for anybody.

(Recess until ten a. m., February 9, 1927.)

February 9, 1927, Ten A. M.

(Case continued pursuant to adjournment.)

DR. PERCY B. MEERBOTT, recalled.

Direct examination by Mr. George:

Q. Dr. Meerbott, there is some little confusion in my mind and maybe in the minds of those interested in the cases. What is the difference in action, Doctor, between a jug or vessel of any kind in which there is foreign matter, into which is poured hydrofluoric acid; taking that illustration with a similar jug with a foreign substance into which is poured hydrofluoric acid; one of the jugs being uncorked and the other corked. Would there be a difference in action, chemical action in those two jugs, the one corked and the one uncorked?

The Court: So that we can get it correctly. You are directing his attention as to whether or not in the corked or uncorked one similar conditions exist.

Q. Similar conditions existed in the jugs. What is the chemical effect where there is a mixture in

the case of a jug corked and uncorked? A. If there are two jugs with the same ingredients contained therein and the same acid be placed in both jugs, that is similar acid in both, the chemical reaction on both jugs would be identical as to the extent of the chemical action. In the one that is corked, there would be a gas formed, which gas would be under pressure and when the pressure is sufficient to overcome the resistance of the cork, then there would be an explosion. While, in the instance where there is no cork, there would be the same reaction but instead of an explosion there would be a gradual elimination of gas and possibly, if it is violent enough, some of the liquid would bubble over the neck of the bottle but the tendency would not be to blow out. Whereas, if it is corked, under the resistance it would blow or explode.

The Court: Having that very same example in mind, assuming now that they are both corked with the same kind of cork but one is paraffined and the other is not, would it be any different?

The Witness: Yes, there would be a difference. The one not paraffined would have greater resistance, therefore the explosion would be more violent than the one paraffined which would not offer as much resistance, as there was a lubricant between the neck of the jug and the cork and the explosion would not be so violent comparatively. It would be more likely that the cork would escape before the pressure got so great as would be necessary to blow the cork that is not paraffined.

The Court: The cork paraffined would offer more resistance?

The Witness: Would offer less resistance than the one not paraffined.

The Court: There would be less danger in one that was paraffined?

The Witness: Yes, there would be less danger in the one paraffined in this way, that the cork would not be affected in the first place and in the second place the resistance offered by the cork paraffined is less than that if it is not paraffined.

Cross-examination by Mr. Ashmead:

Q. From whom do you buy your hydrofluoric acid? A. We buy most of our hydroflouric acid from the General Chemical Company. We also buy from John C. Wiarda and also Wiarda & Hall.

Q. John C. Wiarda is a manufacturer of hydrofluoric acid of good reputation? A. Excellent reputation.

Q. And the hydrofluoric acid manufactured by them is of high grade? A. It is standard grade. I would like to say that we bought 60 per cent. from John C. Wiarda at the time we could not get it, when there was a scarcity of it, I mean.

The Court: May I ask you at this point. The jug with a paraffin cork as compared with the one that did not, would that be less likely to cause a violent explosion than one that didn't have paraffin?

The Witness: Yes, not as serious.

Q. There would not be very much difference, however? A. I said there would be because the paraffin is of a slippery nature so that if that cork were placed into the jug which had been coated with paraffin, it would not offer the same resistance as the cork which is not paraffined. It would not enter into the entrices of the lead and the cork would hold it less.

Q. Paraffin is put on the cork to protect the cork? A. Paraffin is put on the cork to protect the cork as far as I know, yes, sir.

Q. As a practical matter in handling hydrofluoric acid. A. In handling hydrofluoric acid we use two agents, one pitch and the other paraffin. Pitch has a higher melting point and we prefer to use pitch on barrels because if any warm material is then applied to the barrel, it would not melt, whereas the paraffin would have tendency if it was warm——

The Court: It is used for the protection of the cans?

The Witness: The surface of the barrel; because of the action of the acid on the container, on the barrels of the hydrofluoric acid.

The Court: The purpose you have in mind is not the protection of the person handling the jug or container, but it is for the protection of the container itself?

The Witness: Yes, sir. And to confine any chemical reaction on the surface and to make the packages as inert as possible chemically. Another reason is to confine leakage or seepage.

Q. And the action of the hydrofluoric acid on the cork would be very slight anyway? A. Yes, on the cork it would be very slight, might not be any action.

Q. Even without paraffin. A. Well, there would be no action if it were paraffin.

Dr. Percy B. Meerbott—Re-direct—Re-cross.

Q. It would be very slow without paraffin? A. That would depend, Mr. Ashmead, if the cork had been used much, had some salts, then it might be more rapid.

Q. Or it might take more time? A. Pretty near immediately. It might take sometimes, but it would depend on the ingredients in the corked container.

Re-direct examination by Mr. George:

Q. Do I understand that the lining of the barrels that you use for hydrofluoric acid, that you use pitch for two purposes, one to preserve the walls of the container and the second to minimize the possibility of chemical reaction resulting in explosion? A. Yes, sir; another to prevent seepage.

Re-cross-examination by Mr. Ashmead:

Q. There wouldn't be any chemical action on the cork resulting in an explosion? A. I don't think so.

Q. What you have to say with respect to the barrels has no application to the corks? A. We usually paraffin the cork, in fact I wish to modify that, we always paraffin the cork. We use hydrofluoric acid and in the first place we want to allow ourselves to remove the cork more freely when we want to use it and also to prevent the action upon the cork.

Q. That is the only purpose? A. That is in the laboratory.

Mrs. Helen Kelly—Direct.

Mrs. Helen Kelly, called as a witness for the Plaintiffs, first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. What is your name, Mrs. Kelly? A. Helen Kelly.

Q. Where do you live? A. 95 Dwight Street.

Q. Jersey City? A. Yes, sir.

Q. Did you live there on June 23rd, 1925? A. Yes, sir.

Q. Are you the mother of James Kelly who died on that day? A. Yes, sir.

Q. How old was he at that time? A. Twenty years and six months.

Q. He lived at home with you at 95 Dwight Street on that date? A. Yes, sir.

Q. Did he go to business immediately preceding June 23rd, 1925? A. Yes, sir.

Q. By the way, how old were you on June 23rd, 1925, Mrs. Kelly? A. When my boy was killed?

Q. What was your age on June 23rd, 1925? A. 53 years old.

The Court: Your daughter was how old?

The Witness: 23 past.

Mr. Armstrong: I don't think that last statement is quite accurate.

The Witness: She is 26 going on now.

Mr. Armstrong: I will call Miss Kelly later.

Q. You say he went to business, your son, around June 23rd, 1925? A. Yes, sir.

Q. What did he do with the money that he earned, Mrs. Kelly? A. He gave it to me.

Q. Let us take a period of about a year before June 23rd, 1925, and can you tell us what his earn-

ings were for that period of time? A. Well about $1100.

Q. Was that turned over to you regularly? A. Yes, just as he made it.

Q. What amount did you say he averaged?

The Witness: $1100, that was the last year.

Cross-examination by Mr. Milton:

Q. How do you arrive at the sum of $1100 which you say your son turned over to you in the year preceding his death? A. How did I arrive at it; he made that in the year.

Q. Will you talk so that I can hear you? A. Yes, if I can.

Q. Would you mind repeating what you said before? A. Well——

The Court: How can you tell that the amount was $1200. What means have you for knowing that?

The Witness: Well, I know where he worked your Honor. I know what he made.

Q. You knew what his weekly wages were? A. Yes, sir.

Q. Was he working for the full year prior to his death steadily? A. Not exactly.

Q. Well, exactly how much of the time of the year was he working A. About 11 months.

Q. Where? A. He worked in the Air Reduction, in the Erie, and he was in a publishing place.

Q. Did he make the same amount of money in the publishing place and the air reduction? A. He made the same some weeks in the canvassing.

Q. He was working on a commission basis? A. Yes, sir.

Q. And how long was he in the Air Reduction Sales Company? A. He was seven months.

Q. And how much of that remaining five months was he working? A. He was three months in the Erie.

Q. That would make him a month canvassing? A. Well yes, about a month.

Q. Was he a month out of work? A. Yes. I didn't keep no account of that.

Q. Might it have been that he was out of work two or three months? A. No, I don't think so.

Q. Are you sure about it? A. No.

Q. Prior to working in the Air Reduction Sales Company where was he? A. He worked in the Erie.

Q. Not in the Erie Railroad Company first? A. No, after.

Q. After he worked in the Air Reduction? A. Yes, sir.

Q. Was the Air Reduction the first job he had? A. No, sir.

Q. He had worked some other place prior to that? A. Yes, after leaving school.

Q. Where did he work? A. In Mr. Griffin's wall paper place.

Q. Griffin's wall paper place? A. Yes, sir.

Q. How old was he when he left school? A. He was 16 years going on when he left high school.

Q. You boarded him at your home? A. I kept him. He gave me his wages, certainly I did.

Q. He gave you his wages of approximately $20 a week? A. Well, $25 and $20 and $16 when he started first.

Q. Sometimes 16? A. When he started out first.

Q. And sometimes 20? A. 22 and 25.

Q. It was 25 while he worked on the Erie Railroad, wasn't it? A. Yes, sir.

Q. And when he was working for this canvassing job, it sometimes fell below $20 a week? A. 15 sometimes, 13 sometimes or even 30.

Q. Sometimes? A. Sometimes he would give me more, sometimes he would have 25 and 30.

Q. Sometimes 25 and 30 and out of the money he gave you you gave him car fare, the money that he had to spend to get to and from his work? A. Yes, sir.

Q. You gave him some little spending money for himself? A. Well, a couple of dollars.

Q. Three or four a week? A. No.

Q. Two or three dollars? A. About two.

Q. In addition to carfare you clothed him? A. Yes, sir.

Q. And lodged him and fed him? A. Yes, sir.

Q. And out of the money that he turned over to you each week you did that? A. Yes, sir.

Q. That is right. How much do you estimate, Mrs. Kelly, that you had net left for yourself at the end of each week after you had fed your boy and clothed him and given him his spending money and the expenses of going to and from work. A. I never figured. I never counted.

Q. Estimate it now. A. I didn't ever account.

Q. Was it as much as five dollars for yourself? A. Oh, yes, $15 some weeks and $20 some weeks.

Q. Evidently you don't understand. You don't mean to say that if your son gave you $20 a week and after you paid the expenses of his board and lodging and clothing and carfare and spending money that you would have $20 left? A. I never figured his board, I don't know what it cost.

Q. I am asking now how much you estimate you had net after you had lodged and boarded him

and given him spending money and the expenses of going to and from his work? A. I never figured it.

The Court: You know what the table would cost. How much would it cost you?

The Witness: About five or six dollars a week I suppose.

Q. You had five or six dollars left? A. Oh, yes, more.

Q. How much more? A. I didn't figure it.

Q. If I went to board at your house how much would you charge me for board?

Mr. George: That is objected to as immaterial.

The Court: Sustained.

The Witness: I never figured. He was no boarder.

Q. You can't tell us now how much you had left net for yourself out of your son's weekly wage? A. Some weeks I had fifteen dollars, some weeks I had ten, maybe some weeks I had twenty.

Q. What week did you have twenty dollars for yourself? A. I didn't keep no account of it.

Q. How much do you estimate it cost you to feed and clothe and lodge your son? A. I didn't keep no account of it.

Re-direct examination by Mr. Armstrong:

Q. Did I understand you, in answer to one of Mr. Milton's questions to say that you figured it cost you five dollars a week to keep your boy, is that what you said in answer to one of Mr. Milton's questions? A. No, I didn't say.

Q. You haven't arrived at that? A. I suppose about the clothes, you asked how many clothes he wore, I said a couple of suits.

MARY KELLY, called for the Plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. Miss Kelly, you live at 95 Dwight Street, Jersey City? A. Yes, sir.

Q. With your father and mother, Mr. and Mrs. Kelly? A. Yes, sir.

Q. You are the sister of James Kelly who died on June 23rd, 1925? A. Yes, sir.

Q. He lived at home with the family on that date? A. Yes, sir.

Q. I am going to ask you this. How old were you on June 23rd, 1925?

Mr. Milton: I object to that.

The Court: On the ground that she could not state?

Mr. Milton: I don't think that she forms any portion of the plaintiff's damages.

The Court: Not on the probability of contribution. You may have an exception.

Mr. Armstrong: I will withdraw the question so long as it is objected to.

(CASE OF O'NEILL.)

CHARLES O'NEILL, being called as a witness for the plaintiffs, being first duly sworn, testified as follows:

Direct examination by Mr. Cutley:

Q. Where do you live? A. 62 Wegman Parkway.

Q. You are the father of John O'Neill? A. Yes, sir.

Q. Who died on or about June 23rd, 1925? A. Yes, sir.

Q. How old was John? A. 24.

Q. You are married? A. Yes, sir.

Q. What is your wife's name? A. Margaret.

Q. How many children have you got? A. Five now.

Q. What are their names? A. Margaret Clarke, my wife.

The Court: Five children. Who is the first?

The Witness: James.

The Court: How old is he?

The Witness: He is about 33 I think. He may be 34. Catherine about 32 I guess; Joseph about 30 or 31.

The Court: And the next?

The Witness: I can't tell the ages exactly. Veronica. There was one died between.

The Court: How old was Veronica?

The Witness: John was next. There was two died between Johnnie and Joe. Johnnie was 24 and Veronica 23. Then Margaret.

Q. How old is Margaret? A. Margaret about 18.

The Court: How about Veronica; how old is she?

The Witness: 23.

Q. How old are you? A. I am 64.

Q. What did your boy John do prior to the time of this accident? A. Well, he worked in the Post Office first; then he worked out in Ford's and then he left the Ford plant. They got slack and

he left there and went to work for the Western Electric.

Q. At the Post Office, what was his salary? A. I couldn't tell you that.

Q. What do you know about his salary? A. I don't know anything about it. He turned all his money over to his mother.

Q. Do you know what money he earned in Ford's? A. I think it was around $36.

Q. What did he do with the money, did he give it to Mrs. O'Neill? A. Gave his mother and his mother bought him his clothes and everything else.

Q. And then when he went to the Western Electric. Do you know what he earned in the Western Electric? A. I think he only made about $25 there, he didn't work there long.

Q. Did you go to Newark the day of this accident? A. No, sir.

Q. You didn't see him just prior to his death? A. No, sir.

Cross-examination by Mr. Milton:

Q. Were any of your boys married, Mr. O'Neill? A. No, sir.

Q. They all lived at home? A. Yes, sir.

Q. They are all working and supporting themselves? A. Some of them.

Q. Which of them are not? A. Margaret and I got the other one——

Q. Veronica? A. No, Veronica is working.

Q. The boys all working? A. No, I got one son not working. He was in the Army and he never worked since.

The Court: Who is that, John?

The Witness: No, that is James.

Q. Margaret is the youngest of the girls? A. Yes, sir.

Q. Does she stay home and help her mother? A. She stays home.

Q. She stays home and helps her mother? A. Yes, and Dorothy stays home, too.

Q. How old is Dorothy? A. She is 18; Dorothy is about 20 and Margaret is about 18.

Q. Veronica, she is 23 and she goes to business? A. Yes, sir.

The Court: How many children are there living?

The Witness: Five. There is two out of four dead altogether. They died when they were young. Two died 1924.

Q. Your boy, Mr. O'Neill, lived at home, did he? A. Yes, sir.

Q. Out of the money which he turned over to his mother she clothed him and fed him and lodged him? A. Yes, sir.

Q. And gave him whatever spending money the boy had? A. Yes, sir.

Q. And she also gave him the money that it was necessary for him to spend to go to and from his work? A. Why, certainly.

Q. What was the last position or place he had, Mr. O'Neill? A. The Electric, Western Electric.

Q. How long before his death was that? A. About a week he was laid off, about a week before he died.

Q. He had been laid off? A. Yes, sir.

Q. How long had he been there? A. Only worked a month. He worked out in Ford's and he left Ford's and went there.

Q. Hadn't he been a student at Seton Hall? A. Yes, sir.

Q. Wasn't he studying for the priesthood? A. No, sir.

Q. Wasn't he in the seminary? A. No, sir.

Q. He was in the college? A. Yes, sir.

Q. When did he leave Seton Hall College? A. I couldn't tell you that.

Q. Was it in the year he died? A. No, sir.

Q. Not the same year? A. No, sir.

Q. How long did he work in Ford's? A. I guess he worked there about 18 months.

Q. 18 months? A. About that. I could not say exactly.

Q. When he was in Ford's he got twenty-five dollars a week? A. No, he got thirty-six in Ford's.

Q. It was in the Western Electric he got twenty-five dollars? A. Yes, sir.

Q. That is the job he last held before he died? A. Yes, sir.

Mr. Cutley: If your Honor please, Mr. Milton and I have agreed to stipulate that the death of Joseph O'Neill was caused by the result of this accident on June 23rd, 1925.

Mr. Armstrong: I rest with the exception of some medical testimony.

Mr. George: That also applies to my client's case.

Mr. Ashmead: I move your Honor for a non-suit in each one of the cases on the following grounds:

No negligence on the part of the defendant has been shown.

There was no legal duty owing from the defendant to the plaintiff which is shown to have been breached.

The proofs submitted on behalf of the

plaintiff failed to show that the accident was the result of any lack of care on the defendant's part which it owed to any of the plaintiffs or their intestate.

The evidence shows that the accident resulted from the fact that there was foreign matter in the jug at the time it was delivered to the defendant for filling, for which the defendant was in no wise responsible.

Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it; the jug having been furnished by the purchaser, the defendant had the right to assume that it was in a fit condition to be filled with hydrofluoric acid.

There is no evidence to charge the defendant with knowledge that the jug was not in a fit condition to be filled with hydrofluoric acid.

Where, as in this case, the fact is that the injury may have been the result of a gas, for which the defendant is in no wise responsible, the plaintiff must fail if his evidence does not show that the injury was produced by some act of the defendant to the exclusion of all other causes for which the defendant was not responsible, and then, if it is just as probable that it was caused by one or the other of these causes, the defendant is entitled to a non-suit.

Where the plaintiff's evidence is equally consistent with the absence as with the existence of negligence, a non-suit should be granted.

Furthermore upon the ground of contributory negligence of each of the plaintiffs

and the plaintiff intestate and particularly in reference to the Hopper case, the contributory negligence of Mr. Hopper who brought the jugs to the defendant for refilling.

(Motion argued.)

(*Recess until two P. M.*)

After Recess, Two P. M.

(Argument resumed.)

The Court: I will deny the motion at this time.

In view of the importance of the case and because I have not yet had an opportunity to go into the citations that have been submitted by counsel, I will reserve the right to dispose of this motion, however, at a later time.

George F. Salter, called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. Armstrong:

Q. Mr. Salter, where do you live? A. East Orange.

Q. What is your business? A. Life insurance actuary.

Q. How long have you been an actuary? A. 25 years.

Q. Do you belong to any actuarial society? A. Yes, the Actuarial Society of America, I belong to.

The Court: What table do you use?

The Witness: The Carlisle.

The Court: Is there any question about that?

Q. Mr. Salter, what would be the expectancy of a boy 20 years and six months of age on June 23rd, 1925?

The Court: That is referring to whom?

Mr. Armstrong: To James Carroll.

A. This shows for whole ages. You wish the whole age, you wish to call it 21?

Q. 21, call it. A. The expectancy is 40 years and seven-tenths.

Q. What would be the expectancy as of June 23rd, 1925, of a woman 50 years of age, Mr. Salter? A. 21 years and one-tenth of a year.

Q. What would be the expectancy of a man 60 years of age as of June 23rd, 1925? A. 14 years and three-tenths.

Direct examination by Mr. Cutley:

Q. What would be the expectancy of a young man 24 years of age in June 23rd, 1925? A. 38 years and six-tenths.

Cross-examination by Mr. Milton:

Q. These tables are based upon the assumption that the person to whom they are applied is in normal condition of health? A. They are.

Q. They are average tables? A. Yes, they are.

Q. And obviously, if anyone whose expectancy is figured in the manner you have calculated should incur pneumonia or typhoid fever or any of the ills flesh is common heir to, and die, the application of the table could not be said to be a fair rule. It would not save them? A. No, it is merely a table of averages, Mr. Milton.

Re-direct examination by Mr. Armstrong:

Q. Just as obviously, if a person remained in normal health, he might live longer than the tables show? A. Yes, sir.

The Court: It is just an average on a great quantity of cases.

The Witness: It is the mean after-life-time.

Dr. Harry J. Perlberg, called as a witness for the plaintiffs, being duly sworn, testified as follows:

Direct examination by Mr. George:

Q. Where do you live, Doctor? A. Jersey City, 921 Bergen Avenue, Jersey City.

Q. You are a licensed physician practicing in the State of New Jersey? A. I am.

Q. In addition to being a physician, do you specialize in any branch of medicine or surgery? A. I specialize in X-ray work.

Q. What sort of technical term is used for that particular branch of the work? A. Roentgenologist.

Q. Did you have occasion to take X-ray pictures of Edward Hopper? A. Yes, sir.

Q. Will you tell us when? A. On June 10th, 1926, I believe.

Q. I show you a negative and I ask you if this represents an X-ray photograph made by you of Edward Hopper on that date at your office or plant? A. Yes, sir.

Q. What does it disclose? A. This is an X-ray of the chest of Edward Hopper.

Q. Just a moment, for the purposes of the record.

Mr. George: Is there any objection to its being received in evidence now in order that we may have it?

Mr. Milton: Did you fix the date when it was taken?

Mr. George: Yes; June 10, 1926.

(Plate now accepted and marked as Exhibit P-G-9 of this date.)

Q. Now, referring to Exhibit P-G-9, I ask you to tell the jury, please, what the X-ray discloses. A. This is an X-ray of the chest of Edward Hopper. The findings are as follows. You want me to give the diagnosis, the technical diagnosis?

Q. Yes, please, Doctor. A. There is an increase in both high lights and shadows. The high light is right of this line running from there, to the bronchi and the lungs, and dividing here (indicating). These shadows are thicker and larger than they are normally and there is a generalized increase in the normal long markings through both long fields. That is to say the various subdivisions of the bronchi as they divide, just like the branches of a tree, are thicker and more dense, to use the technical expression, than is normally found in a lung which has not been affected by anything which would increase the marking.

These markings are particularly thick in the apices and the uppermost portion of the lung and especially so on the right side in the upper lobe. The character of the markings, indicates the presence of what we term fibrosis. Fibrosis ordinarily is to be compared to a scar. It is the result of the healing of an inflammatory process as a scar on the hand or any other part of the body.

After the part has been inflamed and healed, it leaves a scar, scar tissue and this scar tissue in the lung is called fibrosis.

That is particularly marked, as I have stated, in the apices and especially on the right side. The fibrosis or the increase in the markings in general, indicates a reaction to an inflammatory process. The findings in this case indicate that there has been an inflammatory process in these lungs which has apparently, as far as can be stated from the X-ray, healed.

Q. And left a scar? A. And left a scar there.

Q. Which, in medical terms, is referred to as fibrosis. A. Right.

Q. I notice in this X-ray, Exhibit P-G-9, that the right lung is not quite as dark or rather the right side of the photograph which I suppose portrays the lung, isn't quite as dark as the left side. Will you tell us what significance that has, if any? A. The normal lung, if radiographed, if it was absolutely normal, would be black, because you would have there nothing but these air sacks filled with air and air does not offer any resistance to the passage of the X-ray through it, therefore the plate would be affected to such an extent as to make it dark. Now, when you have something which impedes the passage of the X-ray through it, in other words stops it from going through readily, the plate is not affected as markedly as it would be otherwise and it is therefore white or grayish, depending upon the material which impedes, the thickness of the material which impedes it. In other words, a metallic substance would stop the ray entirely and you would have a white shadow, a dense particle, like fibrous tissue or flesh or wood, would stop part of it and the plate would be not white but gray and this

gray appearance here indicates that there is something dense there. By dense I mean hard, that stops part of the ray from going through. Practically that means that there is not as much normal lung tissue on the right side as there is on the left side, that there is not as much air on the right side as the left side, that it does not function on the right side as well as on the left side.

Q. Would you say that that is due to the presence of fibrosis which therefore consumes so much more room which would otherwise be used as air cells? A. Right. This is the mate to that plate. That is they were taken in pairs. (Indicating.)

Q. Does it add anything to what you have already told the jury? A. No.

Mr. George: I offer it in evidence.

(Accepted and marked as Exhibit P-G-10 of this date.)

Q. I show you these three plates and I ask you if you took them on the same occasion? A. I did.

Q. What do they disclose? A. The left side of the skull of Edward Hopper and it shows a thinning of the bone at the top and also a thinning at the posterior portion, just above the little bump that is prominent in every skull, that is a thickening at the bump which is technically called the torcular herophili.

Q. Is there anything on that plate to indicate any indentation or destruction of the bone portion of the skull? A. It is slightly indented at the extreme top.

Q. And when you say slightly indented you are referring to the bone, aren't you? A. Yes, sir.

Mr. George: I offer that in evidence.

(Accepted and marked as Exhibit P-G-11 of this date.)

Q. I ask you now if this plate was also taken on the same date (handing witness)? A. Yes, sir.

Q. Taken by you? A. Yes, sir, of the right side of the skull of Edward Hopper.

Q. Does that add anything to what you have already told the jury in reference to the previous photograph? A. Except that it shows a thickening of the bone just above this bump, this thickening being more prominent on the right side than on the left. Otherwise the findings are the same.

Mr. George: I offer it in evidence.

(Accepted and marked as Exhibit P-G-12 of this date.)

Q. I show you this and I ask you whether that adds anything to what you have already said? A. Yes, this is a view of the frontal portion of the skull. It does not offer any additional information.

Mr. George: I offer that in evidence.

(Accepted and marked as Exhibit P-G-13 of this date.)

Q. From your knowledge of medicine, as well as what may be disclosed from your experience in the practice of your profession of roentgenologist, would Exhibit P-G-9 evidence to you the probability of a condition caused by the inhalation of gaseous fumes such as hydrofluoric acid?

Mr. Milton: That is objected to as leading.

The Court: Objection sustained. Let him tell us what condition, if any, it discloses.

Q. Could you tell us what would be the probable cause of the condition of the lungs of Edward Hopper as disclosed to you by reason of the X-ray photographs taken by you on the 10th of June last and which has been offered in evidence marked Exhibit P-G-9? A. The findings indicate the residue of an inflammatory process, such as could be induced by the inhalation of fumes of an irritative acid.

Cross-examination by Mr. Milton:

Q. And induced, as well, by other causes, Doctor? A. Yes, sir.

Q. Influenza? A. Yes, sir.

Q. Tuberculosis? A. Yes, sir.

Q. Excessive smoking? A. No.

Q. Any cause which would affect the pulmonary tract? A. Yes, sir.

Q. A germ? A. Yes, sir.

Q. So that you don't intend to have it understood here that you confine the cause exclusively to the possible inhalation of an irritative acid gas? A. I based my conclusion——

Mr. Milton: I move to strike that out.

Q. Will you please answer my question.

(Question read as follows:)

"Q. So that you don't intend to have it understood here that you confine the cause exclusively to the possible inhalation of an irritative acid gas?" A. No, I could not confine it exclusively.

Q. Do you know that this man had an inflammatory tuberculosis of the spine? A. No, sir.

Q. The result shown by Exhibit P-G-9 does not enable you to form any opinion as to the age of the condition which resulted in the fibrosis? A. No.

Q. It might have been one year or two years or perhaps longer? A. Yes, sir.

Q. Before you took the photograph on June 10, 1926? A. Yes, sir.

Re-direct examination by Mr. Armstrong:

Q. In addition to your professional qualifications brought out here, did you ever have any experience in gas cases during the late war? A. Yes, I X-rayed great numbers of them.

Q. In the United States Army? A. Yes, in the Army.

Q. Have you had any experience in civilian life in the X-ray of chests for the determination of tubercular condition? A. My official position as roentgenologist to the Hudson County Tuberculosis Hospital and Clinic. I see several thousand cases a year.

Q. Did you ever take an X-ray photograph, Doctor, of the chest of John Carroll, one of the plaintiffs in this case? A. I did.

Q. I show you a film and ask you if you can identify that as a picture that you took of the chest of John Carroll? A. That is an X-ray film I took of John Carroll on December 3rd, 1925.

Mr. Armstrong: I offer that in evidence.

(Accepted and marked as Exhibit P-A-5 of this date.)

Q. Do you find that X-ray, anything to be wrong with the chest of John Carroll? A. Summarize, if you want it short.

Q. Please tell us, Doctor, in your own language

so that the jury may understand you and save a lot of time. A. I might summarize by saying that the findings indicate to me the presence of the residue or remainder of an inflammatory process to both lungs, more marked on the right side, the result of an inflammation or irritation.

Q. Are there any marks in that X-ray photograph which would indicate other than a normal lung to you, and if so will you explain them to us? A. These marks here, these are high lights, the roots of the lungs, are thickened and contain dense lines which are due to inflammatory process and there is an increase in the lung marks there, both lung fields, somewhat more marked on the right side. These markings are quite soft except in the right apex where they are firm, indicating fibrosis. The general character of the markings shows that there has been an inflammatory condition in the lung. It is not a normal lung.

Q. You say you have had experience in gas cases? A. Yes, sir.

Q. Would the inhalation of a gas irritate the membrane or the tissue of the lung so as to cause an inflammatory process? A. It would.

Q. Will you tell us what you mean by inflammatory process, Doctor? A. Well, inflammation, the reaction to irritation.

Q. Affecting the tissues? A. Affecting any tissue.

Q. Do I understand that would make a tissue upon which the reaction had taken place, and, with the inflammatory process commenced, would that make that tissue sub-normal? A. Yes, sir.

Re-cross examination by Mr. Milton:

Q. I assume, Doctor, that as you testified with respect to Hopper's case, because of the inflamed

condition of this lung, might as well have been bacterial as irritant? A. Yes, sir.

Q. That is an influenza germ, a tubercular germ, might have set up this activation in the lung tissue and the inflamed condition? A. Yes, sir, except that the markings have a peculiar character which identify them with irritation by chemicals, basing that statement upon my experience with lungs reacting to chemical irritation.

Q. Has your experience since you testified at the last trial been such as to change any opinion that you might have given at the last trial on the Carroll case? A. No, sir.

Q. You did testify at the last trial on the Carroll case? A. I did.

Q. I note that at the last trial of the Carroll case you did express the opinion that the cause of any abnormal condition of Mr. Carroll's lung tissue might have been bacterial or irritant or because of an irritant, you were unable to say which.

Mr. Armstrong: I object. If the testimony was given at the last trial it should be characterized accurately.

The Court: Sustained.

Q. I refer to page 220. Dr. Perlberg, were you not asked this question on the last trial of the Carroll case:

"Q. Now, have they" (referring to these X-ray plates) "Now, have they any appearance which would enable you to determine whether or not the inflammatory condition was due to an irritation rather than to a bacterial condition," and did you not make this answer, "No, I can't say that"? A. I can't say beyond a shadow of doubt that this is a reaction——

Q. You misunderstand the point of my question. A. I suppose I did, if it is in the record.

Q. Whatever the cause was, Doctor, the fact is that the inflammatory condition is not any longer acute?

Mr. Armstrong: I object to that. Dr. Perlberg has testified to nothing on his direct examination that would indicate that he has seen this man since taking the plate. He is not competent to testify whether or not it is any longer acute or not. He can testify to what he found in the plate.

Mr. Milton: Obviously my question was directed to the condition involved in the plate.

(Question read as follows:)

"Q. Whatever the cause was, Doctor, the fact is that the inflammatory condition is not any longer acute?" as shown by the plate? A. At this time you mean?

Q. At the time the X-ray was taken.

Mr. Armstrong: As of the date of the plate, I believe that is what Mr. Milton means.

A. I would like to qualify that. Do you mean to ask me whether at this time there is evidence of any acute process in the lung, of any type, is that what you mean, Mr. Milton?

Q. No, I mean this, Doctor. I said, regardless of what the cause might have been of this inflammatory condition, is it not a fact that at the time the picture was taken, the markings indicate that the condition was no longer acute? A. I could not say that because I don't know the case clinically.

Q. Were you not asked this question on the former trial of the Carroll case at page 208: And did you not make this answer? "Q. Will you explain now, in language so that I may understand it, I am ignorant of medical terms, just what that report means and your findings from the photograph? A. By the chest shadows—I mean these shadows in the centre of the lungs which extend to the roots of the lung, about the roots of which there are numbers of small glands, which react to an inflammation and which become thick and increase in size. These (indicating) are the chest shadows, which I say are increased in size and contain a number of dense glands. There is an increase in the normal lung markings throughout the normal lung field, there are markings which extend throughout the lungs, which markings are caused by associated shadows and the vessels and normal subdivisions of the bronchi. These are not very readily seen—that is, if things were perfectly normal; but in response to an irritation, there is a reaction which causes a thickening of the hyperplasia, which renders these shadows more opaque to the X-ray, and therefore they register on the film, showing these gray marks, which extend throughout the lung; the marks in this case extend through the whole lung, to the periphery. Out to the apices these markings are fairly settled, denoting an absence of scar tissue or an active inflammatory condition at the time. The marks in the upper portions of the lungs, in the apices, are fairly formed and dense, indicating whatever there was there was healed and is not active at this time in the apices. On the lower portion of the lungs the markings are blurred, particularly at the apices, and more markings on the right side." Did you, Doctor, make that answer? A. Yes, sir.

Q. The apices, as revealed by the X-ray which you took, do they indicate that this man had tuberculosis or not? A. They don't indicate that he had tuberculosis.

Q. The condition of this patient Carroll, of his lungs as revealed by the X-ray which you took, was such, at the time of the taking of the ray, as to cause a cough, wasn't it? A. I don't remember whether he coughed.

Q. From the history? A. He has enough in his chest, the lower portion of his chest particularly at the base, to give him a cough. The base is active. The apex or apices, taking them both, show no activity, but in the lower part of the lung, the softened marks indicate to me that there is an active inflammatory condition there.

Q. How was that acting? A. I don't know.

Q. Can't you tell from your ray? A. No.

Q. You cannot? A. No.

Q. From your ray, can you tell whether that would progress? A. I can't tell.

Q. Can you form any opinion from the ray as to the antiquity or date that the irritation was set up? A. No, sir.

Q. It might have been either one year or three or four years prior to the taking of the ray? A. Yes, sir.

Re-direct examination by Mr. Armstrong:

Q. Have you in mind that lengthy answer given by you at the last trial which Mr. Milton has read? A. Yes, sir.

Q. Do you wish to qualify that or to make any explanation? A. I would like to.

The Court: With respect to what he said. I think that should be framed, "as to wheth-

er or not he has changed his opinion in respect to that statement."

Mr. Armstrong: I will reframe it.

Q. Having in mind the lengthy answer to the question given by you at the previous proceeding and read to you a few moments ago by Mr. Milton, do you wish to change your view or your statement made in that answer in view of anything that might have transpired since that time up to the present moment?

Mr. Milton: That is objected to.

The Court: Why Mr. Milton; conditions may arise subsequently.

Mr. Armstrong: I withdraw it.

The Court: If you want, I will rule upon it.

DR. WILLIAM J. ARLITZ, recalled.

Direct examination by Mr. Armstrong:

Q. Doctor, I want to take up the case of Carroll. A. Yes, sure.

Q. Did you ever have occasion to examine John Carroll? A. I did, on December 3rd, 1925, at your office.

Q. Did you make an examination of any particular organ or his entire body? A. I examined his entire body.

Q. Will you tell us what you found with respect to the chest first. What did you find if anything with respect to Carroll's chest? A. On that day I found that he had a number of rales which are noises heard by the medical man when he examines a chest. These rales or noises indicated to

me that there was something abnormal. After an examination, it disclosed the fact that his voice sounds were exaggerated and there was some dullness, at least I thought there was some dullness on percussion and I concluded that Mr. Carroll had an inflammatory condition of his lungs and I referred him to the roentgenologist for additional examination.

Q. Did you examine the rest of his body? I believe you told us you did. A. Yes, sir.

Q. Will you tell us what you found with respect to the rest of his body? A. His general resistance was comparatively good. He had a number of scars on his body. He had a small scar on the right wrist. He has a large irregular scar on the lower anterior front of the right leg. A large scar on the upper side of the right angle and a coalescing scar which extends over the upper dorsal surface of his foot. He has a number of small scars all over the lower third of the right leg, ankle and foot. All of these scars appear to be the result of caustic burns.

Q. Could the scars as shown by your examination in any way affect Mr. Carroll's physical condition either locally or generally? A. Locally, scar tissue is always improperly nourished. The tissue, if again traumatized, because of its lack of circulation, might break down and result in a chronic ulceration.

Q. By traumatized you mean what? A. Injury.

Q. Another injury? A. Yes, sir.

Q. Did you ever examine Mr. Carroll again subsequent to the time you have just related, or did you see him? A. Yes, sir.

Q. Can you describe what if anything you found at the time? A. Why, the findings were about the same on each occasion.

Q. And the subsequent occasion, was it any appreciable length of time after the first occasion? A. I think it was about the time of the last trial.

Q. March, 1926, Doctor. It is considered it was March, 1926. Doctor, assuming that on or about June 23rd, 1925, an individual who apparently had been in good health prior to that date, was subjected to the effects of hydrofluoric acid or its gas by contact on the outer surfaces of the body and by inhalation of the gaseous fumes of that acid into the interior or in his body or into his lungs; and assume further that as a result of that contact with either the acid or the gas that his body was burnt and that the person had developed a cough and he spit blood; that he had been confined to the hospital for a period of two weeks; and assume further that there had been a loss in his bodily weight from about 180 pounds as of June 23rd, 1925, to about 155 pounds as of this date; and assuming further, as you have just revealed the findings in his chest as you found them, that is to say a number of pulmonary rales, although I believe you called them exaggerated voice sounds, what would you say as to the probability of the accident which is alleged to have occurred on June 23rd, 1925, being the competent producing cause of the condition that I have just mentioned.

Mr. Milton: That is objected to as based upon an unwarranted assumption of fact, one of them being that the weight of this suppositious person is stated to be 155 pounds.

The Court: I remember clearly the weight of Mr. George's client but I don't remember this gentleman's weight.

Mr. Milton: 160.

Mr. Armstrong: I will say then 160.

A. I would say it was a competent cause for his condition.

Q. Now, this inflammatory condition, Doctor, that you say you found in the man's lungs and that you also say you found in his body, what do they indicate to be the probable, if any, condition of his lungs to you? A. If they still continue, it would indicate that he is suffering with a chronic type of inflammation of his bronchial tubes and of his lungs.

Q. Doctor, is tuberculosis a progressive disease? A. Yes, sir.

Q. Inflammation? A. I won't say that it is always a progressive disease. It can be arrested and can be cured except that there is a permanent scar tissue in the parts that have been involved in the process.

Q. Doctor, assuming the inhalation of an irritating gas, can you tell us—you did say I believe that would inflame the tissue? A. Yes, that is the assumption.

Q. Can you tell us whether tubercular bacilli are usually present in the human system in normal people? A. That is the assumption, that they are always with us.

Q. With everybody? A. Yes, sir.

Q. Assume, Doctor, that the lung had been inflamed by the inhalation of an irritating gas, where if any place in the lung, assuming the presence of tubercular bacilli, would be the most likely point of attack by these germs? A. In the part of the lung that was traumatized, if it was.

Q. It would be more likely to attack that portion which had been injured? A. Yes, that is the common seat of the attack. The parts that have the worst resistance, where the resistance has been lessened. The same thing might happen to a joint,

the same thing might happen to some other part of the body. If the individual's resistance is of the highest type and continues of a high type, the probabilities are that the tubercular bacilli do not produce any great damage. On the other hand, if the resistance is lower they commence their work and do a lot of damage.

Q. Resulting in probable active tuberculosis?

Mr. Milton: That is objected to.

Q. Doctor, do gas cases generally improve after having been subjected to the inhalation of irritating gas? A. If they seek the proper climate and live the proper type of life, many of them are improved and some cured. Some individuals get well.

Q. Is this a good climate for gas cases? A. The general practice is to send a man suffering from a pulmonary ailment to a different climate.

Cross-examination by Mr. Milton:

Q. Let us talk about the Carroll case and not general gas cases. Is it your opinion that Carroll has tuberculosis of the lungs? A. I could not say that.

Q. Have you any opinion on the subject? A. My opinion at the time of my last examination was that Carroll was suffering with an inflammatory condition of his lungs which may have been tubercular or may have been simply fibrosis. I could not determine that without the opinion of the roentgenologist. I know no more of it today than I did then.

Q. If Carroll has tuberculosis of the lungs, how would that manifest itself in him? A. Lose weight.

Q. Lose weight, is one of the outstanding symptoms? A. Yes, cough.

Q. That is one of the outstanding symptoms? A. Yes, sir.

Q. When you examined John Carroll it was on the 8th day of December, 1925, for the first time and in March, 1926, for the second time. What was his height? A. Five feet ten.

Q. 160 pounds is the ideal weight for that height, is it not? A. I would say a very good weight, yes, sir.

Q. In fact the ideal weight? A. I say that he was two pounds, if he was two pounds lighter for his build, he would be of fighting weight.

Q. You would not think, if a man who had gone from 160 pounds to, as is claimed by Mr. Armstrong, 155 pounds or three pounds below fighting weight since December, 1925, when you examined him, had tuberculosis of the lungs now, would you? A. I could not say, he might and he might not have it.

Q. What is your best judgment? A. He might have a low form or a very inactive form of tuberculosis. He might go along for years without suffering any material loss of weight. On the other hand he might have a very active form of tuberculosis and he might lose a tremendous amount of weight and die in a very short time. I should say on an average that a man with a weight of 160 pounds carries a normal weight about with him. Very few of us do that.

Q. Carry a normal weight? A. We all get too heavy I think. Even young men get too heavy.

Q. Mr. Carroll in all probability has not got tuberculosis? A. I don't know that. My best judgment is that Mr. Carroll has fibrosis. By fibrosis I mean inflammation of the lungs, more or less chronic in character as the result of the inhalation of this gas. Now, the extent of that in-

flammation I cannot tell you. The roentgenologist is the only man that can tell you that.

Q. And the cause of that fibrosis you don't intend to convey is the inhalation of hydrofluoric gas? A. I could not do that. I am taking the history. He might have fibrosis from other causes.

Q. Influenza? A. Yes, sir, any person might have tuberculosis that might subside and then the fibrosis might continue for an indefinite period of time.

Q. When you examined Carroll in 1925 did you find his heart normal? A. I thought it was.

Q. You found his nervous system good? A. Yes, sir.

Q. You found the scars on the left and the right leg that have been described healed? A. Yes, sir.

Q. And I think you said on direct examination that you found his resistance good? A. Yes. I found the outstanding thing, if you will permit me to say so, in Mr. Carroll's case at that time was the condition of his lungs.

Q. That is this chronic inflammatory condition, this fibrosis? A. Yes, sir.

Q. Would you say according to the history you assume it was due to the inhalation of the hydrofluoric acid gas? A. That was my best judgment.

Q. But it might have been caused just as well by influenza, tuberculosis, or any of the other things which attack the lungs? A. That is a matter of common knowledge, that a person suffers tuberculosis and fibrosis will be there if an individual has been subjected to any of those causes.

(Plaintiffs Rest.)

Dr. Joseph M. Rector, called as a witness for the defendant, being first duly sworn, testified as follows:

Direct examination by Mr. Milton:

Q. Where do you live, Doctor? A. 681 Bergen Avenue, Jersey City.

Q. Doctor, Mr. George has been kind enough to admit your qualifications but for the benefit of the jury I would like to get some understanding of the extent of your experience. How long have you been practicing medicine? A. 34 years, 35 in May.

Q. All of those years in Jersey City except for the time you were abroad with the American Expeditionary Force? A. Yes, sir.

Q. How long were you at the front with the Expeditionary Force? A. From June until the Armistice was signed.

Q. Where was your service while in France? A. At different places in the front area. I was in the area of the advance during my entire time in France. I was through the front area traveling from Brest to Gronvieres and to Alsace Loraine. I was in the trenches three weeks.

Mr. George: This is not an investigation of the patriotism or the Americanism of this gentleman. This is to show his qualifications. I don't care what he did or how long he was in the front line trenches.

The Court: Your experience upon patients.

Q. What class of work did you do while abroad? A. I was operating surgeon. That is, I was chief of an operating room which operated behind the

lines during the Armiens, St. Mihiel and Alsace drives. There was 16 of us in a 17,000 bed hospital. We worked 24 hours a day during drives.

Q. What class of work do you do now? A. Surgery and general diagnosis and hospitalization of cases.

Q. While abroad, and at home, have you come in contact with cases of gas poisoning? A. Not so frequently as we did abroad. I get an occasional case of poison from ordinary illuminating gas.

Q. While abroad you came in contact with gas poisoning cases? A. Yes, sir.

Q. At the request of the defendant in this case, did you examine the plaintiff, Edward Hopper? A. Yes, sir.

Q. When and where was that examination made? A. At the office of Mr. George.

Q. When? A. On the 17th of May, 1926.

Q. What did the examination consist of? A. consisted of an examination of the entire body.

Q. Would you be good enough to state what you found? A. On the right side of the face, of the neck and of the nose and the forehead there are multiple scars of various sizes which indicated that there had been trauma or injury which had destroyed the upper two layers of the skin, there being no contractions or deformities. Otherwise we would have had scar tissue, which would have deformed it by the contraction. There had been burns of the face and lacerations and adhesions which destroyed the tissue, which produced the injury. On the left side of the forehead there were several small scars which evidently were of the same nature as those upon the right side. Upon the right shin there was also a scar which was of the same nature as the scar upon his face.

The injury of the mouth showed no contraction, no deformity, no scar tissue. A number of his teeth were present and they were filled, showing a previous decomposition character, without the appearance, as far as the microscope could disclose, could find that the man had pyorrhea. In other words the teeth required filling and were filled for a defective purpose, not an infective purpose.

Q. Do you remember observing the condition of his tongue? A. Yes, sir.

Q. What have you to say as to whether or not that could be caused by any other agency than the inhalation of fumes from hydrofluoric acid?

Mr. George: I object to that upon the ground that the Doctor said he examined the mouth and disclosed as a result of his examination a normal condition with the exception of teeth being missing, that there was no abnormality of any kind with the exception of the teeth which he said were in his mouth at the time.

The Court: What did you find?

The Witness: The examination of the tongue was negative, was included with the examination of the membrane of the mouth.

The Court: What did you find?

The Witness: Nothing abnormal; there was nothing; it was negative. There was the ordinary disturbance the same as we find in anybody's mouth.

Q. How tall is Mr. Hopper, Doctor? A. He gave us the height, 70½ inches, five feet ten and a half inches.

Q. What was his weight? A. 160.

Q. What was his blood pressure? A. 140-90.

The systolic or active heart registration was 140; his quiet heart registration was 90 giving a pulse pressure of 50 which is normal.

Q. With a man of Hopper's age and build and height, what have you to say or to suggest as to the blood pressure? A. It is normal, his age 28, it runs from 30 to 40, sometimes 45.

Q. To what extent in your judgment, Doctor, did the wounds on the head involve the boney structure? A. The wounds on the head which I examined, I perhaps omitted them in my description of what I found. They passed through the external table into the spongy portion between the external table and internal table. Errosion of the skull, the deficiencies in that portion of the head showed that the external table was gone in places and that whatever caused the injury, the loss of the external table had gone into the spongy portion but had not gone into the inner table. It had destroyed the external table of the skull but not the internal. I omitted giving you that in my examination. I apologize.

Mr. Milton: I possible interrupted you.

Q. Did you get a history of a pathological condition of the spinal column? A. Yes, sir.

Q. What was it? A. He said that in 1919 he was operated on by Dr. Hibb, on February 19, 1919, he was operated on by Dr. Hibb at the New York Orthopedic Hospital in which operation there has been a portion of his spine or a transposition of bone from the leg to his spinal column.

Q. In your judgment, Doctor, to what extent, if any, excluding the possible effect upon his eyes, will the injury received by Mr. Hopper permanently affect him? A. The injuries to the face

will cause a cosmetic disturbance, that is, it looks bad. The injuries to the head have not resulted in a cosmetic disturbance because the hair has grown over these places. The injury to the shin will cause no disturbance otherwise than a scar. You will see that if you examine him.

Q. Will any of those injuries in your judgment affect the man's ability to perform his work? A. None whatever.

Q. You spoke about the eyes? A. You said with the exception of the eyes.

Q. I excluded the injuries to the eye. I understand you are not an eye specialist? A. No, sir.

Q. You understood his work was that of a stone cutter? A. Yes, sir.

Cross-examination by Mr. George:

Q. And a stone letterer, Doctor? A. Yes, sir.

Q. Which requires a steady hand and good vision? A. I don't know; I am not a letterer.

Q. I beg your pardon. A. I don't know what the requirement of that is. I am not experienced, you understand.

Q. I know you have never been a stone cutter nor a stone letterer but from your knowledge of what monumental stone looks like and the lettering on monumental stone, and from your general knowledge of the necessity for a steady hand and for vision and straight guidance of the tool which might otherwise be chipped unless it was guided straight, wouldn't you conclude that the man would require a steady hand for lettering? A. That is my understanding.

Q. You said you examined Mr. Hopper at my office? A. Yes, sir.

Q. At whose request? A. Mr. Milton's.

Q. For the defendant? A. At the request of Mr. Milton.

Q. That is for the purpose of testifying for the defendant? A. No, the purpose of the examination was to make a report of my findings to Mr. Milton.

Q. And making a report thereof in order that you would be prepared at the proper time to come and give testimony in a court of law? A. No, merely to give a report on what I found when I examined him in your office. I didn't know what he was going to do with it. It was none of my business.

Q. You did not know? A. No.

Q. You made a report? A. Yes, sir.

Q. And a written one? A. Always a written one.

Q. In order that you may have some basis upon which you might refresh your recollection and give testimony? A. Always to have a record of my proceedings.

Q. There is a permanent disfigurement of the face? A. There is a permanent cosmetic disturbance.

Q. You might call it what you like but in plain everyday language he will never look the same, will he? A. No.

Q. In giving your knowledge of the condition of Hopper's mouth, you omitted on your first answer to Mr. Milton's question even mentioning the tongue, is that a fact? A. Yes, but there was a purpose in that.

Q. The purpose was because you found no abnormality with the exception of the teeth? A. No, it was nothing of the kind. We find continuously on all subjects a changed condition of the tongue which is due to systemic disturbances. If otherwise than the stomach, a pathological condition. There was no deformity of the tongue. There was

nothing wrong muscularly. There was nothing wrong with the tongue except what you might find in any patient arising from a stomachic condition.

Q. As a matter of fact the condition might have been produced by the inhalation of gases through the fumes of hydrofluoric acid, might it not? A. If it was done at the time we would have an irritated condition or burn.

Q. The fact of the matter is the tongue was not normal when you saw it? A. It was not, it was not abnormal other than coated.

