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STUDIES
IN
WORKMEN'S INSURANCE:
ITALY, RUSSIA, SPAIN

BY

I. M. RUBINOW

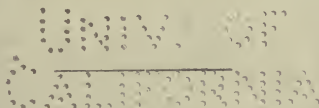
CHIEF STATISTICIAN OF THE OCEAN ACCIDENT AND GUARANTEE CORPORATION,
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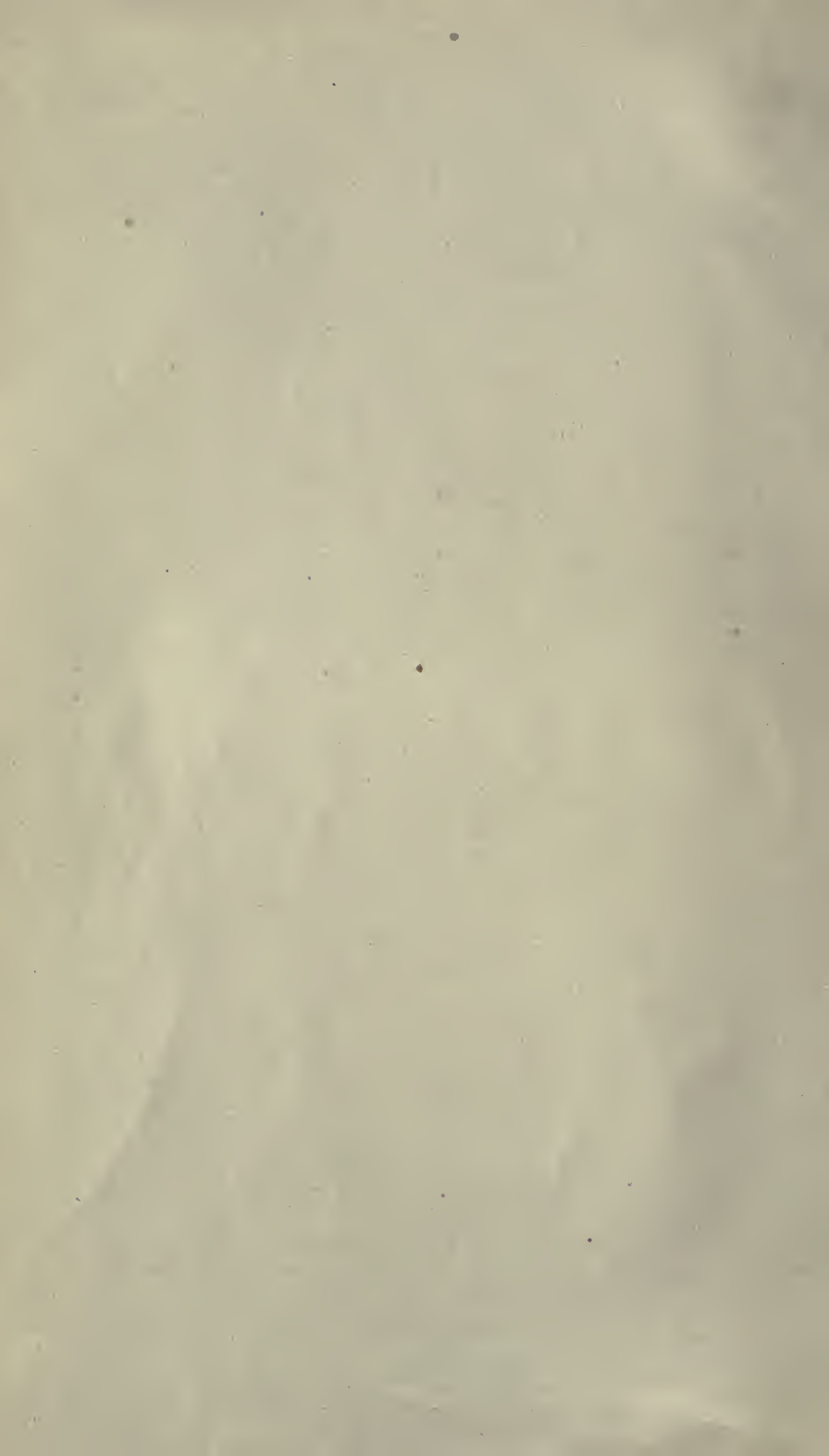
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PREFACE



The studies offered herewith, on Workmen's Insurance in Italy, Russia and Spain, represent,—together with a considerable portion of the study of the same problem in France,—the author's contribution to the Twenty-Fourth Annual Report of the United States Commissioner of Labor on "Workmen's Insurance and Compensation Systems in Europe."

This explains the nature of treatment of the material, which is descriptive rather than critical,—a limitation under which most government reports necessarily labor, especially when dealing with foreign economic and legal conditions. It would indeed be unfortunate if the writer's personal views and convictions were permitted to create grave international conflicts.

It may be added that the same circumstance has determined the somewhat unfortunate typographical form of this book, showing itself in the matter of running page headings, pagination and numbering of chapters, all of which the fastidious reader will not have failed to notice. It is the author's misfortune, rather than fault, that in an alphabetic arrangement of European countries, Norway—the domain of another student—intruded between Italy and Russia with the malicious intent of breaking down the continuity of pagination.

And finally, what is more important, the same circumstance explains the somewhat accidental selection of the countries, which—in the process of distribution of an enormous task among several fellow workers—was determined by such considerations as knowledge of certain languages and some familiarity with the conditions of the countries treated. It was the author's fate to be left to the less familiar hunting grounds.

It is hoped, however, that some unity of thought may be found in the various chapters, and that there need be no apology for presenting them together. The problem of social insurance which suddenly has acquired such tremendous importance in this country, is mainly discussed upon the basis of German and

English experience; the first because of the remarkable completeness and unity of its system, the latter because of the natural tendency to follow British precedents. Much less known are the results of Romance and Slavic experience. The three countries brought here together in one volume show the workings of many different institutions and forms of insurance, compulsory as well as voluntary, private as well as state. They show how unwilling were many of the countries in adapting the German ideas of compulsion. They also show how insistent is the demand of social progress that they should eventually do so. If as a result of a study of these chapters, the reader may come to the conclusion, that the trend everywhere seems to be from voluntary to compulsory insurance, that success of all forms of social insurance is almost directly proportionate to the degree of compulsion, then it is hoped this conclusion will not be ascribed to the author's leaning to the compulsory principle, announced in some desultory way in magazine articles more than eight years ago, but to an accurate and impartial presentation of the facts and figures collected during three years of patient application.

I. M. R.

New York City,

November, 1911.



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WORKMEN'S INSURANCE IN ITALY

CHAPTER VII.

WORKMEN'S INSURANCE IN ITALY.

INTRODUCTION.

The beginnings of workmen's insurance in Italy may be traced to voluntary cooperative organizations. These organizations provided for mutual help in a great many different emergencies, but primarily for sick benefits. They were known in the eighteenth century, but began to develop rapidly in the seventies of the nineteenth century, and by 1886 their importance was sufficiently great to cause the adoption of a special law regulating them to some extent. A few years before, by the law of 1883, the National Accident Insurance Institution was authorized for voluntary insurance against accidents. This was a private institution, formed for that purpose by a combination of 10 savings banks, but under government supervision.

For the next fifteen years the question of workmen's insurance in all its phases was under continuous discussion, but very little of actual legislation was accomplished. On March 17, 1898, the accident insurance law was passed, establishing what is practically compulsory accident insurance, though with freedom of selection of the carrier of the insurance, for a considerable portion of Italian manufacturing industry and mining. In the same year the national institution for voluntary old-age and invalidity insurance was organized.

These two laws of 1898 present the essential legislative acts of Italy in connection with workmen's insurance. The accident insurance system was considerably extended and amended by the act of June 20, 1903, the codified text of the law being published January 31, 1904, and the system of voluntary old-age and invalidity insurance was modified by the amending acts of July 7, 1901, and of May 20, 1907. But no essentially new principles were introduced by any of these amending acts.

Very little has been accomplished by the Italian Government in the field of sickness insurance in comparison with accident and old-age insurance. The only measure enacted of any importance is the law of April 15, 1886, concerning recognition or incorporation of the voluntary private mutual benefit societies which concern themselves mainly but not exclusively with sickness insurance.

Maternity insurance, which may be considered as a form of sickness insurance, has been earnestly discussed in Italy for over a decade.

The question was raised by a few individuals early in the last decade of the nineteenth century, and the influence of their agitation in private organizations was powerful enough to call forth a government bill for the creation of a national maternity insurance institution. This bill, with some modifications, became a law on July 17, 1910.

An explanation of the slow development of social insurance in Italy may be found in the general economic status of the country. The occupational statistics of Italy disclose the fact that it is still largely an agricultural country.

In 1901 the number of persons employed in the manufacturing industries (including mining) in Italy did not exceed 16 per cent of the total population over 9 years of age, or about 25 per cent if only persons gainfully employed be taken into consideration. Agriculture claimed 38 per cent of the total adult population, or nearly 60 per cent of that part which was gainfully employed. The occupational statistics of the census of 1882 and of 1901 were presented according to different systems of classifications and are scarcely comparable; nevertheless a comparison of the statistics for the two years indicates an absence of any very large and rapid development of industrial employment.

NUMBER AND PER CENT OF PERSONS OVER 9 YEARS OF AGE IN ITALY, CLASSIFIED BY INDUSTRY AND SEX, CENSUSES OF 1882 AND 1901.

[Source: *Annuario Statistico Italiano, 1905-1907, Vol. I, p. 111.*]

Industry, etc.	Census of January 1, 1882.			
	Males.	Females.	Total.	
			Number.	Per cent.
Agriculture, fishing, etc.....	5,513,545	3,101,163	8,614,708	38.20
Mining, metallurgy, stone quarrying, etc.....	399,920	7,915	407,835	1.81
Manufacturing, etc.:				
Building.....	518,876	67,914	586,790	2.60
Textiles.....	137,476	1,213,978	1,351,454	5.99
Clothing.....	494,432	498,523	992,955	4.40
Food products.....	267,938	55,615	323,553	1.44
Wood and straw working.....	307,802	73,400	381,202	1.69
All other industries.....	152,520	26,554	179,074	.79
Total manufacturing, etc.....	1,879,044	1,935,984	3,815,028	16.91
Transportation.....	310,519	2,664	313,183	1.39
Commerce and exchange.....	325,716	71,377	397,093	1.76
Public undertakings.....	118,298	71,280	189,578	.84
Domestic service, private employ, etc.....	306,822	413,022	719,844	3.19
Public administration.....	164,962	2,400	167,362	.74
Professions.....	271,652	95,470	367,122	1.63
Defense of the land.....	160,155	.....	160,155	.71
Persons living from revenues.....	427,456	535,425	962,881	4.27
Persons supported by families.....	554,480	4,103,606	4,658,086	20.66
Persons supported by public or private charity, vice, etc.....	101,115	96,161	197,276	.88
Persons of unknown occupation.....	725,284	855,691	1,580,975	7.01
Total.....	11,258,968	11,292,158	22,551,126	100.00

NUMBER AND PER CENT OF PERSONS OVER 9 YEARS OF AGE IN ITALY, CLASSIFIED BY INDUSTRY AND SEX, CENSUSES OF 1882 AND 1901—Concluded.

Industry, etc.	Census of February 10, 1901.			
	Males.	Females.	Total.	
			Number.	Per cent.
Agriculture, fishing, etc.....	6,466,165	3,200,302	9,666,467	38.08
Mining, metallurgy, stone quarrying, etc.....	546,222	9,938	556,160	2.19
Manufacturing, etc.:				
Building.....	558,890	5,908	564,798	2.22
Textiles.....	121,479	661,774	783,253	3.08
Clothing.....	574,666	539,177	1,113,843	4.39
Food products.....	270,431	44,069	314,500	1.24
Wood and straw working.....	343,139	67,796	410,935	1.62
All other industries.....	203,563	42,764	246,327	.97
Total manufacturing, etc.....	2,072,168	1,361,488	3,433,656	13.52
Transportation.....	416,152	7,639	423,791	1.67
Commerce and exchange.....	468,918	111,179	580,097	2.29
Public undertakings.....	140,769	52,087	192,856	.76
Domestic service, private employ, etc.....	226,795	404,440	631,235	2.49
Public administration.....	173,177	5,064	178,241	.70
Professions.....	274,084	131,927	406,011	1.60
Defense of the land.....	204,012	.....	204,012	.80
Persons living from revenues.....	301,596	290,156	600,752	2.37
Persons supported by families.....	1,160,969	7,194,804	8,355,773	32.91
Persons supported by public or private charity, vice, etc.....	80,178	66,675	146,853	.58
Persons of unknown occupation.....	10,603	.....	10,603	.04
Total.....	12,541,808	12,844,699	25,386,507	100.00

ACCIDENT INSURANCE.

The present system of compulsory insurance of workmen against industrial accidents dates back to the law of March 17, 1898, which went into effect September 17, 1898. The law was considerably amended by the act of June 29, 1903, and promulgated in codified form January 31, 1904, in which form it went into effect through a retroactive clause December 30, 1903.

The system of compulsory insurance of workmen against accidents has been in existence in Italy for over ten years. The substitution of this system for the old system of employers' liability was not established in a day. The first efforts of reform of the legal principle of employers' liability began as early as 1879, and the history of these efforts, lasting almost uninterruptedly through two decades, gives interesting material for the study of the development from the one extreme of civil liability of the employer for his act to the other of an absolute right of the employee to compensation in case of industrial accidents, the concept of trade risk, and the collective responsibility of the industry rather than of the individual employer for the loss of life and health unavoidably connected with modern industrial processes.

The Civil Code, which went into effect in Italy January 1, 1866, repeats in its articles 1152, 1153, 1157, and 1644 the provisions of

the French civil code concerning the responsibility of the employer for injuries to employees. These provisions differ little from the general principles of responsibility for injuries resulting from the acts of commission or omission of any person or his agents.

HISTORY OF ACCIDENT INSURANCE LEGISLATION.

The conviction that the common law did not supply the necessary protection of the industrial worker, and that there was need for special protective legislation, found its first formal expression in the Chamber of Deputies in the bill covering workmen in the construction of buildings, in mines, and workshops introduced March 17, 1879. The basic principle of this proposal was the transfer of the burden of proof from the employee to the employer. It proposed that the employers of labor in the industrial fields indicated should be responsible for injuries sustained by workmen through industrial accidents unless these accidents had been caused through the fault of the victim or through pure chance. This bill never came up for open discussion in the Chamber.

A bill introduced in the Chamber of Deputies June 9, 1880, was based on the same principle of civil responsibility with change of the burden of proof, and in the main followed the lines laid down in the earlier proposal. This proposal did not meet with any greater success than of the pioneer proposal of 1879.

The two preceding bills introduced were proposals of individual deputies and did not seem to have any considerable influence upon the membership of the Chamber. The numerous proposals made within the next two decades all came from the Government. The first of these government proposals was introduced in the Chamber of Deputies June 28, 1881. In the main, this first governmental proposal followed the lines of its predecessors. It aimed to establish the presumptive liability of owners of land and buildings and employers of factories, mines, and quarries, in case of accidents caused by total or partial collapse of buildings during construction, landslides, excavations, explosions, and similar occurrences, but not in all accidents, as provided in the preceding bill of 1880.

A parliamentary commission appointed to examine into the governmental proposal as well as into that of the preceding year, brought in its report November 24, 1881. This report entirely rejected the fundamental basis of all these proposals. It asserted that the presumption of fault of the employer, and the consequent imposition upon him of the burden of proof, was a sudden, radical, and dangerous digression from the established principles of the common law. It admitted the justice of the responsibility where the cause of the accident could be traced to the employer, but thought the presentation of proof to that effect essential.

A new bill was introduced February 19, 1883, based, like the preceding ones, upon the principles of transfer of the burden of proof, and also accepting the principle of joint responsibility of the owners and managers as indorsed by the parliamentary commission of 1881, to which it added the responsibility of the engineers and architects who direct the work. In other particulars the bill differed materially from the earlier bills. It was broader in scope in that it included railroads. The bill provided that if the employer participated in the cost of insurance of his employees against industrial accidents, at least up to one-third of the premiums, the amount of the insurance must be deducted from the amount of indemnity granted by the court. This provision was to act as a stimulus for encouraging such insurance, with the employer's participation in the cost. It is evident that in introducing this clause the Government had in view its plan for the establishment of the national fund for insurance of workmen against accidents, which was accomplished in the same year by the law of July 8, 1883.

This second government bill was referred to a parliamentary commission, which reported it back April 8, 1884. Again the parliamentary commission refused to accept the reforms contained in the government proposal, insisting that they were at variance with the fundamental principles of civil law. Instead of the joint responsibility of engineers, managers, employers, and owners for accidents it proposed a new bill containing specific regulations for the prevention of accidents in each industry and civil liability only in case of non-compliance with such regulations, only such persons being liable who were guilty of such non-compliance. It also introduced other limitations, such as the exclusion of the railroads. This modified bill according to the report brought in by the commission was to protect the rights and interests of workers without injuring any other rights and without prejudicing the industrial progress of the country.

The original bill of 1883, as well as the amended bill of the parliamentary commission, came up for an extended discussion in the Chamber of Deputies and was adopted by the Chamber June 15, 1885. In passing this bill the Chamber included many important amendments, in which the influence of the German insurance system could be seen. The purpose of these amendments was to stimulate further the insurance of employees by the employers, though a voluntary system was thought preferable and better adapted to Italian conditions than the compulsory system established in Germany, and for the purposes of such voluntary insurance the National Insurance Fund already existed.

The bill as passed by the Chamber of Deputies finally came up for discussion in the Senate, when a report was made by a senate commission on April 2, 1886. The majority of the senate commis-

sion disagreed entirely with the fundamental principle of the bill and presented a counter project, which made the owners, employers, etc., responsible for the accident only when these persons had not conformed to all requirements as to prevention of accidents. The bill and the counter proposition were thoroughly discussed, but led to no practical results.

These discussions in the Senate closed the first period of the history of workmen's insurance against accidents in Italy—a period based upon the strengthening of the civil responsibility of the individual employer (employers' liability), with leanings during the last two years of the period toward a system of voluntary insurance.

A new period was ushered in by the new minister of commerce and agriculture, requesting Prof. Carlo F. Ferraris to prepare a report covering the entire subject of insurance of workmen against accidents. The selection was significant, as Professor Ferraris was known as a believer in the system of obligatory insurance. In his report to the commission^(a) Professor Ferraris proposed a system based upon obligatory insurance, totally at the expense of the employers, covering all cases of accidents, including those caused by the negligence of the victim himself, and he combined with this system of obligatory insurance preventative measures, so as to reduce the frequency of accidents. Notwithstanding a very violent opposition, the proposal of Doctor Ferraris was accepted by the consultative commission with certain slight modifications which involved a slight contribution of the workmen to the cost of insurance and in the beginning a limitation of the group of industries to be covered by the law. In this latter limitation the commission was quite persistent in including under the law only mines and quarries, the manufacture of explosives, and the construction of buildings.

Upon these principles a government bill was introduced in the Chamber of Deputies February 8, 1890, applicable (1) to workmen of all establishments in dangerous industries, namely, mines, quarries, construction, and the manufacture of explosives; (2) in establishments employing over ten workers and making use of mechanical power, shipyards, arsenals, mineral and metal working, mechanical construction, and textile industries. The same conditions were made applicable to government establishments as to private plants. Only those private establishments were excepted from the obligation of insurance which had special funds for giving the workmen compensation in case of accidents and such state establishments as are provided for by special legislation. Of the insurance premium, nine-tenths were to be paid by the employer and one-tenth by the

^aCarlo Ferraris, *L'assicurazione obbligatoria e la responsabilità dei padroni ed imprenditori per gli infortuni sul lavoro*. Rome, 1890.

employee. The employer must advance the employee's share, but may deduct it from his wages. The bill permitted insurance either with the national insurance institution, organized in 1883, or with any private authorized insurance company. Several provisions of the bill were intended to prevent industrial accidents. With the exception of cases of criminal responsibility of the employee the insurance system was intended to be a substitute for the old liability under the civil code, and the employees were absolved from this liability.

The parliamentary commission charged with the study of this bill presented a report on June 7, 1890, (^a) which, for the first time in the experience of parliamentary commissions of the Italian Chamber, was favorable to the principle of compulsory accident insurance and the other essential features of the law, except that it suggested the exclusion of all cases leading to temporary disability of less than three weeks duration and the payment of indemnities beginning with the fourth week of disability. The minor accidents, in the opinion of the commission, were better taken care of by the voluntary associations of the workmen.

This bill and the report of the commission did not come up for discussion on the floor.

The next bill was introduced in the Senate by the minister of agriculture, April 13, 1891. (^a) This was practically the same as the previous bill, as amended by the parliamentary commission. An important change was in the period during which no indemnities are to be paid, which was reduced from three weeks to two. This bill went to a senate commission, which brought in a substitute February 19, 1892, differing in many essential points from the ministerial bill. (^b)

The most important points of difference were as follows: First, the senate commission proposed to except the accidents due to gross negligence of the victim from the action of the law, claiming that by compensating such accidents the law would stimulate carelessness on the part of the employees. Second, it proposed to include persons in a supervisory capacity, provided they did not receive over 6 lire (\$1.16) per day. Third, it embodied in the law a scale of compensation, which the preceding two bills left to the discretion of administrative authorities. Finally, greater attention was paid to the subject of prevention of accidents.

^a Bulletin du Comité Permanent du Congrès International des Accidents du Travail, tome 2, 1891, pp. 298-303.

^b Bulletin du Comité Permanent du Congrès International des Accidents du Travail, tome 3, 1892, pp. 4-21.

The bill was the subject of prolonged discussions, but practically no voice was heard in opposition to the principle of compulsory insurance, thus indicating a pronounced change in the public attitude on this question as a result of a decade of agitation.

The bill as finally passed by the Senate March 3, 1892, differed from the text as proposed from the senate commission in form more than in substance,^(a) for most of the views of the commission were accepted by the Senate unchanged. The bill as passed by the Senate was introduced in the Chamber of Deputies March 26, 1892, but the dissolution of the Chamber of Deputies blocked further progress of the bill.

A new bill introduced in the Chamber of Deputies by the minister of agriculture, industry, and commerce December 1, 1892, approached closely the bill suggested by the senate commission in its report of February 19, 1892. In some respects it presented an advance over all previous legislative proposals. Thus it proposed to include employees in the manufacture of gas, electric power, and in telephone service, in addition to employees in mines, quarries, factories, arsenals, and shipyards and establishments for manufacture of explosives. It ordered the payment of indemnities for temporary disability, beginning with the sixth day instead of the eleventh.^(b)

On the other hand, the bill tried to limit the application of the law as to the cause of the accidents. It gave the insurance institutions the right of action against the employers in case the accident was due to their criminal intent, gross negligence, or noncompliance with the regulations concerning accident prevention and against the injured if the accident is due to his criminal intent or gross negligence. This was evidently based upon the idea that the obligatory insurance should cover only such accidents as are not due to anyone's fault or negligence, i. e., are due to what has been called trade risk.

Another new feature of the bill was the compulsion for all establishments, whether of State, Province, or community, to be insured in the national insurance institution. The bill was referred to a parliamentary commission and reported back May 5, 1893, with a few amendments, but the proposal of this commission never came up for discussion.

The bill introduced by the minister of agriculture, industry, and commerce June 13, 1895, did not differ materially from the preceding bill. It discarded the qualification of grave negligence, but

^a Bulletin du Comité Permanent du Congrès International des Accidents du Travail, tome 3, 1892, pp. 222-232.

^b Bulletin du Comité Permanent du Congrès International des Accidents du Travail, tome 5, 1894, pp. 2-27; also T. Boediker, Die Arbeiterversicherung in den europaischen Staaten, 1895, pp. 295-308.

preserved that of accidents due to disobedience of laws or regulations, which is so close to the conception of grave negligence that the change was more one of words than of conditions. Like its predecessors, it provided, first, for accident prevention through safety devices and regulations, and, secondly, for a system of accident insurance, with voluntary selection of the insurance institution, for all establishments employing not less than 5 persons.^(a)

The report of the parliamentary commission, brought in December 4, 1895, included several important amendments, namely, the permission to employers to organize employers' mutual associations for insurance of their employees against accidents, the obligation to convert the indemnities granted in case of permanent total disability into life annuities, and also a proposition to create a superior council of labor. When the report came up for discussion,^(b) an amendment was adopted providing that in case of gross negligence on the part of the employer, as established by judgment of court, the indemnity should be double, the responsible employer paying the excess. With these amendments the bill was adopted in the Chamber of Deputies on May 27, 1896, and introduced in the Senate the following day, May 28, 1896.

The Senate commission reported on this bill on July 10, 1896, and recommended striking out the compromise affected regarding gross negligence of the employer. It reverted to the older formula of the bill of 1892 in making the employer civilly responsible in case of criminal intent or neglect to comply with the safety regulations. When the report came up for discussion a violent opposition developed to the very basis of the compulsory insurance system. The bill was sent back to the central commission on December 4, 1896, with instructions to reexamine the bill and bring in a new project more in harmony with the suggestions made. In less than two weeks the central commission brought in a substitute radically different from the bills discussed in both chambers for about seven or eight years, in that they proposed to substitute personal obligation to pay compensation instead of obligatory insurance.

In view of the radical differences in the attitudes of the two chambers, the Government, on December 18, 1896, recalled the bill, promising at the same time to introduce a new bill in the near future, after a thorough reconsideration of the problem.

The next step taken by the cabinet was to request the Consiglio della Previdenza to prepare an exhaustive report on this question, which had already been studied by that institution in 1889. Prof.

^a Bulletin du Comité Permanent des Accidents du Travail et des Assurances Sociales, tome 6, 1895, pp. 433-444.

^b Bulletin du Comité Permanent du Congrès International des Accidents du Travail, tome 7, 1896, pp. 505-508.

Carlo Ferraris was intrusted with the preparation of this report, as he had been seven years earlier. The principles proposed by Ferraris in his report^(a) were on the whole in accordance with the bill which passed the Chamber of Deputies in May, 1896. The most important suggestion was for the purpose of settling the much-discussed question of personal responsibility of either employer or employee. In the opinion of Professor Ferraris, all accidents caused by "civil fault" (such fault as carried with it civil responsibility only) of the employer or his agents should be classed together with other accidents in the class of trade risk and be subject to obligatory insurance, while such accidents as are due to criminal negligence, according to the provisions (as established by a punitive sentence of a court), should carry civil liability.

These suggestions were approved, and April 30, 1897, the Government introduced in the Senate a new bill based upon them.^(b) In the main the new bill was similar to that adopted by the Chamber of Deputies May 27, 1896. It included the same provisions for prevention of accidents, and endeavored to introduce a system of obligatory insurance with choice of insuring company; it covered, briefly, all mining and manufacturing establishments employing over 5 persons, building, construction, transportation on land and inland waters, and orders compensation only for injuries causing disability for over ten days. While the freedom of choice of the insurance institution was provided for, it was limited either to the national institution or the employers' mutual insurance associations, thus demonstrating the influences of German example and experience. The question of the civil responsibility of the employers in case of criminal negligence was settled on the lines suggested by Professor Ferraris, i. e., the civil responsibility remained in case of fraud, negligence, incapacity, or failure to comply with rules or orders, as provided for in certain articles of the penal code, if such fraud, etc., has been established by a punitive sentence of a court.

This bill was sent to the central bureau of the Senate, which brought in its report June 22, 1897. The only important modification introduced by the commission was the establishment of greater liberty of choice of insurance institution, and the permission to establish independent funds under strict guarantees. The bill was adopted by the Senate with scarcely any changes July 5, 1897, and introduced in the Chamber of Deputies two days later. The report of the parlia-

^a Relazione del Professore Carlo Francesco Ferraris sul Tema: "Gli infortuni del lavoro e la legge." Atti del Consiglio della Previdenza. Allegate B. pp. 205-322. (Ministero di Agricoltura, Industria e Commercio, Divisione Credito e Previdenza Annali del Credito e della Previdenza, 1897.)

^b Bulletin du Comité Permanent du Congrès International des Accidents du Travail et des Assurances Sociales, tome 8, 1897, pp. 215-228.

mentary commission on this bill, brought in February 10, 1898, showed that the principle of trade risk, which had caused so much opposition in the earlier days, had become generally accepted by that time. The idea of free choice of the insurer (with insurance compulsion) had as many adherents as the method of compulsory insurance in a designated institution. At the same time the failure of voluntary insurance was freely admitted, as only one-tenth of the industrial workmen were insured in the national insurance institution. The commission recommended the adoption of the law, and after prolonged discussion it was adopted by 172 votes against 60 on March 13. It was approved and became a law March 17, 1898, promulgated March 31, 1898, and went into effect six months later, September 30, 1898.

The law of 1898 provided compensation for all injuries caused by industrial accidents and leading to death or disability lasting more than five days. It was applicable, first, to mines and quarries, building, gas-producing, electric-power establishments, such establishments where explosives are produced or utilized; second, railroad transportation, inland navigation, tramways, and construction works; and, finally, to industrial establishments utilizing mechanical or animal power and employing more than five persons. Within these branches of industry it applied to workmen, apprentices, and overseers receiving not more than 7 lire (\$1.35) per day. No exception is made for accidents due to gross negligence of employees, but when the accident is due to willful misconduct, as established by a judicial conviction, the person or institution paying the compensation may be reimbursed through a criminal action.

The scale of compensation established was briefly as follows: In case of death or total permanent disability an amount equal to 5 times the annual wages, with a minimum of 3,000 lire (\$579) in the latter case; a proportionate amount in case of partial permanent disability; in case of total temporary disability—a daily compensation equal to one-half the average wages from the sixth day on, and a corresponding portion in case of partial temporary disability. The compensation for death or permanent disability is paid in a lump sum, except in case of total permanent disability, when it must be converted into a life pension for the injured employee with a designated financial institution.

For the payment of this scale of compensation, the employers were required to insure their specified employees either in the National Accident Insurance Institution or in authorized private insurance societies, while for public establishments, whether of the State or provincial or communal governments the national institution is prescribed; under certain conditions an employers' association for mutual insurance against accidents, or even a private employer's insurance fund could be substituted; government establishments for which pro-

vision has been made by special legislation are relieved from this obligatory insurance. Compliance with this law relieved the employer from his responsibility under the civil law except in such cases when he or his agents are criminally responsible for the accidents as established by judgment of a court.

Perhaps the most important advance of the law over preceding bills was the establishment of a government fund for compensation of injured employees who have failed to receive the compensation due them on account of insolvency of the employer who has failed to insure his workers. Into that fund are paid the indemnities due in case of fatal accidents, when the persons killed leave no heirs.

The law contained several provisions concerning accident prevention. It required the minister of agriculture, industry, and commerce to prepare regulations after consultation with the employers in the industries specified and with government authorities on the subject, and the failure to comply with these regulations was made a criminal offense. No special factory inspection was organized to carry this law into effect, but the existing mine inspectors and the private agencies were to be utilized, such as the employers' mutual insurance associations and societies for prevention of accidents.

On June 1, 1901, less than three years after the law of 1898 went into effect, the movement for amendment of the law was started by the introduction of a bill by the minister of agriculture, industry, and commerce, in the Chamber of Deputies.^(a) The most important changes suggested in this bill were as follows: First, the extension of the law to the following industries—the installation and repair of electric conduit wires and lightning rods; deep-sea navigation and fishing; loading and unloading, leveling, and grading; felling and pruning trees; all employees working near industrial or agricultural machines, moved by mechanical power, and those employed to handle cannons or other apparatus for counteracting hail. For the proper organization of the insurance of persons employed in maritime navigation, special regulations were included in the law in view of the many peculiar conditions governing this industrial field.

Second, important modifications were made in the scale of compensation for disability. For total permanent disability the compensation was increased from five to six times the annual wages, though the minimum limit was left unchanged. A corresponding increase was proposed in the compensation for partial permanent disability from five to six times the loss of annual earning power. According to the law of 1898, only those injuries were compensated which

^a Le projet de loi portant modifications à loi du 17 mars 1898 relative aux accidents du travail. Bulletin du Comité Permanent du Congrès International des Accidents du Travail, tome 12, 1901, pp. 365-407.

caused disability for over five days, and the payment of compensation began with the sixth day. While no change was suggested in the class of injuries compensated, the new bill proposed that in these cases the compensation be paid for the entire period of disability.

Third, a most important change suggested was that referring to persons entitled to compensation in case of a fatal accident. The old law simply named the legal heirs according to the Civil Code. The bill of 1901 suggested a complicated schedule showing the distribution of the compensation between the widow and children and the other relatives in descending or ascending line. More exact methods of computing the annual earnings of the injured employees, for the purpose of determining the amount of compensation due, were also introduced.

Fourth, the original law exempted from the obligation of insurance at fixed premiums in the National Accident Insurance Institution or private insurance companies such establishments as formed employers' mutual accident insurance associations, which distribute the cost by assessment of the membership. Notwithstanding this effort to stimulate employers' mutual associations, only four such associations had been formed. The new bill gave the Government the right to make the formation of such mutual associations compulsory if after consultation with local interests it found such a step necessary. As was explained in the memorial accompanying the bill, the provision was aimed directly at the sulphur mines of Sicily, which caused great difficulties to insurance companies writing accident insurance for them, because of the frequency of accidents.

Other changes suggested referred mainly to methods of procedure and were of minor importance.

The government bill was referred to a parliamentary commission, which handed in a favorable report December 30, 1901, indorsing most changes recommended by the Government, but suggesting several minor changes, of which the most important were as follows: Instead of all deep-sea fishing, only that within 10 kilometers (6.2 miles) and the fishing for sponges and corals was included; to felling and pruning trees the work of transporting them to the rivers or the wagon roads were added; the absence of indemnity during the first five days of temporary disability was reestablished in accordance with the law of 1898. The right to establish obligatory employers' insurance associations was limited to the Sicilian sulphur mines.

The bill passed the Chamber April 22, 1902, with a great number of further minor changes. The most important were as follows: The addition of transportation of merchandise by land and construction and repair of ships; a minimum annual wage of 500 lire (\$96.50) was established as a basis for computing indemnity for partial permanent

disability; the brothers and sisters of the deceased, under 18 years of age, were given a right to compensation in absence of nearer relatives; the provisions of the government bill concerning the payment of compensation during the first five days of disability were restored, though struck out by the commission; in cases of partial permanent disability with loss of 50 per cent of earning capacity or more, the payment of a life annuity instead of a lump sum through the national invalidity insurance institution was made obligatory; the general right of the Government to establish compulsory employers' mutual insurance associations was reasserted; and several other changes were introduced, mostly in favor of the interests of the insured employees.

The bill was introduced in the Senate April 30, 1902. It was referred to the central office of the senate and reported back February 7, 1903, again with numerous changes, in which were embraced the following points: The law was further extended to the tearing down of structures, and all land transportation. The form of annuities lasting until the age of 18, but twice as great before the age of 12 as from 12 to 18, was substituted for lump-sum payments in paying compensation to minor children or brothers and sisters; and for the relatives in an ascending line annuities were also made compulsory instead of lump-sum payments. In general the pension idea gained in popularity, and payment of lump sums was made conditional upon the demand of the victim. A special scale of compensation, lower than the general scale, was prepared for seamen. In addition, the central office of the Senate suggested the passage of a resolution inviting the Government to present by the end of 1904 a bill for the establishment of a simplified, more rapid, and less costly procedure for settlement of disagreements, and, secondly, to elaborate a bill for the obligatory insurance against trade diseases.

A few minor changes were introduced on the floor of the Senate, some of these of material advantage or extending the application of the law; thus, while the text previously included employees in agriculture handling machines moved by mechanical power, this was changed so as to include all machines moved by any power other than by the employees tending the machine. The right to establish obligatory employers' mutual insurance associations was further enlarged, so that no evidence of necessity was required; the evidence of feasibility was sufficient.

The bill passed the Senate April 3, 1903, was reintroduced in the Chamber of Deputies May 12, 1903, referred to the commission which reported June 25, 1903, in favor of agreeing to the form of the bill as it passed the Senate, and without further changes the bill was so passed June 28, and was approved and became a law June 29, 1903. Thus two years were consumed in the process of amending the law of

1898. But the resulting law was considerably broader than the original act and a great many crudities were eliminated.

In accordance with a provision in the act of June 29, 1903, the text of the older law was codified with that of the act of June 29, 1903, and the new consolidated text of the law was promulgated by royal decree of January 31, 1904.

LEGISLATION IN FORCE.

The codified text of the law, as published by royal decree of January 31, 1904,^(a) is the basis of the accident insurance system in force at present. This is supplemented by the regulations published by the royal decree of March 13, 1904;^(b) the royal decree of May 15, 1904,^(c) referring to slight details of the special guarantee fund as established by article 37 of the law of January 31, 1904; the law of July 11, 1904;^(d) the royal decree of July 11, 1904; and the royal decree of September 29, 1904,^(e) concerning the special provisions for the Sicilian sulphur mines. The royal decree of August 27, 1905,^(f) refers to the insurance of seamen. The royal decree of December 24, 1903,^(g) concerning the modification of existing accident insurance contracts, in view of the changes in the law, had temporary importance only. A royal decree of December 13, 1903,^(h) establishes a table of coefficients for computing the respective shares of claimants of indemnity for fatal accidents. By another royal decree of the same date⁽ⁱ⁾ the new regulations governing the National Accident Insurance Institution were approved and a new scale of insurance premiums established.

INDUSTRIES INCLUDED.

The law now covers the following branches of industry:

First. The more hazardous employments, viz, work in mines, quarries, and peat bogs, also the working of the raw material and the loading and transportation to the shipping point and unloading of the product; the construction, repair, and tearing down of buildings,

^a Italian text: *Annali del Credito e della Previdenza*, 1904, No. 55, p. 1. German and Italian text: *Zacher*, VIa, pp. 26, 27. French text: *Annuaire de la Legislation du Travail*, 1904, p. 375.

^b Italian text: *Annali del Credito e della Previdenza*, 1904, No. 55, p. 30; *Zacher* VIa, p. 46. German text: *Zacher*, VIa, p. 47. French text: *Annuaire de la Legislation du Travail*, 1904, p. 400.

^c *Annali del Credito e della Previdenza*, 1904, p. 132.

^d *Annali del Credito e della Previdenza*, 1904, No. 55, p. 129.

^e *Bolletino di Notizie sul Credito e sulla Previdenza*, 1904, p. 1643.

^f *Annuaire de la Legislation du Travail*, 1905, p. 463.

^g *Annali del Credito e della Previdenza*, 1904, No. 55, p. 125. *Annuaire de la Legislation du Travail*, 1904, p. 464.

^h *Annali del Credito e della Previdenza*, 1904, No. 55, p. 89. *Annuaire de la Legislation du Travail*, 1903, p. 314.

ⁱ *Annuaire de la Legislation du Travail*, 1903, p. 353.

whether in the city or in the country, also including the loading, transportation, and unloading of the construction materials; gas works, electric power houses, and the transmission of gas and electricity; telephones; the placing, repairing, and taking down of electric conductors and lightning rods; arsenals, ship yards (except such as do not build any craft with a displacement of over 10 tons), and all industrial establishments in which explosives are manufactured or used. In this group all establishments are included without regard to the number of employees.

Second. All establishments in the following industries which employ more than five workers: The construction and operation of steam railways, or other railways driven by mechanical power; transportation on land, rivers, canals, and inland lakes, or deep-sea navigation; deep-sea fishing within 10 kilometers (6.2 miles) from the shore, and all sponge and coral fishing; loading and unloading; irrigation works, drainage and reclamation, and leveling and grading works; felling and chopping trees in forests; transportation of logs and wood to the wagon road or to the river front and depositing the logs in the rivers; construction and repair of harbors, canals, dams, bridges, tunnels, and roads; and the construction, repair, and demolition of ships.

Third. All other industries or establishments which utilize steam engines or machinery not driven by the person who tends it, and which employ more than five persons. All employees of these establishments, even if not engaged in handling the machinery, are included.

Finally, the work of tending machinery driven by mechanical power and utilized for industrial or agricultural purposes; service with cannon and other firearms, used to break up hailstorms; and the commissary department of the navy. Establishments utilizing machinery temporarily only, or connected with educational institutions and used for the purpose of instruction, or with hospitals, asylums, or other charitable institutions, are exempted, except that those persons who tend the machinery must be insured.

This very detailed enumeration of industries included under the law may be thus briefly summarized: All mining work, all building, practically all construction work, transportation, and all manufacturing industry with the exception of the hand trades. The large branches of economic activity which are not included are commerce, agriculture (except lumbering and tending agricultural machinery), and domestic service.

Cooperative establishments are subject to the provisions of the law on equal terms with other establishments, and the members of the cooperative group, if working in the establishments, must be insured like other employees.

The law also extends over the establishments, undertakings, or construction work of the state, provincial, or communal governments, or operated by private persons or corporations under a franchise (concession) from the Government.

PERSONS INSURED.

The law applies to all workmen employed in the establishments and branches of industry enumerated above, and working outside of their own homes, whether at time or piece wages; also persons employed in a supervising capacity receiving not more than 7 lires (\$1.35) per day and who are paid at least once a month; to apprentices employed in the work, whether with or without pay. Workmen who are hired and paid by other workmen in the establishment are considered for this purpose as direct employees of the establishment. The Italian law thus differs materially from the laws of some other European countries, in that it does not include the office employees of industrial establishments or enterprises.

In deep-sea navigation all members of the crew who receive not more than 2,100 lire (\$405.30) per annum are included.

CHARACTER OF DISABILITY COMPENSATED.

The law grants compensation to the workman for all the injuries sustained because of the employment, and causing disability lasting over five days. There is no reference to the specific cause of the accident, the whole question of negligence, even if gross, having been entirely eliminated from the Italian law. However, if the accident is due to the willful misconduct of the injured, as established by means of a penal decision of the court, the beneficiary may be sued for the amount of compensation.

BENEFITS.

The compensation granted by the law consists of the following: First, medical aid; in case of temporary disability, one-half the daily wages; in case of total permanent disability, an amount equal to six times the annual earnings, and a proportionate sum in partial permanent disability; and in case of death, five times the annual earnings.

For seamen in deep-sea navigation the scale is considerably lower, namely, four years' earnings for total disability and three years' earnings for fatal accidents.

The essential feature of this scale of compensation is that it is based upon lump-sum payments, and though in some cases conversion into pensions or annuities is compulsory, as is explained presently, yet these amounts of annuities depend upon the lump sum.

The Italian law does not attempt to cover the entire cost of medical and surgical treatment, as some other European compensations do.

MEDICAL ATTENDANCE.—Medical help to the injured is limited to the cost of first aid to the injured and the cost of transportation to the home, or to any other place where the injured person must be taken, and that of the medical certificate. This expense must be met by the employer directly, no matter how the other compensation is paid.

Employers who have organized a regular medical and pharmaceutical service for first aid to the injured, or who have contracted for such help with the Italian Red Cross Society, may be freed by the order of the prefect from meeting the cost of medical help in any other way, provided the arrangements are satisfactory to the prefect.

Only seamen receive full medical help. As they are granted free medical treatment during illness or injury by an older provision of the Commercial Code, the law specifically states that these rights are not destroyed by the new act.

TEMPORARY DISABILITY.—When the injury caused by the accident leads to total temporary disability, the injured person receives a daily allowance equal to one-half his wage at the time of the accident for all the time of the disability. Unlike most other accident insurance or compensation acts, the Italian law recognizes besides total temporary disability also the case of partial temporary disability. The compensation for such disability (leading to a diminution but not entire loss of earning power for a limited time) is a daily allowance equal to one-half the loss in wages, paid for all the time of disability. All allowances for temporary disability are paid for all days including holidays, but the day of accident is not counted.

PERMANENT DISABILITY.—The compensation for total permanent disability is equal to six times the annual earnings, but not less than 3,000 lire (\$579). If the disability though permanent is only partial, leading to decrease but not total loss of earning capacity, the compensation is equal to six times the loss in annual earnings, but for the purposes of this computation the annual earnings must be taken at not less than 500 lire (\$96.50). In either case, whether the permanent disability be total or partial, the indemnity is exclusive of the allowances for temporary disability for the first three months. If such allowances have been paid for a longer period, the excess of payments over three months is deducted from the compensation finally computed. If the compensation due to partial permanent disability is smaller than the allowances paid or due to be paid for temporary disability, then the injured employee has the right to this larger amount instead of the compensation for partial permanent disability.

To determine the degree of partial disability from the injury sustained, the following scale is established by the regulations:

	Per cent.
Loss of the entire right arm or up to upper third.....	80
Loss of the entire right forearm or of the left arm up to the upper third.....	75
Loss of the entire left forearm or of all fingers of the right hand.....	70
Loss of all fingers of the left hand.....	65
Loss of the right thumb.....	30
Loss of the left thumb.....	25
Loss of the last joint of the right thumb.....	15
Loss of the last joint of the left thumb.....	12
Loss of the middle or ring finger.....	8
Loss of a finger joint.....	5
Loss of a thigh.....	70
Loss of leg up to upper third.....	60
Loss of lower third of leg or foot.....	50
Loss of big toe, and corresponding part of foot.....	15
Loss of big toe alone.....	7
Loss of any other toe does not give right to any compensation.	
Loss of more than one toe, per toe.....	5
Complete deafness of one ear.....	10
Total loss of sight in one eye.....	35

Total and incurable loss of function is rated as equivalent to loss of part or organ. In case of loss of several parts or organs or of any injury not mentioned, the degree of disability must be decided upon the merits of each case.

When the permanent disability is total or over 50 per cent, then the computed compensation must be converted into a life annuity, for which purpose the National Old-Age and Invalidity Insurance Institution is utilized. Such conversion is not made immediately, however, because of the possibility that the original estimate of the degree or duration of disability may not have been accurate. The compensation granted is, therefore, turned over in trust for two years to the old-age insurance institution, and monthly allowances are paid to the injured person equal to the annuity which he could purchase with that amount of compensation. During these two years adjustments are made, as will be explained later in discussing the subject of "revision." After two years the remaining sum (discounting the payments and making the necessary adjustments as a result of the revision, if any) is converted into an annuity, though in exceptional cases the magistrate may, upon petition of the injured employee made within fourteen days after the expiration of the two years' limit, permit the payment of the residual amount in a lump sum instead of an annuity.

If the injured person dies within the two years as a result of the accident, the remaining compensation (possibly adjusted as a result of a revision) is treated in the same way as compensation granted in

case of death; if the death is not due to the original accident, the remaining amount of the compensation is paid to the legal heirs according to the civil law.

These complex provisions are evidently necessary because of the lump-sum basis for measuring compensation. The actual amount of the annuity is dependent upon the age, the value of the annuity purchasable with a definite amount increasing with age. Another peculiarity due to the system of lump-sum payments is that in the case of death of the beneficiary within two years from the day of the accident, if the death was in no way connected with the original accident, the legal heirs inherit the bulk of the compensation, for the annuity is not purchasable until the end of the two years.

COMPENSATION FOR DEATH.—Compensation for death is equal to five times the annual earnings of the victim, except that in deep-sea navigation the amount is smaller, equal to three times the annual earnings only. This definite sum must be distributed among the dependent members of the family as provided for in the following complicated rules:

The dependent relatives are the consort, children or other descendants under 18 years or disabled; parents or other ascendants; and dependent brothers and sisters under 18 years or disabled.

The surviving consort (of either sex) receives—

Two-fifths of the compensation, if there are children or other dependent descendants under 18 years of age or disabled because of some physical or mental defect; these descendants receiving the other three-fifths.

One-half of the compensation, if there are no children or other descendants of the classes described but dependent relatives in an ascending line survive; these relatives receiving the other half.

Three-fifths of the compensation, if there are no dependent relatives either in an ascending or descending line, but dependent brothers or sisters under 18 years of age or disabled because of some physical or mental defect; these brothers or sisters receiving the remaining two-fifths.

The entire amount of compensation if no dependent relatives of the classes described survive.

If the surviving consort had been divorced from the deceased through some fault of the consort, he or she is not entitled to any compensation at all.

The surviving children (legal or natural) under 18 years of age and other dependent relatives in a descending line receive three-fifths of the compensation if the other parent survives and the entire amount if no parent survives.

The compensation due to all the children together is to be distributed among them in such a way that each child receives an amount sufficient to purchase a limited annuity of equal value for those under 12 years of age; after reaching the age of 12 the annuity is reduced one-half until the age of 18 is reached, when the payments cease.

If among the descendant heirs there are any who are incapacitated from earning a livelihood because of any physical or mental defect, the share of the indemnity to be given to him is determined by the pretor (justice of the peace) and against his decision there is no appeal. The remainder is distributed among the other children according to the rules explained above.

The relatives in an ascending line are entitled to compensation only when no dependent children survive. They receive one-half of the compensation when the consort survives, or the entire amount of compensation when neither children nor consort survive. The amount due to all relatives in an ascending line is distributed among them in such a way as to provide them with equal life annuities.

Dependent brothers or sisters under 18 years of age, or incapacitated from earning a living because of some physical or mental defect, are entitled to compensation only when no dependent children and no relatives in the ascending line survive. They receive two-fifths of the compensation if the deceased is survived by the consort, and the entire amount of compensation if they are the only surviving relatives recognized under the law. The distribution of the total amount of compensation among these brothers and sisters is to be made according to the same rules which govern the distribution of the compensation among the descendants.

The distribution of the indemnities prescribed by these complicated rules must be effected according to special computation tables prepared by the minister.^(a)

These tables of coefficients were published by the royal decree of December 13, 1903, and are given below. They are based upon the probability of life, and in the case of the first table for minor dependents, also upon the length of time the annuity has to run.

The method of using these tables of coefficients is simple. The coefficients of individual dependents belonging to the same group (i. e., either descendants, or brothers and sisters, or ascendants) are added together and the total amount due to that group is divided by this sum of coefficients; the quotient is then multiplied by the coefficient of each dependent to ascertain his or her share.

^a In the analysis of the law, whenever the minister is mentioned the minister of agriculture, industry, and commerce is meant unless otherwise stated.

TABLE OF COEFFICIENTS FOR USE IN COMPUTING THE SHARES OF THE SEVERAL DEPENDENT RELATIVES ENTITLED TO COMPENSATION UNDER THE LAW.

MINOR DEPENDENTS (DESCENDANTS AND BROTHERS AND SISTERS).

Age.	Coefficient.	Age.	Coefficient.	Age.	Coefficient.	Age.	Coefficient.
Under 1 month.	79	1 to 1½ years...	91	7 to 7½ years....	68	13 to 13½ years..	23
1 to 2 months...	80	1½ to 2 years....	92	7½ to 8 years....	65	13½ to 14 years..	21
2 to 3 months...	81	2 to 2½ years....	93	8 to 8½ years....	61	14 to 14½ years..	19
3 to 4 months...	82	2½ to 3 years....	92	8½ to 9 years....	57	14½ to 15 years..	17
4 to 5 months...	83	3 to 3½ years....	91	9 to 9½ years....	53	15 to 15½ years..	14
5 to 6 months...	84	3½ to 4 years....	89	9½ to 10 years...	49	15½ to 16 years..	12
6 to 7 months...	85	4 to 4½ years....	86	10 to 10½ years..	45	16 to 16½ years..	10
7 to 8 months...	86	4½ to 5 years....	84	10½ to 11 years..	41	16½ to 17 years..	8
8 to 9 months...	87	5 to 5½ years....	81	11 to 11½ years..	36	17 to 17½ years..	5
9 to 10 months...	88	5½ to 6 years....	78	11½ to 12 years..	32	17½ to 18 years..	3
10 to 11 months..	89	6 to 6½ years....	75	12 to 12½ years..	27		
11 to 12 months..	90	6½ to 7 years....	71	12½ to 13 years..	25		

DEPENDENTS IN ASCENDING LINE.

Age.	Coefficient.	Age.	Coefficient.	Age.	Coefficient.	Age.	Coefficient.
22 to 22½ years..	203	41½ to 42 years..	162	61 to 61½ years..	98	80½ to 81 years..	43
22½ to 23 years..	202	42 to 42½ years..	161	61½ to 62 years..	96	81 to 81½ years..	42
23 to 23½ years..	201	42½ to 43 years..	159	62 to 62½ years..	94	81½ to 82 years..	41
23½ to 24 years..	200	43 to 43½ years..	158	62½ to 63 years..	92	82 to 82½ years..	40
24 to 24½ years..	200	43½ to 44 years..	156	63 to 63½ years..	90	82½ to 83 years..	38
24½ to 25 years..	199	44 to 44½ years..	155	63½ to 64 years..	88	83 to 83½ years..	37
25 to 25½ years..	198	44½ to 45 years..	154	64 to 64½ years..	87	83½ to 84 years..	36
25½ to 26 years..	197	45 to 45½ years..	153	64½ to 65 years..	85	84 to 84½ years..	35
26 to 26½ years..	196	45½ to 46 years..	151	65 to 65½ years..	84	84½ to 85 years..	34
26½ to 27 years..	195	46 to 46½ years..	150	65½ to 66 years..	82	85 to 85½ years..	33
27 to 27½ years..	195	46½ to 47 years..	148	66 to 66½ years..	80	85½ to 86 years..	32
27½ to 28 years..	194	47 to 47½ years..	147	66½ to 67 years..	78	86 to 86½ years..	31
28 to 28½ years..	193	47½ to 48 years..	145	67 to 67½ years..	77	86½ to 87 years..	30
28½ to 29 years..	192	48 to 48½ years..	144	67½ to 68 years..	75	87 to 87½ years..	30
29 to 29½ years..	191	48½ to 49 years..	142	68 to 68½ years..	74	87½ to 88 years..	29
29½ to 30 years..	190	49 to 49½ years..	140	68½ to 69 years..	73	88 to 88½ years..	28
30 to 30½ years..	189	49½ to 50 years..	138	69 to 69½ years..	72	88½ to 89 years..	27
30½ to 31 years..	188	50 to 50½ years..	137	69½ to 70 years..	70	89 to 89½ years..	27
31 to 31½ years..	187	50½ to 51 years..	135	70 to 70½ years..	69	89½ to 90 years..	26
31½ to 32 years..	186	51 to 51½ years..	134	70½ to 71 years..	67	90 to 90½ years..	26
32 to 32½ years..	185	51½ to 52 years..	132	71 to 71½ years..	66	90½ to 91 years..	25
32½ to 33 years..	184	52 to 52½ years..	130	71½ to 72 years..	64	91 to 91½ years..	25
33 to 33½ years..	183	52½ to 53 years..	128	72 to 72½ years..	63	91½ to 92 years..	24
33½ to 34 years..	182	53 to 53½ years..	126	72½ to 73 years..	61	92 to 92½ years..	24
34 to 34½ years..	181	53½ to 54 years..	124	73 to 73½ years..	60	92½ to 93 years..	23
34½ to 35 years..	179	54 to 54½ years..	123	73½ to 74 years..	58	93 to 93½ years..	23
35 to 35½ years..	178	54½ to 55 years..	121	74 to 74½ years..	57	93½ to 94 years..	22
35½ to 36 years..	177	55 to 55½ years..	120	74½ to 75 years..	55	94 to 94½ years..	22
36 to 36½ years..	176	55½ to 56 years..	118	75 to 75½ years..	54	94½ to 95 years..	21
36½ to 37 years..	175	56 to 56½ years..	116	75½ to 76 years..	53	95 to 95½ years..	21
37 to 37½ years..	174	56½ to 57 years..	114	76 to 76½ years..	52	95½ to 96 years..	20
37½ to 38 years..	173	57 to 57½ years..	112	76½ to 77 years..	51	96 to 96½ years..	19
38 to 38½ years..	172	57½ to 58 years..	110	77 to 77½ years..	50	96½ to 97 years..	18
38½ to 39 years..	170	58 to 58½ years..	109	77½ to 78 years..	49	97 to 97½ years..	18
39 to 39½ years..	169	58½ to 59 years..	107	78 to 78½ years..	49	97½ to 98 years..	17
39½ to 40 years..	168	59 to 59½ years..	105	78½ to 79 years..	48	98 to 98½ years..	16
40 to 40½ years..	167	59½ to 60 years..	103	79 to 79½ years..	47	98½ to 99 years..	14
40½ to 41 years..	165	60 to 60½ years..	102	79½ to 80 years..	46	99 to 99½ years..	12
41 to 41½ years..	164	60½ to 61 years..	100	80 to 80½ years..	45	99½ to 100 years..	10

In the absence of any relatives of the classes described, the compensation due is paid into a special fund for payment of indemnities to employees of insolvent employers and for other purposes, which are described in detail in a subsequent section.

The method of distribution of the compensation as outlined above presents many peculiarities which deserve to be emphasized. The designation of the specific classes of relatives entitled to compensa-

tion and the specific rules for distribution of compensation, when compared with the earlier drafts of the law designating only the legal heirs, shows progress and a transition from the legal point of view of liability (so much for a death) to the point of view of need. But the transition has not been as complete as in some other laws. On one hand the compensation is not as great as the maximum allowed under the German, Austrian, or Russian laws, under which the pensions amount to two-thirds of the annual wages. On the other hand, the Italian law presents many cases of possibly excessive compensation, as, for instance, when one minor child or one minor brother, if left the only dependent relative, would receive an enormous annuity or its equivalent up to 18 years, or when only very aged parents survive the annuity that could be purchased for them in view of their high age might be higher than the wages of the deceased. A childless widow may receive the considerable sum of five times the deceased husband's wages, and remarry very soon after that, while almost all similar laws of other European countries provide for the discontinuance of the pension to the widow at her remarriage. A surviving widower may receive part or the whole of the compensation, even if not dependent upon the earnings of the deceased at all. In other words, there is comparatively little correspondence between amount of compensation and need, instead of which there is a fixed relationship between accident and the amount of compensation.

DETERMINATION OF WAGES.

Since all forms of compensation are based upon the annual earnings or daily wages of the injured, the methods of determining these earnings become important. They are strictly defined in the law and regulations. If the annual salary is mentioned in the labor contract, that sum is taken; otherwise the actual annual earnings of the preceding 12 months are taken. If the person injured had been employed less than 12 months, the annual earnings are taken to be equal to 300 times the daily wages. To determine these, the earnings of the employee during all the time of employment up to one year is divided by the number of full days of work rendered, a full day's work being measured by the number of hours of work, usual for the establishment in question. The maximum limit allowed in the computation is 2,000 lire (\$386) per annum; for cases of permanent disability as explained above a minimum limit of 500 lire (\$96.50) is established. If the injured employee is an apprentice, then the lowest wages of a regular workman in the same industry and occupation, or the one nearest to it, must be taken as a basis.

In case of common day laborers, their actual daily wages are taken, but they must not vary more than 10 per cent from the customary wages for a day laborer in the same locality.

The computations are simpler in case of temporary disability. If the injured person receives time wages, the wages of the day of accident are taken; if piece wages are paid, the daily wages are computed by dividing the earnings within the last 15 days by the number of full days of work, but the result must not be less than the customary minimum wage.

In all computations of wages not only all money payments, but also the value of the payment in kind, according to the average local values must be included.

BURDEN OF PAYMENT.

The cost of compensation falls entirely upon the employer, the owner, or operator of the establishment or undertaking, though indirectly by means of payment of insurance premiums as explained presently. The shifting of the cost upon the employees by direct or indirect deductions from the wages is punishable by fines up to 4,000 lire (\$772). When any work is done by contract for the state government, Province, commune, or any public institution, the contractor must meet the cost of insurance. If any workers are employed in the establishment or undertaking who are hired and paid by other employees, the burden of insurance falls upon the proprietor of the enterprise. Whenever the requirements concerning insurance have not been complied with, then in addition to various fines established the liability for the amount of compensation due reverts back to the individual employer.

CIVIL RESPONSIBILITY.

Compliance with the requirements of the law concerning insurance relieves the employers of all civil responsibility for accident, except when the criminal responsibility for the accident has been placed by a penal sentence of a court upon the employer or manager, or any other person entrusted with supervisory work. In such cases not only the person criminally responsible, but also the employer is civilly liable under the common law for the damages sustained by the injured person.

When a judgment is obtained under this rule against the person civilly liable, only the excess of this judgment over the amount of the insurance is payable to the injured worker or to his heirs. No such judgment must be granted, when in the opinion of the court it would not exceed the amount due under the insurance contract.

The establishment of the civil cases does not relieve the insurer of his obligation to pay the indemnity, but the insurer may sue the person liable for the amount of indemnity paid out. As explained before, the insurer may proceed in the same way against the injured employee, if he has been found criminally responsible for the accident causing

his injury. In all cases, if the criminal proceedings are dropped because of death or pardon, the civil liability proceedings may nevertheless be carried on.

INSURANCE.

Broadly speaking the Italian law is based upon a system of compulsion to insure though the method of insurance is not prescribed and there are a great many exceptions to the compulsion. Establishments operated by the state, provincial, or communal governments, or by private persons by franchise from the Government, must insure their employees in the National Accident Insurance Institution unless they are provided with special compensation acts, when they are exempt from all insurance. Other employers may insure their employees with authorized private insurance companies.

The following substitutes for insurance in the national or private insurance companies are permitted: Private establishments funds organized by the employer (or by several employers in the same locality) and authorized by the Government, having a membership of more than 500, or employers' mutual accident insurance associations, organized by employers and authorized by the minister, and insuring at least 4,000 employees.

In addition to these employers' voluntary mutual associations, compulsory associations may be established by the Government if it finds after consultation with the chambers of commerce, provincial councils, and the state council that such an association is necessary or advantageous to secure better compliance with the provisions of the law. An employers' compulsory mutual accident insurance association must include at least 15,000 employees.

Finally, the railways to which the law applies are exempt from the obligation of insurance, provided they adjust the pension and benefit fund to the requirements of this law without interfering with the acquired rights of the members of the funds. These adjustments must be approved by the minister.

The detailed provisions of the law concerning the regulations of insurance institutions are given subsequently in connection with the discussion of the various classes of these institutions.

SPECIAL GUARANTEE FUND.

The special guarantee fund completes the complicated arrangements made for securing the payment of indemnity to the injured person. It is mainly intended to provide a source for paying compensation to injured workmen of employers who have failed to comply with the requirements for insurance and who have become insolvent, so that civil procedure against them is useless. It also has other subsidiary functions, namely, (1) to subsidize benefit funds which undertake to assist injured workmen during the first five days of disability, (2)

to grant prizes to inventors of new safety devices, and (3) to subsidize associations or institutions granting medical help to the injured employees. The income of the fund is derived (1) from the compensation due for fatal accidents to employees having no dependent relatives entitled to compensation under the law and (2) from the fines and penalties imposed for noncompliance with the law or regulations.

The bank of deposits and loans must notify the ministry at the end of each year as to the amount credited to this fund, and only when the fund exceeds 20,000 lire (\$3,860) may appropriations be made for subsidiary purposes.

The subsidies to societies granting relief during the first five days of disability may be made with intervals of at least five years' duration. Such distribution is made among societies applying for it and presenting detailed evidence of their activities; the other functions depend upon the judgment of the minister.

STATE SUPERVISION OF INSURANCE.

Explicit regulations are provided for enforcing compliance with the insurance requirement in all its details. The owners or managers of new establishments must insure their employees before the beginning of operations or as soon as possible thereafter, and in no case later than five days after the beginning of operations. If any accidents happen before insurance had been effected the employer is personally responsible for the compensation according to the law.

Within ten days after the beginning of operations the prefect of the Province must be notified as to the nature of the establishment and number of employees and apprentices employed. A similar report must be made of each insurance contract, giving the date, length of contract, and the number of workmen and apprentices insured. The discontinuance of work in the establishment must also be reported to the prefect. The prefect must compile the data in regard to all the insured establishments.

In each establishment or undertaking an easily legible notice must be posted, stating the name of the insurance institution with which such insurance has been contracted for and the date of termination of the insurance. The original contract or a copy thereof must be in the possession of the employer at the establishment, and must be shown, with necessary explanations, to the injured workman or his legal representative, who shall be allowed to copy it. For non-compliance with this regulation the employer is subject to a fine of at least 50 lire (\$9.65).

For noncompliance with the insurance requirements, such as failure to insure or to renew insurance, or to increase it with the increase of

the number of employees, the employer is subject to a fine of 5 lire (97 cents) per employee and per day, up to 2,000 lire (\$386). In addition, the employer is not only liable in case of an accident for the legal amount of compensation but he must pay an equal amount into the special guarantee fund. The same penal provisions are made for those who cause the insurance to lapse through a culpable failure to pay the premiums due.

A complete register of all employeés must be kept in every establishment subject to this law. This register must contain information as to the name, conjugal condition, date and place of birth, the date of entering service, and the usual occupation and the amount of daily wages. In addition a general wage book is required to be kept containing the accounts of each individual worker. It must be kept up to date, showing the earnings of each employee and payments made to him. These books must be bound, with pages consecutively numbered, and they must be examined by the insurance office before they may be used. The entries must be made in ink, and without erasures. Employees whose names are not entered in the wage book are not considered insured, and for their omission the employer is subject to the penalties provided. But until the fact of such non-compliance has been established by a court the insurance company is not relieved from the obligation of paying compensation provisionally, with the right of suing to recover these payments from the delinquent employer.

The employee who receives piece wages, and who employs and pays his helpers, must also keep a register and a pay book. The register and wage books must always be open for inspection by government inspectors and agents of the insurance companies, who may copy extracts from them.

Railroad companies and other public institutions, having regular pay rolls or temporary undertakings of very short duration, may be exempt from the obligation of keeping registers and wage books.

Individual wage books of uniform pattern for all branches of industry are made obligatory and must be supplied by the employer to all the workmen. The same book may be used by the employee even in different establishments, and it must contain all information necessary for the administration of the accident insurance law.

If the inspector finds that an establishment employs a greater number of workmen than is insured against accidents, he must prosecute the owner or manager of the establishment before the local judiciary authorities. The employer may be fined for giving wrong or misleading information, irrespective of the right of the ministry to contract for the additional insurance at the expense of the delinquent employer.

PROCEDURE.

REPORT AND INVESTIGATION OF ACCIDENTS.—A satisfactory administration of an accident insurance or compensation act is impossible without a careful system of reporting accidents. The law requires that each accident resulting in disability lasting over five days or in death must be reported to the local police authorities by the manager of the establishment or undertaking, under penalty of a fine of from 50 to 100 lire (\$9.65 to \$19.30). The reports must be made to the prefect of the Province in which the establishment is located; they are required from all undertakings and establishments, whether or not covered by the accident insurance law, and they must be made within three days from the accident or the day on which information concerning the accident reached the manager of the establishment. To make such reports possible all accidents, no matter how slight, must be reported by the injured employee to the person in charge of the establishment. In case of failure to do so, the injured person may lose the right to compensation for the days elapsing between the date of the accident and the report to the manager. Only accidents causing disability of over five days' duration must be reported by the manager, so that evidently an estimate must be made as to the probable length of disability, which may not prove correct. If an accident had not been reported because the disability was not expected to last five days but subsequently did extend into the sixth day, it must be reported within three days thereafter.

Similar reports of accidents must be made to the respective insurance institutions by managers of establishments subject to the law.

Reports of accidents must include the name of employer, place and time of the accident, and its cause and description; name, conjugal condition, age, address, and occupation of the injured employee; his condition, probable duration of the disability (to be certified by the physician), and names and addresses of witnesses. The police and other authorities must keep lists of accidents reported. Failure to make reports of accidents must be brought to the attention of the court by the police.

In all fatal cases, or such cases as are likely to lead to disability for over thirty days, or to death, the police must forward a copy of the accident report, together with the medical certificate to the local magistrate (pretor), who is required to make an investigation within four days after the receipt of the report, ascertaining the following facts: The cause, the conditions of the accident, the nature and condition of the injury, the daily wages and the annual earnings of the injured; the relatives of the killed employee and their place of residence, and the fact and method of insurance of the victim.

The time and place of such investigation must be communicated in advance by the magistrate (pretor) to the employer or his representative and to the particular insurance institution concerned. The investigation must be conducted in the presence of representatives of all parties concerned, and a physician and other experts invited by the magistrate. In the absence of the injured person or his representatives the magistrate may select two workmen of the same establishment to represent his interest. The purpose of this investigation is to establish the actual facts as to the cause of the accident. Only in establishments where the work is done in secrecy for considerations of state may such investigation be substituted by a written report of the management. The investigation must be concluded within a few days and the facts stated in an official report signed by the magistrate. In fatal cases copies of this report must be forwarded to the ministry.

The report must remain for five days in the office of the magistrate, after which it is transferred to the proper judicial authority, which may take any legal steps it finds necessary; the report is also transmitted to the civil tribunal of the district.

The magistrates, witnesses, physician, and other experts called in to the investigation receive compensation for their work.

DETERMINATION OF DISABILITY.—The insurance institution has the right to subject the injured person to a medical examination in the presence of the attending physician, and the injured employee has no right to decline such examination whenever the insurance institution demands it, provided the insurer meets the cost; nor can the injured employee decline to go to a hospital or a clinic for a determination of the consequences of the injury. When any dispute arises as to the nature of the results of the accident, the decision may be intrusted to a medical arbitration board of three members, of whom two are nominated by the respective parties and the third by these parties together or by a president of a court. The president of the court determines the compensation of the physicians, at any figure from 5 to 200 lire (97 cents to \$38.60), and the distribution of this cost between the insurance institution and the injured employee.

Sanitary officers and communal physicians may not decline their services necessary to determine the results of accidents. A scale of payment for their services is established in the regulations. Hospitals must permit medical representatives of the insurance companies to examine the patient.

PAYMENT OF COMPENSATION.

TEMPORARY DISABILITY.—The insurance company must make the first compensation payment for temporary disability as soon as possible after receiving notice of an accident and the physician's

certificate, and in any case not later than twenty days after the accident. In case of dispute as to the amount of compensation, the insurance company pays the amount which it thinks due and the disputed amount only is withheld. The subsequent payments must be made within intervals of seven days, and after the expiration of the first three months advance payments must be made until nine-tenths of the amount is paid out which the insurance institution thinks is due to the injured person. If the insurance company does not hold itself responsible it may decline to pay, but must state the reasons in writing.

The insurance company may delegate the employer to pay the compensation for temporary disability, reimbursing him subsequently, but the employer must demand evidence of disability before making such payments.

If the establishment possesses an infirmary, organized by the employer, in which the workmen are regularly treated, and the injured employee is being treated there with his consent, one-third of the daily compensation due is paid by the insurance company into the treasury of the infirmary.

PERMANENT DISABILITY.—Within eight days after the receipt of the final medical certificate the insurance company (or association, etc.) must determine the amount of the compensation for permanent disability; the insurance company must inform the injured person of this amount and its estimate of the nature and degree of disability, the reasons for arriving at this conclusion, the wage used in the computation, the decrease in the wage which may have taken place as a result of the disability, and the amount of advance payments made. If the workman accepts the opinion of the insurance company the amount must be paid within eight days after notice of such acceptance is given. In case of delay the usual interest must be added to the amount of compensation.

If the workman disagrees with the insurance company, he states the reasons in writing, and if his demands are not complied with within fifteen days he may carry the case to the courts, as provided for in the law.

The regulations governing the conditions of payment of compensation for total permanent disability, or for partial permanent disability which reduces the earning capacity by at least 50 per cent, are quite complicated, due to the intent of the law that such compensation be transformed into annuities. At the same time the conditions of payment are further complicated by the necessity of postponing such conversion for two years, lest some material change should take place in the condition of the injured employee which would necessitate a change in the amount of compensation.

The insurance company pays the amount due, after deductions for advance payments made, to the National Old-Age and Invalidity

Insurance Institution, and it is then free from any further liability, unless there should be a request for revision within two years. If the injured person should die before the indemnity was converted into an annuity, and if it should be established that the death was a consequence of the accident, then the legal dependents according to the law present to the old-age insurance institution evidence as to the death of the injured person, the opinion of the medical examiner as to the cause of death and other evidence of their right to receive the compensation. Then the amount due, after deductions for the payments made and with interest added, is distributed among the heirs according to the law. If the death is not due to the accident, the amount is paid to the legal heirs according to the Civil Code.

If death does not occur the conversion is made after the expiration of the two years' period, but the monthly allowances are continued for two months more, and their value discounted from the amount used to purchase the annuity.

To obtain the remaining amount of compensation as a lump sum the injured workman must petition the local magistrate (pretor) in writing, stating the reasons for his request. In the decision of the pretor the reasons for granting or declining the request must be stated in writing.

FATAL ACCIDENTS.—In case of death the insurance company must take the necessary steps within twenty days to establish the amount of compensation due. Those who claim compensation must hand in claims with the necessary evidence, and the insurer must within eight days inform them of the amount of computed compensation, stating the wage rate used for compensation and the advance payments deducted. If a dispute arises the insurance company must pay temporary allowances up to nine-tenths of the amount which the insurance company admits as due, at semimonthly intervals, to all the legal claimants; the sum of this allowance per day must not exceed one-half the daily wage of the deceased. But if the dispute concerns merely the right of compensation no such preliminary payments need be made. If the insurance company receives no information as to the existence of legal heirs it must so report to the ministry, stating also the amount of compensation granted, the wage rate used in computing it, and the total amount paid out and the amount to be deducted. The ministry may verify the accounts and order the insurance company to transfer the amount due to the guarantee fund as soon as the year has elapsed.

REVISION OF BENEFITS.

Both the victim of the accident and the insurance company may ask for a revision of the compensation during the two years following the accident, if the first decision was unfair or if changes had taken place in the physical condition of the injured workman. In case

of a fatal accident, a request for revision must be made within two months from the day of death. As was explained above, it was for the purpose of leaving an opening for such revision that the compensation in cases of total permanent disability or partial permanent disability of 50 per cent or over was to be held in trust for two years by the old-age insurance institution.

In making application for revision of compensation the insured person must present a medical certificate, stating either that the earlier judgment was incorrect or that the condition had since become aggravated. If the dependents under the law make the request for such revision the physician must certify that the death was due to the accident. Within one month from the date of the application the insurance company must either grant or decline to grant a new rate of compensation, stating the reasons for declination in writing. In case of declination the claimant may bring the claim into court. The insurance company must apply to the court for revision of the compensation granted.

SETTLEMENT OF DISPUTES.

Disputes arising out of the compensation for temporary disability are to be adjudicated by the local trade (arbitration) courts, whose decisions involving amounts up to 200 lire (\$38.60) are final. In the absence of such arbitration courts the case is brought before the local magistrate (pretor). Cases involving amounts of more than 200 lire (\$38.60) must be carried to the ordinary courts, but in such cases counsel is not required and the cases are exempt from stamp dues. The court expenses are very low: For amounts up to 50 lire (\$9.65), 50 centesimi (9.7 cents); for 50 to 100 lire (\$9.65 to \$19.30), 1 lira (19.3 cents); and 2 lire (38.6 cents) for each additional 100 lire.

SPECIAL PROVISIONS FOR SEAMEN.

Numerous special provisions for seamen are contained in both the law and the regulations. Some of these are necessary because the peculiar character of this occupation demands deviations from the general procedure. The necessity for other exceptions is not so obvious. Some exceptions have already been noted. Thus no distinction is made between wage-workers and salaried employees, and all members of the crew receiving 2,100 lire (\$405.30) per annum or less are insured.

The scale of compensation is considerably lower in case of permanent disability (four times the annual wages instead of six) and death (three times the annual wages instead of five). As to temporary disability, previous legislation has granted seamen the right to their full wages, besides the cost of medical and surgical treatment, for four

months in case of illness or injury. This right is reaffirmed by the new law, and the right to the temporary disability compensation under the law begins only after the expiration of the four months.

For the purposes of this law the person or corporation chartering the vessel is considered the responsible employer. When a vessel is lost, or for lack of information is considered lost, and no certificate of death is therefore possible, the legal claimants may enter their claims six months after the day of shipwreck or of the date of the information last received. The term of one year within which claims may be made begins after the expiration of these six months.

In such cases the payments must be made under bonds, which are to hold good for three years from the expiration of the period of six months, and during these three years the compensation is subject to revision if any information is obtained from the person supposedly lost.

Wages of seamen are computed by dividing the remuneration stipulated for the whole voyage plus the cost of subsistence, as per pay roll, by the number of days the voyage lasts. The annual earnings are computed as 300 times the daily wage. The cost of subsistence must be entered in the pay roll for each seaman, according to local custom at the port where he shipped.

The report of the accident must be made by the captain and signed by two witnesses. It must be transmitted to the local port authorities, and if the accident has happened during the voyage, to the authorities of the first Italian port reached. If there is a physician on the ship he must certify to the report; otherwise a physician's examination and certificate must be obtained at the first port of landing.

The three days' limit for making an accident report runs from the day of the arrival of a ship in an Italian port or in a foreign port having an Italian consul. Investigations of fatal accidents and of those leading to disability for over thirty days must be made by the port authorities or by the Italian consul.

PREVENTION OF ACCIDENTS.

Regulations for the prevention of accidents are included in the accident insurance law. The purpose of the combination of these two fairly distinct measures in one act seems to have been to counteract the common objection against obligatory accident insurance—that it tends to make both employers and employees less careful and accidents more frequent.

The law authorizes the minister, after consultation with employers and government expert councils, to publish regulations concerning the prevention of accidents and for the protection of the workmen's life and limb. Compliance with such regulations is demanded by the

law, and noncompliance is punishable by fines. These regulations may be issued for separate branches of industry, and also for certain localities. The minister must enforce such compliance with the regulations. For the preparation of regulations one or more of the following bodies must be consulted: The council of industry and commerce, the mining council, the superior council for public works, the superior committee for railroads, the council for forestry, the council for the merchant marine, and in all cases the superior council of labor.

In addition, the employers' compulsory mutual accident insurance associations are permitted to include in their constitutions provisions for prevention of accidents.

INSPECTION.—For the purpose of enforcing compliance with the requirements concerning insurance and prevention of accidents the ministry may avail itself of the services of the factory inspectors, mining inspectors, and the inspectors and engineers of the ministries of public works and of the marine, as well as of the technical employees of the societies for prevention of accidents and the employers' mutual accident insurance associations and the inspectors of the National Accident Insurance Institution. Special officers may be detailed for inspection in connection with the work.

Persons intrusted with inspection of industrial establishments are prohibited from having any direct or indirect interest in any industrial undertaking, or from being employed by such private establishments in the capacity of engineers, chemists, or physicians.

All establishments and undertakings must be regularly inspected at least once in two years, and special inspections may be ordered by the minister or by the prefect at any time. The inspectors must ascertain whether the preventive regulations and the insurance requirements have been complied with. They have the right to visit the establishments, to question the employers, the supervising employees, and workmen, and to inspect the general and individual wage books, the insurance contract, and all necessary documents. They must make reports to the ministry, making the necessary observations and recommendations, and certifying to any infringement of the law and regulations. A copy of the report must also be sent to the local judiciary authority and to the prefect. The report must be signed by the employer, or by his representative and the inspector. The employer may state his explanations.

Compulsory mutual accident insurance associations must organize an independent inspection service over the establishments subject to its jurisdiction. Its inspectors may apply to the police for assistance in case they are hindered in their work, and the employers must not place any obstacles in the way of their work, under penalty of a fine of from 20 to 300 lire (\$3.86 to \$57.90).

GENERAL PROVISIONS.

All agreements waiving wholly or partly the benefits conferred by this act are null and void. Indemnities or annuities paid under this act are not subject to cession or seizure.

All claims under this act must be made within one year from the date of the accident.

All contracts and legal documents executed in compliance with the requirements of this law are free from stamp dues, insurance taxes, or similar taxation.

APPLICATION OF THE LAW.

Voluntary insurance of workmen against accidents has been practiced in Italy by the National Accident Insurance Institution since 1883. With the establishment of the compulsory system of insurance the functions of the national insurance institution were greatly enlarged. New tariffs were prepared, to provide for insurance in compliance with the requirements of the law, though the old tariffs remained in force for voluntary accident insurance. But private insurance companies rapidly went into the field in competition. Four private accident insurance companies qualified toward the end of 1898, and one in 1899.

The other forms of insurance provided by the law did not grow in popularity under the old law of 1898. Only four employers' mutual accident insurance associations were organized under this law. One of these, the so-called "Subalpine Syndicate," was established in Turin and approved November 30, 1898. By its constitution this association was authorized to accept employers of all industries covered by the law in the Provinces of Turin, Alessandria, Novara, and Coni. It began its operations in December, 1898, with 333 members and about 19,000 employees insured, and by 1899 the number of members increased to 600 and the number of insured persons exceeded 30,000.

The mutual association of mine operators, organized in Sardinia and authorized March 31, 1899, had no territorial limitations to its activity. The association "Legure," in Genoa, was formed January 25, 1900, with only 8 members; but all these were large establishments in the iron and steel industry. Its constitution admitted all enterprises except the manufacture of explosives. The association of public works, buildings, and similar undertakings, in Florence, was authorized February 14, 1900, and included at the beginning 393 members and 4,098 insured employees.

In addition, there were organized in 1899 three cooperative funds—one in Florence, consisting of two mine operators; one in Palermo, comprising a number of Sicilian wine manufacturers; and one in

Vercelli, with 88 small, miscellaneous manufacturing establishments, employing 552 workers. Finally, 10 independent cooperative funds qualified in 1899 with a number of employees varying from 500 to 2,000. The largest among these were the fund of a shipbuilding concern, in Livorno, with 2,047 employees; the fund of subsidiary railroads, of Sardinia, insured 1,655; the fund of a large linen-goods factory, in Vicenza, with 1,681 employees; the fund of a machine shop, in Milan, with 1,237 employees; and a paper and printing establishment, in Florence, with 710 employees. Few of these private benefit funds were organized in 1899, but most of them had existed for some time before the adoption of the law of March 17, 1898, and had simply applied for recognition under the law. The amendment of the law in 1903, by extending the scope of the application of the law and the raising of the premium rates of the National Accident Insurance Institution, stimulated the formation of employers' mutual associations and private benefit funds. In 1904 three voluntary mutual associations were organized in Genoa, of which one included the works in the maritime port and one the seamen of that port. An employers' compulsory mutual association for the sulphur mines of Sicily was established in the same year. Three more voluntary associations and the compulsory association for insurance of seamen were established in 1905, and two voluntary ones in 1906.

Three cooperative benefit funds were organized in 1904, three more in 1906, and one early in 1907. Within the same period 12 private funds were formed, 3 in 1903, 3 in 1904, 5 in 1906, and 1 early in 1907. The most important of these are the funds of street railway employees in Florence and Naples, organized in 1903. Altogether, according to the list of accident insurance institutions brought up to February 28, 1907,^(a) there were, in addition to the National Accident Insurance Institution, 7 private insurance companies, 12 employers' voluntary mutual associations, 2 employers' compulsory mutual associations, 10 cooperative benefit funds, and 22 private benefit funds.

GENERAL STATISTICS.

Unfortunately, the statistics of the activity of these various insurance institutions in Italy are very meager and fragmentary, and anything like a complete and up-to-date account of them is quite impossible.

A statistical report concerning the application of the law for the first fourteen months, ending December 31, 1899, was published early in 1901.^(b) Later reports concerning all the accident insurance institutions were published in 1906.^(c) Reports for more recent

^a Bollettino di Notizie sul Credito e sulla Previdenza, February, 1907, p. 196.

^b Bollettino di Notizie sul Credito e sulla Previdenza, Vol. XIX, 1901, p. 140.

^c Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, pp. 1371-1490.

years were published in the official organ of the Office of Credit and Savings Institutions.^(a) Reports concerning the statistics of accidents alone are available for the second half of 1904, for 1905, and for 1906, but these do not contain any information concerning other results of the insurance system. Very little is known concerning the effects of the amendments to the law. Besides, these reports are very fragmentary, so that even the total number of persons insured is not stated.^(b)

On December 31, 1899, 28,307 industrial establishments carried accident insurance, but for 20,459 establishments only was the number of employees known, which aggregated 1,050,763 persons. On December 31, 1900, the number of establishments carrying insurance was 36,020; the number of persons insured in 31,788 establishments was 1,272,592.^(c)

In the report of the commission of the Chamber of Deputies concerning the ministerial proposal of March 13, 1908, the number of persons insured is stated as follows: For the year 1903, 869,874; 1904, 937,570; 1905, 1,089,086, and for 1906, 1,106,256. These totals are so low in comparison with the reports of the earlier years that some doubt as to their accuracy exists. As a matter of fact, data from only one private insurance company out of seven are available for 1903 and 1906, and for two only for 1904 and 1905.

^a Bollettino di Notizie sul Credito e sulla Previdenza, September-October, 1908, p. 1126.

^b Many fragmentary but valuable statements may be found in the reports which Dr. Vincenzo Magaldi, Chief of the Bureau of Credit and Social Insurance, of the Ministry of Agriculture, Industry, and Commerce (*Direzione Generale del Credito e della Previdenza, Ministero di Agricoltura, Industria e Commercio*) periodically furnishes to the international congresses of social insurance, and which may be considered semiofficial, as the supervision of these institutions is intrusted to this bureau. Finally, Doctor Magaldi's two studies of labor insurance in Italy, published in Doctor Zacher's well-known series in 1905 and 1908, contain some statistical information which could not be found in the publications either of the Bureau of Credit and Providence (*Inspettorato Generale del Credito e della Previdenza*) or of the Bureau of Labor, and these data have been made use of in the following brief review. Concerning the activity of the National Accident Insurance Institution, the statistical information available is much more complete.

^c Les accidents du travail en Italie, par. V. Magaldi (Congrès International des Accidents du Travail et des Assurances Sociales, Dusseldorf, 1902, p. 681).

No complete official record of the distribution of the total number of insured workmen among the various insurance institutions is available, the data for 1903 to 1906, published by the parliamentary commission, being admittedly very incomplete. These data are as follows:

NUMBER AND PER CENT OF INSURED WORKMEN IN ITALY, CLASSIFIED BY KIND OF FUND OR ASSOCIATION, 1903 TO 1906.

Kind of fund or association.	Workmen insured in the year—							
	1903.		1904.		1905.		1906.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
National institution.....	421,363	48.5	370,198	39.5	373,876	34.3	407,859	36.9
Private companies.....	352,298	40.5	443,990	47.3	514,464	47.2	447,654	40.5
Mutual association.....	62,793	7.2	83,191	8.9	150,687	13.9	189,587	17.1
Cooperative funds.....	18,539	2.1	24,734	2.6	28,346	2.6	35,662	3.2
Private funds.....	14,881	1.7	16,457	1.7	21,713	2.0	25,494	2.3
Total.....	869,874	100.0	937,570	100.0	1,089,086	100.0	1,106,256	100.0

The data indicate mainly a steady growth in the popularity of the mutual accident insurance principle. The figures for the cooperative funds also indicate a steady growth, the number of insured having almost doubled within three years.

The following table, constructed from the various reports of Doctor Magaldi, shows the number of accidents compensated by the various groups of insurance institutions, and therefore gives indirectly an idea of the comparative importance of these institutions:

NUMBER AND PER CENT OF ACCIDENTS COMPENSATED BY EACH KIND OF INSURANCE INSTITUTION, 1899 TO 1905.

[Source: Congrès International des Accidents du Travail et des Assurances Sociales, Paris, 1900; Dusseldorf, 1902; Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906; Bollettino dell' Ufficio del Lavoro, Vol. III and Vol. VII.]

Kind of fund or association.	Nov. 1, 1898, to Dec. 31, 1899.		1900.		1901.		July to Dec., 1904.		1905.	
	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.
National institution.....	12,167	20.8	15,726	26.8	22,021	33.2	19,253	40.6	42,734	36.8
Private companies.....	41,676	71.2	36,293	61.8	37,017	55.9	19,518	41.2	50,945	43.9
Employers' associations.....	944	1.6	2,352	4.0	2,471	3.7	8,627	18.2	22,340	19.3
Private and cooperative funds	602	1.0	1,053	1.8	1,190	1.8				
Railroad funds.....	3,129	5.4	3,309	5.6	3,596	5.4				
Total.....	58,518	100.0	58,733	100.0	66,295	100.0	^a 47,398	100.0	^b 116,019	100.0

^a Exclusive of 517 accidents for which the mode of insurance was unknown or which occurred in establishments not subject to insurance, making a total of 47,915 accidents.

^b Exclusive of 8,299 accidents for which the mode of insurance was unknown or which occurred in establishments not subject to insurance, making a total of 124,318 accidents.

The most important indication of this table is the gradual decline in the relative importance of private insurance and the growing importance of the state insurance principle (in the National Accident Insurance Institution) on the one hand and of various mutual organizations on the other. Assuming that the number of accidents compensated is fairly representative of the number of persons insured, neither mutual employers' association nor private funds showed a very extensive activity in the earlier years of the application of this law, as they did not claim more than 5 or 6 per cent. The employers' associations showed a tendency to grow. For the later years it is unfortunately impossible to differentiate the activity of private funds from that of the employers' associations; but together these private and cooperative efforts show a considerable development, partly due to the establishment of obligatory mutual employers' associations.

The growth of the national institution has been very rapid, the slight decline in 1905 being due to the formation of the Sicilian Sulphur Mines Mutual Accident Insurance Association, since the insurance for these mines had been carried previously almost exclusively by the national institution. In 1899 only one-fifth of all accidents was compensated by this institution, and in 1904 two-fifths.

The growth was at the expense of the private insurance companies which in the beginning claimed over 70 per cent of the insurance, as the employers hurried to comply with the requirements of the law, but gradually lost, the employers being attracted by the lower rates of the national institution.

In the following table the accidents compensated by each group of insurance institutions are classified according to the termination of the injuries sustained, whether in death, permanent disability, or temporary disability. Only for the years 1899 to 1901 are these data available; while for the year 1902 the accidents may be thus classified, but not for each class of insurance institutions separately.

NUMBER AND PER CENT OF COMPENSATED ACCIDENTS RESULTING IN DEATH, PERMANENT DISABILITY, AND TEMPORARY DISABILITY, BY KIND OF INSURANCE INSTITUTION, 1899 TO 1902.

[Source: Congrès International des Accidents du Travail et des Assurances Sociales, Paris, 1900; Dusseldorf, 1902; Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906; Bollettino dell' Ufficio del Lavoro, Vol. III and Vol. VII.]

Year and kind of fund or association.	Accidents resulting in—								Total.
	Death.		Permanent disability.				Temporary disability.		
			Complete.	Partial.	Total.				
	Number.	Per cent.			Number.	Per cent.	Number.	Per cent.	
Nov., 1898, to Dec., 1899.									
National institution.....	159	1.3			345	2.8	11,663	95.9	12,167
Private companies.....	361	.9			1,164	2.8	40,151	96.3	41,676
Employer's associations.....	8	.8			51	5.4	885	93.8	944
Private and cooperative funds.....	5	.8			14	2.3	583	96.9	602
Railroad funds.....	55	1.7			74	2.4	3,000	95.9	3,129
Total.....	588	1.1			1,648	2.8	56,282	96.1	58,518
1900.									
National institution.....	153	1.0	9	529	538	3.4	14,824	94.3	^a 15,726
Private companies.....	324	.9	8	1,605	1,613	4.4	34,356	94.7	36,293
Employers' associations.....	27	1.1	1	86	87	3.7	2,238	95.2	2,352
Private and cooperative funds.....	5	.5	1	40	41	3.9	1,007	95.6	1,053
Railroad funds.....	50	1.5	7	72	79	2.4	3,180	96.1	3,309
Total.....	559	1.0	26	2,332	2,358	4.0	55,605	94.7	^a 58,733
1901.									
National institution.....	279	1.3	10	895	905	4.1	20,837	94.6	22,021
Private companies.....	209	.6	3	1,627	1,630	4.4	35,178	95.0	37,017
Employers' associations.....	31	1.2		106	106	4.3	2,334	94.5	2,471
Private and cooperative funds.....	7	.6	3	32	35	2.9	1,148	96.5	1,190
Railroad funds.....	46	1.3	1	101	102	2.8	3,448	95.9	3,596
Total.....	572	.9	17	2,761	2,778	4.2	62,945	94.9	66,295
1902.									
Total (b).....	505	.8	39	2,868	2,907	4.6	59,957	94.6	63,369

^a Including 211 accidents the results of which were unknown.

^b Data by accident insurance institutions are not available.

A comparison between the premiums paid to the insurance institutions, the compensation paid by them, and the wage expense of the employers throws some light upon the cost of the accident insurance system. The amount paid in wages was not stated prior to 1901, so that the comparison of premiums, compensation, and wages can be made only for 1901 and 1902. For 1903 to 1906 the data are so fragmentary that they are omitted from the table which follows.

AMOUNT OF COMPENSATION AND PREMIUMS, COMPENSATION AND PREMIUMS IN PER CENT OF WAGES, AND COMPENSATION IN PER CENT OF PREMIUMS, IN ACCIDENT INSURANCE, BY CLASS OF FUNDS, 1899 TO 1902.

[Source: Congrès International des Accidents du Travail et des Assurances Sociales, Paris, 1900; Dusseldorf, 1902; Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906; Bollettino dell' Ufficio del Lavoro, Vol. III and Vol. VII.]

Year and kind of fund or association.	Wages of workers.	Compensation.				Premiums paid.		Compen- sation in per cent of premi- ums.
		Paid be- fore Dec. 31.	Due but not paid on Dec. 31.	Total.	Per cent of wages.	Amount.	Per cent of wages.	
Nov., 1898, to Dec., 1899.								
National institution.....		\$188,793	\$14,703	\$203,496	.....	\$279,823	.....	72.72
Private companies.....		327,076	183,423	510,499	.....	713,915	.....	71.51
Employers' associations.....		16,970		16,970	.....	25,129	.....	71.53
Total.....		532,839	198,126	730,965	.....	1,018,867	.....	71.74
Private funds.....		6,954	702	7,656	.....		.....
Grand total (a).....		539,793	198,828	738,621	.....	1,018,867	.....	72.49
1900.								
National institution.....		147,488	108,420	255,908	.....	298,610	.....	85.70
Private companies.....		328,260	235,365	563,625	.....	662,617	.....	85.06
Employers' associations.....		37,029	9,959	46,988	.....	44,744	.....	105.02
Total.....		512,777	353,744	866,521	.....	1,005,971	.....	86.14
Private funds.....		12,269	4,453	16,722	.....		.....
Railroad funds.....		85,655	10,645	96,300	.....		.....
Grand total.....		610,701	368,842	979,543	.....	1,005,971	.....	97.37
1901.								
National institution.....	\$25,495,077	415,029	.....	415,029	1.62	372,624	1.46	111.38
Private companies.....	58,221,017	309,834	150,579	460,413	.79	567,826	.98	81.08
Employers' associations.....	6,037,116	27,094	16,219	43,313	.72	51,840	.86	83.55
Cooperative funds.....	605,557	2,899	315	3,214	.53	6,071	1.00	52.94
Total.....	90,358,767	754,856	167,113	921,969	1.02	998,361	1.10	92.35
Private funds.....	2,128,049	13,036	906	13,942	.66		.....
Railroad funds.....	11,999,118	97,725	.....	97,725	.81		.....
Grand total.....	104,485,934	865,617	168,019	1,033,636	.99	998,361	.96	103.53
1902.								
National institution.....	31,423,779	520,137	.....	520,137	1.66	583,958	1.86	89.07
Private companies.....	65,484,573	258,961	218,159	477,120	.73	646,715	.99	73.78
Employers' associations.....	6,861,861	33,425	11,127	44,552	.65	61,928	.90	71.94
Cooperative funds.....	583,329	3,808	111	3,919	.67	17,905	3.08	21.81
Total.....	104,353,542	816,331	229,397	1,045,728	1.00	1,310,566	1.26	79.91
Private funds.....	1,727,782	15,480	2,738	18,218	1.05		.....
Railroad funds.....	15,766,249	83,297	.....	83,297	.53		.....
Grand total.....	121,847,573	915,108	232,135	1,147,243	.94	1,310,566	1.08	87.54

a Exclusive of railroad funds.

The proportion of total premiums to wages is shown to be 0.96 per cent in 1901 and 1.08 per cent in 1902. This is not altogether accurate, because in the private and railroad funds no premiums are paid. The percentages for the years 1901 and 1902, excepting the private funds and railroad funds, are 1.10 and 1.26, respectively. The percentage is highest for the national institution, which corroborates the opinion that the industries with the highest risks are insured

in this institution. Altogether, however, the accident insurance system as established by the law of 1898 did not cost Italian industries much over 1 per cent of the wage expense during 1898 to 1902. As the amendments of 1903, embodied in the codified text of 1904, made somewhat more liberal provisions, the cost is now considerably higher. In fact the data for 1903 to 1906, though not very accurate, seem to indicate an increasing cost, which in 1904 amounted to 1.56 per cent, in 1905 to 2.12 per cent, and in 1906 to 2.19 per cent.

This comparatively low cost of the accident insurance system in the earlier years is explained by the very low average amount of the compensation. From the two preceding tables and the estimates of Dr. Magaldi, quoted below, the following statement has been compiled:

NUMBER OF ACCIDENTS COMPENSATED AND TOTAL AND AVERAGE AMOUNT OF INDEMNITY PAID, 1899 TO 1905.

Year.	Accidents compensated.	Indemnity paid.		Year.	Accidents compensated.	Indemnity paid.	
		Total.	Average.			Total.	Average.
1899 (a)	55,389	\$738,621	\$13.34	1903.....	73,704	\$1,286,948	\$17.46
1900.....	58,733	979,543	16.68	1904.....	121,654	1,951,572	16.04
1901.....	66,295	1,033,636	15.59	1905.....	156,215	2,558,732	16.38
1902.....	63,369	1,147,243	18.10				

a Not including the railroad funds.

Thus the average amount of compensation per case, while increasing quite rapidly, amounted in 1902 to only \$18.10, and in 1905 to \$16.38, this including all cases.

A general average like the above has a limited value. Of greater importance are the averages for the four main classes of accidents, those resulting in death, complete permanent disability, partial permanent disability and temporary disability. In such detail, data are available only for the year 1901, and they are shown in the table following. The average compensation for death is found to have been only \$633.42, for complete permanent disability \$646.24, for partial permanent disability \$151.64, and for temporary disability, which cases constitute the vast majority of all accidents, \$3.83.

No definite conclusions can be derived from this table concerning any differences between the various classes of insurance institutions except that the benefits paid by the railroad funds are considerably higher than those of other institutions. The number of cases of death and total permanent disability is too small for the averages to be trustworthy. Both in case of partial permanent disability and temporary disability the compensation paid by private insurance companies seems to be decidedly smaller than that paid either by the National Accident Insurance Institution or by the mutual employers' associations.

NUMBER OF ACCIDENTS AND AVERAGE INDEMNITY, BY RESULT OF INJURY AND BY GROUPS OF INSURANCE INSTITUTIONS, 1901.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906.]

Kind of fund or association.	Injuries resulting in—								Total.	
	Death.		Total permanent disability.		Partial permanent disability.		Temporary disability.		Cases.	Indemnity per case.
	Cases.	Indemnity per case.	Cases.	Indemnity per case.	Cases.	Indemnity per case.	Cases.	Indemnity per case.		
National institution.....	279	\$613.82	10	\$693.70	895	\$169.93	20,837	\$4.07	22,021	\$18.85
Private companies.....	209	628.93	3	794.33	1,627	127.01	35,178	3.41	37,017	12.44
Employers' associations.....	31	544.13	.....	.....	106	168.36	2,334	3.93	2,471	17.53
Cooperative funds.....	1	724.00	.....	.....	6	274.67	182	4.63	189	17.01
Private funds.....	6	713.50	3	338.33	26	136.57	966	5.27	1,001	13.93
Railroad funds.....	46	820.39	1	651.00	101	371.13	3,448	6.34	3,596	27.18
Total.....	572	633.42	17	646.24	2,761	151.64	62,945	3.83	66,295	15.59

The results of the application of the accident insurance law during 1903, 1904, and 1905 are shown in the table following. The figures contained in this table were compiled by the author from original reports of the separate insurance companies, though some of them are only estimates. In the few cases where the figures may be checked up from official reports, as for instance the total number of accidents in 1905, they do not quite agree with the figures quoted elsewhere in this report. They are reproduced here as the best available data concerning the application of the law during recent years.

GENERAL RESULTS OF THE APPLICATION OF THE ACCIDENT INSURANCE LAW, 1903 TO 1905. (a)

[Source: Vincenzo Magaldi, Die Arbeiterversicherung in Italien (Zacher, Heft VIb, 1908).]

Year.	Total premium paid.	Total amount of compensation paid.	Total number of accidents.	Average amt. of compensation per accident.	Amt. of compensation per \$100 of premium	Eight insurance institutions reporting.					Approximate number of employees insured.	Approximate number of accidents per 1,000 insured.
						Number of workmen insured.	Annual wages paid to insured.	Number of accidents per 1,000 insured.	Average premium per \$1,000 of wages.	Average premium per insured.		
1903...	\$1,495,371	\$1,286,948	73,704	17.46	\$86.06	841,602	\$27,735,447	72	\$7.96	\$1.29	1,163,563	63.34
1904...	2,659,502	1,951,572	121,654	16.04	73.38	926,631	36,348,208	95	13.75	1.95	1,363,129	89.25
1905...	3,153,988	2,558,732	156,215	16.38	81.13	1,031,325	45,003,053	105	19.10	2.02	1,563,659	99.90

^a The number of workmen insured and the amount of wages paid to these workmen is available for eight insurance companies only. This important information is given in the table in columns 7 to 11, inclusive, while the last two columns contain an estimate of the total number of persons based upon data for these eight companies.

The table indicates, first, a rapid increase in the number of accidents compensated, proportionately as well as absolutely. In two years the absolute number has more than doubled (increased by 112 per cent), partly through inclusion of new industries by the amendments of 1903. But the accident rate within two years has increased from 72 to 105 per 1,000, or 45.8 per cent. The average amount of compensation has not shown any tendency to increase, being in 1905 less than in 1903 (\$16.38 as against \$17.46), but the total amount of compensation has doubled and the amount of premiums has even more than doubled. The average premium per insured has increased from \$1.29 to \$2.02, and the cost of the insurance premium from 0.8 per cent of the wages to 1.91 per cent, or considerably more than doubled.

It is the general impression in Italy that this rapid increase of accidents reported is to a great extent due to fraudulent practices, and, as will be shown in a later section, these conditions have created a strong demand for amendment in the procedure by which such frauds might be prevented.

LITIGATION UNDER THE LAW.

As one of the purposes of the law is to do away with unnecessary and costly litigation, and substitute for it a cheap, automatic, and orderly manner of settling disputes, the following statistics of the cases of litigation under this law are interesting. It appears that during the year 1906, 1,987 cases were disposed of in some way, and in 1907, 2,498, while 2,431 were pending on December 31, 1907, making a total of 6,916 for these two years. In the table these cases are shown by the result, by the court, and also by the group of insurance institutions.

LITIGATION UNDER THE ACCIDENT INSURANCE LAW DURING 1906 AND 1907.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1908, Vol. XXVI.]

Kind of fund or association and classification of courts.	1906.				1907.				1906 and 1907.				
	Number of cases—			Total cases.	Number of cases—			Total cases.	Number of cases—				Total cases.
	Ad-judicated.	Com-promised	Abandoned		Ad-judicated.	Com-promised	Abandoned		Ad-judicated.	Com-promised	Abandoned	Pending on December 31, 1907.	
National institution:													
Magistrates.....	79	125	54	258	97	197	70	364	176	322	124	211	833
Lower courts.....	187	341	117	645	181	364	123	668	368	705	240	668	1,981
Court of appeals.....	54	13	6	73	52	11	4	67	106	24	10	85	225
Court of cassation.....	9	.....	.....	9	9	1	.....	10	18	1	.....	12	31
Total.....	329	479	177	985	339	573	197	1,109	668	1,052	374	976	3,070
Insurance companies:													
Magistrates.....	43	103	14	160	51	117	36	204	94	220	50	243	607
Lower courts.....	109	244	26	379	190	322	54	566	299	566	80	614	1,559
Court of appeals.....	27	4	1	32	43	5	.....	48	70	9	1	79	159
Court of cassation.....	11	1	.....	12	3	.....	.....	3	14	1	.....	14	29
Total.....	190	352	41	583	287	444	90	821	477	796	131	950	2,354
Mutual associations:													
Magistrates.....	94	35	12	141	104	40	15	159	198	75	27	157	457
Lower courts.....	134	61	9	204	160	78	9	247	294	139	18	255	706
Court of appeals.....	22	1	.....	23	81	7	3	91	103	8	3	53	167
Court of cassation.....	1	.....	.....	1	2	.....	.....	2	3	.....	.....	5	8
Total.....	251	97	21	369	347	125	27	499	598	222	48	470	1,338
Cooperative funds:													
Magistrates.....	1	.....	.....	1	1	1	.....	2	2	1	.....	.....	3
Lower courts.....	5	7	.....	12	5	9	1	15	10	16	1	10	37
Court of appeals.....	3	.....	.....	3	1	.....	.....	1	4	.....	.....	.....	4
Court of cassation.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	9	7	.....	16	7	10	1	18	16	17	1	10	44
Private funds:													
Magistrates.....	2	2	2	6	11	2	4	17	13	4	6	5	28
Lower courts.....	11	8	1	20	13	14	.....	27	24	22	1	18	65
Court of appeals.....	6	.....	.....	6	6	.....	.....	6	12	.....	.....	1	13
Court of cassation.....	2	.....	.....	2	1	.....	.....	1	3	.....	.....	1	4
Total.....	21	10	3	34	31	16	4	51	52	26	7	25	110
All insurance institutions:													
Magistrates.....	219	265	82	566	264	357	125	746	483	622	207	616	1,928
Lower courts.....	446	661	153	1,260	549	787	187	1,523	995	1,448	340	1,565	4,348
Court of appeals.....	112	18	7	137	183	23	7	213	295	41	14	218	568
Court of cassation.....	23	1	.....	24	15	1	.....	16	38	2	.....	32	72
Total.....	800	945	242	1,987	1,011	1,168	319	2,498	1,811	2,113	561	2,431	6,916

Of the 6,916 cases, 2,431 were pending, so that only 4,485 were settled in or out of court. Of these, 561, or 12.5 per cent, were abandoned, 2,113, or 47.1 per cent, were compromised out of court, and only 1,811, or 40.4 per cent, were adjudicated in court. The number of cases disposed of by the various insurance institutions reaches nearly 150,000. For the National Accident Insurance Institution and the private insurance companies, the report gives the following comparison for 1906, the figures for 1907 not being available at the time.

DISPOSITION OF CASES OF LITIGATION IN THE NATIONAL ACCIDENT INSURANCE INSTITUTION AS COMPARED WITH PRIVATE INSURANCE COMPANIES, 1906.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1908, Vol. XXVI.]

Kind of insurance institution.	Number of accidents.	Amount of premiums received.	Amount of compensation paid for accidents.	Cases of litigation on account of accident.							
				Adjudicated.		Compromised.		Abandoned.		Total.	
				Num-ber.	Per 1,000 acci-dents	Num-ber.	Per 1,000 acci-dents	Num-ber.	Per 1,000 acci-dents	Num-ber.	Per 1,000 acci-dents
National Accident Insurance Institution.	66,077	\$1,244,289	\$1,119,064	329	4.98	479	7.25	177	2.68	985	14.91
Private insurance companies.....	86,416	1,637,595	1,407,155	190	2.20	352	4.07	41	.47	583	6.75

It appears from this comparison that of the cases insured in the National Accident Insurance Institution, nearly 15 cases per thousand led to litigation, while for the private insurance companies the proportion is less than 7 per thousand. It is explained in the official report, however, that this difference against the national institution is not due to any tendency of this institution to put difficulties in the way of paying compensation and to call forth litigation, but to the fact that private insurance companies may scrutinize the requests for accident insurance and decline the risks, while the national insurance institution is prohibited from declining any application for insurance, and therefore gets the worst insurance contracts.

THE NATIONAL ACCIDENT INSURANCE INSTITUTION.

Among the institutions provided for accident insurance the most important is the National Institution for Insurance of Workmen against Industrial Accidents (*Cassa Nazionale d' Assicurazione per gl' Infortuni degli Operai sul Lavoro*), not only because of its close official relations with the Government, making it practically a state institution, and because of the large amount of accident insurance it carries, but also because of its history and the rôle it played in the development of the idea of accident insurance. Italy joined the list of countries with compulsory accident insurance in 1898, after a long and obstinate opposition, which lasted nearly 20 years. During all this time Italy was making an effort to solve the problem through the method of voluntary insurance, and because the establishment of this system did not change the legal status of employers' liability, no objections were raised to the bill to establish a national insurance institution for the voluntary insurance of workmen against accidents, which was offered by the Government to the Parliament on the same day (in 1883) that the first bill for a system of compensation was introduced.

For 15 years (1883 to 1898) this system of voluntary insurance operated before the law for compulsory insurance was finally passed, and while the voluntary system was admitted to be insufficient, the volume of the operations under this system was constantly growing. In the system of compulsory insurance, as introduced by the law of 1898, this national insurance institution was given a prominent function, but its operation under the new law has radically changed in so many important respects that the history of this institution is divided by the law of 1898 into two well-defined periods.

HISTORY.

The National Accident Insurance Institution is a private institution, organized by ten private savings and banking institutions,^(a) which on February 8, 1883, concluded an agreement with the minister of agriculture, industry, and commerce. This agreement was approved by the law of July 8, 1883. The law granted to this private institution certain privileges, such as the free cooperation of the postal savings banks in all its financial transactions, the exemption of all its transactions from stamp duties and other taxes, and the exemption of the institution from the provisions of the Commercial Code concerning commercial corporations. The system of voluntary insurance against accidents as it existed until the law of March 17, 1898, went into effect, was established by this agreement and the following acts: The law of December 3, 1886, and royal decrees of March 26, 1884 (approving the rates), July 3, 1884 (approving the constitution and by-laws), July 24, 1887, November 22, 1888, and December 29, 1888 (approving the revised by-laws).^(b)

The institution was left its autonomous administration, though put under government control. It was self-supporting, that is, no subsidy from the Government was granted. Its income was derived mainly from the insurance premiums, and in addition from interest on investments, and from other miscellaneous sources. The endowment funds, however, were large, and therefore presented a substantial aid to those who wished to undertake the insurance of employees. As such insurance was entirely voluntary, it follows that the establishment of this institution did not introduce any change in

^a The institutions were as follows: The savings banks of Milan, Turin, Bologna, Rome, Venice, Cagliari, the banks of Naples and of Sicily, the loan savings bank of Genoa, and the loan company at Siena. The Milan institution contributed 600,000 lire (\$115,800) (which was subsequently increased to 625,000 lire (\$120,625)), the Naples bank 200,000 lire (\$38,600), the banks at Turin, Bologna, Siena, Rome, and Sicily 100,000 lire (\$19,300) each, the Genoa bank 75,000 lire (\$14,475), and the banks of Venice and Cagliari 50,000 lire (\$9,650) each.

^b Bollettino di Notizie sul Credito e sulla Previdenza, 1884. Also Maurice Bellom, *Les Lois d'Assurance Ouvrière a l'Étranger*. II. Assurance Contre les Accidents. Troisième partie, pages 1653-1700.

the legal relations of the employers and employees, and put no financial obligations upon the industries except as the employer was willing to insure his employees at his own expense:

The insurance institution was organized in recognition of the necessity of some provision for the victims of industrial accidents, as well as of the advantages of an orderly adjustment of claims over protracted judicial procedures. Notwithstanding the recognition of the advantages of insurance, the obligatory system was claimed to be ill adapted to Italian conditions, because the burden of such insurance was excessive in view of the weak position of Italian industry, and because the compulsion was out of harmony with Italian conditions. Therefore it was reasoned that the development of voluntary insurance was more desirable, and for this development the national institution was to be a most efficient stimulus. There had existed some private accident insurance even before the institution was organized; but it was costly and therefore not popular. The national institution was able to quote very low premium rates for three reasons: The absence of a profit motive in its organization by the ten savings banks, which are institutions for social welfare; the low cost of administration, and the material advantages arising from the guarantee fund and the privileges offered by the Government. The premium rates of the National Accident Insurance Institution were very much lower than those quoted by private insurance companies, the latter in some cases being 300 or 400 per cent higher.^(a) It thus not only offered a very cheap form of insurance but was to act as a factor in forcing the private companies to reduce their rates.

The National Accident Insurance Institution began its operations on a very small scale, but grew rapidly during the earlier years. In 1884 the number of insured was less than 500; in 1886, over 30,000; and in 1890 over 100,000. In 1897, on the eve of the adoption of the compulsory accident insurance law, the total number of insured was 172,869.

PRESENT PURPOSE AND SCOPE.

The original legislation concerning the national institution still remains in force, and only new regulations concerning premiums and indemnity were issued in 1898 and 1903 to conform with the requirements of the new law. The institution provides accident insurance to all who apply for it. According to the law of 1904, it must accept all insurance—and even all reinsurance—offered, though it may increase the premiums when the insurance asked presents a special risk. The law further provides that establishments operated by the state,

^a *Avantage du libre choix de l'assureur—Congrès International des Accidents du Travail et des Assurances Sociales. Troisième Session, Milan, 1894. Tome 1, pages 865 to 881.*

provincial, and communal governments, or by private persons by franchise from the Government, must insure their employees in the national institution.

As far as obligatory insurance is concerned, the general provisions of the accident insurance law apply. Voluntary insurance against accidents may be contracted for by any industrial or agricultural establishment in the country.

According to the decree of November 22, 1888, all workmen who reside within the Kingdom and who have reached the age of 9 years may be insured. According to the agreement of 1883 the minimum age was 10 years. The blind, deaf, mute, epileptic, and insane are excluded, as a rule, though the executive committee may permit the insurance of deaf, mute, or blind. Epileptics may be insured only in the collective form and persons over 70 years of age only in the individual form.

From the beginning of the operations of the national insurance institution it has insured against the results of industrial accidents, namely, death, total or partial permanent disability, and temporary disability. Each insurance policy may or may not include the latter, separate schedules of rates being provided for insurance which includes temporary disability benefits.

BENEFITS.

As the whole organization of the national insurance institution for the first 15 years of its existence was based-upon the principle of voluntary insurance, no fixed amounts of compensation could be established, the determination of the amounts being left to individual contracts and depending upon the insurance premium paid, as explained in a later section.

