WEST LIBERTY.

Jayne, W. B.
Knott, H. A.
Dillingham, E. H.
Long, W. M.

WEST POINT.

Wirsig, A. E.

WEST UNION.

Cannom, W. L.
Wright, H. S.

WHAT CHEER.

Baughman, G. P.
Engelman, S. U.

WHITTEMORE.

Smith, L. B.

WILLIAMS.

Wilson, R. E.

WILLIAMSBURG.

Gardner, H. H.
Hinkley, H. D.

WILTON JUNCTION.

Smith, D. E.
James, F. B.
Scholten, John.

WINTERSET.

Cooper, R. S.
Leech, C. S.
Pratt, G. M.
Powell, E. F.
Jones, Mabel.

WINFIELD.

Duncan, W. J.
O'Laughlin, L.
Glass, H. L.

WINTHROP.

Roberts, G. A.

WOODBINE.

Dewell, Wells.
Humphrey, Glen.

WOODWARD.

Ineson, M. W.
Rowland, C. W.

WOOLSTOCK.

Reed, C. J.

WYOMING.

Stoffel, E. N.

ZEARING.

McCormack, A. J.

FIRST BIENNIAL REPORT

OF THE

Iowa Industrial Commissioner

TO THE

GOVERNOR OF THE STATE OF IOWA

FOR THE PERIOD ENDING JUNE 30, 1914

WARREN GARST
IOWA INDUSTRIAL COMMISSIONER

WELKER GIVEN
SECRETARY

PRINTED BY AUTHORITY OF THE GENERAL ASSEMBLY

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1914

REPORT OF THE IOWA INDUSTRIAL COMMISSIONER

STATE OF IOWA

OFFICE OF INDUSTRIAL COMMISSIONER
DES MOINES, IOWA

To the Honorable George W. Clarke, Governor of Iowa:

The Iowa Workmen's Compensation Act of 1913, opened a new field in this state. A preliminary commission had, however, spent nearly two years in an elaborate investigation, and the fundamental principles of workmen's compensation were found elsewhere to be well grounded and tested. One feature, however, was at that time generally unsettled or open to experiment. Accordingly, while committing Iowa to the fundamental principle or policy of compensation by schedule for industrial accidents, the General Assembly, with evident regard to the one feature still in doubt, provided in Section 25 of the Act that the Industrial Commissioner should "recommend such changes in the law as he may deem necessary."

In respect to the general policy or principle of this law I cannot speak too warmly. It stands for one of the greatest advances of the time, and, in nine-tenths of its provisions, our Iowa law is a credit to the state and will stand comparison with any statute of the kind in the country. These excellent provisions may be left to speak for themselves; it is my duty to examine more particularly into the one particular in which the results obtaining under our law seem to be at fault.

THE ONE QUESTION STILL OPEN.

Within four years twenty-two states have adopted workmen's compensation laws. In eight other states the question is now under investigation. Taking together the states that have acted and those preparing to act, it may be said the one great question now open is that of insurance. It is popularly thought that the question of insurance as applied to workmen's compensation is one of extreme intricacy, but, while I would not question the complexity of the matter when followed into detail, I see no difficulty in the way of a general understanding of the fundamental principle if it is borne in mind that the compensation provided for victims of

industrial accidents, and the insurance necessary to secure the payment thereof, are both based on the wages paid. This is the great difference from other insurance. The victim of accident is compensated by the employer making up a part of his wage loss. The employer accordingly has to pay premiums based not merely on the accident rate but also on the pay roll, and this is most conveniently stated as a percentage on each $100.00 of pay roll. Bearing this in mind no difficulty will be found in tracing the results as they fall with dual effect on employer and employe, and make insurance the one great question now at stake.

The most of the twenty-two states entering the compensation field followed the same general policy as Iowa and left insurance to stock or mutual companies under more or less direct supervision by the state. Fifteen states, like Iowa, made insurance or other security on the part of the employer a necessity but put no control on rates. Four states—Ohio, Washington, Oregon and West Virginia—established systems ousting private insurance from the field, and requiring the state itself to administer a collective employers' fund. This is often styled state insurance, but the term is incorrect as the state insures nothing but steps in to administer a fund which it collects of each industry. This is not engaging in the business of insurance; no element of profit appears; it is the administration of workmen's compensation from the primary standpoint of the state and its working people rather than that of corporations organized for pecuniary profit.

But the plan of a collective fund takes two forms. In Michigan and New York such a fund is established merely to compete with or against the old forms of insurance, but under this plan the stock companies take the cream, leaving the bad risks for the state. Therefore, Ohio, Washington, Oregon, West Virginia and Ontario have given the state fund the whole field. In Massachusetts the mutual plan closely approaches the state fund system. The wisdom of the plans which give the whole field to the state is being overwhelmingly demonstrated and I shall devote this report chiefly to an inquiry into them, alike on the economic and the humanitarian sides.

IOWA'S PRESENT ATTITUDE INCONSISTENT.

Iowa has assumed the attitude of a protector; she has said to one of her children, Mr. Employer, you must provide and pay compensation to your unfortunate employe, irrespective of fault on his part, unless it is wilful and intentional injury, or due to

intoxication; and she says to the employe, you must accept a fixed and somewhat lower compensation than you would receive if you were to wage a successful suit for damages, it being fixed and certain that, irrespective of fault on your part, you can afford to do this. You must both accept a simple, speedy, workable schedule of average justice. Good so far but can Iowa stop with this?

The best obtainable records when liability laws were in force show that only one out of every eight and one-half injured employes received any damages. It is proposed by the compensation schedule fixed in advance by special legislation, that substantially all shall receive compensation. This being true, it seems to me illogical and unfair for the state to stand the employer in a corner, then disarm him by taking away his common law defenses, and saying to the insurance people, you are permitted to exploit him to the greatest extent possible. Understand, I have no criticism to make of the insurance companies. Anything I state is against a system that I believe to be unwise, unfair, and against public policy. The state having assumed the attitude of a protector, is morally and logically under obligation to provide a fund administered by the state that will give to the employe the maximum compensation at the minimum cost to the employer. If the state comes in to fix a fair and uniform schedule it should apply that rule to the insurance side as well as the compensation side of the problem, and fix standards just to both.

PARTIALLY DISABLED EMPLOYES.

In addition to the financial side of the insurance question there is another growing out of the same difficulty but of far greater importance, as it seems to me, and that is the question of the aged or the partly maimed employe. Let me illustrate. We have in Iowa an organization which takes under advisement the efficiency and safety of every factory in the state employing any considerable number of men. They fix a rate, we will say of $1.00 per $100 of pay roll, with the statement that where conditions are ideal, where the factory has modern machinery, well guarded, thereby minimizing the risk, where the conditions are conducive to cheerfulness on the part of the employe, they will make a rate less, possibly 75c, but where conditions are not so desirable they make a higher rate, possibly $1.25 and may be more. And what are the conditions that are unfavorable or necessitate a higher rate? An inspector goes through a factory and he comes out and says to the manager: Your building is splendid, your machinery is new,

everything is of the newest and best type, as well safe guarded as the ingenuity of man will permit, but I noticed you had some old men, presumably fifty, sixty or sixty-five years old; your old men are more susceptible to injury and having been injured are very much slower in recovery, and therefore they become a menace, and we do not think we can give you a minimum rate on account of the aged men you have at work for you. Moreover, many of these men have families dependent on them, so that in case of death the maximum compensation of $3,000 might have to be paid, whereas if you employ only single men without dependents the responsibility would be limited to $100 for funeral expenses, so that the hazard of your establishment is greatly lessened by the employment of young men without dependents. The state should never consent to the provision which makes it profitable for the insurance company, or the employer carrying his own risk, thus to discriminate against employes on account of age or being at the head of a family.

Before the new law and the new system of insurance had been in effect a month a large employer in eastern Iowa wrote me as follows:

"We have three men in our employ at the power plant here that will not be accepted by the insurance companies. One of these men has but one eye, another has had a partial stroke of paralysis and the third has a rupture. Now, these men are all married and have families and if they are discharged they will be unable to procure employment elsewhere. All are good, faithful men, and I dislike very much to let them go; but unless there is some way in which we can be released of the extraordinary hazard I must do so. Is there any way we can keep these men without increasing our liability? It seems unjust to me to let them go. None of the men referred to were injured in our service, but all are old employes."

J. O. Boyd, of Keokuk, who as counsel for large employers is in a situation to forecast the effect of the present insurance methods in causing loss of employment, writes:

"The law has placed a handicap upon those who have only one eye. The old man is carrying a heavier weight than he ever carried before. The insurance inspector will look over your plant and if he sees the one-eyed man, the man with the wooden leg, the man with the varicose veins, and the old man, he will tell you that each and all of these make your rate higher and that your insurance rate will be reduced if you do not have these employes the next time he comes around. . . . This, I say, is contrary to public policy. It is wrong. . . . By the unvarying rule of business competition you will be forced to dispense with the services of every employe who in any way has a tendency to make your insurance higher. No state can afford to handicap a given class of citizens. Every citizen, every worker, every employe, has a right to stand before his employer without handicap other than that with which nature may have burdened him."

Other letters to the commissioner emphasize especially the danger of loss of employment in the case of men having only one eye. Persons so afflicted are often just as capable as ever to earn full wages, but as they have only one eye remaining are peculiarly exposed to complete blindness. A prominent manufacturer wrote:

"This company is having a physical examination made of every person now in its employ who is included in the Workmen's Compensation Act, for the purpose of ascertaining their present physical condition. We have one man who has been retained in the employment of the company for philanthropic reasons more than on account of his proficiency, who is a paralytic, which you understand increases the hazard of his employment. We also have a fireman with only one eye. He is an efficient employe but, of course, the loss of the eye increases the hazard incident to his employment. We have said nothing to these men, but we do not feel that we are justified in retaining them in our employ if they intend to accept the privileges of the Compensation Act, as this requires the company to assume all of the additional hazard on account of their physical condition. We are willing to retain both of these men if we can be relieved of this additional hazard, and they should see fit to reject the benefits of the Act."

It was my opinion that the Iowa law did not intend that the loss of a second eye should put the burden of compensating for total blindness on the last employer. In answer to an inquiry on this line from a third employer I took the ground that the General Assembly could not have intended to hold employers for a loss of both eyes when one had been lost before the employe entered this employment. It seemed to me on any fair consideration the benefit to the comparatively few suffering total blindness in this way would be far out-balanced by the loss of wages and employment on the part of a far greater number classed as "impaired risks". A few distressing cases might develop of men who had lost a first eye in childhood or in the civil war perhaps losing another in recent em-

ployment and looking to the last employer for the heavy compensation due for total blindness, but such cases could not but be vastly outnumbered by the many who, suffering no second loss of eyesight, would nevertheless be thrown out of employment because of the great risk of retaining them. The loss of wages for the many would be as a thousand to one what a few might receive in compensation.

The case of a man losing a second eye was a representative one but with every inquiry I found there was more occasion for anxiety over the loss of employment by the nine hundred and ninety-nine rather than over the failure of the one to get compensation.

This anxiety was only increased when I inquired into the experiences of other countries and states, and considered other classes of employes who though good workers were deficient physically, or were as the insurance interests term them, "impaired risks".