Q. Your examination occurred about 11 months after the injury to him? A. His injury was the 23rd of June, 1925.

Q. Your examination occurred in May, 1926? A. May 17, 1926.

Q. About eleven months, is that right? A. Yes, sir.

Q. Are you willing to say with your 35 years' experience in the profession that a diastolic pressure of the blood of 90 per cent would be normal in a young man of Hopper's age? A. With the systolic pressure of 140 I do because where we have this systolic pressure and there is a diastolic pressure which gives a normal difference or a difference between 10 and 15 per cent from the maximum, the maximum characteristic of an individual —in other words when we have an average between the systolic and the diastolic of 50 we consider that a normal appearance which reveals the strength of the heart behind which is pumping blood through the organs or the blood vessels.

Q. What did you say his weight was? A. I said the weight given me by Hopper was 150 pounds.

Q. You testified first it was 160. A. I beg your pardon; it is 150. 160 I got from Carroll. Car-

roll was 160. I must look at my notes to refresh my memory.

Q. Now I see that purpose in making your report, so that you can refresh your recollection when you do come into court? A. I have done the same as Dr. Arlitz. I have to make a report.

Q. Do you know anything about X-ray photographs? A. Well, I know something, I am not an expert.

Q. Can you read them? A. I have had them taken for an expression from the X-ray man. I don't know what they are. I am not an expert in them.

Q. See if you can tell us anything that you find that is abnormal in that picture, handing you Exhibit P-G-9. A. What is the question.

Q. What does it disclose to you? A. The size of the heart shows that the picture was not taken, or rather the shadows show that the normal distance of six feet which is that usually taken by the radeologist is not the usual shadow which results from six feet.

Mr. George: As far as you have gone, I move that that be stricken out upon the ground that the witness has already said that he doesn't know anything about the taking of the pictures.

Mr. Milton: I object.

The Court: The manner in which the picture was taken will be stricken out. The manner in which he tried to tell you what it disclosed will remain.

The Witness: It shows pictures which are not in keeping with the usual pictures, of pictures taken at six feet.

Mr. George: I move that be stricken out.

Q. The question is what does the picture disclose so far as the condition of the tissues and so forth?

The Court: You didn't say that.

Q. What does this picture disclose with respect to the physiological condition of Hopper which that picture purports to be an X-ray photograph of? A. It shows a disturbed physiological condition of the chest.

Q. Is that as far as you can see? A. You asked me and I have said it.

Q. What is the character or the nature of the disturbance? A. It shows a series of mottled shadows which indicate a thickening of possibly and probably the mucous membrane lining the bronchial tubes, mostly high lines, or a run of lines extending out from a short distance at either side.

Q. Is there any indication of fibrosis there? A. I see a series of continuous mottled shadows which indicate to my mind that there was a thickening of the mucous membrane. If you will analyze, you will see a high line there, right and you will see a high line from there. That indicates a thickening, from which goes a lighter shadow, that is normal tissue.

Q. There is a fibrosis there? A. I would not say a fibrosis. I would say a thickening.

Q. A thickening of what? A. Of the mucous membrane.

Q. As distinguished from a normal membrane? A. It is increased in size. I mean an increase in density from the normal tissue, as the result of inflammatory reaction.

Q. What is fibrosis? A. Fibrosis is a thickening condition that forms a scar tissue as a rule.

You don't get fibrosis until you get a destruction, as a rule, of normal tissue and scar tissue. Then you get fibrous tissue, which takes place there. This is a thickening there, you simply have there an enlarged normal tissue.

Q. You say that there is no fibrous tissue? A. I characterize it as a thickening of the normal membrane along the bronchial tubes.

Q. You haven't answered my question. A. I find no fibrosis present if that is what you wish.

Q. You don't agree that fibrosis is a thickening of the membrane? A. I didn't say that.

Q. Well, is it? A. I said scar tissue.

Q. What is scar tissue? A. A destruction of the existing tissue.

Q. Leaving what? A. A scar.

Q. And the scar is fibrosis? A. May be fibrous.

Q. Assuming that a young man had fibrosis which would indicate, which might or might not indicate a tubercular condition or an inflammatory condition of the membrane of the lung, followed with the fact that at the time of your examination in May last the weight of the young man was 150 pounds and today is 143 and ½ pounds, would that indicate to you the possibility of the presence of tuberculosis? A. No.

Q. To what might you attribute it, in view of the condition in which you found Hopper, considering the history of his case as outlined to you which was to the effect that there has been an inhalation of corrosive gas such as hydrofluoric acid, in the light of his condition at the time you examined him 11 months after the happening of the accident, to what would you attribute the change in weight from the time you examined him of 150 to 143 and ½ pounds today? A. I suppose your question refers to weight. A difference of

7 pounds is not inconsistent with the normal life of an individual from month to month or week to year.

Q. Is not inconsistent? A. It is not inconsistent. It depends upon the individual's mode of living, the food he eats, the conditions under which he lives. That might be due to several causes, one cause will be change of diet, change of occupation, change of restfulness, injury. Where we find nothing in the man's mode of living which would indicate the change of weight to within the seven pounds, there is nothing to say but it is natural. The weight varies at different seasons or times of the year, the occupations, where a man might subject himself to different things. There are several things. Several things where we have no history or no condition at the time of a disease. If it was a constant loss of weight, that would not be the same. That would be different but this is not a loss of weight inconsistent with an ordinary man's life.

Q. Taking the Hopper case, the case of this particular young man and in the light of the history of the case that you had received at the time of your examination, would you say that the condition of the lung as disclosed by the photograph Exhibit P-G-9, would be a condition that might be reasonably traced to the inhalation of gaseous fumes of hydrofluoric acid? A. No, sir.

Re-direct examination by Mr. Milton:

Q. The condition of Mr. Hopper's lung which is reflected in the Exhibit P-G-9, what have you to say as to whether or not it could be the result of more than one cause? A. The result of several causes. You have got to take in consideration the condition of the respiratory tract. There are

lobes to the lung. If we have caustic liquid or caustic gas, you are bound to have reminiscences upon the mouth and within the mouth and upon the trachea, then the lungs down the epiglottis. In other words, any form of caustic gas or caustic liquid, anything, whether just plain hot water or anything which causes an irritation and that irritation is sufficient to destroy the lining or membrane of the respiratory tract—by that I mean the mouth, we have traces from the place where it first strikes the mucous membrane. And again over the surface or the part of the surface through which that liquid or that gas passes, it loses its virility, causes a reaction—in other words, the condition of the mouth, whether of the tongue or of the lips or of the mucous membrane of the mouth, whether the back part of his throat or in the larynx or in the vocal cords, it would be less active, less corrosive as it passed down, because there is a dilutation because of its constantly being retained by being forced down, the mucous membrane, the mucous lining which lines the whole thing. If I found scar tissue or the result of burns, or fibrosis, or scar tissue in the mouth and vocal cords, in the larynx or in the thorax, then I would say that the probable cause of the same condition in his lung was a continuation of this irritant which passed originally through his lips into his lungs.

Q. What have you to say as to the probability of Mr. Hopper having inhaled a quantity of hydrofluoric acid gas into his lungs of sufficient strength as to affect it in the manner appearing upon Exhibit P-G-9 without having caused an irritation upon the passages which lead to the lungs? A. I would say it is impossible because of the deficiencies of gas, principally; second because of the dilution of the irritant which takes place on

every particle of surface in the mucous membrane and therefore we don't find any trace of injury until we get into the lung where we find nothing but a thickened lining, membrane which might come from any irritant or any infective process. There is no way in the world to show what caused that irritated condition of thickening of the membrane unless we have some evidence at the time of a diseased condition of the bronchial tubes or the lungs or a very marked diseased condition of the trachea or larynx.

Q. So that, assuming that the condition of the lung may have been due to some bacteriological condition, some germ, and finding no trace of the fact of an inhalation of hydrofluoric acid gas upon either the mouth or the larynx or the trachea or the cords, therefore the idea is with respect to the inhalation of gas into the lung, that it was not inhaled? A. That it was not.

Re-cross examination by Mr. George:

Q. Do you say, Doctor, that Hopper's tongue is normal now? A. No, I see some fissures there in the centre and through the sides of the tongue.

Q. The question is, is it normal, yes or no. A. I can't answer that by saying yes or no.

Q. You don't want to answer? A. I said I cannot. I have no interest in the matter. I am merely telling what I found.

Q. You are certainly willing to answer if you can. Give us your best explanation as far as you can to the question. Is it normal or is it not? A. It has the appearance of being the result of a diseased process.

Q. Now, Doctor, I again ask you, not what caused it, but is it normal or abnormal now? A. I answered. I said the result of a diseased process which shows abnormality.

Q. Then it is not normal? A. No.

Q. Why didn't you say so? A. Because I said what it was. I told you the differences.

Q. Assuming an automobile, a sedan automobile, with two young men in the front seat and two in the rear seat and an explosion or evulsion or evolution of hydrofluoric gas, as a result of which one young man in the front seat died of asphyxiation and the other survived and another young man in the back seat died of asphyxiation and the other died; now let me ask you the question. If those two young men who died died of asphyxiation caused by the inhalation of gaseous fumes of hydrofluoric acid, wouldn't it be probable and reasonable to assume that the lungs of the two survivors being seated beside the two young men who were killed, might have been affected? A. It depends upon two or three conditions. First, it would depend upon the deviation of the gas. Second, it depends upon the proximity of the liquid to the other men. It depends also on the amount of inhalation of the gas which was taken in by the different men. Now, of course I don't know the proper specific gravity of the deliquescence as observed in hydrofluoric acid. That I don't know. I am not a chemist. I do know of the gas cases which I have seen on the other side, that we had about as bad as any of them. And there were men in the advance, when the gas would attack them, one man would be gassed and would die and the other men escape.

Mr. George: I object to that character of answer, if the court please. That question can be answered yes or no.

Having given you this illustration of Hopper, could this condition be the proper result therefrom?

The Court: Can you answer that yes or no?

The Witness: Not without explanation.

Mr. George: I object and move that that be stricken out as not responsive.

Q. You cannot answer? A. Not without explanation.

Mr. Milton: I submit that the Doctor ought to be permitted to answer the question with an explanation.

The Court: You don't have to take his explanation. In other words, if he says he can't answer that without explanation and he doesn't care to make use of that explanation, that leaves it wide open to you.

Q. You cannot answer without explanation? A. Not without explanation.

(Carroll Case.)

Direct examination by Mr. Milton:

Q. When did you examine John Carroll? A. The 29th of March, 1926.

Q. Where? A. The office of Mr. Armstrong and Mr. Mullin, 586 Newark Avenue.

Q. Dr. Arlitz was present at the time? A. Dr. Arlitz was present.

Q. With reference to the appearance, what did you find the appearance of Carroll to be? A. I found a scar upon the lower part of the right leg, one scar was on the outer side, projected down below the extremity of the ankle joint. There was another scar in the front. There was a third scar above the second scar previously described as be-

ing the area to the front of the leg, and the lower part of the lower third. Upon the left leg I found multiple scars varying in size from a millitre to half an inch in diameter. These scars were the result of a pre-existing destruction of tissue by which we had a destruction of the upper layers of the skin and in several of the scars it had gone through the upper layers of the skin and had gone into the connected tissue between the true skin and the muscular layers. Between the scars on the right side, I should have said that there was also a scar upon the right wrist, the lower part of the wrist and the outer side of the right wrist. These scars, the scar on the right leg not involving the muscle nor involving the tendons nor involving the ligaments, showed that there was no destruction of the tissues which governed the movement of that joint, in other words the movement of flexion and extension of that joint were normal.

Upon the left side there were no scars within the immediate neighborhood of the ankle joint or of the knee joint. The scar upon the right wrist, if I remember, was above the wrist. That had the same characteristics as the scars described upon the right hand left lower extremities.

Q. To what extent, Doctor, would you say the burns, after healing, affected the ability of Carroll to perform his work as an iron worker? A. None whatsoever.

Q. Was there any interference with the muscular movement? A. None whatsoever.

Q. What interference, if any, was there in motion of the joints or ankle? A. None at the ankle joint, the right ankle joint or the right wrist joint.

Q. With regard to this lung or chest condition of Carroll, did you examine his chest? A. Yes, sir.

Q. What did you find? A. I found a changed condition in the note, that is the sound which was elicited or which responded to a tap upon the chest wall. I found some sound which was of a dry nature and an occasional mucous condition. They are false sounds in the lung produced by the expansion of the lungs and the respiratory tract which is present where there is a previously diseased condition of the lungs at the part through which the air is passing. In other words there was a dullness on percussion, that is on the top of the chest there was a changed sound, these false rales which were distributed through the centre portion of the lungs upon respiratory movement.

Q. What is a rale, Doctor? A. A rale is the present—which do you mean, dry or moist, or what kind?

Q. First, dry. A. A dry rale is nothing more than the thickening of the membrane of the chest or the bronchial tubes, just an inflammation of the mucous surface. It is a mucous secretion and it gives a whistling or squeaking sound, it gives the sound like a heavy whisper, as the air passes over it and forms a sound.

Q. And a moist rale. A. Produced by mucous, excessive mucous which is the second stage of the inflammatory process, first dryness, second the moist; on respiration the air goes backwards and forwards and we get these false sounds which we know by the name of rales.

Q. What kind did you find? A. Dry and moist.

Q. Are you able to say what caused these rales? A. No, sir; they were an inflammatory process.

Q. Are you able to say what set up the inflammatory process? A. No, sir.

Q. Why not? A. Because they are set up by all kinds of diseases, any disease causing an irritation of the mucous membrane of the chest. We

get a dry or a moist rale, by any one of these diseases. If that is an acute condition, without any disease, that gets below the mucous surface and there is a destruction of the mucous surface and we get a complication of the connected tissue surface and then we get scar tissues or fibrous tissue which has been spoken about.

Q. Could the inflammatory process be the result of bacteriological as well as mechanical or other irritant? A. Yes, sir.

Q. Did you examine Carroll's mouth? A. Yes, sir.

Q. Would you say whether or not you found any traces of burns or corrosive action or caustic effect by inhalation? A. I found nothing abnormal otherwise than a disturbed tongue which we find in all cases.

Q. What have you to say as to the likelihood of Carroll inhaling hydrofluoric acid gas of sufficient strength to set up an inflammatory process in the lung tissue without a corrosive effect upon the air vessels of the mouth, larynx, pharynx, trachea, etcetera? A. May I ask the specific gravity of the hydrofluoric acid?

Q. 60 per cent.

Mr. Armstrong: We concede that, Doctor.

The Witness: With 60 per cent.

Q. I don't know what the specific gravity was but it was a 60 per cent solution. A. 33 and 1/3 per cent density of solution rather of the normal chemical fluid of hydrofluoric acid is used in the treatment of diseases by inhalation from an hour to an hour and a half a day in pulmonary diseases. It must have been a greater excess of density to have formed a burn which would result in scar

tissue as I have explained in the case of Hopper.

I would expect, if I found scar tissue or destruction anywhere from the lips right down to the lung and it is impossible for a cautery or caustic chemical to skip the lips and the mouth and the tongue and the larynx and especially the vocal cords which are not more than an eighth or a tenth of an inch apart. The first sign that we would get would be the swelling of these cords. The first irritation would be the swelling of these cords. We would find upon examination scar tissue or a history of a burn from the inhalation of gas, from the inflammatory condition of the trachea, and particularly, as I said, the vocal cords. How it can pass——

Mr. Armstrong: Did you say a history?

The Witness: I said a microscopic examination which would show.

Mr. Armstrong: From a history?

The Witness: Or a history. I am basing my opinion on the appearance, not the history. How it could pass without having a caustic action upon the parts of the tissue or the mucous membrane from the lips continuously until it got to the lungs. I say that in any caustic action, no matter what the irritation was that went into that lung, it would not pass the mucous membrane of the lips, would not pass the lips without showing some indication. It must pass the lips and the mucous membrane until it got to the lungs and there set up the condition upon which this question rests.

Q. In ordinary respiration, Doctor, what is the probability of hydrofluoric acid gas being taken into the man's system and penetrating to the apex of either lung? A. Impossible.

Q. And assuming that there is fibrosis in the apex of Carroll's lung, is it your judgment then that such fibrosis could not be the result of an inflammatory process set up as the result of taking hydrofluoric acid into the system?

Mr. Armstrong: That is objected to as leading.

The Court: If it is just leading I overrule the objection.

(Question read as follows:)

"Q. And assuming that there is fibrosis in the apex of Carroll's lung, is it your judgment then that such fibrosis could not be the result of an inflammatory process set up as the result of taking hydrofluoric acid gas into the system?" A. That is my opinion.

Q. Will you briefly describe for the benefit of the jury, not a great many words, but in words of one syllable the act of breathing, how it is divided? A. Yes; the act of breathing is divided into first what is called the tidal respiration. That is the respiration which we all use in ordinary quiet condition of life, breathing as we are all breathing now. Where there is not sufficient amount of oxygen passes into the lungs to cause the change between the oxygen and carbon dioxide that is aerated by the lungs and taken away from the lungs, taking away the poisonous condition which is brought to the lungs by the blood, in the instances where there is not sufficient oxygen, then that causes a condition which causes a long respiration which we take involuntarily at times, what is called complimental air. In the ordinary normal respiration, the tidal respiration, we expel five hundred cubic centimeters of air and the supplementary air rises to 1600 cubic centimeters. Now there is a reserve portion of the respiration called residual air which is constantly present within the lungs, inhabitant the apices and the outer extremities of the lungs which does not change. That remains constantly present in the lungs. Now, on the reverse, that is inspiration, on the expiration we have the same in the tidal air as in the inspiration, 500 cubic centimeters. Where the lung pushes out the air in the expiring condition we have again the throwing out of this 1600 cubic centimeters which comes in long enforced respiration. With that respiration it gives us a capacity of 3700 cubic centimeters with the exception of the residual air which remains there constantly in the ordinary respiration. The change effected by the breathing does not pass beyond the second or third divisions of the bronchial tubes. That is shown conclusively by the treatment which is used in diseases of the lungs, that is the pulmonary treatment, the extension of the lungs by forced expiration and forced inspiration to have the air reach the further part of the lungs, as far as possible in order to reach up and change the carbon dioxide. That is constant treatment in pulmonary tuberculosis.

Q. What would be the reaction if through the process of breathing one should take into his mouth hydrofluoric acid gas? A. There is a reflex. By reflex I mean an unconscious uncontrollable action whereby the part injured pulls itself away from the cause of the injury. To illustrate that, if one puts a finger upon a hot stove it comes away involuntarily. That is reflex action. The same if there is an inhalation of an irritant, which passes into the lung. There is an automatic reflex action by which the epiglottis, that little tongue in the center of the throat which is the beginning of the respiratory tract, part of the throat, closes.

That is a reflex which causes the prevention of any further irritation of that irritant passing down to the deeper channels. If, however, there is disease, that does not close or there is insufficient muscular action, why then there is a chance for the irritant passing by that little tongue and getting into the larynx and next the pharynx and the vocal cords. Then if it gets into the vocal cords we have this cauterized condition in the bronchial tubes, to which the respiration takes it.

Q. Is Carroll's condition as revealed by your examination such as to cause him constantly to spit blood? A. If there had been acute infection, upon the condition that already existed in the beginning, you would have congestion whereby there might be an increase of mucous and he might spit blood.

Q. Did you find any such acute condition? A. Not at the time I examined him.

Q. Of course you have not examined him since? A. No, sir.

Re-cross examination by Mr. Armstrong:

Q. You said something about the residue of air at the apices of the lung. A. Yes, sir.

Q. You don't mean to tell this court and jury that from the date of birth until the date of death there is air in this, that it does not change? A. No, you misunderstand me.

Q. So that when you breathe, either supplementary or respiratory, we do take in gas, air is a gas, isn't it, Doctor? A. Yes, sir.

Q. So that that gas then passes through the lung? A. Yes, sir.

Q. And then up into the apices? A. No, it does not.

Q. How does it get there? A. Because the gas,

the air, as it passes down beyond the first, second and third bronchial areas, in forced respiration, remains there until the expiration takes it out.

Q. At which time the apices are filled? A. At which time the air of the apices is changed. The apices are always full. That is the reason it is called the residual air.

Q. So then a constant change of air takes place at the apices? A. Yes, sir.

Q. The residuum was not a permanent thing? A. No.

Q. It was constantly flowing, air flowing through the entire lung? A. I didn't say that. I said that there is an amount of air, possibly 3700 cubic centimeters, which always remains in these apices. Not the air which by expiration or inspiration goes into the lungs, in other words that there was more air always in the lungs—if there wasn't some air always in the lungs they would collapse.

Q. All of which air, either residuum or new inhalation makes up, molecule by molecule, we will say, until you have filled a complete lung with air, that's true, isn't it? A. Yes, in the degree which I have stated.

Q. If I understand you correctly, Doctor, you say that when you touch an organ with your finger or your finger comes in contact with a caustic substance the tendency is to draw away. Nature will protect you, you give a long sharp forced expiration of breath, isn't that so? A. No, I didn't say caustic substance.

Q. What did you say, an irritating substance? A. An irritating substance.

Q. Is that true? A. Yes, sir.

Q. What would be the next inhalation, it would be a large inhalation, wouldn't it? A. No, it

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would depend upon what air is passed by the primary inhalation, or what the condition is when one began it. First, it would remain somewhat, the air, and you would pull yourself away from it, then it becomes conscious again after the reflex The impulses are telegraphed to the blood and from being unconscious then it becomes conscious, rushes through the cells of the brain and then takes up its usual course.

Q. And these inflammatory conditions about which you have spoken, which you say you found in Carroll's chest, could have been caused by an irritating substance? A. Yes, I said it, an irritated condition.

Q. Hydrofluoric acid gas is an irritant? A. Yes, sir.

Q. Did I understand you to say that hydrofluoric acid gas is used in lung conditions? A. I said it is used, a 33 1/3 per cent in pulmonary conditions.

Q. Where do you find that? A. You will find that in the United States Pharmacopeia.

Q. Will you find it for me, Doctor? (Handing witness book.). This is the United States Pharmacopeia. Will you find it in here? A. It says Pharmacopeia of the United States.

Q. Do you quibble between the difference between the Pharmacopeia of the United States and the United States Pharmacopeia. Is there any difference between the United States Pharmacopeia and the Pharmacopeia of the United States? A. Well, there is a difference.

Q. There is a difference? A. Yes, there is the United States and the International.

Q. You say the United States? A. That's the one that I've got. That is the reference I made. I think I can show it to you.

Q. Here is the book yourself. A. I don't know that book. I never saw it.

Q. You never saw this book? A. Never saw that book.

Q. You don't know any of the subject matter that is contained between these pages? A. I don't know what is in that Pharmacopeia.

Q. Never saw that before? A. I will say my record——

Q. I don't want your records. I want you to find in the United States Pharmacopeia the fact that hydrofluoric acid or its resultant gas is used as an agent in tuberculosis. A. I beg your pardon. I want to correct that on my reference. That was taken from page 643 of Howell's Textbook of Physiology, 5th Edition.

Q. That is not the Pharmacopeia? A. I made a mistake.

Q. Just one more question and I think we are through. In a closed automobile, Doctor, assuming the rear window to be all closed and jugs in the back of this sedan automobile and assuming that the jugs were filled with hydrofluoric acid and that there was an evulsion of gas and assuming further that two men died in that closed box or automobile, would you say that the two survivors would inhale any part of those fumes? A. Oh yes, unless I found some——

Q. I think that's all. A. Unless I found some condition——

Q. I think I said that was all. A. Unless I found evidence on the body of burns. I found evidence of burns of a liquid application to the skin.

Q. In these two cases? A. Each case there were scars. I did not find upon the mucous membrane of the mouth or the upper respiratory tract any evidence of burns and resultant scars.

Re-cross examination by Mr. George:

Q. Are you not confusing between hydrochloric acid, meaning the fumes that are used—— A. No, I know hydrofluoric acid.

Q. Isn't it a fact that a 33 1/3 per cent solution of hydrofluoric acid, being inhaled by a human being, would put a corpse on your hands in a very few minutes? A. No, I would give you a reference and you can look it up.

Q. In what? A. I have to look it up. I have two, in pages 222 of the American Science Series, Rense; page 1396 United States Dispensary, 20th Edition.

Q. Where are those books? A. In my libarry.

Q. Why didn't you bring them here? A. I didn't suppose you would want them.

Re-cross examination by Mr. Armstrong:

Q. You don't hold yourself out to be a lung specialist, do you, Doctor? A. No.

Q. You are a surgeon? A. Yes, sir,

Q. How many cases of hydrofluoric acid gas poisoning have you seen? A. Never saw one.

Mr. Armstrong: I think that's all.

Dr. William W. Maver, called as a witness for the defendant, being first duly sworn, testified as follows:

(Carroll Case.)

Direct examination by Mr. Milton:

Q. I understand the qualifications of the Doctor are admitted. Doctor, you have practiced your

profession of medicine in Jersey City for how long? A. For about 18 years.

Q. Specializing now in the taking of X-ray pictures? A. X-ray diagnosis and treatment.

Q. I show you three plates or negatives, perhaps they are all portions of the human anatomy and ask you if they were taken by you? A. Yes, they were all taken by my office.

Q. Of John Carroll on June 29, 1926? A. Yes, sir.

Mr. Milton: I offer them for identification.

Mr. George: No objection.

(Accepted and marked as Defendant's Exhibits 3, 4, and 5 respectively for identification.)

Q. Now will you state, first giving the stenographer whichever exhibit number you are using, what that exhibit shows with reference to the existence of bronchial inflammation? A. Exhibit D-3. That shows the presence of fibrosis in the roots and apices of the lungs, of a low grade inflammatory pathology and condition in the same area.

Q. You use the expression low grade. What is that? A. That indicates mild infection.

Q. Now what nature, so far as its origin is concerned, is the fibrosis which you have indicated? A. It is impossible to form a conclusion on that from the X-ray. It is due to irritation of some type, whether mechanical or bacteriological I cannot tell you from the X-ray.

Q. And with reference to its age? A. I cannot tell you how long it has existed.

Q. It might have been in existence for years prior to the taking of the X-ray? A. It might have been.

Q. What is your best judgment as to its probably being of tubercular origin? A. Very many of these infections of this particular region are tubercular in origin but I am not prepared to say that this particular lesion is tubercular.

Q. At the time of your examination, had the lesion healed or not? A. I am speaking of the condition of the roots of the lungs. I wonder whether we understand each other. I am talking about a fibrosis in the roots of the lungs.

Q. I was speaking first of the fibrosis in the apex. A. There is a condition in the left apex which indicates a tubercular lesion.

Q. Are you able to say whether or not that was recent or of remote origin with respect to the time of the taking of your picture? A. No, I could not say with any degree of definiteness how long that lesion has existed.

Q. The condition you are speaking of now is in the root of the lungs? A. The condition I was first speaking of is in the roots of the lungs.

Q. And this one which you are unable to say is of tubercular origin, or of mechanical origin, didn't you say that? A. I cannot tell you what the cause of that fibrosis is. It may be tubercular. It may be due to infection by irritation or a number of different things.

Q. Nor can you say when it was set up? A. No, sir, I don't know how long it has existed.

Q. It might have existed for years before the picture was taken? A. That is possible.

Cross-examination by Mr. Armstrong:

Q. On the other hand, it might not have existed before the picture was taken, it might have been more recent than Mr. Milton endeavors to portray. Isn't that so too. A. The condition at the roots of the lungs we are discussing?

Q. The entire situation that you found, Doctor. A. I found two different situations, the condition of the roots of the lungs shows considerable fibrosis, scar tissue, which takes some little time to develop.

Cross-examination by Mr. George:

Q. May I ask you to look at Exhibit P-G-9 and I ask you if you don't also find fibrosis there (handing witness)? A. Yes, I find fibrosis in the root areas of this chest also.

Q. Which discloses a condition similar to that which you found in the X-ray picture of Carroll, isn't that so? A. Yes, a similar degree of fibrosis.

Q. It might have been caused by the same situation as caused or probably caused the condition shown by Carroll's picture, is that right? A. The fibrosis may be due to the same causes that produced fibrosis in this Exhibit D-3.

Re-direct examination by Mr. Milton:

Q. How common is it, Doctor, in taking pictures of the chests of human beings or in making autopsies to find scars or fibrosis of their lungs indicating that at one time there was active inflammatory process going on?

Mr. George: That is objected to. The Doctor is not produced as a pathologist. He is produced as an X-ray expert and the question is now directed to an autopsy.

Mr. Milton: Strike out the autopsy.

A. No, sir; the X-ray standard I would say it was very common.

(Recess until February 10, 1927, ten A. M.)

Thursday, February 10, 1927. Ten A. M.

ROMAIN SCHMELTZ, recalled as a witness for the Defendant.

Direct examination by Mr. Ashmead:

Mr. Ashmead: I now wish to offer these two bottles that were identified by Dr. Edel, one of which is marked D-1 for identification——

(Exhibit D-1 for identification now marked in evidence.)

Mr. Ashmead: And the second bottle which contains the material which was ground up by Dr. Edel.

(Exhibit D-2 for identification now marked in evidence.)

Mr. Ashmead: And the small jug which Dr. Edel stated contained the acid that was delivered to him as coming from Exhibit P-G-2, the smaller jug which has been in his possession ever since.

Mr. George: It is consented that they be received in evidence as having contained the acid that was given to him by someone connected with the defendant company but not as having come from any particular place designated by him.

Mr. Ashmead: All right, as given to him by someone connected with the defendant.

(Accepted and marked as Exhibit D-6 of this date, the same exhibit being also marked herein as Exhibit P-A-2.)

Q. Where do you reside? A. 28 Garrison Street.

Q. In Newark? A. Yes, sir.

Q. Where are you employed? A. In the Charles Cooper Company.

Q. In Newark, New Jersey? A. Yes, sir.

Q. The defendant in this suit? A. Yes, sir.

Q. Where is this company located? A. South and Van Buren Street.

Q. Have you been employed there long? A. About 22 years.

Q. In what department are you employed? A. In the Acid Department.

Q. What kinds? A. It is fluoride and C. P. Acid, pure acid.

Q. What is C. P.? A. That is pure.

Q. In that department is also the hydrofluoric acid? A. Yes, sir.

Q. What are your duties in that department and particularly in respect to the hydrofluoric acid that is being manufactured? A. Before, not now.

Q. How long has it been since they discontinued the manufacture of it? A. About 14 years.

Q. So that during the last 14 years they have not manufactured any hydrofluoric acid. A. No.

Q. What are your duties in the hydrofluoric acid department? A. I fill the acid in jugs.

Q. How long have you been doing that? A. Since I worked there.

Q. Twenty years or more? A. Yes, sir.

Q. How many jugs do you suppose you have filled in that time? A. Well, I clean them out.

Q. How many jugs have you filled in that time? A. I can't remember how many jugs.

Q. How many did you fill? A. Sometimes five jugs, ten jugs, I remember one day that I filled

90 jugs. Well, that day the foreman helped me. It was too many.

Q. Were you there on June 23rd, 1925, when this accident occurred? A. Yes, sir.

Q. Did you fill the jugs that were brought there by Hopper? A. Yes, sir.

Q. Now I show you a jug which is a tall jug and marked Exhibit P-G-1; is that one of the jugs you filled that day? A. Yes, sir.

Q. I show you Exhibit P-G-2 which is the jug of the lesser height and ask you did you fill that jug that day? A. Yes, sir.

Q. Now, you tell the court and jury just what you did when you filled those jugs. A. When I came from the other side of the street in the yard, working, I saw Mr. Charles Ruhl, my foreman, and Mr. Moorehead and they were talking together and he called me over, he said, "Schmeltz ——"

Mr. George: Just a minute, I object.

The Court: You went over?

The Witness: I came. He said, "Schmeltz——"

The Court: Not what he said. You can't tell what he said but what did you do as a result thereof. You went over there and you did something?

The Witness: He called me to fill them jugs.

Q. What did you do as a result of your conversation? A. When I was behind, I saw the dipper and the two jugs there. Then I asked him, "Charlie, have you filled——"

Mr. George: I move that that be stricken out.

The Court: You can't tell us what he said but what you did and what you saw. You started to do something. What was it?

The Witness: Then I see behind two jugs and the dipper and the funnel and I take the jugs and turn them upside down and tap them and fill with flouric acid and put corks in, one cork was a regular cork and the second cork was with paraffin.

Q. Now, go on. A. I put them corks in and hammered them flat, and bring them right in Charley's office, my foreman, and give to Moorehead.

Q. Now, when you filled them you spoke about corks. You said one was a regular cork. What do you mean by that? A. Well, we have all the time regular corks there. If we get an extra and a strange jug, don't fit right in that jug, then we get out a regular cork and hammer them in.

Q. With your regular corks, do they have anything on them? A. No.

Q. Do they have paraffin? A. No, that is just a regular cork.

Q. What have your corks on them? A. Paraffin.

Q. Your corks are paraffined? A. Yes, sir.

Q. In which of those jugs which are now marked Exhibit P-G-1 and P-G-2, did you put the paraffin cork? A. In P-G-1.

Q. The tall jug? A. Yes, sir.

Q. You put the paraffin cork in the Exhibit P-G-1, which is the tall jug? A. Yes, sir.

Q. And did your cork fit that jug? A. That fit, yes, sir.

Q. And this other jug, what did you put in?

A. That was a regular cork, that is a different kind of size.

Q. Why did you put a regular cork in that jug? A. It is a different size cork. I cannot fit it with paraffin.

Q. So that this is the jug that had the paraffined cork? A. Yes, sir.

Q. P-G-1? A. Yes, sir.

Q. Now, you say something about hammering them flat. Will you explain that a little more? A. Why, we do all the time that way. We hit them flat so that the cork fits good in.

Q. What do you hit them with? A. A hammer; we have a hammer there.

Q. For that purpose? A. Yes, sir.

Q. Where did you get this acid from that you put in these jugs? A. I got that from the big container, 100 pounds.

Q. From the big container? A. Yes, sir.

Q. Was that marked in any way, the big container, what lot was it? A. That lot was number four.

Q. Now, when you took this acid out of the big container, I think you spoke of using a dipper and a funnel, did you not? A. Yes, sir.

Q. Is this the dipper? A. Yes, sir.

Mr. Ashmead: I ask to have that marked for identification.

(Marked for identification, Exhibit D-7 of this date.)

Q. I show you a dipper marked Exhibit D-7 of this date and I ask you what that is? A. That was the dipper that was filled.

Q. That was the dipper that you used to fill the jug? A. Yes, sir.

Q. And by means of which you drew acid from the big jug? A. Yes, sir.

Q. What is that, how much does that dipper contain? A. That holds five pounds.

Q. Is there a mark to indicate when you get five pounds in it? A. Yes, right here.

Q. Indicating a mark on the edge of the mouth? A. Yes, sir.

Q. Could you get more than five pounds in it? A. It runs over.

Q. It is so made that it will run over? A. Yes, sir.

Q. Now, where did you get this dipper? A. I got it; I found right there with my funnel.

Q. Is this the dipper usually used for filling jugs with hydroflouric acid? A. Yes, sir.

Q. Used for any other purpose? A. No, sir.

Q. What was the condition of that dipper at the time you put hydrofluoric acid in; was it clean? A. It was clean. We keep them in shelves, lying all the time upside down. They never get dirty.

Q. You know that the dipper was clean? A. Yes, sir.

Mr. Ashmead: May I have this funnel marked for identification?

(Marked for identification, Exhibit D-8 of this date.)

Q. I show you now the funnel marked Exhibit D-8 for identification. What is that? A. Well, that is the funnel I was filled.

Q. That was the funnel that you used, is it? A. Yes, sir.

Q. Do you ever use that funnel for anything else? A. No, sir.

Q. Where did you get that funnel on the day in

question? A. It was in the same place where the dipper is.

Q. What was its condition of cleanliness? A. It was clean, I did not see nothing in.

Mr. Ashmead: I now offer these two in evidence.

(Exhibit D-7 and D-8 for identification now marked in evidence.)

Q. When you took the hydroflouric acid out of that large container, did you observe it? A. Yes, sir.

Q. Was there anything unusual about it? A. I didn't look. It was look like other acid.

Q. It looked like the acid you had been handling for 20 years? A. I didn't see no difference.

Q. How much acid did you put in these jugs? A. Ten pounds.

Q. Two dippers full? A. Two dippers full.

Q. Now, where was this barrel or large container located in respect to where you filled them. What did you do with these jugs after you filled them and hammered them? A. I bring them over to the office.

Q. You said that when you got these jugs and before you filled them that you turned them upside down and tapped them? A. Yes, sir.

Q. Did anything come out of either jug? A. No, I didn't see nothing.

Q. Nothing came out? A. No, sir.

Q. Now, when you had filled those jugs, what did you do with them after you had put the stoppers in and hammered them down? What did you do with the jugs? A. I bring them over in the office.

Q. In Mr. Ruhl's office? A. Yes, sir.

Q. How far was that from the container from which they were filled? A. I can't say correct, about 40 feet or 20 feet, I don't know.

Q. Very close? A. Well, about 40 feet is what I think.

Q. Now, how did you carry these jugs over there? A. I took them by the handle and bring them over.

The Court: How long would you say it took you from the time when you filled the jugs until you took them to Mr. Ruhl's office and gave them to him?

The Witness: That was about five or six minutes.

Q. From the time you filled the jugs to carry them over 40 feet was six minutes? A. Maybe more. I didn't watch.

Q. Would you say six minutes or more? A. Maybe it was ten. I didn't look at a watch at that time.

Q. I understand the court's question, after you put the hydroflouric acid in the jug, how long was it or how long did it take you to put the two corks in, hammer them down and take them over to Mr. Ruhl's office?

Mr. George: He has already testified.

A. It was ten minutes.

The Court: That is different.

The Witness: At the longest.

The Court: How much did you say?

Q. You mean the jugs were in your possession ten minutes or it took ten minutes from the time you hammered the corks down? A. I mean with the filling.

Q. You mean the whole thing? A. The whole thing.

Q. That's not what I am asking you, Mr. Schmeltz. I am asking you how long it was from the time you hammered the corks down until you had carried them to Mr. Ruhl's office? A. That takes about four or five minutes, four minutes, or maybe three minutes. I ain't looked at the watch.

Q. You have no watch? A. I got no watch at that time. I don't know how long it was.

Q. Now, during all of the time that the jugs were in your possession was there anything with respect to the filling of the jugs, which was different from what had been your experience in the past 20 years in filling jugs?

Mr. George: That is objected to as improper and having no bearing upon the previous conduct as described or attempting to describe the manner in which the jugs were filled on this occasion. One might have been very careful for many years and then on one occasion careless.

Mr. Ashmead: I am simply asking him if there was anything in this experience different from the other experiences he had.

The Court: Yes, the same thing was gone into before.

The Witness: I never filled a jug different all the time, that is the way. I never filled a different way all the time. That is the same way.

Q. Nothing different on this occasion? A. No, sir.

Q. Was there anything different in these jugs on this occasion than the other jugs that you had

filled on previous occasions? A. I didn't do nothing different, no.

Q. You didn't observe any difference in these jugs and the other jugs that you had filled in the past 20 years? A. No, sir.

Q. No difference? A. No, sir.

Q. Now, Mr. Schmeltz, after this accident occurred, did you go to the big container afterwards? A. Yes, sir.

Q. Who was with you when you went there? A. What was that?

Q. Did you go back to the big container from which these jugs were filled? A. I was alone.

Q. Who was with you when you went there? A. I was alone.

Q. You don't understand. After the accident. A. Oh, after the accident.

Q. Did you go there with Mr. Ruhl? A. No, I wasn't there.

Q. Did you ever weigh these containers? A. That big container, yes sir.

Q. Who was with you when you weighed it? A. It was the first two jugs I took out from that big container. Afterwards when that happens, my foreman, Charley Ruhl, came and said, "We are going to weigh the big jug" and we put it in the scale and there was ten pounds short. There was the first two jugs we took out of the big container.

Q. So that you and Mr. Ruhl checked up on the weight of the container? A. Yes sir.

Q. And there was ten pounds short? A. Yes sir.

The Court: Do you mean by that that these two jugs were the first containers you filled from that particular vat.

The Witness: It was the first two jugs from that big container we took out.

Q. You showed him the container from which you took this acid? A. Yes, the first jugs from lot number four.

Cross-examination by Mr. George:

Q. You told us Mr. Schmeltz that you filled these jugs in the same manner in which you filled jugs previously for over 20 years, is that right? A. Yes sir.

Q. Did you ever have an explosion before? A. Since I have worked, I never have.

Q. Yet you want the jury to understand that you filled the jugs the same way? A. Yes sir.

Q. On this occasion? A. Yes sir.

Q. Now you told us a few days ago that you have an order to clean all jugs before filling them, is that right? A. Yes sir.

Q. And the order is by the company? A. Yes sir.

Q. The Cooper Company? A. Yes, sir.

Q. To be careful to thoroughly clean all jugs before you put acid in? A. Yes, sir.

Mr. Ashmead: I don't know whether he understands the question. Mr. Schmeltz, do you understand the question? Before you answer it, understand it. If you don't understand it don't answer it until you do.

Q. You understand English, don't you? A. I understand.

Q. I am speaking the same English that Mr. Ashmead used when he was examining you, am I not? A. Yes, sir.

Q. So that if you understood his questions, you should not have any difficulty in understanding mine? A. No.

Q. Your order was, as you told us, to clean the jugs before putting the acid in, is that right? A. Yes, sir.

Q. Yes or no? A. Yes, sir.

Q. To see that they were thoroughly cleaned before you put in hydrofluoric acid, into the jugs? A. Yes, sir.

Q. As a good servant you obeyed orders? A. I don't understand, by orders?

Q. You did what you were ordered to do? A. Yes, I did all the time.

Q. See to it that the jugs are thoroughly clean before you put acid in? A. Yes, sir.

Q. And in pursuance of those orders, when these two particular jugs marked Exhibit P-G-2 and P-G-1 were brought to you for filling, you tried to see to it that they were thoroughly clean? A. Yes, sir.

Q. And just what did you do when you found out that they were thoroughly clean? A. Thoroughly clean.

Q. What did you do when you found out (Question withdrawn.)

Q. What did you do to clean them, if anything? A. Turned them upside down and tapped them.

Q. What did you do after that? A. Stand them up and fill with hydrofluoride.

Q. Before you filled them and stood them up and filled them, did you tap them? A. I tapped them.

Q. What with? A. With a hand and gloves.

Q. Please show the court and jury just how you did that. A. I tapped them first here around

with gloves and then I turned them upside down and tapped on the bottom.

Q. Hard? A. Hard and shaking with rubber gloves.

Q. You tapped it, or hit the jug as hard as you could with your hand? A. With my hand, yes, sir.

Q. That was what you did towards carrying out the orders of the company to thoroughly clean the jugs before filling them with acid? A. Yes, sir.

Q. Now you were asked by Mr. Ashmead whether anything came out of the jug and you said you didn't see anything come out. A. No, sir.

Q. Did you look? A. I could not look in the jug, that jug.

Q. Did you look outside of the jug after you tapped? A. I didn't see nothing falling out.

Q. You are not sure whether anything came out or not? A. I didn't see nothing.

Q. You don't know whether anything came out? A. As near as I know, I didn't see it.

Q. You are not sure? A. Well, I am not sure, I didn't see it.

Q. Some might have come out without you seeing it? A. Maybe.

Q. Isn't it a fact that some might have come out? A. I can say yes because I didn't see it.

Q. Then you don't know whether any came out or not? A. I don't know.

Q. Aside from the orders of the company to thoroughly clean the jugs before refilling with hydrofluoric acid, why would you clean the jugs? A. Why, because the acid gets dirty sometimes there is a little acid left and I want to dump out the old acid and fill with new acid.

Q. Why wouldn't you put acid in without thoroughly cleaning it; it is dangerous, isn't it? A. No, I don't see the danger there, there never was danger for me.

Q. Isn't that the reason you would not put hydrofluoric acid into the jug that you knew nothing about without thoroughly cleaning it because if you didn't clean it and there was something in there, you knew it would be dangerous? A. No sir, if they blown it was danger. I never feel that safe for myself.

Q. If you knew there was dirt in there, would you put acid in for your own sake? A. Yes, sir.

Q. You would? A. No, sir.

Q. Because you know it would be dangerous to you? A. To me, yes, sir. It never was dangerous for me so long as I was working.

Q. Because you were lucky? A. Well, I may be.

Q. Now, Mr. Schmeltz, I understand you to say that this dipper holds five pounds? A. Yes, sir.

Q. Full? A. No, to that mark there.

Q. You gave good measure in this case, didn't you; I mean when somebody wants ten pounds, somebody orders ten pounds of acid, you see that they get what they pay for? A. Well, measure.

Q. You would not give them nine and a half pounds if they paid for ten pounds? A. I got an order to fill to that mark.

Q. And that is five pounds? A. Yes sir.

Q. You got orders because your company is honest? A. I think so.

Q. You did fill it? A. Yes, sir.

Q. You filled it twice? A. Yes, sir.

Q. You didn't spill any out as you were pouring it into the jug, Exhibit P-G-2? A. Sometimes falls a drop down, I won't say that.

Q. Did any drop out on this occasion that you

remember so clearly. What happened on this occasion, did any drop out? A. It dropped out every time dropped two or three drops out.

Q. Just two or three drops? A. I don't know how many drops, all I know about all the time lose a little out.

Q. You knew that P-G-1 is a ten-pound jug, is that right? A. Yes, sir.

Q. So that if there was a lot of stuff on the inside and a coating or encrustation were on there, which would take considerable room, if you put the full ten pounds in the jug it would flow over? A. Well, if it was in.

Q. It would flow over? A. Yes, if there was anything in.

Mr. Ashmead: See if he understands this question.

Q. I am talking about this jug, do you understand? You understand that if there was something in there, you said that if there was a lot of stuff in there that takes room, you could not get ten pounds of acid in there, it would flow over? A. Yes, sir. Since I fill it was all the time, since I fill never runs over.

Q. Therefore you are satisfied that there was not a lot of stuff in there; isn't that so? A. I didn't see any inside.

Q. You do not know that so long as you put ten pounds of acid in that jug which only holds ten pounds?

Mr. Ashmead: It is called a ten-pound jug.

Mr. George: I am using the witness's own language and understanding of the matter.

(Question read as follows):

"Q. You do know that so long as you put ten pounds of acid in that jug which only holds ten pounds" and if it did not overflow, there was not a lot of stuff on the inside; isn't that so. A. Never a jug overflows.

Q. This jug didn't overflow? A. No, sir.

Q. The reason for it was because there is nothing inside, isn't that so? A. I think so. I never gave a look in, that is a lead jug.

Q. You told us you always keep that dipper clean. A. Yes, sir.

Q. Is that right? A. Yes, sir.

Q. Why? A. Why, we want clean acid when we put it in.

Q. Because it would be dangerous? A. I don't know if dangerous. I got order to keep clean and I keep it clean.

Q. You have handled hydrofluoric acid for 23 years and you know that it is dangerous, don't you, after handling it for 23 years? A. Every acid is dangerous.

Q. Isn't hydrofluoric acid dangerous? A. It is dangerous, it was never for me.

Q. Because the Gods were good to you? A. Yes, sir.

Q. But notwithstanding you have been burnt by acid on other occasions? A. I was burnt a couple of times on the fingers a little bit.

Q. And again you were lucky it was not more? A. Yes, sir.

Q. And you knew from this small experience that you had on your own fingers it is a dangerous acid, didn't you? A. Every acid is dangerous, I know that.

Q. Which of these jugs is sold by the Cooper Company, do you know? A. Well, it looks like Cooper's jug, that tall jug.

Q. You are not sure of it? A. I am not.

Q. You are sure that the smaller jug is not Cooper's? A. That is a stranger jug.

Q. How about this Exhibit P-G-3 and P-G-4? A. Them two is stranger jugs.

Q. So there was nothing strange about P-G-1? A. I don't know, it looks like our jug, I can't say it was a Cooper jug or not.

Q. You have two kinds of corks, one paraffined and one plain cork? A. Yes, sir.

Q. And the plain cork holds tighter in the neck than the paraffin cork? A. No, both of them the same thing.

Q. You say that the plain cork in this case was pretty tight in the neck because you hammered to drive it in? A. Why, sometimes drive it in; yes, sir, every one.

Q. Do you know what action hydrofluoric acid has on glass? A. I know it, yes, sir.

Q. What does it do? A. Eats glass.

Q. Do you know what action hydrofluoric acid has on sand? A. I don't know that.

Q. You don't know? A. I see some.

The Court: Do you know what happens when hydrofluoric acid drops on sand? Have you ever seen it drop on sand and see what happens?

The Witness: Well, there is a little working, that's all.

The Court: You have seen it?

The Witness: I have seen it, yes, sir.

Q. What does it do on the sand? A. Nothing, just a little smoke.

Q. You get away from the smoke, don't you? A. Well, hydrofluoric acid always has a little smoke.

Q. You don't want to inhale any of it, do you, you don't want to inhale any of the hydrofluoric acid gas smoke, do you? You wouldn't do it? A. No.

Q. Why, afraid it would kill you? A. Never kill me.

Q. I say you would not do it because it might kill you? A. If I was——

Q. Answer my question. A. I don't know what that means.

Q. You saw smoke coming from the hydrofluoric acid when it came in contact with sand? A. Yes, sir.

Q. And you didn't want to put your nose near it? A. No, I would take a little away and wash off, that's all I do.

Q. You wouldn't want to put your nose down to it and take a good sniff? A. No, nobody, I think, likes the smell of acids.

Q. They would be very foolish? A. Yes.

Q. Because it might kill them? A. Well, it is dangerous.

Q. If they would do that it would make an injury? A. Would have a burning, yes, sir.

Q. What kind of gloves do you say you used in this work? A. Rubber gloves.

Q. Without other protection? A. I save my hands.

Re-direct examination by Mr. Ashmead:

Q. Will you tell us just what your orders were about the filling of the jugs?

The Court: Give the language as near as you can.

The Witness: What's that mean?

The Court: What did they tell you to do when they said to clean the jugs? How did they talk about it, what did they say?

The Witness: They tell me keep clean dipper and keep clean your funnel and every jug what come in tap it and fill again with acid; if any acid left there, old acid dump out and fill with new acid.

Q. And that was the instruction that they gave you? A. That they gave me, yes, sir.

Q. In those words as far as you can remember? A. Yes, sir.

Re-cross-examination by Mr. George:

Q. You are still employed by the Cooper Company? A. Yes, sir.

CHARLES RUHL, called as a witness for the defendant, being first duly sworn, testified as follows:

Direct examination by Mr. Ashmead:

Q. Mr. Ruhl, where do you live? A. 347 Van Beuren Street, Newark, New Jersey.

Q. By whom are you employed? A. Charles Cooper and Company.

Q. Where is their place of business? A. 348 Van Beuren Street.

Q. How long have you been employed by them? A. About twenty-four years.

Q. In what capacity are you employed? A. Foreman of the acid department.

Q. Now, were you there on the day of the accident, June 23rd, 1925? A. I was.

Q. You were there when the jugs were filled? A. Yes, sir.

Q. I show you exhibits P-G-1 and P-G-2; when they were brought to be filled you were there? A. I received them from Mr. Moorehead.