The following stipulations were made in regard to the payment of compensation. In case of death, the whole amount of insurance was paid to the legal heirs. Of permanent disability, three degrees were recognized. First degree: Total permanent disability, including the loss of both eyes, both arms, both hands, both feet, one arm and one hand, one hand and one foot, or incurable mental disease. For such disability the payment of the full amount of insurance was granted. Second degree: Permanent disability, reducing the earning capacity one-half or more, including such injuries as the loss of one arm or hand or one leg or foot, or such mental disease as does not altogether disqualify the person from employment. Third degree: When the injury is not as serious as in the preceding degrees, but yet leads to permanent diminution of earning power, such as loss of one eye, or one or several fingers. For injuries leading to disability of the second or third degree from 10 to 80 per cent of the total amount of insurance was paid. Indemnities for permanent disability or

death were paid if these consequences developed within one year from the day of the accident.

In case of temporary disability the full amount of the daily benefit stipulated in the insurance policy is paid from the sixth day throughout the continuance of the disability, but not over 360 days. The original agreement provided for compensation for temporary disability to begin one month after the injury; but by the law of December 23, 1886, the superior council was permitted to reduce this period, with the approval of the Government, and by the decree of July 24, 1887, the payment of compensation beginning with the sixth day was permitted.

The amount of daily benefits could be reduced by 20 per cent to 40 per cent after the first 24 days. If the duration of disability could not be estimated, or was likely to last over three months, the institution could, with the agreement of the injured person, substitute a lump sum for the daily benefits. This amount of benefits paid for temporary disability must be deducted from the amount due for permanent disability or death when such results finally develop. Furthermore, maximum limits of indemnity were established by the regulations, which meant putting a limit to the amount of insurance. For cases of death and total permanent disability the limit was 10,000 lire (\$1,930), and for temporary disability 5 lire (97 cents) per day.

The national insurance institution may also insure the employers against the risk of employers' liability, but the limit of insurance must not exceed 10,000 lire (\$1,930). The maximum limit may be made smaller by the executive committee, and must be specified in the policy. In any case the institution insures to the employer the payment of only nine-tenths of the judgment in favor of the employee, and in case of 7 classes of greater risk (out of the 14 classes into which all the establishments were divided) only eight-tenths. Thus the interest of the employer in preventing severe industrial accidents is not entirely eliminated, even if the employer carries insurance against employers' liability.

With the introduction of compulsory compensation for accidents by the law of 1898 and subsequent acts the compensation for accidents under contracts made in compliance with these laws are regulated; but there is in addition a considerable amount of voluntary insurance, for which the rates of compensation are arbitrary.

SOURCES OF INCOME.

The National Accident Insurance Institution is a self-supporting institution. Its income, besides the small revenue from interest on the endowment and other investments, is derived from the premiums paid by the persons contracting for insurance. As the law requires

the employers to meet this cost in all industries specified, by far the largest share now comes from the employers. The State does not contribute directly to the resources of the insurance institution. A certain amount of individual insurance against accidents is still written by the institution. Employees in industries not covered by the laws of 1898 and 1903 may thus obtain protection for themselves at their own expense. Employers may voluntarily insure workmen at their own expense, and special provisions were also made for collective insurance of the membership of mutual benefit societies.

PREMIUMS.

The study of the premiums and their development is of great importance because it throws some light upon the problem of cost of accident insurance. During the 25 years of its existence the premiums of the National Accident Insurance Institution have undergone many revisions, mainly with a view of their increase.

The general scale of premiums depended upon the forms of insurance, in addition to the variation of the trade risk. Three forms of insurance were recognized at the beginning of the operations—individual insurance, simple collective insurance, and combined collective insurance. Individual insurance is a contract entered into with an individual employee, and guaranteeing him a specified sum in case of injury sustained from an industrial accident. Simple collective insurance may be carried either by an employer for his employees, an employer and his employees jointly for the benefit of the latter, or an association of workmen for the benefit of its members. Finally, combined collective insurance is carried either by the employer individually or jointly with his employees in favor of the latter, and in addition to the regular benefits also insures the employer against judgments arising out of employers' liability. Insurance against employers' liability only was not permitted.

The insurance premiums differed for each of these three forms of insurance and also varied according to the degree of risk. For these purposes all industries and classes of employees were divided into 14 classes on the basis of the imperfect accident statistics obtainable at the time, and a long list of such industries and form of work and employment was prepared, which contained nearly 700 items. In addition separate rates were quoted per person insured and per 1,000 lire (\$193) of wages paid, the former for all forms of insurance and the latter only for collective insurance. As insurance may be written either with or without the inclusion of temporary disability benefits, separate premium rates were prepared for both forms.

The first tariff of premiums was approved by the council of the institution in February, 1884; it was slightly modified and raised in

December, 1888. Both tariffs are given for the different forms of insurance in the following table. Tariff A was applicable to individuals insuring themselves against the results of industrial accidents. Tariffs B and D were intended for collective insurance. Tariff B granted the right to the same compensation as tariff A, but it was lower because of the collective nature of the insurance. In tariff D the rates are for compensation to the employee and also the insurance of the employer against liability within the limits specified, namely, up to 10,000 lire (\$1,930). For the seven lower-risk groups the insurance covered only nine-tenths and for the seven higher-risk groups only eight-tenths of the judgment in favor of the employee.

For all the three classes of insurance the rates of compensation could be doubled, trebled, etc., by corresponding increases of the premium.

Tariffs B and D can be applied conveniently only to permanent employees and would present many practical difficulties with a shifting body of employees. These rates were therefore open to permanent bodies, such as mutual benefit associations or similar organizations, or to such employers as were able to furnish complete lists of names of employees. In all cases the application of these tariffs required a special permit of the administrative council of the national insurance institution.

The policies for which the premium rates shown in the following table were paid included a death benefit of 1,000 lire (\$193), a total permanent disability benefit of 1,000 lire (\$193), a partial permanent disability benefit in proportion to the reduction of earning power, a temporary disability benefit of 1 lira (19.3 cents) per day, and an employers' liability insurance up to 10,000 lire (\$1,930), but not more than nine-tenths of the judgment for classes 1 to 7 and eight-tenths for classes 8 to 14.

ANNUAL PREMIUM RATES PER PERSON INSURED, AS APPROVED IN 1884 AND IN 1888, BY FORM OF INSURANCE AND CLASS OF RISK.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1884. Cassa Nazionale d'Assicurazione per gli Infortuni degli Operai sul Lavoro. Regolamento dei premi e delle indennità e tariffe. Milano, 1898.]

Form of insurance.	Premium rate per person insured in risk class—													
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Individual insurance (tariff A), 1884: (a)														
Without temporary disability benefit.....	<i>Lire.</i> 1.00	<i>Lire.</i> 1.12	<i>Lire.</i> 1.35	<i>Lire.</i> 1.57	<i>Lire.</i> 1.85	<i>Lire.</i> 1.99	<i>Lire.</i> 2.24	<i>Lire.</i> 2.73	<i>Lire.</i> 3.29	<i>Lire.</i> 4.60	<i>Lire.</i> 6.13	<i>Lire.</i> 8.05	<i>Lire.</i> 10.05	<i>Lire.</i> 13.00
With temporary disability benefit.....	1.50	1.68	2.03	2.35	2.77	2.99	3.36	4.13	4.93	6.90	9.20	12.08	15.02	19.50
Simple collective insurance (tariff B) (exclusive of employers' liability):														
Without temporary disability benefit.....	1884.. .60	.72	.80	.96	1.12	1.28	1.44	1.60	1.99	2.40	3.20	4.80	8.00	12.00
1888.. .72	.80	.96	1.12	1.28	1.44	1.60	1.99	2.40	3.20	4.80	7.20	9.60	12.00	
With temporary disability benefit.....	1884.. .90	1.08	1.20	1.44	1.68	1.92	2.16	2.40	2.99	3.60	4.80	7.20	12.00	18.00
1888.. 1.08	1.20	1.44	1.68	1.92	2.16	2.40	2.99	3.60	4.80	7.20	10.80	14.40	18.00	
Combined collective insurance (tariff D) (with employers' liability), 1888: (b)														
Without temporary disability benefit.....	1.03	1.41	1.55	1.87	2.17	2.44	2.95	3.54	4.47	6.37	8.94	12.40	15.86	19.33
With temporary disability benefit.....	1.39	1.81	2.03	2.43	2.81	3.16	3.75	4.54	5.67	7.97	11.34	16.00	20.66	25.33

a Not changed in December, 1888.

b No corresponding tariff in 1884.

The normal tariffs used were those based upon the amount of the wage expenses, and quoted per 1,000 lire (\$193) of wages paid, rather than those based on the number of persons employed. According to the first tariff of 1884, the amount of compensation agreed upon in case of death or total permanent disability could be either one, two, three, or four years' salary; partial permanent disability was compensated proportionately, and for temporary disability the daily allowance was equal to one-thousandth of the insurance in case of death.

The tariff C as quoted covered insurance for all the possible consequences of industrial accidents—death, permanent disability, and temporary disability—but if it was desired to exclude all provision for temporary disability the premium rates were reduced one-third. This form of insurance included employers' liability. It was evidently expected in the beginning that the payments connected with this form of insurance would be heavy. Thus two tariffs were prepared, C and C¹, the former insuring only nine-tenths of the employers' liability and C¹ insuring the entire liability; and the difference between these two tariffs was considerable, as may be seen from the following table. Moreover, such unlimited insurance of employers' liability was permitted only for the classes of lower risks, I to X, so that for the classes XI to XIV the rates are equal in both tariffs C and C¹.

The premiums for various amounts of insurance were not proportionate to the amount of compensation, which is partly explained by the inclusion of the fixed charge for employers' liability.

The premiums shown in the next table were for the following benefits:

(1) In case of death or total permanent disability, an amount equal to the specified number of times the annual wages.

(2) In case of partial permanent disability, a proportionate part of the sum above mentioned, according to the reduction of earning power.

(3) In case of temporary disability, a daily benefit equal to one-thousandth part of that amount, but not over the daily wages and not over 5 lire (96.5 cents), beginning with the thirty-first day of disability and up to three hundred and sixty days.

(4) A guarantee of employers' liability, unlimited (tariff C¹) or up to nine-tenths (tariff C).

ANNUAL PREMIUM RATES PER 1,000 LIRE (\$193) OF WAGES PAID ACCORDING TO THE TARIFF OF 1884, BY FORM AND AMOUNT OF INSURANCE AND CLASS OF RISK.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1884.]

Form and amount of insurance.	Premium rate per 1,000 lire (\$193) in risk class—													
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Combined collective insurance, with insurance of employers' liability limited to nine-tenths (tariff C).														
Amount of policy:	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>
1 year's wages.....	1.30	1.39	1.81	2.03	2.43	2.81	3.16	3.75	4.54	5.67	7.97	11.34	16.88	25.33
2 years' wages.....	2.05	2.49	2.81	3.24	3.83	4.40	4.97	5.72	7.02	8.64	11.88	17.28	27.00	40.50
3 years' wages.....	2.75	3.32	3.73	4.37	5.13	5.89	6.64	7.56	9.32	11.34	15.39	22.68	36.45	54.68
4 years' wages.....	3.40	4.10	4.56	5.40	6.35	7.29	8.18	9.18	11.39	13.77	18.50	27.54	45.23	67.68
Combined collective insurance, with unlimited insurance of employers' liability (tariff C ¹).														
Amount of policy:														
1 year's wages.....	1.44	1.54	2.01	2.25	2.70	3.12	3.51	4.14	5.04	6.30	(a)	(a)	(a)	(a)
2 years' wages.....	2.28	2.76	3.12	3.60	4.26	4.89	5.52	6.36	7.80	9.60	(a)	(a)	(a)	(a)
3 years' wages.....	3.06	3.69	4.14	4.86	5.70	6.54	7.38	8.40	10.35	12.60	(a)	(a)	(a)	(a)
4 years' wages.....	3.78	4.56	5.07	6.00	7.05	8.10	9.09	10.20	12.66	15.30	(a)	(a)	(a)	(a)

^a Unlimited insurance of employers' liability not permitted for this class.

These tariffs per 1,000 lire (\$193) of wages paid, as the most frequently used, were most modified in 1888. Tariff C¹ was altogether abolished, it being considered undesirable to grant unlimited insurance of employers' liability. Tariff C, for combined collective insurance with limited employers' liability, became tariff E, and a new tariff for simple collective insurance, per 1,000 lire (\$193) of wages paid, was prepared.

The determination of the compensation in multiples of the annual earnings was thought too rigid, and a more flexible system of multiples of daily wages was substituted, eight classes being recognized instead of the previous four classes. As in the preceding tariff of 1884, tariffs

C and E cover insurance for all the possible consequences of industrial accidents. If it was desired to exclude temporary disability the premium rates according to tariff C were reduced by one-third. As Tariff E included a charge for employers' liability insurance, it could be adjusted for the exclusion of temporary disability by deducting from the quotation of tariff E, which is to be used, one-third of the corresponding quotation from tariff C.

The premiums shown in the next table were for benefits, as follows:

- (1) In case of death or total permanent disability, an amount equal to the specified number of times the daily earnings.
- (2) In case of partial permanent disability, a proportionate part of the sum above mentioned, according to the reduction of earning power.
- (3) In case of temporary disability, a daily benefit equal to one-thousandth of that amount.
- (4) Under the combined collective insurance policy, a guarantee of employers' liability up to 10,000 lire (\$1,930), not exceeding nine-tenths of the judgment for classes 1 to 7 and eight-tenths for classes 8 to 14.

ANNUAL PREMIUM RATES PER 1,000 LIRE (\$193) OF WAGES PAID, ACCORDING TO THE TARIFF OF 1888, BY FORM AND AMOUNT OF INSURANCE AND CLASS OF RISK.

[Source: Cassa Nazionale d'Assicurazione per gli Infortuni degli Operai sul Lavoro. Regolamento dei premi e delle indennità tariffe. Milano, 1898.]

Form and amount of insurance.	Premium rate per 1000 lire (\$193) in risk class—													
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Simple collective insurance (tariff C):														
Amount of policy—	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>	<i>Lire.</i>
300 days' wages.....	1.08	1.20	1.44	1.68	1.92	2.16	2.40	2.99	3.60	4.80	7.20	10.80	14.40	18.00
400 days' wages.....	1.47	1.60	1.91	2.24	2.56	2.88	3.23	4.01	4.85	6.50	9.69	15.46	19.21	23.97
500 days' wages.....	1.88	2.01	2.38	2.80	3.20	3.62	4.06	5.03	6.10	8.20	12.19	18.12	24.02	29.95
600 days' wages.....	2.29	2.43	2.87	3.36	3.84	4.34	4.88	6.04	7.35	9.89	14.69	21.77	28.84	35.91
700 days' wages.....	2.60	2.81	3.32	3.88	4.42	5.03	5.66	7.00	8.51	11.46	17.00	25.19	33.37	41.56
800 days' wages.....	2.91	3.19	3.78	4.41	5.00	5.71	6.44	7.97	9.67	13.03	19.32	28.61	37.91	47.21
900 days' wages.....	3.24	3.58	4.24	4.94	5.66	6.39	7.23	8.92	10.83	14.59	21.64	32.04	42.44	52.84
1,000 days' wages....	3.56	3.93	4.64	5.44	6.24	7.02	7.94	9.80	11.90	16.03	23.77	35.22	46.67	58.10
Combined collective insurance (tariff E):														
Amount of policy—														
300 days' wages.....	1.39	1.81	2.03	2.43	2.81	3.16	3.75	4.54	5.67	7.97	11.34	16.00	20.66	25.33
400 days' wages.....	1.75	2.14	2.43	2.90	3.34	3.76	4.41	5.37	6.66	9.28	13.32	19.02	24.69	30.39
500 days' wages.....	2.12	2.47	2.83	3.37	3.87	4.37	5.07	6.20	7.65	10.58	15.30	22.02	28.72	35.45
600 days' wages.....	2.49	2.81	3.24	3.83	4.40	4.97	5.72	7.02	8.64	11.88	17.28	25.02	32.76	40.50
700 days' wages.....	2.76	3.11	3.62	4.26	4.87	5.53	6.33	7.79	9.54	13.05	19.08	27.79	36.51	45.23
800 days' wages.....	3.03	3.41	4.00	4.69	5.34	6.09	6.94	8.56	10.44	14.22	20.88	30.56	40.26	49.96
900 days' wages.....	3.32	3.73	4.37	5.13	5.89	6.64	7.56	9.32	11.34	15.39	22.68	33.34	44.00	54.68
1,000 days' wages....	3.60	4.00	4.72	5.54	6.36	7.15	8.10	10.00	12.15	16.43	24.30	35.87	47.44	59.02

The new conditions imposed by the accident insurance law upon the National Accident Insurance Institution necessitated the immediate preparation of a new premium tariff to conform with the cost of insurance under the new law. As the law of 1898 did not cover all industrial establishments and did not altogether destroy the opportunities for voluntary insurance, the old tariffs remained in force and

a new tariff of rates (tariff F) was added for insurance in compliance with the requirements of the law. Tariff F, shown in the table following, includes rates for insurance with employers' liability (combined collective insurance) and without such liability (simple collective insurance). Somewhat higher rates are also quoted in case the employer desires to grant for temporary disability a somewhat higher daily allowance than one-half of the daily wages as provided for by the law.

The tariff was approved by the executive council of the insurance institution on September 10, 1898, and by royal decree of October 30, 1898. It was preliminary in its character, not being based upon any very exact data. The old classification of industries and occupations was preserved with only a few changes, which were all, however, in the nature of transfers from a lower to the next higher risk group.

The tariffs are seen to be higher than the highest rates quoted in the highest tariff of 1888—that providing compensation of 1,000 times the daily wages for death. But, nevertheless, the premium securing all the forms of compensation guaranteed by the law of 1898 amounts to less than 1 per cent of the wage expense for the first seven risk groups. It is less than 2 per cent in Groups VIII, IX, and X, and only in the Groups XI to XIV does it rise to a very high level.

ANNUAL PREMIUM RATES PER 1,000 LIRE (\$193) OF WAGES PAID, FOR INSURANCE ACCORDING TO THE REQUIREMENTS OF THE LAW OF MARCH 17, 1898, AND ALSO FOR AN INCREASE OF AMOUNT OF COMPENSATION FOR TEMPORARY DISABILITY (TARIFF F).

[Source: Maurice Bellom, Les Lois d'Assurance Ouvrière à l'Etranger. II. Assurance contre les Accidents, 4^{ème} partie. For benefits covered by the premiums below, see p. 1753.]

Form and amount of insurance.	Premium rate per 1,000 lire (\$193) in risk class—													
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV
Simple collective insurance, with temporary disability benefits amounting to—														
50 per cent of daily wages.	<i>Lire.</i> 4.19	<i>Lire.</i> 4.60	<i>Lire.</i> 5.43	<i>Lire.</i> 6.37	<i>Lire.</i> 7.31	<i>Lire.</i> 8.23	<i>Lire.</i> 9.29	<i>Lire.</i> 11.48	<i>Lire.</i> 13.93	<i>Lire.</i> 18.76	<i>Lire.</i> 27.83	<i>Lire.</i> 41.26	<i>Lire.</i> 54.68	<i>Lire.</i> 68.08
60 per cent of daily wages.	4.32	4.74	5.60	6.56	7.52	8.47	9.57	11.81	14.35	19.33	28.67	42.48	56.28	70.07
70 per cent of daily wages.	4.43	4.87	5.75	6.73	7.71	8.70	9.83	12.13	14.74	19.85	29.44	43.62	57.79	71.95
80 per cent of daily wages.	4.53	4.99	5.90	6.91	7.91	8.92	10.09	12.46	15.12	20.37	30.21	44.76	59.31	73.84
Combined collective insurance, with temporary disability benefits amounting to—														
50 per cent of daily wages.	4.31	4.82	5.66	6.66	7.65	8.61	9.79	12.07	14.70	19.96	29.40	43.21	57.01	70.84
60 per cent of daily wages.	4.43	4.94	5.80	6.82	7.83	8.81	10.01	12.34	15.03	20.39	30.06	44.21	58.36	72.52
70 per cent of daily wages.	4.52	5.04	5.93	6.96	7.98	8.99	10.21	12.60	15.33	20.78	30.66	45.13	59.61	74.10
80 per cent of daily wages.	4.61	5.14	6.05	7.10	8.14	9.18	10.41	12.85	15.63	21.17	31.26	46.06	60.86	75.67

The rates quoted above were preliminary, and the administration of the National Accident Insurance Institution was ordered to prepare a new schedule of premium rates within two years. On November 1, 1900, this time was extended to October 20, 1902, and on September 6, 1902, again extended to December 31, 1903, in view of the preparation for the amendment of the law.^a The new tar-

^a Bollettino di Notizie sul Credito e sulla Previdenza, 1902.

iffs were finally approved by the superior council of the institution on November 28, 1903, and by royal decree on December 3, 1903. Accompanying these new premiums is a new set of regulations concerning premiums and compensation.

According to these new regulations, the following six forms of insurance are written by the institution, which are essentially the same as in the past.

A. Combined collective insurance according to the law as amended and inclusive of employers' liability.

B. Simple collective insurance according to the law, but exclusive of employers' liability.

C. Combined collective insurance for a stipulated rate of compensation and including employers' liability (for industries not covered by the law).

D. Simple collective insurance for a stipulated rate of compensation, but exclusive of employers' liability (for industries not covered by the law).

E. Individual insurance according to the law and exclusive of employers' liability.

F. Individual insurance for a stipulated rate of compensation.

As a rule, to which specific exceptions may be made by the institution, the collective forms of insurance embrace all workmen employed by the establishment who come under the provisions of the laws of March 17, 1898, and June 29, 1903. But simple collective insurance may also be taken by a workmen's mutual benefit society. All collective insurance must comply with the general conditions of the policy as approved by the minister of agriculture, industry, and commerce. The conditions of the individual policy are prepared by the superior council of the institution, conforming as far as possible to those of the collective policy.

The premium rates were radically changed by the new tariff. A general increase was found necessary because of the gradual rise in the number of accidents compensated. Besides, the twenty years' experience of the institution permitted a more careful classification of industries and occupations according to their accident risks. Instead of 14 groups, the new tariff presents 32 groups. In the table following are presented the two basic tariffs, A and D, for the corresponding classes of insurance. Tariff A is quoted per 1,000 lire (\$193) of wages paid and includes the legal insurance as well as employers' liability. Tariff D is quoted per employee, and covers under the corresponding class of insurance the following amounts of compensation: In case of death or total permanent disability 1,000 lire (\$193), a proportionate amount in case of partial permanent disability, and 1 lira (19.3 cents) per day in case of temporary disability. Tariff A is practically of the greatest importance.

The premium under tariff B (that is, exclusive of employers' liability) is obtained by reducing the corresponding premium under tariff A by 3 per cent.

Insurance under tariffs C and D is intended for industries not covered by the law. Premiums for this form must be quoted per person per annum. If the compensations stipulated are identical with those required by the law, then the premiums under tariffs A and B may be applied to the annual earnings of each employee. Tariff D is applicable when the stipulated compensation is as given above. If it is desired to include the insurance of employers' liability, 10 per cent must be added to these rates. If other amounts of compensation are stipulated, the institution may quote different rates. For individual insurance the same rates are applied.

The law defines the daily allowance for temporary disability as half of the daily earnings. If it is desired to increase this to 80 per cent of the earnings, the rate of the second higher risk groups is applicable for the first six groups, and the next higher group for the remaining groups. Eight-tenths is the normal maximum of the daily earnings insurable, though in exceptional cases nine-tenths may be stipulated; the daily allowance must not exceed 5 lire (96.5 cents), unless one-half of the wages exceeds this limit. The other maximums established are: For death, 10,000 lire (\$1,930), and for total permanent disability, 12,000 lire (\$2,316).

ANNUAL PREMIUM RATES APPROVED DECEMBER, 1903, BY CLASS OF RISK.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1904. For benefits covered by the premiums below see p. 1755.]

Risk class.	Pre- mium per 1,000 lire of wages paid (tariff A).	Premium per each employee.				Risk class.	Pre- mium per 1,000 lire of wages paid (tariff A).	Premium per each employee.			
		Including com- pensation for temporary disability (tariff D).		Exclusive of compensation for temporary disability (tariff D).				Including com- pensation for temporary disability (tariff D).		Exclusive of compensation for temporary disability (tariff D).	
	<i>Lire.</i>	<i>Lire.</i>	<i>\$.</i>	<i>Lire.</i>	<i>\$.</i>		<i>Lire.</i>	<i>Lire.</i>	<i>\$.</i>	<i>Lire.</i>	<i>\$.</i>
I.....	2.50	1.00	\$0.19	1.00	\$0.19	XVII...	26.00	8.40	\$1.62	5.50	\$1.06
II.....	3.00	1.25	.24	1.10	.21	XVIII...	30.00	9.50	1.83	6.00	1.16
III.....	4.00	1.50	.29	1.20	.23	XIX.....	35.00	10.60	2.05	6.70	1.29
IV.....	5.00	1.75	.34	1.30	.25	XX.....	40.00	11.80	2.28	7.50	1.45
V.....	6.00	2.00	.39	1.40	.27	XXI.....	45.00	13.00	2.51	8.50	1.64
VI.....	7.00	2.30	.44	1.60	.31	XXII...	50.00	14.20	2.74	10.00	1.93
VII.....	8.00	2.60	.50	1.80	.35	XXIII...	55.00	15.40	2.97	11.50	2.22
VIII....	9.00	3.00	.58	2.00	.39	XXIV...	65.00	16.60	3.20	13.00	2.51
IX.....	10.00	3.30	.64	2.20	.42	XXV...	75.00	18.00	3.47	14.50	2.80
X.....	11.00	3.60	.69	2.40	.46	XXVI...	90.00	20.00	3.86	16.50	3.18
XI.....	12.00	4.00	.77	2.60	.50	XXVII...	105.00	25.00	4.83	19.00	3.67
XII.....	14.00	4.60	.89	3.00	.58	XXVIII...	125.00	31.00	5.98	22.00	4.25
XIII....	16.00	5.30	1.02	3.50	.68	XXIX...	150.00	38.00	7.33	25.00	4.83
XIV....	18.00	6.00	1.16	4.00	.77	XXX...	200.00	48.00	9.26	30.00	5.79
XV.....	20.00	6.60	1.27	4.50	.87	XXXI...	250.00	60.00	11.58	40.00	7.72
XVI....	23.00	7.50	1.45	5.00	.97	XXXII...	300.00	75.00	14.48	55.00	10.62

NOTE.—Tariff B may be derived from tariff A by a reduction of 3 per cent. Tariff C may be derived from tariff D by an increase of 10 per cent. In insurance forms E and F tariffs B and D, respectively, may be used.

The list of industries and occupations with the risk class under which each has been placed is given on pages 1758 to 1769. As is indicated in the many notes, it is not absolute. Many conditions may be taken into consideration for the purpose of increasing the premium, by placing the industry or occupation in a higher risk group. In addition to these specific qualifications, a general rule permits the increase or decrease of the premium under the following circumstances: Increase of premium in case of use of mechanical or circular saws, use of motors or dangerous machinery, extensive use of means of transportation, work on scaffolds or stagings or in any other position in which falls are possible, work in place when collapse of materials is likely, use of explosives, corrosive substances, compressed gases, inflammable liquids, or other dangerous substances.

Decrease of premium in case of use of electric motors, especially for the purpose of driving machinery; use of special and efficient safety appliances, or other conditions evidently reducing the risk of the industry.

Whenever several distinct processes differing as to their degree of risk are combined in one establishment, the premium may be computed in the following way: The wage expense in each department is multiplied by the corresponding premium rate, and the sum of the products is divided by the total wage expense. Where such computation is impossible, a similar computation, based upon the number of employees in the various departments, may be made.

Furthermore, the executive committee of the national insurance institution is permitted to add new industries to those in the list, and even transfer industries from one risk group to another, upon the basis of experience acquired.

The institution is to write insurance asked for by any industry to which the law of obligatory insurance applies, but may decline the insurance in case of industries not subject to the law if the risk appears unfavorable, because of the character of the persons to be insured, their age, or their condition of health, if they object to a sufficient increase of the premium.

In addition to the premium as per tariff, a special charge of two lire (38.6 cents) is levied upon the policy, when the premium does not exceed 50 lire (\$9.65); of 5 lire (96.5 cents) when the premium is more than 50 lire (\$9.65) but not more than 200 lire (\$38.60); and of 10 lire (\$1.93) for all policies contracting for a premium of over 200 lire (\$38.60). No special charge is levied upon individual policies.

Finally a minimum premium is established for all policies. For the individual policies this minimum amounts to only 1 lira (19.3 cents), and for the collective policies the minimum is as follows:

MINIMUM ANNUAL PREMIUMS FOR COLLECTIVE INSURANCE.

For risk classes—	Minimum annual premium allowable.	
	Lira.	\$
I to V.....	5	0.965
VI to X.....	10	1.930
XI to XV.....	15	2.895
XVI to XX.....	20	3.860
XXI to XXIII.....	30	5.790
XXIV to XXVI.....	40	7.720
XXVII to XXXII.....	50	9.650

In the following table are shown the industries and occupations included in each of the 32 risk classes and for each class the annual premium rate in per cent of wages paid. The rates, which were approved in December, 1903, are for combined collective insurance according to the law as amended, including insurance of employers' liability.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS.

[Source: Cassa Nazionale d' Assicurazione per gl' Infortuni degli Operai sul Lavoro . Regolamento dei premi e delle indennità e tariffe, 1903. For benefits covered by these premiums, see page 1755.]

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
AGRICULTURE, ANIMAL INDUSTRY, AND SILVICULTURE.			
Agriculture:			
1	Agriculture, with machinery, including the entire personnel of the establishment (a).....	XX	4.0
2	Agriculture, without machinery, including the entire personnel of the establishment.....	XII	1.4
3	Steam plowing.....	XX	4.0
4	Machine seeding.....	XIV	1.8
5	Machine mowing.....	XX	4.0
6	Steam thrashing.....	XXII	5.0
7	Steam pressing of fodder.....	XVIII	3.0
8	Steam chopping of fodder.....	XXV	7.5
9	Tilling for hemp and flax with machinery.....	XVIII	3.0
10	Tilling for hemp and flax without machinery.....	VIII	.9
11	Drying rooms, with machinery.....	XIII	1.6
12	Drying rooms, without machinery.....	IX	1.0
13	Engineers and firemen attending to steam engines used for agricultural work not mentioned in the tariff (irrigation, drainage, cleaning, and grinding of cereals, pressing, etc.), including accessory machinery when it does not present any special danger.....	XIX	3.5
14	Horticulture, viticulture, gardening, and other work of a similar nature (b).....	VIII	.9
15	Dissipating hailstorms.....	XXVII	10.5
Animal industry:			
16	Cattle raising, driving, and care of stock.....	XXI	4.5
17	Poultry raising.....	I	.25
18	Silkworm raising, with their removal from the leaves of the mulberry tree, and their transportation.....		1.8
19	Silkworm raising, without the removal from the leaves of the mulberry tree, and their transportation.....	IX	1.0

a The premium may be reduced when the use of mechanical motors is limited.

b If machinery is used the premium must be increased.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

In- du- stry num- ber.	Industry.	Risk class.	Annual premium rates in per cent of wages.
AGRICULTURE, ANIMAL INDUSTRY, AND SILVICULTURE—concluded.			
Silviculture:			
20	Tree felling in the mountains (a).....	XXVIII	12.5
21	Tree felling on the plains (b).....	XXVI	9.0
22	Trimming and gathering flowers and seed and other work performed upon the trees.....	XX	4.0
23	Manufacture of charcoal, with chopping of wood.....	XXVI	9.0
24	Manufacture of charcoal, without chopping of wood.....	XI	1.2
FOODSTUFFS, OILS, AND TOBACCO.			
Beverages, alcohols, and ice:			
25	Effervescent waters.....	XIX	3.5
26	Mineral waters.....	XI	1.2
27	Wines (c).....	XI	1.2
28	Breweries.....	XVII	2.6
29	Manufacture of malt.....	VIII	.9
30	Manufacture and refining of alcohol.....	XVI	2.3
31	Manufacture of spirits, liquors, exclusive of the distilling with machinery.....	XIII	1.6
32	Same as above, without machinery.....	XI	1.2
33	Sirups.....	XIII	1.6
34	Vinegar.....	IX	1.0
35	Artificial ice.....	XXII	5.0
Coffee and spices:			
36	Coffee drying and roasting, with machinery.....	VIII	.9
37	Coffee drying and roasting, without machinery.....	III	.1
38	Coffee substitutes, with machinery.....	X	1.1
39	Coffee substitutes, without machinery.....	VI	.7
40	Spices, pulverizing and grinding.....	XIII	1.6
41	Liquors.....	X	1.1
42	Mustard.....	X	1.1
Milk and its products:			
43	Condensed milk, including manufacture of the cans.....	XIV	1.8
44	Condensed milk, exclusive of the manufacture of the cans.....	X	1.1
45	Milk, sterilization and modification.....	X	1.1
46	Manufacture of cheese, including cattle raising.....	XVI	2.3
47	Manufacture of cheese, exclusive of cattle raising, with machinery.....	XI	1.2
48	Manufacture of cheese, exclusive of cattle raising, without machinery.....	VI	.7
Slaughtering and salting of meats:			
49	Public slaughterhouses, including the entire personnel.....	XXIII	5.5
50	Salting meat, including slaughtering.....	XXVIII	3.0
51	Salting, without slaughtering, with machinery.....	XIV	1.8
52	Salting, without slaughtering, without machinery.....	XI	1.2
Flour grinding, rice polishing, baking and pastes:			
53	Flour-grinding mills, stationary.....	XVII	2.6
54	Flour-grinding mills, floating.....	XIX	3.5
55	Pounding rice.....	XV	2.0
56	Bakeries, with machinery.....	XVI	2.3
57	Bakeries, without machinery.....	VII	.8
58	Manufacture of wafers.....	V	.6
59	Food pastes, with machinery.....	XVI	2.3
60	Food pastes, without machinery.....	VII	.8
Vegetable and animal oils:			
61	Animal oils.....	IX	1.0
62	Vegetable oils in general, large establishments.....	XII	1.4
63	Vegetable oils in general, small establishments.....	IX	1.0
64	Vegetable oils in general, extraction of residual oils by means of sulphur.....	XVIII	3.0
Pastry baking, chocolate, preserves, and food products:			
65	Pastry baking and confectionery, with machinery.....	IX	1.0
66	Pastry baking and confectionery, without machinery.....	IV	.5
67	Chocolate and almond cakes, with machinery.....	XI	1.2
68	Chocolate and almond cakes, without machinery.....	XV	.7
69	Preserves, including manufacture of cans.....	XV	2.0
70	Preserves, exclusive of manufacture of cans.....	VIII	.9
71	Prepared food products, with machinery.....	XIV	1.8
72	Prepared food products, without machinery.....	VIII	.9
Tobacco:			
73	Tobacco manufactures.....	II	.3
Sugar:			
74	Sugar factories and refineries.....	XVIII	3.0

a With or without transportation.

b With or without transportation; the premium may be reduced in exceptional cases if the transportation offers sufficient guarantee of security.

c Premium is increased if there is connected with it any transportation service or the use of mechanical motors.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
PAPER, LEATHER, GUMS, AND PRINTING.			
Paper and cardboard making:			
75	Wood pulp.....	XVII	2.6
76	Paper manufacturing, with machinery (a).....	XIV	1.8
77	Paper manufacturing, without machinery (a).....	VIII	.9
78	Cardboard with machinery (b).....	XI	1.2
79	Cardboard, without machinery (b).....	IV	.5
80	Papier-mâché, statuary pasteboard.....	XI	1.2
Manufactures of paper and cardboard:			
81	Colored paper and wall paper, with machinery.....	XI	1.2
82	Colored paper and wall paper, without machinery.....	III	.4
83	Paper, wax, oiled, parchment, sand, glazed, etc., with machinery.....	X	1.1
84	Same as above, without machinery.....	III	.4
85	Various manufactures (boxes, envelopes, tubes, bags, etc.) with machinery (c).....	XI	1.2
86	Same as above, without machinery (c).....	III	.4
87	Stationery and bookbinding, with machinery.....	VIII	.9
88	Stationery and bookbinding, without machinery.....	II	.3
Preparation of leather and manufacture of leather substitutes:			
89	Tanneries, with machinery.....	XIV	1.8
90	Tanneries, without machinery.....	XI	1.2
91	Dyeing, glazing, and preparation of skins and leather, with machinery.....	XII	1.4
92	Same as above, without machinery.....	VII	.8
93	Parchment.....	XI	1.2
94	Wax cloth.....	VIII	.9
95	Artificial leather.....	XI	1.2
96	Bark grinding mills.....	XVII	2.6
Manufactures of skins, leather and substitutes:			
97	Footwear, with machinery.....	VII	.8
98	Footwear, without machinery.....	III	.4
99	Gloves, with machinery.....	VI	.7
100	Gloves, without machinery.....	II	.3
101	Saddlery, harness, and similar things, with machinery.....	VII	.8
102	Saddlery, harness, and similar things without machinery.....	III	.4
103	Trunks and other manufactures of leather, with machinery.....	VI	.7
104	Trunks and other manufactures of leather, without machinery.....	II	.3
India rubber, gutta-percha, and celluloid, manufacture of:			
105	Manufacture of india rubber and gutta-percha, with machinery.....	XIV	1.8
106	Manufacture of india rubber and gutta-percha, without machinery.....	VI	.7
107	Water-proof textiles.....	X	1.1
108	Manufactures of celluloid.....	XIII	1.6
Polygraphic arts:			
109	Printing, lithographing, color printing, etc., with machinery (d).....	V	.6
110	Same as above, without machinery (d).....	II	.3
111	Engravers.....	II	.3
112	Designers and copyists.....	I	.25
113	Photographers.....	II	.3
CHEMICAL INDUSTRIES.			
Acids, salts, and other chemical products:			
114	Calcium carbide.....	XV	2.0
115	Distillation of coal tar.....	XVII	2.6
116	Cream of tartar.....	IV	.5
117	Wood distillation, exclusive of felling and transportation of trees.....	XV	2.0
118	Sulphure of carbon.....	XXIV	6.5
Chemical products not specified in the tariff:			
119	(a) Manufacture of corrosive substances (strong acids, caustic alkalies, etc.).....	XVII	2.5
120	(b) Manufacture of various products, where corrosive substances are used.....	XV	2.0
121	(c) Manufacture of various products without the use of corrosive substances.....	XII	1.4
122	(d) Manufacture of pharmaceutical products.....	IX	1.0
Starch, dextrin, and albumen:			
123	Starch and face powder, with machinery.....	XI	1.2
124	Starch and face powder, without machinery.....	VI	.7
125	Fecula.....	VII	1.4
126	Glucose, dextrin, and albumen.....	XI	1.2

a The premium is increased if it is combined with the manufacture of wood pulp.

b Exclusive of the manufacture of wood pulp; otherwise the premiums for paper must be applied.

c The premium may be modified according to the greater or smaller importance of mechanical appliances.

d The premium may be increased if the establishment includes a type foundry, or the preparation of type with circular saws.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
CHEMICAL INDUSTRIES—concluded.			
Glue and artificial fertilizers:			
127	Glue, with machinery (a)	XI	1.2
128	Glue, without machinery (a)	VII	.8
129	Artificial fertilizers, with machinery (b)	XII	1.4
130	Artificial fertilizers, without machinery (b)	IX	1.0
Dyestuffs and colors and varnishes:			
131	Dyestuffs and colors (animal, vegetable, and mineral), with machinery (c)	XIII	1.6
132	Same as above, without machinery (c)	IX	1.0
133	Varnishes	XIV	1.8
134	Blacking (exclusive of the manufacture of boxes)	VIII	.9
135	Writing ink	V	.6
136	Printing ink	IX	1.0
Explosives:			
137	Explosives in general (gunpowder, dynamite, gun-cotton, etc.)	XXVI	9.0
138	Pyrotechnics (manufacture and setting off of fireworks)	XXVIII	12.5
139	Cartridges (manufacture and charging)	XXVI	9.0
Matches:			
140	Wax matches	VIII	.9
141	Wooden matches, including mechanical manufacture of the splints	XIV	1.8
142	Wooden matches, exclusive of the mechanical manufacture of the splints	VIII	.9
Illuminating gas and its products:			
143	Common gas, manufacture and distribution	XI	1.2
144	Acetylene, manufacture and distribution	XVI	2.3
145	Coke	XIV	1.8
Fats and their derivatives, soaps and candles:			
146	Fats in general (lubricants, tallow, margarine, artificial butter, etc.) with machinery	XIII	1.6
147	Same as above, without machinery	XI	1.2
148	Stearin, with machinery	XIII	1.6
149	Stearin, without machinery	XI	1.2
150	Glycerin, with distillation of fat	XVI	2.3
151	Glycerin, without distillation of fat	XI	1.2
152	Soap, with machinery	XIII	1.6
153	Soap, without machinery	XI	1.2
154	Candles of wax and tallow, with machinery	XI	1.2
155	Candles of wax and tallow, without machinery	VII	.8
156	Stearin candles, with machinery	XIII	1.6
157	Stearin candles, without machinery	VIII	.9
Petroleum, essences, ether, rosin, and asphalt:			
158	Petroleum refining	XIII	1.6
159	Essences	X	1.1
160	Ethers	XIV	1.8
161	Perfumery	IV	.5
162	Distillation of rosins	XIII	1.6
163	Sealing wax	XI	1.2
164	Asphalt working, with machinery	XV	2.0
165	Asphalt working, without machinery	XI	1.2
CONSTRUCTION OF BUILDINGS, PUBLIC ROADS, AND IRRIGATION WORKS.			
Laborers in various works:			
166	Unskilled day laborers in works not otherwise specified in the tariff, including transportation on rail or by animal traction and with use of blasting	XIX	3.5
167	Same as above, exclusive of transportation and without use of blasting	XV	2.0
Building—Construction and repair of buildings (dwellings, factories, churches, towers, and accessory structures):			
168	(a) Work executed at a considerable height or with incomplete scaffolding or on roofs, cupolas, etc., or work mainly connected with tearing down, construction of towers, belfries, smoke-stacks, placing of lightning rods, etc.	XXIV	6.5
169	(b) Work executed altogether or mainly upon scaffolding or with frequent use of blasting or with certain amount of tearing down of buildings	XXI	4.5
170	(c) Work executed only partly upon scaffolding, or in which blasting is used only exceptionally or with very little tearing down of buildings	XVII	2.6
171	(d) Work in which special measures of prevention are applied, or such as is performed indoors on slightly elevated staging, without tearing down of structures or use of blasting, and general assistance in construction	XV	2.0
172	Framework and construction in wood	XXII	5.0
173	Pavements of wood blocks and of cement	IX	1.0
174	Construction of fireplaces inside of buildings	XI	1.2
175	Installation of gas fixtures, heaters, and water pipes	XV	2.0

a Increase of premium if benzine is used for extraction of the fats.

b Increase of premium accompanied by production of sulphuric acid.

c Increase of premium if use is made of grinding mills, corrosive substances or digesters.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
CONSTRUCTION OF BUILDINGS, PUBLIC ROADS, AND IRRIGATION WORKS—concluded.			
	Painters, gilders, white washers, plasterers, varnishers, workers in mosaic, paper hangers, etc.:		
176	(a) On scaffolding and exterior of the buildings (also in the inside of buildings when staging is placed at great height).....	XXI	4.5
177	(b) On scaffolding on inside of buildings.....	XV	2.0
178	(c) In buildings or in shops, exclusive of all work on scaffolding.....	VIII	.9
179	Decorators, installation of special illumination, and of work executed on hand ladders or movable ladders.....	XXI	4.5
	Hydraulic work and bridges:		
	Subterranean aqueducts, construction and maintenance—		
180	(a) Including work in galleries or at a certain depth and with frequent use of blasting.....	XXI	4.5
181	(b) Including work in open air or at a slight depth with rare use of blasting.....	XVII	2.6
182	(c) Including work in the open air with superficial excavations and without use of blasting.....	XI	1.2
183	Sewers, cleaning without pneumatic machines.....	XXII	5.0
184	Sewers, cleaning with pneumatic machines.....	XIX	3.5
	Canal construction:		
185	(a) Work at great depth or subterraneous, with danger of landslides and with frequent use of blasting.....	XX	4.0
186	(b) Work at slight depth with rare use of blasting, not including transportation of the excavated material by tramways.....	XVI	2.3
187	Canal maintenance.....	XII	1.4
	Regulation of streams and water courses:		
188	(a) Work with use of blasting or in places subject to landslides, construction of masonry on large scale; use of dredges.....	XX	4.0
189	(b) Work with rare use of blasting, without danger of landslides, with masonry work on small scale.....	XIV	1.8
190	Watchmen, hydraulic works.....	XVII	2.6
	Ports, construction and repair:		
191	(a) Work with compressed air or with frequent use of blasting.....	XXVI	9.0
192	(b) Work with moderate use of blasting and extraction and with excavation of stone.....	XXIII	5.5
193	(c) Work without use of blasting and without excavation of stone.....	XIX	3.5
194	(d) Other work presenting lower risk.....	XV	2.0
195	Personnel of lighthouses.....	XXI	4.5
196	Divers.....	XXIX	15.0
197	Pile driving.....	XXI	4.5
198	Dredges, floating.....	XXII	5.0
199	Dredges, on dry land.....	XIX	3.5
200	Construction of common wells.....	XXIV	6.5
201	Construction of artesian wells, with machinery.....	XXII	5.0
202	Construction of artesian wells, by hand labor.....	XIX	3.5
	Bridges, construction and maintenance:		
203	(a) Of iron (a).....	XX	4.0
204	(b) Of wood (a).....	XIX	3.5
205	(c) Of masonry.....	XX	4.0
	Public roads—Construction:		
206	(a) With tunnels and bridges of considerable magnitude, either because of the number or because of their length or elevation.....	XXV	7.5
207	(b) With tunnels and bridges of certain magnitude, or with frequent use of blasting, or with excavation of material, mountain roads.....	XXII	5.0
208	(c) With small tunnels and bridges, with exceptional use of blasting and without excavating work, level roads.....	XIX	3.5
209	(d) Without tunnels or bridges, without blasting, with limited carting.....	XVII	2.6
210	Maintenance of ordinary roads, with carting.....	XVII	2.6
211	Maintenance of ordinary roads, without carting.....	IX	1.0
212	Construction of tunnels.....	XXV	7.5
ELECTRICITY.			
	Installation of electric telephone and telegraph lines:		
213	Electric-power conduits or electric-light wires, installation and maintenance (b).....	XVI	2.3
214	Telephones, installation and maintenance, with work on roofs and poles.....	XXV	7.5
215	Telephone installation and maintenance, including stringing of wires on poles.....	XVI	2.3
216	Telegraphs, installation and maintenance.....	XVI	2.3

^a If use is made of compressed air the premium may be increased by one or two classes. The premium may also vary according to the magnitude of the construction work.

^b The premium to be increased if the work is to be performed with live wires, especially in case of a high-tension current.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
	ELECTRICITY—concluded.		
217	Production and distribution of electric energy: Electric power houses. (Also including installation of fixtures.)	XVII	2.6
	BRICKYARDS, POTTERY, AND GLASS INDUSTRY.		
	Brickyards and manufacture of plaster and cement:		
218	Brickyards, machine manufacture	XVI	2.3
219	Brickyards, manufacture by hand	IX	1.0
220	Brickyards, manufacture both by hand and machinery	XIV	1.8
221	Gypsum (plaster of paris), manufacture of	VI	.7
222	Cement, manufacture of various materials (not including extraction)	IX	1.0
	Majolica, porcelain, and earthenware:		
223	Majolica, porcelain, and earthenware	V	.6
	Glass and mirrors:		
224	Glass, including production of plate glass	XIV	1.8
225	Glass, without production of plate glass	IX	1.0
226	Glass beads	VI	.7
227	Enamels	VII	.8
228	Working up of glass (grinding, polishing, chemical, mechanical, and photographic engraving)	IX	1.0
229	Glaziers, working on scaffolding	XVI	2.3
230	Glaziers, working without scaffolding	VII	.8
231	Mirrors, with production of plate glass	XIV	1.8
232	Mirrors, without production of plate glass	VII	.8
	WOODWORKING.		
	Poles, sticks, umbrellas, and pipes:		
233	Strips of wood for cornices, with use of mechanical saws	XVIII	3.0
234	Strips of wood for cornices, without use of mechanical saws	XIII	1.6
235	Canes, umbrellas, whips, and pipes, with use of mechanical saws (a)	XVII	2.6
236	Canes, umbrellas, whips, and pipes, without use of mechanical saws (a)	IX	1.0
	Cooperage:		
237	Barrels, with machinery (a)	XVIII	3.0
238	Barrels, without machinery (a)	X	1.1
	Horn, ivory, mother-of-pearl, amber, etc.:		
239	Horn, ivory, mother-of-pearl, bone, tortoise shell, manufacture of, with machinery	XIV	1.8
240	Same as above, without machinery	VIII	.9
241	Amber, coral, meerschaum, manufacture of, with machinery	V	.6
242	Amber, coral, meerschaum, manufacture of, without machinery	III	.4
	Carpenters and cabinetmakers (performing work not included under any other subgroup):		
243	Carpenters and cabinetmakers, working with machinery (including circular saws)	XXI	4.5
244	Same as above (exclusive of circular saws)	XVIII	3.0
245	Carpenters and cabinetmakers, working without machinery	XIII	1.6
246	Carpenters and cabinetmakers, working on scaffolding or staging	XXI	4.5
247	Manufacture of venetian blinds, with power saws	XX	4.0
248	Manufacture of venetian blinds, without power saws	VI	.7
249	Shoe trees and wooden shoes, with power saws	XVIII	3.0
250	Shoe trees and wooden shoes, without power saws	X	1.1
251	Impregnation of wood (b)	XIII	1.6
	Carving, inlaid work, wood turning, and other delicate woodwork:		
252	Wood carvers and inlaid woodworkers	IX	1.0
253	Wood turners, using power saws	XVI	2.3
254	Wood turners, without power saws	XI	1.2
255	Wooden ware and wooden toys, with machinery	XV	2.0
256	Wooden ware and wooden toys, without machinery	XI	1.2
257	Crayons, pencil boxes, and similar office supplies	XII	1.4
258	Manufacture of match splints, with machinery	XV	2.0
259	Manufacture of match splints, without machinery	IX	1.0
260	Wooden sticks	XIV	1.8
261	Fans, with use of power saws	XV	2.0
262	Fans, without use of power saws	VIII	.9
	Sawmills and wood planing:		
263	Wood sawing (lumber, firewood, hard-wood flooring, staves) with use of power saws, including circular saws	XXIII	5.5
264	Same as above, with use of power saws but exclusive of circular saws	XIX	3.5
265	Same as above, with use of handsaws	XV	2.0
266	Planing	XVIII	3.0

^a Premium to be increased if use is made of circular saws.

^b The premium may be modified according to the danger presented by the substances employed and the system of impregnation.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages
WOODWORKING—concluded.			
Cork, wicker, and brushes:			
267	Cork working.....	VIII	0.9
268	Manufactures of wicker.....	V	.6
269	Manufactures of rush products.....	VII	.8
270	Brushes, with woodworking.....	XVII	2.6
271	Brushes, without woodworking.....	VII	.8
272	Whisk brooms and paint brushes, with use of power.....	XVII	2.6
273	Whisk brooms and paint brushes, without use of power.....	VII	.8
MACHINERY AND MECHANICAL WORK.			
Appliances for lighting, heating, electricity, and exact instruments in general:			
274	Appliances for lighting, heating, hydraulic work, manufacture, and installation (a).....	XII	1.4
275	Appliances enumerated above, manufacture but without installation (b).....	IX	1.0
276	Scientific instruments and appliances (chemical, pharmaceutical, surgical, mathematical, physical, and optical), with machinery (c).....	XI	1.2
277	Same as above, without machinery (c).....	VII	.8
278	Scales, weights, and measures, with machinery (c).....	XI	1.2
279	Scales, weights, and measures, without machinery (c).....	VII	.8
280	Ordinary timepieces.....	V	.6
281	Tower clocks, manufacture and installation (d).....	X	1.1
Firearms:			
282	Ordinary firearms, with machinery (e).....	XV	2.0
283	Ordinary firearms, without machinery (e).....	XI	1.2
284	Artillery.....	XVIII	3.0
Ship yards:			
285	(a) Large establishments for construction of wooden and iron ships, including machine shops.....	XXV	7.5
286	(b) Construction of wooden ships and boats, with power saws.....	XXI	4.5
287	(c) Same as above, without power saws.....	XIX	3.5
288	(d) Construction of barges, boats, etc., with power saws.....	XVII	2.6
289	(e) As above, without power saws (the repair work, calking, etc., shall be assimilated, according to its importance and the mode and place of execution, to one of the preceding groups).....	XIII	1.6
290	Breaking up of wooden ships.....	XXIX	15.0
291	Breaking up of iron ships.....	XXXI	25.0
292	Dry docks, management (not including the repair of ships or any work on board ship).....	XV	2.0
Carts and carriages:			
293	Ordinary carts and carriages, with use of power saws.....	XVI	2.3
294	Ordinary carts and carriages, without use of power saws.....	XIII	1.6
295	Railroad and tramway cars.....	XVIII	3.0
Musical instruments and accessories:			
296	Musical instruments not otherwise specified in the tariff, with machinery.....	XII	1.4
297	Same as above, without machinery.....	VIII	.9
298	Organs, pianos, harmoniums, with use of power saws.....	XVI	2.3
299	Organs, pianos, harmoniums, without use of power saws.....	XI	1.2
300	Harmonicas, with machinery.....	XI	1.2
301	Harmonicas, without machinery.....	V	.6
302	Musical strings, catgut.....	IV	.5
303	Musical strings, metal.....	VII	.8
Machines and machine shops in general:			
304	Manufacture of boilers for industrial uses.....	XXI	4.5
305	Demolition of boilers for industrial uses.....	XXIII	5.5
306	Agricultural machinery.....	XVI	2.3
307	Construction and repair of grinding mills, with use of power saws.....	XIX	3.5
308	Construction and repair of grinding mills, without use of power saws.....	XVI	2.3
309	Automobiles (increase of premium if testing is included).....	XVI	2.3
310	Bicycles.....	XIV	1.8
311	Sewing machines and typewriters.....	XI	1.2
312	Pumps (with increase of premium if work in wood is included).....	XIV	1.8
313	Weaving looms and other implements for weaving.....	XIII	1.6
314	Grinders and assemblers of machinery.....	XIX	3.5

a If the work of installation is done upon the outside of buildings or on scaffolds or if use is made of power or of foundry work the premium must be increased.

b If use is made of power or of foundry work the premium must be increased.

c Premiums are increased if use is made of power saws.

d The premium to be increased if it is combined with work outside of the towers.

e With increase of premium if it is combined with the charging of cartridges.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OR RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
MACHINERY AND MECHANICAL WORK—concluded.			
Machine shops:			
315	(a) For large construction.....	XVIII	3.0
316	(b) For small construction, with machinery (a).....	XVI	2.3
317	(c) For small construction, without machinery (a).....	XIII	1.6
318	(d) For repair, with machinery (a).....	XIII	1.6
319	(e) For repair, without machinery (a).....	X	1.1
METALS.			
Iron and steel (manufacture, smelting, and early manufacturing processes):			
320	Iron and steel foundries, large establishments.....	XXII	5.0
321	Iron and steel foundries, small establishments, with machinery.....	XVIII	3.0
322	Iron and steel foundries, small establishments, without machinery.....	XIII	1.6
323	Blacksmith shops.....	XIX	3.5
324	Forging hammers, large establishments.....	XIX	3.5
325	Forging hammers, small establishments.....	XVI	2.3
326	Iron and steel rolling.....	XIX	3.5
327	Iron and steel wire drawing, hot.....	XIX	3.5
Various metals, exclusive of iron and steel (smelting and early manufacturing processes):			
328	Smelting of various metals, large establishments.....	XV	2.0
329	Smelting of various metals, small establishments, with machinery.....	XIII	1.6
330	Smelting of various metals, small establishments, without machinery.....	X	1.1
331	Rolling of various metals, large establishments.....	XIII	1.6
332	Wire drawing, various metals, hot (exclusive of precious metals).....	XVIII	3.0
333	Wire drawing of precious metals.....	VI	.7
334	Manufacture of tin plate.....	XV	2.0
335	Gold beaters, with machinery.....	X	1.1
336	Gold beaters, without machinery.....	III	.4
337	Gold and silver plate.....	VIII	.9
338	Metal grinding.....	XIII	1.6
Goldsmithing, silversmithing, jewelry:			
339	Silversmithing, with machinery.....	X	1.1
340	Silversmithing, without machinery.....	III	.4
341	Goldsmithing and jewelry, with machinery.....	IV	.5
342	Goldsmithing and jewelry, without machinery.....	III	.4
Implement and utensils, metal furniture and various articles:			
343	Blacksmiths and locksmiths, working in iron and steel, not otherwise specified in the tariff, exclusive of smelting and for work performed in the shop, with machinery (b).....	XIV	1.8
344	Same as above, without machinery (b).....	VIII	.9
345	Same as above, working on scaffolding or staging (b).....	XIX	3.5
346	Knives, scythes, cutting arms, etc., with machinery.....	XIII	1.6
347	Knives, scythes, cutting arms, etc., without machinery.....	IX	1.0
348	Files, rasps, and saws.....	XIII	1.6
349	Metallic springs for vehicles or large machinery.....	XVI	2.3
350	Metallic springs of small size.....	XIII	1.6
351	Screws.....	XI	1.2
352	Horseshoers.....	XIX	3.5
353	Iron furniture and safes, with machinery.....	XIV	1.8
354	Iron furniture and safes, without machinery.....	IX	1.0
355	Tinsmiths, plumbers, and zinc workers, in the shop, with machinery.....	XVI	2.3
356	Tinsmiths, plumbers and zinc workers, in the shop, without machinery.....	XII	1.4
357	Working on roofs, staging, or scaffolding (b).....	XXIV	6.5
358	Brass working.....	XII	1.4
359	Coppersmith manufacturing, objects of home use.....	XIV	1.8
360	Metallic pens.....	X	1.1
361	Metal stamping and pressing, with machinery.....	XII	1.4
362	Metal stamping and pressing, without machinery.....	VI	.7
363	Cartridges, exclusive of charging.....	X	1.1
364	Metal novelties and jewelry, with machinery.....	XI	1.2
365	Metal novelties and jewelry, without machinery.....	VII	.8
366	Needles and pins.....	X	1.1
367	Screws and bolts.....	XIV	1.8
368	Nails, with machinery.....	XII	1.4
369	Nails, without machinery.....	X	1.1
370	Iron points.....	XII	1.4
371	Wire, metal rope, and cables.....	XII	1.4
372	Metal netting, including wire drawing.....	XVI	2.3

^a The premium may be increased for shops of small construction using factory work and for repairs done outside the machine shop.

^b For mixed work, that is, such as is performed partly in the shop and partly on scaffolding, an intermediate premium proportionate to the importance of operations performed under the two different conditions of risk.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
METALS—concluded.			
Implements and utensils, metal furniture and various articles—Concluded.			
373	Metal netting, exclusive of wire drawing.....	XI	1.2
374	Type for printing.....	IX	1.0
375	Metal turners.....	XVI	2.3
376	Metal chases.....	IV	.5
Finishing of metal products:			
377	Grinding and polishing metals, with machinery (a).....	XIV	1.8
378	Grinding and polishing metals, without machinery (a).....	VIII	.9
379	Silver plating, gold plating, nickel plating, and varnishing.....	IX	1.0
380	Enameling metals.....	XII	1.4
381	Electric plating.....	V	.6
MINERALS. (b)			
Clay, gravel, and coloring earths:			
382	Digging clay, gravel, sand, and coloring earths.....	XVIII	3.0
Mineral fuels:			
383	Hard and soft coal mines.....	XIX	3.5
384	Turf pits.....	XI	1.2
Metals:			
385	Metal mining, including smelting.....	XX	4.0
Stones:			
386	Stone quarries not mentioned in the tariff, with underground work.....	XXIII	5.5
387	Stone quarries not mentioned in the tariff, without underground work.....	XIX	3.5
388	Marble, granite, and porphyry, with inclined plane.....	XXIV	6.5
389	Marble, granite, and porphyry, without inclined plane.....	XXII	5.0
390	Lava, pozzolana, and tufa stone quarries.....	XXIV	6.5
Sulphur:			
391	Sulphur mining, including working up of the mineral.....	XXIV	6.5
Various minerals:			
392	Asbestos mining.....	XXII	5.0
393	Asphalt mining (asphaltic, bituminous rock).....	XXII	5.0
394	Graphite mining.....	XVIII	3.0
395	Mica and barytes and magnesite quarries.....	XX	4.0
396	Petroleum mining.....	XVIII	3.0
397	Rock salt mining.....	XIX	3.5
398	Salt works.....	IX	1.0
399	Ice cutting.....	XIX	3.5
Working up of the products of mining: (c)			
400	Blast furnaces.....	XXI	4.5
401	Limekiln, cement, and gypsum ovens, including grinding mills.....	XVII	2.6
402	Limekiln, cement, and gypsum ovens, without grinding mills.....	XI	1.2
403	Sulphur refining, sublimation, and grinding.....	XVI	2.3
404	Gravel, machine crushing.....	XIX	3.5
405	Gravel, hand crushing.....	XXIII	5.5
406	Manufacture of emery.....	XII	1.4
407	Crushing of stones and earths.....	XVII	2.6
408	Chisellers, working upon scaffolding or staging.....	XX	4.0
409	Chisellers, not working on scaffolding or staging.....	XVIII	3.0
410	Sculptors and marble-cutters, working on scaffolding or staging.....	XVIII	3.0
411	Sculptors and marble-cutters, working in shops.....	XIV	1.8
412	Sawing and mechanical working up of marble and other stones.....	XVII	2.6
413	Millstones and grindstones.....	XVII	2.6
414	Slate and lava working.....	XII	1.4
415	Precious stone working.....	XIII	1.6

^a The premium to be increased if use is made of large and rapid grinding machines.

^b For the classes comprised under the first to the sixth subgroups, inclusive, the premium may be increased if the condition of work was unfavorable; that is: First, sliding of the material and danger that several persons might be crushed at once; second, frequent use of explosives; third, excavations not continued according to the regulations of the trade; fourth, large size, great depth or activity of the mines or quarries; fifth, dangerous methods of transportation or use of mechanical tools; sixth, production of deleterious or explosive gases. The premium may be reduced if the working up of the material (the crushing of gravel, roasting and pulverizing ores, sawing stones, refining, etc.), is insured at the same time with the mines or quarries, unless these processes have already been included under the different classes. Still greater reduction may be granted if the work is performed by hand or in several places. The premium may also be reduced when the extraction of the ore takes place at such a slight depth that the entire danger of falling materials is excluded or if no use is made of explosives or of animal or mechanical traction.

^c Extraction of the metal, roasting, smelting, and washing of minerals, when executed in independent establishments.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
TEXTILES.			
	Spinning and operation preparatory and accessory thereto: (a)		
416	Mechanical washing of the wool.....	VI	0.7
417	Wool and cotton carding.....	VII	.8
418	Artificial wool.....	XI	1.2
419	Combing of hemp, wool, and flax (premium to be reduced if the work is done by hand).....	VI	.7
420	Silk spinning.....	II	.3
421	Spinning, exclusive of silk or waste but comprising preparatory accessory processes.....	VII	.8
422	Silk waste working.....	VIII	.9
423	Other textile waste working (exclusive of silk).....	X	1.1
424	Yarn twisting in general.....	III	.4
425	Yarn twisting, with machinery.....	IX	1.0
426	Yarn twisting, without machinery.....	IV	.5
	Weaving and preparatory processes, not including spinning:		
427	Machine weaving (b).....	V	.6
428	Hand weaving (b).....	II	.3
	Preparation of yarn and tissues:		
429	Preparation of the yarn or tissues (bleaching, finishing, shearing, carding, fulling, etc., exclusive of dyeing or printing), with machinery.....	IX	1.0
430	Same as above, without machinery.....	III	.4
431	Printing of cloth.....	IV	.5
432	Dyeing of yarn or cloth, with machinery.....	VII	.8
433	Dyeing of yarn or cloth, without machinery.....	III	.4
	Tissues in general and other woven articles (the processes united):		
434	Manufactures of hemp, jute, and flax.....	IX	1.0
435	Cotton manufactures.....	X	1.1
436	Manufactures of wool and of animal hair weaving.....	VII	.8
437	Silk manufactures.....	IV	.5
438	Manufactures of knit goods, lace, ribbons, passementerie, and similar articles.....	IV	.5
TRANSPORTATION.			
	Porters, elevators, cranes, etc.:		
439	Loading and unloading of ships and ferrying.....	XXIV	6.5
440	Porters at seaports.....	XX	4.0
441	Porters in other places (c).....	XVII	2.6
442	Street messengers.....	XIII	1.6
443	Storehouses in general, the entire personnel, including the use of mechanical appliances.....	XVIII	3.0
444	Same as above, without use of mechanical appliances.....	XVI	2.3
445	Packing, without transportation.....	XII	1.4
446	Operating elevators, windlasses, cranes, and other mechanical appliances for lifting.....	XXI	4.5
	Railroads:		
447	Personnel of the repair shops.....	XV	2.0
448	General administration and management of the stations.....	XI	1.2
449	Traction and maneuvering.....	XIX	3.5
450	Train service.....	XVII	2.6
451	Common laborers.....	XVII	2.6
452	Miscellaneous employes.....	XV	2.5
	Tramways:		
453	Horse cars, the entire personnel.....	XVI	2.3
454	Steam cars, the entire personnel.....	XV	2.0
455	Steam cars, train service.....	XVII	2.6
456	Electric tramways, car employes.....	XVI	2.3
	Transportation in carts, carriages, etc., and telephones:		
457	Heavy carts (for construction material, coal, lumber, furniture, boxes, animals, etc.).....	XXIII	5.5
458	Light carts (carts for merchandise of small weight and volume, carts on springs, etc.).....	XVIII	3.0
459	Transportation firms, the entire personnel.....	XXI	4.5
460	Carriages and omnibuses, in the mountains.....	XX	4.0
461	Carriages and omnibuses, in the plains.....	XVI	2.3
462	Funeral processions.....	IX	1.0
463	Automobiles, chauffeur.....	XXVI	9.0

a The processes mentioned in this subgroup of textiles which do not bear the designation with or without machinery are mechanical processes altogether or partly. If, however, they are entirely performed by hand the indicated premium may be reduced.

b The premium may be modified if, on account of the nature of the material used or the article manufactured, there is evidently a variation from the average risk.

c The premium may be reduced if transportation is accomplished without mechanical appliances, without animal traction or in general in case of light articles of small bulk not offering any special danger.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Continued.

Industry number.	Industry.	Risk class.	Annual premium rates in per cent of wages.
TRANSPORTATION—concluded.			
Transportation in carts, carriages, etc., and telephones—Concluded.			
464	Hand wagons on rails.....	XXII	5.0
465	Forest roads.....	XX	4.0
466	Inclined planes.....	XXVII	10.5
467	Telephones.....	XX	4.0
Transportation on rivers and lakes:			
468	Sailing vessels on lakes, rivers, and lagoons, including the entire crew...	XIX	3.5
469	Steam vessels as above.....	XVII	2.6
470	Barges and fishing vessels on lakes, rivers, and lagoons.....	XVIII	3.0
471	Rafts, and floats on lakes, rivers, and lagoons.....	XVIII	3.0
Deep sea transportation. (a)			
CLOTHING.			
Clothing, furs, lingerie, corsets, etc.:			
472	Dealers, with machinery.....	VI	.7
473	Dealers, without machinery.....	I	.25
474	Lingerie, with machinery.....	VI	.7
475	Lingerie, without machinery.....	I	.25
476	Corsets, with machinery.....	IV	.5
477	Corsets, without machinery.....	I	.25
478	Buttons of cloth or thread, with machinery.....	VIII	.9
479	Buttons of cloth or thread, without machinery.....	I	.25
480	Mattresses.....	VI	.7
Hats:			
481	Felt hats, with machinery.....	IV	.5
482	Felt hats, without machinery.....	II	.3
483	Straw hats, with machinery.....	IV	.5
484	Straw hats, without machinery.....	II	.3
485	Beretta, with machinery.....	IV	.5
486	Beretta, without machinery.....	I	.25
Millinery, plumes, and artificial flowers:			
487	Millinery.....	I	.25
488	Artificial flowers.....	II	.3
489	Plumes.....	III	.4
Washing, ironing, and cleaning:			
490	Laundries, with machinery.....	XII	1.4
491	Laundries, without machinery.....	IV	.5
492	Cleaning.....	VII	.8
493	Ironing.....	IV	.5
MISCELLANEOUS.			
Retail trade:			
494	Wine, selling at retail (exclusive of manufacture or transportation).....	V	.6
495	Drug stores.....	VIII	.9
496	Butcher shops.....	XII	1.4
497	Retail selling, of classes not otherwise mentioned in the tariff.....	II	.3
Guards, guides, and firemen:			
498	Forest and field watchmen.....	XI	1.2
499	Night watchmen.....	XI	1.2
500	City watchmen.....	XIV	1.8
501	Watchmen, in customs service in cities.....	IX	1.0
502	Watchmen, in customs service out of town.....	XX	4.0
503	Guards of tax officers.....	XV	2.0
504	Hunting guards.....	XIV	1.8
505	Alpine guards and porters.....	XIX	3.5
506	Regular firemen.....	XIV	1.8
Personnel of service in general: (b)			
507	Hotels, the night service.....	XI	1.2
508	Domestic servants, male.....	VI	.7
509	Sea bathing establishments.....	XII	1.4
510	Other bath establishments.....	VI	.7
511	Hospitals, the entire personnel.....	XI	1.2
512	Hospitals for the insane, the night personnel.....	XVII	2.6
513	Theaters, the night personnel, including machinists.....	XIV	1.8
514	Domestic servants, female, and porters.....	VIII	.9
515	Carriers.....	VIII	.9
516	Employees in general.....	I	.25

^a For deep sea transportation a special tariff applies which has not yet been approved.

^b The personnel of service included here must not be occupied at anything but hand work; if persons handling machinery (elevators, all kinds of motors, steam heating plants, etc.) are included, the premium must be increased correspondingly.

CLASSIFICATION OF ENTERPRISES, INDUSTRIES, AND PROFESSIONS, BY DEGREE OF RISK; AND PREMIUM FOR EACH RISK CLASS—Concluded.

In- du- stry num- ber.	Industry.	Risk class.	Annual premium rates in per cent of wages.
MISCELLANEOUS—concluded.			
Various professions not included in the other subgroups:			
517	Lamplighters, including those working on ladders.....	IX	1.0
518	Bill posters, including those working on ladders.....	XI	1.2
519	Grave diggers.....	IX	1.0
520	Shooting galleries, the entire personnel.....	XXI	4.5
521	Hunters.....	XVII	2.6
522	Boiler scraping.....	XXIV	6.5
523	Engineers and firemen of stationary or movable steam engines (a).....	XIX	3.5
524	Barbers and hairdressers.....	IV	.5
525	Water heating, steam heating, and hot-air heating.....	X	1.1
526	Chimney sweepers.....	XV	2.0
527	Sterilizing and disinfecting establishments.....	XV	2.0
528	Carpet beating.....	IX	1.0
APPENDIX. (b)			
Tariff of premiums for combined collective insurance of seamen (not subject to the special provisions of the law of January 31, 1904, concerning deep-sea navigation):			
529	Crew of harbor and short-distance tugs.....	XVII	2.6
530	Pilots in harbors and for short distances on steamers and sailing vessels..	XIII	1.6
531	Crew on barges and ferryboats in harbors and for short distances.....	XXIV	6.5

a This rate should be used when the tariff does not determine the conditions of work of the motors or if it is impossible to tell in advance the kind of machine at which the insured will be employed.

b From Bollettino di Notizie sul Credito e sulla Previdenza, 1905.

ADMINISTRATION.

The institution is autonomous, although subject to government control. The central office of the institution is located in the Milan savings bank, the largest of the ten banking institutions which have entered into the agreement. The executive committee of the Milan bank acts also as the executive committee of the national insurance institution. It must meet weekly, and oftener if necessary, and administers all the current business of the insurance institution, supervising the work of the executive force. It studies the necessary premium changes, prepares the annual statements and every five years the technical statements, conducts the agitation among the employers and workmen for insurance of workmen, studies methods of accident prevention, etc. All the other banks which have signed the agreements act as local agents of the insurance institution, and these local officers are under the control of the executive committee, while the work of this committee and the general policy of the national insurance institution is supervised by a superior council constituted as follows: The president, vice-president, and five members of the executive committee, and one representative from each of the other nine banks. This council must meet semiannually, and oftener if necessary. It approves the premium and indemnity rates, approves the annual budget and the statement, controls and revises the action of executive offices, may order audits, etc.

The law of December 23, 1886, provided a method for introducing changes in the conditions of the agreement. According to the law the superior council may recommend to the Government such changes in the conditions as experience shall prove desirable, and these recommendations may be approved by royal decrees (administrative acts).

STATISTICS OF OPERATIONS.

A record of the operation of the National Accident Insurance Institution for the entire period is quoted in the following table, showing the total number of policies issued and the number of persons insured each year from the beginning of the organization of the institution. This table shows the growth of the transactions, though not altogether accurately. The number of policies issued and the number of persons insured is excessive for the years 1898 and 1904. During 1898 the first compensation act went into effect, and during 1904 the amendments of 1903, and in both years many policies were written twice, first for a short time under the old conditions, and then again to comply with the new requirements, which explains the very large number of policies issued during these two years.

NUMBER AND KIND OF POLICIES ISSUED AND NUMBER OF PERSONS INSURED EACH YEAR BY THE NATIONAL ACCIDENT INSURANCE INSTITUTION, 1884 TO 1907.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1902 to 1908. Atti della Cassa Nazionale d'Assicurazione per gl' Infortuni degli Operai sul Lavoro, 1908 and 1909.]

Year.	Individual insurance: Persons insured.	Collective insurance.						Total.	
		Simple.			Combined.			Policies issued.	Persons insured.
		Policies issued.	Persons insured.	Average number insured per policy.	Policies issued.	Persons insured.	Average number insured per policy.		
1884....	42	6	306	51.0	2	95	47.5	50	443
1885....	304	28	2,382	85.1	53	10,521	198.5	385	13,207
1886....	532	76	6,687	88.0	228	25,487	111.8	836	32,706
1887....	1,058	62	4,103	66.2	259	34,370	132.7	1,379	39,531
1888....	1,192	75	4,018	53.6	359	48,202	134.3	1,626	53,412
1889....	1,292	82	4,191	51.1	538	78,304	145.6	1,912	83,787
1890....	2,056	113	4,977	44.0	749	93,797	125.2	2,918	100,830
1891....	1,904	101	5,516	54.6	905	106,503	117.7	2,910	113,923
1892....	1,947	100	6,047	60.5	997	111,122	111.5	3,044	119,116
1893....	1,922	105	11,762	112.0	1,142	117,052	102.5	3,169	130,736
1894....	2,105	141	11,358	80.6	1,247	121,536	97.5	3,493	134,999
1895....	2,472	187	12,282	65.7	1,464	138,879	94.9	4,123	153,633
1896....	2,540	190	16,803	88.4	1,670	148,569	89.0	4,400	167,912
1897....	2,777	250	15,318	61.3	1,843	154,774	84.0	4,870	172,869
1898 (a)....	2,710	337	20,287	60.2	3,976	272,825	68.6	7,023	295,822
1899....	2,274	201	6,665	33.2	3,823	107,325	28.1	6,298	116,264
1900....	2,452	296	8,160	27.6	5,493	207,464	37.8	8,241	218,085
1901....	2,669	443	9,917	22.4	8,880	298,383	33.6	11,992	310,969
1902....	3,029	378	10,305	27.3	14,607	392,027	26.8	18,014	406,361
1903....	3,082	463	10,718	23.2	17,927	444,739	24.8	21,472	458,539
1904 (a)....	3,379	(b)	(b)	.....	c 39,505	c 972,868	c 24.6	42,884	976,247
1905....	3,409	(b)	(b)	.....	c 27,136	c 537,441	c 19.8	30,545	540,850
1906....	3,460	(b)	(b)	.....	c 32,027	c 642,154	c 20.1	35,487	645,614
1907....	3,811	(b)	(b)	.....	c 33,151	c 644,870	c 19.5	36,962	648,681

a The large number of policies issued in this year is explained by the fact that policies were issued twice during the year, first before the new regulations went into effect, and then for the rest of the year.

b Included in combined collective insurance.

c Including simple collective insurance.

The actual increase in the number of wage-workers insured is shown in the second column of the following table, giving the average number of persons insured throughout the year. The difference between the number of persons insured during the year, as shown on page 1770, and the average number insured throughout the year indicates that a considerable number of persons were insured for only a short time. The highest number was reached in 1903, after which the formation of the Sulphur Mine Employees Obligatory Insurance Association caused a considerable reduction in the average number of persons insured throughout the year in the National Accident Insurance Institution.

This table shows the increase in the number of accidents. The column giving the annual number of accidents per 1,000 persons insured shows a very rapid increase in the frequency of accidents, which has caused a very strong outcry against the fraudulent practice and malingering, discussed more fully in a subsequent section.

The rapid increase of the accident rate from 28.48 per thousand in 1886 to 41.22 in 1887 and 61.41 in 1888 is explained by the inclusion (by the decree of July 27, 1887) of all accidents causing disability of over five days, while previously benefits were paid only for injuries causing disability of over 30 days' duration; and, as is well established by the accident statistics of all countries, a very large proportion of accidents caused disability of less than one month.

The accident rate seems to have remained fairly uniform for about eight years (1888 to 1895), since which it has grown rapidly with the exception of 1899. The increase was especially great in 1904 as compared with the preceding year, the rate rising from 107.41 to 143.08, or fully one-third. The increase since 1895 is seen to have taken place mainly in the accidents which did not result in death, for the death ratio has not increased, but rather declined. A comparison of the totals for the three periods, the one before the enactment of the law (1888 to 1898), the period of the first law of 1898 (1899 to 1903), and of the amended law (1904 to 1906), brings out more forcibly the rapid increase in the accident rate.

NUMBER AND PER CENT OF ACCIDENTS TO PERSONS INSURED IN THE NATIONAL ACCIDENT INSURANCE INSTITUTION AND ACCIDENT RATES, BY RESULT OF INJURY, 1884 TO 1906.

[Source: Atti della Cassa Nazionale d'Assicurazione per gli Infortuni degli Operai sul Lavoro. Verbale della Seduta del 22 dicembre 1908. On September 30, 1908, there remained unsettled 3 cases of 1900; 1 of 1901; 7 of 1902; 56 of 1903; 127 of 1904; 90 of 1905, and 738 of 1906. These numbers are not included in the figures reported for the respective years.]

Year.	Average number of persons insured throughout the year.	Number of accidents resulting in—			Total number of accidents.	Number of accidents per 1,000 insured resulting in—			Number of all accidents per 1,000 insured.	Per cent of accidents resulting in—		
		Death.	Perma- nent disability.	Tem- porary disability.		Death.	Perma- nent disability.	Tem- porary disability.		Death.	Perma- nent disability.	Tem- porary disability.
1884.....	67											
1885.....	6,556	2	19	49	70	0.31	2.90	7.47	10.68	2.85	27.14	70.00
1886.....	24,440	91	67	538	696	3.72	2.74	22.02	28.48	13.07	9.63	77.30
1887.....	36,992	47	104	1,374	1,525	1.27	2.81	37.14	41.22	3.08	6.82	90.10
1888.....	58,023	62	108	3,393	3,563	1.07	1.86	58.48	61.41	1.74	3.03	95.23
1889.....	77,876	65	133	4,685	4,893	.83	1.71	60.29	62.83	1.33	2.72	95.95
1890.....	94,507	101	153	5,249	5,503	1.07	1.62	55.54	58.23	1.84	2.78	95.38
1891.....	103,238	84	203	5,636	5,923	.81	1.97	54.59	57.37	1.42	3.43	95.15
1892.....	109,253	89	211	5,720	6,020	.81	1.93	52.36	55.10	1.48	3.50	95.02
1893.....	118,133	96	247	6,977	7,320	.81	2.09	59.06	61.96	1.31	3.37	95.32
1894.....	125,119	82	299	7,610	7,991	.66	2.39	60.82	63.87	1.03	3.74	95.23
1895.....	138,192	113	336	8,338	8,787	.82	2.43	60.34	63.59	1.29	3.82	94.89
1896.....	146,696	99	366	9,804	10,269	.67	2.49	66.84	70.00	.95	3.57	95.48
1897.....	158,214	174	431	11,999	12,604	1.10	2.72	75.84	79.66	1.38	3.42	95.20
1898.....	160,772	145	390	12,019	12,554	.90	2.42	74.76	78.08	1.15	3.11	95.74
1899.....	178,439	158	406	10,908	11,472	.88	2.28	61.13	64.29	1.38	3.54	95.08
1900.....	202,355	159	646	14,920	15,725	.78	3.19	73.73	77.70	1.01	4.11	94.88
1901.....	245,501	298	956	21,420	22,674	1.21	3.90	87.25	92.36	1.31	4.22	94.47
1902.....	340,256	339	1,554	31,561	33,454	1.00	4.57	92.75	98.32	1.01	4.65	94.34
1903.....	421,363	399	2,372	42,489	45,260	.94	5.63	100.84	107.41	.88	5.24	93.88
1904.....	370,198	353	2,037	50,579	52,969	.95	5.50	136.63	143.08	.67	3.84	95.49
1905.....	373,570	307	2,005	51,914	54,226	.82	5.37	138.97	145.16	.57	3.70	95.73
1906.....	406,183	334	2,844	62,064	65,242	.82	7.00	152.80	160.62	.51	4.36	95.13
1888 to 1898....	1,290,023	1,110	2,877	81,440	85,427	.86	2.23	63.13	66.22	1.30	3.37	95.33
1899 to 1903....	1,387,914	1,353	5,934	121,298	128,585	.97	4.28	87.40	92.65	1.05	4.62	94.33
1904 to 1906....	1,149,951	994	6,886	164,557	172,437	.86	5.99	143.10	149.95	.57	4.00	95.43

In addition to the increase of accidents there was also an increase in the average amount of compensation. In the following table the figures do not refer to the amount of compensation paid during any one year, but the amount paid in compensation for accidents occurring during the year. Such a method of presentation is much more accurate and valuable, though it causes considerable delay, as the figures for the last five or six years are always subject to correction because some claims remain unsettled for several years. The marked increase of the average amount of compensation per case from \$9.92 in 1898 to \$17.93 in 1899 shows the effects of the act of 1898, which regulated the amounts of compensation and increased it for both the fatal cases and those leading to permanent disability. Under the voluntary system the average amount paid for a fatal accident fluctuated between \$140.17 and \$243.74; under the law of 1898 it immediately increased to \$548.02, and in 1905 was \$570.69. In cases of permanent disability the average amount of compensation under the voluntary system was under 500 lire (\$96.50), and immediately after the passing of the law of 1898 increased to nearly 1,000 lire (\$193).

TOTAL AND AVERAGE AMOUNT OF COMPENSATION PAID BY THE NATIONAL ACCIDENT INSURANCE INSTITUTION FOR ACCIDENTS OCCURRING IN EACH YEAR, BY RESULT OF INJURY, 1885 TO 1906.

[Source: Atti della Cassa Nazionale d' Assicurazione per gl' Infortuni degli Operai sul Lavoro. Verbale della Seduta del 22 dicembre 1908. Milano, 1909.]

Year.	Compensation paid out for accidents resulting in—						Total for all accidents.	Average compensation paid in case of—			
	Death.		Permanent disability.		Temporary disability.			Death.	Perman-ent disability.	Tempo-rary disability.	All acci-dents.
	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.					
1885	\$280	17.73	\$1,173	74.20	\$128	8.07	\$1,581	\$140.17	\$61.75	\$2.60	\$22.59
1886	15,556	68.68	4,715	20.82	2,379	10.50	22,650	170.95	70.38	4.42	32.54
1887	9,937	41.18	8,003	33.17	6,190	25.65	24,130	211.43	76.95	4.50	15.82
1888	11,233	30.78	9,684	26.54	15,577	42.68	36,494	181.13	89.67	4.59	10.24
1889	11,201	25.00	11,400	25.45	22,203	49.55	44,804	172.32	85.72	4.73	9.16
1890	19,019	30.10	16,204	25.64	27,971	44.26	63,194	188.31	105.91	5.33	11.48
1891	17,606	27.01	18,814	28.86	28,769	44.13	65,189	209.60	92.68	5.10	11.01
1892	17,123	24.75	22,260	32.17	29,808	43.08	69,191	192.39	105.50	5.21	11.49
1893	19,983	26.67	21,081	28.13	33,865	45.20	74,929	208.16	85.35	4.85	10.24
1894	19,391	22.69	28,375	33.20	37,699	44.11	85,465	236.48	94.90	4.95	10.69
1895	27,542	29.25	29,458	31.29	37,159	39.46	94,159	243.74	87.67	4.46	10.72
1896	21,809	22.19	33,015	33.60	43,437	44.21	98,261	220.30	90.21	4.43	9.57
1897	38,967	29.85	37,590	28.79	53,988	41.36	130,545	223.95	87.22	4.50	10.36
1898	32,317	25.95	36,593	29.44	55,549	44.61	124,459	222.88	93.98	4.62	9.92
1899	86,587	42.09	76,553	37.21	42,572	20.70	205,712	548.02	188.55	3.90	17.93
1900	91,261	33.76	120,201	44.47	58,831	21.77	270,293	573.97	186.07	3.94	17.19
1901	177,573	40.23	176,052	39.89	87,763	19.88	441,388	595.88	184.15	4.10	19.47
1902	211,176	32.74	297,286	46.09	136,543	21.17	645,005	622.94	191.30	4.33	19.28
1903	255,952	28.67	455,587	51.04	181,096	20.29	892,635	641.48	192.07	4.26	19.72
1904	209,878	22.66	487,155	52.60	229,073	24.74	926,106	594.55	239.15	4.53	17.48
1905	175,201	21.29	430,690	52.34	216,981	26.37	822,872	570.69	214.81	4.18	15.18
1906	186,026	18.77	553,959	55.88	251,321	25.35	991,306	556.96	194.78	4.05	15.19
1888 to 1898	236,192	26.64	264,474	29.83	386,025	43.53	886,691	212.79	91.95	4.74	10.38
1899 to 1903	822,126	33.49	1,126,100	45.87	506,806	20.64	2,455,032	607.63	189.77	4.18	19.11
1904 to 1906	571,105	20.84	1,471,804	53.71	697,375	25.45	2,740,284	573.00	213.74	4.24	15.89

Small as the amounts of compensation are, especially when judged by American standards, they are nevertheless considerable when compared with the Italian wages.

The total amount of compensation as stated in the last table does not include the payments under contract for insurance of employers' liability. The following table gives the total amount of employers' liability payments and the proportion these payments constituted of the entire compensation payments. The fluctuations from year to year are naturally very great, but the very marked decrease in such payments since 1898, when the compulsory accident insurance law was passed, is very significant. As appears from the table on page 1770, the vast majority of policies issued are of the combined collective class—that is, they include the insurance of employers' liability—but according to the law such liability arises under conditions of criminal fault only, and is evidently not very frequently resorted to.

PROPORTION BETWEEN EMPLOYERS' LIABILITY PAYMENTS AND TOTAL AMOUNT OF INDEMNITY PAID, 1884 TO 1906.

[Source: Atti della Cassa Nazionale d' Assicurazione per gli Infortuni degli Operai sul Lavoro. Verbale della Seduta del 22 dicembre 1908 del Consiglio Superiore e Bilancio Consuntivo del 1907. Milano, 1909.]

Year.	Total indemnity paid (including liability payments).	Employers' liability payments.		Year.	Total indemnity paid (including liability payments).	Employers' liability payments.	
		Amount.	Per cent of total indemnity.			Amount.	Per cent of total indemnity.
1884.....				1897.....	\$134,049	\$3,504	2.61
1885.....	\$1,581			1898.....	128,521	4,062	3.16
1886.....	38,550	\$15,899	41.24	1899.....	207,473	1,761	.85
1887.....	25,270	1,139	4.51	1900.....	271,881	1,588	.58
1888.....	37,194	700	1.88	1901.....	444,341	2,953	.66
1889.....	45,351	546	1.20	1902.....	656,432	11,427	1.74
1890.....	64,040	846	1.32	1903.....	901,116	8,481	.94
1891.....	73,136	7,947	10.87	1904.....	930,438	4,332	.47
1892.....	71,719	2,528	3.52	1905.....	824,589	1,718	.21
1893.....	79,874	4,945	6.19	1906.....	991,407	101	.01
1894.....	88,749	3,284	3.70	1884 to 1898.....	990,823	55,769	5.63
1895.....	100,623	6,464	6.42	1899 to 1906.....	5,227,677	32,361	.62
1896.....	102,166	3,905	3.82				

The general results of the operation of this institution in the separate industrial groups to which the insured belong are shown in the following three tables for a period of four years, 1899 to 1902. By thus combining the data for a number of years larger numbers are obtained and the averages and proportions are more trustworthy than for a single year. The data for individual insurance are not included in these tables.

One of the most interesting things brought out by the following table is the proportion between the premiums and the wage expense in the various industrial branches. The lowest relative cost is found in the textile industry, only 0.47 of 1 per cent of the wage expense being paid as premiums. The highest, nearly 3 per cent, is quite unexpectedly found in agriculture. This is easily explained, however, by the fact that only persons tending agricultural machinery are subject by the law to compulsory insurance. With this exception, mining shows the highest percentage, followed by construction. Among the industries showing a low relative cost are found clothing, paper and printing, brick, earthen and glass ware, and even transportation (which does not include many railroad employees, as these are protected mainly by the railroad mutual funds).

The proportion between indemnity paid and premiums collected shows very interesting fluctuations. It demonstrates that the actual cost of accidents often varies considerably from the expected cost. Thus in the brick and china manufacturing industry and in mining the actual cost was very much higher than the expected cost as represented by the premium charged, while in the paper and printing industry it was only about two-fifths of what was expected; in clothing and in textiles it was about seven-tenths.

COMPARISON OF WAGES, INDEMNITY, AND PREMIUMS UNDER THE COLLECTIVE ACCIDENT INSURANCE OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, BY INDUSTRIES, 1899 TO 1902.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, May, 1907.]

Industry.	Annual wages paid.	Indemnity insured for—		Premiums received.		Indemnity paid.		
		Death and permanent disability.	Temporary disability.	Amount.	Per cent of wages paid.	Amount.	Per cent of wages paid.	Per cent of premiums.
Agriculture.....	\$1,131,768	\$5,093,532	\$553,306	\$32,508	2.87	\$28,077	2.48	86.37
Brick, earthen and glass ware.....	2,411,757	12,058,783	1,211,775	17,651	.73	23,631	.98	133.88
Building and construction.....	28,123,573	140,561,472	14,146,474	552,851	1.97	512,763	1.82	92.75
Chemicals, etc.....	7,139,843	35,688,165	3,617,479	88,168	1.23	67,832	.95	76.93
Clothing.....	206,600	1,032,999	103,300	1,042	.50	718	.35	68.91
Electricity.....	1,346,248	6,731,239	701,187	13,167	1.35	15,822	1.18	87.09
Food, oil, and tobacco.....	3,301,663	16,483,644	1,705,348	37,583	1.14	30,719	.93	81.74
Machinery.....	7,021,850	35,084,587	3,569,121	94,750	1.35	89,321	1.27	94.27
Metal working.....	5,281,854	26,327,880	2,707,654	58,888	1.11	59,303	1.12	100.70
Mining.....	15,252,900	76,223,010	8,165,581	359,656	2.35	444,577	2.91	123.61
Paper, printing, etc.....	2,552,776	12,750,410	1,356,724	15,671	.61	6,559	.26	41.85
Textiles.....	8,004,213	40,017,484	4,225,617	37,702	.47	27,130	.34	71.96
Transportation.....	17,089,850	84,198,270	8,507,301	166,009	.97	179,050	1.05	107.86
Woodworking.....	1,877,770	9,380,782	990,708	26,816	1.43	22,572	1.20	84.17
Other industries.....	2,493,625	5,494,412	848,242	13,333	.53	8,278	.33	62.09
Total.....	103,236,290	507,126,669	52,409,817	1,520,795	1.47	1,516,352	1.47	99.71

In the next table the results of the accidents occurring under the collective accident insurance of the National Accident Insurance Institution during the four-year period, 1899 to 1902, are shown by industries.

RESULTS OF ACCIDENTS OCCURRING UNDER THE COLLECTIVE ACCIDENT INSURANCE OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, BY INDUSTRIES, 1899 TO 1902.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, May, 1907.]

Industry.	Accidents resulting in—						All accidents.	
	Death.		Permanent disability.		Temporary disability.			
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Agriculture.....	15	1.69	61	6.88	811	91.43	887	1.08
Brick, earthen and glass ware.....	3	.19	85	5.29	1,517	94.52	1,605	1.95
Building and construction.....	337	1.44	1,089	4.65	21,979	93.91	23,405	28.49
Chemicals, etc.....	44	.99	113	2.54	4,295	96.47	4,452	5.42
Clothing.....	.....	.....	4	15.38	22	84.62	26	.03
Electricity.....	7	.95	34	4.64	692	94.41	733	.89
Food, oil, and tobacco.....	10	.61	103	6.23	1,540	93.16	1,653	2.01
Machinery.....	17	.21	314	3.79	7,946	96.00	8,277	10.08
Metal working.....	15	.28	196	3.68	5,111	96.04	5,322	6.48
Mining.....	330	1.68	781	3.98	18,498	94.34	19,609	23.87
Paper, printing, etc.....	1	.15	50	7.34	630	92.51	681	.83
Textiles.....	10	.41	140	5.82	2,256	93.77	2,406	2.93
Transportation.....	122	1.12	373	3.43	10,389	95.45	10,884	13.25
Woodworking.....	10	.60	108	6.49	1,547	91.91	1,665	2.03
Other industries.....	9	1.66	10	1.85	523	96.49	542	.66
Total.....	930	1.13	3,461	4.21	77,756	94.66	82,147	100.00

The following table shows, by industries and results of accidents, the indemnity paid during the four-year period, 1899 to 1902, to persons insured under the collective accident insurance of the National Accident Insurance Institution:

TOTAL AND AVERAGE PER CASE OF INDEMNITY PAID UNDER THE COLLECTIVE ACCIDENT INSURANCE OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, BY INDUSTRIES AND RESULT OF INJURY, 1899 TO 1902.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, May, 1907.]

Industry.	Indemnity paid for accidents resulting in—							
	Death.		Permanent disability.		Temporary disability.		All accidents.	
	Amount.	Average per case.	Amount.	Average per case.	Amount.	Average per case.	Amount.	Average per case.
Agriculture.....	\$6,152	\$410	\$16,915	\$277	\$5,010	\$6.18	\$28,077	\$31.65
Brick, earthen and glass ware.....	1,737	579	17,021	200	4,873	3.21	23,631	14.72
Building and construction.....	204,534	607	212,602	195	95,627	4.35	512,763	21.91
Chemicals, etc.....	26,839	610	23,532	208	17,461	4.07	67,832	15.24
Clothing.....			627	157	91	4.14	718	27.62
Electricity.....	6,426	918	6,699	197	2,697	3.90	15,822	21.59
Food, oil, and tobacco.....	5,758	576	18,766	182	6,195	4.02	30,719	18.58
Machinery.....	10,426	613	52,913	169	25,982	3.27	89,321	10.79
Metal working.....	12,975	865	29,015	148	17,312	3.39	59,303	11.14
Mining.....	199,682	605	154,273	198	90,622	4.90	444,577	22.67
Paper, printing, etc.....	72	72	4,165	83	2,323	3.69	6,559	9.63
Textiles.....	3,408	341	17,036	122	6,686	2.96	27,130	11.28
Transportation.....	71,388	585	69,320	186	38,342	3.69	179,050	16.45
Woodworking.....	5,042	504	11,706	108	5,824	3.76	22,572	13.56
Other industries.....	4,318	480	1,989	199	1,971	3.77	8,278	15.27
Total.....	558,757	601	636,579	184	321,016	4.13	1,516,352	18.46

FINANCIAL STATISTICS.

In the details of the financial organization a radical change was affected by the decree of November 22, 1888. The original agreements provided that the premiums should be calculated without taking into consideration the cost of administration, and that these be distributed among the 10 banks pro rata, proportionately to their contributions to the guarantee fund. After 10 years of experience the banks might be permitted to substitute a definite annual payment instead of these pro rata payments, or a lump-sum payment of the capitalized value of such annual payments. Half of the surplus from the operations of the insurance institution was to be used in payment of the guarantee fund in pro rata sums; and as long as the entire guarantee fund was not repaid, the interest on the outstanding amounts was to be returned to the banks. After the entire guarantee fund is repaid from the surplus a part, but not over one-half, of the additional surplus determined by the superior council might be used for accumulating a reserve fund and part for the benefits of the insured.

This system was abolished by the decree of November 22, 1888. According to the system then established the guarantee fund was

turned into the treasury of the insurance institution which was to make use of this fund and the interest from it as of all other revenue. On the other hand, the insurance institution was required to meet all expenses of administration. The prohibition to load these expenses upon the premium rate was abrogated, and the 10 banks which signed the agreement were freed from any further obligation to contribute to the cost of administration. The insurance institution was required to build up a reserve fund with the annual surpluses, and if after the first 10 years of operation this reserve should exceed 500,000 lire (\$96,500) then the surpluses of the following years are to be used in repayment of the guarantee fund, without interest.

The financial condition of the insurance institution is shown in the following four tables.

The data were taken partly from the original reports of the National Accident Insurance Institution^(a) and partly from the digests of these reports in the serial publication, *Bollettino di Notizie sul Credito e sulla Previdenza*. As this publication did not appear between 1896 and 1900, it was impossible to ascertain the data for 1895 to 1898.

As is seen from the statement of resources and liabilities, the resources had grown to \$1,313,973 in 1905. The two principal items are the reserve for compensation of cases pending at the end of the year and the original guarantee fund of 1,500,000 lire (\$289,500), which is practically intact. In addition the institution has carefully labored to create reserve funds for various purposes, and their growth has been fairly continuous.

RESOURCES AND LIABILITIES OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION FOR VARIOUS YEARS, 1889 TO 1907.

[Source: *Bollettino di Notizie sul Credito e sulla Previdenza*. Data for 1890 and 1895 to 1898 not obtainable.]

Year.	Resources on December 31.	Liabilities on December 31.							Surplus from operations of the year.
		Guarantee fund.	Surplus.	Reserve for compensation of cases pending.	Reserve for fluctuation of value of securities.	Extraordinary reserve.	Other reserves and funds.	Bills payable.	
1889...	\$344,895	\$289,500	\$9,723	\$17,894	.....	\$5,790	\$1,930	\$17,557	\$2,501
1891...	370,198	289,500	13,510	24,340	\$13,510	19,300	3,860	3,387	2,791
1892...	387,971	289,500	19,300	28,005	13,510	28,950	3,860	3,684	1,162
1893...	407,623	289,500	19,300	25,655	27,406	36,284	3,860	4,051	1,567
1894...	425,084	289,500	19,300	34,289	27,406	44,390	3,860	4,783	1,556
1899...	566,171	289,500	29,837	105,412	27,406	57,900	14,128	7,914	34,074
1900...	609,589	289,500	49,137	124,400	27,406	54,108	27,638	10,497	26,903
1901...	682,439	289,500	54,040	195,323	27,406	68,578	31,498	16,094	.....
1902...	808,464	289,500	54,040	345,804	27,406	43,819	19,682	28,153	.....
1903...	970,109	279,850	54,040	468,888	47,618	.....	17,370	102,343	.....
1904...	1,137,977	271,586	.....	592,991	35,931	77,200	20,021	128,270	11,978
1905...	1,313,973	279,850	.....	742,151	40,644	38,093	21,962	171,860	19,413
1906...	1,474,675	279,850	.....	884,483	23,526	48,250	27,987	210,579	.....
1907...	1,859,422	279,850	.....	1,129,426	26,566	38,109	37,381	262,237	85,853

^a Atti della Cassa Nazionale d' Assicurazione per gl' Infortuni degli Operai sul Lavoro, 1904-1909.

In the following tables showing the receipts of the institution it was impossible to present comparable data for the entire period because of a radical change in the form of presentation of the accounts. The first table represents a purely formal receipt account. The actual income of the institution consists mainly of two items—the premiums received and the interest on investments. All other revenues were comparatively insignificant, except for 1902 and 1903, when they included transfers from the reserves for the purpose of covering the deficits from operation during these two years.

In the table of receipts for 1904 to 1907 the form of the account has been changed, and the total represents the actual revenue of the institution. In 1907 the premiums were about 95 per cent of the total receipts.

RECEIPTS OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION FOR VARIOUS YEARS, 1889 TO 1903.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza. Data for 1890 and 1895 to 1898 not obtainable.]

Year.	Reserve for compensation of cases pending.	Premiums.	Interest.	All other.	Loss from operations.	Total.
1889.....	\$14,758	\$58,220	\$12,478	\$8,777	.....	\$94,233
1891.....	21,895	87,205	17,169	2,577	.....	128,846
1892.....	24,340	88,069	18,007	2,883	.....	133,299
1893.....	28,006	95,621	18,714	1,298	.....	143,639
1894.....	25,655	100,244	19,436	1,651	.....	146,986
1899.....	55,570	265,569	22,250	1,265	.....	344,654
1900.....	105,412	298,610	25,270	7,073	.....	436,365
1901.....	124,400	384,011	26,973	7,478	\$11,817	554,679
1902.....	195,323	583,958	28,340	a 54,994	28,456	891,071
1903.....	345,864	822,341	29,376	b 100,361	12,058	1,310,000

a Including \$53,060 taken from the reserves for payment of claims.

b Including \$67,027 taken from the reserves for payment of claims.

RECEIPTS OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, 1904 TO 1907.

[Source: Atti della Cassa Nazionale d' Assicurazione per gl' Infortuni degli Operai sul Lavoro: Bilancio Consuntivo del 1904, 1905, 1906, and 1907.]

Year.	Premiums.	Interest.	Office fees.	All other.	Total.
1904.....	\$1,219,249	\$34,935	\$26,127	\$502	\$1,280,813
1905.....	1,121,709	39,737	22,631	296	1,184,373
1906.....	1,244,289	48,398	25,596	433	1,318,716
1907.....	1,586,953	50,088	26,839	1,354	1,665,234

On account of a change in the form of keeping the accounts the expenditures are also shown in two tables. For the years 1889 to 1903 the first table shows the actual indemnity paid during the year, and the reserve computed at the end of the year to cover outstanding claims as an item of expenditure. The gains from operation are also shown as an expense item to balance with the revenue account. For the years 1904 to 1907 an effort is made to account for the actual expenses of the year, the indemnity for claims accrued during the year being

shown rather than the indemnity actually paid. For most items comparisons may be made for the entire period. Very interesting are the rapid increases of expenditures for medical help, legal advice, and inspection, which indicate the cost of the efforts to counteract the tendency to fraudulent practices, described in a preceding section.

EXPENDITURES OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, FOR VARIOUS YEARS, 1889 TO 1903.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza. Data for 1890 and 1895 to 1898 not obtainable.]

Year.	Indemnity paid.	Reserve at end of the year for compensation of cases pending.	Expenditures for administration.	Medical expenses.	Legal expenses.	Expenses for inspection.	Taxes on investments.	Transferred to reserves.	All other expenses.	Gain from operations.	Total.
1889..	\$44,366	\$17,894	\$9,820	\$2,786	\$373	-----	\$1,647	\$13,688	\$1,157	\$2,501	\$94,232
1891..	65,619	24,340	13,072	1,291	36	-----	2,266	19,033	398	2,791	128,846
1892..	70,652	28,005	14,044	846	755	-----	2,377	15,440	18	1,162	133,299
1893..	75,982	25,655	14,859	785	474	-----	2,470	21,230	618	1,566	143,639
1894..	80,089	34,289	16,557	727	1,826	-----	3,234	8,106	602	1,556	146,986
1899..	151,692	105,412	25,778	2,277	1,396	\$2,363	4,299	16,959	211	34,074	344,461
1900..	240,713	124,400	29,741	3,625	2,273	2,846	4,893	-----	971	26,903	456,365
1901..	307,621	195,323	34,937	4,414	2,570	4,034	5,244	-----	536	-----	554,679
1902..	472,332	345,864	45,932	8,359	5,425	6,298	5,441	-----	1,421	-----	891,072
1903..	701,459	468,888	60,399	13,047	18,573	7,953	5,423	30,838	5,350	-----	1,311,930

EXPENDITURES OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, 1904 TO 1907.

[Source: Atti della Cassa Nazionale d' Assicurazione per gl' Infortuni degli Operai sul Lavoro: Bilancio Consuntivo del 1904, 1905, 1906, and 1907.]

Year.	Indemnity accrued.	Expenditures for administration.	Medical expenses.	Legal expenses.	Cost of determination of injuries.	Expenses of inspection.	Taxes on investments.	All other expenses.	Total.
1904..	\$924,570	\$88,465	\$14,567	\$30,558	\$3,479	\$8,971	\$5,423	\$2,893	\$1,078,926
1905..	985,383	92,790	18,437	53,665	4,577	12,991	5,423	4,148	1,177,414
1906..	1,119,064	111,300	25,280	56,014	6,523	15,025	5,423	9,431	1,348,060
1907..	1,335,393	119,586	36,555	61,666	7,343	19,050	2,125	17,005	1,598,723

The preceding tables, giving the receipts and expenditures by years, and further complicated by various bookkeeping accounts, do not furnish a satisfactory basis for any conclusion as to the financial results of the insurance institution. To supplement this, each annual report of this institution contains a table comparing the amount of premiums received with the total expenditures arising during the same year and properly chargeable to the premiums for that year, including the compensation payable for all accidents occurring during the year and the expenses of administration for the same year. As, however, the total amount of compensation payable is not definitely known at the end of the year, and is subject to further changes, the annual statements are subject to subsequent modifications. In the following table the amount of compensation paid for the entire period has been taken from the latest source available and is therefore more accurate, especially for the earlier years. The statement of expenditures has been taken from the original reports

as far as available. It was impossible to obtain such data for 1885 to 1888, 1890, and 1895 to 1898.

Until 1900 the premiums not only covered the compensation paid, but left a surplus for meeting the other expenditures, and even permitted the formation of reserves. But taken together the compensation and the expenditures of administration very often exceeded the amount of premiums received, so that evidently the low premiums were possible only because of the interest from the guarantee fund and the accumulated reserves. The proportion between compensation and premiums became quite alarming in 1901, when the compensation exceeded the premiums by 15.71 per cent. Adding the cost of administration, the excess of total expenditures over premiums reached 27.68 per cent in 1901, 23.71 per cent in 1902, and 21.74 per cent in 1903. Thus the premiums were far too low to cover the cost of insurance. The general revision of the rates remedied the situation, while the formation of the obligatory mutual association for the sicilian sulphur mines reduced the amount of compensation paid very materially.

The favorable proportion between the compensation paid and the premiums, and the seemingly large surplus for the last few years are deceptive because due to delay only, many claims for benefits remaining unsettled. For these years, therefore, the amount of compensation payable is nearer to the truth than the amount of compensation paid out for each year up to September, 1908. For 1905 the amount paid out as compensation was \$824,589, while the amount payable was computed at the end of the year at \$985,383, and it is reasonable to assume that for 1905, as for all the preceding years, the amount eventually paid would be higher than the computed amount due. For 1906 the amount paid out up to September 30, 1908, was \$991,407, while the computed amount payable was \$1,119,064. Taking these amounts, the proportion of the compensation to the premiums for 1905 is 87.85 per cent, and not 73.51 per cent, and adding the expense account, 104.48 per cent and not 90.1 per cent. For 1906 the proportion is 89.94 per cent instead of 79.68 per cent for compensation alone, and 107.90 per cent instead of 97.65 per cent for compensation and expenses together. For 1907, the last year reported, the amount actually paid was comparatively small; the amount payable was \$1,335,393, or 84.15 per cent of the premiums, while the expense account was \$263,330, or 16.59 per cent of the premiums. The total cost was therefore 100.74 per cent of the premiums.

COMPARISON BETWEEN PREMIUMS, COMPENSATION PAID UNTIL SEPTEMBER 30, 1908, AND TOTAL EXPENDITURES OF THE NATIONAL ACCIDENT INSURANCE INSTITUTION, FOR VARIOUS YEARS, 1889 TO 1906.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza (1889 to 1903) and Atti della Cassa Nazionale d'Assicurazione per gl' Infortuni degli Operai sul Lavoro; Bilancio Consuntivo del 1904, 1905, 1906, and 1907. Data for 1890 and 1895 to 1898 not obtainable.]

Year.	Premiums received.	Compensation paid for each year (up to Sept. 30, 1908).	General expenses. (a)	Total compensation and expenses.	Excess of—		Per cent of premiums.		
					Premiums.	Total payments.	Compensation.	Expenses.	Total payments.
1889..	\$58,220	\$45,351	\$13,244	\$58,595	.....	\$375	77.90	22.75	100.65
1891..	87,205	73,136	14,399	87,535	.....	330	83.87	16.51	100.38
1892..	88,069	71,719	15,656	87,375	.....	\$994	81.43	17.78	99.21
1893..	95,621	79,874	16,679	96,553	.....	932	83.53	17.44	100.97
1894..	100,244	88,749	19,381	108,130	.....	7,886	88.53	19.33	107.86
1899..	265,569	207,473	31,814	239,287	.....	26,282	78.12	11.98	90.10
1900..	298,610	271,881	38,485	310,366	.....	11,756	91.05	12.89	103.94
1901..	384,011	444,341	45,974	490,315	.....	106,304	115.71	11.97	127.68
1902..	583,958	656,432	66,013	722,445	.....	138,487	112.41	11.30	123.71
1903..	822,341	901,116	99,971	1,001,087	.....	178,746	109.58	12.16	121.74
1904..	1,219,249	930,438	148,667	1,079,105	.....	140,144	76.31	12.19	88.50
1905..	1,121,709	824,589	186,586	1,011,175	.....	110,534	73.51	16.63	90.14
1906..	1,244,289	991,407	223,572	1,214,979	.....	29,310	79.68	17.97	97.65

^a Not including taxes on investments, and in some years other minor disbursements, not considered expenses of administration.

The per capita amount of premium and also of compensation have been computed and are shown in the following table. By dividing the entire life of the institution into three periods—that previous to the accident insurance law (1884 to 1898), the period under the law and rates of 1898 (1899 to 1903), and that under the amendments of 1903 (1904 to 1906)—a very interesting contrast is obtained. The average amount of the premium has increased from 84 cents during the first period to \$1.70 during the second and \$3.12 during the last. The average amount of indemnity paid has not varied very much from these averages, except that for the last three-year period it was considerably smaller, because many claims arising during these years had not been settled.

PROPORTION BETWEEN PREMIUMS AND INDEMNITY PAID OUT BY THE NATIONAL ACCIDENT INSURANCE INSTITUTION, 1884 TO 1906.

[Source: Atti della Cassa Nazionale d'Assicurazione. Bilancio Consuntivo del 1907.]

Year.	Average number of persons insured throughout the year.	Amount of premiums received.		Amount of indemnity paid. (a)	
		Total.	Average per person insured.	Total.	Average per person insured.
1884.....	67	\$25	\$0.37		
1885.....	6,556	3,327	.51	\$1,581	\$0.24
1886.....	24,440	17,824	.73	38,550	1.58
1887.....	36,992	28,123	.76	25,270	.68
1888.....	58,023	44,881	.77	37,194	.64
1889.....	77,876	58,220	.75	45,351	.58
1890.....	94,507	75,286	.80	64,040	.68
1891.....	103,238	87,205	.84	73,136	.71
1892.....	109,253	88,069	.81	71,719	.66
1893.....	118,133	95,621	.81	79,874	.68
1894.....	125,119	100,244	.80	88,749	.71
1895.....	138,192	115,986	.84	100,623	.73
1896.....	146,696	128,167	.87	102,166	.70
1897.....	158,214	144,178	.91	134,049	.85
1898.....	160,772	148,183	.92	128,521	.80
1899.....	178,439	265,569	1.49	207,473	1.16
1900.....	202,355	298,610	1.48	271,881	1.34
1901.....	245,501	384,011	1.56	444,341	1.81
1902.....	340,256	583,958	1.72	656,432	1.93
1903.....	421,363	822,341	1.95	901,116	2.14
1904.....	370,198	1,219,249	3.29	930,438	2.51
1905.....	373,570	1,121,709	3.00	824,589	2.21
1906.....	406,183	1,244,289	3.06	991,407	2.44
1884 to 1898.....	1,358,078	1,135,339	.84	990,823	.73
1899 to 1903.....	1,387,914	2,354,489	1.70	2,481,243	1.79
1904 to 1906.....	1,149,951	3,585,247	3.12	2,746,434	2.39

a The numbers here shown include all payments made up to Sept. 30, 1908, for accidents occurring in each year.

THE COMPULSORY MUTUAL ACCIDENT INSURANCE ASSOCIATION FOR SICILIAN SULPHUR MINES.

The parliamentary commission which studied the bill of 1903 intended to limit its provisions concerning compulsory employers' mutual accident insurance associations to the industry of sulphur mining in Sicily, but the law as passed did not contain the specification, because of the argument that conditions similar to those in that industry might develop in other industries also. As a matter of fact the sulphur mining industry of Sicily was the first to be organized under the law on July 11, 1904.

The difficulties arising out of the application of the law of 1904 to the sulphur mines of Sicily were claimed to be inherent in the peculiar organization of that industry. Small undertakings predominate. When the compulsory association was formed it embraced about 900 employers and nearly 40,000 employees. Subcontracting is very common. Often the proprietor divides his sulphur beds among many contractors, and even one sulphur mine may be exploited by several contractors, each having an independent shaft of entry. In addition, the usual method of payment is in piece wages. These factors made the differentiation of the employer and employee and the

determination of the earnings and other details of the application of the law very difficult. The operators complained of the excessive charges imposed by the law. The national insurance institution was forced to put these mines in one of the highest (twenty-fourth) risk classes with special increases of premiums for unfavorable conditions. The private insurance companies had complained of the frequency of frauds on the part of the small employers, and after two years of unsatisfactory experience left the entire field to the national insurance institution, which by its constitution is prohibited from refusing any risks. Protracted lawsuits and delays in the payment of indemnities were frequent and caused hardship to the injured workmen, and the national insurance institution, in which most of these miners were insured, suffered a heavy deficit during the years 1899 to 1903, which was especially large in the Palermo branch, due to the sulphur mines. All these circumstances emphasized the necessity of a local mutual institution on a cooperative basis, which would make better control possible. According to one authority, the lack of the feeling of economic and social solidarity made the hope for a voluntary association futile.