EXPERIENCE ELSEWHERE.

At the end of the first month under the New York law, which is not in this respect as severe as the Iowa act, a prominent insurance journal, the United States Review, said: "The labor leaders are puzzled as to how to meet the inclination of employers to rid themselves of employes who are deficient physically."

This, too, under a law which provides a state fund to compete against the stock companies, and hence to keep down insurance rates. The same insurance journal says even under such a law, "The tendency has been to rid pay rolls of those not able to keep up the pace," referring to all forms of partial disability, not loss of sight alone.

So the industrial accident board of Massachusetts in the 1914 report says: "One of the logical but most unexpected developments of the Workmen's Compensation Act was shown almost immediately in the throwing of aged and infirm employes out of industry to reduce the cost to certain employers of insurance premiums. One company in Massachusetts, after a physical examination, discharged twenty-two employes, who were either aged or under par physically, within a few weeks after the act went into effect."

Commenting on the situation of the elderly or partly incapacitated employes thus legislated out of their means of livelihood, the Massachusetts board says further that "the state which has thrown

these employes out of work will eventually be asked to make provision for them." Is it the purpose of Iowa to legislate worthy men out of employment and, if so, is she willing to provide pensions or other support for this class of citizens?

England, with a law like that of Iowa except that an injury is not in any case presumed to be due to the negligence of the employer, affords us an example of the practical working of private insurance at its best, that may well cause us to stop and wonder whether the people of Iowa have in mind to bring about a like condition in this state in that after years of experience it is found that the aged and partially incapacitated are put to a serious disadvantage while, as a matter of fact, no aged man should be required to bear an artificial handicap, one not due necessarily to his reduced efficiency. "The evidence," said the British Departmental Committee in its report of 1904, "has led us to the conclusion that the Workmen's Compensation Acts have largely increased the difficulties of old men finding and obtaining employment. We fear that the tendency is for these difficulties to grow . . . . A somewhat different question arises in reference to diseased, weak or partially maimed persons. In the case of the latter there is distinct evidence that in many cases they are refused employment at their old trade, although perfectly capable of earning full wages."

Sir Edward Brabrook, the Chief Registrar of the English Relief Societies, has spoken of "the horrors" of the private insurance system in causing loss of employment, while Dr. Collie of the English Home office, says it "has done more than anything else in recent years to force men between fifty and seventy years of age into the poor house."

It was my hope for quite a time that the Iowa law might be construed to lessen if not avoid any such enforced loss of employment. I had hoped in the case of the partly blind, at least, that a precedent would be established to protect such persons in their livelihood and prevent men who were good workers being weeded out because the insurance interests regarded them as "impaired risks."

My view of the intent of the law did not secure the approval of the special counsel in the Attorney General's office, who held instead to the line of interpretation which makes the half blind bad risks, and declares that the loss of a second eye can be estimated by the commissioner at any point above the loss of a first eye up to three times that sum.

I refer to these facts not to question the correctness of the opinion announced by my legal adviser but to show that it is to this together with other, and more stringent, features in the insurance provisions of the Iowa act that we must attribute the rejection of our law by so many employers.

REJECTIONS OF THE LAW EXPLAINED.

Affirmative rejections by employers under the Iowa Act when compared with Minnesota stand as sixty to one. Why such a contrast, the relief schedules of the two states being almost identical? It is explained in part by the different conditions as to insurance in the two states, which rightly or wrongly impel many Iowa employers to seek as a refuge what the Minnesota employers studiously avoid.

It is noted that the greater number of Iowa employers who have taken themselves out from under the compensation provisions have done so not by direct action, as the law provides, but by the indirect method of neglecting or refusing to insure. The number rejecting the act in this circuitous but significant manner can only be estimated, but persons in a situation to judge put it at a minimum of 10,000 employers, with 40,000 workmen in their employ. This is fairly appalling. I believe the number (practically one-third of all properly subject to the compensation act) will be greatly reduced because many employers have acted under a misapprehension of the legal effect of a rejection, and others have simply neglected temporarily to insure, but will do so soon, notwithstanding repugnant terms and conditions.

But when every allowance is made the fact will remain that the Iowa compensation act will stand rejected by a proportion of employers far beyond any neighboring state and, in fact, unprecedented. The gravity of this situation is heightened by the fact that the Iowa law goes beyond that of any state in the Union, in subjecting the employers who go out from under it to drastic liability. I am told it was the general if not unanimous belief of those who had most to do with framing the rejection provisions of the act that they would make it practically impossible for Iowa employers to reject the law. In case they do not reject it they not only lose the three great defenses of fellow servant, assumption of risk, and contributory negligence, but the burden of proof is reversed, and a presumption of negligence is created against them.

One would think that prudent business men, recognizing the disastrous effect on credit of unlimited liability with old defenses gone, would feel even if the obligation to the employe might rest lightly on conscience, that the effect on credit would be a powerful influence toward taking out compensation insurance. This no doubt is true of a great number who think, however, they must first directly or indirectly protest effectively against the results reached by private insurance under our law.

BAD RESULTS OF STOCK COMPANY INSURANCE.

Experience in this country is limited but already it threatens in worse degree the first great evil of loss of employment, as felt in the eastern states and in England. The Iowa law not only leaves the employer at the mercy of an insurance monopoly if he seeks protection in that direction, but if he takes the other course and rejects the act he is loaded with liability to an extent not known in compensation laws in other states or abroad.

Are Iowa employers to be forced to turn against their employes and apply the weeding out process to all who are physically below par? Must they in self defense weed out the aged, the married, and the partly incapacitated, more ruthlessly than in other states?

That Iowa employers have not gone farther with the weeding out process is most commendable. My correspondence indicates that they are striving apparently to bridge over the difficulty and are retaining old employes in the face of great risk in the belief that the peril will be only temporary and that the General Assembly will come to their relief at an early date. But it is too much to expect that Iowa employers will maintain this attitude if the law is left unchanged by the next General Assembly.

If the private insurance methods are to stand permanently and in full rigor in Iowa, we may expect to see great numbers of industrious and fairly competent men thrown out of employment. The employers rejecting the law, equally with those under the act, will be forced to protect themselves by weeding out all but test-proof employes. Instead of condemnation the employers not coming under the act merit warm approval for consenting for awhile at least to retain these employes and give the General Assembly time to act, thus saving the situation temporarily, but at heavy risk to themselves—a risk too great to be made permanent.

For in addition to the evil just mentioned and to high rates made necessary by a system that does not fit our economic needs, the employers and business men of the state are

face to face with another great evil and inequality. A third inducement to reject the law is likely to arise out of the opportunity thereby secured to raise and contest the question of negligence in case of a suit for damages. Thus, despite all the rigor of the act on the employer who rejects it, powerful reasons and inducements impel in that direction. The natural result will be the division of our industrial community into two great bodies operating under grossly dissimilar and unequal laws. With one great body of employers under the compensation system, and another almost as large under the liability system, there will be an incongruity and inequality that cannot be permanently endured.

A further gross discrimination has appeared against a certain class of small employers. When the law went into full effect July 1, 1914, the insurance people generally took the position that a minimum policy fee of $25.00 would be necessary. In view of the fact that there were thousands of employers in Iowa with few employes, and a small pay roll, many times not sufficient to justify more than a dollar of premium to cover the real loss cost, a shopkeeper with one employe at a salary of $500 who ought to pay 14 cents, a total of 70 cents to cover his actual risk, would have to pay $25.00 or $24.30 in excess of the real cost of insurance as fixed by the companies themselves. This seemed so unfair that I entered a vigorous protest with the Insurance Commissioner, who, on, investigation, found the law itself prohibited such unjust discrimination. Compelled to abandon the minimum fee plan some of the companies, according to advices reaching this department, have refused entirely to write compensation insurance in cases like those cited, and the result has been that many small employers have been unable to comply with the law for the reason that the insurance companies refuse to issue policies that do not bear what they regard as an adequate profit.

Hence small employers complain to this department that while the law requires them to insure they are unable to do so. They and their employes are thus forced outside of the compensation law when they desire to be under it, and stand ready to comply with its provisions on equal terms with large employers but are not permitted to do so. Such inequality between large and small employers is against public policy. No private agency should have power to deprive employer and employe of the benefit of the compensation act against the will of both. In this instance the incongruity of compensation being dependent on private insurance

reaches its highest point of absurdity. At every stage in the compensation system private profit and public duty are unequally yoked together, but in the case of the small employer the contradiction stands out in specially bold relief.

The success of the Ohio or state fund plan in avoiding the first great evil of loss of employment by bread winners is shown by the following statement by the secretary of the Ohio Commission under date of August 31, 1914:

"In regard to employers of this state discharging elderly men or those having physical defects, please be advised that we have no complaint whatever as to this, and I think no such practices prevail in Ohio."

The force of this statement is increased by the fact that the Ohio law being an earlier one than Massachusetts or New York puts this longer experience of assured employment under the state plan in contrast with the quick and severe menace of many bread winners under the private insurance system.

A STATE SYSTEM NECESSARY.

It would seem, therefore, if the Iowa employer is to be saved from oppressive insurance rates or the alternative of discharging those employes who have given him years of faithful service, employes who have been his companions and friends, always loyal to his interests, the state must step in and provide a system so that the employer with humanitarian instincts will not be put to an economic disadvantage compared to those who have less consideration for aged or partly disabled employes.

A collective fund administered by the state is the remedy for all these evils and inequalities. Such a system will make an end of excessively high rates; it will remove also the temptation to reject the act in order to raise the question of negligence; above all, it will take away the temptation to discharge partially incapacitated employes. The element of personal advantage from weeding out the partly incapacitated is very slight and inconsequential when it comes back in a liability diffused over a whole state, but will often be compulsory and unavoidable when narrowed down to the concentrated pressure of a higher or lower insurance rate in a stock company, mutual association, or the burden on an employer carrying his own risk.

No profit should be made on the workman's misfortune. The state should protect her old men and her partly disabled men from enforced idleness. Even more imperative it is that she should

not permit insurance companies or employers carrying their own risk to discriminate against the employment of married men, and give preference to single men because in case of injury under certain circumstances there would not be as much compensation to pay.

Humanitarian considerations forbid any backward step in workmen's compensation. John Mitchell says the accidental deaths in industry in this country number 35,000 a year, 100 a day, one every sixteen minutes, while the injured are estimated at two million a year. In proportion to the number employed more than three times as many are killed and injured as in any other country in the world. A dozen battles of Waterloo would barely equal the annual "carnage of peace" in this country. To reduce this waste of peace was a main purpose in the adoption of the compensation laws, but since then the awful labor loss in Europe in consequence of the great war puts an increased duty on us to save and protect our working classes. Our country must make good as best it can the great void in the world's manual labor. The necessity on us to check and prevent all waste of labor is redoubled. It is no time now to think of backward steps from workmen's compensation.

If the menace to the employment of partly incapacitated men resulted in low rates of insurance it would not excuse though it might mitigate the evil. But it does not seem to have any such result. The facilities of this department have not permitted me to make an exhaustive study of insurance rates under our workmen's compensation law, but I have had the aid of skilled and experienced men in doing this as to certain representative industries, and on this basis I find a strong presumption that Iowa is not receiving fair treatment. The comparisons forcing me to this conclusion are set out in the tables annexed to this report. The investigation by myself and my assistants was directed to the one end of learning the truth and while we would have welcomed a contrary conclusion the facts seem to indicate a treatment of Iowa which, whether intended or not, is in fact most unfair.