Q. When he brought them down from the office to be filled? A. From the office down to my department.

Q. Mr. Moorehead brought them down to be filled? A. Yes, sir.

Q. What did you do with them? A. He took them outside, I directed him where to put them outside of the door of the fluoric acid department. I called Schmelz and went and got the dipper and the funnel from inside. Meantime Schmelz came and I directed him to fill with ten pounds each. He took these and I went to the office and entered the order in my ledger.

Q. Mr. Schmelz filled the jugs? A. Yes, sir.

Q. What did he do with them? A. Brought them into my office after they were filled.

Q. What happened to them then? A. Moorehead took them up to the office, I imagine.

Q. Did Mr. Moorhead start away from your office with the jugs? A. Started away from the office with the jugs, yes, sir.

Q. When next did you see these jugs? A. The next time I seen them is when I came back from the hospital and I washed out the car.

Q. How long was that after the accident, would you say? A. I will say would be quite half an hour.

Q. About half an hour after the accident? A. About half an hour.

Q. When you next saw these jugs where were

they? A. They were in the rear of the car, in the box, the condensed milk box.

Q. The rear of Mr. Hoppers' car? A. The rear of Mr. Hopper's car.

Q. How many jugs were in that car? A. Four.

Q. I show you exhibits P-G-1, P-G-2, P-G-3 and P-G-4. Are they the four jugs that were in the car? A. They are, yes, sir.

Q. Now, what was the condition of jug P-G-1, which is the tall jug that is now cut open?

Mr. George: Is this after the accident?

A. Well, that was standing in the back of the car, there was some acid, I don't know how much was in it, and the other, the white jug, was intact.

Q. Just let's finish this, this jug P-G-1 was in the back of the car? A. Yes, sir.

Q. With the cork out? A. With the cork out was this.

Q. Let's finish this jug first. Now, did you look for the cork? A. I found it when I cleaned the car later on.

Q. Have you got that cork? A. I have got it in my pocket here.

Q. Where did you find this cork? A. The front seat between the cushions, the bottom cushions and the rear cushions.

Q. And the cork that you found there, did it have paraffin on it? A. Yes, sir.

Q. Did it show indications where it had been in the jug? A. It does yet.

Q. In what way? A. Why, there is a depression where it had been forced into the mouth of the container.

Q. And this is the cork (indicating)? A. That is the cork.

Q. That you found in the car? A. That is the cork.

Q. The cork in exhibit P-G-1? A. Yes, sir.

Q. What is this paper? A. That has the original paper on it yet.

Q. What, the yellow paper? A. That is the cork exhibit paper.

Mr. George: There is no objection if you want to offer it.

Mr. Ashmead: I want to have it noted on the record that the yellow paper that is on the cork was the paper of the court, something put on at the last trial.

The Witness: That's the way I received it.

Q. So that when you found it, the cork was not covered by this paper at all? A. No sir, not covered by that yellow paper.

Q. Did the cork have paraffin on it? A. That is paraffined.

Mr. George: May I see it.

Mr. Ashmead: The paper that was on the cork has been taken off by Mr. George.

Mr. Ashmead: I now offer it in evidence.

Accepted and marked as Defendant's Exhibit D-9 of this date.

Q. Coming back to Exhibit P-G-2, what was the condition of that jug? A. That was full, it had the cork intact.

Q. And it was full of acid? A. Yes, sir.

Q. And were either of these two jugs P-G-1 or P-G-2 hot? A. Not that I know of, no.

Q. That was half an hour after the accident? A. Approximately a half hour.

Q. Now, in the jugs P-G-3 and P-G-4, what was the condition of these jugs? A. They were empty.

Q. And without corks? A. Without corks.

Q. What did you do with these jugs? A. I took the jugs out of the car, put them in the factory yard. I took the jug which had the cork intact and put it into the yard, and I found a peak cap in the car belonging to the men. I took that in there, and then I thought I will make sure, in order to find out if there will be any pressure there to prevent anything being done by anybody except myself so I could handle same, so I found on withdrawal that there was no pressure in there whatever.

Q. What was done with the cork in this jug? A. What was done? It was taken out and it was put back for the laboratory experiment.

Q. Do you know what became of the cork? A. I believe Mr. Hopper put it in his pocket.

Q. What became of this cork? A. Mr. Hopper's father put it in his pocket.

Q. Now, Mr. Ruhl, what was the distance from the place where these jugs were filled and your office, that is from the big container, to your office? A. About two and a half blocks.

Mr. Ashmead: Oh, no.

Q. You have spoken of going to your office? A. My department, thirty feet.

Q. That is from the place of the big container to your office? A. My office is directly next door to the hydrofluoric acid department.

Q. Now, after the accident did you examine the big container? A. I did.

Q. You don't manufacture hydrofluoric acid? A. No, sir.

Q. From whom do you buy? A. John C. Wyarde, of Brooklyn, New York.

Q. Was this container from which these jugs were filled, pointed out to you by Mr. Schmelz? A. Yes, sir.

Q. What lot number was that? A. Lot number one.

Q. From whom did you buy that acid? A. John C. Wyarde.

Q. You have been buying acid from them how long? A. A good many years.

Q. Have you ever had any trouble? A. Never had any trouble.

Q. When did you examine that container? A. Checked up with the container to see if that was the container he took the acid out of.

Q. What did you find? A. Twenty pounds short. There was 110 pounds when it was filled, and it was 90 pounds.

Mr. George: You said 20 pounds short.

Q. Did you use the other acid in the big container from which these jugs were filled? A. Yes, sir.

Q. What did you do with it? A. Filled it up for orders and shipped it out.

Q. And you used some in your plant? A. Yes, sir.

Q. It worked properly? A. Worked perfectly.

Q. It was good acid? A. Good acid, no mistake.

Q. It was consumed in the ordinary course of business, the rest of the acid in this big container? A. Yes, sir.

Q. Now, Mr. Ruhl, what is the difference in the time in which it might take to fill an order received in the front office; what is the difference

in time? A. There should not be any delay in time in my department, we fill it immediately.

Q. And how long would it take? A. If I am not there five minutes or so.

Q. Depends on whether the man is available to fill it? A. Yes, sir.

Q. There is nothing different in the filling of one order than in another? A. No, sir.

Q. So that the only difference in time would be simply the availability of the man who has taken care of the order received? A. Yes, sir.

Q. Is that the only reason? A. Yes, sir.

Q. In the time of filling of two orders? A. Yes, sir.

Q. Now, are you the man that gives the orders to Schmelz as to how to fill the jugs? A. Yes, sir.

Q. What were these orders? A. I ordered him in the ordinary way of routine, ordered him to fill two pound jugs with hydrofluoric acid.

Q. No, when he came there in your employ. Did you give him orders as to how to fill the jugs? A. Oh, yes, sure.

Q. And what was that order? A. To see that the containers were clean, turn them upside down and tap them to see if there is any loose material or spent acid.

Q. And that has been the invariable practice? A. It has.

Q. Now, did you see this dipper marked D-7 at the time? A. Yes sir, it was on the outside.

Q. It was clean? A. Always clean.

Q. You don't use anything else? A. Not for hydrofluoric acid.

Q. Did you see the funnel at the time? A. Yes, sir.

Q. That was clean? A. That was clean also.

Q. Was that used for anything else? A. Nothing else but hydrofluoric acid.

Q. I think I asked you, you examined this cork to see if it had paraffin? A. Yes, sure; that is paraffin. That is the original cork.

Q. Mr. Ruhl, these jugs just like that, what are they called? A. Well, we call it a ten-pound jug.

Q. What does it actually hold? A. It holds from eleven and a half to twelve pounds.

Q. The jug is larger? A. Than the acid which is contained in it. We allow a space in there for the gas, room in there.

Q. The jug is larger by how much? A. That is, we allow that much. We fill up to here with about ten pounds, and that is excess space in there.

Q. Because that ordinarily was hydrofluoric acid? A. Ordinarily, yes, sir.

The Court: That container contained how much?

The Witness: It will hold ten; if you filled it to the top it would hold eleven and a half to twelve pounds, but there is ten pounds put in it.

Q. It is referred to as a ten-pound container? A. A ten-pound container we call it.

Q. For the reason that's all you put in that kind of jug? A. Yes, sir.

Q. Now, when the police were at the office you indicated to them those jugs, did you? A. Yes, sir.

Q. And described to them just as you have described here as to how you found them in the car? A. Yes, sir.

Q. Did they take any acid from these jugs or did Dr. Edel while you were there take any acid? A. I could not say who took it, whether he took

it or Lieutenant Rue or Lacey. I believe they did take acid.

Q. You don't know who? A. No, sir.

Q. Dr. Friedman knows about that? A. Dr. Friedman knows about that.

The Court: This measure which was used to carry liquid from the big container to the jug, that contains more than ten pounds?

The Witness: No, five pounds.

The Court: I beg pardon, five pounds.

The Witness: There is a mark in there, up to that level it is five pounds.

The Court: And above that?

The Witness: Above that it would run over, probably would not be more than an ounce.

Q. Would you explain a little bit more about that? A. The acid is filled up to that place that is five pounds, and then there is two dippers in that jug, that is ten pounds.

Q. That is what you are speaking of here? A. Yes, sir.

Q. You can't get above that line? A. No, sir.

Q. In other words, you couldn't make it any more? A. You could not make no more than ten pounds, two measures.

Q. More than five pounds into the dipper at one time? A. That is the idea.

Q. Now let me ask you whether you have ever had any trouble with the acid from John C. Wyarde? A. Never. We never had any trouble, not in all my experience.

Q. In all your experience, Mr. Ruhl, have you ever had a case where the cork blew out like this? A. Never.

Q. Have the Charles Cooper Company ever had any while you were there? A. Never.

Mr. George: That is objected to.

Q. Not of your knowledge? A. No, we never had any trouble.

Q. And you have filled these jugs yourself? A. Yes, we take thousands of them.

Q. When you fill them do you wear any gloves? A. I never wear any gloves at all.

Cross-examination by Mr. George:

Q. Mr. Ruhl, you have been employed by the Charles Cooper Company for twenty-four years? A. Approximately twenty-four years.

Q. As a matter of fact, you live in a house owned by them right adjoining the premises of the plant, isn't that so? A. Yes, sir.

Q. They built the house for you, didn't they A. No, sir.

Q. Or for you and other employees, and they take ten dollars a month rent from you, is that right? A. That is right.

Q. And you are still in their employ? A. I am.

Q. And you are still their tenant at ten dollars a month? A. Right.

Q. When does this gas begin to form in a jug after acid is poured into it? A. Well, gas is present in all acids.

Q. It forms a pressure if it is stoppered up? A. Not necessarily, no.

Q. Well, if there is some foreign substance in a jug and the jug is corked in the very first instance there would be gas, but there would be a continuous generation of gas and the pressure would become greater and greater? A. It depends upon the material that was in there.

Q. Wouldn't it? A. Depending on the material that was in there.

Q. I said a foreign substance. A. Well, it is capable, if there is something that is insoluble.

Q. Assuming something soluble like silica or sand? A. Yes, sir.

Q. Wouldn't it then generate a gas? A. It would, yes, sir.

Q. If corked it would expand? A. Right.

Q. And develop pressure? A. Yes, sir.

Q. Until the imprisonment of the generated gas, the pressure would be so great that something would explode, is that right? A. That is right.

Q. And it is for that very reason, isn't it, that these jugs allow about eighteen per cent. of space in the interior for such an emergency, is that right? A. No, I wouldn't say that.

Q. Why would you call this a ten-pound jug if it can hold eleven and a half or twelve pounds? A. We never fill any container up to the neck; it is a poor policy.

Q. You said a certain amount of space was allowed for gas arising in there? A. Surely.

Q. Is that what you mean? A. Surely.

Q. So that it is not because you merely arbitrarily refuse to fill a jug up to the neck; it is because they allow that or you allow that in the jugs, you allow a certain amount of space for gas, is that right? A. For the expansion of the liquid.

Q. Because of the gas? A. Surely.

Q. And if it is corked up with gas there would be an explosion if there was a foreign substance in the jug? A. Yes, sir.

Q. Why would you clean the jug, Mr. Ruhl, or have a standing order to see to it that they were cleaned before being filled? A. To remove any foreign substance if there is any present.

Q. Because of the fact that you put hydrofluoric acid into a jug that contained a foreign substance, soluble substance, such as silica or sand and then cork it up with the eighteen per cent of space allowance for gas, would not be sufficient to prevent an explosion, would it? A. Well, it would depend upon the amount of gas given off.

Q. It would go enough to give off gas and explode? A. Depending upon the material that was in there.

Q. I said sand or silica; don't quibble. A. I am saying the kind in there.

Q. Assuming a large amount? A. A large amount, yes, sir.

Q. It would cause an explosion, wouldn't it? A. It would cause an evolution of gas.

Q. That means an explosion; the cork would come out if there was an evolution, and anybody who was in that vicinity would be injured, isn't that a fact? A. Yes, sir.

Q. And it is to avoid that that you have a standing order in your place to see to it that foreign substances are cleaned from jugs? A. So as not to——

Q. Wait a minute; I am not finished—before putting this acid in? A. So as not to contaminate the acid.

Q. Isn't that a fact? A. Yes, sir.

Q. You were one of the fellows who poured water on these dying boys? A. No, sir.

Q. Didn't you help? A. I remember——

Q. When you saw Kelly lying on the ground? A. Sure.

Q. How did you help? A. Well, I put carron oil, linseed oil and limewater.

Q. Where did you get it? A. In the factory.

Q. Where do they keep it? A. In the laboratory.

Q. Why do they keep it? A. For burns.

Cross-examination by Mr. Armstrong:

Q. You say that you turned over the lead jug, upset it, to make sure there isn't any spent acid before you refill it? A. Yes, sir.

Q. What is spent acid? A. Acid returned by the customer that may be left, a little in there, a pound or two.

Q. Spent acid might also mean, or doesn't it mean, Mr. Ruhl, to your knowledge, acid that has acted upon something, or evaporated its gas, isn't that so? A. I don't know what it is used for, I don't know that.

Q. You don't know what spent acid is? A. What there is, that is only what is left.

Q. If you don't know, say so. Do you know what spent acid means? A. Well, I will say no.

Q. You used that term, didn't you, in answer to one of your counsel's questions, a question by Mr. Ashmead, that you turn it upside down to make sure there is no spent acid in the bottom of the container before it was refilled; did you say that? A. Yes, sir.

Q. You don't know what spent acid is? A. We call spent acid acid that has been worked out.

Q. What do you mean? A. No longer any there, which I assume was spent acid.

Q. You know, of course, Mr. Ruhl, that this acid has a reaction on silicia, don't you? A. Surely.

Q. You know that spent acid might mean acid which had acted upon silica? A. I wouldn't say so.

Q. Now, how long did you continue to refill old jugs? A. Only when the jug looked badly.

Q. Only when you look at it. Do you ever make any tests to find out whether they are safe to withstand this eighteen per cent of space that might be filled with gas, whether they would stand that pressure? A. No, no test of that sort.

Q. None whatsoever? A. No.

Q. Did you ever receive any orders to make any tests for the strength or the character of these goods? A. No, left to our own judgment.

Q. Entirely to your own judgment? A. Yes, sir.

Re-cross-examination by Mr. George:

Q. One of the first things you did after the accident was to go back to Number 4 tank, was it? A. Number 4 jug.

Q. Not this jug, I mean to say the large jug? A. It was in the factory where we filled the acid.

Q. After the accident you went back to this lot number 4 for some reason, didn't you? A. Yes, to check up.

Q. To check up what? A. The man really took it out of that container.

Q. The man really took it out of that container, what man? A. Schmelz.

Q. And Schmelz really took what out of that container? A. The hydrofluoric acid.

Q. You wanted to find out whether he took it out of that lot? A. Simply for my own record, to check it up, that's all.

Q. You wanted to find out whether he sold ten pounds to the jug, or twenty pounds—which jug? You wanted to check up whether something was wrong at the time; isn't that it? A. Well, just

simply to check up the amount of acid that was taken out of that jug.

Q. And that's all? A. That's all.

Q. Did anybody dispute the fact that twenty pounds of acid had been purchased? A. No.

Q. Did Carroll and Hopper, or Kelly and O'Neill, who died, and Carroll and Hopper who were nearly dead, dispute the quantity that they purchased—did they? A. Not that I know of.

Q. And did Schmelz raise any issue or any doubt or any question about whether it was ten pounds to the gallon or eleven pounds to the gallon? A. No.

Q. So the fact is that you went back to check up if there was any generation of some foreign substance in the tank? A. No, simply went back there to check up.

Q. Check up what? A. A matter of my own record.

Q. For what, merely to find out how much was sold? A. Yes, sold out of that jug.

Q. But nobody had raised the issue, isn't that so? A. Not to my knowledge.

The Court: Did you have other lots of hydrofluoric acid there?

The Witness: We did have a lot on the other side, the last lot that came in, lot number 5. These lots are numbered.

The Court: Did you have anything in your mind as to whether or not it came from that lot number 5?

The Witness: No, because the container is marked lot number 4 on it. All the containers are marked with lot numbers the day they are received and tested.

The Court: Did you want to see whether

he had drawn out more than twenty pounds?

The Witness: Yes, sir.

Q. Why, nobody had raised any question? A. That was a matter of my own information.

Q. Nobody had raised any question as to the quantity of acid purchased, had they? A. No.

Q. You didn't believe that Schmelz was dishonest, did you, and that Schmelz was taking more than Hopper was paying for? A. I didn't say so. I used my own judgment.

Q. What was your judgment, that he was dishonest? A. No, sir.

Q. Then you knew he was honest? A. Yes, sir.

Q. Then, if you ordered him to go for twenty pounds you knew that that was what he did? A. Surely.

Q. Then if you knew he only sold twenty pounds of acid, why did you go back and check up how much came out, will you answer that question? A. To simply check up, for my own check.

Q. Will you please tell me, if you knew, that Schmelz was honest, and there was no doubt about the quantity that was sold, why you checked up? A. Well, that is my answer.

Q. Can you answer that question or don't you want to? A. I gave my answer; I simply made a check.

Q. And that is the best explanation you want to give the court and jury to that question? A. Yes, sir.

Re-direct examination by Mr. Ashmead.

Q. Mr. Ruhl, were you interested in ascertaining as much about the facts of this case concerning this accident as you could? A. Yes, sir.

Q. Did that have anything to do with your going back there and examining the container? A. No, no.

Q. It didn't. You did that in the regular course of your business? A. In the regular course of my daily work, checking up. I have to check up all of my records.

Q. As to what acid has been sold during the day? A. Yes, sir.

Q. So it was in that connection that you made this test? A. Yes, sir.

The Court: Was it to remove any doubt in your mind as to whether or not more of this acid had been put in the jugs respectively than had been ordered?

The Witness: I did that every day. That is part of my day's duty.

The Court: Did that enter into your reasoning?

The Witness: That didn't enter into my mind; in the course of the day I go around and check up all of my orders, the amount of stuff that was shipped during the day.

The Court: Did you go back and weigh it?

The Witness: After the day's work I check up all my work.

The Court: You do?

The Witness: Yes, sir.

Re-cross examination by Mr. George.

Q. That is your regular custom? A. Yes, sir.

Q. But in this case you didn't wait until the day was over, did you? A. Well, the day was practically over after I got back from the hospital.

Q. It was early afternoon? A. Yes, after four o'clock, four-thirty by the time I got down to my department.

Q. And you tell the court and jury that you went back to check up all that was sold? A. After the accident, yes, sir. That was close on to five o'clock, four-thirty or five.

William Moorehead, recalled by the defendant.

Direct examination by Mr. Ashmead:

Q. Mr. Moorehead, where do you live? A. 16 Cottage Street, Newark.

Q. By whom are you employed? A. George Cooper & Company, Newark, New Jersey.

Q. How long have you been employed there? A. About nine and a half years.

Q. Where were you employed before that?

Mr. Armstrong: I object to that as immaterial where he was employed before he was with the Cooper Company.

Mr. Ashmead: Question withdrawn.

The Court: It might have been along the same line.

The Witness: McKesson & Robbins.

Q. What are you doing there? A. Work down in the cellar, bringing up to the plant oil.

Q. Crude oil? A. Yes, sir.

Q. In what capacity are you employed by the Charles Cooper Company? A. In the shipping room, packing.

Q. What do you mean when you say in the shipping room, packing? A. Taking bottles, finished goods.

Q. Did you ever work in the acid department? A. No, sir.

Q. You never had anything to do with acids? A. No, sir.

Q. What, if anything, did you have to do with filling jugs or things of that kind? A. Nothing.

Q. Your experience, since you have been with the Charles Cooper Company, in fact since you have been down there, has been solely in the packing room, packing finished goods into wood boxes or cases, that is correct? A. Yes, that is correct.

Q. Occasionally did you run around to carry a jug from one place to another? A. Occasionally, when there is a cash order comes in, see, anything like that.

Q. On this occasion did you take the jugs down to be filled? A. Yes, sir.

Q. Took them down to Mr. Ruhl's department? A. Down to the acid storage department.

Q. You carried them down there? A. Yes, sir.

Q. Did anything get in the jugs while you carried them down there? A. No, sir.

Q. And when you got down there what happened when you got down to the acid department? Who did you see there? A. I seen Mr. Ruhl on the way down, and he was near his own office, near the acid storage department. I said to him: "I want twenty pounds of hydrofluoric acid, ten pounds in each jug for a cash order." I handed Mr. Ruhl the order and he entered the order in his book, and he walked back and he called for Schmelz. Mr. Schmelz did not come then, and so he went inside and he said he would fill it himself, and he went in and brought out the dipper and the funnel. Then Mr. Schmelz come along and then he ran to the office and he got the jugs and the jugs were filled.

Q. You went to Mr. Ruhl's office? A. And waited there until the jugs were filled.

Q. Then when did you next see the jugs? A. The next thing, about five minutes after Mr. Schmelz came with the jugs and placed the two jugs on the floor in Mr. Ruhl's office.

Q. Then what happened? A. Then I took the two jugs and walked back to the shipping room. I placed them in front of the door of the main office and I waved and Mr. Wally came out and told me to take them out to the automobile in front of the main office.

Q. After these jugs were filled you carried them from where Schmelz put them on Mr. Ruhl's office floor in the acid department to the car, did you, to the automobile. You carried them from Ruhl's office to the automobile? A. I carried them to the main office first.

Q. And then to the automobile? A. Yes, sir.

Q. How far is that, would you say? A. Do you mean from the acid storage department?

Q. Out to the automobile? A. Well, it is a block and a half almost, I couldn't say just the exact length.

Q. Have you any idea how long it would take you to walk that? A. It would take about five minutes.

Q. That is only an estimate? A. Only an estimate, I never timed it.

Q. How did you carry these jugs, will you show how you carried them, use Exhibits P-G-3 and P-G-4? A. Carried them like this.

Mr. George: For the record, by the handles.

Q. While you were carrying them that block and a half did either of these jugs get warm? A. No, sir, not——

Mr. George: What's that?
The Witness: Not that I know of.

Q. Not that you know of? A. No.
Q. You didn't notice any heat about the jugs? A. No.

Mr. George: I object to that as leading.
The Court: The question has been put and answered before. It can't do any harm.

Q. And you carried these jugs out to the automobile? A. Yes, sir.
Q. When you got to the automobile what happened with the jugs, what did you do with them? A. I placed them on the side.
Q. When you got to the automobile was the door open or closed? A. The door was open.
Q. Who was in the automobile? A. I don't know who was in the automobile, I didn't know them. I just knew them by the order.
Q. When you got to the automobile what did you do with the jugs, will you demonstrate what you did with them? A. I swung them up, one at a time, to the sill of the door of the automobile, just like that (indicating).
Q. Now, did you put them in the box? No, sir.
Q. Where did you leave the jug? A. On the sill of the door of the automobile.
Q. When you swung one of these jugs up on to the sill of the door, what happened to it? A. One of the men in the rear of the automobile took it from me.
Q. What did he do with the jug? A. Well, I really don't know, I didn't wait that long to see.
Q. Well, as soon as he took that jug what did you do with the other jug? A. I swung that up in a similar manner.

Q. Where did you leave that jug? A. In the same place.
Q. And did you close the door of the automobile? A. No, sir.
Q. During the time that you had these jugs in your possession or while you were at the car did there anything occur that would indicate to you that either of these jugs were hot? A. No, sir, there was nothing.

Cross-examination by Mr. George:

Q. You are quite positive of that, are you, Mr. Moorehead, that last answer? A. I didn't see nothing noticeable.
Q. The fact of the matter is, you don't know whether they were hot or not? A. I didn't notice anything unusual.
Q. That wasn't what I asked you. You are not prepared to say, being under oath now, whether they were hot or not at the time you put them in the car, are you? You cannot say, can you? Come on, why hesitate? A. I never noticed anything.

Mr. Ashmead: He is simply asking whether you know.
Mr. George: Please permit me to ask it.

Q. You can answer that question. It is very simple.

(Question read as follows: "You are not prepared to say, being under oath now, whether they were hot or not at the time you put them in the car, are you? You cannot say, can you? Come on, why hesitate?")

A. No, I am not prepared to say.

Q. One more question, where do you live, Mr. Moorehead? A. 16 Cottage Street.

Q. Jersey City? A. No, Newark.

Q. How far is that from the plant? A. It is about six blocks.

Q. Are you still in the employ of the Cooper Company? A. Yes, sir.

Re-direct examination by Mr. Ashmead:

Q. If the jugs were hot, or either of them, at the time they were placed in the car by you and taken there by you, you didn't know it, did you?

Mr. George: Objected to, not only as leading, but as argumentative besides.

The Court: It may be leading, but it is not argumentative.

Mr. George: Well, I object to it upon valid ground, at least.

The Court: Can you say now, of your own knowledge, whether they were hot or not hot?

Mr. George: That question has been answered. He said, "No, he could not".

The Court: I am simply helping you out.

Mr. Ashmead: I withdraw the question.

Mr. George: I withdraw the objection.

Dr. William S. Tonry, called as a witness for the Defendant, being duly sworn, testified as follows:

Direct-examination by Mr. Ashmead:

Q. Dr. Tonry, where do you reside? A. 640 West 147th Street, New York City.

Q. What is your occupation? A. Chemist.

Q. What are you, a manufacturing chemist? A. I am a manufacturing chemist.

Mr. George: I will admit the Doctor's qualifications.

Mr. Ashmead: I appreciate that very much but I want to show the standing of this gentleman.

Q. Are you a college graduate? A. I am; I have the Degree of Doctor of Philosophy. Also the Degree of B.A. and other degrees, including the Ph.D.

Q. You have made a special study of chemistry? A. Yes, sir.

Q. How long have you been engaged in the business of a manufacturing chemist? A. In chemistry?

Q. Your experience in the manufacture of chemicals? A. Well, about 25 years, I should say. I would not like to put that down to the month, but approximately 25 years I might say.

Q. Prior to that you were making a special study of chemistry? A. Yes, also doing analytic work in my labaratory.

Q. By whom have you been emloyed? A. For most of that time, John C. Wiarda & Company, by Wiarda & Hall at the present. I was probably approximately about 14 years with John C. Wiarda & Company, as their factory superintendent and chief chemist. I am with the firm of Wiarda & Hall, and work as a factory superintendent chemist.

Q. During all these years, have you had experience handling hydrofluoric acid? A. Yes, sir.

Q. Did the concern manufacture hydrofluoric acid? A. Yes, sir; in fact John C. Wiarda is the

oldest manufacturer of hydrofluoric acid in the country. I am speaking of commercial acid, the commercial standard acid.

Q. You are not employed by them now? A. No, sir.

Q. Their products were all very high grade? A. Standard; reputable. Standard, commercial acid.

Q. In your capacity as a manufacturer of hydrofluoric acid, you also know the processes of other manufacturers and about the way of handling hydrofluoric acid? A. Yes, sir.

Q. Will you now tell what is the generally recognized practice in use or the general practice in use in the filling of a jug that has been once filled with hydrofluoric acid and then returned to be refilled? A. Well the jug would be taken by the man and reversed to see if there was any spent acid therein, give it a shake or two and then proceed to fill it immediately.

Mr. George: I don't get the hang of that.

The Witness: They would proceed immediately. I am speaking of a jug brought in. If he was ready, he would proceed as soon as he was ready to fill the jug.

Q. That would be according to your experience of 25 years? A. Yes, sir.

Q. Would it be according to the recognized practice or the practice in use by these concerns that manufacture hydrofluoric acid? A. Yes, that is the proper way at the time of filling it. If the man is prepared at the time, I think if he was ready he would proceed to fill it.

Q. For what purpose do you say they turn them upside down?

The Court: And shake them.

A. Well, the usual. It is very often found when acid had been sent, or taken away by the user, that the user would use the jug as a receptacle before it was taken in again.

Mr. George: I think that that is not the particular field in which the witness can go and therefore I object to it.

Q. Just state the conclusion. State your conclusion. A. When the jug is returned, we have found repeatedly that it contained spent acid and it was a simple fact that a jug holds a limited amount. Now, if they return a lot of spent acid which they sometimes do, we naturally want to see if the jug was free from anything that could be shaken out of the jug or poured out of the jug and in filling this jug, that was to prevent the filling in on top of it.

Q. What has been the practice, what is the custom in respect to the directions given to the men who fill these jugs as to what to do with them? A. Well, the directions given to the man is that he turn the jug over, see if there is anything in the jug before attempting to fill it.

Q. To tap it? A. Yes, sir.

Q. That is simply to get the spent acid out of it? A. Get the spent acid out, yes, tap it. I would really say——

Mr. George: You just made a gesture. Will you tell us what that means?

The Witness: Well, the tap of the jug is merely to see if there is anything else in the jug. That is about all I might say.

Q. Is there anything that would be practicable to do in ascertaining whether there was any caked material in one of these jugs? A. No.

Q. Why not? A. Not practically.

Q. Why not? A. Not caked material.

Q. Any material that might be caked on the bottom, that would not come out on tapping. A. Probably if it was caked, it could not come out on a tap.

Q. What examination could you make of one of these jugs, what examination could the man who is filling the jug make to ascertain that there was any caked material in there? A. Simply by shaking the jug is the only way I know that would be possible.

Q. That is the only practical way? A. The only practical way that I can see.

Q. And if the jug was hammered so as to break-away anything that was stuck to that jug, what effect would it have on the lining of the jug? A. It would destroy the lining of the jug. These jugs are pacified. When jugs are taken in to begin with, what we call pacifying them takes place. A solution of weak acid is put in it and the object of this is to form a coating. Lead is readily attacked by hydrofluoric acid and in order to form this coating we put hydrofluoric acid in these jugs thereby forming a coat and a lining. That acts as a protection against any further action of the acid. Then the jug is always handled with the greatest of care not to break this coating away because while there is action, after the coating is formed I mean, there is an action and this coating is a protection that is put on the jug for the purpose of preventing any further action and I might say that in the handling of these containers the orders are to handle them the same as if they were glass because if the jug is not handled carefully, if it is put down suddenly it is liable to crack the coating that was put on the container to preserve

it. When that was done, when it was cracked, the acid could eat further and then it would come through to the surface but as a protection against that they handle the jug with the greatest of care. That is why the orders are given to put nothing in the jug, not even to put water in the jug. To put nothing in the jug that would possibly interfere with or break away the coating of the jug.

Q. Not even put water in the jug? A. We especially tell them not to wash the jug out.

Q. And why? A. Well, simply because if a man puts water in the jug he would turn it around and he would begin to shake it and agitate it strongly and in the agitation there would be a liability of breaking or cracking this coating, breaking away the coating of this jug. That is one of the things that we particularly say, "Don't wash the jug, don't put anything in the jug, don't even put water in the jug."

Q. And that is the practice followed by all reputable manufacturers that you know of in filling these jugs? A. Absolutely.

The Court: Is that likely to occur in the practice by striking the jugs?

The Witness: Yes, the coating apparently is very tenacious but as time goes on it seems to get scaly, if you know what I mean, a scale forms with time and then any agitation moves this scale away from the jug itself.

Q. After the jug has been once filled with hydrofluoric acid and used and returned, is there any likelihood of any evolution of gas by putting new hydrofluoric acid in the jug? A. Very very small. It would only be the action of the acid on the jug if part of the coating had been broken away.

Q. Limited to that. A. Although I will state that it is a fuming acid but in a very small measure.

Q. That is there are fumes go off as they do off a great many acids? A. Yes, sir.

Q. But they are slight? A. They are slight.

Q. Is the practice, when a jug has been so returned and refilled to re-stopper it immediately? A. Surely.

Q. There is no danger in that? A. Absolutely none.

Q. That has been your experience of the 30 years? A. Surely.

Q. Has that been the recognized practice with all reputable manufacturers that you know of? A. Yes sir.

Q. Nothing unusual about that? A. Nothing unusual.

The Court: Do you mean to tell us, as part of your orders that you give a direction to tap the jug or merely to shake it.

The Witness: To shake it, tap it, tell a man when we give our orders, when we put a new man on the job who is going to handle this acid, tell him first to turn the jug over and give it a little shake and pat it to see if anything comes out of it.

The Court: And if he pats it too much.

The Witness: He could hardly—he could hardly hit it hard enough with his hand.

Q. That is the reason you said tap instead of knock? A. I would never tell him to use any instrument or anything; just shake it, tap it with his hand.

Q. By tap you mean pat? A. Well I wouldn't ask that to be defined, that term.

Cross-examination by Mr. George:

Q. You have just told us in almost the last question asked that there is absolutely no danger in immediately re-stoppering a jug that has just been re-filled with hydrofluoric acid. There would be no danger? A. No.

Q. That is a fact, isn't it? A. Absolutely.

Q. Provided there is no foreign substance or solutions of a siliceous nature in the jug at the time? A. Yes, sir.

Q. It would be highly dangerous then to immediately restopper it if there is? A. Dangerous, yes, sir.

Q. And the danger, that is the time of the dangerous result would be limited by the quantity of the foreign substance? A. The quantity and the quality.

Q. So that the general statement which you made that it is not dangerous immediately to re-stopper is not correct, is it? A. It is. When I fill a jug with hydrofluoric acid I fill a jug that has been returned to me and it has been inspected by my men in the manner that has been spoken of. I do not then consider it dangerous.

Q. So that if Tom, Dick or Harry should bring a jug to you, Doctor, you would immediately re-fill it and recork it, you would not want that generalization to apply to it absolutely, would you without having first inspected it? A. Well, after I had what I called inspected the jug and shook the jug.

Q. Whatever inspection is an inspection nevertheless? A. Yes, sir.

Q. So that you do mean, don't you, Doctor, that re-filling and immediately re-stoppering after the refilling is not dangerous provided there has been

an inspection; isn't that what you mean? A. Yes, sir.

Q. Because you know that hydrofluoric acid is very dangerous. A. When brought in contact.

Q. A stick of dynamite is perfectly safe and harmless? A. Until detonated.

Q. Unless there is anyone in contact with it? A. Yes, sir.

Q. It is dangerous, isn't it? A. Yes, sir.

Q. And so is hydrofluoric acid? A. Not in the same sense.

Q. One might suffocate you to death and the other blow your head off? A. Yes, sir.

Q. If you would have your choice, which would you prefer? A. I would prefer neither.

Q. Let us assume an illustration if we may, Doctor. If Tom, Dick or Harry should bring a jug to you, would you refill it yourself unless you were satisfied that a proper and thorough and reasonable inspection were made for the presence of foreign matter in that jug before? A. I would refill it on the inspection made on the orders given.

Q. Leave out the orders, I am talking about you? A. Yes, I would refill the jug if I had inspected as I have ordered that the jug shall be inspected.

Q. I am not talking about anybody else's inspection, I am asking you to limit it to yourself. If I should bring a jug to you and ask you to refill it, would you fill it without having first made an inspection? A. I would fill it after I had turned the jug over and given it a little shake, probably a little pat.

Q. Do you call that inspection? A. And I would proceed to fill the jug.

The Court: Mr. George you want the jug filled with hydrofluoric acid.

Q. The fact is, Doctor, whatever the process of inspection, you would not put the acid in, would you, you would not refill it without an inspection? A. Without an inspection such as I have stated, yes, sir.

Q. Now, if there was any doubt in your mind, Doctor, and you were in a hurry or had your mind on something else, realizing that you could not give the time to the character of inspection that you know would be necessary commensurate to the danger of the subject matter involved, to be put therein, in order to absolutely safeguard yourself and whoever brings the jug to you against a harmful result, would you tell us what you would do? A. If there was doubt in my mind, I would not know how to proceed, I would simply say——

Q. Let me ask you this. Wouldn't it be the proper thing where there is some doubt in your mind, having a knowledge of the propensities of the subject matter and you refill it, wouldn't you then leave it uncorked and standing for a while to permit the pacification of the acid and the escape of the gaseous fumes which would minimize them or entirely spend themselves from the possibility of creating gas through pressure? A. I would not fill the jug if there was any doubt in my mind.

Q. I am assuming that there was some doubt as to whether or not you had inspected it as you usually do? A. Yes, sir.

Q. Wouldn't it be the proper thing to do to let it stand for a while and let the chemical reaction take place, let the gas fumes out? A. I should say no, because I would not fill it if there was any doubt.

Q. Even if there was doubt? A. I would not fill it if there was doubt.

The Court: He is asking you to assume something and he holds you back to that position. Assuming that you did have doubt, what would you do yourself if you concluded yourself that there was doubt? Now, assuming that you actually did have this doubt.

Q. Now, would you fill it, without knowing whether there was anything in it? A. Probably I should proceed to fill it if I was in such position——

Q. And having filled it, would you stand it around? A. I should probably put the cork in, in the head and it would blow up before you would get it.

Q. Then it would blow up? A. I don't know.

Q. If I walked out and left the jug there with you, you not having had an opportunity to make the inspection, would you cork it, Doctor, would you immediately cork it? A. Well, that is a situation that I cannot exactly say.

Q. You know chemicals, you know hydrofluoric acids, you know the reaction of contact with hydrofluoric acid, with sand for instance? A. Yes, sir.

Q. And you take this kind of jug which stands before you and you know as an expert of 30 years' experience what the chemical reaction would be, don't you? A. Yes, sir.

Q. Then, if there is foreign substance in that, what would be the safeguard, after having poured the acid in there, would you leave it corked? A. Get away from it as quick as possible if I knew there was foreign substance in there when I had put acid in there. I should take extraordinary care not to be near it when I was through putting

the acid in, get away as quick as possible afterwards.

Q. The danger if it were uncorked would be considerable less than if you corked it immediately? A. Naturally, in such case it would be under pressure, after it was corked. The pressure would be increased after the jug had been corked and the internal pressure would cause the cork to blow out.

Q. If the cork was not hammered in the neck, the action of the acid and the foreign substances—— A. If not hammered in?

Q. Yes. A. If not touched——

Q. I say if no cork, if no cork was hammered in there. A. If no cork, it would come out with this pressure.

Q. The gas would come out? A. Naturally as the pressure was produced by the reaction.

Q. There being no cork in there, there would be no pressure in there? A. Only such as produced by the reaction.

Q. Even if there was no cork? A. If there was none, I imagine it would not come out, if there was pressure within, because of the atmospheric pressure it could not come out.

Q. The fact of the matter is if there was no cork in there, nothing imprisoning the gases, there is no pressure, isn't that a fact? A. No, it cannot be because there would be nothing to come out. If there was no pressure, you wouldn't have anything come out.

Q. It would not cause an explosion, would it? A. Well, no, that is to the extent of forcing out of the cork, no, sir.

Q. At most, it would merely bubble, if uncorked? A. It would also, depending entirely upon the rapidity of the action, the condition of the

acid, the temperature of the acid and you might say the avidity of the acid that was in there. It would all be dependent upon that.

Cross-examination by Mr. Armstrong:

Q. I understand that you have been in charge of acid, and this acid for a long period of years? A. Yes, sir.

Q. You know the customs of the trade? A. Yes, sir.

Q. And the regulations under which shipments of this acid are governed? A. Yes, sir.

Q. There are regulations? A. There are regulations for the acid going out of the State, yes, sir. There are no regulations for shipping within the State.

Q. You make that statement without knowing the Laws of the State of New Jersey? A. I am only speaking generally.

Q. Generally speaking? A. Yes, sir.

Q. Did I understand you to say today, Doctor, in answer to a question of Mr. Ashmead's whether in your experience you ever saw a cork blow out of a container of hydrofluoric acid—— A. Yes, sir.

Q. Have you seen them? A. I have seen corks blow out.

Q. When and under what conditions, Doctor? A. Well, containers that have been filled and standing. These containers were filled and standing for some time before shipment and due to the increase of temperature in the position in which they were placed.

Q. And they popped? A. Yes, just popped.

Q. An explosion? A. I will say I have seen some containers, for instance a man would come to open up at some time and loosen the cork and he would have a pop too.

Q. Assuming, Doctor, that a jug was filled and corked immediately, would there be an explosion—— A. It would entirely depend upon the condition. I would consider the age of the jug, the length of time the acid had been in there and the reaction of the acid on the jug.

Q. Would you make an examination for that purpose; would you not make an examination to determine the length of time during which the jugs presented to you, assuming it to have been two years old, containing acid, would you make an examination for that purpose? A. Only by looking at it, you could tell probably how far it had been used, it would indicate probably.

Q. I beg pardon. A. In looking at it, it would be an evidence of the condition or the age by looking at the neck. You would notice the thickness. If the acid had eaten it very much away, or it showed practically the same scale on the inside of the thing and then of course there is the lead, I should say that——

Q. Would you repacify it? A. After I had practically put it under pressure to see if there was no cracks in the jug, then would probably repacify it.

Q. When you say put the jug under pressure, what do you mean by that? A. Why, to put the jug under pressure, you take and apply a pressure of say approximately five pounds.

Q. To test the safety of the jug, isn't that so? A. Yes, that is only the test as to whether the jug is in any way cracked.

Q. Exactly. There are regulations relating to the shipment of this acid, are there not, interstate, intrastate or otherwise? A. Yes, sir.

Q. You consider these regulations reasonable and fair, do you? A. Yes, sir.

The Court: What do you mean, the general rule?

The Witness: There are rules set down by the Interstate Commerce Commission, I assume that is what the gentleman refers now.

The Court: That is what you are referring to, the Interstate Commerce Commission rules?

A. Yes, sir.

Mr. Ashmead: I object to the question and ask to strike out the answer.

The Court: Yes, sustained.

Q. Do you know whether or not containers returned for refilling, lead containers with hydrofluoric acid are subjected to pressure test? A. Yes, sir.

Q. They are? A. Yes, sir.

Q. So that when you said, Doctor, that on each and every occasion in your experience that jugs are refilled merely by tapping, that is not entirely accurate, is it? A. As relating to this size jug, yes, sir.

Q. The size makes a great deal of difference? A. There are all sizes of jugs for the different kinds of distribution.

Q. In your mind, the size of the container would make a great deal of difference? A. As to the fact that it should be inspected by pressure.

Q. So that this jug here might well be weakened, might it not, by usage? A. Yes, sir.

Q. Just the same as a large container? A. Yes, sir.

Q. And an accurate test of a small container would be a reasonable pressure test? A. Yes, sir.

Q. Just the same as with a large container? A. Yes, sir.

Re-direct examination by Mr. Ashmead:

Q. Doctor, hydrofluoric acid is a commercial product sold in great quantities in commerce? A. Yes, sir.

Q. It is a commercial product? A. Yes, sir.

Q. It is not combustible? A. No, sir.

Q. The vapor of it will not take fire? A. Not under ordinary circumstances.

Q. The danger in connection with the gases coming from it is merely that it is corrosive in character, is it not? A. Yes, sir.

Q. That is the danger? A. Yes, sir. It is not inflammable or combustible substance.

Re-cross-examination by Mr. Armstrong:

Q. You say you made an inspection for the determination of spent acid? A. Yes, sir.

Q. Spent acid—if I am wrong please correct me—is spent acid, the residue of acid which has lost its effect to function for the purpose for which it is intended. Let us say hydrofluoric acid; is that so?

Mr. Ashmead: May I have the question read?

Mr. Armstrong: I withdraw it; I will reframe it.

Q. What do you mean by spent acid? A. We term spent acid anything that is returned to us in a jug that has come from any manufacturer, glass manufacturer or otherwise because we know that it is the practice for them to use the acid and after having used it to pour it back in the

jug and the spent acid that we are speaking of is the acid that has been used either partially or completely.

Q. Do I understand you to say then that you know that it is the custom of your customers to pour back acid which has been used? A. Some of them do.

Q. That is a matter of general knowledge in the trade? A. Yes, that is their own acknowledgement.

Q. That is a matter of general knowledge of course to you gentlemen? A. That has been done by some people.

Q. The usage to which the glass manufacturers put the acid is to etch the glass, is it not? A. Yes, sir.

Q. That means to corrode it? A. There is a difference between etching of prints and the etching of glass.

Q. They use the acid and what you designate as spent acid might well contain silica or silicon fluoride? A. Some silicon fluoride in combination with hydrofluoric acid.

Q. It might cake on the bottom of the jug? A. The acid itself, no.

Q. The residue left after evaporation? A. Not if it was pure hydro silicic acid.

Q. If it were not pure hydro silicic acid it might cake? A. If any, there will be a residue.

Q. Now, Doctor, wouldn't it be a safe practice to allow the cork to remain out of the neck for a reasonable period of time so that the gas might form by reason of this residue could flow out and then the cork put in; wouldn't that be the safer method? A. If there was hydro silicic acid there, there was a residue left there would be no danger unless the insides were broken away.

Dr. Ludwig Friedmann, called as a witness for the defense, being first duly sworn, testified as follows:

Direct examination by Mr. Ashmead:

Q. Doctor, where do you reside? A. Milburn, New Jersey.

Q. By whom are you employed? A. Charles Cooper Company, Incorporated.

Q. How long have you been employed by them? A. About sixteen years.

Q. What is your position with the company? A. Chief chemist.

Q. Do they manufacture acid? A. Hydrofluoric acid?

Q. I mean hydrofluoric acid? A. No, sir.

Q. How long has it ceased manufacturing hydrofluoric acid? A. About some odd fourteen years.

Q. From whom do they buy their acid? A. From John C. Wiarda & Company.

Q. You have had occasion to examine that acid? A. I always do.

Q. Each shipment? A. Each shipment.

Q. In this examination, have you found it to be high grade acid? A. Standard grade acid.

Q. Now, were you there on June 23rd, 1925? A. I was.

Q. The date that this accident occurred? A. Yes, sir.

Q. What was your first knowledge of the accident? A. I heard a commotion downstairs, and we didn't know what it was. We went down to the hall, our laboratory is on the second floor, we went down to the hall on the second floor, and we saw two men. I saw two of them, if I am not mistaken, they were Mr. Carroll and Mr. O'Neill.

Q. I don't want so much detail. I want to make the case as short as possible.

Q. You heard a commotion downstairs? A. I did.

Q. After that did you enter into an investigation to find out what was the cause of that accident? A. Yes, sir.

Q. Now, beginning from there will you tell us what you did. Did you see these jugs? A. I did.

Q. P-G-1 and P-G-2, and these other jugs, P-G-3 and P-G-4? A. I did.

Q. Now, where did you first see them after the accident? A. I saw them in the car.

Q. You recognize these jugs as the jugs that were in the car? A. Yes, I do.

Q. Now, what was done with these jugs, what did you do with them while they were in the car? A. Mr. Ruhl took these jugs from the car and brought them into the yard of our plant.

Q. Under your direction? A. Yes, sir, and secondly he took them up to the laboratory also under my direction. Both of them—I think all four of them were brought up to the laboratory.

Q. Did they remain in your custody until Dr. Edel came there to examine them? A. They did.

Q. What was the condition of the jugs, P-G-1, of course they were not cut open at that time? A. I understand.

Q. Did this jug P-G-1 have any acid in it? A. It did.

Q. How much acid did it have left in it, do you know? A. Less than a pound.

Q. What was the condition of the jug P-G-2? A. P-G-2 was full.

Q. It was full of acid? A. It was.

Q. Did P-G-2 have a cork in it? A. It did, a loose cork.

Q. That was after Mr. Ruhl had loosened it, as he testified? A. It was.

Q. Did P-G-1, the other jug, have a cork in it at the time? A. It did not.

Q. Now, there has been some discussion here about corks, and paraffin corks, and unparaffined corks, will you just describe to the jury, explain to the jury, what the paraffin is used in these jugs for? A. Those jugs are usually corked, for the simple reasons, so that the man who handles them does not get any on his hands, that is the main purpose of corking. The cork is attached by hydrofluoric acid, in other words, the cork will be destroyed in time by the hydrofluoric acid. On the other hand, if it is paraffined, and for that reason these corks are paraffined, as they will last longer and they will be able to use these corks much longer.

Q. And in hydrofluoric acid you put a paraffined cork in there for the reason that it will act as a cork longer than a dry cork? A. Correct.

Q. The action of hydrofluoric acid on a cork which is paraffined is very slow or a rapid action? A. Slow action.

Q. How long would it take before there would be any perceptible action at all? A. Days and weeks.

Q. I think we are at a point where you had the jugs P-G-1 and P-G-2 in your laboratory? A. We did.

Q. Now, did these jugs remain in the same condition as they were when they were taken out of the car until the arrival of Dr. Edel? A. They were.

Q. Absolutely? A. Absolutely.

Q. What took place when Dr. Edel came down there to investigate this accident? A. Dr. Edel

demanded samples of the acid which remained in P-G-1.

Q. That is the tall jug? A. The tall jug, also a sample of the smaller squat jug, P-G-2.

Q. Did he on that occasion take a sample out of P-G-1? A. He did, with my assistance.

Q. So that the two of you worked together, and took a sample out of P-G-1? A. We did.

Q. This is the jug that was in the car, taken from the car that had the pound of acid in it? A. Yes, that is the one.

Q. How much acid did you give him? A. I would say——

Q. Or how much did he take? A. I would say about five ounces.

Q. What did you do with the rest? A. I put it in the small lead container and kept it for our investigations. I also gave some of that acid some time to Dr. Grosvenor.

Q. Dr. Grosvenor was called in later to investigate the cause of this accident, is that the fact? A. It is.

Q. When he came to investigate it, then you gave him some of the acid that was originally in this jug at the time it was found in the car? A. Yes, sir.

Q. Did Dr. Edel then take this jug away with him? A. He did.

Q. Did this jug, this other jug, P-G-2 remain in your possession? A. Yes, it was; amongst the acid that was taken out and given to Dr. Edel.

Q. As it was taken out of this jug P-G-2 by you and given to Dr. Edel also at his request, is that right? A. That is right.

Q. Now, I show you exhibit D-6, a small jug that was identified by Dr. Edel as acid which came

from you, purporting to come out of jug P-G-2? A. He is right in that.

Q. The acid in that came out of that jug P-G-2? A. P-G-2, and given him at his request.

Q. It was at the time taken from the car filled with acid? A. Correct.

Q. What next did you do in investigating the cause of this accident? A. My first step was to find out whether the acid with which these two jugs were filled, in other words the acid in the original container which we used to fill the two jugs, whether that acid was tested, a test made of the acid before it was used; in order to check up that we made another test.