On January 9, 1904, the minister of agriculture addressed a circular^(a) to the prefects of the Provinces and the presidents of the chambers of commerce and of arts in Sicily informing them of the necessity of forming an employers' compulsory insurance association and requesting opinions and suggestions, as required by the law. After the required preliminary steps the constitution of the association was approved and the association thereby instituted by royal decree of July 11, 1904, under the name of the Sicilian Obligatory Association for Mutual Insurance against Industrial Accidents in the Sulphur Mining Industry. (*Sindacato Obbligatorio Siciliano di Mutua Assicurazione per gl' Infortuni sul Lavoro nella Industria delle Miniere di Zolfo.*)

On the same date the Crown approved a special act passed by both chambers of the Parliament which introduced some modifications in the operation of the law as applied to the Sicilian sulphur-mining industry and to the Employers' Compulsory Mutual Insurance Association. These modifications applied to the method of distributing among the individual employers the cost of compensation and to the measures to be taken to collect the necessary funds.

In transmitting the text of the bill to the Chamber of Deputies on May 23, 1904, the minister of agriculture, industry, and commerce pointed out that the method of distributing the expense of the employers' association according to the wage expenses of the indi-

^a Bollettino di Notizie sul Credito e sulla Previdenza, 1904, p. 5.

vidual employers worked injustice, because of frequent deceptions in the statements of some of the employers. A comparison of the data of the mining office of the district of Caltanissetta with the data of the National Accident Insurance Institution showed that the amount of wages certified was about one-half of the amount actually paid. The ministry therefore accepted the suggestions of the Sicilian mining association, indorsed by several of the chambers of commerce of Sicily, that the assessments be made not according to the wage expense, but according to the quantity of sulphur produced, and that they be collected in connection with the railway transportation of the product, so as to make impossible any evasion of the assessments.

OPERATIONS UNDER THE LAW OF JULY 14, 1907.

The conditions of the application of the compensation legislation by the Employers' Compulsory Mutual Accident Insurance Association were considerably modified by the new law of July 14, 1907, referring especially to this obligatory association. The chief object of this law was further to eliminate the opportunities of defrauding the association. The special law of July 11, 1904, was aimed at the frauds in connection with the payment of contributions by the members, but it left untouched the opportunities for fraud in connection with the payment of compensation.

The minister of agriculture, industry, and commerce in his memorial accompanying the bill introduced into the Chamber of Deputies on June 9, 1907, declared that the law of July 11, 1904, aggravated frauds in connection with the statements of wages and earnings upon which the computation of compensation is based, because it took away the restraint upon exaggeration which existed when the employers' contributions were proportionate to their wage expense. It was pointed out in the same memorial that the conditions of contracting and sub-contracting made exaggerations of wages especially difficult to detect. The general standard of the law making the annual earnings equal to 300 times the daily wage was also declared to be excessive for the Sicilian mining industry, since the actual number of working days varied in the different provinces from 160 to 248. The frequent fraudulent practices led to excessive litigation, which proved an additional expense to the insurance association.

To remedy these conditions the association made repeated requests upon the Government that a system of fixed wage schedules for certain occupations be substituted for the method of individual computation of the earnings, and the law of July 14, 1907, is primarily an adaptation of this suggestion. Connected with this are measures for better organization of medical help and for a system of medical

inspection which will enable the mutual insurance association better to control the payment of compensation.^(a)

The law was to go into effect after the publication of the necessary regulations, which were prepared by the ministry, were approved by the royal decree of June 14, 1908, and were promulgated on August 6, 1908.^(b)

It will be unnecessary to give a complete analysis of the workings of this employers' compulsory mutual insurance association, because in its main features it must follow the provisions of the general accident insurance law, which was fully analyzed in an earlier section. The purpose and scope of this institution and the extent of the industrial field covered by it are sufficiently well indicated in its title. The provisions concerning persons injured, the character of disability compensated, and the benefit payments all remain unchanged. Only those features of its activity will be presented which show a material deviation from the methods required by the general law.

MEDICAL HELP.—The association is required by the law of 1907 to organize a service of first medical and pharmaceutical aid to the injured workers, in regular stations, without any cost to the sulphur mine owners. In addition to the medical help, the physicians connected with these medical aid stations must furnish the preliminary and final medical certificates without any cost to the injured person. To cover the cost of this medical service the association is authorized to levy an additional tonnage tax upon the sulphur mined, according to the provisions of the law of July 11, 1904, but not to exceed 50 centesimi (9.7 cents) per ton.

MEDICAL EXAMINATION.—For the purpose of protecting the compulsory mutual accident insurance association against possible fraud, the law of 1904 confers additional power on the association in cases of medical inspection. As soon as an accident has occurred the association may demand of the local magistrate that the injured person be examined by a medical expert even before any claim for compensation is made. The magistrate must order such investigation to be made as soon as possible, and he appoints the expert. In case the injured person refuses to undergo the medical examination, it may be assumed by the judicial authority, unless otherwise proven, that such lesions alone are due to the accident as evidently have been caused by it.

The cost of the examination is paid by the association which has requested it, and includes pay to the injured employee for wages lost because of the examination and reimbursement of his traveling expenses, if any.

^a Die Arbeiter-Versicherung im Auslande. Herausgegeben von Dr. Zacher, Heft VIIb, p. 18.

^b Bollettino dell' Ufficio del Lavoro, Vol. X, Aug. 2, 1908, pp. 491 to 499.

SOURCES OF INCOME.—The expenses of the obligatory mutual accident insurance association of the operators of Sicilian sulphur mines is met by a special tax of 1.50 lire (29 cents) per ton of sulphur obtained or of mineral containing more than 65 per cent of pure sulphur. The assessment upon mineral containing 65 per cent and less is reduced by one-third.

As stated in the report of the minister of May 23, 1904, this rate of assessments was computed in the following way:^a The total amount of compensation annually paid to Sicilian sulphur miners by the National Accident Insurance Institution in 1901 and 1902, when it assumed all insurance in that region, was about 513,000 lire (\$99,009). At that time compensation was paid according to the law of 1898. It was computed that on an average the cost under the law of 1904 would exceed that under the older law by about 20 per cent, and an additional 20 per cent was allowed for the expenses of administration and the formation of the reserve, which brought the probable cost up to almost 718,000 lire (\$138,574). Since the average annual production of sulphur amounted to about 500,000 tons, it was estimated that the tax of 1.50 lire (29 cents) per ton would produce the requisite revenue with a necessary margin of safety.

In case the tax yields more revenue than is needed, and the general meeting of the association expresses the desire to have the tax reduced, the administrative council may petition the ministry to that effect, and after consultation with the Council of State, such reduction may be ordered by the Government, but it may require a guarantee of the solvency of the institution.

The collection of the contribution was combined with the transportation of sulphur and sulphur minerals, because this was considered the best way to reach all the sulphur mined; and since most of the sulphur is transported by rail, the railroad station nearest to the mines was considered the most convenient place for accounting for the tonnage and for receiving the contribution. The railroad companies operating in Sicily agreed to assume the duty of collecting the contribution in connection with the freight charges. The contribution may be paid at the time of shipment or it may be paid at the time of delivery if the shipper assigns the payment to the consignee by a proper indorsement upon the bill of lading and the railroad transfers the amounts received to the insurance association. The fee charged by the railroad for making collections is very small, it being 5 centesimi (1 cent) per each 10 lire (\$1.93), with a minimum charge of 10 centesimi (2 cents).

The regulation of method of payment of contributions for the sulphur transported over ordinary roads was left to the constitution of the association.

^a Bollettino di Notizie sul Credito e sulla Previdenza, 1904, pp. 827 to 835.

The same rule applies to the amount and method of payment of contributions to cover the risk of work which is temporarily unproductive.

DETERMINATION OF BENEFITS.—The general method of determining the benefits due the workmen injured in the Sicilian sulphur mines remains the same as provided for by the laws of 1898 and 1903 (codified in 1904) for all other industries. The difference introduced by the law of July 14, 1907, and by subsequent regulations issued on June 14, 1908, concerns the method of determination of the wages, upon which the amount of compensation depends.

DETERMINATION OF WAGES.—Instead of the complicated system of computing wages which is contained in the general accident insurance law of January 31, 1904, and in the regulations of March 13, 1904, the following much simpler plan is substituted: First, in case of employees hired for a specified annual remuneration, that sum is taken in case of death or permanent disability; in compensation of temporary disability, the daily wage is arrived at by dividing the annual remuneration by 365. For all other employees, special wage tables must be elaborated. These tables must be prepared by the Ministry of Agriculture, Industry, and Commerce, which should take into consideration the proposals of the mining office of the district of Caltanissetta (the center of the sulphur mining industry of Sicily) and give a hearing to the local authorities and to local employers and employees' associations.

In these tables the workmen employed in the sulphur mining industry must be divided into groups, and to each group must be attached a specified sum of annual earnings, to be used in case of death or of permanent disability and a daily wage to be used in case of temporary disability. In computing these tables, the sum of annual earnings must correspond to the average annual earnings of the employees in that group, and the daily wage must be obtained through division of the annual earnings by the average number of working days in the various provinces.

The tables prepared in accordance with these requirements of the law were approved by royal decree of July 2, 1908.

Estimates of annual and daily wages were made not only for occupations and for each of the four sulphur mining provinces but also by age groups; and the tables are furthermore complicated by the fact that different age classifications have been adopted for the different occupational groups. Thus, the miners are divided into four groups, as follows: Under 25 years, 25 and under 45 years, 45 and under 60 years, and 60 years and over. The common laborers are divided into five age groups: Under 15 years, 15 and under 25 years, 25 and under 50 years, 50 and under 60 years, and 60 years and over; and the employees occupied in transporting the sulphur are arranged

also in five groups, but these groups slightly differ from the age grouping of the common laborers: Under 20 years, 20 and under 40 years, 40 and under 50 years, 50 and under 60 years, and 60 years and over. For all other occupations a slightly different age classification was adopted: Under 15 years, 15 and under 21 years, 21 and under 30 years, 30 and under 60 years, and 60 years and over.

For all age groups except the highest, the demand of the law is complied with in obtaining the annual earnings by multiplying the daily wage by the average number of working days. For the age group of 60 years and over, the annual earnings are obtained by subtracting 25 per cent from the product of the multiplication of the daily wage by the average number of working days.

Contract workers who, though working themselves, employ other wage workers are assumed to receive the wage of the highest wage group to which any one of their employees belongs.

Five years after going into effect the tables must be revised, and the procedure of the next revision is prescribed in great detail in the regulations of June 14, 1908. Revision of the tables may be ordered after two years, if a demand for such revision is made either by the Sicilian Mutual Accident Insurance Association or by 100 workmen in any one province, and if the demand is approved by the head engineer, the district mining office of Caltanissetta approves it after investigation. The assigning of the employees to the different wage groups indicated in the tables must proceed in compliance with the regulations. At the time of employment, the employer must inform the employee to which group of average wages he is assigned. This must be done in the presence of witnesses and with the consent of the employee, who may raise objections against the assignment, and if the employer does not agree with the employee, the statements of both parties must be recorded. The certificate of assignment must be made in writing and signed by both parties, and it must contain the objections of the employee, if any. Appeals from this assignment may be made within ten days to the mutual insurance association, which association transfers the complaint to the district mining office at Caltanissetta for final decision.

The same procedure must take place in case of change of the employee from one occupation to another, but if the change from one wage group to another is due to age no special notice need be given. The operator of the mine or his agent, upon complaint made by the employee to the insurance association and forwarded to the district mining office, may be prosecuted for failure to give the employee the required notice of assignment.

If an accident occurs to a workman before his assignment to a wage group has been made, the assignment is made by the insurance

association, and disagreement as to such assignment is to be settled in the same way as all other disagreements as to indemnity to be paid.

Notice of assignments made must be given to the insurance association. The same requirements are applicable to contractors and to subcontractors employing helpers. If at the time of an accident the notice to the association is overdue, or if the notice furnished omitted to give essential information in relation to the workmen's wages or contained false statements relative thereto, the association may recover the amount of compensation from the employer. If the salary stated to the association is lower than that stated to the employee, only the difference of the compensation based upon the two wage figures is recoverable.

FINANCIAL ORGANIZATION.—The revenues of the association consist mainly of the tax upon sulphur as established by the law of July 11, 1904; in addition to this there are the initiation fees of the members, amounting to 4 per cent of their annual wage expense; special assessments for nonproductive work, revenues from the investment of the reserve funds, and miscellaneous income. The normal rate of taxes is established by the law; the special assessment for nonproductive work is determined at 0.5 per cent of the wage expense, and may vary in accordance with the variations of the tax.

In the financial organization of the association three funds are provided for: An operating fund, the ordinary reserve or guarantee fund, and the extraordinary reserve fund. The ordinary reserve fund is formed from the initiation fees and 5 per cent deducted from the other income, which deduction is continued until the reserve is equal to the average annual amount of the indemnities and expenses of administration for the preceding five years. This reserve is invested in state or guaranteed securities and deposited with the Bank of Loans and Deposits, subject to the same regulations as the guarantee funds of the voluntary associations. Extraordinary revenues and surplus from operation are paid into the extraordinary reserve, which is not limited. This reserve is deposited in the same way and serves to meet the payment of extraordinarily heavy indemnities.

If the revenues and 50 per cent of the extraordinary reserve do not suffice to meet the obligations, the council must call a special meeting to authorize a petition to the ministry for necessary measures to cover the deficit. On the other hand, if the revenues should prove too large and after five years of experience (after deducting the 5 per cent payable into the ordinary reserve) are 25 per cent higher than the budget, then the association may petition the ministry for a reduction of the tax. If the reduction amounts to more than 5 per cent, the association may levy a surtax upon the new members (who have not contributed to the accumulated reserves), which surtax must not exceed the difference between the old and the new tax.

In case of the dissolution of the association, the constitution provides for a redistribution of the accumulated reserves among the members proportionately to the wages paid as announced to the association during the whole period of its existence.

The operating fund is kept either in the Postal Savings Bank or in any other savings bank or in the Bank of Sicily, and is subject to the order of the president, who must himself, or through the vice-president or a director, indorse all payments. The temporary benefit payments to the injured workmen are made by members of the association, who are subsequently reimbursed.

ADMINISTRATION.—The organization and mode of operation of the insurance association is regulated by its constitution. (^a) Briefly, this organization is as follows: The association is governed by the general assembly of members, meeting twice a year regularly and in extraordinary meeting whenever necessary, and its officers, as follows: An administrative council, an executive office, an accident prevention committee, so called, auditors, and a board of arbitration.

The membership of the association consists of the mine operators who are employers of labor. Under certain regulations the owners of mines who do not operate their mines may hold membership in the association. In the general meetings of the association the members have a voting power corresponding to the number of employees, 1 vote up to 25 employees, 1 additional vote for each additional 25 employees, but not over 100 votes to 1 person, though the number of employees is computed by assuming 1 employee for every 500 lire (\$96.50) of annual wages paid. Members may be represented by proxies, but no member of the administrative council is allowed to act as the agent of any other member of the association.

The administrative council consists of ten members, elected for two years, one-half of the number being elected annually. The council has the general powers given to a board of directors, subject to the control of the general assembly. The actual executive work is done by the director, who is at the head of the executive office. He is elected by the assembly for a probationary period of two years, after which he has security of tenure and can be removed for cause only by a general meeting at which are registered three-fourths of all voting power. He supervises all the work except that referring to prevention of accidents. The director is subject to the administrative council, to which he refers each case of rejected application for compensation. Litigation must be sanctioned by the council.

The accident prevention committee consists of three members elected by the general assembly. The function of this committee is to inspect the mines and to issue specific orders and general rules for

^a Bollettino di Notizie sul Credito e sulla Previdenza, 1904, p. 1643.

the purpose of promoting the safety of the work. These orders must be approved by the council, and may be appealed from to the district mining office. For the purpose of inspection the committee may impress members of the association for a short time, and must pay them the cost of subsistence and traveling expenses.

The three auditors perform the usual functions of an auditing committee, and a board of five arbiters elected annually by the general meeting hears all controversies between the association and its members referred to it for informal consideration.

Under penalty of a fine a member is required to accept any office to which he is elected, unless he is excused for cause by the administrative council, and for his services is entitled to traveling expenses and to a per diem allowance.

GOVERNMENT CONTROL OF ADMINISTRATION.—A few changes were introduced in the methods of administration of the association by the law of 1907, for the purpose of strengthening the government control over its affairs. The governor is authorized to appoint a government representative on the administrative council of the association; and a special provision authorizes the ministry to transfer the entire administration into the hands of a government commissioner, if the council ceases to exercise its function or exercises it irregularly. In such cases the commissioner remains in charge until the general assembly elects a new council. It was explained that some such provision was needed on the statute books to insure continuity of service of the association against any malice on the part of the board of directors. This commissioner has all the powers of the president and of the administrative council, and may be given the powers of the general assembly. He is to resign as soon as a council has been selected. The remuneration of the commissioner is to be determined by the minister, but must not exceed 25 lire (\$4.83) per day.

STATISTICS.—The Sicilian compulsory mutual insurance association has been in operation such a short time that little statistical information concerning it is available; but in the following two tables a few data concerning accidents in the sulphur mines and the compensation paid for such accidents are given for 1899 to 1905, inclusive, i. e., a continuous period of seven years of the application of the accident compensation law, for from January 1, 1899, to October 1, 1904, the sulphur mine operators were insured almost altogether with the National Accident Insurance Institution. Only the last line in these tables, giving data for the 15-month period, October 1, 1904, to December 31, 1905, refers to the compulsory mutual insurance association, and this permits some comparisons. The tables show a continuous and rapid increase in the accident rate which even the formation of the compulsory mutual association did not stop, although it slowed down the pace. The rate in 1903 was 126 per thousand; in

1904 it was 143.2 per thousand for nine months, or 190.9 per thousand per annum; and in 1904-5 it rose to 254 per thousand for fifteen months, or 203.2 per thousand per annum. What the rate is under the application of the new law of July, 1907, it is impossible to tell, since no data are available. As might be expected, the increase is not manifested in the number of grave accidents. In 1900 the rate per thousand of accidents resulting in death or permanent disability was 8.1, in 1904 it was 9.3, and in 1905 it was 8.0, while the rate of cases of temporary disability increased from 74.3 per thousand in 1900 to 181.6 in 1904 and to 195.2 in 1905. It is also shown that the total amount of compensation increased materially, though to a less degree, because the increase of the accidents was mainly in the temporary disability group.

NUMBER OF ACCIDENTS IN SICILIAN SULPHUR MINES AND RATE PER 1,000 EMPLOYEES, 1899 TO 1905.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1908, Vol. XXVI.]

Year.	Em- ployees.	Wages paid.	Accidents.			Accidents per 1,000 employees.		
			Resulting in—		Total.	Resulting in—		Total.
			Death or per- manent disa- bility.	Tem- porary disa- bility.		Death or per- manent disa- bility.	Tem- porary disa- bility.	
1899.....	38,208	\$3,424,635	152	2,393	2,545	4.0	62.6	66.6
1900.....	38,044	3,488,810	308	2,825	3,133	8.1	74.3	82.4
1901.....	38,901	3,588,165	255	3,924	4,179	6.5	100.9	107.4
1902.....	37,789	3,455,561	263	4,875	5,138	7.0	129.0	136.0
1903.....	37,341	3,495,840	307	4,397	4,704	8.2	117.8	126.0
1904.....	^a 35,395	^a 2,569,414	^a 248	^a 4,820	^a 5,068	^a 7.0	^a 136.2	^a 143.2
1905.....	(^b)	(^b)	^c 397	^c 9,056	^c 9,453	^c 10.0	^c 244.0	^c 254.0

^a Nine months of the operation of the national insurance institution.

^b Not reported.

^c Fifteen months of the operation of the Sicilian compulsory mutual insurance association.

TOTAL AND AVERAGE COMPENSATION PAID FOR ACCIDENTS TO WORKMEN IN SICILIAN SULPHUR MINES.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1908, Vol. XXVI.]

Year.	Total com- pensation paid	Average compensation.			Per case, all cases.
		Per case resulting in—			
		Death.	Permanent disability.	Temporary disability.	
1899.....	\$56,520.90	\$467.00	\$163.75	\$3.93	\$22.21
1900.....	85,960.19	508.00	251.09	3.43	27.44
1901.....	108,283.45	594.00	190.28	4.01	25.91
1902.....	101,592.01	575.00	202.45	3.96	19.77
1903.....	128,272.15	599.00	261.72	4.69	27.27
1904.....	^a 122,806.09	^a 527.00	^a 348.56	^a 4.95	^a 24.23
1905.....	^b 163,259.76	^b 579.00	^b 232.57	^b 4.38	^b 17.27

^a Nine months of the operations of the national insurance institution.

^b Fifteen months of the operations of the Sicilian compulsory mutual insurance association.

COMPULSORY ASSOCIATION FOR INSURANCE OF SEAMEN.

The second compulsory mutual insurance association was ordered by royal decree of December 14, 1905, approving the constitution of this association after the preliminary steps required by the law of January 31, 1904, and the regulations of March 13, 1904, had been taken. The decree ordered the association to begin operations on August 1, 1906, under the official title of the Obligatory Southern Maritime Association for Insurance of Seamen against Trade Accidents (*Sindacato Obligatorio Marittimo Meridionale per l'Assicurazione degli Infortuni sul Lavoro della Gente di Mare*). It embraces the equipers and the owners of ships belonging to the shipping districts of Naples, Gaeta, Castellammare di Stabia, Pizzo, Reggio di Calabria, Taranto, and Bari, with headquarters at Naples.

In all its essentials the constitution of this association follows that of the sulphur mine association, providing the same internal organization of administration and of the finances, except that in levying the contributions upon its members it follows the general law of 1904, which permits the general meeting to establish the rate annually.

OTHER ACCIDENT INSURANCE INSTITUTIONS.

As was explained at some length in the general discussion of the law and its application, in addition to the National Accident Insurance Institution and the compulsory mutual associations, accident insurance may be provided by the following three groups of institutions: (1) Private (commercial) insurance companies; (2) voluntary mutual associations; and (3) private funds, either cooperative or individual. These will be treated very briefly, especially in view of the meager data available.

PRIVATE INSURANCE COMPANIES.

The essential difference between Italy and Germany or Austria and some other European countries lies in the permission to private insurance companies to enter the field of accident insurance. While the Parliament did not see its way to exclude them, it felt the necessity of subjecting their activities to strict supervision and control, so as to protect the interests of the insuring employers as well as those of the insured employees.

Private insurance companies desiring to write accident insurance under this law must obtain authorization from the ministry. Writing accident insurance without such specific authorization is punishable by a fine up to 1,000 lire (\$193) for each contract, and the insured employer has the right of action for any damages sustained.

Such authorization must be asked for in written petition, accompanied by the list of premium rates and a sample policy. Variations

from the authorized form of policy are not permitted and are punishable by a fine of from 100 to 5,000 lire (\$19.30 to \$965) and, if repeated, may lead to cancellation of the authorization. Changes in premium or in conditions of policy require special permission of the ministry. The same requirements in regard to monthly reports and a register of insurance apply to the private insurance companies as to the national insurance institution. The accident insurance business must be kept entirely separate from all other business of the company.

A guarantee fund is required from the private insurance companies which at the end of the year must amount to two-thirds of the premiums received during that year, with a minimum of 200,000 lire (\$38,600). When the guarantee fund falls below the required limit and is not replenished within the specified time, the authorization is considered canceled and the employers must, within fifteen days, provide for insurance in some other way.

The great importance ascribed to the guarantee funds is shown by the numerous regulations concerning them. The guarantee funds must be deposited with the Bank of Deposits and Loans in the form of state or guaranteed securities, according to the market value. The valuation must be reviewed each six months, and in case of depreciation of the securities they must be brought up to the required amount. They must also be adjusted every six months to the changes in the volume of operation, and when an increase of the fund is necessary it must be effected within fifteen days under penalty of a fine up to 50 lire (\$9.65) per day for failure to comply with the requirement. In case of reduction of the number of persons insured, the administration of the insurance company may petition the ministry for permission to refund the difference, and such refunding may be accomplished by the bank upon order of the minister. In case of the discontinuance of a fund or association, such refunding is not made unless it is shown that all obligations of the company have been met. If the guarantee fund has been impaired by payment of compensation, it must be replenished within one month under penalty of cancellation of the authorization.

The administration of each private insurance company must furnish to the ministry monthly reports of the status and changes of insurance. The annual statements of accidents and compensation must also be published, and for this purpose a register of all accidents must be carried, giving information of establishments, time and place of accidents, their causes, all necessary information in regard to the injured, the injury, and the compensation.

All accident insurance companies are subject to regular examinations by the Ministry of Agriculture, Commerce, and Industry.

Notwithstanding the rigorous demands of the laws and regulations concerning reports from the private insurance companies, the

statistical information concerning their operation is very scanty and fragmentary. The organization of these companies has been already referred to in the chapter devoted to the general application of the law. Unfortunately neither the number of persons insured nor the number of persons compensated is available, so that a comparison must be made upon the respective amounts of premiums received and of compensation paid. The comparison is not unfavorable, since it shows an increase in the share of premiums distributed as compensation from 73.8 per cent in 1902 to 87.1 per cent in 1906.

AMOUNT OF PREMIUMS RECEIVED AND OF COMPENSATION PAID BY PRIVATE INSURANCE ASSOCIATIONS IN ITALY, BY YEARS, 1901 TO 1906.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, and September, 1908.]

Year.	Premiums received.	Compensation paid.	
		Amount.	Per cent of premiums.
1901.....	\$567,825	\$460,414	81.1
1902.....	646,715	477,120	73.8
1903.....	601,527	459,044	76.3
1904.....	1,129,285	810,553	71.8
1905.....	1,431,049	1,146,369	80.1
1906.....	1,637,595	1,426,456	87.1

EMPLOYERS' VOLUNTARY MUTUAL ASSOCIATIONS.

It was the avowed intention of the law to stimulate mutual accident insurance among employers by the formation of mutual associations according to the German type. Such mutual associations may be organized by employers who together employ at least 4,000 persons, whether in the same line or in different lines of industry. The organization of each association requires the authorization of the Government, and in addition there are stringent regulations concerning control, accountancy, and guarantee in order that the employees insured in these mutual associations may receive protection equal to that given to persons insured in the National Accident Insurance Institution or in private insurance companies.

Employers' mutual associations must be organized in writing, the articles of incorporation to contain a list of members and establishments included in the association; also evidence of the deposit of the required guarantee fund and of the approval of the constitution by all the employers who intend to join the association, and, finally, evidence of payment of half the annual insurance premiums which the national insurance institution would require for insurance of all the establishments in the association, this initial payment to serve as a fund to begin the operations of the association.

The constitution of the association must contain the usual regulations as to the constituency, the meetings, the administration, and

the financial operations, such as the methods of distribution of the employers among the risk classes, methods of settling disputes within the association, surveillance over the establishments belonging to the association, conditions of liquidation of the association, amendments to the constitution, etc.

The articles of incorporation and the constitution must be sent to the ministry for approval or amendment, with all the necessary documents, such as evidence of the payment of the required guarantee fund, a statement from the national institution as to the amount of insurance premiums which the association employers would have to pay, and a list of members, with numbers of workmen to be insured. With the final approval of the constitution by the ministry the association is legally organized. The expenditures of the association are covered by means of annual assessments upon the membership, the amount of the assessments being based upon the expenditures for the preceding year.

All these mutual associations which are authorized to act as substitutes for regular insurance companies must guarantee a scale of compensation which is in no particular inferior to that established by the law, and to assure the solvency and ability of the associations to meet the obligations assumed they are required to place guarantee funds with the Bank of Deposits and Loans, in accordance with the regulations of the minister.

The requirements concerning these guarantee funds contained in the law and the regulations are very strict, since they are the only protection of the injured workman or his family against a dishonest or mismanaged employers' mutual insurance association.

For the employers' mutual accident insurance associations the guarantee fund must equal 10 lire (\$1.93) per insured employee, but not over 250,000 lire (\$48,250). In addition, a further guarantee is given by the provision that when an association is unable to meet its obligations for payment of compensation the liability reverts to the person responsible for the insurance, i. e., the employer.

The regulations concerning the guarantee funds of the private insurance companies mentioned above also apply to the guarantee funds of the mutual insurance associations.

The formation of voluntary mutual employers' associations proceeded but slowly after the enactment of the first law, in 1898. The first one to organize was the Sindacato Subalpino, in Turin, on November 30, 1898, with over 1,000 employers and some 40,000 employees in various branches of industry. The mining employers' mutual association in Iglesias was authorized on March 31, 1899, with some 15 employers and some 15,000 employees. These were the representatives of two different types of mutual insurance associations, the one

consisting of a few large employers in one definite industry and the other of a large number of small employers in many different branches.

Two more associations were formed early in 1900, the Syndicate League, in Genoa, and the Association for Employers on Public Works (*Sindacato fra Impresari d'Opere Pubbliche*), in Florence, both consisting of several hundred employers and from five to six thousand employees. Thus there were only four associations when the revision of the law took place.

Since then the formation of voluntary mutual associations proceeded at a much more rapid rate. Besides the compulsory associations, three voluntary ones were formed in 1904—for employment in naval ports, with headquarters in Genoa, April 5; for seamen, Genoa, April 15; and Sideros, for miscellaneous industries, Genoa, December 20; three in 1905—lumbering industry, Rome, March 10; the Cisalpino, in Milan, December 20; and for miscellaneous industries and building trades, Genoa, December 21; and two in 1906—one in Naples, December 4, and one in Genoa, both for miscellaneous industries.

The amendments of the law seem to have greatly stimulated the development of voluntary mutual accident insurance, since from 1903 to 1905 the number of insured persons increased 150 per cent. While the cost of such insurance greatly varies from one mutual association to another, in view of the differences in the trade risks of industries covered, the relation between the total amount of compensation paid and the premium seems, on the whole, to be a favorable one, indicating a moderate administrative expense.

OPERATIONS OF EMPLOYERS' VOLUNTARY MUTUAL INSURANCE ASSOCIATIONS OF ITALY, 1901 TO 1906.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, and September, 1908.]

Year.	Number of—		Amount of—			Average premium per—		Average indemnity per—	
	Employers.	Employees insured.	Wages insured.	Premiums received.	Compensation paid.	Insured employee.	\$1,000 of wages insured.	\$1,000 of wages insured.	\$1,000 of premium received.
1901.....	(a)	(a)	\$6,037,116	\$51,840	\$43,313	(a)	\$8.59	\$7.17	\$836
1902.....	(a)	(a)	6,861,861	61,928	44,552	(a)	9.02	6.49	719
1903.....	1,689	62,793	6,985,353	66,854	53,878	\$1.06	9.57	7.71	806
1904.....	2,523	83,191	11,273,337	283,657	187,783	3.41	25.16	16.66	662
1905.....	2,893	109,687	16,220,045	464,943	332,365	4.24	28.66	20.49	715
1906.....	3,255	152,587	21,278,521	627,292	512,539	4.11	29.48	24.08	817

a Not reported.

PRIVATE AND COOPERATIVE FUNDS.

The private funds, whether of an individual establishment (*cassa privata*) or of several establishments combined (*cassa consorziale*), represent a transition from the principle of insurance to that of

compensation by the individual employer, although a private fund which is supported by a combination of several employers closely approaches an employers' mutual accident insurance association. The permission to private employers to substitute a fund for the obligation of insurance was mainly due to the desire to preserve such funds where they already existed and also to provide for comparatively large employers, who could ascertain in advance with considerable accuracy the probable cost of accident compensation. As in the case of mutual associations, private funds require authorization, must furnish guaranties, and are subject to government control.

A private fund may be organized either by an individual establishment or by several establishments in the same industry or in the same locality. The authorization of the ministry is necessary, and such authorization is granted upon petition, which must give all necessary information as to the establishments, together with a statement from the national insurance institution as to the annual amount of insurance premiums which would be required to purchase insurance for the risk, and evidence of having complied with the requirements as to the guaranty. The private funds are governed by their respective constitutions, which must state the scale of compensations paid. This scale must not be lower than that prescribed by the law.

When the private fund is organized by several establishments joined for that purpose, the constitutions must state the period for which such union is affected, methods of determining the coefficient of risk of each establishment and the contribution of each establishment, conditions for admission of other establishments, provision for collective responsibility, methods of amending the constitution, and liquidating the fund if necessary. The ministry may introduce changes in the constitution of such funds with the approval of the council of state and publish them as royal decrees.

For the private funds the guarantee fund must not be less than five times the insurance premiums in accordance with the rates of the National Accident Insurance Institution, if the membership does not exceed 2,000, and three times the insurance premium but not less than 40,000 lire (\$7,720) for the largest funds. The same conditions relative to the management of the guarantee fund—concerning dissolution, reinsurance, examination of accounts, etc.—which have been given in connection with the mutual associations, also apply to the private funds.

Three cooperative funds were authorized in 1899, one in 1901, three in 1904, two in 1906, and one in 1907; one of these suspended operations in 1905 and one in 1906. At the end of 1906 there were known to exist seven such cooperative funds. One of these covered nearly 20,000 employees, two about 6,000 each, one over 2,000; the three remaining protected less than a thousand employees each.

OPERATIONS OF COOPERATIVE INSURANCE FUNDS OF ITALY, 1901 TO 1906.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, and September, 1908.]

Year.	Number of—		Amount of—			Average premium per—		Average compensation per—	
	Employers.	Employees insured.	Wages insured.	Premiums received.	Compensation paid.	Insured employee.	\$1,000 of wages insured.	\$1,000 of wages insured.	\$1,000 of premium received.
1901.....	(a)	(a)	\$605,556	^b \$6,071	\$3,214	.....	\$10.03	\$5.31	^b \$52.94
1902.....	(a)	(a)	583,329	17,963	3,919	.....	30.79	6.72	21.82
1903.....	509	18,539	579,216	7,813	3,495	\$0.42	13.49	6.03	44.73
1904.....	805	24,734	1,826,369	20,487	5,304	.83	11.22	2.90	25.89
1905.....	994	25,346	2,319,157	23,233	8,343	.82	10.02	3.60	35.91
1906.....	1,225	35,662	2,813,982	29,453	14,992	.83	10.47	5.33	50.90

^b Not including 1 association not reporting premiums received.^a Not reported.

Eight private funds for individual establishments qualified in 1899 and 2 in 1900. In 1903, 1904, and 1905, 11 more were organized. One of them, in the large cotton manufacturing establishment in Turin, had a membership of 3,600 and 1 of 2,800. Three of them are organized in connection with establishments employing from 1,000 to 2,000 persons, and 9 in connection with establishments employing fewer than 1,000 persons each. It will be unnecessary to give here the detailed figures concerning each of the twenty or more private funds existing in Italy at the end of 1906. The total data have been given in connection with the general discussion of the results of the operation of the accident insurance law.

PROPOSED REFORMS.

The rapid increase in the number of accidents and in the number of cases carried into court created the feeling in administrative circles that the administration of the law, notwithstanding the various efforts at reform, was lax and open to criticism. As early as 1903, during the parliamentary debates preceding the adoption of the amendatory act of June 29, 1903, both chambers passed resolutions requesting the Government to prepare legislative proposals for the establishment of special tribunals for the adjudication of actions arising under this law and for the simplification of the judicial procedure in such actions.^(a)

In conformity with these resolutions, on May 31, 1905, a commission was appointed for the study of the question. The commission admitted that the regular tribunals—accustomed to consider cases according to the well-established principles of the common law—were not well adapted to sit in cases arising under this special act, which was based upon a different conception of the relations between capital and labor than that held in common law. It recognized,

^a Bollettino di Notizie sul Credito e sulla Previdenza, 1908, p. 256.

however, that the ordinary courts had an advantage over special tribunals in the general sense of legal rights and the definite habits of legal reasoning, due to experience and to professional training. The commission did not see its way to recommend the organization of special tribunals, but admitted that the adjustment of claims should not be left entirely to the individual bargaining of both parties, because the workmen or their dependent relatives do not have the necessary understanding of the correct value of their claims. It therefore suggested that in all cases the local administrative officers (*pretori*) act as intermediaries, representing the State and adjusting the claims on a basis equitable to both parties; that all decisions of the "pretori" up to 1,500 lire (\$289.50) be final and without appeal, and in such cases where larger sums are concerned the appeals be considered by the ordinary courts of appeal; that by appropriate administrative decrees attorneys at law be discouraged from interfering with the administration of the law; and that the fees of attorneys and medical and other experts be regulated by decree.

This plan, expressed in a draft of a bill published toward the end of 1905, came up for discussion in the Superior Council of Labor. In the last session of 1905 the council, in view of the serious abuses of the law in Rome, instructed the Bureau of Labor in cooperation with the General Office of Credit and Provident Institutions to prepare a careful report concerning the administration of the law, and this report came up for discussion in the first session of the council for 1907. The suggestion of the commission of 1905 to delegate the important judicial powers to the "pretori" did not meet with the approval of the council. It was argued that these administrative officers had neither the time nor the necessary medical or technical training for the consideration of these claims; that they were not free from local influences, and were likely to be more influenced by the employers and insurance institutions than by the workmen. As to the best substitutes for such administrative intervention, the suggestions offered embraced special courts, an autonomous central insurance office in Rome, and the adaptation of special simplified methods of procedure in the ordinary courts.

A careful study of all these suggestions and of the legislation and practice of other European countries formed the basis for a bill for the reform of administrative procedure in connection with accident insurance, which was introduced on March 13, 1908, by the minister of agriculture, industry, and commerce, in the Chamber of Deputies.

The legislative proposal introduced by the ministry is divided into two distinct parts. The first deals with the specific problem of disputes arising under the law and the second aims at a general reform of administrative procedure.

The arguments in favor of special tribunals prevailed. The bill proposes the organization of special provincial or distinct commissions for consideration of controversies arising under this law. A commission is to be established in the capital of each Province to have jurisdiction of that Province. If necessary, separate commissions may be established by royal decree, upon recommendation of the minister of agriculture, in separate districts (*circondario*), with jurisdiction over that district, which is then taken out of the jurisdiction of the provincial commission. Thus the effort is to provide all industrial localities with commissions conveniently located, so that there may be no hardship to the poor claimant.

Each commission is to consist of three members, the president of the local tribunal, the provincial physician, and the local chief engineer, they furnishing the expert knowledge necessary for the proper consideration of the claims—law, medicine, and engineering.

The procedure before these special tribunals is to be much simpler than in the regular courts.

Minors over 18 years may appear in their own cases, and married women do not require the authorization of the husband. Attorneys or counsel are not necessary. Proceedings must be oral, as a rule. Briefs may be filed only by permission of the commission. Witnesses may be examined by the commission, and in the examination of witnesses, as well as in the entire procedure, the legal rules of procedure are not obligatory.

Considerable stress is laid upon the technical features of the case, the examination of which may be made either by the entire commission or by any one of its members delegated for that purpose. The commission or the member delegated may visit the place of accident or any other place necessary to verify the statements of the injured employee or any witness.

Thus the commission is given the right and opportunity to inform itself in a most direct manner with all the facts in the case. In addition, it is given the right to appoint outside medical or technical experts when necessary, these experts to be assisted by the respective members of the commission. The orders of the commission have the force of judicial orders. It may order provisional payments or the deposit of guarantee funds. Its final sentences must be immediately put into execution, but they may be carried to the court of cassation in Rome on a writ of error only.

The expenditures of the commission are to be charged to a special fund of the Ministry of Agriculture, Industry, and Commerce, to which contributions are to be levied upon the National Accident Insurance Institution and other insurance institutions. Exemption from stamp and registry duties are to be conferred upon all acts in connection with the proceedings of these courts.

The last twelve articles of the bill (articles 22 to 33) suggest various reforms in the administration of the law, which are almost all directed toward increasing the control over the claimants and thus preventing the abuse of the law through fraud and malingering. The proposals are important as indicating the practical difficulties which necessarily must arise in the administration of an accident insurance law unless proper methods are early taken for their prevention. One of the most troublesome details in such administration, even in cases of admitted validity, is the proper method of determining the exact duration of disability, to exaggerate which there is a frequent tendency among the injured employees.

Furthermore, aside from the cases of malingering and of deception as to the length of disability, the possible carelessness in taking measures necessary for hastening recovery must be taken into account, such carelessness being due either to ignorance or to the desire to prolong the duration of benefits.

To meet these difficulties, the bill undertakes to grant to the insuring institutions the right to exercise medical control over the injured person, such control to consist of visits of a physician representing the insurance institution. The bill further provides that the injured employee shall be subject to the visit of the institution's physician; shall appear in proper medical institutions indicated by the insurance institution for the purpose of having a thorough medical examination made in order to ascertain the results of the injury, or submit to such treatment which, while being without danger, may, in the opinion of the insurance institution's physician, relieve the consequences of the accident. If the employee without good reason declines to accede to requests for any of the three enumerated measures, his compensation may be partially reduced or altogether discontinued.

While these proposals are mainly directed at the ignorance or carelessness of the injured employee, other measures are proposed for the purpose of preventing or detecting fraud and malingering. The bill intends to deprive the employee of his right to compensation under the law when (1) he has simulated or exaggerated or actually aggravated the consequences of the accident, (2) when he has returned to work while continuing to receive his daily allowance, or (3) when he has in any other way tried to deceive the employer or the insurance institution.

Finally, the third important object aimed at by the new bill is to discourage unnecessary litigation. The commission which prepared the bill recognized that frequently attorneys are responsible for fraudulent claims or unnecessary lawsuits, and the measures for counteracting these evils are directed partly against the claimants

but primarily against the attorneys or any other intermediaries. The bill intends to prohibit any attorney from offering his services to the claimant in such cases. Persons who offer their own services or the services of other persons as such intermediaries are to be fined for the first offense up to 300 lire (\$57.90) and for a second offense up to 2,000 lire (\$386). Officials who, having received notice of accidents, give information to intermediaries so as to enable them to offer their services are to be similarly punished. All contracts with intermediaries for payment of services rendered in connection with the obtaining of compensation for injured workmen under the law shall be null and void. While the compensation paid is not as a rule subject to cession or seizure, an exception is made in favor of court fees, which injured workmen or their beneficiaries may be required to pay in case of unsuccessful lawsuits.

These are the most important reforms proposed by the bill for the purpose of preventing the practice of malingering and the fraudulent claims from which the application of the accident insurance law in Italy has greatly suffered.

The bill was referred by the Chamber of Deputies to a parliamentary commission, which approved substantially all the provisions proposed.^(a) The most important modification suggested by the commission was in the constitution of the special tribunals, which, instead of consisting of three officials already overburdened with many duties, are to consist of a judge, a physician, an engineer, and one representative for the employers and one for the employees.

The parliamentary commission did not stop there, however. It pointed out that the governmental bill was drawn on narrow lines in accordance with instructions given in 1905; that since that time the criticism to which the law of 1904 has been subjected and the experience gained through its administration, uncovered many other weak points requiring corrections, and the more important changes suggested were the following: A better definition of accident, so as to include all injuries caused during employment and not through employment only; the demand of immediate notice of accident; the payment of no compensation during the first three days of disability so as to eliminate the growing number of claims for very petty accidents; a more practicable method of determining the wages of the apprentices; the better regulation of the right of revision of compensation granted, which is to be limited to one time, etc. Perhaps the most important measure proposed is the limitation of insurance to the National Accident Insurance Institution, though without interfering with the rights of mutual insurance associations and private accident funds. The measure is directed against the writing

^a Bollettino di Notizie sul Credito e sulla Previdenza, 1908, pp. 1030 to 1123.

of accident insurance by private insurance companies, since it was shown by investigation that their profits are large and constitute a heavy and nonproductive burden upon the industry.

PROPOSED INSURANCE FOR AGRICULTURAL LABORERS.

One of the questions raised by this parliamentary commission in its report was the possibility of extending the provisions of the accident insurance law to the agricultural laborers, who are much more numerous than the industrial workers. The commission expressed its general sympathy with the proposal but dismissed it for the present time because of practical difficulties.

Independently of these general governmental efforts at reforming the law, the question of accident insurance for agricultural laborers has come up in the Italian Parliament and the movement in its favor is gradually growing. As early as 1902 the question was seriously discussed in the Chamber of Deputies. On January 31, 1907, a bill to that effect was introduced in the Senate; and while the bill did not accomplish very much, a more carefully prepared bill with an extensive report was reintroduced on March 20, 1909.^(a)

In connection with the first bill a report was made in which it was argued that the conditions of work on land were so different from the conditions in the factory or mine that a separate law was preferable to an amendment to the old law, simply extending it to the agricultural labor. The bill of 1907^(b) imposed upon the owner of the farm, who managed it himself or through a hired manager, or the money or share tenant, the duty to insure the laborers he employed against industrial accidents. The insurance obligation included also the state, provincial, or communal government bodies owning agricultural land. The insurance was to be effected either through the existing insurance institutions or through special voluntary agricultural employers' associations, which might be made compulsory by the minister. Workmen employed in tending agricultural machinery operated by mechanical power remained subject to the old law. The scale of compensations proposed was simple and rather crude: 2,500 lire (\$482.50) for death or total permanent disability and full wages for temporary disability. The bill also contained a long list of operations or occupations which were to be classified as agricultural, and this included: Plowing, sowing, grass mowing, transporting and handling hay, reaping and harvesting, tending stock, trimming trees, gathering, transporting, and pressing grapes, rearing silkworms, gathering mulberry leaves, fruit gathering, tree planting, cleaning of privies, sewers, irrigation ditches, etc., butter and cheese making, and repairing of farm buildings and of agricultural machinery and implements.

^a Bollettino dell' Ufficio del Lavoro, Vol. XI, 1909, pp. 700-744.

^b Bollettino dell' Ufficio del Lavoro, Vol. VII, 1907, p. 365.

During the two years that intervened between the introduction of the first and second bill the question was extensively discussed by many agricultural societies. In a lengthy report accompanying the later bill many cases were cited of approval of the intent of the bill by agricultural associations. The criticisms were directed against the details of the bill. For this reason these details were considerably modified in the latter bill, which presents very peculiar provisions.

The bill is very broad in its intent. It aims to include all agricultural labor hired for the cultivation of the soil, or any subsidiary occupations, necessary in farming, even if for a few days or hours. Those branches of agricultural labor which are covered by the general accident insurance law, such as forestry work, tending machinery, hydraulic work, leveling, road making, etc., are left undisturbed when these forms of labor are performed as independent occupations. But if they lose their industrial nature, and become forms of ordinary farm labor, they are to be treated as such.

An original feature of the bill is that which puts the responsibility for carrying the insurance upon the owner of the land, and not upon the person operating the farm or estate. But while the civil responsibility is intended to rest entirely upon the owner of the land, tenants are required to contribute one-half of the premium if they rent more than 4 hectares (9.9 acres), and one-third if renting from 1 to 4 hectares (2.5 to 9.9 acres). Tenants renting less than 1 hectare (2.5 acres) are not expected to contribute any share of the premiums.

The obligations of insurance obtain even for small holdings cultivated by the members of the family, whether the head of the family is tenant or proprietor. In the latter case the head of the family is held responsible for the insurance obligation.

The compensation scale is rather crude, as in the first bill; it requires 2,500 lire (\$482.50) for a fatal accident if the victim is married, and 1,000 lire (\$193) if single. In case of total permanent disability the compensation is 2,500 lire (\$482.50), whether single or married. For temporary disability there is a daily allowance of 1 lira (19.3 cents) for single persons and 1.50 lire (29 cents) for married persons. No account is taken of differences in earning capacity, age, etc. While accidents leading to partial permanent disability are referred to in the law, no scale of compensation is provided for those, and no regulations are given concerning the distribution of compensation in fatal accidents. This is the more remarkable, as the existing Italian laws are very explicit concerning these problems.

The modern Italian tendencies concerning accident insurance are seen in the provisions of the bill, granting to the National Accident Insurance Institution the exclusive right to insurance, except that mutual associations may be formed; and the minister of agriculture

is given the right to organize compulsory mutual associations whenever he may think any necessary.

Perhaps the most novel features of the bill proposed is the method of assessing the cost of insurance. It is based not on the number of persons employed or the wage expenses, but on the acreage of the land. A considerable advantage of simplicity may be claimed for this plan. For the purposes of each assessment the land is divided into six classes: (1) Irrigated land; (2) dry land used for grass, hay, hemp, flax, vegetables, and fruit; (3) land cultivated for one-third, and left for grazing for two-thirds; (4) land under extensive cultivation for vegetables; (5) wood lots; and (6) alpine pasture lands. It is still more remarkable, both in view of the very unsatisfactory conditions of Italian accident statistics in general, and statistics of accidents in agriculture in particular, that the law undertakes to establish the rate of accident insurance premiums for each grade of land—namely, 1.10 lire per hectare (8.6 cents per acre) for land of groups 1 and 4, 0.90 lira per hectare (7 cents per acre) for land of second group, 0.70 lira (5 cents per acre) for the third group, 0.40 lira (3 cents per acre) for the wood lots, and 0.20 lira (1.5 cents per acre) for the alpine pasture lands. For estates extending over 20,000 hectares (49,420 acres) these rates are reduced by one-third, and if extending over 50,000 hectares (123,550 acres), by one-half. Provision is made in the bill for revision of these rates after two years of experience.

The number of agricultural laborers in Italy is so much larger than that of industrial employees that the problem is one of very great importance. According to the census of 1901, persons employed in agriculture numbered over nine and a half millions as against less than 4,000,000 employed in industry.

STATISTICS OF INDUSTRIAL ACCIDENTS.

The principal statistics of industrial accidents were given in discussing the general application of the law (pages 1736 to 1744). In addition to the grand totals of the number of accidents, detailed accident statistics contain very important material for the understanding not only of the problem of accident insurance, but also of industrial accidents in general. While Italian accident statistics are exceedingly fragmentary, they nevertheless contain much that is valuable and are therefore reproduced here.

Both government institutions concerned with the problem of workmen's insurance have at different times taken up the question of industrial accident statistics, namely, the Bureau of Credit and Savings Institutions (*Divisione Credito e Previdenza*, at present *Divisione Generale del Credito e della Previdenza*), and the Bureau of Labor (*Ufficio del Lavoro*), both in the Ministry of Agriculture, Indus-

try and Commerce (*Ministero di Agricoltura, Industria e Commercio*). Ample legal authority for collection of statistics of industrial accidents is contained in the general law and the regulations, and as early as 1901 a very comprehensive scheme for the collection and elaboration of such statistics was published in the *Bollettino di Notizie sul Credito e sulla Previdenza* (Vol. XIX, p. 525, 1907), but not until August, 1906, were the results of the elaboration of the data for 1901 and 1902 published. Moreover, the report for 1901 covers only 27,653 out of 62,699 accidents recorded, and the data are not satisfactory even for these. These data have therefore not been utilized in the analysis which follows. The report for 1902 is much more complete, including 57,617 out of 63,369 cases. It classifies accidents by industries, causes, results, and nature of injury. No later accident statistics have been published by this bureau. The Italian Bureau of Labor, organized early in 1904, began to publish reports on accident statistics in July, 1904, and altogether its statistics cover a period of two and one-half years—July, 1904, to December, 1906. Its earlier reports covered periods of three months each. A report for the entire year 1905 appeared in the spring of 1907, and one for the year 1906 in the summer of 1907. No other reports appeared until August, 1909, when a few data for July to September, 1908, were published, and in January, 1910, the data for October to December, 1908, and also totals for the six months—July to December, 1908. But somewhat unfortunately these reports are far from uniform. Their elaboration was begun on a very large scale, but soon the extent of the analysis was materially reduced, the report for 1905 being much simpler than for the last six months of 1904, and the data for 1906 containing very little except totals, so that no very extended analysis is possible except for the last six months of 1904.

The reports for 1905 contain the data by months, geographical division, insurance institution, industry, cause, age, and sex, but all the tables concerning the time have been eliminated. The combinations are mainly those of geographical division with the other factors enumerated, and there are also combinations of industry, sex, and age; industry and cause; and cause, sex, and age.

Finally, the report for 1906 contains data by geographical divisions, sex, and industry only, but no data concerning cause, time, or age; and the report for 1908 is limited to a simple classification by geographical divisions and branches of industry.

In the following table the number of accidents is given by industries for 1902, July to December, 1904, 1905, 1906, and July to December, 1908. Because of absence of reliable statistics of persons employed in these industries, it is impossible to compute accurate accident rates. The proportion of accidents to females has not changed very much, being 6.2 per cent of the total for July to December, 1904,

5.7 per cent in 1905, and 6 per cent in 1906. The metal-working industry (primarily iron), building and construction, mining, and textiles claimed the vast majority of the industrial accidents in 1906, over 63 per cent.

NUMBER OF ACCIDENTS IN SPECIFIED YEARS BY INDUSTRIES, 1902 TO 1908.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, and Bollettino dell' Ufficio del Lavoro, March and June, 1905, and March and June, 1907.]

Industry.	1902.	July to December, 1904.			1905.			1906.			July to December, 1908.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
Agriculture and forestry.....	460	890	67	957	1,945	80	2,025	2,328	51	2,379	1,120
Mining.....	10,947	5,892	27	5,919	13,646	46	13,692	18,979	97	19,076	6,989
Metallurgy.....		1,944	36	1,980	6,157	38	6,195				
Bricks, pottery, and glassware.....	1,917	1,387	83	1,470	4,046	195	4,241	5,635	264	5,899	5,673
Metal working.....	13,331	9,943	274	10,217	29,731	579	30,310	47,330	618	47,948	21,389
Electric industry.....	649	546	19	565	1,775	18	1,793	(a)	(a)	(a)	(a)
Woodworking.....	1,327	1,345	25	1,370	3,131	41	3,172	4,941	159	5,100	2,911
Chemicals, etc.....	2,592	2,257	222	2,479	5,537	411	5,948	9,410	402	9,812	4,911
Printing and paper.....	1,371	882	169	1,051	2,071	402	2,473	2,886	530	3,416	1,930
Textiles.....	6,580	2,516	1,668	4,184	6,753	4,224	10,977	8,806	6,569	15,375	7,662
Leather and other animal products.....	728	396	43	439	1,199	80	1,279	1,716	182	1,898	1,213
Clothing.....	783	521	138	659	1,017	359	1,376	1,053	293	1,346	825
Food products.....	2,759	2,334	83	2,417	5,528	184	5,712	7,907	589	8,496	5,469
Building and construction.....	9,007	7,550	38	7,588	17,300	82	17,382	23,129	114	23,243	14,184
Loading and unloading, lifting, carrying, etc.....	(a)	1,551	1	1,552	4,356	8	4,364	3,874	33	3,907	5,431
Railroad transportation.....	(a)	3,423	11	3,434	7,963	38	8,001	10,531	15	10,546	8,369
Transportation by water.....	(a)	490	6	496	1,229	10	1,239	3,635	1	3,636	619
All other.....	5,166	1,101	59	1,160	4,073	291	4,364	4,438	46	4,484	793
Total.....	57,617	44,968	2,969	47,937	117,457	7,086	124,543	156,598	9,963	166,561	89,488

a Not separately reported.

The causes of accidents for 1902, July to December, 1904, and for 1905, are shown in the following table. As the data were taken from two distinct sources, with somewhat different methods of classifying causes, they are not strictly comparable for 1902 and the two later periods.

The table shows that more than half of the industrial accidents occurring in 1904 and in 1905 were caused by landslides, falling bodies, striking against objects, and falls; 61.22 per cent of the total number of accidents in 1905 being attributed to these causes.

CAUSES OF ACCIDENTS, 1902, JULY TO DECEMBER, 1904, AND 1905.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, and Bollettino dell' Ufficio del Lavoro, March and June, 1905, and March, 1907.]

Causes of accidents.	Accidents during—					
	1902.		July to December, 1904.		1905.	
	Number.	Per cent of total.	Number.	Per cent of total.	Number.	Per cent of total.
Motors.....	248	0.43	273	0.57	524	0.42
Power transmission apparatus.....	806	1.40	593	1.24	846	.68
Instruments and tools.....	6,028	10.46	3,710	7.74	9,371	7.52
Working machinery.....	8,611	14.94	5,278	11.01	11,642	9.35
Elevators, hoists, cranes, etc.....	776	1.35	273	.57	473	.38
Boilers and steam fittings.....	117	.20	83	.17	140	.11
Explosives.....	183	.32	89	.19	174	.14
Inflammable substances.....			190	.40	558	.45
Incandescent metals.....	3,916	6.80	1,361	2.84	3,512	2.82
Gases, liquids, etc., corrosive and other-wise harmful.....			1,196	2.49	3,435	2.76
Landslides and falling bodies.....	18,344	31.84	9,665	20.16	22,357	17.95
Striking against fixed or movable objects.....	(a)		9,434	19.68	35,652	28.63
Sudden movements of the body.....	(a)		4,954	10.33	12,525	10.06
Falls.....	9,916	17.21	7,113	14.84	18,236	14.64
Electric conductors.....	44	.08	42	.09	81	.06
Railroad accidents.....	40	.07	863	1.80	1,099	.88
Navigation.....	6	.01	126	.26	113	.09
All other.....	8,582	14.89	2,694	5.62	3,805	3.06
Total.....	57,617	100.00	47,937	100.00	124,543	100.00

a Not separately reported.

The distribution of accidents by causes is further shown in the following table for each industrial group. Certain common causes are responsible for a large number of accidents in each industry; such are falling bodies, falls, striking against objects, etc.; but certain definite causes are more frequent in certain industries. Thus, working machinery is responsible for large numbers of accidents in the metal working and textile industries, landslides and falling bodies in mining and metal working, falls in building and construction and mines, etc.

NUMBER OF ACCIDENTS IN 1902, JULY TO DECEM

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, August, 1906, and

Marginal number.	Industry.	Number of accidents caused by—						Com- bustibles, corrosives, gases, etc.
		Motors.	Power trans- mission apparatus.	Work- ing ma- chinery.	Eleva- tors, hoists, cranes, etc.	Boilers and steam- fittings.	Explo- sives.	
1902.								
1	Mines and metallurgy.....	8	26	142	216	23	83	477
2	Bricks, pottery, and glassware.....	5	22	100	10	.....	2	233
3	Metal working.....	41	155	2,484	178	14	2	1,717
4	Chemicals, etc.....	11	23	171	27	22	13	430
5	Food products.....	41	105	500	34	10	.....	227
6	Woodworking.....	3	33	547	4	1	.....	34
7	Textiles.....	22	271	3,075	31	13	1	245
8	Leather and other animal products.....	.....	15	121	1	2	.....	23
9	Clothing.....	2	27	360	.....	5	.....	43
10	Paper and printing.....	7	46	498	10	4	.....	45
11	Building and construction.....	29	14	72	167	5	62	165
12	Cars, vehicles, etc.....	2	13	211	30	2	.....	128
13	Transportation.....	30	4	75	44	7	.....	70
14	Electrical industry.....	14	7	70	2	.....	.....	45
15	Agricultural labor.....	32	42	128	13	7	20	16
16	All other.....	1	3	57	9	2	.....	18
17	Total.....	248	806	8,611	776	117	183	3,916
JULY TO DECEMBER, 1904.								
18	Mines and metallurgy.....	16	29	181	41	10	35	504
19	Bricks, pottery, and glassware.....	2	12	81	2	2	2	110
20	Metal working.....	58	135	1,607	87	8	2	980
21	Chemicals, etc.....	8	26	166	11	10	20	317
22	Food products.....	21	64	317	13	14	3	197
23	Woodworking.....	10	23	318	4	.....	1	30
24	Textiles.....	19	171	1,470	17	9	.....	138
25	Leather and other animal products.....	.....	6	64	2	.....	.....	18
26	Clothing.....	2	19	245	.....	1	.....	21
27	Paper and printing.....	9	33	309	3	1	.....	40
28	Building and construction.....	16	13	86	32	3	12	172
29	Loading and unloading, lifting, carry- ing, etc.	2	.....	17	24	.....	.....	10
30	Railroad and water transportation....	77	14	101	24	17	6	120
31	Electrical industry.....	13	6	53	1	4	.....	25
32	Agriculture and forestry.....	16	40	165	6	3	2	18
33	All other.....	4	2	98	6	1	6	47
34	Total.....	273	593	5,278	273	83	89	2,747
1905.								
35	Mines and metallurgy.....	29	36	369	119	8	94	1,433
36	Bricks, pottery, and glassware.....	7	17	189	5	2	.....	375
37	Metal working.....	135	200	3,828	156	46	6	2,959
38	Chemicals, etc.....	35	27	321	22	10	10	794
39	Food products.....	52	99	618	17	11	.....	362
40	Woodworking.....	10	15	545	4	4	.....	73
41	Textiles.....	83	242	3,443	11	29	.....	294
42	Leather and other animal products.....	2	25	160	.....	.....	.....	38
43	Clothing.....	11	36	367	2	.....	1	48
44	Paper and printing.....	25	51	613	10	1	.....	57
45	Building and construction.....	29	22	207	39	8	50	438
46	Loading and unloading, lifting, carry- ing, etc.	6	4	36	35	.....	1	44
47	Railroad and water transportation....	51	18	231	36	11	3	276
48	Electrical industry.....	33	9	138	3	2	.....	93
49	Agriculture and forestry.....	7	36	210	5	5	4	41
50	All other.....	9	9	366	9	3	5	180
51	Total.....	524	846	11,642	473	140	174	7,505

α This total is not the correct sum of the items; the figures are given as shown in the original report.

BER, 1904, AND 1905, BY INDUSTRY AND CAUSE.

Bollettino dell' Ufficio del Lavoro, March and June, 1908, and March, 1907.]

Number of accidents caused by—										Total accidents.	Marginal number.
Land-slides and falling bodies.	Falls.	Rail-road accidents.	Navigation.	Electric conductors.	Instruments and tools.	Striking against fixed or movable objects.	Sudden movements of the body.	Loading and unloading, lifting, carrying, etc.	All other causes.		
5,225	1,902	5	.....	1	934	.....	.....	1,812	93	10,947	1
579	332	1	.....	.....	147	.....	.....	201	255	1,917	2
4,078	1,318	2	.....	2	1,910	.....	.....	1,266	164	13,331	3
664	540	.....	1	1	276	.....	.....	341	72	2,592	4
611	572	.....	.....	1	223	.....	.....	291	144	2,759	5
296	117	.....	1	.....	182	.....	.....	74	35	1,327	6
1,025	1,013	.....	.....	1	316	.....	.....	346	221	6,580	7
141	179	.....	.....	.....	110	.....	.....	94	42	728	8
87	103	.....	.....	.....	105	.....	.....	26	25	783	9
231	225	.....	.....	.....	206	.....	.....	65	34	1,371	10
3,230	2,395	4	1	13	1,011	.....	.....	1,709	130	9,007	11
669	337	.....	1	.....	284	.....	.....	112	18	1,807	12
1,100	549	27	1	4	178	.....	.....	612	121	2,822	13
153	169	1	.....	21	61	.....	.....	94	12	649	14
72	62	.....	.....	.....	28	.....	.....	21	19	460	15
183	103	.....	1	.....	57	.....	.....	55	48	537	16
18,344	9,916	40	6	44	6,028	.....	.....	7,119	1,463	57,617	17
2,746	1,180	.....	.....	.....	475	1,421	756	.....	505	7,899	18
253	202	.....	.....	.....	70	397	200	.....	137	1,470	19
2,006	770	4	.....	6	1,194	1,927	971	.....	462	10,217	20
339	357	.....	.....	3	172	490	432	.....	128	2,479	21
278	429	.....	.....	3	136	531	259	.....	152	2,417	22
221	109	.....	.....	.....	271	235	111	.....	37	1,370	23
396	538	.....	.....	4	181	693	315	.....	233	4,184	24
41	78	.....	.....	.....	63	67	66	.....	34	439	25
58	48	.....	.....	.....	85	120	35	.....	25	659	26
99	141	1	.....	2	124	162	91	.....	36	1,051	27
2,011	1,885	3	.....	8	416	1,659	971	.....	301	7,588	28
376	357	.....	.....	.....	25	322	178	.....	241	1,552	29
540	519	853	126	5	203	848	361	.....	116	3,930	30
70	134	.....	.....	10	65	102	52	.....	30	565	31
82	205	1	.....	.....	140	206	39	.....	34	957	32
149	161	1	.....	1	90	254	117	.....	223	1,160	33
9,665	7,113	863	126	42	3,710	9,434	4,954	.....	2,694	47,937	34
5,698	2,864	2	.....	.....	1,099	4,635	1,963	.....	538	19,887	35
555	554	.....	.....	1	175	1,482	626	.....	252	4,241	36
5,091	2,319	1	2	15	3,093	9,034	2,756	.....	669	30,310	37
646	875	2	.....	4	392	1,698	928	.....	184	5,948	38
616	1,060	.....	.....	4	323	1,686	649	.....	215	5,712	39
439	274	.....	1	1	639	868	217	.....	82	3,172	40
1,003	1,352	1	.....	7	536	2,865	813	.....	298	10,977	41
100	215	.....	.....	.....	154	327	198	.....	60	1,279	42
79	86	.....	.....	1	260	359	83	.....	43	1,376	43
204	260	.....	.....	.....	336	626	229	.....	61	2,473	44
3,691	4,226	14	1	4	980	5,108	2,010	.....	555	17,382	45
974	1,003	5	.....	1	62	1,429	502	.....	262	4,364	46
1,239	1,559	1,073	107	10	557	3,033	777	.....	259	9,240	47
220	353	1	.....	31	144	492	221	.....	53	1,793	48
255	405	.....	.....	1	246	585	136	.....	89	2,025	49
547	831	.....	2	1	375	1,425	417	.....	185	4,364	50
22,357	18,236	1,099	113	81	9,371	35,652	12,525	.....	3,805	124,543	51

Information concerning the variations in the number of accidents by days of the week is available only for the six months, July to December, 1904. The actual number of accidents occurring during each day of the week is shown by industrial groups in the following table.

With the exception of the small number of accidents occurring on Sunday, the number of accidents for the different days of the week appears to be fairly uniform, but shows a tendency to increase toward the end of the week. The relations vary somewhat from industry to industry, probably due to local conditions of the industry.

NUMBER OF ACCIDENTS, BY DAY OF THE WEEK AND BY INDUSTRY, JULY TO DECEMBER, 1904.

[Source: Bollettino dell' Ufficio del Lavoro, March and June, 1905. Data obtainable only for July to December.]

Industry.	Number of accidents on—							Total.
	Sun-day.	Mon-day.	Tues-day.	Wed-nesday.	Thurs-day.	Fri-day.	Satur-day.	
Agriculture and forestry.....	68	147	135	124	145	159	179	957
Mining.....	238	872	915	1,054	915	989	936	5,919
Metallurgy.....	101	329	278	307	302	338	325	1,980
Bricks, pottery, and glassware.....	67	255	224	238	230	225	231	1,470
Metal working.....	350	1,631	1,613	1,608	1,618	1,673	1,724	10,217
Woodworking.....	29	225	209	209	209	237	252	1,370
Chemicals, etc.....	192	421	379	387	360	366	374	2,479
Paper and printing.....	42	192	184	158	136	164	175	1,051
Textiles.....	81	696	679	626	646	692	764	4,184
Food products.....	197	411	330	339	396	373	371	2,417
Building and construction.....	266	1,205	1,248	1,195	1,117	1,276	1,281	7,588
Loading and unloading, lifting, carrying, etc.....	109	224	245	241	224	248	261	1,552
Railroad transportation.....	326	525	512	516	509	539	507	3,434
All other.....	167	540	523	513	514	519	543	3,319
Total.....	2,233	7,673	7,474	7,515	7,321	7,798	7,923	47,937

The number of accidents occurring on the various days of the week are shown by the principal causes in the following table. The increase of the frequency toward the end of the week is noticeable in nearly all groups.

NUMBER OF ACCIDENTS, BY CAUSES AND BY DAY OF THE WEEK, JULY TO DECEMBER, 1904.

[Source: Bollettino dell' Ufficio del Lavoro, March and June, 1905. Data obtainable only for July to December.]

Causes of accidents.	Number of accidents on—							Total.
	Sun-day.	Mon-day.	Tues-day.	Wed-nesday.	Thurs-day.	Fri-day.	Satur-day.	
Instruments and tools.....	131	619	582	565	578	611	624	3,710
Working machinery.....	179	887	809	833	787	871	912	5,278
Incandescent metals.....	72	205	186	219	215	214	250	1,361
Landslides and falling bodies.....	398	1,451	1,542	1,524	1,511	1,677	1,562	9,665
Striking against fixed or movable objects.....	442	1,462	1,497	1,476	1,449	1,553	1,555	9,434
Sudden movements of the body.....	241	859	773	755	720	803	803	4,954
Falls.....	336	1,160	1,099	1,123	1,103	1,099	1,193	7,113
All other.....	434	1,030	986	1,020	958	970	1,024	6,422
Total.....	2,233	7,673	7,474	7,515	7,321	7,798	7,923	47,937

The distribution of the accidents by the hours of the day, as shown in the next table, shows a very marked variation, which may be explained by several considerations. The very small number of accidents occurring during the night hours, 9 p. m. to 6 a. m., is clearly seen. This is explained by the comparative infrequency of night work. The difference in the frequency of accidents in the three periods, 6 to 9 a. m., 9 a. m., to 12 m., and 12 m. to 3 p. m., requires a somewhat more complicated explanation. While the time periods are equal, three hours each, the second period represents a greater amount of work than either the first or the third period; greater than the first because all work does not begin as early as 6 a. m., and greater than the third because the period 12 to 3 p. m. includes the lunch hour. This will partly explain why the accident frequency is greater in the period 9 to 12 a. m. than in the period 6 to 9 a. m., and greater in the period 3 to 6 p. m. than in the period of 12 to 3 p. m., but the excess in either case is so large that this explanation alone does not seem to be sufficient; thus the relation of the frequency in the period 9 to 12 a. m. to that in the period 6 to 9 a. m. for all industries combined is 194 to 100, the relation in the period 3 to 6 p. m. to that of 12 to 3 p. m. is 180 to 100.

NUMBER OF ACCIDENTS, BY INDUSTRY AND BY HOUR OF OCCURRENCE, JULY TO DECEMBER, 1904.

[Source: Bollettino dell' Ufficio del Lavoro, March and June, 1905. Data obtainable only for July to December.]

Industry.	Number of accidents during—								Time un- known	Total.
	Hours before 12 m.				Hours after 12 m.					
	12 to 3.	3 to 6.	6 to 9.	9 to 12.	12 to 3.	3 to 6.	6 to 9.	9 to 12.		
Agriculture and forestry.....	15	25	141	243	132	221	124	28	28	957
Mining.....	78	202	981	1,857	1,150	1,115	275	165	96	5,919
Metallurgy.....	23	57	280	568	266	523	171	58	34	1,980
Bricks, pottery, and glassware.	22	37	265	445	164	380	95	44	18	1,470
Metal working.....	72	204	1,456	2,983	1,388	2,921	881	202	110	10,217
Woodworking.....	3	15	207	423	209	369	113	13	18	1,370
Chemicals, etc.....	38	83	353	704	360	636	186	91	28	2,479
Paper and printing.....	7	26	117	322	174	302	79	21	3	1,051
Textiles.....	52	99	672	1,191	525	1,146	397	79	23	4,184
Food products.....	35	91	350	655	347	589	209	93	48	2,417
Building and construction.....	68	149	1,182	2,332	1,005	2,076	496	146	134	7,588
Loading and unloading, lift- ing, carrying, etc.....	14	29	230	494	218	406	98	18	45	1,552
Railroad transportation.....	54	91	556	898	475	777	339	182	62	3,434
All other.....	33	54	462	962	439	877	223	55	214	3,319
Total.....	514	1,162	7,252	14,077	6,852	12,338	3,686	1,195	861	47,937

Considerable differences in the accident frequency are found to exist, when the accidents are analyzed by separate causes. Some of the fluctuations are not easy to explain, and may possibly be purely accidental in view of the comparatively small numbers with which the table is dealing.

NUMBER OF ACCIDENTS, BY CAUSES AND BY HOUR OF OCCURRENCE, JULY TO DECEMBER, 1904.

[Source: Bollettino dell' Ufficio del Lavoro, March and June, 1905. Data obtainable only for July to December.]

Causes of accidents.	Number of accidents during—								Time un-known	Total.
	Hours before 12 m.				Hours after 12 m.					
	12 to 3.	3 to 6.	6 to 9.	9 to 12.	12 to 3.	3 to 6.	6 to 9.	9 to 12.		
Instruments and tools.....	19	69	521	1,212	518	1,001	270	50	50	3,710
Working machinery.....	49	105	741	1,600	774	1,446	391	89	83	5,278
Incandescent metals.....	23	52	154	302	178	428	151	55	18	1,361
Landslides and falling bodies..	121	235	1,475	2,881	1,498	2,468	607	237	143	9,665
Striking against fixed or movable objects.....	84	239	1,459	2,736	1,322	2,350	816	245	183	9,434
Sudden movements of the body.....	39	97	810	1,599	681	1,242	303	111	72	4,954
Falls.....	83	197	1,102	2,011	1,020	1,840	556	186	118	7,113
All other.....	96	168	990	1,736	861	1,563	592	222	194	6,422
Total.....	514	1,162	7,252	14,077	6,852	12,338	3,686	1,195	861	47,937

While both sexes show an increase of accident frequency toward the end of the week and also toward the close of each working period, this rise of frequency is slightly more pronounced in the case of the female employees than in that of the male workers.

NUMBER OF ACCIDENTS, BY SEX, BY HOUR OF OCCURRENCE, AND BY DAY OF THE WEEK, JULY TO DECEMBER, 1904.

[Source: Bollettino dell' Ufficio del Lavoro, March and June, 1905. Data obtainable only for July to December.]

HOUR OF OCCURRENCE.

Sex.	Number of accidents during—								Time un-known.	Total.
	Hours before 12 m.				Hours after 12 m.					
	12 to 3.	3 to 6.	6 to 9.	9 to 12.	12 to 3.	3 to 6.	6 to 9.	9 to 12.		
Male.....	489	1,118	6,803	13,152	6,461	11,510	3,421	1,170	844	44,968
Female.....	25	44	449	925	391	828	265	25	17	2,969
Total.....	514	1,162	7,252	14,077	6,852	12,338	3,686	1,195	861	47,937

DAY OF THE WEEK.

Sex.	Number of accidents on—							Total.
	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	
Male.....	2,187	7,208	7,014	7,036	6,851	7,297	7,375	44,968
Female.....	46	465	460	479	470	501	548	2,969
Total.....	2,233	7,673	7,474	7,515	7,321	7,798	7,923	47,937

The accidents are classified by the nature of the injury for each industrial group in the table which follows, and in the second section of the same table are shown the percentage relations which have been computed for each industry, on a somewhat less expanded classification of injuries. The data are available only for the year 1902. Wounds, contusions, and fractures are classified together because frequently such injuries are combined in one casualty, and they constitute over nine-tenths of all injuries. Nearly 44 per cent of all injuries affect the upper extremities and almost 29 per cent the fingers alone, the frequency of injuries to the fingers of the right and the left hand being almost equal. Nearly one-fourth of all injuries affect the lower extremities, so that the wounds, contusions, and fractures of the extremities claim over two-thirds of all accidents. Injuries to the trunk are very much less frequent, and are mostly located in the chest. The variations in the nature of injuries in the various industries are considerable. The proportion of injuries affecting the upper extremities rises to nearly three-fourths in the clothing industry, and is only about one-third in building and construction, chemical industries, and the mines and metallurgical establishments, where accidents to lower extremities are much more frequent than in the clothing industry. The variations are plainly due to the differences in the nature of operations necessary in each industry.

A very close relationship exists between the cause of the accident and the nature of the injury. The accidents resulting from the handling of tools must necessarily cause injuries very much different from those caused by explosives or landslides. This relationship is shown in the second table following which gives the figures for 1902; the second section of the table summarizes the data on a percentage basis.

Working machinery must frequently injure the upper extremity, and particularly the fingers. Nearly two-thirds of all accidents due to this cause led to injuries of fingers, no very great difference being noticeable between the number of injuries to the right hand and to the left. Next in the frequency of injuries to the fingers follow accidents due to motors, to instruments and tools, and to power-transmission apparatus. Elevators, hoists, cranes, etc., affect the lower extremities, the head, neck, and trunk more frequently than the other forms of machinery. Boilers and combustibles lead to burns and scalds, while the injuries due to explosives are fairly evenly distributed over the body, as are those due to falls, landslides and falling bodies, and loading and unloading, lifting, carrying, etc.

NUMBER AND PER CENT OF ACCIDENTS FOR WHICH BENEFITS WERE PAID BY THE

[Source: Bollettino di Notizie sul Credito

NUMBER.

Nature of injury.	Accidents in each specified industry.						
	Mines and metallurgy.	Bricks, pottery, and glass-ware.	Metal-working.	Chemicals, etc.	Food products.	Wood-working.	Textiles.
BURNS, SCALDS, ETC.							
Single parts of body, not including eyes	135	204	1,414	292	173	22	187
Eyes.....	47	13	173	46	18	3	28
Several parts of body:							
Not including eyes.....	325	16	144	115	43	10	35
Including eyes.....	7	2	14	7	1	.....	2
The entire body.....	4	.....	1	3	1	.....	2
Total.....	518	235	1,746	463	236	35	254
WOUNDS, CONTUSIONS, FRACTURES, ETC.							
Right arm:							
Not including fingers.....	555	171	921	177	197	92	688
Including fingers.....	93	24	92	24	32	14	73
Fingers alone.....	1,088	224	2,115	297	453	344	1,465
Total.....	1,736	419	3,128	498	682	450	2,226
Left arm:							
Not including fingers.....	516	159	901	134	177	109	524
Including fingers.....	55	16	74	16	27	10	62
Fingers alone.....	996	220	2,328	255	385	323	1,145
Total.....	1,567	395	3,303	405	589	442	1,731
Both arms:							
Not including fingers.....	7	3	13	.....	4	3	15
Including fingers.....	2	2	9	4	.....	1	5
Fingers alone.....	4	3	11	4	4	1	2
Total.....	13	8	33	8	8	5	22
Right or left leg:							
Not including toes.....	2,697	365	1,793	432	483	162	1,015
Including toes.....	131	10	74	19	20	5	42
Toes alone.....	480	85	638	105	128	33	189
Total.....	3,308	460	2,505	556	631	200	1,246
Both legs:							
Not including toes.....	50	3	29	7	6	.....	7
Including toes.....	2	.....	2	2	.....	.....	3
Toes alone.....	1	.....	3	.....	1	.....	.....
Total.....	53	3	34	9	7	.....	10
Head and neck:							
Not including eyes.....	618	86	453	99	109	47	290
Including eyes.....	25	2	16	4	6	4	13
Eyes alone.....	604	44	605	67	53	27	130
Total.....	1,247	132	1,074	170	168	78	433
Trunk:							
Chest.....	239	28	124	54	42	12	41
Back.....	670	89	619	199	121	27	224
Shoulders.....	234	42	149	37	39	11	90
Ribs.....	79	9	38	10	30	9	31
Abdomen.....	57	11	79	21	37	5	56
Inguinal region.....	214	27	184	49	50	14	78
Other parts of trunk.....	130	18	67	15	24	10	39
Total.....	1,623	224	1,260	385	343	88	559
Other parts and several parts enumerated.....	869	39	245	92	91	29	98
The whole body.....	9	1	2	1	3	.....	.....
Total wounds, contusions, fractures, etc.....	10,425	1,681	11,584	2,124	2,522	1,292	6,325

VARIOUS INSURANCE INSTITUTIONS, BY NATURE OF INJURY AND BY INDUSTRY, 1902.

e sulla Previdenza, August, 1906.]

NUMBER.

Accidents in each specified industry.										Total.
Leather and other animal products.	Clothing.	Paper and printing.	Building and construction.	Cars, vehicles, etc.	Transportation.	Electrical industry.	Agricultural labor.	All other.		
19	42	33	61	103	59	33	22	15		2,814
5	1	4	97	18	10	3	1	2		469
1	3	11	25	8	10	16	10	2		774
			7	1		2	2			45
					1					12
25	46	48	190	130	80	54	35	19		4,114
81	64	132	517	119	214	59	51	45		4,083
4	6	19	71	3	25	7	6	4		497
125	253	328	900	286	344	65	55	64		8,406
210	323	479	1,488	408	583	131	112	113		12,986
59	41	109	462	117	152	53	35	37		3,585
4	5	14	62	10	17	2	7	1		382
130	208	311	1,005	268	288	72	54	87		8,075
193	254	434	1,529	395	457	127	96	125		12,042
4			20	1	7	2	1	1		81
		1	7		5			2		38
1	1		18	6	8	2	1	1		67
5	1	1	45	7	20	4	2	4		186
108	55	176	2,070	299	645	109	72	101		10,582
3	5	11	75	17	14	5	10	2		443
17	10	47	370	78	114	16	18	24		2,352
128	70	234	2,515	394	773	130	100	127		13,377
2	1		52	4	27	4	3	2		197
			2				1			12
										5
2	1		54	4	27	4	4	2		214
31	12	31	737	95	165	46	23	46		2,888
	3	2	15	3	4	4	1	1		103
15	20	20	297	143	73	26	9	11		2,144
46	35	53	1,049	241	242	76	33	58		5,135
9	3	11	185	8	69	10	16	10		861
42	14	44	512	70	177	27	9	29		2,873
19	11	11	151	27	74	10	7	14		926
5	2	14	58	7	27	6	5	8		338
12	1	11	43	22	28	6	2	7		398
13	7	6	187	30	77	12	9	3		960
4	1	8	101	13	25	4	7	4		470
104	39	105	1,237	177	477	75	55	75		6,826
14	14	15	889	50	161	39	22	14		2,681
1		2	9		1	7	1			37
703	737	1,323	8,815	1,676	2,741	593	425	518		53,484

NUMBER AND PER CENT OF ACCIDENTS FOR WHICH BENEFITS WERE PAID BY
OF ACCI-

[Source: Bollettino di Notizie sul Credito

NUMBER.

Nature of injury.	Accidents caused by—					
	Motors.	Power transmission apparatus.	Working machinery.	Elevators, hoists, cranes, etc.	Boilers and steam fitting.	Explosives.
BURNS, SCALDS, ETC.						
Single parts of body, not including eyes...	1		1		62	18
Eyes.....					3	2
Several parts of body:						
Not including eyes.....	1				23	44
Including eyes.....						11
The entire body.....					1	1
Total.....	2		1		89	76
WOUNDS, CONTUSIONS, FRACTURES, ETC.						
Right arm:						
Not including fingers.....	31	128	851	52	2	3
Including fingers.....	6	21	131	8	2	3
Fingers alone.....	70	165	2,808	128	2	3
Total.....	107	314	3,790	188	6	9
Left arm:						
Not including fingers.....	19	100	631	47	6	4
Including fingers.....	2	12	102	6		1
Fingers alone.....	44	140	2,620	127	2	2
Total.....	65	252	3,353	180	8	7
Both arms:						
Not including fingers.....	1	2	10	2		
Including fingers.....		2	7			
Fingers alone.....	1	1	14	2		
Total.....	2	5	31	4		
Right or left leg:						
Not including toes.....	35	50	477	110	5	14
Including toes.....	2	3	18	6		
Toes alone.....	3	8	139	38	1	
Total.....	40	61	634	154	6	14
Both legs:						
Not including toes.....		4	7	1		
Including toes.....			4			
Toes alone.....				2		
Total.....		4	11	3		
Head and neck:						
Not including eyes.....	7	55	239	85	2	11
Including eyes.....	1	3	14	1		2
Eyes alone.....	4	9	254	6	2	5
Total.....	12	67	507	92	4	18
Trunk:						
Chest.....	3	9	29	23		
Back.....	2	7	45	37	1	7
Shoulders.....		18	38	11		5
Ribs.....		5	17	4		
Abdomen.....		4	16	3		1
Inguinal region.....	3	5	38	20	1	
Other parts of trunk.....		7	17	11	1	4
Total.....	8	55	200	109	3	17

THE VARIOUS INSURANCE INSTITUTIONS, BY NATURE OF INJURY AND BY CAUSE
DENT, 1902.

e sulla Previdenza, August, 1906.]

NUMBER.

Accidents caused by—									Total.
Combustibles, corrosives, gases, vapors, etc.	Land-slides and falling bodies.	Falls.	Railroad accidents.	Navigation.	Electric conductors.	Instruments and tools.	Loading and unloading, lifting, carrying, etc.	Other causes.	
2,698	11	8			9		1	5	2,814
463	1								460
699		1			5			1	774
33					1				45
9					1				12
3,902	12	9			16		1	6	4,114
3	1,066	784	3	1	3	547	416	193	4,083
	142	61				55	50	18	497
	2,756	512	6		1	1,058	637	260	8,406
3	3,964	1,357	9	1	4	1,660	1,103	471	12,986.
1	888	723	2		1	652	358	153	3,585
	111	36	2			62	37	11	382
	2,353	443	3	1		1,587	552	201	8,075
1	3,352	1,202	7	1	1	2,301	947	365	12,042
	19	33			1	3	4	6	81
	7	4				5	9	4	38
	25	2				6	14	2	67
	51	39			1	14	27	12	186
2	4,472	3,229	8	2	1	756	1,174	247	10,582
	292	39				24	49	10	443
	1,539	183				154	250	37	2,352
2	6,303	3,451	8	2	1	934	1,473	294	13,377
	75	70	1		1	6	29	3	197
	4	1					3		12
	2					1			5
	81	71	1		1	7	32	3	214
4	1,238	756	1		5	253	153	79	2,888
	40	30				6	5	1	103
1	1,261	83	1		1	448	33	36	2,144
5	2,539	869	2		6	707	191	116	5,135
	195	321	3			73	193	12	861
	313	481	1			111	1,847	21	2,873
	250	258	1	1		43	285	16	926
	91	158		1		15	36	11	333
	70	181				8	104	11	398
	128	161				54	529	21	960
	127	184	1			18	88	12	470
	1,174	1,744	6	2		322	3,082	104	6,826

The results of injuries are classified in three groups, death, permanent disability, and temporary disability. Combined data for four years, 1899 to 1902, published by the National Accident Insurance Institution, have been used because they afford the advantage of larger numbers, from which the conclusions are somewhat more trustworthy than from other available data. These data are presented in connection with the study of the operations of the national institution. A little more than 1 per cent of the accidents prove fatal, a little over 4 per cent lead to permanent disability, and nearly 95 per cent to temporary disability only. The variations between industrial groups are important. The highest rate of fatal accidents is found in agriculture, 1.69 per cent of all accidents resulting in death; in mining 1.68 per cent of all accidents resulted fatally, and in building and construction 1.44 per cent. The high fatality rate of agricultural accidents is due mainly to the fact that in this industry only persons tending machinery are covered by the compulsory accident insurance law. Besides, the reporting of minor accidents in agriculture is probably not so efficient as in other industries. The lowest fatality rates are found in clothing, paper and printing, brick, earthen and glass ware, machinery, metal working, and textiles. For four years there was not one fatal accident in the clothing industry, and only one in the paper and printing industries combined.

A more careful analysis of the results of industrial accidents is possible for 1902. The tables which follow not only divide the accidents into fatal ones and those leading to temporary disability, partial permanent disability, and total permanent disability, but indicate for the cases of temporary disability the duration of such disability, and for cases of partial permanent disability, the degree of disability in percentages. Out of 57,617 accidents, 54,439, or 94.5 per cent, resulted in temporary disability only, and 2,716, or 4.7 per cent in permanent, but only partial disability, leaving only 0.8 of 1 per cent for the fatal cases and total permanent disability cases combined.

Of the cases of temporary disability, the vast majority lasted a very short time only. Accidents causing disability of less than six days are not considered. Of the total of 57,617 accidents, 27,666, or 48 per cent, caused disability for only six to fifteen days, and 17,149, or 29.8 per cent, disability for sixteen to thirty days, so that in 77.8 per cent of the cases considered the disability did not last over thirty days, and in 7,356 cases, or 12.8 per cent, from thirty-one to sixty days.

Even when permanent disability results from the accidents, the reduction of earning power is very small in the majority of cases.

Of the 2,748 cases of permanent disability, in 1,157, or over two-fifths of the cases, it destroyed from 5 to 10 per cent of the total earning capacity of the injured, and in 576, or a little more than one-fifth, from 11 to 20 per cent of the earning capacity, so that in more than three-fifths of all the cases of permanent disability such disability does not exceed 20 per cent. The tables show the results of the injuries for each industrial group and also for each cause of accidents.

RESULTS OF INJURIES, BY

[Source: Bollettino di Notizie sul Credito

Cause of accident.	Accidents causing temporary disability which lasted—								Total.
	6 to 10 days.	11 to 15 days.	16 to 20 days.	21 to 30 days.	31 to 60 days.	61 to 90 days.	91 to 180 days.	Over 180 days.	
Motors.....	53	47	28	47	37	8	4	.....	224
Power-transmission apparatus.....	155	179	94	133	112	21	23	4	721
Working machinery.....	1,836	1,940	1,192	1,345	1,183	168	69	24	7,757
Elevators, hoists, cranes, etc.....	151	159	127	145	112	20	8	2	724
Boilers and steamfitting.....	34	29	15	18	11	2	.....	.....	109
Explosives.....	11	22	14	28	28	9	6	2	120
Combustibles, corrosives, gases, etc.....	918	859	637	683	580	74	33	11	3,795
Landslides and falling bodies.....	4,889	4,201	2,735	2,755	2,245	377	235	73	17,510
Falls.....	2,478	2,123	1,454	1,417	1,359	335	210	56	9,432
Railroad accidents.....	9	9	3	5	6	3	.....	.....	35
Navigation.....	1	.....	.....	1	4	.....	.....	.....	6
Electric conductors.....	8	5	4	4	6	1	1	.....	29
Instruments and tools.....	1,882	1,583	886	803	527	83	29	7	5,800
Loading and unloading, lifting, carrying, etc.....	1,714	1,607	1,063	1,118	984	166	119	35	6,806
Other causes.....	449	315	190	205	162	27	20	3	1,371
Total.....	14,588	13,078	8,442	8,707	7,356	1,294	757	217	54,439

RESULTS OF INJURIES, BY

[Source: Bollettino di Notizie sul Credito

Industrial group.	Accidents causing temporary disability which lasted—								Total.
	6 to 10 days.	11 to 15 days.	16 to 20 days.	21 to 30 days.	31 to 60 days.	61 to 90 days.	91 to 180 days.	Over 180 days.	
Mines and metallurgy.....	2,013	2,434	1,805	1,871	1,648	313	211	57	10,352
Brick, pottery, and glassware.....	594	455	284	247	189	38	19	9	1,835
Metal working.....	4,211	3,063	1,841	1,871	1,445	213	97	23	12,764
Chemicals, etc.....	856	639	343	318	272	42	26	9	2,505
Food products.....	670	597	392	440	362	63	29	13	2,566
Woodworking.....	222	287	206	236	181	35	14	5	1,186
Textiles.....	1,455	1,545	978	1,080	875	136	74	22	6,165
Leather and other animal products.....	264	155	81	100	77	9	8	.....	694
Clothing.....	228	212	118	92	92	10	4	.....	756
Paper and printing.....	388	325	173	186	159	27	17	2	1,277
Building and construction.....	1,668	1,971	1,398	1,502	1,331	284	185	55	8,394
Cars, vehicles, etc.....	626	394	219	198	192	28	19	8	1,684
Transportation.....	1,015	625	367	318	303	51	27	10	2,716
Electrical industry.....	198	148	79	81	83	9	6	1	605
Agricultural labor.....	50	90	69	90	87	22	15	3	426
Other industries.....	130	138	89	77	60	14	6	.....	514
Total.....	14,588	13,078	8,442	8,707	7,356	1,294	757	217	54,439

CAUSE OF ACCIDENT, 1902.

e sulla Previdenza, August, 1906.]

Accidents causing partial permanent disability, with reduction of earning power of—									Total.	Accidents causing—		Total accidents.
1 to 4 per cent.	5 to 10 per cent.	11 to 20 per cent.	21 to 30 per cent.	31 to 40 per cent.	41 to 50 per cent.	51 to 60 per cent.	61 to 70 per cent.	71 to 80 per cent.		Total permanent disability.	Death.	
	9	5	3	3	1			1	22		2	248
1	21	10	13	8	6	5	1	8	73	1	11	806
1	434	195	70	41	24	17	28	23	833		21	8,611
1	23	6	3	2	4	3		2	44		8	776
	1	2	1	1			1		6	1	1	117
	6	8	8	10	8		4	2	46	4	13	183
	14	28	16	14	3	2	2	3	82	4	35	3,916
2	240	148	98	129	31	11	12	8	679	5	150	18,344
1	88	68	59	43	38	19	21	10	347	8	129	9,916
	1					1			2		3	40
	2	1				1			4		11	6
	86	49	37	40	7	2	1		222		6	44
											11	44
	194	44	16	15	5	2	4	3	283	4	26	7,119
	38	12	6	12	3			2	73	5	14	1,463
6	1,157	576	330	318	130	63	74	62	2,716	32	430	57,617

INDUSTRIAL GROUPS, 1902.

e sulla Previdenza, August, 1906.]

Accidents causing partial permanent disability, with reduction of earning power of—									Total.	Accidents causing—		Total accidents.
1 to 4 per cent.	5 to 10 per cent.	11 to 20 per cent.	21 to 30 per cent.	31 to 40 per cent.	41 to 50 per cent.	51 to 60 per cent.	61 to 70 per cent.	71 to 80 per cent.		Total permanent disability.	Death.	
	152	93	66	78	30	15	13	8	455	8	132	10,947
	26	24	6	10	2	1	2		71	1	10	1,917
2	256	115	57	62	18	9	10	4	533	2	32	13,331
	27	16	8	10	4	1	4	2	72	2	13	2,592
	87	33	16	15	8	2	2	7	170		23	2,759
1	68	41	14	4	2	2	3	1	136		5	1,327
	191	86	40	28	15	11	11	13	395	2	18	6,580
	17	3	3	3	1		1	1	29	1	4	728
	12	6	4	2	1		1		26		1	783
1	42	24	6	3	1	3	2	4	86		8	1,371
	163	88	75	76	35	15	11	9	472	12	129	9,007
2	53	23	16	13	7	1		1	116	1	6	1,807
	36	15	8	3	1	2	6	5	76	1	29	2,822
	12	4	7	7			2	1	33	1	10	649
	8	3	3	2	3	1	5	5	30		4	460
	7	2	1	2	2		1	1	16	1	6	537
6	1,157	576	330	318	130	63	74	62	2,716	32	430	57,617

SICKNESS INSURANCE.

In the field of sickness insurance much less has been accomplished than in the fields of insurance against accidents and old age and invalidity; and this is especially true, when the efforts of the Government are considered. There is no obligatory insurance against sickness, nor has the State adopted any active measures to stimulate voluntary insurance, as it has done in regard to accident insurance and old-age and invalidity insurance.

The legislative interference with the private efforts toward sickness insurance are as yet limited to the regulative law of April 15, 1886, which aims only to regulate the mutual benefit societies.

Moreover, it is not quite accurate to speak of these mutual benefit societies as a system of insurance of workmen against sickness, for they are not limited either to wage-workers or to the one form of insurance—that against sickness. However, wage-workers do constitute a great majority of their membership, and while many forms of benefits and assistance are furnished by some of these societies, sickness insurance or at least benefits in cases of sickness, as a matter of fact, do represent the most frequent and most important form of insurance, and it is therefore most convenient to speak of the operations of these organizations under the caption of "sickness insurance."

HISTORY.

Some mutual benefit societies of Italian workmen date back into the eighteenth century, and owe their origin to the old trade guilds, but only during the last 40 years, or since the unification of Italy, has any general movement toward the establishment of mutual benefit societies manifested itself. The statistical account of these societies given elsewhere shows that in 1862 only 443 of these societies were enumerated; in 1873, 1,447; in 1878, 2,091, and by 1885 they had increased to 4,900. In the beginning these societies were organized very informally. They had no legal standing and therefore could not own any property. In their development serious difficulties soon appeared, as was the experience in all countries where mutual benefit societies were developing. Aside from occasional fraud and abuses, most such societies came to grief because of the entire absence of an actuarial basis for their operation and lack of executive ability and familiarity with the problem, which made these associations offer much greater benefits than they were able to meet. These difficulties were especially great for the associations which endeavored to grant old-age and invalidity benefits. Few of the associations kept the accounts of different forms of benefits separated and because of faulty bookkeeping they were not aware of their financial difficulties.

The necessity of some legal regulation of these societies soon became quite evident, both to the Government and to the societies.

Not only was it necessary to safeguard the savings which, however small in individual cases, amounted to large sums in the aggregate, but it was felt that a collapse of many such associations would have a very detrimental effect upon the saving habits and the cooperative spirit of the Italian workmen.

On the other hand, the lack of legal standing proved a serious drawback and impediment to the more energetic associations, which were anxious to extend their operations, because it deprived them of their property-holding powers. Frequently, therefore, individual associations applied to the Government for incorporation by royal decree, but as such incorporation was evidently a mark of approval or at least of confidence, the Government considered it necessary to study the financial basis of the associations before granting such requests. The results were, as Minister Grimaldi stated in his report to the Senate of April 6, 1886, that, within the three years previous, out of 100 associations requesting such incorporation by royal decree only 20 were granted this request.

The law of April 15, 1886, concerning the recognition or incorporation of mutual benefit societies was the result of a movement which lasted nearly ten years. During the session of the Chamber of Deputies of June 14, 1876, a promise of such a law was made by the Government and in fulfillment of this promise a bill was introduced on June 9, 1877, by the minister of agriculture, industry, and commerce.^(a)

In the memorial accompanying the bill, the minister pointed out that these mutual benefit societies were essentially insurance institutions, and that therefore they could not be successful unless they were guided by the well-recognized principles of insurance and based their dues and benefits upon sound actuarial calculations.

Therefore the State could not confer the benefits of "recognition" (incorporation) unless the society did comply with the demands of actuarial science. In discussing the objection raised by a certain number of representatives of mutual benefit societies that this might lead to an excessive interference by the Government with the operations of such voluntary organizations, the minister pointed out that such danger was purely imaginary, since incorporation was intended to be an entirely voluntary act and granted only upon application of the society itself, and no organization was forced to apply. On the other hand the minister dismissed the suggestion, also considered by the consultative commission, that the requirements for recognition be limited only to conditions of the formal organization of the society

^a Atti Parlamentari, sessione del 1876-77. XIII Legislatura. Camera dei Deputati, No. 120. Progetto di legge presentato dal ministro di agricoltura, industria e commercio (Maiorana-Calatabiano) nella tornata del 9 giugno 1877.

without regard to the actuarial basis. Such conditions would not, in his opinion, give any guarantee of security, and it would not be proper for the Government to grant the natural support of its recognition to any institution whose security was not guaranteed in any way.

The bill of 1877 was prepared in accordance with these principles. It proposed the organization of a central commission of mutual benefit societies to which any such society might apply for a "recognition," presenting complete accounts of its financial standing. In accordance with the broad conception of these societies as insurance institutions, not only sickness insurance but also old-age pensions, widows and orphans' pensions, forms of insurance which evidently required very strict adherence to actuarial principles, were to be permitted. In addition the societies were permitted to conduct educational work or engage in cooperative enterprises, such being the custom in a great many cases. For each form of insurance the society was required to keep a separate account and to demand separate contributions. A minimum number of insured was required, 500 for sickness insurance and 200 for old-age and life insurance. The nature of the constitution of the society and the method of investment were also regulated, but the most important provision was that permitting the recognition of only such societies as furnished evidences of a satisfactory relation between the obligations assumed and the means at their disposal. It was explained in the memorial that in order to obtain this satisfactory actuarial basis the recognized societies would have to avail themselves of mortality and sickness tables based as far as possible upon Italian data and also upon foreign statistics, which tables might be prepared by the commission which was to include legal, mathematical, and insurance experts. Recognized societies were to remain under the supervision of the Ministry of Agriculture, Industry, and Commerce and the commission. The ministry could accordingly order an investigation at any time and cancel its recognition if the accounts proved unsatisfactory. In recognition of compliance with these stringent requirements of the law the incorporated societies would acquire, in addition to the rights of legal persons, also other privileges, such as exemption from certain taxes, not only of the society as such, but also of the benefits paid to its members, and publication of its reports in certain official journals at the expense of the ministry.

This legislative project was prepared by the consultative commission for labor and savings institutions after a study of the legislation of France, Belgium, Great Britain, and Germany.

This bill did not meet with the universal approval of the societies interested. The requirements for incorporation were considered too

stringent, and in numerous congresses the desire was expressed that such requirement be made more formal in its nature, refer primarily to the organization of the mutual benefit societies, and leave the actuarial basis untouched.

On June 11, 1880, the new minister of agriculture, industry, and commerce introduced a new bill in the Senate. He admitted that the requirements of the old bill were too stringent, but on the other hand dismissed the plea for the incorporation of all societies applying for it as entirely too extravagant. The following requirements were considered essential: (1) The exact definition of the aims of the society; (2) a due proportion between contributions and benefits; (3) a certain minimum number of members; and (4) separation of funds and accounts pertaining to separate purposes of the societies.

It appears, therefore, that this bill included all the essential features of the earlier bill. The most important differences were that the application was to be made to the local judiciary authorities and incorporation was to be ordered by them, while the actuarial standing of the society was to be investigated by experts selected by the court from local professors of mathematics. The idea of a central commission for the control of the benefit societies was preserved, but its composition was made fully representative—that is, in addition to three members appointed by royal decree, three by the Senate, and three by the Chamber of Deputies, there were to be five members selected by the societies.^(a)

The bill was somewhat amended in the Senate and after a brief discussion was passed with slight changes on February 12, 1881, and presented to the Chamber of Deputies on March 8, 1881. The senate bill was referred to a parliamentary commission, which brought in its report on December 22, 1881, containing a modified text of the bill as proposed by this commission. While adhering somewhat to the text of the senate bill, the commission of the lower chamber materially changed all the essential features of the bill. The commission took the directly opposite point of view to that of the minister of agriculture, industry, and commerce. It insisted that none of the foreign laws was entirely adapted to the special requirements of the Italian workmen, that the mutual benefit societies would be more useful if left to develop naturally, and that they should be entitled to receive the benefits of incorporation without subjecting themselves to any governmental regulation other than the common law. The project of the parliamentary commission, therefore, excluded all

^a Atti Parlamentari, Legislatura XIV, 1^{ma} Sessione 1880— Documenti. Camera dei Deputati, No. 178. Disegno di legge approvato dal Senato de Regno presentato dal ministro di agricoltura, industria e commercio (Miceli), nella tornata dell' 8 mayo 1881.

reference to the organization of a central commission of mutual benefit societies, the requirements of a due proportion between dues and benefits, the separation of the separate forms of benefits and their accounts, the demand for a minimum number of members, and the method of investment of the funds. It also excluded pensions for widows and orphans from the list of permissible benefits, feeling that that function required a stricter adherence to insurance principles than was desirable to exact from the mutual benefit societies. The bill, as amended, simply contained provisions for incorporation of mutual benefit societies by local judicial authorities, with very few provisions for control of such societies. This proposal of the parliamentary commission never came up for discussion in the House.

The principles enunciated in the report of the parliamentary commission were, however, embodied in the next project of a law concerning mutual benefit societies, introduced in the Chamber of Deputies on June 21, 1883. The bill was referred to a new committee, which brought in its report on February 19, 1884, introducing a few minor changes. The consideration of the bill was delayed another two years, and the bill was finally passed in the Chamber of Deputies on April 8, 1886, introduced in the Senate on the next day, reported by the committee on April 10, 1886, passed and became a law on April 15, 1886. This rapid enactment of the law after a discussion of ten years seems to have been influenced by a decided change in public opinion and in its opposition to some regulation of the operations of the mutual benefit societies, while on the other hand the Government has finally adjusted the law to the demands of the opposition and has abandoned the effort to introduce a system of careful control of the financial and actuarial status of the recognized societies.

PROVISIONS OF THE LAW OF APRIL 15, 1886.

The law concerning the incorporation of mutual benefit societies, approved on April 15, 1886, states the requirements with which a mutual benefit society must comply in order to be granted such recognition or incorporation, the degree of control exercised subsequently by the Government over such recognized societies, and the benefits derived by such societies from this recognition.

The law applies to all mutual benefit societies without consideration of the occupation or economic standing of its membership, provided they aim at one or more of the following objects: To assist their members in case of illness, working disability, or old age, or to come to the assistance of the families of deceased members. The law carefully avoids the word "pensions" and in a subsequent circular of July 2, 1886, the minister of agriculture, industry, and commerce

specifically instructs the courts not to grant incorporation to societies providing such old-age or invalidity pensions, for such pensions can not be given without a solid actuarial foundation, which the law, as will be shown, does not require.

The requirements for incorporation contained in the law are primarily constitutional. The constitution of the society applying for admission must define the following: The headquarters of the society; its objects and aims; conditions for admission and separation of members; their obligations and rights; the methods of expenditures and investment of the property and the guarantees required; conditions of a quorum; of validity of elections and resolutions adopted; the requirement of keeping minutes of the general meeting, of the executive committee, and of the auditors or supervisors' committee; the method of organization of these committees and their functions; the mode of representation of the society before the court and other outside parties; the condition for resolving the winding up of the affairs of the society, or for amending the constitution, with the proper consideration of the fixed requirements of the law. It is understood that the constitution may not contain anything contrary to the law. The actual contents of the constitution is thus left to the discretion of the society itself; but the law contains a few requirements which must govern the operations of the mutual benefit societies.

First, in addition to the main objects, the forms of mutual assistance enumerated above, the recognized societies may undertake only the following activities: Cooperative educational work among members and their families, assistance to members in acquiring tools of trade, and other functions of institutions for saving and social improvement. No expenditures may be made for any other purposes than those specified above, or to cover the cost of administration.

Second, if a society receives legacies or donations for a definite and permanent object, these legacies or donations must be kept separately and the revenue derived from them expended in accordance with the wishes of the donor.

Third, the executive officers of the societies must be selected from among the active members. They may be recalled at will, and need not furnish any bond unless the constitution so requires.

Application for incorporation under this law must be made to the local civil court, and attached to the application must be a copy of the constitution certified by a notary public. Societies already possessing the rights of legal persons at the time when the law went into effect, and wishing to obtain the additional privileges under this law, must also make the required application, adjusting their constitutions if necessary.

Societies in existence at the time when the law went into effect and having no such rights may be granted incorporation on application, if their constitutions conform to the demands of the law. Otherwise the constitution must be amended at a general meeting specially called for that purpose, and a certified copy of the amended constitution with a certified copy of the minutes of this special meeting must be attached to the application.

Societies organized after the law went into effect must furnish a certified copy of the constitution and of the procedure of the charter meeting of the society.

After examining these documents in order to see that they conform with the requirements of the law, the court orders that the name of the society be entered on the register of recognized societies. In case of desired change in the constitution the same method of procedure as in original incorporation is required.

The governmental control consists mainly in exacting reports and holding the officers of the society responsible for observing the requirements of the law and the provisions of the constitution. The officers of the society are individually and jointly responsible for the execution of their respective duties, for the correctness of all entries in the books and for strict compliance with all provisions of the constitution of the society.

On the other hand, an officer who formally records his dissent from a resolution in the minutes, and who gives immediate notice of such an illegal resolution to the supervising committee, thereby is relieved from such responsibility, as is also an officer who was absent from the meeting of the executive committee when the decision in question was taken.

Furthermore, an officer who knowingly makes false statements concerning the status of the society, or suppresses any actual facts in the accounts, or before the general meeting, or in court, is punishable by a fine of 100 lire (\$19.30) in addition to the usual civil responsibility.

If suspicion arises concerning the existence of gross irregularities in the work of the officers or of the supervisory committee, this may be brought to the attention of the court, provided at least 20 members so decide, and if the court should find these suspicions well grounded it may take the necessary legal measures.

If a mutual benefit society has failed to comply with the regulations limiting the legitimate expenditures to certain purposes, the court must, upon application either of a member or of the public authorities, make the demand upon the society to comply with the law within fourteen days, and upon failure to do so, must order the name of the society stricken from the register of incorporated societies.

The incorporated mutual benefit societies must transmit to the minister of agriculture, industry, and commerce, through the local authorities, copies of their constitutions and their annual reports, as well as all statistical information specifically asked for. In the annual report all expenditures for subsidiary beneficiary features and the sources from which the expenditures are met must be indicated.

The main rights acquired by the mutual benefit societies which have complied with all the requirements of the law are those of legal persons, and for this reason this "recognition" may be considered as equivalent to "incorporation." In addition, the following privileges are extended to the recognized mutual benefit societies: Exemption from stamp taxes, registry taxes, the insurance tax, personal property tax, and from court fees, and freedom of the benefits granted to the members from seizure and cession.

The legal status of the mutual benefit societies has not changed to any extent during the twenty-three years which have elapsed since the law of April 15, 1886, went into effect. No more active measures have as yet been taken to encourage such mutual help in case of sickness than those contained in the law.

The extent and nature of the operations of these mutual benefit societies and the effect of the law of 1886 may best be studied from the statistical data available.

STATISTICS OF MUTUAL BENEFIT SOCIETIES.

Six statistical investigations of the mutual benefit societies were undertaken in Italy within the last half century, in 1862, 1873, 1878, 1885, 1894, and 1904.^(a)

While they are not all elaborated exactly on the same plan, a great many comparisons are possible, and these six reports furnish considerable material for a study of the development of these institutions.

^a (1) *Statistica de Regno D'Italia, Società di Mutuo Soccorso*. Anno 1862, per cura del Ministro d'Agricoltura, Industria, e Commercio. Torino, 1864.

(2) *Ministero di Agricoltura, Industria, e Commercio, Statistica delle Società di Mutuo Soccorso*, Roma, 1875.

(3) *Ministero di Agricoltura, Industria, e Commercio, Direzione della Statistica Generale del Regno—Statistico delle Società di Mutuo Soccorso*, anno 1878. Roma, 1880.

(4) *Ministero di Agricoltura, Industria, e Commercio, Direzione Generale della Statistica. Statistica delle Società di Mutuo Soccorso e delle Istituzione Cooperative Annesse alle Medesime*, anno 1885. Roma, 1888.

(5) *Ministero di Agricoltura, Industria, e Commercio, Direzione Generale della Statistica. Elenco delle Società di Mutuo Soccorso*. Roma, 1898.

(6) *Ministero di Agricoltura, Industria, e Commercio. Ispettorato Generale del Credito e della Previdenza Le Società di Mutuo Soccorso in Italia al 31 dicembre, 1904. Studio Statistico*. Roma, 1906.

NUMBER OF SOCIETIES AND MEMBERS.

The number of societies of mutual benefit, their membership, and the proportion of the membership to the population is shown in the following table. In none of the six investigations was it possible to obtain the desired information from all societies, but it is believed that the number reporting is sufficient to make the data representative.

The number of societies and the membership increased rapidly up to 1894. During the period 1894 to 1904 a material decrease has taken place, and it seems certain that the growth of mutual benefit societies has been interrupted and the efficiency of the law of 1886 as a stimulus has greatly declined. In 1904 the average number of members per 1,000 of population was only 27.82; so that, even if women and children are excluded, only a small percentage of Italian citizens gainfully employed hold membership in mutual benefit societies.

In addition to the societies included in the next table there were four societies of railroad employees in 1885 and three in 1894; but as data for these could not be obtained for other years they have not been considered in this table.

NUMBER AND MEMBERSHIP OF MUTUAL BENEFIT SOCIETIES FOR VARIOUS YEARS,
1862 TO 1904.

[Source: Le Società di Mutuo Soccorso, 1878 and 1904, and Annuario Statistico, 1905 to 1907. Data are exclusive of railroad societies.]

Year.	Population.	Total number of societies.	Number of societies reporting membership.	Number of members.	Number of members per 1,000 population.	Average number of members per society.
1862 ^(a)	21,929,176	443	417	111,608	5.09	252
1873.....	27,132,848	1,447	1,146	218,822	8.06	191
1878.....	27,962,084	2,091	1,981	331,548	11.86	167
1885.....	29,300,268	4,896	4,768	730,475	24.93	153
1894.....	31,191,564	6,722	6,584	936,686	30.03	142
1904.....	33,282,850	6,535	6,347	926,026	27.82	146

^a Data for this year do not include the Province of Venetia and the city of Rome.

As the law for incorporation of mutual benefit societies was enacted after the investigation of 1885 was undertaken, only the last two investigations contain separate data for incorporated and unincorporated societies. By 1894, 1,156, or 17.2 per cent, of the societies had obtained incorporation or recognition under the law; and by December 31, 1904, the number had increased to 1,548, or 23.7 per cent. Thus even nearly twenty years after the law of 1886 went into effect, less than one-fourth of these societies availed themselves of the advantages offered by the law. The effect of the law upon the development of the mutual benefit movement must, therefore, be considered very limited. For 6,347 out of the 6,535 societies the membership has been ascertained. Of these societies 24 per cent

were incorporated, and they claimed 31.2 per cent of the membership, the average membership of the incorporated societies being larger than that of the unincorporated ones; 189 as against 132. Incorporation is therefore found to be an evidence of strength.

COMPARISON OF INCORPORATED AND UNINCORPORATED MUTUAL BENEFIT SOCIETIES AT END OF YEARS 1894 AND 1904.

[Source: Le Società di Mutuo Soccorso, 1904.]

Kind of society.	Mutual benefit societies in—								
	1894.(a)		1904.						
	Num-ber.	Per cent.	Num-ber.	Per cent.	Reporting membership.		Membership.		
					Num-ber.	Per cent.	Number.	Per cent.	Average per society.
Incorporated.....	1,156	17.2	1,548	23.7	1,525	24.0	288,598	31.2	189
Unincorporated.....	5,566	82.8	4,987	76.3	4,822	76.0	637,428	68.8	132
Total.....	6,722	100.0	6,535	100.0	6,347	100.0	926,026	100.0	146

^a Exclusive of three societies of railroad employees.

