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Program

SYMPOSIUM ON
DUST PROBLEMS

Tuesday, January 15, 1935

The University Club,
123 University Place,
Pittsburgh, Pennsylvania

Chairman, WILLIAM P. YANT,
Supervising Engineer,
Pittsburgh Experiment Station,
U. S. Bureau of Mines

MORNING SESSION—930 A.M.

1—THE PRESENT DAY SITUATION:

MR. A. C. HIRTH,
Williams, Eversman & Morgan,
Toledo, Ohio.

2—THE MEDICAL VIEWPOINT:

- (a) DR. EUGENE P. PENDERGRASS,
X-Ray Laboratory,
University Hospital,
Philadelphia, Pennsylvania.
- (b) DR. A. J. LANZA,
Assistant Medical Director,
Metropolitan Life Insurance Co.,
New York, New York.
- (c) DR. R. R. SAYERS,
Medical Officer in Charge,
U. S. Public Health Service,
Washington, D. C.

BUFFET LUNCHEON—12:30 P.M.
Main Dining Room, University Club
Courtesy of Mellon Institute

AFTERNOON SESSION—2:00 P.M.

3—PRECAUTIONS:

- (a) PROF. PHILIP DRINKER,
School of Public Health,
Harvard University,
Boston, Massachusetts.
- (b) MR. F. ROBERTSON JONES,
General Manager, Association of
Casualty and Surety Executives,
New York, New York.

4—OPEN DISCUSSIONS, led by:

- (a) DONALD E. CUMMINGS,
Assistant Director, Saranac Laboratory for Study of Tuberculosis,
Edward L. Trudeau Foundation,
Ironwood, Michigan.
- (b) DR. SAMUEL R. HAYTHORN,
Director, Singer Memorial Laboratory,
Pittsburgh, Pennsylvania.

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REPORT FILE

REFERENCE No.

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THE PROBLEM

By

Alfred C. Hirth

of

Williams, Everaman & Morgan
Attorneys

This meeting has been called to provide affected industries with an opportunity of discussing a common problem and of considering ways and means of solving it. I have been advised that it is a family meeting in which we may call a spade by its rightful name with the assurance that we will not be quoted in the press or elsewhere.

I do not for a minute pretend to be an expert on silicosis. I am far too near home to make any such pretension. However, for the last two years, I have devoted my entire time to the various aspects of the silicosis problem. This has included the trial of cases, the formulation of legislation, supervision of corrective engineering and the setting up of adequate medical programs to safeguard both employees and employers. The experience I have gained in this work has brought me a realization of the enormous proportion of industry's problem in so far as its dust hazard is concerned. That which was a rather disturbing possibility three years ago, has now become a grim reality and one that requires concerted and well directed action. If I can

leave that single thought with you, I will feel that my efforts have been well spent and hope that in doing so I will have rendered you some service.

Goldberg of Columbia, states that "The importance of dust as a factor in occupational mortality has attracted the attention of every authority on occupational diseases from Ramazzini to Sir Thomas Oliver. It requires no extended consideration to prove that human health is much influenced by the character of the air breathed and that its purity is a matter of very considerable sanitary and economic importance. Aside from the risk of exposure to so-called air-borne diseases, the pollution of the atmosphere by organic and inorganic dusts is unquestionably the cause of a vast amount of ill-health and premature mortality, chiefly among men and women engaged in the many indispensable trades and occupations that minister to human needs. The sanitary dangers of air contaminated by disease-breeding germs are possibly not so menacing as generally assumed, while the destructive effects of the dust-laden atmosphere of factories and workshops are a decidedly serious menace to health and life."

Disability resulting from the inhalation of any of these various dusts may result in liability on the part of the employer, the extent of which is now being demonstrated by the epidemic of silicosis cases. The serious situation in which industry finds itself is a result of our lack of knowledge of the extent and even of the existence of the hazard and the means which should have been

employed to remove it. I cannot feel that industry should be called upon to pay the bill. My feelings, however, are unimportant in view of the very definite notions to the contrary entertained by most juries.

The rapid spread of these cases is sufficiently serious to present a question of national importance. It is the purpose of this meeting to discuss this problem intelligently, find out where we are and where we are going from here. You will be addressed by individuals who are experts in the particular phase of the problem which they will present. I will confine my paper to a general picture of the entire situation, my thought being that the technical papers can be followed more easily if you have a general background first. In treating technical questions, I shall try to do so in nontechnical language. I will not attempt to give a scientifically sound treatise on the subject, but as I have already said, will content myself in giving you a rough picture. There may be industries represented here which do not use any free silica in their process and most of my remarks will be directed to silicosis which so far as we now know is caused solely by the inhalation of free silica. The principles involved, however, are equally applicable to all dusts. The disability, if any, resulting from other dusts may vary in intensity and in character, but fundamentally, the problem will be the same.