The peculiar advantages of the state do not appear to be considered in fixing the insurance rates. We have probably the most temperate industrial population to be found in the country, and yet the rates are on the same basis as where intemperance prevails and risks are correspondingly great. The average of Iowa intelligence is high, yet we are assessed for insurance on the same lines as in places where illiteracy and its dangers abound. For

our great safety conditions of intelligence and temperance we receive no allowance.

In proof of these conclusions I can only refer to the sub-joined comparison of compensation insurance rates in Iowa compared with those obtaining in other representative states, both near and distant. I ask attention in this connection especially to an analysis of the rates put on a representative industry of Iowa.

EXCESSIVE RATES ON COAL MINING.

At the outset of the compensation law in Iowa the state is confronted with rates in the great coal industry which are seemingly in gross excess of the actual risk. The basic rate generally charged by the insurance company on each $100 of pay roll is $6.50 as compared with $1.50 under the state fund plan in Ohio. This glaring contrast suggested a thorough inquiry to determine the fairness of the rate charged, and I accordingly enlisted the services of Mr. S. Bruce Black, the assistant statistician of the Wisconsin Commission, who has used the unequalled facilities of that board to make the detailed study set out in the table appended to this report. It will be seen that this study justifies the state insurance rate of $1.50 as covering all that is reasonable and condemns the stock company rate of $6.50 as having no other justification than that of charging all the business will bear.

There was every reason why the Iowa coal industry should have been allowed a rate as favorable as that furnished under state insurance. The case was a pivotal one. The great anthracite coal strike of twelve years ago led to an over development of bituminous mines in Illinois and Iowa, and many of those in this state are now operated on a very small margin. Moreover, the mines of Iowa are exceptionally free from catastrophe hazard, the great risk of gas explosion being unknown. The risk conditions generally are good, but instead of a rate anything like that supplied by the state plan the operators were confronted by the rate of $6.50, which is over seven times what the naked risk requires, and is practically prohibitive. Accordingly nearly all the leading operators of the state rejected the compensation law at the beginning.

But the statistician gave a liberal margin in estimating a living rate for Iowa coal mines. Assuming an error in estimate of pay roll and a number of unreported accidents which would equal $20,000 per annum, and in five years provide a reserve of $100,000, sufficient for fifty lives (the average in Wisconsin being about $1,500

under a maximum of $3,000), he advanced the pure premium to $1.25 to cover these items. Next, in continuance of this liberality he added 25% for catastrophe hazard. He further loaded the premium $1.00 for stock company expense and profit. By such liberalities it is possible to figure a rate of $2.50 as against the actual basic rate of $6.50, as charged by the insurance companies, but it is to be remembered that the Ohio rate for deeper and more dangerous mines and much greater compensation than Iowa is $1.50. In Washington the coal rate is $1.93 but the benefits are so much greater this would correspond to about $1.25 in Iowa. Thus all the liberally estimated cost in Iowa appears to be covered by $1.25, or 25 cents less than the Ohio rates. The results reached in the study of coal mine rates in Iowa show the actual loss cost to be included in the following:

Rate per $100 of pay roll	.90
Rate per employe per year	4.71
Rate per ton of coal mined	.011

The naked risk is covered by a fraction over a cent a ton while coal users would be called on to pay over seven times that simply to meet the insurance cost to the operators.

Although generally in Iowa under liability the actual loss cost was about 40% of the basic rates fixed by the insurance companies, the ratio in the coal industry under compensation shows a risk less than one-seventh what the insurance manual demands. This ratio of practically one-seventh is strangely close to the experience of 500 general employers in Wisconsin with 80,000 employes, and a pay roll of $53,000,000, who carry their own risk at one-sixth what the insurance companies would charge them, a fraction over 16 per cent. The saving to these Wisconsin employers going without insurance in the year 1913 alone amounted to about $1,500,000. Why should Iowa rates be four times those of Ohio with more dangerous mines, and over seven times what our own risk requires? A general comparison with states in the east shows a contrast less unfair yet painfully severe. Why are the basic rates of Iowa generally over 30% above those of Massachusetts, the relief schedules being closely similar? If the eastern rates are too low then Iowa and other western states are paying eastern losses. If the eastern rates are fair then we are being assessed for an undue and illegitimate profit. It is true the discrimination is more severe against other western states (Illinois and Wisconsin being worse treated than Iowa), but Iowa can not be satisfied with a somewhat less percentage of discrimination. I would welcome anything to show that the comparisons in this report are erroneous and that Iowa is better treated than appears by these tables, but in the absence of any detected error I do not think Iowa can rest content under the rates now demanded for compensation insurance.

IMMEDIATE PROBABLE RESULTS.

I think it fair to assume if there is no change in the law and the employers all come under it, it would cost $1,500,000 to $3,000,000 annually in excess of the amount required where an employers' fund was disbursed to meet the requirements of the law. Can we afford to pay this amount to maintain a system that is so baneful in its effect on the citizenship of the state? The members of the general assembly will be warned against seeking lowered rates and other relief by putting this immense business in the hands of the public men of the state on the plan followed in Ohio. Iowa, with a history covering sixty years, has had no serious trouble in the conduct of her affairs, and if it is thought wise to protect the employers of the state I think she will have no trouble in the future. Ohio, with public and moderately paid men in charge, has reduced rates three times in two years and yet maintained her liberal compensation.

In other states where the policy of stock or mutual insurance has been allowed to take strong root it is now declared that the only course possible is for the struggle between stock company and mutual insurance to be fought out to a survival of the fittest. Such, for instance, is the solution looked forward to by the Massachusetts industrial commission. It means, however, that during a contest between the two forms of private insurance which may last for many years, the loss of employment to the aged, the partly incapacitated, and those having families, which has developed, shall not only continue but become more extended in character. As stock and mutual companies become engaged in more strenuous competition they will demand that all so-called impaired risks be dropped from the pay rolls. Meanwhile also as between individuals rates will be adjusted according to what the business will bear, rather than fairness; a few who are fortunately situated getting fair rates while neighbors and competitors are levied on for all they can stand.

Commercial insurance may reduce accidents but not as completely as the state fund plan, when supplemented by a rigid system of inspection such as employer and employe are entitled to, penalizing the employer who neglects or refuses to meet safety requirements. Insurance companies properly look out for their own interest, but the state cannot afford to disregard the welfare of her working people. It is a moral crime through legislation to close the door of opportunity to partly disabled men, men over 50 years of age, and men with families.

The representatives of stock company insurance argue that a system of state administration of an employers' fund will be faulty because administered by public men. But would it not be better to have a right system administered by public agents (possibly with less efficiency, though I do not admit that conclusion is necessary) than to continue a wrong system which as it becomes more efficient through the discharge of men of 50 and over, becomes more abhorrent to fair-minded people?

Iowa should do one of two things: either in justice to all her people provide a plan which will give the maximum benefit to the employe at the minimum cost to the employer, protecting all her industrial children by such plan, or repeal the workmen's compensation act entirely and return to the antiquated system of personal liabiltiy. A state system alone will secure equal treatment, such a system as that by which the federal government gives the postal service to every citizen on equal terms, the multi-millionaire who buys tens of thousands of stamps, paying the same rate as the person who may not use more than one or two a month.

Wm. C. Archer, of the Ohio commission, has graphically summed up the case covering all these manifold abuses and inequalities thus: "What moral right has a state to introduce between its sovereignty and its labor a private agency to make money out of distress?"

AN INDUSTRIAL BOARD RECOMMENDED.

It seems to me it would be wise if the work of the Industrial department should be broadened and administered by a board of three members, one member being the Labor Commissioner, there being a relationship between the Labor department and the Industrial Commissioner's department so close that it seems to make it desirable they should be co-operative in their work. The third member should be one versed in insurance matters.

If it is not thought wise to form this commission, then in the interest of the better administration of the industrial and compensation laws, I would recommend that the office of Labor Commissioner be taken out of politics, being placed under civil service rule, the commissioner to serve without definite fixed time, and removed only for cause after a public hearing. It certainly is absurd that Iowa, with an output of 350 millions from her factories (which will probably be doubled in twenty years), 50 millions in excess of the cereal crops of the farms of the state, should have such an interest subjected to the caprice of politics, and have as an administrator over it a man who perhaps is recommended chiefly by political activity in his own neighborhood.

I am now criticising the system. I believe that Iowa has now a Labor Bureau that is unexcelled for devotion, for capability, by any in the United States. Where a labor department proves its worth from every standpoint, could anything be more ill advised or more detrimental to the interest of the employer, the employe, and the state as a whole, than a change for political reasons?

Large financial, commercial and industrial interests throughout the world are seeking those who can most efficiently administer their affairs. England has recently taken from the United States a man to manage one of the great English railways; not because he was an American, not because he was a republican or democrat, but simply because he was believed to be the most capable man for that particular work to be found anywhere. The same rule should apply to an office that has no political significance, and on this broad ground, and the still broader ground, of the workmen's compensation law made to do its maximum of good, it should be administered directly or indirectly by men who are free from political entanglements.

The necessity of a member of this commission having knowledge of insurance matters leads to a further suggestion. I would recommend that having made provision for the employers of the state to pay compensation, that the state should provide the machinery, paying the salaries and expenses of the administrators of the insurance laws, thereby minimizing the cost to the employer. I do this upon the ground, first, that the saving in court expenses under the compensation law will be presumably many times the cost of this commission; second, on the additional ground that Iowa's factory interests having assumed such large proportions are entitled to special consideration; third, because the compen-

sation law will save from want many who would otherwise be driven to private charity, and fourth, to preserve to society society's greatest asset, the family. For years the taxpayers of Iowa have rightfully, I think, been spending their money for the encouragement of agriculture. This, no doubt, will continue to be the rule, as it should. Would it not be but a matter of fairness to the factory interests of the state that they should have like encouragement, with the thought in mind that ultimately Iowa will become, if not a leader, at least a large factor in the production of manufactured products?

Under our present scheme of insurance an employer is required to buy insurance of those authorized to do business in the state but in case the insurance company fails it does not relieve the employer from responsibility. It seems to me that the state should provide (the employer having paid for the protection at a rate fixed by the state) a system, which must be adequate, under which he should be relieved from personal responsibility.

Again, our law provides that where the employe has received total permanent disability he shall be entitled to compensation for 400 weeks with a maximum of $10 a week. I would suggest that under the administration of an employers' fund, by unanimous action of the board, approved by the governor, this compensation should be continued in whole or in part, as long as the ends of justice demand.

The railroads of the state have found serious objection to the provisions of the law requiring weekly payments. It seems to me that it could be safely left to the commission to determine as to whether the payments should be made weekly, semi-monthly or monthly, as would suit the convenience of the employer, if not to the inconvenience of the employe. The law should be amended so that very employer of the state should make reports irrespective of the fact that they may have rejected the law or have failed to come under the law by neglecting or refusing to provide insurance.

The act, in my judgment, should be amended so as to give the employes of public service corporations a first lien upon their property for compensation.