The mutual benefit society movement is almost entirely limited to the male portion of the Italian population. As is shown in the following statement, at no period (data for 1894 not being available) have females constituted even one-tenth of the total membership of the societies. The interesting fact is also brought out that the proportion of females in incorporated societies was smaller than in the unincorporated societies in 1904. Of the male members 31.7 per cent belonged to incorporated societies and of the female members only 25.1 per cent.

MEMBERSHIP OF MUTUAL BENEFIT SOCIETIES FOR VARIOUS YEARS, 1862 TO 1904, BY SEX.

Source: Le Società di Mutuo Soccorso, 1862, 1878, 1885, and 1904.]

Year.	Males.		Females.		Total membership
	Number.	Per cent.	Number.	Per cent.	
1862.....	101,410	90.86	10,198	9.14	111,608
1873.....	197,719	90.36	21,103	9.64	218,822
1878.....	^a 299,544	^a 90.35	^a 28,592	^a 8.62	^b 331,548
1885 (c).....	531,047	93.68	35,853	6.32	566,900
1904:					
Incorporated societies.....	269,377	93.34	19,221	6.66	288,598
Unincorporated societies.....	580,041	91.00	57,387	9.00	637,428
Total, 1904.....	849,418	91.73	76,608	8.27	926,026

^a Not including 3,412 members, sex not reported.

^b Including 3,412 members, sex not reported.

^c For 3,705 societies only.

The following table shows that in 1904 less than 4 per cent of the societies reporting sex of members were organized for females alone. The number of organizations admitting only males has increased from a little over seven-tenths in 1873 to eight-tenths in 1904.

NUMBER OF MUTUAL BENEFIT SOCIETIES IN VARIOUS YEARS, 1873 TO 1904, BY SEX OF MEMBERSHIP.

[Source: La Società di Mutuo Soccorso, 1873, 1878, 1885, and 1904.]

Year.	Societies admitting—						Number of societies—		
	Males only.		Females only.		Both sexes.		Report- ing sex.	Not re- porting sex.	Total.
	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.			
1873.....	900	71.20	42	3.32	322	25.48	1,264	183	1,447
1878.....	1,537	73.50	70	3.35	484	23.15	2,091	.....	2,091
1885.....	2,861	76.05	109	2.90	792	21.05	3,762	1,138	4,900
1904:									
Incorporated societies....	1,178	77.25	38	2.49	309	20.26	1,525	23	1,548
Unincorporated societies..	3,900	80.88	214	4.44	708	14.68	4,822	165	4,987
Total, 1904.....	5,078	80.01	252	3.97	1,017	16.02	6,347	188	6,535

In addition to the active members of societies, belonging for the benefits to be derived from such membership, large numbers of honorary and contributing members assist them by their contributions or influence, thus introducing an element of private and organized charity into the activity of these mutual benefit societies. In 1873 ^(a) the number of such members was 19,263, or about 9 per cent of the active membership, and in 1878, 32,177, or nearly 10 per cent of the active membership. In 1885 the total honorary membership amounted to 52,763, of whom only 31,690 were contributing. For later years information is not available, except that on December 31, 1903, ^(b) the incorporated societies had 11,675 contributing honorary members as against a total of 259,914 active members, or only 4.5 per cent. The influence of the honorary members in the development of the mutual benefit societies seems to be decreasing.

SIZE OF SOCIETIES.

The distribution of the mutual benefit societies by the number of members is shown in the following table for the last three censuses, 1885, 1894, and 1904:

^a Società di Mutuo Soccorso, 1878.

^b Società di Mutuo Soccorso, 1904.

NUMBER AND PER CENT OF MUTUAL BENEFIT SOCIETIES IN EACH MEMBERSHIP GROUP AT THE END OF EACH YEAR, 1885, 1894, AND 1904.

[Source: La Società di Mutuo Soccorso, 1885, 1894, and 1904.]

Membership group. (a)	Mutual benefit societies in—									
	1885.		1894.		1904.					
					Incorporated.		Unincorporated.		Total.	
	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.	Num-ber.	Per cent.
Less than 50.....	1,768	36.08	3,649	54.26	224	14.47	1,258	25.23	1,482	22.68
50 to 100.....					380	24.55	1,543	30.94	1,923	29.43
101 to 200.....	1,194	24.37	1,779	26.46	497	32.11	1,231	24.68	1,728	26.44
201 to 300.....	422	8.61	620	9.22	199	12.85	367	7.36	566	8.66
301 to 400.....	153	3.12	249	3.70	99	6.39	188	3.77	287	4.39
401 to 500.....	68	1.39	102	1.52	51	3.29	98	1.97	149	2.28
501 to 600.....	36	.73	54	.80	23	1.49	47	.94	70	1.07
601 to 700.....	21	.43	35	.52	14	.90	26	.52	40	.61
701 to 800.....	16	.33	26	.39	6	.39	13	.26	19	.29
801 to 900.....	13	.27	18	.27	6	.39	13	.26	19	.29
901 to 1,000.....	8	.16	11	.16	7	.45	8	.16	15	.23
1,001 to 1,500.....	18	.37	26	.39	11	.71	18	.36	29	.45
1,501 to 2,000.....	7	.14	5	.07	4	.26	6	.12	10	.15
2,001 to 3,000.....	1	.02	5	.07	4	.26	6	.12	10	.15
More than 3,000.....	3	.06	8	.12						
Unknown.....	1,172	23.92	138	2.05	23	1.49	165	3.31	188	2.88
Total.....	4,900	100.00	6,725	100.00	1,548	100.00	4,987	100.00	6,535	100.00

a In the report for 1904 the groups begin with the even hundred, as follows: 100 to 199, 200 to 299, etc.

The majority of the societies are found to be very small. In 1894 54.26 per cent had not over 100 members. In 1904 52.11 per cent of all societies had less than 100 members, 26.44 per cent from 100 to 199, and 18.57 per cent 200 members or over. Only 49 societies had 1,000 members or over. It is easily seen how difficult any application of actuarial principles would be in such small societies.

A comparison between the incorporated and unincorporated societies in 1904 shows a very interesting difference in distribution by size of membership. Societies with less than 100 members constituted 39.02 per cent of the incorporated and 56.17 per cent of the unincorporated societies; those with a membership of 100 to 199, 32.11 per cent and 24.68 per cent; those with 200 to 999, 26.15 per cent, and 15.24 per cent; and those with 1,000 members and over, 1.23 per cent and 0.60 per cent. To put the comparison somewhat differently, of the societies with a membership of less than 100, 17.7 per cent were incorporated; of those with a membership of 100 to 199, 28.8 per cent; of those with a membership of 200 to 499, 34.8 per cent; of those with a membership of 500 to 999, 34.4 per cent; and of those with 1,000 members and over, 38.8 per cent were incorporated. The tendency to incorporate under the act is evidently much stronger among the larger societies.

OCCUPATIONS OF MEMBERS.

Satisfactory data are unfortunately lacking concerning the occupations of Italian workmen belonging to the mutual benefit societies. In the following table is shown all the information available on this subject. The classification here is that of the societies rather than members, and the large majority of the societies, 61.05 per cent in 1894, are unclassified. Besides, no similar data are available for the last census year, 1904. Some tendency toward differentiation may be noticed in this table. In 1878 81.30 per cent of all societies, and in 1894 only 61.05 per cent were unclassified as far as the occupations of their members is concerned. In 1885 66.13 per cent of all membership of mutual benefit societies were unclassified as to occupation, and in 1894 58.50 per cent.

OCCUPATIONS OF MEMBERS OF MUTUAL BENEFIT SOCIETIES, 1878, 1885, AND 1894.

[Source: La Società di Mutuo Soccorso, 1878, 1885, and 1894.]

Occupation group.	Mutual benefit societies in—									
	1878.		1885.				1894.			
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Membership.		Num-ber.	Per-cent.	Membership.	
					Num-ber.	Per-cent.			Num-ber.	Per-cent.
Unclassified workmen.....	1,700	81.30	2,940	61.03	489,556	66.13	4,021	61.05	581,609	58.50
Steam railroad employes.....			7	.15	4,192	.57	29	.44	87,087	8.76
Farmers and industrial workers.....			564	11.71	69,026	9.32	701	10.64	84,526	8.50
Veterans, retired army men, etc.....			225	4.67	36,276	4.90	410	6.22	54,292	5.46
Farmers and laborers.....	28	1.34	142	2.95	20,309	2.74	241	3.66	29,526	2.97
Public and private employes.....	13	.62	18	.37	4,764	.64	56	.85	14,300	1.44
Merchants, clerks, traveling men, etc.....	20	.96	66	1.37	10,137	1.36	59	.90	14,102	1.42
Mechanics, metal casters, black- smiths, etc.....	13	.62	37	.77	5,161	.70	75	1.14	11,350	1.14
Teachers.....	12	.58	21	.44	8,373	1.13	36	.55	10,652	1.07
Workmen in food industry.....	40	1.91	74	1.54	8,611	1.16	92	1.40	10,346	1.04
Shoemakers, hatters, tailors, saddlers, etc.....	50	2.39	129	2.68	9,449	1.28	143	2.17	9,260	.93
Textile operatives.....	22	1.05	29	.60	6,059	.82	33	.50	8,177	.82
Boatmen, fishermen, and sailors.....	7	.34	39	.81	5,463	.74	55	.84	7,746	.78
Printing trades.....	22	1.05	36	.75	4,838	.65	50	.76	7,384	.74
Masons, marble workers, stone- cutters, etc.....	24	1.15	63	1.31	7,624	1.03	78	1.18	7,222	.73
Servants, coachmen, etc.....	34	1.62	34	.71	4,558	.62	37	.56	5,118	.52
Musicians and theater employes.....	20	.96	17	.35	2,240	.30	43	.65	4,274	.43
Woodworkers.....	18	.86	50	1.04	4,891	.66	64	.97	4,184	.42
Tobacco workers.....			4	.08	2,164	.29	11	.17	4,173	.42
Porters, loaders and unloaders, etc.....			20	.41	1,967	.27	39	.59	4,018	.40
Tanners, glove makers, etc.....	10	.48	25	.52	3,310	.45	32	.49	3,626	.37
Barbers, hairdressers, etc.....	16	.77	36	.75	2,585	.35	43	.65	3,578	.36
Hackmen and street-railroad em- ployees.....	4	.19	15	.31	2,721	.37	25	.38	3,534	.36
Physicians, surgeons, pharma- cists, veterinarians, sanitary employes, etc.....	10	.48	13	.27	1,594	.22	30	.46	3,213	.32
Varnishers, painters, plasterers, decorators, etc.....	8	.38	30	.62	2,415	.33	22	.33	1,935	.20
Coffee-house keepers, liquor deal- ers, bakers, and confectioners.....			14	.29	1,726	.23	18	.27	1,852	.19
Clergymen.....	4	.19	4	.08	1,603	.22	5	.08	1,588	.16
Potters, glass workers, etc.....	5	.24	11	.23	1,413	.19	12	.18	1,528	.15
Ushers, watchmen, and servants.....							14	.21	1,435	.14
Goldsmiths, jewelers, and watch- makers.....	8	.38	19	.39	1,795	.24	16	.24	1,155	.12
Miners.....							8	.12	541	.05
All other professions and trades.....	3	.14	135	2.80	15,400	2.09	89	1.35	10,852	1.09
Total.....	2,091	100.00	4,817	100.00	740,280	100.00	6,587	100.00	994,183	100.00

YEAR OF ORGANIZATION AND OF INCORPORATION.

In the following table are shown the societies in existence in 1894 and 1904, distributed by the year of their organization:

YEAR OF ORGANIZATION OF MUTUAL BENEFIT SOCIETIES.

[Source: Le Società di Mutuo Soccorso, 1898 and 1904.]

Year of organization.	Mutual benefit societies in existence at end of year.						
	1894.	1904.					
		Incorporated.		Unincorporated.		Total.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent of all existing societies.
Prior to 1850.....	72	14	21.9	50	78.1	64	1.0
1850 to 1859.....	a 219	76	43.7	98	56.3	174	2.7
1860 to 1869.....	b 818	224	34.3	429	65.7	653	10.0
1870 to 1874.....	c 694	139	26.8	379	73.2	518	7.9
1875 to 1879.....	d 695	174	25.0	522	75.0	696	10.7
1880 to 1884.....	1,602	255	21.3	944	78.7	1,199	18.3
1885 to 1889.....	1,287	197	21.4	722	78.6	919	14.1
1890 to 1894.....	1,264	200	25.0	599	75.0	799	12.2
1895 to 1899.....		114	20.7	437	79.3	551	8.4
1900.....		35	24.6	107	75.4	142	2.2
1901.....		34	19.2	143	80.8	177	2.7
1902.....		30	19.9	121	80.1	151	2.3
1903.....		33	20.2	130	79.8	163	2.5
1904.....		20	15.4	110	84.6	130	2.0
Unknown.....	74	3	1.5	196	98.5	199	3.0
Total.....	6,725	1,548	23.7	4,987	76.3	6,535	100.0

a Organized 1850 to 1860.
b Organized 1861 to 1870.

c Organized 1871 to 1875.
d Organized 1876 to 1879.

The table shows that the period of most rapid development of mutual benefit societies was the years 1880 to 1884. Possibly the organization of the large national funds subsequently checked the increase of this class of societies. A comparison of the figures of 1894 and 1904 are particularly interesting, for such a comparison shows that many of the earliest associations have been dissolved.

Of the 6,535 societies enumerated in 1904, 5,022, not including those for which the year of organization was not reported, had been organized before 1895. But the census of 1894 showed 6,722 societies (exclusive of the three railroad funds), so that evidently 1,700, or 25.3 per cent, of the societies have been dissolved in ten years. Of the societies organized from 1880 to 1894, 4,153 were in existence in 1894 and 2,917 in 1904, showing that during the ten years 1,236, or 29.8 per cent, were dissolved.

As it is desired to show here the efficiency of the law for voluntary registration (incorporation) of the benefit societies, the following table supplies some information as to what degree the societies made use of this right of incorporation. The percentage of incorporated societies is greater among the older societies and incorporation evidently comes not at the time of organization but later in the history of the society. In any case incorporation proceeded at a very slow rate, the highest number of societies incorporating in one year being 149 in 1891.

NUMBER OF MUTUAL BENEFIT SOCIETIES ON DECEMBER 31, 1904, BY YEAR OF INCORPORATION.

[Source: Le Società di Mutuo Soccorso, 1904.]

Year.	Number of societies incorporated.	Year.	Number of societies incorporated.	Year.	Number of societies incorporated.
1886.....	78	1893.....	88	1900.....	59
1887.....	107	1894.....	72	1901.....	67
1888.....	100	1895.....	46	1902.....	66
1889.....	99	1896.....	58	1903.....	74
1890.....	98	1897.....	67	1904.....	64
1891.....	149	1898.....	53		
1892.....	110	1899.....	51	Total.....	a 1,506

a Not including 42 societies incorporated by royal decree, years not reported.

CHANGES IN MEMBERSHIP.

The list of the societies is not very stable from year to year, many societies dissolving and others being formed; there is also a considerable degree of change in the membership of these societies. In the following statement the gain and loss in membership is shown for 1885 and 1903. Unfortunately the data for 1885 are for all societies and for 1903 only for incorporated societies, the data concerning the membership of the unincorporated societies in 1903 not being available. For this reason no satisfactory comparison of the data for the two years can be made. The incorporated societies are usually larger, stronger, and probably subject to fewer changes in membership than those which are not incorporated.

The changes of membership in 1885 among all mutual benefit societies were as follows:

Number of societies reporting.....	3,705
Effective members at beginning of year.....	535,181
Members admitted during year.....	88,935
Per cent of members at beginning of year.....	16.6
Members lost during year.....	57,216
Per cent of members at beginning of year.....	10.7
Net gain during year.....	31,719
Per cent of members at beginning of year.....	5.9
Total effective members at close of year.....	566,900

In 1903 the changes of membership in the incorporated societies were as follows:

Number of societies reporting.....	1,412
Effective members at beginning of year.....	258,346
Members admitted during year.....	19,842
Per cent of members at beginning of year.....	7.7
Members lost during year.....	18,274
Per cent of members at beginning of year.....	7.1
Net gain during year.....	1,568
Per cent of members at beginning of year.....	.6
Total effective members at close of year.....	259,914

As is shown by the next table, the loss of membership is mainly due to failure in payment of dues. In the incorporated societies out of a total loss of 18,274 members in 1903, 10,916, or nearly 60 per cent, were dropped for that reason.

LOSS OF EFFECTIVE MEMBERSHIP DURING 1903 IN INCORPORATED MUTUAL BENEFIT SOCIETIES.

[Source: Le Società di Mutuo Soccorso, 1904.]

Cause of loss.	Number lost.	Per cent of total loss.	Loss per 100 members at beginning of year.
Death.....	3,981	21.8	1.5
Withdrawal.....	2,220	12.2	.9
Delinquency in payment of dues.....	10,916	59.7	4.2
Other causes.....	1,157	6.3	.5
Total.....	18,274	100.0	7.1

BENEFITS.

As was stated in the introduction to this part of the report, the primary function of these benefit societies consists in granting sick relief. In 1885, 99.4 per cent of all societies, and in 1904, 95.8 per cent were granting such relief. Societies organized exclusively for forms of mutual relief other than sick benefits are therefore very exceptional, though somewhat more common now than twenty years ago. But in addition to sick benefits a very large number of societies furnish many other forms of relief, which are shown in the following tabular statement:

NUMBER AND PER CENT OF MUTUAL BENEFIT SOCIETIES HAVING EACH KIND OF BENEFIT AT END OF YEARS 1885, 1894, AND 1904.

[Source: Le Società di Mutuo Soccorso, 1885, 1898, and 1904. Data are for 3,762 societies in 1885; 6,725 in 1894; and 1,548 incorporated and 4,987 unincorporated societies in 1904.]

Kind of benefit.	December 31, 1885.		December 31, 1894.		December 31, 1904.				Total.	
	Number of societies.	Per cent.	Number of societies.	Per cent.	Incorporated societies.		Unincorporated societies.		Number.	Per cent.
					Number.	Per cent.	Number.	Per cent.		
Sick benefits.....	3,739	99.4	(a)	.....	1,501	97.0	4,758	95.4	6,259	95.8
Continuous benefits or pensions:										
Old age.....	1,545	41.1	b2,256	b33.6	564	36.4	1,054	21.1	1,618	24.8
Chronic diseases.....	1,801	47.9	(c)	(c)	576	37.2	1,393	27.9	1,969	30.1
Invalidity due to industrial accidents.....	1,401	37.2	489	7.3	427	27.6	811	16.3	1,238	18.9
To widows and orphans.....	520	13.8	(c)	(c)	116	7.5	176	3.5	292	4.5
Single payments:										
Old age.....	(a)	.....	b2,478	b36.9	264	17.1	785	15.7	1,049	16.1
Chronic diseases.....	(a)	.....	(c)	(c)	302	19.5	931	18.7	1,233	18.9
Invalidity due to industrial accidents (d).....	588	15.6	(a)	.....	300	19.4	733	14.7	1,033	15.8
To widows and orphans.....	1,176	31.3	(c) ^h	(c)	542	35.0	1,355	27.2	1,897	29.0
Maternity benefits and for nursing.....	384	10.2	451	6.7	123	8.0	449	9.0	572	8.8
Funeral benefits.....	1,700	45.2	1,891	28.1	736	47.6	2,231	44.7	2,967	45.4
Unemployment benefits.....	184	4.9	234	3.5	77	5.0	340	6.8	417	6.4
Subsidies to members of other societies in search of work.....	(a)	.....	429	6.4	(a)	.....	(a)	.....	(a)	.....
Subsidies for instruction of members or their children.....	301	8.0	417	6.2	(a)	.....	(a)	.....	(a)	.....
Subsidies to members in case of death of member of family.....	271	7.2	241	3.6	(a)	.....	(a)	.....	(a)	.....
Old age and invalidity insurance institutions.....	(a)	.....	.....	.....	97	6.3	256	5.1	353	5.4
Loans to members.....	(a)	.....	1,151	17.1	510	33.0	1,087	21.8	1,597	24.4
Cooperative stores.....	(a)	.....	409	6.1	193	12.5	359	7.2	552	8.5
Societies having organized cooperative enterprises.....	(a)	.....	174	2.6	(a)	.....	(a)	.....	(a)	.....
Societies having schools for members or their families.....	(a)	.....	467	6.9	(a)	.....	(a)	.....	(a)	.....
Societies finding employment for unemployed members.....	(a)	.....	545	8.1	(a)	.....	(a)	.....	(a)	.....

a Not reported.

b Including benefits for chronic diseases and to widows and orphans.

c Included in old-age benefits.

d For fatal accidents only, in 1885.

Though these other forms of relief are not altogether germane to the subject of sickness insurance, they are interesting, nevertheless, as characterizing the tendencies of voluntary mutual relief. These other forms of relief or other functions of the mutual benefit societies are very varied.

In addition to the main function of the mutual benefit societies, that of furnishing sick benefits, funeral benefits evidently constituted the most frequent feature, as nearly one-half of all enumerated societies furnished this form of assistance. Less common are the various forms of continuous payments in case of old age and invalidity, the payments which approach a system of pensions and for which, as was explained above, the mutual benefit societies are seldom prepared financially. About one-fourth of all societies in 1904 granted aid in form of continuous payments in case of old age, and nearly one-third in case of chronic diseases, which may be taken as an equivalent of invalidity. During the last twenty years, the proportion of societies granting such quasi pensions has considerably decreased (from 41.1 per cent to 24.8 per cent for old age, and from 47.9 to 30.1 per cent for invalidity). Similarly, the granting of continuous benefits in case of invalidity due to industrial accidents is a function which is being slowly eliminated (if the reports of 1885 and 1904 are compared) under the influence of the law of 1898. In many societies single-payment benefits are granted in case of old age or invalidity instead of continuous payments.

The same change from pensions or pension-like payments to lump-sum payments is found in relation to widows and orphans, the number of societies promising widows pensions having decreased from 520 to 292, while the number of those giving single-payment benefits has increased from 1,176 to 1,897. In view of the special interest displayed in Italy in the problem of maternity aid, it is interesting to observe that only about 10 per cent of the societies granted such aid in 1885, and that by 1904 the proportion had decreased to 8.8 per cent. On the other hand there has been a slight increase in the granting of unemployment benefits. Unfortunately there is very little information to be obtained as to the amount of aid granted under these many forms. Still less information is there in connection with other forms of activities of these mutual benefit societies, outside of the field of benefits for temporary or permanent disability, such as the cooperative and educational efforts.

The statistics of 1894, quite deficient in other respects, give more information about these secondary activities than do those of other years. There is, therefore, no way of gauging the growth of cooperative stores, schools, or employment offices supported by these mutual benefit societies.

A comparison of the data for incorporated and unincorporated societies for 1904 indicates that the secondary functions are more

frequent among the former, stronger societies, and that in a few forms of relief the incorporated societies are much more strongly represented. This is especially true, as appears from the table, for old-age, chronic-disease, and invalidity benefits.

SICK BENEFITS.—As the sick benefit is the most popular form of benefits paid by these mutual associations, they require a more detailed analysis. The constitutional provisions of 1,377 incorporated societies, concerning the conditions of payment and the amount of sick benefits, are presented in tabular form in the following table:

CONSTITUTIONAL PROVISIONS OF INCORPORATED MUTUAL BENEFIT SOCIETIES CONCERNING PAYMENT OF SICK BENEFITS, 1904.

[Source: La Società di Mutuo Soccorso, 1904. Data are for 1,377 societies.]

Constitutional limit as to time.	Number of societies granting relief under conditions specified.	Per cent of total.	Constitutional limit as to amount of benefits.	Number of societies granting relief under conditions specified.	Per cent of total.
TIME REQUIRED TO ELAPSE BEFORE TITLE TO SICK BENEFITS IS ESTABLISHED.			AMOUNT OF DAILY BENEFITS.		
From beginning of membership:			Fixed:		
None.....	45	3.3	1 lira (\$0.193) and under.....	512	37.2
1 to 12 months.....	1,046	76.0	Over 1 lira (\$0.193).....	69	5.0
13 to 24 months.....	146	10.6	Variable maximums:		
Over 24 months.....	120	8.7	1 lira (\$0.193) and under.....	477	34.6
Indefinite.....	20	1.4	Over 1 lira (\$0.193).....	217	15.8
From beginning of illness:			Indefinite.....	102	7.4
None.....	338	24.5	BENEFITS IN CASE OF INDUSTRIAL ACCIDENTS RESULTING IN—		
1 to 3 days.....	831	60.4	Temporary disability:		
4 to 10 days.....	156	11.3	Equal to those for ordinary illness.....		
Over 10 days.....	12	4.9	Less than those for ordinary illness.....		
Indefinite.....	40	2.9	Permanent disability:		
Maximum duration of benefits:			Determined by by-laws.....		
60 days and under.....	309	22.4	Not determined by by-laws.....		
From 61 to 120 days.....	455	33.1	Death:		
From 121 to 180 days.....	245	17.8	Determined by by-laws.....		
Over 180 days.....	65	4.7	Not determined by by-laws.....		
Unlimited.....	207	15.0			
Indefinite.....	96	7.0			

Almost all societies require a certain length of membership before the right to receive sick benefits is acquired. In 76 per cent of the societies this limit is from 1 month to 12 months. In addition to this minimum membership duration there is also in most cases a certain period at the beginning of illness for which benefits are not paid, but this is not very long, only 1 to 3 days in 60.4 per cent of the societies, and in about one-fourth the benefits are paid from the beginning of illness.

Much variety is found in the maximum limits for payment of the benefits. In 207 societies no such constitutional limit exists. The most frequent limits are from 61 to 120 days, about one-third of the societies paying benefits for this time; and in 309 the maximum is 60 days and under. The amount of daily benefit paid by 71.8 per cent of these societies does not exceed 1 lira (19 cents). Less than 21 per cent of them pay over 1 lira (19 cents) per day.

In case of industrial accidents, most societies grant benefits equal to those for ordinary sickness.

The number of members of mutual benefit societies who received sick benefits and the number of days for which benefits were paid are shown in the following table for the years 1873, 1878, 1885, and 1903. The data for 1903 are for the incorporated societies only and include 69,029 cases of illness, an average of 29.1 cases per 100 members. These societies paid out \$265,295 as sick benefits during the year 1903, an average of \$1.09 per member, \$3.84 per case of illness, and \$4.32 per member receiving benefits.

NUMBER OF PERSONS RECEIVING SICK BENEFITS AND NUMBER OF DAYS FOR WHICH BENEFITS WERE PAID, 1873, 1878, 1885, AND 1903.

[Source: Le Società di Mutuo Soccorso, 1878, 1885, and 1904.]

Year.	Number receiving benefits during year.		Number of days for which benefits were paid.			
	Total.	Per 100 members.	Total.	Per member.	Per case of illness.	Per member receiving benefits.
1873.....	45,786	24.35	984,539	5.24	(a)	21.5
1878.....	67,229	23.26	1,512,216	5.23	(a)	22.5
1885.....	104,386	22.55	2,102,881	4.54	(a)	20.1
1903.....	b 59,258	b 25.00	b 1,293,923	b 5.52	b 18.7	b 22.0

a Not reported.

b Data are for incorporated societies only.

FINANCIAL STATISTICS.

The report for 1895 does not contain any statement concerning the financial status of the mutual benefit societies, and for 1862 the data are quite incomplete and therefore of little value. For the remaining years for which reports were made the data are reproduced in the few tables which follow. Not all societies furnished financial statements, but the number of societies which did furnish them is sufficiently large to make the data representative, if not accurate as to totals.

During the period of 31 years the proportion of revenue received from each source has not changed very much, though the total income has increased from \$619,110 in 1873 to \$2,804,758 in 1904. The regular contributions of the active members still represent by far the most important source of revenue, nearly two-thirds of the total. Voluntary contributions and dues of honorary members, which also partake of the nature of a voluntary assistance, increased about 4 per cent between 1885 and 1904. The remainder of the revenue is derived from investments and business enterprises, and this has not changed much, amounting to about 30 per cent of the total. In 1904 a considerable difference is found in the per cent of revenue from each source in the incorporated and unincorporated societies. The income from other sources, which includes income from investments, constitutes 37.8 per cent of the total revenues of incorporated societies, while in the case of the unincorporated societies this income amounts to 23.4 per cent of the total.

REVENUE OF THE MUTUAL BENEFIT SOCIETIES, 1873, 1878, 1885, AND 1904.

[Source: Le Società di Mutuo Soccorso, 1885 and 1904. Data are for 1,101 societies in 1873, 1,940 in 1878, and 3,566 in 1885; for 1904 the number is not reported.]

Year.	Income from—								Total income.
	Investments.		Contributions of active members.		Voluntary contributions and dues of honorary members.		Other sources.		
	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.	
1873.....	\$118,142	19.1	\$425,590	68.7	\$28,252	4.6	\$47,126	7.6	\$619,110
1878.....	195,630	19.6	644,308	64.5	36,500	3.6	123,171	12.3	999,609
1885.....	278,040	19.0	970,089	66.4	47,730	3.3	164,404	11.3	1,460,263
1904:									
Incorporated societies.....	(a)	.....	633,491	53.7	99,984	8.5	b 446,065	37.8	1,179,540
Unincorporated societies.....	(a)	.....	1,141,791	70.3	102,727	6.3	b 380,700	23.4	1,625,218
Total, 1904.....	(a)	.....	1,775,282	63.3	202,711	7.2	b 826,765	29.5	2,804,758

^a Included in income from other sources.

^b Including income from investments.

For the year 1903 more detailed information as to the various sources of revenue is available, but it includes only the incorporated societies.

Of the total revenues, amounting to \$1,542,275, over one-third, namely \$531,045, represents gross revenues of the cooperative stores and other enterprises. It is impossible from the data available to determine what proportion of these gross revenues represented profits.

REVENUE OF INCORPORATED MUTUAL BENEFIT SOCIETIES IN 1903.

[Source: Le Società di Mutuo Soccorso, 1904.]

Source of income.	Amount.	Per cent of total.
Real estate.....	\$25,996	1.7
Interest.....	264,292	17.1
Total capital revenues.....	290,288	18.8
Contributions of active members.....	595,337	38.6
Contributions of honorary members, etc.....	15,231	1.0
Total contributions of members.....	610,568	39.6
Gross revenues from:		
Cooperative stores.....	425,385	27.5
Other enterprises.....	105,661	6.9
Total gross revenues.....	531,046	34.4
Extraordinary revenues.....	110,372	7.2
Grand total.....	1,542,274	100.0

The expenditures of the mutual benefit societies are available in detail for 1873, 1878, and 1885, and also of the incorporated societies for 1903. For 1904 only the total expenditures for benefits and the cost of administration, which includes all other expenditures, are

given. Comparisons for the later year are therefore somewhat unsatisfactory. The expenditures for the years 1873, 1878, 1885, and 1904 were as follows:

EXPENDITURES OF MUTUAL BENEFIT SOCIETIES, 1873, 1878, 1885, AND 1904.

[Source: Le Società di Mutuo Soccorso, 1885 and 1904. Data are for 1,103 societies in 1873, 1,901 in 1878, and 3,602 in 1885; for 1904 the number is not reported.]

Year.	Expenditures for—						Total.
	Benefits.		Administration.		All other purposes.		
	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.	
1873.....	\$260,463	64.3	\$67,238	16.6	\$77,294	19.1	\$404,995
1878.....	492,356	71.5	122,210	17.8	73,574	10.7	688,140
1885.....	688,551	66.0	268,763	25.8	85,697	8.2	1,043,011
1904:							
Incorporated societies.....	566,127	60.2	a 373,759	a 39.8	(b)	(b)	939,886
Unincorporated societies..	876,017	65.6	a 459,573	a 34.4	(b)	(b)	1,335,590
Total, 1904.....	1,442,144	63.4	a 833,332	a 36.6	(b)	(b)	2,275,476

a Including expenditures for all other purposes.

b Included in expenditures for administration.

The comparative importance of the various forms of mutual benefit is shown in the following table, but unfortunately the data for 1903 do not include any but the incorporated societies. It is therefore somewhat difficult to tell what the tendency was during the last twenty years. Up to 1885 the payment of sick benefits was by far the most important function of these societies. In 1903 the incorporated societies spent for sick benefits, inclusive of medical and pharmaceutical help, a little more than one-half of their total expenditure for relief.

EXPENDITURES OF THE MUTUAL BENEFIT SOCIETIES FOR BENEFITS, BY KIND OF BENEFITS, 1873, 1878, 1885, AND 1903.

[Source: Le Società di Mutuo Soccorso, 1873, 1878, 1885, and 1904.]

Kind of benefits.	1873.		1878.		1885.		1903 (incorporated societies only).	
	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.	Amount.	Per cent of total.
Sick benefits.....	\$191,301	73.4	\$304,753	61.9	a \$427,450	62.1	\$266,656	45.8
Physicians and medicine.....	25,564	9.8	37,154	7.5	59,493	8.6	41,306	7.1
Funeral expenses.....	5,346	2.1	8,782	1.8	24,513	3.6	10,287	1.8
To families of defunct members...	9,499	3.7	21,140	4.3	12,102	1.8	35,933	6.2
Permanent disability.....	b 20,404	b 7.8	b 114,130	b 23.2	b 135,027	b 19.6	60,309	10.4
Superannuation.....	(c)	(c)	(c)	(c)	(c)	(c)	149,011	25.6
Unemployment.....	8,349	3.2	6,397	1.3	6,328	.9	(d)	.....
Other.....					23,638	3.4	18,349	3.1
Total.....	260,463	100.0	492,356	100.0	688,551	100.0	581,851	100.0

a Including \$6,743 for temporary disability and \$2,737 for maternity benefits and nursing.

b Including superannuation benefits.

c Included in permanent disability benefits.

d Not reported.

The total assets of the societies, and also the average assets per society and per member, are shown in the following table for the various years reported. There is seen to have been an almost constant growth not only in the total assets, but in the average assets per society and per member. The average assets of the incorporated societies are more than three times that of the unincorporated societies. This is partly explained by the larger membership in the incorporated societies, but the average assets per member are also considerably larger—more than twice as much.

ASSETS OF THE MUTUAL BENEFIT SOCIETIES, 1873, 1878, 1885, and 1904.

[Source: Le Società di Mutuo Soccorso, 1885 and 1904. Data are for 1,095 societies in 1873, 1,949 in 1878, 3,520 in 1885, and 1,514 incorporated and 4,485 unincorporated societies in 1904.]

Year.	Total assets.	Average per society.	Average per member.
1873.....	\$1,806,013	\$1,648	\$8.56
1878.....	4,080,341	2,093	12.45
1885.....	6,214,762	1,766	11.72
1904:			
Incorporated societies.....	7,114,285	4,684	24.77
Unincorporated societies.....	6,858,055	1,522	11.61
Total, 1904.....	13,972,340	2,319	15.92

The next table shows for 1904 the distribution of both incorporated and unincorporated societies by the amount of assets. Over one-half of the societies (54.08 per cent) are found to own less than \$965, about one-third of the societies (34.09 per cent) have assets of \$965 and under \$9,650, and only 3.63 per cent own \$9,650 and over, no data being available for the remaining 8.2 per cent. The differences between the assets of the incorporated and unincorporated societies are sufficiently well brought out in the table.

ASSETS OF THE MUTUAL BENEFIT SOCIETIES ON DECEMBER 31, 1904, BY AMOUNT OF ASSETS.

[Source: Le Società di Mutuo Soccorso, 1904.]

Amount of assets.	Incorporated societies.		Unincorporated societies.		All societies.	
	Number.	Per cent of total.	Number.	Per cent of total.	Number.	Per cent of total.
Under \$193 (1,000 lire).....	197	12.72	1,220	24.46	1,417	21.68
\$193 and under \$965.....	378	24.42	1,739	34.87	2,117	32.40
\$965 and under \$1,930.....	300	19.38	689	13.82	989	15.13
\$1,930 and under \$9,650.....	519	33.53	720	14.44	1,239	18.96
\$9,650 and under \$19,300.....	66	4.26	90	1.80	156	2.39
\$19,300 and under \$48,250.....	40	2.58	20	.40	60	.92
\$48,250 and under \$96,500.....	6	.39	6	.12	12	.18
\$96,500 and under \$193,000.....	4	.26	1	.02	5	.08
Over \$193,000.....	4	.26	.....	.....	4	.06
Not reported.....	34	2.20	502	10.07	536	8.20
Total.....	1,548	100.00	4,987	100.00	6,535	100.00

PROPOSED REFORM OF MUTUAL BENEFIT SOCIETIES.

Only a very small proportion of the workmen of Italy were able to join the existing voluntary societies in which the entire burden of the cost of insurance falls upon their own resources. In 1907 the Council of Providence and Social Insurance appointed a special commission for the study of necessary reforms in the status of the mutual benefit societies. After over a year of work the commission reported a bill for establishing a system of government subsidies to sickness insurance societies. The fact that the proposal of this special commission received the approval of the whole council makes this plan a matter of considerable importance.

The main provisions of the proposed plan, which is to serve as a substitute for the old act of 1886, are as follows: In addition to the nonregistered societies and those registered under the new law, there is to be created a third group of so-called authorized societies. The requirements for registration are practically left unchanged. But for authorization the requirements are considerably more stringent. The societies must be of a certain size, namely, not less than 200 active members (the statistics quoted on page 1839 showed that less than one-fifth of the societies had the necessary membership). They must grant a certain minimum of benefits, namely, (1) all necessary medical and surgical aid from the very first day of sickness and at least for six months; (2) a sick benefit of at least 1 lira (19.3 cents) per day for adults, and of one-half lira (9.7 cents) for children 16 years and under, from the fourth day of sickness till the end of three months, and at least one-half that amount for the succeeding three months. Special provision is made for maternity benefits, which in view of the recent act establishing compulsory maternity insurance for working women, is now of minor importance. This maternity benefit must consist of a daily benefit of one lira (19.3 cents) for at least 30 days, part of which may precede the birth of the child. The dues of these authorized societies must be computed with consideration for the special needs, but must not be less than one lira (19.3 cents) per month. In addition to individual mutual benefit societies, federations of such societies are permitted, both in the registered group and in the authorized group. The recognition as well as authorization is left to the minister of agriculture, industry and commerce, and the authorized societies are to be subjected to stricter supervision of the Government.

The object of this authorization is to provide a group of financially sound and carefully supervised mutual benefit societies, to which substantial subsidy is to be granted by the national treasury. For this purpose a special annual appropriation of two million lire (\$386,000) was proposed. This fund is to be divided among all the authorized benefit societies in proportion to their membership. The system pro-

posed is to include additional subsidies for invalidity insurance in the following way: Each member of the authorized mutual benefit society who is insured in the National Old-Age and Invalidity Insurance Institution is to count as two in this distribution, and only one share is to go to his society, and the other to his private account in the old-age insurance fund. Moreover, another substantial benefit is to be extended to these authorized mutual benefit societies. The National Old-Age and Invalidity Insurance Institution is permitted to act as a central institute for sickness insurance, and to enter into agreement with authorized benefit funds, or federations of such benefit funds to insure their members a continuation of the sick benefit of one-half lira (9.7 cents) beyond the normal limit of six months for the whole duration of sickness.

MATERNITY INSURANCE.

While the general condition of sickness insurance in Italy is still very unsatisfactory, since only a small proportion of the working population enjoys the benefits of such insurance and the State has done very little except provide conditions of incorporation, a very strong and very interesting movement toward compulsory insurance, in at least one branch of sickness insurance, was started in Italy within the last decade—that of maternity insurance, which very recently was successful in accomplishing this result.

By "maternity insurance" is meant insurance of medical or financial assistance to the mother for a certain period before and after childbirth.

The theoretical question may be raised whether such a form of insurance may properly be considered a branch of sickness insurance. But, as a matter of fact, medical and financial assistance in case of childbirth is often rendered, usually in connection with general sickness insurance institutions. This is the case not only in the compulsory system of sickness insurance in Germany, but also in the voluntary sickness insurance institutions of Italy. But it is the insufficiency of the voluntary system of sickness insurance, its failure to include all those who are in need of it, and the evidence of the special urgency of such insurance for a working woman during childbirth, that created the movement for maternity insurance in Italy. It is very interesting to note that in the reports of the proceedings of the international congresses on workmen's insurance all the reports and discussions on maternity insurance were furnished by Italian delegates, and the Italian legislative work in connection with that problem bears strong evidence of the influence of these reports.

The information obtainable from the six censuses of Italian mutual benefit societies concerning their activity in maternity insurance is somewhat meager. While it shows a rather rapid growth, it nevertheless demonstrates the very limited extent of such relief. The

censuses of 1862, 1873, and 1878, unfortunately, do not show this function at all, combining it probably with other forms of sick benefits. The census of 1894 contains no financial data. Thus only a comparison between 1885 and 1904 is possible; and even for these years maternity benefits are combined with all other benefits for nursing. In 1885, 384 societies out of 3,762, or 10.2 per cent, were giving such benefits; in 1894, 451 out of 6,725, or only 6.7 per cent; and in 1904, 572 out of 6,535, or 8.8 per cent. The total expenditure for this purpose in 1885, as far as obtained by that investigation, was only 14,182 lire (\$2,737.13), and later data are not available.

SPECIAL PRIVATE MATERNITY INSURANCE INSTITUTIONS.

The organization of a private maternity insurance institution was first proposed before the workmen's insurance congress in Milan in 1894; and the plan proposed was made the object of a vigorous agitation by many organizations of Italian women. A thorough study of the question was undertaken by the Italian Hygienic Society, and in 1898 it prepared the constitution of a maternity insurance institution; and though the institution has never been realized, the plan of the proposed organization is nevertheless of some interest. The object of the projected institution was to grant financial assistance of at least 1 lira (19 cents) per day for 20 days, 8 days before and 12 days after childbirth. The means were to come from contributions of the active members, according to a schedule which was to take the ages of the members into consideration; but private donations were to be solicited. The right to the benefits was made conditional upon at least 300 days of previous membership. A reserve fund was to be created, into which 20 per cent of the annual surplus was payable, while 75 per cent of this surplus was to be redistributed among the active members. The administration was left to the general meeting of all members, and officers were to be elected by this meeting.

Another plan, which also failed, was proposed by the Savings Bank of Bologna. It was a scheme of individual saving rather than insurance. It was contemplated to issue special "maternity saving books," only to girls under 16 years of age who are employed in manual labor, or whose parents are so employed, to be subject to the general rules for savings accounts, except that the savings so made were to be available only in case of childbirth; and as an encouragement to such savings a special fund of 200,000 lire (\$38,600) was to be created, the interest of which was to be distributed among the owners of these special maternity accounts. Only in cases of childbirth in marriage, or within the first 300 days of widowhood, were these savings to be repaid.

The first plan which materialized was conceived in Turin. A league for the defense of the interests of women was organized in

Turin early in 1895, and a congress of workmen of Piedmont, held in Turin early in 1896, unanimously voted in favor of establishing a maternity insurance fund. Soon after that the league appointed an organization committee and in the beginning of 1898 this fund was established. According to its constitution (^a) the aim of this fund is to enable its active members to abstain from work for some time before and after childbirth. The total period during which benefits are normally given is 30 days, while in case of illness accompanying childbirth, special provisions are made, up to a maximum of 45 days. The normal period is divided into two terms, 15 days before and 15 days after childbirth. In case of miscarriage or premature labor, only the second term is paid for.

The daily benefit for the period is 1.50 lire (29 cents), and it is given only upon proof of actual abstention from work. Other conditions exacted are that the woman be not pregnant at the time of admission to membership, that normal childbirth does not take place until nine months after admission to membership, and that the members' dues be regularly paid.

The resources from which these benefits are paid are membership fees and charitable donations or other miscellaneous revenues. Members are divided into three classes—active, contributing, and honorary; but from a financial point of view only the first two classes are important. Contributing members are persons who join the association from humanitarian considerations, and they are divided into three groups—founders, who contribute not less than 1,000 lire (\$193) as a lump sum; life members, who contribute not less than 50 lire (\$9.65) at once, either in money or in commodities; and contributing members, who agree to contribute 2 lire (39 cents) per annum for at least 5 years. Active members pay 50 centesimi (10 cents) per month.

An interesting subsidiary function of the association is the annual awarding of premiums to mothers who take the best care of their infants, as judged by physicians and lady visitors.

Naturally, only women of the childbearing age could be expected to join this association. A birth rate of 50 per cent was therefore expected, but by experience it was reduced to 40 per cent. With this rate in view, the financial status of the association is seen from the following computation:

With a daily benefit of 1.50 lire (29 cents) during 30 days, the normal amount of benefits per each case amounts to 45 lire (\$8.69), or 1,800 lire (\$347.40) for each 100 active members, without taking into consideration the cost of administration. The annual member-

^a Henri Scodnik, *L'Institution de Caisses pour la Maternité en Italie* (Congrès International des Accidents du Travail et des Assurances Sociales. Sixième Session tenue à Dusseldorf du 17 au 24 juin, 1902), pp. 667-680.

ship dues of these 100 members amount to 600 lire (\$115.80), or only one-third of the necessary cost, leaving 1,200 lire (\$231.60), or two-thirds, to be obtained from contributing members or from other charitable sources. Yet 6 lire (\$1.16) per annum is considered quite high for dues, considering the wages for labor in Italy, the old-age insurance institutions not daring to demand more than that. Thus a voluntary system of maternity insurance in Italy seems to meet the unsurmountable difficulty of excessive cost.

The provisions of this society were somewhat modified (^a) in 1904, when the society was recognized under the law of 1886. An effort was made to adjust the membership dues to the risk of maternity, though in a rather crude way. The dues are 35 centesimi (7 cents) per month for women under 21 years of age, 55 centesimi (11 cents) per month for women 21 to 30 years old, and 45 centesimi (9 cents) per month for women over 30 years of age. The number of members in 1907 was 494, and the number of cases assisted only 121, or less than 25 per cent. Nevertheless, the membership dues were not sufficient to support the society.

Five more maternity benefit societies are known to have been organized—one in each of the cities of Milan, Rome, Florence, and Brescia in 1905, and one in Bergamo in 1906.

In the Milan society the membership dues vary from 1.20 lire (23 cents) to 9 lire (\$1.74) per annum for members under 20 years of age, and for all over 20 years of age they are 9.60 lire (\$1.85) per annum, while the total maternity benefit must not exceed 30 lire (\$5.79). The society in Rome, while offering a benefit equal to that of the society at Turin, exacts as dues only 25 centesimi (5 cents) per month. The society of Florence gives a daily benefit of 1.50 lire (29 cents) for twenty days before accouchment and for an equal period after accouchment, making a total benefit of 60 lire (\$11.58), and also exacts higher dues—45 centesimi (9 cents) per month for members under 21 years of age, 65 centesimi (13 cents) for members from 21 to 30 years, and 55 centesimi (11 cents) for those over 30 years of age.

The society at Bergamo charges membership dues of 40 centesimi (8 cents), 60 centesimi (12 cents), and 50 centesimi (10 cents) per month, respectively, for the same three age groups as shown for the Florence society, in addition to an initiation fee of 1 lira (19 cents), and grants a benefit of 40 lire (\$7.72).

The society at Brescia charges 40 centesimi (8 cents), 55 centesimi (11 cents), and 45 centesimi (9 cents), respectively, for the same three age groups, and grants a daily benefit of 1.50 lire (29 cents) for thirty days, or a total of 45 lire (\$8.69).

^a Henri Scodnik, *L'Assurance Maternelle et les Caisses pour la Maternité* (Congrès International des Assurances Sociales, 8^e session, Rome, octobre, 1908).

The variations show that there is no real actuarial basis for all these societies, which are partly self-supporting.

A great stimulus to the public interest in the problem of maternity insurance was given by the adoption on June 19, 1902, of the law regulating industrial employment of women and children. (a) Article 6 of this law specifically prohibits employment of women within one month after childbirth. In exceptional cases this period may be reduced to three weeks, provided the woman furnishes a certificate signed by the bureau of hygiene of the locality in which she resides, certifying that the state of her health is such that she may, without any harm to herself, perform the work for which she desires to be employed. Thus the law established a period of legal disability, accompanied by an enforced loss of earnings, and it was natural that in both chambers of the Parliament the adoption of this law was accompanied by resolutions that the Government be called upon to prepare a plan for the establishment of a national maternity insurance institution, in which membership should be obligatory for all those female workers to whom this law applies, namely, employees of mines, factories, and workshops.

INVESTIGATION OF THE BUREAU OF LABOR.

To prepare the statistical and actuarial foundations for a bill to establish a system of obligatory maternity insurance, the minister of agriculture, industry, and commerce charged the Italian Bureau of Labor to undertake an investigation extending only to those women who are covered by the law of June 19, 1902. The investigation was undertaken in 1903, and the report published in 1904, being the first statistical investigation of that bureau. It covered the year December 1, 1902, to November 30, 1903, and included 172,365 female employees in 2,654 establishments.

According to the Italian census of 1901, the number of female employees and their proportion to the total number of employees is shown in the following table:

NUMBER AND PER CENT OF FEMALE EMPLOYEES IN EACH INDUSTRY GROUP, 1901.

[Source: Ministero di Agricoltura, Industria e Commercio, Ufficio del Lavoro. *Basi Tecniche di una Cassa di Maternità.*]

Industry group.	Total number of employees.	Female employees.	
		Number.	Per cent.
Mines, metallurgy, mechanical, and chemical industries.....	1, 002, 728	20, 219	2
Food products.....	162, 883	19, 353	12
Textiles.....	458, 302	366, 571	80
All other.....	971, 781	324, 673	33
Total.....	2, 595, 694	730, 816	28

a Belgium. Office du Travail, *Annuaire de la Legislation du Travail*, 6^e année, 1902.

The total number of females employed in the industries, according to the census of 1901, was 730,816. On the other hand, the statistical office of the Ministry of Agriculture, Industry, and Commerce has published its own enumeration of the industrial establishments subject to the law of June 19, 1902, as follows:

NUMBER AND PER CENT OF FEMALE EMPLOYEES IN EACH INDUSTRY GROUP, 1902.

[Source: Ministero di Agricoltura, Industria e Commercio, Ufficio del Lavoro. Basi Tecniche di una Cassa di Maternità, 1904.]

Industry group.	Number of establishments.	Total number of employees.	Female employees.					
			Under 15 years of age.		Over 15 years of age.		Total.	Per cent of total employees.
			Number.	Per cent.	Number.	Per cent.		
Mines, metallurgy, mechanical, and chemical industries	29,000	374,711	3,407	12.0	24,931	88.0	28,338	7.6
Food products.....	95,800	249,464	1,700	7.2	21,799	92.8	23,499	9.4
Textiles.....	6,523	421,643	54,039	17.3	257,921	82.7	311,960	74.0
All other.....	12,670	228,888	23,202	26.8	63,469	73.2	86,671	37.9
Total.....	143,993	1,274,706	82,348	18.3	368,120	81.7	450,468	35.3

Thus out of an aggregate of 1,274,706 employees, 450,468, or 35.3 per cent, were females; but of these only 368,120, or 81.7 per cent, were over 15 years of age, constituting only 28.9 per cent of the aggregate.

The investigation of the Bureau of Labor embraced only 2,654 establishments, out of 143,993 or less than 2 per cent, but these establishments employed 172,365 females between the ages of 15 and 54, or 46.8 per cent of all female employees over 15 years of age, which makes the results of the investigation sufficiently accurate.

In the following table are shown the statistical results of this investigation, somewhat simplified by the exclusion of actuarial details. The table shows, by the four industrial groups, the birth rate per 1,000 full-year employees, the average wage of the female employees between 15 and 54 years of age, and the average wage of women giving birth to children, which is somewhat higher, and finally a computation of the relation between the dues necessary to cover the cost of maternity insurance and the wages of the female employees. The benefits, which are paid for 30 days, are made equal to one-half the daily wage, or three-fourths the daily wage. The birth rate was found to be only 45 per thousand full-year workers, while it is 120 per thousand for the corresponding ages in Italy at large. This is easily explained by the great proportion of unmarried women among the factory employees. The final conclusion of the computation seems to show that 0.3 of one per cent of the wages would be necessary to provide maternity benefits amounting to one-

half the wages for 30 days, and 0.45 of one per cent of the wages for maternity benefits amounting to three-fourths of the wages for 30 days.

BIRTH RATE, AVERAGE WAGES, AND PROPORTION OF WAGES NECESSARY TO INSURE MATERNITY BENEFIT, BY INDUSTRY GROUPS, 1902.

[Source: Ministero di Agricoltura, Industria e Commercio, Ufficio del Lavoro. Basi Tecniche di una Cassa di Maternità, 1904.]

Industry group.	Number of establishments.	Number of female employees Nov. 30, 1902.	Computed number of full-year employees.	Number of full-year working women per 1,000 employees.	Number of cases of child-birth among the wage-workers.	Number of cases of child-birth per 1,000 full-year workers.	Average daily wage of female employees.	Average daily wage of those who became mothers.	Premiums necessary to insure a maternity benefit for 30 days (expressed in 10,000 parts of the wages.)	
									When benefit is $\frac{1}{2}$ of wages.	When benefit is $\frac{3}{4}$ of wages.
Mines, metallurgy, mechanical, and chemical industries.....	244	7,029	5,834	830	271	46	\$0.23	\$0.26	36	55
Food products.....	90	1,595	1,085	680	42	39	.25	.26	34	51
Textiles.....	1,643	134,770	120,778	896	4,683	39	.22	.23	25	38
All other.....	677	28,971	25,998	897	1,897	73	.30	.32	46	69
Total.....	2,654	172,365	153,695	892	6,893	45	.23	.26	30	45

BILL OF 1905.

The results of this investigation and the discussion of the problem of maternity insurance both by the council of provident institutions (a) and by the superior council of labor (b) resulted in a bill which was introduced in the Chamber of Deputies on May 27, 1905, (c) by the minister of agriculture, industry and commerce. The bill aimed to establish a system of obligatory maternity insurance, limited to women between the ages of 15 and 50, employed in mines, factories, and workshops.

For this purpose a national institution or fund was proposed with headquarters in Rome, to be administered by the National Old-Age and Invalidity Insurance Institution, as an autonomous section of the same.

In this institution the insurance was to be compulsory for all women of the class and age designated. The benefit necessary was placed approximately at three-fourths of the daily wage for 30 days, rather than a flat per diem rate, which would have no relation to the local variations in the cost of living, as the wages do to a great

a Atti del Consiglio de Previdenza (Ministero di Agricoltura, Industria e Commercio, Ispettorato Generale del Credito e della Previdenza), Annali del Credito e della Previdenza, Anno 1903, No. 51.

b Atti del Consiglio Superiore del Lavoro, III Sessione, 1904.

c Bollettino dell' Ufficio del Lavoro, Vol. III, 1905.

extent. It was also thought proper that the employer share with the employee the cost of this form of insurance.

The bill proposed to group the wages, contributions, and benefits into seven classes rather than to leave the determination of either to special computation in each case. This slight deviation from abstract justice was justified by consideration of administrative simplicity. Accordingly the following wage groups with the corresponding contributions and benefits were prepared:

CONTRIBUTIONS AND BENEFITS, BY WAGE GROUPS.

[Source: Bollettino dell' Ufficio del Lavoro, 1905, Vol. III.]

Group.	Daily wages.		Annual contributions.		Daily benefits.	
	<i>Lire.</i>		<i>Lire.</i>		<i>Lire.</i>	
1.....	Under 0.60.....	Under \$0.116....	1. 20	\$0. 232	1. 00	\$0. 193
2.....	0.61 to 1.20.....	\$0.118 to \$0.232....	2. 40	. 463	1. 00	. 193
3.....	1.21 to 1.80.....	.234 to .347....	3. 60	. 695	1. 35	. 261
4.....	1.81 to 2.40.....	.349 to .463....	4. 80	. 926	1. 80	. 347
5.....	2.41 to 3.00.....	.465 to .579....	6. 00	1. 158	2. 25	. 434
6.....	3.01 to 3.60.....	.581 to .695....	7. 20	1. 390	2. 70	. 521
7.....	3.61 and over.....	.697 and over....	8. 40	1. 621	3. 15	. 608

The annual contributions represented two days' wages, or about two-thirds of 1 per cent of the annual earnings, based on the maximum wage of each group, except in group 7, in which the contribution is limited to 8.4 lire (\$1.62). The daily benefits represented three-fourths of the maximum daily wage of the group, except that in the first two groups a flat rate of 1 lira (19 cents) per day was established, being for some employees even higher than the daily wage, and in group 7 the daily benefit was limited to 3.15 lire (61 cents).

Other proposed sources of income for this institution were fines and penalties collected for noncompliance with the demands of the law, and private contributions and donations. But the membership dues have been adjusted to cover the cost of insurance. They were to be paid by the employer, who was to be permitted to deduct one-half of it from the wages of the insured. Every three years, or oftener, if found necessary, a technical revision was contemplated and the amount of contribution could then be changed if necessary.

The rates suggested in the bill of 1905, amounting approximately to two days' wages, or about 0.67 of 1 per cent of the annual wages, are somewhat higher than the rate obtained by the investigation of 1903 (0.45 of 1 per cent). The report justifies this increase first, because in the statistical investigation miscarriages were not taken into consideration, and because due weight was not given to women employed only a part of the time. The expenses of administration must also be taken into consideration, even though they would not be very great if this form of insurance is managed largely by the old-age and invalidity insurance institution. The elimination of the female em-

ployees 50 to 54 years old, which were included in the investigation of 1903, will naturally not decrease the number of births very materially and therefore will increase the birth rate.

BILL OF 1907.

Notwithstanding the active support given the bill of 1905 by many labor organizations, it did not command active attention in the Chamber of Deputies. It was referred, however, to a parliamentary commission, which did not bring in its report until more than two years later. The Ministry of Agriculture, Industry and Commerce having meanwhile been entrusted to another minister, the commission modified the bill of 1905 to conform to the ideas of the new incumbent.^a The commission admitted all the contentions brought in support of the preceding bills. It stated that in the opinion of the majority of the members it was also desirable that the State share in the cost of this insurance equally with the employer and employee, but it did not succeed in bringing the Government over to this point of view, and therefore relinquished the demand rather than delay the adoption of this law.

In one very essential feature the original bill was modified. The complicated schedule dividing the female employees into 7 wage groups with corresponding rates of dues and benefits was abolished and a flat rate of 1.50 lire (29 cents) per employee was substituted, while the amount of benefits was placed at the lump sum of 30 lire (\$5.79). In making this change, the commission argued that the absence of satisfactory statistical information concerning maternity insurance whether in Italy or abroad made any efforts at perfect justice in dues and benefits futile, that the scale suggested by the bill of 1905 failed to establish such justice, while it introduced a great many complications, and therefore for purposes of simplicity a uniform rate of both dues and benefits was preferable. The rate of dues suggested imposed a burden of only 75 centesimi (14½ cents) per annum upon the women insured, and therefore was not burdensome to the poorest employees, while the benefit of 30 lire (\$5.79) represented three-fourths of the average daily wages of the childbearing woman for thirty days, or the full wages for about twenty-two days.

BILL OF 1909.

The report of the parliamentary commission of December 20, 1907, was not acted upon by the Parliament because of the closing of the

^a Bollettino dell' Ufficio del Lavoro, 1908, Vol. IX, p. 379. German text of the bill in Zacher's *Arbeiterversicherung im Auslande*, Heft VI, C., p. 47. French text in Henri Scodnik's *L'Assurance Maternelle et les Caisses pour la Maternité* (Congrès International des Assurances Sociales, 8^e session, Rome), p. 63.

session, and a new bill was introduced on March 29, 1909. This new bill was practically identical with that reported by the commission on December 20, 1907.

The one important change concerned the rate of membership dues. Instead of a flat rate of 1.50 lire (29 cents) per annum for each employee from 15 to 50 years of age, the rate proposed in this bill was 1 lira (19 cents) for those from 15 to 20 years old and 2 lire (39 cents) for those over 20 and under 50 years of age. This change was based mainly upon the great difference in the maternity rates for women of these two different age groups.^(a) It has been computed that this annual rate for women 15 to 20 years of age is 0.3 of 1 per cent, while for women 20 to 31 years of age it is 8.4 per cent. The statistics of women at work in Italy^(b) shows that women from 15 to 20 years old constitute 38.5 per cent of all female employees over 15 years of age and women from 20 to 55 years of age 58.7 per cent. A rate of 1 lira (19 cents) per annum for the former, and 2 lire (39 cents) per annum for the women from 20 to 50 years of age will evidently average only a little more than 1.50 lire (29 cents) per employee, and yet be more equitable, in view of the different maternity risk, than the flat per capita rate.

Another change of some importance was that of denying the right of benefit in the case of intentional abortion, while the cases of normal abortion or miscarriage were treated as ordinary cases of labor.

In none of the bills proposed and here discussed has any effort been made to furnish different rates for married and unmarried employees.

The parliamentary commission brought in a very favorable report upon this bill in June, 1910^(c). The commission again put forward the principle of state subsidy and found greater encouragement in the new cabinet, which followed the ministerial crisis of December, 1909. Instead of the earlier demand for equal contributions from all the three parties concerned, a compromise was reached in the proposal that to each maternity benefit of 30 lire (\$5.79) the State contribute a subsidy of 10 lire (\$1.93). This represents the only important amendment proposed by the parliamentary commission.

A month later the entire text of the bill as presented by the commission was adopted by the Parliament without any changes, and on July 17, 1910, the act became a law, thus establishing the first national institution for maternity insurance in the world.

^a Bollettino dell' Ufficio del Lavoro, Vol. XI, aprile, 1909.

^b La Donna nell' Industria Italiana (Pubblicazione dell' Ufficio del Lavoro, Serie B, No. 5, Ann. 1905).

^c Bollettino dell' Ufficio del Lavoro, Vol. XIII, June, 1910.

PROVISIONS OF THE LAW OF JULY 17, 1910.^a

The purpose of the law is to establish a national maternity fund for granting benefits to working women in case of childbirth.

The extent of the application of the law is made harmonious with that of the act of November 10, 1907, regulating the work of women and children. Only such women as are protected by this earlier act are covered by the new maternity fund, with a further exception of female employees of the State for whom special provision at least equally favorable exists.

The benefits granted amount to 40 lire (\$7.72), of which the maternity fund contributes three-fourths and the State grants a subsidy of one-fourth. This amount must be considered in connection with the requirement of the law that in case of childbirth the mother shall discontinue work for at least seven weeks, and it must also be remembered that 1 lira (19.3 cents) per day is the usual minimum for sick benefits in Italian mutual benefit societies.

An important requirement of the law is that this benefit must be paid promptly. At least one-half must be paid during the first week after parturition. Authority is given by the law for the regulations to require that the employer make advance payments to the working woman, to be reimbursed subsequently by the fund.

This benefit can not be assigned, and is not subject to seizure. Any agreement to waive the right to this benefit is declared null and void. Moreover, the right to the benefit is made independent of the fact, whether the required contributions to the fund have been made or not. A year's time, counting from day of childbirth or abortion, is given to begin action for claiming the benefit.

The employer, the employee, and the State contribute to the fund. A compulsory annual contribution to the fund is required from all employees to which the act applies, namely, to working women between the ages of 15 and 50. For women 15 to 20 years old the contribution is one lira (19.3 cents) per annum, and for women 20 to 50 years old, two lire (38.6 cents). Of this contribution, equal shares are to be paid by the employer and the employee.

The contribution is to be paid by the employer, who may deduct one-half of it from the wages of the employee. Any effort to raise the share of the employees in these deductions is punishable by a fine.

In case of failure of the employer to pay all or part of the required contributions, no rights are forfeited by his employees. The usual benefits must be paid to them, and the fund is authorized to collect the amount due, together with a fine, from the employer.

The contribution from the State amounts to 10 lire (\$1.93) per case, or one-fourth of the entire benefit, and does not constitute a revenue of the fund properly speaking.

^a Bollettino di Notizie sul Credito e Sulla Previdenza, Anno XXVIII, August, 1910.

Other revenues of the fund, foreseen in the law, are fines collected from employers for noncompliance with the requirements of the law, and gifts or legacies or other miscellaneous contributions to the fund.

An indirect contribution from the State is represented by the assumption of the cost of administration and the granting of other privileges, such as freedom from taxes and registry fees for all documents in connection with its administration.

The maternity fund is intrusted for administrative purposes to the National Old-Age and Invalidity Insurance Institution, though the finances of the two institutions must be kept entirely separate. The seat of the new institution is therefore in Rome. The maternity fund is to be administered directly by a special committee, appointed by the administrative council of the old-age insurance institution. Provision is made for representation of both employers and employees on that committee; one-third of the committee to consist of the former and one-third of the latter. These representatives of both the employers and employees are to be nominated, however, by the minister of agriculture, industry, and commerce from the colleges of prud'hommes (*collegi di probi-viri*) of the industries in which women are employed.

The financial organization is also intrusted to the National Old-Age and Invalidity Insurance Institution, though the accounts must be kept separately. During the first year of the application of the law this institution is to advance the necessary amounts to the maternity fund, to be repaid in five annual installments with a 4 per cent rate of interest.

Annual reports to the Parliament concerning the activity of the fund are required of the minister of agriculture, industry, and commerce, these reports to contain all necessary suggestions concerning the revision of the actuarial basis of the fund.

All the details of the application of the law are left to the regulations, which by the act were required to receive formal approval by royal decree within six months of the approval of the original act. The act is to go into effect three months after the publication of the regulations.

OLD-AGE AND INVALIDITY INSURANCE.

NATIONAL OLD-AGE AND INVALIDITY INSURANCE INSTITUTION.

In its system of compulsory insurance against industrial accidents Italy followed to a great extent the example of Germany, but it looked to France and Belgium for models of a system of old-age insurance, and the National Institution for Insurance of Workmen against Invalidity and Old Age (*Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai*), established by the law of July 17, 1898, is an institution for voluntary but subsidized insurance, and

shows a pronounced similarity to the corresponding French and Belgian institutions.

Established in the same year in which the law concerning compulsory accident insurance was passed, this system of voluntary insurance has also a history of nearly twenty years of persistent efforts.

HISTORY.

It is interesting to note that the first effort to establish a state institution for old-age insurance in Italy dates back as far as 1859. A bill providing for such insurance became a law on July 15, 1859. This law did not impose any financial obligations upon the state treasury and therefore offered no additional inducement for old-age provision except that presented by the existence of an insurance institution (*Cassa di rendite vitalizie per la vecchiaia*).^(a) The law never went into effect because of the political events of the following decade. A proposition to revive this old law was made in the Chamber of Deputies on February 3, 1877, but without success.^(b)

Agitation for the establishment of an institution to provide old-age pensions, organized by labor organizations in Bologna, led to the appointment, on October 11, 1879, of a commission^(c) by the minister of interior and the minister of agriculture, industry, and commerce for the study of this problem and the preparation of a bill and regulations for an old-age and invalidity pension institution.^(d) The commission brought in a report and the text of a bill, in which was proposed the establishment of an old-age insurance institution for the exclusive insurance of wage-workers. It proposed a limit of 600 lire (\$115.80) to insurance written. The revenues of the institution were to consist mainly of the premiums of the insured, secondly, of voluntary contribution or legacies, and finally of certain state subsidies.

The management of this institution was to be intrusted to the National Bank for Loans and Deposits, and the local post-offices were to act as agencies. The cost of organization and administration was to be advanced by the State and gradually repaid from the extraordinary revenues of the institution. A form of cooperation was provided between this institution and private mutual benefit societies; furthermore, the commission proposed to encourage old-age insurance

^a Atti Parlamentari, Legislatura XV, Prima Sessione, 1882-83, Camera dei Deputati, No. 75.

^b Atti Parlamentari, Legislatura XIII, Sessione 1876-77, Camera dei Deputati, No. 55.

^c Zacher, VI, 1899, p. 29. Atti Parlamentari, Legislatura XV, Prima Sessione, 1882-83, Camera dei Deputati, No. 75.

by federations of such mutual benefit societies by offering them free of any expense the cooperation of the local post-office for the receipt of contributions and payment of pensions.

Based upon these recommendations of the commission, a bill^(a) was introduced by the minister of agriculture, industry, and commerce in the Chamber of Deputies on November 30, 1881, for the establishment of a national institution for workmen's pensions. The essential features of this proposal were, first, its special designation for the use of wage-earners, and, secondly, the proposal to turn over to this institution as a state subsidy to the insured 20 per cent of the net profits of all the savings banks, private as well as postal. This provision of the bill caused considerable criticism and opposition from the savings banks, which claimed that such a tax would be an infringement of their rights and would endanger their own obligations.

On the other hand, the formation of an old-age pension institution without some material state subsidy offered very little hope for success in view of the very low standard of earnings of the Italian workmen; and the state treasury was not in a condition to furnish a direct subsidy without additional taxation.

The bill of 1881 never came up for discussion in the Chamber of Deputies. It was reintroduced with some modifications on February 19, 1883.^(b)

According to this bill, the old-age pension institution, though an independent organization, was to be administered by the National Bank of Deposits and Loans. All workers of either sex over 18 years of age could take insurance for old-age pensions in this institution. The monthly contributions were to be not less than 1 lira (19 cents) nor more than 4 lire (77 cents), and an entrance fee of from 5 to 50 lire (97 cents to \$9.65) was to be required. In addition to the contributions of the insured, several other sources of revenue were provided; namely, two-tenths of the net profits of the postal savings banks, but not of the other savings banks^(c) and a few minor sources of revenue. Pensions were to be payable at any time after the insured had reached 50 years of age, provided he had been paying his premiums for fifteen years. In case of invalidity before reaching this age limit, special pensions could be granted by the committee.

^a Zacher, VI, p. 29. Atti Parlamentari, Legislatura XIV, Prima Sessione, Camera dei Deputati, No. 263.

^b Atti Parlamentari, Legislatura XV, Prima Sessione, 1882-83, Camera dei Deputati, No. 75.

^c According to the law of May 27, 1875, establishing the postal savings banks, seven-tenths of the net profits of the savings banks are distributed to the depositors, and the remaining three-tenths must be distributed as premiums to provident institutions. The assignment of two-tenths to the national pension institution was therefore claimed as a fulfillment of their legal obligations.

Two forms of old-age insurance were recognized, so-called "general" and "mutual." These have been called elsewhere in this report insurance with reserved capital and with alienated capital, the essential difference being that under general insurance the accumulations were payable to the heirs in case of death before the pension was granted, while in mutual insurance such accumulations were to be forfeited. The two different classes of insurance were to be kept separately, and the accumulations of profits in the mutual class naturally would be higher.

In the mutual class the granting of the pension was to be compulsory at the age of 65. But in either form of insurance, at the time of granting the pension, it could be computed in accordance with the wishes of the insured, so as to reserve the entire amount of the accumulations or part of them, as property of the insured, to be paid to his heirs, or without any reservation of the capital at all. Besides, the old-age pension institution was to be authorized to sell pensions for a capital value to relatives of workmen compensated by the National Accident Insurance Institution for fatal accidents.

Very exhaustive tables based upon Italian mortality statistics accompanied the bill.

In the memorial explanatory of the purposes of the bill its authors emphasized the fact that the institution was intended exclusively for the working classes, and therefore could not become a depository for the savings of small proprietors, as was claimed to be the case in France and Belgium.

To stimulate a desire for self-help the authors of the bill thought a state institution necessary, and discarded the proposal to impose this duty upon local savings banks or mutual benefit societies as utterly unsatisfactory.

The bill was based entirely upon the principle of voluntary insurance, and the authors took a very strong stand against any proposition to make old-age pension insurance obligatory.

The bill of 1883 met the same fate as the bill of 1881; it never came up for parliamentary consideration. Two years later, in June, 1885, the new minister of agriculture, industry, and commerce introduced a bill which in many of its provisions radically differed from the previous bills, and at the same time the bill of 1883 was recalled by royal decree.^(a)

The bill of 1885 did not provide for direct state insurance as did the two previous bills. The result of neither the French nor the Belgian experience was considered favorable to such a plan, and the plan itself in Italy has called forth the criticism of bearing the

^a Atti Parlamentari, Legislatura XV, Prima Sessione, 1882-83, Camera dei Deputati, No. 75a.

earmarks of state socialism and excessive centralization. Equally good results were claimed to be possible through private institutions, singly or in federations, but under government supervision and control, and the National Accident Insurance Institution established in 1883 was quoted as an example. The bill provided therefore that each savings bank could be authorized to write old-age pension insurance by depositing a guarantee fund of 50,000 lire (\$9,650). Several savings banks could unite in forming an old-age fund. To each old-age insurance institution thus organized a definite geographic district was to be assigned. Insurance was allowed to all workers over the age of 15. Only insurance with reserved capital was to be permitted; that is, the premiums and interest being returnable in case of death. The pensions were to begin at the age of 50, though they could be postponed. When a pension was granted, it might be given with or without the reservation of the rights of the insured to his original accumulations, and even lump-sum payments might be substituted for pensions.

The state subsidies to the insured remained nearly the same as in the previous bills, but they were divided into two groups, the annual subsidy and an eventual subsidy, the payment of the latter being delayed until the fund reached a certain amount. The main bond between the many old-age pension insurance institutions was to be formed by the distribution of these subsidies among them in direct proportion to the number of insured. These were to be further distributed in equal amounts among all insured persons who had paid in not less than 6 lire (\$1.16) during the current year. The cooperation of the postal savings banks for collection of premiums was another form of state assistance. This bill did not have any better success than its predecessors. The Parliament dissolved before it came up for discussion.

The fourth bill in this series of unsuccessful efforts was introduced in the Lower Chamber on December 9, 1887.^a In this bill the tendency away from a direct state insurance toward a system of state subsidy and supervision of private local pension insuring institutions was even more pronounced than in the preceding bill. The bill of 1887 provided for the establishment of a special fund in connection with the Bank of Deposits and Loans. This fund was to be utilized for distribution of subsidies to institutions for insurance of workers against old age, and the selection of the institutions and the assignment of subsidies to each were to be left to ministerial decrees, with the provision that the distribution must be in proportion to the number of insured persons over 15 years of age who had paid in during the year not less than five lire (97 cents), and the subsidy should not exceed twenty lire (\$3.86). In return for this subsidy the

^a Atti Parlamentari, Legislatura XVI, Camera dei Deputati, No. 74.

pension insuring institutions must present annual reports of their accounts and otherwise comply with the regulations to be promulgated in compliance with the law.

This bill made somewhat better headway than its three predecessors. It was referred to a parliamentary commission which brought in a favorable report on July 2, 1888, but because of the closing of the session of the Parliament in December of the same year, the report of the commission did not come up for consideration.

The bill was reintroduced on December 11, 1889, again referred to a commission, which brought in its report on July 11, 1890, approving the bill with some modifications; but it made no further progress.

The fate of the earlier bills indicated a lack of interest in the system of voluntary old-age insurance. None of the bills introduced within the eighties had even achieved the dignity of a discussion on the floor of the Chamber. This may explain the long interval which elapsed before the next effort in the same direction was made. The next bill was introduced on February 23, 1893,^a and was entitled "A Proposal for the Establishment of a National Institution for Invalids of Industry."

Notwithstanding this difference in name the bill was very similar to those introduced in 1881 and 1883. It proposed the establishment of a national old-age insurance institution rather than a subsidy to local and privately organized funds. Though legally autonomous, it was to be regulated by statutes prepared by the minister of agriculture, industry, and commerce, and approved by royal decree. Like all the previous bills, it proposed an institution for the special benefit of wage-workers and a voluntary system of insurance with state subsidies. From the list of these subsidies the contribution from the income of the postal savings banks had been omitted. The annual contributions of the insured were to be not less than 12 lire (\$2.32), nor more than 100 lire (\$19.30); and both the individual form of insurance (with reserved capital) and the mutual form (with alienated capital in case of death before pensioning) were permitted. Pensions were to be granted at the age of 60 or over, but only after 15 years of insurance. In case of invalidity such pensions might be granted before the expiration of such terms. In all cases the pensions depended upon the individual deposits, the interest, and the additional benefits conferred through distribution of the subsidies. This distribution was to take place for the first time in 15 years after the organization and proportionately to the number of years of membership, and after that annually in equal shares to all making the minimum contri-

^a Italian text: *Atti Parlamentari, Legislatura XVIII, Prima Sessione, Camera dei Deputati, No. 245. Bollettino di Notizie sul Credito e sulla Previdenza, 1893, Vol. II.* French text: *Bulletin du Comité Permanent du Congrès International, vol. 5.* German text: *Bödiker, Arbeiterversicherung, 1895.*

bution, the subsidy not to exceed 60 lire (\$11.58) per annum to each person insured. Various minor privileges were also conferred upon the institution. In the main, however, the technical regulations, the tables and computations were to be left to be elaborated by the minister of agriculture, industry, and commerce.

The bill never came up for discussion in the Chamber.

"A Bill for the Establishment of a National Institution for the Insurance of Wage-workers against Invalidity and Old Age" was introduced on April 13, 1897, passed on July 14, 1898, and approved by the Crown on July 17, 1898. Thus the establishment of the national institution for invalidity and old-age insurance followed very rapidly the adoption of the law for compulsory insurance against industrial accidents.

LEGISLATION.

The following is a list of the important laws, decrees, and similar enactments which have been promulgated concerning the National Institution for Insurance of Wage-workers against Invalidity and Old Age since its organization.

(1) The organic law establishing the institution was passed on July 17, 1898,^(a) to go into effect one month after the approval of its constitution.

(2) The constitution of the institution was approved by royal decree on June 18, 1899.^(b)

(3) The technical regulations of the institution were approved by royal decree on June 18, 1899.^(b)

(4) Regulations for all branch offices of the institution were promulgated by the royal decree of July 29, 1900.^(c)

(5) The provisional tables for computations of earned pensions were approved by royal decree of February 3, 1901.^(d)

(6) Law of July 7, 1901, amending that of July 17, 1898.^(c)

(7) Codified text of the law, consolidating the act of July 17, 1898, and the amending act of July 7, 1901, published by royal decree of July 28, 1901.^(e)

^a Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XIX, 1901. German text: Zacher, VI. French text: Annuaire de la Législation du Travail; 2d Annuaire, 1898.

^b Italian text: Annali del Credito e della Previdenza, 1899. Atti del Consiglio della Previdenza, Prima Sessione. French text: Annuaire de la Législation du Travail, 1899.

^c Bollettino di Notizie sul Credito e sulla Previdenza, XIX, 1901.

^d Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XIX, 1901. French text: Annuaire de la Législation du Travail, 1901.

^e Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XIX, 1901. German text: Zacher, VIa. French text: Annuaire de la Législation du Travail, 1901.

(8) Royal decree of December 22, 1901, authorizing the national institution to write insurance for life annuities.^(a)

(9) New constitution of the institution,^(b) approved by royal decree of May 21, 1902.

(10) New technical regulations of the institution, approved by royal decree of May 22, 1902.^(c)

(11) Law of July 3, 1902, turning over to the old-age insurance institution certain small abandoned accounts with the postal savings banks.^(d)

(12) Law of March 13, 1904, amending the law (codified text) of July 28, 1901.^(e)

(13) Royal decree of June 26, 1904, approving the premium tariffs and general conditions of the popular insurance of life annuities^(f) as permitted by the royal decree of December 22, 1901. (See above No. 8 in this list.)^(f)

(14) Royal decree of September 2, 1904, amending the technical regulations.^(g)

(15) Royal decree of September 2, 1904, amending the constitution.^(g)

(16) Royal decree of November 18, 1905, amending the decree of June 26, 1904, concerning the premium tariffs and the general conditions of the popular insurance of life annuities.^(h)

(17) Royal decree of December 16, 1906, concerning the tariffs of workmen's annuities.⁽ⁱ⁾

(18) Law of December 30, 1906, amending the codified text of the law of July 28, 1901, and the law of March 13, 1904.^(j)

(19) Codified text of the law, approved by royal decree of May 30, 1907.^(k)

^a Bollettino di Notizie sul Credito e sulla Previdenza, XIX, 1901.

^b Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XX, 1902. French text: Annuaire de la Législation du Travail, 1902.

^c Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XX, 1902. French text: Annuaire de la Législation du Travail, 1902. German text: Zacher, VIa.

^d Bollettino di Notizie sul Credito e sulla Previdenza, XX, 1902.

^e Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XXII, 1904. German text: Zacher, VIa.

^f Bollettino di Notizie sul Credito e sulla Previdenza, XXII, 1904.

^g Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XXII, 1904. French text: Annuaire de la Législation du Travail, 1904.

^h Bollettino di Notizie sul Credito e sulla Previdenza, XXIII, 1905.

ⁱ Bollettino di Notizie sul Credito e sulla Previdenza, XXV, 1907.

^j Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XXV, 1907. French text: Annuaire de la Législation du Travail, 1906.

^k Italian text: Bollettino di Notizie sul Credito e sulla Previdenza, XXV, 1907. French text: Annuaire de la Législation du Travail. German text: Zacher, VIb.

(20) Constitution of the institution, approved by royal decree of March 18, 1909.^(a)

(21) Technical regulations, approved by royal decree of March 18, 1909.^(b)

Not all of this legislation is in force at present. The new codified texts of the law have successively been substituted for the older texts, and with the approval of the new statutes and regulations the preceding ones were repealed. In the following pages only the legislative acts now in force will be studied in detail. But it is necessary to precede such detailed analysis by a brief review of the changes in legislation affecting the National Institution for Insurance of Wage-workers against Invalidity and Old Age, because only through such study of the changes can the tendencies in the growth and development of old-age insurance in Italy be understood. Briefly, the history of the legislation concerning this institution is: The first law was approved on July 17, 1898, and the actual operations of the fund began in October, 1899.

The first amending act was approved on July 7, 1901, and the codified text of the law was promulgated by royal decree July 28, 1901, and went into effect on August 1, 1901.

The second general amending act was approved on December 30, 1906, and the codified text was promulgated by the royal decree of May 30, 1907. Some of the important changes of this law did not go into effect until March 18, 1909, when the new constitution and the technical regulations of the institution were approved.

LAW OF 1898.—The National Institution for Insurance of Workmen against Invalidity and Old Age as established by the law of July 17, 1898, is an institution for voluntary insurance open to all wage-workers who are citizens of Italy. The amount of contributions is left entirely to the free will of the insured, except that a maximum limit of 100 lire (\$19.30) per annum is established, and contributions smaller than 50 centesimi (10 cents) are not received. These contributions are credited to each insured person's individual account, but, besides, additions are made to the individual accounts of all persons paying in at least 6 lire (\$1.16) during the year. These additions are obtained partly from the interest on the endowment funds and partly from the annual revenues allotted to the institution.

The endowment fund of 10,000,000 lire (\$1,930,000) has been formed from two sources, contributing equal shares of 5,000,000 lire (\$965,000) each—the net profits of the postal savings banks and the fund of invalidated bank notes not presented for cancellation.

^a Statuto in esecuzione della legge (testo unico), 30 maggio 1907. Published by Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai.

^b Regolamento lectrico, etc., published by the Cassa, etc.

In addition numerous other revenues were diverted to the treasury of the newly-created institution, to be used partly as annual revenues and partly to swell the endowment fund. Even from the annual revenues a portion must be diverted to the endowment fund for the first 10 years, so as to bring it up to 16,000,000 lire (\$3,088,000).

The essential feature of this plan is that no definite amount of additional benefits is guaranteed to the insured persons. They appear to be somewhat accidental, depending upon the revenues received by the institution, and being inversely proportionate to the number of persons insured, among whom the amount must be distributed. Only the maximum limit, 12 lire (\$2.32) per annum to each person, is established.

The list of revenues diverted to this institution is very interesting. No direct subsidy from the state treasury is given, but a large number of trust funds are thus transferred, as follows:^(a)

The first fund of 5,000,000 lire (\$965,000) was taken from the value of the bank notes issued in accordance with a law of April, 1874, and canceled because of failure to present them for redemption in accordance with the law of April 7, 1881, which discontinued the compulsory circulation of these bank notes and established certain time limits for their redemption in specie or treasury notes. The amount of bank notes not presented for redemption and therefore canceled by October 1, 1894, was 13,343,796 lire (\$2,575,353). The appropriation for the benefit of the old-age and invalidity insurance institution, therefore, amounted to less than one-half of the net gain of the Government from this operation.

The second fund of 5,000,000 lire (\$965,000) was taken from the available net profits of the postal savings banks, which were organized in 1876, and by the end of 1896 had accumulated a surplus of 19,652,721 lire (\$3,792,975).

The following additional sources of revenue were created for the increase of the 10,000,000 lire (\$1,930,000) endowment fund:^(b)

(1) A law reorganizing the banks of issue was passed on August 10, 1893. The old notes were taken out of circulation on December 31, 1897, and if not presented for payment within five years half their value was to be turned over to the old-age institution.

(2) According to the law of May 27, 1875, deposit accounts of postal savings banks which remain absolutely inactive for 30 years were transferred to the Bank of Deposits and Loans. These are given to the old-age institution.

(3) Deposits in the Bank of Deposits and Loans which remain unclaimed for 30 years were invalidated according to the law of

^a Atti Parlamentari, Legislatura XX, prima sessione, 1897, Camera dei Deputati, Documenti No. 66A, Allegato II.

^b See Prof. Carlo F. Ferraris in Braun's Archiv für Soziale Gesetzgebung und Statistik, vol. 13, 1899.

May 17, 1863. These invalidated deposits are now transferred to the old-age insurance institution.

(4) By the law of July 7, 1866, dissolving the religious orders, their property was used to form the so-called religious fund. From the proceeds of this fund expenditures for pensions are made to members of these orders and for other religious purposes. Of the excess of the proceeds over expenditures, one-fourth is paid to the local communities where the property is located, and three-fourths revert to the State. Of this share, one-tenth was granted to the old-age insurance institutions.

(5) All other private grants, bequests, etc.

The following sources were designated as regular annual revenues:

(1) A portion of the net profits of the postal savings banks—for 1897 and 1898, 30 per cent, and from January 1, 1899, 50 per cent, and in addition to this when the total deposits exceed 500,000,000 lire (\$96,500,000), 70 per cent of the net revenues attributable to that excess.

(2) Fifty per cent of the net income from the deposits of court fees and similar court moneys deposited according to the law of June 29, 1882, in the Bank of Deposits and Loans (for 1897 and 1898 only 25 per cent).

(3) Legacies reverting to the State.

(4) The interest upon the endowment fund; and (5) all other revenues.

These various sources of annual revenue and the interest on the endowment fund are expected to provide means for substantial increments to the personal accounts of the members. These accounts, carefully computed according to the detailed provisions contained in the law, form the basis for payment of pensions.

Normally the accounts were to be liquidated—that is, transformed into annuities when the member reached 60 or 65 years of age, and after at least 25 years have elapsed since the first payment. This rule would not permit the insurance of persons over 40 years of age, and for the first two years insurance for a shorter period (20, 15, or 10 years) was permitted. This was subsequently extended by the law of July 7, 1901, to December 31, 1903, and by the law of March 13, 1904, to December 31, 1905. The conversion of the accumulated account into an annuity was to take place according to the ordinary insurance principles, and according to a special table based upon Italian mortality statistics.

Under certain conditions payment of the entire value or part of the value of the accumulated account was payable in a lump sum instead of as an annuity. Also the annuity could be purchased with reserved capital or alienated capital.

Two forms of insurance are allowed, the plan of reserved payments and the mutual plan; the essential difference between these two

plans being that in the former, in case of death before a right to an annuity is acquired, the accumulated payments are paid to the heirs of the deceased, while in the latter plan such payments are distributed among all other members insured according to the same plan. As a matter of fact, the difference is not so great as might appear, for the insurance with reserved payments has also the element of mutuality in it. Only the actual contributions of the member are returned to his heirs and all the additions made to the accounts are redistributed among the other members. The amount of annuity purchasable for a stated amount is much greater under the mutual plan, but the plan of reserving the payments may appeal more forcibly to a workman who does not wish his family to lose his accumulations in case of his premature death.

The amount of annuity purchasable for \$1 per annum under each plan is shown in the following table:

AMOUNT OF ANNUITY PURCHASABLE FOR \$1 PER ANNUM UNDER THE MUTUAL PLAN AND UNDER THE RESERVED PLAN.

Age at beginning of insurance.	Annuity to begin at the age of—			
	60 years.		65 years.	
	Mutual plan.	Reserved plan.	Mutual plan.	Reserved plan.
25 years.....	\$11.40	\$7.87	\$21.08	\$12.37
30 years.....	8.36	5.99	15.66	9.59
35 years.....	5.95	4.45	11.37	7.30
40 years.....	4.07	3.18	8.02	5.42

It is seen from the above that the system established was primarily one of old-age insurance, the provisions for invalidity being insignificant. It was permitted to grant an annuity on the basis of accumulated accounts in case of invalidity, provided five years have elapsed since the beginning of insurance. In addition a special invalids' fund was established for granting additional increases of annuity to invalids, but the sources of this invalids' fund are very meager.

AMENDING ACT OF 1901.—The amending act of July 7, 1901, introduced many changes which, though of considerable importance, did not affect the general principles of the old-age insurance system outlined above. The changes introduced are mainly in the nature of slight financial benefits to the institution:

1. In 1893 and 1894 small treasury notes of 1 lira (19 cents) and 2 lire (39 cents) denominations were issued for circulation to the amount of 110,000,000 lire (\$21,230,000). According to the law of February 11, 1899, these notes were ordered taken out of circulation on December 31, 1901. The amount of such notes outstanding and not presented for payment and cancellation by the end of

1902 were deposited in January, 1903, as a voluntary interest-bearing deposit in the Bank of Deposits and Loans, to serve as a fund for redemption of the outstanding notes. The interest from this deposit is transferred to the old-age insurance institution for the increase of its endowment fund.

2. A modification was introduced in the method of reverting to the old-age insurance institution fund one-half the value of such bank notes as should not be presented for redemption before June 30, 1904. It was estimated by the Government that about 8,000,000 lire (\$1,544,000) worth of these bank notes were probably lost, and they were taken out of circulation. The law ordered, therefore, that the three banks of issue (Banca d'Italia, Banca di Napoli, and Banca di Sicilia) pay to the Bank of Deposits and Loans the sum of 8,000,000 lire (\$1,544,000), proportionately to their amounts of outstanding circulation. This fund was invested in 8 per cent Government bonds and divided equally, one-half being to the credit of the old-age insurance institution and one-half to the credit of the three banks named, proportionately to the sums contributed by them. This fund is to be held for the redemption of bank notes, and as they will become invalid the deposit will be turned over, one-half to the old-age institution and one-half to the banks named. Thus the revenue from the sum had been anticipated nearly three years before the final invalidation of the bank notes.

3. The regulations concerning the contribution from the religious fund have been stated above. The new law provided that within the five years beginning with the year 1901-2 these payments should constitute 2,950,000 lire (\$569,350).

While the above amendments referred mainly to the sources of revenue, others introduced some changes in the methods of insurance. The age of liquidation of accounts was reduced for female members from 60 to 55 years, and the period for accepting shorter time insurance was extended until December 31, 1903. Participation in the distribution of additional increments to their accounts was permitted to those members who have not paid in within the year the minimum of 6 lire (\$1.16), provided the sum of payments made by them was not less than 6 lire (\$1.16) multiplied by the years of membership; regulations were provided for continuation of membership of persons who ceased to be wage-workers; the list of securities in which the institution might invest its funds was extended by including guaranteed railroad securities; and a few changes were introduced in the system of administration.

LAW OF 1904.—A few additional changes were introduced by the brief act of March 13, 1904. The right to issue insurance for periods as short as 10 years was extended from December 31, 1903, to December 31, 1905, as almost one-third of all persons insured had taken out

insurance for less than 25 years, and this form was evidently very popular.

The lists of permitted investments were further extended by including securities of loan banks and urban real estate; the latter having been specifically prohibited by the law of July 17, 1898, which even required the institution to dispose of all real estate involuntarily acquired within five years, and forbade the acquisition of buildings even for its own use. The amount invested in real estate must not, however, exceed one-fifth of the amount invested in government bonds.

AMENDING ACT OF 1906.—While the preceding amendatory acts only slightly modified the provisions of the law of July 17, 1898, the act of December 30, 1906, substituted an almost entirely new act, amending about 20 out of the 32 sections of the consolidated act of July 28, 1901.

On February 2, 1906, a bill containing an entirely new text of the whole law governing the old-age and invalidity insurance institution, and embodying the ideas of the administrative council of the institution^(a), was introduced in the lower chamber. The main changes proposed by this bill were as follows:

The insurance for periods shorter than 25 years (thus enabling persons over 40 years of age to insure), permitted temporarily in the original law and the temporary permission extended repeatedly, proved so popular that the authors of the bill proposed to embody a permanent provision to that effect.^(b)

Furthermore, to facilitate this form of insurance, it substituted for the demand of a lump-sum payment for all insurance for less than 25 years, an additional annual payment of 1 lira (19 cents) for each year less than 25.

The second and most important change suggested was in the method of computing annuities. According to the previous legislation, the accounts consisted of 6 and 7 items annually. Especially in case of mutual insurance, when an annual redistribution of the accounts of deceased members was required, very elaborate rules for such redistribution were necessary. In reality the system was found to work very poorly. In many cases of death notice failed to reach the institution, as in a case of mutual insurance there was no material consideration to prompt the relatives of the insured to give such notice. The computation of interest on all the accounts was also a very complicated process. The bill proposed therefor the substitution of an assumed mortality table for the mutual insurance and also interest tables, and a computation of the annuity value of each in-

^a See Bollettino di Notizie sul Credito e sulla Previdenza, 1906.

^b See statement accompanying the text of the bill, in Bollettino di Notizie sul Credito e sulla Previdenza, 1906, vol. 24.

dividual payment or of any other addition to individual accounts, so that the computation of the total annuity may be quickly computed by addition of the separate annuity items. In case of postponement of the annuity until 65 years of age, a recomputation on the basis of the tables of mortality and probability of life could be easily accomplished.

The third important change proposed consisted in strengthening the invalidity pensions. The actual determination of the amount was left to the administrative council. The invalidity fund, amounting to only about 2,000,000 lire (\$386,000), did not permit of very large annuities. The Government had previously announced its intention of allowing the invalidity fund a special subsidy of 10,000,000 lire (\$1,930,000). Upon the basis of this increase in the invalidity fund, the bill proposed to establish a minimum invalidity annuity of 120 lire (\$23.16). A bill introduced in the Chamber of Deputies on March 20, 1906, also included these three important proposals and several other minor changes which eventually were embodied in the law.^(a)

On May 17, 1906, the government bill was introduced in the Chamber of Deputies. The cabinet having undergone a reorganization soon after that, practically the same bill was reintroduced by the new minister of agriculture, industry, and commerce, supported by other new ministers. On November 27, 1906, the bill was referred to a parliamentary commission, which brought in its report, with very few changes, on November 27, 1906. It became a law on December 30, 1906, without any deviations from the text as amended by the commission.

The essential changes introduced by this act were as follows:

(1) The material simplification of personal accounts, as explained above, by substituting tables for computation of the annuity value of each payment and benefit, for a complex annual redistribution and computation of interest upon all the accounts.

(2) The establishment of a minimum invalidity annuity of 120 lire (\$23.16) by means of the addition of 10,000,000 lire (\$1,930,000) to the invalidity fund.

(3) The part of the net profits of the postal savings banks, reverting to the old-age institution, was definitely established at 70 per cent.

(4) The extension of all the benefits of membership in the institution to such independent producers as do not pay over 30 lire (\$5.79) per year in taxes.

(5) The maximum limit of annual contributions previously put at 100 lire (\$19.30) was eliminated. The minimum was raised from 50 centesimi (10 cents) to 1 lira (19 cents).

^a Bollettino di Notizie sul Credito e sulla Previdenza, vol. 24, 1906.

(6) This rule in combination with the preceding one evidently created the danger of growth of excessively large accounts. To counteract this danger, persons with an acquired annuity of over 1,000 lire (\$193) were debarred from further benefits.

(7) While the normal age of maturing of annuity was left as before, an earlier age of 55 years was established in certain kinds of work requiring severe physical exertion, such as mining, blast furnaces, foundries, steam boilers, glass factories, and railroad service.

(8) For this lower annuity age, a higher minimum of payments, 9 lire (\$1.74) instead of 6 lire (\$1.16), was required.

(9) The requirement of 25 years of insurance was left in normal cases; but payment of annuities before the expiration of the period was permitted on condition of higher minimum premiums, provided the required age was reached.

(10) The financial organization was somewhat changed. A members' fund was added to the existing four funds, the endowment fund, annuity fund, invalidity fund, and reserve fund; and the latter was made to protect not only the annuity fund but also the members' fund.

(11) The deductions from the annual incomes to strengthen the permanent funds were left to the discretion of the administrative council, but must not be less than 30 per cent, to be used in necessary proportions to increase the endowment fund, the invalid fund, and the extraordinary reserve fund.

(12) The maximum amount of the annual ordinary benefits was reduced from 12 to 10 lire (\$2.32 to \$1.93).

The amending act of December 30, 1906, went into effect immediately, with the exceptions indicated below, and the codified text of the law was published by royal decree of May 30, 1907.

Excepted were (1) the provisions as to changes in the administrative council and (2) the changes in the methods of keeping the individual accounts and computing the value of annuities, which were made dependent upon the promulgation of a new constitution and regulations for the old-age insurance institution. The administrative council of the insurance institution at its sessions in December, 1907, adopted the texts of both the constitution and the regulations, and they were approved by royal decree of March 18, 1909.

ANALYSIS OF LEGISLATION IN FORCE.

The institution is officially known as "The National Institution for the Insurance of Workers against Invalidity and Old Age" (*Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai*), and its purposes are apparent from this name. This insurance is entirely voluntary, and the privilege of being insured in this institution is offered to all Italian citizens engaged mainly in manual

labor for time wages or piece wages, or on their own account provided they do not pay more than 30 lire (\$5.79) per annum in taxes of any nature. Married women may be insured without the permission of the husband and minor persons without the permission of parent or guardian.

The institution may carry on an old-age insurance business among other classes of the population (so-called popular annuity insurance), but under special conditions, which will be explained presently.

When a regularly insured person ceases to satisfy the above-mentioned requirements, he is transferred to the popular insurance branch.

FORMS OF INSURANCE.—At the time of taking out the insurance the insured person must select one of the two recognized forms of insurance; the mutual form or the form of reserved contributions. In the first form, the payments of the insured are not returned; under the second form the actual value of the contributions made by the insured or by other persons for him are returned to his dependent relatives according to the following rules:

The surviving consort receives the whole amount when neither children nor relatives in an ascending line survive. When children survive, the consort receives 40 per cent and the children 60 per cent; when no children, but relatives in an ascending line survive, the consort receives 60 per cent and the latter 40 per cent.

When no consort survives the children receive the entire amount in equal portions; and in the absence of either a consort or children, the entire amount reverts to the relatives in an ascending line. Finally, when no consort, child, or ascending relative survives, the amount goes to the other descendants and brothers and sisters under 18 years of age, or disabled because of some physical or mental defect and who were supported by the insured while living.

The time for making application is limited to two years, and if no legal heirs under the above rules are disclosed within that time the amount subject to repayment is turned over to the invalidity fund.

CONTRIBUTIONS OF INSURED.—No regular premiums are exacted, the amount of contribution being left entirely to the option of the insured, except that contributions smaller than 1 lira (19 cents) are not accepted, nor are contributions including fractions of a lira accepted. This minimum limit of a single contribution is quite high, and may be claimed to be too high to stimulate the habit of small savings. To meet this difficulty the regulations provide for a method of making smaller savings by means of postage stamps. For that purpose special stamp cards are provided which are distributed without cost by the branches of the institution and through post-offices. These cards are ruled into squares, where ordinary postage stamps may be pasted until a full card represents a saving of 1 lira (19 cents), and may be handed in instead of cash. The accounts are sub-

sequently adjusted between the insurance institution and the Ministry of Posts and Telegraphs.

Certain minimum contributions are established to qualify the insured persons for the benefits given by the institution. These minima are 6 lire (\$1.16) per annum for those classes whose insurance matures at the regular age (60 years for men and 55 for women), and 9 lire (\$1.74) for those in the special occupations whose insurance expires at the age of 55 years.

It is sufficient, however, if the average amount of contributions for all the elapsed years satisfies this requirement, even if the contributions for the last year do not.

Furthermore, persons insured for a shorter period (as explained later) must add annually at least as many lire as equal the difference between 25 years and the number of years of their insurance period.

ACCOUNTS OF MEMBERS.—The contributions are credited to the individual accounts of the insured. According to the provisions of the new law, which have gone into effect only very recently, these accounts are to be very much simpler than heretofore, when there were six classes of entries for the mutual form and five entries for those insured with repayment of premiums in case of death. Against each payment made is entered the value of the annuity, to begin with the normal annuity age, purchasable for that one payment. The same rule applies to all benefit payments which are granted to these individual accounts.

Of course, the annuity equivalent of each payment can not be computed independently each time. Tables must be provided for such computation, and these tables take into consideration the probability of life at the time of maturity of the pension and the age at the time of payment, as the capital value of the payment at the time of maturity of the pension will depend upon the length of time interest is accruing upon it.

In the case of the mutual form of insurance an additional factor enters into consideration, namely, the death rate of the same class of insured. Different tables are necessary, therefore, for the two forms of insurance.

CHANGE OF FORM OF INSURANCE.—While the form of insurance (whether mutual or with reserved contributions) must be determined at the time of taking out the insurance, conditions may arise which make a change from one form to the other desirable. To provide for such conditions the new regulations permit a change from the mutual to the reserved-payments plan to the insured under 45 years of age within one year after marriage or after the birth of a child, with recomputation of the existing credits to his accounts, so that the amount of payments made by the insured prior to the transfer becomes available to his family in case of death. If, however, the

insured does not comply with these requirements, the change has no retroactive force, and only the payments subsequently made are reserved.

On the other hand, the change from the reserved plan to the mutual plan is permitted unconditionally and the annuity value of the old payments is recomputed.

ADDITIONAL BENEFITS.—In order to stimulate the saving habit and also to increase the value of the pension, the old-age insurance institution contributes certain additions to the personal accounts. All persons insured according to the law are entitled to receive certain additions, provided they have complied with the requirements concerning the minimum annual payments, as explained on page 1879, and on the other hand have not accumulated an annuity of over 1,000 lire (\$193) per annum. In addition, the old qualification of the law of 1898 has been preserved, that such insured workmen, for whom some special old-age and invalidity provision has been made either by the State, provincial government, communities, or any other public or private employers, are not entitled to any benefits. The amount of the ordinary benefit payable depends upon the resources available and is determined by the council, but must not exceed 10 lire (\$1.93) per annum for each insured person. In addition special benefits are given to those insured for less than twenty-five years and for those in collective insurance.

From the current revenues at least 30 per cent must be deducted by the administrative council for distribution, according to the judgment of the council, among the endowment fund, the special reserve fund, and the invalidity fund, of which more will be said; the rest is utilized for payment of benefits to the accounts of the insured.

LIQUIDATION OF ACCOUNTS.—Each personal account may be liquidated in one of two ways, either by death of the insured or by the maturity of the insurance at the specified age. In case of death before maturity of the insurance, the deposits in case of mutual insurance are not repaid, and in case of insurance with reserved payments they are repaid according to the rules stated on page 1878.

Normally the pension matures at the age of 60 for men and 55 for women, and after at least 25 years have elapsed since the beginning of the insurance. The liquidation may be demanded at the age of 55 years by persons employed in mining, furnaces, glass factories, foundries, in operating steam boilers, in railroad services, and in other industries to be determined by royal decree. By such decree firemen, tax controllers, and watchmen, appointed by communities and provinces, and attendants in hospitals and insane asylums, were included.

This right to receive the annuity at the earlier age of 55 is preserved only by those who at the time are still employed at one of these exceptional trades. Application for the insurance to mature at the age of 55 must be made within one year from the time of insuring,

or from the time of employment at one of these occupations, if the person had been insured before.

The liquidation of the accounts may be effected and the annuity granted at the age indicated, even if less than 25 years but at least 10 years have elapsed from the beginning of the insurance; i. e., insurance may be taken by persons over 35 years of age but not over 50 years. But the insured must comply with the following special requirements. In addition to the usual minimum premium he must pay annually as many lire as years are missing to complete the twenty-five year period; i. e., when the insurance is to run only 10 years, the insured person pays additional 15 lire (\$2.90) per annum; when the insurance is to last 15 years, he pays additional 10 lire (\$1.93) per annum. The general rule that excess payments in one year may serve to cover deficiencies in payment of subsequent years applies also to these additional payments. Persons insured for such shorter periods must receive additional benefits to be determined by the administrative council. The liquidation and granting of the annuity may be deferred upon the request of the insured until the expiration of 65 years.

PENSION TABLES.—The amount of pensions granted for the payment of \$1, as approved March 18, 1909, are given in the following table for both plans of insurance, the mutual plan or that of alienated capital, and the reserved-capital plan. In the original tables the value of the annual pension purchased by the payment of a premium of 1 lira is computed for each year of age (from 55 to 70) at which the pension may mature. Only the columns for pensions maturing at 55, 60, 65, and 70 years are here reproduced. The difference in the amount of pensions for the two forms of insurance is found to be considerable, and this difference is seen to increase with the higher age of maturity, as at that age the chance of the maturing of the pension becomes smaller and the chance of death previous to maturity greater. Thus, at the age of 12, the value of the pension purchased for \$1, to mature at the age of 55, would be 51.2 cents on the mutual plan and 44 cents, or 14 per cent less, on the reserved-capital plan, while if the pension is to mature at the age of 70, the value on the mutual plan would be \$2.667 and on the reserved-capital plan \$2.163, or nearly 19 per cent less.

The difference in the amount of pension secured for \$1 under the two forms of insurance rapidly decreases as the age at which the payment is made increases. Thus, for the pensions maturing at the age of 55 years, the difference for payment of \$1 made at the age of 12 is 7.2 cents; at the age of 20, 5.6 cents; at the age of 30, 3.5 cents; at the age of 40, 2 cents; at the age of 50, 0.6 of 1 cent; and at the age of 54, 0.1 of 1 cent. In percentages, however, the difference amounts to about 14 or 15 per cent until the age of 25, and then begins to decrease. In other words, the advantages of the mutual plan are greatest at the earlier ages.

AMOUNT OF ANNUAL PENSIONS SECURED FOR THE PAYMENT OF \$1, BY AGE AT TIME OF PURCHASE, FORM OF INSURANCE, AND AGE AT MATURITY.

[Source: Regolamento Tecnico della Cassa Nazionale di Previdenza.]

Age at time of purchase (years).	Amount of annual pension purchased for \$1 under—							
	Mutual plan: Maturing at age of—				Reserved-capital plan: Maturing at age of—			
	55 years.	60 years.	65 years.	70 years.	55 years.	60 years.	65 years.	70 years.
12.	\$0.512	\$0.798	\$1.363	\$2.667	\$0.440	\$0.675	\$1.131	\$2.163
13.	.493	.768	1.313	2.568	.422	.648	1.085	2.073
14.	.474	.740	1.264	2.473	.406	.622	1.040	1.987
15.	.457	.712	1.217	2.380	.390	.597	.998	1.903
16.	.439	.685	1.171	2.291	.374	.573	.956	1.823
17.	.423	.659	1.126	2.203	.360	.550	.917	1.746
18.	.406	.634	1.083	2.118	.345	.528	.879	1.671
19.	.390	.609	1.041	2.035	.332	.506	.842	1.600
20.	.375	.585	1.000	1.955	.319	.486	.807	1.531
21.	.360	.561	.960	1.877	.306	.466	.774	1.465
22.	.346	.539	.921	1.801	.294	.447	.741	1.402
23.	.332	.517	.884	1.728	.282	.429	.710	1.342
24.	.318	.496	.848	1.658	.271	.412	.681	1.283
25.	.305	.476	.813	1.591	.260	.395	.652	1.227
26.	.293	.456	.780	1.526	.250	.379	.625	1.174
27.	.281	.438	.748	1.464	.240	.363	.598	1.122
28.	.269	.420	.718	1.404	.231	.349	.573	1.073
29.	.258	.403	.689	1.347	.222	.335	.549	1.026
30.	.248	.387	.661	1.292	.213	.321	.526	.980
31.	.238	.371	.634	1.240	.204	.308	.503	.937
32.	.228	.356	.608	1.189	.196	.295	.482	.895
33.	.219	.341	.583	1.140	.189	.283	.462	.855
34.	.210	.327	.559	1.094	.181	.272	.442	.817
35.	.201	.314	.536	1.049	.174	.261	.423	.780
36.	.193	.301	.514	1.006	.168	.250	.405	.745
37.	.185	.288	.493	.964	.161	.240	.388	.711
38.	.177	.276	.472	.924	.155	.231	.371	.678
39.	.170	.265	.453	.885	.149	.221	.355	.647
40.	.163	.254	.434	.848	.143	.212	.340	.617
41.	.156	.243	.415	.812	.138	.204	.325	.589
42.	.149	.233	.397	.777	.132	.196	.312	.561
43.	.143	.223	.381	.744	.127	.188	.298	.535
44.	.137	.213	.364	.712	.123	.180	.285	.510
45.	.131	.204	.348	.682	.118	.173	.273	.486
46.	.125	.195	.333	.652	.114	.166	.261	.463
47.	.120	.187	.319	.624	.109	.160	.250	.441
48.	.114	.178	.305	.596	.105	.153	.239	.420
49.	.109	.170	.291	.570	.102	.147	.229	.400
50.	.104	.163	.278	.544	.098	.142	.219	.381
51.	.100	.155	.265	.519	.094	.136	.210	.363
52.	.095	.148	.253	.495	.091	.131	.201	.346
53.	.090	.141	.241	.471	.088	.126	.193	.329
54.	.086	.134	.229	.449	.085	.121	.185	.313
55.		.128	.218	.427		.117	.177	.298
56.		.121	.208	.406		.113	.170	.284
57.		.115	.197	.385		.109	.163	.270
58.		.109	.187	.365		.105	.156	.257
59.		.103	.177	.345		.101	.150	.245
60.			.167	.326			.144	.233
61.			.157	.306			.138	.223
62.			.147	.287			.133	.212
63.			.138	.269			.128	.203
64.			.128	.251			.124	.194
65.				.233				.186
66.				.216				.178
67.				.200				.171
68.				.184				.164
69.				.168				.158

COMPUTATION OF PENSIONS.—Normally the computation of pensions is a very simple process according to the new law, being accomplished by a simple addition of the annuity values of all the separate entries in the account of the individual. In exceptional cases a lump-sum payment may be substituted for the annuity according to the provisions to be included in the new regulations. These provisions

are as follows: If the annuity acquired by the insured workman exceeds 365 lire (\$70.45), he may choose one of the three plans—(1) Either receive the entire benefit as an annuity or (2) convert the excess of the annuity over 365 lire (\$70.45) into an immediate lump-sum payment, or (3) leave the capitalized value of this excess with the insurance institution and receive the interest in addition to the annuity during life, the capital to be paid to the heirs at death.

If the annuity acquired amounts to less than 60 lire (\$11.58) the insurance institution may of its own initiative liquidate it by a lump-sum payment of its capitalized value.

INVALIDITY INSURANCE.—The liquidation of the account and the computation of the annuity may be accomplished at any age in case of duly established invalidity, provided five years have elapsed since the beginning of the insurance. If the invalidity originated after the insurance was taken out, the value of the annuity must be raised to 120 lire (\$23.16) per annum from the special invalids' fund. The benefits of this provision are not extended, however, to persons over 50 years of age at the time of insurance.

INVALIDITY FUND.—To provide for the payment of such invalidity pensions, a special invalidity fund exists, with the following sources of revenue:

(a) A lump sum of 10,000,000 lire (\$1,930,000) to be paid by the State.

(b) Payments from persons or institutions responsible under the law for the support of the invalids.

(c) Annual contributions from the current revenues.

(d) Payments of persons insured with reservation of payments and dying without legal heirs.

(e) Interest on the investments of the fund of legacies and gifts given to this particular fund.

The 10,000,000 lire (\$1,930,000) fund is to be paid from the treasury in five equal annual installments from the budgets of 1906-7 to 1910-11.

REGULATIONS CONCERNING INVALIDITY PENSIONS.—By the new regulations the term "invalidity" is defined as a condition which reduces the earnings of the person to less than one-third of the usual earnings of a worker in the same occupation and locality. Evidence of such invalidity must be furnished with the application for an invalidity pension, and such evidence must include certificates from a physician, from the local communal authority, and from the last employer for whom the insured had been working at the time the disability established itself. In addition, the administration of the institution may order a special medical examination. The administration may decline to grant the petition for an invalidity pension. The insured may appeal from the decision of the office to the adminis-

trative council of the insurance institution, but the decision of the council is final.

If the annuity acquired through the minimum payments and the regular benefits is less than 120 lire (\$23.16) it is increased to that amount from the invalidity fund. Any annuity acquired by means of payments over and above the required minimum is added to this 120 lire (\$23.16) annuity.

The following classes of insured persons are deprived of the right to receive the subsidy from the invalidity fund above mentioned: (1) Persons whose invalidity dates back of the time of commencing the insurance, (2) persons who have insured themselves at the age of over 50, (3) persons who have become invalids either through malicious intent, alcoholism, or through criminal misconduct, (4) those who became invalids through an industrial accident and have received, in virtue of the accident insurance law, a compensation corresponding to a loss of at least 50 per cent of working capacity, and (5) persons admitted to an insane asylum at public expense.

COLLECTIVE INSURANCE.—In order to encourage workmen's mutual benefit societies to insure their members collectively the institution is permitted to grant special benefits to persons thus insured, though such insurance may also be contracted for in accordance with the ordinary regulations concerning benefits. The special conditions must be stated in the insurance contract.

If in such insurance agreement the society contracts for immediate pensions to such of its members as have reached the minimum age for granting annuities (55 or 50 years according to the sex and occupation), then to each such pension the institution adds an annual bonus of 10 lire (\$1.93), but if the original pension was less than 10 lire (\$1.93) the annual bonus shall not exceed the amount of the pension.

The institution may also contract to assume the management of private and public establishment funds for old age and invalidity relief. The special conditions of each such contract must be determined by the administrative council and approved by the Government in each individual instance.

In view of the evident intent of the law to stimulate the collective insurance of workmen against old age and invalidity through the instrumentality of the mutual benefit societies, the regulations concerning this form of insurance as contained in the *Reglamento Technico* are of great importance.