For the sake of convenience, I will present the problem in sections. First in order shall be "Silicosis, Its Cause and Effect"; Second, "The Basis of Employer Liability"; Third, "The

Legislative Aspect", and Fourth, "The Elimination of the Hazard".

Silicosis, Its Cause and Effect 31

There are innumerable dusts which find their way into the human lung resulting in varying degrees of harm. The general term "pneumoconiosis" is applicable to all dusty lungs irrespective of the character of the particular dust inhaled and is the Greek term for "dusty lungs".

The deleterious effect of the inhalation of dust was well known to the ancients. Pliny (B. C. 23), the poet, Lucretius (B. C. 96), Paracelsus (1534), Agricola (1556), and many others were so impressed by it that they mentioned it in their writings. Agricola states that it was not uncommon to find women in the mining districts who had married seven times and there were no divorces in those days. The Colorado miners have for years referred to certain dust producing air drills as "widow makers". It was not, however, until very recently, about 1912, that worthwhile research and clinical work were undertaken. The appalling effects of mineral dust on the workers in the gold mining districts of the Rand, South Africa, stimulated and initiated a world-wide study and research in silicosis, culminating in the International Conference on Silicosis, held in Johannesburg in 1930.

The general field of pneumoconiosis is divided into numerous smaller fields depending on the character of the dust finding its way into the lungs. Thus, we have anthracosis, resulting from

the inhalation of hard coal dust, bituminosis from soft coal dust, asbestosis from asbestos dust, siderosis from iron dust, and numerous other classifications. The chief concern of industry is centered around silicosis resulting from the inhalation of silica dust, because it is this dust that causes disability. Of the various ones I have referred to, we are now advised that asbestosis is perhaps the only one in addition to silicosis which is disabling. It may be that in the future we shall find other disabling dust diseases. At present, however, we can confine our attention to silicosis.

For a better understanding of the problem, it might be well to consider very briefly and nontechnically the process from which this disease results.

All air contains a certain quantity of silica dust. As a matter of fact, about sixty per cent of the earth's crust is composed of silica. A baby as young as eleven days old will have some minute silica deposit in its lungs and the normal city dweller will during his lifetime accumulate in his lungs millions of particles of such dust which, however, will not in any way disable him. So it will be seen that the mere exposure to, and inhalation of silica dust does not necessarily result in the contraction of silicosis.

The human lung and its various defensive organisms are so constructed that only very minute particles of dust can gain entrance to the air sacs of the lung. We are only concerned

with particles sufficiently small in size to gain such entrance. In no case can such particles be larger than ten microns in their longest dimension. Medical science is reasonably well satisfied that most of the particles causing harm are less than three microns in their longest dimension. A micron is $1/25,000$ of an inch so it is quite possible that the harmful dust may be invisible.

In addition to the size of the particles, the dust to be harmful must be of a sufficient concentration, which is measured by the number of particles contained in a cubic foot of air. Authorities have stated that a concentration of five million particles of free silica less than ten microns in size is not harmful, and that any greater concentration constitutes a hazard.

Dr. Boisliniere has described the physical process so simply and clearly that I shall borrow his ideas in presenting it to you. When these minute particles of dust enter the air sacs of the lung, they are soon enveloped by phagocytes whose function it is to remove them from the air sac and carry them into the sewage system of the lung. These vehicles travel along the highways and byways of the lymphatic system attempting to reach their proper destination outside the lung proper. Enroute there are lymph nodes or aggregations of lymphoid tissues or cells which act as traffic cops, allowing some of the vehicles to continue to their destinations but holding up others. The arrivals may be greater than the departures resulting in a veritable traffic jam at these places. This will occur more readily if the lymph nodes have by previous infections, such as early tuberculosis, become filled,

calcified, or fibrosed. When these dust cells become lodged in the lymph spaces, nature engulfs them in a fibrous tissue. As more and more dust becomes collected, the fibrous tissue increases in density and after sufficient dust is inhaled, these fibrous tissues will increase even though no additional dust may find its way into the lung. Fibrous tissue corresponds very nearly to scar tissue and as it becomes more massive, the lung loses its elasticity and becomes rigid. The resulting condition is silicosis.