The Court: What was your original test?

The Witness: My original test was where we tested the strength of the acid.

Q. You have that original test? A. Yes, sir.

Mr. Ashmead: I am going to put that in.

Q. Now, Doctor, you inquired, next went to see, which container the small jugs were filled from? A. Yes I did.

Q. Had you when you got the order of the acid as a matter of common practice, made a test of it, of the acid received? A. We did.

Q. Then you knew that you had had a test of this acid in the container from which these small jugs were filled—— A. Of that same lot.

Q. Then you go to your records and look for it? A. I would.

Q. Have you that test that you made? A. I have the record, that is the slip which we always hand to the foreman which permits him to use that lot of acid.

Q. He is not permitted to use the acid until then? A. Until he gets this slip from the laboratory.

Q. How long had that acid contained in the big container from which these bottles were filled been in your factory. When was it received? A. On April 29th of 1925.

Q. So that it had been in your possession from April 29th, 1925, until June 23rd, 1925? A. That is right.

Q. What is that lot showed there? A. 25-4.

Q. 25 means the year? A. Correct.

Q. 4 means the lot in the year? A. We give always a number he can recognize right away, from which the year itself is indicated. On this one 25-4.

Q. This test, you gave that to the foreman at the time it came in? A. Yes, sir.

Q. And this is the original slip that was made out at the time? A. That is it.

Q. By you? A. By me.

Q. Which is necessary before any acid can be used? A. The foreman is not supposed to touch or dispose of the acid, any of the acid until he gets word from the laboratory.

Q. What does that original test show? A.

Mr. George: If he is going to make use of a report or something why not mark it for identification.

Mr. Ashmead: I will offer it in evidence.

(Accepted and marked as Defendant's Exhibit D-10 of this date.)

Q. Is that the slip about which you have just been talking? A. That is it.

Q. What does that show the test of that acid to be? A. That showed that the acid contained 59.85 of hydrofluoric acid and 0.83 per cent of sulphuric acid.

Q. Is that high grade hydrofluoric acid? A. High grade commercial acid.

Q. Known as what, what do they call it? A. 60 per cent acid.

Q. What does 60 per cent acid mean? A. It has 60 per cent of hydrofluoric acid and 40 per cent water.

Q. When this accident occurred and you got this slip, what did you do next with respect to finding out the quality of the acid in the particular container from which these jugs had been filled? A. We took a sample of that acid and examined it more closely than the other, than we usually do on a lot; in other words, we made a full analysis of it.

Q. What did you find that acid to be, have you got that examination? A. I have it. May I use my paper to read from? That was 100 pound supply jug; that is what we call it, 100 pound supply jug. This 100 pound jug at that time contained 56.98 per cent of hydrofluoric acid.

Mr. George: Do you want that in evidence?

The Witness: And .872 per cent of sulphuric acid; 3.03 per cent of hydrofluosilicic acid.

Q. Is that high grade hydrofluoric acid? A. It is; that is not the full test.

Q. And this is out of your big container? A. The test was made after. It contained:

Residue on evaporation	1.02 %
Residue on ignition, or ash	.068%
Iron fluoride	.027%
Lead fluoride	.006%
Calcium fluoride	.025%
Mineral impurities and water	39.06 %

Q. With those impurities you have mentioned, that is an analysis of everything in that container? A. Yes, sir.

Q. These items are contained in chemical hydrofluoric acid? A. Yes, sir.

Q. Do these indicate high grade commercial hydrofluoric acid? A. Yes. Just a minute. I have two more analyses of that.

The Court: Have you finished this report?

The Witness: With this explanation: this analysis is finished.

Q. Have you read all that analysis? A. Yes, sir.

Q. You said you have an explanation? A. I have two more analyses of this, made from the jug.

Q. I thought that was the complete analysis of the acid in the container? A. In that 100 pound supply jug.

Q. You found that both at the time it was received and after the accident to be high grade commercial hydrofluoric acid? A. I did.

Q. What next did you do? A. I tested also the acid in the container in the car which exploded and the other container which remained intact at the time of the accident.

Q. Let us get rid of the container Exhibit P-G-2, which remained intact. In respect to the

acid in the big container, what disposition was made of that; was it used and sold? A. Some shipped for orders and the rest was used in our plant.

Q. There was no trouble with any part of that acid? A. None whatever.

Q. Now, coming then to the jug P-G-2, which was the jug in the car still filled with acid after the explosion, did you make an examination and an analysis of that? A. I did.

Q. What did you find? A. I found that was practically the same as the acid in that 100 pound supply jug; I have the full analysis here.

Q. We might as well put that in. A. I found it contained:

56.83 % of hydrofluoric acid.
.760% of sulphuric acid.
.306% of hydrofluo-silicic acid.
1.01% of residue on evaporation.
.074% of residue on ignition, which is ash.
.030% of iron fluoride.
.007% of lead fluoride.
.036% of calcium fluoride.
39.277% of mineral impurities and water.

Q. You say that was practically the same as the analysis of the acid in the big container from which this jug had been filled? A. It was.

Q. And that also showed a high grade of commercial hydrofluoric acid, did it not? A. It did.

Q. This jug, Exhibit P-G-2, was one that did not blow up? A. Of which the cork did not blow out, that is right.

Q. And which was still filled with acid when it was found in the car after the accident? A. Filled and corked.

Q. Now, what next did you do in the way of examination? A. I examined the acid which remained in the jug of which the cork was exploded, and there I found it contained:

7.54% of hydrofluoric acid.
.41 % of sulphuric acid.
40.91 % of hydrofluo-silicic acid.
7.90 % of residue on evaporation.
4.75 % of residue on ignition.
1.0128 of free silica.
1.05 of iron fluoride.
1.390 of lead fluoride.
.42 of calcium fluoride.
47.543 of mineral impurities and water.

Q. What did that analysis indicate to you as a chemist? A. Indicated plainly that the jug contains silica.

Q. Where does that come in that analysis? A. That silica was converted, at least part of it was converted into hydrofluo-silicic acid.

Q. Is that what happened when chemically pure, 60% hydrofluoric acid comes in contact with sand? A. It does.

Q. Or silica? A. Yes, sir.

Q. So that that indicated to you that there had been sand or silica in the jug? A. It did.

Q. Now, what next did you do to find out what was the cause of this accident in your investigation at the chemical plant? A. We tried to find out how it was possible there should be silica in that jug and the man that inverted the jug could not find any; because the only suspicion we could turn to was that that silica was caked to the jug, to the sides or to the bottom. We wanted to ascertain, is it possible to produce a cake like that, and for that purpose we left a little acid in the

jug and poured silica, siliceous matter, mixed and tried a little lime with that and let it stand and found that it became a hard cake.

Q. Would that cake stick to the jug? A. It does. We tried to invert it and none of it came out on inverting the jug.

Q. Did it come out on tapping? A. No, it would not.

Q. No part of it? A. Not even a part.

Q. Did you make that experiment in the open container as well? A. In the open container.

Q. Will you describe just what happened when that action had taken place, what was the appearance, did it have a glazed surface? A. A smooth surface.

Q. Perfectly smooth like this (indicating)? A. About; it was like a glaze, smooth.

Q. A glazed surface? A. Yes, sir.

Q. Now, that was a glaze; did you find that it had much density, that the container in which it had been——

Mr. George: Please don't lead.

Q. What did you find about the denseness of this cake? A. I found it was hard, the sides and the bottom of the jug.

The Court: What material was in the jug?

The Witness: We put in silica.

The Court: Did you make these experiments with a lead jug?

The Witness: A lead jug of the same size.

Q. Now, is it so or what is the fact, when you put a large amount of hydrofluoric acid in a container which has only a small amount of silica, is there neutralization or polarization or whatever you call it? A. No action for a while.

Q. You don't quite understand me. If there had been sand in a jug. A. Loose or caked?

Q. Just a small amount of sand in a jug and it was afterwards filled with hydrofluoric acid and there was sufficient amount of acid, a large amount of acid compared with the sand, what would be the effect of that small amount or trifling amount of silica? A. If it was soluble, it would dissolve and form hydrofluo-silicic acid, with a foreign substance. In other words, there is an intermediary reaction which it gives silicon fluoride, a gas is formed which is instantly dissolved by this large amount of hydrofluoric acid and forms hydrofluo-silicic acid.

Q. Tell us, is that just what one of your analyses of the big container showed?

Mr. George: That is objected to as leading.

Q. Did that condition exist in these analyses? A. I don't get that question.

Q. I say, every bit of hydrofluoric acid has a small amount of hydrofluo-silicic acid in? A. Yes, sir.

The Court: Now, what do you mean; would you say a certain amount of free silica?

The Witness: That was silica not acted upon by hydrofluoric acid.

The Court: You found that in the jug Exhibit P-G-1?

The Witness: I did.

The Court: You mean free silica; you mean that which has not been encrusted?

The Witness: Yes. I have to explain this. I might not have mentioned it before, that is when we took the acid out of that jug, P-G-1, we did not loosen any of the cake that was in there. We simply shook the jug up a little, that means as far as we could agitate its contents by shaking it and pouring the contents out and the contents had the appearance of a muddy liquid. My analysis, the analysis of the acid, of the liquid portion in there, with a slight amount of residue in it, there would be an amount of silica floating around in it or would be suspended in it.

The Court: That's what I am getting at; that part of your report which you gave respecting the analysis of P-G-1; the free silica had nothing to do with the silica that may have been encrusted in a cake at the bottom.

The Witness: Yes, might have been just a part, a small part of it. That is what we surmise, there was quite a lot on the bottom which we never got out.

The Court: If it was free silica, it would not be combined with any other substance.

The Witness: No, sir.

Q. What I want to get in my mind is this, why was that silica free after the evolution of gas had taken place. That is the next question that I want to ask you, and that is, what you found in this experiment which you made where you had put acid on silica and that cake formed and had that glazed surface? A. Yes, sir.

Q. Did you make further experiment as to what might happen on a cake in that condition by having applied to it subsequently hydrofluoric acid? A. I made experiments.

Q. Will you detail these. A. Why, putting that pure hydrofluoric acid on that hard cake, for some time, for quite a few minutes there was no reaction, there was no physical or noticeable reaction whatever. After awhile, I would say about eight or ten minutes, it started to get slightly warm and as more heat was liberated the reaction became gradually visible and finally became quite violent.

Q. Was there a violent evolution of gas? A. Afterwards a very violent evolution of gas.

Q. What effect did that action, after eight or ten months, have on the cake that was previously solid? A. Some of it got loose.

Q. Did it have anything like a boiling effect? A. It did.

Q. Is that how you account for the presence of the silica that you found in the residue of the acid contained in jug number one? A. Yes, we surmise there must be quite a lot more because we just took the liquid portion which contained some solid matter. There must have been, if we found free silica, we surmise that there was quite a lot in the jug.

Q. I want to make that perfectly clear. I want you to define how you formed that cake again. A. That is all in before. That cake is formed by having some acid left in the jug and pouring powdered and granulated matter into that jug and allow it to stand.

Q. And then what happened? A. A cake was formed.

Q. And what was its density to the container? A. It clung fast to the container.

Q. And the surface of the cake, what was the character of that? A. Smooth.

Q. A cake in that condition, contained in the bottom of a glazed jug, would anything come out

when you inverted it? A. Even out of the open jug, nothing came out.

Q. So that it was in such condition that nothing would fall from it? A. Right.

Q. I want you to again describe what you did then with that cake. Did you treat it with hydrofluoric acid? A. As I mentioned before, I treated with chemical acid, with 60 per cent acid.

Q. In this particular case, you had it in an open container so you could see what happened? A. Right, and I poured the acid on every eight or ten minutes.

Q. Now, when you poured the acid on was there any chemical reaction at first that you could notice? A. None.

Q. How many minutes before it started? A. Eight to ten minutes.

Q. And then what was the character of the action? A. A very great deal; you could see some gas, you could see small amounts in the jug and then it became noticeably warm; in other words if I took my hand, put my hand on it I could feel it getting warm gradually. It got warmer until it got quite hot I would say to the touch, got from 80 degrees centigrade or 90 degrees centigrade, and there was a violent evolution of gas started on, I would say, almost suddenly.

Q. Now, let us understand that evolution of gas? A. Yes; in other words a reaction between the hydrofluoric acid and the silica, there is a lot liberated and in the liberation that gas evolves.

Q. It was not until the reaction got active that heat became observable? A. Until the reaction set in.

Q. And then it was very violent? A. It was very violent.

Q. And a considerable evolution of gas? A. Very great.

Q. I suppose the time for the reaction would depend entirely upon the character and quantity of material? A. Of the quantity of the acid in the container.

Q. Which would be the third element? A. Correct.

Q. Did you make other experiments that were longer than that? A. I did.

Q. So that by changing the character of the material or the quantity of the material, did that affect the time before that reaction would commence.

Mr. George: I think I must again ask Mr. Ashmead not to lead.

Mr. Ashmead: I withdraw the question.

Q. What are the elements that affected the time? A. The elements that affected the time till the reaction set in were the character of the silica first, the amount of the silica in the container and the amount of acid or strength of the acid which was in that container, put into that container?

Q. How long in some of your experiments did it take? A. Over 20 minutes; did I understand that correct?

Q. How long before the violent evolution set in? A. 20 minutes.

Q. Did you instruct Mr. Ruhl to go down and check up this acid in this big container? A. I did.

Q. That is your recollection? A. Yes, sir.

Q. Were you directed by the company to ascertain the cause of this accident? A. No.

Mr. George: That is objectionable as leading.

The Court: At the beginning he said he was directed by his company to make this investigation to find out the cause of the accident.

Q. From your examination of the fact as you have revealed them, what in your opinion was the cause of the accident? A. To me there is no doubt whatever that the accident was caused by siliceous material mixed with some lime, a small amount of lime, iron and dirt and that the siliceous matter was caked to the jug, to the bottom and sides of the jug and in its reaction with hydrofluoric acid afterwards, in time there was enough pressure created to expel the cork and display part of the contents on the victims.

The Court: Assuming your opinion to be correct with respect to the encrustation of this jug, the inside of this jug containing silica, can you form an opinion how long it would take before such a jug as exhibit P-G-1, would become hot or warm, noticeably so?

A. I would say in about three to five minutes.

Q. After what? A. After it has been corked.

Q. How far was it from the place where it was filled to the automobile? Have you ever measured it? A. The distance; I measured it as to the time it takes to walk from that place where the jugs were filled to the car.

Q. How long did it take you to get there? A. About three and a half minutes.

Q. Could you give a definite opinion as to the time reaction would have taken, how long it would take? A. No.

Q. Why not? Can you be definite within about three or five minutes? A. I could not.

Q. Why not? A. For the simple reason I don't know how much silica was in there. I made no examination of the residue left in the jug. If I had known all of that, I might have formed some conclusion how many minutes it should take. I imagine, since I would say that the jug had the cork blown out, in about five minutes, and by that time certainly the jug must have been warm.

Q. Has it actually taken five minutes to get it up to the automobile? A. Takes less than five minutes.

Q. Takes how long about? A. Three and a half minutes I say.

Q. The caked mass might have been in such condition that it would have taken much longer?

Mr. George: That is objected to.

Q. From your experiment with a caked mass, it might have been how long a time from your experiments—you have answered this I think already. How long a time from your experiment did it take for the acid to act on this caked mass, that you formed?

Mr. George: That is objected to because the question does not specify any particular character of cake. Have you reference to his experiment or have you reference to the specific jug?

Then I object to the form of the question because it deals with his experiments and not with the question of fact, as to how long he in his judgment thinks it took for that particular jug.

The Court: I don't know from the form

of the question exactly what Mr. Ashmead wants. In other words whether you are directing it to the particular jug or to his experiments.

Mr. Ashmead: I am directing his attention to the experiment he made and as to the time that it would take.

Mr. George: For what?

Mr. Ashmead: For chemical hydrofluoric acid to act upon the siliceous caked mass.

Mr. George: I object to it upon the ground that there is no evidence as to the quantity or the character of density of the cake substance.

The Court: I think that may be overcome by giving the quantity if you can.

Q. Doctor, when you treated these cakes, you took a cake that had a considerable amount of sand in it and treated it with hydrofluoric acid, commercial hydrofluoric acid. Did you make tests as to the time it would take before there was a violent evulsion of gas?

Mr. George: Objected to upon the same ground.

The Court: He asked if he did.

Mr. George: Yes or no would be the only answer.

A. Yes, sir.

Q. In those tests did you vary the amount of the sand? A. I did.

Q. And as you increased or decreased the amount of sand, what was the effect upon the time before this reaction took place

Mr. George: I object to the question because it presupposes a condition, a number

of cases that vary the quantity of siliceous matter and therefore the answer would not give the general time.

Mr. Ashmead: I will reframe the question that way. What effect did the free amount of sand have upon the time before the violent evolusion took place?

A. The amount of sand was in inverse ratio to the time that it takes for the violent reaction to appear. The less sand I used, the longer it took for the violent reaction to take place.

Q. The more sand you took the quicker? A. Correct.

Q. Did you find that as the result of the same thing in all your experiments? A. Every time.

The Court: Did you make any tests after you had glazed this substance on the bottom of the container to ascertain whether or not by tapping, you could find whether there was evidence from the sound that such condition existed in the jug.

The Witness: Yes, I had an open jug, in fact I could see what was going on. I also had glazed jugs, jugs which were not quite open. When I say an open jug——

The Court: Did you ever jar them and shake them when they contained this free silica substance and also when they were encrusted as you say you did in your experiment?

The Witness: Yes, I did.

The Court: Was there any difference in the sound

The Witness: No.

Q. The jug is made of lead? A. Yes, lead jugs of the same size as this jug.

The Court: No difference in weight that is appreciable?

The Witness: No, none, they weigh about 18 pounds, we were only dealing with ounces of gas.

(Recess to 2 P. M.)

February 10, 1927, Two P. M.

Dr. Ludwig Friedman, resumed the stand.

Cross-examination by Mr. George:

Q. You testified in the previous cases in which Kelly and Carroll were plaintiffs? A. I did.

Q. That your inspection or examination or your analyses of the acid which is involved in the accident was made after the accident and not before? A. Of the acid in these two jugs, certainly.

Q. Now, you say that you examined or inspected or anlyzed the acid before the accident, which is true? A. That I have said at that time that I examined the acid in these two jugs after the accident?

Q. I am speaking of the acid in the jugs or that which was left in the jugs after the accident. I say that the acid, of which the acid involved in the accident was a part was inspected or anlyzed after the accident and you then said yes, didn't you? A. Yes, sir.

Q. Although you testified today you analyzed it before the accident. A. I analyzed it before and after.

Q. So that your statement today or rather at the last trial was not true, was it? A. It was true. The fact is I think, that was in the evidence that was given, April 29th, 1925.

Q. You are a chemist, aren't you? A. Yes, sir.

Q. You consider yourself an expert, don't you, in chemistry? A. If I might say so with modesty.

Q. I am helping you to say so with modesty. Isn't that so, Doctor? (No answer.)

Q. Therefore you were quite competent as an expert chemist to ascertain the cause or the probable cause of the explosion, weren't you? A. I was.

Q. Then why was it necessary if that is the case that you and your organization, Charles Cooper, Incorporated, should go out and get somebody else to come in? A. For the simple reason that two minds were a little better than one.

Q. Then you were not sure? A. I was sure.

Q. What greater benefit did another mind have upon the subject, if you as an expert, were quite satisfied that you were correct? A. I am not infallible.

Q. Then you mean by that that you are not sure of what your conclusions would be? A. I am, positively, as far as I am concerned.

Q. But you were not sure that that would be enough? A. I wasn't sure whether everybody else would take my view.

Q. What do you mean everbody else, a jury? A. Not the jury, other experts.

Q. What difference did it make what opinion the other experts had if you were not calling in such persons for the purpose of trying to convince the jury at some future date? A. Why, to convince the jury just that I was right in the surmise, whether he might have thought or felt the same way as I did.

Q. You owed no responsibility to anyone and having concluded positively yourself as to what was the cause of the explosion and owing no explanation to anyone, why did you deem it necessary to call in another expert? A. First of all I didn't call in the expert if you want to know it.

Q. You said, "we did". A. By that the firm, I mean. I am just an employee of the firm.

Q. At your suggestion? A. They asked wouldn't it be a good thing to call someone else and I said, "Oh, just as you please."

Q. You said O. K.? A. Yes, sure, if I said it was O. K. If I didn't say it they might have done it just the same.

Q. The inspection of these jugs was made at your plant? A. Which inspection was this?

Q. The inspection of the jugs in evidence. A. After the accident?

Q. P-G-1 and P-G-2? A. Yes.

Q. How long were these two jugs, Exhibit P-G-1 and P-G-2 in your office after the accident? A. P-G-1 was about 20 hours and P-G-2 about two days approximately.

Q. Who was the other expert called in to help you determine the cause of the accident? A. It was quite some time later.

Q. Who was it? A. Dr. Grosvenor.

Q. Is he in court now? A. Yes, sir.

Q. He has been in here ever since Monday morning? A. I suppose so. I didn't watch.

Q. He was paid by you or the Cooper Company to give his report? A. He was not paid by me.

Q. By the Cooper Company? A. I don't know.

Q. He was doing that for the corporation? A. I suppose they know that.

Q. Paid by the corporation? A. I suppose so. If you pay nothing you get nothing.

Q. As far as making up his report and the examination that was made he was on the Cooper Company payroll for that purpose?

The Court: Chemists don't work for nothing.

The Witness: Never did.

Q. How long after the accident did Dr. Edel come on the scene? A. He came next morning.

Q. At whose request? A. The County Coroner or the Prosecutor, I suppose so.

Q. He was the man who cut the jugs open, wasn't he? A. I don't know how many persons.

Q. He was in your plant? A. No.

Q. Where? A. I don't know, I suppose in his laboratory.

Q. And then they were immediately brought back to your plant? A. They were not.

Q. But these jugs were in your plant at least 20 hours after the accident? A. One 20 hours and the other two days.

Q. P-G-1? A. 20 hours.

Q. And the other? A. About two days.

Q. We are speaking about waking hours. You wouldn't have Dr. Edel come in at half past three in the morning? A. I mean this was left in there the whole day or two days.

Q. What was done with this jug P-G-1 for the 20 hours or during the 20 hours it was in your custody? A. Nothing.

Q. Did you make an examination of the container during this 20 hours? A. I did not.

Q. What did you do with this jug, P-G-1 between the time of the accident and the time it left your custody 20 hours later? A. What I did was to stopper it and put it aside. The next morning

when I came in the jug was in the self same place and in the self same condition.

Q. It was then you proceeded to examine it? A. I didn't touch it until the County Prosecutor's Chemist came.

Q. You didn't know he was coming? A. I did know that he was coming. That's what I am trying to explain to you.

Q. You did know this? A. There was the Lieutenant of Detectives Rowe there in the plant and it appears he asked the officials of the company not to touch the jugs until the County Chemist has them examined. I was told to keep the jugs in my custody till they came and examine the jugs.

Q. But immediately after the accident you obtained Exhibit P-G-1 and there put it aside? A. Correct.

Q. And then, as an expert chemist, knowing that an explosion had occurred, and not knowing what was still remaining in the jug which caused the accident and knowing further that the corking of a jug which may contain hydrofluoric acid that may well be coated with some foreign substance like sand or silices and might be likely to cause another explosion; do you still say that you then immediately corked it up again? A. I didn't say immediately.

Q. How long after? A. About two hours after; just before I went home.

Q. Even then it might have been dangerous, Doctor? A. No.

Q. In view of the testimony you gave on your direct examination in which you say it takes longer for hydrofluoric acid to act on continuous encrusting of the wall, it might even then have been dangerous? A. Not in my opinion.

Q. Doesn't that conflict with the opinion you

expressed before in answering Mr. Ashmead? A. No.

Q. So that hydrofluoric acid in a jug having an encrustation which might have been silicate in it, caked, would not be dangerous? A. Not after it stood two hours in the open.

Q. In the open? A. Two hours uncorked.

Q. You said corked. A. I said two hours it was uncorked. The accident happened around three o'clock. I stoppered with the cork after five o'clock.

Q. So that, Doctor, if acid had been placed in a jug or was contained in a jug and there was also contained in the jug some silicates, the safe thing to do would be to leave it uncorked for a period of about two hours; then it would be safe to cork. Isn't that so? A. If it exploded in two hours, I was sure it would not explode any more if I left it two hours.

Q. It would be safe, as a matter of fact, to leave it uncorked, not knowing what content had caused this? A. If I had suspicions, it certainly would be safe.

Q. Where you didn't know what the content of the jug was, as a matter of security you would leave it uncorked that period of time? A. I would not.

Q. What would you do? A. Stopper it immediately.

Q. You didn't stopper this immediately? A. Because I didn't have a chance.

Q. Why not? A. We were talking about what happened, that is about the poor fellows.

Q. So that for two hours between the time of the accident and the time that you corked this jug up, you were not the least bit concerned about what was in the jug, what caused the explosion,

you were just standing around talking about these poor fellows. A. We were told not to touch these jugs.

Q. How soon did you touch them? A. As soon as the authorities came there.

Q. How soon was that? A. That must have been I judge approximately about an hour and a half, an hour or an hour and a half.

Q. During that period between the time of the accident and an hour or an hour and a half thereafter you didn't do anything with respect to the jug but talked about these poor fellows who were dead and dying. A. Well, the jugs came to my possession about three-quarters of an hour or an hour after the accident.

Q. For half an hour didn't you do a thing? A. Nothing to those jugs.

Q. Doctor, in this case, as was disclosed on your examination, you found that a caky or flaky substance had attached itself to the interior surface of the jug? A. I surmise so.

Q. Your conclusion was reached upon the theory that it can be there by reason of the fact of having in that jug hydrofluoric acid and silicate and having spent itself, formed a caky substance on the walls? A. Yes, sir.

Q. Is this the first time, speaking of this occasion on June 23rd, 1925, was this the first time in your experience of 20 years as a chemist that you found a caky substance having formed after the admixture of hydrofluoric acid with silicate or some substance or soil or anything containing silicates? A. I don't understand the question.

The Court: Is this the first time you ever found in your experience that this substance would form on the bottom of the

container such as is claimed on this container?

The Witness: I never made any cakes before the accident.

Q. This was your first experience in having such a process result from the admixture of hydrofluoric acid and silicates? A. Yes, sir.

Q. In your direct examination, you testified that Exhibit P-G-1, when you first saw it, was uncorked? A. Right.

Q. P-G-2 had a loose cork in it? A. Correct.

Q. What do you mean by loose cork? A. It was not hammered in tight, flush corked. I put P-G-1 also on loosely.

Mr. George: I ask that that be stricken out.

The Court: Yes, that is volunteered.

Q. Don't you know as a chemist of 20 years experience that hydrofluoric acid coming in contact with sand would form a cake after it evaporates, after the acid evaporates? A. Oh, yes, I know that.

Q. Would you with your experience of acid and from the fact that you are employed by the Charles Cooper Company deliver to a customer or prospective customer, a jug containing hydrofluoric acid, which, while in your hands, is hot? A. No, I would not.

Q. Why, because it is dangerous? A. I would say that there is some reaction going on and I would want to find out.

Q. A process of reaction going on would indicate danger? A. Not momentarily, not necessarily danger. I would say there is some reaction going on that might contaminate the acid.

Q. A heated jug would give you reasonable thought that there is a commotion, a reaction going on? A. Right.

Q. Which causes a generation of gas? A. Yes, sir.

Q. If continued to sufficient pressure would explode? A. Might do even that.

Q. So that if the jug was hot, there is a possibility of an explosion, isn't that so? A. There is a possibility of the cork being expelled.

Q. It is for that reason you don't hand a hot jug containing hydrofluoric acid to a customer? A. That would be one of the reasons.

Q. A very good reason? A. Fairly good. I would say it is good.

Re-direct examination by Mr. Ashmead:

Q. Now, Doctor, these jugs which you had were taken out and put into your custody on the afternoon of June 23rd? A. They were.

Q. And the 22 hours or whatever time elapsed was from that afternoon? A. From three o'clock until about ten or eleven in the morning.

Q. And these jugs stayed in your possession until what time? A. Until June 25th.

Q. Two days afterwards? A. Yes, sir.

Q. From the time that Dr. Edel took these jugs, have they ever been in your possession? A. No, I have never seen them.

Q. They have always been in Dr. Edel's possession? A. They were.

Q. I believe he testified that they were in his possession excepting during the time they were in court during the last trial? A. Yes, sir.

Q. You don't know who employed Dr. Grosvenor? A. No, I have a suspicion you did it.

Mr. George: I move that that be stricken out.

Q. You don't know? A. No.

Q. You spoke about a loose cork being in the jug Exhibit P-G-2. Did you see Mr. Ruhl loosen that cork? A. I did.

Mr. George: That is leading.

Q. Did you see him loosen the cork? A. I did see him loosen the cork.

Dr. William M. Grosvenor, called as a witness for the defense, being first duly sworn, testified as follows:

Direct examination by Mr. Ashmead:

Q. Where do you reside? A. 200 West 58th Street, New York City.

Q. What is your business? A. Consulting engineer.

Q. Where is your place of business? A. 50 East 41st Street, New York City, the Chemists' Building.

Q. Will you give a short resumé of your experience as a consulting chemist, your qualifications for that work? A. Yes, sir.

Q. Are you a graduate of a college? A. Yes.

Q. What? A. Polytech., Brooklyn, where I took a five year course in both chemistry and engineering.

Q. What study have you had besides your work? A. I beg pardon.

After taking the degree of Bachelor of Science, I taught there and then did graduate work at

the University of Pennsylvania and Johns Hopkins, taking my Doctor's degree in 1898. From that time on my work was entirely commercial and largely investigation work of one type or another, investigating in some instances for the banks, in some cases for corporations, some work for the Federal Government; and for two years I was assistant manager of the investigation department of the General Chemical Company.

Some of those investigations have been connected with the so-called exhibitions, and a good deal of the work has been connected with the manufacture and the use of various acids and chlorine. Among others, some very careful investigation of hydrofluoric acid during this time, of the process of manufacture and some of its uses.

Mr. George: We will concede the Doctor's qualifications.

Q. When did you first hear of this case? A. My recollection is it was in the latter part of March of last year.

Q. By whom were you employed, or what were you employed to do? A. I was requested by you to undertake an investigation of the causes and the scientific procedure and result of this accident, of the blowing off of this jug.

Q. When you were asked to do that, will you state shortly what you did in the way of investigating this accident to ascertain the cause? A. I investigated first the location and origin of the jugs, their history and their present condition, the character of the materials to which they had been exposed. As a result of that use and history, the material that had been left in the jug which caused the trouble as indicated by the sample of that material furnished to me. The way in which

hydrofluoric acid affected the casing of materials to which the jugs had been exposed, and the kind of material that this examination of the residue indicated must have been in there.

I further investigated the amount of such material, and the condition of such material as affected the results with hydrofluoric acid, when it came in contact with it, and the resultant effect on the jugs of pressure and temperature produced therein.

Q. Did you in your investigation of the history of the jug, go to the place from which it is alleged to have come? A. I went to the stoneyard of Mr. Hopper and met him, discussed the character of his work and his material. He was courteous enough to show me the kind of work he did and to explain to me where the jug had come from. Was kind enough to take me over to the florists and they showed the location of the jug, and the character of the material they used in their place.

Q. Did you get any of the acid from the jug from which the cork was expelled? A. Dr. Friedman furnished me with a sample.

Mr. George: I object to that and ask that that be stricken out upon the ground that it has not been established that this witness is competent to state that the acid came from that jug. All that he can testify to is that Dr. Friedman gave him some acid.

The Court: Yes.

Q. Did you get from Dr. Friedman any acid which he told you came from the jug from which the cork was expelled?

Mr. George: I object to that as predicated upon hearsay.

The Court: You got the acid from Dr. Friedman?

The Witness: I did.

The Court: Which you understood came from the jug?

The Witness: I did.

Q. Did you make an examination of that acid? A. Yes, sir, a rather painstaking examination. I took a sample over to the laboratory, which was analyzed and analyzed in a somewhat different way than either of the other samples had been, so far as I can judge from the reports which I also obtained copies of during my investigation. In other words, I preferred to analyze the entire material together, both sediment and liquid, with a view of ascertaining as perfectly as possible what there had been active in that jug at the time. The other analyses I think were made of the liquid or of the solid separately.

Q. What was the result of that analysis? A. The analytic figures?

Q. No, generally, what did it contain? A. That there had been a considerable quantity of siliceous material containing some iron and some other mineral matters in the acid for a sufficiently long period to convert most of the hydrofluoric acid into hydrofluo-silicic acid, which is the product of the action of hydrofluoric acid on silica or quartz.

Q. Did that indicate to you what might be the cause of the expulsion of the cork? A. It indicated what probably was the cause. Just how the silica caused these peculiar results required still further investigation, but it gave me a line along which to carry the investigation.

Q. What further investigation did you do? A.

That I have explained. I investigated the character of materials that might have contained silica, and might have gotten into the jug, in the cork, and of the use and the exposure to which it had been put. Then I investigated the result of adding hydrofluoric acid to that type of material in jugs.

Q. May I stop you just a minute? What was the result; did you make any cakes with siliceous material? A. That was one of the points I investigated. I investigated that a good deal of necessity, because it seemed to me to be an extremely important point, to know what the action of this material might be when exposed to such weak, or spent hydrofluoric acid as is likely to be left in a jug.

Q. What was the result of these experiments? A. That the tendency of these materials is to form more or less compact, hard, resistent cakes, either on the walls or bottom of the container, according to the position in which it lies or stands, and that such cakes are slightly reacting——

Q. You found that it made that sort of cake? A. It did.

Q. What was the character of that cake with respect to its tenacity to the jug or container? A. In nearly all cases, if the material was resting in contact with the walls of the jug, as it would be just dropped into the jug, the material was very firmly cemented and attached to the walls.

Q. Now, did you make further tests as to how these cakes would react upon a further application of hydrofluoric acid, commercial hydrofluoric acid 60 per cent? A. A number of them, I did.

Q. What was the result of those tests? A. That, depending partly upon the position of the cakes, partly on the amount of the cake as compared with

the acid, partly on the age of the cakes, the period it had taken in forming, and some other factors, the rate of reaction varied very considerably, but in nearly all cases was slow at first, and in some cases so slow that it was hardly perceptible over considerable periods.

Q. How long? A. Why, in some cases it is hardly perceptible in an hour or two, but in most of the cases with which I dealt, the effects of the reaction were quite perceptible in fifteen or twenty minutes.

Q. Now, what was the first action that you could notice with this hydrofluoric acid when it was applied to these cakes. Will you describe that in a way that the jury will understand? A. I hope so.

The first action is a wetting and gradual penetration of the cake by the liquid acid; when hydrofluoric acid acts on silica, it does not necessarily at first give off gas. Hydrofluoric acid forms the silicon fluorid which itself is a gas, but which at first is soluble in the hydrofluoric liquid. After that reaches a certain point and the hydrofluoric liquid is under those conditions saturated, then the question arises what has become of the added gas. That will help to explain why, when you first add the acid to this material, at first there is perceptible to the eye no vigorous action. If the material has been caked, and particularly if it has been standing caked for a long period.

As the acid penetrates into the mass, gradually it becomes warmer within the mass, but for some little time, depending on the conditions, that heat is not rapidly transferred to the liquid because the liquid is penetrating to the mass itself. When the action has continued to a certain point, depending upon the character of the caking, the cake

begins to disintegrate and when it gets heated to a certain point, the gas has pushed out and has to disintegrate it. From that point on, the reaction becomes vigorous, much more rapid, the temperature rises much more rapidly, and again may take considerable time before it becomes active, and then when it does it goes on so rapidly both the temperature and the action that goes on, the chemical reaction proceeds much more rapidly at high temperature.

Q. Was the heat intense? A. In some cases was intense.

Q. When did that intensity of heat begin as compared with the breaking up of the cake? A. I don't think I observed any case in which the intense heat occurred until after the cake was broken up in one way or another.

Q. What effect did it have upon the cake in so far as breaking it up is concerned? A. That I think I have explained. The action of the acid tends to soften the outer portion of what might be called the coating tissue of the cake, and the increasing heat within the cake tends to puff it up and push it apart.

Q. Does that release the material from the container? A. In some cases it elevated the material out of the container, and in some cases the action was at the end rather violent and sudden, but the important point, it seemed to me, was that it released material from its compacted state, and exposed it much more freely to the action of the acid, and caused the increasing activity and the rapid rise in temperature.

Q. Now, as a result of your investigation, in your opinion what caused the accident, the evolution of the gas in jug number one?

Mr. George: I object to that, because the witness cannot testify to that unless he was

present at the time. The probable cause might be the proper question.

Q. I think there is one part of your investigation I have not brought to your attention. Did you examine these jugs themselves? A. I have.

Q. So that that also is included in your investigation? A. Yes, sir.

Q. Where did you examine them? A. The first time I examined them was when I went around to Dr. Edel's office and with his permission went over them with him and discussed with him the condition of when they had been originally placed in his hands, the time of acting upon the material which he had removed from them. From one of them he showed to me these samples exhibits D-1 and D-2. That was my first opportunity to observe them. Later I examined them rather carefully one day in court again. Those were the only examinations I personally made of the jugs.

Q. As the result of your investigation, in your opinion, what was the probable cause of the expulsion of the gas which occurred in this jug number one, what was it? A. The presence in the jug at some time previous to its being offered for filling, of a siliceous mineral material, together with enough moisture, and I think also dilute or weakened hydrofluoric acid to cause that material to center together or cement itself together into a hard cake; the period prior to that filling was a considerable one, because——

Mr. George: I object to that and I move that that be stricken out as something not within the purview of the question, not even reasonably so.

The Court: Just confine yourself to collateral issues.

The Witness: Confining my answers strictly to the cause of the evolution of the gas, it was the presence of this material in the jug at the time when the hydrofluoric acid was added to the jug.

Q. And what in your opinion was the condition of the foreign matter in the jug at the time the hydrofluoric acid was added?

Mr. George: I object to that unless he knows at the time it was offered for refilling.

The Court: No, from your examination which you made, can you tell us what in your opinion was the contents of the jug which produced this result?

The Witness: I think so.

Mr. George: May I have permission to examine on that subject?

The Court: Certainly.

Cross-examination by Mr. George:

Q. Doctor, when was the first time that you saw the jug in question? A. At Mr. Edel's office nearly a year after the accident occurred.

Mr. George: Then I will object to it as to the period of time of the examination of the jug in question being far too remote from the time of the happening of the accident as to inform him of any condition. He not having qualified as to the condition of the jug, as to the period of time that condition existed prior to the time of the accident.

The Court: Would the character of the jug have any bearing upon your answer?

The Witness: Very little, on the essential things.

The Court: Those things that you experimented with and investigated?

The Witness: With which I dealt in my investigation.

The Court: Do you still object?

Mr. George: Yes, sir.

The Court: Will you please say what for. I wish you would state a reason.

Mr. George: I respectfully submit that I have.

The Court: Is the basis of your objection that it is not based upon the general condition of the jug; that he doesn't know what the condition of the jug was during that period of time?

Mr. George: As far as this witness is concerned, yes.

Mr. Ashmead: Dr. Edel testified.

The Court: Eliminate the jug entirely. What in your opinion were the ingredients that went into the formation of, or that produced or were producing the cause of this explosion?

The Witness: A hard caked, siliceous material, caked so hard that the action was very slow when the hydrofluoric acid was added to it.

The Court: Would that lead to any conclusion of the component parts of that compound which you say was the encrustation?

The Witness: As to the component parts, the examination of the liquid would indicate that the liquid left in exhibit P-1, would indicate there the general character, and their relative proportions. An exami-

nation of the results obtained with similar materials under different conditions would indicate the character or physical condition of these materials at the time when the hydrofluoric acid was added to them.

The Court: Can you state them now?

The Witness: The condition of the material?

The Court: Speaking of the component parts?

The Witness: Yes, sir. There was a considerable amount of silica, probably a portion of it free and a portion of it combined in some mineral. There was some iron, a small quantity of lime, some illumina, and a little iron oxide. Those were the general component parts.

The Court: Were you able further to refine the silica as to whether it was pure silica, or whether it contained sand and other minerals mixed in sand?

The Witness: Probably both, and in sand; in sand there is thought to be some free silica, as minute grains. There is also generally in most sand combined, silica, as silicate, felspar is a combined silica, ordinary clay is a combined silica present as a silicate. One is not able to say whether any of the material was free in the sense of the uncombined in this case only because there are apparently minute granules of silica which have not been completely affected, and which would not be formed in the reaction. So that the chances are there was some very fine sand there present at the time when the hydrofluoric acid was in that.

The Court: Not imprisoned within the compound mixture; why not within the compound?

The Witness: It would be located in the compound, imprisoned within it, but not the chemical compound, it was mechanically held.

Q. Mechanically held, you say? A. Yes, sir.

Q. Would that indicate material such as might be found in a florist's, such as you say? A. That type of material in part, yes sir.

Q. Now, Doctor, in your opinion, how long would it take for chemically 60 per cent. hydrofluoric acid to act upon such a mass as you have described, before there would be a violet evolution of gas or a creation of an intense heat? A. As I stated, that would depend on the character of the material, on the age of the complete setting of the cake, on the amount of the acid, and other circumstances; it may be fifteen or twenty minutes, it may be an hour or two.

Q. Could anybody, without having a sample of the cake that you say was in the jug at the time it was filled, venture any opinion as to how long a time would elapse before reaction would take place? A. He might venture an opinion on it, maybe a fairly well rounded opinion, but he could not express a certainty. I attempted to venture such an opinion when I said that I thought it would be a matter of fifteen or twenty minutes, and I venture that opinion again.

Mr. Armstrong: I ask that that be stricken out as an opinion given by an expert. I don't think he can give such an opinion.

Mr. Ashmead: May I ask him the reason for this opinion?

The Court: Upon what do you base your opinion?

The Witness: I base it on the fact that I have put together materials which had the same general character and composition as in this acid the anlysis showed to have been present, and treated these with hydrofluoric acid, and found that the different period of slow reaction was about ten minutes, and the more rapid period finally went up to the boiling point of water, was about four minutes. That was simply one instance. If the proportions had been slightly varied, it would have been varied in another direction, it would have been less. I stated that as one offering an example I had observed.

Q. As to the exact time it would take, or would have taken this jug to evolve gas after it was filled with hydrofluoric acid, could you state any definte period without basing it upon the actual composition of what was in the jug at the time it was filled?

Mr. George: That is objected to. In the first place the witness is asked to state an accurate period of time for the reaction; secondly, it is predicated upon tests of which this witness knows nothing, and further, it is objectionable.

A. I could suggest an opinion in terms of events, but not in terms of minutes.

Q. Will you give it in terms of events? A. The fact that the reaction became sufficiently violent

to blow out the stopper when the jug was placed, or after the jug was placed in the car, shows that the proportion of materials and the condition of the cake was such as to require that length of time, whatever it may be precisely in minutes, which transpired between the filling of the jug and the blowing out, for the reaction to reach and proceed into the violent stage.

The Court: The substance of which is that it was not in violent action, in your opinion, until the time it had gotten to the car, about?

The Witness: That was so shortly before.

Cross-examination by Mr. George:

Q. Your first question, put to you by Mr. Ashmead, was as to when you first came in contact with this subject matter, or when you first began your investigation in this matter. You said it was some time in March following the accident, at Mr. Ashmead's request? A. He made the request, yes, sir.

Q. That is true, isn't it? That isn't the first time you had anything to do with this matter, it it? A. Nothing to do with it in what sense?

Q. Anything, in any sense, Doctor? A. Why, it was the first time that I had attempted in any way to investigate it or become active in it. I had heard of it, that was all.

Q. You actually were called in by the Cooper Chemical Company within a short period after the accident? A. Oh, no.

Q. Didn't you hear Dr. Friedman testify here today, when he was asked the question by me, after having stated that they called in somebody else to check up with him on the investigation

right after the accident; I asked him who was that other expert and he said Dr. Grosvenor. A. I didn't hear Mr. Friedman intimate that anybody had been called in just after the accident.

Q. Well, a very short time after? A. I didn't hear him say that.

Q. Who was the first to employ you in connection with this matter either one way or another? A. Mr. Ashmead, as I stated.

Q. You heard Dr. Friedmann say that you were called in by the company, didn't you? A. The Company may have called me in through Mr. Ashmead. It was with Mr. Ashmead I dealt.

Q. Didn't you hear Dr. Friedmann say that the Charles Cooper Company, at his suggestion, Dr. Friedmann's suggestion, called you in to collaborate with him in the analyses to be made? A. No, I heard him say that it was his recollection that it had been suggested, and he said that they could do as they liked. That is my recollection of his testimony.

The Court: You were called in.

Q. Doctor, when did Mr. Ashmead talk with you for the first time in connection with this matter? A. I cannot recollect the exact date, but my present recollection is that it was last March or very early in April.

Q. Of what year? A. Last year.

Q. Was that the first time you had anything to do with the case at all? A. In any active way, as I have stated, discussing it as one will discuss a case with men who have happened to have heard of it.

Q. Do you mean then, that the first time you ever saw the jugs was this occasion in March af-

ter you talked with Mr. Ashmead? A. That is my recollection; yes, sir.

Q. Did you see those jugs at Dr. Edel's office? A. Yes, sir.

Q. Prior to that time? A. I think not.

Q. You are not sure about it? A. I am not perfectly sure of the date, but I was in Trenton, my recollection is, March or April, February or March of last year, and it was after that Trenton trip I came up. I did not start this matter myself until one month later, one way or the another. It was the spring of last year when I first saw the jugs and began to take an active interest in the case.

Re-direct examination by Mr. Ashmead:

Q. All that you have testified to here today was done after you saw me, whatever day that was? A. Yes, sir.

Mr. Ashmead: If the Court please, yesterday I think we had a motion before your Honor for a nonsuit, which at that time was held to be disposed later.

The Court: I had better dispose of that now.

I deny the motion for a nonsuit, and I will allow you an exception.

Mr. Ashmead: Exception.

Mr. Ashmead: I now wish to make a motion for a direction of verdict upon each of the following grounds:

1. No negligence on the part of the defendant has been shown.

2. There was no legal duty owing from the defendant to the plaintiffs, or the plaintiffs' intestate in the death cases, which is shown to have been breached.

3. The proof submitted on behalf of the plaintiffs respectively, failed to show that the accident was the result of any lack of care on the defendant's part, which it owed to any of the plaintiffs or their intestates.

4. The evidence shows that the accident resulted from the fact that there was foreign matter in the jug at the time it was delivered to the defendant for filling, for which the defendant was in nowise responsible.

5. Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it, the jug having been furnished by the purchaser, the defendant had the right to assume that it was in a fit condition to be filled with hydrofluoric acid. There is no evidence to charge the defendant with knowledge that the jug was not in a fit condition to be filled.

6. There is uncontradicted evidence from which it appears that the proximate cause of the accident was the presence of siliceous matter in the jug at the time it was presented to the defendant for filling, and no act of the defendant has been shown to break the causal connection, or to make it in any way responsible for the accident.

7. The plaintiffs, in order to recover or have the case submitted to the jury, must prove that the defendant has violated some contract or rule of law that has infringed on the plaintiffs' known rights, or else they must prove facts and circumstances from which it can be ascertained with

reasonable certainty, what particular precaution the defendant ought to have taken, but did not take. If the defect was not obvious, as in this case, there must be some evidence from which it can be inferred how it might and ought to have been discovered.

They must also prove facts from which it can fairly be inferred that the defendant's negligence was the cause and the proximate cause of the injury. Mere surmise or a conjecture on any of these points will not do.

I submit that the plaintiffs have failed in those particulars.

8. Then it has not been shown that any act of the defendant was the natural and proximate cause of the accident. The occurrence of the accident in question and the resultant injury, there is no evidence of negligence on the part of the defendant shown, and no other evidence of negligence has been shown.

9. Where the fact is that injury may have been caused by one of two causes, for one of which the defendant is responsible, and for the other not, the plaintiffs must fail if their evidence does not show that the injury was produced by the former, or if it is just as probable that it was caused by one as by the other. And the plaintiffs in this case have not sustained that burden.

10. Where the plaintiffs' evidence is equally consistent with the absence as with the existence of negligence, the direction of verdict should be granted.

11. Also upon the ground of contributory negligence upon the part of the plaintiffs and their decedents, and particularly urged as against the plaintiffs Hopper and Carroll.

On each of these grounds I urge the motion for a direction, each one of the respective grounds.

The Court: I will deny your motion and allow you an exception.

Mr. Ashmead: Exception.

Counsel summed up to the jury.

Adjourned to February 11, 1927, at 10 a. m.

February 11, 1927.

(Met pursuant to adjournment.)

Mr. George: If it please the Court, I consent to a voluntary non-suit on behalf of the Plaintiff, Edward Henry Hopper, the father.

The Court: That will be granted.

The Court then charged the Jury as follows:—

The Court: Gentlemen of the Jury:

These cases have taken the better part of a week to try, but notwithstanding the fact, the Court has no hesitancy in saying to you that the time has been well employed in view of the importance of these cases, and no matter what the result may be, the clients who are here represented may go hence with the assurance that the cases have been most ably, fully, conscientiously and efficiently tried by the attorneys representing all parties. They have been most helpful to the Court in the suggestions they have made from time to time and it may have come to your attention, although the Court requested your retirement at two stages of the case, that certain motions, for example for the granting

of a non-suit and then for the direction of a verdict on the part of the defendant, were denied by the Court. Nevertheless, that is no concern of yours. In deciding those motions, the Court was merely determining that in these cases, as the Court found them, there were sufficient facts to resolve these cases into jury questions, and so your duty in these cases is to take the law which the Court is about to give you and apply that law to the facts as you find them, because you are the sole judges of the facts. It makes no difference what the Court may state the evidence was, nor what counsel may have stated on the subject. If such statements differ from your own recollection with respect to the evidence which has been produced here during the week on the stand, you must disregard those statements and should rely and must rely solely upon your own recollections.

On June 23rd, 1925, Edward W. Hopper, at the request of a florist by the name of Entermann, conveyed four lead jugs in a two seated automobile to the chemical works of Charles Cooper & Company at Newark, for the purpose of having two of these jugs filled with hydrofluoric acid, which was kept for sale by Charles Cooper & Company in vats or casks on containers purchased from other manufacturers, as they did not, at that time at least, manufacture this kind of acid themselves.

Hopper invited John Carroll, John P. O'Neill and James M. Kelly to ride with him on this trip and upon their arrival at the Charles Cooper Company plant in Newark, Hopper took the four jugs into the chemical plant for the purpose of having two of them filled with one gallon, or ten pounds, of hydrofluoric acid each, and to get a rebate, if possible, on the other two jugs.

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After failing to get a rebate on two of these jugs, and they are all marked as Exhibits in evidence and you will have them in the Jury room, the other two which were used were taken by a representative of the Charles Cooper Company into the acid plant of that Company to be filled, while Hopper, as has been indicated, took the two remaining jugs back and put them in the car, as I recall the testimony.