Such collective insurance is permitted to associations recognized under the law of April 15, 1886, and to other unincorporated associations, provided a majority of their membership conforms to the requirements of the law as to persons entitled to its benefits. Only insurance in which all members of an association are embraced is recog-

nized as collective, though the association may except those of its members who are not workers or who are over 50 years old.

In order to acquire the right to the special benefits offered to collective insurance, the associations must make the insurance compulsory for its members by an amendment to its constitution, and must make annual contributions which, per capita, will not be smaller than the normal minimum contributions required.

When these conditions have been complied with the national old-age insurance institution will contribute a special benefit of 1 lira (19 cents) per annum in addition to the normal benefits to which the insured is entitled. When the association provides for insurance of its older members for a briefer period, these members receive a special benefit of 2 lire (39 cents).

Such members as do not possess the qualifications of workmen or petty independent producers, entitling them to the insurance under the workmen's roster, must be entered on the roster of "popular annuity insurance." If a member is expelled from the mutual benefit association he loses his right to receive the special benefit for collective insurance, beginning with the year of his expulsion.

While ordinarily insurance is not written for a period briefer than 10 years, i. e., is not written for men over 50 years and women over 45 years of age, yet the occasion may arise that an association which has been conducting old-age insurance among its benefit features would desire to take out collective insurance with the national institution, and the presence of members over the maximum age might prove very embarrassing. The regulations provide, therefore, that under such condition, males over 50 years of age and females over 45 may be insured for a period less than 10 years, but so that the annuity does not mature before the age of 55 for the females and the males in the excepted trades and not before the age of 60 for all other male workers.

For those members who have already reached these age limits annuities may be purchased by the association, and in such cases the national institution grants an annual bonus to each annuity, the total annuity to be not less than 60 lire (\$11.58).

If such associations are paying annuities at the time of taking out collective insurance they may transfer such obligations to the national institution, and the capital cost of such annuities is determined on the basis of either the tariff for workmen's insurance or the tariff for popular insurance according to whether the pensioner is a workman or not. All these benefits conferred by the new regulations upon collective insurance are extended to all mutual associations insured at the time these regulations go into effect.

The mutual benefit associations which have insured their membership may be authorized to perform for their members the simple

financial operations of a branch office. Payment for such services must be limited to a per capita fee for all members in good standing for whom the minimum payments were made, and this per capita fee must be uniform for all associations.

The same conditions of collective insurance may be extended by the institution to employees of industrial undertakings or public enterprises.

OTHER FORMS OF INSURANCE.—Compensation from private employers or accident insurance companies, due to workmen disabled through industrial accidents or to workmen who became invalids because of old age or disease, may be deposited with this old-age insurance institution for conversion into an annuity.

Other forms of insurance business may be permitted to the old-age insurance institution by royal decree, but the net profits of such transactions must go to increase the normal annual revenues of the business.

Among these regular branches of insurance is the so-called "popular annuity insurance," open to all persons without the limitations established for the main line of insurance carried by the institution. Under this form of insurance none of the special bonuses or benefits previously described are granted. Whenever a person insured under the workmen's insurance plan loses the qualifications entitling him to such insurance (e. g., ceases to be employed and becomes an employer) the special bonuses and benefits to him are discontinued and the entire amount credited to him is transferred to a new account under the "popular insurance" plan. On the other hand, if a person insured under the "popular insurance" plan acquires the qualifications necessary to entitle him to insurance under the "workmen's insurance" plan, his account is so transferred and he acquires the right to the special bonuses and benefits, and the time of his insurance under the other plan is taken into consideration for the purposes of the liquidation of the annuity.

FINANCIAL ORGANIZATION.—The following special funds are provided in the financial organization in order to preserve the financial soundness of the institution: (a) The endowment fund as described above; (b) the fund of the insured, consisting of the payments made by the insured persons or for them and benefits paid to their accounts; (c) the annuity fund, from which mature annuity accounts are paid. At the time of granting each annuity a corresponding amount is to be transferred from the fund of the insured to the annuity fund. At least each five years a technical balance of these two funds must be struck.

(d) For the guarantee of these two funds a special reserve fund is created. Into this fund go any possible excesses found at the time of striking the balances of the two preceding funds, annual contribu-

tions from the current revenues, and other sums indicated in the regulations. The purpose of this reserve is to cover all possible deficits in the fund of the insured and in the annuity fund.

(e) Finally the invalids' fund, the constitution of which has been explained in conjunction with invalidity insurance.

The payment of annual contributions from the regular revenues of the institution into the special reserve must be discontinued when the reserve amounts to one-tenth of the sum of the amounts credited to the fund of the insured and the annuity fund.

If the amount of the special reserve is not sufficient to meet the deficits arising in these two funds, these deficits must be covered by heavier contributions from the annual revenues either within one or several years, in accordance with the judgment of the administrative council.

The funds of the institution are to be invested in Italian national-debt bonds; other government or guaranteed securities; railroad bonds guaranteed by government subsidies; trusts of institutions for land credit; bonds of provincial and communal governments and of undertakings for irrigation and improvement works; in urban real estate; interest-bearing deposits; or loans for construction of workmen's dwellings or mortgage bonds of undertakings for this purpose. The investments in real estate must not exceed one-fifth of all investments.

MINOR BENEFITS.—The cooperation of the postal-savings banks is given to the old-age insurance institution without compensation. This includes the operations for admission to membership, the receipt of contributions, and payment of annuities and other moneys.

Free postage privileges are extended to the institution in its correspondence with public institutions, its branches, propaganda committees, benefit associations, and the insured persons.

TAX EXEMPTIONS.—The National Old-Age and Invalidity Insurance Institution is granted the same freedom from taxes as the postal and other savings banks, such as special insurance taxes, registry fees, stamp dues, and taxes on legacies bequeathed to the institution.

The annual income from investments other than state or guaranteed securities are free from the income tax.

All the annuities granted under the "workmen's insurance" plan and under the "popular insurance" plan, when not in excess of 1,500 lire (\$289.50), are exempt from the income tax. The payments returned to the heirs of a deceased member are exempt from inheritance taxes.

CESSION, SEIZURE, ETC.—The annuities granted by this institution are not subject to cession or seizure, except the excess over 400 lire. (\$77.20) per annum. To prevent such cession, payments may be made to representatives of the member only in case of sickness cer-

tified to by a physician or in case of any other obstacle certified to by the local authorities.

ADMINISTRATION.—The National Old-Age and Invalidity Insurance Institution is autonomous in the sense of having an administrative machinery entirely separated from the General Government, and no obligations, except such as are definitely specified, are assumed by the Government. While the details of the administration are determined by the constitution, the law establishes the following demands: The main administrative body is a council appointed by royal decree, the number of members of the council being determined by the constitution. According to the law, one-third of the membership must consist of representatives of workmen insured; there must also be representatives of savings banks and other corporations which assist the institution and of cooperative associations whose membership is insured. In addition the council includes one representative from each of the following ministries: Agriculture, finance, posts and telegraphs; and finally, the director general of the Bank of Deposits and Loans and the director of the Bureau of Labor of the Ministry of Agriculture, Industry, and Commerce, are *ex officio* members of the council.

This council prepares the constitution of the institution, prescribes conditions for the establishment and administration of branch offices, and also the technical regulations and the tariffs for the computation of annuities; but the constitution, regulations, and tariffs must be presented for consideration to the insurance council and the council of state, to the ministers of agriculture, of finance, and of posts and telegraphs, and must be approved by royal decree. The same conditions regulate the amendments of these acts.

The institution is under the supervision of the Ministry of Agriculture, Industry, and Commerce, to which all financial reports and balance sheets must be forwarded. The technical balances, which must be prepared every 5 years beginning with January 1, 1908, must also be presented to the Ministry of Finance.

The details of administration are further regulated by the constitution, which was published by royal decree of May 24, 1902, and amended on September 2, 1904, to conform to the changes introduced by the law of March 13, 1904. The text of the new constitution, proposed by the council on December 21, 1907, was adopted without any material changes on March 18, 1909.

According to the constitution, the administrative council governing the institution consists of 23 members—18 appointed by the Crown, 3 ministerial representatives, and 2 *ex officio* members. Among the 18 members appointed by the Crown there must be 6 representatives of the insured workmen, 2 from savings banks, and 2 from benefit or cooperative societies insuring their membership. The period of serv-

ice is 3 years, with right of reelection, one-third of the membership being elected each year. The council elects its own officers and convenes at least once in 3 months. As is customary, the council directs the general policies, issues regulations, approves tariffs, appoints the clerical force, etc., while the executive work is performed under the direction of an executive committee elected by the council and consisting of the president, vice-president, and five members of the council.

Service on the council is gratuitous except that traveling expenses and a fee of 20 lire (\$3.86) per day is paid to members residing outside of Rome, and a fee of 10 lire (\$1.93) for each session is given to the labor representatives living in Rome.

The director general is the executive officer of the institution and is appointed by the council.

BRANCH OFFICES.—The duties of branch offices may be intrusted to savings banks, popular banks, various industrial associations, mutual benefit societies, insurance companies, and similar institutions, and in absence of such, special branch offices may be established and put in charge of local committees. Besides performing the necessary financial operations these local branch offices must endeavor to keep the population informed of the activity of the insurance institution and the advantages offered by it. In addition the constitution contains regulations concerning the investment of the funds and the preparation of annual and quinquennial balances.

PROCEDURE.—The procedure of old-age and invalidity insurance is regulated mainly by the new technical regulations.

Applications for insurance may be made either by the applicant himself or by another person either at the central office in Rome or at the branch offices or agencies of the institution or in post-offices, from which they are forwarded to the main offices. The administration may decline to insure an applicant, but he has a right to appeal to the administrative council, whose decision is final.

For each insured person an individual account is opened in the books of the institution and a deposit book is made out and forwarded to him through the local agency. This book must be presented with each payment.

Payments may be made at any agency of the institution, as enumerated above, but once a year the book must be forwarded by the insured through the agency, for balancing, for making the entries in the account and for adjusting the benefits.

Italian workmen living in foreign countries may avail themselves of the benefits of this act, and consuls may be designated as agents by the Ministry of Foreign Affairs, or the insurance institution may appoint agents in foreign countries.

When an insured person ceases to conform to the qualifications for workmen's insurance required by the law, he must so inform the institution. If he fails to do so and information to that effect reaches the administration, it must notify him in writing that the appropriate measures will be applied to him. The insured may appeal to the council against the decision within one month, but the decision of the council is final. When the question is settled against the insured the transfer of his account to the "popular insurance" roll is effected. When he again qualifies for the workmen's insurance rolls he must furnish the same evidence as for an original insurance. When an annuity is granted the deposit book is exchanged for an annuity certificate. Annuities are payable in quarterly amounts, on March 1, June 1, September 1, and December 1, on presentation of this certificate by any office or agency of the institution. Annuity payments not demanded within a whole year are suspended and application for their recovery must be made to the central office. Payments due but not collected may be recovered by the heirs within two years.

PROBABLE AMOUNTS OF PENSIONS.

The new method of computing the pension values of payments has gone into effect so very recently that it is impossible to give any accurate estimate as to the values of pensions which the insured may expect under normal conditions. But as the actual values of pensions purchased could not change very materially notwithstanding the radical change in the method of computations, estimates based upon the old laws of 1898 and 1901 will be indicative if not altogether accurate. The actual pensions can not, of course, be guaranteed in advance; they must depend upon the rate of interest, the amount of the institution's subsidies and the invalidity table.

In the following tables the assumptions are: An annual rate of interest of 3.75 per cent, an annual additional benefit of 6 lire (\$1.16) from the institution to each individual account, and the accepted Italian mortality table. The following table shows the expected value of the annual pension maturing at 60 or 65, when payments of contributions begin at 20, 25, 30, 35, and 40, and when the annual contributions amount to 6, 12, 18, 24, and 36 lire (\$1.16, \$2.32, \$3.47, \$4.63, and \$6.95). The values of pensions differ materially under the two plans of insurance, the mutual (alienated capital) plan and the reserved-capital plan.

If old-age insurance is taken out at the age of 20 or 25, the pensions may reach substantial amounts, but for persons contracting for such insurance at more advanced ages, and especially if the minimum contribution of 6 lire (\$1.16) per annum is paid; the pensions are very small. It must be remembered, however, that a substantial increase

of the value of the pensions is possible by delaying the time of the maturing of the pension from the age of 60 to the age of 65, or according to the new table of pension values (on p. 1893) to the age of 70.

EXPECTED VALUE OF ANNUITIES, BY FORM OF INSURANCE, AGE AT TIME OF INSURING, AND AMOUNT OF CONTRIBUTION.

[Source: Luigi Rava, La Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai.]

Form of insurance and age at time of insuring.	Expected value of annuity for annual premium of—				
	\$1.16 (6 lire).	\$2.32 (12 lire).	\$3.47 (18 lire).	\$4.63 (24 lire).	\$6.95 (36 lire).
ALIENATED CAPITAL.					
Pension maturing at age of 60, insured at age of—					
20 years.....	\$29.72	\$45.74	\$61.76	\$77.78	\$109.82
25 years.....	22.58	34.55	46.51	58.48	82.41
30 years.....	16.60	25.48	34.35	43.23	60.99
35 years.....	11.19	17.56	23.93	30.30	43.04
Pension maturing at age of 65, insured at age of—					
20 years.....	53.27	82.60	111.94	141.28	199.95
25 years.....	40.72	62.92	85.11	107.31	151.70
30 years.....	30.09	47.29	63.88	80.48	113.68
35 years.....	22.58	34.55	46.71	58.67	82.80
40 years.....	16.21	24.70	33.39	41.88	59.06
RESERVED CAPITAL.					
Pension maturing at age of 60, insured at age of—					
20 years.....	24.70	35.51	46.51	57.32	79.13
25 years.....	19.11	27.60	36.09	44.58	61.57
30 years.....	14.28	20.84	27.41	33.97	47.09
35 years.....	9.84	14.67	19.69	24.51	34.35
Pension maturing at age of 65, insured at age of—					
20 years.....	40.92	57.90	74.50	91.48	125.06
25 years.....	31.85	45.36	58.67	72.18	99.01
30 years.....	24.51	34.93	45.36	55.78	76.62
35 years.....	18.34	26.44	34.55	42.65	58.87
40 years.....	13.51	19.49	25.48	31.46	43.43

An estimate of the amounts of monthly contributions necessary to acquire a pension of 180 lire and 360 lire (\$34.74 and \$69.48) to mature either at 60 or 65 years of age, both for the alienated and reserved capital plans, is given in the following table. For a person starting at the age of 25 years, for instance, a pension of 360 lire (\$69.48) at the age of 65 years may be acquired by a monthly payment of 1.90 lire (37 cents) per month on the reserved-capital plan and of 1.15 lire (22 cents) per month on the mutual plan. Unfortunately, it is impossible to ascertain, because of the absence of detailed reports of the old-age insurance institutions, what the average contribution of the persons insured amounts to.

ESTIMATED AMOUNT OF MONTHLY CONTRIBUTION NECESSARY TO INSURE A PENSION OF 180 LIRE (\$34.74) AND 360 LIRE (\$69.48), BY FORM OF INSURANCE AND AGE AT TIME OF INSURING.

[Source: Luigi Rava, La Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai.]

Age at time of insuring.	Estimated amount of monthly contribution necessary to insure a pension of—							
	\$34.74 (180 lire).				\$69.48 (360 lire).			
	Mutual plan: Maturing at age of—		Reserved capital plan: Maturing at age of—		Mutual plan: Maturing at age of—		Reserved capital plan: Maturing at age of—	
	30 years.	65 years.	60 years.	65 years.	60 years.	65 years.	60 years.	65 years.
20 years.....	\$0.125	\$0.097	\$0.183	\$0.097	\$0.338	\$0.154	\$0.492	\$0.261
25 years.....	.193	.097	.270	.116	.473	.222	.666	.367
30 years.....	.290	.116	.396	.193	.666	.318	.907	.511
35 years.....	.454	.193	.598	.290	.984	.473	1.293	.704
40 years.....	.....	.309	.....	.434	.....	.704	.....	.994

ORDINARY PENSION INSURANCE.

A tariff of rates for ordinary voluntary old-age pension insurance, authorized by the law of July 28, 1901, and by the decree of December 22, 1901, was published June 26, 1904. This form of insurance does not confer any specific gratuities upon the assured, but gives the advantage of insurance in an institution not conducted for profit, which may manifest itself in lower rates. Both forms of insurance are permitted—the alienated-capital plan and the reserved-capital plan. In the former plan the premiums are forfeited at death, in the latter plan they are returned. A few rates for each plan are quoted in the following table, where the amount of pension maturing at a definite age and purchasable by a single payment of \$100 is given. While the alienated plan naturally permits a higher pension than the reserved-capital plan, it is nevertheless evident that for longer periods the difference becomes very much less important. It is evident that, while attractive in form, these ordinary old-age pensions are of comparatively little importance to the wage-workers, with the standard of earnings prevailing in Italy. Thus it is true that by making a single deposit of \$100 to the credit of his child at the age of 5, the workman could guarantee to that child an annual pension of \$168.90 beginning at the age of 65, but there are very few workers in Italy with an income large enough to make such provision for the old age of their children. At the age of 25 a workman could begin to provide for his own old age; then each dollar paid in would guarantee a pension of 46 cents beginning with the age of 60, the value of the pension purchasable with each payment decreasing with advancing age. No statistics of this branch of activity of the institution were available.

AMOUNT OF ANNUAL PENSION SECURED FOR A PAYMENT OF \$100 ON THE ORDINARY PLAN, BY AGE AT TIME OF PURCHASE AND AGE AT MATURITY OF PENSION.

[Source: Cassa Nazionale di Previdenza per la Invalidità e per la Vecchiaia degli Operai. Assicurazioni Popolari di Rendite Vitalizie Condizioni Generali e Tariffie.]

Form of insurance and age at time of purchase.	Amount of annual pension secured for \$100 when maturing at age of—										
	20 years.	25 years.	30 years.	35 years.	40 years.	45 years.	50 years.	55 years.	60 years.	65 years.	70 years.
ALIENATED CAPITAL.											
5 years.....	\$8.57	\$10.91	\$14.02	\$18.27	\$24.24	\$32.83	\$45.81	\$66.56	\$102.09	\$168.90	\$311.70
10 years.....	7.02	8.95	11.51	14.99	19.88	26.94	37.60	54.63	83.79	138.63	255.84
15 years.....	5.80	7.39	9.50	12.38	16.41	22.24	31.05	45.10	68.17	114.46	211.22
20 years.....		6.04	7.77	10.12	13.42	18.18	25.08	36.87	56.54	93.55	172.65
25 years.....			6.31	8.22	10.91	14.78	20.62	29.96	45.95	76.02	140.30
30 years.....				6.68	8.86	12.01	16.76	24.35	37.36	61.80	114.06
35 years.....					7.20	9.75	13.61	19.78	30.34	50.19	92.63
40 years.....						7.89	11.02	16.01	24.55	40.63	74.97
45 years.....							8.85	12.86	19.73	32.64	60.23
50 years.....								10.23	15.69	25.95	47.89
55 years.....									12.23	20.24	37.34
60 years.....										15.32	28.28
65 years.....											20.49
69 years.....											15.04
RESERVED CAPITAL.											
5 years.....	6.76	8.62	11.08	14.42	19.13	25.92	36.18	52.57	80.61	133.39	246.15
10 years.....	5.42	6.91	8.89	11.58	15.36	20.81	29.05	42.20	64.72	107.08	197.61
15 years.....	4.33	5.51	7.08	9.23	12.25	16.60	23.16	33.65	51.61	85.39	157.59
20 years.....		4.36	5.61	7.30	9.69	13.13	18.33	26.63	40.85	67.58	124.70
25 years.....			4.40	5.73	7.62	10.32	14.39	20.91	32.07	53.07	97.93
30 years.....				4.46	5.93	8.02	11.20	16.27	24.94	41.28	76.17
35 years.....					4.45	6.16	8.60	12.49	19.16	31.70	58.49
40 years.....						4.65	6.49	9.43	14.46	23.92	44.16
45 years.....							4.79	6.96	10.67	17.66	32.59
50 years.....								4.99	7.65	12.65	23.35
55 years.....									5.26	8.71	16.07
60 years.....										5.68	10.47
65 years.....											6.33
69 years.....											3.92

A comparison of this tariff with the preceding estimates makes possible an approximate determination of the value of the subsidies. In the following table an effort is made to compute this value by comparing the value of the pension on the subsidized plan and on the ordinary plan, under the supposition of an annual premium of 12 lire (\$2.32).

COMPARISON OF EXPECTED VALUES OF ANNUITIES UNDER THE DIFFERENT FORMS OF INSURANCE, BY AGE AT TIME OF INSURING.

Form of insurance and age at time of insuring.	Expected value of annuity for annual premium of \$2.32 (12 lire).		
	Workmen's form.	Ordinary form.	Excess of workmen's annuity.
ALIENATED CAPITAL.			
Pension maturing at age of 60, insured at age of—			
20 years.....	\$45.74	\$28.16	\$17.58
25 years.....	34.55	22.11	12.44
30 years.....	25.48	17.20	8.28
35 years.....	17.56	13.20	4.36
Pension maturing at age of 65, insured at age of—			
20 years.....	82.60	44.33	38.27
25 years.....	62.92	34.32	28.60
30 years.....	47.29	26.19	21.10
35 years.....	34.55	19.58	14.97
40 years.....	24.70	14.22	9.48
RESERVED CAPITAL.			
Pension maturing at age of 60, insured at age of—			
20 years.....	35.51	16.18	19.33
25 years.....	27.60	11.86	15.74
30 years.....	20.84	8.49	12.35
35 years.....	14.67	5.87	8.80
Pension maturing at age of 65, insured at age of—			
20 years.....	57.90	27.36	30.54
25 years.....	45.36	20.22	25.14
30 years.....	34.93	14.64	19.29
35 years.....	26.44	10.31	15.13
40 years.....	19.49	6.96	12.53

The comparison shows that a very considerable proportion of the workmen's pension consists of the subsidies. This excess of the workmen's pension over an ordinary pension purchased at the same cost is higher for the reserved-capital plan than for the alienated-capital plan. The reason for this is obvious, for in the workmen's pension on a reserved plan only his own payments are reserved, while the subsidies are given on an alienated plan. The difference between the values of pensions on the reserved and the alienated plans is not so great for the workmen's pension as for the ordinary pension, for the workmen's reserved-plan pension is only partly on a reserved plan. On an alienated plan, therefore, from one-third to almost one-half of the pension is due to the subsidies, and on the reserved plan from one half to two-thirds.

STATISTICS.

The statistical information concerning the old-age and invalidity insurance institution is very meager. In the following table is given the number of persons taking out insurance from the beginning of the activity of the institution in October, 1899, until the close of 1908.

The number of persons taking out insurance shows considerable fluctuations, but the largest numbers are found in the years 1902 and 1906, due to the influence of the amendments to the organic law.

The total number of accounts opened during the years shown in the table equals nearly 300,000; according to the latest information available the total number of accounts opened up to November 30, 1910, reached 352,376; but, unfortunately, further details as to the distribution of these by sex, age, occupation, etc., are lacking.

For the years 1904 to 1908 the data are shown by the place where insurance was taken out—i. e., either the main and branch offices of the institution or the post-offices; and the table shows the very important function of the post-office as a stimulus to popular thrift. In some years more than one-half of the insurance was taken out at post-offices.

A comparison of the two plans of insurance indicates that they are about equally popular, both meeting existing demands. During the five years for which data are available, 1904 to 1908, the total number of policies issued on the mutual plan (alienated capital) was 84,903 and that of policies on the reserved capital plan 84,849—almost exactly equal.

NUMBER OF PERSONS INSURED EACH YEAR IN THE NATIONAL OLD-AGE AND INVALIDITY INSURANCE INSTITUTION, BY PLACE OF INSURANCE AND PLAN OF INSURANCE, 1899 TO 1908.

[Source: Bollettino dell' Ufficio del Lavoro, 1904 to 1909, and Die Arbeiter-Versicherung im Auslande, Dr. Zacher.]

Year.	Number insured at—		Number insured under—		Total insured during year.
	Post-offices.	Main office and branches.	Mutual plan.	Reserved-capital plan.	
1899 (a).....	(b)	(b)	(b)	(b)	776
1900.....	(b)	(b)	(b)	(b)	10, 279
1901.....	(b)	(b)	(b)	(b)	20, 324
1902.....	(b)	(b)	(b)	(b)	54, 470
1903.....	(b)	(b)	(b)	(b)	28, 779
1904.....	13, 687	17, 739	15, 840	15, 586	31, 426
1905.....	12, 378	11, 302	10, 889	12, 791	23, 680
1906.....	25, 590	25, 201	27, 875	22, 916	50, 791
1907.....	14, 162	20, 998	16, 630	18, 530	35, 160
1908.....	11, 302	17, 393	13, 669	15, 026	28, 695

a For last 3 months only.

b Not separately reported.

Very interesting data concerning the size of the contributions of the membership were published by the old-age insurance institution in 1905, though unfortunately they refer only to the years 1900 to 1903, and no later comparable data were published; they nevertheless throw some light upon the activity of the fund.

ANNUAL CONTRIBUTIONS OF PERSONS INSURED IN THE NATIONAL OLD-AGE AND INVALIDITY INSURANCE INSTITUTION, 1900 TO 1903.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1905.]

Amount of contributions during year.	1900.		1901.		1902.		1903.	
	Number contributing.	Per cent of total.	Number contributing.	Per cent of total.	Number contributing.	Per cent of total.	Number contributing.	Per cent of total.
Total membership:								
No contribution	238	2.08	2,734	6.43	10,929	11.94	25,959	28.47
Less than 6 lire (\$1.16)	2,807	24.49	4,612	10.85	24,907	27.20	9,684	7.67
6 lire (\$1.16)	4,890	42.66	19,185	45.14	27,640	30.18	39,650	31.40
6.01 to 10 lire (\$1.16 to \$1.93)	615	5.36	2,450	5.77	3,255	3.55	4,540	3.59
10.01 to 25 lire (\$1.93 to \$4.83)	1,441	12.57	5,397	12.70	14,456	15.79	18,094	14.33
25.01 to 50 lire (\$4.83 to \$9.65)	881	7.69	3,190	7.51	4,261	4.65	7,150	5.66
50.01 to 100 lire (\$9.65 to \$19.30)	364	3.17	2,713	6.38	3,545	3.87	6,097	4.83
100 lire (\$19.30) and over	227	1.98	2,216	5.22	2,581	2.82	5,121	4.05
Total	11,463	100.00	42,497	100.00	91,574	100.00	126,295	100.00
Membership on mutual plan:								
No contribution	155	2.87	1,286	6.49	4,963	11.00	19,547	30.58
Less than 6 lire (\$1.16)	1,679	31.12	2,731	13.79	14,480	32.10	5,133	8.03
6 lire (\$1.16)	1,586	29.39	7,880	37.26	12,325	27.33	17,199	26.91
6.01 to 10 lire (\$1.16 to \$1.93)	351	6.50	1,250	6.31	1,391	3.08	2,017	3.16
10.01 to 25 lire (\$1.93 to \$4.83)	861	15.96	2,879	14.53	6,886	15.27	9,392	14.69
25.01 to 50 lire (\$4.83 to \$9.65)	598	11.03	1,782	9.00	2,280	5.06	4,093	6.41
50.01 to 100 lire (\$9.65 to \$19.30)	119	2.21	1,280	6.46	1,055	2.34	2,982	4.66
100 lire (\$19.30) and over	47	.87	1,220	6.16	1,724	3.82	3,551	5.56
Total	5,396	100.00	19,808	100.00	45,104	100.00	63,917	100.00
Membership on reserved-capital plan:								
No contribution	83	1.37	1,448	6.38	5,966	12.84	16,412	26.31
Less than 6 lire (\$1.16)	1,128	18.59	1,881	8.29	10,427	22.44	4,551	7.30
6 lire (\$1.16)	3,304	54.46	11,805	52.03	15,315	32.96	22,451	35.99
6.01 to 10 lire (\$1.16 to \$1.93)	264	4.35	1,200	5.29	1,864	4.01	2,523	4.04
10.01 to 25 lire (\$1.93 to \$4.83)	580	9.56	2,513	11.10	7,570	16.29	8,702	13.95
25.01 to 50 lire (4.83 to \$9.65)	283	4.66	1,408	6.20	1,981	4.26	3,054	4.90
50.01 to 100 lire (\$9.65 to \$19.30)	245	4.04	1,433	6.32	2,490	5.36	3,115	4.99
100 lire (\$19.30) and over	180	2.97	966	4.39	857	1.84	1,570	2.52
Total	6,067	100.00	22,689	100.00	46,470	100.00	62,378	100.00

The table shows a very rapid increase of the number of persons who made no contributions during the year. In 1900 they amounted to only 2.1 per cent, in 1901 to 6.4 per cent, in 1902 to 11.9 per cent, and in 1903 to 28.5 per cent. Thus in 1903 nearly three-tenths of the members were not paying their contributions. The total number of persons insured as stated in the preceding table must be considered in the light of these data.

It is true that a number of persons failing to contribute anything during one year may do so during the next year. Of the persons making some contribution during the year 1903 nearly half contributed 6 lire (\$1.16), which entitles them to the subsidy. The number of persons contributing that amount in 1900 was 42.7 per cent of the total; and in 1903, 31.4 per cent of the total number, or about 44 per cent of those who contributed anything during that year.

The very large number of persons contributing less than 6 lire (\$1.16) in 1902, and nothing in 1903, is explained in the official report as a result of the fact that in consequence of a very active propaganda a large number of workmen insured themselves in the institution, who soon found it difficult to keep up the contributions and gradually dropped out.

Of the finances of the old-age and invalidity insurance institution unfortunately very little information is available. The assets and liabilities of the institution for 1899 to 1909 are shown in the tables following.

The deposits and other revenues of the institution are distributed among numerous funds, as is prescribed by the laws and regulations governing it. These funds are shown in detail in the next table.

(1) The endowment fund, representing a source of financial strength and future revenues for the institution, grows very rapidly, both by special revenues and by assignments from the ordinary revenues, as prescribed in the law. But with the increase of deposits the proportion of the endowment funds to the total is gradually declining.

(2) The invalidity fund, representing the amounts to be used in subsequent grants of invalidity pensions and

(3) The special reserve fund for protection of the two funds above mentioned have been described above.

(4) The mutual benefit societies' fund represents amounts specially designated for bonuses to be added to pensions of persons insured under the collective insurance contract.

(5) Similarly, the special fund for "brief period" insurance is intended to provide means for payment of bonuses to pensions of members of mutual benefit societies who have been insured less than 10 years when reaching the pension age.

(6) Special grants in favor of certain groups of depositors, when so designated, must be kept in a special account according to the regulations.

(7) The pension fund represents the actuarial value of current pensions which have matured or have been purchased outright (as in the case of compensation for permanent injuries).

(8) The indemnity deposit fund represents the deposits of compensation made in case of injuries likely to remain permanent; these deposits are held in trust by the National Old-Age and Invalidity Insurance Institution for two years, according to the accident insurance law, until the final adjudication of the claim.

(9) The depositors' fund is the most important of all. It contains the actual payments made either by insured persons or for them, and the benefits annually contributed by the institution out of its revenues.

(10) Popular old-age insurance which is done by the institution (since 1905 on an independent rate and without participation in any of the benefits granted to workmen) is kept in a separate account. While the operations under this plan are as yet very small, they show a perceptible growth and indicate the advantages of the low rates offered by the institution.

(11) The provident fund for the employees of the central office represents the results of accumulations of small gratuities given annually by the administration in favor of these employees.

(12) The last fund represents the difference between the general or ordinary revenues of the institution and its expenses. The ordinary revenues do not include those revenues which in virtue of the law

must be turned into the endowment fund, nor the deposits made by or for the insured directly.

All expenditures, exclusive of pension payments, are met out of these revenues, and the surplus is redistributed among the other funds. In this table the amount in this fund on December 31 of each year is shown, the distributing usually taking place at the end of March. Unfortunately, data concerning the annual receipts and expenditures and the distribution of this surplus are not available later than 1902. As appears from the report for that year, the 2,698,997 lire (\$520,906.42) available for distribution at the end of that year were assigned as follows: 304,485 lire (\$58,765.61), or 11.3 per cent, to the endowment fund; 392,285 lire (\$75,711), or 14.5 per cent, to the invalidity fund; 98,071 lire (\$18,927.70), or 3.6 per cent, to the special reserve fund; 458,000 lire (\$88,394), or 17 per cent, to the fund of brief period insurance; 55,800 lire (\$10,769.40), or 2.1 per cent, to the special mutual benefit societies' fund; 900,000 lire (\$173,700), or 33.3 per cent, for distribution of the regular subsidies of 10 lire (\$1.93), among the individual accounts; and the remainder, 490,356 lire (\$94,638.71), or 18.2 per cent, was carried over into the next year's accounts.

AMOUNTS IN THE VARIOUS FUNDS OF THE OLD-AGE AND INVALIDITY INSURANCE INSTITUTION, 1899 TO 1908.

[Source: Bollettino dell' Ufficio del Lavoro Vol. XIII, May, 1910.]

Year.	Endowment fund.	Invalidity fund.	Special reserve.	Fund of collective insurance by mutual benefit societies.	Special fund for insurance for short periods.	Special funds created by contributions in favor of depositors.	Fund of pensions granted.	Deposits under the accident insurance law made in case of permanent disability.
1899.....	\$2, 219, 167	\$21, 836	\$5, 459	.....	\$94, 392	\$9, 650	.....	.....
1900.....	2, 239, 868	21, 836	5, 459	.....	94, 392	13, 607	.....	.....
1901.....	2, 436, 865	70, 909	17, 727	.....	120, 050	14, 221	\$2, 360	.....
1902.....	2, 739, 734	113, 668	28, 412	\$20, 111	201, 106	15, 247	16, 341	.....
1903.....	2, 913, 685	196, 878	49, 214	32, 103	300, 964	15, 474	48, 978	.....
1904.....	3, 088, 831	360, 779	74, 647	40, 128	217, 977	15, 744	59, 343	\$32, 186
1905.....	3, 282, 273	462, 261	99, 758	81, 752	261, 697	15, 673	69, 196	157, 573
1906.....	3, 473, 552	636, 552	136, 441	145, 014	409, 772	16, 275	104, 143	212, 199
1907.....	3, 927, 952	916, 850	200, 411	400, 746	516, 444	16, 254	180, 173	259, 897
1908.....	4, 817, 088	1, 162, 063	261, 535	600, 597	683, 337	21, 479	268, 105	235, 904

Year.	Fund of the insured.	Amount to be redistributed among individual depositors' accounts.	Popular old-age pension insurance.	Provident fund for the employees of the central office of the institution.	Miscellaneous.	Funds to be distributed, December 31.	Total.
1899.....	\$748	\$386	.....	.....	\$528	\$27, 296	\$2, 379, 462
1900.....	31, 744	386	.....	.....	.....	359, 226	2, 767, 654
1901.....	256, 491	.....	.....	\$936	200	462, 487	3, 383, 516
1902.....	579, 015	16, 405	.....	1, 941	465	520, 906	4, 254, 577
1903.....	1, 151, 385	34, 740	.....	3, 176	456	698, 139	5, 448, 645
1904.....	1, 913, 535	78, 125	.....	4, 773	2, 312	677, 420	6, 579, 193
1905.....	2, 662, 872	82, 025	\$27, 706	6, 383	14, 095	1, 030, 472	8, 295, 200
1906.....	3, 478, 514	136, 254	52, 047	8, 201	53, 741	1, 161, 414	10, 006, 954
1907.....	4, 002, 543	778, 003	88, 060	10, 919	33, 858	1, 238, 582	12, 602, 002
1908.....	5, 025, 358	897, 450	159, 146	13, 888	56, 259	1, 480, 347	15, 751, 559

As is required by the law and regulations, the largest part of the assets is invested in interest-bearing securities held by the Bank of Deposits and Loans. In 1908 nearly 80 per cent of the total assets were so invested. The amounts invested as loans to Provinces and communes since 1903, in virtue of the act of 1902, are insignificant; though the revised act permitted investment in real estate, this form of investment has not shown any increase.

ASSETS OF THE NATIONAL OLD-AGE INSURANCE INSTITUTION.

[Source: Bollettino dell' Ufficio del Lavoro, Vol. XIII, May, 1910.]

Year.	Securities held by the Bank of Deposits and Loans.	Interest due on securities held.	Loans to Provinces, communities, etc.	Urban real estate.	Account with the Bank of Deposits and Loans.	Cash on hand in central office, branches, and post-office.	Miscellaneous bills receivable.	Total.
1899.....	\$2,345,235	\$26,621	-----	-----	\$6,447	\$966	\$193	\$2,379,462
1900.....	2,714,542	33,746	-----	-----	6,975	12,185	206	2,767,654
1901.....	3,152,737	42,044	-----	-----	47,756	110,263	30,715	3,383,516
1902.....	3,759,876	68,116	-----	-----	329,867	96,716	2	4,254,577
1903.....	4,530,435	85,632	\$403,605	-----	240,429	169,791	18,753	5,448,645
1904.....	4,763,537	88,768	631,455	\$774,729	186,768	124,618	9,318	6,579,193
1905.....	6,179,801	116,265	746,633	901,587	128,941	216,790	5,183	8,295,200
1906.....	7,793,755	156,029	660,694	901,645	331,862	157,023	5,946	10,006,954
1907.....	10,575,995	178,456	537,655	901,992	398,407	959	8,538	12,602,002
1908.....	12,444,446	207,956	463,094	933,150	1,432,908	271,412	28,593	15,051,559

COMPULSORY OLD-AGE INSURANCE FOR CERTAIN STATE EMPLOYEES.

The Italian Government has at various times granted old-age and superannuation pensions to various groups of its employees. It is impossible here to enter into a discussion of these civil-service pension laws. But the general tendency to incorporate these pension schemes into the National Old-Age and Invalidity Insurance Institution deserves to be emphasized, at least as far as the industrial employees of the Government are concerned.

Perhaps the best example of this tendency is found in connection with the employees of the government tobacco monopoly.

TOBACCO MONOPOLY.

On November 23, 1886, a bill for the establishment of a pension fund for the employees in the tobacco industry was introduced, but it did not come up for discussion. A similar fate befell the later effort of November 19, 1887. While both these efforts failed, the administration was forced to begin the payment of regular benefits to disabled and superannuated employees. In the beginning such informal benefits were paid only to employees working for time wages, but since 1892 these benefits were extended to workers for piece wages. From 1892 to 1899 the minimum annual pension for a workman was 120 lire (\$23.16), in 1899 it was increased to 180 lire (\$34.74), in 1901 to 216 lire (\$41.69), and in 1902 to 240 lire (\$46.32).

The maximum in 1897 was placed at 240 lire (\$46.32), in 1899 increased to 360 lire (\$69.48), and in 1902 it was abolished. According to the rules adopted in 1892, inability to work did not give the right to a pension unless the applicant had reached the age of 60; in 1894 the conditions were modified so that 35 years of service were sufficient, without regard to the age at the time of applying for a pension; and in 1899 the limit was reduced to 25 years of service.

The following table gives an indication of the rapid development of these benefits during the period 1894 to 1903, the average number of employees being about 15,000:

NUMBER OF BENEFICIARIES AND AMOUNT OF BENEFITS PAID TO EMPLOYEES OF THE TOBACCO MONOPOLY, 1894 TO 1903, BY YEARS.

[Source: Bollettino di Notizie sul Credito e sulla Previdenza, 1904.]

Fiscal year.	Number of beneficiaries at the end of the year.	Amount of benefits paid during the year.	Average amount of benefits at the end of the year to—	
			Females.	Males.
1894-5.....	221	\$6,807.94		
1895-6.....	343	11,872.03		
1896-7.....	369	13,832.44	(a)	b \$39.20
1897-8.....	531	21,512.77	(a)	b 40.51
1898-9.....	685	28,539.51	(a)	b 41.63
1899-1900.....	1,238	62,718.99	(a)	b 50.71
1900-1.....	1,754	105,594.29	(a)	b 60.18
1901-2.....	2,094	138,247.71	\$62.09	124.78
1902-3.....	2,445	158,436.14	66.19	111.18

a Not separately reported.

b Average for both sexes.

On September 29, 1899, immediately before the beginning of the operations of the old-age insurance institution, Minister Carniti ruled that no person could be accepted as a permanent employee of the tobacco industry who would not be insured in the national old-age insurance institution. The contributions to be deducted from their earnings and paid by the administration of the industry were 1 lira (19 cents) per month from the wages of females and 2 lire (39 cents) per month from the wages of the males. To this contribution the administration of the industry added an equal amount. Thus the system of gratuitous old-age pensions was abolished in 1899 except for persons already employed. Considerable difference in the treatment of the old and new employees arose. Those employed on or before September 30, 1899, were entitled to a pension after 25 years of service. This pension was determined by the average annual salary for the last five years of service and amounted to $\frac{4}{10}$ of the average salary when the service was less than 30 years, $\frac{5}{10}$ when the length of service was 30 but less than 35 years, $\frac{6}{10}$ if 35 years but less than 45 years, $\frac{7}{10}$ if 45 years but less than 50 years, and $\frac{8}{10}$ if 50 years or over. In all cases, however, the pension

was due unless disability was established. The minimum pension was 240 lire (\$46.32) for women and 480 lire (\$92.64) for men. If such disability arose before the completion of 25 years of service, but after 10 years, the employee was entitled to $\frac{1}{10}$ of the average annual salary for the preceding five years, but such pension was to run only 2 years if the employee had served less than 12 years; 3 years if he had been in service 15 years but less than 20 years, and for 4 years if he had been in service 20 years but less than 25 years. The position of persons entering service after September 30, 1899, was entirely different, as they were subject to the general rules of the old-age insurance institution. But a computation showed that the pensions acquired under the latter conditions at the age of 60 for men and 55 for women would not be inferior to those granted under the old conditions.

To make the provisions for the two classes of employees uniform, and to sanction the system by legislative action, a bill was introduced on March 17, 1904, which with a few modifications became a law on June 16, 1904.

The law regulates the pensions for such employees as were in the regular service before September 30, 1899, subsequently referred to as "old employees," and for those who entered the service since then and referred to in the following accounts as new employees. The conditions are still very much different for these two classes of employees, but an effort was made in the law to equalize them as far as possible under the radical difference that only the new employees contribute to their old-age and invalidity insurance by compulsory insurance in the national institution.

All workmen permanently employed in the six institutions of the tobacco-manufacturing monopoly, whether day workers, piece-workers, master mechanics, artisans, supervisors, or clerks, are included.

The law provided for both superannuation and invalidity benefits.

The old employees are entitled to a pension from the administration, and the new employees must have their pensions liquidated by the old-age insurance institution under one of the following three conditions:

- (1) When they reach the age of 60 (55 years for female employees);
- (2) When they are disabled for further employment after 25 years of service; or
- (3) When they are disabled through injury or disease contracted because of their employment, provided they renounce their right to compensation under the accident-insurance law.

Lump-sum invalidity benefits are paid if the old employee has become disabled (not through the causes mentioned in the preceding paragraph) before he has acquired the right to a pension but after

10 years of service. Under identical conditions the new employees may demand the liquidation of their accounts in the old-age insurance institution either in the form of pensions or lump-sum payments.

When an old employee is forced to give up the service on account of disability (invalidity), a right to the regular superannuation or invalidity pension is acquired; but after 10 years of service he receives a lump-sum benefit computed on the basis of the average daily wages for the preceding five years, which is multiplied by 300 when the length of the service is less than 15 years, by 450 when it is 15 years but less than 20 years, and by 600 when it is 20 years but less than 25 years.

In case of new employees the national insurance institution must liquidate the pension either as a pension or as a lump sum, at the option of the insured. If the amount is below that named above the administration of the tobacco monopoly adds the necessary difference to bring it up to that.

The superannuation or invalidity pension of the old employee who has been in service 25 years is equal to the average daily wages for the preceding 10 years (excluding the two years of lowest wages) multiplied by 150. This gives approximately half his annual salary. For each year over 25 years up to and including the 45th year of service 3 units are added to the multiplier, so that by the end of 45 years the multiplier would be equal to 210 and the pension to $\frac{7}{10}$ of the annual wages. For each year of service over 45 six units are added, so that the full pension, equal to annual wages, would be reached after 60 years of service. In no case shall the pension be less than 300 lire (\$57.90) for female employees and 480 lire (\$92.64) for male employees.

The new employees receive their pensions from the National Old-Age and Invalidity Insurance Institution, computed according to the general rules. Their insurance may be either on the mutual (alienated-capital) plan or the reserved-capital plan (see p. 1878), as explained later. If the pension computed by the national institution falls below the minima mentioned in the preceding paragraph, and the insurance has been taken on the mutual plan, then it is raised to the minimum, and the administration of the tobacco industry pays to the national old-age institution the difference necessary to bring the computed pension up to the minimum. When the insurance has been taken on the reserved-capital plan, then the payment is such as would be necessary to bring the pension up to the minimum, if the insurance had been taken out on the mutual (alienated capital) plan. That is to say, the minimum quoted is guaranteed to the employee only as a pension or annuity. But if the employee prefers to reduce the amount of his annuity by insuring on a reserved-capital plan, that circumstance shall not entitle him to any extra bene

In computing the length of service, all periods of service are added together, including the time of absence on account of sickness or military service. Credit is given for the time spent in service in the private tobacco works in Sicily.

The entire cost of the pensions of the old employees is met by the Government as a part of its appropriation for the tobacco works. The new employees are required to pay for their insurance, the following amounts being deducted from their wages: One lira (19 cents) per month for the female employees, who are in the vast majority, and 2 lire (39 cents) per month from the wages of the male employees. In addition, a monthly contribution is granted by the administration, enough to make, when added to the members' contribution and the subsidy of the insurance institution, a total of 34 lire (\$6.56) for the females and 58 lire (\$11.19) for the males. In other words, the total annual subsidy of the State and of the insurance institution amounts to 22 lire (\$4.25) for the female employees and 34 lire (\$6.56) for the male employees.

Each employee must decide under which of the two plans (reserved or alienated capital) he wishes to be insured. Within one year from the promulgation of the law the change from the alienated capital to reserved plan was permitted.

All superannuation and invalidity pensions paid according to previous regulations are transformed into pensions according to this law, but on the basis of the wages and length of service established at the time when the benefits were granted.

On March 31, 1903, at the time when the text of the law was being prepared, there were 16,184 names of workers on the rolls of this tobacco monopoly; of these, 2,371 were pensioners and 13,813 active employees and only 1,388, or about 10 per cent of the active employees were males. Only 3,170, or less than one-fourth, of these entered the service since September 30, 1899, and were subject to the new provisions for compulsory insurance, while 10,643, or over three-fourths, were entitled to gratuitous pensions. An estimate of the capitalized value of the pensions already running or to be granted to these 10,643 employees placed this value at nearly 25,000,000 lire (\$4,825,000).

SALT WORKS.

By the law of July 9, 1905, the provisions of the law granting pensions to the employees in the tobacco industry were extended, practically without any modifications, to the employees of the government salt works,^a both to those who were employed on or before September 30, 1899, and to those who entered the service since that time. These works employ about 2,000 persons.

^a Bollettino dell' Ufficio del Lavoro, Vol. IV, 1905.

OFFICE OF ENGRAVING AND PRINTING.

A special law granting pensions to the workers of both sexes employed in the government office for engraving and printing securities and valuable papers was approved on July 7, 1905. This law practically repeats the provisions of the law for the tobacco employees, except that the division into old and new employees dates not from September 30, 1899, but from the day of the promulgation of the present law (July 15, 1905).

UNEMPLOYMENT INSURANCE.

No governmental institution for the insurance of wage-workers against unemployment exists in Italy, although the problem of unemployment insurance or rather unemployment relief has been under serious discussion for some time. So far the practical movements of relief have been limited either to cooperative or to humanitarian relief. Only within the last year or two has the subject of government aid to unemployment insurance been seriously discussed. No general discussion of the complex problems of unemployment is here intended, but the measures applied and proposed in Italy and the results of their application will be briefly sketched.

For a proper appreciation of the question of unemployment insurance, the few available statistical data concerning unemployment in Italy will be quoted. In view of the importance of trade unions in the development of unemployment insurance, the main data concerning trade unions in Italy will be brought together, and the most interesting experiment in the field of unemployment insurance will be described.

UNEMPLOYMENT STATISTICS.

Data concerning the amount of unemployment in Italy are rather scant. While chambers of labor since 1904 have been required to furnish the Bureau of Labor with data concerning the number of organized workers and also the number of unemployed, the data thus furnished are, as yet, very incomplete.

Perhaps the best statistical study of the unemployed is that published by the Humanitarian Society in 1905 and referring to the status in Milan on July 1, 1903. Of an entire productive population of 165,305, only 27,306, or 16.5 per cent, made any report relative to unemployment. Of these, 6,388, or 23.4 per cent, of the number reporting were without employment on July 1, 1903.

In the following table the number and per cent of these 6,388 unemployed persons are given by age and sex.

AGE AND SEX OF 6,388 PERSONS UNEMPLOYED IN MILAN ON JULY 1, 1903.

[Source: Contro la Disoccupazione. Pubblicazioni della Società Umanitaria, April, 1905.]

Age.	Males.		Females.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
Under 13 years.....	30	0.6	19	1.1	49	0.8
13 to 16 years.....	402	8.7	218	12.4	620	9.7
17 to 20 years.....	764	16.5	313	17.8	1,077	16.9
21 to 25 years.....	673	14.5	295	16.8	968	15.2
26 to 30 years.....	430	9.3	161	9.2	591	9.2
31 to 40 years.....	657	14.2	243	13.8	900	14.1
41 to 50 years.....	603	13.0	204	11.6	807	12.6
51 to 60 years.....	594	12.8	152	8.7	746	11.7
Over 60 years.....	364	7.9	99	5.6	463	7.2
Not reported.....	115	2.5	52	3.0	167	2.6
Total.....	4,632	100.0	1,756	100.0	6,388	100.0

The length of the state of unemployment, as indicated in the answers of the unemployed in Milan, is shown in the next table. Altogether 165,305 persons were asked to report in regard to unemployment. Of this number, 137,999 persons, or 83.5 per cent, did not respond at all; 18,720, or 11.3 per cent, reported days of unemployment within the preceding year; and 8,586, or 5.2 per cent, stated that they had never been unemployed. Of the 6,388 persons reported unemployed on July 1, 1903, 878, or nearly 14 per cent, were unemployed continuously from 1 to 4 years and over.

DURATION OF UNEMPLOYMENT OF 6,388 PERSONS UNEMPLOYED IN MILAN ON JULY 1, 1903, BY SEX.

[Source: Contro la Disoccupazione. Pubblicazioni della Società Umanitaria, April, 1905.]

Duration of unemployment.	Males.		Females.		Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
8 days.....	278	6.0	107	6.1	385	6.0
15 days.....	384	8.3	151	8.6	535	8.4
1 month.....	513	11.1	253	14.4	766	12.0
2 months.....	473	10.2	226	12.9	699	10.9
3 months.....	461	10.0	198	11.3	659	10.3
4 to 5 months.....	429	9.3	138	7.8	567	8.9
6 to 7 months.....	437	9.4	119	6.8	555	8.7
8 to 9 months.....	180	3.9	49	2.8	229	3.6
10 to 11 months.....	76	1.6	27	1.5	103	1.6
1 year.....	380	8.2	109	6.2	489	7.7
2 years.....	167	3.6	35	2.0	202	3.2
3 to 4 years.....	66	1.4	13	.7	79	1.2
Over 4 years.....	96	2.1	12	.7	108	1.7
Not reported.....	692	14.9	319	18.2	1,011	15.8
Total.....	4,632	100.0	1,756	100.0	6,388	100.0

The above data, interesting in themselves, because they throw light upon the composition of the unemployed body, do not give very much information as to the rate of unemployment. In a later report of the same institution an interesting table is given which shows the rate of unemployment for members of labor organizations, which have been for several years furnishing regular monthly reports concerning the extent of unemployment.

PER CENT OF MEMBERS OF MILAN LABOR ORGANIZATIONS UNEMPLOYED EACH YEAR, 1906 TO 1909.

[Source: Societa Umanitaria, Milano, Disoccupazione Collocamenti Sussidi in Milano nel 1909.]

Year.	Average monthly number of—		Per cent of members unemployed.
	Members of unions.	Unemployed members.	
1906....	5,392	152	2.82
1907....	6,499	230	3.54
1908....	7,459	257	3.45
1909....	6,148	169	2.75

TRADE-UNION STATISTICS.

Historically, unemployment insurance, or, to use a broader and more exact term, unemployment relief, has grown up primarily as a function of the labor associations. While a few of the efforts toward furnishing unemployment relief have been made independently of labor organizations, the latest and most successful experiments, such as the Ghent system in Belgium and the system of the Humanitarian Society, are based upon the recognition of this natural correlation. A few statistical data concerning the growth and extent of labor organizations in Italy will therefore be useful in indicating the available organization for unemployment relief.

Most of the Italian labor organizations are affiliated with the federations of trade associations, the federations of farm laborers, or the chambers of labor.

The chambers of labor may be compared to our American central labor unions, though in Italy they have a semiofficial standing. They are representative organizations, composed of delegates from labor organizations, and have been growing in strength very rapidly during the last few years. At the beginning of 1906 there were 82 chambers of labor in Italy, composed of 2,732 organizations, having a membership of 298,446. Two years later the number of chambers had increased to 92, the number of organizations to 3,747, and the membership to 546,574.

The total income of these chambers in 1907 was computed at 432,241 lire (\$83,422.51) and the expenditures at 402,266 lire (\$77,637.34).

The federations of trade associations are not as strong numerically as the chambers of labor and do not seem to show the same tendency to growth. In the beginning of 1907 there were 21 of these federations, composed of 2,045 organizations, with a membership of 204,271, while in the beginning of 1908 there were 22 federations, with 2,550 organizations and 191,599 members. Within the year four new federations were organized and three dissolved.

The annual revenues have been approximately determined at 583,642 lire (\$112,643) and their expenditures at 480,526 lire (\$92,742).

The third important group of labor organizations is found in the field of agricultural labor. The organizations of farm laborers in Italy have been growing very rapidly within the last few years. At the beginning of 1906 there were 982 of these organizations, with a membership of 221,913. Two years later the number of organizations had increased to 1,809 and the membership to 425,983.

At the beginning of 1908 there were 189,423 farm laborers having membership in chambers of labor and 108,191 affiliated with the National Federation of Agricultural Laborers.

With 546,574 members in the chambers of labor, 191,599 in the federations of trade associations, and 425,983 in federations of farm laborers, there would seem to be 1,164,156 members of labor unions in Italy. This number, however, includes a great many duplications, as many of the members of the trade associations and of the farm laborers' unions also belong to the chambers of labor.

Combined statistics for these unions, indicating the relation between the local, central, and the national organizations were published in January, 1908, and refer to the beginning of 1907.

They are reproduced in the following table and show a grand total of about 684,000 members of labor organizations in Italy.

NUMBER OF ORGANIZATIONS AND MEMBERS OF LABOR UNIONS AT THE BEGINNING OF 1907, BY CLASS OF LABOR AND AFFILIATION.

[Source: Bollettino dell' Ufficio del Lavoro, January, 1908.]

Class of labor and affiliation.	Number of organizations.	Number of members.
Agricultural labor:		
Affiliated with chambers of labor.....	551	102,973
Independent.....	752	176,540
Total.....	1,303	279,513
Industrial labor:		
Affiliated only with chambers of labor.....	1,438	144,100
Affiliated only with federations.....	661	52,960
Affiliated with both chambers of labor and federations.....	569	122,164
Independent.....	282	43,309
Total.....	2,950	362,533
Railroad employees.....	60	42,000
Grand total.....	4,313	684,046
Affiliated only with chambers of labor.....	1,989	247,073
Affiliated only with federations.....	^a 721	^a 94,960
Affiliated with both chambers of labor and federations.....	569	122,164
Independent.....	1,034	219,849
Total affiliated with chambers of labor.....	2,558	369,237
Total affiliated with federations.....	1,290	217,124

^a Including railroad employees.

These data are given at greater length by separate industries in the following table. They not only show the number of organizations and members in each large industrial group, but also their

respective affiliations and the proportion between organized labor and the total number employed according to the census of 1901 for almost all groups. The per cent of employed persons holding membership in labor unions was obtained by dividing the number of members in each industry at the beginning of 1907 by the number of persons in each industry according to the census of 1901. No later census figures were available.

NUMBER OF ORGANIZATIONS AND MEMBERS OF LABOR UNIONS AT BEGINNING OF 1907, BY INDUSTRY AND AFFILIATION, AND PER CENT OF EMPLOYEES IN LABOR UNIONS.

[Source: Bollettino dell' Ufficio del Lavoro, January, 1908.]

Industry.	Labor organizations.										Total number employed, according to census of 1901.	Per cent of total employees in labor unions. (a)
	Affiliated with—					Independent.		Total.				
	Chambers of labor only.		Federations only.		Both chambers of labor and federations.							
	Number of organizations.	Number of members.	Number of organizations.	Number of members.	Number of organizations.	Number of members.	Number of organizations.	Number of members.	Number of organizations.				Number of members.
Agriculture.....	551	102,973					752	176,540	1,363	279,513	5,693,080	4.9
Fishing.....	1	60					1	85	2	145	51,269	.3
Metal mining.....	3	240	1	50			3	665	7	955	21,737	4.4
Marble and stone quarrying and working.....	58	4,326	44	2,700	30	2,987	15	834	147	10,847	64,306	16.8
Sulphur mining and extracting.....	6	1,845					8	6,226	14	8,071	41,402	19.5
Metallurgy.....	100	12,733	82	9,895	59	24,549	3	194	244	47,371	211,123	22.4
Precious metals, working.....	11	891					2	80	13	971	12,208	7.9
Pottery.....	7	796	20	1,091	6	535	2	95	35	3,517	8,182	30.8
Bricks, etc.....	45	5,663	31	2,911	18	4,255	9	1,082	103	13,911	53,385	26.1
Glass.....	31	2,079	18	1,141	15	1,708	2	18	66	4,946	12,044	41.0
Building trades.....	130	13,423	224	15,655	145	26,648	43	4,235	542	60,002	358,648	16.7
Chemical industry.....	18	2,109	5	2,007	7	1,629	3	170	33	5,915	33,583	17.6
Woodworking.....	91	8,001	27	972	33	2,479	16	694	167	12,146	186,181	6.5
Basket making.....	5	227			1	20	2	352	8	599	19,962	3.0
Straw goods.....	16	1,221					10	1,782	26	3,003	100,022	3.0
Paper making.....	6	396	2	282	3	681	2	475	13	1,834	23,270	7.9
Printing.....	34	2,353	24	2,330	34	8,366	3	60	95	13,139	32,296	40.7
Spinning, weaving, and dyeing.....	62	7,799	24	1,612	45	10,102	18	3,946	149	23,459	503,013	4.7
Leather.....	21	2,033	5	136	8	1,454	2	140	36	3,763	14,104	26.7
Clothing, etc.....	52	4,030	4	269	9	933	4	94	69	5,326	324,116	1.6
Hat making.....	5	352	11	109	18	4,851			34	5,312	11,682	45.5
Shoemaking.....	37	1,254	58	3,842	35	5,281	26	1,021	156	11,398	183,430	6.2
Barbers.....	22	1,663	6	197	5	890	1	82	34	2,832	29,142	9.7
Cereals and pastes.....	50	5,009	7	255	5	340	7	2,286	69	7,890	87,541	9.0
Bread baking.....	29	2,438	30	1,261	28	4,178	11	399	108	8,276	45,050	18.4
Sugar making.....	2	295			1	148	2	283	5	726	11,800	6.1
Other food products.....	52	8,496	1	60			5	951	58	9,507	44,063	21.6
Work in ports.....	46	9,283					2	1,050	48	10,333	(b)	
Navigation.....	13	918	7	3,140	8	12,698	2	610	30	17,366	(b)	
Government establishments.....			16	1,850	10	3,725	1	200	27	5,775	14,208	40.6
Street railroads.....	24	4,016							24	4,016	(b)	
Various public employments.....	99	8,518							99	8,518	(b)	
Nurses, etc.....	15	904	13	1,160	35	3,171			63	5,235	12,059	43.4
Not specified.....	347	30,694	1	35	1	500	77	15,200	426	46,429	(b)	
Total.....	1,939	247,073	661	52,960	569	122,164	1,034	219,849	4,253	642,426	(b)	

a These percentages have been computed from the number of members of labor unions at the beginning of 1907 and the number of persons employed according to the census of 1901.

b Not reported.

The functions of these local labor organizations and their federations in Italy are very numerous and varied. Perhaps the most diversified is the activity of the chambers of labor, while the federations are more specialized organizations for collective bargaining. The chambers of labor may, and do to some extent, undertake anything that may further the interests of labor, such as employment bureaus, legislative agitation, educational work, publication of trade papers, arbitration courts between employers and employees, etc. Thus, in 1908, 39 chambers had employment offices, 65 had legal-aid bureaus, 30 employed physicians, 19 had schools, and 44 had libraries.

UNEMPLOYMENT RELIEF BY LABOR UNIONS.

In a report concerning unemployment insurance recently presented to the Chamber of Deputies the estimate is made that out of half a million of industrial workmen belonging to organizations only about 50,000 are protected by unemployment insurance.^(a)

It is explained that the labor organizations in Italy mostly follow the policy of low membership dues, and are therefore often unable to undertake any form of insurance. The largest national labor organization to carry on unemployment insurance is the Italian federation of hat makers, with 36 branches and 5,896 members, which has a federal unemployment and traveling fund. Unemployment benefits are granted under the following conditions: At least one year previous membership; conclusive proof of the involuntary nature of the unemployment and absence of any other remunerative work; and duration of unemployment for at least one week.

The benefit is given for not over 12 weeks, and is very small, amounting to only 2 lire (38.6 cents) per week during the first three weeks, 3 lire (57.9 cents) per week during the following three weeks, 4.50 lire (86.9 cents) for the next four weeks, and 6 lire (\$1.158) per week for the last two weeks. These are the benefits for the first (higher) group of members; for the second (lower) group they are only 1 lira (19.3 cents), 1.5 lire (29 cents), 3 lire (57.9 cents), and 4.5 lire (86.9 cents) per week. The means to pay these benefits are obtained by contributions of members, which contributions are compulsory. The membership dues are 10 centesimi (1.93 cents) and 5 centesimi (0.97 cents) per week for the two groups of members, and out of these dues 4 centesimi (0.77 cents) and 2 centesimi (0.39 cents), respectively, are deducted for unemployment insurance. In addition to these unemployment benefits the federation pays traveling expenses. During the year 1908 the federation distributed 2,986 lire (\$576.30) for unemployment benefits and 1,914 lire (\$369.40) in traveling expenses, making a total of 4,900 lire (\$945.70).

^a Bollettino dell' Ufficio del Lavoro, Vol. XIII, 1910, pp. 1313-1334.

The Italian glass workers' federation also grants unemployment relief in the following three cases: At the close of the season, if within two months work is not resumed in the same establishment or in the same locality; in case of discharge because of the recognized necessity to reduce the number of persons employed; and, finally, when the workman's leaving becomes necessary for no fault of his. The benefits are paid out of the general fund of the association.

In the lithographers' federation the granting of unemployment benefits is made compulsory for the individual sections, under the supervision of the central committee; but insurance under this system is optional with the members. A member so insured is required to pay a premium of 10 centesimi (2 cents) per week and is entitled to relief in case of unemployment for lack of labor or any other cause for which he is not responsible, except sickness. The unemployment benefit is from 1 to 2 lire (19.3 cents to 38.6 cents) per day. The rules of this form of relief are very strict, requiring appearance at the headquarters of the section at least three times a week, and willingness to accept any employment the local section committee might offer him.

The federation of printers leaves the organization of the unemployment relief to its individual sections, which number 125. In 1908 62,339.45 lire (\$12,031.51) were granted for 40,153 days of unemployment in addition to 9,709.80 lire (\$1,873.99) for traveling expenses, making a total of 72,049.25 lire (\$13,905.50).

The study of unemployment relief, published by the labor bureau of the Milan Humanitarian Society in 1905, contains an analysis of the various forms of unemployment relief given by the Milan labor organizations at that time, i. e., before the organization of the unemployment fund by that society. Of the 115 organizations inscribed in 1903 in the Milan chambers of labor, 41 had some provision concerning unemployment benefits, and 32 were actually furnishing such. Unemployment benefits were most frequent among the employees of metallurgical and mechanical establishments. Out of 17 organizations of such employees, only 2 did not furnish some relief. Of 14 printing trades organizations, 8 furnished unemployment relief.

The methods and the conditions of payment of such relief are naturally subject to the widest variations, these organizations being entirely voluntary. The contributions may be uniform for all members or proportionate to the age groups, a smaller contribution being exacted from the employees under 18 years of age, or different for master mechanics and apprentices, or the contributions may be proportionate to the salary. The usual amount of contribution is about 10 to 15 centesimi (1.9 cents to 2.9 cents) per week, and the usual amount of unemployment benefit about 1 lira (19 cents) per day.

The amounts of benefits vary considerably and may depend upon the length of membership, and various regulations exist for limiting the length of time during which unemployment benefits may be paid. This period is usually limited to about six or eight weeks, after which some organizations grant half the benefits for another period of the same length. In the following table are shown the principal statistics of contributions and benefits of the unemployment insurance organizations in Milan:

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CONTRIBUTIONS AND BENEFITS IN UNEMPLOYMENT

[Source: Contro la Disoccupazione.]

Occupation.	Members' contributions per week (cents).	Amount of unemployment benefits per day (cents).
Setters-up.....	1.9, 3.9, and 5.8 (a)	9.7, 14.5, and 19.3
Armature winders, etc.....	(b)	(b)
Bronze workers.....	2.9, 4.8, and 6.8 (a)	14.5, 19.3, and 29.0
Braziers.....	1.0, 1.9, and 2.9	9.7, 20.3, and 29.0
Chisellers.....	2.9 and 3.9 (a)	19.3 and 29.0
Compositors.....	4.8	29.0, 38.6, and 50.2
Blacksmiths.....	1.0 and 1.9	9.7 and 19.3
Working women in printing.....	2.9	15.4
Type founders.....	2.9	30.9
Metal founders.....	1.0, 1.9, and 2.9	9.7, 19.3, and 29.0
Iron works.....	1.0, 1.9, and 2.9	9.7, 20.3, and 29.0
Printers.....	4.8	29.0, 38.6, and 50.2 (d)
Carvers.....	11.6, 17.4, and 23.2 (e)	19.3, 24.1, and 29.0
Instrument makers.....	1.9, 3.9, and 5.8 (a)	9.7, 14.5, and 19.3
Tinsmiths, etc.....	2.9 and 3.9	19.3 and 29.0
Photographers' helpers.....	2.9 and 4.8	14.5 and 19.3
Metal cornice workers.....	1.9, 2.9, and 3.9 (a)	9.7, 19.3, and 29.0
Mechanicians.....	1.9 and 4.8 (a)	9.7 and 19.3
Fine mechanical workers.....	2.9 and 4.8 (a)	11.6 and 19.3
Lithographers.....	3.9, 7.7, and 9.7 (a)	19.3
Butchers.....	21.2 (e)	9.7
Modelers.....	1.9, 2.9, and 3.9	19.3, 29.0, and 38.6
Goldsmiths, etc.....	7.7 and 11.6 (f)	14.5 and 24.1
Workers in skin and leather.....	5.8 and 11.6 (e)	19.3, 24.1, and 29.0
Polishers.....	1.9	19.3
Plumbers, etc.....	1.9 and 2.9	9.7 and 19.3
Saddlers and trunk makers.....	(g)	19.3 and 29.0
Stereotypers and galvanizers.....	9.7	29.0
Dyers, stampers, etc.....	2.9 and 3.9	96.5 and 135.1 (h)
Metal turners.....	1.9, 2.9, 4.8, and 6.8	9.7, 19.3, and 29.0
Metal chisellers, etc.....	1.9, 2.9, 3.9, and 5.8	4.8, 9.7, 14.5, and 19.3
Zinc etchers.....	1.6, 1.9, and 2.9	19.3, 27.0, and 33.8
Total.....		

a These amounts include dues for strike benefits.

b Not reported.

c During entire period of unemployment.

d According to length of membership.

e Per month.

INSURANCE ORGANIZATIONS IN MILAN, BY OCCUPATIONS, 1902.

Publicazioni della Società Umanitaria.]

Duration of payment of unemployment benefits.		Number of members.	Number unemployed during year.	Days for which benefits were paid during year.			Amount of benefits paid during year.	
Full benefits.	Half benefits.			Number.	Average per member.	Average per member receiving benefits.	Total.	Average per beneficiary.
8 weeks.....	8 weeks.....	950	84	2,532	2.7	30.1	\$390.33	\$4.65
(b)	(b)	109	25	329	3.0	13.2	58.86	2.35
8 weeks.....	8 weeks.....	300	1	96	.3	96.0	13.90	13.90
(c)		233	24	349	1.5	14.5	83.83	3.49
6 weeks.....		101	6	230	2.3	38.3	66.58	11.10
60 days.....		898	145	6,959	7.7	48.0	1,993.16	13.75
8 weeks.....	8 weeks.....	825	5	246	.3	49.2	38.21	7.64
6 weeks.....		297	18	221	.7	12.2	36.17	2.01
6 to 12 weeks (d)		119	5	66	.6	13.2	23.62	4.72
8 weeks.....	4 weeks.....	1,200	25	697	.6	27.9	134.52	5.38
(b)		190	38	1,525	8.0	40.1	373.90	9.84
60 days.....		750	103	3,229	4.3	31.3	895.33	8.69
8 weeks.....		138	47	264	1.9	5.6	67.79	1.44
10 weeks.....		75						
8 weeks.....	8 weeks.....	210						
(b)		41	1	42	1.0	42.0	8.11	8.11
13 weeks.....		95						
8 weeks.....		117	13	351	3.0	27.0	64.85	4.99
8 weeks.....	8 weeks.....	230	10	392	1.7	39.2	64.15	6.42
60 days.....		527	48	1,716	3.3	35.8	331.19	6.90
(b)	(b)	230	10	295	1.3	29.5	28.47	2.85
6 weeks.....	6 weeks.....	75	14	229	3.1	16.4	67.55	4.83
6 weeks.....		360	10	255	.7	25.6	61.76	6.18
24,30, and 42 days.		987	48	506	.5	10.5	115.37	2.40
8 weeks.....	8 weeks.....	240	15	175	.7	11.7	32.62	2.17
6 weeks.....		170						
2 months.....		108						
6 weeks.....		60	3	60	1.0	20.0	19.11	6.37
3 months.....		666	14	385	.6	27.5	59.44	4.25
8 weeks.....	8 weeks.....	1,400	135	4,847	3.5	35.9	957.33	7.09
8 weeks.....	8 weeks.....	138						
6 weeks.....	6 weeks.....	144	20	333	2.3	16.7	80.98	4.05
.....		11,983	867	25,629	2.1	29.6	6,067.13	7.00

f Per month. These amounts include dues for strike benefits.

g Fixed by the council of the union.

h Per week.

* This total is not the correct sum of the items; the figures are given as shown in the original report.

The two labor organizations which have granted unemployment insurance for the longest time are the unions of compositors and printers. In the following table are given the main results of their operations; for the compositors, for the period 1877 to 1901, and for the printers, for 1880 to 1902:

RESULTS OF UNEMPLOYMENT INSURANCE IN UNIONS OF COMPOSITORS AND OF PRINTERS IN MILAN FOR A SERIES OF YEARS.

[Source: Contro la Disoccupazione. Pubblicazioni della Società Umanitaria.]

Item.	Compositors: 1877 to 1901.	Printers: 1880 to 1902.
Contributions:		
Ordinary.....	\$23,169.81	\$9,344.12
Extraordinary.....	\$1,599.55	\$1,002.32
Total.....	\$24,769.36	\$10,346.44
Average per member per year.....	\$1.31	\$1.26
Benefits paid:		
Ordinary.....	\$23,616.88	\$6,672.09
Extraordinary.....	\$1,028.61	\$73.48
Total.....	\$24,645.49	\$6,745.57
Average per member per year.....	\$1.30	\$0.82
Average per year.....	\$985.82	\$293.29
Days of unemployment:		
Number for which benefits were paid.....	71,799	24,573
Average per year.....	2,872	1,068
Average per member per year.....	3.8	3.0
Members:		
Total number for all years.....	18,929	8,208
Number receiving benefits.....	1,182	924
Per cent receiving benefits.....	6.24	11.26

PRIVATE AND VOLUNTARY UNEMPLOYMENT INSURANCE.

MUTUAL BENEFIT SOCIETIES.

In a small way the mutual benefit societies (described in the chapter on sickness insurance) have made some effort to meet the problem of unemployment relief for over 25 years. According to the statistical reports of these mutual benefit societies, in 1885 there were 184 societies which included unemployment relief among their various activities, in 1895 there were 234, and in 1904, 417, or 6.2 per cent of all. No data exist as to the amount of unemployment relief thus granted, except for 1885, when it amounted to 32,787 lire (\$6,328).

The peculiar conditions of the unemployment insurance problem require special organizations for dealing with them, and within the last decade various special unemployment insurance societies have been founded in Italy in an experimental way. Though the extent of the activity of these societies is small, they are nevertheless of importance because the entire subject of unemployment insurance is as yet in an experimental stage, and the best method of treating this condition still remains to be determined. A brief account of them follows.

SPECIAL UNEMPLOYMENT INSURANCE SOCIETIES.

BOLOGNA.—As early as 1896 the director of the Bologna Savings Bank proposed a new type of personal accounts for the specific purpose of providing for involuntary unemployment, and for the benefit of these accounts the interest from a special fund of 200,000 lire (\$38,600) was to be assigned.

Personal account books could be taken out by wage-earners over 14 years of age, born and living in Bologna, in the trades of mason, carpenter, blacksmith, roofer, white washer, marble worker, tinsmith, glass worker, and plasterer.

Each depositor was required to deposit within a certain time 5 lire or 3 lire (97 cents or 58 cents), according to whether he was of age or not.

After the time for making the deposits had elapsed, the depositors, if deprived of employment without any fault of theirs, were entitled to receive a daily benefit of 60 centesimi (12 cents) for minors and 1 lira (19 cents) for persons of age. This benefit was continued for not over 40 days, beginning with the sixth day of unemployment, and was payable every 3 days.

If the interest on the special fund should become exhausted the depositors were to be entitled to receive the amounts of their deposits and interest, the total grant not to exceed 40 lire (\$7.72). Unemployment due to sickness or accidents was excluded, other agencies existing for these forms of relief.

The depositor was required to furnish a certificate from his employer and from 4 wage-earners not unemployed, in the same or similar branches of industry.

The heirs of an insured person who died during the insurance period without having received any benefits received the deposits and interest. The same rule was to apply if the bank decided to discontinue the experiment.

This plan enabled the insured to purchase for 3 or 5 lire (58 cents or 97 cents) an insurance of 40 days benefits, or a total of 24 or 40 lire (\$4.63 or \$7.72), but, on the other hand, there was the possibility of losing the deposited amount if the person insured did not suffer from unemployment within the period. This was the result of the application of the ordinary principle of mutual insurance. But this principle of mutuality was not sufficiently developed to overcome the fear of losing the deposit, and the plan never achieved any great popularity.

During the first year of the operation of this plan only 27 workers availed themselves of this opportunity, their deposits together with interest accrued amounting to 117.59 lire (\$22.69), while the amount of benefits granted reached 660.40 lire (\$127.46).

In the second year of the experiment, the masons, roofers, white washers, and plasterers were excluded because for them the certainty of unemployment existed. It was argued that the theory of insurance presupposed protection only against an unexpected or uncertain emergency; then the insurance premium corresponds to the degree of probability of the emergency arising; but if the emergency is sure to arise, insurance appears to be unnecessary. Other trades were added in the place of those excluded, namely, workers in ammunition factories, shoemakers, hat makers, tanners, carriage makers, leather workers, bakers, pewterers, horseshoers, brass workers, bridge workers, saddlers, stonecutters, chisellers, dyers, turners, and glaziers. Other changes also were introduced. It was thought desirable to prefer for insurance such persons as have shown a tendency to some providence, and therefore the right to receive benefits was limited to persons having a savings-deposit book for at least one year. Persons keeping steady employment with the same employer were thought worthy of encouragement, as against workmen constantly changing one employer for another, and therefore the right to receive benefits was limited to persons who had worked for at least one year for the same employer. The same limits of the benefits remained, i. e., 40 days and a total of either 24 or 40 lire (\$4.63 or \$7.72). The required evidence of unemployment was simplified.

In the year 1898-99 further modifications were introduced. The required period of ownership of a savings account was reduced from 1 year to 3 months and subsequently to one month. The required period of continuous employment was also reduced from 1 year to 6 months. Women working in the specified industries were also admitted to this form of insurance, and the list of industries was extended to include the employees of military arsenals, tobacco manufacturing, and the manufactures of mineral and sparkling waters. Private employees and the management of government establishments endeavored to stimulate this form of insurance by special prizes and privileges. But all these modifications and changes in regulations failed to arouse the interest of workmen in this institution, and the possibility of losing the 5 lire (97 cents) of premium proved an effective barrier against any considerable extension of the system. According to the report of the directors, the main cause of failure was the insurance principle itself, as the danger of protracted unemployment was not great in Bologna, except in the building trades, to which the insurance principle was claimed to be inapplicable. As a result the insurance principle was entirely abandoned and in its place was substituted a system of individual savings for a definite purpose, with a subsidy to such savings added mainly to promote the habit of saving. New regulations were therefore prepared in 1901. The exclusion of the building trades was discon-

tinued, since only by the difficulties of application of the insurance principle was this exclusion justified.

The basis of the new regulations was individual accumulations by means of deposits in the savings bank, upon which the bank was to pay interest. The interest upon the fund of 200,000 lire (\$38,600) was to be distributed among this group of depositors proportionately to their deposits during the current year, but not to exceed the actual amount of deposits, or 40 lire (\$7.72), to one person within any one year. These additional credits were to be interest bearing like the original deposits. The essential features making these saving deposits a form of unemployment relief are the rules that withdrawals from the account may be made only if proof is furnished that the depositor is at the time unemployed without any fault of his and that the withdrawals must not exceed 1.50 lire (29 cents) per day. These withdrawals must be made by the depositor in person, and if he, while out of work, endeavors to make withdrawals through another person without giving a satisfactory reason for such action he loses the credits already given him, with the interest accrued, and the additional credits due during the year. The additional credits and the interest accrued on these remain on the account of the depositor for the following year if not used during the current year. In case of death of the insured these credits and the interest accrued, if not used by the depositor, revert to the fund, while the contributions made by the insured and interest on these contributions revert to the heirs. Thus, a workman participating in this plan of unemployment relief does not run any risk of losing the savings made. The new plan of 1901 reduced itself to gratuitous contributions by the bank, without any risk on the part of the depositor. This proved more popular, and the number of depositors grew so large that it soon became doubtful whether it would be possible to pay the maximum bonus of 40 lire (\$7.72) allowed by the regulation. As this maximum limit was likely to give rise to an impression that such bonuses would actually be paid, it was eliminated from the regulation, and the determination of the limit was left entirely to an administrative council.

In the same year persons under 18 years of age were excluded, and to persons from 18 to 21 years the daily compensation was limited to 1 lira (19 cents), because it was feared that in case the daily benefit was higher than the earnings of the young persons the system of unemployment relief might prove a factor for the encouragement of laziness and unemployment. Later it was also decided to exclude female wage-earners because of the difficulty experienced in establishing the lack of employment in lines of female work. Toward the end of 1901 the influx of depositors was so great that it was found necessary to increase the fund by another 100,000 lire (\$19,300) and

to limit the members to residents not of the province, but of the city of Bologna. The increase of depositors under this form continued, however, and by 1903 it became evident that a further reduction of the bonuses below an amount which would be at all adequate was necessary unless further restrictions were placed in the classes of persons admitted. All wage-workers under age were therefore excluded under the assumption that they had lighter obligations and often had the chance of obtaining relief from their homes. Persons over 65 years of age were also excluded because at that age, unemployment assumes the nature of invalidity and must be handled as such. Notwithstanding these limits the cost of this system grew very rapidly, and soon various abuses asserted themselves, such as deception concerning conditions of unemployment, voluntary unemployment, fraudulent deposits through loans so as to increase the available sum of benefits. The detection of these fraudulent practices became a very difficult matter. Against the commonest form of fraud, that of an employed wage-worker receiving unemployment benefits, the remedy was proposed of demanding the daily appearance of those claiming benefits so as to establish the fact of unemployment. It was even suggested that the unemployed appear twice a day, since it was quite apparent that no employed worker could absent himself twice a day from his shop and keep his employment. But the consideration of the discomfort to the unemployed by doubling trips in all kinds of weather, sometimes over great distances, with the temptation to spend, prevailed against this plan.

The measures taken for prevention of fraud were not altogether satisfactory, and in 1903 the director was forced to announce at a meeting of the unemployed that unless some method was devised to prevent fraud this activity of the bank would have to be discontinued. As a result a commission of labor delegates was elected, consisting of five members. The commission brought in the following suggestions: That the subsidized unemployed be required to assemble daily, that they remain there for 2 hours (1 to 3 p. m.), the doors being closed after the appointed hour.

This plan was not adopted because it was feared that it would cause too much complaint and irritation. The establishment of a vigilance committee was also suggested, but objection was found to it on account of the hostility to which the members of such committee would be exposed.

It proved difficult to suggest a way to counteract the other frauds mentioned.

Altogether there were 691 persons registered under this form of insurance or relief in 1903. Their deposits and other credits amounted on December 31, 1903, to 31,570.87 lire (\$6,093.18). After the winter unemployment, i. e., on March 31, they equaled 20,252.64 lire

(\$3,908.76) and on May 31, 20,665.86 lire (\$3,988.51). The fund from which interest is used to pay the bonuses to the persons insured equaled 356,300 lire (\$68,765.90).

There evidently were two well-defined periods in the history of this experiment. As an insurance scheme it was a complete failure because the classes concerned refused to take any interest in the matter. In the latter stage it became a system of subsidizing individual savings and rapidly became popular, but led to various forms of malingery and fraud. It has also been pointed out that because of the total absence of any connection between this system of relief and the institutions for finding employment it had no influence on the reduction of the unemployment period.

The total number of savings books issued by the Bologna Savings Bank under the form of unemployment insurance up to October 31, 1904, was 865, of which 173 became extinct, leaving active accounts on that date of 692. By occupation, these owners of books were distributed as follows:

NUMBER OF SAVINGS BOOKS ISSUED FOR UNEMPLOYMENT INSURANCE BY THE BOLOGNA SAVINGS BANK UP TO OCTOBER 31, 1904, BY OCCUPATIONS.

[Source: Bollettino dell' Ufficio del Lavoro, Vol. IV, 1905.]

Occupation.	Number of savings books—			Occupation.	Number of savings books—		
	Issued.	Extinct.	Current.		Issued.	Extinct.	Current.
Masons.....	690	129	561	Carpenters.....	13	4	9
White washers.....	61	21	40	All other.....	48	8	40
Mechanics.....	22	6	16				
Laborers.....	17	1	16	Total.....	865	173	692
Varnishers.....	14	4	10				

This form of insurance was evidently used almost exclusively by the building trades, for whom some period of unemployment is certain. According to the regulations, the distribution of the bonuses to the accounts was made on December 31, and on the basis of the deposits made during the twelve months ending on October 31 preceding. In the following table is shown the amount of deposits for the year November, 1903, to October, 1904, by months, and it appears quite evident that the deposits did not rise to any considerable amount until toward the end of the year.

NUMBER AND AMOUNT OF DEPOSITS FOR UNEMPLOYMENT INSURANCE IN THE BOLOGNA SAVINGS BANK FOR THE FISCAL YEAR ENDING OCTOBER 31, 1904.

[Source: Bollettino dell' Ufficio del Lavoro, Vol. IV, 1905.]

Year and month.	Deposits.		Year and month.	Deposits.	
	Number.	Amount.		Number.	Amount.
1903.			1904—Concluded.		
November.....	14	\$12.35	May.....	223	\$168.30
December.....	3	4.25	June.....	335	261.71
1904.			July.....	454	372.70
January.....	1	1.93	August.....	415	350.68
February.....	1	.29	September.....	397	343.27
March.....	17	5.60	October.....	417	358.46
April.....	85	52.78	Total.....	2,362	1,932.32

The total amount credited to these 692 accounts in October, 1903, was 18,931.02 lire (\$3,653.69), so that the total amount deposited on October 31, 1904, reached the sum of 28,943.22 lire (\$5,586.03). The amount of bonuses distributed was 7,440 lire (\$1,435.92), only 328 persons qualifying for such bonuses. The total amount withdrawn for unemployment relief during the following eight months, November, 1904, to June, 1905, was 16,290 lire (\$3,143.97), distributed, by months, as follows:

NUMBER OF DAYS OF UNEMPLOYMENT AND AMOUNT WITHDRAWN FROM THE BOLOGNA SAVINGS BANK FOR UNEMPLOYMENT RELIEF FOR THE EIGHT MONTHS ENDING JUNE 30, 1905.

[Source: Bollettino dell' Ufficio del Lavoro, Vol. IV, 1905.]

Year and month.	Number of days of unemployment.	Amount withdrawn.	Year and month.	Number of days of unemployment.	Amount withdrawn.
1904.			1905—Concluded.		
November.....	74	\$21.42	March.....	1,732	\$501.41
December.....	545	157.78	April.....	187	54.14
1905.			May.....	146	42.27
January.....	3,956	1,145.26	June.....	28	8.11
February.....	4,192	1,213.58	Total.....	10,860	3,143.97

The entire activity of this form of insurance might be designated as an effort to encourage the saving of summer earnings for use during the winter unemployment. Some such process is inevitable in seasonable trades, like the building trades, to which almost all the beneficiaries of this plan belong. In the case of the Bologna Savings Bank a very high bonus of over 50 per cent is given to the persons practicing this form of saving.

Notwithstanding the modest limits of this activity, it was again felt necessary, in 1905, to "proceed cautiously," as the director of the bank states in his last report, (a) so as to prevent an undue pressure

^a Bollettino dell' Ufficio del Lavoro, Vol. XIV, Oct., 1910, pp. 697-702.

upon the resources of the bank. An entirely new set of regulations for this part of the activity of the savings bank was therefore prepared in 1905 and went into effect in the beginning of 1906. It embodied mainly the following two new principles: First, that only those depositors who actually suffer from unemployment participate in the distribution of the interest on the endowment fund. This was claimed to be more logical than the distribution of the interest among all the depositors. Secondly, right was given to withdraw the deposits after the period of "insurance" had elapsed.

The regulations adopted in 1905, and still in force, provide for the following system of unemployment relief:

The Bologna Savings Bank has a special fund of 300,000 lire (\$57,900) for unemployment relief of such persons as are willing to make savings for the lean months in times when there is enough work. The benefits of this fund are open only to men between 21 and 65 years of age who live and work in Bologna, who are employed in manual labor, and who work for hire, being employed on a daily or weekly wage. In order to participate in these benefits the men must obtain special unemployment deposit books. Each person may possess only one such book. A very important provision is the rule which gives the administration of the fund the right to determine each year how many such unemployment deposit books shall be issued. Applications for these books must be made within a certain time of the year, namely, between March 1 and May 31, and are acted on in the order in which they have been made.

The deposits must be made out of the personal earnings of the depositor and must not exceed 5 lire (96.5 cents) per week. These deposits draw the ordinary rate of interest on the same conditions as all other deposits in the savings bank. In addition to this normal rate of interest, however, these deposits entitle the depositor to a participation in the interest of the unemployment fund, there being two grades of benefits. The first grade consists of depositors who deposited 40 lire (\$7.72) or over, and for them, according to the language of the regulations, "1 lira (19 cents) is reserved for every lira deposited, but not over 40 lire (\$7.72);" in other words, to all of the depositors of the first grade a credit of 40 lire (\$7.72) is reserved. The second grade consists of depositors who have deposited less than 10 lire (\$1.93); for them one-half of a lira is reserved for each lira deposited up to 20 lire (\$3.86).

Both the deposits and these reservations of benefits are for the purpose of unemployment relief. Moreover, the savings of one year are intended for relief during the following year. During the current year, therefore, in which the deposits have been made, they are not subject to withdrawal. But during the next year they may withdraw such deposits, together with the share of the benefits on

presentation of sufficient proof of being unemployed without any fault of their own. If, however, they withdraw their own deposits without such proof, they lose all right to the benefits. The unemployment withdrawals must not exceed 1.50 lire (29 cents) per day while such unemployment lasts. This daily allowance of 1.50 lire consists partly of their own deposits and partly of the benefits reserved, in the following ratio: For the depositors of the first grade, i. e., those who have accumulated 40 lire (\$7.72), each daily allowance of 1.50 lire (29 cents) consists of 0.75 lira of their own deposits and 0.75 lira of the reserved benefits, until the limit of 40 lire (\$7.72) of the latter is exhausted, and for the depositors of the second grade 1 lira (19 cents) of the deposits, and 0.50 lira (9.7 cents) from the reserves up to the limit of 20 lire (\$3.86).

In order to obtain these benefits the depositors are required to present themselves in person, as often as required, and to furnish all required proof of unemployment. The benefits may, however, be given even to such depositors as have left Bologna for other localities in search of employment, if they are unsuccessful in their search, provided they are able to present satisfactory proof of such unemployment.

A complete account of the activity of the Bologna Savings Bank was recently published by the administration, covering the years 1904 to 1910. The account shows that the new regulations had the effect of restricting the deposits, especially during the first year of the full application of the new rules, i. e., 1907. Thus, not only has the total amount of benefits paid out been decreased from 11,862.97 lire (\$2,289.55) in 1906 to 4,553.25 lire (\$878.78) in 1909, but the proportion of the benefits to the total deposits has materially declined, from 66.6 per cent in 1904 to 26.7 per cent in 1909. As the endowment fund at the same time has been materially increased, it may be admitted that the new regulations have succeeded in preventing the threatening danger of excessive losses. For the years 1906 and 1907 the maximum limit of persons to be admitted to participation in the benefits was determined by the bank at 450, and for the following years at 750. The whole history of this experiment is therefore mainly interesting as an illustration of the serious difficulties in the way of an unemployment relief plan which is based upon the principle of subsidized private saving. The method of voluntary saving was evidently selected for considerations of character building, as being the best method of relief through a combination of economic and educational effects, while on the other hand the subsidies made exactly the opposite effect likely, unless the work was surrounded by very stringent safeguards, which narrowly limited its scope.

In the table following are shown the operations of the unemployment fund of the Bologna Savings Bank from 1904 to July 31, 1910.

OPERATIONS OF THE UNEMPLOYMENT FUND OF THE BOLOGNA SAVINGS BANK, 1904 TO 1910.

[Source: Bollettino dell' Ufficio del Lavoro, Vol. XIV, 1910.]

Year.	Number of deposit books.				Total credits on books January 1.	Deposits during year.			Interest on deposits.	Benefits distributed from endowment fund. (c)	Total deposits, interest, and benefits.	Amount on books at end of year.	
	On January 1.	Issued during year.	Discontinued during year.	At end of year.		Entitled to participate in benefits.	Not entitled to participate in benefits.	Total.				Total.	Average per depositor.
1904..	690	55	65	680	\$6,083.53	\$1,917.84	.....	\$1,917.84	\$64.94	\$1,657.29	\$3,640.07	\$6,935.94	\$10.20
1905..	680	126	54	752	6,935.94	2,449.54	\$96.35	2,545.89	152.37	2,280.55	4,987.81	8,402.75	11.17
1906..	752	35	55	732	8,402.75	2,444.23	.....	2,444.23	167.62	(b)	2,611.85	6,624.61	9.05
1907..	732	94	97	729	6,624.61	2,258.83	13.86	2,272.69	94.89	884.08	3,251.66	4,257.95	5.84
1908..	729	99	76	752	4,257.95	2,215.69	10.95	2,226.64	112.34	497.17	2,836.15	4,734.49	6.30
1909..	752	96	53	795	4,734.49	2,482.08	1.21	2,483.29	116.38	878.78	3,478.45	4,923.39	6.19
1910..	795	c 35	c 43	c 787	4,923.39	(d)	(d)	c 897.78	c 109.80	c 376.78	c 1,384.36	4,037.65	5.13

Year.	Amount of endowment fund.	Members inscribed on rolls during preceding year for participation in benefits.	Members admitted.		Members suspended.	Withdrawals.				Days of unemployment.	
			First grade.	Second grade.		Benefits.		Deposits.			Total.
						Amount.	Per cent of total.	Amount.	Per cent of total.		
1904..	\$67,347.00	522	81	438	3	\$1,855.49	66.6	\$932.17	33.4	\$2,787.66	(d)
1905..	68,804.50	333	153	145	5	1,657.29	47.1	1,863.71	52.9	3,521.00	(d)
1906..	70,039.70	372	286	71	15	2,289.55	52.2	2,100.45	47.8	4,390.00	6,107
1907..	70,618.70	450	296	46	108	884.08	15.7	4,734.23	84.3	5,618.31	6,194
1908..	71,101.20	444	324	110	10	497.17	21.1	1,862.44	78.9	2,359.61	3,453
1909..	71,101.20	564	399	137	28	878.78	26.7	2,410.77	73.3	3,289.55	5,977
1910..	71,101.20	552	400	142	10	c 376.78	c 15.3	c 2,086.31	c 84.7	c 2,463.09	c 2,592

a The amounts reported for 1904 and 1905 were distributed among the accounts at the end of the respective years; for 1907 to 1910 the distribution was made only at the time of payment of unemployment benefits.

b On account of the change in the system no distribution of benefits was made this year.

c For the first seven months of the year.

d Not reported.

VENICE.—The unemployed workmen's benefit society of Venice (*La Società di Previdenza per gli Operai Disoccupati in Venezia*) was established by some private persons with a charitable purpose in 1901, and legally incorporated by the royal decree of June 30, 1901.

The purposes of this society are to facilitate as far as possible the placing of unemployed workmen, to assist them with temporary subsidies in case of involuntary unemployment, and to assist in the settlement of disputes between employers and employees.

The first purpose is met by gathering all available information concerning the demands for help, which information is furnished to persons interested, and occasionally also by furnishing traveling expenses to those who have obtained employment out of town.

The provision of the by-laws requiring the society to act as a conciliator in disputes between employers and employees has remained a dead letter, the main function being that of granting aid to unemployed persons. Although originally a private organization, the municipality of Venice went to its aid. In 1904 the amount contributed by the municipality of Venice was 10,000 lire (\$1,930), by the province of Venice, 1,000 lire (\$193), and the contributions of honorary members and patrons amounted to about 2,000 lire (\$386).

The contributions of the wage-workers insured during the first three years of the activity of the society was 40 centesimi (8 cents) per month, but in 1904-5 were increased to 1 lira (19 cents) per month by the executive council of the society. This increase of contributions was partly offset by an increase of the benefits from 1.25 lire (24 cents) to 1.50 lire (29 cents) per day to married workmen and to widows with more than two children. But the main purpose of the increase is admitted by the administration to have been to check the rapid growth in the number of insured, which became alarming in view of the absence of all limitations as to the duration of the benefits and the cheapness of the rates.

The activity of this society is admitted by its administration to be in the nature of an experiment, requiring further study, especially for the purpose of adjusting the finances of the society. Its essential difficulty is evidently to be found in the fact that it is primarily a disguised form of charity, a very small share of the revenue being derived from the contributions of the insured.

The activity of the society for the fiscal years 1902-3 and 1903-4 is shown in the following table:

NUMBER OF MEMBERS AND NUMBER, AMOUNT, AND AVERAGE OF BENEFITS PAID BY THE UNEMPLOYED WORKMEN'S BENEFIT SOCIETY OF VENICE, 1902-3 AND 1903-4, BY INDUSTRIES.

[Source: Bolletino dell' Ufficio del Lavoro, Vol. II, 1904.]

Industry.	1902-3.					1903-4.				
	Number of members.	Number receiving benefits.	Percent receiving benefits.	Total benefits.	Average benefits per beneficiary.	Number of members.	Number receiving benefits.	Percent receiving benefits.	Total benefits.	Average benefits per beneficiary.
Metallurgy (a).....	190	74	38.9	\$572.33	\$7.73	151	95	62.9	\$894.46	\$9.42
Shipbuilding, etc.....	34	25	73.5	229.96	9.20	63	58	92.1	576.45	9.94
Building trades.....	91	32	35.2	306.87	9.59	79	45	57.0	476.42	10.59
Woodworking.....	15	6	40.0	60.50	10.08	16	7	43.8	91.19	13.03
Painters, decorators, etc.....	98	70	71.4	670.58	9.58	119	100	84.0	1,015.95	10.16
Unskilled laborers and others not specified.....	17	8	47.1	84.44	10.56	24	24	100.0	266.58	11.11
Total.....	445	215	48.3	1,924.68	8.95	452	329	72.8	3,321.05	10.09

^aIncluding only iron and steel manufacturing in 1903-4.

MILAN.—Perhaps the most ambitious effort in the line of unemployment relief is that made by the Milan Humanitarian Society. This is a charitable institution for various forms of social betterment, established by a legacy of Prospero Moisè Loria who died on October 28, 1892, leaving his entire fortune of over 10,000,000 lire (\$1,930,000) to this institution. Because of continued litigation (see the Survey, July 10, 1909, vol. 22, p. 541), the operations of the society did not begin until 1900, by which time the accrued interest had increased the endowment up to nearly 13,000,000 lire (\$2,509,000). While the scope of this institution is very broad, including technical education, housing reform, employment offices, and statistical study of labor problems, one of the main, if not the main object at present is the relief of the unemployed. The scheme of the unemployed relief or insurance adopted by this organization is especially interesting because it follows the experience of the well-known Ghent system, being based upon subsidies to labor organizations granting such relief. In this way the scheme, in addition to contributing financially to the support of the unemployed, aims mainly at stimulating self-help and mutual help among the organized workers as a means of counteracting the harmful effects of unemployment.

The unemployment insurance fund, which began its operations on July 1, 1905 is regulated by the following constitution:

CONSTITUTION OF THE MILAN UNEMPLOYMENT BENEFIT FUND.

ARTICLE 1. There shall be established an institution for unemployment relief among trade associations aiming at economic betterment of their members and among savings associations, with participation and cooperation of Milan cooperative societies, of the Humanitarian Society, and of any other societies which might desire to participate.

ART. 2. This institution aims to coordinate the individual funds for unemployment relief existing within associations named in article 1. The institution helps to organize funds destined to grant unemployment relief in connection with financial assistance from the cooperative societies, the Humanitarian Society, and other organizations.

ART. 3. Only involuntary unemployment shall be subsidized, and only when caused by dull season, fluctuations in demand and supply of labor, industrial crises, and other suspensions of work, independent of the will of the worker, as removal of factories, breaking down of machinery, conflagrations, etc.

ART. 4. There may be admitted to participation in the institution such associations, which, besides unemployment relief, pursue other aims of social betterment, providence, and cooperation.

ART. 5. The individual trade associations shall determine the conditions regulating the payment of contributions by their members and the granting of subsidies to different groups of workers belonging to the same trade, with consideration of the conditions of wage payments, the possibility and intensity of unemployment. But these conditions must be approved by the council of the institution. The associations must, therefore, present copies of their constitutions signed either by their presidents or by the members of the councils in charge, as the case might be.

ART. 6. The cooperative societies which participate in the institution with their financial assistance may resolve that this financial assistance be designated only for the benefit of the same class of workers of whom the membership of the cooperative society consists.

ART. 7. The addition of the institution to the unemployment benefits, as established by the separate associations and paid out of their funds, is fixed at 50 per cent of the amount of the benefits, but must not exceed 50 centesimi (10 cents) per day, and shall be granted for not exceeding 60 working days in any one year.

The administrative council of the institution shall have the power to reduce in the course of the year the rate of this addition in accordance with the gravity and intensity of unemployment, and also according to the financial condition of the institution.

ART. 8. The institution shall not contribute any additional payments whenever the benefit paid to the unemployed member by the association shall exceed 1.50 lire (29 per cents) per day.

The addition of the institution to the benefits paid by the associations shall be paid at the end of each month to the individuals adhering to the associations, after presentation of their registers with statements of amounts paid out, and after the auditing of these accounts.

ART. 9. All the members of the associations granting unemployment benefits and belonging to the institution must also be registered in some employment office.

ART. 10. The associations must keep accounts of their membership and of the unemployment benefits according to a uniform plan determined by the administration of the institution.

ART. 11. Those members who, in the opinion of the council, do not belong to the class of workmen, those who have deceived or tried to deceive the institution under the disguise of unemployment, or who have refused employment offered by the employment office, shall lose the right to obtain any benefits.

ART. 12. The operations of the institutions are supervised and managed by a council consisting of:

- (a) The president of the Humanitarian Society;
 - (b) Another representative of the Humanitarian Society as chairman;
 - (c) Two representatives of the trade associations belonging to the institution;
 - (d) One representative of the cooperative societies contributing to the institution;
- and

Finally, a representative of those who contribute annually at least 5,000 lire (\$965).

The representatives of the trade associations and cooperative societies are elected in annual meetings of the delegates of the individual associations and cooperative societies. Each association is entitled to one vote.

The associations having more than 100 members have one vote for each 100 members participating in the unemployment relief. The officers elected remain in office one year and are re-eligible.

ART. 13. The Humanitarian Society provides the office force, the headquarters, office expenses, and the printing.

ART. 14. The institution is established experimentally for one year.

The organization and plan of this form of unemployment insurance appears very plainly from the brief constitution quoted. It follows quite closely the plan of the so-called Ghent system. It began operation on July 1, 1905.

In the spring of 1909 an unemployment benefit institution was organized in Brescia by the local branch of the Milan Humanitarian Society. The constitution of this new institution follows closely that of the Milan fund. The subsidy given by it to the unemployment benefits furnished by the trade associations is determined at 50 centesimi (10 cents) per day for not exceeding 40 days. It may be increased to 75 and 90 centesimi (17 cents and 19 cents) to those persons who carry membership in two or three trade associations granting unemployment benefits. According to the latest information available this institution has not yet begun its operations because the necessary trade association unemployment funds have not yet been organized.

The general results of the activity of the unemployment insurance fund of the Milan Humanitarian Society are shown in the following table for 4½ years, from July, 1905, to the close of 1909. The fund began operations on July 1, 1905, with 27 labor organizations affiliated and 6,449 members. By the end of the year the number of affiliated organizations had increased to 33, and by the

end of 1906 to 36. The largest increase in the number of organizations took place during 1907, when it grew to 46, and according to the latest data available the number was 52 at the close of 1909. During the 4½ years the membership in these affiliated organizations increased from 6,449 to 12,815. The number of beneficiaries has somewhat more than doubled, but does not show any alarming growth, except for 1907, presumably due to temporary conditions. The number of members receiving benefits in 1906 was 6.6 per cent of the total; in 1907, 12.4 per cent; and in 1908, 9.4 per cent. The average number of days of benefits per member insured varied from 1.4 to 3 days in the different years; while the average number of days of benefits per member receiving benefits fluctuated between 20.8 and 26.2 days. The total amount of benefits was not very great. In 1907, when the amount was the greatest, it was 56,467.58 lire (\$10,898.24), of which about 31 per cent was contributed by the Humanitarian Society and the rest by the labor organizations. The average amount of benefits paid per insured member in 1907 was 91 cents, and in 1908 only 72 cents, while the average amount of compensation paid to members receiving benefits varied from \$6.88 to \$8.25 in the different years. During the 4½ years the average amount of daily benefits was about 32 cents, of which more than two-thirds was contributed by the labor organizations and nearly one-third by the Humanitarian Society.

STATISTICS OF OPERATION OF THE MILAN HUMANITARIAN SOCIETY UNEMPLOYMENT INSURANCE FUND, 1905 TO 1909.

[Source: Bollettino dell' Ufficio del Lavoro, April, 1909, June, 1910. Società Umanitaria, Milano, Discoccupazione, Collocamenti, Sussidi in Milano, nel 1909.]

Year.	Number of affiliated organizations.	Number of members on Dec. 1.	Members receiving benefits.		Number of days for which benefits were paid.	Amount of benefits paid.		
			Number.	Per cent.		By unions.	By Humanitarian Society.	Total.
1905, July-December.	33	8,363	469	5.6	12,317	\$2,776.12	\$1,091.05	\$3,867.17
1906.....	36	8,913	588	6.6	12,242	2,920.52	1,124.76	4,045.28
1907.....	46	11,944	1,477	12.4	36,046	7,489.49	3,408.75	10,898.24
1908.....	49	12,198	1,145	9.4	26,309	6,347.18	2,485.68	8,832.86
1909.....	49	10,931	1,194	9.3	25,090	6,958.83	2,372.42	9,331.25

Year.	Average number of days for which benefits were paid.		Average amount of benefits paid.				Average amount of benefits paid per day.		
	Per member.	Per beneficiary.	Per member.	Per beneficiary.			By unions.	By humanitarian society.	Total.
				By unions.	By humanitarian society.	Total.			
1905, July-December.	1.5	26.2	\$0.46	\$5.92	\$2.33	\$8.25	\$0.22	\$0.09	\$0.31
1906.....	1.4	20.8	.45	4.97	1.91	6.88	.24	.09	.33
1907.....	3.0	24.4	.91	5.07	2.31	7.38	.21	.09	.30
1908.....	2.2	22.9	.72	5.54	2.17	7.71	.24	.10	.34
1909.....	2.1	21.0	.73	5.83	1.99	7.82	.26	.09	.35

a Not reported.

The distribution of the number of beneficiaries and of days for which benefits were paid is given in the next table for 1907 and 1908, by causes of unemployment. In 1908 dull season and industrial crises were responsible for over 80 per cent of all days of unemployment. In 1907 more than half of the unemployment was caused by lockouts and shutdowns and discharges in consequence of labor disputes.

NUMBER OF PERSONS COMPENSATED AND NUMBER OF DAYS FOR WHICH BENEFITS WERE PAID BY THE MILAN HUMANITARIAN SOCIETY IN 1907 AND 1908, BY CAUSES OF UNEMPLOYMENT.

[Source: Bollettino dell' Ufficio del Lavoro, May, 1908, and April, 1909.]

Causes of unemployment.	Number receiving benefits.		Days for which benefits were paid.			
	1907.	1908.	1907.		1908.	
			Number.	Per cent of total.	Number.	Per cent of total.
Dull season.....	a 652	787	a 15,311	42.04	20,368	77.42
Dismissal because of application of new wage scales.....	86	63	1,344	3.09	2,007	7.63
Lockouts and shutdowns.....	458	60	12,983	35.64	1,594	6.06
Suspension of work because of strike of other workmen supplying new material.....	15	60	551	1.51	878	3.34
Industrial crises.....	(b)	57	(b)	.....	711	2.70
Discharge subsequent to labor disputes.....	266	94	6,237	17.12	605	2.30
Closing of establishments through bankruptcy.....	(b)	17	(b)	.....	96	.36
Suspension of operation for the purpose of taking stock.....	(b)	7	(b)	.....	50	.19
Total.....	1,477	1,145	c 36,426	100.00	26,309	100.00

^a Including industrial crises, closing of establishments through bankruptcy, and suspension of operation for the purpose of taking stock.

^b Included with dull season.

^c Including a duplication of 380 days due to benefits being paid by two societies to the same persons.

The main results of the activity of the Milan unemployment insurance funds are shown in the following table by months of the year. The table is interesting mainly in showing the difficulty of drawing any definite conclusions as to the probable unemployment by seasons of the year. In 1905 the greatest amount of unemployment happened in July, August, and September; in 1906, in July and August; in 1907, in August, September, and December; and in 1908, in January.

The table shows that the number of unemployed persons receiving benefits from the Humanitarian Society is often somewhat smaller than that receiving benefits from the labor organizations themselves. Occasions arise when the subsidy of the Humanitarian Society is denied for noncompliance with some of the regulations.

UNEMPLOYMENT RELIEF BY THE HUMANITARIAN SOCIETY AND THE TRADE ASSOCIATIONS OF MILAN, BY MONTHS, JULY, 1905, TO AUGUST, 1909.

[Source: Bollattino dell' Ufficio del Lavoro. Some of the totals in this table do not agree with the totals in the following table; the figures are given as shown in the original report.]

Year and month.	Number of persons receiving benefits.		Number of days for which benefits were paid.		Amount of benefits paid by trade associations.		Amount of benefits paid by the Humanitarian Society.	Total amount paid to persons receiving benefits both from trade associations and the Humanitarian Society.
	From trade associations.	From the Humanitarian Society.	By trade associations.	By the Humanitarian Society.	To all unemployed members.	To members receiving benefits from the Humanitarian Society.		
1905.								
July.....	173	160	2,393	2,124	\$487	\$429	\$174	\$603
August.....	203	185	2,992	2,576	761	644	229	873
September.....	222	203	3,491	2,989	812	638	275	963
October.....	124	116	1,466	1,388	315	321	128	449
November.....	119	107	1,364	1,122	288	243	105	348
December.....	138	125	1,692	1,437	407	368	133	501
Total, 6 months.....	934	896	13,398	11,636	3,072	2,693	1,044	3,737
1906.								
January.....	122	120	1,454	1,418	295	295	127	422
February.....	82	81	908	896	156	156	81	237
March.....	42	40	486	383	90	90	36	126
April.....	53	40	437	417	119	105	38	143
May.....	44	41	497	388	112	99	37	136
June.....	61	60	611	526	129	114	49	163
July.....	134	124	1,499	1,361	319	305	125	430
August.....	161	155	2,044	1,909	444	439	173	612
September.....	106	97	1,483	1,354	349	342	126	468
October.....	84	78	981	896	232	223	86	309
November.....	119	107	1,804	1,490	486	459	140	599
December.....	92	72	1,602	1,197	382	293	107	400
Total.....	1,100	1,026	13,856	12,242	3,113	2,920	1,125	4,045
1907.								
January.....	74	71	858	822	179	179	77	256
February.....	78	77	896	990	185	185	85	270
March.....	63	62	744	732	136	136	69	205
April.....	198	192	1,755	1,632	419	412	155	567
May.....	131	120	1,527	1,364	342	325	120	455
June.....	133	126	1,669	1,482	389	357	136	493
July.....	163	144	1,973	1,512	406	363	137	500
August.....	357	344	6,949	6,716	1,096	1,045	635	1,680
September.....	374	358	8,109	7,920	1,147	1,034	756	1,850
October.....	265	242	2,303	1,892	553	452	175	627
November.....	288	274	2,468	2,226	552	506	206	712
December.....	525	493	9,380	8,858	2,549	2,435	848	3,283
Total.....	2,649	2,503	38,631	36,046	7,953	7,489	3,409	10,838
1908.								
January.....	405	405	5,227	5,157	1,274	1,274	434	1,768
February.....	135	135	2,030	2,030	508	508	189	697
March.....	118	118	1,334	1,233	399	360	117	477
April.....	136	130	1,501	1,408	294	284	113	402
May.....	167	155	2,506	2,187	596	519	191	710
June.....	156	150	1,775	1,643	369	347	150	497
July.....	201	201	2,471	2,317	503	417	209	626
August.....	205	194	2,720	2,596	635	601	237	838
September.....	234	216	3,116	2,731	774	692	243	942
October.....	150	136	2,462	2,040	555	417	184	601
November.....	133	159	1,936	1,587	513	402	151	553
December.....	191	170	2,533	2,160	602	510	193	709
Total.....	2,300	2,163	29,671	27,094	7,022	6,338	2,482	8,820

* This total is not the correct sum of the items; the figures are given as shown in the original report.

UNEMPLOYMENT RELIEF BY THE HUMANITARIAN SOCIETY AND THE TRADE ASSOCIATIONS OF MILAN, BY MONTHS, JULY, 1905, TO AUGUST, 1909—Concluded.

Year and month.	Number of persons receiving benefits.		Number of days for which benefits were paid.		Amount of benefits paid by trade associations.		Amount of benefits paid by the Humanitarian Society.	Total amount paid to persons receiving benefits both from trade associations and the Humanitarian Society.
	From trade associations.	From the Humanitarian Society.	By trade associations.	By the Humanitarian Society.	To all unemployed members.	To members receiving benefits from the Humanitarian Society.		
1909.								
January.....	113	113	1,663	1,663	315	315	145	460
February.....	118	118	1,358	1,358	305	305	127	432
March.....	120	118	1,448	1,406	325	319	138	457
April.....	147	146	1,678	1,631	353	348	159	507
May.....	253	252	3,506	3,382	729	715	321	1,036
June.....	178	175	2,291	2,212	609	558	208	766
July.....	371	367	3,961	3,835	1,104	1,078	347	1,425
August.....	177	175	2,516	2,354	948	926	222	1,148
September.....	182	169	2,796	2,296	969	860	221	1,081
October.....	200	185	2,118	1,859	714	629	189	818
November.....	199	172	2,137	1,826	683	615	173	788
December.....	155	148	1,285	1,108	333	291	113	404
Total.....	2,213	2,138	26,757	24,930	7,387	6,959	2,363	9,322

UNEMPLOYMENT BENEFITS, BY TRADE ASSOCIATIONS.

In the tables heretofore given the membership of all the affiliated organizations was taken as a whole. The importance of the question of dependence of employment upon the trade calls for additional information. Data concerning the number of cases of relief, the number of days for which benefits were paid, and the amount of benefits paid are shown for the years 1906 to 1908 separately for each labor organization affiliated with this unemployment insurance system. For purposes of obtaining percentages, the mean between the membership of each union in January and in December has been used for 1906 and 1907. As the average membership for the year was available for 1908, it has been used in preference to the mean membership.

In some instances the number of cases of relief seems large, even exceeding the mean membership in one occupation in 1907. This shows that some members received benefits more than once during the year. In 1906 the number of cases of relief to printers was 36.1 per cent of the mean membership, and for the compositors the percentage was 29.5. In 1907 the number of cases of benefits to glass polishers and workers in white glass was 192.6 per cent of the mean membership. The next highest percentage, 89.6, was for chiselers. In 1908 the highest percentage, 35.4, was for metal forgers. The compositors, printers, and lithographers show comparatively high percentages for each of the three years.

UNEMPLOYMENT RELIEF BY THE HUMANITARIAN SOCIETY AND THE TRADE ASSOCIATIONS OF MILAN, BY TRADE ASSOCIATIONS, 1906, 1907, AND 1908.