Employers who refuse either to insure or give notice of rejection should be subject to a fine of $1.00 per day for each employe for such neglect, as is the case in the law of New York.

STATE AND STOCK COMPANY RATES COMPARED.

But, as already asserted, the state fund plan does not rest wholly on the duty of the commonwealth to conserve her labor and preserve their means of livelihood to all her citizens. If we turn to a more detailed study of insurance rates and consider only that phase the result is equally conclusive in favor of the system of state control and administration as illustrated in Oregon, West Virginia, Washington, and Ontario, but more fully and elaborately in Ohio. The longer experience of this last named state shows how the superior economies of the state fund plan develop year by year. The original Ohio rates were assailed as unreasonably low and certain to be greatly advanced. Instead they have been lowered three times in as many years, the last reduction returning six per cent of what was previously collected. Such are the results of the state fund plan in eliminating private profit and acquisitional cost and greatly lessening inspection expense, adjustment of claims and office administration.

Eight months after the Ohio system of state insurance had gone into effect the actuary of the industrial commission, Emile E. Watson, prepared a comparative statement of rates in representative industries there and in states having stock company insurance, as follows, under date of September 1, 1912:

Representative Employments, September, 1912	Ohio state ins. rate, class 1 rate	New Jersey compensation rate	Illinois plan compensation rate	Wisconsin compensation rate	Wisconsin employers' liability rate
Confectionery Mfgs.	$ .70	$ 1.50	$ 2.00	$ 2.10	$ .75
Acid Mfgs.	1.20	3.00	4.05	4.20	1.65
Car Mfgs. (R. R.)	1.85	3.50	4.70	4.90	2.40
Coal mines	1.80	6.00	15.00	8.40	3.00
Carpenter contractors	3.05	3.75	4.50	5.25	3.00
Mason contractors	3.90	5.25	6.30	7.35	4.20
Electric Light & P. Cos.	4.15	6.00	7.20	8.40	4.80
Harness and saddle Mfgs.	.85	1.25	1.65	1.75	.55
Saw mills	2.20	4.50	5.60	6.30	2.25
Planing mill and lumber yard	1.60	3.25	4.05	4.55	1.50
*Meat packing and stock yard	1.40	2.25	3.35	3.50	1.50
Machine shop	.85	2.00	2.50	2.80	1.00
Machine shop with foundry	.95	2.50	3.10	3.50	1.20
Foundry (iron)	1.25	2.75	3.40	3.85	1.50
Boilermakers	1.95	3.50	4.35	4.90	2.25
Flour mills	1.20	2.00	2.70	2.80	1.20
Mining (except coal)	1.80	6.00	8.10	8.40	4.00
Ice—artificial—Mfgs.	1.20	2.50	3.35	3.50	1.35
Street Ry. Co.—					
(a) Electric interurban	3.05	8.00	10.80	11.20	6.25
(b) Electric, not interurban	2.15	5.00	6.75	7.00	3.75
Oil (fish, lard, tallow, etc.) Mfgs.	1.10	2.25	3.00	3.15	1.05
Blast furnaces	2.65	6.00	8.10	8.40	3.75
Iron smelters	2.65	6.00	8.10	8.40	3.75
Paper Mfgs, no saw or bark mills	1.55	2.50	3.35	3.50	1.50
Cardboard Mfgs. (no pulp mills)	1.15	2.00	2.70	2.80	1.20
Writing paper Mfgs.	1.20	1.25	1.65	1.75	1.20

Representative Employments, September, 1912	Ohio state ins. rate, class 1 rate	New Jersey compensation rate	Illinois plan compensation rate	Wisconsin compensation rate	Wisconsin employers' liability rate
Glass Mfgs., no plate or window	.45	1.25	1.65	1.75	.30
Printers	.85	1.25	1.55	1.75	.60
Rubber Mfgs.	1.00	2.25	3.00	3.15	.63
Freight handlers—stevedores	2.20	4.00	8.00	5.60	3.00
Lime quarries—blasting and crushing	3.30	6.00	8.10	7.00	3.50
Cement Mfgs.—no quarry	2.80	4.00	5.40	5.60	3.13
Clothing Mfgs.	.35	.60	.75	.84	.27
Mattress Mfgs.—no spring or wire work	.50	1.50	1.85	2.10	.72
Tobacco (chewing, smoking, etc.) Mfgs.	.50	.75	1.00	1.05	.32
Great Lake steamers	1.90	3.00	1.80	3.50	1.35
Scrap iron dealers (shop and yard)	3.80	6.00	8.10	8.40	4.20
Storage (cold, grain)	2.05	2.50	3.38	3.50	1.75
Furniture Mfgs.	1.00	2.00	2.50	2.80	.80
Wood turners	1.00	2.25	2.80	3.15	.96
Totals	$ 69.10	$ 131.85	$ 180.23	$ 182.84	$ 82.08
Ratio	1.0	1.9	2.6	2.6	1.2

*Under $100,000 pay roll, including slaughter-house.

This table represents the initial rates in both kinds of insurance in the states named, but within a year marked reductions were made in both the stock company and state premiums. In Wisconsin the basic employers' liability insurance rates were advanced fully 25% and the corresponding rates for workmen's compensation were reduced in much the same proportion. But the state plan kept an even better pace, rates being reduced in Ohio by July, 1913, on various classifications from 10 to 33 1-3%. This table must not be taken too absolutely. It deals only with the initial stage, and it must be remembered that in Ohio the basic rates are graded upward to penalize any lack in safety precautions, while in the stock company insurance states they are scaled downwards, either, as employers often claim, to discriminate in favor of certain businesses; or as the companies generally assert, on the principle of merit rating for safety conditions. Moreover, the marked difference in the benefits provided in the laws of the different states must be borne in mind. But when all these considerations are allowed due weight, the overwhelming merit of the state plan stands out equally in the light of economy and of efficiency. The Ohio-Ontario plan of state administration excels all others, Washington coming next and falling behind only because her system is not applied to industry generally, but only to quite hazardous employments.

THE LATEST COMPARATIVE STUDY.

The changes worked in two years' experience may be seen in Actuary Watson's comparison of the rates obtaining in July, 1914, in Ohio, under so-called state insurance, and Wisconsin and Michigan under private insurance, both stock company and mutual. In this table only the rates are compared but it must not be assumed that the benefits are the same. In fact, Ohio, with an allowance of 66 2-3% of the wage loss, and her long and even lifetime pensions in certain cases, supplies a greater benefit than Wisconsin and Michigan, while doing it at much less cost. This is shown in detail in the accompanying table of basis rates obtaining in Ohio, Michigan and Wisconsin July 1, 1914:

Representative Employments July, 1914	Ohio state insurance pref'd rate	Michigan compensation rate	Wisconsin compensation rate
Confectionery Mfgs.	$ .45	$ 1.10	$ 1.65
Acid Mfgs.	.77	3.30	3.50
Car Mfgs. (R. R.)	1.30	3.58	4.25
Coal mines	1.50	11.00	8.25
Carpenter contractors	2.03	3.50	4.62
Mason contractors	2.70	5.00	6.47
Electric Light & Power Cos.	3.10	6.60	7.28
Harness and saddle Mfgs.	.50	1.38	1.60
Saw mills	1.31	4.95	5.05
Planing mill and lumber yard	.95	3.58	3.50
Meat packing and stock yards	.81	2.75	3.38
Machine shops	.63	1.65	1.90
Machine shop with foundry	.72	2.48	2.37
Foundry (iron)	.95	2.75	3.85
Boilermakers	1.49	3.85	4.29
Flour mills	.72	2.20	3.20
Mining (except coal)	1.35	6.60	8.25
Ice—artificial—Mfgs.	.72	2.75	3.79
Street Ry. Co. (a) Electric interurban	1.80	11.00	14.57
(b) Electric not interurban	1.26	7.43	4.41
Oil (fish, lard, tallow, etc.)	.55	2.48	2.77
Blast furnaces	1.80	6.60	9.48
Iron smelters	1.80	6.60	9.48
Paper Mfgs. (no saw or bark mills)	1.15	2.90	2.89
Cardboard Mfgs. (no pulp mill)	.85	2.35	2.62
Writing papers Mfgs.	.90	1.30	1.20
Glass Mfgs. (no plate or window glass)	.27	1.38	.92
Printers	.20	1.10	.92
Rubber goods Mfgs.	.59	2.48	2.37
Freight handlers—stevedores	1.44	6.50	7.77
Lime quarries—blasting and crushing	2.30	6.60	7.55
Cement Mfgs.—no quarry	2.03	4.40	5.30
Clothing Mfgs.	.18	.66	.55
Mattress Mfgs.—no spring or wire work	.27	1.48	1.48
Tobacco Mfgs. (chewing, smoking, etc.)	.32	.83	.67
Great Lake steamers	1.13	4.00	3.35
Scrap iron dealers (shop and yard)	2.55	6.60	11.10
Storage (cold storage)	1.22	2.20	2.30
Furniture Mfgs.	.68	1.98	2.37
Wood turners	.68	2.20	2.84
Totals	$ 46.06	$ 151.09	$ 164.75
	1	3.28	3.7

The foregoing table is not open to criticism as made from a point of view strained to favor Ohio. The contrary might be claimed. It takes into comparison the latest revised and reduced rates of Michigan and Wisconsin, while it makes little account of the fact that under the state fund system of Ohio the benefits to the employe are much greater than in the other states.

In the final line of inquiry, which has become practicable only in the last few months, over 100,000 compensation cases—all that are available in this country—have been put into the analysis.

This method of computation has been applied to representative states and industries with the results shown in the tables annexed. In every case the advantage is with the state fund system of Ohio. Narrowing the comparison to rates alone and taking the classification most unfavorable to the state system, it appears that Ohio pays only 65% of the Iowa computed and but 48% of the Iowa actual. And for these lower rates Ohio secures much greater benefits for her injured workmen.

Carrying forward the part of the foregoing tables that is of permanent value, the statistician has made the revised comparison of workmen's compensation insurance under various systems as set out in detail in the tables annexed to this report. This study had to be directed to the important but difficult end of determining a proper differential to be applied to the Iowa compensation act in order to ascertain the loss cost in the aggregate and in detail with benefits as well as rates taken into the comparison.

In these latter computations the rates in Massachusetts were taken as the base. The Massachusetts rates are low compared with other states having private insurance, but they have been subjected to expert study on behalf of the state as well as of the insurance companies. They have stood the test and are generally regarded as reasonable. Next in order came the task of learning the distribution of accidents into the various classes—deaths, permanent total disabilities, temporary total, and temporary and permanent partial, together with medical aid during the waiting period. Only a few states as yet furnish the statistics for such a computation, but as supplied in the annexed tables they give the latest and most valuable information attainable as to the loss-cost of workmen's compensation insurance. Persons who wish to enter into the details of workmen's compensation in the light of the latest comparative statistics are urged to make a careful study of these tables.

The most condensed summary of this study gives the following results of comparative insurance rates stated in percentages:

Ohio (state insurance)	72
Massachusetts (stock and mutual)	1.00
Iowa computed	1.10
Iowa actual	1.50
Wisconsin computed	1.50
Wisconsin actual	2.28

We proceed next to the actual averaged rates in 1914 in forty-five leading industries studied in detail and yielding these summarized results.