In the interest of simplicity, I will refer to the various phases of the disease itself, by reference to the original American Medico-legal classification of 1st, 2nd and 3rd stages. The 1st stage occurs where the disease is in its infancy and if the employee is removed from the hazard, it will not progress and no disability is involved. The 2nd and 3rd stages are much more developed and may result in a real disability. If either of these stages has been reached, the removal of the man from the hazard will usually not check the progress of the disease, nor is it subject to any satisfactory treatment.

3rd stage cases are very frequently fatal and sometimes the individual dies in the 2nd stage without ever having reached the 3rd. Death, however, usually results from some other complication. Because of the fact that the lymph or sewage systems of the lungs are largely blocked off and rendered inert by their deposited silica dust and scar tissue, the lungs are no longer able to combat infection. The most common lung infection is tuberculosis which is

contracted by many silicotics and is the immediate cause of their death, although it may fairly be said that were it not for the pre-existing silicosis, the tuberculosis would not have been contracted. ~~THESE CASES ARE NOT TO BE TAKEN AS AN INDICATION THAT THE DISEASE IS INEVITABLE IN ALL CASES OF SILICOSIS. THE DISEASE IS INEVITABLE IN ALL CASES OF SILICOSIS. THE DISEASE IS INEVITABLE IN ALL CASES OF SILICOSIS.~~

It is important that we all appreciate the seriousness of the situation with which we are faced. Silicosis is a very real ailment and at the present time presents our greatest industrial hazard which, if not properly controlled, will result in the financial ruin of many companies.

At the present time, there are pending cases in this country in which damages asked for aggregate far in excess of \$50,000,000.00. In South Africa \$55,000,000.00 was paid to silicotic claimants in one year and it is now estimated that one-fifth of the total cost of producing gold in that area consists in the payment of silicosis claims.

The possibilities of an epidemic of silicosis claims is very well illustrated in one of our large industrial centers. The litigation in that city is almost entirely in the hands of two lawyers. During the year 1932, one of these lawyers is said to have received in fees from these cases, the sum of \$100,000.00, and was not required to try any great number of them. He still has

pending in his files some five hundred additional claims which have not yet been settled.

Because of this flood of pneumoconiosis cases, employers generally have come to regard this sort of litigation as a "racket". With this feeling, I am very much in sympathy. There can be no doubt that shyster lawyers have solicited literally hundreds of employees to bring actions of this kind, in many of which there is not the slightest trace of injury. These same lawyers, with the assistance of their twin brothers in iniquity, the quack doctors, have prosecuted some of these cases to successful conclusions and have forced others to unconscionable settlements.

However, these facts and the use of this label must not lead you to believe that you are dealing with a situation in which the fraudulent cases can be defended on the grounds of being a racket or in which there can be no bona fide cases with attendant liability. Such an attitude of mind is highly dangerous. There are bona fide cases in which the plaintiffs are represented by lawyers of ability and integrity and in which there may or may not be liability, depending upon the particular facts of each case.

Basis of Employer Liability 27

In a general way it may be said that liability in these cases may arise under the doctrines of the common law, under the statutes which have been passed in the various states to protect the health of employees or under the provisions of workmen's compensation and occupational disease acts.

Common Law Liability

The common law consists of those principles and rules of action which from time to time have been adopted and acted on by the courts when administering justice in cases not governed by any written law. One of the principles established by the courts under the common law is that which requires employers to furnish their employees with a reasonably safe place in which to work.

Originally, this doctrine applied only to the safeguarding of machinery and appliances from which accidental injury might occur. It has now been broadened, however, so as to include anything which may be injurious to the employees' health. It is the failure on the part of the employer to provide a reasonably safe place to work which gives rise, at common law, to liability in silicosis cases.

Whether the employer should be held liable for injuries to his employee's health resulting from failure to provide a reasonably safe place to work depends on whether the employer had knowledge of the existence of such danger, or whether, in the exercise of reasonable care, he should have had such knowledge. The dangers of many manufacturing processes to the health of workmen have been a matter of common knowledge as long as industry has been in existence. The dangers of other manufacturing processes, however, have not been well known for very long, and this lack of knowledge should weigh heavily in favor of the employer in determining whether he has provided reasonable protection for his employees. It is a defense

which we can strongly urge, but one upon which we cannot too strongly rely.

Assuming that employers should have known of the dangerous character of certain dusts, the question still remains as to whether reasonable protection against such dangers has been provided. This is a question of fact ordinarily for the determination of the jury. The various protective devices and equipment which have been adopted by the industries generally, or by a particular industry, furnish some evidence as to whether a given plant or factory is a reasonably safe place to work.