[Source: Bollettino dell' Ufficio del Lavoro, April, 1907, May, 1908, and April, 1909. Some of the totals in this table do not agree with the totals in the preceding table. The figures are given as shown in the original report.]

Trade associations.	Mem-ber-ship. (a)	Cases of relief by—		Days for which benefits were paid by—			Amount of benefits paid by—				
		Trade asso-ciations.		Trade asso-ciations.			Trade asso-ciations.	Hu-mani-tarian Soci-ety.	Total.		
		Num-ber.	Per-cent of mem-ber-ship.	Num-ber.	Aver-age per mem-ber.	Aver-age per bene-ficiary.					
1906.											
Bronze workers.....	57										
Chisellers.....	66	3	4.5	3	17	0.3	5.7	17	\$4.92	\$1.64	\$6.56
Compositors.....	1,300	383	29.5	370	4,965	3.8	13.0	4,503	1,331.18	409.58	1,740.76
Blacksmiths.....	54										
Metal casters.....	900	26	2.9	26	156	.2	6.0	156	38.50	15.06	53.56
Printers.....	977	353	36.1	323	4,696	4.8	13.3	4,040	770.68	348.57	1,119.25
Instrument makers.....	12										
Bookbinders ^(b)	323	14	4.3	14	144	.4	10.3	144	37.64	14.29	51.93
Lithographers.....	463	70	15.1	70	1,080	2.3	15.4	1,080	208.44	104.22	312.66
Ironworkers.....	70	1	1.4	1	6	.1	6.0	6	1.16	.58	1.74
Goldsmiths.....	140	2	1.4	2	18	.1	9.0	18	5.21	1.74	6.95
Mechanics.....	108	7	6.5	7	119	1.1	17.0	119	16.28	10.87	27.15
Polishers and platers.....	205	6	2.9	6	43	.2	7.2	43	8.30	4.15	12.45
Workers in leather.....	82	15	18.3	15	126	1.5	8.4	126	29.38	11.78	41.16
Newspaper dealers and distributors.....	108										
Dyers.....	265	20	7.5	20	184	.7	9.2	184	41.40	17.95	59.35
Metal turners.....	1,075	42	3.9	54	354	.3	8.4	345	74.80	32.81	107.61
Office employees.....	522	19	3.6	19	496	1.0	26.1	496	106.92	47.87	154.79
Women in printing industry.....	166	6	3.6	6	53	.3	8.8	53	4.32	4.32	8.64
Ribbon makers.....	310	5	1.6	5	52	.2	10.4	52	9.98	5.02	15.00
Workers in trimmings.....	18	1	5.6	1	13	.7	13.0	13	2.70	1.26	3.96
Type founders.....	167	17	10.2	17	147	.9	8.6	147	34.47	14.18	48.65
Hat makers.....	75	6	8.0	6	48	.6	.8	48	2.70	1.35	4.05
Glassworkers.....	74										
Basket makers.....	78										
Typographical union.....	315	52	16.5	50	662	2.1	12.7	644	101.80	31.49	133.29
Bookbinders ^(b)	120	5	4.2	5	51	.4	10.2	51	4.92	4.92	9.84
Metal cutters.....	14										
Brasiers.....	31										
Metal forgers.....	55										
Saddlers.....	150	37	24.7	37	302	2.0	8.2	302	72.86	29.14	102.00
Pharmaceutical employees.....	102	7	6.9	7	104	1.0	14.9	104	10.03	10.04	20.07
Workers in knit goods.....	150										
Gilders.....	116										
Lace workers.....	30	3	10.0	3	20	.7	6.7	20	1.93	1.93	3.86
Upholsterers.....	61										
Horseshoers.....	31										
Total.....	8,790	1,100	12.5	1,055	13,856	1.6	12.6	12,711	2,920.52	1,124.76	4,045.28

^a For 1906 and 1907 the mean membership is given; for 1908 the average for the year is used.

^b The two lines for bookbinders represent two different organizations.

^c Including a duplication of 29 cases, due to the payment of benefits by three different organizations of printers to the same persons. This total is not the correct sum of the items; the figures are given as shown in the original report.

^d Including a duplication of 469 days due to benefits being paid by the typographical union, the compositors' union, and the printers' union to the same persons.

UNEMPLOYMENT RELIEF BY THE HUMANITARIAN SOCIETY AND THE TRADE ASSOCIATIONS OF MILAN, BY TRADE ASSOCIATIONS, 1906, 1907, AND 1908—Continued.

Trade associations.	Member-ship. (a)	Cases of relief by—			Days for which benefits were paid by—			Amount of benefits paid by—			
		Trade associations.		Hu- man- itar- ian Soc- iety.	Trade associa- tions.			Hu- man- itar- ian Soc- iety.	Trade associa- tions.	Hu- man- itar- ian Soc- iety.	Total.
		Num- ber.	Per cent of mem- ber- ship.		Num- ber.	Aver- age per mem- ber.	Aver- age per Bene- fici- ary.				
1907.											
Bronze workers.....	182	121	66.5	121	1,987	10.9	16.4	1,987	\$565.49	\$191.70	\$757.19
Chisellers.....	77	69	89.6	69	1,116	14.5	16.2	1,116	321.93	107.69	429.62
Compositors.....	1,450	576	39.7	532	6,716	4.6	11.7	5,869	1,532.58	536.05	2,068.63
Blacksmiths.....	35										
Metal casters.....	800	79	9.9	79	965	1.2	12.2	965	258.43	88.51	346.94
Printers.....	1,015	468	46.1	399	5,970	5.9	12.8	4,717	1,011.98	434.55	1,446.53
Bookbinders ^(b)	514	31	6.0	31	248	.5	8.0	248	67.10	24.00	91.10
Lithographers.....	546	147	26.9	146	2,036	3.7	13.9	2,024	514.63	195.90	710.53
Ironworkers.....	150	5	3.3	5	84	.6	16.8	84	16.21	8.11	24.32
Goldsmiths.....	120	5	4.2	5	71	.6	14.2	71	8.59	6.85	15.44
Mechanics.....	103	7	6.8	7	90	.9	12.9	90	17.37	8.68	26.05
Polishers and platers.....	208	21	10.1	21	204	1.0	9.7	204	39.37	19.69	59.06
Workers in leather.....	78	9	11.5	9	65	.8	7.2	65	14.67	6.27	20.94
Newspaper dealers and distributors.....	111	2	1.8	2	72	.6	36.0	72	13.90	6.94	20.84
Dyers.....	344	6	1.7	6	67	.2	11.2	67	15.13	6.46	21.59
Metal turners.....	858	186	21.7	186	1,587	1.8	8.5	1,587	423.91	152.68	576.59
Office employees.....	599	20	3.3	19	452	.8	22.6	397	91.19	38.31	129.50
Women in printing in- dustry.....	325	20	6.2	20	226	.7	11.3	226	20.55	20.46	41.01
Ribbon makers.....	279	109	39.1	109	585	2.1	5.4	585	123.82	56.05	179.87
Workers in trimmings.....	136	2	1.5	2	44	.3	22.0	44	8.49	4.25	12.74
Type foundry.....	191	9	4.7	9	56	.3	6.2	56	16.35	6.08	22.43
Hat makers.....	99	15	15.2	15	318	3.2	21.2	318	52.79	20.84	73.63
Glassworkers.....	133	3	2.3	3	29	.2	9.7	29	5.60	2.80	8.40
Basket makers.....	88										
Typographical union.....	325	50	15.4	49	817	2.5	16.3	779	103.91	36.93	140.84
Bookbinders ^(b)	98	12	12.2	12	117	1.2	9.8	117	11.87	11.29	23.16
Metal cutters.....	14										
Brasiers.....	30										
Metal forgers.....	70	2	2.9	2	11	.2	5.5	11	1.93	1.06	2.99
Saddlers.....	125	2	1.6	2	54	.4	27.0	54	11.00	5.21	16.21
Chemical workers.....	123	27	22.0	27	151	1.2	5.6	151	20.26	14.48	34.74
Workers in knit goods.....	150										
Gilders.....	162	1	.6	1	18	.1	18.0	18	2.60	1.22	3.82
Upholsterers.....	72										
Glass decorators.....	c 38										
Employees of cooperative societies.....	c 193										
Horseshoers.....	100										
Comb makers.....	c 40										
Photo-engravers.....	c 80	1	d 1.3	1	24	d 3	24.0	24	3.24	1.16	4.40
Loom turners.....	c 200	199	d 68.6	199	2,997	d 10.3	15.1	2,997	817.84	289.21	1,107.05
Glove makers.....	c 169										
Glass polishers.....	c 30	443	d 192.6	443	11,430	d 49.7	25.8	11,430	1,372.71	1,103.00	2,475.71
Workers in white glass.....	c 200										
Soap and perfume makers.....	c 72										
Helpers in printing shops.....	c 88	2	d 2.3	2	24	d 3	12.0	24	4.05	2.32	6.37
Stereotypers.....	c 74										
Total.....		2,649		2,533	38,631		14.6	36,426	7,489.49	3,408.75	10,898.24

a For 1906 and 1907 the mean membership is given; for 1908 the average for the year is used.

b The two lines for bookbinders represent two different organizations.

c Membership at end of year.

d Based on membership at end of year.

e Including a duplication of 25 cases due to benefits being paid by two societies to the same persons.

f Including a duplication of 380 days due to benefits being paid by two societies to the same persons.

UNEMPLOYMENT RELIEF BY THE HUMANITARIAN SOCIETY AND THE TRADE ASSOCIATIONS OF MILAN, BY TRADE ASSOCIATIONS, 1906, 1907, AND 1908—Concluded.

Trade associations.	Mem-ber-ship. (a)	Cases of relief by—		Days for which benefits were paid by—			Amount of benefits paid by—				
		Trade asso-ciations.		Trade asso-ciations.			Trade asso-ciations.	Hu-man-itarian Soci-ety.	Total.		
		Num-ber.	Per cent of mem-ber-ship.	Hu-man-itarian Soci-ety.	Num-ber.	Average per mem-ber.				Average per bene-ficiary.	Hu-man-itarian Soci-ety.
1908.											
Printing trades:											
Compositors.....	1,484	238	16.04	(b)	9,929	6.6	34.9	8,327	2,037.80	731.55	2,769.35
Printers.....	1,051	200	19.03	(b)	4,735	4.5	21.5	4,312	806.66	388.50	1,195.16
Bookbinders (c).....	515	31	6.02	(b)	968	1.9	31.2	968	254.08	94.09	348.17
Lithographers.....	544	92	16.91	(b)	3,304	6.1	35.9	2,954	785.32	285.06	1,070.38
Women in the print- ing industry.....	415	54	13.01	(b)	1,321	3.2	24.5	1,321	141.14	127.48	268.62
Stereotypers.....	72			(b)							
Photo-engravers.....	63			(b)							
Type founders.....	175	24	13.71	(b)	385	2.2	16.0	385	92.16	37.07	129.23
Newspaper employees	122			(b)							
Printing-shop helpers.	96	3	3.13	(b)	65	.7	21.7	65	6.27	6.27	12.54
Printers' Institute.	320	62	19.38	(b)	833	2.6	13.4	833	166.07	42.78	208.85
Bookbinders (c).....	120	10	8.33	(b)	50	.4	5.0	50	7.34	5.40	12.74
Metallurgy:											
Bronze workers.....	237	49	20.68	(b)	376	1.6	7.7	370	103.74	35.61	139.35
Blacksmiths.....	210			(b)							
Metal founders.....	550	81	14.73	(b)	2,081	3.8	23.3	1,885	647.24	211.98	859.22
Ironworkers.....	390	9	2.31	(b)	95	.2	10.6	95	18.33	9.17	27.50
Polishers and platers.	284	36	12.68	(b)	391	1.4	10.9	391	75.46	37.73	113.19
Metal turners.....	502	33	6.57	(b)	750	1.5	22.7	750	192.03	70.64	262.61
Brasiers.....	24			(b)							
Metal forgers.....	79	28	35.44	(b)	138	1.7	4.9	138	38.98	13.32	52.30
Stone turners.....	267	55	20.60	(b)	353	1.3	6.4	353	101.62	34.06	135.68
Metal beaters.....	85			(b)							
Industries of precision:											
Chisellers.....	87	18	20.69	(b)	222	2.6	12.3	222	33.58	21.43	55.01
Workers in fine me- chanical work.....	70			(b)							
Metal cutters.....	17			(b)							
Gold beaters.....	50			(b)							
Jewelers.....	111	1	.90	(b)	36	.3	36.0	36	10.42	3.48	13.90
Textiles:											
Weavers.....	1,130	34	3.00	(b)	764	.7	22.5	764	181.18	73.73	254.91
Ribbon makers.....	402	11	2.74	(b)	92	.2	8.4	92	16.08	8.44	24.52
Trimmings makers.....	219	4	1.83	(b)	49	.2	12.3	49	9.55	4.73	14.28
Dyers and stampers..	424	49	11.56	(b)	747	1.8	15.2	747	219.33	72.18	291.51
Upholsterers.....	70			(b)							
Glass:											
Glassworkers.....	250	9	3.60	(b)	245	1.0	27.2	245	70.93	23.06	93.99
Glass fitters.....	148	1	.68	(b)	12		12.0	12	2.31	1.16	3.47
Glass decorators.....	38			(b)							
Leather:											
Workers in leather....	82	12	14.63	(b)	214	2.6	17.8	214	55.58	20.84	79.42
Glove makers.....	105	12	11.43	(b)	299	2.8	24.9	299	49.22	24.39	73.61
Saddlers.....	103	2	1.94	(b)	66	.6	33.0	66	19.11	6.37	25.48
Chemical industry:											
Chemical workers.....	150	8	5.33	(b)	46	.3	5.8	46	8.11	4.44	12.55
Soap and perfumery workers.....	70			(b)							
Various industries:											
Hat makers.....	131	15	11.45	(b)	500	3.8	33.3	500	64.94	28.81	93.75
Basket makers.....	90			(b)							
Comb makers.....	26	3	11.54	(b)	133	5.1	44.3	133	25.67	12.83	38.50
Gilders and varnishers	250	1	.40	(b)	18		18.0	18	2.41	1.22	3.63
Paper hangers.....	124	4	3.23	(b)	30	.2	7.5	30	5.80	2.89	8.69
Carriage makers.....	50			(b)							
Office employees, etc.:											
Employees' union....	487	9	1.85	(b)	294	.6	32.7	294	62.53	28.37	90.90
Commercial employ- ees.....	160			(b)							
Employees of coop- erative stores.....	199	8	4.02	(b)	172	.9	21.5	172	33.19	16.60	49.79
Total.....	12,648	1,205	9.54	(b)	29,713	2.3	22.5	27,136	6,347.18	2,485.68	8,832.86

a For 1906 and 1907 the mean membership is given; for 1908 the average for the year is used.
 b Not reported.
 c The two lines for bookbinders represent different organizations.

PROPOSED GOVERNMENTAL UNEMPLOYMENT INSURANCE.

On June 16, 1910, a bill was introduced in the Chamber of Deputies by the minister of the interior for the organization of a system of state insurance against unemployment, on the Ghent plan. The bill proposed only the first steps in that direction, through an appropriation of 100,000 lire (\$19,300) to be used in subsidizing workmen's unemployment insurance organizations.

In a comprehensive report accompanying this bill the general problem of unemployment was discussed and the various methods of relief suggested were compared.

The bill, which is very brief, proposes the appropriation of 100,000 lire (\$19,300) for the fiscal year 1910-11, to be administered by the minister of agriculture, industry, and commerce for the purpose of granting subsidies to labor organizations which grant unemployment relief. Only the following few requirements are specified in the bill: (1) That the unemployment relief granted by these organizations be based entirely, or at least partly, upon the principle of saving, i. e., that the organizations should not be purely charitable and should receive a part or the whole of their revenues from membership contributions. (2) That a definite length of membership be required before relief is granted, so that workmen would not join these organizations only at the time when relief is needed. (3) That the subsidized persons be able-bodied workmen. This, according to the memorandum accompanying the bill, is intended to exclude the sick, the injured, the aged, the invalid, and women after childbirth, for all of which groups special provision either exists already or is contemplated, and should be made upon very different principles. (4) That only persons unemployed against their will be permitted to get relief; this is to exclude: Strikers, as the State can not grant strike benefits under the principle of state neutrality in industrial conflicts; persons voluntarily leaving their employment for any reasons whatsoever; shirkers, who for any reason do not care to make the necessary effort to obtain or retain employment, or persons discharged for some fault. (5) Finally, that the state subsidy be not granted to persons in seasonal trades during the period of such seasonal unemployment.

The details of administration of this act are not prescribed in the bill, but left to an administrative regulation to be issued by royal decree, after consultation with the superior council of labor and the council of providence.

The bill was passed by the Chamber of Deputies almost without discussion. In the Senate it was referred to the central committee, which brought in an unfavorable report on July 7, 1910.^(a)

^a Bollettino dell' Ufficio del Lavoro, Vol. XV, January, 1911.

RAILROAD PENSION AND MUTUAL AID INSTITUTIONS.

INTRODUCTION.

The most important example of compulsory old-age and invalidity insurance in Italy is furnished by the State Railroad Employees' Pension and Aid System (*Il servizio delle pensioni e dei sussedi*), now regulated by the law of July 9, 1908, and the royal decree of April 22, 1909, codifying this law, together with various preceding decrees. But though the legislation above mentioned is of recent origin, various provisions and institutions for pensions and mutual aid have existed in the Italian railroads for nearly 50 years. The present system is a direct outgrowth of these earlier beginnings. It follows these to a very great extent, and can not be understood without a historical account of their origin and development.

The growth of the Italian railroad system did not assume any considerable proportion until toward the end of the eighties, as appears from the following statement:

	Miles.
December 31, 1871.....	3,962
December 31, 1880.....	5,414
December 31, 1890.....	8,170
December 31, 1900.....	9,870
June 30, 1907.....	10,711

Since 1885 a very large proportion of the Italian railroad mileage has been owned by the State, as is shown by the following data, referring to June 30, 1907:

Railroads owned by—	Miles.
The State.....	8,254
Private companies.....	2,352
Jointly by the State and private companies.....	105
Total.....	10,711

While the Italian railroad mileage equaled only 4.5 per cent of the American system on the same date, the personnel of the Italian service is larger than the above proportion of mileage would indicate. Unfortunately, for the entire Italian railroad system, no data later than for 1903 are available, but for the state-operated railroads, the number of employees on June 30, 1906, was 118,815, and on June 30, 1907, 134,611, so that the total number of employees must exceed 150,000. The total number of employees for 1891 to 1903, and the total and average remuneration, including the entire contribution by the railroads for the benefit of the employees, are shown in the table following:

For the year 1903 detailed information is given for the three main railroad systems and for other railroads existing in that year. This shows that three large railroad systems, which included in 1903 7,960 miles, or less than 75 per cent, claimed over 90 per cent of the

employees. The salaries were considerably higher on these three roads than for the smaller roads, and the total contributions for the benefit of the employees of the smaller roads were very small, since these smaller roads do not have any organized provident institutions.

NUMBER OF EMPLOYEES, SALARIES, AND CONTRIBUTIONS OF RAILROADS TO BENEFIT INSTITUTIONS, 1891 TO 1903.

[Source: *Annuario Statistico Italiano*, 1905-1907. Vol. II.]

Year.	Number of employees.	Salaries paid.		Contributions of railroads to benefit institutions.			Total salaries and contributions to benefit institutions.	
		Amount.	Average per employee.	Amount.	Per cent of salary.	Average per employee.	Amount.	Average per employee.
1891.....	98,180	\$22,262,387	\$226.75	\$813,468	3.65	\$3.29	\$23,075,855	\$235.04
1892.....	96,573	21,845,473	226.21	833,544	3.82	8.63	22,679,017	234.84
1893.....	96,873	21,907,168	226.14	839,152	3.83	8.66	22,746,320	234.80
1894.....	96,924	22,054,087	227.54	828,713	3.76	8.55	22,882,800	236.09
1895.....	93,550	22,454,024	240.02	849,537	3.78	9.08	23,303,561	249.10
1896.....	96,801	22,816,100	235.70	839,318	3.68	8.67	23,655,418	244.37
1897.....	101,065	23,529,483	232.81	872,808	3.71	8.64	24,402,291	241.45
1898.....	101,110	23,452,256	231.95	866,735	3.69	8.57	24,318,991	240.52
1899.....	101,871	24,020,649	235.79	865,695	3.60	8.50	24,886,344	244.29
1900.....	105,372	24,726,268	234.66	1,007,209	4.07	9.56	25,733,477	244.22
1901.....	108,690	25,522,854	234.82	996,422	3.90	9.17	26,519,276	243.99
1902.....	111,271	26,548,146	238.59	1,340,459	5.05	12.05	27,888,605	250.64
1903:								
Mediterranean rail- road.....	52,500	13,338,735	254.07	617,048	4.63	11.75	13,955,783	266.82
Adriatic railroad.....	44,437	11,082,298	249.39	715,309	6.45	16.10	11,797,607	265.49
Sicilian railroad.....	6,460	1,432,119	221.69	78,682	5.49	12.18	1,510,801	233.87
Total.....	103,397	25,853,152	250.04	1,411,039	5.46	13.65	27,264,191	263.68
All other.....	9,297	1,710,631	184.00	40,582	2.37	4.37	1,751,213	188.36
Grand total, 1903....	112,694	27,563,783	244.59	1,451,621	5.27	12.88	29,015,404	257.47

Since 1905 the Italian Government has operated not only all the railroads it owns, but also some which are the property of private owners. Of the entire railroad net of 10,711 miles on June 30, 1907, 8,699 miles, or over four-fifths, were operated by the State and only 2,012 miles by private companies.

ORGANIZATION OF PROVIDENT INSTITUTIONS.

In 1885, before the nationalization of most Italian railroads took place, there existed in Italy four large railroad systems: The Upper Italian (*Ferrovie Alta Italia*), the Southern (*Ferrovie Meridionali*), the Roman (*Ferrovie Romane*), and the Calabrian Sicilian (*Ferrovie Calabro-Siculi*).

Within the 20 years, 1860 to 1880, pension funds and mutual aid associations were organized for each one of these four railroad systems as follows:

DATE OF ORGANIZATION OF RAILROAD PENSION FUNDS AND MUTUAL AID SOCIETIES.

[Furnished by the director of the Office of Social Insurance, Rome.]

Pension funds.	Date of organization.	Mutual aid societies.	Date of organization.
Alta Italia.....	Jan. 1, 1862	Meridionali.....	July 1, 1869
Meridionali.....	July 1, 1869	Alta Italia.....	Jan. 1, 1870
Romane.....	Jan. 1, 1871	Romane.....	Jan. 1, 1879
Calabro-Sicule.....	Jan. 1, 1880	Calabro-Sicule.....	Feb. 1, 1880

While there were certain differences between the respective funds of the different railroads, such as relating to the amount of contributions, pensions, subsidies, conditions of membership, etc., yet these two groups of funds belonged to two well-defined types. The purpose of the pension funds was to grant pensions (annuities) to the employees for old-age and ordinary invalidity, exceptional (increased) pensions for invalidity due to some injury sustained in service, pensions to widows and orphans, and lump-sum benefits to the members or their families in case all the requirements for pensions were not complied with.

The mutual aid society rather belonged to the type of sick benefit funds. Their purpose included medical care and treatment, cost of medicines and appliances, sick benefits, funeral benefits, but also invalidity pensions in case of complete disability, and small lump-sum death benefits. The two different forms of mutual provision were shaped to the needs of the two classes of employees. The higher grades of employees held membership in the pension funds, while those of the lower grades were inscribed in the mutual aid societies, in which both contributions and benefits were lower, but which also provided a system of sick insurance, for which a greater need is felt among the lower grades of employees.

The funds of the Upper Italian Railway presented an important exception to the rule in that most of its employees belonged both to the pension fund and to the mutual benefit society.

In all funds and societies membership was compulsory for all permanently employed, and all these funds and societies were subsidized by the railroad companies to a considerable extent.

In August, 1875, the upper Italian railroad system, the largest of the four, was purchased by the Government, and as the movement for the government ownership of the railroads gained headway during the following 10 years, the Italian Government acquired ownership of most Italian railroads by the law of April 27, 1885. The entire network of government railroads was divided into three sys-

tems, the Mediterranean and the Adriatic systems on the mainland, and the Sicilian system on the island, and these three systems were leased for operation to three private corporations for 60 years with reserved right to cancel the leases after 20 years.

REORGANIZATION OF PROVIDENT INSTITUTIONS.

In accordance with this reorganization of the railroads, a corresponding reorganization of the pension funds and benefit societies was thought necessary and was ordered by the law of April 27, 1885,^(a) which required a pension fund and a mutual benefit society for each of the three new operating companies, and uniform constitutions and by-laws for these funds and societies. The reorganization was not effected without some delay, provisional uniform constitutions going into effect on January 1, 1890. The essential feature of both the pension and the mutual benefit funds was their mutual character, combined with the absence of strict actuarial rules. The contributions made by and for the many members were paid into a common fund, from which payments of pensions and benefits were made, and the amounts of pensions and benefits were dependent upon the length of service and the salary toward the end of the service rather than the amounts paid in by the member. Under such circumstances difficulties were bound to arise as soon as obligations began to mature.

The balance sheets began to show large deficits and a law was passed by the Parliament and approved on August 15, 1897, which ordered a reorganization of the funds.^(b) This act ordered that the activity of the existing pension funds and mutual benefit societies be limited to persons in service on December 31, 1896, and that for employees entering the railroad service since January 1, 1897, new provident institutions be organized not later than January 1, 1898. By this act the Government was also ordered to introduce, within six months, a bill into Parliament for the better regulation of the existing railroad pension funds and mutual benefit societies.

Meanwhile, to counteract the effect of the deficits of the pension funds and the mutual benefit societies, the Government was forced to establish by this act a small surtax upon passenger and freight rates for the benefit of the funds, as follows: For through trains, 5 per cent upon passenger tickets for distances over 20 but under 30 kilometers (over 12.4 but under 18.6 miles), and 10 per cent for distances of 30 kilometers (18.6 miles) and over, and for mixed and accommodation trains 1 per cent for all distances over 20 miles, and for the freight

^a Raccolta Ufficiale delle Leggi e dei Decreti del Regno d' Italia, 1885, vol. 75.

^b Raccolta Ufficiale delle Leggi e dei Decreti del Regno d' Italia, 1897, vol. 3, p. 2544.

rate a surcharge of 10 centesimi (1.9 cents) per ton for each loading or unloading. These provisions of the law were ordered to go into effect three months after publication (August 26, 1897) for internal communication and commerce, and five months after publication for international communication and commerce, to remain in force only until December 31, 1898; but to be abolished after six months if within that time the Government should fail to introduce a bill for the regulation of the existing pension institutions. It was found necessary subsequently to extend the action of this special surtax by repeated enactments to March 31, 1900.^(a)

The law of March 29, 1900,^(b) which established definite legislation concerning the old as well as the new provident institutions, substituted other more or less permanent sources of revenue for the covering of old deficits. The conditions of the act of 1897 were complied with, and on March 29, 1900, the law creating the new provident institutions, establishing certain new regulations for the existing pension funds and mutual benefit societies, and providing for new sources of revenue to cover old deficits, was finally approved by the Crown.

The minister of public works was ordered to ascertain, within one year, the amounts of deficits of the pension funds and mutual benefit societies of the four large railroad systems on June 30, 1885, according to all obligations assumed and also the deficits of the existing three funds and societies on the date of the adoption of the new constitutions, the old deficits to be made good by the State, while the new deficits were to be met by the operating societies according to the law of August 15, 1897. To meet these old deficits of June 30, 1885, the following new taxes were created by the law for the government railroads operated by the three corporations. An increase of the surtax upon fast freight rates from 13 to 16 per cent, and upon slow freight rates from 2 to 3 per cent. The tax was ordered to go into effect on May 1, 1900 (for international trade five months later). The proceeds were required to be deposited with the State Loan and Deposit Bank, to be distributed among the existing funds and societies according to the same rules which were applicable to the redistribution of the assets of the old pension funds and mutual benefit societies among the new ones organized in 1885.

The new regulations for pension funds and mutual benefit societies will be discussed more fully in connection with a detailed analysis of the constitutions. Briefly, they conferred the right to a pension at the age of 60 and after 30 years of membership for sedentary

^a Raccolta Ufficiale delle Leggi e dei Decreti del Regno d'Italia, 1898, vol. 3, p. 2796; *ibid.*, 1899, vol. 2, p. 1240; *ibid.*, 1899, vol. 2, p. 1730; *ibid.*, 1899, vol. 3, p. 3045.

^b Raccolta Ufficiale delle Leggi e dei Decreti del Regno d'Italia, 1900, vol. 1, p. 670.

occupations, and at the age of 55, after 25 years of membership, for active occupations; invalidity pensions after 10 years of membership, this qualification being waived in case of invalidity due to injury; and regulated the pensions of widows and orphans. Concerning the mutual benefit societies, the main provisions which the law established were the prohibition of pensions to survivors of members and the prohibition of any sick benefits during the first five days of illness.

The organization of a commission, including representatives of the Government, the railroads, and the members of these institutions, was ordered for the preparation of new constitutions, to be uniform for all pension funds and for all mutual benefit societies, this commission to determine the necessary revenues to correspond to the assumed obligations. The law also required that at the expiration of a period of the contract for operation of the railways a technical balance be struck and the ascertained amount of deficit be charged to the operating society.

Regulations for the new provident institutions form the main part of the law of March 29, 1900. Such institutions were ordered to be organized within six months after the promulgation of the law, to include all employees who entered railway service after January 1, 1897. The essential difference between the new provident institutions and the old funds and societies is the introduction of the system of individual accounts. Two sections were organized in each provident institution, one corresponding to the pension fund and the other to the mutual benefit society. The membership in the first section was compulsory to employees receiving annual or monthly salaries; in the second section, to employees paid a daily wage. The sources of revenue—i. e., the contributions of the members and of the railroad companies and the subsidiary sources—were practically the same for the two sections, but the main revenues were credited to individual accounts, which were to form the basis of the pensions or lump sum-benefits, while the other revenues were paid into a collective fund and were to be used for special increased pensions, etc. The second section, similar to the mutual benefit society, also renders medical and pharmaceutical service and grants sick benefits to its members. The constitutions of these provident institutions were approved by the royal decree of January 31, 1901.

The constitutions of all these three sets of institutions were modified several times during the last decade, though the modifications were slight. As the laws of 1897 and 1900, besides requiring the organization of the new provident institutions, also established certain new conditions of administration for the old existing institutions, namely, the participation of the members in the administration hitherto entirely left to the railroad companies, and also a certain

degree of governmental control, new constitutions embodying these changes were approved by the royal decree of August 2, 1902.

As the private operation of the railroads proved unsatisfactory, the Italian Government decided to take advantage of the twenty-year clause in the lease, and the operation of the main railroad system was assumed on July 1, 1906, in conformance with the law of April 22, 1905. New constitutions embodying only minor changes were approved by royal decree of March 17, 1907, for the pension funds and mutual benefits societies, as well as for the new provident institutions. By these acts the new and the old institutions were made more nearly uniform.

It soon developed, moreover, that in view of the consolidation of the railroads under the unified administration by the State, there was no necessity for three separate institutions of each of the three groups, and one week after the new constitutions were approved, the law of March 24, 1907, ordered their consolidation into one pension fund, one mutual benefit society, and one provident institution. Constitutions of these three unified institutions were approved by the royal decree of May 23, 1907.

The entire system was radically changed by the law of July 9, 1908, which aimed to reduce the differences of treatment of employees of different groups. The law prescribed a unified system of pensioning, which was worked out in a codification of the law with some of the provisions in the constitutions of the three consolidated institutions, published by royal decree of April 22, 1909. According to this law the three institutions ceased to exist on December 31, 1908, and the new system was introduced on January 1, 1909.

STATE RAILROAD PENSION FUND.

This institution is the most important of the three because the principles of its organization were closely followed in elaborating the details of the existing pension system, in which the membership of all the three institutions was merged.

The purpose and scope of the pension fund was the granting of old-age and invalidity pensions to its members, pensions to widows and orphans of deceased members, lump-sum benefits to members or widows and orphans in cases in which a right to a pension had not been acquired, and in addition the fund assumed the administration of accident insurance in compliance with the general laws governing such insurance.

The fund was specially designed for the employees of the state railway system; within that system is included the actual operating force and the clerical force, but not the working force of the railroad shops.

Membership in the fund was restricted to such persons as held membership in one of the three pension funds on December 31, 1896,

including, as was explained above, mainly salaried employees and such persons who were on that date members of a mutual benefit society and later became entitled to membership in the pension fund by promotion to a higher position.

The pension fund took care of ordinary superannuation, as well as of ordinary invalidity at an early age, providing special benefits for invalidity due to occupational diseases or to miasmatic fevers; it granted pensions to survivors in case of death of either a member or a pensioner.

Regular superannuation pensions were payable to members who retired from the service, either by their own request or by the decision of the administration, after attaining 60 years of age and after 30 years of membership in the fund, in case of sedentary occupations, or after attaining 55 years of age and after 25 years of membership in case of so-called active occupations, which include in general the train service, yard service, and station service. Employees of either group may demand a pension at the age of 55 and after 25 years of membership, provided they have had 15 years of actual service.

Invalidity pensions were payable at any age, when such invalidity had been established, provided it was preceded by 10 years of membership in the fund. This condition was waived when invalidity was due to an injury or other lesion acquired through the service, or to some miasmatic fever, caught in consequence of the service in an infected locality.

If members of 10 years standing were separated from the service by the railroad administration without any fault of their own, they may be permitted by the administration of the fund to retain their membership in the fund, contributing according to the last salary, the railroad making the regular 8 per cent contribution. In such cases families retain the same rights as if the person had been in the service.

In addition to the pensions to members, pensions were paid to widows and children of deceased members or pensioners as explained below.

BENEFITS.

As was pointed out above, the chief characteristic of these pension funds was the absence of any strict dependence between a member's accumulated contributions and his pensions.

Normal pensions, which may be termed plain superannuation pensions, were liquidated on a basis of 3 per cent of the accumulated earnings of the members from whom deductions were made, to which are added one-twelfth of each increase in salary during the time. The actual annual pension was equal to nine-tenths of this computed amount, with a minimum of 300 lire (\$57.90) and a maximum of 8,000 lire (\$1,544). This, in case of a complete 25 years' membership,

would give a pension of over 75 per cent of the average annual salary. In case of premature invalidity due to some injury or disease received in the service, or to a miasmatic fever, the pension fund was even more liberal. In such cases the pension was computed on a basis of 25 years of membership, no matter how long or short it actually was, and for such purposes the last year's salary was assumed for all missing years.

The amount of pensions to widows and orphans depended upon the amount of the pension which the deceased member was receiving, or to which he would have been entitled if he had left the service on the day of his death.

The amounts of these pensions were proportionately very high, namely, 50 per cent of the original pension if the widow alone survived; 65 per cent if she had any minor children; if in addition minor children of the deceased by a previous marriage survived, the 65 per cent was divided among all the survivors, giving the widow two shares, and not less than 25 per cent. The widow's pension was paid until remarriage, and the children's pension until they were of age, or in case of female children until marriage, if that took place before they became of age.

If a member of the fund was forced to give up his position, either because of invalidity or of the abolition of his position before he had acquired the right to a pension, he received a benefit in the nature of one payment equal to 3 per cent of his total salary. A proportionate amount according to the pension regulations was granted to the widow and children of a deceased member who died before acquiring the right to a pension. If minor children, but no widow, survived, they received 50 per cent of the computed amount divided equally among all those surviving or still entitled to a pension because of their minority. If only one minor child remained he received 25 per cent of the computed amount.

Thus, with a few minor exceptions, the pension fund provided very high pensions for those who reached the superannuation age and for invalids of the service.

But in view of the fact that the pension system was a contributory one (the contributions being very high as will appear in the following section) it seemed to be somewhat of a drawback that the pension rights were lost altogether by resignation or dismissal from the service, except in the cases of persons in the employ of railroads subsequently acquired by the State, who lost their position at the time of the purchase of that road, and who might retain membership in the pension fund.

The loss of the right to a pension because of resignation carried with it a corresponding total loss to the widow and children, while in

case of dismissal the wife and minor children were treated under the same rules as in case of death of the employee.

While all invalidity, whether or not due to industrial accidents, gave the right to a pension, a certain number of the employees insured in the fund come under the provisions of the accident compensation law, and therefore special provisions were included in the constitution for the purpose of adjusting these two rights and preventing double compensation for accidents. In general these provisions may be summarized as follows: That in so far as the railroad administration had not otherwise provided for their accident insurance, the pension fund acted as the agent of the railroad administration for payment of compensation; of the two amounts, that due to him as a member of the pension fund and that due under the accident compensation law, the larger was paid to the injured employee or to his survivors, the distribution being made according to the provisions of the accident law; on the other hand the railroad administration was required to pay to the pension fund the amount of compensation due under the accident law.

SOURCES OF INCOME.

All of the assets of the three pension funds were transferred to the State Railroad Pension Fund. The current revenues of the fund may be divided into three main groups: (a) The periodical contributions of the members; (b) the periodical contributions of the railroad administration as an employer; and (c) a special source of income created by the law of March 29, 1900. The contributions paid by the private operating companies before the assumption of the railroad business by the Government were then made by the State, but as before from the operating accounts.

In addition, donations and legacies might be received by the fund, and the income from investments of the funds on hand were added to the revenue.

Under the constitutions of January 1, 1890, for the three individual pension funds monthly deductions of 4.5 per cent were made from the salaries and other accessory payments made to the employees. By the constitution of 1902 these were increased to 5.5 per cent on October 21, 1902. In case of an increase of the annual salary, one-twelfth of the increase was retained during the first month after the increase went into effect. In other words, the actual increase of the salary was retained for one month.

If the salary was reduced because of suspension, leave, sickness, or transfer to a waiting list, the deductions were made as if no such decrease of salary had taken place. If the salary was entirely discontinued for a time, the employee must make the deferred payments on return to the active service.

From January 1, 1890, until October 21, 1902, the railroad administration paid to the pension fund 5 per cent, and since that date 8 per cent, of the salaries subject to the deductions, and in case of a promotion one-twelfth of the increase in the annual salary.

In case of temporary reduction or discontinuance of the salary the administration met its obligations at the same time that the employee did.

A special source of income was created for the fund by the law of March 29, 1900, act 3, in turning into the fund the proceeds of the sale of tickets of admission to railroad stations.

ADMINISTRATION.

The pension fund was intrusted to an administrative committee of 12 members, of whom 6 were nominated by the state railroad administration and 3 were selected by the members in active service. Of these 9 members all but one of the administration's representatives must be employees in active service. The other 3 members were required to be representatives of other governmental departments, one of the Ministry of Agriculture, Industry, and Commerce and the other two financial experts from the Ministry of the Treasury. Several other high officials were mentioned as consultative members of the committee.

The committee elected its own president, vice-president, and secretary, who were not to be the above-mentioned representatives of government departments. Various provisions were contained in the constitution concerning the investment of the funds and the auditing and reporting of the financial affairs. The entire cost of the administration was assumed by the railroad administration.

STATISTICS.

MEMBERSHIP.—The movement in the membership and the number of pensioners in all the three funds is shown in the following table. The rapid decline in the membership since 1897 is easily explained by the organization of the new provident institutes. But even before that the membership appeared to be decreasing, though, as was shown in the table on page 1936, the number of employees of the Italian railroads was growing. But it seems to have been the policy to increase the number of temporary appointees rather than of permanent employees. Thus while the number of permanent employees has actually decreased within the decade 1891 to 1901 from 89,723 to 88,995, the number of temporary employees increased from 8,457 to 19,695.

With the practical closing of the pension funds to new members, the proportion of pensioners to members rapidly increased. In 1890 there were 16.5 pensioners for each 100 members, and in 1907, 67.5 pensioners per 100.

AVERAGE ANNUAL NUMBER OF MEMBERS AND PENSIONERS IN THE THREE RAILROAD PENSION FUNDS.

[Source: Ferrovie dello Stato, Rapporto sulle Operazioni e sulle Stato Economico delle Cessate Casse Pensioni per l'anno 1907.]

Year.	Adriatic fund.		Mediterranean fund.		Sicilian fund.		Total of the funds.	
	Average number of members.	Average number of pensioners.	Average number of members.	Average number of pensioners.	Average number of members.	Average number of pensioners.	Average number of members.	Average number of pensioners.
1890.....	13,964	2,598	22,304	3,481	851	34	37,119	6,113
1891.....	13,927	2,997	22,506	3,883	844	40	37,277	6,920
1892.....	13,601	3,462	22,405	4,387	890	49	36,896	7,898
1893.....	13,286	3,817	22,205	4,809	915	55	36,406	8,681
1894.....	13,069	4,118	22,008	5,145	941	71	36,018	9,334
1895.....	12,754	4,438	21,895	5,489	954	90	35,603	10,017
1896.....	12,494	4,701	21,705	5,905	972	103	35,171	10,709
1897.....	12,341	4,959	21,503	6,318	951	136	34,795	11,413
1898.....	12,196	5,196	21,310	6,701	933	153	34,439	12,050
1899.....	11,937	5,442	20,902	7,155	907	184	33,746	12,781
1900.....	11,669	5,706	20,348	7,626	890	200	32,907	13,532
1901.....	11,368	5,951	19,843	8,070	875	218	32,086	14,239
1902.....	10,986	6,203	19,353	8,467	881	230	31,220	14,920
1903.....	10,569	6,453	18,859	8,870	900	260	30,328	15,583
1904.....	10,155	6,695	18,309	9,293	892	275	29,356	16,263
1905.....	9,762	6,924	17,753	9,618	889	282	28,404	16,824
1906.....	9,447	7,058	17,244	9,865	861	291	27,552	17,214
1907 (a).....	9,240	7,123	13,820	10,099	861	293	26,921	17,515
1907 (b).....							26,321	17,764

a First six months.

b Last six months; united fund.

A study of the reports concerning the movement of membership of the pension funds furnishes very valuable material concerning the death rate and the disability and retirement rates of railroad employees. In the following tables these rates are computed for the entire membership as well as for the main groups. Perhaps the most interesting feature brought out is the small number of deaths or retirements due to accidents. Thus, for the ten years 1890 to 1899, the total number of retirements due to accidents was, for the two larger funds, 183, and the total number of fatal accidents 204, or 18.3 and 20.4 per annum, respectively. With an average membership of 35,000 members, this gives a rate of one accidental invalidity per 1,913 employees, and one fatal accident to 1,716 employees. The general rate of retirements and deaths naturally increases, in view of the discontinuance of new admissions in 1897, but not so rapidly as one would expect. To some extent this prohibition of new admissions was limited by the rule permitting transfers of members of the mutual benefit societies by promotion from a daily wage to a monthly salary. During 1890 to 1894 the average rate of retirement for old age and disability was 2 per cent, or 20 per thousand; for 1895 to 1899, 2.14 per cent, or 21.4 per thousand; for 1902 to 1906, 23.6 per thousand;

and in 1907, 36.5 per thousand. The average death rate in 1890 to 1894 was 9 per thousand; in 1895 to 1899, 8.6 per thousand; and in 1902 to 1906, 9.7 per thousand.

The percentages of resignations and dismissals are small, and have been growing very much smaller. As the constitution provided no repayments for members who resigned or were dismissed for cause, the increased value of the acquired rights to a pension evidently had the effect of counteracting the tendency both for resignations on the part of the employee and dismissals by his superiors.

MOVEMENT OF MEMBERSHIP IN THE ADRIATIC, MEDITERRANEAN, AND SICILIAN PENSION FUNDS, 1890 TO 1907.

[Source: The annual reports of the funds. From 1890 to 1899 the Adriatic and Mediterranean funds only are included.]

Year.	Number of members—			Members lost because of—									
				Disability.				Death.				Resignation or dismissal.	
	In January.	Admitted during year.	Total.	Due to old age and invalidity.	Due to accident.	Total.	Per cent.	Natural.	Accidental.	Total.	Per cent.	Number.	Per cent.
1890.....	36,006	1,697	37,703	616	25	641	1.7	306	26	332	0.9	201	0.5
1891.....	36,529	1,232	37,761	856	18	874	2.3	316	24	340	.9	210	.6
1892.....	36,337	688	37,025	891	22	913	2.5	302	15	317	.9	123	.3
1893.....	35,676	731	36,407	605	25	630	1.7	311	31	342	.9	128	.4
1894.....	35,307	594	35,901	651	10	661	1.8	297	11	308	.9	86	.2
1895.....	34,846	732	35,578	677	17	694	2.0	316	20	336	.9	97	.3
1896.....	34,451	614	35,065	725	11	736	2.1	276	20	296	.8	87	.2
1897.....	33,946	842	34,788	695	10	705	2.0	252	16	268	.8	73	.2
1898.....	33,742	676	34,418	712	20	732	2.1	288	20	308	.9	107	.3
1899.....	33,271	313	33,589	821	25	846	2.5	259	21	280	.8	51	.2
1902.....	31,669	149	31,818	353	20	716	2.3	180	12	304	1.0	34	.1
1903.....	30,764	232	30,996	439	17	794	2.6	167	11	300	1.0	30	.1
1904.....	29,890	107	29,997	(a)	(a)	805	2.7	(a)	(a)	278	.9	39	.1
1905.....	28,847	88	28,935	(a)	(a)	680	2.4	(a)	(a)	280	1.0	10	(b)
1906.....	27,965	61	28,026	(a)	(a)	534	1.9	(a)	(a)	298	1.1	27	.1
1907 (c).....	27,167	50	27,217	(a)	(a)	373	1.4	(a)	(a)	164	1.1	3	(b)
1907 (d).....	26,677	62	26,739	(a)	(a)	612	2.3	(a)	(a)	140	1.1	21	.1

a Not reported separately.

b Less than one-tenth of 1 per cent.

c First six months.

d Last six months.

e In July.

The same data are given in the following table for each branch of the service, for the ten-year period 1890 to 1899, only the two large funds being included. In both funds the highest retirement rate is found in the groups of maintenance-of-way and station service, and the lowest in the office force. The rates of retirement are much higher for the Adriatic fund, which had a membership of a much higher average age. The higher retirement rates for the maintenance-of-way and station service is partly due to a higher average age of these groups, railway employees being transferred to these easier occupations when they

are considered because of their age unfit for the more strenuous duties of the active train service. Thus, in 1890 in the Adriatic fund there were among the office employees only 15.7 per cent. 50 years of age and over; among the engineers and firemen, 17.5 per cent; in the train service, 18.7 per cent; in the station service, 20.2 per cent; and in the maintenance-of-way, 34.2 per cent.

AVERAGE MEMBERSHIP FOR 10-YEAR PERIOD 1890 TO 1899 IN THE MEDITERRANEAN AND ADRIATIC PENSION FUNDS, BY BRANCH OF THE SERVICE.

[Source: The annual reports of the funds.]

Fund and branch of the service.	Member-ship.	Members lost because of—									
		Disability.				Death.				Resigna- tion or dismissal.	
		Due to old age and invalidity.	Due to accident.	Total.	Per cent.	Natural.	Acci- den- tal.	Total.	Per cent.	Num- ber.	Per cent.
Mediterranean fund:											
Engineers and firemen.....	2,276	33	5	38	1.7	17	2	19	0.8	2	0.09
Train service.....	2,120	34	2	36	1.7	15	3	18	.8	6	.28
Maintenance of way.....	3,696	91	2	93	2.5	26	3	29	.8	4	.11
Station service.....	6,793	131	5	136	2.0	52	5	57	.8	23	.41
Office force.....	7,724	110	1	111	1.4	72	1	73	.9	24	.31
Total.....	22,609	399	15	414	1.8	182	14	196	.9	64	.28
Adriatic fund:											
Engineers and firemen.....	1,306	27	2	29	2.2	11	1	12	.9	1	.77
Train service.....	1,061	27	3	30	2.8	7	3	10	.9	3	.28
Maintenance of way.....	1,986	98	1	99	5.0	14	2	16	.8	1	.50
Station service.....	2,481	84	1	85	3.4	22	2	24	1.0	16	.64
Office force.....	6,522	92	.....	92	1.4	54	1	55	.8	32	.49
Total.....	13,356	328	7	335	2.5	108	9	117	.9	53	.40

SALARIES.—For a better appreciation of the data concerning the pensions paid by these funds, it is necessary to give some information concerning the earnings of the Italian railroad employees. In the following tables the average salaries have been computed from the annual reports of the Adriatic and Mediterranean funds, as far as available, namely for 1890 to 1899, and 1890 to 1903, respectively. The average earnings have increased during this period from \$314 to \$369 in the Adriatic fund, and from \$278 to \$339 in the Mediterranean fund. These averages are considerably higher than for the entire railroad personnel, as shown in the table on page 1936, and are explained by the fact that the pension funds included mainly the higher paid employees. The discontinuance of new admissions in 1897, except by transfer from the mutual benefit societies, in itself is responsible for a considerable increase in the average salary. As a matter of fact, the greatest increase in the average salary is noticeable in the

class of office employees where the highest salaries are paid; while in some of the other groups there was little or no increase.

The average remuneration of these employees in the Adriatic fund during the last five years for which information is available (1895 to 1899) was as follows: Engineers and fireman, \$410; train service, \$281; maintenance of way, \$185; station service, \$204; and in office service, \$450. In the Mediterranean fund data are available for a later period, 1900 to 1903, and though more recent are somewhat lower, namely: Engineers and firemen, \$399; train service, \$276; maintenance of way, \$175; station service, \$192; and office employees, \$477.

AVERAGE ANNUAL SALARIES OF MEMBERS OF THE MEDITERRANEAN PENSION FUND, 1890 TO 1903, AND OF THE ADRIATIC PENSION FUND, 1890 TO 1899, BY BRANCH OF SERVICE.

[Source: The annual reports of the funds.]

Fund and year.	Engineers and firemen.		Maintenance of way.		Train service.	
	Member-ship.	Average annual salary.	Member-ship.	Average annual salary.	Member-ship.	Average annual salary.
Mediterranean fund:						
1890.....	2,104	\$376	4,154	\$157	2,053	\$251
1891.....	2,131	377	3,985	157	2,042	253
1892.....	2,152	376	3,857	159	2,049	252
1893.....	2,154	377	3,717	160	2,054	253
1894.....	2,155	380	3,618	159	2,082	253
1895.....	2,190	377	3,493	160	2,096	249
1896.....	2,252	379	3,399	161	2,075	253
1897.....	2,293	378	3,272	160	2,087	255
1898.....	2,369	374	3,151	164	2,033	256
1899.....	2,351	377	3,031	168	1,987	262
1900.....	2,363	384	2,885	172	1,923	265
1901.....	2,372	388	2,739	173	1,876	266
1902.....	2,341	403	2,653	175	1,815	285
1903.....	2,329	420	2,532	179	1,755	288
Average:						
1890 to 1894.....	2,139	377	3,866	158	2,056	253
1895 to 1899.....	2,291	377	3,269	163	2,056	255
1900 to 1903.....	2,351	399	2,702	175	1,842	276
Adriatic fund:						
1890.....	1,009	443	2,385	176	1,094	272
1891.....	1,008	445	2,253	178	1,063	275
1892.....	980	449	2,032	179	1,026	276
1893.....	1,274	409	1,967	179	1,007	287
1894.....	1,336	407	1,897	180	975	283
1895.....	1,443	406	1,800	181	943	284
1896.....	1,461	406	1,713	182	926	288
1897.....	1,468	407	1,583	183	1,040	279
1898.....	1,462	412	1,535	186	1,087	275
1899.....	1,460	417	1,409	191	1,110	279
Average:						
1890 to 1894.....	1,121	431	2,107	178	1,033	279
1895 to 1899.....	1,459	410	1,608	185	1,021	281

AVERAGE ANNUAL SALARIES OF MEMBERS OF THE MEDITERRANEAN PENSION FUND, 1890 to 1903, AND OF THE ADRIATIC PENSION FUND, 1890 to 1899, BY BRANCH OF SERVICE—Concluded.

Fund and year.	Station service.		Office employees, etc.		Total.	
	Member-ship.	Average annual salary.	Member-ship.	Average annual salary.	Member-ship.	Average annual salary.
Mediterranean fund:						
1890.....	6,768	\$178	7,478	\$415	22,557	\$278
1891.....	6,690	181	7,607	415	22,455	281
1892.....	6,591	179	7,705	408	22,354	280
1893.....	6,460	179	7,671	404	22,056	280
1894.....	6,486	179	7,619	416	21,960	285
1895.....	6,508	179	7,542	419	21,829	286
1896.....	6,368	179	7,486	425	21,580	289
1897.....	6,302	180	7,473	427	21,427	292
1898.....	6,268	180	7,373	444	21,194	295
1899.....	6,075	182	7,166	444	20,610	300
1900.....	5,886	185	7,029	455	20,086	308
1901.....	5,721	187	6,892	465	19,600	315
1902.....	5,574	197	6,722	488	19,105	330
1903.....	5,373	200	6,624	498	18,613	339
Average:						
1890 to 1894.....	6,599	179	7,616	412	22,276	281
1895 to 1899.....	6,304	180	7,408	432	21,328	292
1900 to 1903.....	5,638	192	6,817	477	19,350	323
Adriatic fund:						
1890.....	2,981	192	6,503	408	13,072	314
1891.....	2,883	192	6,695	407	13,882	318
1892.....	2,687	200	6,595	412	13,320	325
1893.....	2,551	196	6,452	431	13,251	335
1894.....	2,284	197	6,394	429	12,886	338
1895.....	2,161	199	6,275	436	12,622	344
1896.....	2,048	200	6,218	445	12,366	352
1897.....	1,967	210	6,083	448	12,141	355
1898.....	1,855	205	5,983	455	11,922	360
1899.....	1,790	206	5,839	466	11,608	369
Average:						
1890 to 1894.....	2,673	195	6,528	417	13,462	326
1895 to 1899.....	1,964	204	6,080	450	12,132	356

PENSIONS.—In the following two tables is shown the activity of the pension funds in the distribution of pensions. The first table gives the total number of current pensions at the end of each year, while the second table gives the number of new pensions granted during each year. Because of the great difficulty in obtaining material the tables are not as complete as they should be.

No data were available for the Sicilian fund prior to 1901, and therefore totals for all the three funds could not be obtained for the earlier years; and for the other two funds the data are incomplete for a number of years, mainly as far as the pensions to orphan families are concerned. The data presented are nevertheless sufficient to indicate the general results.

The increase in the amount of pensions is better demonstrated in the second table, showing the average amounts of pensions granted during the years specified. The averages fluctuate mainly because of the difference in the occupation of the employees pensioned, as the differences in the annual salaries of the different classes of employees are considerable. The pensions of the widows include those with and without minor children, and for a few years the data were given sep-

arately for these groups; but as the total amounts given to the minor children are not very great the averages are affected but slightly by combining all the widows into one group. The averages for members fluctuate from year to year between \$180 and \$300, seldom falling outside of these limits. If the means of five annual averages are considered, then the increase from 1890-1894 to 1903-1907 for the Adriatic fund is from \$198 to \$257, and for the Mediterranean fund from \$188 to \$235.

To appreciate the actual purchasing value of these pensions in Italy, it is necessary to keep in mind not only the general level of prices and the standard of living, but also the wages paid.

Roughly the widow's average pension equals about one-half of the employee's average pension. Taking the mean of the averages for all the funds for pensions granted each year, 1902 to 1907, the employee's pension equals \$241, the widow's pension, \$123, or 51 per cent, while the average pension of a family of minor orphans equals \$53 per annum, or about 22 per cent of the employee's pension.

When the entire number of current pensions is considered, the average amount appears to be much smaller and less subject to fluctuations, though the tendency to a higher average pension is unmistakable. In the Mediterranean fund the average current pension for 1889 to 1893 was \$160, and for 1903 to 1907, \$192; in the Adriatic fund the increase was from \$172 to \$206. The difference between the average amount of the current pension and that of the pension granted is easily accounted for by the survival of many very low pensions granted many years ago when the wages of the Italian railroad employees were very much lower than they are now.

NUMBER, AMOUNT, AND AVERAGE OF PENSIONS PAID EACH

[Source: The annual

Fund and year.	Pensions paid to—		
	Members.		
	Number.	Amount.	Average.
Mediterranean fund:			
1889	1,583	\$233,098	\$147
1890	1,770	268,657	152
1891	2,138	341,142	160
1892	2,471	420,685	170
1893	2,664	451,252	169
1894	2,824	434,911	172
1895	3,029	529,804	175
1896	3,322	596,660	180
1897	3,551	648,401	183
1898	3,794	704,637	186
1899	4,112	784,793	191
1900	4,357	824,150	189
1901	4,614	863,409	187
1902	4,801	904,337	188
1903	5,006	949,582	190
1904	5,218	989,558	190
1905	5,274	1,006,563	191
1906	5,356	1,033,365	193
1907 (c)	5,491	1,089,202	198
Adriatic fund:			
1889	1,103	179,835	163
1890	1,356	227,590	168
1891	1,640	280,061	171
1892	2,058	362,136	175
1893	2,215	402,631	182
1894	2,434	450,826	185
1895	2,623	495,341	189
1896	2,816	543,103	193
1897	2,900	569,709	192
1898	3,104	596,925	192
1899	3,246	623,128	192
1900	(a)	(a)	(a)
1901	3,497	685,075	196
1902	3,628	718,861	198
1903	3,731	738,983	198
1904	3,852	769,995	200
1905	3,955	826,445	209
1906	3,918	826,516	211
1907 (c)	3,950	840,398	212
Sicilian fund:			
1901	109	24,390	224
1902	114	27,266	239
1903	132	33,017	250
1904	135	35,852	266
1905	140	37,827	270
1906	134	36,867	275
1907 (c)	133	36,872	277
Total funds:			
1901	8,220	1,572,874	191
1902	8,543	1,650,464	193
1903	8,869	1,721,582	194
1904	9,205	1,795,405	195
1905	9,369	1,870,835	199
1906	9,408	1,896,748	202
1907 (c)	9,580	1,966,472	205
1907 (d)	9,728	2,022,274	208

a Not reported.

b Not including pensions to minor children of widows, which in 1901 amounted to \$18,870.

CHAPTER VII.—WORKMEN'S INSURANCE IN ITALY. 1953

YEAR, 1889 TO 1907, BY FUNDS AND CLASSES OF PENSIONS.

reports of the funds.]

Pensions paid to—						Total pensions.		
Widows (with and without minor children).			Orphans.					
Number.	Amount.	Average.	Number.	Amount.	Average.	Number.	Amount.	Average.
1,619	\$134,181	\$83	141	\$3,570	\$25	3,343	\$370,849	\$111
1,706	143,815	84	143	3,766	26	3,619	416,238	115
1,850	158,750	86	159	4,440	28	4,147	504,332	122
1,984	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,150	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,279	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,444	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,594	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,738	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,884	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
3,088	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
3,261	^b 288,770	94	(a)	(a)	(a)	(a)	(a)	(a)
3,465	^b 315,652	97	(a)	(a)	(a)	(a)	(a)	(a)
3,651	358,928	104	220	8,651	39	8,299	1,230,988	148
3,839	382,015	105	223	9,205	41	8,675	1,295,557	149
4,052	402,713	105	224	9,220	41	9,069	1,361,515	150
4,202	426,268	105	247	10,413	42	9,517	1,426,239	150
4,384	445,638	106	243	10,531	43	9,719	1,462,732	151
4,435	465,729	106	271	12,053	44	10,011	1,511,147	151
	472,566	107	261	11,806	45	10,187	1,573,574	154
1,212	93,468	77	102	3,616	35	2,417	276,919	115
1,301	102,628	79	112	4,091	37	2,709	334,309	121
1,410	114,471	81	110	4,778	43	3,160	399,310	126
1,503	124,257	83	113	5,732	51	3,674	492,125	134
1,591	129,963	82	(a)	(a)	(a)	(a)	(a)	(a)
1,688	140,355	83	(a)	(a)	(a)	(a)	(a)	(a)
1,800	154,766	86	(a)	(a)	(a)	(a)	(a)	(a)
1,898	166,314	88	(a)	(a)	(a)	(a)	(a)	(a)
1,982	176,744	89	(a)	(a)	(a)	(a)	(a)	(a)
2,070	188,142	91	(a)	(a)	(a)	(a)	(a)	(a)
2,180	201,634	92	(a)	(a)	(a)	(a)	(a)	(a)
(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
2,407	249,931	104	161	8,643	54	6,065	943,649	156
2,545	268,068	105	168	9,101	54	6,341	996,030	157
2,674	284,005	106	160	8,224	51	6,565	1,031,812	157
2,817	301,075	107	156	8,206	53	6,825	1,079,276	158
2,918	315,329	108	150	7,726	52	7,023	1,149,500	164
3,019	329,830	109	156	8,413	54	7,093	1,164,759	164
3,041	334,735	110	156	8,576	55	7,153	1,183,709	165
105	11,201	107	4	367	92	218	35,958	165
113	12,260	108	3	213	71	230	39,739	173
125	14,001	112	3	213	71	260	47,231	182
137	15,328	112	3	214	71	275	51,394	187
141	15,707	111	1	41	41	282	53,575	190
155	19,522	126	2	76	38	291	56,465	194
161	20,054	125	2	76	38	296	57,002	193
5,977	620,060	104	385	17,661	46	14,582	2,210,595	152
6,309	662,343	105	394	18,519	47	15,246	2,331,326	153
6,638	701,319	106	387	17,657	46	15,894	2,440,558	154
7,006	742,671	106	406	18,833	46	16,617	2,556,909	154
7,261	776,674	107	394	18,298	46	17,024	2,665,807	157
7,558	815,081	108	429	20,542	48	17,395	2,732,371	157
7,637	827,355	108	419	20,458	49	17,636	2,814,285	160
7,730	840,051	109	435	20,887	48	17,893	2,883,212	161

^c First 6 months.

^d Last 6 months; united fund.

NUMBER, AMOUNT, AND AVERAGE OF NEW PENSIONS GRANTED

[Source: The annual

Fund and year.	Pensions granted to—		
	Members.		
	Number.	Amount.	Average.
Adriatic fund:			
1890.....	310	\$55,903	\$180
1891.....	382	68,935	180
1892.....	507	98,008	193
1893.....	261	57,446	220
1894.....	342	73,416	215
1895.....	313	69,343	222
1896.....	310	70,484	227
1897.....	281	53,625	191
1898.....	285	55,344	194
1899.....	299	56,392	189
1900.....	(a)	(a)	(a)
1901.....	(a)	(a)	(a)
1902.....	333	75,051	225
1903.....	313	67,641	216
1904.....	335	80,352	240
1905.....	314	101,253	322
1906.....	172	44,730	260
1907 (b).....	131	32,290	246
Mediterranean fund:			
1890.....	297	54,231	183
1891.....	468	87,566	187
1892.....	453	104,712	231
1893.....	338	57,143	169
1894.....	314	62,126	198
1895.....	362	72,310	200
1896.....	438	98,038	224
1897.....	397	83,546	210
1898.....	442	92,905	210
1899.....	533	123,470	232
1900.....	466	84,096	180
1901.....	494	87,604	177
1902.....	383	76,614	200
1903.....	458	95,974	210
1904.....	463	96,131	208
1905.....	390	86,621	222
1906.....	350	82,489	236
1907 (b).....	316	93,705	297
Sicilian fund:			
1902.....	11	4,165	379
1903.....	22	6,910	314
1904.....	12	4,382	365
1905.....	8	2,423	303
1906.....	7	1,789	256
1907.....	1	442	442
Total funds:			
1902.....	727	155,830	214
1903.....	793	170,525	215
1904.....	810	180,865	223
1905.....	712	190,297	267
1906.....	529	129,008	244
1907 (b).....	448	126,437	282
1907 (c).....	397	110,765	279

a Not reported.

b First six months.

CHAPTER VII.—WORKMEN'S INSURANCE IN ITALY. 1955

EACH YEAR, 1890 TO 1907, BY FUNDS AND CLASSES OF PENSIONS.
 reports of the funds.]

Pensions granted to—						Total pensions.		
Widows (with and without minor children).			Orphans.					
Number.	Amount.	Average.	Number.	Amount.	Average.	Number.	Amount.	Average.
121	\$12,071	\$100	21	\$791	\$38	452	\$68,765	\$152
148	15,153	102	14	1,257	90	544	85,345	157
137	13,207	96	19	1,440	76	663	112,655	170
146	16,556	113	(a)	(a)	(a)	(a)	(a)	(a)
153	14,207	93	(a)	(a)	(a)	(a)	(a)	(a)
166	19,411	117	(a)	(a)	(a)	(a)	(a)	(a)
142	16,623	117	(a)	(a)	(a)	(a)	(a)	(a)
146	16,776	115	(a)	(a)	(a)	(a)	(a)	(a)
154	16,728	109	(a)	(a)	(a)	(a)	(a)	(a)
174	18,586	107	(a)	(a)	(a)	(a)	(a)	(a)
(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)
195	24,626	126	21	974	46	549	100,651	183
207	26,707	129	20	1,046	52	540	95,394	180
224	28,557	127	26	1,518	58	585	110,427	189
209	25,466	122	21	1,152	55	544	127,871	235
203	26,393	130	25	1,731	69	400	72,854	182
88	12,015	137	12	840	70	231	45,145	195
138	14,394	104	15	497	33	450	69,122	154
197	20,171	102	29	970	33	694	108,707	157
192	20,050	104	(a)	(a)	(a)	(a)	(a)	(a)
207	20,521	99	(a)	(a)	(a)	(a)	(a)	(a)
174	17,850	103	(a)	(a)	(a)	(a)	(a)	(a)
230	24,503	107	(a)	(a)	(a)	(a)	(a)	(a)
220	21,761	99	(a)	(a)	(a)	(a)	(a)	(a)
208	23,479	113	(a)	(a)	(a)	(a)	(a)	(a)
259	26,150	101	(a)	(a)	(a)	(a)	(a)	(a)
251	29,406	117	(a)	(a)	(a)	(a)	(a)	(a)
274	35,527	130	(a)	(a)	(a)	(a)	(a)	(a)
306	33,940	111	(a)	(a)	(a)	(a)	(a)	(a)
261	32,995	126	40	1,989	50	684	111,598	163
282	30,816	109	34	1,820	54	774	128,610	166
331	38,243	116	56	3,094	55	850	137,468	162
334	38,746	116	40	2,313	56	764	127,680	167
358	42,216	118	64	3,621	57	772	128,326	166
122	14,986	123	11	655	60	449	109,346	244
9	1,252	139	1	270	270	21	5,687	271
12	1,851	154	1	101	101	35	8,862	253
12	1,328	111	-----	-----	-----	24	5,710	238
4	452	113	-----	-----	-----	12	2,875	240
29	4,851	167	1	36	36	37	6,676	180
6	742	124	-----	-----	-----	7	1,184	169
465	58,873	126	62	3,233	52	1,254	217,936	174
501	59,374	119	55	2,967	54	1,349	232,866	173
567	68,128	120	82	4,612	56	1,459	253,605	174
547	64,664	118	61	3,465	57	1,320	258,426	196
590	73,460	125	90	5,388	60	1,209	207,856	172
216	27,743	128	23	1,495	65	687	155,675	226
204	27,020	132	66	1,908	29	667	139,693	209

c Last six months; united fund.

The following table, showing the number and amounts of pensions by the five branches of the service, further illustrates the very high level of pensions both to the members and to the widows. Unfortunately it was possible to bring the data down only to 1899 for the Adriatic fund and to 1903 for the Mediterranean fund, later data not being available. But the fluctuations are not very great, nor could there be any radical change, since the provisions of the constitution regulating pensions have not undergone any important changes since 1890, while the rates of contributions from both sides have been increased to meet the cost of the pensions.

The average amount of the pensions fluctuated for engineers and firemen roughly between \$200 and \$300, for the train service personnel between \$150 and \$200, for the trackmen and other persons employed in the maintenance of way between \$100 and \$120, for the station and yard service between \$115 and \$125, and among the office force, this class containing the highest paid employees, between \$300 and \$400. The widows' average pensions are equal to about half the average pensions of the members.

NUMBER AND AVERAGE PENSIONS GRANTED EACH YEAR TO MEMBERS AND THEIR WIDOWS BY THE ADRIATIC AND THE MEDITERRANEAN PENSION FUNDS, 1890 TO 1903, BY BRANCH OF THE SERVICE.

[Source: The annual reports of the funds.]

Fund and year.	Pensions granted each year to—											
	Engineers and firemen.		Train service employees.		Maintenance-of-way employees.		Station service employees.		Office employees, etc.		Total.	
	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.
MEMBERS.												
Adriatic fund:												
1890.....	27	\$250	17	\$193	123	\$105	70	\$121	73	\$336	310	\$180
1891.....	36	223	21	179	125	104	100	123	100	329	382	180
1892.....	39	239	30	212	106	113	121	122	396	507	193	
1893.....	36	274	17	185	42	115	82	114	84	361	261	220
1894.....	25	211	28	187	53	112	114	126	121	350	342	215
1895.....	22	275	31	182	83	112	75	117	102	388	313	222
1896.....	25	294	32	177	82	104	69	125	102	395	310	227
1897.....	21	303	25	176	85	123	77	115	73	323	281	191
1898.....	31	273	37	181	80	119	65	117	72	320	285	194
1899.....	23	254	23	180	104	103	76	118	68	374	299	189
Total—												
1890 to 1894.....	155	254	113	193	555	105	479	121	500	357	1,802	196
1895 to 1899.....	127	278	148	179	434	112	362	118	417	364	1,488	205
Mediterranean fund:												
1890.....	24	241	21	205	63	110	119	119	73	317	300	181
1891.....	49	264	40	162	116	111	171	123	101	363	468	187
1892.....	29	229	31	183	89	110	108	115	149	385	406	226
1893.....	38	241	29	159	110	96	100	115	93	334	370	181
1894.....	33	266	42	187	76	104	85	114	80	336	316	193
1895.....	34	269	32	179	98	106	124	118	91	378	379	196
1896.....	31	245.	45	172	68	102	160	116	120	399	424	209
1897.....	44	231	23	144	106	115	126	117	121	436	420	222
1898.....	35	228	49	183	83	110	167	112	111	360	445	190
1899.....	69	284	40	187	107	106	180	115	149	447	545	230
1900.....	37	253	47	188	113	107	172	108	108	357	477	184

NUMBER AND AVERAGE PENSIONS GRANTED EACH YEAR TO MEMBERS AND THEIR WIDOWS BY THE ADRIATIC AND THE MEDITERRANEAN PENSION FUNDS, 1890 TO 1903, BY BRANCH OF THE SERVICE—Concluded.

Fund and year.	Pensions granted each year to—											
	Engineers and firemen.		Train service employees.		Maintenance-of-way employees.		Station service employees.		Office employees, etc.		Total.	
	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.
MEMBERS—Concluded.												
Mediterranean fund—Con.												
1901.....	44	\$240	55	\$172	121	\$103	165	\$116	106	\$333	491	\$177
1902.....	36	307	36	170	75	110	135	116	91	359	373	198
1903.....	66	302	49	204	110	133	142	127	89	355	456	207
Total—												
1890 to 1894.....	164	250	163	177	454	106	583	118	496	353	1,860	194
1895 to 1899.....	213	256	189	176	462	108	757	115	592	408	2,213	211
1900 to 1903.....	183	279	187	184	419	113	614	117	394	351	1,797	191
WIDOWS. (a)												
Adriatic fund:												
1890.....	10	124	10	79	33	63	33	77	32	169	118	102
1891.....	9	127	8	93	29	54	49	65	53	160	148	102
1892.....	11	132	8	83	36	64	40	68	42	145	137	96
1893.....	14	105	7	90	13	47	15	53	39	159	83	110
1894.....	6	153	6	47	18	45	25	53	28	112	83	78
1895.....	7	111	11	66	17	57	18	48	27	146	80	91
1896.....	8	114	4	73	8	58	12	65	30	134	62	104
1897.....	7	126	6	68	12	62	10	56	39	126	74	101
1898.....	4	126	3	62	10	56	20	61	42	136	79	103
1899.....	5	101	6	81	11	55	9	62	41	125	72	101
Total—												
1890 to 1894.....	50	124	39	81	129	57	162	65	194	151	574	99
1895 to 1899.....	31	115	30	70	58	57	69	58	179	132	367	100
Mediterranean fund:												
1890.....	11	107	17	93	26	71	42	67	42	166	138	104
1891.....	11	151	18	90	37	60	60	63	71	153	197	102
1892.....	13	114	13	78	27	56	32	51	39	157	124	95
1893.....	11	136	10	71	23	55	33	51	50	129	127	91
1894.....	10	90	6	85	14	50	24	57	45	139	99	99
1895.....	11	153	13	68	22	53	44	58	46	160	136	100
1896.....	12	127	13	64	26	61	42	54	40	169	133	97
1897.....	13	122	9	69	11	55	36	55	41	137	110	95
1898.....	28	106	12	65	25	57	33	57	40	134	138	90
1899.....	14	124	13	80	14	51	31	57	45	152	117	103
1900.....	15	105	12	73	20	68	32	57	59	188	138	121
1901.....	20	119	12	72	19	59	46	64	48	164	145	105
1902.....	14	117	14	91	12	56	34	51	66	168	140	117
1903.....	11	125	16	74	19	48	44	50	48	148	138	93
Total—												
1890 to 1894.....	56	120	64	85	127	59	191	59	247	149	685	99
1895 to 1899.....	78	122	60	69	98	56	186	56	212	151	634	97
1900 to 1903.....	60	116	54	78	70	58	156	56	221	168	561	109

a Not including widows of pensioners since 1893.

The relation between the average pension and the average salary, by branches of the service, is clearly brought out in the following table. Five-year averages have been used so as to eliminate accidental annual variations. The members' pensions amount to about 60 to 70 per cent of the wages, and the widows' pensions about 30 to 35 per cent. The pensions are proportionately highest among the office employees where longer service is possible before invalidity occurs.

PROPORTION BETWEEN SALARIES AND PENSIONS OF ADRIATIC AND MEDITERRANEAN PENSION FUNDS, BY BRANCHES OF THE SERVICE, 1890 TO 1903.

[Computed from preceding tables.]

Fund and year group.	Engineers and firemen.					Train service.					
	Average salary.	Average pension granted to—				Average salary.	Average pension granted to—				
		Members.		Widows.			Members.		Widows.		
		Amt.	Per cent of salary.	Amt.	Per cent of salary.		Amt.	Per cent of salary.	Amt.	Per cent of salary.	
Adriatic fund:											
1890 to 1894.....	\$431	\$254	58.9	\$124	28.8	\$279	\$193	69.2	\$81	29.0	
1895 to 1899.....	410	278	67.8	115	28.0	281	179	63.7	70	24.9	
Mediterranean fund:											
1890 to 1894.....	377	250	66.3	120	31.8	252	177	70.2	85	33.7	
1895 to 1899.....	377	256	67.9	122	32.4	255	176	69.0	69	27.1	
1900 to 1903.....	399	279	69.9	116	29.1	276	184	66.7	78	28.3	
	Maintenance of way.					Station service.					
Adriatic fund:											
1890 to 1894.....	\$178	\$105	59.0	\$57	32.0	\$195	\$121	62.1	\$65	33.3	
1895 to 1899.....	185	112	60.5	57	30.8	204	118	57.8	58	28.4	
Mediterranean fund:											
1890 to 1894.....	158	106	67.1	59	37.3	179	118	65.9	59	33.0	
1895 to 1899.....	163	108	66.3	56	34.4	180	115	63.9	56	31.1	
1900 to 1903.....	175	113	64.6	58	33.1	192	117	60.9	56	29.2	
	Office force.					All occupations.					
Adriatic fund:											
1890 to 1894.....	\$417	\$353	84.6	\$151	36.2	\$326	\$196	60.1	\$99	30.4	
1895 to 1899.....	450	364	80.9	132	29.3	356	205	57.6	100	28.1	
Mediterranean fund:											
1890 to 1894.....	412	353	85.7	149	36.2	281	194	69.0	99	35.2	
1895 to 1899.....	432	408	94.4	151	35.0	292	211	72.3	97	33.2	
1900 to 1903.....	476	351	73.7	168	35.3	323	191	59.1	109	33.8	

FINANCES.—A general review of the finances of the three pension funds since their organization in 1890 is given in the following table. Their combined assets in 1890 were \$15,841,525, and in 1907 when the three funds were united the assets amounted to over twenty-two million dollars. Nevertheless, a more careful analysis shows that their finances were not in a satisfactory condition. The annual excess of income over expenditures rapidly decreased except for the small Sicilian fund. The Adriatic fund had a deficit annually since 1900, which the very much increased revenues of 1902 (i. e., the increase of members' contributions from 4.5 to 5.5 per cent of the salary, and of the railroad contributions from 5 to 8 per cent) succeeded in reducing only for a time, but could not altogether obliterate. The Mediterranean pension fund also showed a deficit in 1901, and while the increased revenues of 1902 succeeded in creating a surplus, it rapidly declined during the following years. As the number of pensioners rapidly

grew, the expenditures increased very much faster than the income; thus the combined revenues in 1907 (\$2,827,439) show an increase of less than 50 per cent over those of 1890, while the expenditures (\$2,809,937) are more than four times as great as those for 1890. Of course, as the admission of new members was practically discontinued in 1897, the pension funds were winding up their affairs, but the computation of the actual obligations repeatedly indicated that the funds were not solvent.

FINANCES OF THE ADRIATIC, MEDITERRANEAN, AND SICILIAN PENSION FUNDS, 1890 TO 1907.

[Source: The annual reports of the funds.]

Year.	Income.	Expenditures.	Surplus.	Deficit.	Assets at end of year.
1890.....	\$1,909,181	\$694,974	\$1,214,207	.....	\$15,841,525
1891.....	1,954,609	851,864	1,102,745	.....	16,944,270
1892.....	1,968,871	1,041,785	927,086	.....	17,871,356
1893.....	2,021,310	1,179,658	841,652	.....	18,713,008
1894.....	1,994,996	1,281,915	713,081	.....	19,426,089
1895.....	1,995,528	1,413,310	582,218	.....	20,008,307
1896.....	2,038,856	1,560,400	478,456	.....	a 20,702,104
1897.....	2,089,741	1,675,604	414,137	.....	21,116,241
1898.....	2,103,058	1,783,306	319,752	.....	21,435,993
1899.....	2,132,529	1,927,454	205,075	.....	21,641,068
1900.....	2,160,622	2,054,405	106,217	.....	21,747,285
1901.....	2,127,123	2,179,066	.....	\$51,943	21,695,342
1902.....	2,271,512	2,300,282	.....	28,770	21,666,572
1903.....	2,662,908	2,415,397	247,511	.....	21,914,083
1904.....	2,639,712	2,517,570	122,142	.....	22,036,225
1905.....	2,599,843	2,598,827	1,016	.....	22,037,241
1906.....	2,774,611	2,753,202	21,409	.....	22,058,650
1907 (b).....	1,429,406	1,362,330	67,076	.....	22,125,726
1907 (c).....	1,398,033	1,447,607	.....	49,574	22,076,152

a This number does not equal the assets in 1895 plus the surplus in 1896; the figures are given as shown in the original report.

b First six months.

c Last six months; united fund.

In the following table the income and expenditures of the three pension funds are shown for the period since their reorganization in 1902 until their consolidation into one pension fund in 1907.

The total income for 1906 amounted to \$2,774,611, and for the first six months of 1907 to \$1,429,406. The regular railroad contributions represented the largest item in these two years, being in 1906 \$978,560, or 35.3 per cent of the total. Adding to this the income from the proceeds of the sale of tickets of admission to stations, \$90,993, or 3.3 per cent, the total share of the railroads was 38.6 per cent. Income from interest and investments in some years even exceeded the railroad contributions; in 1906 it amounted to 35.2 per cent of the total. Thus the employees themselves contributed only one-fourth (25.1 per cent) of the total revenues of the funds.

A decided increase in the revenues is noticeable in 1902 as compared with the preceding years. This is caused by the increase of the contributions of both the members and the railroads, as pointed out in

the history of the funds. The members' contributions were 4.5 per cent of their salaries until October 20, 1902, and 5.5 per cent since that date. Thus for the larger part of the year the smaller contribution was exacted. On the same date the railroads' contribution changed from 5 per cent to 8 per cent of the salaries; thus the members' contribution increased by 22.2 per cent, and that of the railroads by 60 per cent. As a result, the share of the members' contributions to the total revenue increased from 25.6 per cent in 1902 to 26.4 per cent in 1903, while that of the railroads increased from 29.3 per cent to 34.8 per cent.

In the expenditures of the pension funds the main item naturally consists of members' pensions, followed by widows' pensions, the latter including the shares of minor children whose mothers are living. Pensions to orphans do not represent a very large amount, and lump-sum benefits are insignificant, notwithstanding numerous provisions in the constitutions of the funds concerning such benefits. The vast majority of the members of the pension funds evidently earn pensions. The proportion between the amounts paid out to members and to widows remains fairly uniform. In 1902 the amount paid to widows was about 40 per cent, and in 1906 about 42 per cent of the amount paid to members. This proportion indicates that the Italian railroad pension funds are much more than merely old-age and invalidity pension funds, since they protect thousands of families of deceased employees and pensioners.

INCOME AND EXPENDITURES OF THE PENSION FUNDS, BY SOURCE OF INCOME AND ITEM OF EXPENDITURE, 1902 TO 1907.

[Source: The annual reports of the funds.]

INCOME.

Fund, source of income, and item of expenditure.	1902.	1903.	1904.	1905.	1906.	1907. ^(a)
Adriatic fund:						
Members' contributions...	\$224,190	\$266,716	\$269,704	\$256,755	\$270,883	\$151,938
Railroad's contributions..	254,110	366,552	362,888	354,435	376,111	209,334
Interest, etc.....	348,710	351,040	350,400	348,633	362,673	162,061
Sale of tickets of admission to stations.....	30,618	28,952	28,514	24,571	37,845	12,839
Accident compensations, excess of receipts.....	13,937	5,625	6,239	4,881	8,770	6,117
All other.....	191					5,355
Total.....	871,756	1,019,485	1,017,745	989,275	1,056,282	547,644
Mediterranean fund:						
Members' contributions...	336,540	411,184	378,418	368,366	398,694	224,297
Railroad's contributions..	388,990	525,315	535,643	526,095	563,828	309,845
Interest, etc.....	529,538	542,027	527,613	534,943	538,962	262,357
Sale of tickets of admission to stations.....	39,647	39,413	42,220	43,131	51,987	11,807
Accident compensations, excess of receipts.....	15,169	9,234	11,105	20,714	10,937	7,341
All other.....	5,002	4,989	16,320	11,270	8,679	3,846
Total.....	1,314,886	1,532,762	1,511,319	1,504,519	1,573,287	819,493

^a For first 6 months only.

INCOME AND EXPENDITURES OF THE PENSION FUNDS, BY SOURCE OF INCOME AND ITEM OF EXPENDITURE, 1902 to 1907—Concluded.

INCOME—Concluded.

Fund, source of income, and item of expenditure.	1902.	1903.	1904.	1905.	1906.	1907. ^a
Sicilian fund:						
Members' contributions...	\$20,511	\$25,177	\$24,017	\$25,738	\$27,742	\$16,287
Railroad's contributions...	22,263	34,155	34,319	34,917	38,621	22,306
Interest, etc.	38,526	40,397	42,430	44,217	75,693	22,760
Sale of tickets of admission to stations	1,825	1,387	1,305	1,172	1,161	698
Accident compensations, excess of receipts		153	284	5		
All other	1,746	9,392	8,293		1,825	218
Total	84,870	110,661	110,648	106,049	145,042	62,269
Total funds:						
Members' contributions...	581,241	703,077	672,139	650,859	697,519	392,522
Railroads' contributions...	665,363	926,022	932,850	915,447	978,500	541,485
Interest, etc.	916,772	934,664	920,443	927,793	977,328	447,178
Sale of tickets of admission to stations	72,091	69,752	72,039	68,874	90,993	25,344
Accident compensations, excess of receipts	29,106	15,012	17,628	25,600	19,707	13,458
All other	6,939	14,381	24,613	11,270	10,504	9,419
Grand total	2,271,512	2,662,908	2,639,712	2,509,843	2,774,611	1,429,406

EXPENDITURES.

Adriatic fund:						
Pensions to—						
Members	\$707,979	\$734,101	\$753,190	\$794,567	\$859,951	\$414,042
Widows	253,796	275,153	298,115	296,700	330,779	164,337
Orphans	8,595	8,318	8,681	7,819	8,013	3,901
Total pensions	975,370	1,017,572	1,059,986	1,099,086	1,198,743	582,280
Lump-sum benefits	1,352	327	286	1,756	802	531
All other expenditures	5,645	15,200	4,418	1,519	195	
Total expenditures	982,367	1,033,099	1,064,690	1,102,361	1,199,740	582,811
Mediterranean fund:						
Pensions to—						
Members	890,897	933,384	972,356	993,440	1,018,006	516,285
Widows	376,681	394,924	417,764	437,794	457,223	228,918
Orphans	9,582	9,929	11,280	11,418	11,608	5,977
Total pensions	1,277,160	1,338,237	1,401,400	1,442,652	1,486,837	751,180
Lump-sum benefits	3,086	1,280	1,122	898	1,274	601
All other expenditures			377	160	10,288	105
Total expenditures	1,280,246	1,339,517	1,402,899	1,443,710	1,498,399	751,886
Sicilian fund:						
Pensions to—						
Members	(b)	(b)	(b)	37,210	37,054	17,981
Widows	(b)	(b)	(b)	15,202	17,955	9,632
Orphans	(b)	(b)	(b)	118	41	20
Total pensions	37,669	42,274	49,855	52,530	55,050	27,633
Lump-sum benefits		100		218		
All other expenditures		347	126	8	13	
Total expenditures	37,669	42,781	49,981	52,756	55,063	27,633
Total funds:						
Pensions to—						
Members	^c 1,598,876	^c 1,607,485	^c 1,725,546	1,825,217	1,915,011	948,308
Widows	^c 635,477	^c 670,077	^c 715,879	749,696	805,957	402,887
Orphans	^c 18,177	^c 18,247	^c 19,961	19,355	19,662	9,898
Total pensions	2,290,199	2,398,083	2,511,243	2,594,268	2,740,630	1,361,093
Lump-sum benefits	4,438	1,767	1,408	2,872	2,076	1,132
All other expenditures	5,645	15,547	4,921	1,687	10,496	105
Total expenditures	2,300,282	2,415,397	2,517,570	2,598,827	2,753,202	1,362,330

^a First 6 months only. ^b Not separately reported. ^c Not including Sicilian fund, not separately reported.

STATE RAILROAD MUTUAL BENEFIT SOCIETY.

This institution was primarily a compulsory sickness insurance society and only secondarily an old-age pension fund at the same time. Gradually, however, the old-age benefits became the most important function, and eventually widows' and orphans' pensions were added. The history of the origin and various changes of the individual mutual benefit societies and their consolidation into one organization has been given hereinbefore.

The purpose and scope of this society embraces medical and sanitary service, sick benefits, invalidity pensions, or lump-sum subsidies where the right of pension has not yet been acquired, and, in addition, similarly to the pension fund, it assumed the administration of accident compensation to its members. Since 1905 it has also granted pensions to widows and orphans.

Membership in this fund was compulsory, and included all persons who held membership in one of the three mutual benefit societies on December 31, 1896. This included mainly the employees of lower grades; but as in the original constitution of the Mutual Benefit Society of the Alta Italia Railroad, employees were permitted to hold membership in both organizations. Many of the employees retained membership in both the pension fund and the mutual benefit society. These evidently did not need any of the invalidity and old-age pensions of the mutual benefit society. The membership was therefore divided into two groups, "ordinary," who held membership in the mutual benefit society only, and "aggregate" members (*compartecipanti aggregati*) holding membership in both organizations.

The activity of this institution was many-sided, as explained above. It embraced insurance against sickness, accidents, old age and invalidity, with some provisions for the orphans and widows, not so extensive by far as in the case of pension funds.

BENEFITS.

A free medical service was kept up and supported by the mutual benefit society in conjunction with the second section of the new provident institute, both societies contributing their respective shares of the net cost in proportion to the total annual salaries of the respective memberships. The constitution of 1907 further provided that as soon as this amount becomes greater for the second section of the new provident institute the management shall be transferred to it.

Some features of this medical service were free to all employees of the railroads, whether holding membership in either of the two organizations or not. These free functions included (1) the determination of the fact of illness; (2) the furnishing and maintenance

in repair of orthopedic apparatus (this, however, was limited to results of injuries in the course of service, as far as nonmembers are concerned); (3) the supply of antifebriles in recognized cases of malaria; and (4) the maintenance of life-saving appliances and furnishing of emergency first aid. The cost of the last two functions, and also of the first two as far as applied to nonmembers, was reimbursed to the mutual benefit society by the railroad administration.

MEDICAL AID TO MEMBERS.—The medical care of the members of the mutual benefit society and of the second section of the provident institute was not limited to the few functions enumerated above. It included all medical and surgical aid, medicines or their cost, hospital treatment when necessary, and other special treatment during illness or convalescence (but not including the cost of boarding and lodging), the cost of transportation of the sick or injured members to their homes or to the hospital, and, finally, funeral benefits, calculated at 5 per cent of annual wages, but not below 30 lire (\$5.79).

SICK BENEFITS.—The above numerous forms of medical and surgical or pharmaceutical aid were granted to all members of the mutual benefit society as well as to those of the second section of the provident institute. The sick benefits, as compensation for wages lost, were paid only to the "ordinary" members, when because of illness no wages were paid. The sick benefits amounted to two-thirds of the daily wage beginning with the fourth day of illness and for not over 180 days in any one calendar year. No sick benefits were paid in case of illness, due to disorderly conduct, vice, fights, or in work outside of the railroad service, or when the sick member declined to enter a hospital when directed or to subject himself to the orders of the physicians of the society.

OLD-AGE AND INVALIDITY PENSIONS.—These may be described under two headings, pensions and lump-sum payments. Old-age and invalidity pensions were primarily intended for the "ordinary" members, the "aggregate" members receiving very little outside of medical treatment and other similar benefits.

The constitution of the society did not provide for any straight old-age pensions, but only for "continuous disability benefits." This means that the society did not recognize any standard retirement age; but as the benefits were continuous they may be classified with pensions, and as they were paid for disability they seem necessarily to include disability arising from old age. The requirement of 15 years of membership as a condition of granting such benefits brings them still nearer to old-age pensions.

After 15 years of membership, if forced to give up his employment because of proven disability (invalidity) the male employee holding membership in the society received a continuous benefit (or pension)

equal to one-fiftieth of the average annual salary of the last three years for each year of membership, with a minimum limit of 80 centesimi (15 cents) and a maximum limit of 2.50 lire (48 cents) per day.

If such disability was due to an injury received in service or to miasmatic fevers contracted in service, then the amount of pension was increased by one-fourth within the limits of 1 lira (19 cents) and 3.10 lire (60 cents) per day, provided he did not receive compensation for the same injury or condition in conformance with other laws. These pensions could not be capitalized.

LUMP-SUM BENEFITS TO MEMBERS.—If a male employee was relieved of his position because of invalidity before 15 years of membership in the society had elapsed, he received only a small lump-sum payment, equal to one-twentieth of the average annual salary during the last three years for each year of membership, with a minimum of two months' pay according to that average annual salary. If disability was due to an injury received in service or to malaria, this benefit was increased by one-fourth, with a minimum of half the average annual salary.

BENEFITS TO FEMALE MEMBERS.—No continuous benefits or pensions were granted to female employees. Lump-sum benefits were given, amounting to one-twentieth of the average annual salary of the last 3 years for each year of membership, irrespective of its length, but with a minimum of two months' pay and a maximum of one year's pay according to that average salary. Such lump-sum benefits, moreover, were given not only in case of invalidity, but also in case of separation from service because of an abolished position or the transfer of the husband. The rule concerning the increase by one-fourth in case of injuries due to service or fevers was applicable. The rights of a female employee did not conflict with her rights as a surviving member of the family of an employee.

BENEFITS TO "AGGREGATE" MEMBERS.—The "aggregate" member, when relieved from duty because of disability, received a lump-sum benefit computed according to the same rules, but after deducting the amount paid to him by the pension fund.

If the "aggregate" member was entitled to a pension from the pension fund, the mutual benefit society added to this an additional amount necessary to bring the pension up to 365 lire (\$70.45).

BENEFITS TO SURVIVORS.—The earlier organization of the mutual benefit societies did not provide for any pensions to the widows or orphans of deceased members or pensioners of those societies. But the law of April 22, 1905 (Art. 21), regulating the operation of railroads by the Government, provided for this important extension beginning with July 1, 1905, i. e., for the widows and orphans of those members who die or leave the railroad service after June 30, 1905.

No rights were acquired by this amendment by the survivors of deceased members who died before July 1, 1905, or who died subsequently but had been separated from the service before July 1, 1905.

The widow's right was subject to the condition that she had not been legally separated from her husband through any fault of hers. Furthermore, both her rights and those of her children were conditioned upon the following: That her marriage had taken place at least two years before the day of the member's death or dismissal from service, and that it was solemnized before the husband was 50 years old. This latter condition was waived, however, if the death was due to malaria or injury. All minor children, whether legitimate, illegitimate, adopted, etc., provided they were unmarried, were entitled to share in the pension.

These conditions, applicable to widows and children, were waived in case of marriages solemnized before July 1, 1905. The widows' pensions were to run until death or remarriage, and the children's pensions until reaching majority, or in case of the girls, until marriage, if preceding such majority.

The pension which the deceased member had been actually receiving before death, or if he died in active service, that to which he would have been entitled if he had been forced to resign because of invalidity on the day of his death, was taken as a basis of these widows' and orphans' pensions.

Of the actual or computed amount of the member's pension the widow received 50 per cent if she alone survived, and if minor children also survived she received 65 per cent in all. If children alone survived they received 50 per cent equally distributed, with a new redistribution every time one of them became of age. If only one minor child survived he received 25 per cent.

If in addition to the widow and her children other minor children of the deceased by a previous marriage survived, the 65 per cent was distributed in equal shares among all these survivors, the widow receiving two shares, and in no case less than 25 per cent.

These pensions or continuous payments to the widow and children were evidently the exception, for they were due only to the widow or children of such members as were receiving or were entitled to pensions at the time of death, and moreover, only if the granting of the pension or the death in service had taken place since July 1, 1905. If the husband died in active service before 15 years of membership, or if he died as a pensioner, said pension having been granted to him before July 1, 1905, the family received only a small lump-sum benefit. If he died in service this lump sum amounted to one-twentieth of the average annual salary of the last three years of service, for each year of membership in the society, with a minimum of two months' pay and a maximum of one year's pay according to such

average salary, and in case of death being due to an injury or malaria acquired in service, the lump sum was increased, as in other cases, one-fourth, with a minimum limit of six months of the average annual salary, always excepting, of course, such cases of injury or disease which are compensated under special laws or regulations.

If a member who was relieved from the service and was receiving a pension died and his family was not entitled to receive this pension, not satisfying all of the necessary conditions, then the family received the same lump sum as above, minus the sum of continuous payments made to the member before death, with a minimum of four times the monthly pension of the deceased.

LOSS OF PENSION RIGHT.—As in the case of the pension fund, the member lost all rights to any benefits by resignation or dismissal. In case of voluntary resignation his family also lost all rights, while in case of dismissal the wife and children had rights equal to those of a widow and orphans in case of death of the member. There were some regulations providing for reinstatement in membership in case of recognized mistake in a disciplinary dismissal. But disregarding these, the loss of rights to pensions and other benefits by dismissal or resignation must be considered a very serious feature of the organization, especially in view of the large monthly contributions to the revenue of the society from the small earnings of the members.

ACCIDENT COMPENSATION.—Similarly to the pension fund the mutual benefit society was intrusted with the duty of accident compensation. The pension fund assumed this duty toward all its members who came within the provisions of the accident insurance law. The mutual benefit society did the same toward those of its members, covered by the law, who were not at the same time members of the pension fund, and also toward such railroad employees as were covered by the accident law, and who were not members of any of the provident institutions and were not insured in some other way.

The provisions regulating this branch of the society's activity were practically identical with those concerning the same function of the pension funds. The basis of it was that the nonmembers who came within the provisions of the accident law received from the mutual benefit society the payments as regulated by the law; members received the payments due to them as members, and if this amount was less than that granted by the accident law, an additional sum to make up the difference. In other words, the injured or his family could receive only one of the compensations due either under the society's constitution or the accident law, receiving only the larger of the two. The cost of these accident cases did not impose any burden upon the finances of the society, as the administration of the railroad paid into the society's treasury the amount of compensa-

tion due under the law, the cost of medical treatment, etc. When pensions instead of lump-sum payments were due under the accident law, the capital necessary was transferred to the National Old-Age and Invalidity Insurance Institution, by which the annuities were paid.

SOURCES OF INCOME.

Notwithstanding the important extension of benefits by the law of April 22, 1905, granting widows and orphans' pensions, the general scale of benefits paid by the mutual benefit society was somewhat lower than that of the pension fund. On the other hand, the cost of medical service and sick benefits was a charge which the pension fund was not called upon to meet. The sources of revenue of the mutual benefit society were numerous, as is seen from the following list:

1. Assets transferred to the society at the time of its organization, or to be transferred to it in conformance with the law of March 29, 1900 (surtax upon rates.)
2. The deductions from the members' pay.
3. Contributions from the railroad administration.
4. Income from fines and penalties imposed upon the railroad personnel.
5. The net proceeds of the sale of unclaimed articles found anywhere on the railroad premises.
6. The net proceeds from the sale of railroad tariffs and time-tables.
7. The unclaimed overcharges on freight.
8. Excess sums found in the cash accounts of stations.
9. Donations and legacies without special designation of purpose.
10. All other revenue which may be assigned to the society.
11. Income for the investment of the funds.

MEMBERS' CONTRIBUTIONS.—Most of these sources of revenue were indefinite, contingent upon many other conditions; but the contributions of the employees and employers were strictly established by the constitution.

The ordinary members contributed until October 21, 1902, 3 per cent, and since that date $3\frac{1}{2}$ per cent of their salaries and other emoluments for contract work, overtime, etc. As in the case of the pension funds, these contributions were partly offset by an annual redistribution among those members who are subject to the accident law of one-half of the reimbursements from the railroad administration to the society for payments under the accident insurance. The reason for such redistribution is patent. As the mutual benefit society out of its own funds compensated for invalidity due to accidents those of its members who were not protected by the accident law and was

reimbursed when granting accident compensations to persons so protected, it is evident that a portion of its revenues was expended in a form of benefits, payable only to those of its members not otherwise provided for, and if their contributions were equal to those of the members protected by the accident law, then in view of the mutual character of the society, one class of members would be contributing for the benefit of the other class. The amount so distributed was very slight however.

The "aggregate" members, whose rights to benefit were rather limited, paid only 1 per cent of their salary.

EMPLOYERS' CONTRIBUTION.—The regular contributions of the railroad administration were increased twice since their reorganization in 1890. Up to October 21, 1902, they amounted to 3 per cent, or were equal to those of the employees. From October 21, 1902, to December 31, 1905, they were 4.2 per cent, and since January 1, 1906, they became very heavy, amounting to 8.15 per cent of the annual wages of the "ordinary" members. It contributed nothing on account of the "aggregate" members. This contribution was increased since the nationalization of the railroad business, when pensions to widows and orphans were introduced, thus considerably reducing the difference between the respective benefits of the better paid members of the pension fund and the lower paid members of the mutual benefit society.

ADMINISTRATION.

The rules for administration of the mutual benefit society were practically identical with those of the pension fund.

STATISTICS.

MEMBERSHIP.—The movement of the membership of the three mutual benefit societies is shown in the following table. The decrease in membership was even more rapid than in the case of the pension funds, for a large proportion of the members were employees of the lower grades, in which changes are more frequent and tenure of service less secure. As was explained above, there were two grades of membership, "ordinary" and "aggregate," the latter holding membership in the pension fund at the same time. The total average annual membership decreased from 60,851 to 36,789, or nearly 40 per cent. The greatest reduction was in the number of "aggregate" members, which was reduced to less than one-half, decreasing from the time of the first reorganization of the society in 1890. The number of "ordinary" members began to decrease in 1896, when admission of new members was discontinued. The decrease of members proceeded from two reasons, not only because of separation from

the service, through death, invalidity, resignation, dismissal or any other reason, but also by promotion from a daily wage to a monthly salary, which carried with it a transfer from membership in the mutual benefit society to that in the pension fund.

AVERAGE ANNUAL MEMBERSHIP OF THE THREE MUTUAL BENEFIT SOCIETIES,
1890 TO 1907.

[Source: The annual reports of the societies.]

Year.	Adriatic society.			Mediterranean society.			Sicilian society.	Total.		
	"Ordinary" members.	"Aggregate" members.	Total membership.	"Ordinary" members.	"Aggregate" members.	Total membership.	"Ordinary" members.	"Ordinary" members.	"Aggregate" members.	Total membership.
1890.....	20,801	5,713	26,514	18,060	13,792	31,852	2,485	41,346	19,505	60,851
1891.....	21,691	5,508	27,199	18,061	13,399	31,460	2,459	42,211	18,907	61,118
1892.....	21,418	5,148	26,566	18,103	13,002	31,105	2,405	41,926	18,150	60,076
1893.....	20,603	4,841	25,444	18,549	12,636	31,185	2,405	41,557	17,477	59,034
1894.....	19,788	4,611	24,399	18,936	12,193	31,129	2,444	41,168	16,804	57,972
1895.....	19,128	4,369	23,497	19,442	11,734	31,176	2,605	41,175	16,103	57,278
1896.....	18,605	4,135	22,740	20,263	11,349	31,612	2,751	41,619	15,484	57,103
1897.....	17,950	3,906	21,856	20,301	10,976	31,277	2,743	40,994	14,882	55,876
1898.....	17,161	3,681	20,842	19,329	10,574	29,903	2,632	39,122	14,255	53,377
1899.....	16,465	3,456	19,921	18,540	10,144	28,684	2,491	37,496	13,600	51,096
1900.....	15,744	3,255	18,999	17,923	9,690	27,613	2,347	36,014	12,945	48,959
1901.....	15,083	3,057	18,140	17,110	9,218	26,328	2,230	34,423	12,275	46,698
1902.....	14,525	2,824	17,349	16,409	8,768	25,177	2,139	33,073	11,592	44,665
1903.....	13,981	2,588	16,569	15,878	8,360	24,238	2,039	31,898	10,948	42,846
1904.....	13,513	2,356	15,869	15,322	7,921	23,243	1,946	30,781	10,277	41,058
1905.....	13,136	2,168	15,304	14,839	7,512	22,351	1,887	29,862	9,680	39,542
1906.....	12,829	2,014	14,853	14,404	7,171	21,575	1,845	29,078	9,195	38,273
1907 (a).....	12,602	1,909	14,511	14,060	6,942	21,002	1,808	28,470	8,851	37,321
1907 (b).....								27,960	8,478	36,438
1907.....								28,210	8,579	36,789

a First six months.

b Last six months; united society.

The number of employees separated from the service through disability, death, resignation or dismissal is shown for the mutual benefit societies as far as data were available in the following table. The rate of retirement is somewhat lower than that of the membership of the pension funds, because there is no provision for regular old-age retirement and because of the transfer of large numbers of older men to the pension funds. The death rate does not appear to be much greater than for the pension fund membership.

MOVEMENT OF MEMBERSHIP IN THE MUTUAL BENEFIT SOCIETIES, 1902 TO 1907.

[Source: The annual reports of the societies.]

Society and year.	Number of members—			Members lost because of—									
	In January.	Admitted during year.	Total.	Disability.				Death.				Resignation or dismissal.	
				Due to old age and invalidity.	Due to accident.	Total.	Per cent.	Natural.	Accidental.	Total.	Per cent.	Number.	Per cent.
1902.....	33,604	14	33,618	325	14	620	1.0	124	17	288	0.9	166	0.49
1903.....	32,505	10	32,515	375	21	694	2.1	98	14	287	.9	258	.79
1904.....	31,373	3	31,376	(a)	(a)	555	1.8	(a)	(a)	273	.9	156	.50
1905.....	30,292	8	30,300	(a)	(a)	452	1.5	(a)	(a)	307	1.0	117	.39
1906.....	29,434	2	29,436	(a)	(a)	359	1.2	(a)	(a)	271	.9	85	.29
1907 (b).....	28,721	.....	28,721	(a)	(a)	243	}2.0	(a)	(a)	192	}1.2	{ 65	} .34
1907 (c).....	28,321	3	28,324	(a)	(a)	351		{(a)}	(a)	144		{ 30	

a Not separately reported.

b First six months.

c Last six months; united society.

d In July.

SALARIES.—For the proper appreciation of the data concerning the pensions granted it is necessary to get a clear idea as to the average salaries paid, and such data would be meaningless unless given by separate occupational groups. Such data are presented in the following table, as far as available, namely, for the Adriatic fund for 1890 to 1903 and for the Mediterranean fund for 1890 to 1901. In the original reports of the Adriatic fund the wages were stated by the day for 1890 to 1892, and in the subsequent years they were stated in computed annual amounts on the assumption of 340 working days per annum. The same method of computation was therefore used for the earlier three years as well.

The average earnings of the entire membership of these societies are only about one-half of that of the members of the pension funds. This is partly due to the inclusion of the female employees in the track service who are paid a mere pittance of about \$33 to \$35 per annum. But the differences are considerable even if separate groups are considered, which clearly indicates that the lower-paid portion of the personnel held membership in the mutual benefit societies. Some increase in the average salary has been noticeable, but not so great as in case of those who belonged to the pension funds. There is practically none as far as the Mediterranean society is concerned for the years 1890 to 1901, and the increase in the Adriatic society seems to be due mainly to the rapid decrease in the number of employees of some low-paid groups. As the promotion of an employee to a higher group was followed by his transfer to the pension fund, this explains the slow rate of increase of the average salary.

MEMBERS OF THE MUTUAL BENEFIT SOCIETIES AND THEIR AVERAGE ANNUAL WAGES, 1890 TO 1903, BY BRANCH OF THE SERVICE.

[Source: The annual reports of the societies.]

Society and year.	Engineers and firemen.		Train service.		Maintenance of way (males).		Maintenance of way (females).	
	Members.	Average annual wages.	Members.	Average annual wages.	Members.	Average annual wages.	Members.	Average annual wages.
Adriatic Society:								
1890.....	705	\$177	893	\$140	7,904	\$108	663	\$32
1891.....	771	177	893	143	7,795	108	579	32
1892.....	812	177	887	145	7,476	109	453	33
1893.....	508	177	889	148	7,284	110	428	33
1894.....	450	179	929	149	7,055	111	398	32
1895.....	343	184	952	151	6,904	111	354	33
1896.....	334	185	958	154	6,787	112	322	33
1897.....	275	192	785	156	6,440	113	289	33
1898.....	225	198	701	159	6,206	114	250	33
1899.....	175	207	627	163	5,975	115	213	34
1900.....	112	230	536	169	5,772	116	194	34
1901.....	106	239	480	176	5,536	118	172	34
1902.....	109	243	436	182	5,333	123	149	34
1903.....	107	246	418	187	5,066	125	135	34
Mediterranean Society:								
1890.....	310	189	376	146	4,496	111	1,202	35
1891.....	283	185	319	147	4,583	111	1,168	34
1892.....	358	175	315	148	5,078	109	1,317	34
1893.....	357	175	322	148	5,454	108	1,431	34
1894.....	356	177	325	145	5,848	107	1,550	34
1895.....	345	176	306	144	6,195	107	1,750	33
1896.....	337	177	440	141	6,498	106	1,695	33
1897.....	364	177	501	141	6,331	107	1,622	33
1898.....	333	175	598	140	6,159	107	1,554	33
1899.....	421	173	706	140	6,039	108	1,476	33
1900.....	468	172	842	141	5,883	111	1,389	33
1901.....	505	169	823	141	5,666	112	1,299	33

Society and year.	Station service.		Office employees, etc.		Shop employees.		Total.	
	Members.	Average annual wages.	Members.	Average annual wages.	Members.	Average annual wages.	Members.	Average annual wages.
Adriatic Society:								
1890.....	7,195	\$138	246	\$182	4,006	\$191	21,612	\$135
1891.....	7,417	138	238	184	4,070	191	21,763	137
1892.....	7,214	139	236	184	3,992	192	21,070	138
1893.....	6,960	142	250	185	3,818	194	20,137	140
1894.....	6,641	144	269	184	3,697	195	19,439	141
1895.....	6,408	146	267	183	3,589	197	18,817	143
1896.....	6,254	148	276	187	3,461	198	18,392	144
1897.....	6,099	151	273	188	3,348	200	17,509	146
1898.....	5,902	153	282	189	3,248	202	16,814	148
1899.....	5,717	156	274	194	3,137	204	16,118	150
1900.....	5,520	158	270	196	2,963	207	15,367	152
1901.....	5,352	161	285	202	2,845	210	14,776	155
1902.....	5,175	166	291	211	2,743	220	14,236	161
1903.....	4,991	169	288	215	2,669	223	13,674	164
Mediterranean Society:								
1890.....	6,680	138	389	196	4,805	203	18,258	144
1891.....	6,525	138	330	202	4,655	202	17,863	143
1892.....	6,347	137	301	202	4,627	200	18,343	140
1893.....	6,395	138	260	201	4,536	200	18,755	138
1894.....	6,206	138	258	208	4,573	208	19,116	139
1895.....	6,257	138	221	216	4,635	209	19,769	137
1896.....	6,531	138	306	208	4,951	207	20,758	138
1897.....	6,031	139	200	229	4,796	210	19,845	139
1898.....	5,427	140	128	252	4,614	212	18,813	140
1899.....	4,981	143	130	249	4,513	216	18,266	142
1900.....	4,537	145	140	245	4,321	217	17,580	144
1901.....	4,169	144	175	259	4,012	220	16,649	145

STATISTICS OF SICKNESS.—During the period 1891 to 1900 the Mediterranean fund published very interesting statistical data concerning the cause of disability, data which give a rare and valuable opportunity to compare the sickness rates and the nature of diseases affecting the seven classes of railroad employees. There is so little reliable sickness statistics by occupations in this country, that the presentation of these data is thought to be useful.

In the following table the data for 1891 had to be discarded because presented on a different classification of diseases. As the numbers upon which the rates are based are not very large (about 30,000 employees for each year), and for each separate group, very much smaller, it was thought preferable to combine the data for the nine years and compute the rates and percentages from these combined data. The total membership for the nine years is: For engineers and firemen, 16,027; train service, 16,620; maintenance of way (male employees), 81,385; maintenance of way (female employees), 16,370; station service, 97,853; office force, etc., 6,367; shop employees, 41,762; total, 273,684. In this table the difference between the "ordinary" and "aggregate" members is disregarded and all sickness is included, whether compensated or not.

The variations from year to year are not disclosed in these tables. Such variations may be due to purely local or temporary causes and are not important, but rather form a disturbing element in the study of sickness rates, except as they might indicate a tendency toward an increase or decrease.

CAUSES OF DISABILITY OF THE MEMBERS OF THE MEDITERRANEAN RAILROAD MUTUAL BENEFIT SOCIETY FOR THE NINE YEARS 1892 TO 1900, BY BRANCH OF SERVICE.

[Computed from the annual reports of the societies.]

Causes of disability.	Engineers and firemen.						
	Cases of disability.			Days of disability.			
	Number.	Per cent of total.	Average per 100 members.	Number.	Per cent of total.	Average per case.	Average per 100 members.
DISEASES.							
Infectious diseases.....	9,668	22.2	60.3	77,149	16.7	8.0	481.4
Malaria.....	2,805	6.5	17.5	32,635	7.1	11.6	203.6
General tuberculosis.....	60	.1	.4	3,259	.7	54.3	20.3
Syphilis.....	218	.5	1.4	4,568	1.0	21.0	28.5
Diseases of—							
Metabolism.....	152	.3	.9	1,837	.4	12.1	11.5
Nervous system.....	2,071	4.8	12.9	24,170	5.2	11.7	150.8
Respiratory system.....	3,110	7.2	19.4	43,256	9.4	13.9	269.9
Circulatory system.....	778	1.8	4.9	11,899	2.6	15.3	74.2
Genito-urinary system.....	453	1.0	2.8	7,096	1.5	15.7	44.3
Digestive system.....	10,085	23.2	62.9	73,271	15.9	7.3	457.4
Organs of locomotion.....	5,205	12.0	32.5	59,820	12.9	11.5	373.2
The skin.....	3,922	9.0	24.5	52,318	11.3	13.3	326.4
Affecting sight.....	1,331	3.1	8.3	14,212	3.1	10.7	88.7
Affecting hearing.....	147	.3	.9	1,588	.3	10.8	9.9
Hernia.....	98	.2	.6	1,890	.4	19.3	11.8
Total.....	40,103	92.2	250.2	408,968	88.5	10.2	2,551.7

CAUSES OF DISABILITY OF THE MEMBERS OF THE MEDITERRANEAN RAILROAD MUTUAL BENEFIT SOCIETY FOR THE NINE YEARS 1892 TO 1900, BY BRANCH OF SERVICE—Continued.