After a short time, and there is some variation as to the exact time, some stating it was fifteen or twenty minutes, a Mr. Moorehouse who worked for the Charles Cooper Company, came out of the chemical works with the two jugs containing the hydrofluoric acid, and put them in the automobile, or at least brought them to the automobile, some of the testimony being to the effect that he handed them in or put them into the machine.

Now, after this was done, Hopper started up the car, and after he had done so and gone only a short distance, there was an explosion or evulsion of gas from one of the containers which had been filled with this acid, and the cork flew out of the container, followed by an emission or evulsion of the acid and gas, with the result that Hopper and Carroll were injured, and James Kelly and John O'Neill were so badly injured that they subsequently died, as I understand it to be undisputed, as a result of the accident.

Edward W. Hopper and John Carroll have each brought a separate suit as plaintiff against Charles Cooper & Company as defendant, to recover damages which they say they severally sustained as the natural and proximate result of this accident; and Edward Henry Hopper, father of the young man of the same name who had driven the car and had taken these jugs on this unfortunate expedition, joins in his son's suit to recover damages for alleged injury to the automobile involved in this occurrence. But with respect to to the elder Hopper, a voluntary non-suit has just been granted, for the reason that there has been no proof here of the damages done to the automobile, and so his case, that is the case of Hopper senior, is taken from your consideration.

Now, at the same time, James Kelly, as Administrator *ad prosequendum* of the estate of his son James M. Kelly; and Charles J. O'Neill, as Administrator *ad prosequendum* of the estate of his son John O'Neill, have each brought separate suits as separate plaintiffs against the Charles Cooper Company as defendant, in an effort to recover damages which they say were sustained by reason of the respective deaths of these other two young men.

So you see, Gentlemen, you have here four separate and distinct cases, which for the purpose of convenience and expedition in trial, have been joined together for the purposes of this trial.

But it will be incumbent upon you, and I wish to make this very clear at this stage of the cases, and it will be necessary for you to find separate and distinct verdicts in each one of these four cases. So, have the names of the plaintiffs and the name of the defendant in each case firmly in mind.

Now, prior to what is known as the "Death Act" in this State, passed some time in the eighteen forties, there could be no recovery where death resulted from the negligent act of another, and so that Act was passed for the purposes of allowing a recovery under certain circumstances, governed by a certain measure of damages, of

which I will speak at some length in just a moment.

Before you start your deliberations in these cases, there is one fundamental proposition which you must always have in mind and it is this: that the fact that two young men lost their lives and two were injured in this unfortunate and deplorable accident, does not, alone, entitle these plaintiffs or any one of them, to verdicts in these several suits against this defendant. These plaintiffs cannot recover unless they establish to your satisfaction by a fair preponderance of the evidence in these respective cases, that this defendant, Charles Cooper & Company, was negligent with respect to some duty which it owed to the plaintiffs and that such negligence was the proximate cause of the accident and the injuries which are alleged to have been sustained because of the accident.

Now, by a fair preponderance of the evidence is not necessarily meant the greater number of witnesses on one side nor on the other. The reference is more particularly to the weight, rather than to the quantity of the evidence. We are speaking, if I may so phrase it, as to the quality rather than the quantity of the proof.

The defendant here was in no sense an insurer of the safety of these young men, and can never, under any circumstances, be held liable, unless the explosion or evolusion of gas and acid from this lead container was caused by the negligence of the defendant.

There seems to be no doubt that there was, as I have characterized it, an explosion or an evulsion or evolution of gas from one of the filled lead containers, by reason of which Kelly and O'Neill died and Hopper and Carroll were in some degree

injured. But it is for you to decide, from the evidence in these cases and only from the evidence presented here during this trial, what caused the accident and whether it was the result of negligence on the part of the defendant.

Now, as I have already said, the fact that there was an explosion, so-called, does not make the defendant liable, but the plaintiffs must establish by a fair preponderance of the evidence that this so-called explosion was the result of negligence on the part of the defendant before any plaintiff can recover.

If the explosion was caused by the negligence of someone else other than the defendant, or if the evidence fails to show whose negligence caused the accident, there can be no recovery against the defendant, no matter how much you may sympathize with them, nor how much the heart strings may be pulled and tugged at. That is the rule of law and you cannot disregard it. For negligence, Gentlemen, is never presumed. It must always be proven by evidence, and if the evidence fails in this particular, then the defendant must have your verdict.

So you see, you must first determine whether the defendant was negligent, and negligence presupposes the violation of or the failure to perform some duty owing by one person to another, and so you must necessarily know what duty the defendant owed to the plaintiffs with respect to inspection of the jug before filling, and the handling of the jug while it was in defendant's possession.

There can be no doubt from the testimony in these cases, that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that

degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling, and handling of the jug in question at this time.

And, Gentlemen, let me emphasize this fundamental proposition, to be always kept in mind in determining the question of negligence, which, as I mentioned a moment ago, is never presumed but must always be proven.

The only presumption of fact which the law recognizes is an immediate inference from the facts proven; and mere theories and inferences do not authorize a verdict, unless they are the only conclusions which can reasonably be drawn from the facts proven. And if the plaintiff is to succeed, it is incumbent upon him, if there is an absence of direct evidence, to show not only the existence of such possible responsibility, but the existence of such circumstances as would justify the inference that the plaintiff's injury was caused by the negligent act of the defendant, and which would exclude the idea that it was a cause with which the defendant was not connected.

Furthermore, you must remember that the test with respect to inspection of the jug before filling, is not whether there was some possible infallible test, nor can the defendant be held for failure to apply some infallible test, because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved.

In order to determine whether or not the defendant was negligent, you should consider the situation which existed on this 23rd of June, 1925.

I have said that this trial has taken the best part of a week to try. The facts probably may have become in some instances confused in your mind, so I am going to depart from my ordinary course, and refer to some of the evidence here, not that it is to be controlling, not to give undue emphasis to that which I recite and leave out other reference to the evidence, but merely that your recollection may be spurred when it becomes, as it shortly will, your duty to decide these facts.

Now, the defendant Company was engaged in the sale of chemicals in the City of Newark, and there is evidence in these cases that among the customers of this concern was a man by the name of Edward William Hopper, who had for many years been purchasing in some capacity, the chemical product known as hydrofluoric acid, which is used for etching glass and by persons in the stone business and for various other similar purposes, and this man's son Edward W. Hopper, who is one of the plaintiffs here, worked for him as I understand it in this business and had done so for some time.

The acid in question is not inflammable, nor is it combustible, but when brought in contact with certain substances, produces a gas, and when applied to the flesh, like a great many acids, it causes a burn. In order to ship this acid safely, certain kinds of containers are used, one of them being lead, and the neck of the container being usually stoppered with paraffin corks.

Now, the elder Hopper has been purchasing this acid from the defendant for several years, and he had containers which he had bought from

this defendant, and when they became unfit for further use, he purchased others. Hopper or his son, and when I say "son" I mean the one who is one of the plaintiffs in these suits, would bring these containers from time to time to the defendant company to have them refilled with the acid. Both Hopper and his son were accustomed to use this acid and never at any time had an explosion occurred in any of these lead containers which they had filled with this acid by the defendant company.

At the request of a friend, who, as I mentioned at the outset, was a florist, I think, by the name of Entermann, young Hopper, one of the plaintiffs, went to the defendant's place of business in Newark to get two containers filled with acid. He took along four jugs, two of which he was to have filled and the other two he was trying to get a rebate on from this company, but the company did not take two of the jugs and grant a rebate and they were put back in the automobile.

Hopper had invited three of his friends, Carroll, Kelly and O'Neill, to go with him on the ride to Newark.

When Hopper reached the defendant's plant, he ordered this acid put in two of the lead containers which he had brought with him. One of these two containers was one which had been made or sold by the defendant—that is P-G-1 in this case—and the other was not purchased of this defendant.

The two containers were taken into the plant of the defendant Company and the defendant claims that the man in charge of that branch of the business turned them upside down and tapped them with his hand, and also claims that, finding nothing in them, this man, whose name was

Schmelz, filled first one and then the other with acid, corking them as soon as they were filled.

The defendant claimed that they used a paraffined cork in the container which came originally from the defendant, Exhibit P-G-1 in these cases, and used a common cork in the other because, as I understand the testimony, there was a difference in the size of the opening of the larger jug, and that they did not have a cork with paraffin on that fitted.

That is the claim of the defendant.

The plaintiffs, however, claim with respect to this corking operation that there was no paraffin on the cork in Exhibit P-G-1, as I recall the testimony.

However, after the containers were filled and corked, they were delivered to the manager and by him turned over to Mr. Moorehouse, a helper in the packing or shipping room of this plant, to be taken out to the automobile of Hopper and they were so taken and left there.

Now, it does not appear that the defendant Company had any further contact with these jugs until after this accident. The man who delivered them to the automobile, Mr. Moorehouse, testified that he didn't notice that they were warm; Hopper and Carroll both testified that they put their hands on the container as they were about to start up the automobile and they were hot, or one of them was hotter than the other. You will recall the testimony as to that, as to just what was done with respect to ascertaining the real heat in these containers, as claimed by Hopper and Carroll.

Now, they had only moved the car a short distance when the cork flew out of one of the containers, that is the taller one, the one marked

Exhibit P-G-1, which the defendant claims had a paraffined cork, but which the plaintiffs claim had merely a common cork.

Both of these containers were filled from the same receptacle, but only one of them exploded.

Chemical tests were made of the acid in the container which did not explode, and also in the larger receptacle from which they were filled, and the test shows that it was good commercial acid and there was nothing in the acid itself as taken from the stock which would cause it to explode.

The defendant has offered proof to establish that these containers were filled and the corks driven in in the same way and manner as other containers had been filled at the defendant's plant for something like twenty years. During all that time, no explosion had ever taken place.

A witness who had worked for another plant for a number of years testified that during all the time he had worked for the plant, that this acid was put in in the same way and manner and corked immediately, where the containers were used before they were filled, and when the container was new, it was left without a stopper for a given length of time.

From all these facts, Gentlemen, from all the evidence in the case that has been presented here, you are to say whether the accident was caused by the negligence of the defendant. And you are to be the sole judges of what the evidence has been.

The danger from this acid was its burning quality. Care had to be exercised to see it was kept in a closed container so that the acid would not come out and injure persons and property. As I understand the evidence, unless the acid is brought in contact with certain substances that produce gas, or brought in contact with heat,

there is no danger of explosion. The test to show whether there was any foreign matter was to turn the jug upside down, and if the container seemed to be free from foreign matter, it was then filled, if used before. If it was new, it was allowed to stand, as I said a moment ago, for a number of hours.

So, Gentlemen, it is for you to say whether or not the defendant was negligent in the way and manner it inspected, filled and handled the lead jug involved in this explosion or evulsion of gas.

If the defendant was not negligent under the rules I have given you, then the plaintiffs would not be entitled to your verdict, but you would find for the defendant and against the plaintiffs in each case, a verdict of "no cause of action". Remember the burden rests upon the plaintiffs of proving negligence by a fair preponderance of the evidence. The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug.

But if you find the defendant was negligent, then you will have to proceed to consider the next element in the case, and that is whether or not such negligence, if any, was the proximate cause of this accident, and that is another equally important matter for your consideration. What do we mean by proximate cause?

It is an expression that is exceedingly difficult of exact definition. Proximate cause, however, may be said to be, for all practical purposes, that cause which naturally and probably led up to and which might have been expected to produce the result which has occurred. It is the moving, efficient cause which brings about an accident.

Although a defendant may be negligent in the performance of some duty owed to the person injured, no liability attaches unless such negligent act was the proximate cause of injury.

In order to establish proximate cause, it is necessary in the first place that there be a causal connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.

Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the chain of circumstances leading up to the injury, and which in the natural, continuous sequence, unbroken by any new independent cause, produced the injury.

Now, if this defendant is found by you to have been negligent, but that such negligence was not the proximate cause of this accident, but that some other efficient cause brought the accident about, so that that other efficient cause was the proximate cause of the accident, then, Gentlemen, there can be no recovery as against the defendant here.

But, if the defendant is found to have been negligent and it is further found that such negligence was the proximate cause of this accident, you would not be privileged to stop there and bring in a verdict in favor of the plaintiffs and against the defendant, because in these cases, and in all of these cases, the defense of contributory negligence has been raised on the part of the defendant, and having thus raised it in its pleadings, the duty rests upon the defendant of establishing contributory negligence by a fair preponderance of the evidence in the case.

Now, Gentlemen, these young men were not privileged to shut their eyes to surrounding circumstances, but were required to exercise reasonable care for their own safety; such care as a reasonably prudent person would have exercised under exactly the same circumstances.

Now, the care here is not that they must so act as to insure their safety, but they are only required to exercise that care for their safety which a reasonably prudent person would have done under exactly the same circumstances. So you may therefore properly ask yourselves: what did any of these young men do, respecting his own individual case now, which a reasonably prudent person would not have done, or what did he fail to do which a reasonably prudent person would have done. If that person's conduct—speaking now of the plaintiffs—did not comport with what would have been reasonably prudent care under the circumstances, then such plaintiff would be negligent, and if such negligence contributed in any degree to the happening of this accident, there could not be a recovery on the part of such a plaintiff.

From the testimony of the plaintiff Hopper, it appears that he was more or less familiar with hydroflouric acid. You will remember what his testimony was, and that he knew that these jugs were hot at the time, or one of these jugs, at the time it was placed in the car, or immediately after it had been placed in the car, and he was charged to act as a reasonably prudent person would have acted under the circumstances. If you find that a reasonably prudent person would

not have attempted to take the jug away, or to do what he did with respect to the jug under the circumstances, and he was thereby contributorily negligent, you would have to find in favor of the defendant and against the plaintiff. But remember this, Gentlemen, that the other three plaintiffs in these cases, Kelly, O'Neill and Carroll, were in that car on this trip by his invitation, the invitation of Hopper, and any negligence, if there should be found any negligence on the part of Hopper, would not be attributable or imputable to the other three men in the car, but they would be responsible or chargeable with their own individual negligence, if any.

And so, Gentlemen, if in one or more, or all of these four cases, you should find that the defendant was negligent, and that its negligence was the proximate cause of this accident within the rules that I have given you, and it should further appear that the plaintiff in the particular case that you are considering was free from contributory negligence, then such plaintiff, in such case, would be entitled to a verdict as against the defendant.

And if such plaintiff is entitled to a verdict then you will proceed naturally to consider the damages which should be awarded, and as a general proposition with respect to the two plaintiffs who are here alive today, they would be entitled to be compensated for the injuries which they personally sustained as the natural and proximate result of the accident, and the burden rests upon the plaintiffs of proving their damages to your satisfaction by a fair preponderance of the evidence in the case.

So that, if you should find that Edward W. Hopper is entitled to your verdict, he is entitled to be compensated for the injuries which he personally sustained as the natural and proximate result of this accident. That would include any pain and suffering that you find he has experienced, is experiencing or will experience. He has said that he was in the hospital for five weeks and some odd days. There is evidence to the effect that he was burned about the face, head and mouth. He claims that his tongue was burned and is scarred, and there are scars on his face and scalp which are said to be permanent. There is some evidence here to the effect that the jaw bone was affected and that teeth had to be taken out and a plate inserted; that his eyes were affected and glasses are now necessary, that there is a permanent loss of vision to the extent of 28 per cent in the right eye and 17 per cent in the left eye, as I recall the testimony. Well, now, Gentlemen, if those things are true, and are established to your satisfaction by a fair preponderance of the evidence, and are the natural and proximate result of the accident, he is entitled to be compensated therefor. There was some claim at least that his lungs were affected by the inhalation of the gas generated by this acid, and of course you are not entitled to speculate as to what may happen in the future. There is some claim on the other side that this condition is not due, or entirely due to this accident. But you are to remember what the expert testimony has been upon that subject, and you cannot give any money by way of damages in this case for anything which has not been proven by a fair preponderance of the evidence to have been the natural and proximate result of this accident.

Furthermore, if Hopper is entitled to recover, he is entitled to recover for any loss of earning capacity or for any wages which he lost as the natural and proximate result of this accident. You

remember what that testimony was, and I might say right here, that with regard to all of the testimony in the case, you are the sole judges of the weight and credibility that you will give to the testimony of the respective witnesses. That is peculiarly and solely your function.

Now, there is some claim that this young man was made nervous and that the now has headaches as the result of this accident. If that is so, he is entitled to be compensated for those things.

Mr. Hopper is also to be compensated for any medical attention reasonably and necessarily incurred in an effort to cure him of the injuries done, but the testimony upon that point has been rather meager. I recall, for example, that there is some testimony that a reasonable dental bill was from sixty to seventy-five dollars. You will remember what the testimony was, and you cannot give anything by way of damages unless the finding is based upon the evidence in the case.

Taking up now the case of Carroll. He is entitled to be compensated for any injuries that were the natural and proximate result of this accident. He claims that he had burns on the ankle and legs, but there is no proof that there was any permanent loss of function. He was in the hospital about two weeks. It is claimed that his lungs also were affected because of inhaling this gas, and it is not necessary for me to repeat that which I have already said with respect to the claim regarding the condition of the lungs when I was dealing with the case of Mr. Hopper. It is only those things, Gentlemen, that are the natural and proximate result of the accident for which compensation can be rightfully claimed.

Now, he claims that he has been made nervous and he spits blood mornings as a result of this

accident. He also claims to have lost weight. He claims that his earning capacity has been diminished and he is only now able to work two or three days a week, whereas prior to the accident, he was able to do a full week's work. If he lost wages as the natural and proximate result of this accident, or if his earning capacity has been reduced because of this accident, he is entitled to be compensated for those things. He, too, is entitled to compensation for the reasonable expenses incurred in an effort to cure. There is some testimony here that there was a doctor at the rate of $2 per visit for three visits a week during a period of a month.

He claims that it was reasonably necessary for him to go away to recuperate as the result of this accident, and the cost of the trip was $100.

Well, if those things are reasonably necessary because of this accident to re-establish the health of this young man, he would be entitled to be compensated for the reasonable cost.

I think there is some testimony in the case with respect to Carroll that his clothing was injured or damaged. Now, he is entitled to be compensated for the damage done to his clothing, to the reasonable value thereof, that is, to the extent of the damage actually done as the natural and proximate result of the accident.

So much for the measure of damages to be applied with respect to the two plaintiffs who have survived this accident.

Now, with respect to the other two, you will remember that James Kelly appears here as the administrator *ad prosequendum* of the estate of James M. Kelly, deceased, and that Charles O'Neill appears here as the administrator *ad prosequendum* of the estate of John P. O'Neill, deceased.

Don't be confused, Gentlemen, by those Latin phrases. You are no doubt as familiar with their meaning as myself, but that means nothing more than the person appointed to take charge of the prosecution of the suits, *ad prosequendum* means "to prosecute the suits".

Now, in those two cases, the Death Act to which I referred at the outset of my Charge, fixes the measure of damages which you are to apply, and I ask your careful attention, because you have got to apply this measure of damages that I am going to give you to these two cases, if you find these plaintiffs are entitled to your verdict, with extreme care and caution, because unless you do so, you are liable to do an injustice.

This Act provides that:

"Every such action shall be brought by and in the names of the personal representatives of such deceased person, and the amount recovered in every such action shall be for the exclusive benefit of the widow and next of kin of such deceased person, and shall be distributed to such widow and next of kin in proportion provided by law in relation to the distribution of personal property left by persons dying intestate; and in every such action the jury may give such damages as they shall deem fair and just with reference to the pecuniary injury resulting from such death to the wife and next of kin of such deceased person."

Now, that is as far as it is necessary for me to read from this Act in order that you may get the meaning of the Act.

But, Gentlemen, it required a decision of our Court of Errors and Appeals in order to more concretely set forth what is meant by fair remuneration which is to be made in a case where

death has ensued through a wongful act. And in that case this language, or language similar to this was used:

The deprivation of reasonable expectation of a pecuniary advantage which would have resulted to the persons for whose benefit the action is brought by a continuation of the life of the deceased is the measure to be applied in fixing the damages. That sum is not the whole amount the intestate, had he lived, would have been able to contribute to the persons for whose benefit the action is brought, but rather the present value of the probable amount they would have received from him had he not died as the result of the injury complained of, taking into consideration the fact that they will come into present possession thereof, with the future income thereof. That fund is to be ascertained by taking into account all the possibilities. The intestate might have died by the course of nature shortly after the accident; had he lived he might have suffered financial reverses; had he lived, he might have outlived the person for whose benefit this action is brought, or they might never have received any money from him. Nothing is to be added for loss of society, or for wounded feelings or for anything else which cannot be measured by money and satisfied by a pecuniary recompense.

Now, Gentlemen, the exact letter of that rule seems harsh and cruel, but you must remember that prior to this enactment, no recovery could be had at all in such a case as this, and therefore the Legislature, in its wisdom, having in mind the remedy which was sought to be applied to meet the circumstances which it was found existed, fixed this measure, this yard-stick if you please, which is to be applied in ascertaining damages in cases such as this.

And so, no matter what you may think the rule should be, you must apply the rule which is cited in the case as expounded by our highest court of this State. You cannot go out and speculate upon what might be a better rule. You cannot allow, as the language of this decision states, sympathy to sway you or give anything for wounded feelings, because money could not measure wounded feelings.

It is the deprivation of the reasonable expectation of pecuniary benefit. And so, Gentlemen, that hinges on a lot of things in these cases.

One of these young men, Mr. Kelly, was under twenty-one years of age. He was 20 years, six months and a few days of age. So that he has a little while to go until he reached his majority. Now, the law is that during that time, the time of minority, the father, at the time this accident occurred, was entitled to the earnings of this young man, unless he should be sooner emancipated, freed from the obligation of turning over his earnings, and until he reached that time, the rule is that he is required to turn over his earnings. The father of course was required to support, maintain and educate him until he reached his majority, or until he was sooner emancipated. So, as a recompense, as an off-set for that, the law gives to the father the earnings of the child.

But after he reached twenty-one years, and in respect to the case of Mr. O'Neill, who was over twenty-one years of age, your consideration does not stop there, because the law says that you are to take into consideration the reasonable expecta tion of pecuniary benefits.

Now, you have got to remember, Gentlemen, what the testimony has been respecting the earning of these two young men, and then get down

to the point of deciding what damages should be awarded. You must take into consideration the ages of the father and mother, of the brothers and sisters of these respective young men. Now, my recollection is that in the case of Kelly, the father was 62 years of age and there was a sister about 23 years of age, and the mother was about 53 years of age. I do not pretend to tell you, Gentlemen, that those ages are correct. I am merely seeking to spur your recollection. In the case of O'Neill, the father was 64 years of age and I think there were four other children. I think he included the deceased son, when the father said that the number was five, although I will not be sure about that.

You heard the testimony here as to the expectancy of life of these two deceased young men, that is what would have been, under normal conditions, the expectancy of their life. Of course, these tables are made up from a great number of cases and give you the average expectation of life, but these young men, as aptly brought out in the testimony, might never have lived out that time, or they might have lived over that time.

So, I am going to ask you to take these cases now, gentlemen, with the admonition that you must always remember there are four separate and distinct cases, and you must also remember that there should be four separate and distinct verdicts, whether your verdicts be for the plaintiffs or for the defendant.

You must not allow passion, or prejudice, or sympathy to sway you in your verdicts. You have taken an oath to base your verdict on the evidence that has been presented. If you do that, you observe that oath, and take the rules of law which the Court has given you, and apply

those rules to the facts as you find them, your verdict will be a right one, no matter for which of these parties it is rendered.

I have been requested to charge certain additional propositions by the attorney for the defendant, and I will now proceed to dispose of them.

1. The fact that the Court has refused a nonsuit and direction of a verdict for the defendant is no evidence of and should not be taken by the jury as any indication of liability of the defendant.

I charge you that.

2. The mere proof by the plaintiff of the occurrence of an accident and resultant injury does not give rise to an inference of negligence.

I charge you that.

3. In an action for personal injury the plaintiff, in order to recover damages, must do more than show the possible responsibility of the defendant for the injury. In the absence of direct evidence, he must show the existence of such circumstances as would justify the inference that the injury was caused by the wrongful act of the defendant and exclude the idea that it was due to a cause for which the defendant was not responsible.

I charge you that.

4. The burden of proof is upon the plaintiff and the right of the defendant to have the plaintiff to bear the burden is a substantial one and cannot be found by the jury to have been fulfilled by the plaintiff unless he established the negligence of the defendant by a preponderance of the testimony.

I charge you that.

5. Under the circumstances of this case, as shown by the evidence, there was no duty on the part of the defendant to advise either the plaintiff, Edward William Hopper, Jr., the plaintiff, Carroll, or plaintiff Kelly's intestate, or plaintiff, O'Neill's intestate, of the characteristics of hydrofluoric acid.

I charge you that.

6. The quality of the hydrofluoric acid is not involved in this case. No issue in respect thereto is raised by the pleadings in any of the several suits.

I charge you that.

7. The evidence in this case presents no issue for submission to the jury as to the quality of the acid as the proofs show that the acid was purchased from a manufacturer whose acid was of standard grade and quality.

I charge you that.

No. 8 is not necessary, because the previous request has been charged.

Mr. Ashmead: That is all right.

The Court: No. 9 the same.

Mr. Ashmead: Yes.

The Court: No. 10 I refuse to charge, except as I have already charged.

No. 11 I refuse to charge, except as I have already charged.

No. 12 I refuse to charge, except as I have already charged.

No. 13 I refuse to charge, except as I have already charged.

No. 14 I refuse to charge, except as I have already charged.

No. 15 I refuse to charge, except as I have already charged.

No. 16 I refuse to charge, except as I have already charged.

No. 17 I refuse to charge, except as I have already charged.

No. 18 as presented here, I refuse to charge except as I have already charged. I think I have charged the exact rule upon that subject.

No. 19, which is numbered (b) I charge you as follows: That the use of methods of inspection customarily used by others under similar conditions is a fair test of the prudence with which defendant was chargeable.

I have already said so.

No. 20. The defendant cannot be liable for an injury occasioned by a condition, the existence of which would not have been disclosed by such inspection as it was required to make.

I charge you that, under the rules of law already given you, of course.

21. The defendant was not bound to anticipate and search for that which was unusual and unforeseen.

I charge you that:

22. I do not like the language of that. As to the degree of care, I have already charged on that very carefully covering that point. Therefore I refuse to charge that, except as already charged.

23. In proving the negligence of the defendant in not using reasonable care to discover that the jug was unfit for its proposed use, the plaintiff cannot ask the jury to speculate and to guess what the defendant, in the exercise of due care, should have done that would have made it cognizant of the defective condition. If the defective condition was not obvious there must be some evidence from which it can be inferred how it might and ought to have been discovered.

I charge you that.

24. Any conversation with occupants of the car had by the employee who delivered the jugs filled with acid to the car is not under the circumstances of this case chargeable to the defendant.

I charge you that.

25. Even though you may find that the employee who delivered the jugs filled with acid to the car knew at the time of delivery that one or both of the jugs were hot such knowledge is not under the circumstances of this case chargeable to the defendant.

I charge you that.

26. You must find for the defendant unless you find that the accident was the natural and proximate consequence of the breach of duty which the court has charged was owing from the defendant to the plaintiff, Hopper Jr., the plaintiff; Carroll, the plaintiff; Kelly's intestate, and the plaintiff O'Neill's intestate, respectively.

I charge you that.

27. I think I have covered the exact point.

Mr. Ashmead: I think you have.

The Court: Then you withdraw No. 27?

Mr. Ashmead: Yes, your Honor.

The Court:

28. I don't think it is necessary to charge that.

Mr. Ashmead: That is withdrawn.

The Court: No. 29 now becomes unnecessary.

Mr. Ashmead: Yes, your Honor.

Mr. Ashmead: I would like an exception to each of the Court's refusals to charge as requested.

The Court: You may have exceptions.

Mr. Ashmead: Then, in the Court's charge, I noticed two or three times with respect to Hopper and Carroll, that you said "he is entitled to damages." Of course you had previously qualified that, but at these times you unqualifiedly said "he is entitled."

The Court: I said "if any" at the outset, but I will cover that.

Mr. Ashmead: I would like to take an exception to that part of the Charge where the Court said: "There is no doubt that hydrofluoric acid is dangerous," for this reason, that the acid is not the cause and your Honor so charged, but the condition of the jug.

Also, there is no evidence of any danger involved here except the condition of the jug, over which the defendant had no charge, was not responsible for and of which it had no knowledge. The only inspection the defendant was chargeable with, was that commensurate with the danger involved, of which it had notice.

I also except to that part of the Charge which refers to negligence in the way and manner in which the jug was filled, to the broad general principle. As to the duty to inspect. You charged, that there was a duty to inspect, but there is nothing as to the way and manner—

The Court: You claim there was no duty to inspect?

Mr. Ashmead: I think that this provision of your Charge, as to the way and manner, would indicate to the Jury that there was a duty to inspect.

The Court: I meant to charge them that.

Mr. Ashmead: That is the part I am taking exception to, merely insofar as it is inconsistent with the requests I have asked the Court to charge and which you refused.

The Court: All right.

Mr. Ashmead: Then with respect to proximate cause. It seemed to leave the Jury a little confused as to proximate cause. You said as to some other cause, and the some other cause was not sufficiently explained to point out that sand in the jug might have been the efficient cause. And that the mere application of the acid to that jug in the condition it was, would not be the proximate cause or break the causal connection between the original act and the injury.

The Court: Gentlemen of the Jury:

Some exceptions have been taken to my Charge in certain particulars.

At one time I said there could be no doubt that acid, referring to this acid, was dangerous.

I think the testimony would not warrant the broadness of that assertion; I did not intend it to be so understood. The testimony, as I understood it, as to this acid, is if it comes in contact with the flesh or if it comes in contact with a foreign substance which would cause it to boil or evolve or push out a gas, would be dangerous. I do not wish you to understand by the remark I made that the acid of itself, in its vat, unless coming in contact with some foreign substance, or unless applied directly to the flesh, would be dan-

gerous. It only becomes dangerous in the manner of its use; that is what I intended to say.

Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterisation that I make with respect to that, that the danger involved is limited in that respect.

With respect to what I said about proximate cause, it is feared that I left with you the impression, that I might have confused you about the true meaning of proximate cause, the definition thereof. I am going to repeat what I said, which is the cardinal rule.

Proximate cause is that cause which naturally and probably led up to and which might have been expected to produce the very result which is complained of. It is the moving, efficient cause of an accident. Now, in this case, inspection of the jugs and application of the acid, if they were not the moving, efficient cause of this accident, so that it could be said to be the proximate cause, but the accident was due to some other cause which was the proximate cause, then there could be no recovery in this case as against the defendant.

Now, that is the best that I can give you on that subject. You may take it as I have given it to you.

Now, with respect to the question of damages, referring now to the cases of Hopper and Carroll. There is some testimony here with respect to Hopper, that his face was scarred, and you have seen him on the stand. It is claimed that these scars are permanent. If that is so, he is entitled to be compensated for the disfigurement.

With respect to any loss of earning capacity, as to both of these plaintiffs whom I have just referred to now, it is claimed their earning capacity has been reduced, that is to say, in each case, the respective plaintiffs. Now, if they lost earning capacity and that is due to this accident, they are entitled to be compensated for that. There has been some evidence with respect to Carroll that at the time of this accident his wages were $49.50; they are now $60. You have got to take that into consideration. You have to take that into consideration as to what would fairly compensate him for his loss of earning capacity or loss of wages directly due to this accident, provided of course, with respect to the latter sum, that increase in wages obtained during the time he was incapacitated, because he claims now that he does do some work.

It has been suggested that in the course of talking to you about damages, that I spoke to you as though, gathering from the substance of what I said, that the plaintiffs were absolutely entitled to recover damages because of the accident. As to that I said, "if that is so", he is entitled to be compensated for the damages sustained. You must remember you need not go into the question of damages at all, unless you find that the defendant here is liable, and they can only be liable under the rules I have given you.

So what I may have said about the plaintiffs being entitled to recover in certain circumstances, applying certain measures of damages, would only apply if you should find that this particular plaintiff was entitled to recover against this defendant under the rules that I have given you. You must find that the defendant was liable, before you go into the question of damages at all.

You may now retire.

(The jury retired.)

Mr. Ashmead: I would like to reserve the right of exception to what the Court said as to the duty on our part to inspect the jugs.

The Court: All right.

DEFENDANT'S REQUESTS TO CHARGE.

1. The fact that the Court has refused a nonsuit and direction of a verdict for the defendant is no evidence of and should not be taken by the jury to be an indication of liability of the defendant.

2. The mere proof by the plaintiff of the occurrence of an accident and resultant injury does not give rise to an inference of negligence.

3. In an action for personal injury the plaintiff, in order to recover damages, must do more than show the possible responsibility of the defendant for the injury. In the absence of direct evidence he must show the existence of such circumstances as would justify the inference that the injury was caused by the wrongful act of the defendant and exclude the idea that it was due to a cause for which the defendant was not responsible.

4. The burden of proof is upon the plaintiff and the right of the defendant to have the plaintiff to bear the burden is a substantial one and cannot be found by the jury to have been fulfilled by the plaintiff unless he established the negligence of the defendant by a preponderance of the testimony.

5. Under the circumstances of this case, as shown by the evidence, there was no duty on the

part of the defendant to advise either the plaintiff, Edward William Hopper, Jr., the plaintiff Carroll, or plaintiff, Kelly's intestate, or plaintiff, O'Neill's intestate, of the characteristics of hydrofluoric acid.

6. The quality of the hydrofluoric acid is not involved in this case. No issue in respect thereto is raised by the pleadings in any of the several suits.

7. The evidence in this case presents no issue for submission to the jury as to the quality of the acid as the proofs show that the acid was purchased from a manufacturer whose acid was of standard grade and quality.

8. If the preceding request is refused then to charge as follows:

(a) It appearing, by the uncontradicted evidence, that the defendant, having purchased the hydrofluoric acid in question, from a reputable manufacturer of hydrofluoric acid, the defendant was not required to analyze the acid purchased from such manufacturer before reselling it to a purchaser.

9. (b) There is no evidence in this case that the accident in question resulted from a defect in the quality of the hydrofluoric acid with which the jug in question was filled.

10. There is no evidence in this case that the accident was the result of the presence or lack of paraffin on the cork used.

11. The jug having been furnished by the purchaser the defendant had the right to assume that it was in fit condition to be filled with hydrofluoric acid.

Defendant's Requests to Charge.

12. Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it.

13. There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled.

14. If you find that the accident was the result of foreign matter in the jug the defendant, under the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

15. There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident, contained any foreign matter such as would naturally and proximately cause the accident which occurred.

16. If you find that the accident was the result of the action of the hydrofluoric acid placed in the jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred.

17. There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred.

Defendant's Requests to Charge.

18. If you charge that the defendant was under any duty to inspect and investigate the condition of the jug when tendered by Hopper, then we request that you charge (a) that, under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them.

19. (b) That the use of methods of inspection customarily used by others under similar conditions is a fair test of the prudence with which defendant was chargeable.

20. (c) The defendant cannot be liable for an injury occasioned by a condition, the existence of which would not have been disclosed by such inspection as it was required to make.

21. (d) The defendant was not bound to anticipate and search for that which was unusual and unforseen.

22. If you find that defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it.

23. In proving the negligence of the defendant in not using reasonable care to discover that the jug was unfit for its proposed use, the plaintiff cannot ask the jury to speculate and to guess what the defendant, in the exercise of due care, should have done that would have made it cognizant of the defective condition. If the defective condition was not obvious there must be some evidence from

which it can be inferred how it might and ought to have been discovered.

24. Any conversation with occupants of the car had by the employee who delivered the jugs filled with acid to the car is not under the circumstances of this case chargeable to the defendant.

25. Even though you may find that the employee who delivered the jugs filled with acid to the car knew at the time of delivery that one or both of the jugs were hot, such knowledge is not under the circumstances of this case chargeable to the defendant.

26. You must find for the defendant unless you find that the accident was the natural and proximate consequence of the breach of duty which the court has charged was owing from the defendant to the plaintiff, Hopper, Jr., the plaintiff, Carroll, the plaintiff, Kelly's intestate and the plaintiff, O'Neill's intestate, respectively.

27. From the testimony of Hopper, Jr., it appears that he was familiar with hydrofluoric acid and its characteristics and that he knew that the jug was hot at the time it was placed in the car and was chargeable to act as a reasonably prudent person would have acted under the circumstances, and if you find that a reasonably prudent man would not have attempted to take the jug away in such condition you must find in favor of the defendant and against Hopper. (Withdrawn.)

28. If you find for the plaintiff the injury to be recovered for is the deprivation of a reasonable expectation of a pecuniary advantage which would have resulted to the persons for whose benefit the action is brought by a continuance of the life of

the deceased, that sum is not the whole amount the intestate, had he lived, would have been able to contribute to the persons for whose benefit the action is brought, but rather the present value of the probable amount they would have received from him had he not died as a result of the injury complained of, taking into consideration the fact that they will come into the present possession thereof with the future income thereof. That fund is to be ascertained by taking into account all the possibilities. The intestate might have died by the course of nature shortly after the accident. Had he lived he might have outlived the persons for whose benefit this action is brought or some one of them. Nothing is to be added for loss of society or wounded feelings or anything else which cannot be measured by money and satisfied by a pecuniary recompense. (Withdrawn.)

29. Upon the proofs in the case the plaintiff William Henry Hopper cannot recover, if anything, more than six cents damages. (Withdrawn.)

New Jersey Court of Errors and Appeals

On Appeal from New Jersey Supreme Court.

Sat below: Ackerson, Jr., C. C. J.

Edward William Hopper,
Plaintiff-Respondent,

vs.

Charles Cooper & Company, Inc.,
a corporation,
Defendant-Appellant.

John Carroll,
Plaintiff-Respondent,

vs.

Charles Cooper & Company, Inc.,
a corporation,
Defendant-Appellant.

James Kelly, Administrator *ad prosequendum* of James M. Kelly, deceased,
Plaintiff-Respondent,

vs.

Charles Cooper & Company, Inc.,
a corporation,
Defendant-Appellant.

Charles J. O'Neill, Administrator *ad prosequendum* of John P. O'Neill, deceased,
Plaintiff-Respondent,

vs.

Charles Cooper & Company, Inc.,
a corporation,
Defendant-Appellant.

BRIEF FOR DEFENDANT-APPELLANT.

Each of the above cases is before this Court on appeal from a judgment of the Supreme Court entered in an action for negligence upon the ver-

dict of a jury of the Hudson County Circuit of the Supreme Court. Judge Henry E. Ackerson presided at the trial.

All of the cases arose out of the same accident caused by the evolution of gas in one of two lead jugs which had been presented by the plaintiff, Hopper, and filled with hydrofluoric acid by the defendant, Charles Cooper & Company, Inc. At the time of the accident, the filled jugs had been delivered to the plaintiff Hopper and stored in his automobile. Shortly after he had started the car the cork from one of the jugs blew out and a portion of the acid sprayed over the occupants of the car resulting in the injuries complained of. The accident resulted in the deaths of James M. Kelly and John P. O'Neill and serious injuries to the plaintiffs, Edward William Hopper and John Carroll.

The judgment in the Hopper case is for $12,000 (Case, p. 16); in the Carroll case $3,066 (Case, p. 39); in the Kelly case $9,066.28 (Case, p. 64); and in the O'Neill case $9,000 (Case, p. 79).

The cases were tried together in the court below and are likewise presented here on appeal. The grounds of appeal in each case are the same.

Statement of Facts.

Edward Henry Hopper, father of the defendant Edward William Hopper, had been engaged for a number of years in the monument and tombstone business at No. 335 Ocean Avenue, Jersey City, N. J. (Case, p. 82, ll. 15-32, p. 104, ll. 1-11). In that business, he had occasion to use hyrofluoric acid for the purpose of cleaning stains from marble and other stone and for a great many years had purchased all his acid from the defendant, Charles Cooper & Company, Inc (Case, p.

83, ll. 12-22). The plaintiff, Edward William Hopper, personally had made these purchases for his father for eight or nine years prior to the accident (Case, p. 83, ll. 16-20).

On June 23, 1925, one Elizabeth Entermann, engaged in the florist business about a block away from the Hopper establishment on Ocean Avenue, Jersey City, sent four lead jugs to Hopper's place and requested the plaintiff Edward William Hopper to get two of the jugs filled with hydrofluoric acid and if possible to procure a rebate on the other two jugs which he said he agreed to do as a favor (Case, p. 83, ll. 25-33; p. 105, ll. 30-40).

In the early afternoon of June 23rd, the plaintiff Edward William Hopper placed these jugs in his father's automobile (a Studebaker sedan) and started to the plant of the defendant, Charles Cooper & Company, Inc., located at the corner of Van Beuren and South Streets in the City of Newark (Case, p. 83, ll. 1-15). On his way, he met the said James Kelly, John P. O'Neill and the plaintiff Carroll (Case, p. 83, ll. 5-12; p. 107, ll. 17-20; p. 178, ll. 15-18). He told them he was going to Newark to get some acid and asked them to go along (Case, p. 107, ll. 20-24; p. 178, ll. 13-20). They all entered the car and Hopper proceeded to Newark (Case, p. 178, ll. 20-22).

Upon arriving at the plant of the defendant, Charles Cooper & Company, Inc., Edward William Hopper took the four jugs into the plant of the defendant and ordered twenty pounds of hydrofluoric acid to be put in two of the jugs,—ten pounds in each jug—and asked a rebate upon the other two jugs (Case, p. 107, ll. 25-31). The rebate was refused, the cashier stating that the defendant could not use them (Case, p. 87, ll. 1-2).

Hopper states that he then asked the cashier to select the two best jugs and that the two jugs least

bent were set aside and that he took the remaining two jugs out and placed them in the back of the car (Case, p. 86, ll. 24-28; p. 87, ll. 1-10; p. 108, ll. 29-33; p. 109, ll. 12-25). That he then got into the car to wait for the jugs which he left to be filled (Case, p. 109, ll. 25-27).

The undisputed testimony shows that the jugs which Hopper left to be filled were taken from the place where he left them by the witness William Moorehead to the Acid Department of the defendant to be filled (Case, p. 109, ll. 15-23). He states that nothing got into the jugs while in his possession (Case, p. 368, ll. 24-25).

When Moorehead arrived at the Acid Department, he met the witness Charles Ruhl, who was the foreman of the Acid Department of the defendant and gave the order to him (Case, p. 368, ll. 25-35). Ruhl looked for Schmeltz who was an employee of the company whose duty it was to fill jugs with acid (Case, p. 368, ll. 33-36). Not finding Schmeltz, Ruhl prepared to fill the jugs himself and in this preparation went to a shed in which the dipper (Exhibit D-7) and the funnel (Exhibit D-8) were kept and got the dipper and funnel which were accustomed to be used for this purpose (Case, p. 368, ll. 35-38). At this moment, Schmeltz appeared from some other work he had been doing and Ruhl directed him to fill the jugs (Case, p. 368, ll. 38-40).

Schmeltz was an employee who had been employed by the defendant company for about twenty-two years (Case, p. 333, ll. 4-15) and whose duty during all that time, among other things, had been to fill jugs with hydrofluoric acid (Case, p. 333, ll. 30-35). Schmeltz upon receiving the jugs, the dipper and the funnel from Ruhl took the jugs out to a large container in which the hydrofluoric acid was kept to fill them (Case, p. 336, ll. 18-23; p. 351, ll. 20-24).

The undisputed testimony shows that when Schmeltz received the two jugs in question and the dipper and the funnel from Ruhl, the dipper and funnel were both clean (Case, Ruhl, p. 351, ll. 19-24; Schmeltz, p. 337, ll. 18-26, ll. 33-40; p. 338, ll. 1-6). Schmeltz further stated that he turned each jug upside down, shook it and tapped it and that nothing came out (Case, p. 338, ll. 28-35; p. 343, ll. 39-40; p. 344, ll. 1-10). He testified that he did this pursuant to an order which he had received from the defendant when he first was employed in the Acid Department and in accordance with a practice that he had always followed in filling all of the jugs that he had filled (Case, p. 342, ll. 12-27). He said that the purpose of this was to clean the jug (Case, p. 165, ll. 18-22); to get out any spent acid that might be in the jug (Case, p. 344, ll. 35-40). He stated that during his employment of twenty-two years in this work he had filled a great number of jugs and on some occasions as high as ninety jugs in one day (Case, p. 333, ll. 33-40; p. 334, l. 1). He testified that in the instant case he followed the same practice of turning the jugs upside down, shaking and tapping them as he had followed in all his other experience (Case, p. 340, ll. 15-40; p. 343, ll. 39-40; p. 344, ll. 1-10) and that there was nothing in the instant case to indicate any unusual condition of either of the jugs in question (Case, p. 341, ll. 5-9). That he had never in all his experience had any trouble with any jug that he had ever filled (Case, p. 342, ll. 16-17). Nor had the company ever had any such experience with any jugs that it had filled (Case, p. 358, ll. 38-40; p. 359, ll. 1-12).

It also appeared by the undisputed testimony that this practice was the practice used by all reputable manufacturers in refilling jugs that had been previously filled with hydrofluoric acid and that it was the only practical thing to do.

Dr. Tonry, who had been a manufacturing chemist for twenty-five years (Case, p. 373, ll. 19-26) and prior to that engaged in analytical work in a chemical laboratory (Case, p. 373, ll. 26-29) and who during all of his experience has handled hydrofluoric acid (Case, p. 373, ll. 36-38) and whose testimony was undisputed said that when a jug had been once filled with hydrofluoric acid and then returned to be refilled, the jug would be taken by the man who was to fill it and reversed to see if there was any spent acid in it. He would give it a shake or two and then proceed to fill it immediately (Case, p. 374, ll. 15-23). He said the purpose of turning the jug upside down was to get out the spent acid and the purpose of tapping the jug was to see if there was anything else in the jug; that it was not practicable to do anything more to ascertain if there was any foreign matter in the jug without injurying the jug (Case, p. 375, ll. 22-40). That when the jugs are new they are pacified by putting in a weak solution of acid which attacks the lead and forms a coating or a lining which acts as a protection against any further action of the acid. Then the jug is always handled with the greatest care so as not to break this coating because if the jug is not handled carefully it is liable to crack the coating. That is why orders are given to put nothing in the jug,—not even to put water in the jug (Case, p. 376, ll. 20-40; p. 377, ll. 1-11). One of the directions they particularly give the men is,—"Don't wash the jug; don't put anything in the jug; don't even put water in the jug". That this was the practice followed by all reputable manufacturers (Case, p. 377, ll. 19-26), and had been followed by him for thirty years (Case, p. 378, ll. 15-16).

When Schmeltz had filled the jugs, he put corks in them and tapped them flat with a hammer (Case, p. 335, ll. 15-18, p. 336, ll. 12-19). One

of the jugs, the tall one marked "Exhibit P-G-1", was similar in shape and size to the lead jugs used by the defendant in making sales of hydrofluoric acid (Case, p. 348, ll. 1-8). The other jug, "Exhibit P-G-2", was a "strange jug" (Case, p. 348, ll. 8-10). In the tall one, he put a cork coated with paraffin upon it as customarily used by the defendant (Case, p. 335, ll. 32-37). The other jug had a larger mouth and not having any corks with paraffin of a size to fit this jug he selected a cork of the proper size without paraffin and put it in this jug. As above stated, he pounded the corks with a hammer until they were flush with the top of the jugs and carried them to the office of Ruhl about thirty or forty feet distant (Case, p. 335, ll. 15-18), where Moorehead was waiting for them (Case, p. 369, ll. 1-2).

Moorehead then took the jugs and carried them to Hopper's car standing in Van Beuren Street (Case, p. 370, ll. 15-16) about a block and a half from Ruhl's office (Case, p. 369, ll. 25-28) and delivered them to one of the men in the rear of the car (Case, p. 370, ll. 34-38). There is some dispute as to who placed the jugs in the car. Moorehead testified that he left them on the sill of the door of the car (Case, p. 370, ll. 25-40). Hopper and Carroll testified that Moorehead placed them in the box in the car (Case, Hopper, p. 109, ll. 28-36; Carroll, p. 181, ll. 26-29).

At the time the jugs were so placed, Hopper was standing up in the back of the car (Case, p. 110, ll. 5-16). After the jugs had been arranged, Hopper took his seat at the wheel and started the car which was facing south on Van Beuren Street. He had partially turned the car around to return to Jersey City (Case, p. 184, ll. 33-38) when the cork from the tall jug (Exhibit P-G-1) blew out (Case, p. 184, l. 40, p. 185, ll. 1-7, p. 352, ll. 20-24) followed by a portion of the acid which

sprayed over all of the occupants of the car. The other jug of acid (Exhibit P-G-2) remained intact (Case, p. 353, ll. 32-36). About two or two and a half minutes had elapsed from the time the jugs were placed in the car until the accident (Case, p. 91, ll. 32-37).

Hopper, Kelly, O'Neill and Carroll all succeeded in making their escape from the car and went into the plant of the Charles Cooper & Company, Inc., where they were given first aid and then taken to the Saint James Hospital in Newark (Case, p. 92, ll. 1-20), with the exception of Carroll who was taken to the City Hospital (Case, p. 186, l. 40). O'Neill and Kelly died soon after their arrival at the Hospital (Case, p. 159, ll. 12-20) and Hopper and Carroll both recovered. Hopper was in the hospital five weeks (Case, p. 154, ll. 30-33) and Carroll two weeks (Case, p. 187, ll. 1-6).

There is no question involved in the case as to the quality of the hydrofluoric acid with which the jugs were filled and the court so charged (Case, p. 459, ll. 14-16). The defendant, Charles Cooper & Company, Inc., while a manufacturer of certain chemicals, is not a manufacturer of hydrofluoric acid (Case, p. 389, ll. 16-20). It had not manufactured hydrofluric acid for a great number of years prior to the accident (Case, p. 389, ll. 20-23). During at least fourteen years preceding the accident, the defendant had been accustomed to purchase its acid from J. C. Wiarda & Company, the oldest manufacturer of hydrofluoric acid in the country, whose place of business is in Brooklyn, N. Y. (Case, p. 373, l. 40; p. 374, ll. 1-5; p. 389, ll. 24, 25), and which is a manufacturer of very excellent reputation and very high-grade hydrofluoric acid, as testified to by both plaintiffs' and defendant's witnesses (Case, p. 268, ll. 21-28; p. 374, ll. 9, 10).

The jugs were filled from a lot of acid known as 1925-4 from a large one hundred pound container actually containing one hundred ten pounds which had been received from J. C. Wiarda & Company on April 29, 1925, which lot of acid upon its receipt had been tested by Dr. Friedman, head chemist of the Charles Cooper & Company, Inc., in the ordinary course of his work and found to be high-grade commercial hydrofluric acid (Case, p. 395, ll. 1-9; p. 396, ll. 33-36). Subsequent to the accident, Dr. Friedman made another test of the remaining acid in this container and found it to be of practically the same analysis as at the time it was tested upon its receipt from J. C. Wiarda & Company on April 29, 1925 (Case, p. 395, ll. 15-38; p. 396; ll. 33-36). The remaining acid in this container was subsequently used in making sales and for other purposes in the conduct of the defendant's business (Case, p. 396, l. 40; p. 397, ll. 1-6). Also, both of the jugs were filled out of the same container and at the time of the accident, the cork blew out of only one of the jugs,—the tall jug (Exhibit P-G-1). The acid in the other jug was tested after the accident and found to be of the same chemical analysis as the acid in the big container from which it was taken and a high-grade commercial hydrofluoric acid (Case, p. 397, ll. 10-35). There is t,herefore, no question as to the quality of the acid sold.