Wisconsin (stock company and mutual insurance)	$ 2.55
New Jersey (stock company)	1.68
Massachusetts (stock and mutual insurance)	1.12
Ohio (state insurance)	.81
Iowa (stock company rates)	1.68

Thus the comparison shifts considerably when the selection of industries is changed or when the actual or the computed rates of Iowa are used as basic, but under each and every form of comparison the advantage is overwhelmingly with the state plan as illustrated in Ohio.

One line of comparison shows Ohio to be paying only one-third of what Iowa actually pays, another with a different list of industries proves Ohio to be paying 48 per cent of what Iowa ought to pay, while a third list shows the discrimination against Iowa to average 35 per cent.

If any of these points of view showed a condition reasonably fair to Iowa this state might perhaps continue to compel employers to insure at whatever rates the companies may demand, but this can hardly be expected when every line of comparison shows that we are being put to a sore disadvantage.

PROVED MERIT OF STATE FUND PLAN.

Considering expense only, and viewing it from each of the three lines of comparison herein set forth, there seems no escape from the broad conclusion that Ohio pays rates ranging from one-third to one-half what Iowa does, and secures in return 25% more benefit for injured workmen.

If it is claimed that the foregoing results are reached by charging administration expense to the state, the reply is that the state

from the courts to a commission. The Ohio Commission estimates itself saves greatly by changing the settlement of disputed cases the saving of court costs in that state at $250,000 per annum. If only half that amount could be saved in Iowa there would be sufficient twice over to defray the expenses of a well paid and well equipped commission (and no other should be thought of), for administering a state fund.

It is not surprising in view of the results reached that the Ohio Commission declares that by every test which can be applied to insurance, the Ohio state plan shows forth its supreme merit. "It provides more insurance for less money than any other plan known. It costs less money to administer than does any other system, state or private, and by removing from the realm of controversy the settlements of claims of injured employes for losses, it effects even to the taxpayers of Ohio a probable saving of a quarter of a million dollars annually." In Iowa it would save at least double the cost of administration.

The state fund as applied in Ohio offers to employes the most generous measure of compensation of any workmen's compensation law in the United States. Under this plan one hundred cents of every dollar collected from the industries of the state goes to compensate losses for industrial accidents.

Thus the humanitarian side of the question keeps even step with the economic in the state fund system. But as this question is so new in Iowa we must not permit any issue between different systems of insurance to keep attention long withdrawn from the fundamental doctrine of all the compensation laws. Turning from the one defect of the Iowa Act we cannot fail to wonder why a measure so fundamentally beneficial and just was so long delayed.

WARREN GARST,
Iowa Industrial Commisioner.

September 15, 1914.

APPENDIX

THE BEGINNING OF WORKMEN'S COMPENSATION.

FIRST AMERICAN RESORT TO THE COMPENSATION METHOD AFTER THE CHERRY MINE DISASTER IN 1910.

It is fortunate when there is danger of the fundamental principle of workmen's compensation being interlocked with inconsistent private insurance that we have only to turn back to the start of the compensation policy in this country a few years ago to see it vindicated and illustrated in the perfection of its design. Legislators may well turn again to that birth lesson of this great reform.

THE CHERRY MINE DISASTER.

As is so often the case this sweeping reform started in a great disaster—the loss of 270 lives in the Cherry mine calamity of November 13, 1909. Before that calamity there had been some scattered discussion in this country of the workmen's compensation laws of England and Germany, (a little in Iowa), but the persons who proposed copying such enactments here were generally regarded as rash innovators or mere theorists. It took the horror of Cherry and the vivid lessons growing out of it to arouse the general public to a different view and to secure for the advocates of scheduled compensation for industrial death and disability a most attentive and favorable hearing.

Eight days after the calamity at Cherry twenty men were rescued when every hope had seemed to be lost. Ten of the first rescue party went into the mine only to perish. Then came the last rescue led by the so-called "book-miners," the trained experts with oxygen helmets from the Universities of New York, Virginia, Princeton and the Columbia School of Mines. But with twenty men brought back almost from the grave, and the mine shafts finally sealed with nearly 300 men beyond hope, there remained work for other scientific students. Turning at once to the problem of the hundreds of widows and children left destitute, Mr. J. E.

Williams of Streator, Illinois, a close student of European compensation laws, as well as a miner of former practical expereince, proposed administering the relief fund on the general plan of the English Compensation Act, but without any kind of incidental private profit. The experts of the Carnegie hero fund commission, and the officials of the Milwaukee road agreed to the proposition, and the plan was at once begun by voluntary act. Insurance interests had no hand whatever in the matter. The practical results quickly demonstrated before the eyes of a deeply aroused and interested public were so grateful and successful that within ninety days legislative steps were taken for incorporating the system into positive law. The movement has since gone on and gathered strength with every advance east and west. At the outset of the new system in Iowa it will be helpful and instructive to keep in view the splendid lesson developed at the start in Illinois, when insurance profit and indeed all forms of private profit were consistently excluded.

In its issue of December 4th, two weeks after the calamity at Cherry, a leading magazine prophetically declared the disaster would be "A Mine Test of Civilization" and two weeks later Graham Taylor said in confirmation, writing from Cherry:

"Speculative lawyers are asking from fifty to sixty per cent of the claims which they undertake to collect from the coal company. In the absence of any workmen's compensation law or compulsory insurance, at least $100,000.00 more in charity is needed to compensate for the lack of justice to those who hazarded everything and lost in the dangerous occupation of mining."

The charity was forthcoming. Money in excess of the amount stated quickly poured in but still more important was the working out of the first great American object lesson in workmen's compensation. "Relief by schedule, aid for all, revenge for none," were the cardinal rules put in practice in distribution of the first $100,000.00.

Looking at the suprising results of the Cherry relief administered from a public standpoint and with private profit eliminated, Mr. S. C. Kingsley, of the United Charities of Chicago, made a comparison between fifty families at Cherry so quickly relieved under the new plan, and fifty representative families in various cities east and west who had lost their breadwinners in industrial accidents but were left dependent on law suits and haphazard charity for relief in the old way.

THE NEW COMPENSATION PLAN.

Fifty families of miners killed in the disaster at Cherry, Nov. 13, 1909, under relief societies application of the Compensation Plan at about two-thirds the Iowa rates. Six months record. — $90,000 total, $1,800 each

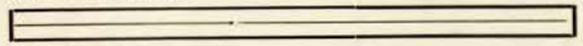
THE OLD HAPHAZARD WAY

Fifty representative families relieved by charity and law suits—the old way—six months record.

Jury verdict	$3,000—1 Case
	1,150—1 "
	800—1 "
	750—1 "
	500—2 Cases
	400—1 Case
	300—1 "
	270—1 "
	200—2 Cases
	125—1 Case
	100—3 Cases
	85—1 Case
	69—1 "
	35—1 "
	25—1 "
	20—2 Cases
	0-15 "
Relief in money	9,149
Funeral only	—2 Cases
Suits pending	-12 "

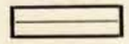
THE NEW VS. OLD PLAN ON THE YARD STICK

Compensation Plan



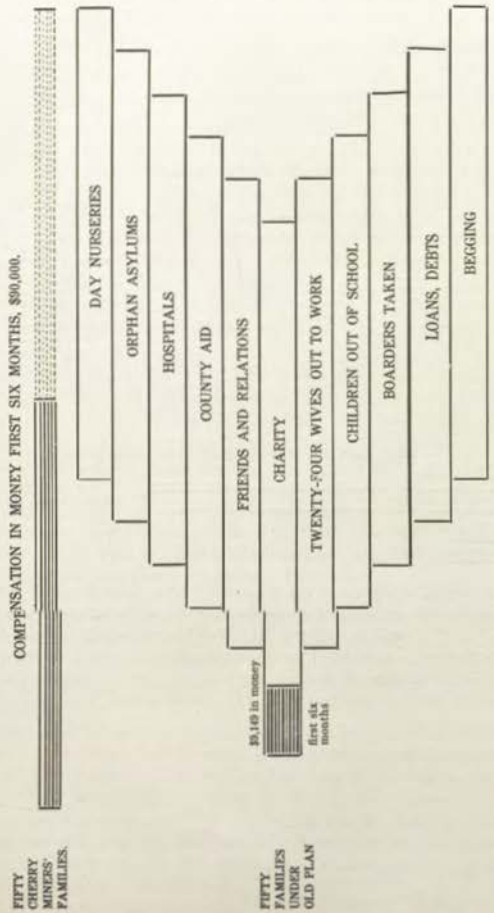
$90,000, Expense 10 per cent.

Law suit and charity



$9,149.

A second diagram gives the results of a more detailed investigation of the charitable societies into the relief afforded the second list of families. These fifty families represent typical cases in various cities selected by Superintendent Kingsley to show the practical working of the old methods of lawsuits and haphazard relief in further contrast with the compensation plan.



Here is told in terms of life and suffering the true story of the "unholy trinity" of old legal doctrines—assumption of risk, fellow servant and contributory negligence—while in countless judicial opinions and legal treatises these rules may be found in terms of severe and icily perfect logic. There is no doubt as to the choice made by twentieth century legislators. Workmen's compensation by schedule has come to stay; no perfection of legal logic can revive the old legalistic dogmas which preceded it and proved so disastrous in practice.

AT BREAKING POINT OF HOPE.

Of the fifty cases under the law-suit-and-charity system there remain three that could not be included in the diagrams but require separate statement as follows.

	Reversed in Supreme Court
Jury verdict in lower court	$ 7,000.00
Second similar case, verdict	7,000.00
Third case	22,500.00

Commenting on these cases Superintendent Kingsley said:

"The uncertainty and delay had a most demoralizing effect both morally and physically. Demoralization and general deterioration were returned as among the social consequences. These people were in suspense, setting their expectations on sums of money that would make them independent, huge fortunes in their eyes, and after living in this anticipation, adopting a scale of living accordingly as far as they could, they were finally disappointed and got nothing."

OTHER LESSONS OF CHERRY.

But the example of Cherry does not stop here. The contrast presented in the foregoing diagrams covers only the first six months in the experience of the families appealing to law suits and charity, on the one hand, and those aided during a like period by workmen's compensation. In fact, the Cherry relief fund was not limited to $100,000 but extended to four times that sum, and instead of stopping at the end of six months it is still in operation. During all these years children have been kept in school, as many will be for years yet to come until the age of self support. It remains for some investigator to bring this record down through subsequent years and place against it the detailed results of the twelve law

suits still being prosecuted by the verdict chasers when the inquiry covering the first six months was closed.

And when the full record of Cherry is contrasted with the overflowing cup of bitterness presented by the old system, still other lessons will appear. Some future investigator may perhaps pass beyond the results to be shown by figures and diagrams to make some estimate of those that are psychological, and to find an answer to the objectors who argue that no workman with a proper sense of American independence and individuality should consent to give up the right to sue for his own personal loss and accept instead that of a uniform or equalized schedule. This argument still makes an impression in some quarters but not among students of the great object lesson at Cherry. Miners especially remember how the band of twenty rescued men had subsisted for eight days by carefully cachting and apportioning among themselves in half cups and quarter cups the water that seeped from the mine walls. No man's thirst was completely satisfied but all were saved. Possibly a few of the stronger might have monopolized the scant water supply and held the weaker at bay until they perished, but Cherry supplied no such lessons of individualism and survival of the strongest. The example was that of an equal share to all, all for each and each for all, a singularly complete illustration of the workmen's compensation principle unhampered by private profit or loss from the common relief.