Causes of disability.	Engineers and firemen.						
	Cases of disability.			Days of disability.			
	Number.	Per cent of total.	Average per 100 members.	Number.	Per cent of total.	Average per case.	Average per 100 members.
ACCIDENTS.							
Not in service.....	850	2.0	5.3	10,013	2.2	11.7	62.5
In service.....	2,538	5.8	15.9	42,903	9.3	16.9	267.7
Total.....	3,388	7.8	21.2	52,916	11.5	15.6	330.2
Grand total.....	43,491	100.0	271.4	461,884	100.0	10.6	2,881.9
Train service.							
DISEASES.							
Infectious diseases.....	8,385	26.2	50.4	60,448	20.0	7.2	363.7
Malaria.....	2,387	7.5	14.4	22,630	7.5	9.5	136.2
General tuberculosis.....	26	.1	.2	1,792	.6	68.9	10.8
Syphilis.....	138	.4	.8	3,010	1.0	21.8	18.1
Diseases of—							
Metabolism.....	161	.5	1.0	1,930	.6	12.0	11.6
Nervous system.....	1,520	4.8	9.1	16,682	5.5	11.0	100.4
Respiratory system.....	2,692	8.4	16.2	32,403	10.7	12.0	195.0
Circulatory system.....	671	2.1	4.0	8,259	2.7	12.3	49.7
Genito-urinary system.....	350	1.1	2.1	5,063	1.7	14.5	30.5
Digestive system.....	7,575	23.7	45.6	47,342	15.7	6.2	284.8
Organs of locomotion.....	2,938	9.2	17.7	35,203	11.6	12.0	211.8
The skin.....	2,500	7.8	15.0	30,289	10.0	12.1	182.2
Affecting sight.....	714	2.2	4.3	7,453	2.5	10.4	44.8
Affecting hearing.....	101	.3	.6	1,222	.4	12.1	7.4
Hernia.....	53	.2	.3	800	.3	15.1	4.8
Total.....	30,211	94.5	181.8	274,531	90.8	9.1	1,651.8
ACCIDENTS.							
Not in service.....	567	1.8	3.4	6,256	2.1	11.0	37.6
In service.....	1,176	3.7	7.1	21,536	7.1	18.5	129.6
Total.....	1,743	5.5	10.5	27,792	9.2	15.9	167.2
Grand total.....	31,954	100.0	192.3	302,323	100.0	9.5	1,819.0
Maintenance of way (male employees).							
DISEASES.							
Infectious diseases.....	23,507	22.9	28.9	161,481	17.2	6.9	198.4
Malaria.....	31,967	31.2	39.3	217,593	23.1	6.8	267.4
General tuberculosis.....	122	.1	.1	6,160	.6	50.5	7.6
Syphilis.....	145	.1	.2	2,252	.2	15.5	2.8
Diseases of—							
Metabolism.....	324	.3	.4	3,516	.4	10.9	4.3
Nervous system.....	3,490	3.4	4.3	41,352	4.4	11.8	50.8
Respiratory system.....	8,008	7.8	9.8	108,517	11.5	13.6	133.3
Circulatory system.....	1,030	1.0	1.3	15,137	1.6	14.7	18.6
Genito-urinary system.....	718	.7	.9	9,982	1.1	13.9	12.3
Digestive system.....	12,585	12.3	15.5	97,564	10.4	7.8	119.9
Organs of locomotion.....	6,794	6.7	8.3	88,566	9.4	13.0	108.3
The skin.....	7,169	7.0	8.8	88,006	9.4	12.4	108.9
Affecting sight.....	1,660	1.6	2.0	19,410	2.1	11.7	23.8
Affecting hearing.....	227	.2	.3	2,529	.3	11.1	3.1
Hernia.....	170	.2	.2	3,185	.3	18.7	3.9
Total.....	97,916	95.5	120.3	865,850	92.0	8.8	1,063.9

CAUSES OF DISABILITY OF THE MEMBERS OF THE MEDITERRANEAN RAILROAD MUTUAL BENEFIT SOCIETY FOR THE NINE YEARS 1892 TO 1900, BY BRANCH OF SERVICE—Continued.

Causes of disability.	Maintenance of way (male employees).						
	Cases of disability.			Days of disability.			
	Number.	Per cent of total.	Average per 100 members.	Number.	Per cent of total.	Average per case.	Average per 100 members.
ACCIDENTS.							
Not in service.....	1,625	1.6	2.0	20,326	2.2	12.5	25.0
In service.....	3,016	2.9	3.7	54,144	5.8	18.0	66.5
Total.....	4,641	4.5	5.7	74,470	8.0	16.0	91.5
Grand total.....	102,557	100.0	126.0	940,320	100.0	9.2	1,155.4
Maintenance of way (female employees).							
DISEASES.							
Infectious diseases.....	2,510	20.0	18.4	21,150	14.6	8.4	154.7
Malaria.....	2,774	22.1	20.3	24,736	17.0	8.9	180.9
General tuberculosis.....	24	.2	.2	1,383	.9	5.8	10.1
Syphilis.....	5	(a)	(b)	242	.2	48.4	1.8
Diseases of—							
Metabolism.....	59	.5	.4	1,110	.8	18.8	8.1
Nervous system.....	494	3.9	3.6	5,792	4.0	11.7	42.4
Respiratory system.....	909	7.3	6.7	14,013	9.7	15.4	102.5
Circulatory system.....	188	1.5	1.4	2,675	1.8	14.2	19.6
Genito-urinary system.....	2,720	21.7	19.9	39,947	27.5	14.7	292.2
Digestive system.....	1,524	12.1	11.1	15,030	10.4	9.9	109.9
Organs of locomotion.....	459	3.7	3.4	5,653	3.9	12.3	41.4
The skin.....	469	3.7	3.4	6,494	4.5	13.8	47.5
Affecting sight.....	162	1.3	1.2	2,172	1.5	13.4	15.9
Affecting hearing.....	28	.2	.2	289	.2	10.3	2.1
Hernia.....	5	(a)	(b)	108	.1	21.6	.8
Total.....	12,330	98.2	90.2	140,794	97.1	11.5	1,029.9
ACCIDENTS.							
Not in service.....	95	.8	.7	1,272	.9	13.4	9.3
In service.....	130	1.0	.9	2,932	2.0	22.6	21.5
Total.....	225	1.8	1.6	4,204	2.9	18.7	30.8
Grand total.....	12,555	100.0	91.8	144,998	100.0	11.5	1,060.7
Station service.							
DISEASES.							
Infectious diseases.....	42,328	24.1	43.3	302,599	17.5	7.1	309.2
Malaria.....	24,444	14.0	25.0	194,110	11.3	7.9	198.4
General tuberculosis.....	303	.2	.3	14,291	.8	47.2	14.6
Syphilis.....	414	.2	.4	8,169	.5	19.7	8.3
Diseases of—							
Metabolism.....	804	.5	.8	9,825	.6	12.2	10.0
Nervous system.....	7,958	4.5	8.1	90,629	5.3	11.4	92.6
Respiratory system.....	14,048	8.0	14.4	195,786	11.4	13.9	200.1
Circulatory system.....	2,645	1.5	2.7	33,030	1.9	12.5	33.8
Genito-urinary system.....	1,331	.8	1.4	21,333	1.2	16.1	21.8
Digestive system.....	33,127	18.9	33.8	232,578	13.5	7.0	237.7
Organs of locomotion.....	15,996	9.1	16.3	188,841	10.9	11.8	193.0
The skin.....	15,329	8.7	15.7	196,995	11.4	12.9	201.3
Affecting sight.....	3,507	2.0	3.6	40,241	2.3	11.5	41.1
Affecting hearing.....	458	.3	.5	4,790	.3	10.5	4.9
Hernia.....	407	.2	.4	6,898	.4	16.9	7.1
Total.....	163,099	93.0	166.7	1,540,115	89.3	9.4	1,573.9

^a Less than one-tenth of 1 per cent.

^b Less than one-tenth of a case.

CAUSES OF DISABILITY OF THE MEMBERS OF THE MEDITERRANEAN RAILROAD MUTUAL BENEFIT SOCIETY FOR THE NINE YEARS 1892 TO 1900, BY BRANCH OF SERVICE—Continued.

Causes of disability.	Station service.						
	Cases of disability.			Days of disability.			
	Number.	Per cent of total.	Average per 100 members.	Number.	Per cent of total.	Average per case.	Average per 100 members.
ACCIDENTS.							
Not in service.....	3,538	2.0	3.6	38,943	2.3	11.0	39.8
In service.....	8,739	5.0	8.9	145,667	8.4	16.7	148.9
Total.....	12,277	7.0	12.5	184,610	10.7	15.0	188.7
Grand total.....	175,376	100.0	179.2	1,724,725	100.0	9.8	1,762.6
DISEASES.							
Infectious diseases.....	2,177	23.3	34.2	16,985	17.5	7.8	266.8
Malaria.....	1,995	21.4	31.3	19,833	20.4	9.9	311.5
General tuberculosis.....	19	.2	.3	557	.6	29.3	8.8
Syphilis.....	41	.4	.6	763	.8	18.6	12.0
Diseases of—							
Metabolism.....	37	.4	.6	347	.4	9.4	5.5
Nervous system.....	497	5.3	7.8	4,899	5.0	9.9	76.9
Respiratory system.....	885	9.5	13.9	13,303	13.7	15.0	208.9
Circulatory system.....	209	2.2	3.3	2,975	3.1	14.2	46.7
Genito-urinary system.....	126	1.3	2.0	2,650	2.7	21.0	41.6
Digestive system.....	1,883	20.2	29.6	15,341	15.8	8.1	240.9
Organs of locomotion.....	556	6.0	8.7	7,264	7.5	13.1	114.1
The skin.....	496	5.3	7.8	6,240	6.4	12.6	98.0
Affecting sight.....	159	1.7	2.5	2,085	2.2	13.1	32.8
Affecting hearing.....	44	.5	.7	462	.5	10.5	7.3
Hernia.....	12	.1	.2	212	.2	17.7	3.3
Total.....	9,136	97.8	143.5	93,916	96.8	10.3	1,475.1
ACCIDENTS.							
Not in service.....	102	1.1	1.6	1,396	1.4	13.7	21.9
In service.....	101	1.1	1.6	1,751	1.8	17.3	27.5
Total.....	203	2.2	3.2	3,147	3.2	15.5	49.4
Grand total.....	9,339	100.0	146.7	97,063	100.0	10.4	1,524.5
DISEASES.							
Infectious diseases.....	14,778	22.6	35.4	117,490	15.6	8.0	281.3
Malaria.....	1,835	2.8	4.4	16,802	2.2	9.2	40.2
General tuberculosis.....	95	.2	.2	8,085	1.1	85.1	19.4
Syphilis.....	417	.6	1.0	10,750	1.4	25.8	25.7
Diseases of—							
Metabolism.....	323	.5	.8	3,912	.5	12.1	9.4
Nervous system.....	3,346	5.1	8.0	38,342	5.1	11.5	91.8
Respiratory system.....	4,745	7.3	11.4	80,705	10.7	17.0	193.2
Circulatory system.....	1,394	2.1	3.3	22,563	3.0	16.2	54.0
Genito-urinary system.....	700	1.1	1.7	12,429	1.7	17.8	29.8
Digestive system.....	13,498	20.7	32.3	95,576	12.7	7.1	228.9
Organs of locomotion.....	6,602	10.1	15.8	87,314	11.6	13.2	209.1
The skin.....	8,038	12.3	19.2	113,192	15.1	14.1	271.0
Affecting sight.....	1,635	2.5	3.9	20,253	2.7	12.4	48.5
Affecting hearing.....	156	.2	.4	1,840	.3	11.8	4.4
Hernia.....	222	.3	.5	3,366	.5	15.2	8.1
Total.....	57,784	88.4	138.3	632,619	84.2	10.9	1,514.8
ACCIDENTS.							
Not in service.....	1,463	2.3	3.5	18,737	2.5	12.8	44.9
In service.....	6,089	9.3	14.6	100,147	13.3	16.4	239.8
Total.....	7,552	11.6	18.1	118,884	15.8	15.7	284.7
Grand total.....	65,336	100.0	156.4	751,503	100.0	11.5	1,799.5

CAUSES OF DISABILITY OF THE MEMBERS OF THE MEDITERRANEAN RAILROAD MUTUAL BENEFIT SOCIETY FOR THE NINE YEARS 1892 TO 1900, BY BRANCH OF SERVICE—Concluded.

Causes of disability.	All employees.						
	Cases of disability.			Days of disability.			
	Number.	Per cent of total.	Average per 100 members.	Number.	Per cent of total.	Average per case.	Average per 100 members.
DISEASES.							
Infectious diseases.....	103,353	23.5	37.8	757,302	17.1	7.3	276.7
Malaria.....	68,207	15.5	24.9	528,339	12.0	7.7	193.0
General tuberculosis.....	649	.1	.2	35,527	.8	54.7	13.0
Syphilis.....	1,378	.3	.5	29,754	.7	21.6	10.9
Diseases of—							
Metabolism.....	1,860	.4	.7	22,477	.5	12.1	8.2
Nervous system.....	19,376	4.4	7.1	221,866	5.0	11.5	81.1
Respiratory system.....	34,397	7.8	12.6	487,988	11.0	14.2	173.3
Circulatory system.....	6,915	1.6	2.5	96,538	2.2	14.0	35.3
Genito-urinary system.....	6,398	1.5	2.3	98,500	2.2	15.4	36.0
Digestive system.....	80,277	18.2	29.3	576,702	13.0	7.2	210.7
Organs of locomotion.....	38,550	8.7	14.1	472,661	10.7	12.3	172.7
The skin.....	37,923	8.6	13.9	494,134	11.2	13.0	180.5
Affecting sight.....	9,168	2.1	3.3	105,826	2.4	11.5	23.7
Affecting hearing.....	1,161	.3	.4	12,720	.3	11.0	4.6
Hernia.....	967	.2	.4	16,459	.4	17.0	6.0
Total.....	410,579	93.2	150.0	3,956,793	89.5	9.6	1,445.7
ACCIDENTS.							
Not in service.....	8,240	1.9	3.0	96,943	2.2	11.8	35.4
In service.....	21,789	4.9	8.0	369,080	8.3	16.9	134.9
Total.....	30,029	6.8	11.0	466,023	10.5	15.5	170.3
Grand total.....	440,608	100.0	161.0	4,422,816	100.0	10.0	1,616.0

A few of the most important data of this table may well be emphasized here. The number of cases of disability per 100 members was 161, and the number of sick days per 100 members 1,616, or 1.6 cases and over 16 days of sickness per member per annum. These exceedingly high rates may partly be explained by the unhealthy climatic conditions in some parts of Italy; the high frequency of malaria and other infectious diseases seems to point in that direction. How much the liberal sick benefits act to cause malingery and fraud it is, of course, impossible to say.

Accidents are responsible only for a small part of the loss of time. Of all cases of temporary disability only 6.8 per cent were due to accidents and 93.2 per cent to sickness, the average duration of the accident cases, however, being 15.5 days, as against 9.6 days for sickness, so that accidents were responsible for 10.5 per cent of the loss of time.

General infectious diseases, malaria, and diseases of the digestive organs were most frequent, these three causes claiming 57.2 per cent of all cases of disability. But these had the shortest average duration, so that they claimed only 42.1 per cent of the days of disability.

The most important deductions are to be made from the comparison of the data of the seven separate groups.

The sickness rates vary greatly, the highest being shown by the engine service (engineers and firemen). Their occupation is, therefore, not only the most hazardous as far as accidents are considered, but also the most injurious to the health of the employees. The second group, train service (conductors, picket inspectors, trainmen, and brakemen), comes a close second, followed in a descending order by the station service (lower grade employees in stations, warehouses, and offices, such as watchmen, lampers, oilers, cleaners, and similar occupations, but not the workmen in the shops) and office employees. The lowest sickness rate is shown by the service of maintenance of the way (trackmen, gatemen, etc.), and it is interesting to note that the average number of cases of sickness is lower for the female employees of this class, though the somewhat longer duration of each case of sickness reduces this difference when the number of days of sickness per 100 employees is considered. The injurious effect of the railroad business upon these employees of either sex is slighter, and their life in the open country gives them a lower sickness rate even than the much more highly paid office employees.

On the whole the same classes of diseases are conspicuous in all the groups, namely, infectious diseases, malaria, and diseases of the digestive system, except that the female employees show a very high rate of genito-urinary diseases, including the specific female disorders; nevertheless very interesting differences may be noticed on close examination of the data. Thus malaria is much more frequent among the maintenance-of-way service and the office employees, many of whom are permanently located in malarial regions, while the employees of the shop, train, and engine service show a much lower rate of malarial illness. Syphilis and genito-urinary diseases are most frequent among the engineers and firemen, and trainmen (disregarding the high rate of diseases of the latter class among female employees, due to special reasons) and much more frequent than among the persons in station service and in the maintenance-of-way group, a result of the irregular habits of employees, who are frequently obliged to stay away from home, while the trackmen, etc., are not subject to such influences.

In the class of nervous diseases, and again in the diseases of respiratory organs, of organs of locomotion, of the skin, and of the organs of the sight, the engineers and firemen show the highest rates, followed closely by the trainmen, indicating the deleterious effects of exposure and mental and physical strain inevitable in these occupations.

One reason why the figures for sickness as shown in the preceding table are so high, is that the total duration of the treatment and not the actual loss of time was given. For comparative purposes, therefore, the following is introduced, in which only such illness as led to actual loss of time is considered. The data extend from 1890 to 1900, inclusive, but no data were published for 1892 and 1893. The table also gives a comparison between one year and another. The two classes of membership are kept separated, so that a comparison between them is possible.

The sickness rates are found to fluctuate very materially between one year and another, the minimum average being 115.2, the maximum average 134.7, and the average loss of time from 12.3 to 18.1 days per person. But no tendency to an increased sickness rate or loss of time is noticeable. On the contrary, if the very high rate of 1900 be disregarded, the tendency seems to point throughout the preceding decade toward a decreasing sickness rate and loss of time.

A comparison of the sickness rates of the "ordinary" and "aggregate" members fails to disclose any very pronounced difference, though the treatment of these two groups by the mutual benefit societies was very much different. The "ordinary" members, paid on a per diem basis as was shown above, received in addition to all medical, surgical, and pharmaceutical assistance also a daily sick benefit of one-half their daily wage. The "aggregate" members did not receive this benefit from the mutual benefit societies, because their salaries being fixed on a monthly or annual basis, were not discontinued during illness. During eight of the nine years for which data are available, the rate for the "ordinary" members was higher, but for some years the difference is very small. For the entire period, the rate for the "aggregate" members was 117.6 per 100 employees, and for the "ordinary" members 126.2 per 100 employees. This comparison is not very conclusive, however, in view of the difference in the occupational distribution of these two groups. When comparisons by groups are made the sickness rates for "ordinary" members are found to be very much higher among the engineers and firemen, the train service and the service of maintenance of way, which may be due to the fact that the "aggregate" members represent on the whole higher-paid employees, many of whom were paid a monthly or annual salary, and so lost no time on account of illness.

CASES OF ILLNESS CAUSING LOSS OF EARNINGS AND DAYS LOST BY MEMBERS OF THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY DURING THE YEARS 1890, 1891, AND 1894 TO 1900, BY BRANCH OF SERVICE AND YEAR.

[Source: The annual reports of the society.]

Branch of service and year.	Average number of members.	Cases of illness.		Days lost because of illness.	
		Number.	Per 100 members.	Number.	Per 100 members.
"ORDINARY" MEMBERS.					
Engineers and firemen:					
1890.....	382	1,176	307.8	11,495	3,009.1
1891.....	297	874	294.3	8,240	2,774.4
1894.....	377	880	233.4	8,409	2,230.5
1895.....	350	784	224.0	7,368	2,105.2
1896.....	341	765	224.4	7,329	2,149.3
1897.....	351	770	219.4	7,146	2,036.2
1898.....	388	590	152.1	6,130	1,579.9
1899.....	422	660	156.4	5,855	1,387.4
1900.....	482	849	176.1	8,350	1,732.4
Train service:					
1890.....	396	734	185.4	7,237	1,828.0
1891.....	347	1,044	300.9	9,743	2,807.8
1894.....	354	777	219.5	6,516	1,840.7
1895.....	346	768	222.0	6,524	1,884.7
1896.....	403	917	227.6	8,033	1,993.6
1897.....	470	885	188.2	7,842	1,668.0
1898.....	621	1,010	162.6	8,519	1,371.8
1899.....	716	1,078	150.6	9,187	1,283.1
1900.....	849	1,467	172.9	14,275	1,681.4
Maintenance of way (males):					
1890.....	4,383	4,835	110.3	57,030	1,301.2
1891.....	4,539	4,370	96.3	40,442	891.0
1894.....	5,617	6,785	120.8	58,952	1,049.5
1895.....	6,022	7,225	119.0	59,131	982.1
1896.....	6,346	7,632	120.2	66,970	1,055.2
1897.....	6,415	7,173	111.8	59,840	932.8
1898.....	6,237	7,033	112.7	62,074	995.3
1899.....	6,094	6,551	107.5	55,788	915.5
1900.....	5,942	7,266	122.3	60,601	1,120.8
Maintenance of way (females):					
1890.....	1,142	573	50.2	7,449	652.3
1891.....	1,185	547	46.2	6,601	557.1
1894.....	1,491	1,124	75.4	13,822	927.0
1895.....	1,650	1,225	74.2	14,306	867.1
1896.....	1,722	1,393	80.9	15,906	923.8
1897.....	1,658	1,145	69.1	14,578	878.8
1898.....	1,588	1,082	68.1	13,700	862.7
1899.....	1,515	1,044	68.9	12,964	855.7
1900.....	1,433	1,057	73.8	13,480	940.7
Station service:					
1890.....	6,495	8,507	131.0	92,697	1,427.2
1891.....	6,603	10,115	153.2	100,040	1,515.1
1894.....	6,251	9,295	148.7	92,236	1,475.5
1895.....	6,231	6,265	100.5	86,832	1,393.7
1896.....	6,394	8,920	139.5	91,603	1,432.3
1897.....	6,281	8,325	132.5	86,699	1,380.0
1898.....	5,630	6,902	122.6	76,194	1,353.3
1899.....	5,089	6,992	137.4	65,794	1,292.9
1900.....	4,651	7,692	165.4	74,677	1,605.6
Office force:					
1890.....	422	510	120.8	5,943	1,408.3
1891.....	360	303	84.2	3,439	955.3
1894.....	272	295	108.5	3,223	1,184.9
1895.....	239	191	79.9	1,920	803.5
1896.....	264	294	114.4	3,030	1,147.6
1897.....	253	204	80.6	2,215	865.6
1898.....	169	100	59.2	996	589.4
1899.....	130	84	64.6	725	557.7
1900.....	154	143	92.9	1,615	1,048.7
Shop employees:					
1890.....	4,840	6,326	130.7	85,857	1,773.9
1891.....	4,730	6,091	128.8	79,354	1,677.7
1894.....	4,574	6,671	145.8	79,856	1,745.9
1895.....	4,604	6,903	149.9	75,485	1,639.1
1896.....	4,793	6,221	129.8	69,328	1,146.2
1897.....	4,873	6,181	126.9	63,802	1,309.0
1898.....	4,696	6,057	129.0	66,655	1,419.4
1899.....	4,574	5,447	119.1	60,815	1,329.6
1900.....	4,412	6,426	145.6	69,985	1,586.2

CASES OF ILLNESS CAUSING LOSS OF EARNINGS AND DAYS LOST BY MEMBERS OF THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY DURING THE YEARS 1890, 1891, AND 1894 TO 1900, BY BRANCH OF SERVICE AND YEAR—Continued.

Branch of service and year.	Average number of members.	Cases of illness.		Days lost because of illness.	
		Number.	Per 100 members.	Number.	Per 100 members.
"ORDINARY" MEMBERS—concluded.					
Total "ordinary" members:					
1890.....	18,060	22,661	125.5	267,708	1,452.3
1891.....	18,061	23,344	129.2	247,859	1,372.3
1894.....	18,936	25,827	136.4	263,014	1,389.0
1895.....	19,442	23,361	120.2	251,566	1,294.1
1896.....	20,263	26,142	128.6	262,199	1,293.7
1897.....	20,301	24,683	121.5	242,122	1,192.0
1898.....	19,329	22,774	117.8	234,268	1,212.0
1899.....	18,540	21,856	117.9	211,128	1,138.8
1900.....	17,923	24,900	138.9	248,983	1,389.2
"AGGREGATE" MEMBERS.					
Engineers and firemen:					
1890.....	1,462	2,860	195.6	31,468	2,152.4
1891.....	1,432	2,951	205.8	33,653	2,346.8
1894.....	1,486	2,899	195.1	32,164	2,164.5
1895.....	1,452	2,872	197.8	29,539	2,034.5
1896.....	1,410	2,394	169.7	26,486	1,878.5
1897.....	1,380	2,174	157.7	26,922	1,951.2
1898.....	1,343	2,401	178.8	27,307	2,033.3
1899.....	1,284	2,077	161.8	27,174	2,116.4
1900.....	1,225	2,203	179.8	26,587	2,170.4
Train service:					
1890.....	1,531	2,163	141.3	20,933	1,367.3
1891.....	1,493	1,822	122.0	18,481	1,237.9
1894.....	1,460	1,847	126.5	18,447	1,263.5
1895.....	1,415	1,698	120.0	20,130	1,423.0
1896.....	1,377	1,491	108.2	17,603	1,277.0
1897.....	1,341	1,307	96.0	15,377	1,129.0
1898.....	1,290	1,393	108.0	15,938	1,235.5
1899.....	1,232	1,285	104.3	15,896	1,290.3
1900.....	1,171	1,437	122.7	17,386	1,484.7
Maintenance of way:					
1890.....	3,874	3,970	102.5	46,564	1,202.0
1891.....	3,753	3,140	83.7	37,862	1,008.9
1894.....	3,389	3,186	94.0	35,281	1,041.0
1895.....	3,282	2,547	77.6	33,777	1,029.8
1896.....	3,175	2,664	83.9	33,208	1,045.6
1897.....	3,074	2,499	81.3	33,178	1,079.0
1898.....	2,970	1,968	66.3	24,285	817.7
1899.....	2,861	2,526	88.3	31,414	1,098.0
1900.....	2,738	2,609	95.3	32,979	1,204.5
Station service:					
1890.....	6,363	9,108	143.1	101,112	1,589.1
1891.....	6,170	7,155	116.0	77,281	1,252.5
1894.....	5,340	6,475	121.3	72,962	1,366.3
1895.....	5,178	6,192	119.5	71,149	1,374.9
1896.....	4,965	5,524	111.3	61,037	1,229.1
1897.....	4,786	5,254	109.8	61,796	1,291.0
1898.....	4,593	5,641	122.8	61,897	1,347.6
1899.....	4,390	5,466	124.6	66,040	1,504.3
1900.....	4,083	5,596	137.1	69,546	1,703.3
Office force:					
1890.....	562	757	134.7	5,996	1,066.9
1891.....	549	534	97.3	5,939	1,081.8
1894.....	518	324	62.5	3,620	698.8
1895.....	407	304	74.7	3,556	873.8
1896.....	422	291	69.0	3,364	797.1
1897.....	395	233	59.0	3,686	933.1
1898.....	378	269	71.2	2,638	697.9
1899.....	377	201	53.3	2,282	605.3
1900.....	473	448	94.7	4,553	969.6
Total "aggregate" members:					
1890.....	13,792	18,858	136.7	206,073	1,494.2
1891.....	13,399	15,602	116.4	173,216	1,292.8
1894.....	12,193	14,732	120.8	162,474	1,332.5
1895.....	11,734	13,613	116.1	158,151	1,348.4
1896.....	11,349	12,364	108.9	141,698	1,249.3
1897.....	10,976	11,467	104.5	140,959	1,283.0
1898.....	10,574	11,672	110.4	132,065	1,249.0
1899.....	10,144	11,555	113.9	142,806	1,407.8
1900.....	9,690	12,293	126.9	151,051	1,559.9

CASES OF ILLNESS CAUSING LOSS OF EARNINGS AND DAYS LOST BY MEMBERS OF THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY DURING THE YEARS 1890, 1891, AND 1894 TO 1900, BY BRANCH OF SERVICE AND YEAR—Concluded.

Branch of service and year.	Average number of members.	Cases of illness.		Days lost because of illness.	
		Number.	Per 1,00 members.	Number.	Per 100 members.
ALL MEMBERS.					
1890.....	31,852	41,519	130.3	473,781	1,487.4
1891.....	31,460	38,946	123.8	421,075	1,338.4
1894.....	31,129	40,559	130.3	425,488	1,366.8
1895.....	31,176	36,974	118.6	409,717	1,314.0
1896.....	31,612	38,506	121.8	403,897	1,277.8
1897.....	31,277	36,150	115.5	383,081	1,225.0
1898.....	29,903	34,446	115.2	366,333	1,225.0
1899.....	28,684	33,411	116.5	353,934	1,233.9
1900.....	27,613	37,193	134.7	400,034	1,811.2

PENSIONS.—The total number of current pensions of the mutual benefit societies are shown as far as data are available in the following table. The average pension from 1901 to 1907 is seen to be only \$81.71, and in the earlier years even smaller. In judging of the amount it is necessary to point out that the averages were materially influenced by the very small widows' and orphans' pensions. As has already been explained, the mutual benefit societies did not grant any new pensions to widows and orphans from 1891 to 1904, inclusive, and the current pensions had been granted by the Alta Italia Railroad Mutual Benefit Society prior to the reorganization in June, 1890. These pensions were exceedingly small, averaging usually \$18 for widows and \$7 per annum for orphans. The number of these pensions was rapidly declining, the widows' and orphans' pensions granted since 1905 being much larger, though not any too large, even considering the Italian standard of living.

Another considerable class of very small pensions is found in those granted to the "aggregate" members, in order to increase their pensions received from the pension funds to 365 lire (\$70.45).

All these factors influence the average amount of the pensions paid by the mutual benefit societies. The average pension of a member within recent years was over \$90, and in the Mediterranean fund over \$100. The seeming drop in 1907 is due to the fact that the "supplementary" pensions of "aggregate" members are not stated separately, but together with the pensions of the "ordinary" members, which decreases the average.

NUMBER AND AVERAGE OF PENSIONS PAID BY THE MUTUAL BENEFIT SOCIETIES
IN SPECIFIED YEARS, BY SOCIETY AND YEAR.

[Source: The annual reports of the society.]

Society and year.	Pensions paid to—								Total pensions.	
	"Ordinary" members.		"Aggregate" members.		Widows.		Orphans.			
	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.
Adriatic society:										
1890.....	1,648	\$62	75	\$11	249	\$19	17	\$6	1,989	\$54
1891.....	1,897	66	92	11	241	19	15	6	2,245	59
1892.....	2,392	72	101	11	228	19	13	6	2,734	65
1901.....	3,489	88	152	9	147	18	.....	.....	3,788	82
1902.....	3,605	88	153	9	138	18	.....	.....	3,896	83
1903.....	3,749	88	150	9	130	18	.....	.....	4,029	83
1904.....	3,756	89	146	9	124	18	.....	.....	4,026	84
1905.....	3,742	89	140	9	147	25	4	25	4,033	84
1906.....	3,664	90	136	9	216	34	10	28	4,026	84
1907.....	a 3,776	a 87	(b)	(b)	225	37	11	26	4,012	84
Mediterranean society:										
1890.....	1,262	74	116	13	510	18	15	6	1,903	55
1891.....	1,535	83	129	13	493	18	11	7	2,168	64
1892.....	1,642	87	136	13	460	18	10	7	2,248	68
1893.....	1,776	91	144	13	437	18	8	7	2,365	73
1894.....	1,837	93	147	13	416	18	6	7	2,406	75
1895.....	1,903	94	151	13	395	18	6	7	2,455	77
1896.....	1,933	95	168	13	383	18	6	7	2,490	77
1897.....	1,966	95	179	13	371	18	3	7	2,519	78
1898.....	1,996	97	205	13	334	18	3	7	2,538	79
1899.....	2,035	96	217	13	323	18	1	7	2,576	80
1900.....	2,048	98	239	12	304	18	1	7	2,592	80
1901.....	2,106	99	244	12	286	18	1	7	2,637	82
1902.....	2,120	99	243	12	279	18	.....	.....	2,642	82
1903.....	2,145	99	237	12	273	18	.....	.....	2,655	83
1904.....	2,227	100	237	12	261	18	.....	.....	2,725	84
1905.....	2,235	101	231	12	287	21	3	22	2,756	85
1906.....	2,201	101	220	12	349	31	14	29	2,784	85
1907.....	a 2,395	a 93	(b)	(b)	371	33	14	32	2,780	84
Sicilian society:										
1901.....	631	59	.....	.....	.....	.....	.....	.....	631	59
1902.....	650	60	.....	.....	.....	.....	.....	.....	650	60
1903.....	668	60	.....	.....	.....	.....	.....	.....	668	60
1904.....	692	61	.....	.....	.....	.....	.....	.....	692	61
1905.....	659	63	.....	.....	3	53	.....	.....	662	63
1906.....	635	69	.....	.....	18	49	1	31	654	68
1907.....	a 628	a 69	.....	.....	24	51	1	31	653	69
Total societies:										
1901.....	6,226	89	396	11	433	18	1	7	7,056	80
1902.....	6,375	89	396	11	417	18	.....	.....	7,188	80
1903.....	6,562	89	387	11	403	18	.....	.....	7,352	81
1904.....	6,675	89	383	11	385	18	.....	.....	7,443	82
1905.....	6,636	91	371	11	437	23	7	24	7,451	83
1906.....	6,500	91	356	11	583	33	25	29	7,464	83
1907 (c).....	a 6,799	a 87	(b)	(b)	620	35	26	30	7,445	83
1907 (d).....	a 6,841	a 89	(b)	(b)	697	38	67	19	7,605	83

a Including pensions to "aggregate" members.
 b Included in pensions to "ordinary" members.

c First six months.
 d Last six months; united society.

Finally, it must be pointed out that women (in the service of maintenance of way) constituted a certain proportion of the pensioners because in the Alta Italia Railroad Mutual Benefit Society women were granted pensions until after the reorganization of 1890, since which they received lump-sum benefits only.

These pensions to women, which were proportionate to their salaries, were very small and influenced the average for the pensioners. For some years the pensioners could be separated by sexes, and the pensions for each sex are shown in the following table:

NUMBER AND AVERAGE OF PENSIONS PAID TO "ORDINARY" MEMBERS OF THE ADRIATIC MUTUAL BENEFIT SOCIETY, 1893 TO 1903, AND OF THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY, 1891 TO 1906, BY SEX.

[Source: The annual reports of the societies.]

Society and year.	Pensions paid to "ordinary" members.					
	Males.		Females.		Total.	
	Number.	Average.	Number.	Average.	Number.	Average.
Adriatic society:						
1893.....	2,114	\$84	237	\$17	2,351	\$77
1894.....	2,333	85	232	17	3,565	57
1895.....	2,447	87	219	17	2,666	81
1896.....	2,573	89	213	17	2,786	83
1897.....	2,741	90	202	17	2,943	85
1898.....	2,822	90	194	17	3,016	85
1899.....	2,981	90	190	17	3,171	86
1900.....	3,182	92	185	17	3,367	88
1901.....	3,313	92	176	17	3,489	88
1902.....	3,433	92	170	17	3,503	91
1903.....	3,589	91	158	17	3,747	88
Mediterranean society:						
1891.....	1,300	95	235	21	1,535	83
1892.....	1,417	98	225	21	1,642	87
1893.....	1,561	101	215	21	1,776	91
1894.....	1,626	102	211	21	1,837	93
1895.....	1,702	103	201	20	1,903	94
1896.....	1,738	103	195	20	1,933	95
1897.....	1,775	103	191	20	1,966	95
1898.....	1,815	104	181	20	1,996	97
1899.....	1,860	104	175	20	2,035	96
1900.....	1,880	104	168	20	2,048	97
1901.....	1,949	105	157	20	2,106	99
1902.....	1,971	105	149	20	2,120	99
1903.....	2,007	104	138	20	2,145	99
1904.....	2,093	105	134	20	2,227	100
1905.....	2,118	105	117	20	2,235	101
1906.....	2,099	105	102	20	2,201	101

In view of the great differences in salaries a better understanding of the pensions granted by the mutual benefit societies is obtained by studying them by separate branches of the service. The following table shows the number, amount, and average of pensions granted each year by the Adriatic Mutual Benefit Society from 1890 to 1903, and by the Mediterranean Mutual Benefit Society from 1890 to 1901, by the main groups of railroad employees.

The number of pensions granted to employees in the first, second, and fifth groups (engineers and firemen, trainmen, and office employees) were so small that it was not thought necessary to show them separately.

No invalidity pensions were granted to the female employees, as the constitution provided only for lump-sum benefits.

The pensions appear to have been larger in the Mediterranean society, due to higher wages paid by the Mediterranean Railroad. In both societies a tendency to smaller pensions is noticeable, though the fluctuations from year to year are considerable.

The comparison between the various occupational groups is particularly important. The shop employees receive larger pensions

than either the employees in the maintenance-of-way class or in the station service. This is partly due to higher wages and partly, probably, to longer service.

NUMBER AND AVERAGE OF PENSIONS GRANTED EACH YEAR BY THE ADRIATIC MUTUAL BENEFIT SOCIETY, 1890 TO 1903, AND BY THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY, 1890 TO 1901, BY BRANCHES OF THE SERVICE.

[Source: The annual reports of the societies.]

Society and year.	Pensions granted each year to—								Total.	
	Maintenance-of-way employees (male).		Station and yard service employees.		Shop employees.		All other.			
	Number.	Average.	Number.	Average.	Number.	Average.	Number.	Average.	Number.	Average.
Adriatic society:										
1890.....	123	\$78	96	\$96	110	\$132	6	\$132	335	\$102
1891.....	169	75	93	101	59	136	7	120	328	94
1892.....	320	75	199	96	70	142	21	120	610	91
1893.....	66	78	89	102	50	115	17	136	222	100
1894.....	130	70	118	101	67	133	7	137	322	96
1895.....	100	74	78	101	62	133	10	120	250	99
1896.....	103	78	66	101	85	148	12	142	266	109
1897.....	138	72	94	90	69	124	6	159	307	91
1898.....	104	74	47	92	55	129	8	129	214	94
1899.....	135	73	96	99	74	124	6	105	311	94
1900.....	136	78	92	105	125	130	15	134	368	104
1901.....	117	71	93	98	76	122	7	132	293	94
1902.....	116	69	117	94	50	119	14	127	297	90
1903.....	200	70	105	87	51	126	8	118	354	84
Mediterranean society:										
1890.....	78	94	104	111	87	152	13	142	282	120
1891.....	90	96	161	109	94	141	16	148	361	116
1892.....	75	91	88	100	54	143	16	153	233	111
1893.....	68	89	64	101	108	148	8	145	248	120
1894.....	49	89	38	112	47	146	6	143	140	117
1895.....	52	80	58	95	49	141	11	137	170	106
1896.....	39	81	57	102	40	156	10	141	146	107
1897.....	47	84	60	99	37	147	3	103	147	105
1898.....	52	72	50	97	59	157	5	160	166	112
1899.....	56	74	80	96	27	142	8	120	171	97
1900.....	47	82	56	90	77	137	11	95	191	167
1901.....	67	70	56	96	84	146	8	119	215	108

LUMP-SUM BENEFITS.—In case of retirement because of disability before fifteen years of membership, the employee received only a lump-sum payment, as explained above, depending upon his length of membership, with a minimum of two months' pay. The female employees, all belonging to the maintenance-of-way service, received only such lump-sum benefits. As the following table shows, these lump-sum benefits were very small, especially so in the case of the female employees. But these latter constituted by far the greater part of all persons receiving such lump-sum benefits, very few of the other groups retiring before the necessary fifteen years have elapsed.

The average sum paid to the female employees varied in the different years from \$17 to \$32. In other branches of service these amounts were larger; and the largest lump-sum benefits, as well as the largest pensions (outside of the few office employees), were paid to the shop workers.

NUMBER AND AVERAGE OF LUMP-SUM RETIREMENT BENEFITS PAID TO MEMBERS BY THE ADRIATIC MUTUAL BENEFIT SOCIETY, 1890 TO 1903, AND BY THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY, 1890 TO 1901, BY BRANCH OF THE SERVICE.

[Source: The annual reports of the societies.]

Society and year.	Lump-sum retirement benefits paid to—										Total.	
	Maintenance-of-way employees (males).		Maintenance-of-way employees (females).		Station-service employees.		Shop employees.		All others.			
	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.	Num-ber.	Aver-age.
Adriatic society:												
1890.....	2	\$78	79	\$22	5	\$68	6	\$126			92	\$34
1891.....			78	25	9	71	9	82	2	\$28	98	35
1892.....	6	40	123	22	11	56	10	117	1	235	151	33
1893.....	5	25	22	25	14	78	7	122	2	54	50	54
1894.....	8	55	25	28	7	80	7	125			47	55
1895.....	8	46	39	27	7	87	14	120	1	22	69	54
1896.....	11	84	28	28	10	80	1	210	1	47	51	54
1897.....	18	48	31	28	12	66	3	82	2	146	66	46
1898.....	12	66	34	27	6	72	12	100			64	52
1899.....	9	56	36	31	8	68	6	136	1	204	60	53
1900.....	3	32	18	28	10	84	4	130			35	58
1901.....	2	66	22	31	11	82	4	86			39	53
1902.....	5	66	22	31	8	112	6	177	1	112	42	73
1903.....	4	74	14	32	11	93	3	108			32	65
Mediterranean society:												
1890.....	5	32	36	24	26	55	27	52	1	47	95	41
1891.....	8	46	68	26	10	46	21	64	5	46	112	33
1892.....	5	63	70	24	14	56	6	59	2	45	97	33
1893.....	8	52	89	22	12	65	17	61	1	25	127	33
1894.....	1	133	52	20	9	50	1	112	1	53	64	28
1895.....	3	52	63	19	10	53	9	101			85	33
1896.....	6	30	57	17	11	64	16	91			90	37
1897.....	13	60	59	21	14	64	21	113			107	49
1898.....	11	47	54	20	29	63	15	132	3	130	112	53
1899.....	6	48	61	19	20	73	10	106	1	54	98	41
1900.....	4	48	76	23	25	67	10	150	3	76	118	45
1901.....	8	70	79	24	20	76	15	135	6	97	128	52

As explained in the analysis of the constitution, the mutual benefit societies, in distinction from the pension funds, did not pay any pensions to dependent families of deceased members until after 1905. Instead a lump-sum benefit was granted in such cases, as explained in a preceding paragraph. The number and average amounts of such death benefits are shown for the two largest societies and for the same periods to which the previous tables refer and separately for the larger three occupational groups. No such benefits were given to families of deceased female members, and only a few to the members of the higher wage groups who were rapidly being transferred to the pension funds, and therefore showed lower death rates. The average amounts of such benefits were somewhat higher than the average annual amounts of pensions. They did not represent an amount sufficient to insure economic security of the family for any length of time, but represent a sufficiently high amount to tide the family over the immediate difficulties accompanying the death of the father.

A considerable increase in the average amount of the death benefit may be noticed for all the groups. This is explained, however, by the discontinuance of new admissions after January 1, 1897, which operated to gradually raise the average age at death and also the average length of service at death, upon which the amount of the death benefit depends. Thus in 1894 there were 39 deaths of members under 35 and in 1903 only 4 such deaths. The average death benefit in case of such early death was naturally very small. Thus in 1896 these 35 families received only \$1,855, or only \$53 per family, while 31 families of members dying at the age of 50 or over received \$4,426, or \$143 per family.

NUMBER AND AVERAGE OF LUMP-SUM BENEFITS PAID TO FAMILIES OF DECEASED MEMBERS BY THE ADRIATIC MUTUAL BENEFIT SOCIETY, 1890 TO 1903, AND BY THE MEDITERRANEAN MUTUAL BENEFIT SOCIETY, 1890 TO 1901, BY BRANCH OF THE SERVICE.

[Source: The annual reports of the societies.]

Society and year.	Lump-sum benefits paid to families of—								Total.	
	Maintenance-of-way employees (males).		Station-service employees.		Shop employees.		All others.			
	Number.	Average.	Number.	Average.	Number.	Average.	Number.	Average.	Number.	Average.
Adriatic society:										
1890.....	44	\$83	66	\$80	22	\$150	12	\$92	144	\$92
1891.....	57	78	59	93	24	146	5	73	145	95
1892.....	64	79	54	84	24	160	7	97	149	95
1893.....	59	70	53	86	29	155	14	92	155	93
1894.....	56	74	45	83	16	154	5	92	122	90
1895.....	69	71	53	107	29	154	12	94	163	100
1896.....	60	83	43	87	20	156	11	148	134	101
1897.....	42	71	49	114	27	175	9	165	127	117
1898.....	42	67	61	103	22	159	7	129	132	102
1899.....	43	82	57	111	16	150	8	155	124	108
1900.....	46	73	50	124	31	167	11	113	138	116
1901.....	46	92	54	126	23	165	11	157	134	124
1902.....	43	100	60	136	22	196	8	161	133	136
1903.....	36	103	44	143	15	191	10	179	105	140
Mediterranean society:										
1890.....	62	68	59	89	29	121	5	112	155	87
1891.....	63	67	41	70	41	127	9	114	154	86
1892.....	53	64	55	84	46	126	6	85	160	89
1893.....	40	65	64	72	38	141	4	200	155	90
1894.....	56	69	48	83	32	139	7	97	143	91
1895.....	77	72	39	87	33	159	7	74	156	94
1896.....	59	68	51	110	29	132	1	226	140	98
1897.....	52	62	36	88	31	140	4	107	123	91
1898.....	54	69	43	109	48	176	11	133	156	118
1899.....	59	83	47	101	45	210	7	112	158	123
1900.....	57	73	49	113	37	213	13	98	156	119
1901.....	65	84	39	119	32	196	15	136	151	121

Until 1905, in case of death of pensioners, the family of the deceased was not entitled to the continuous pension, but only to a lump sum. The minimum of such lump-sum benefit was, according to the constitution of 1902, four times the monthly benefit of the pensioner. As the following table indicates, the average amount of this benefit varied since 1893 between \$36 and \$73. It did not represent, therefore, more than a funeral benefit and a small sum to tide over the first difficulties of the situation. By the law of 1905, embodied in the society's constitution of 1907, the widows of pensioners receiving their pensions since 1905 were granted the continuation of the pension. Data concerning the application of this paragraph are not available.

NUMBER AND AVERAGE OF LUMP-SUM BENEFITS PAID TO FAMILIES OF DECEASED PENSIONERS BY THE ADRIATIC AND BY THE MEDITERRANEAN MUTUAL BENEFIT SOCIETIES, 1890 TO 1903.

[Source: The annual reports of the societies.]

Lump-sum benefits paid to families of deceased pensioners by—				Lump-sum benefits paid to families of deceased pensioners by—					
Year.	Adriatic society.		Mediterranean society.		Year.	Adriatic society.		Mediterranean society.	
	Number.	Average.	Number.	Average.		Number.	Average.	Number.	Average.
1890.....	10	\$112	3	\$85	1897.....	48	\$58	41	\$49
1891.....	18	104	16	142	1898.....	59	45	43	54
1892.....	34	79	29	100	1899.....	64	52	44	54
1893.....	(a)	.....	39	62	1900.....	76	36	60	58
1894.....	(a)	.....	25	73	1901.....	74	46	60	52
1895.....	(a)	.....	32	50	1902.....	96	38	(a)	.....
1896.....	(a)	.....	41	60	1903.....	120	46	(a)	.....

^a Not reported.

FINANCES.—The general review of the finances of the three mutual benefit societies for the period of 18 years since their first reorganization in 1890 very plainly shows their financial weakness. The reorganized funds started on January 1, 1890, with a surplus fund of \$1,863,702, accumulated in the preceding period when their retirement benefits were rather small. But as the average age of the members increased and the number of retirement benefits grew the annual surplus decreased, and by 1892 was changed to a large and growing deficit. Thus between 1892 and 1905 more than two-thirds of the assets of the mutual benefit societies had dwindled away. Only the material increase in rates in 1906 had evidently saved these funds from financial difficulties. The causes for this appear more clearly in the following tables, which give the financial reports for the years 1902 to 1907:

FINANCES OF THE MUTUAL BENEFIT SOCIETIES, 1890 TO 1907

[Source: The annual reports of the societies.]

Society and year.	Income.	Expenditures.	Surplus.	Deficit.	Assets at end of year.
1890.....	\$607,286	\$438,774	\$168,512	.....	\$2,032,214
1891.....	651,786	511,717	140,069	.....	2,172,283
1892.....	602,604	622,963	.....	\$20,359	2,151,924
1893.....	618,666	643,941	.....	25,275	2,126,649
1894.....	621,007	647,381	.....	26,374	2,100,275
1895.....	631,404	687,918	.....	56,514	2,043,761
1896.....	640,669	709,489	.....	68,820	1,974,941
1897.....	632,058	729,991	.....	97,933	1,877,008
1898.....	618,957	743,441	.....	124,484	1,752,524
1899.....	617,318	750,402	.....	133,084	1,619,440
1900.....	619,548	804,849	.....	185,301	1,434,139
1901.....	618,004	818,511	.....	200,507	1,233,632
1902.....	680,164	803,409	.....	123,245	1,110,387
1903.....	647,884	811,332	.....	163,448	946,939
1904.....	678,854	803,079	.....	124,225	822,714
1905.....	658,379	812,832	.....	154,453	668,261
1906.....	921,750	810,709	111,041	.....	779,302
1907 (a).....	577,523	403,235	174,288	.....	953,590
1907 (b).....	465,125	420,345	44,780	.....	998,370
1907.....	1,042,648	823,580	219,068	.....	998,370

a First six months.

b Last six months; united fund.

The sources of revenue of the mutual benefit societies, as of the pension funds, consist of the following main sources: Contributions of the members, contributions of the railroads, regular sources of revenue established by the constitution, and interest and profits from investment. As appears from the following tables, the members' contributions in 1906 constituted about one-fourth (25.2 per cent) of the total, the direct contributions from the railroads over one-half (51.7 per cent), the indirect contributions, including the reimbursements for accident compensation, nearly one-fifth (18.3 per cent), and the income from interest and investments was very small, only 3.7 per cent, because of the low reserve. In view of the rapid decline of the reserve, the necessity for increasing the current revenues of the funds was keenly felt. The lower level of the wages of those employees who held membership in these societies, as compared with that of the members of the pension funds, previously described, precluded the possibility of increasing the members' contributions, and the railroads were therefore forced by law to increase their share. On October 21, 1902, these contributions were increased from 3 per cent of the salaries paid to 4.2 per cent, and on January 1, 1906, further increased to 8.15 per cent, i. e., nearly doubled. As a result the total contributions of the railroads more than doubled between 1902 and 1906, notwithstanding the decline in the membership. In 1902 these direct contributions of the railroads represented only 26.6 per cent, or a little over one-fourth of the total income, as against 51.7 per cent in 1906. The study of the table giving the expenditures by main items explains the reason for these difficulties. Pensions represented the main item, though officially designated by the name of continuous benefits, and though they were given only for retirement because of invalidity, and not for old age alone. The total expenditures for retirement pensions did not show such a rapid increase as in the case of the pension funds, but they were still

increasing in 1906, being in that year 7 per cent greater than in 1902. Thus, notwithstanding the existence of these mutual benefit societies for over 35 years, and the discontinuance of new admissions since 1897, the societies have not yet reached the state of equilibrium where the granting of new pensions would be entirely offset by the discontinuance of old ones. As was shown in one of the preceding tables, the number of current pensions was still increasing in 1907, and so was the average amount of pensions because of the increase in wages. While the latest increase of the railroad contributions from 4.2 per cent to 8.15 per cent of the salaries did overbalance the deficit and produce a slight surplus, the mutual benefit societies were not yet put upon a sound financial basis thereby. For with the continued increase of pensioners and the decrease of active members, producing a fall in the revenues, the small surplus was likely to be again converted into a deficit in the near future. If a technical balance of the mutual benefit societies were struck, it would show that the members through their long membership had acquired rights for invalidity pensions, thus creating a large actuarial liability with practically no reserve to cover it. At the same time a new source of liabilities was created by the provision of the law of 1905 establishing pensions for widows of members dying after July 1, 1905, and for widows of pensioners who had received their pensions after that date.

In the earlier years the expenditures for pensions for widows were on account of old pensions granted before January 1, 1890, to widows of members of the old *Alta Italia Mutual Benefit Society*, merged partly with the *Adriatic* and partly with the *Mediterranean Society*. But since 1905 the number and cost of widows' pensions show an increase.

If it were not for the entire change of the pension system the cost of widows' pensions would rapidly have assumed large proportions.

INCOME AND EXPENDITURES OF THE MUTUAL BENEFIT SOCIETIES, 1902 TO 1907.

[Source: The annual reports of the societies.]

INCOME.

Source of income and item of expenditure.	1902.	1903.	1904.	1905.	1906.	1907.(a)
Contributions of members:						
"Ordinary" members.....	\$175, 846	\$203, 526	\$199, 018	\$197, 043	\$211, 647	\$108, 249
"Aggregate" members.....	23, 369	22, 661	21, 439	20, 541	21, 079	10, 703
Total.....	199, 215	226, 187	220, 457	217, 584	232, 726	118, 952
Direct contributions of railroad.....	181, 065	243, 991	238, 851	236, 473	476, 144	340, 306
Indirect contributions of railroad:						
Unclaimed overcharges on freight.....	87, 381	57, 299	73, 558	54, 383	102, 707	54, 500
Fines.....	25, 163	17, 814	18, 597	17, 169	18, 809	12, 764
Repayments for accidents.....	28, 838	27, 395	35, 881	25, 807	36, 773	22, 941
All other.....	11, 209	11, 024	7, 552	8, 054	10, 223	4, 612
Total.....	152, 591	113, 532	135, 588	105, 413	168, 512	94, 817
Interest and investment.....	146, 747	63, 682	64, 430	65, 543	33, 760	18, 072
All other.....	546	492	19, 528	33, 366	10, 608	1, 186
Grand total.....	680, 164	647, 884	678, 854	658, 379	921, 750	^b 573, 333

^d For first six months only.

^b This total is \$4,190 less than the total shown on page 1988; the figures are given as shown in the original report.

INCOME AND EXPENDITURES OF THE MUTUAL BENEFIT SOCIETIES, 1902 TO 1907—
Concluded.

EXPENDITURES.

Source of income and item of expenditure.	1902.	1903.	1904.	1905.	1906.	1907. ^a
Temporary disability benefits:						
Sick benefits.....	123,208	89,188	87,668	110,070	105,909	66,006
Physicians' fees, expenses, etc.....	34,391	31,214	25,304	22,319	22,890	7,419
Medicines, appliances, etc.....	20,603	13,625	10,162	10,177	11,397	4,077
Total.....	178,202	134,027	123,134	142,566	140,196	77,502
Retirement benefits:						
Pensions.....	557,130	567,058	590,964	588,130	601,850	294,241
Lump sums.....	8,650	5,186	5,094	2,834	3,703	1,409
Total.....	565,780	572,244	596,058	590,964	605,553	295,650
Death benefits:						
Pensions to widows.....	7,186	6,771	6,393	6,413	14,617	11,217
Lump sums to families of members.....	36,670	35,819	35,608	38,359	10,576	1,913
Lump sums to families of pensioners.....	6,914	8,384	11,277	11,175	7,442	2,982
Funeral benefits.....	2,806	2,818	3,041	3,273	3,055	1,633
Total.....	53,576	53,792	56,319	59,220	35,690	17,745
Payments to pension fund.....	4,979	50,175	24,079	17,637	11,357	8,007
All other.....	872	1,094	3,489	2,445	17,913	141
Grand total.....	803,409	811,332	803,079	812,832	810,709	^b 399,045

^a For first six months only.^b This total is \$4,190 less than the total shown on page 1988; the figures are given as shown in the original report.

PROVIDENT INSTITUTE OF THE STATE RAILROAD.

The financial organization of the provident institute resulting from the consolidation of the three separate provident institutes of the railroad operating companies was very much different from that of the older institutions, and the reasons for these differences are important, having been forced by the impossibility to construct a true actuarial basis for the activity of a pension and benefit institution on those older lines. It will be necessary, therefore, to give the details of these differences in the financial organization.

As was stated in a preceding section, the provident institute combined the functions of both a pension fund and a mutual benefit society, or, in other words, old-age and invalidity insurance with sickness insurance and medical aid. The element of mutuality, while not altogether eliminated, was very considerably reduced, the main activity taking the form of compulsory accumulation of individual accounts, to be converted under certain conditions either into annuities or lump-sum benefits.

The membership in this institution was compulsory for all permanent employees of the railroads who entered the service after December 31, 1896, except that for employees appointed at an age over 45 years such membership was optional. The institute was divided into two sections, the first being limited to employees receiving monthly or annual salaries and the second to those receiving daily

wages, the two sections thus corresponding to the pension fund and the mutual benefit society. The second section, like its prototype, combined sickness insurance and medical aid with old-age invalidity insurance and widows' and orphans' pensions. In case of promotion to a monthly salary, members of the second section were transferred to the first section.

SOURCES OF INCOME.

As in distinction to the two older institutions described, the benefits of this institute depended primarily upon the individual accounts. It is necessary to analyze these accounts and all sources of revenue before stating the amounts of pensions and other benefits.

These sources of revenue are stated in the constitution as follows:

- (1) The regular deductions from the earnings of the members.
- (2) Extraordinary deductions.
- (3) Voluntary contributions of the members.
- (4) Contributions of the railroad administrations.
- (5) Special assigned sources of revenue.
- (6) Extraordinary revenues, such as legacies, donations, etc, and
- (7) Revenues from investments of funds.

Briefly, these sources may be classified into three groups: Employees' contributions, the railroad management's contributions, and miscellaneous revenues. In detail, these sources of revenue differed for the two sections of the institute.

The regular contributions of the members were identical with those in the pension fund and the mutual benefit society—i. e., 5.5 per cent of the salary for the first section and 3.5 per cent for the second section. The extraordinary contributions contained the deduction of one-twelfth of each annual increase of salary and, besides, an initiation fee of one-tenth of the annual salary at appointment. As each member's account was an individual one, the members were permitted to increase these accounts by additional voluntary contributions, which during any one month, however, must not exceed one-fifth of the salary.

The regular contributions of the railroad administration were identical with those for the pension fund and the mutual benefit society, namely, 8 per cent of the salary for the members of the first section and 8.15 per cent for the members of the second section, and amounts equal to the members' extraordinary contributions, not only promotion contributions, but also initiation fees.

The additional sources of revenue from the administration were shares of the revenues assigned to the pension fund and the mutual benefit society. The first section shared with the pension fund and the second with the mutual benefit society, the distribution being

affected annually in proportion to the aggregate earnings of the membership.

The various revenues enumerated were distributed into two distinct systems of accounts, the individual accounts and the collective account. The individual account of each member was made up of his compulsory deductions, his voluntary contributions, and the contribution of the railroad administration, to which at the end of each year was added interest at the rate established each year according to the computed rate of interest received by the institute. This account was payable to the member at time of leaving the service or to his family after his death. The collective account claimed all the other revenues and also certain transfers of the undistributed individual accounts or parts of accounts, as explained below. It was to be used for increasing the individual accounts of members leaving service because of old age and invalidity, and of families of members, according to special regulations to be issued.

In addition there was also a reserve fund into which certain amounts from other funds were paid, as explained below.

BENEFITS.

The annual benefits payable to members depended upon the amounts of accumulations in the individual accounts, and approached therefore a system of subsidized and compulsory savings.

The entire account was paid at the time of separation from service, either by resignation or by administrative order, under one of the following conditions:

(1) If the member had reached 60 years of age and completed 30 years of membership, in case of sedentary occupations, or 55 years of age and 25 years of membership, in active occupations.

(2) If the separation from service was due to invalidity, after 15 years of membership.

(3) Without any consideration as to the length of membership if the separation from service was due to invalidity caused by an injury received in service or by a miasmatic fever.

Thus the regulations for old age and invalidity insurance for all the members (i. e., for both sections) were similar to those for the pension fund, and a superannuation pension was introduced for the lower-grade employees, who before had only an invalidity pension.

The entire individual account was also liquidated in case an employee was discharged without any fault of his, but because of a change of personnel, even before he had reached the above-mentioned limits, provided he had held membership for 15 years.

PENSIONS AND LUMP SUMS.—The constitution further provided that when the member received the full value of his individual ac-

count, it must be converted into a life pension (after 2 per cent is deducted in favor of the reserve fund). An exception was made in the case of the member whose account was liquidated before 15 years of membership, when the account must be paid out in a lump sum, except that in cases when the pension would amount to not less than 200 lire (\$38.60) per annum such conversion might be demanded by the recipient. In the compulsory conversion of the total individual account into a pension, the rights of the wife and children must be taken into consideration. Thus, if a member had a wife but no children, she was entitled after his death to a pension of one-half the amount of his pension until her death or remarriage. If besides the wife there were minor children, they were entitled, if under age at the time of his death, collectively to one-fourth of his pension until majority. If the pensioner was a widower with children, they had a right to receive after his death and until majority one-half of his pension, or if there was only one child, one-fourth of his pension. All these pensions, together with the pension of the member, were purchased out of the liquidated individual account.

PARTIAL LIQUIDATIONS.—Unless one of the conditions enumerated above existed, the right of the employee to his individual account at the time of leaving the service was limited, except to the voluntary contributions, which together with interest accrued, were paid out at the time of leaving service for any cause.

If the employee left the service, unless dismissed for disciplinary reasons, he was entitled to receive his own contributions with the interest accrued. The remaining portion of the individual account was divided between the collective account and the reserve fund, the former receiving nineteen-twentieths, and the latter one-twentieth.

BENEFITS TO WIVES OR WIDOWS AND CHILDREN.—If the employee should be dismissed after 15 years of membership, the entire account was to be liquidated in favor of his wife or minor children, and if he died in service after 15 years of membership, in favor of his widow and minor children. The requirement as to the length of membership was waived in case of death because of an injury or a miasmatic fever. These amounts were convertible into pensions for the wives, widows, or children, unless the membership did not last 15 years; the pensions to widows were to run until remarriage and to the children to majority.

If, however, the dismissal or death took place before this 15-year limit and in absence of any conditions (injury or disease) causing the time limit to be waived, the widow or wife and children were entitled only to the employees' contributions with interest accrued. In this case, as in the case of the benefit being paid to the member himself, the retained portion of the account was divided between the collective and the reserve funds.

The rights of the widows and orphans of employees who died after having drawn their full accounts from the institute were provided for at the time of the liquidation of the account, when their pensions were computed, as explained above.

As the rights of the widows and children were rather complicated, they are briefly summarized again.

(1) When the ex-member died after having liquidated his full account and received a pension, the widow received one-half of his pension, and minor children one-fourth of his pension. If minor children, but no widow, survived, they received one-half of his pension, in equal shares.

(2) If an ex-member died after he received only his own contributions with interest, part in lump sum, his widow and orphans had no right.

(3) If a member died while in service and after 15 years of membership (or from injury or miasmatic fever, when this condition is waived), the entire individual account was liquidated in favor of his widow and minor children, and converted into pensions, the distribution being affected in such a way that the temporary pension of each minor child was equal to one-third of that of the widow.

(4) If a member died while in service but before 15 years of membership, the widow received in a lump sum only the contributions of the member with interest accrued.

The general conditions required to entitle the widow and children to benefits were identical with those for the other two institutions described above.

In case of dismissal from service for cause, the wife and children had the same rights as a widow and orphans.

LIMITS OF PENSION.—The pension to an employee was not to exceed four-fifths of the average annual salary during the last quinquennial period for the members of the first section, and 2.50 lire (48 cents) per day for the members of the second section.

The pension of widows (with or without one minor child) of the first section must not exceed two-fifths of that average annual salary, nor must it be larger than 4,000 lire (\$772) per annum. If there were minor children, the total pension must not exceed three-fifths of the average annual salary, nor 6,000 lire (\$1,158).

When two or more minor children without a mother survived, the limit of their pensions was the same as for the widow; for one minor child the maximum limit was one-half of that for the widow.

For the widows of members of the second section the limits were very much lower: Namely 1.25 lire (24 cents) per day with or without one child, and together with two or more minor children, 1.90 lire (37 cents) per day. All amounts from the individual accounts in excess of these limits reverted to the collective fund.

SPECIAL BENEFITS FOR MEMBERS OF THE SECOND SECTION.—It appears from the foregoing analysis that much more uniformity had been introduced in the treatment of employees of the two classes, the main difference being in the rate of compulsory monthly contributions from the employees' earnings and in the different sources for supplemental revenue of the collective fund.

The other important difference was that the second section included besides old-age, invalidity, and retirement relief, also the functions of sickness insurance similar to those of the mutual benefit society.

SANITARY SERVICE.—It will be remembered that the mutual benefit society conducted a medico-sanitary service for the entire personnel of the railroads, the expenses being shared by the second section of the provident institute. The constitution of the latter provided that as soon as the total earnings of its members exceeded that of members of the mutual benefit society it should assume this function, the mutual benefit society sharing in its expenses. The benefits in the nature of medical and surgical help, hospital treatment, medicinal bath, funeral benefits, etc., were identical with those of the mutual benefit society enumerated on page 1963.

SICK BENEFITS.—Sick benefits of two-thirds the daily wages were paid to the employee deprived of his earnings because of illness, provided he had been subject to deductions from his salary for at least 30 days. The conditions of payment of sick benefits were identical with those of the mutual benefit society.

COST OF SICKNESS INSURANCE.—As far as the medical service and the sick benefits were concerned, the principle of mutuality was applied to the second section. The entire cost of sickness insurance to the second section was divided among the members proportionately to their annual earnings, and the respective amounts were deducted from their individual accounts.

ACCIDENT INSURANCE.—Similar to the other institutions, the provident institute, in case of industrial accidents, assumed the responsibility toward all its members who were subject to the accident insurance law.

The general methods applicable in the case of this institute were practically identical with those of the pension fund and the mutual benefit society, except that in case of death or of permanent disability necessitating separation from the service, the injured person or his family received the personal contributions with the interest accrued in addition to the compensation required by the law. The remaining portion of the individual account reverted to the collective account. But if the total amount paid under the accident law, plus these personal contributions, was still less than the amount to which the injured

person or his family would have been entitled under the constitution in case of death or invalidity from other causes, the difference was paid and charged to the collective fund.

ADMINISTRATION.

The institute was administered by a committee divided into two sections, corresponding to the sections of the institute; the details of administration were identical with those for the pension fund and the mutual benefit society, except that for certain purposes, concerning each section separately, the committees acted separately, and for other general purposes they sat together as one body. The expenses of administration, as in the case of the other two institutions, were borne by the railroad administration.

As seen from the analysis, the new provident institute had some advantages over the two older institutions. Perhaps the main advantage was a fiscal one; as the benefits were dependent upon the individual accounts, the institute was guaranteed against deficits and insolvency. Another advantage was the comparative equality in the treatment of the members of the two sections. A third was that under no conditions did a member lose all his rights to benefits by premature separation from the service. The principle prevailed that only the additional contributions from the railroad administration were in the nature of a reward for continuous service, and that under no circumstances was a member to be deprived of the accumulations resulting from his compulsory or voluntary contributions.

STATISTICS.

The provident institutes, organized in accordance with the law of 1897 by the constitution adopted on January 31, 1901, grew rapidly within the next five or six years at the expense of the other institutions previously described. The Adriatic Railroad began to keep accounts for the provident institute as early as 1897, the Sicilian Railroad in 1898, and the Mediterranean Railroad in 1900. As is shown in the following table, the average annual membership in 1900 was 3,861, and during the last 6 months of the existence of the individual funds 34,918, while for the first 6 months of the consolidated provident institute it increased to 38,335, the first section claiming about one-third, and the second section two-thirds, of the total membership.

AVERAGE MEMBERSHIP OF THE PROVIDENT INSTITUTES, 1897 TO 1907, BY SECTIONS AND FUNDS.

[Source: The annual reports of the institutes.]

Year.	Number of members in—							Grand total.	
	First section.				Second section.				
	Adriatic fund.	Mediterranean fund.	Sicilian fund.	Total.	Adriatic fund.	Mediterranean fund.	Sicilian fund.		Total.
1897	4			4	45			45	49
1898	15		41	56	370		272	642	698
1899	140		75	215	938		473	1,411	1,626
1900	425	241	111	777	1,546	858	680	3,084	3,861
1901	965	591	157	1,713	1,985	2,254	866	5,105	6,818
1902	1,647	767	229	2,643	2,842	3,057	1,017	6,916	9,559
1903	2,440	1,018	380	3,838	5,767	5,480	1,229	12,476	16,314
1904	3,249	1,495	531	5,275	8,702	8,512	1,511	18,725	24,000
1905	3,930	2,171	627	6,728	9,982	9,663	1,699	21,344	28,072
1906	4,628	3,737	817	9,182	10,930	9,847	1,824	22,601	31,783
1907 (a)	5,066	5,386	942	11,394	11,615	9,983	1,926	23,524	34,918
1907 (b)				12,958				25,377	38,335

a First 6 months.

b Last 6 months; united fund.

The changes in the membership during these first six months are shown in detail in the following statement. The membership on December 31, 1907, is seen to have exceeded 40,000.

CHANGES IN MEMBERSHIP OF THE UNITED PROVIDENT INSTITUTES, 1907.

[Source: The annual reports of the institutes.]

	First section.	Second section.	Total.
Membership on June 30, 1907:			
Adriatic fund.....	5,159	11,839	16,998
Mediterranean fund.....	5,850	10,215	16,065
Sicilian fund.....	925	1,967	2,892
Total.....	11,934	24,021	35,955
Admitted July 1 to December 31, 1907.....	2,200	2,900	5,100
Total.....	14,134	26,921	41,055
Lost July 1 to December 31, 1907:			
Died.....	15	45	60
Retired, etc.....	130	54	184
Discharged.....	8	32	40
Transferred to first section.....		58	58
Total.....	153	189	342
Total membership December 31, 1907.....	13,981	26,732	40,713

FINANCES.—The financial statements of these institutions, available in detail for the entire period 1902 to 1907, must be studied separately for the two sections, between which important differences existed, as pointed out above. In the following summary table the total income and expenditures of the first section are given, also the surplus from each year's operations and the total assets.

The entire period appears to have been one of accumulations. The expenditures necessarily were trivial, for the members were all employees with very short length of service and not entitled to retire-

ment benefits on account of old age. The payments made were extensively for invalidity or death, and even then were necessarily very small. By the time the three funds were merged into one, on July 1, 1907, the accumulated reserves of the first section of the provident institutes amounted to \$2,287,198, or \$191.65 per member.

FINANCES OF THE PROVIDENT INSTITUTES, FIRST SECTION, 1897 TO 1907.

[Source: The annual reports of the institutes.]

Fund and year.	Income.	Expenditures.	Surplus.	Assets at end of year.
1897.....	\$91	.....	\$91	\$91
1898.....	1,748	.....	1,748	1,839
1899.....	10,215	\$51	10,164	12,003
1900.....	40,782	221	40,561	52,564
1901.....	65,874	770	65,104	117,668
1902.....	203,809	1,083	202,726	320,394
1903.....	255,416	2,048	253,368	573,762
1904.....	330,134	2,241	327,894	901,656
1905.....	399,759	4,399	395,360	1,297,016
1906.....	587,571	5,337	582,234	1,879,250
1907 (a).....	411,416	3,468	407,948	2,287,198
1907 (b).....	513,541	10,998	502,543	2,789,741

a First six months.

b Last six months; united fund.

The sources of these accumulations are shown in some detail for 1902 to 1907 in the following table. The contribution of the railroad operating companies is the main item, followed by the regular 5.5 per cent deduction from the salaries of the employees. The income of the first section from the extraordinary deductions, namely, initiation fees and promotion contributions were heavier than is usual from such sources, but this is evidently explained by the youth of the institutions, the number of new members each year being a very high proportion of the total membership. In comparison with the amount of the members' regular contributions, the amount from this source was declining. In 1902 it amounted to 49.1 per cent, and in 1906 only to 22.4 per cent of the regular contributions. On the other hand, the income from investments was gradually growing and helped to build up the individual as well as the collective accounts.

INCOME OF THE PROVIDENT INSTITUTES, FIRST SECTION, 1902 TO 1907.

[Source: The annual reports of the institutes.]

Source of income.	1902.	1903.	1904.	1905.	1906.	1907. (a)
Members' contributions:						
Normal.....	\$39,076	\$63,675	\$86,047	\$103,095	\$152,824	\$103,528
All other.....	19,179	20,821	29,502	21,232	34,279	31,993
Arrears, etc.....	2,758	14,683	4,201	882	4,395	533
Total.....	61,013	99,179	119,750	130,209	191,498	136,054
Voluntary contributions.....	.....	17	17	23	20	66
Railroad contributions.....	129,686	116,247	147,160	174,912	255,246	182,494
Investments.....	7,150	15,892	25,747	39,208	50,523	33,543
Sale of station tickets.....	4,646	11,228	9,068	11,039	21,381	9,962
Transfers from second section.....	1,314	12,787	28,175	44,369	62,183	11,062
All other.....	.....	66	197	.....	720	38,235
Total.....	203,809	255,416	330,134	399,759	587,571	411,416

a First six months only.

An interesting feature brought out by the financial accounts of these institutions, and one which holds true of the second as well as of the first section, is the trivial amount of the voluntary contributions which the constitution permitted the members to make for the purpose of increasing their accounts. As these contributions carried no additional subsidy from the railroad, the stimulus to voluntary saving, or rather to the use of this provident fund for the purposes of saving was very slight.

The only additional source of income established by law was the proceeds from the sale of the tickets of admission to the railroad stations. This was shared with the pension fund in proportion to the respective amounts of the annual salaries of the total membership of these two institutions.

Another source of income was the transfer of the accounts of the employees promoted from daily to monthly salaries and therefore transferred from the second to the first section of the provident institute.

The finances of the second section are presented in the following two tables. As the second section granted sick benefits and had other expenses in connection with the treatment and care of the sick, its total expenditures are found to have been greater than those of the first section. The accumulations were nevertheless considerable, about keeping pace with those of the first section, but in view of the larger number of members, the average accumulations per member were very much smaller. On June 30, 1906, the total accumulations of the 24,021 members amounted to \$2,240,128 or \$93.26 per member, less than one-half of that of the members of the first section.

FINANCES OF THE PROVIDENT INSTITUTES, SECOND SECTION, 1897 TO 1907.

[Source: The annual reports of the institutes.]

Year.	Income.	Expenditures.	Surplus.	Assets at end of year.
1897.....	\$431	\$179	\$252	\$252
1898.....	5,051	726	4,325	4,577
1899.....	12,555	4,525	8,030	12,607
1900.....	25,732	10,210	15,522	28,129
1901.....	43,233	16,832	26,401	54,530
1902.....	197,572	22,704	174,868	229,398
1903.....	376,069	54,393	321,676	551,074
1904.....	522,444	88,021	434,423	985,497
1905.....	509,154	129,045	380,109	1,365,606
1906.....	662,352	134,982	527,370	1,892,976
1907 (a).....	408,096	60,943	347,153	2,240,129
1907 (b).....	437,985	94,313	343,672	2,583,801
1907.....	846,081 ^a	155,256	690,825	2,583,801

^a First six months.^b Last six months; united fund.

The income from members of the second section was very much smaller than that of the first section, notwithstanding the very much larger number of members, the annual contributions of the

members amounting only to 3.5 per cent of the salary instead of 5.5 per cent as in the first section. This source contributed in 1906 less than one-fifth (19.5 per cent) of the total income. The income from initiation fees and promotion contributions was high, for the same reason as in the first section, i. e., because of the admission of a proportionately large number of new members; and the miscellaneous sources of revenue established by the law, which may be considered indirect contributions of the railroads, were very much more important in this section. Adding these to the railroad contributions, it is seen that more than one-half of the revenue was contributed by the railroad management.

In the expenses of the second section, a very large item is, properly speaking, a bookkeeping account, representing the transfer of the accounts of members from the second to the first section. Disregarding this, the most important item is represented by sick benefits. The items for physicians' fees and traveling expenses and also for medicines are very small as compared with the amount of sick benefits, but this is explained by the fact that the cost of the first aid and of antifebrile medicaments since 1904 was assumed by the railroad administration.

INCOME AND EXPENDITURES OF THE PROVIDENT INSTITUTES, SECOND SECTION,
1908 TO 1907.

[Source: The annual reports of the institutes.]

Item.	1902.	1903.	1904.	1905.	1906.	1907.(a)
INCOME.						
Members' contributions:						
Normal.....	\$36,358	\$82,446	\$112,218	\$124,807	\$129,358	\$71,155
All other.....	13,740	54,302	87,763	68,206	48,255	26,985
Arrears, etc.....	1,461	14,721	12,454	2,243	374	303
Total.....	51,559	151,469	212,435	195,256	177,987	98,443
Railroad contributions.....	122,057	167,684	222,751	205,912	267,107	214,499
Other sources of revenue under the law (b)	17,682	42,052	46,123	42,394	70,873	43,487
Investments.....	4,243	11,793	27,869	42,635	56,193	33,668
All other.....	2,031	3,071	13,266	22,957	90,192	17,999
Total.....	197,572	376,069	522,444	509,154	662,352	408,096
EXPENDITURES.						
Physicians' expenses, etc.....	5,414	9,074	8,840	9,439	9,639	3,704
Medicines and appliances.....	2,402	3,203	3,684	4,634	5,240	2,189
Sick benefits.....	13,586	27,172	41,400	53,469	50,262	38,936
Funeral benefits.....	41	586	893	1,178	981	828
Repayments of contributions.....	204	1,342	2,539	15,804	6,537	2,938
Payments to first section.....	1,057	13,016	30,665	44,521	62,323	11,062
All other.....						1,196
Total.....	22,704	54,393	88,021	129,045	134,982	60,943

^a First six months only.

^b Including fines imposed on employees, proceeds of sale of unclaimed articles found on railroad property, proceeds of sale of railroad tariffs and time-tables, unclaimed overcharges on freight, and excess sums found in cash accounts of stations.

For the financial statement of the united provident institute data are available only for the first six months, July 1 to December 31, 1907.

The income and expenditures of both sections are shown for that period in the following table. Eliminating the transfers from the second to the first section, the income for the six months amounted to \$904,332 and the expenditures to \$58,117, increasing the assets during these six months by \$846,215, or an average of about \$22 per average member. As the total contributions of the members for these six months were only \$272,608, the accumulations appear to be three times as great, notwithstanding the cost of sick benefits and other benefit payments.

By the end of 1907 the total assets of the first section increased to \$2,789,741 and those of the second section to \$2,583,801, making a total of \$5,373,542.

INCOME AND EXPENDITURES OF THE PROVIDENT INSTITUTE, JULY 1 TO DECEMBER 31, 1907.

[Source: The annual reports of the Institutes.]

Income.				Expenditures.			
Source.	First section.	Second section.	Total.	Item.	First section.	Second section.	Total.
Members' contributions:				Repayment of individual accounts:			
Normal.....	\$127,945	\$78,716	\$206,661	To discharged employees.....	\$5,300	\$3,014	\$8,314
Payments at reinstatement, etc.....	1,158	741	1,899	To families.....	2,556	3,475	6,031
All other.....	39,766	26,181	65,947	Total.....	7,856	6,489	14,345
Total.....	168,869	105,638	274,507	From collective accounts:			
Railroad contributions:				To discharged employees.....	2,959	1,384	4,343
Normal.....	186,102	183,296	369,398	To families.....	183	3,527	3,710
Arrears.....	34,126	34,126	68,252	Total.....	3,142	4,911	8,053
All other.....	39,766	26,181	65,947	Medical expenses.....		6,583	6,583
Total.....	225,868	243,603	469,471	Funeral expenses.....		779	779
Other legal sources of revenue (a).....	15,636	42,082	57,718	Sick benefits.....		28,357	28,357
Investment.....	44,694	37,999	82,693	Total expenditures exclusive of transfers.....	10,998	47,119	58,117
All other.....	11,280	8,663	19,943	Transfers to first section.....		47,194	47,194
Total income exclusive of transfers.....	466,347	437,985	904,332	Total expenditures.....	10,998	94,313	105,311
Transfers from second section.....	47,194		47,194	Surplus.....	502,543	343,672	846,215
Grand total.....	513,541	437,985	951,526	Grand total.....	513,541	437,985	951,526

^a Including fines imposed on employees, proceeds of sale of unclaimed articles found on railroad property, proceeds of sale of railroad tariffs and time-tables, unclaimed overcharges on freight, and excess sums found in cash accounts of stations.

LAW OF JULY 9, 1908.(a)

The actuarial advantages of the new provident institute over the older institutions, the pension fund and the mutual benefit society, consisted in the prevention of deficits, and were of greater importance as long as these institutions were self-supporting and the railroads managed by private companies. This avoidance of deficits could

naturally be accomplished only at the expense of the pensions. With the nationalization of the operation of railroads, when all the railway employees became government employees, the actuarial advantage of the provident institutes lost some of its value, as old-age and invalidity pensions constitute a recognized feature of the Italian Government service. On the other hand, it was felt that the pensions purchasable with the accumulated individual accounts would be smaller than those granted by the old pension fund. The existence of differences in the treatment of various classes of employees was considered a disadvantage from an administrative point of view, as leading to dissatisfaction.

The law of July 9, 1908, was intended to do away with these inequalities and disadvantages. This law abolished all the three existing institutions, the pension fund, the mutual benefit society, and the provident institute, transferring the entire pension activity to a new office within the state railroad administration. Beginning with January, 1909, all the existing funds, assets, and sources of revenue were transferred to this branch of the Government, and the expenditures and revenues connected with the pensions must be entered as parts of the railroad budget.

As a basis for the pension payments the constitution of the pension fund is taken, except as modified by the present law. This constitution was more liberal in old-age and invalidity pension payments than either that of the mutual benefit society or the provident institute. The revenues of the service remain mainly as before, except that all members' regular contributions are equally placed at 5.5 per cent of the salaries, while the contributions of the railroad administration for 1909 were placed at 8 per cent of the salaries, for 1910 at 8.5 per cent, and for 1911 and thereafter at 9 per cent. All members are subject to the extraordinary contribution of one-twelfth of the increase and of one-tenth of the initial salary at the time of appointment, the railroad administration contributing equal amounts in both cases.

Of the new sources of revenue created, the most important are the reestablishment of the 2 per cent tax upon the gross revenues from operation, which had been in force according to the original contract of lease of the government railroads to private operating companies from 1885 until 1905, and interest upon all the accumulated funds of the pension fund, the mutual benefit society, and the provident institute, and also upon the accumulations in the Loan and Deposit Bank for the purpose of covering the deficits of the pension funds and the mutual benefit societies.

The substitution of the pension scheme of the old pension fund for that of the mutual benefit society and of the provident institute was of

most importance for the rights of the widows and orphans of the members of the latter. These extensions are limited, however, in their retroactive effect. Thus far, as concerns the families of members who retired or died before January, 1909, the old rules of the respective institutions are in force. Besides, the provisions of the pension fund concerning the pension rights of widows and orphans shall not apply to marriages entered into before July 1, 1908, by persons holding membership in the mutual benefit society on December 31, 1908, and before January, 1908, by persons holding membership in the provident institute on December 31, 1908.

The sickness insurance benefits are excluded from the new pension system, but the interests of the lower grade employees, for whom this sickness insurance was intended, did not suffer, for the law placed the duty of providing sick benefits and medical care, etc., upon the railroad administration without any cost to the personnel. Moreover, the amount of sick benefits was raised from two-thirds of the daily wage to the full wage. Again, the entire application of the accident insurance law was assumed by the railroad administration directly, and the benefits for accidents leading to temporary disability was increased to full pay instead of two-thirds, as under the law.

Those were the main changes introduced in the pension fund constitution as applied to all the employees after January 1, 1909. Only for the female employees, members of the old mutual benefit society, have the old rules concerning deductions from salaries and concerning pensions been left undisturbed. No new appointments are made in that class.

The system of individual accounts has been discarded, but it can hardly be considered a return to the mutual system, as the Government assumes the entire financial responsibility for the application of the law.

The essential objection to this system remains in the fact that it is like the old pension fund was—primarily, an old-age or invalidity retirement fund—and that, notwithstanding the considerable compulsory contributions by the employees, they lose all their rights to a pension, for themselves as well as for their families, in case of voluntary resignation before certain age limits (unless invalidity can be established), while in case of dismissal they lose their pension rights, but their families are treated as widows would be if death instead of dismissal had taken place, i. e., are entitled to pensions after 10 years of service, but not before.

The codified text of the pension provisions, prepared in accordance with article 21 of the law of July 9, 1908, and approved by the royal decree of April 22, 1909, combines all the provisions of the three constitutions which are still in force with those of the law, but represents

mainly an adjustment of the provisions of the pension fund constitution to the requirements of the new law. It will not be necessary, therefore, to give any detailed analysis of this codified text.^(a)

As this law went into effect so very recently, no data relative to the results of its application are available.

CONCLUSIONS.

The extent of the operations of this system may roughly be judged, however, from the combined data of the operations of the nine institutions for the first six months of 1907 and of the three unified institutions for the second six months of the same year, giving together the latest available total for all Italian railroad employees' benefit institutions.

The membership of these institutions has increased during the year from 90,324 to 94,378.

The total number of employees of the state railways on June 30, 1907, is stated at 134,611, but of these 39,899 are classified as temporary or supernumerary employees (*personale avventizio*) not protected by the pension legislation. The regular force comprised 94,712, so that practically the entire force of regular employees held membership in one of the three benefit institutions.

The financial operations cover revenues amounting to \$5,636,938 and expenditures of \$3,799,048, leaving a surplus of \$1,837,885 and increasing the funds of the combined institutions from \$26,610,170 to \$28,448,055.

^a Testo unico delle Disposizioni per le Pensioni del Personale delle Ferrovie dello Stato. Rome, 1909.

SUMMARY OF OPERATIONS OF ALL ITALIAN

[Source: The annual

Fund.	Membership at—		Income.					
	Begin- ning of period.	End of period.	Members' contribu- tions.	Railroad contribu- tions.	Invest- ments.	Other regular sources.	All other.	Total.
January 1 to June 30, 1907:								
Pension funds—								
Adriatic.....	9,320	9,161	\$151,938	\$209,334	\$162,061	\$12,839	\$11,472	\$547,644
Mediterranean.....	16,986	16,654	224,297	309,845	262,357	11,807	11,187	819,493
Sicilian.....	861	862	16,287	22,306	22,760	698	218	62,269
Total.....	27,167	26,677	392,522	541,485	447,178	25,344	22,877	1,429,406
Mutual benefit socie- ties—								
Adriatic.....	12,704	12,501	49,276	138,771	6,339	34,260	1	228,647
Mediterranean.....	14,189	13,932	62,541	199,443	11,718	33,915	.....	307,617
Sicilian.....	1,828	1,788	7,135	25,033	15	3,701	1,185	37,069
Total.....	28,721	28,221	118,952	363,247	18,072	71,876	1,186	^b 573,333
Provident institutes—								
Adriatic, first sec- tion.....	4,973	5,159	62,152	83,740	17,925	4,891	38,235	206,943
Adriatic, second section.....	11,948	11,839	47,390	78,737	17,104	21,224	16,109	180,564
Mediterranean, first section.....	4,921	5,850	63,235	84,407	12,586	4,649	.....	164,877
Mediterranean, second section...	9,750	10,215	43,650	114,358	13,133	19,243	1,855	192,239
Sicilian, first sec- tion.....	959	925	10,733	14,347	3,032	422	11,062	39,596
Sicilian, second sec- tion.....	1,885	1,967	7,403	21,404	3,431	3,020	35	35,293
Total, first sec- tion.....	10,853	11,934	136,120	182,494	33,543	9,962	49,297	411,416
Total, second section.....	23,583	24,021	98,443	214,499	33,668	43,487	17,999	408,096
Both sections...	34,436	35,955	234,563	396,993	67,211	53,449	67,296	819,512
July 1 to December 31, 1907:								
State pension fund....	26,677	25,966	388,416	488,626	476,996	43,711	284	1,398,033
State Mutual Benefit Societies.....	28,221	27,699	116,590	271,185	19,935	56,994	421	465,125
State Provident Insti- tutes, first section....	11,934	13,981	168,809	225,868	44,094	15,636	58,474	513,541
State Provident Insti- tutes, second section.	24,021	26,732	105,638	243,603	37,999	42,082	8,663	437,985
Total.....	90,853	94,378	779,513	1,229,282	579,624	158,423	67,842	2,814,684
The entire year 1907:								
Pension funds.....	27,167	25,966	780,938	1,030,111	924,174	69,055	23,161	2,827,439
Mutual Benefit Socie- ties.....	28,721	27,699	235,542	634,432	38,007	128,870	1,607	1,038,458
Provident Institutes, first section.....	10,853	13,981	304,989	408,362	78,237	25,598	107,771	924,957
Provident Institutes, second section.....	23,583	26,732	204,081	458,102	71,667	85,569	26,662	846,081
Grand total.....	90,324	94,378	1,525,550	2,531,007	1,112,085	309,092	159,201	5,636,935

^a Deficit.^b This total is \$4,190 less than the total shown on page 1983; the figures are given as shown in the original report.

RAILROAD EMPLOYEES' BENEFIT FUNDS, 1907.

reports of the funds.]

Expenditures.						Surplus.	Assets at—	
Pensions.	Lump-sum benefits.	Sick benefits.	Sanitary service.	All other.	Total.		Beginning of period.	End of period.
\$582,280	\$531				\$582,811	^a \$35,167	\$7,891,032	\$7,855,865
751,180	601			\$105	751,886	67,607	12,977,203	13,044,810
27,633					27,633	34,636	1,190,415	1,225,051
1,361,093	1,132			105	1,362,330	67,076	22,058,650	22,125,726
167,980	3,204	\$26,828	\$4,516	4,498	207,026	21,621	223,925	245,546
116,930	4,268	35,098	5,634	3,422	165,352	142,265	587,523	729,788
20,548	465	4,080	1,346	228	26,667	10,402	^c 32,146	^c 21,744
305,458	7,937	66,006	11,496	8,148	^b 399,045	174,288	779,302	953,590
	2,435				2,435	204,508	979,996	1,184,504
	2,267	24,602	2,797	17	29,683	150,881	960,632	1,111,513
	786				786	164,091	736,780	900,880
	1,120	11,516	2,088		14,724	177,515	747,667	925,182
	247				247	39,349	162,465	201,814
	379	2,818	1,098	12,241	16,536	18,757	184,677	203,434
	3,468				3,468	407,948	1,879,250	2,287,198
	3,766	38,936	5,983	12,258	60,943	347,153	1,892,976	2,240,129
	7,234	38,936	5,983	12,258	64,411	755,101	3,772,226	4,527,327
1,445,925	1,502			180	1,447,607	^a 49,574	22,125,726	22,076,152
313,642	7,760	58,714	11,837	28,392	420,345	44,780	953,590	998,370
	10,998				10,998	502,543	2,287,198	2,789,741
	12,179	28,357	6,583	47,194	94,313	343,672	2,240,129	2,583,801
1,759,567	32,439	87,071	18,420	75,766	1,973,263	841,421	27,606,643	28,448,064
2,807,018	2,634			285	2,809,937	17,502	22,058,650	22,076,152
619,100	15,697	124,720	23,333	36,540	^b 819,390	219,068	779,302	998,370
	14,466				14,466	910,491	1,879,250	2,789,741
	15,945	67,293	12,566	59,452	155,256	690,825	1,892,976	2,583,801
3,426,118	48,742	192,013	35,899	96,277	3,799,049	1,837,886	26,610,178	28,448,064

^c Liabilities.

The combinations of all these institutions into one statistical picture, as is done in this table, brings out several interesting facts. Of the total income of \$5,636,938, only \$1,525,550, or 27.1 per cent, was contributed by the employees. The railroads directly contributed \$2,531,008, or 44.9 per cent, of the total revenue, but in addition various sources of revenue, which may be considered indirect contributions of the railroads, were created by the law, yielding altogether \$309,092, or 5.5 per cent, so that the entire contribution of the railroads may be put at 50.4 per cent of the total income. The income from investments brought in \$1,112,086, or 19.7, leaving only \$159,202, or 2.8, for other sources of revenue.

The total expenditures for the entire year amounted to \$3,799,048, leaving a surplus of \$1,837,885. By far the greatest share of the expenditures of the pension funds and of the mutual benefit societies was claimed by pension payments, which amounted to \$3,426,115, or 90.2 per cent of the total. The other benefits in case of retirement or death, paid in lump sums, constituted only 1.3 per cent; sick benefits, 5.1 per cent; expenses of medical service, 0.9 per cent; and all other expenses, 2.5 per cent; these latter are mostly bookkeeping accounts, representing transfers from the mutual benefit societies to the pension funds, and from the second sections of the provident institutes to the first sections.

The total assets of the three institutions on December 31, 1907, amounted to \$28,448,055. But in addition to that, large accumulations to the credit of the older pension fund and the mutual benefit society were deposited with the governmental Bank of Deposits and Loans. It will be remembered that in accordance with the law of 1885 there was a two per cent tax levied upon the gross receipts (1 per cent in case of the Sicilian railways), in order to cover the deficit of the pension funds up to 1885. In addition, the laws of April 15, 1897, and March 29, 1900, created surtaxes, described above. Up to March 31, 1900, these amounts accumulated in the treasuries of the pension funds, but on that date, in accordance with the latter law (March 29, 1900), they were transferred to the Bank of Deposits and Loans. On that date they amounted to \$3,508,612. Further payments according to these laws were made into the Bank of Deposits and Loans. The revenues under the older law of 1885 stopped on June 30, 1905, when the contracts for private operation ran out and the railroads reverted to the State, and on that date they amounted to \$1,848,902. The total revenue from the later taxes of 1897 and 1900 amounted on December 31, 1906, to \$11,489,415, so that the total payments into the Bank of Deposits and Loans. reached \$13,338,317. The actual accumulations were materially larger because of the interest on the securities in which these deposits

were invested according to law. On December 31, 1906, the total accumulations amounted to \$14,967,783, and on December 31, 1907, to \$17,234,436.

To this must be added the accumulations of a special fund created by the law in 1885 to cover the deficits which have accrued in the old Southern (Meridional) Pension Fund, merged during the reorganization of the railroads and their pension funds, partly with the Adriatic, and partly with the Sicilian funds. This fund was constituted by contributions from the Southern Railroad Company, which continued to operate the Adriatic system. Until June 30, 1905, contributions were made to the fund from time to time by the Southern railroad, and since that date the fund grew by accruing interest. On December 31, 1907, it amounted to \$1,891,731, so that the total of these supplementary funds amounted on that date to \$19,126,167. Together with the assets of the three institutions, \$28,448,055, it represented a total accumulation of \$47,574,222, of which the interest, according to the law of July 9, 1908, was made available for the purpose of meeting the pension obligations according to the law. As, however, the Government assumed the entire responsibility of meeting this obligation of the pension system, the financial details, important from a fiscal point of view, are immaterial as far as the solvency of the pension system is concerned.

ACCUMULATIONS OF SPECIAL FUNDS DEPOSITED WITH THE BANK OF DEPOSITS AND LOANS FOR THE PURPOSE OF COVERING OLD DEFICITS OF PENSION FUNDS AND MUTUAL BENEFIT SOCIETIES.

[Source: Rapporto sull' Andamento della Cassa Pensioni per il Personale delle Ferrovie Costituente la Rete Adriatica, 1902 to 1906.]

Date of receipt.	Proceeds of the original 2 per cent tax (Sicilian fund, 1 per cent).	Proceeds of the surtaxes established by the laws of April 15, 1897, and March 29, 1900.	Total payments into the Loan and Deposit Bank.	Total value of these proceeds, with interest accrued on deposit in the Loan and Deposit Bank.	Special fund for meeting the deficits of the Meridional pension fund.	Total amounts on deposit with the Loan and Deposit Bank, for the purpose of meeting deficits.
March 31, 1900.....	\$293, 129	\$3, 215, 483	\$3, 508, 612	\$3, 508, 612	(a)	(a)
December 31, 1902.....	938, 532	6, 331, 291	7, 269, 823	(a)	\$959, 727	(a)
December 31, 1903.....	1, 217, 800	7, 511, 848	8, 729, 648	(a)	1, 248, 808	(a)
December 31, 1904.....	1, 589, 154	8, 752, 216	10, 341, 370	10, 977, 583	1, 693, 881	\$12, 671, 464
June 30, 1905.....	1, 848, 902	9, 348, 949	11, 197, 851	(a)	(a)	(a)
December 31, 1905.....	1, 848, 902	10, 052, 801	11, 901, 703	12, 749, 265	1, 757, 702	14, 506, 967
December 31, 1906.....	1, 848, 902	11, 489, 415	13, 338, 317	14, 967, 783	1, 822, 315	16, 790, 098
December 31, 1907.....	1, 848, 902	(a)	(a)	17, 234, 436	1, 891, 731	19, 126, 167

a Not reported.

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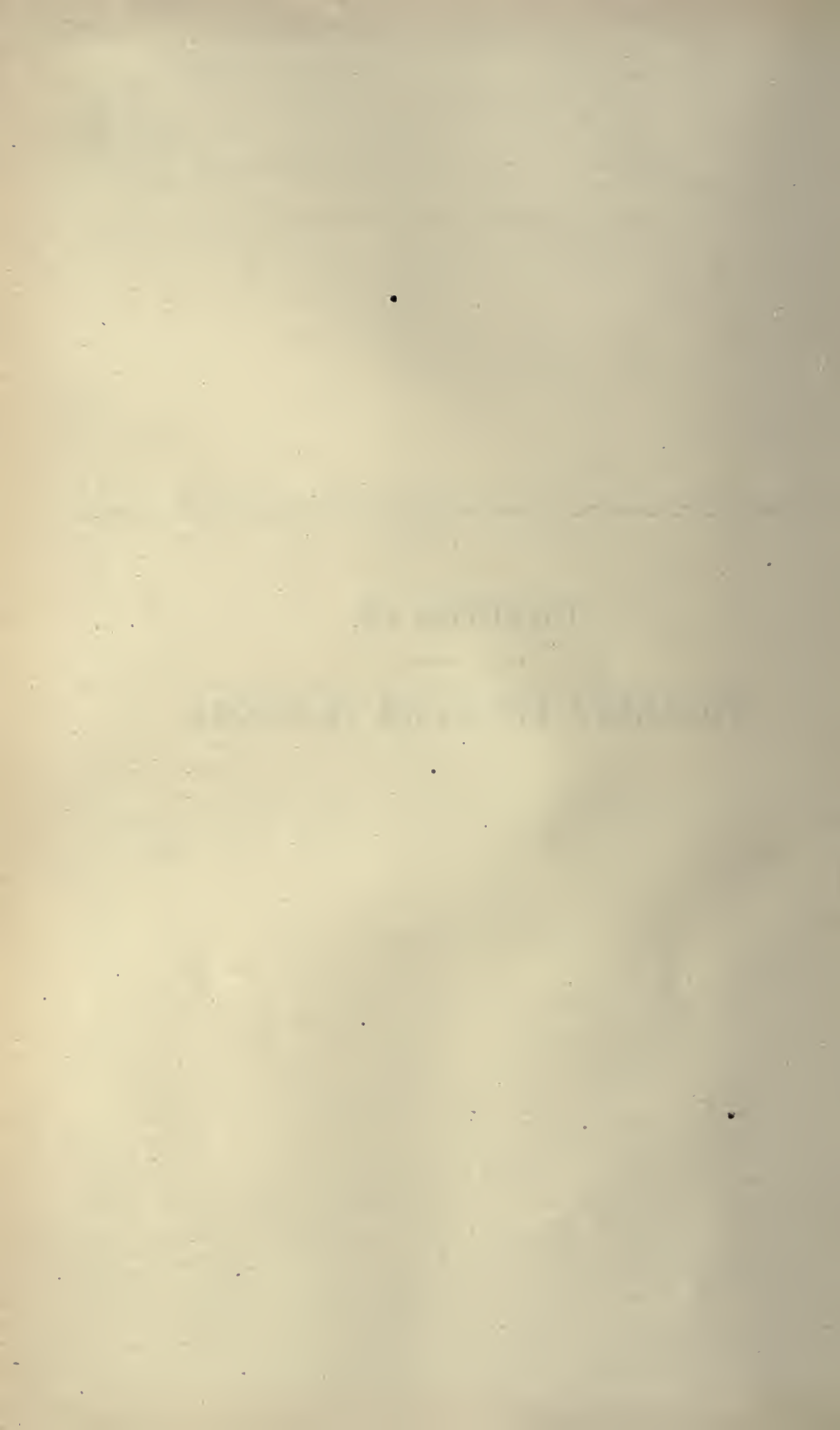
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CHAPTER IX.

WORKMEN'S INSURANCE IN RUSSIA.



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INTRODUCTION.

The industrial development of the Russian Empire dates practically from the day of the emancipation of the serfs in 1861. Prior to that date manufacturing was conducted mainly in artisans' shops, and the few factories and mills then existing mostly employed serf labor. The problems of workmen's insurance could not have arisen in Russia until a comparatively recent date. Russia is primarily an agricultural country. The rural population, according to the census of 1897, constituted 108,811,626 out of a total of 125,640,021, or 86.6 per cent. Of the 33,201,495 persons gainfully employed, 18,245,287, or 55 per cent, were engaged in agriculture. Together with their dependents they constituted 93,701,564, or 74.6 per cent of the entire population.

But within the last thirty years the growth of Russian industry has been quite rapid. The urban population increased from 7,293,161, or 10 per cent of the total population, in 1858, to 16,828,395, or 13.4 per cent, in 1897.

According to the later census, the total number of persons employed in manufacturing and mechanical pursuits in 1897 was 5,169,919 and in transportation 714,745, making a total of 5,884,664 for the industrial army, or 17.7 per cent of those gainfully employed.

The table following shows the number and per cent of persons engaged in the various industries, according to the census of 1897:

NUMBER AND PER CENT OF PERSONS ENGAGED IN THE VARIOUS INDUSTRIES OF THE RUSSIAN EMPIRE IN 1897.

[Source: Premier Recensement General de la Population de l'Empire de Russie, 1897.]

Industry.	Persons engaged in gainful occupations.						Members of families of persons engaged in gainful occupations.	Total.	
	Male.		Female.		Total.			Number.	Per cent.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.			
Agricultural pursuits.	16,159,118	60.0	2,086,169	33.3	18,245,287	55.0	75,456,277	93,701,564	74.6
Professional service.	786,673	2.9	202,140	3.2	988,813	3.0	1,552,436	2,541,249	2.0
Personal service.	2,958,070	11.0	1,817,283	29.0	4,775,353	14.3	2,748,943	7,524,296	6.0
Manufacturing and mechanical pursuits.	4,187,826	15.5	982,093	15.7	5,169,919	15.6	7,115,643	12,285,562	9.8
Transportation.	692,629	2.6	22,116	.4	714,745	2.1	1,236,265	1,951,010	1.5
Commercial pursuits.	1,331,581	4.9	299,408	4.8	1,630,989	4.9	3,364,398	4,995,387	4.0
All other.	824,631	3.1	851,758	13.6	1,676,389	5.1	964,564	2,640,953	2.1
Total.	26,940,528	100.0	6,260,967	100.0	33,201,495	100.0	92,438,526	125,640,021	100.0

The industrial development of Russia, as of any other country, manifested itself not only in the increase of the number of persons employed in industrial occupations, but also in the substitution of large manufacturing establishments for small, independent undertakings and the consequent growth of the wage-earning classes.

The problem of workmen's insurance concerns itself mainly with the wage-earner and not with the independent producer. For this reason the report published in 1906 by the Russian Government concerning the number of wage-earners in Russia, though based upon the data of the census of 1897, is of great importance. In the following table are shown the total number of persons employed as wage-earners in various branches of mining, manufacturing, transportation, commerce, agriculture, and unskilled labor and service.

NUMBER AND PER CENT OF WAGE-EARNERS OF EACH SEX, BY INDUSTRIES, 1897.

[Source: Ministerstvo vnutrennykh del. Chislennost i Sostav rabochikh v Rossii na osnovanii dannykh pervoi vseobshchei perepisi naselenia Rossiiskoi Imperii 1897 goda. St. Petersburg, 1906.]

Industry.	Total wage-earners.	Males.		Females.	
		Number.	Per cent.	Number.	Per cent.
Mining:					
Miners.....	163,738	155,020	94.7	8,718	5.3
Smelters.....	42,638	40,940	96.0	1,698	4.0
Total.....	206,376	195,960	95.0	10,416	5.0
Manufacturing:					
Textiles.....	530,138	310,439	58.6	219,699	41.4
Animal products.....	74,270	71,246	95.9	3,024	4.1
Woodworking.....	173,043	166,295	96.1	6,748	3.9
Metal working.....	370,933	364,720	98.3	6,213	1.7
Minerals.....	83,138	74,469	89.6	8,669	10.4
Chemical products.....	61,094	45,247	74.1	15,847	25.9
Beverages—					
Alcoholic liquors.....	38,723	36,918	95.3	1,805	4.7
Other.....	4,220	4,035	95.6	185	4.4
Food products.....	194,703	183,941	94.5	10,762	5.5
Tobacco.....	27,994	10,620	37.9	17,374	62.1
Paper and printing.....	52,175	46,560	89.2	5,625	10.8
Instruments.....	8,030	7,722	96.2	308	3.8
Jewelry, etc.....	25,767	25,213	97.8	554	2.2
Clothing.....	326,470	256,889	78.7	69,581	21.3
Building.....	345,724	345,724	100.0	.....	.....
Carriages and wooden boats.....	8,793	8,768	99.7	25	.3
Other.....	65,357	54,029	82.7	11,328	17.3
Total.....	2,390,572	2,012,825	84.2	377,747	15.8
Transportation:					
Post, telegraph, and telephone.....	5,463	5,439	99.6	24	.4
Water transportation.....	44,141	43,885	99.4	256	.6
Railroads.....	175,246	162,784	92.9	12,462	7.1
Carting.....	118,423	117,761	99.4	662	.6
Other.....	25,756	25,391	98.6	365	1.4
Total.....	369,029	355,260	96.3	13,769	3.7
Commercial pursuits:					
Commerce.....	118,787	113,171	95.3	5,616	4.7
Hotels, restaurants, etc.....	76,970	72,266	93.9	4,704	6.1
Liquor trade.....	17,336	15,270	88.1	2,066	11.9
Cleaning, laundry work, etc.....	42,495	11,751	27.7	30,744	72.3
Total.....	255,588	212,458	83.1	43,130	16.9

NUMBER AND PER CENT OF WAGE-EARNERS OF EACH SEX, BY INDUSTRIES,
1897—Concluded.

Industry.	Total wage-earners.	Males.		Females.	
		Number.	Per cent.	Number.	Per cent.
Agricultural pursuits, etc.:					
Agriculture.....	2,132,899	1,467,302	68.8	665,597	31.2
Cattle raising.....	411,817	341,596	82.9	70,221	17.1
Forestry.....	84,714	83,404	98.5	1,310	1.5
Other rural industries.....	57,990	44,820	77.3	13,170	22.7
Fishing and hunting.....	35,203	32,331	91.8	2,872	8.2
Total.....	2,722,623	1,969,453	72.3	753,170	27.7
Common (unskilled) laborers.....	1,094,848	809,426	73.9	285,422	26.1
Servants:					
In institutions.....	167,240	142,706	85.3	24,534	14.7
In factories, etc.....	226,743	205,720	90.7	21,023	9.3
House servants (janitors, etc.).....	162,053	160,089	98.8	1,964	1.2
Domestic servants.....	1,556,599	268,086	17.2	1,288,513	82.8
Total.....	2,112,635	776,601	36.7	1,336,034	63.3
Grand total.....	9,151,671	6,330,983	69.2	2,819,688	30.8

According to these census figures the wage-earners in Russia numbered over 9,000,000, of whom about 2,400,000 were employed in manufacturing, 200,000 in mining, and 370,000 in transportation, giving a total of nearly 3,000,000 for wage-earners in industry, in the narrower sense of the word. Agricultural laborers numbered over 2,700,000, the servant class over 2,100,000, unskilled labor nearly 1,100,000, and wage-earners in commercial pursuits (not including salaried employees) over 250,000.

As a matter of fact this number is not as great as it would be but for the limitation put in Russia upon the designation "wage-earner" (*zabochi*). A great many persons who would be so designated in this country are classed with salaried employees in Russia, as, for instance, many railway employees.

On the other hand, a comparison between the number of wage-earners and the total number of persons employed in various occupations demonstrates the existence of a very large number of small independent producers in various branches of industry, as, for instance, in textile, woodworking, metal working, clothing, etc. This comparison, as made in the following table, shows that in manufactures in general only 48.3 per cent of the persons occupied were wage-earners, and more than one-half were independent producers.

PROPORTION OF WAGE-EARNERS TO TOTAL NUMBER OF PERSONS EMPLOYED,
BY INDUSTRIES, 1897.

[Source: Premier Recensement General de la Population de l'Empire de Russie, 1897. Relevé Général, St. Petersburg, 1905, Vol. II. Chislennost i Sostav Rabochikh v Rossii, St. Petersburg, 1906, Vol. I.]

Industry.	Number of persons employed.	Wage-earners.	
		Number.	Per cent of persons employed.
Mining:			
Miners.....	181,303	163,738	90.3
Smelters.....	47,560	42,638	89.7
Total.....	228,863	206,376	90.2
Manufacturing:			
Textiles.....	959,584	530,138	55.2
Animal products.....	154,221	74,270	48.2
Woodworking.....	410,126	173,043	42.2
Metal working.....	624,954	370,933	59.4
Mineral products.....	125,781	83,138	66.1
Chemical products.....	76,869	61,094	79.5
Beverages—			
Alcoholic liquors.....	48,485	38,723	79.9
Other.....	8,740	4,220	48.2
Food products.....	343,794	194,703	56.6
Tobacco.....	31,485	27,994	88.9
Paper and printing.....	82,397	52,175	63.3
Instruments.....	23,391	8,030	34.3
Jewelry, etc.....	54,570	25,767	47.2
Clothing.....	1,158,865	326,470	28.2
Building.....	726,926	345,724	47.6
Carriages and wooden boats.....	14,400	8,793	61.1
Other.....	106,468	65,357	61.4
Total.....	4,951,056	2,390,572	48.3
Transportation:			
Post, telegraph, and telephone.....	46,729	5,463	11.7
Water transportation.....	71,057	44,141	62.1
Railroads.....	262,180	175,246	66.8
Carting and drayage.....	302,956	118,423	39.1
Other.....	31,823	25,756	80.9
Total.....	714,745	369,029	51.6
Commercial pursuits:			
Commerce.....	1,256,330	118,787	9.5
Hotels, restaurants, etc.....	154,470	76,970	49.8
Liquor trade.....	84,287	17,336	20.6
Cleaning, laundry work, etc.....	135,902	42,495	31.3
Total.....	1,630,989	255,588	15.7
Agricultural pursuits, etc.:			
Agriculture.....	16,658,134	2,132,899	12.8
Cattle raising.....	1,121,828	411,817	36.7
Forestry.....	125,756	84,714	67.4
Other rural industries.....	199,807	57,990	29.0
Fishing and hunting.....	138,762	35,203	25.4
Total.....	18,244,287	2,722,623	14.9
Common (unskilled) laborers.....	1,120,156	1,094,848	97.7
Servants:			
In institutions.....	a 167,240	167,240	100.0
In factories, etc.....	242,011	226,743	93.7
House servants (janitors, etc.).....	165,650	162,053	97.8
Domestic servants.....	1,578,412	1,556,599	98.6
Total.....	2,153,313	2,112,635	98.1
Grand total.....	29,043,409	9,151,671	31.5

a Because of differences in classification this item could not be obtained; it is therefore assumed to be the same as the number of wage-earners.

Along with the industrial development the problems of protection of workmen against the results of accidents, sickness, and old age have been growing in importance and have commanded increasing attention.

The workmen's compensation act of June 2 (15), 1903, embracing all large industries, is perhaps the most important result in the domain of workmen's insurance. It has introduced a system of compensation of workmen against industrial accidents within a rather limited scope.

In the field of old-age insurance the existing provisions embrace almost exclusively the individual employees of the State. Of the private employees thus provided for the most important are the railroad employees, for whom old-age pension funds were established in 1888. In view of the extensive undertakings of the Russian Government, however, the existing old-age pension funds cover a very large body of industrial wage-earners. The pension fund for government railroad employees was organized in 1894, the fund for employees of the liquor monopoly in 1900, etc.

Very much less has been established in the domain of provision against sickness, though the earliest social labor legislation concerned itself with the care of the men in factories in case of sickness. Special laws concerning employees of certain state establishments were promulgated early in the nineteenth century, and general provisions in the form of temporary regulations were made in 1866, requiring the factory owners to furnish medical aid and if necessary hospital treatment to the sick employees. Thus from the very beginning the problem of medical treatment was separated from that of financial aid during sickness, and the burden of such medical treatment was placed upon the employer. Fairly satisfactory results were obtained in this branch of sickness insurance, but almost no progress was made in the other branch.

Thus, the entire situation in regard to workmen's insurance in Russia may be summarized as follows:

1. An accident compensation law of 1903, followed by a series of special laws for various groups of government employees.
2. The law of 1866 requiring the furnishing of medical treatment in factories (extended in 1886 to mines), and
3. A series of special institutions for old-age and invalidity insurance and relief mainly of government employees.

In addition to these provisions for the welfare of the wage-earners, as established by laws and governmental decrees, there is in Russia but little that can be traced to voluntary efforts, either of the employer or of the employees themselves.

Within the last few years, and especially since the establishment of the National Legislature, considerable activity has manifested itself

in the preparation of legislative proposals for comprehensive insurance systems, including all the three main branches of workmen's insurance, against accidents, sickness, and old age and invalidity. Such proposals were published in 1905, 1906, 1907, and 1908, and the last ones were formally introduced in the Duma and await the action of this body.

ACCIDENT INSURANCE.

EMPLOYERS' LIABILITY.

The system of workmen's compensation in Russia grew out of the development of the idea of employers' liability. A consideration of the principles governing the liability of employers for injuries sustained by workmen in the course of their employment is important, not only for historical reasons but because employers' liability still remains the only means of redress for workmen not included under the provisions of the law of 1903.

Until the promulgation of this law the Russian code did not include any special law to determine the general principles of the employers' liability for industrial injuries. Such measures as passed prior to 1903 were intended for relief of definite classes of wage-earners, primarily state and railroad employees. The responsibility of employers for results of industrial accidents was based altogether upon the general provisions of the Russian code in regard to general responsibility for results of acts committed, whether criminal or not. According to article 644 of Volume X, part 1, of the Russian code, a person guilty of committing a crime, whether with or without intent, must compensate for all losses directly caused by his act, and according to article 645 he must also compensate for all losses, even though very remote, if it be proven that the overt act was committed with the intent to cause losses to the victim of the act, while the following section exempts such losses as are caused by accidental acts, without intent and without any negligence.

The sections of the code quoted apply only to criminal acts, but the failure to convict the person of any criminal act does not relieve him of the civil liability for any losses caused by his acts, for this liability is established by other sections of the code. Moreover, in these sections the civil responsibility is much broader than that laid down in the sections mentioned above. Section 684 provides that "each person is obliged to compensate for damage and losses caused to any party by his act or omission, even if not criminal, provided he had not been forced to commit that act by demands of law, or of the Government, or in self-defense, or by a combination of circumstances which he could not prevent." Furthermore, section 687 establishes also the responsibility of a person not only for his acts, but also for those of his agents, and that of a master for the acts of a servant.