Also, there is no question as to the quantity of the acid placed in the jugs. The jugs in question are what are known as ten pound jugs (Case, p. 357, ll. 9, 10). They, in fact, hold about eleven and a half to twelve pounds of acid (Case, p. 357, ll. 12-14), the extra capacity being for the purpose of allowing some space for the evolution of gas (Case, p. 357, ll. 14-16) hydrofluoric acid being a fuming liquid from which always arises a slight vapor (Case, p. 378, ll. 1-10). The uncon-

tradicted testimony of Schmeltz who filled the jugs is that he put only ten pounds in each jug (Case, p. 338, ll. 22-23). Two dippers full (Case, p. 338, l. 24). The dipper is so constructed that when more than five pounds are put into it, it overflows (Case, p. 337, ll. 12-16; p. 358, ll. 10-21). Also, Ruhl who had a record of the amount of acid contained in the big container from which the two jugs were filled at the time it was received from J. C. Wiarda & Company again weighed the container subsequent to the accident and found that only twenty pounds had been taken out of it (Case, p. 355, ll. 18-24).

All of the experts, produced by both the plaintiffs and defendant agreed that the accident was due to a foreign substance in the jug at the time the jug was filled (Edel, p. 219, ll. 1-10; Meerbott, p. 249, ll. 1-18, 26-40; Friedman, p. 405, ll. 8-20; Grosvenor, p. 425, ll. 24-34; p. 427, ll. 24-40; p. 428, ll. 1-40; p. 429, ll. 1-16).

Dr. Edel, who is the County Chemist of the County of Essex (Case, p. 204, ll. 37-8), testified that on the 24th day of June, the day following the accident, he was directed by the Public Authorities of Essex County to make an examination and analysis of the jug alleged to have evolved gas (Case, p. 204, ll. 38-40; p. 205, ll. 1-6). He went to the plant of the Charles Cooper & Company, Inc., and took away with him the jug in question, a portion of the acid still remaining therein (Case, p. 205, ll. 8-18; p. 390, ll. 28-36). He also procured a portion of the acid from the jug P. G. 2 (Case, p. 221, ll. 8-39; p. 392, ll. 30-40; p. 393, ll. 1-10) which was filled at the same time, from the same container, and which did not evolve gas. The next day he also got the jug which did not explode (Case, p. 208, ll. 5-11; p. 219, ll. 20-23). Also the two jugs which were not filled (Case, p. 208, ll. 5-11). He made a chemical examination

of the contents of both of these jugs which were filled and made a report in respect thereto and submitted his conclusion as to the cause of the accident to the County Authorities. His report was read into evidence by the plaintiffs and appears in the State of Case on pages 207-209. His conclusion was as follows:

> "The combined results plainly indicate that some mineral was present in the container at the time of filling with hydrofluoric acid. The solvent action of the acid caused a rapid evolution of gas, which produced a high pressure upon the container, resulting in the explosion.
>
> "The composition of the mineral residue found indicates a marble, which, on solution in acid, produced carbon dioxide in volume more than sufficient to cause the observed effect" (Case, p. 209, ll. 20-34).

In his report he further stated—

> "The container which caused the accident, and one of those received on the latter date were finally cut open.
>
> "The former contained a large quantity of white, scaly material, part of which was doubtless due to the corrosive action of the hydrofluoric acid. It was found, however, to contain large amounts of calcium, iron and aluminum, as well as traces of lead, manganese and magnesium.
>
> "The latter container showed a small quantity of a grayish, granular powder, differing altogether in form and quantitative composition from that in the other container. The powder showed lead, iron and calcium in traces only" (Case, p. 209, ll. 1-20).

Later, he made an examination of the encrustation found in the jug (Exhibit P-G-1) which evolved gas. The bottle marked Exhibit D-1 contains a portion of the residue of the jug (Exhibit

P-G-1) which evolved gas. The bottle marked Exhibit D-2 contains a portion of the residue from the same jug, powdered, for the purpose of chemical analysis (Case, p. 216, ll. 32-36). The analysis of this residue caused him to modify his opinion. "Only in that one thing, that it was not only marble calcium but that some metal, silica was present" (Case, p. 218, ll. 18-21). He was then asked,—Q. Upon your investigation, Doctor, confirmed by this subsequent examination of the residue in this jug, what did you conclude to be the cause of this evolution of gas? A. Calcium silica (Case, p. 218, ll. 22-25).

Dr. Meerbott who was the only other expert produced by the plaintiffs who testified on this point for the plaintiffs said—

> "Q. Assuming a vessel similar to that marked Exhibit P-G-1 into which is placed a gallon or ten pounds of hydrofluoric acid and corked, a 60 per-cent. solution, and 15 or 20 minutes thereafter there is an evolution that blows out the cork, an explosion as described in this case, can you tell us what in your opinion would be the probable cause of such an explosion? A. The chemical reaction of the acid on some ingredients that must be present in the container.
>
> "Q. When you say some ingredients, you mean a foreign substance? A. Some foreign substance that will act rapidly with hydrofluoric acid" (Case, p. 249, ll. 1-18).
>
> "Q. In the question that was asked you, the suggestion was made to you that the evolution of gas occurred 15 or 20 minutes after it was filled, and in your opinion you say it was due to some foreign substance in there at the time the acid was put into the jug? A. I think, Mr. Ashmead, the violence of the explosion from the description that was given to me there must have been foreign material there in order to create such violence. If there was simply a pacification and the cork was put in there it would not be hot. It would not exhibit such violence as this and eventually explode" (Case, p. 249, ll. 26-40).

Dr. Friedman, who was the Chief Chemist of the Charles Cooper & Company, Inc., and who analyzed a portion of the acid contained in the jug (Exhibit P-G-1) which evolved gas, testified as follows:

> "Q. From your examination of the facts as you have revealed them, what in your opinion was the cause of the accident? A. To me there is no doubt whatever that the accident was caused by siliceous material mixed with some lime, a small amount of lime, iron and dirt and that the siliceous matter was caked to the jug, to the bottom and sides of the jug and in its reaction with hydrofluoric acid afterwards, in time there was enough pressure created to expel the cork and display (spray) part of the contents on the victims" (Case, p. 405, ll. 8-20).

Dr. Grosvenor, an expert employed by the defendant to make a special investigation of the cause of the accident (Case, p. 419, ll. 26-31) and who visited the monument works of Hopper (Case, p. 420, ll. 16-18) and of the florist (Case, p. 420, ll. 22-23) and who made a chemical examination of the acid still remaining in the jug (Exhibit P-G-1) which evolved gas, testified as follows:

> "Q. As the result of your investigation, in your opinion, what was the probable cause of the expulsion of the gas which occurred in this jug number one, what was it? A. The presence in the jug at some time previous to its being offered for filling, of a siliceous mineral material, together with enough moisture, and I think also dilute or weakened hydrofluoric acid to cause that material to center together or cement itself together into a hard cake; the period prior to that filling was a considerable one, because——" (Case, p. 425, ll. 24-34).

"The Court: Eliminate the jug entirely. What in your opinion were the ingredients that went into the formation of, or that produced or were producing the cause of this explosion?

"The Witness: A hard caked, siliceous material, caked so hard that the action was very slow when the hydrofluoric acid was added to it.

"The Court: Would that lead to any conclusion of the component parts of that compound which you say was the encrustation?

"The Witness: As to the component parts, the examination of the liquid would indicate, the liquid left in exhibit P-1, would indicate there the general character, and their relative proportions. An examination of the results obtained with similar materials under different conditions would indicate the character or physical condition of these materials at the time when the hydrofluoric acid was added to them.

"The Court: Can you state them now?

"The Witness: The condition of the material?

"The Court: Speaking of the component parts?

"The Witness: Yes, sir. There was a considerable amount of silica, probably a portion of it free and a portion of it combined in some mineral. There was some iron, a small quantity of lime, some illumina, and a little iron oxide. Those were the general component parts.

"The Court: Were you able further to define the silica as to whether it was pure silica, or whether it contained sand and other minerals mixed in sand?

"The Witness: Probably both, and in sand; in sand there is thought to be some free silica, as minute grains. There is also generally in most sand combined, silica, as silicate, felspar is a combined silica, ordinary clay is a combined silica present as a silicate. One is not able to say whether any of the material was free in the sense of the uncombined in this case only because there are apparently minute granules of silica which have not been completely affected, and which would not be formed in the reaction. So that the chances are there was some very fine sand there present at the time when the hydrofluoric acid was in that.

"The Court: Not imprisoned within the compound mixture; why not within the compound?

"The Witness: It would be located in the compound, imprisoned within it, but not the chemical compound, it was mechanically held.

"Q. Mechanically held, you say? A. Yes, sir.

"Q. Would that indicate material such as might be found in a florist's, such as you say? A. That type of material in part, yes, sir" Case, p. 427, ll. 24-40; p. 428, ll. 1-40; p. 429, ll. 1-16).

At the completion of the plaintiffs' case a motion for non-suit was made in each case. The grounds for the motion appear on pages 280-282 of the State of Case.

At the close of the testimony, a motion for the direction of a verdict in favor of the defendant was made in each case. The grounds for the motion appear on pages 433-436 of the State of Case.

The Grounds of Appeal Relied upon by the Defendant-Appellant.

The grounds of appeal upon which the defendant relies are as follows:

1. The judgment is contrary to law.

2. The trial court erred in giving judgment in favor of the plaintiff and against the defendant.

3. The trial court refused to non-suit the plaintiff (Case, p. 433, ll. 27-35; Grounds of Appeal, p.

2, ll. 28-29; p. 18, ll. 26-27; p. 41, ll. 29-30; p. 66, ll. 30-31).

4. The trial court refused to direct a verdict in favor of the defendant (Case, p. 436, ll. 1-9; Grounds of Appeal, p. 2, ll. 31-32; p. 18, ll. 28-29; p. 41, ll. 31-32; p. 66, ll. 32-33).

The trial court refused to charge the jury as follows:

5. There is no evidence in this case that the accident was the result of the presence or lack of paraffin on the cork used (Case, p. 467, ll. 34-36; p. 459, ll. 31-32; p. 462, ll. 10-12; Grounds of Appeal, p. 2, ll. 33-37; p. 18, ll. 31-35; p. 41, ll. 35-39; p. 66, ll. 36-40).

6. The jug having been furnished by the purchaser the defendant had the right to assume that it was in fit condition to be filled with hydrofluoric acid (Case, p. 467, ll. 37-40; p. 459, ll. 33-34; p. 462, ll. 10-12; Grounds of Appeal, p. 2, ll. 39-40; p. 3, ll. 1-3; p. 18, ll. 36-41; p. 41, l. 40; p. 42, ll. 1-3; p. 67, ll. 1-9).

7. Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it (Case, p. 468, ll. 1-3; p. 459, ll. 36-37; p. 462, ll. 10-12; Grounds of Appeal, p. 3, ll. 10-12; p. 19, ll. 6-8; p. 42, ll. 10-13; p. 67, ll. 13-15).

8. There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled (Case, p. 468, ll. 7-10; p. 459, ll. 39-40; p. 462, ll. 10-12; Grounds of Appeal, p. 3, ll. 16-18; p. 19, ll. 12-14; p. 42, ll. 16-18; p. 67, ll. 19-21).

9. If you find that the accident was the result of foreign matter in the jug, the defendant, under

the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred (Case, p. 468, ll. 11-18; p. 460, ll. 1-2; p. 462, ll. 10-12; Grounds of Appeal, p. 3, ll. 21-27; p. 19, ll. 19-25; p. 42, ll. 22-28; p. 67, ll. 25-31).

10. There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any foreign matter such as would naturally and proximately cause the accident which occurred (Case, p. 468, ll. 19-24; p. 460, ll. 6-7; p. 462, ll. 10-12; Grounds of Appeal, p. 3, ll. 31-35; p. 19, ll. 28-32; p. 42, ll. 32-36; p. 67, ll. 34-38).

11. If you find that the accident was the result of the action of the hydrofluoric acid placed in the jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred (Case, p. 468, ll. 25-33; p. 460, ll. 9-10; p. 462, ll. 10-12; Grounds of Appeal, p. 3, ll. 39-40; p. 4, ll. 1-11; p. 19, ll. 36-40; p. 20, ll. 1-4; p. 42, ll. 39-40; p. 43, ll. 1-11; p. 68, ll. 1-13).

12. There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred (Case, p. 468, ll. 34-40; p. 460, ll. 11-12; p. 462, ll. 10-12; Grounds of Appeal, p. 4, ll. 15-20; p. 20, ll. 11-16; p. 43, ll. 15-20; p. 68, ll. 17-22).

13. Under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them (Case, p. 469, ll. 1-12; p. 460, ll. 14-17; p. 462, ll. 10-12; Grounds of Appeal, p. 4, ll. 24-28; p. 20, ll. 21-25; p. 43, ll. 23-27; p. 68, ll. 25-29).

14. If you find that defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it (Case, p. 469, ll. 25-31; p. 460, ll. 35-39; p. 462, ll. 10-12; Grounds of Appeal, p. 4, ll. 31-37; p. 20, ll. 28-34; p. 43, ll. 31-37; p. 68, ll. 33-39).

The trial court charged the jury as follows:

15. "There can be no doubt from the testimony in these cases that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling and handling of the jug in question at this time" (Case, p. 441, ll. 38-41; p. 442, ll. 1-11; p. 462, ll. 21-26; Grounds of Appeal, p. 5, ll. 1-15; p. 20, ll. 37-40; p. 21, ll. 1-10; p. 44, ll. 1-15; p. 69, ll 1-15).

16. "Furthermore, you must remember that the test with respect to inspection of the jug before filling, in not whether there was some possible infallible test, nor can the defendant be held for

failure to apply some infallible test, because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved" (Case, p. 442, ll. 30-42; p. 462, ll. 27-33; Grounds of Appeal, p. 5, ll. 18-30; p. 21, ll. 14-25; p. 44, ll. 19-30; p. 69, ll. 19-30).

17. "The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug" (Case, p. 447, ll. 22-27; p. 462, ll. 34-40; p. 463, ll. 1-14; Grounds of Appeal, p. 5, ll. 33-38; p. 21, ll. 27-32; p. 44, ll. 33-38; p. 69, ll. 33-38).

18. "In order to establish proximate cause, it is necessary in the first place that there be a casual connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.

"Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the chain of circumstances leading up to the injury, and which in the natural continuous sequence, unbroken by any new independent cause, produced the injury" (Case, p. 448, ll. 8-24; p. 463, ll. 15-24; Grounds of Appeal, p. 6, ll.

1-22; p. 21, ll. 35-40; p. 22, ll. 1-15; p. 45, ll. 1-22; p. 70, ll. 1-23).

19. "Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterization that I make with respect to that, that the danger involved is limited in that respect" (Case, p. 464, ll. 7-14; Grounds of Appeal, p. 6, ll. 25-32; p. 22, ll. 18-26; p. 45, ll. 26-34; p. 70, ll 25-33).

The Court Erred in Denying the Defendant's Motions for a Non-suit and Direction of a Verdict.

At the close of the plaintiffs' case a motion for non-suit in each case was made on behalf of the defendant (Case, p. 280, ll. 32 to p. 282, l. 9). The trial court withheld its decision thereon for the time being, but later denied the motion and exception was duly taken (Case, p. 282, ll. 16-17; p. 433, ll. 25-35).

At the close of the testimony, the defendant made a motion for a direction of a verdict (Case, p. 433, l. 36 to p. 436, l. 5). This motion was also denied and exception duly taken (Case, p. 436, ll. 6-8).

The grounds for the motion of non-suit appear on pages 280-282 and of the motion for a direction of verdict on pages 433-436 of the State of Case.

As set forth in the statement of facts, all of the experts produced by either plaintiffs or defendant agreed that the accident was due to a foreign substance in the jug at the time it was filled (Case,

p. 219, ll. 1-10; p. 249, ll. 1-18, 26-40; p. 405, ll. 8-20; p. 425, ll. 24-34; p. 427, ll. 24-40; p. 428, ll. 1-40; p. 429, ll. 1-16). The ~~examination of the~~ portion of the acid and of the encrustation still remaining in the jug after the accident when analyzed was found to be of a siliceous character (Case, p. 209, ll. 20-34; p. 209, ll. 1-20; p. 249, ll. 1-18; p. 249, ll. 26-40; p. 405, ll. 8-20; p. 25, ll. 24-34; p. 427, ll. 24-40; p. 428, ll. 1-40; p. 429, ll. 1-16). There was not the slightest suggestion in the case that the accident was due to any other cause than said siliceous matter and as testified by Dr. Grosvenor who was the only expert who had visited the place of business of the florist from which the jugs came was of a character that might be found in such a place (Case, p. 428, ll. 22-40; p. 429, ll. 1-14).

It also was testified to by all the experts produced by both the plaintiffs and defendant that if sand or other siliceous matter gets into a container moist with or containing a small portion of hydrofluoric acid the result is that the hydrofluoric acid permeates the sand and cements it together, forming an encrustation of the material which tenaciously adheres to the container. On this point, Dr. Meerbott, one of the experts produced by the plaintiffs, said—

> "Q. Hydrofluoric acid would have upon sand, if there was not sufficient hydrofluoric acid to neutralize or polarize all of the sand, a cementing effect, wouldn't it, just the same as water? A. Only if the acid does not react upon the silicon or sand that was there. Then there would be some unacted upon sand that would be probably cemented or coated to the container or it may be encrusted over the surface and not be cemented below.
>
> "Q. And be a solid mass? A. Not necessarily a solid mass. It may be simply coated over the surface and the under part of it, the lower part of it would be quite free but the

surface no doubt would be coated, a sort of glaze.'' (Case, p. 244, ll. 9-24.)

Dr. Pond, the other expert called by the plaintiffs, testified as follows:

> ''Q. I understand you to say that if a foreign substance got in a receptacle of hydrofluoric acid, and there was more foreign substance than the acid was sufficient to neutralize or polarize, then the effect would be to make a plastic mass or mat it down. I think you said that? A. I should think it would.
> ''Q. It would form a glazed surface, would it not? A. I don't know of a glazed surface, it might.
> ''Q. It would become a composite mass? A. Yes, it might.'' (Case, p. 262, ll. 30-40.)

Dr. Friedman, subsequent to the accident, made a series of experiments for the purpose, if possible, of ascertaining the cause of the accident. He testified as follows:

> ''Q. Now, what next did you do to find out what was the cause of this accident in your investigation at the chemical plant? A. We tried to find out how it was possible there should be silica in that jug and the man that inverted the jug could not find any; because the only suspicion we could turn to was that that silica was caked to the jug, to the sides or to the bottom. We wanted to ascertain, is it possible to produce a cake like that, and for that purpose we left a little acid in the jug and poured silica, siliceous matter, mixed and tried a little lime with that and let it stand and found that it became a hard cake.
> ''Q. Would that cake stick to the jug? A. It does. We tried to invert it and none of it came out on inverting the jug.
> ''Q. Did it come out on tapping? A. No, it would not.
> ''Q. No part of it? A. Not even a part.
> ''Q. Did you make that experiment in the open container as well? A. In the open container.

> ''Q. Will you describe just what happened when that action had taken place, what was the appearance, did it have a glazed surface? A. A smooth surface.
> ''Q. Perfectly smooth like this (indicating)? A. About; it was like a glaze, smooth.
> ''Q. A glazed surface? A. Yes, sir.'' (Case, p. 398, ll. 32-40; p. 399, ll. 1-22.

Dr. Grosvenor also made similar experiments and testified as follows:

> ''Q. Did you make any cakes with siliceous material? A. That was one of the points I investigated. I investigated that a good deal of necessity, because it seemed to me to be an extremely important point, to know what the action of this material might be when exposed to such weak, or spent hydrofluoric acid as is likely to be left in a jug.
> ''Q. What was the result of these experiments? A. That the tendency of these materials is to form more or less compact, hard, resistant cakes, either on the walls or bottom of the container, according to the position in which it lies or stands, and that such cakes are slightly reacting——
> ''Q. You found that it made that sort of cake? A. It did.
> ''Q. What was the character of that cake with respect to its tenacity to the jug or container? A. In nearly all cases, if the material was resting in contact with the walls of the jug, as it would be, just dropped into the jug, the material was very firmly cemented and attached to the walls'' (Case, p. 422, ll. 12-34).

All of the experts, produced by both the plaintiffs and defendant agreed that if subsequently to the formation of such a tenacious siliceous mass, the jug was refilled with hydrofluoric acid, the acid would act upon the mass with a resulting evolution of gas. That the action would be very slow at first but that eventually the acid

would work itself into the small cracks and as it permeated the mass it would attack the silica contained therein and as the mass broke up the action would become suddenly violent. That the resulting evolution of gas would blow out the cork and the gas and the acid would spray from the container. Dr. Meerbott, one of the plaintiffs' experts, testified as follows:

> "Q. If you take a mass of sand which has been partially treated with hydrofluoric acid, but not fully neutralized by the hydrofluoric acid and then allowed to dry, do you know as a matter of your experience whether or not in putting hydrofluoric acid on that mass that the action would be very, very slow at first? A. I should say that if there is an encrustation there, there is danger of a crack in the encrustation and then there would be an evolution of gas. If there was a new exposure, wherever hydrofluoric acid came in contact with it the temperature rises and there would be a further stirring up of the mass, the chemical action would continue.
>
> "Q. So that it would be very slow in the beginning? A. I don't know, that it is dependent upon the measure it is exposed to.
>
> "Q. Then when the action got stronger as time goes on, the action would become stronger, wouldn't it, and the whole amount would spring up? A. Yes, and there would be a temperature, the action would be accelerated.
>
> "Q. And the part that was sticking to the container, that would break out from the sides and deposit in the acid? A. Possibly so" (Case, p. 246, ll. 10-35).

Dr. Pond, the other expert produced by the plaintiffs, testified as follows:

> "Q. Doctor, assuming a small quantity of silica, coming in contact with hydrofluoric acid, how soon thereafter will the reaction commence or would it commence immediately upon contact? A. It depends on the condition of the silica.
>
> "Q. Let us assume pure silica. A. Pure silica, free, the action would commence approximately at once.
>
> "Q. Assuming sand, which I believe you told us contained a large percentage of silica. A. The action probably would commence very promptly.
>
> "Q. By very promptly you mean what? A. Very quickly.
>
> "The Court: Would it be within the passage of a few seconds or a few minutes?
>
> "The Witness: If the sand were loose, where the acid could surround it promptly I should expect the action to commence in a few seconds. If on the other hand the sand might be together so that the acid could not come in contact with pure silica, it might take the action longer, it would take longer to start the certain portions of it, and gradually work in and become more violent all the time" (Case, p. 258, ll. 8-33).

Dr. Friedman who made a great number of experiments testified on this point as follows:

> "Q. Will you detail these? A. Why, putting that pure hydrofluoric acid on that hard cake, for some time, for quite a few minutes there was no reaction, there was no physical or noticeable reaction whatever. After a while, I would say about eight or ten minutes, it started to get slightly warm and as more heat was liberated the reaction became gradually visible and finally became quite violent.
>
> "Q. Was there a violent evolution of gas? A. Afterwards a very violent evolution of gas" (Case, 402, ll. 1-14).

Dr. Grosvenor testified as follows:

> "Q. Now, Doctor, in your opinion, how long would it take for chemically 60 per cent. hydrofluoric acid to act upon such a mass as

you have described, before there would be a violent evolution of gas or a creation of an intense heat? A. As I stated, that would depend on the character of the material, on the age of the complete setting of the cake, on the amount of the acid, and other circumstances; it may be fifteen or twenty minutes, it may be an hour or two (Case, p. 429, ll. 16-25).

* * * * * *

"Q. As to the exact time it would take, or would have taken this jug to evolve gas after it was filled with hydrofluoric acid, could you state any definite period without basing it upon the actual composition of what was in the jug at the time it was filled? (Case, p. 430, ll. 25-30.)

* * * * * *

"A. I could suggest an opinion in terms of events, but not in terms of minutes.

"Q. Will you give it in terms of events? A. The fact that the reaction became sufficiently violent to blow out the stopper when the jug was placed, or after the jug was placed in the car, shows that the proportion of materials and the condition of the cake was such as to require that length of time, whatever it may be precisely in minutes, which transpired between the filling of the jug and the blowing out, for the reaction to reach and proceed into the violent stage" (Case, p. 430, ll. 37-40; p. 431, ll. 1-12).

From this testimony it undisputably appears why nothing came out of the jug when Schmeltz inverted the jug and tapped it at the time it was filled. Why he did not discover the latent dangerous condition of the jug.

Under the circumstances of this case of what act of negligence was the defendant shown to have been guilty? We have been unable to find any authority and the plaintiffs have produced none

that has imposed a liability upon a defendant in such a case.

We need only present one homely illustration to demonstrate the proposition. Suppose one has an opaque jug containing wood alcohol and when the jug is about empty he should by mistake take it to a store and present it to be filled with vinegar and the storekeeper should fill it and as a consequence of the subsequent use of the contents for vinegar some member of the family should be poisoned would it be held that the storekeeper was responsible. It is uniformly held that he would not be liable in the absence of knowledge of the existence of the latent dangerous condition of the jug at the time it was filled by him.

In *Barnett* v. *Sinclair Refining Co.* (Indiana, 1925), 145 N. E. 894, the plaintiff's husband presented a can, which contained some gasoline, to the defendant to be filled with kerosene. Defendant filled the can without removing the gasoline. This created an explosive mixture and upon being exposed to heat, exploded and injured plaintiff. The lower court sustained a demurrer to plaintiff's complaint. This was upheld on appeal. The court said—

> "Neither does the amended complaint state a cause of action at common law, as the same nowhere alleges that the agent of the appellee had any knowledge that there was gasoline in the can at the time he sold the kerosene."

Cases in which gas is furnished to a consumer and the pipes or fixtures in his house prove to be defective are also analogous.

In *Smith* v. *Pawtucket Gas Co.* (R. I. 1902), 52 Atl. 1078, defendant introduced gas into plaintiff's house at the request of the tenant. There was apparently a defect in plaintiff's piping which caused an explosion. The court said—

"In the absence of any facts upon which to base an inference of duty, a court cannot infer a general obligation to inspect pipes in a private house, which are not under the control of the company, and as to which it has no apparent relation other than the fact that its gas is to be used through pipes placed therein by the owner. * * *

"The plaintiff argues that negligence is to be inferred from the fact that the company is dealing with a dangerous substance, and hence bound to use great care in its introduction. *Doubtless, this is true, so far as it relates to anything done by the company. But one who applies for gas is equally to be presumed to have knowledge of the danger, and the duty is upon him to see that his own pipes, through which the gas is to be used, are in good order.*"

Greed v. *Manufacturers' Light & Heat Co.* (Pa. 1913), 86 Atl. 95. Action for death caused by explosion of gas furnished by defendant. A verdict was directed for defendant. Affirmed. The Court said:

"In a case like this negligence is never presumed from the mere happening of the accident. He who alleges it must affirmatively prove it, or point to such circumstances as naturally and reasonably lead to the conclusion of carelessness, on the part of the accused, as the proximate cause of the occurrence which resulted in the injuries complained of. Tested by this rule, what was developed in the presentation of plaintiff's case which justified any inference of negligence on the part of the defendant company? It had nothing to do with the installation of the gas pipes. They were placed in the building by the owner or tenant of the property; and the duty of the gas company was to supply gas to the occupants, when requested. It had not installed the pipes. It had no control over them, and was in no manner responsible

for the condition in which they were to be maintained. *That responsibility rested exclusively upon the owner or tenant of the house; and, when Mrs. Dager asked that a meter be set in the apartment which she and her husband had leased, the defendant company was warranted in assuming that the interior system of pipes was sufficiently secure to permit the gas to be introduced with safety.*"

Triplett v. *Alabama Power Co.* (Ala. 1925), 104 So. 248, was a suit for injuries caused by escape of gas. Plaintiff installed a gas heater in his house and requested defendant to make gas connections. Defendant did so but did not inspect the heater before introducing the gas. The heater was defective, which resulted in the escape of gas and consequent injury to plaintiff. The court, in holding that defendant was under no duty to inspect, said:

"These conclusions are in accord with authorities which have had occasion to consider the matter. They are to the effect that defendant in such cases is not under duty, unless employed for that purpose, to inspect pipes or fixtures which are placed in the dwelling by its customer or his contractors over whom defendant has no control, and that the furnisher of gas in such cases is warranted in assuming that the interior system of pipes is sufficiently secure to permit the gas to be introduced with safety."

Okmulgee Gas. Co. v. *Kelly, et al.* (Sup. Ct. of Okla. 1924), 232 Pac. Rep. 428, was a suit for death caused by an explosion of gas furnished by defendant to the house of one Agard occupied by a tenant. The deceased was the wife of the tenant. In reversing the judgment entered upon a verdict of a jury in the court below, the court said:

"* * * the duty rested with the defendant, only to maintain inspection and make repairs over its line, which ended at the property line of the consumer. The defendant owed no duty to inspect the pipe line and gas fittings of Agard. The defendant would not be liable for injury resulting from explosions, due to defects of pipe line, gas connections and fittings on the property of Agard, *unless it had actual notice of such defects.* See notes to 32 L. R. A. (N. S.) 813; L. R. A. 1915E, 1023; Ann. Cas. 1914C at page 348.

"If the gas pipes and fittings are the property of the consumer, and there is no contractual duty resting on the gas company to inspect, the consumer, by application for gas service, assumes the burden of inspecting and maintaining the pipe and fittings on his property in a manner reasonably suited to meet the required service, and the company has the right to assume that these duties have been performed by the applicant. *Smith* v. *Pawtucket Gas Co.,* 24 R. I. 292, 52 A. 1078, 96 Am. St. Rep. 713. However, the company would be responsible for inspection and the condition of the meter and its connections which it installed on the premises of the consumer.

"If the landlord fails to properly maintain the gas connections in the property which he occupies, which results in injury to the tenant, he would be liable. *Chiles* v. *Ft. Smith Commission Co.,* 139 Ark. 489, 216 S. W. 11, 8 A. L. R. 493. *The defendant had the right to rely on the belief that Agard would discharge his duty in properly maintaining the gas fittings and connections in the property he occupied, unless the company had actual notice of the existing defects. Judson* v. *Giant Powder Co.,* 107 Cal. 549, 40 P. 1020, 29 L. R. A. 718, 48 Am. St. Rep. 146; *Emery* v. *Raleigh R. Co.,* 102 N. C. 209, 9 S. E. 139, 11 Am. St. Rep. 727; *Downey* v. *Gemini Min. Co.,* 24 Utah, 431, 68 P. 414, 91 Am. St. Rep. 798. *The defendant was not called upon to anticipate any negligence on the part of Agard in this respect. Fraler* v. *Sears Union Water Co.,* 12 Cal. 555, 73 Am. Dec. 562; *Hasie* v. *Alabama R. Co.,* 78 Miss. 413, 28 So. 941, 84 Am. St. Rep. 632, *Emery* v. *Raleigh R. Co., supra.*"

The same rules are applied in respect to injuries resulting from electricity due to the defective condition of appliances belonging to the owner or tenant. See *National Fire Insurance Co.* v. *Denver Cons. El. Co.* (Colo. 1901) 63 Pac. 949; *Memphis Consol. Gas & El. Co.* v. *Speers* (Tenn. 1904) 81 S. W. 595; *Caldwell* v. *Alley* (Ind. 1919) 123 N. E. 432.

Where, as in this case, a condition exists in a container presented by another to be refilled with a specified article or liquid the plaintiff in order to hold the dealer for damages resulting from a defective condition of the container must show that the defendant had actual knowledge of the defective condition of the container causing the injury. Upon this proposition all of the above cases are directly in point.

Most of the cases, however, that discuss the necessity of knowledge of a dangerous condition arise out of a different state of facts. Of these cases the nearest in point are the cases of bottlers who have bought their bottles from a reputable manufacturer and have filled them with carbonated or other explosive liquid and then make a sale of the filled bottle and its contents and subsequently an explosion occurs injuring the purchaser or some third party. In such cases, the bottler sells the bottle as well as its contents while in the cases already cited, and in the instant case, the defendant had nothing whatever to do with the container. This we submit is a very substantial difference in fact between the two classes of cases.

In the case of the sale of the container with the liquid in it there might be some basis for holding that the seller owed some duty to the purchaser in respect to the condition of the container but clearly such is not the case in the instance of a container produced to be refilled with a commercial product or liquid of standard grade ordered by the purchaser.

But even in the case of a dealer selling both the bottle and the included liquid the better considered cases sustain the proposition that in order to hold the dealer for damages sustained by reason of the defective condition of the container the plaintiff must show that the defendant had *actual knowledge* of the defective condition of the container, and this for the very sound reason that one who purchases a container or other article of general commerce has the right to assume that it has no latent defects and for this reason is held not to be under any duty to inspect and consequently is not chargeable with knowledge of any defect that he might have found by an inspection. See *Bates* v. *Batey & Co.* (Eng.), 1913, 3 K. B. Div. 351; *Simons* v. *Sun Ray Water Co.* (N. Y. Sup. Ct. 1917), 162 N. Y. Supp. 968.

But even assuming the rule to be, which we deny, that the defendant was obliged to inspect the containers presented by Hopper to be refilled with hydrofluoric acid, we submit that the present judgments cannot stand.

There is no evidence in this case of any fact known to the defendant concerning the container in question that would indicate in any way that it contained the foreign matter which was the cause of the evolution of gas resulting in the injuries complained of. The defendant was not bound to anticipate and search for that which was unusual and unforeseen. *Miller* v. *Swenson* (Ill.

1914), 189 Ill. App. 355; *Gould* v. *Slater Woolen Co.* (Mass. 1888), 17 N. E. 531.

Even under the rules applicable to master and servant as to the duty of inspection as repeatedly affirmed by this court no negligence was shown on the part of the defendant.

In *Stassett* v. *Taylor Iron & Steel Co.* (Ct. of E. & A. 1911), 82 N. J. L. 631, 632, this court said—

> "The gravamen of the action, as set forth in the declaration, is that the defendant negligently failed to inspect the machine or to warn the plaintiff of such latent defect, which was known, or ought to have been known, to the defendant, and was unknown to the plaintiff.
>
> "Now, the general rule is that a master is not liable for injuries resulting to a servant by reason of a latent defect of which he was ignorant, and which could not be discovered in the exercise of reasonable care and diligence. 26 Cyc. 1145.
>
> "The allegation that the latent defect in the bolt was known to the master has no proof to support it.
>
> "Nor do we think there was any evidence that reasonable care in inspection would have disclosed the defect, and in the absence of such evidence, the mere failure to inspect would not warrant holding the master liable. *Atz* v. *Newark Lime, &c. Co.*, 30 Vroom 41; *Essex County Electric Co.* v. *Kelly*, 28 *Id.* 100.
>
> "Reasonable care in the matter of inspection, when inspection is required, requires the master to make such an examination and test as a reasonably prudent man would deem necessary, under the same circumstances, for the discovery of possible defects, *and he is not required, unless put upon notice as to possible existence of defects, to employ unusual or extraordinary tests.* 26 Cyc. 1139.
>
> "The defendant had no manner of notice of the possible existence of the latent defect in the bolt, and plainly it was of such a character that an examination, such as an ordinarily prudent man would deem necessary, would

not have disclosed it. It was quite like that which gave rise to the accident in *Atz.* v. *Newark Lime, &c., Co., supra.*

"Moreover, the motor, with the ring-bolt attached for use in lifting, had been manufactured by, and was fresh from the hands of, the Darby Engineering Company, and that company was shown by the proofs to have been a reputable and experienced manufacturer, who was under contract to install the motor in the defendant's plant. At the time of the accident that contract was not complete. The motor was being moved by the defendant from a railroad freight car for the Darby company, to be later installed by the Darby company.

"Whether, under these circumstances, the defendant was under any obligation to inspect the bolt before putting it to the use for which it was admittedly supplied by a reputable and experienced manufacturer, is a question not now calling for decision. But clearly, to paraphrase the remarks of Mr. Justice Swayze in *Bauman* v. *Cowdin,* 46 Vroom 193, respecting a quite similar situation, the latent defect in the bolt, which was the cause of the accident, if attributable to negligence, was due to the negligence of the Darby Engineering Company on whose experience and reputation the defendant had a right to rely."

Surely the defendant in this case had as much right to rely upon the purchaser as to the condition of the jug which he presented to be re-filled with hydrofluoric acid as would a purchaser of a machine to rely upon the manufacturer from whom he bought it.

The authorities without a dissent hold that this is so at least in the absence of any circumstance putting him on notice of the defective condition. There were no such circumstances in the present case. Schmeltz turned the jug upside down shook and tapped it, and nothing came out. As shown

by the undisputed testimony this was not only the test in general use by all reputable manufacturers but was the only test that was practicable without endangering the destruction of the coating on the inside of the jug. All the experts agree that the sand in the jug was encrusted upon the surface of the jug. This was the reason why nothing came out when Schmeltz turned it upside down and tapped it and also the reason why the reaction upon the mass was so slow and the evolution of gas did not occur until after delivery to the car. It was undisputedly established that the cause of the injuries complained was the presence of the caked mass in the jug at the time it was delivered to the defendant by the plaintiff Hopper. The filling of the jugs with hydrofluoric acid was neither the culpable or responsible cause of the accident for it was performed in ignorance of the danger, to hold otherwise would make all dealers insurers not only of their own acts but the acts of their customers.

We respectfully submit that there was no negligent act by the defendant of either commission or omission which was shown to be the proximate cause of the injury.

The Court Erred in Submitting to the Jury the Question that the Accident Was Due to the Presence or Lack of Paraffin on the Cork Used in the Jug which Caused the Accident.

The defendant requested the Court to charge the jury as follows:

"There is no evidence in the case that the accident was the result of the presence or lack of paraffin on the cork used." (Case, p. 467, ll. 34-36, p. 459, ll. 31-32, p. 462, ll. 10-12.) (Grounds of Appeal, Case, p. 2, ll. 33-37; p. 18, ll. 31-35; p. 41, ll. 35-39; p. 66, ll. 36-40.)

Hopper testified that at the time the jugs were delivered to the car he noticed that there was no paraffin around the corks, as there had been in all previous cases when he had purchased acid from the defendant (Case, p. 93, ll. 16-20).

It was stated by Schmeltz, who filled the jugs, that the jug P-G-1, which caused the accident, looked like those used by the Charles Cooper Company in the sale of hydrofluoric acid (Case, p. 348, ll. 1-8). That in it he put one of the corks usually used by the company with paraffin on it (Case, p. 335, ll. 29-39, p. 336, ll. 9-11). That the mouth of the other jug was a different size, and that none of the paraffined corks that he had fit this jug (Case, p. 335, l. 40, p. 336, ll. 1-8), and consequently he selected another cork of proper size without paraffin and put it in this jug (Case, p. 336, ll. 6-8). That he took a hammer and pounded both of the corks flat (Case, p. 335, ll. 15-18, p. 336, ll. 12-19). It is not denied by Hopper that the corks were flush with the top of the jug at the time they had been placed in the car. It is obvious, therefore, that any inspection he could have made would not have qualified him to state with any certainty whether there was paraffin around the corks or not.

Ruhl testified that after the accident and the injured persons had been taken to the hospital, he examined the car and that there was no cork in the tall jug which caused the accident (Exhibit P-G-1) (Case, p. 352, ll. 20-23), and that the other jug, which did not evolve gas, still contained the cork intact (Case, p. 353, ll. 33-36). That he looked over the automobile for the missing cork from jug P-G-1 and found a cork lying on the front seat of the car, which cork fit the tall jug (P-G-1) which caused the accident and that it was compressed in a way indicating that it had been used in the jug (Case, p. 352, ll. 23-40, p. 353,

ll. 1-3). That this cork had paraffin on it. It was introduced into evidence and is Exhibit D-9, which in fact shows that it had been treated with paraffin.

Ruhl carried the two jugs into the office and as a matter of precaution removed the cork from jug P-G-2, which did not evolve gas (Case, p. 354, ll. 8-18). Plaintiff's father, Henry Hopper, visited the plant shortly after the accident and took this cork (Case, p. 354, ll. 24-25). It was not produced at the trial. Ruhl testified, however, that it did not have paraffin on it, confirming absolutely the testimony of Schmeltz.

But be that as it may, the evidence is undisputed that the accident was not caused by the presence or absence of paraffin on either of the corks, but by the presence of a caked mass of siliceous matter in the jug at the time it was delivered to Charles Cooper & Company for refilling.

The paraffin is put on the corks simply to make them last longer. (Case, p. 391, ll. 8-30.) Also we have the express testimony of the plaintiffs' experts that there is no difference in the chemical reaction which takes place when hydrofluoric acid is poured into a jug containing foreign matter, whether the jug is corked or uncorked and that in no case would the action by hydrofluoric acid on a cork cause an explosion. (Case, p. 270, ll. 23-26; p. 263, ll. 12-21; p. 391, ll. 8-30.)

Dr. Meerbott, one of the plaintiffs' experts, testified as follows:

> "Q. Paraffin is put on the cork to protect the cork? A. Paraffin is put on the cork to protect the cork as far as I know, yes, sir." (Case, p. 269, ll. 7-9.)
>
> "Q. And the action of the hydrofluoric acid on the cork would be very slight anyway? A. Yes, on the cork it would be very slight, might not be any action.

"Q. Even without paraffin? A. Well, there would be no action if it were paraffin." (Case, p. 269, ll. 34-40.)

"Q. There wouldn't be any chemical action on the cork resulting in an explosion? A. I don't think so." (Case, p. 270, ll. 23-26.)

Dr. Pond, the other expert called on behalf of the plaintiffs, testified as follows:

"Q. Now, you have spoken about the effect of hydrofluoric acid on different substances. What effect does hydrofluoric acid have on corks? A. * * * I haven't noticed any effect.

"Q. No effect? A. I would not say no effect, but no appreciable effect in a limited time." (Case, p. 263, ll. 12-21.)

Dr. Friedman testified as follows:

"Q. Now, there has been some discussion here about corks, paraffined corks, and unparaffined corks, will you just describe to the jury, explain to the jury, what the paraffin is used in these jugs for? A. Those jugs are usually corked for the simple reason, so that the man who handles them does not get any on his hands, that is the main purpose of corking. The cork is attacked by hydrofluoric acid, in other words, the cork will be destroyed in time by the hydrofluoric acid. On the other hand, if it is paraffined, and for that reason these corks are paraffined, as they will last longer and they will be able to use these corks much longer.

"Q. And in hydrofluoric acid you put a paraffined cork in there for the reason that it will act as a cork longer than a dry cork? A. Correct.

"Q. The action of hydrofluoric acid on a cork which is paraffined is very slow or a rapid action? A. Slow action.

"Q. How long would it take before there would be any preceptible action at all? A. Days and weeks." (Case, p. 391, ll. 8-30.)

But aside from all this the fact that cork is not an explosive or gaseous substance is a matter of such common knowledge and experience that the court itself may take judicial notice of it. Our system of jurisprudence is not based on the theory that our courts are entirely ignorant of such a commonplace truth.

We submit that the Court erred in refusing to take from the jury the question of any negligence on the part of the defendant in respect to the character of the corks used.

The Plaintiff Hopper Was Guilty of Contributory Negligence, which Negligence Was the Proximate Cause of the Injury.

If there be any evidence of negligence on the part of the defendant, which we deny, it is certainly true that the plaintiff Hopper was guilty of contributory negligence and that such negligence broke the causal connection between any act of the defendant and the injuries.

From Hopper's own testimony it appears that he was entirely familiar with hydrofluoric acid and its action. He had been working at his father's monument works for eight or nine years prior to the accident and had occasion to use hydrofluoric acid during all of that period (Case, p. 104, ll. 1-12). He had worked with it daily (Case, p. 104, ll. 13-14). He had observed its action on marble and granite and of its action upon sand (Case, p. 104, ll. 28-40; p. 105, ll. 1-2). He knew that it had to be greatly diluted in order to prevent damage to granite or marble (Case, p. 104, ll. 35-40; p. 105, ll. 1-2). He had repeatedly noticed that when the undiluted acid came in contact with sand there was a particularly violent fuming action (Case, p. 104, ll. 32-34; p. 105, ll. 5-11). He knew

that the jugs had come from a florists' place in which all of the work was in connection with soil or sand (Case, p. 105, ll. 30-40). He knew that the use made of hydrofluoric acid by the florist was the cleansing of glass (Case, p. 106, ll. 1-3). He must have known that in such a place that sand and dust would be apt to collect on the glass of the hot houses.

He stated that they always kept their own jugs stoppered. He knew that when the jugs in question were delivered to him that they were unstoppered (Case, p. 106, ll. 18-36) and consequently in view of his knowledge of the origin and the prior use of the jugs was chargeable with knowledge of the probability of their containing sand or siliceous matter. He knew that a solution of ten pounds to the gallon indicated the strength of the acid (Case, p. 84, ll. 21-29). He knew that he was to order a strong solution of hydrofluoric acid (Case, p. 84, ll. 14-29). Notwithstanding these facts he testified that he made no examination of the jugs and had made no effort to cleanse or clear them of any foreign matter (Case, p. 106, ll. 37-40; p. 107, ll. 1-14).

He had been purchasing hydrofluoric acid from the defendant for the past eight or nine years (Case, p. 83, ll. 12-20). He testified that in his past experience he had always had to wait an hour and a half or two hours until they *made* it up (Case, p. 92, ll. 31-41). In this instance, he only had to wait fifteen or twenty minutes (Case, p. 87, ll. 24-40; p. 88, ll. 1-5).

While it appeared by the undisputed testimony that the defendant had not made hydrofluoric acid for at least fourteen years previous to the accident and that the difference in the time Hopper had to wait on other occasions and the time he had to wait on this occasion was merely due to the availability or lack of availability of some one

competent to fill the jug at the time the respective orders were given, nevertheless to Hopper this difference in time was an unusual circumstance.

He testified that at the time the jugs were delivered to him filled with acid, he made an inspection of the jugs (Case, p. 89, ll. 15-40; p. 90, ll. 1-25) and found what seemed to him other unusual circumstances and conditions.

He says that he noticed that the corks did not have paraffin on them (Case, p. 93, ll. 10-40; p. 94, ll. 1-8). This was to him a very unusual occurrence as he said this was the only instance in the eight or nine years that he had been buying acid, that this had occurred (Case, p. 93, ll. 25-40; p. 94, ll. 1-5). While as a matter of fact the jug which caused the accident was corked with a paraffined cork, he did not notice it and while in fact this made no difference he thought it did and consequently was called upon to act as if in fact the cork had no paraffin on it.

But far more important and of vital significance he also noticed that both jugs were warm and that the jug which subsequently caused the accident was very hot (Case, p. 113, ll. 22-30). So hot that he could not hold his hand upon it very long (Case, p. 117, ll. 35-40).

As before stated, he was perfectly familiar with the violent fuming action of hydrofluoric acid when it came in contact with sand as well as with the prior history and use of the jugs (Case, p. 104, ll. 28-40; p. 105, ll. 1-2, 30-40; p. 106, ll. 1-5). He was entirely familiar with the fact that the acid was corrosive in character (Case, p. 104, ll. 15-26) and that it was dangerous (Case, p. 104, ll. 15-26) and would seriously burn the flesh if it should come into contact with it (Case, p. 104, ll. 20-26). He knew that his car was a closed car with rear windows which could not be opened but

slightly and that the doors were closed (Case, p. 88, ll. 15-25). He had three invited guests in the car (Case, p. 88, ll. 13-15).

Such circumstances and familiarity with the acid and its dangerous character placed upon him a duty not to subject himself or his invited guests to the probable dangers involved in such a situation. Notwithstanding this fact, he failed to notify the occupants of the car of the danger. He failed to request them to get out of the car until the unusual conditions which he had observed had been investigated but on the contrary, without reporting these unusual and dangerous conditions to the office of the defendant (Case, p. 113, ll. 33-34); and with full consciousness of the fuming and corrosive character of the acid and of the dangers to human flesh involved in such a situation started away with the jugs and his invited guests in a closed car.

Every circumstance upon which the plaintiffs can rely to establish the alleged negligence of the defendant applies with equal or greater force to Hopper.

Moreover many facts and circumstances were known to him of which the defendant was never cognizant. He had a familiarity with the prior history of the jugs and the use that had been made of them which the defendant did not have. He had knowledge that the jugs had not been cleaned by him at least. He had knowledge that the jugs were hot and must have known that some reaction of the acid had started therein. He knew that he had a closed car in which there were three of his friends whom he had invited to come along with him and that any escape of the acid or its fumes from the jug would be particularly serious.

Surely if it can be said that the defendant was in any way negligent certainly it must follow that Hopper was guilty of contributory negligence.

It is fundamental that one who knows of the danger from the negligence of another and understands and appreciates the risk therefrom and voluntarily exposes himself to it, is precluded from recovering for an injury resulting from such exposure.

On the one hand, the plaintiff Hopper had invited the other occupants of the car to come to Newark with him to get acid and consequently was under a duty to exercise reasonable care for their protection.

On the other hand, the defendant Charles Cooper & Company, Inc., had no relations with them whatever and had only contracted with Hopper for the sale of the acid to him. As already pointed out there is no question but that the acid was of a high grade commercial quality and of the character that he ordered. Nor was the defendant company in any way responsible for the condition of the jug which occasioned the accident. It owed no duty to either Hopper or the other occupants of the car in respect thereto.

Under these circumstances even if it should be held that the defendant was under a duty to inspect the jug and that it was in any wise derelict in this duty, nevertheless such negligence was not the proximate cause of the accident. It is well settled that there is no right of action where the duty of another person to exercise care intervenes between the neglect of the defendant and the injury of the plaintiff. The cases on this point are numerous but we need only refer to one or two.

One of the leading cases in this country in support of this proposition is the case of *Curtain* v. *Somerset* (Pa. 1891) 21 Atl. 244. In that case it was held that—

> "A contractor who has completed a building and turned it over to the owner is not

liable to a third person, who is afterwards injured in an accident caused by the defective construction of the building, since the contractor's duty is only to the owner."

The court said:

"The building was completed, and accepted by the hotel company in the presence of their architect and the chairman of the building committee. Subsequently, at an entertainment given at the hotel by the proprietor or lessee, a crowd of persons, some 20 or more, having collected on the porch, a girder, which in part supported it, gave way, the porch fell, and by reason thereof the plaintiff was injured. He brought this suit in the court below against the contractor to recover damages for the injury he thus sustained."

Held, that he could not recover.