THE PRINCIPLE OF AVERAGE JUSTICE.

If any think the example of Cherry too deeply grounded in the tragic and the emotional to be a safe guide for anything beyond the initial stage, it is easy to find a corrective. Over a dozen commissions, aided by expert statistical talent, have made elaborate investigation into the economic side of workmen's compensation. Owing to scarcity and conflict of primary information these studies are not in some respects all that could be wished, but they leave no doubt as to the loss, waste, suffering and bitterness of leaving each individual to the remedy of the law suit. They confirm also the great saving not only to individuals and families but to society by supplying relief by impartial methods instead of law suits, and by fixed and averaged schedules instead of the speculations of juries.

The workmen's compensation principle, consistently administered, benefits the employer hardly less than the employe. The rule

of average justice means that the employer is no longer pursued as a wrong doer, the employe seeks not revenge but for an award agreed upon in advance, and fixed by a schedule; the range for dispute or bitter feeling being, if not entirely removed, reduced to the minimum by a consistent scheme of state administration. Such is the great dual benefit springing from the beneficent doctrine of average justice so dramatically inaugurated at Cherry.

AN IOWA CONTRAST TO CHERRY.

Vivid as is the contrast of the old system with the equalized and scheduled relief at Cherry there remains another equally instructive. Let us bring the Iowa employers who have unflinchingly accepted the compensation law and the interlocked insurance rates into the comparison. What about contributions made by these devoted employers for the relief of the injured? What proportion of what they give will reach the employe? How will it compare with Cherry? In short, how will the example at Cherry compare with the administration of a relief fund of $100,000 under the present method of insurance in Iowa?

The discrimination between industries is great in the manual of basic rates for Iowa, but in no considerable range have they been shown to be lower than two and a half times the loss-cost. That would make it cost in insurance $10,000 to get $50,000 into the hands of fifty such families as at Cherry. On the basis of the coal mining rates fixed for Iowa the operators would be at an expense of $650,000 to get $100,000 of relief to fifty families. At Cherry there was added to the $100,000 of relief about $10,000 of expense.

Powerful as the Cherry experience condemns the old system, it is almost equally opposed to the halting plan of legalizing workmen's compensation in acts of the general assembly, and then allowing such a heavy proportion of what employers pay to be intercepted by the insurance companies, while only a beggarly amount reaches the accident victims.

It is true that in the Cherry distribution legal controversy and other wastes were reduced to an extent rarely possible, but the state plan approximates such a standard while private insurance departs widely from it. Cherry and the closely similar state fund systems speak with the same voice. In the United States and at the outset of workmen's compensation they were twin-born.

STATE PLANS JUDICIALLY EXAMINED AND APPROVED.

For a calm and dispassionate study wholly free of the emotional influence felt at Cherry there is nothing more valuable than the work of the Ontario Commission. That investigation began early and lasted long. In order to avoid clashing or compromises between capital and labor the work was intrusted to one man—Sir William Meredith, Chief Justice of the Province. The single commissioner held the question under advisement until the work of nearly all the composite commissions in this country had been concluded and the state plans of Ohio and Washington were well tested. The Chief Justice then announced conclusions condemning the old systems as severely as any one speaking from the standpoint of Cherry, and was equally positive in approving the plan of relief by fixed schedule with a complete monopoly of compensation administration by the state. His recommendations met the approval of the highly conservative legislative body of Ontario and the result is one of the best, as well as latest, workmen's compensation laws. The severe judicial inquiry of Ontario thus points to the fundamental idea reached by the Cherry relief—the necessity of freeing workmen's compensation from such excrescences or leeches as private profit insurance and costly litigation. The fundamental idea being protective—the conservation of the laboring force of the state including all who are below 100 per cent efficiency, as well as the comparatively few of the young and able bodied who can measure up to that standard—consistency demands the elimination of private insurance profit and the reduction of legal and medical fees to the minimum. Every "rider" possible must be taken from the back of crippled labor. Ohio and Washington grasped this principle at the outset and by happy inspiration took the right direction from the first step and established systems of state administration that reach almost up to the results attained in the great and splendid object lesson at Cherry. If there was too much of the sympathetic and emotional at work at Cherry, it is fully counterbalanced by the severe study, investigation and experience in the three jurisdictions named, Ontario with her prolonged judicial inquiry and final approval of the state plan by a most careful and conservative legislative assembly speaking the last word. Other states may well hesitate before allowing private insurance to become permanently fastened as an excrescence on workmen's compensation or became permanently entangled in new plans that are neither one thing nor the other.

TAKE FROM THE REALM OF CONTROVERSY.

As we look back from the standpoint of some disappointing subsequent experience we see that the first American resort to the workmen's compensation principle at Cherry was not only a brilliant but a thoroughgoing success. Not only was the schedule plan adopted in the distribution of the first $100,000 with a complete lack of the waste and bitterness of controversy, but private profit was eliminated from the whole proceeding. In the perfection of its design this is what workmen's compensation means—one hundred cents of every dollar going to the injured workman. That was done at Cherry by voluntary action; private insurance having no hand in the matter; in Ohio, Ontario and Washington it is achieved by state administration of the fund, but other American states by opening the field of settlement to stock company insurance allow a large part of the benefit of workmen's compensation to slip through the fingers. After an escape to a new system they turn and restore one of the prime evils of the old one; they install a private agency to seek a profit and to gain it largely by high rates and milking the relief fund. Only half the great lesson of Cherry is learned.

Wm. C. Archer, of the Ohio Commission, justly sums up the case for the state plan when he says it goes the full length and grasps the complete benefit by "taking settlements out of the realm of controversy." The one blot on the German and English system —costly litigation—is saved in the Americanized plan of a general fund administered by the state.

IOWA INDUSTRIAL ACCIDENTS

(From 1914 Report of the Labor Bureau, A. L. Urick, Commissioner)

Two substantial purposes are served by the reporting of industrial accidents to the Bureau of Labor Statistics: 1. Accident prevention, and 2. an Iowa experience on which to base equitable casualty rates to cover compensation for injuries sustained. Physicians cannot heal the sick without first making a thorough diagnosis of the patient; the builder must have carefully prepared plans, based upon knowledge of materials and architecture, to construct a building worth while; the farmer must have a knowledge of soils and plant life and of the means to combat soil deterioration and disease of plant life, to succeed. So must the state know the character, cause and economic cost of industrial accidents before a real progress can be made in the conservation of her productive forces as evidenced in the workers.

The cost in lessened productivity, the suffering entailed, and the ill-feeling engendered between employer and employe as a result of industrial accidents has long been recognized as a heavy burden upon industry, the industrial workers, and upon society. No adequate provision was made, prior to the time of the Thirty-fifth General Assembly, to arrive at facts and conditions as they exist in our home state.

The law creating the Bureau of Labor contained among other duties of the Commissioner, the following "and shall compile and publish therein (biennial report) such information as may be considered of value to the industrial interest of the state, * * * * the number and character of accidents," etc. Under this provision, former commissioners made a faithful effort to collect accident statistics by preparing and mailing blanks for report of accidents to all employers from whom other statistics were gathered at the end of each biennial period. The great difficulty with this plan was that only a small per cent of employers were reached, and of those but very few kept a record of accidents in their establishment and consequently could not furnish the desired information. As an indication of the uselessness of these reports for any practical purposes, we note that from December 31, 1902, to December 31,

1911, a period of nine years, but 103 fatal and 7,667 non-fatal accidents were reported, a number less than the actual number occurring during one year upon the basis of present reports under the statute of 1913.

PRESENT LAW.

The last General Assembly, appreciating the need of more accurate data of accidents, in view of the change from employers' liability rules to workmen's compensation in the adjustment of claims for personal injuries sustained in industry, enacted the following:

"Chapter 196—Section 4. Record of Accidents, Report—Failure—Penalty. Manufactures, manufacturing corporations, proprietors or corporations operating any mercantile establishments, mills, workshops, mines other than those subject to inspection by the state mine inspector, or business houses, shall keep a careful record of any accidents occurring to an employe, while at work for the employer, when such accident results in the death of the employe or in such bodily injury as will or probably may prevent him from returning to work within four days thereafter. The said record shall at all times be open to inspection by any inspector of the bureau of labor statistics. Within forty-eight hours after the occurrence of an accident, the record of which is herein required to be kept, a written report thereof shall be forwarded to the commissioner of the bureau of labor statistics, and said commissioner may require further and additional report to be furnished him should the first report be by him deemed insufficient. No statement contained in any such report shall be admissible in any action arising out of the accident therein reported. Any employer who fails to keep the record or to furnish the report as herein provided shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not less than five dollars ($5) nor more than one hundred dollars ($100) and costs of prosecution."

This act became effective July 4, 1913. For the reason that the Workmen's Compensation Act also made provision for a report of accidents to the Industrial Commissioner, an agreement was made for a joint accident blank which could be made out by the employer in triplicate—one copy to be mailed the Industrial Commission, one copy to the Bureau of Labor, and the other to be retained by the employer as a record required under the provisions of the law.

To familiarize employers with their duty under the law, 20,000 copies of these blanks were mailed in sets of three and six; the supply being insufficient another 20,000 copies were printed to supply the demand.

Considering the experience of former commissioners, it was deemed unwise to expend monies to gather accident reports for the period from December 31, 1911, to July 4, 1913, the date of the new law becoming effective, and as the biennial period for report ended December 31, 1913, this report includes accidents reported for six months only. It should be further explained that because thousands of employers had no knowledge of the above act, and a considerable number of others were confused by reason of the Workmen's Compensation Act not becoming effective in all of its parts until July 1, 1914, and who therefore thought the latter to be the date of the accident report law going into effect, the accidents reported in this issue is far from the total number occurring during the six months period. This is indicated by the fact that but 193 employers made reports, and some of these only during the latter months of the period. To the credit of Iowa employers, it must be said that those who had knowledge of the provisions of the law, at all times co-operated with the Bureau in the most satisfactory manner. Those who have studied our method of compiling accident reports have expressed the opinion that such a report for five years, or even two years, would be of inestimable value to employer, employes and to the state at large, both as a means of preventing many unnecessary accidents, which is the thing most desired, and in rate adjustment, and are lending every means to make possible accurate data.

As shown by table following, there were reported to the Bureau, 1,186 accidents from July 4, 1913, to December 31, 1913, of this number 11 were fatal approximating 9 1-3 per cent. In 192 cases, there was no final report, because of discharge of the injured, the injured quitting the service, suits brought, etc., leaving 983 cases in which a computation is possible on time and wages lost by reason of injury, also possible effects under a compensation law. The total number of actual working days lost in these cases was 6,355 and the actual wages lost as based upon reports was $16,699.78. Based upon reports coming into the office during July, 1914, the above amounts can be multiplied by 8, and possibly 10 to reach the actual loss of wages caused by accidents per annum.