This evidence is not conclusive, however, since an entire industry may be held to have been negligent. Each case must stand or fall on its own facts. A place which would be regarded as reasonably safe when the hazard was unknown or little understood would not be so considered after the hazard had become known to the employer or was such that he should have known it. In other words, you might possibly be excused for your past acts of omission but those days are gone forever.

Liability Under Statutes

In many states, statutes have been adopted prescribing certain safety devices and methods for the protection of employees from dangers arising from the inhalation of dust. Failure to conform to these statutes is negligence as a matter of law, and if it be shown that the disability complained of was a direct result of such negligence, plaintiff very probably will recover judgment.

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The statutes of the various states differ greatly in detail, and I shall not attempt to enumerate them. Generally speaking, they include one or more of the following provisions requiring: the installation of dust eliminating equipment; the providing of approved respirators; the furnishing of working clothing for employees; the examination of employees monthly by a physician; the furnishing of dressing rooms, lavatories, hot and cold showers, and various other toilet facilities; the whitewashing of the inside of plants and factories, etc.

It is perfectly apparent that many of these provisions were not intended to be and should not be applied to plants producing those dusts which are capable only of producing silicosis as opposed to those dusts which are in themselves generally regarded as poisonous. It is against the latter dust that many of these provisions are designed to afford protection. Notwithstanding this fact, in a number of recent silicosis cases the jury were permitted to consider any violation of these statutes in determining whether or not the employer had been guilty of negligence.

This presents a highly hazardous situation. If a jury finds that the employer has been guilty of some negligence, they probably will go further and find that the injury complained of is a direct result of such negligence; and the finding will be sustained by the court if there is some evidence in support of it, even though there be strong evidence to the contrary.

Each of you should determine what statutes and state regulations may govern your operations so far as protection of employees from the deleterious effects of dust are concerned, and the greatest care should be exercised in conforming thereto, to avoid placing yourselves in the situation I have just described.

Liability Under Compensation and Occupational
Disease Acts. 34

Workmen's compensation acts generally are designed to provide compensation for employees who have suffered accidental injury. In a very few states, because of the terminology used in the acts, they have been construed broadly enough to include silicosis. In addition to workmen's compensation acts, some states have adopted occupational disease acts which in principle are very closely analogous to the compensation acts, but which provide for compensation either for occupational diseases generally, or for occupational diseases specifically named in the acts, such as anthrax, lead poisoning and many others.

Some of these statutes include silicosis as an occupational disease. At the present time, I believe that in California, Maryland, Connecticut, Massachusetts, North Dakota, Wisconsin, and the District of Columbia, silicosis is compensable either under the workmen's compensation act or under the occupational disease act. In several states, bills are now pending to make silicosis compensable under one or the other of these acts.

The Legislative Aspect *vv*

Legislation of this character is the strongest bulwark you can erect against future disaster. It has been recommended by the League of Nations and has been adopted by many of the great industrial countries. In our country, Congress has very limited powers in dealing with this problem and the individual states have been woefully lacking in coping with the situation and I cannot urge too strongly that you give your active support to properly drawn bills seeking to make silicosis compensable.

In England and many of her dominions which have had extensive experience with silicosis and kindred diseases the disabilities have been made compensable under occupational disease acts and the system generally has been very successful. Under such acts the vicious situation with which we are now faced, the filing of thousands of actions for damages by ambulance-chasing lawyers would be largely, if not entirely eliminated. The shyster lawyer will foment litigation only so long as he will receive a substantial portion of the recovery. As soon as his fee becomes a negligible quantity, then, and then only, will his interest cease. Under many of the better drawn compensation acts, legal fees are strictly limited.

The elimination of large legal fees is a real benefit to the employee. Under properly drawn compensation acts, the injured man or his dependents are those who receive the benefits, not the lawyers and expert witnesses used in the prosecution of the case.

This benefit is also shared by the employer. Litigation of this character is very expensive. In a recent case tried in West Virginia for silicosis, the trial lasted for eight weeks and resulted in a disagreement by the jury, thereby necessitating a repetition of the whole process. The expense of trial in one case with which I am somewhat familiar was in excess of \$25,000.00, and the case was one where there was no liability.

Under compensation acts the compensation is payable in installments. In most cases, if it is found that the award was unwarranted, the claimant may be reexamined and his compensation may be reduced or discontinued. This, of course, would not be possible if the case were tried to a jury.