"What duty did the defendant owe to the plaintiff? The latter was not upon the porch by the invitation of the defendant. The proprietor of the hotel, or whoever invited or procured the presence of the plaintiff there, may be said to have owed him a duty—the duty of ascertaining that the porch was of sufficient strength to safely hold the guests whom he had invited. The plaintiff contended, however, that as the hotel company was not responsible, the contractor must necessarily be so. This, however, is moving in a circle. It by no means follows that, because A is not responsible for an accident, B or some other person must be. * * *

"The true rule, which we think applicable to it, may be found in *Wharton on Negligence,* Sec. 439. It is as follows: 'There must be casual connection between the negligence and the hurt; and such casual connection is interrupted by the interposition between the negligence and the hurt of any independent human agency. Thus, a contractor is employed by a city to build a bridge in a workmanlike manner, and after he has finished his work, and it has been accepted by the city, a traveler is hurt while passing over it by a defect caused by the contractor's negligence.

Now, the contractor may be liable upon his contract to the city for his negligence, but he is not liable to the traveler in an action on the case for damages. The reason sometimes given to sustain such a conclusion is that otherwise there would be no end to suits. *But a better ground is that there is no casual connection between the traveler's hurt and the contractor's negligence.* The traveler reposed no confidence on the contractor, nor did the contractor accept any confidence from the traveler. The traveler, no doubt, reposed confidence on the city that it would have its bridges and highways in good order; but between the contractor and the traveler intervened the city, an *independent,* responsible agent, breaking the casual connection.' In section 440 the same learned author refers to the case of a contract with the postmaster general to furnish certain road-worthy carriages; and after the delivery of the carriages the plaintiff is injured in using one of them, by reason of the carriage having been defectively built. 'No doubt,' says Mr. Wharton, 'had the carriage been built for the plaintiff, he could have recovered from the contractor. But there is no confidence exchanged between him and the contractor; and between them, *breaking the casual connection,* is the postmaster general, acting independently, forming a distinct legal center of responsibilities and duties.' "

The same principle is well settled in our own state. In *Styles* v. *Long Co.* (Ct. of E. & A. 1903) 70 N. J. L. 301, 302, Mr. Justice Swazy, in speaking for this court, said—

> "The ordinary rule is that an action for a breach of contract must be brought either by a party to the contract or some one for whose benefit the contract is made. There are cases where the existence of the contract subjects the parties to duties which are independent of the duty to perform the contract. The duty

of carriers of passengers (*Marshall* v. *York, Newcastle and Berwick Railway Co.,* 11 Com. B. 655); the duty of a vendor of drugs (*Thomas* v. *Winchester,* 6 N. Y. 397); the duty of the vendor of a gun to a person for whom it was bought (*Langridge* v. *Levy,* 2 Mees. & W. 519; 4 Id. 337); the duty of a person who participates in the management of a highly dangerous agency (*Van Winkle* v. *American Steam Boiler Co.,* 23 Vroom 240); the duty of a county clerk under the statute in canceling a mortgage (*Appleby* v. *State,* 16 Id. 161); are all of them instances where the duty was held to be a positive duty, independent of the contract, although arising out of a state of facts created by the contract. The contract creates the situation which gives rise to the duty, very much as a conveyance of property imposes upon the grantee the duties of an owner of property—duties which would not be increased or diminished by covenants inserted in his deed.

"Whether in any particular case a right of action in favor of third persons exists is a question of difficulty, upon which the cases are hard to reconcile upon general principles. *It is, I think safe to say that there is no right of action where the duty of another person to exercise care intervenes between the neglect of the defendant and the injury of the plaintiff.* A good illustration is afforded by *Thomas* v. *Winchester,* above cited. If in that case it had been possible for the retail druggist to ascertain, by ordinary care in inspection, the fact that the article sold was belladonna, the plaintiff's remedy would have been against his immediate vendor, not against the wholesale dealer. Another illustration is afforded by *Marvin Safe Company* v. *Ward,* 17 Vroom 19, a case very similar to the present case, which was decided by the Supreme Court in 1884 and has never been questioned. The duty to provide and care for certain bridges rests, primarily, upon the county authorities, and by statute an action is given against the board of chosen freeholders for neglect to

perform that duty. Gen. Stat., p. 307, Sec. 9, act of March 15th, 1860. There are several cases of actions for failure to erect, rebuild or repair bridges to be found in our reports. All of them, except the Marvin Safe Company case, were against the county. *Ripley* v. *Freeholders of Essex and Hudson,* 11 Vroom 45; *Jernee* v. *Monmouth,* 23 Id. 553; *Freeholders of Morris* v. *Hough,* 26 Id. 628; *Mahnken* v. *Freeholders of Monmouth,* 33 Id. 404; *Weeks* v. *Freeholders of Somerset,* 39 Id. 622.

"In the only instance in which a contractor for a bridge has been sued, the plaintiff failed to maintain his action against the contractor.

"*In a case where the duty to the plaintiff rests in the first instance, upon some one not the defendant, and the plaintiff is injured by a failure to perform that duty, the proximate cause of the injury is the failure of the one who is under a duty immediately to the plaintiff. The failure of one whose duty is primarily to the third person, but not to the plaintiff, may, indeed, be a cause of the injury, but it is a remote, not a proximate, cause.* The principle, as stated by Mr. Beven, is in effect the same, though couched in somewhat different language. *Beven Negl.,* 61, where the English cases are stated and considered."

In 33 Harvard Law Review 633 at page 637 Professor Beale in an article entitled "The Proximate Consequences of an Act" in discussing the same point says:

> "The *starting-point* of any investigation of *legal liability is some act or some non-action of a human being.* But whereas an actor may always rightly be held to answer for the consequences of his act, since he has taken it upon himself to change the course of events, it is otherwise with a non-actor; he should be held responsible only if his failure to act was in itself a legal wrong, *that is, if he had a duty to act.* The non-action of one who has no legal duty to act is nothing. It does not

> alter the course of events, and therefore it has no consequences. It is true that the omission of a legal duty also does not alter the course of events; *but the non-actor, having been obliged by law to change events, is rightly held responsible for the consequences of not doing so.*''

It follows that the negligence of Hopper was not only the proximate cause of the injury to himself but also to the other occupants of the car, as well.

The Court Erred in Refusing to Charge that the Defendant Was under no Duty to Inspect the Jug Presented by the Plaintiff Hopper.

The Court was requested and refused to charge as follows:

> ''Upon the evidence in the case the defendant was under no duty to inspect the jug which caused the accident before filling it'' (Case, p. 468, ll. 1-3; p. 459, ll. 36-37; Exception p. 462, ll. 10-12; Grounds of Appeal, Case, p. 3, ll. 10-12; p. 19, ll. 7-9; p. 42, ll. 10-12; p. 67, ll. 13-15).

As already shown, the cases are uniform in holding that where, as in this case, the container is presented by a purchaser to be refilled with a particular commodity ordered by the purchaser, the duty is upon the purchaser to see that the container is in proper condition to be filled. The dealer is not called upon to anticipate any negligence on the part of the purchaser in this respect but is entitled to assume that it is in a proper condition to permit the commodity ordered to be introduced in safety unless he has actual notice of such defective condition. *Barnett* vs. *Sinclair Oil Refining Co.* (Ind., 1925), 145 N. E. 894; *Smith* vs. *Pawtucket* (R. I., 1902), 52 Atl. 1078; *Greed* vs.

Manufacturers Light & Heat Co. (Pa., 1913), 86 Atl. 95; *Triplett* vs. *Alabama Power Co.* (Ala., 1925), 104 So. 248; *Okmulgee Gas Co.* vs. *Kelly* (Okla., 1924), 232 Pac. 428. And there is not even a suggestion in the present case that the defendant had any such knowledge.

The Court Erred in Refusing to Charge that in the Absence of Any Knowledge as to the Defective Condition of the Jug at the Time It Was Filled with Acid the Defendant Could Not Be Held Guilty of Negligence.

The Court was requested and refused to charge the jury as follows:

> ''There is no evidence in this case to charge the defendant with knowledge that the jug was not in a fit condition to be filled'' (Case, p. 468, ll. 7-10; p. 459, ll. 39-40; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 3, ll. 15-18; p. 19, ll. 12-15; p. 42, ll. 16-19; p. 67, ll. 19-21).
>
> ''If you find that the accident was the result of foreign matter in the jug the defendant, under the evidence in this case, cannot be held responsible for the accident unless you find that it had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred'' (Case, p. 468, ll. 11-18; p. 460, ll. 1-2; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 3, ll. 21-27; p. 19, ll. 18-25; p. 42, ll. 22-29; p. 67, ll. 24-31).
>
> ''There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any foreign matter such as would naturally and proximately cause the accident which occurred'' (Case, p. 468, ll. 19-24; p. 460, ll. 6, 7; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 3, ll. 31-36; p. 19, ll. 27-33; p. 42, ll. 32-37; p. 67, ll. 34-39).

"If you find that the accident was the result of the action of the hydrofluoric acid placed in the jug upon foreign matter in the jug at the time the jug was delivered to the defendant, the defendant, under the evidence in this case cannot be held responsible for the accident, unless you find that the defendant had actual knowledge of such foreign matter in the jug as would naturally and proximately cause the accident which occurred" (Case, p. 468, ll. 25-33; p. 460, ll. 9-10; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 3, ll. 39-40; p. 4, ll. 1-11; p. 19, ll. 35-40; p. 20, ll. 1-8; p. 42, ll. 39-40; p. 43, ll. 1-10; p. 68, ll. 1-13).

"There is no evidence in this case to charge the defendant with knowledge that the jug which caused the accident contained any such foreign matter that when filled with hydrofluoric acid it would naturally and proximately cause the accident which occurred" (Case, p. 468, ll. 34-40; p. 460, ll. 11-12; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 4, ll. 13-19; p. 20, ll. 11-17; p. 43, ll. 15-20; p. 68, ll. 16-22).

As already stated, the sounder rule is that a dealer must have actual notice of the defective condition likely to cause injury, as he has the right to assume that the container presented by the purchaser is in a fit condition to be filled with the commodity ordered and consequently is under no duty to inspect and, therefore, is not chargeable with what he might have discovered by inspection. *Bates* vs. *Batey & Co.* (Eng.) 1913, 3 K. B. Div. 351; *Simons* v. *Sun Ray Water Co.* (N. Y. Sup. Ct. 1917) 162 N. Y. Supp. 968.

Even in the cases most favorable to the plaintiffs, it is held without exception that in a case like the present, in order to establish defendant's liability, the plaintiff must affirmatively prove that the defendant was either cognizant of the

defective condition likely to cause the injury complained of, or, at least, of such facts as should put him on notice thereof. But even if this rule be applied, there is no evidence in the case to charge the defendant with the knowledge that the jug in question was not in a fit condition to be filled or any evidence that can be said to have put in on notice thereof.

Under none of the authorities can the defendant be held chargeable with responsibility for the condition of the jug in question which it did not create and could not find by making an inspection which was the only inspection it was practicable to make without destroying the efficacy of the container.

The Court Erred in Denying Defendant's Eighteenth Request to Charge.

The Court was requested and refused to charge as follows:

> "18. If you charge that the defendant was under any duty to inspect and investigate the condition of the jug when tendered by Hopper, then we request that you charge (a) that, under the evidence of this case, the defendant was under a duty only to use such tests as were so commonly employed in such inspections that it might reasonably be deemed to have had knowledge of them" (Case, p. 469, ll. 1-12; p. 460, ll. 14-16; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 4, ll. 23-28; p. 20, ll. 20-25; p. 43, ll. 22-27; p. 68, ll. 25-29).

This request is based upon the rule laid down in the case of *Atz* vs. *Mfg. Co.* (Sup. Ct. 1896), 59 N. J. L. 41, 45, and the refusal of the Court to so charge was in direct violation of said rule.

The Court Erred in Its Charge as to the Degree of Care Necessary To Be Exercised by the Defendant and in Refusing to Charge that if the Jury Should Find that the Defendant, Before Filling the Jug, Made Such an Inspection as a Reasonably Prudent Man Under the Circumstances Would Make Without Finding any Condition in the Jug Which Would Naturally and Proximately Cause the Accident which Occurred, the Defendant Discharged Its Full Duty and no Recovery Could Be Had Against It.

The Court charged the jury as follows:

> "There can be no doubt from the testimony in these cases, that hydrofluoric acid is among the substances classed as dangerous. The duty that the law requires in the handling thereof is that degree of care which is commensurate with the risk and danger that is involved, and so you are to determine in these cases, whether the defendant exercised the degree of care and caution commensurate with the danger involved with respect to the inspection of, and filling, and handling of the jug in question at this time" (Case, p. 441, ll. 38-41; p. 442, ll. 1-11; Exception, p. 462, ll. 21-26; Grounds of Appeal, Case, p. 5, ll. 1-15; p. 20, ll. 37-40; p. 21, ll. 1-10; p. 44, ll. 1-15; p. 69, ll. 1-15).
>
> "It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and the operation involved" (Case, p. 442, ll. 35-42; Exception, p. 462, ll. 27-33; Grounds of Appeal, Case, p. 5, ll. 23-30; p. 21, ll. 18-25; p. 44, ll. 23-30; p. 69, ll. 23-30).
>
> "The defendant was not an insurer of the safety of these young men, nor of the operation which it undertook, but could only be required to use that degree of care commensurate with the danger involved in the inspection, filling and handling of this jug" (Case, p. 447, ll. 22-27; Exception, p. 462, ll. 34-40; p. 463, ll. 1-14; Grounds of Appeal, Case, p. 5, ll. 33-38; p. 21, ll. 27-32; p. 44, ll. 33-38; p. 69, ll. 33-38).
>
> "Then at another place, I might have said to you that there was to be an inspection commensurate with the danger involved. It is pointed out, and this is appropriate, as applied to what I have said to you as to the condition of the jug and the application of acid thereto. So that you may take the characterization that I make with respect to that, that the danger involved is limited in that respect" (Case, p. 464, ll. 7-14; Grounds of Appeal, Case, p. 6, ll. 25-32; p. 22, ll. 18-26; p. 45, ll. 26-34; p. 70, ll. 25-33).

The court was requested and refused to charge as follows:

> "If you find that defendant, before filling the jug, made such inspection as a reasonably prudent man under the circumstances would make, without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery can be had against it" (Case, p. 469, ll. 25-31; p. 460, ll. 35-40; Exception, p. 462, ll. 10-12; Grounds of Appeal, Case, p. 4, ll. 31-38; p. 20, ll. 28-34; p. 43, ll. 30-37; p. 68, ll. 32-39).

In refusing this request, the court said:

> "I do not like the language of that. As to the degree of care, I have already charged on that very carefully covering that point. Therefore I refuse to charge that, except as already charged" (Case, p. 460, ll. 35-40; p. 462, ll. 10-12).

The charge of the court is clearly erroneous in the following particulars.

(a) It erroneously charged the defendant with a duty to inspect the jug produced by the purchaser under circumstances under which the defendant had the right to assume that the jug was in proper condition to be filled with the commodity ordered. It erroneously charged the defendant with such knowledge as the jury might find the defendant ought to have acquired by an inspection which it was not obliged to make. It erroneously charged the defendant with a duty to anticipate a condition in the container that under the circumstances of the case there was no reasonable ground to anticipate; to anticipate unusual and unforeseen dangers without any information to put it on notice that they might exist.

(b) It does not properly define the degrees of care required of the defendant. Obviously under the most favorable rule to the plaintiffs, that can be applied, the defendant was not obliged to use more than reasonable care under the circumstances.

In *Pesin* v. *Jugovich* (Ct. of E. & A. 1913) 85 N. J. L. 256, 259, this court said—

> "Reasonable care means not extraordinary care but such care as an ordinarily prudent person would exercise under the conditions existing at the time he is called upon to act."

Instead of laying down this fundamental and well suited rule for the jury to follow in making its determination the court not only once but repeatedly stated to the jury that the defendant was chargeable with a degree of care commensurate with the danger involved irrespective of the knowledge it had or might have acquired by the use of reasonable care.

Although expressly requested so to do, nowhere in its charge did the court mention such care as an ordinarily prudent man would have exercised under the circumstances as they had been presented by the testimony. Nowhere did it mention the fact that to hold the defendant liable it was necessary for the plaintiffs to show that the defendant had knowledge of the dangerous condition of the jug or at least that it had knowledge of some fact or circumstance that would have put a reasonably prudent person on notice that it was in an unsafe condition to be filled but without such necessary limitations charged the jury to hold the defendant to a much greater degree of care, namely—a degree of care commensurate with the danger that only subsequent events showed was actually involved.

The charge as given was erroneous in that

(a) It did not limit the defendant's duty to the exercise of such care as an ordinarily prudent person would have exercised;

(b) It erroneously failed to point out that the defendant's acts must be judged in the light of the conditions and circumstances existing at the time the alleged negligent act was performed and not in the light of the facts subsequently developed by the occurrence of the accident.

(c) It erroneously excluded any consideration of the lack of knowledge or ignorance of the defendant of the presence of the encrusted sand in the jug at the time it was filled;

(d) It erroneously permitted the jurors to determine in their own individual opinion what care was commensurate with the actual danger involved without any reference to the standard of diligence that would have been exercised by an ordinarily prudent person with the knowledge

properly chargeable to the defendant at the time the alleged negligent act was performed.

In speaking of instructions of the court upon the degree of care to which a defendant is chargeable in actions of negligence, in 29 Cyc. 650, it is said—

> "If the term is defined it should be by some phrasing that will convey the idea of the ordinary conduct of the ordinarily prudent man under the same or similar circumstances and where the charge of the court tends to create the impression in the mind of the jury that they may establish for themselves a particular standard of diligence there is error. An instruction imposing upon the defendant a higher degree of care than is required by law is erroneous."

The charge as given in the instant case was subject to all these faults as well as the others above pointed out.

The Court Erred in Its Charge in Respect to Proximate Cause.

The Court charged as follows:

> "In order to establish proximate cause, it is necessary in the first place that there be a casual connection between the negligent act and the injury. The act must have been such that without it the injury would not have happened. It must be the cause that produced the injury.
>
> "Negligence which does not amount to more than a remote cause will not create a liability for injuries which follow. Yet it is not necessary that the cause of the injury should be the immediate, the last, or the nearest cause in time or distance to the consummation of the injury. It is sufficient that it be the efficient cause which set in motion the

> chain of circumstances leading up to the injury, and which in the natural, continuous sequence, unbroken by any new independent cause, produced the injury." (Case, p. 448, ll. 8-24; Exception, p. 463, ll. 14-24; Grounds of Appeal, Case, p. 6, ll. 1-22; p. 21, ll. 33-40; p. 22, ll. 1-14; p. 45, ll. 1-22; p. 70, ll. 1-22.)

Later the Court said:

> "With respect to what I said about proximate cause, it is feared that I left with you the impression, that I might have confused you about the true meaning of proximate cause, the definition thereof. I am going to repeat what I said, which is the cardinal rule.
>
> "Proximate cause is that cause which naturally and probably led up to and which might have been expected to produce the very result which is complained of. It is the moving, efficient cause of an accident. Now, in this case, inspection of the jugs and application of the acid, if they were not the moving, efficient cause of this accident, so that it could be said to be the proximate cause, but the accident was due to some other cause which was the proximate cause, then there could be no recovery in this case as against the defendant.
>
> "Now, that is the best that I can give you on that subject. You may take it as I have given it to you" (Case, p. 464, ll. 14-35).

The charge is a mere statement of an abstract proposition of law which without some suggestion as to its proper application to the facts of the particular case could but create in the minds of the jurymen, not at all familiar with legal phrases, the impression that the filling of the jugs in question with hydrofluoric acid was necessarily the proximate cause of the injury. No other act was mentioned as a possible proximate cause and everything that was said was applicable to that act.

In the ordinary sense of the term as interpreted by laymen there was undoubtedly a physical "casual connection" between the filling of the jugs with hydrofluoric acid and the subsequent evolution of gas, "without it the injury would not have happened." In the ordinary sense of the term the filling of the jugs with acid was "the cause that produced the injuries".

From the court's general statement without proper explanation that "negligence which does not amount to more than a remote cause will not create a liability for injuries which follow" would not any juror not familiar with legal literature get the idea that the negligent act of the florist in permitting sand to get into the jug should be excluded? It perhaps is apparent to this court that the trial judge *intended to say* that it is not necessary that a cause to be the proximate cause of the injury need not be the immediate, the last or the nearest cause in time. But in fact the court did not so state, but said "it is not necessary that" the *cause of the injury* should be the immediate, the last or the nearest cause. And in the very next sentence added that "it is sufficient that it be the efficient cause *which set in motion* the chain of circumstances leading up to the injury". Undisputably, the filling of the jug was the physical act which "set in motion the chain of circumstances which led up to the injury" and in the following words of the charge "which in the natural continuous sequence unbroken by any new independent (physical) cause produced the injury". From the point of view of the layman composing the jury this statement of the court amounted to an absolute declaration that the filling of the jugs by the defendant was the proximate cause of the injury. No juror without a knowledge of legal phraseology from this charge could possibly get the idea that

the negligence of the florist could be considered to be "the cause *which set in motion* the chain of circumstances leading up to the injury" and that it, unbroken by any new, independent *culpable* cause, produced the injury and might properly be found to be the proximate cause thereof.

Later, the court attempted to remedy the defects in its original charge. It said proximate cause is the *moving* efficient cause of an accident and proceeded as follows: "Now, in this case, inspection of the jug and application of the acid, *if* they were not the *moving* efficient cause of this accident so that it could be said to be the proximate cause, but the accident was due to some other cause which was the proximate cause then there could be no recovery in this case as against the defendant." This only tended to impress the jury more strongly, however, that the florists's negligence could not be fairly considered to be the proximate cause. In the ordinary sense of the term the florist's act was not the "*moving*" cause. At least without proper explanation no juror would get any such idea.

This charge taken as a whole was misleading to the very great prejudice of the defendant in two respects.

On the one hand, to a layman it excluded the idea that the florist's negligence in permitting sand to get into the jug. It excluded all ideas of the importance of the lack of knowledge on the part of the defendant of the encrusted cake of sand it contained and that without this knowledge the defendant's act of filling the jug could not be said to be an act that would break the casual connection between the negligence of the florist and the resulting injury.

On the other hand, to a laymen it excluded the idea that with the experince Hopper had had with hydrofluoric acid and his admitted knowledge of

the history of the jug and the use that had been made of the hydrofluoric acid it had previously contained and of his knowledge that it was hot at the time he started away with it in a closed car, ~~It excluded the idea~~ that he was under a legal duty not only to himself but to his invited guests in the car to protect himself and them from the danger of being injured and that if his failure to do this was a failure to exercise that degree of care an ordinary prudent person with his knowledge and experience would have done under the circumstances, it was an act of negligence on his part which they might find broke the causal connection between the alleged negligent act of the defendant in filling the jug and the injuries to himself and the several occupants of the car which followed and which they might properly find to be the proximate cause of the accident.

The instruction given without these proper and necessary explanations was most harmful to the defendant. It necessarily left the jury with the impression that if they did not hold the defendant liable there could be no recovery from any one else—an impression which if the jurors get always results most prejudicially to the defendant.

The Judgment Is Contrary to Law.

The plaintiffs each allege in their respective complaints that the negligence of the defendant consisted of the following acts: (a) That it failed to use due and proper care and caution in the handling of the said hydrofluoric acid, then and there known to the said defendant, its agents or servants, to be a highly dangerous and explosive substance; (b) It failed to exercise due and proper care and caution in cleansing and scouring the said lead containers or jugs, before refilling them

with the said hydrofluoric acid; (c) It failed to properly seal and cork said lead jugs or containers, so that gases would not form in them and thus cause an explosion; (d) That it, well knowing the dangerous and explosive character and propensity of the said hydrofluoric acid, failed to use due and reasonable care and caution to protect the plaintiff or the plaintiff's intestate from injury.

In no instance have they proved any of these alleged acts of negligence.

(a) There is not a suggestion in the case that there was any lack of care in the handling of the acid or that the accident in any way resulted from any such cause.

(b) There are no circumstances shown from which any duty arose to clean or scour the jugs. On the contrary, the evidence stands undisputed that to put anything in the jug, even water, results in the destruction of the coating of a seasoned jug, the existence of which coating is necessary to make the jug a fit container for hydrofluoric acid (Case, p. 377, ll. 8-22). All that it was practicable to do to clean the jug without destroying the coating was done. The jug was turned upside down, shaken and tapped, and nothing came out (Case, p. 343, ll. 39-40; p. 344, ll. 1-18). The only practice used and recognized by all reputable manufacturers was followed (Case, p. 374, ll. 15-38).

(c) It is indisputable that the sealing and corking of the jugs had nothing whatever to do with the formation of the gas within the jug which forced the cork out. There is not the slightest suggestion that the hydrofluoric acid upon a cork, whether the cork be paraffined or not, would form a gas. All of the experts agree that the cause of the explosion was the presence of foreign siliceous matter in the jug at the time it was filled and not

because of paraffin or lack of paraffin on the cork (Case, p. 249, ll. 1-18, 26-40; p. 405, ll. 8-20; p. 425, ll. 24-34; p. 427, ll. 24-40; p. 428, ll. 1-40; p. 429, ll. 1-16).

(d) Nor is there any evidence tending to show that the defendant did not use due and reasonable care. The defendant can not be held liable as an insurer. At most, it was bound only to guard against such dangers of which it had actual knowledge or of which it ought to have knowledge. There is no evidence in the case that it had knowledge of any fact or circumstance which would have lead a reasonably prudent man to anticipate that the jug which caused the injury had concealed in it a caked mass of siliceous matter liable to evolve a pressure of gas if the jug should be refilled with hydrofluoric acid, as requested by Hopper. At least, in the absence of some fact or circumstance to put it on notice, defendant had the right to assume that the jug was in a fit condition to be used for the purpose for which it was presented.

In short, there is no evidence in the case to support the judgment upon any of the issues raised by the pleadings.

CONCLUSION.

For the reasons alleged, we submit that the trial court erred in giving judgment for the plaintiff and against the defendant and that the judgment of the Supreme Court should be reversed and a new trial granted.

Respectfully submitted,

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New Jersey Court of Errors and Appeals

ON APPEAL FROM NEW JERSEY SUPREME COURT.

SAT BELOW: ACKERSON, JR., C. C. J.

EDWARD WILLIAM HOPPER,
Plaintiff-Respondent,

vs.

CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

JOHN CARROLL,
Plaintiff-Respondent,

vs.

CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

JAMES KELLY, Administrator *ad prosequendum* of James M. Kelly, deceased,
Plaintiff-Respondent,

vs.

CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

CHARLES J. O'NEILL, Administrator *ad prosequendum* of John P. O'Neill, deceased,
Plaintiff-Respondent,

vs.

CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

BRIEF FOR PLAINTIFFS-RESPONDENTS.

Each of the above cases are before this Court on appeal from a judgment of the Supreme Court

in an action of negligence upon the verdict of a jury sitting with Judge Henry E. Ackerson, Jr., in the Hudson County Circuit of the Supreme Court.

The verdicts were as follows:

In the Hopper Case ($12,000.00), Case, p. 16.
In the Carroll Case ($3,066.00), Case, p. 36.
In the Kelly Case ($9,066.28), Case, p. 64.
In the O'Neill Case ($9,000.00), Case, p. 79.

The cases were tried together in the Court below and are likewise presented here on appeal. The grounds of appeal being the same in each case, excepting that ground which charges Hopper with contributory negligence, are argued by the plaintiffs-respondents in one brief.

Statement of Fact.

On June 23rd, 1925, Edward William Hopper went to Newark to purchase hydrofluoric acid from the Charles Cooper Chemical Company (Case, p. 83, ll. 7 to 10) in an automobile owned by his father (Case, p. 82, ll. 38-40). Hopper started from Jersey City (Case, p. 82, ll. 10-20). With him at the time were Carroll, O'Neill and Kelly (Case, p. 83, ll. 9-10). Carroll, O'Neill and Kelly went with Hopper at his, Hopper's, invitation (Case, p. 178, ll. 22-24). In the car at the commencement of the journey to Newark, were four lead jugs (Case, p. 83, ll. 22-24). It was Hopper's purpose to have two of the jugs filled with hydrofluoric acid and to obtain a rebate on the other two jugs (Case, p. 83, ll. 28-30). The jugs were owned by a florist named Entermann (Case, p. 83, ll. 32-33).

Upon arriving at the plant of the defendant, Charles Cooper Company, Hopper took the four

jugs into the plant of the defendant and ordered twenty pounds of the acid, and asked a rebate upon two of the jugs (Case, p. 107, ll. 25-30). A rebate was refused (Case, p. 107, l. 40) and *thereupon a selection of the best two jugs was made by an employee of the Cooper Company* (Case, p. 108, ll. 1-10; p. 109, ll. 1-10; p. 86, ll. 24-28; p. 108, ll. 29-33). Hopper then returned to his automobile which was waiting outside the Cooper factory with the two remaining jugs (Case, p. 87, ll. 1-10; p. 109, ll. 11-33). Hopper then waited in the automobile for the jugs which had been left to be filled (Case, p. 109, ll. 29-37).

Hopper had to wait, *on this occasion, about twenty minutes* for the jugs to be filled (Case, p. 87, ll. 25-30). It was about twenty minutes from the time he paid his money until the return of the jugs (Case, p. 87, ll. 35-40). Hopper had previously purchased the acid from the Company (Case, p. 83, ll. 12-40) but had been *on all other occasions, required to wait from one hour and one-half to two hours before the acid was delivered to him* (Case, p. 92, ll. 30-40). The Cooper Company did not manufacture the acid, but were merely jobbers, and had not manufactured the acid for fourteen years prior to the accident (Case, p. 389, ll. 20-30).

The jugs were brought from the defendant's factory and placed in the automobile by one of the defendant's employees (p. 89 ll. 1-8). The jugs were carried by said employee (p. 88, ll. 35-40). The distance from the point at which said jugs were filled, to Hopper's car was about a block and a half (p. 369, ll. 25-28). After the jugs had been arranged in the car, either by the employee of the defendant (Case, p. 109, ll. 30-35) or by Hopper, (p. 370, ll. 25-40), Hopper took his seat at the wheel and started the car which was facing

south on Van Buren Street. He had partially turned the car around to return to Jersey City, (p. 184, ll. 20-40), when the cork from the tall jug (Ex. P. G-1) blew out (p. 184, l. 40; p. 185, ll. 1-7) followed by a portion of the acid which sprayed over the occupants of the car. Hopper and Carroll were injured by the resultant explosion (p. 185, l. 10; p. 101, l. 30). Kelly and O'Neill died by asphyxiation of gaseous fumes in thirty-five minutes, (p. 159, ll. 10-20; p. 92, ll. 1-20; p. 226-228).

When the jugs were delivered to the automobile by an employee of the Cooper Company, a conversation ensued (p. 89, ll. 10-20). Immediately after the conversation, Carroll placed his hands upon the jug, as did Hopper also, (p. 89, ll. 20-40). Both Carroll and Hopper noted the jugs were hot, one more than the other, (p. 89, ll. 20-40; p. 90, ll. 1-10; p. 183, ll. 10-30).

The defendant's employee could not say whether or not the jugs were hot (Moorehead, p. 371, l. 40).

"No, I am not prepared to say."

Hopper also noted that the jugs were not corked as had been the practice upon previous occasions by the defendant Company in that there was no evidence of paraffin paper surrounding the corks, nor was the paper tied with twine (p. 93, ll. 30-40).

It further appeared that *after the selection of the jugs in question by the employee of the defendant* they were taken to be filled and were filled by another employee named Schmeltz. Schmeltz testified that he endeavored to clean the jugs (p. 165, ll. 1-40). He also testified that he turned the jugs upside down and tapped them for the purpose of cleaning them (p. 166, l. 30). He

also testified when asked (Schmeltz, 167, ll. 25-30).

"Q. When you turned the jugs upside down and tapped them, did anything come out?

"A. I didn't see anything. They come all the time a little powder, that is fluoric slag, that is, come out of all of them."

He further testified (Schmeltz, p. 335, ll. 15-30)

"I put them corks in and hammered them flat."

He further testified his orders were to "See that jugs were thoroughly clean before putting hydrofluoric acid into them" (p. 343, ll. 1-20). He further testified he did not look into the jug to see whether it contained dirt (p. 344, l. 20), and that he was not sure whether or not anything came out of the jug upon his turning it upside down (p. 344, ll. 20-30) and that if he knew there was dirt in a jug he would not put acid into it (p. 345, ll. 7-20). He further testified that the acid is dangerous (p. 349, ll. 28-30).

"Well, it is dangerous."

It is in evidence, undisputed, that the jugs in question had a capacity of more than ten pounds although designated as ten pound jugs (p. 357, l. 20). (RUHL.)

"It will hold ten; if you fill it to the top it would hold to eleven and one-half to twelve pounds, but there is ten pounds put in."

That the excess space over ten pounds is to allow for gas (p. 360, ll. 20-34). RUHL:

"Q. Why would you call this a ten pound jug if it can hold eleven and one-half or twelve pounds?

"A. We never fill any container up to the neck. It is a poor policy.

"Q. You said a certain amount of space was allowed for gas arising in there?

"A. Surely.

"Q. And if it is corked up with gas there would be an explosion, if there was a foreign substance in the jug?

"A. Yes, sir.

"Why would you clean the jug, Mr. Ruhl, or have a standing order to see to it that they were clean before being filled?

"A. To remove any foreign substance if there is any present."

That the standing order of the defendant was to clean the jugs before being filled to remove any foreign substance if there is any present (p. 360, l. 40).

The consensus of opinion by experts produced by both sides attributes the cause of the explosion to the presence of foreign matter in the jug containing silicious material which coming in contact with hydrofluoric acid creates a gas and causes a rising temperature with great rapidity (Edel, p. 209, ll. 20-30; Meerbott, p. 240, ll. 20-30; Pond, p. 265, ll. 30-40; p. 257, ll. 1-40; Tonery, p. 379, ll. 1-40; Friedman, p. 405, ll. 8-20; Grosvenor, p. 425, ll. 24-34).

The condition of the foreign material present in the jug prior to filling is in dispute as to whether it was a caked or a granular substance (Edel, p. 218, ll. 38-40; p. 219, ll. 1-10).

"Q. What in your opinion was the cause, after your examination of this accident?

A. The presence of a foreign material or the action of the acid on a foreign mineral.

Q. That was in the container?

A. That was in the container, probably *marble, or sand, or both*" (p. 428, ll. 10-20; p. 428, ll. 37-40; p. 249, ll. 15-25; p. 209, ll. 1-20).

The experts agree that a caked silicious substance would have a slower action on hydrofluoric acid (p. 427, ll. 28 to 30; p. 408, ll. 10-20; p. 263, ll. 1-10).

WHEREAS, if the substance were granular in form, the action would be very prompt. In fact three to five minutes (Friedman, p. 405, l. 28; Pond, p. 258, ll. 20-40, "Within a few seconds").

It is further conceded that by the undisputed testimony of Dr. Meerbott, and Dr. Pond, that the reaction of hydrofluoric acid upon dirt or sand containing silicious materials is *elementary chemistry* (Meerbott, p. 237, ll. 15-22; Pond, p. 266, ll. 10-12).

It is further conceded that *hydrofluoric acid and its resultant gas is a dangerous substance* (Edel, p. 226, ll. 8-10).

"The Court: Is that gas dangerous to human being?

The Witness: It is."

(Dr. Martland, p. 227, ll. 39-40:)

"Q. In your opinion would that be sufficient to cause a man's death?

A. Oh, yes, a horrible death."

(Edel, p. 228, ll. 39-40:)

"Q. So it is an instrumentality of danger?

A. It is."

(Dr. Meerbott, p. 233, ll. 8-40; p. 234, ll. 1-20:)

"Q. Now, will you tell us the constituent parts?

A. Hydrofluoric acid is a compound containing hydrogen and fluorin. Hydrogen is an element and so is fluorin. Fluorin belongs to what is known as the halogen group and when we say the halogen group we mean the elements obtained from sea water. There

are four of these, that is, there are these four elements obtained from sea water, sea salt, producing these things. *They are fluorin, the lightest and the most dangerous,* chlorin next, bromin, a liquid, also dangerous but not as dangerous as the other two mentioned, iodin.

Q. To which subdivision of the halogen group is hydrofluoric acid or its gas belong?

A. It does not belong to the group at all.

Q. Is it in the halogen group?

A. No, it is a compound. It is not an element.

Q. That is to say, flourin is a constitutent part of hydrofluoric acid?

A. Yes, sir.

Q. Is fluorin a dangerous gas, Doctor?

A. I consider it a very dangerous gas.

Mr. Ashmeal: I object to that.

Mr. Armstrong: I withdraw the question.

Q. You were telling us about the constituent parts of the acid. Will you continue?

A. I mentioned the three of the halogen group. I was mentioning iodin which is a solid. Hydrofluoric acid is produced by the action of sulphuric acid on fluor spar, which produces calcium fluor spar by the acting upon the calcium in the fluor spar there is a gas created. You have all heard of helium. Helium is a light thin gas which causes balloons to rise in the air and airships. Now fluorin belongs to that light gas, not the heavy gases. When this is dissolved in water it produces hydrofluoric acid. That is how hydrofluoric acid is made.

Q. And hydrofluoric acid, is it a fuming liquid?

A. It is what we call an unstable liquid by which we mean that it makes fumes—in other words I mean that the hydrofluoric acid is vitalized.

Q. Will you please tell us what you mean?

A. A gas.

Q. So that you call a fume and a gas the same, synonymous terms?

A. Yes, sir."

(Dr. Pond, p. 254, ll. 25-30:)

"Hydrofluoric acid coming in contact with the flesh produces a very intense, serious and poisonous burn, and a drop of hydrofluoric acid, a single drop coming in contact with the flesh would produce a very painful and serious burn."

(Pond, p. 262, ll. 10-20; Pond, p. 264, ll. 28-35:)

"Then they went to fluorine and tried for years to isolate fluorine. They knew of its compound and *chemists were repeatedly killed trying to prepare fluorine.* I should say offhand they would both be terrible.

Q. Would you say it would be more corrosive than mustard gas?

A. I don't want either one of them.

Q. You don't know?

A. Fluorin gas would be terribly corrosive. No question. It is the most active element known."

(Tonery, p. 379, ll. 15-18:)

"Q. It would be highly dangerous to restopper it if there is?

A. Yes, sir." (p. 380, ll. 3 and 4).

Q. Because you know that hydrofluoric acid is very dangerous?

A. When brought in contact."

(P. 380, 1-20).

"Q. It is dangerous, isn't it?

A. Yes, sir."

(Friedman, p. 414, ll. 3-10:)

"Q. So that hydrofluoric acid in a jug having an incrustation which might have had silicate in it, caked, would not be dangerous?

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A. Not after it had *stood two hours in the open.*
Q. In the open?
A. *Two hours uncorked.*''

The facts further show and it is conceded that foreign material left in a jug which had prior to refilling contained hydrofluoric acid might form a cake upon the bottom of the container and that such a situation is elementary chemistry.

(Meerbott, p. 237, ll. 15-20:)

''As a matter of chemistry Doctor, is there anything peculiarly difficult in anticipating the result of hydrofluoric acid on silicate?
A. Yes, sir; if hydrofluoric acid is to act on silicate we anticipate an evolution of gas.
Q. Most every chemist would anticipate that too?
A. That is common chemical knowledge.''

(Pond, p. 262, ll. 2-10:)

''Q. I think you explained it was rather elementary chemistry, ordinary chemical knowledge that hydrofluoric acid will act on silicates, did you not?
A. Yes, every chemist is familiar with that.''

(Friedman, p. 416, ll. 23-27:)

''Q. Don't you know, that as a chemist of twenty years experience that hydrofluoric acid coming in contact with sand will form a cake after it evaporates, after the acid evaporates?
A. Oh yes, I know that.''

(Grosvenor, p. 419, ll. 17-20:)

''Among others, some very careful investigation of hydrofluoric acid during this time, of the process of manufacture and some of its uses.''

(Grosvenor, p. 422, ll. 27-28:)

''Q. You found it made that sort of cake?
A. It did.''

(Tonery, p. 373, ll. 23-26:)

''Q. Your experience in the manufacture of chemicals?
A. Well about twenty-five years, I should say.''

(P. 388, ll. 26-32:)

''Q. It might cake on the bottom of the jug?
A. The acid itself, no.
Q. The residue left after evaporation?
A. Not if it was pure hydrosilicic acid.
Q. If it was not pure hydrosilicic acid?
A. *If not, there will be a residue.*''

ARGUMENT.

The Court rightfully denied the defendant's motions for a non-suit and for a direction of a verdict.

The plaintiffs respondents answering appellant's ground of appeal on the above point will make argument under separate headings as follows:

(a) That the appellant had actual knowledge of the condition of the container which exploded or, from the circumstances of the case might reasonably be presumed to have had actual knowledge of the condition of the container prior to the time of its delivery to the Hopper automobile.

(b) That because of the dangerous propensities of hydrofluoric acid, the appellant was under

a legal duty to make an inspection of the container delivered to it for refilling.

(c) That the occurrence complained of in the complaint was such as to place it squarely within the doctrine of *res ipsa loquitur*.

(d) That even assuming, which the Respondents deny, that hydrofluoric acid is not a dangerous substance, or an explosive, and that appellant did not have what amounts to actual knowledge in law of the condition of the container and that the occurrence itself is not squarely within the doctrine of *res ipsa loquitur,* still the appellant is liable in damages because of their effort to inspect the containers when presented for refilling and whether or not the effort made to inspect said containers is purely a question upon which the jury should be called upon to pass.

(e) That a non-suit or a direction of a verdict in a case premised upon the negligence of the defendant cannot be granted even when the facts are conceded if more than one inference might reasonably flow from said conceded facts.

(f) If two or more persons, though not acting in concert, occasion an injury through their negligence, they are severally liable for the consequences.

A

Defendant-appellant has raised the point that unless it had actual knowledge of the condition of the container presented, for refilling, it could not be held liable. Respondents contend that it conclusively appears in the evidence that appellant had actual knowledge of the dangerous propensities of the acid and that it had what was

patent notice of the condition of the jug before it was delivered to Hopper.

All of the experts produced by any of the parties to this litigation are in agreement that hydrofluoric acid is a dangerous substance and that coming in contact with silicate will form a dangerous gas (See citations on this point in Respondent's Statement of Facts).

It is further in evidence that the cause of the explosion in this case was the action upon dirt or silicious materials of hydrofluoric acid. Whether the silicious materials were loose and granular in substance or whether they were caked or encrusted to the sides or the bottom of the jug is purely a hypothesis based upon expert testimony. Dr. Edel testified in his conclusion as to the cause of the accident as follows (Case, p. 219, ll. 1-10):

> "Q. What in your opinion was the cause, after your examination of this accident?
> A. The presence of a foreign material in the container or the action of the acid on the foreign material.
> Q. That was in the container?
> A. That was in the container, probably marble or sand or both."

(Grosvenor, p. 428, ll. 37-40:)

> "So that the chances are there was some very fine sand there present at the time that the hydrofluoric acid was in that."

The question as to whether or not the silicious material or dirt was caked or granular, is one of the facts to be determined by the jury from the evidence produced by experts. If the materials had been caked or encrusted the action of the acid upon it would not have been as rapid as if it had been free and it is for the jury to say in view of the time consumed between the filling and

the explosion, what the condition of the substance was at the time the jugs were presented for refilling.

Respondents further contend that the condition of the material present in the jug which exploded is not necessarily essential in this case since the appellant had actual knowledge of the condition of the jugs or might reasonably be presumed to have had such knowledge.

It is in evidence (Schmeltz, p. 339, ll. 10-40) that the operation of filling the jugs consumed ten minutes. That it took three and one-half minutes to walk the distance from the point at which the jugs were filled to the Hopper automobile (Friedman, p. 405, ll. 20-40). That even a jug containing a cake or crust would be noticeably hot in three to five minutes (Friedman, p. 405, ll. 20-30).

The experts further agree that the reaction of hydrofluoric acid upon dirt or silicate is likely to form a cake or encrustation and that such knowledge is common knowledge among chemists and is classed as elementary chemistry.

The Cooper Chemical Company knew, or reasonably should have known the propensities of hydrofluoric acid, and the testimony of an expert produced on its behalf showed absolutely and definitely that it did have actual knowledge of the propensities of the acid. The appellant produced as one of its experts a Dr. Friedman who has been its chief chemist for a long period of time. Dr. Friedman testified (p. 416, ll. 23-27):

> "Q. Don't you know, that as a chemist of twenty years' experience, that hydrofluoric acid coming in contact with sand would form a cake after it evaporates, after the acid evaporates?
>
> A. Oh yes, I know that."

All of the other experts produced by either side agreed that such a reaction is common chemical knowledge. In fact, the witnesses for the appellant testified that the Company had a standing order to make certain that the containers presented for refilling with hydrofluoric acid be clean before putting new acid into them (See testimony of Charles Ruhl, an employee of the defendant company at page 360, ll. 36-40):

> "Q. Why would you clean the jug, Mr. Ruhl, or have a standing order to see to it that they were clean before being filled?
>
> A. To remove any foreign substance if there is any present."

Respondents therefore contend that the appellant had what amounts to actual notice of the dangerous propensities of the acid and the danger of refilling used containers because of the liability of the formation of gas.

In addition to the actual notice which respondents contend that appellant had, the fact is forcibly brought out in the evidence that four jugs were brought to the appellant and a rebate sought upon two of them. That all four jugs were brought into the premises of the appellant by Hopper and that a rebate was sought upon two of them.

It was apparent that all four jugs had been previously used for some purpose, whether for hydrofluoric acid or for some other purpose does not clearly appear. However, the appellant thereupon *exercised its discretion* and made a selection of what appeared to it to be the best two of the four jugs presented.

That selection was made by an employee of the appellant and appears to be an uncontradicted fact from the evidence shown in the State of

case. Nowhere did the present appellant seek to rebut the statement made by Hopper that of the four jugs presented, the appellant exercised its judgment, through an employee, of making a selection of what it considered the best two jugs to be filled with the acid (See the testimony of Edward William Hopper, Case, p. 109, ll. 1-10):

> "The Witness: They were not as good looking.
> The Court: Did this gentleman look them over?
> The Witness: Yes, all four of them.
> The Court: Did he make the selection or did you?
> The Witness: He did."

The respondents here contend that the appellant had notice of the condition of the jugs, or reasonably should have been expected to have had notice of the condition of the jugs since it undertook to make a selection of what it considered the two jugs best fitted to contain the acid. In view of the experts' testimony as to what hydrofluoric acid will do when in contact with silicates or with dirt, respondents contend that the selection made by the appellant was made for a purpose, and that purpose may reasonably be presupposed to have been for its protection against the likelihood of an evolution of gas in said containers.

Respondents further contend that the appellant had actual notice of the danger of making a delivery of the hydrofluoric acid as it did deliver it, since it is in evidence that the jugs were hot immediately upon their delivery to the Hopper automobile. Appellant made an effort to rebut the testimony as to the heat of the containers on their delivery to the Hopper automobile, but this, respondents contend is entirely a question of fact

upon which the jury should be permitted to decide (See also the testimony of Dr. Friedman, an expert produced by the appellants—Case, p. 405, ll. 25-30):

> "The Court: Assuming your opinion to be correct with respect to the encrustation of this jug, the inside of this jug containing silica, can you form an opinion how long it would take before such a jug as exhibit P-G-1, would become hot or warm, noticeably so?
> A. I would say in about three to five minutes.
> Q. After what?
> A. After it has been corked."

The undisputed evidence by the experts for both sides is in agreement upon the point that hydrofluoric acid reacting upon silicate or dirt containing silicate causes the formation of gas which is accompanied by a rising temperature. In fact, the rate or degree of the rise in temperature is not seriously in dispute. Dr. Grosvenor, appellant's expert, testified that the heat of the jugs would be noticeable to a person handling them, that he could give an opinion in terms of events (Grosvenor, p. 430, ll. 38-40):

> "A. I can suggest an opinion in terms of events, but not in terms of minutes.
> Q. Can you give it in terms of events?
> A. The fact that the reaction became sufficiently violent to blow out the stopper when the jug was placed, or after the jug was placed in the car, shows that the proportion of materials and the condition of the cake was such as to require that length of time, whatever it may be, precisely in minutes, which transpired between the filling of the jug and the blowing out for the reaction to reach and proceed into the violent stage."

Respondents further contend that appellants had notice of the propensities of the acid when put into used or old containers since by the undisputed evidence of Hopper it affirmatively appears that he had dealt with the Cooper Company for a long time previously to the date of the accident and that in his prior dealings he was required to wait a period of one and a half to two hours as against a fifteen minute period on the occasion of the accident.

Dr. Pond, an expert produced by the respondents, testified that if a jug had been left uncorked for a period of time after refilling that the gas would flow out of the neck of the jug (Pond, p. 266, ll. 1-10):

> "Q. Doctor, if that container were left uncorked for a period of time, would this gas about which you are now telling us——?
> A. The action would take place and it would blow out of the uncorked container, the gas would blow off.
> Q. Would flow out of the neck of the bottle?
> A. Probably.
> Q. That of course seems very elemental to you?
> A. Yes, I don't think that is difficult to anybody."

Dr. Friedman, an expert produced by the defendant-appellant, testified similarly (Dr. Friedman, p. 414, ll. 3-10):

> "Q. So that hydrofluoric acid in a jug having an incrustation which might have *been* silicate in it caked, would not be dangerous?
> A. Not after it stood two hours in the open.
> Q. In the open?
> A. Two hours uncorked."

Respondents contend that since the appellant did not see fit to rebut the testimony of Hopper

that he had previously been required to wait a period of from one and a half to two hours as against fifteen minutes on the occasion of the accident, that the question of actual notice to the defendant-appellant has been proved by uncontradicted evidence.

Respondents therefore submit that a careful reading of the evidence in the State of Case shows that the appellant had actual notice of the danger of refilling used containers and whether or not they exercised the degree of care which should have been exercised under the circumstances is entirely a question of fact for the jury.

B.

The Trial Court rightfully refused to grant the defendant-appellant's motion for a non-suit and a direction of a verdict.

> "An agency sufficiently powerful to be dangerous to persons and property and not controlled would ordinarily be deemed in law a nuisance. As such, it would render the party introducing it responsible for all damage done by it, without regard to the degree of care and skill exercised, and even though the fault of an independent contractor had permitted the defect through which the damage resulted."
>
> (*Cuff* vs. *Newark & N. J. Railroad,* 6 Vroom, 574);
> (*Hoboken Land & Improvement Co.* vs. *United Electric Co. of N. J.,* 71 N. J. L. 430, at pages 431 and 432.)

The material causing the explosion is, by the undisputed testimony of all parties to the record,

a highly dangerous substance (Edel, Case, p. 226, ll. 8-10):

"The Court: Is that gas dangerous to human beings?
A. It is."

(Martland, p. 227, ll. 39-40:)

"Q. In your opinion, would that be sufficient to cause a man's death?
A. Oh yes, a horrible death."

(Edel, p. 228, ll. 39-40:)

"Q. So it is an instrumentality of danger?
A. It is."