In 43 of the above cases, the loss of time was in excess of thirty

days. In 337 cases, in excess of 7 days and in 195 cases in excess of 14 days or of sufficient time to come within the provisions for compensation under the Workmen's Compensation Act. This data is upon basis of all days lost, while above wage data is upon actual working days lost.

Of accidents partial in character and permanent in quality as defined by law, there were as follows: loss of index finger, 3; loss of third and fourth fingers, 2; loss of four fingers, 2; loss of 2nd and 3rd fingers, 2; one each of the following loss, 2nd finger, 1st three fingers, first 2 fingers, 3rd finger and thumb, first 3 toes, 1 hand, 1 eye.

The accidents in which the loss was only of one joint or less and for which the law provides one-half compensation of that allowed for loss of entire member were as follows: thumb 1, index finger 6, second finger 4, third finger 2, four fingers 1.

Many sociologists, statisticians, students and others are interested in underlying causes. To these the general table should be useful for the many uses that may be made of it to compute different phases of cause and effect of accidents.

To show the possibilities of the many details that may be gleaned from the general table we give number of accidents in each hour of service as follows:

During 1st hour of work	100
During 2d hour of work	102
During 3d hour of work	123
During 4th hour of work	115
During 5th hour of work	84
During 6th hour of work	107
During 7th hour of work	131
During 8th hour of work	123
During 9th hour of work	107
During 10th hour of work	38
After 10th hour of work	19

These figures include 1,049 reports in which complete time dates were given and are based upon the assumption of a break for meals and rest between the 5th and 6th hour of work, and show the greatest number of accidents occurring during the third hour after going to work and the second and third hour after the break. The lessening number after the 8th hour is no doubt due, in a large part, to the lesser number engaged in service after the 8th hour.

AGES.

There were made 1,138 reports giving age of injured, from which we give the number injured of each age.

12 years of age	1
14 years of age	2
15 years of age	5
16 years of age	18
17 years of age	22
18 years of age	29
19 years of age	34
20 years of age	39
21 to 25 years of age	273
26 to 30 years of age	260
31 to 35 years of age	157
36 to 40 years of age	99
41 to 45 years of age	82
46 to 50 years of age	44
51 to 55 years of age	31
56 to 60 years of age	25
61 to 65 years of age	6
66 to 70 years of age	5
Over 70 years of age	6

Those desiring a further analysis we respectfully refer to appended table.

TABLE I.—COMPARATIVE COST OF WORKMEN'S COMPENSATION
Based on the Distribution of 115,539 Accidents

	All Injuries Amount	Fatal With Dependents		Fatal, No Dependents		Permanent Total Disability	
		Amount	a % All	Amount	a % All	Amount	% a All
1. Number of accidents	115,539	456	.4	159	.1	10	------
Massachusetts—							
2. All compensation	$2,201,746	$ 735,528	33.	$ 31,800[b]	1.4	$ 26,110	1.2
3. For indemnity	1,515,546	725,496	48.	----------	------	25,110	1.7
4. For medical	686,200	10,032	1.5	31,800[b]	4.5	1,000	.2
5. Per cent compensation	31	1.4	------	100	------	3.8	------
Iowa—							
6. All compensation	$2,367,343	$ 781,128	33.	$ 15,900[b]	.7	$ 21,650	.9
7. Per cent Mass.	107.5	106	------	50	------	83	------
8. For indemnity	1,651,443	725,496	44.	----------	------	20,650	1.2
9. For medical	715,900	55,632[c]	7.8	15,900[b]	2.2	1,000	.1
10. Per cent compensation	30.2	7.1	------	100	------	4.6	------
Wisconsin—							
11. All compensation	$3,296,043	$1,010,496	31.	$ 15,900[b]	.5	$ 33,750	1.
12. Per cent Mass.	149.7	137	------	50	------	129	------
13. For indemnity	2,467,373	1,000,464	40.6	----------	------	32,500	1.3
14. For medical	828,670	10,032	1.2	15,900[b]	1.9	1,250	.2
15. Per cent compensation	25.1	1.2	------	100	------	3.6	------

*For detailed statement of indemnity for this class, see Table II.
**For detailed statement of indemnity for this class, see Table III.
[a] These, in all cases, represent the percentage of the total for all injuries.
[b] These amounts include the expenses for last sickness and funeral expenses.
[c] The Iowa act provides for funeral expenses in all fatal accidents. This amount includes such funeral expenses.

Line 5—Means the percentage that the medical costs are of the total compensation payable.

Line 7—Means the percentage that the cost of all compensation for each class in Iowa is of the same class in Massachusetts.

Lines 10 and 15—Same as line 5.

Line 12—Same as line 7.

ACTS OF WISCONSIN, MASSACHUSETTS AND IOWA.
in Massachusetts and Wisconsin.

Permanent Partial Disability		Temporary Total Disability**								
		All		Under 1 Week		1 to 2 Weeks		Over 2 Weeks		
Amount	% a All	Amount	% a All	Amount	% a All	Amount	% a All	Amount	% a All	Number
1,874	1.5	113,040	98	76,522	66.3	12,307	10.7	24,211	21	1
$ 297,913	14.4	$1,110,395	50	$ 224,975	10	$ 88,304	4.	$ 797,116	36	2
206,824	13.7	558,116	36.8	----------	------	----------	------	558,116	36.8	3
91,089	13.3	552,279	80.5	224,975	33	88,304	12.8	239,000	34.7	4
30.6	------	49.8	------	100	------	100	------	30	------	5
$ 438,270	18.4	$1,110,395	47	$ 224,975	9.5	$ 88,304	3.8	$ 797,116	33.7	6
147	------	100	------	100	------	100	------	100	------	7
347,181	21	558,116	33.5	----------	------	----------	------	558,116	33.5	8
91,089	12.4	552,279	77.5	224,975	31.4	88,304	12.6	239,000	33.5	9
30.6	------	49.8	------	100	------	100	------	30	------	10
$ 495,451	15.1	$1,740,446	52.7	$ 224,975	6.6	$ 134,518	4.1	$1,380,953	42.	11
167	------	157	------	100	------	152	------	173	------	12
404,362	16.4	1,030,047	41.7	----------	------	46,154	1.9	983,893	39.8	13
91,089	11.	710,399	85.7	224,975	27.	88,304	10.7	397,000	48.	14
18.3	------	41.3	------	100	------	65.6	------	28.8	------	15

TABLE II.—PERMANENT PARTIAL DISABILITIES.

	Number of accidents	Massachusetts			Iowa		Wisconsin	
		Specific Indemnity Rates Per Accident	Total Specific Indemnity	Weekly Indemnity	Specific Indemnity Rate Per Accident	Total Indemnity	Specific Indemnity Rate Per Accident	Total Indemnity
Total	1,874	----------	$ 167,470	$ 393.54	----------	$ 3,471.81	----------	$ 404,362
1. Arm at shoulder	24	$ 287.50	6,785	4.77	$ 1,154.00	272.34	$ 1,800.00	42,480
2. Arm at elbow	8	287.50	2,797	2.06	1,154.00	112.28	1,500.00	14,595
3. Loss of hand	34	287.50	9,851	11.73	866.00	297.04	1,200.00	41,160
4. Loss of palm	6	143.75	905	2.36	519.00	32.70	600.00	3,780
5. Loss of all fingers of one hand	17	143.75	2,454	6.40	450.00	76.95	450.00	7,695
6. Loss of thumb and metacarpal	5	69.24	373	1.09	231.00	12.47	450.00	2,430
7. Loss of thumb at proximal joint	70	69.24	4,823	7.30	231.00	161.47	300.00	20,970
8. Loss of thumb at second joint	107	69.24	7,349	21.78	115.50	123.01	150.00	5,975
9. Loss of index finger and metacarpal	15	69.24	1,001	2.51	173.00	25.09	225.00	3,263
10. Loss of index finger at proximal joint	146	69.24	10,208	25.32	173.00	253.45	150.00	21,975
11. Loss of index finger at second joint	83	69.24	5,720	14.33	173.00	143.42	112.50	9,326
12. Loss of index finger at distal joint	171	69.24	11,864	31.36	86.50	135.97	75.00	12,787
13. Loss of middle finger and metacarpal	2	69.24	124	.29	144.00	2.59	150.00	270
14. Loss of middle finger at proximal	92	69.24	6,334	14.16	144.00	122.20	112.50	10,328
15. Loss of middle finger at second	45	69.24	3,112	7.33	144.00	64.94	75.00	3,383
16. Loss of middle finger at distal	131	69.24	9,039	29.25	72.00	93.31	37.50	6,112
17. Loss of ring finger at proximal	70	69.24	4,685	9.65	115.00	78.09	60.00	4,074
18. Loss of ring finger at second	46	69.24	3,167	6.52	115.00	52.79	45.00	2,061
19. Loss of ring finger at distal	81	69.24	5,554	11.44	57.50	46.29	30.00	2,415
20. Loss of little finger at proximal	56	69.24	3,892	9.10	87.00	48.97	75.00	4,230
21. Loss of little finger at second	35	69.24	2,429	5.68	87.00	30.62	60.00	2,112
22. Loss of little finger at distal	59	69.24	4,043	9.45	43.50	25.49	30.00	1,758
23. Multiple finger injuries	196	143.50	27,696	49.85	(a)	168.61	(a)	19,384
24. Loss of leg at hip	2	287.50	529	1.18	1,010.00	18.58	1,800.00	3,312
25. Loss of leg at knee	10	287.50	2,887	6.46	1,010.00	101.40	1,200.00	12,048
26. Loss of foot	8	287.50	2,346	4.47	721.00	58.83	900.00	7,344
27. Loss of great toe	4	69.24	254	1.15	144.00	5.30	150.00	552
28. Loss of great toe at second joint	8	69.24	563	2.61	72.00	588.00	75.00	612
29. Loss of lesser toe	5	69.24	368	.90	87.00	465.00	30.00	160
30. Loss of lesser toe at second joint	6	69.24	442	1.08	43.50	2.79	30.00	192
31. Multiple toe injuries (a)	39	143.50	5,597	17.38	(a)	31.44	(a)	3,614
32. Loss of eye	26	287.50	7,541	10.60	577.00	151.75	1,200.00	31,560
33. Loss of eyesight	41	287.50	11,673	16.37	577.00	234 26	900.00	36,540
34. Loss of second eye	1	287.50	265	.37	577.00	5.31	1,800.00	1,656
35. Other permanent partial disabilities (a)	225	----------	----------	47.25	(b)	471.53	(a)	54,209

N. B.—These figures include indemnity payments only.

TABLE III.—COMPARATIVE COST OF TEMPORARY TOTAL DISABILITIES.