The value of this particular feature is rather well illustrated by an incident which occurred last summer. A negro brought a claim against a silica company alleging permanent total disability from silicosis. His case was investigated by the employer's insurance carrier and it was their conclusion that settlement of \$2,500.00 should be made. Any such substantial settlement must have been based upon their conviction that the case presented a real disability and a real liability. The claims adjuster went to the residence of the claimant and escorted him down to the office of the insurance company to receive his check. On the way down the claimant was so distressed by shortness of breath and general debility that he found it necessary to stop several times in each block for a rest. He presented what appeared to be a man in the

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throes of a mortal ailment. He received his check and some weeks afterward the claimant participated in a baseball game in which his batting record consisted of a home run, two triples, two doubles, and three stolen bases. Needless to say, had this man been receiving workmen's compensation, his award would have been promptly discontinued.

In some states the defendant in a lawsuit does not have the right to a physical examination of the plaintiff, whereas under workmen's compensation acts this right would be granted. In cases of the kind with which we are here concerned, this is of the greatest importance in view of the fact that without the use of X-ray it is impossible to determine a plaintiff's real condition; nor is the defendant safe in relying on X-ray plates produced by the plaintiff. The technique of taking an X-ray photograph in silicosis cases must be followed with the greatest care or the photograph will not show the true condition. It is possible for skillful X-ray operators to take X-ray photographs in such a way as to simulate a silicotic condition whereas in reality no such condition actually exists.

What is even more important than the advantages upon which I have briefly commented, is the elimination of lay juries from cases of this kind. We are not here dealing with the type of injury which the jury can visualize and understand, such as a broken arm or a broken leg, but with a very complex lung condition which is not understood even by the medical profession generally. Even after some experience, many competent doctors are incapable of accurately diagnosing a silicosis case.

Much of the evidence in these cases consists in the testimony of medical experts. In all cases you will find that a sharp conflict will exist between the plaintiff's experts and those of the defendant. Their testimony will not only be conflicting but will be in such form and couched in such language as to be wholly unintelligible to the jury and often to the court. That a jury can weigh such testimony and come to a correct conclusion is most improbable.

In compensation cases the hearing is had before commissioners or a medical board, who in time will become sufficiently familiar with the subject to enable them to arrive at a reasonably correct conclusion; whereas, in jury cases, each case is tried before a new jury, who have no information on the subject at all. If care is taken in the drafting of a compensation law, the proper machinery can be set up to minimize the possibility of recovery in fraudulent cases. It will not be fool-proof, but it will be a step in the right direction and will ultimately prove its worth both to employer and employee.

The difficulties encountered in trying cases of this kind to a jury were very well illustrated in ~~the case of Barker~~ a recent case wherein ~~the plaintiff was employed by the defendant company, which was engaged in the pulverizing of silica. He brought suit, alleging total and permanent disability resulting from silicosis. The record in this case covers over a thousand printed pages.~~ ~~the plaintiff was employed by the defendant company, which was engaged in the pulverizing of silica. He brought suit, alleging total and permanent disability resulting from silicosis. The record in this case covers over a thousand printed pages.~~ the plaintiff

The defendant produced as witnesses the most outstanding experts in the country in the field of dust. Among them were Professor Drinker of Harvard, Dr. Eugene P. Pendergrass, Dr. Frederick Betjer, Dr. Frederick Willson, and others whose opinions on this subject have been generally accepted.

The testimony conclusively showed that the defendant had taken every possible precaution for the protection of its workmen against dust, that it had installed the latest and most approved type of dust-arresting machinery, and had furnished the workmen without charge, the most efficient respirators available, which they were compelled to wear under penalty of discharge.

Dr. Pendergrass, one of the outstanding Roentgenologists in the country and an authority on lung pathology resulting from the inhalation of dust, described in detail to the jury the cardinal points from which it might be determined whether or not a person were suffering from silicosis. He presented an X-ray photograph of the plaintiff's lung to the jury and described it as a normal healthy lung, pointing out in the minutest detail why it could not be said to be silicotic. He compared this photograph with the photograph of a lung which was silicotic and pointed out the characteristic differences between these two lungs. His testimony was corroborated by other experts of unquestioned reputation.