(Pond, p. 254, ll. 25-30:)

"Hydrofluoric acid coming in contact with the flesh produces a very intense, serious and poisonous burn, and a drop of hydrofluoric acid, a single drop coming in contact with the flesh would produce a very painful and serious burn."

(Tonery, p. 380, ll. 3 and 4:)

"Q. Because you know that hydrofluoric acid is very dangerous?
A. When brought in contact."

(Tonery, p. 380, l. 12:)

"Q. It is dangerous, isn't it?
A. Yes, sir."

Respondents contend that hydrofluoric acid standing by itself is, undisputedly, a dangerous substance and further contends that when placed in contact with elements upon which it reacts is an explosive. Explosives have been defined by the Encyclopedia Brittanica as:

"Any substance capable of undergoing such change, the sudden or extremely rapid conversion of a solid or liquid body of small bulk into a gas or vapor occupying many times the volume of the original substance; and in addition highly expanded by heat generated during the transformation."

Respondents contend that the action of hydrofluoric acid as shown by the undisputed testimony, comes directly within the definition of explosions as herein defined. It reacts quickly upon silicate, forms a gas immediately which gas tends to expand and when contained in a closed container will explode; it also generates heat during the transformation.

Various substances have been determined to be either explosive or dangerous substances, *per se,* in a large number of cases in various jurisdictions. Thus the following substances have been determined to be explosives, or dangerous substances:

Chlorate of potash—*Shuck* vs. *Maine,* 94 N. Y. Supplement, 399.

Crude Oil—*Laugabough* vs. *Anderson,* 12 Ohio, 341.

Flour-dust—*Washburn* vs. *Miami Valley Ins. Co.,* No. 2 Federal, 633.

Sodium and potassium in contact with water—*Hill* vs. *Meyer,* 140 Mo. 433.

Steam—*Bradford* vs. *Woolen Co.,* 60 Ohio, 560.

Sewer gas contained within a septic tank—*LaRue* vs. *Pott* (N. J.) 103 Atl. 197.

Phosphorus—*Maher* vs. *Magnus,* 1 Miscellaneous, p. 469, affirmed by the Court of Errors and Appeals, 123 Atl. 868.

Electrical current—*Hoboken Land & Improvement Co.* vs. *United Electric,* 71 N. J. L. 430.

Respondents here contend that hydrofluoric acid has been proved by the undisputed testimony, to be a dangerous substance, and that as such, the handling of it imposes upon the appellant the duty to inspect every circumstance connected with its sale and delivery; this applies with equal force to the quality of the material and its constituent parts as to the examination of containers in which said material is to be packed.

In *Hoboken Land & Improvement Co.* vs. *United Electric,* 71 N. J. L. 430, the Court held:

> "An Electric Company before sending its current for lighting purposes through an apparatus installed in a building by other parties, is bound, at its own responsibility, to make reasonable inspection of the apparatus to see whether it is fit for use."

See also the case of *Suburban Electric* vs. *Nugent* 58 N. J. L. 586, wherein this Court laid down the principle that an Electric Company supplying electrical current in the streets of Elizabeth was bound to take every reasonable precaution to protect the public since such electrical current was dangerous to human life.

There is no question but that hydrofluoric acid is an agency dangerous to human life since it is admitted by the appellant that two men died from contact with it and two other men were seriously injured.

See also the case of *Heckel* vs. *Ford Motor Co.,* 128 Atl. 242, wherein this Court stated:—

> "That the manufacture of an appliance not in itself inherently dangerous but which will become highly dangerous when put to the use for which it is intended, because of defects in its manufacture owes to the public, irrespective of any contractual relationship, reasonable care in the manufacture of such appliance. And that such duty calls for and requires the exercise of reasonable care in applying reasonable tests to detect defects and deficiencies in the appliance."

In *Van Winkle* vs. *Steam Boiler Co.,* 52 N. J. L. 240, (the leading case on this topic, in this State), it was held

> "That there is a public duty to exercise great care and skill upon those having full charge over instruments which, if mismanaged, are highly dangerous to the lives and persons of men who happen to be in their neighborhood. In such instances the owner of the dangerous machine is liable for the immediate and obvious damage caused by its mismanagement, and all persons whether servants or volunteers who participate in such mismanagement, are also liable."

To the same effect see the case of *Styles* vs. *Long,* 70 N. J. L., 301, which was the failure by the defendant to properly light a temporary foot bridge.

See also *Piracini* vs. *Railroad,* 95 L. 114, which was the kindling of a fire by a railroad employee on the railroad right of way and a subsequent fatal burning of a child trespassing on the right of way.

Respondents at this point urge that Kelly, Carroll and O'Neill, were unquestionably in the status of members of the public generally since they had no contractual relationship with the Cooper Company, did not bring the jugs in question to be filled, had no knowledge of the propensities of the acid, and might well have been mere passers by at the time of the happening of the accident instead of seated in the automobile.

See also on this point the case of *Brown* vs. *Freeman,* 84 N. J. L. 360, in that case the defend-

ant's employee approached an automobile at night with an open globe lantern notwithstanding there was a strong odor of gasoline about the place, and not making an examination to see whether there was a leak or whether it was safe to approach it. The Court held

> "That the Court properly submitted to the jury the question of negligence of S in bringing an open light about the machine *before examining* it to ascertain whether it was safe to do so."

The Courts of other jurisdictions are also in accord with the principle for which respondents here contend. In *McAffrey* vs. *Mosburg* (R. I.), 50 Atl. 651, the Court set forth the opinions of almost every jurisdiction laying down the principles:

> "Cases which involve the liability of a defendant to those with whom he does not stand of privity of contract may be grouped in three classes: (1) Where the thing causing the injury is of a noxious or dangerous kind. The principle which governs the first class of cases is that one who deals with an imminently dangerous article holds a public duty to all to whom it may come and whose lives may be endangered thereby, to exercise caution adequate to the peril involved."

To the same effect see *Wellington* vs. *Oil Company,* 104 Mass. 64, in which dangerous naphtha was sold. *Devlin* vs. *Smith,* 89 N. Y. 470, where the defect in a scaffold was held to be imminently dangerous.

Respondents respectfully urge a careful examination of the case of *Mayer* vs. *Magnus* decided by the Supreme Court of this State, 1 Miscellaneous page 468 and affirmed by the Court of Errors and Appeals in 123 Atl. page 868. In that case,

it was held there was sufficient evidence to justify the jury in drawing an inference of negligence in the defendant company upon the following facts; the defendant owned a tub or vat which was left outside its premises on the public highway. The vat was filled, or partially filled with water and in it were some yellow sticks which looked like candy. The plaintiff's intestate took some of the sticks out of the water and put one of them in his trousers pocket. After the water dried off, the stick ignited and caused his death. The Court held that if the jury believed that the phosphorus yellow sticks were in the vat out on the street and under the water, as the evidence tended to show these facts, *and the undeniable fact that phosphorus is a very dangerous substance* and that the defendant had it habitually upon his premises, and the further fact that phosphorus could not have been carried except under water or any distance without igniting, all point to the permissible inference of negligence. The Court of Errors in affirming these cases laid down the true law relative to inferences as follows:—

> "In the absence of direct evidence the plaintiff must show the existence of such circumstances as would justify the inference that the injury was caused by the wrongful act of the defendant."

Respondents contend that hydrofluoric acid can be carried as shown by the undisputed proofs, only in certain containers which have been freed of the presence of substances upon which the acid reacts and that its propensities are just as dangerous as phosphorus.

C.

That the occurrence complained of in the complaints was such as to place it squarely within the doctrine of *res ipsa loquitur.*

The Doctrine of *res ipsa loquitur* has been repeatedly affirmed by the Courts of this State. This Court has but recently defined *"res ipsa loquitur"* in the case of *Mannon* vs. *Vesper Lodge,* 116 Atl. 784 (1922). The doctrine of *res ipsa loquitur* was, in that case defined as follows:

> "When, through an instrumentality under the management of the defendant or his servants, plaintiff is injured, and the injury would not result if defendant were exercising due care, the occurrence itself, in the absence of explanation affords prima facie evidence of want of due care."

Respondents contend that in the instant case the appellant *by its selection* of two of the four jugs presented and by its control and ownership of the acid had complete control of both the acid and the containers and the very happening of the accident itself, which under ordinary circumstances would not have occurred calls for an explanation from the defendant of the cause of the occurrence of the accident and that the respondents had therefore made out a *prima facie* case upon which the jury should be privileged to pass.

See also the case of *Beck* v. *Hines,* 112 Atl. 332, wherein this Court affirmed the doctrine of *res ipsa loquitur.* In that case a passenger on a ferry boat was injured by having been trampled by other passengers who were endeavoring to avoid a wave which washed over the bow of the ferry boat and which wave was caused by another ferry boat then and there proceeding up the Hudson River. The Court held:

> "That it was not necessary that the defendant should have been able to foresee the particular damage which resulted; it is enough

> if an ordinarily prudent person should be able to foresee dangers or harm of some sort ahead."

It was further held upon the facts in that case:

> "That a presumption of negligence was raised which was incumbent upon the defendant to rebut by an explanation tending to relieve it of the presumption of any or of all care. And in the absence of an explanation comporting with the exercise of due care and foresight for harm a case of prima facie is established."

To the same effect see *Monroe* vs. *Penn. R. R.,* 90 Atl. 254; *McKinsey* vs. *Oakland,* 112-71; see also *Herz* vs. *DuPont* (1924), 123 Atl. 878, wherein the Court of Errors and Appeals of this State held that an explosion of powder in a powder mill and the resultant damage to the property of the adjacent owner was sufficient to go to the jury. In that case the Court stated:

> "There was testimony, upon which the jury could find, if it see fit, that the explosion in question was caused by foreign matter going into the powder as it was going through the mill and that if the mill was operated in the usual way there would not have been an explosion."

See also the case of *Polvony* vs. *Brady Sons Co.,* 126 Atl. 675.

Respondents therefore contend that in the instant case if the jugs had been free of foreign matter and had been filled in the usual way (by allowing to stand for a period of one and a half to two hours) no explosion could have occurred. The jugs were, at the time of filling, under the exclusive supervision of the appellant and in view of the further evidence that the jugs were hot

when delivered to Hopper, it is for the jury to say that if they had been filled in the usual careful and prudent manner that the explosion in question would not have occurred.

D.

Even assuming, which the respondents deny, that hydrofluoric acid is not a dangerous substance or an explosive and that appellant did not have what amounts to actual knowledge in law, of the condition of the container, and that the occurrence is not squarely within the doctrine of *res ipsa loquitur, still the appellant is liable in damages* because of their effort to inspect the containers when presented for refilling; and whether or not the effort made to inspect said containers was a reasonable effort is purely a question of fact upon which the jury should be called upon to pass.

Respondents contend that notwithstanding any duty which may have been placed upon the appellant to inspect the containers presented for refilling it did undertake to do a series of acts which unquestionably point to the idea that they desire to undertake and did undertake an inspection of the containers before filling.

The present appellant, as shown by the uncontradicted evidence made a selection of the best two of the four jugs presented by Hopper for filling. By so doing, it exercised *its discretion* as to which of the four jugs it considered best fitted for the purpose for which they were to be put. It could, assuming it was under no duty whatsoever, have insisted upon Hopper designating the containers to be filled. That it did not do. An employee of the appellant undertook to select which were the two best jugs.

In addition to the selection of the jugs for filling with acid, the appellant, admittedly undertook to clean the jugs it had selected for refilling. It made an inspection of the jugs selected for the purpose of determining whether or not any foreign substance was present in the jugs and to see that they were safe for the purpose to which they were intended to be put.

Respondents contend that the law of this State imposes upon persons, even though they be volunteers and under no duty so to do, a duty to perform what they undertake in a reasonable, careful and prudent manner.

Respondents here respectfully invite the attention of the Court to the testimony of an employee of the present appellant (Schmeltz, p. 165, ll. 7-14):

"Q. Did you undertake to clean them at that time?

A. I turned them upside down and tapped them.

Q. To clean them?

A. Yes, sir.

Q. What was the purpose of cleaning the jugs before filling them?

A. Well, I got that order when I started to work there."

(Schmeltz, p. 165, ll. 36-40:)

"Q. So that you also tried to clean the two jugs in order to see that there was no foreign matter in the jugs before you filled them with acid, is that so?

A. Yes, sir."

(Schmeltz, p. 167, ll. 25-30:)

"Q. When you turned the jugs upside down and tapped them, did anything come out?

A. I didn't see anything. They come all the time a little powder, that is fluoric slag, that is, come out of all of them."

Respondents here contend that whether or not the inspection made by Schmeltz under the circumstances was a reasonable one is purely a question of fact for the jury to pass upon; particularly is this so when it is in evidence that Schmeltz knew the dangerous propensities of the acid.

Appellants here raise the point that the inspection and test of the jugs made by Schmeltz was, by the undisputed testimony, the only test in general use by all reputable manufacturers and the only test that was practicable without endangering the construction of the coating on the inside of the jug. Respondents respectfully urge that the testimony as shown by the state of case is contra to the statement made by appellant. Dr. William S. Tonery a chemical expert produced by the present appellant upon his cross-examination with reference to tests made of containers returned for refilling with hydrofluoric acid testified as follows:

(Tonery, p. 386, ll. 20-40; p. 387, ll. 1 and 2:)

"Q. Do you know whether or not containers returned for refilling, lead containers, with hydrofluoric acid, are subjected to pressure test?
A. Yes, sir.
Q. They are?
A. Yes, sir.
Q. So that what you said Doctor, that on each and every occasion in your experience that jugs are refilled merely by tapping, that is not entirely accurate, is it?
A. As relating to this size jug, yes, sir.
Q. The size makes a great deal of difference?
A. There are all size of jugs for the different kinds of distribution.
Q. In your mind, the size of the container would make a great deal of difference?
A. As to the fact that it should be inspected by pressure.

Q. So that this jug here might well be weakened, might it not, by usage?
A. Yes, sir.
Q. Just the same as a large container?
A. Yes, sir.
Q. And an accurate test of a small container would be a reasonable pressure test?
A. Yes, sir.
Q. Just the same as with a large container?
A. Yes, sir."

(Tonery, p. 387, ll. 21 and 22:)

"Q. You say you made an inspection for the determination of spent acid?
A. Yes, sir."

(Tonery, p. 387, ll. 33-40:)

"Q. What do you mean by spent acid?
A. We term spent acid anything that is returned to us in a jug that has come from any manufacturer, glass manufacturer or otherwise *because we know that it is the practice for them to use the acid and after having used it to pour it back in the jug* and the spent acid that we are speaking of is the acid that has been used either partially or completely."

(Tonery, p. 388, ll. 1-32:)

"Q. Do I understand you to say then that you know that it is the custom of your customers to pour back acid which has been used?
A. Some of them do.
Q. That is a matter of general knowledge in the trade?
A. Yes, that is their own acknowledgment.
Q. That is a matter of general knowledge of course to you gentlemen?
A. That has been done by some people.
Q. The usage to which the glass manufacturers put the acid is to etch the glass, is it not?
A. Yes, sir.

Q. That means to corrode it?
A. There is a difference between etching of prints and the etching of glass.
Q. They use the acid and what you designate as spent acid might well contain silica or silicon fluoride?
A. Some silicon fluoride in combination with hydrofluoric acid.
Q. It might cake on the bottom of the jug?
A. The acid itself, no.
Q. The residue left after evaporation?
A. Not if it was pure hydrosilicic acid.
Q. If it were not pure hydrosilicic acid it might cake?
A. If any, there will be a residue."

Respondents here contend that by the very evidence produced on behalf of the present appellant itself, through its own expert, that at least two different statements as to the tests or inspections made for refilling used containers with hydrofluoric acid have been presented. It is for the jury to determine which of the two inspections stated, is the reasonable and prudent one under the circumstances.

In addition to the foregoing inspections which respondents contend the jury should have had an opportunity to pass upon, it is also in evidence that the employee of the present appellant after filling the jugs with hydrofluoric acid hammered corks into the necks of them until they were flush with the top of the jugs.

Respondents contend that it is again a jury question to determine whether or not appellant exercised that degree of care under the circumstances which it should have used when its employee hammered corks into the necks of the jugs.

A careful examination of the testimony of Dr. Tonery, the expert produced by the present appellant to inform the Court and jury with respect to the customs of the trade relative to the

handling of used containers shows that the utmost care must be exercised to avoid disturbing or displacing the protective coating or lining on the inside of the jugs. Notwithstanding Tonery's testimony, an employee of the present appellant saw fit to hammer the corks into the neck of the jugs and it is for the jury to say, whether or not, such hammering caused a disturbance of that protective coating or lining which may have caused the reaction of the acid and the resultant explosion.

(Tonery, p. 376, ll. 10-40; p. 377, ll. 1-10:)

"Q. What examination could you make of one of these jugs, what examination could the man who is filling the jug make to ascertain that there was any caked material in there?
A. Simply by shaking the jug is the only way I know that would be possible.
Q. That is the only practical way?
A. The only practical way that I can see.
Q. And if the jug was hammered so as to break-away anything that was stuck to that jug?
A. It would destroy the lining of the jug. These jugs are pacified. When jugs are taken in to begin with, what we call pacifying them takes place. A solution of weak acid is put in it and the object of this is to form a coating. Lead is readily attacked by hydrofluoric acid and in order to form this coating we put hydrofluoric acid in these jugs thereby forming a coat and a lining. That acts as a protection against any further action of the acid. Then the jug is always handled with the greatest of care not to break this coating away because while there is action, after the coating is formed I mean, there is an action and this coating is a protection that is put on the jug for the purpose of preventing any further action and I might say that in the handling of these containers the orders are to handle them the same as if they were glass because if the jug is not handled carefully,

if it is put down suddenly it is liable to crack the coating that was put on the container to preserve it. When that was done, when it was cracked, the acid could eat further and then it would come through to the surface but as a protection against that they handle the jug with the greatest of care, that is why the orders are given to put nothing in the jug, not even to put water in the jug. To put nothing in the jug that would possibly interfere with or break away the coating of the jug."

In conjunction with the foregoing testimony by Dr. Tonery, a reading of the testimony of Roman Schmeltz shows his admission that he did hammer the corks into the necks of the jugs with a hammer.

(Schmeltz, p. 166, ll. 30-35:)

"Q. What was that you say you did with these jugs when you received them?
A. Well, I turned them upside down and tapped them and put corks *and hit them flat when they were filled.*"

(Schmeltz, p. 336, ll. 12-19:)

"Q. Now, you say something about hammering them flat. Will you explain that a little more?
A. Why we do all the time that way. We hit them flat so that the cork fits good in.
Q. What do you hit them with?
A. A hammer; we have a hammer there."

(Schmeltz, p. 335, ll. 15-16:)

"I put them corks in and hammered them flat."

The cases of the Court of Errors and Appeals of this State are unanimous in the statement that a person undertaking a duty, although not required so to do, must perform that duty with reasonable care and skill. *Van Winkle* vs. *Steam Boiler,* 52 N. J. L. 240. In that case, an explosion of a steam boiler occurred and the owner of it and an Insurance Company whose employees had made periodical inspections of the boiler, were sued for the resultant damage. The Court held:—

"In such instances the owner of the dangerous machine is liable for the immediate and obvious damage caused by its mismanagement and all persons, *whether servants or volunteers who participate in such mismanagement are also liable.*"

Labrasca vs. *Hinchman,* 81 Law, 367, wherein this Court again laid down the rule that although the owner of the premises was under no duty to effect the repairs to them, the collapse of which caused the injury, the tort-feasance of the Landlord was in undertaking to make the repairs and in doing the work negligently.

Panglorne vs. *Weiss,* 85 Law, 154, where the defendant although under no duty so to do, undertook to repair a lock upon the plaintiff's door and a loss ensued, evidently through theft. The respondents further urge that the appellant having undertaken to make an inspection of the container which exploded even assuming they were under no duty so to do, which respondents deny, they were required to make such inspection with reasonable care and skill and it is for the jury to determine under all of the facts presented with reference to said inspection whether or not such inspection was done reasonably well.

Respondents further urge that even assuming the inspection for which the present appellant contends, to have been the only reasonable one, it is again for the jury to determine whether or not by the hammering of corks into the necks of

containers the protective coating was disturbed and the dangerous reaction of the acid permitted to occur.

E.

That a non-suit or a direction of verdict in a case premised upon the negligence of the defendant cannot be granted, even if the facts be conceded, provided more than one inference might reasonably flow from said facts.

Respondents contend that even assuming all of the facts as set forth in appellant's brief to have been true, and even assuming further that the inspections made by said appellant were the only inspections reasonable, yet the jury might rightfully infer that it was the appellant's own act (the hammering of the corks) which contributed to the cause of the accident.

Bahr vs. *Lombard Ayres & Co.,* 53 Law, 233, at page 236.

> "If from the facts in evidence two inferences as to the defendant's conduct may legitimately be drawn, one favorable and one unfavorable to its negligence a question is presented which calls for the opinion of the jury."

See also:

Holmes vs. *Peligrino,* 133 Atl. 194;
Burnell vs. *Waterbury Hospital* (Conn.), 131 Atl. 501;
Atlantic City Railway vs. *Smith,* 12 Federal, 658.

> "A direction of a verdict or a non-suit upon the question of negligence is authorized only where reasonable men can not differ."

F.

If two or more persons, though not acting in concert, occasion an injury through their negligence, they are severally liable for the consequences.

Respondents here contend that even assuming the owner of the jugs, Entermann, was in some degree negligent yet the negligence of the present appellant was a concurrent incident in the result complained of. Without the contact of hydrofluoric acid on dirt an explosion could not have occurred. From all of the evidence adduced by both sides, it conclusively appears that it was the action of the acid upon silicious dirt which caused the explosion. That circumstance, respondents contend, is the result of the negligence of the appellant or at least the result of the concurrent negligence of the appellant and of Entermann.

Lombardi vs. *Yulinsky,* 119-Atl-873

wherein this Court affirmed the doctrine of the responsibility in severalty of persons concurrently negligent:

> "If two or more persons though not acting in concert occasion an injury through their negligence, they are severally liable."

Fort vs. *Reid Ice Cream Co.,* 119 Atl. 638:

> "Where each of two parties have partial control of premises, both might be liable for the lack of care to a person invited upon the premises of either."

Respondents answering the various citations produced by the appellant with reference to the duty of inspection imposed upon persons or cor-

porations introducing gas or electricity into premises wherein the fixtures were installed by another, contend that the law of the State of New Jersey is as set forth in the case of *Hoboken Land & Improvement Company* vs. *United Electric,* 71 N. J. L. 430, wherein this Court held

> "An Electrical Company before sending its current for lighting purposes through an apparatus installed in the building by other parties, is bound at its own responsibility to make reasonable inspection of the apparatus to see whether it is fit for use."

To the same effect see also *Heckel* vs. *Ford Motor Co.,* 128 Atl. 242. With reference to the case of *Barrett* vs. *Sinclair,* 145, Northeastern, 894, upon which the appellant seemingly relies, respondents respectfully urge a careful reading of that case by the Court.

Respondents contend that the cited case turns completely upon the question of pleading in that the complaint was predicated entirely upon the violation of an Indiana Statute which made it unlawful to sell gasoline, benzine or naphtha in a container unless the same is painted red or to keep for sale or to use or to sell any kerosene in any barrel or container if the same is painted red.

Respondents respectfully contend that standing alone the complaint in the Indiana Case is manifestly insufficient and can in no way be made analogous in the instant case.

Respondents further contend that the Barnett case is not applicable in this State since gasoline has been judicially determined *not to be an inherently dangerous substance.* In the case of *Sarno* vs. *Gulf Refining Company,* 124 Atl. 145, affirmed by the Court of Errors and Appeals, in

130 Atl. 919, Mr. Justice Minturn uses the following language:

> "We must judicially observe, in this connection, that gasoline is a motive fluid in general public use as was kerosene in the days preceding introduction of gas and electricity, *and that there is nothing inherently dangerous in its ordinary use, removal or carriage.*"

With reference to the hypothetical case propounded by appellants on page 29 of its brief respondents contend that the one homely illustration to demonstrate the position that no liability could be fixed upon the defendant by reason of the matters charged in the complaint and the evidence adduced at the trial. Whether the adjective homely meant not very good looking or inapt is not set forth with any fullness; but even in the homely illustration hypothetically set forth by the appellant, if the owner of a vinegar store had, by experience and positive direction in the course of trade, been pursuing the method of ascertaining whether any liquid was in the jug which he was about to fill with vinegar and by his failure to use reasonable care to make the test appropriate to the trade and in accordance with his personally repeated orders to his clerks, it certainly would be said that having undertaken the duty of inspection that it was at least a jury question to say whether or not such reasonable inspection, if undertaken at all, would not be a basis for liability against the defendant. In the case suggested by the appellant there is no suggestion that the storekeeper knew of the presence of any deleterious substance in the opaque jug, or is there any suggestion that any method of inspection was ever utilized or undertaken by the

storekeeper and the respondents agree with the appellant that the storekeeper would not be liable in the absence of knowledge of the existence of the latent condition of the jug at the time it was filled by him, because of the fact that there is no suggestion of any prior standard of inspection used by the storekeeper, and for the more cogent reason that it hardly be admitted that the vinegar in the homely illustration possessed the damaging characteristics of the hydrofluoric acid in the instant case. It may, with due deference, be asserted that it would be a rather delicate judicial determination to insist upon a retailer of vinegar to apprehend that an innocent opaque jug presented by an amiable housekeeper would contain the poisonous beverage mentioned in the appellant's brief.

The illustration is further subject to the criticism, which we hope is not captious, that the opaque jug would presumptively and ordinarily be subjected to no tapping, inspection, or search for substances which might form encrustations liable to violent reaction when saturated with a fluid having the potentially explosive characteristics of so common a staple as household vinegar.

RESPONDENTS THEREFORE RESPECTFULLY URGE that the Court rightfully denied appellant's motions for non-suits and directed verdicts and rightfully permitted the cases to go to the jury.

did not ERR

The Court ~~erred~~ in submitting to the jury that the accident was due to the presence or lack of paraffin on the cork used in the jug which caused the explosion.

The defendant requested the Court to charge the jury as follows: Ten. There is no evidence

in this case that the accident was the result of the presence or lack of paraffin on the cork used (p. 467, ll. 34-36).

Respondents contend that the Court rightfully refused the request of the appellant inasmuch as there is evidence in the case with respect to the condition of the cork in the neck of the jug.

(Case, Hopper, p. 93, ll. 30-40:)

> "Q. What was the difference?
> A. They had paraffin paper around them that protruded far above the cork; they were wrapped in paper and tied with twine. I used to carry them in the trolley car when I hadn't the car."

(P. 94, ll. 8 and 9:)

> "Q. This was the only instance in all the eight or nine years?
> A. Yes, sir."

Schmeltz testified that the cork used by him was one usually used by the Company, with paraffin on it. Meerbott testified in answer to a question by the Court (p. 267, ll. 22-40):

> "The Court: Having that very same example in mind, assuming now that they are both corked with the same kind of cork but one is paraffined and the other is not, would it be any different?
> The Witness: Yes, there would be a difference. The one not paraffined would have greater resistance, therefore the explosion would be more violent than the one paraffined which would not offer as much resistance, as there was a lubricant between the neck of the jug and the cork and the explosion would not be so violent comparatively. It would be more likely that the cork would escape before the pressure got so great as would be necessary to blow the cork that is not paraffined.

The Court: The cork paraffined would offer more resistance?

The Witness: Would offer less resistance than the one not paraffined.

The Court: There would be less danger in one that was paraffined?

The Witness: Yes, there would be less danger in the one paraffined in this way, that the cork would not be affected in the first place and in the second place the resistance offered by the cork paraffined is less than that if it is not paraffined.

The plaintiff Hopper was guilty of contributory negligence which negligence was the proximate cause of the injury.

The respondents, Carroll, Kelly and O'Neill, upon this point urge that even though Hopper may have been guilty of some negligence, which the respondents deny, yet the best that can be said for the present appellant is that such negligence was a concurrent factor.

> "Where an injury is occasioned by the concurrent negligence of more than one person, they are liable in damages severally."
>
> *Lombardi* vs. *Yulinsky,* 119 At. 873.
> *Fort* vs. *Reid Ice Cream Co.,* 119 Atl. 638.

The respondents, Carroll, Kelly and O'Neill, here urge against the appellant each and every reason set forth by it in its brief (pp. 39 to 42) and which reasons all point with greater force to the negligence of the appellant than to Hopper.

> "If, from the facts in evidence two inferences as to defendant's conduct may legitimately be drawn, one favorable and one unfavorable to its negligence, a question is presented which calls for the opinion of the jury."
>
> *Bahr* vs. *Lombard Ayres & Co.,* 53 Law, 233, at page 236.

The respondent, Hopper, urges that the trial court in its charge fully and completely covered the facts and circumstances under which the delivery of the jugs in question was made to the Hopper Automobile.

The Trial Court rightfully submitted those facts for the jury to pass upon. It is in evidence in addition to the fact that Hopper might have known the results from the heat of the container and the lack of paraffin around the cork, the fact that *Schmeltz hammered the cork into the neck of the bottle,* which fact taken in conjunction with the appellant's own expert that the jugs must be handled with the highest degree of care created a situation whereby it might rightfully be said that Schmeltz's act was the proximate cause of the accident (due to the disturbance of the protective coating in the jugs). With that situation, Hopper could in no way be chargeable and the fact that the jugs may have been noticeably hot cannot be said to have placed him on notice of the condition of the acid within the jugs. He had a right to rely upon the superior chemical knowledge of the company supplying the acid and the containers. A question of fact therefore was raised and it is for the jury to determine whether or not Hopper was contributorily negligent. The appellant cannot be heard to complain at this stage of the proceeding, since it did not advance any particular request to charge with respect to Hopper's contributory negligence. It contented itself merely with its statement in its motion to non-suit and to direct a verdict that the plaintiffs were guilty of contributory negligence, particularly Hopper and Carroll.

As to Hopper's knowledge having been the proximate cause of the accident, respondents contend that that is entirely a factual question for the jury to pass upon. Hopper took no affirmative act,

contributed in no way to the filling of the containers, acted merely as a messenger conveying the containers from Entermann to Cooper, had no knowledge of what may have transpired in the Cooper plant and had a right to rely upon the superior knowledge of the Cooper Company and to rely further upon the care and prudence which a company handling such acid should have exercised.

Respondents again urge at this point the reasons, arguments and citations advanced by them in its arguments in answer to appellant's point charging error in the Court in the denial of the motion to non-suit and direct a verdict and particularly desire at this point to again emphasize the opinion of Chancellor Pitney in the case of *Tomlinson* vs. *Armour & Company,* 75 N. J. L. 748, wherein this Court stated:

> "Among the most fundamental of personal rights, without which man could not live in the state of society is the right of personal security including 'the preservation of a man's health from such practices as may prejudice or annoy it.' To assert, therefore, that one living in a state of society organized, as ours is, according to the principles of common law, need not be careful that his acts do not endanger the life or impair the health of his neighbor seems to offend against the fundamentals."

(See also on this point, *Heckel* vs. *Ford Motor Co.,* 128 Atl. 242) and the cases therein cited.

The proposition sought to be sustained by the appellant that Hopper (a non-actor) was the responsible or proximate cause of the accident seems to the respondents to be most strained. Citing from appellant's own brief, page 47; 33 Harvard Law Review, 633:

> "The non-action of one who is under legal duty to act is nothing."

The appellants have shown no duty upon Hopper to have made an inspection of the jugs and to say that he should have done so places upon the Cooper Company an even greater duty of inspection as set forth in respondent's brief heretofore. It has been held in this State that

> "Contributory negligence must have contributed in such a way, that, except for such neligence there would have been no injury."
>
> *Donus* vs. *Public Service,* 133 Atl. 196.

As the accident happened within a few minutes after the jugs had been placed in the automobile, and as the reaction of the acid was rapidly forming a gas during its transportation to the automobile, it was for the jury to say whether or not Hopper, assuming he had knowledge or what was transpiring, could have, within those few minutes have avoided the consequences, either to himself or to his invited guests. Thus it has been held (*Higgins* vs. *Goercke,* 103 Atl. 37, Affirmed 106 Atl. 394):

> "Where a plaintiff customer grasped top of an ice box in defendant's store while examining its interior and the lid fell upon her hand, she was not guilty of contributory negligence as a matter of law."

The cases are uniform in holding that to say that a person is contributorily negligent, *per se,* the evidence thereof must be so strongly that no other inference could reasonably be determined from his conduct.

Carrying packages does not necessarily convict customer of contributory negligence in failing to

observe defects (*Murray* vs. *Earl,* 128 Atl. 436, 282 Pa. 517).

The Court did not err in refusing to charge that defendant was under no duty to inspect the jug presented by the plaintiff Hopper.

Again respondents urge the same arguments in answer to the foregoing point that they raised in answer to the appellant's arguments upon the motions to non-suit and direct a verdict.

Respondents further urge that the request of the appellant was rightfully denied for the reason that the evidence affirmatively showed that it undertook to make an inspection of the container which exploded.

Furthermore, the Court in its charge (Case, p. 442, ll. 35-40) charged as follows:

> "It was only required to make such inspection as was commensurate with the danger involved, and if it did that, it performed its full duty in that respect, and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and operation involved."

(See cases cited by the respondents in their first point argued in this brief.)

The Court did not err in refusing to charge that in the absence of any knowledge as to the defective condition of the jug at the time it was filled with acid the defendant could not be held guilty of negligence.

Upon this point the respondents again urge the same arguments set forth by them in subdivision

'A' of their brief answering appellant's brief upon the question of error in the Court's refusal to non-suit or direct a verdict.

It is in evidence that the trade generally knew of the action of the acid upon silicate; that examinations were habitually made of containers returned for refilling; that said examinations consisted of two or more methods, (Tapping, or pressure tests); that a longer period of time than that which was consumed in the filling of the exploded container had habitually been the custom of the Cooper Company; that containers had previously been known to pop or explode (Toney, p. 384, ll. 30-35):

> "Q. Have you seen them?
> A. I have seen corks blow out.
> Q. When and under what conditions, Doctor?
> A. Well, containers that have been filled and standing. These containers were filled and standing for some time before shipment and due to the *increase of temperature and the position in which they were placed.*"

It is further a jury question as to the fact whether or not the defendant had knowledge of the defective conditions of the jugs in question (See on this point, *Noonan* vs. *Atlantic & Pacific Tea Co.,* 135 Atl. 822.)

The Court did not err in denying defendant's eighteenth request to charge.

Respondents contend in answer to the foregoing point that the Court thoroughly covered the law as to the tests required of the defendant. The Court charged, (442 ll. 35-40)

> "That the test with respect to inspection of the jug before filling is not whether there

> was some possible or infallible test because that would make it an insurer. It was only required to make such inspection as was commensurate with the danger involved and if it did that it performed its full duty in that respect, *and the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger of operation involved.*"

The foregoing citation from the Court's charge needs no reference to the authorities to sustain it, since it is elementary law that the basis upon which the defendant may be charged with negligence is the failure to exercise the common, reasonable and fair course of conduct under the circumstances.

The Court fairly covered the law upon this question.

DID NOT

The Court ~~erred~~ in its charge as to the degree of care necessary to be exercised by the defendant and refusing to charge that if the jury should find that the defendant made such an inspection as a reasonably prudent man under the circumstances would make without finding any condition in the jug which would naturally and proximately cause the accident which occurred, the defendant discharged its full duty and no recovery could be had against it.

Respondents urge upon the foregoing point that the appellant itself at the close of the charge by the Court invited the Court's attention to that about which it now complains (p. 463, ll. 15-30). Upon the objection of Mr. Ashmead of counsel for the appellant with respect to what was said by the Court in its main charge with reference to proximate cause and as to hydrofluoric acid

being a dangerous substance, the Trial Court corrected and recharged the jury. To that recharge, appellant took no exception.

Again respondents urge the arguments presented by it in its arguments answering appellant's reasons why a non-suit or a motion to direct should have been granted.

In addition thereto upon the corrected charge of the Court as requested by counsel for the appellant, the trial Judge charged as follows:

> "At one time I said there could be no doubt that acid, referring to this acid, was dangerous. I think the testimony would not warrant the broadness of that assertion; I did not intend it to be so understood. The testimony, as I understand it, as to this acid, if it comes in contact with the flesh or if it comes in contact with a foreign substance would cause it to boil or evolve or push out a gas, would be dangerous. I do not wish you to understand by the remark I made that the acid itself in its vat, unless coming in contact with some foreign substance or unless applied to the flesh would be dangerous."

To the corrected charge as hereinabove set forth, the appellant took no exception.

With respect to the inspection made by the appellant and the comment thereon by the Court, respondents again respectfully refer to the Court's charge (p. 442, ll. 37-40):

> "And the fair test would be the inspection commonly used and recognized in the trade as commensurate with the danger and operation involved."

Upon this point, see *New Jersey Fidelity & Ins. Co.* vs. *Lehigh Valley Railroad,* 92 N. J. L. 478 (Black Tom explosion cases.)

The legal rule as to the degree of care resting upon individuals or agencies which are dangerous to human life is well expressed by Chief Justice Magie, in *Newark Electric Light Co.* vs. *McGilvrey,* 62 N. J. L. 451, page 454.

> "Such company using in business, wires, to carry a subtle and invisible power highly dangerous to human life, must, although authorized to stretch such wires along poles in Public Highways, exercise a very high degree of care for the safety of those who may be exposed to danger."

See also:

Heckel vs. *Ford Motor Co.,* 128 Atl. 242;
Tomlinson vs. *Armour & Co.,* 72 N. J. L. 748.

The Court did not err in its charge with respect to proximate cause.

The respondents here contend that the charge as given upon proximate cause, was rightfully stated by the Court. Furthermore at the specific request of the present appellant, at the close of the Trial Court's main charge, the jury was recharged upon proximate cause. To that recharge, the appellant took no exception.

And it can not now be heard on appeal. *Vendola* vs. *Public Service,* 136 Atl. 415.

The appellant seems not to question the correctness of the Court's charge or the definition of proximate cause but says the charge is a mere abstract proposition of law without some suggestion as to its proper application to the facts in the instant cases. The Trial Court is not called upon to define and justify every legal proposition in-

volved in the case with the facts in evidence. Its duty is fulfilled if it states the correct legal rule for the jury to follow and to which the jury is to apply the facts. *Lang* vs. *N. Y. Railroad,* 99 Atl. 346.

If the appellant conceived that it was necessary to more carefully apply the rule on proximate cause to the facts in the instant cases, they should have, by request, made application for the desired instruction. (See *Newark Passenger Railway,* 27 Atl. 1067).

Respondents further contend that upon appellants own request the Court charged as follows (p. 461, ll. 30-36):

> 26. "You must find for the defendant, unless you find that the accident was the natural and proximate consequence of the breach of duty which the Court has charged was owing from the defendant to the plaintiff, Hopper, Jr."

The judgment was NOT contrary to law.

Respondents upon the foregoing reason urge that a statement that a verdict is contrary to law without exception taken is futile (See, *Murphy* vs. *Farm Service,* 130 Atl. 517):

> "Where no exception is taken to alleged erroneous instruction, the verdict of a jury, based on such instruction, cannot be attacked as contrary to law."

Respondents contend that the allegations set forth in its complaints have been sustained in all their material allegations and here urge the same reasons in answer to the foregoing ground of appeal as it urged in answer to the ground alleging

error in the Court's refusal to non-suit or to direct a verdict.

Respondents submit that the allegations of the complaints charging failure to use proper care and caution in the handling of the acid then and there known to be a dangerous and explosive substance have been sustained by the evidence (See citations in respondents brief from the evidence of all of the experts produced at the trial). The acid being, *per se,* a dangerous substance, respondents contend a public duty existed upon the appellant to protect the present respondents, and any person who may have come in contact with the acid, from injury due to the handling of it.

On this point see the opinion of Chancellor Pitney in *Tomlinson* vs. *Armour & Company,* 75 L. at page 757, where this Court stated:

> "Among the most fundamental of personal rights, without which man could not live in a state of society, is the right of personal security, including the 'preservation of a man's health from such practices as may prejudice or annoy it" (1. Black, Com. 129, 134)—a right recognized, needless to say, in almost the first words of our written Constitution (Const. art. 1, par. 1). To assert, therefore, that one living in a state of society organized, as ours is, according to the principles of the common law, need not be careful that his acts do not endanger the life or impair the health of his neighbor seems to offend against the fundamentals. Upon what other fundamental principle does the rule rest that one who uses a highway must be careful not to collide with his neighbor? Upon what other fundamental principle does the law of libel and slander rest? Or the rule, recently laid down by this Court, in *Brennan v. United Hatters,* 73 N. J. L. 729, 744, 65 Atl. 165, 9 L. R. A. (N. S.) 254, 118 Am. St. Rep. 727, that any act is wrongful which, in the ordinary course, will infringe upon the rights of another to his damage, except it be done in the exercise of an equal or superior right?"

(See also *Heckel* vs. *Ford Motor Company,* 128 Atl. 242, also *Hoboken Land & Improvement Co.* vs. *United Electric,* 71 N. J. L. 430, and the cases cited by respondents in its first point in this brief.)

Respondents contend further that by the evidence produced at the trial they have squarely raised a question of fact as to whether or not the appellant exercised due and proper care and caution in cleansing and scouring said lead containers. It is in evidence that the appellant endeavored to inspect the containers for the purpose of determining whether or not it was free from foreign matter which might react with the acid.

Respondents further contend that the complaint is sustained by the evidence in that appellant did not properly seal or cork said containers. A question of fact was squarely raised whether or not the cork used by the appellant had a protective coating of paraffin upon it.

Respondents further urge that the complaint has been sustained by the evidence produced in that the undisputed testimony shows that the appellant knew the dangerous and explosive character and propensity of the acid and a question of fact was squarely raised whether or not appellant used proper car and caution to protect the respondents from injury.

Respondents further contend that in order to sustain a verdict it is not necessary that every allegation alleged in its complaint be proved. It is sufficient if a material allegation charging negligence, has been proved and this respondents contend has been done.

CONCLUSION.

For the reasons alleged, respondents submit that the Trial Court rightfully denied the present appellant's motions for a non-suit or a directed verdict, rightfully charged the jury and rightfully refused to charge the requests made by the present appellant which it did refuse, and rightfully submitted the questions of the appellant's negligence to the jury.

For the reasons herein stated, respondents submit that the judgments of the Trial Court should be affirmed.

Respectfully submitted,

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New Jersey Court of Errors and Appeals

ON APPEAL FROM NEW JERSEY SUPREME COURT.

SAT BELOW: ACKERSON, JR., C. C. J.

EDWARD WILLIAM HOPPER,
Plaintiff-Respondent,
vs.
CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

JOHN CARROLL,
Plaintiff-Respondent,
vs.
CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

JAMES KELLY, Administrator *ad prosequendum* of James M. Kelly, deceased,
Plaintiff-Respondent,
vs.
CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

CHARLES J. O'NEILL, Administrator *ad prosequendum* of John P. O'Neill, deceased,
Plaintiff-Respondent,
vs.
CHARLES COOPER & COMPANY, INC.,
a corporation,
Defendant-Appellant.

SUPPLEMENTAL BRIEF FOR PLAINTIFFS-RESPONDENTS.

The Court fully and properly charged the jury upon defendant's allegation of contributory negligence on the part of the plaintiffs.

It was alleged by the defendant-appellant that the plaintiff, Hopper, as well as the other plain-

tiffs, were guilty of negligence which contributed to the happening of the accident.

Defendant-appellant, in its brief, makes the claim that the plaintiff, Hopper, "was entirely familiar with hydrofluoric acid and its action". The breadth of this statement is not justified by the testimony in the case. It was established that the plaintiff, Hopper, was, at the time of the accident, employed as a monumental letterer in the business of his father (Case, p. 82, ll. 19-35). That, while it is true he observed certain forms of the action of hydrofluoric acid, both on glass and stone, as well as the contact of the acid with sand, yet, there was no testimony that would indicate that the plaintiff, Hopper, had any familiarity with the chemical action of hydrofluoric acid under pressure. Assuming, however, that Hopper was more familiar with the chemical action of hydrofluoric acid than can be justified by the testimony in the case, this Court's attention is invited to that part of the Court's charge dealing with defendant's allegation of contributory negligence on the part of Hopper (Case, p. 449, ll. 30-40; Case, p. 450, ll. 1-9) as follows:—"From the testimony of the plaintiff Hopper, it appears that he was more or less familiar with hydrofluoric acid. You will remember what his testimony was, and that he knew that these jugs were hot at the time, or one of these jugs, at the time it was placed in the car, or immediately after it had been placed in the car, and he was charged to act as a reasonably prudent person would have acted under the circumstances. If you find that a reasonably prudent person would not have attempted to take the jug away, or to do what he did with respect to the jug under the circumstances, and he was thereby contributorily negligent, you would have to find in favor of the defendant and against the plaintiff."

We respectfully submit that here the Court fully and completely committed to the jury the consideration of the question of contributory negligence, alleged by defendant against Hopper.

But the Court not only charged the above excerpt as part of its main charge to the jury, but it should be noted that defendant, recognizing the fullness and completeness of this instruction, as covering the allegation of contributory negligence when, after having submitted request to charge No. 27 as follows (Case, p. 470, ll. 25-35): "27. From the testimony of Hopper, Jr., it appears that he was familiar with hydrofluoric acid and its characteristics and that he knew that the jug was hot at the time it was placed in the car and was chargeable to act as a reasonably prudent person would have acted under the circumstances, and if you find that a reasonably prudent man would not have attempted to take the jug away in such condition you must find in favor of the defendant and against Hopper. (Withdrawn.)" Defendant withdrew its request No. 27, as is evidenced by the record.

Again the Trial Court, in its charge to the jury, speaking generally upon the question of contributory negligence, *as applying to all four plaintiffs,* charged the jury (Case, p. 449, ll. 4-30):

> "Now, gentlemen, these young men were not privileged to shut their eyes to surrounding circumstances, but were required to exercise reasonable care for their own safety; such care as a reasonably prudent person would have exercised under exactly the same circumstances.
>
> Now, the care here is not that they must so act as to insure their safety, but they are only required to exercise that care for their safety which a reasonably prudent person would have done under exactly the same circumstances. So you may therefore properly

> ask yourselves: what did any of these young men do, respecting his own individual case now, which a reasonably prudent person would not have done, or what did he fail to do which a reasonably prudent person would have done. If that person's conduct—speaking now of the plaintiffs—did not comport with what would have been reasonably prudent care under the circumstances, then such plaintiff would be negligent, and if such negligence contributed in any degree to the happening of this accident, there could not be a recovery on the part of such a plaintiff."

And again, the Trial Court directed the jury's attention to its duty to consider the allegation of contributory negligence charged (Case, p. 450, ll. 18-27):

> "*And so, Gentlemen, if in one or more, or all of these four cases*, you should find that the defendant was negligent, and that its negligence was the proximate cause of this accident within the rule that I have given you, *and it should further appear that the plaintiff in the particular case that you are considering was free from contributory negligence,* then such plaintiff, in such case, would be entitled to a verdict as against the defendant."

It is undisputed that the plaintiff Hopper, who had been purchasing hydrofluoric acid from and at the plant of defendant for several years (Case, p. 83, ll. 12-20) and that in the eight or nine years during which he had purchased hydrofluoric acid from defendant, he was always obliged to wait *an hour and a half to two hours at defendant's* plant before the acid was delivered to him (Case, p. 92, ll. 31-41).

On the occasion of the accident in question, however, the acid was delivered to him *within fifteen or twenty minutes* of the time of his ar-

rival at defendant's plant (Case, p. 87, ll. 24-40; Case, p. 88, ll. 1-5).

These facts, viewed in the light of the testimony of defendant's chief chemist, Friedman, is not only cogent, but presents a clear-cut issue of fact for the jury (Case, p. 414, ll. 3-10):

> "Q. So that hydrofluoric acid in a jug having an encrustation which might have been silicate in it, caked, would not be dangerous?
> A. Not after it *stood two hours in the open.*
> Q. In the open?
> A. *Two hours uncorked.*"

With the testimony of the expert chemists for both plaintiffs and defendant being substantially in agreement as to the chemical action of hydrofluoric acid, it must follow that, in view of the testimony of defendant's chief chemist, that if the jugs which were filled by defendant were left to stand in defendant's premises, *uncorked for about two hours,* that in such event, with silicate being contained in the jugs into which defendant poured the acid, the jugs of acid would not then have been dangerous. But in the instant case, with the attempt on the part of the defendant, by its employee, Schmeltz, to inspect or clean the jugs (Case, p. 165, ll. 1-40), wherein he turned the jugs upside down and tapped them for the purposes of cleaning them (Case, p. 166, l. 30) and (Case, p. 167, ll. 25-30). He, Schmeltz, "*put them corks in and hammered them flat*" (Case, p. 335, ll. 15-30) and immediately turned them over to defendants' employee, Moorhead, who then forthwith carried them to and placed them in the automobile in which all four plaintiffs were seated (Case, p. 88, ll. 35-40).

We repeat that the plaintiffs were at the plant of the defendant between fifteen and twenty minutes (Case, p. 87, ll. 35-40), and that though

defendant's employee, Schmeltz, attempted to clean the jugs in question to see that the jugs were thoroughly cleaned before putting hydrofluoric acid into them (Case, p. 343, ll. 1-20), he was not sure whether or not anything came out of the jug upon his turning it upside down (Case, p. 344, ll. 20-30), testifying further that *"if he knew there was dirt in a jug he would not put acid into it"* (Case, p. 345, ll. 7-20) *"because he knew that to do so would be dangerous"* (Case, p. 349, ll. 28-30).

An examination of the testimony of all of the experts in the case clearly establishes that to put hydrofluoric acid into containers which are not clean, and immediately corking the containers, thus imprisoning the gases generated by the chemical reaction due to contact between hydrofluoric acid and silicious or foreign substance contained in such receptacle, is highly dangerous, but that, if, notwithstanding the presence of silicious or foreign matter contained in such receptacle into which the hydrofluoric acide is poured, such receptacle is left uncorked, thus releasing the gases formed by such chemical reaction, or, if the receptacles were thoroughly cleaned, there would be no danger. It is forcibly clear that the defendant was negligent in the handling of this highly dangerous agency, as evidenced by the explosion of one of the jugs, resulting in the killing of two of the plaintiffs' intestates and severely injuring the survivors, Hopper and Carroll.

Respondents respectfully submit that the record clearly establishes negligence on the part of the defendant and that the plaintiffs clearly were free from contributory negligence and though defendant alleged such negligence on the part of the plaintiffs, the Court fully and completely instructed the jury as to the latter's duty in considering such allegations, as above stated, and it must therefore follow that the jury, in considering defendant's allegation of contributory negligence on the part of the plaintiffs, failed to find such to exist and found that the defendant was guilty of negligence, as charged, and returned its verdict accordingly.

For the reasons stated herein and in respondents' original brief, respondents respectfully submit that the judgment of the Trial Court should be affirmed.

Respectfully submitted,

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