	Number of accidents	Per cent. All	Massachusetts		Iowa		Wisconsin	
			Rate Per Accident	Amount	Rate Per Accident	Amount	Rate Per Accident	Amount
Total	115,040	100.	.....	$ 558,116	.....	$ 558,116	.....	$ 1,029,647
Under one week	76,622	67.5	.....	.....	.....	.....	.....	.....
1- 2 weeks	12,307	11.	2.88	22,615	$ 2.88	22,615	$ 3.75	46,154
2- 3 weeks	7,689	6.9	8.66	45,917	8.66	45,917	10.25	80,350
3- 4 weeks	5,316	4.6	14.43	42,035	14.43	42,035	18.75	97,988
4- 5 weeks	2,913	2.5	20.20	36,097	20.20	36,097	41.25	73,714
5- 6 weeks	1,787	1.6	25.99	30,999	25.99	30,999	48.75	58,110
6- 7 weeks	1,102	1.1	31.74	29,106	31.74	29,106	56.25	49,250
7- 8 weeks	1,238	1.6	37.52	27,561	37.52	27,561	66.75	71,055
8-10 weeks	1,324	1.2	43.27	27,944	43.27	27,944	71.25	87,121
10-11 weeks	327	.5	49.05	21,553	49.05	21,553	78.75	24,571
11-12 weeks	429	.4	54.82	16,506	54.82	16,506	86.25	29,048
12-13 weeks	302	.3	60.59	39,698	60.59	39,698	90.75	41,156
13-19 weeks	439	.4	83.67	83,998	83.67	83,998	123.75	124,121
19-26 weeks	1,008	.9	121.17	97,192	121.17	97,192	172.50	87,439
Over 26 weeks	473	.4	276.96	86,688	276.96	86,688	375.00	117,375
	513	.3						

N. B.—These figures include indemnity payments only.

TABLE IV.—INSURANCE RATES FOR IOWA.

CLASS	Ohio	Massachusetts	Iowa		Wisconsin	
	State Insurance	Actual	Computed	Actual Basis	Computed	Actual
Per cent Massachusetts	72	100	110	150	150	228
Metal Working—	81			168		
1. Carriage and wagon works	$ .60	$ .65	$ .72	$ .78	$ .98	$ 1.32
2. Cutlery works	.54	.55	.61	1.32	.83	2.08
3. Foundries	.90	1.40	1.54	1.68	2.10	2.65
4. Machine shops—no foundry	.60	.80	.88	1.20	1.20	1.90
5. Machine shops—with foundry	.70	1.20	1.32	1.50	1.80	2.37
6. Sheet metal manufacturing	1.05	1.00	1.10	1.20	1.50	1.90
7. Stove manufacturing	.90	.65	.72	.96	.98	1.52
8. Bridge & structural iron wks.	1.85	2.75	3.03	5.25	4.13	8.16
9. Tools and hardware mfg.	.50	.50	.55	.75	.75	1.16
Woodworking—						
10. Box mfg.	.90	1.60	1.76	2.60	2.90	3.24
11. Furniture mfg.	.40	.90	.99	1.50	1.35	2.37
12. Planing mills	.85	1.90	2.09	2.31	2.85	2.59
Food & Kindred Products—						
13. Bakeries	.40	.60	.66	.86	.90	1.38
14. Breweries	.65	1.25	1.36	1.50	1.88	2.37
15. Candy and confectionery	.40	.50	.55	1.03	.75	1.65
16. Cigar mfg.	.23	.35	.39	.54	.53	.59
17. Sugar making	.60	.90	.99	2.40	1.35	2.66
Leather and Textiles—						
18. Boots and shoes	.25	.30	.33	.43	.45	.68
19. Clothing	.16	.20	.33	.34	.45	.55
20. Knitting mills	.25	.35	.39	.46	.54	.60
21. Woolen mills	.30	.35	.39	.52	.53	.53
22. Tanneries	.70	.85	.94	1.08	1.28	1.70
Public Utilities—						
23. Elec. Light & Power Co.	2.10	2.75	4.13	4.69	5.63	7.28
24. Gas works	.68	1.40	1.54	1.50	2.10	2.37
25. Interurban railways	1.80	1.70	1.87	3.75	2.55	14.57
26. Street railways	1.26	1.70	1.87	9.37	2.55	4.41
27. Teaming	.....	1.12	1.24	1.75	1.68	2.09
Contractors—						
28. Carpenters—interior	1.15	1.50	1.65	1.61	2.23	2.59
29. Carpenters—N. O. C.	1.85	2.62	2.88	1.87	3.93	4.62
30. Masonry—N. O. C.	2.50	3.75	4.13	4.02	5.63	6.47
31. Millwrighting	1.65	1.68	1.85	2.30	2.57	3.70
32. Painting—outside	1.65	2.43	2.67	3.16	3.65	5.09
33. Painting—inside	1.15	1.31	1.44	1.82	1.97	2.13
34. Plumbing	1.15	1.12	1.23	1.82	1.68	2.02
Commercial Risks—						
35. Clerical office—N. O. C.	.13	.10	.11	.14	.13	.17
36. Department stores	.25	.35	.39	.42	.53	.68
37. Dry goods stores	.21	.25	.28	.40	.38	.55
38. Coal yards—retail	.75	1.60	1.76	1.80	2.40	2.84
39. Hardware stores	.21	.25	.29	.34	.43	.59
40. Hotels and restaurants	.30	.30	.33	.37	.45	.52
41. Laundries	.90	1.40	1.54	2.25	2.10	2.77
42. Lumber yards	.95	1.35	1.49	1.80	2.03	2.52
43. Printing and publishing	.20	.60	.66	.57	.90	.92
44. Retail stores—N. O. C.	.21	.20	.22	.28	.30	.37
45. Wholesale stores	.25	.35	.39	.31	.53	.53

Note—N. O. C., not otherwise classified.

TABLE V.—IOWA MINE ACCIDENTS.

Biennial Period Ending June 30th, 1912.

NATURE OF INJURY	Number of accidents	Average days disability	Average indemnity period—days	Indemnity		Medical Cost		All Compensation	
				Average	Aggregate	Average	Aggregate	Amount	Per cent
1. All injuries	1,811			74.6	$ 135,161	$ 15.00	$ 26,895	$ 162,056	100.
2. Fatal	66			1,254.	82,760	100.00	6,600	89,360	55.
3. Permanent total disability	4			2,880.	11,520	100.00	400	11,920	7.5
4. Permanent partial disability	45		453	644.	24,448	9.31	420	24,868	15.5
5. Temporary disability, over two weeks	422	43	32	38.	16,443	11.50	19,475	35,908	22.
6. Minor injuries	1,296	5			10,433	3.95	5,119	5,119	3.16
Detailed Enumeration—									
7. Deaths with dependents[a]	39		1,800	2,122.	82,760	100.00[b]	3,900	86,660	53.5
8. Deaths without dependents	27					100.00[b]	2,700	2,700	1.6
9. Permanent total disability[c]	4		2,400	2,880.	11,520	100.00	400	11,920	7.5
10. Blindness of one eye	1		600	720.	720	100.00	100	820	.5
11. Loss of one leg	1		1,650	1,200.	1,200	100.00	100	1,300	.84
12. Permanent leg injuries[d]	23[e]		522	626.	15,640	*	*	15,640	9.66
13. Permanent arm injuries[f]	7[g]		542	651.	4,560	*	*	4,560	2.81
14. Loss of one finger	10		180	216.	2,160	20.00	200	2,360	1.46
15. Loss of one toe	1		90	108.	108	20.00	20	128	.09
16. Internal injuries	2	270	258	310.	620	100.00	200	820	.5
17. Eye injuries	2	30	18	22.	43	25.00	50	93	.06
18. Sprains	7	24	12	15.	103	20.00	140	243	.15
19. Rupture of muscle	1	180	168	202.	202	100.00	100	302	.2
20. Burns	6	30	18	22.	130	15.00	90	220	.14
21. Lacerations	10	23	8	10.	96	10.00	100	196	.12
22. Infected lacerations	1	56	44	53.	53	25.00	25	78	.05
23. Injuries to teeth	2	18	6	7.	14	40.00	80	94	.06
24. Bruises	98	21	9	11.	1,058	10.00	980	2,038	1.25
25. Unreported accidents, over two weeks[h]	154	28	16	19.	2,964	16.50	2,541	5,505	3.4
26. Minor injuries, under two weeks[h]	1,296	5				3.95	5,119	5,119	3.16
27. All fractures	134	71	59	73.	9,811	68.50	9,160	18,971	11.6
28. Skull	1	180	168	202.	202	100.00	100	302	.2

29. Leg	77	90	78	94.	7,207	100.00	7,700	14,907	9.2
30. Arm	13	58	46	53.	1,270	30.00	390	10,990	1.21
31. Clavicle	4	42	31	37.	149	25.00	100	249	.15
32. Ribs	16	27	15	31.	520	20.00	320	840	.52
33. Sternum and rib	1	28	16	20.	20	25.00	25	45	.03
34. Foot	7	56	44	55.	370	25.00	175	545	.34
35. Fingers	3	23	11	15.	40	10.00	30	70	.04
36. Toes	1	30	18	22.	22	10.00	10	32	.02
37. Maler	1	21	9	11.	11	10.00	10	21	.01
38. All Dislocations	15	86	74	89.	1,334	50.00	800	2,224	1.37
39. Hip	5	180	168	202.	1,008	100.00	500	1,508	.93
40. Shoulder	6	48	30	43.	259	50.00	300	559	.34
41. Elbow	1	36	24	29.	29	30.00	30	59	.03
42. Ankle	2	28	16	18.	36	25.00	50	86	.05
43. Thumb	1	14	2	2.	2	10.00	10	12	.01

[a]Includes 2 maximum awards (two superintendents, one assistant pit boss.

[b]Medical and funeral expenses.

[c]Three broken backs, one loss of left arm and fingers right hand.

[d]Computed as equal to four-sevenths loss of leg, less 78 days temporary disability indemnity.

[e]Included in Item 29.

[f]Computed as one-half loss of arm, less 46 days temporary disability indemnity.

[g]Included in Item 30.

[h]Estimated from combined Washington and foreign coal mine accident statistics.

TABLE VI.—COMPUTATION OF IOWA COAL MINE INSURANCE RATE.

Average number of employes for biennium, 1911-12	16,353
Payroll for biennium, 1911-12	$18,000,000
Tons of coal mined for biennium, 1911-12	14,550,502
Compensation cost for injuries (see above)	$ 182,059
Rate per $100.00 of payroll	$ .90
Rate per employe per year	4.71
Rate per ton of coal mined	.011

Thus the actual risk in Iowa does not cover one-sixth the rate made by the stock companies.

However, because accident reports are so frequently incomplete, and out of abundant caution, the statistician assumed a pure premium of $1.25 per $100 payroll, to allow for unreported accidents and possible error in estimate of payroll.

From the Washington and foreign experience it seemed likely that a number of less serious accidents are not included in the Mine Inspector's Report for the Biennium. In fact many are purposely omitted.

Adding 25c for catastrophe hazard (Note—Iowa mines are non-gaseous. Most serious catastrophe in 12 years would have cost at most $40,000. Twenty-five cents per $100 of payroll would equal, at least $20,000 premium per annum. In five years that would make a reserve fund of $100,000,—sufficient to cover at least 50 lives,) a liberally expanded rate for stock insurance company would be $1.25, plus 25c, plus $1.00 for expense loading, giving $2.50 per hundred dollars of payroll. Experience in Wisconsin shows that the expense load for stock companies is about two-thirds of the pure premium.

The rate for a mutual insurance company would be $1.25 plus 25c, plus 50c for expense loading, giving $2.00 per hundred dollars of payroll. The average rate of the Illinois coal operators mutual is $2.50.

(Note—Stock company rates for New York are computed on 40% expense loading. Mutual companies in Wisconsin are operating on 25 per cent expense loading.)