~~The evidence further showed that the plaintiff, who was a healthy man, was not suffering from silicosis, and that the defendant's failure to provide adequate ventilation and dust-removing equipment was not the cause of the plaintiff's illness.~~

~~and if the defendant had been guilty of negligence, the plaintiff would have been entitled to a verdict against the defendant for \$10,000.00. That such a verdict was entirely unwarranted was borne out by the action of the Circuit Court of Appeals, which set it aside and directed that judgment be entered in favor of the defendant on the theory that no negligence had been shown. If the defendant in this case had been guilty of negligence and its sole defense had consisted in proof that the plaintiff did not have silicosis, it is probable that the Court of Appeals would not have reversed the judgment of the lower court.~~

In my opinion no reasonable man, having any adequate information concerning this problem, could possibly have found either that the claimant had silicosis or that the defendant had been guilty of any negligence. Notwithstanding this fact, the jury brought in a verdict against the defendant for \$10,000.00. That such a verdict was entirely unwarranted was borne out by the action of the Circuit Court of Appeals, which set it aside and directed that judgment be entered in favor of the defendant on the theory that no negligence had been shown. If the defendant in this case had been guilty of negligence and its sole defense had consisted in proof that the plaintiff did not have silicosis, it is probable that the Court of Appeals would not have reversed the judgment of the lower court.

Elimination of Hazard

Perhaps the most important single item in your silicosis problem is the elimination of the dust hazard. I suggest that each of you appoint a Silicosis Committee who shall be charged with the responsibility of dealing with your problem. The personnel of such a Committee should be composed of responsible executives. Their work will require the exercise of sound judgment and will involve a

very considerable amount of money. They should adopt a program suitable to your individual needs and see that it is carried out in detail. This program should include an accurate determination of the existence of dust hazards demonstrated by the taking of dust counts; the installation of adequate equipment to remove the hazard where possible, and the use of approved respirators where removal of the hazard is not possible; the maintenance of medical supervision of employees including X-ray examination before employment and periodically thereafter; the fostering of proper legislation; the investigation of laws pertinent to your operations and upon which a charge of negligence might be based. All of these activities should be carried on by the advice of counsel so that you may be sure that you are complying with the laws of your state, and that the facts of your situation may be so assembled and recorded in such a manner that they will be of the greatest value in event of a future law suit.

Just a word concerning the defense of silicosis suits. These cases are peculiar unto themselves and adequate defense cannot be made unless your counsel has a thorough knowledge and appreciation not only of the law but of the scientific problem involved. A lack of such knowledge may be just the difference between defeat and victory and I have observed excellent lawyers lose cases for the defendant for this very reason. This comment should not be construed as derogatory in any sense of the word. One can hardly be blamed for not having learned what one did not know existed. Nor do I mean to imply that the loss of such a suit is indicative of a lack of such knowledge.

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You should be concerned not only with the successful defense of your own cases but of others as well. In this situation the answer to the age-old query, "Am I my brother's keeper?" is emphatically, "Yes"! Each verdict against a defendant encourages others to bring suit and provides ambulance-chasing lawyers with arguments and money to see that they do. Bear in mind that in most of these cases, plaintiff's counsel receives fifty per cent of the gross recovery, which in the past has been sufficient encouragement to solicit and finance these cases.

I know that invitations to this meeting were very largely sent to trade associations or groups of industries wherein a dust hazard does or may exist. I have no present way of knowing which or how many of the invited industries are represented here today or the extent or degree of interest which those industries may have in this problem, but the large attendance indicates a considerable interest, which is very timely under existing conditions.

There is a great mass of medical information in the hands of many people, and much research is being done in many places, but so far as I know, it is not being correlated or coordinated and there is no definite or national recognized set of rules.

Much work is being done in many places and by many people along lines of preventing, or at least minimizing the dust hazard in various industries, but again, there is now no central clearing house--no place where these things can be assembled, studied and perhaps made later into definite and recognized standards.

Legislation is being attempted by small groups in various localities with indifferent success and perhaps of improper character, and the most necessary thing should not be left like Topsy, who "Jes' grewed", but should be carefully and skillfully planned.

Industry as a whole has little, if any, conception of the extent nationally, of this damage suit racket, and no knowledge as to where it will next strike--and very inadequate defense against it. There is no one place where all information about this very grave threat can be made available to all industries and to the government and to the people.

Industry must organize in its own defense and cooperate together, both in safeguarding invested capital and in protecting the lives and health of those employed. This is both humanitarian and good business.

In closing, let me urge again that industry should move to eliminate the interest of the ambulance-chasing lawyer so that huge sums will not be paid out for dust disease suits brought in behalf of claimants who have no disease. And, of even greater importance to the welfare of our people, industry should put its house in order so that the hazard of dust diseases will be removed as nearly as is humanly possible.

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