Taken together, articles 684 and 687 establish the law of liability for injuries in general. They extend as much protection to the employee as they do to the injured outsider, and this feature is the most characteristic one of the general Russian system of employers' liability. Special legislation in regard to special groups of employees, which will be stated presently, has extended the liability of employers. But any restrictions of the rights of the employees for compensation in case of accidents, as compared with the rights of outsiders, such as the doctrine of common employment or the fellow-servant doctrine, are altogether foreign to the Russian law.

In their application to industrial accidents and to employers' liability to their employees, these basic provisions of the law were considerably influenced by the decision of the Governing Senate, the highest judicial body of the land. According to these decisions the master is responsible for all acts of the servant which have been committed by the latter in the performance of his duties. The problem of negligence or fault does not enter into the discussion; the liability depending, according to the wording of the law, upon the question whether the accident was preventable or not, only non-preventable accidents forming an exception to the liability. Intent, or fault, or negligence may be important to determine the presence of criminal liability, but some definite act or omission and the preventable nature of the accident are sufficient to establish the civil liability of the employer.

Article 687 does not clearly establish upon whom the burden of evidence should fall, simply stating that the person shall not be liable for his act or that of his agent if it shall be proven that the accident was unpreventable. This proof then being a part of the defense, it was established by many decisions of the Governing Senate that according to the general rules of civil procedure the plaintiff may establish his claim by proving only the injury, the accident, and the specific act of the employer or his agent causing the accident; and that the burden of showing the accident to have been unpreventable or that the agent was acting against his orders rests upon the defendant, being evidence to the rebuttal of the claim.

In addition to the general liability of a person for the results of his acts or omissions, the Russian code also establishes definite principles as to the limits of this liability. After the general fact of liability has been established the same compensation is due whether the act had been a criminal one or not; in other words the amount of compensation does not in any degree depend upon the nature of the act which had caused the loss. In general the compensation must be equal to the loss sustained; therefore the law requires that in case of a fatal accident the person liable for the accident shall give means of support to the widow of the deceased until remarriage, to

the dependent parents until death, to the sons until of age, and to the daughters until marriage, etc.; the person liable for the accident must cover the cost of medical treatment until recovery or death and funeral expenses, cost of support of family and dependents during illness, and a pension for life in cases of permanent, partial, or complete disability to earn a living. While the definite amounts of the pensions, depending upon the earnings of the injured or deceased is determined by the courts, the law provides that the compensation for loss of earning power must be in the form of annual payments, and, according to a senate decision, the plaintiff has no right to demand a lump-sum payment. This does not prevent a peaceful settlement by a lump sum outside of the court.

POLAND AND THE BALTIC PROVINCES.

The liability laws described above do not apply to the entire Russian territory, the 10 provinces constituting Russian Poland and the three Baltic provinces of Livonia, Esthonia, and Courland being exempt from the provisions of Volume X of the Russian code.

The French Civil Code is in force in Poland. Here, too, the employers' liability until 1903 was based mainly upon the general liability of a person for damages caused by his act or omission, by negligence or carelessness, or by the acts or negligence, etc., of his servants when committed in the performance of their duties. The law of 1903 provides that a contractor is responsible for the acts of his employees. This does not permit the exemption from liability because of the unpreventable nature of the accidents and the liability is better established than in the Russian code proper, the defense being that the negligence of the servant did not take place during the performance of his duties or execution of the master's orders.

A special civil code is in force in the Baltic provinces. According to this code, the employers' liability for damages sustained by his employees is also based upon the general liability laws. While the provisions are very strict in regard to the liability of a person for his personal acts only, the responsibility of a master for the act of his servant is subject to the proof of the servant's unfitness for his position. The law clearly acknowledges the doctrine of contributory negligence in denying the right to recover where the plaintiff by proper care could have prevented the accident.

It appears that the status of employers' liability throughout the greater part of the Russian Empire, as based upon the law interpreted by the senate decisions, was considerably more favorable to the injured employee than is that under English common law. The fellow-servant doctrine was unknown and the doctrine of contributory negligence had a very limited application, the Governing Senate having established by its decisions that in cases of negligence on the

part of both the employer and the injured employee the latter is entitled to partial compensation. The law provides that the compensation shall be in the form of annual payments.

With all that, the usual drawbacks of a liability system appeared. The great number of injuries due to the unavoidable negligence of the employees themselves, especially in view of the low educational standard of the Russian workman, and many other accidents, unavoidable because of the conditions of work, or caused in some way which it is difficult to explain, were necessarily left uncompensated. Even in those cases which clearly came under the provisions of the liability laws protracted litigation was necessary; but litigation was very difficult for the Russian workman and therefore settlements for small amounts were usually effected even in those cases where the liability of the employer was evident.

LIABILITY OF RAILROAD AND STEAMSHIP COMPANIES.

The hazardous nature of the occupation of railroad and steamship employees has in most countries brought about special legislation extending the liability of the employers in these industries for injuries to employees long before general compensation or liability legislation was adopted. This liability was established by the act of May 12 (24), 1852, which referred only to railways and to accidents happening in the movement of trains, and closely followed Prussian legislation of 1838. The law was amended and extended to steamship companies in its present form in 1878, and in this connection may be mentioned the general railroad law of June 12, 1885. In section 683 no distinction is drawn between injuries to employees and passengers or outside persons, so that the rights of the employees are not specially safeguarded, nor are they, on the other hand, less protected than those of the passengers. It is stated by Russian authorities that the law was originally passed with the view of protecting the passengers and that the employees were brought under the section of this law by judicial decisions. (^a)

Section 683 provides that the proprietors of railroads or steamship lines, whether it be the Government, corporations, or private individuals, are required to compensate all persons injured or killed because of accidents in the operation of such properties, unless they can prove that the accident was (1) not due to the fault of the proprietors or their agents, or (2) that it was due to action of forces which could not be overcome—i. e., to vis major. It further provides that all agreements or conditions contrary to this provision are

^a Otvietstvennost predpriminatelei za uviechia i smert rabochikh, V. P. Litwinov-Falinskii. St. Petersburg, 1900.

Smert i uviechie pri eksploatazii zheleznykh dorog, F. Osetzki. St. Petersburg, 1890.

illegal and nonenforceable; the compensation granted must be in accordance with the amount of damages sustained, and may be either in the form of a lump-sum payment or of a pension payable annually or at other intervals as the injured person might desire; further, that in case of such pensions the amount may be reconsidered and changed by the courts, upon application of either party, whenever new conditions arise justifying such a measure. The method of compensation is further regulated, according to which the person adjudged responsible for injury or loss of life must provide the cost of treatment, funeral expenses, and means of support of family until recovery, and pensions to all the dependents; but the right of demanding a pension is limited to the widow, sons until majority, and daughters until marriage.

The practical application of this law is regulated to a great extent by senate decisions. These have established (1) that by the term "operation" ("*exploitation*") should be meant not only the actual movements of the trains or stéamers, but all work of the employees in connection with the railroad business. The statement of the law excepting accidents "not due to the fault of the management of the enterprise or its agents" may seem to have preserved the dependence of the right of compensation upon the employers' fault or negligence, but by numerous decisions the governing senate has interpreted this phrase to mean "due to the fault of the injured person or to that of an outsider." The burden of establishing such a fault or act of negligence is clearly placed by the law upon the employer. Thus there is no doctrine of fellow-servant. The entire responsibility for trade risk is thrown upon the employer, and the development of a doctrine of contributory negligence, of which slight traces might have been found in the exception quoted, was prevented by senate decisions clearly establishing that such contributory negligence reduces the amount, but does not altogether destroy the right of compensation. Thus only three groups of accidents remain beyond the scope of the law—those due to gross negligence of the injured, to negligence of outside parties, or to "*vis major*."

The law was amended on May 30 (June 11), 1888, to the effect that in giving judgment in favor of the plaintiff the amount of compensation paid over to the injured or his heirs by the railroad employees' pension, saving, and benefit funds must be discounted. Such benefit funds were made obligatory for all private railroad companies by the law of May 30 (June 11), 1888, while a general pension fund for the employees of the state railroads was established by an act of June 3 (15), 1894. These funds will be discussed in a later section. It may be noticed here that since obligatory contributions by the employees constitute the main source of income of these funds, this last provision throws back upon the employees the

greatest share of the burdens which, according to article 683, devolves upon the employer.

On the other hand, in case of total disability the injured employee receives a life annuity of three-fourths his annual salary. If the permanent disability be such as to disqualify him from further employment in railroad service, while permitting some other gainful occupation, then the compensation, in the form of an annuity, depends upon the length of previous service, being one-third of his annual salary for not over fifteen years of service, one-half of his salary in case of previous service of over fifteen years but not more than twenty years, and three-fourths if the injured person had been in the service for over twenty years. In case of a fatal accident the widow of the deceased employee receives one-half of the pension to which her husband would have been entitled if totally disabled. An important distinction between the ordinary systems of compensation for accidents and the activity of these pension funds is found in the provision that after death of the husband while a pensioner for disability, the widow receives a pension equal to one-half of his.

Each child surviving a fatally injured employee receives from 10 to 15 per cent of the pension he would have received if alive but totally disabled, and each child surviving a pensioner receives 10 to 15 per cent of the pension he received, the proportion differing in the pension funds of different railways; but the total amount of pensions to children must not exceed 50 per cent of the pension of the deceased, so that the family of the deceased employee may receive together an amount equal to his pension.

HISTORY OF THE GENERAL COMPENSATION LEGISLATION.

The problem of compensation of workmen for industrial accidents has been attracting the attention of Russian authorities as well as of the Russian manufacturers since the beginning of the eighties, and the efforts for its solution may be divided into three classes: (1) The elaboration of plans for a general comprehensive law in legislative institutions; (2) organization by the various departments of the Government of systems of compensation or insurance for special groups of workmen, mainly those engaged in state industries; and (3) voluntary efforts made by employers toward insurance of workmen, partly for humane and partly for business reasons.

The history of the legislative efforts will be discussed in the following section. The early special legislation concerning the government employees will be discussed in connection with the chapter devoted to that topic, and the history of voluntary accident insurance will also be treated separately.

Under the old régime of Russia prior to the granting of the constitution of 1905, legislative proposals were elaborated by the various

administrative departments, and presented through the Imperial Council to the Emperor for his approval. As early as 1859, and several times since, commissions were created within the Ministry of Finance for revision of factory laws which, among other things, prepared drafts of a law defining employers' liability for industrial accidents, but the plans of these commissions never reached the stage of discussion in the Imperial Council.

In the development of the principle of compensation of workmen for results of industrial accidents, a considerable stimulus was given by the employers themselves.

As early as 1881, i. e., about three years before the German system of insurance against accidents was established, the influential Society for Encouragement of Russian Industry and Commerce elaborated a plan for obligatory state insurance of workmen against accidents, which guaranteed compensation for all injuries, unless incurred voluntarily, and placed the entire burden upon the employers, i. e., the industry. The plan was presented to the minister of finance, but did not proceed any further.

In the same year the congress of mining operators in Kharkov organized a miners' aid fund. In 1893 a petition was presented by the manufacturers of Moscow for a universal compulsory system of state insurance, to be realized by a tax upon the employers, and managed entirely by the governmental authorities. This feeling was not universal, for in the same year the publication of Von Witte's plan for employers' liability legislation called forth a formal protest from the "Congress of Mine Operators of Southern Russia and Poland," which was indorsed by the Council of Iron and Steel Manufacturers' Association. The whole subject of employers' liability, workmen's compensation, and compulsory insurance received a very prolonged and thorough discussion at the Pan-Russian Congress of Commerce and Industry, held at Nizhni Novgorod in August of 1896, in connection with the Pan-Russian Exposition. Two sessions of the congress and an entire volume of its reports were devoted to the consideration of the question of workmen's insurance. The board of the Moscow bourse forwarded a resolution favoring state compensation to the workmen for injuries caused by industrial accidents by a system of compulsory state insurance, the cost to be put upon all industrial establishments, by means of a tax upon the wage expense or the number of workmen, and proportionate to the degree of hazard presented by the various industries; two other chambers of commerce presented similar resolutions, proposing, however, an equal distribution of the burden between the employer and employee.

During the discussion of the problem at the session of the congress the strong preference of the manufacturers for a system of insurance as against employers' liability strongly asserted itself, and the congress

resolved that "of the two methods of compensating workmen against accidents—workmen's insurance or a special employers' liability law—the system of insurance must be declared the more perfect one." Further, the congress resolved that "from the point of view of the interests of the employees as well as of the employers, the best method of providing for the worker disabled either through accident, sickness, or old age from earning a living would be such a system of compulsory insurance of the workers, which was not conducted for commercial profit and therefore should be placed under state supervision; it should not be limited to employees in factories and mills, but should include all workers employed in industrial activity. Should, however, the organization of a system of compulsory insurance under state supervision be found impossible in the immediate future, then it would be highly desirable that the employers make efforts to provide for insurance of their employees either in the existing private insurance companies or by organization of mutual insurance societies, the possibility of entry to which should be afforded to the proprietors of the small industrial establishments." Furthermore, the congress recognized that the existing legislation in regard to employers' liability was very deficient in that it did not conclusively establish the employers' liability for the trade risk of employment, and that for this reason private insurance must supplement existing legislation and specifically include the results of trade risk.

Thus the congress of commerce and industry recommended a material extension of the workman's rights for compensation. This recommendation may be explained by the statements made at the congress that a few heavy judgments of court in favor of the injured employees or the families of employees killed have demonstrated to the employers the preference of insurance over liability. The heavy cost of litigation was also felt by many manufacturers. Besides, with the introduction of insurance in one establishment the demand for it often spread rapidly through the whole industrial district, the workmen discriminating against employers who refused to provide for such insurance. The constant litigations were admitted to lead to strained relations between the employers and employees, which were destructive of factory discipline and efficiency. Besides, many representatives of large industrial establishments and almost all the representatives of the smaller establishments admitted that the danger of possible accidents, with the heavy burden of damages, was a disturbing factor in the calculation of cost of production, and that insurance was preferable, as it permitted an estimate of this element of cost.

Under the influence of the memorial of the Society for Encouragement of Russian Industry and Commerce, presented in 1881, the Council of Commerce and Manufactures, under the Ministry of Finance,

Compulsory insurance
 workmen
 liability
 cost

was charged with the duty of preparing a draft of an employers' liability law. This draft was finally presented to the Imperial Council in 1889 by the minister of finance. This was the first important effort at a solution of the problem of industrial accidents.

The plan, while it proposed to establish a fairly liberal system of compensation, similar to that of the German law, up to a pension of 60 per cent of the earnings in cases of fatal accident, and even a pension equal to the full earnings in cases of total disability, on the other hand it strictly limited the liability of the employer to cases of his well-established negligence or that of a superintendent, thus virtually establishing a fellow-servant doctrine. Another provision of the bill placed upon the plaintiff the entire burden of proof of such negligence. Thus the plan decidedly limited the rights of the workman as they existed under the general laws; far from relieving the injured workman from the expenses of a court trial, it would tend to create conditions under which the legal battles would have to be more persistent, and reduced the chances of the workman for a favorable private settlement.

The bill was therefore a step backward in the development of employers' liability and did not meet with the approval of the Imperial Council. The ministers of justice, of interior, of state domains, and of ways of communication raised objections.

This draft was referred back to the Ministry of Finance and in a few years a new draft was elaborated and introduced in the Imperial Council by the minister of finance, on March 15 (27), 1893.

This plan was in many respects much more thorough than that of 1889. It extended the liability of the employers to all accidents except those due to *vis major*, to actions of third parties, or to malicious intent or fault of the injured; in other words, the scope of liability was made practically equal to that of the railroad and steamship companies. The last limitation was undoubtedly an important one, but the burden of proof of the employee's fault or negligence was placed upon the employer, so that a considerable share of the trade risk was shifted, while in the plan of the bill of 1889 it rested upon the workman. Contributory negligence of the injured did not altogether relieve the employer of the responsibility, the draft providing that in such cases the courts could reduce the normal compensation by one-fourth to one-half. The plan of 1893 also applied to all employees, while the preceding project was limited to wage-workers only. Finally, it contained an important innovation in classifying trade diseases with injuries due to industrial accidents.

In the general scheme of pensions and allowances to the injured or his family the new plan followed quite closely after the old, with 60 per cent of the annual earnings of the injured as a maximum pension. It provided for peaceful agreements between both parties, from which

there was no appeal, and for suits in common courts when no peaceful settlement was possible. Yet the large opportunity for litigation was evident, especially in view of the provisions in regard to contributory negligence. On the other hand, the liberal inclusion of the trade diseases called forth strong opposition among the manufacturers of St. Petersburg.

This plan did not meet with approval and was returned to the Ministry of Finance for further changes. The demand for legislation grew with the development of industry, and the discussion showed a considerable part of the manufacturers of Russia not unfavorably disposed to some regulation of this problem. In a few industrial centers the manufacturers organized mutual companies for insurance of their employees, and the liability assumed by these companies was much broader than that imposed by the laws. The activity of the manufacturers of Riga, which will be described in a later section, was very important in that connection.

In the spring of 1899 a new legislative scheme was announced by the Ministry of Finance. This plan bore evidence of the influence exerted by the Riga Mutual Insurance Company system. In fact, section 2 of the project of 1899, which contains an enumeration of exceptions to the liability of employers, repeated word for word the corresponding section 3 of the Riga society's by-laws. It excepted injuries due to accidents caused by (1) unpreventable and unexpected external forces (*vis major*), (2) acts of outsiders, who have no connection with the management of the industrial establishment, (3) such intentional acts of the fellow-servants as are not connected with the nature of the work, and (4) malicious intent of the injured. The by-laws of the Riga society stated "gross negligence of the injured," for which the legislative plan of 1899 substituted "malicious intent," thus limiting substantially the range of excepted cases.

The law was to apply to workmen and technical employees. Only factories were covered by the bill. Workshops employing less than 15 men and no mechanical power, mines, quarries, metallurgical establishments, agricultural, structural, and transportation employees were not included. Compensation offered included besides medical treatment an allowance of 50 per cent of the daily wages for temporary disability; a pension amounting to two-thirds of the annual earnings for complete permanent disability and a proportionate sum in cases of partial disability, while the Riga society offered 75 per cent to the married victims in similar cases; in cases of death the widow and children were to receive the same rate of compensation as under the Riga system, i. e., 30 per cent of the earnings to the former and 15 to 20 per cent to the latter. The new proposal extended the right to compensation not only to dependent parents, but also to dependent grandparents, brothers, and sisters, but the maximum was the same,

and the claims of these relatives were recognized only in so far as the immediate family was not entitled to the 60 per cent maximum.

After four years consumed in the elaboration and adaptation of this plan, with vital changes, the final draft was approved June 2 (15), 1903, and went into effect on January 1 (14), 1904.

WORKMEN'S COMPENSATION—PRESENT STATUS.

The workmen's compensation act is entitled "Rules concerning the compensation of workmen and employees injured through accidents, as well as members of their families, in manufacturing, mining, and metallurgical establishments." It was accompanied by an extensive "Opinion of the Imperial Council" of the same date, containing amendments and modifications. Since that date many decrees and enactments in regard to this matter have been announced, and the entire law may be said to be still in the formative state.

Instructions to the factory and mine inspectors, referring to the details of the execution of the law, were approved by the ministers of finance and of agriculture and state domains on December 13 (26), 1903, and instructions to the police were issued by the central office of factory and mine inspection on March 5 (18), 1904. Instructions to physicians concerning the methods of determining the degree of disability were elaborated by the medical council of the Ministry of Interior, and approved by the latter on June 5 (18), 1904; new regulations regarding the collective insurance of workmen or the insurance of employers against their civil liability, harmonized with the new legislation, were approved by the minister of interior on December 22, 1903 (January 4, 1904).

By numerous acts the action of law was extended to various state establishments: To the workmen and civil employees of the artillery service, on June 9 (22), 1904, in effect January 1 (14), 1905; to the workmen and employees of manufacturing, mining, and metallurgical establishments of the Crown (i. e., the personal property of the Emperor and the imperial family), June 6 (19), 1905, in effect December 25, 1905 (January 7, 1906); to employees of the government printing office on December 19, 1905 (January 1, 1906), in effect July 1 (14), 1906; and of the senate printing office, March 6 (19), 1906, in effect July 1 (14), 1906; of the navy yards, March 6 (19), 1906, in effect July 1 (14), 1906; and of the governmental industrial establishments connected with the department of ports and harbors, April 19 (May 2), 1906, in effect October 1 (14), 1906. Further extensions must follow to include all the industrial undertakings of the Government.

INDUSTRIES COVERED.

The application of the act is strictly limited to factories, mills, mines, and metallurgical establishments. Large sections of the working population are excluded, namely, the transportation employees

(for whom special provisions exist, partly in section 683 of Volume X, part 1 of the code, as explained above, and partly in the pension and aid funds, which will be described elsewhere), the agricultural laborers, the building trades, and the commercial employees. Factories, mines, and metallurgical establishments owned by provincial governments and municipalities are included. Specifically excluded were industrial establishments of the Central Government, the workshops and other industrial establishments of private railroad and steamship companies, but the heads of the various ministries were instructed to present within one year after the law went into effect, i. e., after January 1, 1904, plans for extension of this law with necessary modifications, to the various state industrial establishments. Accordingly the main provisions of this law were extended to various governmental establishments, namely, all factories, mines, and metallurgical establishments which are personal property of the Emperor and the entire imperial family (so-called of his majesty's cabinet and the Crown), workmen and civil employees of the artillery, the government printing office, senate printing office, navy yards, and the industrial establishments of the department of ports and harbors, this latter group including also construction work. As yet the law was not extended to transportation companies. The extension of the law to the state and crown establishments is accompanied by modifications, more or less uniform, which makes it preferable to treat these establishments separately.

The essential limitation of the law is found in the term "factory." The Russian law recognizes two classes of manufacturing establishments, factories and "artisans' shops" (*remeslennyya zavedeniya*). The latter are not mentioned in the law and therefore are not subject to it. But the definition of a factory, contained in the Russian law, is not sufficiently specific; factories and mills are stated to differ from artisans' shops in that they are large establishments using mechanical power, while artisans have none except hand machinery and tools. The decision in practice is left to administrative officers, and practically the law extends over all manufacturing establishments using machinery and mechanical power.

An exception is found in the exclusion of so-called rural industrial establishments. This includes a large class of certain small establishments located outside of city limits, namely, brick and tile yards, cement and starch factories, turpentine stills, wood distilleries, creameries, cheese factories, even if utilizing mechanical power, provided they do not employ more than 20 workmen, sawmills with only one mechanical saw, flour mills with four or less millstones, or only one rolling stone, wine presses, and a few other small rural industrial establishments.

PERSONS COMPENSATED.

Within the industries and establishments mentioned, the law applies to all workmen as well as to employees, such as foremen, engineers, and superintendents, whose duties bring them in contact with the processes of industry, provided their salary, inclusive of shares in profits, board or lodging, does not exceed 1,500 rubles (\$772.50). All workmen and employees excepted from the application of this law preserve the right of action under the general laws of liability, which are not available to workmen covered by the new act.

INJURIES COMPENSATED.

All injuries due to accidents occasioned by or on account of the work, and causing disability for more than three days or death, must be compensated, unless caused by the injured person himself either intentionally or through gross negligence, such as can not be justified by the conditions of work, while the burden of proving such malicious intent or gross negligence, which would relieve the employer from the duty of compensation is definitely placed upon the employer.

The act is broader than the plan of 1899, in one respect that it has discarded the provision excluding injuries caused intentionally by coemployees; on the other hand, it has excluded injuries caused by gross negligence of the injured, a provision which the plan of 1899 discarded when it copied the entire section from the by-laws of the Riga Mutual Insurance Company.

BURDEN OF PAYMENT.

The duty of compensation is placed entirely upon the employer. Subcontracting the work to a third party does not relieve the employer from the responsibility, but an order given to another independent establishment is not considered subcontracting. All agreements between employers and employees entered into before the occurrence of the accident, waiving the employees' right to compensation under this act, are illegal and not enforceable.

METHODS OF COMPENSATION.

Two methods of compensation are provided—allowances for temporary disability and pensions for permanent disability or death. Only those injuries which cause disability lasting more than three days entitle the injured to an allowance, but it is computed from the day of the injury. The daily allowance is equal to one-half of the actual daily earnings of the injured. In addition to this allowance the employer must either furnish the injured person with free medical treatment, or reimburse him for the cost of such until full recov-

ery, or as long as treatment is continued, at the rates charged in local governmental or municipal hospitals. This allowance and medical treatment constitute all the compensation in cases of temporary disability.

In its initial stages, i. e., until the permanent nature of the disability and its extent is determined, every case of permanent disability is treated exactly like a case of temporary disability, i. e., the injured person receives the medical treatment, and the allowance. This is followed by a pension when the permanent nature of the disability is determined. When the disability is complete, the pension amounts to two-thirds of the annual earnings of the injured. In cases of partial, though permanent disability, a smaller pension is granted, proportionate to the degree of disability. The pension follows immediately after the allowance, and when the amount of the pension is greater than that of the allowance the computed difference for the time elapsed since the day of the accident must be paid to the injured.

When the injury is fatal, or results in death within two years, or even later, but while the injured is still under treatment, the employer must pay for the funeral expenses, 30 rubles (\$15.45) for an adult and 15 rubles (\$7.72) for a minor, and provide pensions to the members of the family of the deceased, as follows:

The widow receives a pension equal to one-third of the annual earnings of the deceased until her death or remarriage; in the latter case she receives in settlement of all her claims one payment equal to three times the amount of her annual pension. The children under 15 years of age, whether legitimate, legitimized, illegitimate, or legally adopted, are each entitled to a pension equal to one-sixth of the annual earnings of the deceased, when the other parent survives, or one-fourth when both parents are dead. But when both parents are killed as a result of industrial accidents, the children receive the sum of pensions to which they are entitled because of the death of each parent. The total sum of pensions must not exceed 66 $\frac{2}{3}$ per cent of the annual earnings of the deceased, and where the pensions of the widow and children, computed as above, would exceed this limit, the shares of all are proportionately reduced. But if the deceased leaves no family, or if this maximum is not claimed by the immediate family, the relatives in an ascending line, and orphan brothers and sisters under 15 years of age, are entitled to pensions of 16 $\frac{2}{3}$ per cent each, or an equal share of as much as is left after satisfying the claims of the widow and children, provided these relatives had previously been dependent upon the deceased. But changes in the family, subsequent to the granting of the pensions, do not lead to a rearrangement of the pensions, with the single exception of a birth of a legitimate child.

When the deceased workman is a foreign subject only those members of the family are entitled to a pension who at the time of the accident resided in Russia.

All allowances and pensions paid under this law are exempt from any attachment, whether for taxes or private debts, and are non-transferable.

LUMP-SUM PAYMENT.

The law permits substitution of a lump-sum payment for the pension of the injured or of the relatives of the deceased, by mutual agreement of both sides, provided it is computed as follows: In case of pension for disability, ten times the pension of the injured, and when the injured is under 17 years of age, ten times the pension to which he would be entitled at 17; in case of pensions to relatives of a deceased employee, the adults may receive ten times the pension, and the children as many times their pension as it has years to run, but not over ten. When such agreement is made after the payment of the pension has commenced, the amounts previously paid may be deducted, provided they do not constitute more than one-third of the lump sum. Such agreements for the substitution of a lump sum may be approved by the proper authorities, and without such approval these agreements are not binding and do not deprive the beneficiary of the right to demand additional compensation through the courts. A substitution of a lump sum is obligatory in case of injured workmen who are foreign subjects, when they or members of their families, receiving pensions, leave Russia. In compensation for all future claims a sum thrice the pension must be paid to them, unless the pension expires in less than 3 years, when a full payment for the remaining period must be made.

DETERMINATION OF DEGREE OF DISABILITY.

The difficulties accompanying the exact determination of the degree of disability by the permanent results of the injury became manifest in the very beginning of the application of the law, and the medical council of the Ministry of Interior was instructed to elaborate a set of rules for the guidance of the physicians. These rules were approved on June 5 (18), 1904, and published on October 29 (November 11), 1904.

TABLE FOR DETERMINATION OF DEGREE OF DISABILITY DUE TO INJURIES CAUSED BY INDUSTRIAL ACCIDENTS.

[Source: Zakony o vosnagrazhdenii rabochikh, poterpevshikh ot neschastnykh sluchaev, so vsiemi izdannyimi v ikh ispolnenie instruktziami i administrativnymi raspriazheniami, E. M. Dementiev, St. Petersburg, 1907.]

Disability number.	Nature of disability.	Per cent of disability.
I. HEAD.		
1	Injuries to skull, resulting in grave and permanent pathological phenomena (insanity, paralysis, epileptic attacks, loss of special senses, grave neuralgia).....	100
2	Injuries to skull, resulting in severe headaches, with decrease of muscular strength of upper extremities or less frequent epileptic attacks.....	70
3	Lighter injuries to skull, resulting in attacks of lesser severity, such as vertigo, headaches, etc.....	30
4	Concussion of the brain, resulting in headaches, vertigo, nausea, inability to bend down, or work in such a position of the body as the trade of the injured person demands....	85
5	Concussion of the brain with less serious consequences.....	60
6	Incurable mental diseases.....	100
7	Chronic partial disturbances of mental abilities (weakening of intellect, weakening of memory).....	50
II. EYES.		
8	Double (complete) loss of sight.....	100
9	Loss of sight in one eye (a).....	35
10	The weakening of eyesight is determined according to Josten's table.....	(b)
III. EARS.		
11	Complete deafness of both ears.....	50
12	Complete deafness of one ear.....	10
13	Chronic inflammation of internal or middle ear, with discharge.....	25
IV. FACE.		
14	Injuries, resulting in functional disarrangements, such as inverted eyelids, with insufficient covering of the eye, lachrymation, stricture of nasal passages and opening, contraction of mouth opening, partial immobility of lower jaw, etc.....	35
15	Injury of nasal bones, upper or lower maxilla, or other facial bones, resulting in functional derangements.....	35
V. NECK.		
16	Injury of larynx, or any other injury to the neck, necessitating constant wearing of tracheal tube.....	50
17	Loss of speech due to injury to vocal or speaking organs.....	40
18	Difficulty in speaking.....	10
19	Difficulty in breathing because of a permanent contraction of larynx.....	40
VI. CHEST.		
20	Reduction in mobility of the chest after injury:	
	Severe.....	40
	Moderate.....	20
	Slight.....	10

a Loss of sight is equal to loss of eye. Loss of one eye in absence of the other is equal to 100 per cent. By loss of sight is meant not only complete blindness but such diminution of sight that the ability is lost to distinguish the form of near objects.

b Josten's table:

S.	0.50	0.40	0.30	0.20	0.10	0.00
0.50	0.00	6.50	13.50	20.00	26.50	33.50
.40	6.50	14.50	22.00	30.00	38.00	46.00
.30	13.50	22.00	31.50	41.00	50.50	60.00
.20	20.00	30.00	41.00	52.00	62.50	73.50
.10	26.50	38.00	50.50	62.50	75.00	87.00
.00	33.50	46.00	60.00	73.50	87.00	100.00

S. stands for strength of vision; the first horizontal line of figures gives the remaining strength of one eye, and the first vertical line the remaining strength of vision of the other eye. The figure at the crossing of the two lines proceeding from the respective figures in the first horizontal and vertical lines gives the degree of loss of vision. Thus, when the vision in one eye is 0.20, and in the other 0.10, the disability is 62.50 per cent.

Besides the strength of central vision, other conditions, such as accommodation, muscular action of the eye, etc., as well as the nature of the employment of the injured, may be taken into consideration.

TABLE FOR DETERMINATION OF DEGREE OF DISABILITY DUE TO INJURIES CAUSED BY INDUSTRIAL ACCIDENTS—Continued.

Disability number.	Nature of disability.	Per cent of disability.
VI. CHEST—Concluded.		
21	Decrease of respiratory action of the lungs or of the respiratory surface, because of partial collapse, adhesions, etc.:	
	Severe.....	60
	Moderate.....	30
	Slight.....	15
22	Chronic affections of the pulmonary tissues:	
	Severe.....	100
	Moderate.....	50
	Slight.....	10
23	Organic diseases of heart, its cavities and lining (chronic myocarditis, aneurisms)....	100
VII. ABDOMEN.		
24	Chronic diseases of abdominal organs, resulting in derangement of their functions and failing of nutrition (stricture of esophagus, of stomach, of intestines, intestinal fistula, chronic peritonitis, hepatitis, etc.):	
	Grave.....	80
	Moderate.....	40
	Slight.....	10
25	Injuries of abdominal wall, interfering with mechanical work.....	25
26	Hernia (abdominal, inguinal, femoral) (a).....	25
27	Prolapse of rectum or uterus.....	25
VIII. GENITO-URINARY ORGANS.		
28	Chronic nephritis.....	50
29	Derangement of urination resulting from injuries in the region of genito-urinary organs.....	15
30	Fistula of the urethra or bladder, interfering with walking and raising of weights.....	50
31	Chronic hydrocele.....	15
32	Loss of male organ at age under 50.....	30
33	Loss of both testicles at an early age.....	50
IX. BACK.		
34	Injuries of the spinal column, resulting in objective and lasting signs of functional disturbance of the spinal cord (paralyzed extremities, incontinence of urine or feces)....	100
35	Loss of mobility of the spinal column:	
	Severe.....	50
	Moderate.....	25
	Slight.....	10
36	Ruptures and lacerations of the dorsal muscles:	
	Severe.....	40
	Moderate.....	30
	Slight.....	5
X. UPPER EXTREMITIES.		
A. FINGERS.		
a. Thumb:		
37	Loss of terminal phalanx.....	15
	Right.....	15
	Left.....	10
38	Loss of terminal and one-half of the first phalanx.....	25
	Right.....	25
	Left.....	15
39	Loss of both phalanxes.....	30
	Right.....	30
	Left.....	25
40	Loss of both phalanxes and the metacarpal bone.....	30
	Right.....	30
	Left.....	25
41	Immobility (ankylosis) of the first joint.....	15
	Right.....	15
	Left.....	10
42	Immobility of second joint.....	5
	Right.....	5
	Left.....	5
43	Inmobility of both articulations.....	35
	Right.....	35
	Left.....	25
44	Contraction of thumb.....	25
	Right.....	25
	Left.....	15
b. Index:		
45	Loss of second and third phalanxes.....	15
	Right.....	15
	Left.....	10
46	Loss of all three phalanxes, with or without the metacarpal bone.....	25
	Right.....	25
	Left.....	15
47	Immobility (ankylosis) of the first joint.....	15
	Right.....	15
	Left.....	10
48	Immobility of the first and middle finger joints.....	25
	Right.....	25
	Left.....	15

a Hernia entitles the Injured person to compensation only in those cases where they are brought about by an accident (such as blow, fall, or unusual exercise of strength) which suddenly causes all objective signs of a hernia, with phenomena of strangulation, which necessitate medical assistance.

TABLE FOR DETERMINATION OF DEGREE OF DISABILITY DUE TO INJURIES CAUSED BY INDUSTRIAL ACCIDENTS—Continued.

Disability number.	Nature of disability.	Per cent of disability.
X. UPPER EXTREMITIES—Continued.		
A. FINGERS—continued.		
b. Index—Concluded.		
49	Immobility of the first and last finger joints.....	Right.. 15 Left... 10
50	Immobility of the middle finger joint.....	Right.. 15 Left... 5
51	Immobility of the middle and last finger joints.....	Right.. 15 Left... 10
52	Immobility of all three joints.....	Right.. 25 Left... 15
53	Curvature of the finger.....	Right.. 20 Left... 10
c. Middle and ring fingers:		
54	Loss of one finger with the metacarpal bone.....	Right.. 10 Left... 5
55	Loss of the second and third phalanxes.....	Right.. 5 Left... 0
56	Immobility of all the three joints, or the first and second joints.....	Right.. 10 Left... 5
57	Immobility of first joint.....	Right.. 5 Left... 0
58	Immobility of the middle joint.....	Right.. 5 Left... 0
59	Immobility of the first and third joints.....	Right.. 5 Left... 0
60	Immobility of the middle and third joints.....	Right.. 5 Left... 0
61	Curvature of the finger.....	Right.. 10 Left... 5
d. Little finger:		
62	Immobility of all three joints.....	Right.. 5 Left... 0
63	Curvature of finger.....	Right.. 5 Left... 0
e. Injuries to several fingers of one hand:		
64	Loss of all fingers.....	Right.. 75 Left... 65
65	Stiffness of all fingers.....	Right.. 65 Left... 55
66	Curvature of all fingers.....	Right.. 60 Left... 50
67	Loss of thumb and index.....	Right.. 50 Left... 40
68	Loss of thumb and middle.....	Right.. 40 Left... 35
69	Loss of thumb and ring.....	Right.. 40 Left... 35
70	Loss of thumb and little.....	Right.. 35 Left... 25
71	Loss of thumb, index, and middle.....	Right.. 60 Left... 50
72	Loss of thumb, index, and ring.....	Right.. 60 Left... 50
73	Loss of thumb, index, and little.....	Right.. 50 Left... 40
74	Loss of thumb, index, middle, and ring.....	Right.. 70 Left... 60
75	Loss of thumb, index, middle, and little.....	Right.. 70 Left... 60
76	Loss of thumb, middle, and ring.....	Right.. 50 Left... 40
77	Loss of thumb, middle, and little.....	Right.. 45 Left... 35
78	Loss of thumb, ring, and little.....	Right.. 45 Left... 35
79	Loss of index and middle.....	Right.. 35 Left... 25
80	Loss of index and ring.....	Right.. 35 Left... 25
81	Loss of index and little.....	Right.. 25 Left... 20
82	Loss of index, middle, and ring.....	Right.. 50 Left... 40
83	Loss of index, middle, and little.....	Right.. 45 Left... 35
84	Loss of middle and ring.....	Right.. 25 Left... 20

TABLE FOR DETERMINATION OF DEGREE OF DISABILITY DUE TO INJURIES CAUSED BY INDUSTRIAL ACCIDENTS—Continued.

Disability number.	Nature of disability.	Per cent of disability.
X. UPPER EXTREMITIES—Concluded.		
A. FINGERS—concluded.		
<i>e. Injuries to several fingers of one hand—Concluded.</i>		
85	Loss of middle and little.....	Right.. 20 Left.. 15
86	Loss of middle, ring, and little.....	Right.. 35 Left.. 20
87	Loss of ring and little.....	Right.. 20 Left.. 10
88	Loss of index, middle, ring, and little.....	Right.. 70 Left.. 55
89	Loss of thumb, middle, ring, and little.....	Right.. 65 Left.. 50
<i>f. Injuries to several fingers of both hands:</i>		
90	Loss of all fingers of both hands, or of 9 fingers.....	100
91	Loss of both index fingers.....	50
92	Loss of thumb and index of one hand and index of the other hand.....	65
93	Loss of thumb, index, and ring or little finger of one hand and index of the other.....	70
94	Loss of all fingers of one hand except index, and the thumb of the other.....	80
95	Loss of both thumbs and indexes (a).....	85
B. WRIST.		
96	Loss of wrist.....	Right.. 75 Left.. 65
97	Stiff wrist joint.....	Right.. 30 Left.. 25
98	Loose wrist joint.....	Right.. 40 Left.. 30
C. FOREARM.		
99	Loss of forearm at elbow joint.....	Right.. 75 Left.. 65
100	Stiff elbow joint at full extension or full flexion.....	Right.. 50 Left.. 40
101	Stiff elbow joint at right-angle flexion.....	Right.. 35 Left.. 25
102	Loose elbow joint.....	Right.. 60 Left.. 50
103	Limited action of wrist.....	Right.. 25 Left.. 15
104	Limited motion in elbow and wrist joint.....	Right.. 30 Left.. 20
105	Stiffness of elbow and wrist joint.....	Right.. 60 Left.. 50
D. SHOULDER AND ARM.		
106	Loss of arm at the shoulder joint or between the shoulder and elbow joint.....	Right.. 75 Left.. 60
107	Stiffness of shoulder joint.....	Right.. 60 Left.. 50
108	Loose shoulder joint.....	Right.. 65 Left.. 50
109	Limited motion in shoulder joint.....	Right.. 30 Left.. 20
110	Inability to raise the arm more than into a horizontal position.....	Right.. 40 Left.. 30
111	Wrong union of fracture of shoulder blade or collar bone, if resulting in limiting the motion of arm.....	Right.. 20 Left.. 10
112	Habitual dislocation of shoulder.....	Right.. 20 Left.. 10
E. HANDS.		
113	Loss of both hands or wrists.....	100
XI. LOWER EXTREMITIES.		
A. TOES.		
114	Loss of big toe.....	10
115	Loss of all toes of one foot.....	25
116	Loss of heads of metatarsal bones.....	50

a In cases of loss of several fingers, or phalanges of several fingers, the loss of the grasping surface of the four fingers put together must be taken into consideration. A loss of about one-half of that surface is equal to a loss of one-third (33 1/3 per cent) of earning capacity. The valuation of the injuries of the hand and wrist must be much higher for workmen employed at trades which demand fine hand work.

TABLE FOR DETERMINATION OF DEGREE OF DISABILITY DUE TO INJURIES CAUSED BY INDUSTRIAL ACCIDENTS—Concluded.

Disability number.	Nature of disability.	Per cent of disability.
XI. LOWER EXTREMITIES—Concluded.		
B. FOOT.		
117	Loss of foot at the ankle joint or below it.....	60
118	Fractures of "os calcis" or tarsal bones.....	40
119	Complete immobility of ankle joint of one foot, the foot being placed at right angle to leg..	25
120	Complete immobility of ankle joint, the foot being placed in-oblique angle to leg.....	40
121	Loose ankle joint.....	40
C. LEG.		
122	Loss of one leg.....	65
123	Complete immobility of the knee joint at extension.....	40
124	Complete immobility of knee joint at slight flexion, under obtuse angle.....	25
125	Complete immobility of knee joint at strong flexion in an acute angle, or over extended..	50
126	Loose knee joint.....	60
127	Stretched ligaments of knee joint (weakened joint).....	25
128	Fracture of patella with disarrangement of the apparatus for extension.....	50
129	Irregular union of a fracture of leg with shortening of over 5 centimeters [1.97 inches] and limited motion.....	45
D. THIGH.		
130	Loss of thigh.....	75
131	Complete immobility in hip joint in extension of leg.....	50
132	Complete immobility in hip joint in flexion of leg.....	60
133	Irregular union of fracture of thigh with shortening of leg of over 5 centimeters [1.97 inches] and limitation of motion.....	50
134	Failure of fracture of hip to unite (false joint).....	65
135	Loss of both legs or feet.....	100
XII. UPPER AND LOWER EXTREMITIES.		
136	Loss of one leg or foot, and one arm or hand.....	100

NOTE 1.—Full paralysis of extremity or a part of an extremity is assimilated to its loss; the same is true of immovable joints, cicatricial contraction, chronic ulceration, insufficient covering of bones after amputation, loss of tendons, etc., when leading to complete impossibility to use the injured extremity at work.

NOTE 2.—In injuries of lower extremities attention must be paid as to whether working is possible with cane, crutches, etc., and in all injuries as to how far the disability caused may be rectified by means of apparatus and appliances.

NOTE 3.—In multiple injuries, resulting from one accident, the estimate of disability must not be made by means of a simple addition of the numbers corresponding to individual injuries according to this scale, but with consideration for the circumstances of each case, i. e., for the resulting loss or reduction of capacity to earn a livelihood from the combined effect of all the injuries together, in connection with the general state of health and nature of employment. In no case must the estimate exceed 100 per cent.

NOTE 4.—Traumatic and other bodily injuries not mentioned in the scale must be estimated in accordance with these general considerations.

METHODS OF COMPUTING EARNINGS.

As the amount of the pension depends upon the annual earnings of the injured workman, the method of determination of these earnings is of importance to the efficacy of the law. The following method is prescribed by the act: The actual earnings of the person injured, as determined by the books of the concern, for the year preceding the day of the accident (or in cases when the workman has been employed less than a year, for all the time of his employment), is divided by the number of days of actual employment, and the average daily earnings thus obtained are multiplied by 260 (considered by this law the average number of working days in a Russian factory). In the case of establishments which normally are not active the whole year, the average daily earnings are multiplied by the normal number of

working days for such establishments, but to the product must be added the usual wages of a common unskilled laborer for the difference between 260 and the normal number of working days in that establishment. Where lodging constituted part of the earnings of the workman, the sum of earnings as computed above must be increased by 20 per cent, and in case of table board its actual cost must be added. In no case must the earnings so computed be less than the average wages for unskilled labor for 260 days. The same minimum must be taken as a basis where the injured workman was not receiving any wages. On the other hand, if it can be proven that the actual ordinary or normal earnings of the injured were greater than the sum computed according to the above rules, these must be taken as a basis. Thus the minimum wage is not definitely established, but is expressed as the average wages for unskilled labor. These averages are determined by the local provincial administrative offices in charge of manufactures or mining, either for the entire province or, when it is thought necessary, for separate districts of the province, every three years, and separately for either sex in the three age groups: Children (12 to 15 years), youths (15 to 17 years), and adults (over 17 years).

If the injured is under 17 years of age, his pension is computed at the basis of the wages of a youth, but recomputed according to the wages of an adult when he reaches 17 years of age; when the injured is under 15 years of age, such recomputation must take place twice, when he reaches 15 and again when he reaches 17 years of age.

SETTLEMENT OF CLAIMS.

In excluding cases of accidents due to gross negligence from the benefits of the law, the question of the cause of accident creates opportunity for disagreements. Even if the justice of the claim is undisputed, a great many factors evidently influence the amounts of the compensation. The actual amounts are not fixed by any administrative process; the law establishes a claim, for the proper determination of which all these provisions must be taken into consideration, but the claim is settled either by voluntary agreement or by judicial decision. It is the intention of the law to encourage the former, but in order to safeguard the interests of the workmen, such agreements must be approved by the proper authorities familiar with the law.

The following procedure is established with this object in view: Agreements between the injured person or members of his family in regard to the amount of compensation must be in writing, signed by both parties, and certified by the factory inspector. This certification is in the nature of approval, and the factory or mining inspector must refuse his certification when the agreement, in his opinion, is obviously and substantially contrary to the requirements of the law.

The original copy of the agreement remains with the factory or mine inspector, while certified copies are given to each party. An agreement thus certified is binding similarly to a private settlement before a justice of the peace

Further, the factory or mine inspector must make efforts to facilitate such agreements. If a voluntary agreement has not been accomplished, either party may petition the factory or mine inspector for his opinion as to their rights or duties in the case under the law. In such cases the factory or mine inspector may demand additional evidence and ask for a medical examination, and he may suggest the proper conditions for a settlement; but if, notwithstanding his efforts, the two parties can not be brought together, or if the inspector declines to certify to the agreement because an unjust one, he must make a written statement ("act") to that effect, stating the date of the petition, the time, place, and circumstances of the accident, the nature of the bodily injury, the degree of disability, or, in fatal cases, the cause of death, the demands and offer of the respective parties, and, finally, state his opinion as to the merits of the case, i. e., the rights of the injured or his relatives to compensation, and its amount. Both parties receive certified copies of this "act."

Cases in which voluntary settlements have failed may be brought to trial before a justice of the peace or the district magistrate (*Zemski nachalnik*).

When the injured is a minor, and not living with his parents or guardians, the local court may appoint a guardian. The factory inspectors may recommend persons for such appointment. Suits may be entered by the injured within two years after the day of the accident, and by his heirs within two years after the day of the death of the injured, as against the 10-year limit in general Russian law, but in computing this time limit, the time elapsing between entering the case with the factory inspector or district engineer and the day of furnishing the injured party a copy of the factory inspector's "act" is omitted. If both parties have come to a voluntary agreement, either oral or written, but not approved in accordance with the rules above, the injured workman or his family do not lose their right of demanding compensation in accordance with the law, even if more than two years have elapsed, and all the time during which this voluntary agreement has been effective is left out of consideration. This protects the injured or his family from any settlement which the proprietor may agree upon with the view of living up to it only within the two-year limit.

In actions instituted, claims are entered against the proprietor of the establishment, either at the place of the accident, or at the place of residence of the proprietor or at the main office of the establishment. Such action may be instituted either after carrying the case

through the office of the factory inspector, or without bringing it to the attention of this officer, but the law discourages the latter procedure by depriving the claimant in such cases of his right to receive court expenses. The same rule holds good if the court's judgment is for a compensation no greater than that offered by the defendant during the preliminary negotiations. But on the other hand the law endeavors to facilitate just claims in many ways; they are free from court fees, must be conducted under a simplified mode of procedure, the amount of attorney's fees is strictly regulated, and all contracts for excessive fees are not enforceable. Appeals against the decisions of the judges of the first instance (justices of the peace) may be had to circuit courts and higher courts of appeal; in such appealed cases the lower court, upon request of the plaintiff, may order "a preliminary award," with or without bonds. Judgments obtained from the courts under this law have a preferred claim against the property of the defendant. Private settlements of the cases brought before the court are not binding unless they have been sanctioned by the court. Private arbitration of cases under this law is prohibited, and decisions of courts of arbitration are not enforceable.

REVISION OF COMPENSATION.

Further reconsideration of the case is permitted within three years after the compensation has been granted or refused, if after a medical examination, ordered upon demand of either party, changes in the condition of the injured are found to have taken place. Lump-sum settlements, however, can not be changed and are not subject to revision.

REGULATIONS AS TO METHODS OF PAYMENT.

The allowances and pensions are paid periodically, as follows: Payment of allowances for temporary disability must be made at the same intervals as the payment of wages. The time of payment of pensions for permanent disability or death may be arranged for by both parties, but in absence of such private arrangement the payments must be made monthly in advance. At the request of the persons receiving compensation, payment must be forwarded to their place of residence at their expense.

On the other hand the pensioners must twice a year (in January and July) present to the proprietor of the establishment or to his representative certificates to the effect that they are alive, and in case of widows, that they have not remarried, such certificates to be filled out by police authorities, and unless such certificates are presented the employer may withhold the payments. Such certificates must be given by the police without fee, and are free from stamp taxes. Unless there has been cause for delay, the employer must

pay a fine for delaying the payments, equal to 1 per cent of the sum retained for each month, and when the delay has extended over more than 6 months, he may be forced to guarantee the payments in the future according to the same rules which are laid down for cases of liquidation of the enterprise.

SECURITY OF PAYMENTS.

Since the Russian law does not introduce any compulsory system of insurance and throws the burden of compensation upon the individual employer, the question of guaranteeing the payments is of great importance. In case of voluntary liquidation, the proprietor must either insure the beneficiaries of the pensions, to the amount of payments due, in one of the recognized insurance companies, or must turn into one of the state credit institutions a sum sufficient to meet such payments. Comprehensive tables giving the capitalized value of pensions due to the injured workmen, whether adult, youth, or child, to the widow, and to relatives in ascending and descending line, for use in securing such pensions with insurance companies, were published by the Ministry of Interior on June 25 (July 8), 1905. The factory (or mine) inspector must be notified of the liquidation, and also of the measures taken to secure the payment of these obligations. In case of death of the proprietor his obligations under this law are transmitted to his heirs. In case of voluntary transfer of ownership, these obligations may be transferred to the new owner with his written consent, otherwise the original proprietor must guarantee the payments in the future, according to the rules laid down for cases of voluntary liquidation.

In cases of bankruptcy, enforced liquidation, or public sale of the establishment, the receivers or other persons in charge must ascertain from the proprietor and from the factory or mine inspector the total obligations of the establishment under this act. A computation must be made of the total sum required to insure the payment of these obligations and such sum becomes a preferred claim upon the amount received from the enforced sale. After the liquidation has been accomplished, the factory or mine inspector must be informed as to the amount available for this purpose. He must indicate what disposition shall be made of these funds, and in what insurance or banking institutions they may be deposited.

ACCIDENT REPORTS AND RECORDS.

The following methods of procedure are prescribed in connection with each accident. When an accident occurs, the proprietor or manager of the establishment must immediately communicate the facts to the local police, as well as to the factory inspector or to the

mining inspector ("district engineer"). Immediately after receiving such notice the local police must send an officer to prepare a written report in presence of the proprietor or the manager of the establishment, the injured person, if he is able to be present, a physician, the eyewitnesses of the accident, and an expert on the nature of the work, or as many of the persons designated as it is possible to summon. This statement must contain information as to the place and time of the accident, the names of the injured persons, and their occupation, the names and addresses of the eyewitnesses, the name of the proprietor of the establishment, a description of the circumstances of the accident, as obtained from the statement of the eyewitnesses as well as the results of a personal examination of the place, the nature of the injuries, and the statement of the physician, if one was present, and it is signed by all persons present.

If the statement is made without a physician, one must be invited by the proprietor within 4 days after the accident, or in case of death, immediately. The physician makes a medical examination, and makes a statement either of the death, and its causation by the accident, or of the nature and extent of the bodily injury with a conclusion in regard to the probable degree of disability. Two additional copies are made both of the police "statement" and the medical certificate, and one of each is given to the proprietor or manager and to the injured person or some member of his family.

A record is kept in each industrial establishment of all injuries, with statements as to compensations paid, and all documents pertaining to the subject. All further changes in the conditions of the injured, such as recovery from the injury, or the propriety of discontinuing the medical treatment, the complete recovery from disability, the permanency of disability, and its degree, must be certified by medical certificate. The certificate of any regular practitioner is acceptable, and if his decision be unsatisfactory, the police, city or district surgeon may be called upon by either party to grant these certificates. A complete list of all accidents, with the statements and medical certificates attached, must be kept at each establishment and presented to the factory or mining inspector on demand. Failure to keep the necessary records, to give the required notice to the police, or to call in a physician subjects the proprietor or manager to a fine of from 25 to 100 rubles (\$12.87 to \$51.50).

FUNCTIONS OF THE FACTORY AND MINE INSPECTORS.

As shown above, the administration of the law is placed upon the factory and mine inspectors. This includes certification and approval of the voluntary agreements, explanation and interpretation of the law, and the rights and duties of all parties under it, inspection of the accident lists, determination of average wages of unskilled labor,

nominations of guardians for minors in cases to be brought to trial, certain supervision of the process of voluntary and enforced liquidations, etc. As yet the system of factory inspection has been introduced only in European Russia and four of the Caucasian provinces; no factory inspectors are provided for the remaining provinces of Caucasus, and throughout Siberia and middle Asia. In these provinces the functions of the factory inspectors are placed upon other administrative officers, known as provincial mechanics, but in view of the insufficiency of the number of these officers (only one to a province) local judges are authorized to certify and approve voluntary settlements; in addition, the injured employees or their heirs are permitted to bring their claims into court without any prejudice to their case. By a provision in the resolution of the Imperial Council, the "Central Council of Manufactures and Mines" attached to the Ministry of Finance (and since transferred to the Ministry of Commerce and Industry) was directed to prepare a set of rules and regulations for guidance of the provincial councils of manufactures and mines, of the factory or mine inspectors, or the officers acting in their places, where no factory or inspection exists, in their duties under this law. Such regulations were prepared and promulgated by the minister of finance on December 13 (26), 1903.

Complete lists of industrial and mining establishments in each district must be compiled by the factory or mine inspectors and kept on file by the provincial councils of manufactures and mining. All establishments subject to this law must be listed whether or not these institutions are otherwise subject to factory or mine inspection. Doubtful establishments must be entered in the lists, and the question of the application of the compensation act must be settled by the local council or referred to the central council in St. Petersburg, to which the proprietor of the establishment, who must be notified of its inclusion in the lists, has a right of appeal. Where there are no factory inspectors, other officers are instructed to collect the lists and furnish them to all officers who may be called upon in connection with accidents.

It is the inspector's duty to make a personal investigation of every industrial accident in his district, which takes place in an establishment subject to the compensation act, without waiting for the formal notice from the proprietor, and he must cooperate with the police to obtain all possible information. It is his duty to encourage amicable settlements between two parties; even if they had once failed to come to an agreement, as evidenced by a proper "act" of the factory inspector, and a lawsuit has been instituted, and even if the legal time limit had elapsed, nevertheless, if both parties enter a request for a voluntary agreement, such request must not be refused. If oral agreements are presented to him by both parties he

can not decline to put them in writing as a preliminary to certification. In the case of a written agreement, acknowledged by a notary, appearance of the agreeing parties is not necessary and the request for certification may come in writing.

The inspector must decline to certify settlements by which the employer tries to avoid a direct obligation imposed by the law, or the employee signs away one of his undisputed rights, but before doing so the inspector on his initiative must suggest the changes necessary to obtain certification. With the written consent of both parties he may certify to some provision of the settlements and except others. When requests are made upon the inspector by one party for explanation as to his rights, the inspector may ask the other party to appear before him, and failure to appear must be considered as a refusal to enter into a voluntary agreement.

The factory inspectors may take the initiative to petition the court for appointment of the guardian for minor claimants. In case of pending voluntary liquidation, or transfer or public sale of an establishment, the inspector must remind the proprietors, orally or in writing, of their obligations under this act, and also inform all the beneficiaries, as far as possible, of the coming change in ownership. They must also inform the official conducting such liquidation or sale, of the obligations under this law. As defined by the regulations, the duties of the factory and mine inspectors are very broad and complex. Besides being charged with almost all the details of the execution of the law, they are practically made official mediators and conciliators, upon whose work the success of the law largely depends.

INSTRUCTION TO THE POLICE.

Rules for the regulation of the police authorities in connection with the law were approved by the ministers of interior and of war on December 11 (24), 1903. The obligations of the police are mainly limited to making an official record of the accident as soon after its occurrence as possible and gathering at the place of its occurrence all the possible information from the eyewitnesses. These regulations to the factory inspectors and the police were also intended to materially improve the statistics of accidents.

INSURANCE.

While the law establishes the individual liability of the employer, and all proposals to establish a system of compulsory insurance were declared premature, the advantages of insurance were clearly recognized and the introduction of a system of compulsory insurance against accidents has only been deferred until a more propitious time. The law tends to encourage insurance not only by permitting it but also by providing that the employer may be entirely relieved from

all obligation imposed if he insures his employees in an authorized insurance company under conditions no less favorable than those secured by the law. Both private insurance companies and mutual insurance societies are authorized, but both must conform to the rules as laid down by the minister of interior on December 22, 1903 (January 4, 1904). These rules are discussed more fully in connection with the section on private insurance against accidents.

SPECIAL PROVISION FOR WORKMEN EMPLOYED BY THE STATE.

The industrial undertakings of the Russian Central Government have during the last two centuries been extensive, and the need of compensating the employees of these industrial establishments for results of industrial accidents was recognized many years before any steps were taken for a general law to cover private undertakings.

CIVIL EMPLOYEES OF NAVY-YARDS.

The workmen employed in the navy-yards and their families were among the first to be provided for in case of accidental injuries or death, by the law of October 8 (20), 1862, which remained in force until after the application of the provisions of the general compensation act of 1903 to this class of state employees. According to the law of 1862, all cases of disability or death caused by accidents were compensated without any effort to determine the fault or place the blame. The law was passed 48 years ago, and established pensions which have remained unchanged. The law preserved the distinction between masterworkmen, journeymen, and apprentices, with different amounts of pensions to each, according to the following scale:

ANNUAL PENSIONS GRANTED TO EMPLOYEES OF NAVY-YARDS, BY CLASSES.

[Source: *Otvletstvinnost predpriminatelei za uviechia i smert rabochikh*, V. P. Litwinov-Falinskii, 1900.]

Class.	Annual pension paid to—		
	Masters.	Journeymen.	Apprentices.
1. For total loss of sight.....	\$72.10	\$54.08	\$36.05
2. Loss of life, or of two extremities, or such injury as will necessitate constant care of injured the rest of his life.....	61.80	46.35	30.90
3. Loss of one extremity or such injury as will cause total disability to earn a living but does not necessitate care of injured.....	41.20	30.90	20.60
4. Injury resulting in disability to continue employment in the navy-yards, but not altogether destroying ability to earn some wages, though not sufficient for support.....	30.90	23.18	15.45
5. Injury resulting in disability to continue in employment in navy-yard, but leaving the victim able to earn a sufficient amount for support at some other occupation.....	20.60	15.45	10.30

Pensions of the fourth and fifth groups were either permanent or temporary, depending upon the duration of disability resulting from injury. When death resulted from the injury the widow received

one-half of the full pension, as indicated above, and each of the children one-sixth, so that the full pension was granted to the family only where there were at least three children. When the children remained orphans at the death of the injured workman, each child was entitled to an equal share of the pension, but not more than one-fourth each, so that the full pension was granted only when four orphans remained. The widow was entitled to the pension until death or remarriage, provided she led a sober and moral life, or until she entered a government asylum. Male children received their pension until 14 years of age and female children until 15 years of age; but when crippled or suffering from incurable diseases, and therefore unable to earn a living, the pension was continued for life. The dependents were entitled to a pension, not only when death resulted from the injury, but in all cases of death of a workman receiving a pension. The procedure was entirely through the officers administering the navy-yards. On May 17 (30), 1904, the provisions of the law of June 2 (15), 1903, with some modification, were substituted for the law of October 8 (20), 1862, while on March 6 (19), 1906, a special act was passed.

STATE MINES AND METALLURGICAL ESTABLISHMENTS.

Labor in state mines and metallurgical establishments before the emancipation of serfs in 1861 was obligatory for the peasants of certain mining districts. Since 1857 the obligation of the State to care for the injured and the invalid was recognized, though the compensation was limited to 2 poods (72.2 pounds) of flour for an adult and 1 pood (36.1 pounds) of flour for a minor monthly, and money pensions varying from 1.87 to 72 rubles (\$0.96 to \$37.08) per annum for the injured workman, from 1.72 to 21 rubles (\$0.89 to \$10.82) per annum to the widow, and 1.72 to 10 rubles (\$0.89 to \$5.15) per annum to each daughter. By the law of March 8 (20), 1861, the relations between the state mines and metallurgical establishments and the peasant population of the mining districts was regulated anew, and the law provided for miners' mutual benefit societies for the care of the sick, aged, invalids, widows, and orphans. An amendment to this law stated that in case of death or disability due to an industrial accident, pensions and allowances should be paid from the treasury of the establishments. This was interpreted to mean that the old provisions of the law of 1857 were to be applied.

A suit instituted in 1894 by an injured workman led to a decision that the law of 1857 was inapplicable, and that the injured workman had a right to recover under the provisions of the general laws. A plan of a special law providing for such compensation of the employees of the state mines and metallurgical establishments was being prepared in the Ministry of Agriculture and State Domains, embodying

the modern principles of such compensation, and this plan was finally adopted with certain modifications on May 15 (28), 1901.

This act preceded by more than two years the general compensation act of 1903, and for some time in the history of the deliberations leading up to that act, served as a model. The law is still in force and is much broader than the act of 1903 in many points, so that the employees of the government mines and metallurgical establishments are the best protected against the results of industrial accidents.

One of the most important points of distinction is found in the inclusion of disability from trade diseases, for which the same pensions are paid as for injuries through accidents.

Another distinction of importance is that only such injuries and occupational diseases are excluded from the benefits of the law as have been intentionally brought about by the victim; so that negligence, even if classified as gross, does not deprive the injured person of the compensation. In case of a fatal result the widow and orphans do not lose the right to compensation, even if the fatal accident or disease had been brought about intentionally.

The general level of compensation for the permanently disabled employee, the widow or dependent widower, children or relations under ascending lines is the same as in the general law of 1903, i. e., two-thirds of the pension for total disability, and a corresponding amount, namely, two-thirds of the difference between the old and the new rate of wages, in case of partial, though permanent, disability; which permits his reemployment by the state mines at a lower rate of wages. Thus the degree of disability is judged (in distinction to the methods under the general law) primarily with reference to his employment in the same service and not with regard to his general ability to work. The difference is one of decided advantage to the employee of the state mines.

Only when the injured workman suffering from such partial disability declines an offer of employment must his pension be computed according to the degree of disability, but in no case must it then exceed one-half of the pension for total disability; that is, 33½ per cent of the average annual earnings.

The act of May 15 (28), 1901, does not concern itself with the numerous cases of transitory disability from minor accidents or ailments, because the fraternal organizations of the miners take care of that part of the problem, but in the provisions for reexamination and revision of the compensation award during the first two years after the accident and for the discontinuance of the pension in case of reestablished ability to work, account is taken of briefer periods of disability. In case of the accident resulting fatally, the pension of the widow or the dependent widower amounts to one-half of the pension for permanent disability, the children under 16 years of age

receive one-sixth of the full pension each, but not more than one-half of the full pension altogether, the pensions of orphans being double that amount. The pensions of the children run until the completion of the sixteenth year, but when permanently disabled from earning a living because of an incurable disease they may receive the pension for life. The pension to the injured is discontinued at his reemployment at the old wage, at his reception in a state hospital, at his death, at his entrance into a monastery, or at the cure of the disease. The pension of the widow, widower, or daughters stops at marriage. The pensions are not affected by any other benefits which the injured or his heirs may be receiving either from a mutual benefit fund or from the treasury because of any special law or grant.

The method of computation of wages to determine the amount of pension is also different. It is based upon the average annual earnings for three years preceding the accident, of the injured employee himself, or an employee of the same group if the injured person had not been employed this length of time.

The application of the law is very much simplified, being left almost entirely to the administration of the state mines and metallurgical establishments, the final appeal being to the Ministry of Agriculture and State Domains (now the Ministry of State Domains). The medical questions are left to the discretion of the official physician of the mining establishment.

LEGISLATIVE ACTS, 1904 TO 1906.

The majority of government employees are protected through an extension of the principles of the compensation act by separate enactments during the years 1904 to 1906, in accordance with the demand contained in the original law of 1903. Considerable changes were made in some of the features of the law as applied to government employees. The Ministry of War was first with a plan for the civil employees of the arsenals and other works of the artillery department. With the compensation act of 1903 as a basis, a special act was elaborated and approved on June 9 (22), 1904. All further enactments in regard to other classes of government employees refer to this act of June 9 (22), 1904, and extend its provisions, and not those of the law of June 2 (15), 1903.

On June 6 (19), 1905, a law was accepted covering employees of manufacturing, mining, and metallurgical establishments owned by the Crown and the appanages (personal property of the Emperor and of the members of the imperial family); on December 19, 1905 (January 1, 1906), the wage-workers and civil employees of the state printing office; on March 6 (19), 1906, the corresponding classes of employees of the senate printing office and the employees of the navy department; and on April 19 (May 2), 1906, employees of the

government establishments connected with the department of commercial ports. Certain additional decrees were published in connection with these laws at various dates:

(1) Instructions referring to the application of the law; for the war department on April 29 (May 12), 1905; for the employees of the Crown on April 21 (May 4), 1906; for the employees of the navy department on December 28, 1906 (January 10, 1907).

(2) Rules to determine the degree of disability for the war department on April 29 (May 12), 1905; for the navy department on December 28, 1906 (January 10, 1907); these are identical with those issued in connection with the law of June 2 (15), 1903; the same rules are made applicable to the employees of all other establishments covered by these laws.

(3) Rules for medical examination of new appointees, with lists of diseases completely or conditionally disqualifying applicants for appointment: In the war department, April 29 (May 12), 1905; for the establishments of the Crown, December 16 (29), 1905, (practically identical with those of the war department); for the senate printing office, June 20 (July 3), 1906, (identical with those of the state printing office); for the navy department, December 28, 1906 (January 10, 1907), (almost identical with those of the war department).

To indicate the extent of modifications introduced in the law of June 9 (22), 1904, it is sufficient to say that of the 53 sections of the original law 17 sections remained unchanged; 18 sections were omitted, and 18 more or less modified, mostly in language, but somewhat in substance, while 14 new sections were added in place of those omitted. In general the rate of pensions and allowances remained the same, while the procedure was considerably modified, since the government industrial establishments are not subject to the supervision of the factory or mine inspectors. But in addition to these administrative details some important changes were made in the most essential provisions of the law.

Complaint has been made that the denial of compensation to workmen guilty of "gross negligence, which can not be justified by the conditions and circumstances of work," was one of the weak points of the law of June 2 (15), 1903. This exception was only partly preserved in the law of June 9 (22), 1904, concerning the employees of arsenals, which provided that when such accident results fatally the war minister may, under exceptional circumstances, allow the regular pensions to the members of the family. In all later enactments in regard to other classes of government employees all references to "gross negligence" were omitted, and only injuries intentionally self-inflicted are excepted.

No less important is the inclusion of the occupational diseases with the injuries compensated. This applies to all classes of govern-

ment employees affected by the laws passed. No definite list of trade diseases is given, but disability due to all injuries caused by the work, or resulting from it, entitles the employee to a pension. As only permanent disability or death from trade diseases is compensated, temporary allowances are not given. Death resulting from such injury entitles the members of the family to pensions under the same conditions as death from accidental injury.

This extension of the conception of accidental injury necessitated complete records of the health of each employee, obtained by means of medical examinations at the beginning of employment and also wherever an injury to health is claimed. On the other hand, to guard against the excessive payments of pensions due to injuries to health, a certain standard of health is required at the time of entering employment, and lists of diseases disqualifying from employment in the governmental establishments have been published in connection with each extension of the law to certain classes of government employees. This list includes the employees of the arsenal, the establishments of the Crown, and of the navy department.

1. Grave incurable disarrangements of nutrition, resulting from protracted and serious diseases (malaria, scurvy, etc.), or from chronic poisonings by metals, alkalis, alcohol, or other poisons.

2. All acute contagious diseases, and chronic contagious diseases during the contagious period.

3. Pronounced tubercular affections of lymphatic gland, scrofulous with swelling, hardening, suppuration, ulceration, and other tubercular affections.

4. Elephantiasis in the pronounced stages of development.

5. Leprosy.

6. Chronic rheumatism, deforming inflammation of joints with hardening, contractions, and other permanent results.

7. Leucæmia, malignant anæmia, and bleeding diathesis.

8. Addison's disease.

9. Diabetic or nondiabetic polyuresis.

10. All malignant tumors.

11. Benign tumors, when interfering with work or with the function of important organs.

12. Myxœdema.

13. Lupus vulgaris, mycosis fungoides, multiple molluscum fibrosum, pemphigus chronicus, scleroderma, prurigo, ichthyosis, psoriasis vulgaris, and other chronic skin diseases accompanied with grave disturbances of general nutrition.

14. Aggravated cases of pediculosis capitis, with ulcers and crusts.

15. Chronic ulcers of syphilitic, scurvic, or tubercular origin.

16. Chronic bone diseases, their complications and results; necrosis, caries, cold abscesses, affections of muscles, tendons, and cartilages.

17. Aneurisms of large vessels.

18. Epilepsy, hystero-epilepsy.

19. Unilateral paralysis, paralysis of one upper or both lower extremities.

20. St. Vitus' dance, paralysis agitans, and other chronic general twitching affections.

21. Chronic neuritis and neuralgia, interfering with work.

22. Diseases of spinal cord and its membranes.

23. Idiocy, insanity, and mental weakness of all stages or forms.

24. Grave forms of hysteria and traumatic neurosis.
25. Progressive muscular atrophy.
26. Basedow's disease.
27. Bronchial asthma.
28. Scars of eyelids, keeping up inflammation of cornea or conjunctiva.
29. Well defined granular conjunctivitis, with deep infiltration.
30. Well defined chronic catarrh of the conjunctiva with enlarged follicles and swelling.
31. Adhesions between the eyelids, or between either and the eyeball in one or both eyes, when interfering with sight or with the free motion of the eyeball.
32. Decrease of over one-half in the power of sight, notwithstanding correction by glasses, because of permanent changes in the eye.
33. Permanent paralysis of the motor nerves of the eyelids or eyeballs.
34. Purulent discharge from one or both ears, resulting from deep destructive affections of the middle ear.
35. Complete deafness of both ears, or such limitation of hearing that the examined workman can not hear a low voice at a distance of 1 arsheen ($2\frac{1}{2}$ feet) and a loud voice at a distance of 6 arsheens (14 feet).
36. Loss of hearing and speech (deaf-mutes).
37. Tumors of pharynx, larynx, or nose, when subject to bleeding, or interfering with deglutition or respiration.
38. Organic diseases of larynx or trachea, interfering with speech, respiration, or deglutition.
39. Stricture of œsophagus.
40. Chronic catarrh or respiratory ducts, with failure of general nutrition; bronchiectasis and well-defined pulmonary emphysema.
41. Tuberculosis, chronic pneumonitis, and pleuritis.
42. Organic diseases of heart, pericardium, aorta, and pulmonary arteries.
43. Organic diseases of peritoneum, liver, spleen, stomach, intestines, kidneys, and other abdominal or pelvic organs, with disturbance of function and of general nutrition.
44. Abdominal hernia of any degree. (Dilatation of the inguinal canal without protrusion of internal organs is not to be considered a hernia.)
45. Prolapse of all layers of the rectum without pressure, rectal fistula, or stricture of rectum or anus.
46. Abnormal anus.
47. Diseases of the genito-urinary organs, leading to uncleanliness.
48. Diseases of vertebra, curvature of vertebra columns or pelvis, when interfering with work.
49. Absence of both feet.
50. Considerable dilatation of veins, with formation of many large knots, interfering with circulation or threatening the integrity of the walls of the blood vessels.
51. Absence of one thumb, or two fingers on one hand, when interfering with work.
52. Supernumerary fingers, curvature of fingers, contractions, or other deformities, when interfering with free action of hand.
53. Prolapse of vulva and uterus.
54. Grave affections of uterus or appendages, or the cellular tissue of the pelvis, or pelvic peritoneum.
55. Pregnancy, during the last three months, and four weeks after childbirth.

A modified list, much briefer and less severe in its restrictions, is applied to the two printing offices, where much less physical strength is demanded of the employees, because of the lighter nature of the work. The list includes, briefly:

Contagious diseases, and primarily syphilis and tuberculosis; and general noncontagious diseases, especially general disarrangements of nutrition because of chronic lead, alcohol, or other poisoning; tumors, malignant or benign; all mental diseases; organic or functional diseases of the central nervous system, organic heart diseases, knotty dilations of veins and varicose ulcers; such diseases of the respiratory ducts as interfere with respiration or speech, chronic pneumonia and pleurisy; purulent bronchitis and emphysema; such digestive diseases as have produced evident disturbances of nutrition; irreducible hernia, or such as can not be supported by a truss; genito-urinary diseases which threaten to cause early working disability; diseases of the bones, muscles, joints; chronic contagious eruptions, lupus of the face; such scars, or unhealed ulcers, as limit the mobility of members, blenorrhoeic eye infections; trachoma and conjunctival scars; decrease of the power of sight; everted or inverted eyelids; purulent otitis media; considerable decrease of sense of hearing. While the list is comprehensive, in the majority of diseases the addition of the qualifying phrase "when interfering with the performance of duties" greatly reduces the stringency of the regulations and simply establishes the rule that only men physically able to perform the work satisfactorily, and not likely to lose their working ability in the near future, may be given employment.

While the general law includes, in addition to workmen, the technical employees only, all laws in regard to government establishments include all civil employees receiving a remuneration at a rate of not more than 1,500 rubles (\$772.50) per annum.

A change of some importance consists in granting to orphans who, through illness or deformity, are incapacitated from earning a living, pensions for life instead of to the completion of the sixteenth year.

Payment of pensions for permanent disability is discontinued during the time the injured is reemployed in the same establishment if the wages paid him are not smaller than before. When such wages are smaller, the pension is equal to only two-thirds of the difference.

The pensions granted are paid irrespective of any subsidies or pensions which the pensioner may receive from the Government or anyone else.

The substitution of a lump-sum payment for the pensions is not permitted when the pension exceeds 24 rubles (\$12.36) per annum. It is the practice in private industrial establishments to agree upon lump-sum payments, but these are not considered to be in the best interests of the workmen.

The methods of administration of the laws have been considerably changed, since the government establishments are not subject to the jurisdiction of the factory or mine inspectors to whom the larger share

in the administration of the law of 1903 is intrusted. These functions are intrusted to the administrative officers of the establishments; a committee of three members is organized for this purpose with the superintendent of the establishment as chairman, who acts independently in case of emergency. Thus, notice of accident must be given and also application for pensions or allowances made to him. He also grants allowances for temporary disability, the cost of medical treatment, or the funeral expenses, unless he prefers to refer them to the committee. Cases of permanent pensions for death or permanent disability, accompanied by all documentary evidence, must be referred to the committee, which renders a written decision, giving reasons for such, and the superintendent acts upon this decision. The procedure is different from that of the law of 1903, which requires friendly agreements between both parties, while here a purely administrative order takes its place. The claimant can file objections to the decision within two months from the day of receiving notice and demand reconsideration of the case. The committee must act upon receiving such an objection, and must give an independent consideration of the case within thirty days. If still dissatisfied, the claimant may choose one of two ways: He may either carry the case to the head of the ministry in whose department he is employed or enter a suit against the Government. The use of one of these two methods prevents the employee from taking advantage of the other. Suits are entered against the Government in the name of the superintendent of the establishment. The essential feature of this system is the decentralization of the administration, with a right of appeal to the head of the department.

STATISTICS OF THE OPERATION OF THE LAW.

The statistical information as to the application of the law of 1903 is limited to the establishments subject to factory inspection, and then including only the cases resulting fatally or in permanent disability. These data are presented in the following six tables.

In the following table the cases wherein settlements have been effected in accordance with the law and have been certified by the factory inspectors are compared with the total number of cases registered. The percentage has increased from 37.7 per cent in 1904, to 78.8 per cent in 1905, and 90.6 per cent in 1906. This indicates a growing frequency of peaceful settlements in the office of the factory inspectors—i. e., out of courts—though the low percentage of the year 1904 may be explained by the delay in settlements, which has carried many cases over into 1905. The cases of partial disability involving small compensation, are most frequently settled peacefully and the fatal cases least frequently.

NUMBER OF ACCIDENTS REGISTERED AND NUMBER AND PER CENT OF CASES CERTIFIED BY INSPECTORS, BY RESULT OF INJURY, 1904 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskoe izvestiye o Resultatakh Primeneniya Zakona 2 iunia 1903 goda.]

Result of injury.	1904.			1905.			1906.		
	Cases registered.	Cases certified by inspectors.		Cases registered.	Cases certified by inspectors.		Cases registered.	Cases certified by inspectors.	
		Number.	Per cent.		Number.	Per cent.		Number.	Per cent.
Death.....	382	105	27.5	332	197	59.3	371	228	61.5
Total permanent disability.....	70	17	24.3	59	45	76.3	60	46	76.7
Partial permanent disability.....	5,783	2,228	38.5	8,196	6,524	79.6	10,296	9,446	91.7
Total.....	6,235	2,350	37.7	8,587	6,766	78.8	10,727	9,720	90.6

In the following table are shown the number of cases for which annual pensions are actually granted and those for which the capitalized value is paid instead of annual pensions. In the vast majority of cases settled (all but 8 per cent in 1906) the annual pensions have been capitalized. Such capitalization of the annual pensions is found to be particularly common in cases of partial disability (93 per cent in 1905 and 93.4 per cent in 1906) where the computed annual pension is often very low; it is agreed to in about half of the fatal cases, and in comparatively few cases of total permanent disability (31.1 per cent in 1905 and 28.3 per cent in 1906). This frequent capitalization of the pension into a lump-sum payment is considered an evil by most Russian authorities on the subject, especially in fatal cases. When the degree of partial disability is low, and the pension therefore amounts to only a few rubles a year, such capitalization is justified, but in grave or fatal cases the employer may often force the employee to agree to a capitalization by refusing a peaceful settlement on any other conditions, for such capitalization at a sum equal to ten annual payments is often very advantageous to the employer. Within recent years, however, a considerable increase in the proportion of cases leading to pensions, rather than to lump-sum payments, has been noticed. From 7.9 per cent in 1906, it has increased to 12.5 per cent in 1907 and to 17.8 per cent in 1908. This may be explained by a gradual increase in the workmen's familiarity with the provisions of the law.

The table also shows that in a great majority of cases (about two-thirds in round numbers) temporary disability allowances are granted before the degree of disability can be established.

NUMBER AND PER CENT OF CASES IN WHICH WERE GRANTED ANNUAL PENSIONS, CAPITALIZED PENSIONS, AND ALLOWANCE FOR TEMPORARY DISABILITY, 1904 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskia Svedenia o Resultatakh Primenenia Zakona 2 iunia 1903 goda. Svod otchetov fabriчныkh inspektorov za 1908 god.]

Result of injury.	Cases agreed to and certified.	Cases in which annual pensions were granted.		Cases in which pensions were capitalized.		Cases in which temporary disability allowances were granted before final settlement.	
		Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1904.							
Death.....	105	55	52.4	50	47.6	20	19.0
Total permanent disability.....	17	9	52.9	8	47.1	7	41.2
Partial permanent disability.....	2,228	142	6.4	2,086	93.6	1,606	72.1
Total.....	2,350	206	8.8	2,144	91.2	1,633	69.5
1905.							
Death.....	197	91	46.2	106	53.8	33	16.0
Total permanent disability.....	45	31	68.9	14	31.1	29	64.4
Partial permanent disability.....	6,524	454	7.0	6,070	93.0	4,626	70.9
Total.....	6,766	576	8.5	6,190	91.5	4,688	69.2
1906.							
Death.....	228	111	48.7	117	51.3	60	25.2
Total permanent disability.....	46	33	71.7	13	28.3	30	65.2
Partial permanent disability.....	9,446	628	6.6	8,818	93.4	6,841	72.4
Total.....	9,720	772	7.9	8,948	92.0	6,931	71.2
1907.							
Death.....	a 213	103	45.8	122	54.2	(b)	(b)
Total permanent disability.....	43	22	51.2	21	48.2	(b)	(b)
Partial permanent disability.....	10,076	1,163	11.5	8,913	88.5	(b)	(b)
Total.....	a 10,332	1,288	12.5	9,056	87.5	(b)	(b)
1908.							
Death.....	a 199	121	59.6	82	40.4	(b)	(b)
Total permanent disability.....	42	30	71.4	12	28.6	(b)	(b)
Partial permanent disability.....	9,581	1,596	16.6	7,983	83.4	(b)	(b)
Total.....	a 9,822	1,747	17.8	8,077	82.2	(b)	(b)

a In 1907 in 12 cases and in 1908 in 4 cases some dependent relatives accepted pensions and some lump sums. For this reason the additions of pension rewards and capitalized rewards gives a larger total than the number of cases. The larger total was used in computing the percentages.

b No data available.

In the following table are computed the average annual earnings, the total and average amount of computed pensions, and the average proportion of the pension to the wages. The legal rate of compensation in cases of total permanent disability is two-thirds of the annual earnings, and this proportion is upheld in practically all cases. In the fatal cases the maximum compensation allowed is two-thirds, but this maximum is evidently not reached in a great number of cases, for the average proportion is less than one-half the annual earnings.

The average pension is very low in cases of partial permanent disability. It was only 8.1 per cent of the earnings in 1906, 7.8 per cent in 1907, and 8.8 per cent in 1908. The fact that the number of cases of partial disability in 1906 was more than four times what it was in 1904 would seem to indicate that lighter injuries are being

compensated. The average is nevertheless remarkably low, when it is remembered that the minimum degree of disability practically used in the medical certificates is 5 per cent, which would correspond to a pension of 3.3 per cent, and that in the vast majority of permanent injuries the degree of disability is much higher. In fact, out of 189 classes of injuries contained in the table prepared for the guidance of the certifying physicians, only 65 were less than 25 per cent and 76 classes were 50 per cent or over.

Because of the great predominance of cases of partial disability over those of complete disability or death the grand average rate of pension in 1907 was only 8.4 per cent of the annual earnings, and in 1908 only 9.8 per cent. The average computed pension in 1908 was \$79.23 for fatal cases, \$129.72 in cases of total permanent disability, and \$14.87 for cases of partial permanent disability, the average pension for all cases being \$16.66 in 1908 as against \$15.03 in 1907 and \$15.49 in 1906.

NUMBER OF ACCIDENTS CERTIFIED, ANNUAL EARNINGS, AND COMPUTED AMOUNT OF PENSIONS, IN CLAIMS CERTIFIED BY FACTORY INSPECTORS, BY RESULT OF INJURY, 1904 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskie Svedenia o Resultatakh Primeneniia Zakona 2 iunija 1903 goda. Svod otchetov fabriчныkh inspektorov v za 1908 god.]

Result of injury.	Number of cases certified.	Annual earnings of injured.		Computed amount of pensions.		
		Total.	Average.	Total.	Average.	Per cent of earnings.
1904.						
Death.....	105	\$13,594.85	\$129.47	\$6,749.21	\$64.28	49.6
Total permanent disability.....	17	2,720.68	160.04	1,815.00	106.76	66.7
Partial permanent disability.....	2,228	344,855.20	154.78	35,116.77	15.76	10.2
Total.....	2,350	361,170.73	153.69	43,680.98	18.59	12.1
1905.						
Death.....	197	26,151.00	132.24	12,093.08	61.38	46.2
Total permanent disability.....	45	6,151.29	136.70	4,107.66	91.23	66.8
Partial permanent disability.....	6,524	1,045,205.65	160.21	96,467.43	14.79	9.2
Total.....	6,766	1,077,507.94	159.25	112,668.17	16.65	10.4
1906.						
Death.....	228	30,279.40	127.80	14,248.74	62.50	47.1
Total permanent disability.....	46	7,767.35	168.86	5,043.40	109.66	64.9
Partial permanent disability.....	9,446	1,629,094.47	172.46	131,317.46	13.90	8.1
Total.....	9,720	1,667,141.22	171.51	150,609.60	15.49	9.0
1907.						
Death.....	213	30,680.56	144.04	14,422.48	67.71	47.0
Total permanent disability.....	43	7,844.53	182.43	5,219.28	121.37	66.5
Partial permanent disability.....	10,076	1,737,267.75	172.42	135,637.06	13.46	7.8
Total.....	10,332	1,775,792.84	171.87	155,278.82	15.03	8.4
1908.						
Death.....	199	35,526.42	178.46	15,765.82	79.23	44.4
Total permanent disability.....	42	8,349.65	198.80	5,448.42	129.72	65.3
Partial permanent disability.....	9,581	1,620,283.91	169.11	142,443.03	14.87	8.8
Total.....	9,822	1,662,159.98	169.23	163,657.27	16.66	9.8

A consideration of the data of the following table, where the actual pensions paid as such are given in the first three columns, shows that the average pensions are considerably higher for the cases settled by annual pensions than for those settled by lump-sum payments. To make a comparison for 1908: The average computed pension for all fatal cases as shown by the preceding table was \$79.23, and for those cases where annual pensions were actually paid, \$89.45; while for the cases settled by lump sums the average computed pension was only \$63.36; for the cases of total permanent disability the general average was \$129.72, the average for pension cases was \$146.46, and for lump-sum cases \$87.88; for cases of partial permanent disability the general average was \$14.87, the average for pension cases \$28.17, and for the lump-sum payments \$12.21. In all groups of cases the tendency is to convert the smaller pensions into lump-sum payments, because a small pension loses its value, and a lump sum is therefore preferred. Statements are also often made that in their anxiety to get a lump sum the claimants are often willing to accept a smaller compensation.

In the absence of adequate mortality statistics the law permits the capitalization of pensions at ten times the annual value, except for such pensions as are not expected to run for 10 years; in these cases the capitalized value must be equal to the annual value multiplied by the number of years the pension has to run. The figures show that the average capitalization is actually made at that rate. The total amount paid out in lump sums in 1908 was \$1,006,305.76, while the computed value of the annual pensions for these 8,077 cases was \$103,486.42, which gives a rate of capitalization of 9.72.

ANNUAL PENSIONS PAID AND LUMP-SUM PAYMENTS MADE IN CLAIMS SETTLED BY FACTORY INSPECTORS, BY RESULTS OF INJURY, 1904 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskia Svedenia o Resultatakh Primenenia Zakona 2 iunia 1903 goda. Svod otchetov fabrichnykh inspectorov za 1908 god.]

Result of injury.	Cases settled by payment of annual pensions.			Cases settled by payment of capitalized value of pensions.		
	Number.	Total computed pensions.	Average pension per case.	Number.	Total compensation paid.	Average compensation per case.
1904.						
Death.....	55	\$4,476.91	\$81.40	50	\$21,491.84	\$429.84
Total permanent disability.....	9	1,116.59	124.07	8	6,983.86	872.98
Partial permanent disability.....	142	4,743.63	33.41	2,086	304,483.40	145.97
Total.....	206	10,337.13	50.18	2,144	332,959.10	155.30
1905.						
Death.....	91	6,859.85	75.38	106	51,824.20	488.91
Total permanent disability.....	31	3,063.01	98.81	14	10,446.67	746.19
Partial permanent disability.....	454	14,630.13	32.22	6,070	828,455.57	136.48
Total.....	576	24,552.99	42.63	6,190	890,726.44	143.90

ANNUAL PENSIONS PAID AND LUMP-SUM PAYMENTS MADE IN CLAIMS SETTLED BY FACTORY INSPECTORS, BY RESULTS OF INJURY, 1904 TO 1908—Concluded.

Result of injury.	Cases settled by payment of annual pensions.			Cases settled by payment of capitalized value of pensions.		
	Number.	Total computed pensions.	Average pension per case.	Number.	Total compensation paid.	Average compensation per case.
1906.						
Death.....	111	\$8,508.55	\$76.65	117	\$52,801.31	\$451.29
Total permanent disability.....	33	3,936.88	119.29	13	10,661.54	820.12
Partial permanent disability.....	628	20,533.87	32.70	8,818	1,103,502.57	125.14
Total.....	772	32,979.30	42.72	8,948	1,166,965.42	130.42
1907.						
Death.....	103	8,400.93	81.56	122	55,951.29	458.62
Total permanent disability.....	22	2,782.60	126.48	21	23,988.36	1,142.30
Partial permanent disability.....	1,163	32,211.94	27.70	8,913	1,029,322.88	115.49
Total.....	1,288	43,395.47	33.69	9,056	1,109,262.53	122.49
1908.						
Death.....	121	10,823.99	89.45	82	46,094.29	562.12
Total permanent disability.....	30	4,393.92	146.46	12	10,484.80	873.73
Partial permanent disability.....	1,596	44,952.94	28.17	7,983	949,726.67	118.97
Total.....	1,747	60,170.85	34.44	8,077	1,006,305.76	124.59

The usual amount of pensions and lump sums granted may be better judged from the following two tables, in which all cases of pensions and lump-sum grants for 1904 to 1908 are classified by amount and by result of accidents. It appears that in fatal cases nearly one-half of all the pensions fall between the limits \$25.75 and \$77.25, and that nearly three-fifths (58.2 per cent) are not over the latter amount. In total permanent disability the pensions are usually higher. None were less than \$25.75, 34.4 per cent were not over \$77.25, 42.4 per cent were from \$77.25 to \$154.50, and 23.2 per cent above that amount. On the other hand, in partial permanent disability nearly three-fifths (59.5 per cent) were not over \$25.75 and 84.7 per cent not over \$51.50.

The lump-sum benefits are naturally much larger, as the normal method of capitalization is by multiplication of the annual pension by ten. The average capital sum paid for a fatal case was \$478.33, a little over one-third (34.1 per cent) were compensated by not over \$257.50, a little over one-third received from \$257.50 to \$515, and less than one-third received over \$515. In cases of total permanent disability the average lump-sum compensation was \$920.08, or nearly double that for fatal cases. Only in a very few cases was the compensation less than \$515, and payments of over \$1,030 were not infrequent. These amounts represent small fortunes for Russian workmen, and that often explains the willingness to capitalize the pension.

The lump sums paid for partial permanent disability represent very small amounts, so that in a great many cases the economic use of such payments may be questioned. While the average payment represented \$124.46, nearly two-thirds (63.9 per cent) amounted to \$103 or less, and about two-fifths (40.2 per cent) to \$51.50 or less.

NUMBER, AMOUNT, AND AVERAGE OF PENSIONS PAID, BY RESULT OF INJURY AND CLASSIFIED AMOUNTS OF PENSION, 1904 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskia Svedenia o Resultatakh Primeneniia Zakona 2 iunia 1903 goda. Svod otchetov fabrichnykh inspektorov za 1908 god.]

Classified annual pension.	Number of cases.	Per cent.	Total amount of pensions.	Average amount of pension.
Fatal cases:				
\$5.15 and under	1	0.2	\$3.72	\$3.72
Over \$5.15 to \$25.75	55	11.4	1,026.11	18.66
Over \$25.75 to \$51.50	128	26.6	5,017.20	39.20
Over \$51.50 to \$77.25	101	21.0	6,269.80	62.08
Over \$77.25 to \$103	72	15.0	6,427.50	89.27
Over \$103 to \$154.50	71	14.8	8,851.98	124.68
Over \$154.50 to \$257.50	42	8.7	8,016.36	190.87
Over \$257.50 to \$515	11	2.3	3,457.56	314.32
Total	481	100.0	39,070.23	81.23
Permanent disability cases:				
Over \$25.75 to \$51.50	13	10.4	587.18	45.17
Over \$51.50 to \$77.25	30	24.0	1,938.01	64.60
Over \$77.25 to \$103	28	22.4	2,556.83	91.32
Over \$103 to \$154.50	25	20.0	2,963.18	118.53
Over \$154.50 to \$257.50	17	13.6	3,362.99	197.82
Over \$257.50 to \$515	12	9.6	3,885.00	323.75
Total	125	100.0	15,293.19	122.35
Partial permanent disability cases:				
\$5.15 and under	508	12.7	1,753.40	3.45
Over \$5.15 to \$25.75	1,863	46.8	26,503.80	14.23
Over \$25.75 to \$51.50	1,005	25.2	36,538.40	36.36
Over \$51.50 to \$77.25	337	8.5	20,881.45	61.96
Over \$77.25 to \$103	142	3.6	12,709.58	89.50
Over \$103 to \$154.50	93	2.3	11,742.92	126.27
Over \$154.50 to \$257.50	32	.8	5,985.06	187.03
Over \$257.50 to \$515	3	.1	957.90	319.30
Total	3,983	100.0	117,072.51	29.39
Total cases:				
\$5.15 and under	509	11.1	1,757.12	3.45
Over \$5.15 to \$25.75	1,918	41.8	27,529.91	14.35
Over \$25.75 to \$51.50	1,146	25.0	42,142.78	36.77
Over \$51.50 to \$77.25	468	10.2	29,089.27	62.16
Over \$77.25 to \$103	242	5.3	21,693.91	89.64
Over \$103 to \$154.50	189	4.1	23,558.07	124.65
Over \$154.50 to \$257.50	91	2.0	17,364.41	190.82
Over \$257.50 to \$515	26	.5	8,300.46	319.25
Total	4,589	100.0	171,435.93	37.36

NUMBER, AMOUNT, AND AVERAGE OF LUMP-SUM BENEFITS PAID, BY RESULTS OF INJURY AND CLASSIFIED AMOUNTS OF PAYMENTS, 1904 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskia Svedenia o Resultatakh Primeneniia Zakona 2 iunია 1903 goda. Svod otchetov fabrichnykh inspektorov za 1908 god.]

Classified lump-sum payments.	Number of cases.	Per cent.	Total amount paid.	Average amount paid.
Fatal cases:				
Over \$5.15 to \$25.75.....	2	0.4	\$25.33	\$12.67
Over \$25.75 to \$51.50.....				
Over \$51.50 to \$103.....	15	3.1	1,162.05	77.47
Over \$103 to \$154.50.....	37	7.8	4,998.05	135.08
Over \$154.50 to \$257.50.....	109	22.8	22,770.19	208.90
Over \$257.50 to \$515.....	163	34.2	61,221.93	375.59
Over \$515 to \$1,030.....	110	23.1	76,368.37	694.26
Over \$1,030.....	41	8.6	61,617.00	1,502.85
Total.....	477	100.0	228,162.92	478.33
Total permanent disability:				
Over \$154.50 to \$257.50.....	2	2.9	434.14	217.07
Over \$257.50 to \$515.....	3	4.4	1,436.49	478.83
Over \$515 to \$1,030.....	45	66.2	33,333.00	740.73
Over \$1,030.....	18	26.5	27,361.61	1,520.09
Total.....	68	100.0	62,565.24	920.08
Partial permanent disability:				
\$5.15 and under.....	97	.3	573.52	5.91
Over \$5.15 to \$25.75.....	6,324	18.7	105,604.72	16.70
Over \$25.75 to \$51.50.....	7,187	21.2	274,980.38	38.26
Over \$51.50 to \$103.....	8,017	23.7	599,082.11	74.73
Over \$103 to \$154.50.....	4,013	11.9	508,588.38	126.74
Over \$154.50 to \$257.50.....	3,944	11.6	783,831.82	198.74
Over \$257.50 to \$515.....	3,225	9.5	1,143,882.95	354.69
Over \$515 to \$1,030.....	946	2.8	641,300.30	677.91
Over \$1,030.....	117	.3	157,646.92	1,347.41
Total.....	33,870	100.0	4,215,491.10	124.46
All cases:				
\$5.15 and under.....	97	.3	573.52	5.91
Over \$5.15 to \$25.75.....	6,326	18.4	105,630.04	16.70
Over \$25.75 to \$51.50.....	7,187	20.9	274,980.38	38.26
Over \$51.50 to \$103.....	8,032	23.3	600,244.15	74.73
Over \$103 to \$154.50.....	4,050	11.8	513,586.44	126.81
Over \$154.50 to \$257.50.....	4,055	11.8	807,036.16	199.02
Over \$257.50 to \$515.....	3,291	9.8	1,206,541.36	355.81
Over \$515 to \$1,030.....	1,101	3.2	751,001.67	682.11
Over \$1,030.....	176	.5	246,625.54	1,401.28
Total.....	34,415	100.0	4,506,219.26	130.94

The expenses for temporary allowances given before death ensues or the degree of permanent disability is established are shown in the following table. The average is found to be quite small, only \$17.27 per case in 1906. The total cost in 1906 was \$119,689.95. It must be remembered that this total includes only the cases certified to by the factory inspectors and does not include any cases of purely temporary disability.

ALLOWANCES PAID FOR TEMPORARY DISABILITY BEFORE DEATH OR BEFORE PERMANENT DISABILITY WAS ESTABLISHED, 1904 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskia Svedenia o Resultatakh Primenenia Zakona 2 iunia 1903 goda.]

Result of injury.	1904.			1905.			1906.		
	Cases.	Amount of temporary allowances.		Cases.	Amount of temporary allowances.		Cases.	Amount of temporary allowances.	
		Total.	Average per case.		Total.	Average per case.		Total.	Average per case.
Death.....	20	\$215.36	\$10.77	33	\$496.30	\$15.04	60	\$784.42	\$13.07
Total permanent disability.....	7	239.50	34.21	29	1,917.23	66.11	30	1,167.75	38.93
Partial permanent disability.....	1,606	24,295.93	15.13	4,626	79,980.89	17.29	6,841	117,737.78	17.21
Total.....	1,633	24,750.79	15.16	4,688	82,394.42	17.58	6,931	119,689.95	17.27

The data in regard to temporary disability were not included in the report because such cases seldom come up before the factory inspectors. In fact only 75 such cases were certified in 1904, 33 in 1905, and 30 in 1906 out of a total of forty to fifty thousand cases annually. The claims for compensation for temporary disability are evidently adjusted without reference to the factory inspector.

A proportion of cases which are referred to the factory inspectors are not certified by them, either because both sides fail to reach an agreement or because the factory inspectors refuse to approve the agreement as contrary to the provisions of the law. The number of cases of the latter class were very much smaller than of the first class. Only 113 cases occurred during three years where factory inspectors on their own initiative refused to certify the agreements, while in 4,808 cases no agreement was reached.

The most frequent cause of refusal to certify the agreement was the determination of degree of disability; on the other hand, disagreements between employer and employee were caused most frequently by the question as to the right of compensation, and next to this, by the question as to the amount of compensation.

NUMBER OF CASES LEADING TO DISAGREEMENT OR TO REFUSAL OF INSPECTORS TO CERTIFY, 1904 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Statisticheskia Svedenia o Resultatakh Primenenia Zakona 2 iunia 1903 goda.]

Year.	Total number of cases presented to inspectors.	Number of cases wherein the cause of disagreement was—				Total cases wherein no agreement was reached.	Number of cases wherein the cause of refusal was—			Total cases wherein certification was declined.
		Right of compensation.	Amount of compensation.	Form of compensation.	Other causes.		Degree of disability.	Annual earnings.	Other causes.	
1904.....	3,071	316	237	47	27	627	10	1	8	19
1905.....	8,406	783	633	55	71	1,542	30	12	13	55
1906.....	12,438	1,446	1,009	80	104	2,639	33	1	5	39
Total.....	23,915	2,545	1,879	182	202	4,808	73	14	26	113

APPROXIMATE COST OF THE COMPENSATION ACT TO INDUSTRY.

While the data quoted above as to the activity of factory inspectors in adjusting claims under the compensation act do not include the entire number of accidents, they nevertheless furnish valuable material for an approximate estimate as to the financial burden which the act places upon the entire industry. Taking the average amount of pension for fatal cases, and all cases of permanent disability, total as well as partial, the total amount of pensions paid for all accidents of these classes may be computed on the assumption that the average compensation in cases not certified by inspectors was equal to the average in cases so certified.

To eliminate annual fluctuations, averages for the 3-year period, 1904 to 1906, are taken.

NUMBER, AMOUNT, AND CAPITALIZED VALUE OF PENSIONS, BY RESULT OF INJURY, ANNUAL AVERAGES FOR 1904 TO 1906.

Result of injury.	Number of cases.	Average pension.	Total pensions.	Capitalized value.
Death.....	362	\$62.38	\$22,581.56	\$225,815.60
Total permanent disability.....	63	101.54	6,397.02	63,970.20
Partial permanent disability.....	8,092	14.45	116,929.40	1,169,294.00
Total.....	8,517	17.13	145,907.98	1,459,079.80

In addition to this the cost of accidents resulting in temporary disability must be considered. For this data are available in the statistical reports concerning accidents in industry. The annual average number of days of treatment for all cases of injury during the three years, 1904 to 1906, was 1,340,868 days, which presupposes the payment of an equal number of daily allowances, or wages for 670,434 days; taking the average number of working days per annum to be 260, according to the Russian compensation act, the total sum of allowances paid must be equal to 2,579 annual wages.

From this number and the average wages the cost of temporary disability may be estimated. The average annual wages in establishments subject to factory inspection in 1904 was \$110.17, in 1905 \$105.84, and in 1906 \$119.32; and the average for 1904 to 1906 is \$111.78. The total amount paid out annually in allowances for temporary disability may be computed at \$288,280.

The average amount of the payments made annually under the compensation act may thus be estimated at \$1,747,360, which does not include the cost of medical treatment.

The total amount paid out in wages in establishments subject to factory inspection is not available, but it may be computed since the average wages for about 75 per cent of all the wage-earners are given. The average wage being \$111.78, and the average number of wage-earners about 1,678,000, the total wage expense would amount to \$187,566,840.

The proportion of the cost of the compensation act to the total wage expense is therefore equal to about 1 per cent (0.93 per cent). To this must be added the cost of medical help. The total cost of medical aid in factories in 1907 has been determined at \$4,874,052; but what share of it should be charged to industrial accidents it is impossible to determine. In view of the low rate of wages and the fairly high remuneration of medical work, the cost of medical help may equal the amount of financial assistance in cases of temporary disability. This would mean an additional charge of about 0.15 per cent, and the total charge upon industry equals only 1.08 per cent of the wage expense.

That this estimate is not far from truth is evidenced by the data in regard to the activity of mutual accident insurance companies.

In 1905 the average premium amounted to 1.46 per cent of the wage expense, and in 1906 to 1.55 per cent. If for the previous years the premiums were very much lower, it was not only because it was before the law of 1903 went into effect, but also because among the mutual associations existing before 1905, those of textile districts, with a comparatively low accident rate, were most numerous.

The average premium is higher than the computed cost. It may partly be accounted for by the added cost of administration; partly, perhaps, by the fact that the assumed cost of medical treatment in the computation was too low. With an average daily wage of ($\$111.78 \div 260$) 43 cents, which gives a daily sick allowance of 21.5 cents, the cost of medical and especially surgical treatment in accidents may be much higher than that of the sick benefits, as assumed.

It may safely be said therefore that on the whole the system of compensation as established by the law of 1903 has added less than $1\frac{1}{2}$ per cent to the wage expense of Russian manufacturing industry, and its cost to the employers is equal to about $1\frac{3}{4}$ million dollars annually.

PRIVATE VOLUNTARY ACCIDENT INSURANCE.

COMMERCIAL COMPANIES.

Insurance against accidents was altogether unknown in Russia before 1888, when a Russian fire and life insurance company began to write such insurance. In the preceding year, 1887, the Ministry of Interior had approved the conditions under which such insurance might be written, and these became the standard rules for all other insurance companies. The main conditions imposed upon the insurance companies, in writing accident insurance for workmen, by the regulations of 1887 were as follows: The workman was insured for a definite sum against death, permanent, and temporary disability caused by accidental injury while at work.^(a) Excepted from

^a Litwinov: *Otvietstvennost predprimateliei*, p. 234. Press, A. A.: *Strakhovanie rabochikh*, p. 6.

insurance were: (1) All usual diseases and their results not caused by industrial accidents, ruptures, or other injuries caused by lifting excessive weights, etc.; (2) injuries caused by vis major, by calamities such as war, illegal acts or malicious intent of the insurer (that is, the employer)^(a) or of the injured employee, or injuries received in fights, quarrels, state of intoxication or insanity; and (3) injuries received outside of regular employment of the insured.

Thus the extent of application of the insurance system was nearly equal to that of the usual compensation act, though it did not prevent litigation. In case of death the total sum of insurance was to be paid to the widow and orphans; when the victim was single one-half of the sum of insurance to the parents.

Cases of permanent disability were divided into three degrees: The first degree of complete disability included the complete loss of sight, or of both arms or legs, or one arm and one leg, or complete incurable insanity, to be compensated by the full pension specified; the second degree included cases of permanent disability, with loss of one-half of earning power, such as loss of one extremity, entitling the injured to one-half of the full pension; and, third, lighter forms of injury, resulting in partial though permanent disability of lower degree, compensated by pensions of from 10 to 25 per cent of the full pension. For temporary disability the insurance company was to pay a daily allowance, agreed upon in the policy, during disability not exceeding 200 days. The pensions paid for permanent disability could be changed to a lump sum upon agreement between the insurance company and the insured (the employer).

Rossiia was a general insurance company which introduced accident insurance in Russia in 1888. Later in the same year a special accident insurance company was organized and another one in 1892; two general insurance companies began to write accident policies in 1896 and four in 1898. Altogether nine insurance companies wrote accident policies in 1903, when the new accident compensation law was passed. The number of workmen insured in these companies was as follows:

NUMBER OF PERSONS INSURED AGAINST ACCIDENT IN PRIVATE INSURANCE COMPANIES, 1888 TO 1903.

[Source: Press, A. A.: Strakhovanie rabochikh v Rossii, St. Petersburg, 1900. Prokopovich, S. N.: K. rabochemu vaprosu v Rossii, St. Petersburg, 1905.]

Year.	Number insured.	Year.	Number insured.
1888.....	40, 196	1896.....	274, 066
1889.....	70, 807	1897.....	395, 148
1890.....	93, 432	1898.....	684, 766
1891.....	106, 227	1899.....	^b 821, 525
1892.....	117, 850	1900.....	936, 309
1893.....	133, 952	1901.....	911, 413
1894.....	152, 937	1902.....	890, 534
1895.....	205, 274	1903.....	738, 287

^a In this case the injured workman would naturally preserve the right of action against the employer.

^b Not including one company not reporting.

The preceding table shows that this form of meeting the liability of employers was gaining but slowly up to 1894, and began to grow rapidly about 1895. The increasing popularity of private insurance was partly due to rumors of coming new legislation for strengthening employers' liability and partly to a gradual change in the policy of the insurance companies. In the earlier years they limited their liability to the amounts of insurance specified. While this was satisfactory to the injured in the majority of cases, he frequently felt that in cases of evident fault of the employer he could recover through the regular courts, and thus the limited insurance did not altogether relieve the employer of the danger of heavy damages. Gradually the insurance companies were forced to accept the civil responsibility for the employers and the obligation to meet the cost of litigation (known in this country as employers' liability insurance). This increased the cost of insurance, which in 1890 was only 1.87 rubles (96 cents) per insured employee; in 1898, 2.83 rubles (\$1.46); and in 1903, 3.55 rubles (\$1.83); nevertheless under these new conditions the number of workmen insured increased from 205,274 in 1895 to 395,148 in 1897, to 684,766 in 1898, and 936,309 in 1900. In 1903 the number had declined to 738,287.

The decline in the total number of insured during the years 1901 to 1903 is partly explained by growth of mutual insurance and partly by the increase in rates by the companies in view of the expected promulgation of the compensation law.

According to the special report here quoted, 600,000 out of the 685,000 insured in 1898, or about 88 per cent of the workmen insured, were employed in manufacturing and mining industries; and as the total number of workmen employed in these industries at that time numbered 2,120,000, it follows that 28.2 per cent of all the workmen were insured. The percentage was still higher in some branches; thus in the iron and steel industry it was 30.9 per cent, in the flour-milling industry 35.6 per cent, in the textile industry 36.3 per cent, in the woodworking industry 48.3 per cent, in the chemical industry 53.6 per cent, and in the oil industry 62.0 per cent. In most hazardous industries, then, the percentage of insured was from one-third to two-thirds of all the employees. The situation was less favorable in the mining industry, where only 10.5 per cent of the workmen were insured. From 1898 to 1900 the number of persons insured increased 36.7 per cent, so that by the end of the nineteenth century about two-fifths of all the employees enjoyed the protection of accident insurance.

The average number of workmen per establishment subject to factory inspection in Russia in 1898 was 56; for the establishments carrying the insurance the average was 148, almost three times as

great. This indicates that the greatest share of insurance was carried by large establishments.

The statistical information concerning private insurance is not complete. In fact, little is available besides the special report prepared by the Ministry of Finance for the Paris Exposition of 1900, which brings the data down to 1898 only.^(a)

Two forms of accident insurance are recognized in this report—the collective form and the individual form. Under the latter form individuals privately contract for accident insurance and pay the premium, while under collective insurance the employer contracts for insurance of his employees. The individual form of accident insurance is therefore of little importance from the point of view of workmen's insurance, and is quoted here only because certain data are stated for both forms of insurance combined.

The number of persons insured collectively against accidents in private insurance companies increased from 40,196 in 1888 to 684,766 in 1898, the amount of insurance against death outstanding at the end of the respective years being \$14,498,051 in 1888 and \$235,358,916 in 1898. During this same period the amount of insurance against permanent disability increased from \$15,315,407 to \$319,916,038. While this average amount per person of the insurance against death has decreased from \$361 in 1888 to \$344 in 1898, the average amount of insurance against permanent disability has increased during this period from \$381 to \$467. The premiums received increased from \$27,997 to \$998,147.

The amount of insurance carried by the employer for each workman was not high. It depended upon the wages of the latter, and the usual policy called for 800 or 1,000 times the daily wage of the workman in case of death and 1,000 to 1,500 times the daily wage in case of total permanent disability. This means three to four times the annual earnings in case of death, and 4 to 6 times the annual earnings in cases of total permanent disability. As was shown above, in case of death of the injured person, the actual sum of insurance was paid; while in cases of permanent disability the whole sum (or a part of it, depending upon the nature of the disability) served as a basis for a calculation of a life pension or annuity, the amount of such annuity depending upon the age of the injured workman.

The average sum of insurance against death varied from \$336 to \$381, and for total permanent disability from about \$381 to \$467. These rates of compensation do not appear to be high, but this may be partly explained by the general level of wages in Russia. For the last decade of the nineteenth century the average wages of an industrial worker (men, women, and children) is stated in an official

^a A. A. Press: Strakhovanie robochikh v Rossii, 1900.

report^(a) to be equal to 187.60 rubles (\$96.61); according to the factory inspectors' reports for 1900 to 1904 the annual earnings were as follows:

AVERAGE ANNUAL EARNINGS OF WORKMEN IN RUSSIA, 1900 TO 1904.

Year.	Average annual earnings.
1900.....	\$99.95
1901.....	103.64
1902.....	104.27
1903.....	111.77
1904.....	109.03
Average.....	105.73

An average earning power of about \$105 per annum gives an average daily wage of approximately 35 cents; the average compensation for death contracted for by the employers amounted to about \$350, or 1,000 times the daily wages, and the average compensation for permanent disability was about \$450 or about 1,200 to 1,300 times the daily wage. The pension for permanent disability varied from about 5 to 10 per cent of this sum, depending upon the age of the injured, and so may be estimated at from \$22 to \$45 a year. Small as these compensations were, the system of insurance on a whole was more liberal to the workman than the then existing legislation. An official report upon the activity of the insurance companies in this line stated that "industrial conditions have advanced ahead of existing legislation which does not any more meet the demand of actual life."

The number of persons insured individually against accidents in private insurance companies increased from 1,148 in 1888 to 15,171 in 1898, the amount of the insurance against death at the end of the respective years being \$5,198,956 in 1888 and \$41,652,216 in 1898, and the insurance against permanent disability \$6,220,654 in 1888 and \$50,770,406 in 1898. The average amount of the death insurance per person decreased during this period from \$4,529 to \$2,746 and that of the permanent disability insurance from \$5,419 to \$3,347. The amount of premiums received increased during the ten years from \$24,593 to \$181,598, the average premium per person being \$21.42 in 1888 and \$11.97 in 1898. These figures show that the individual accident insurance included few persons of the working class.

The total amount of premium received and the benefits paid by the insurance companies as well as the other expenses of the companies in connection with accident insurance and the surplus remaining, are stated for both forms of insurance combined. The amount of benefits paid under the two forms of insurance has increased from \$17,947 in 1888 to \$585,548 in 1898. The expenses of the insurance companies

^a Strakhovanie rabochikh v Rossii, 1909. A. A. Press.

other than for benefits, amounted to \$275,204 in 1898. The reserve surplus and profits for 1898 was \$318,994, or 46 cents per capita.

The business of accident insurance evidently was fairly remunerative, and the total profits were rapidly growing, amounting for the entire decade to nearly \$900,000, notwithstanding the very high expenses for commission to obtain business (over \$560,000) and for administration (nearly \$500,000). Thus for the eleven years for which the statistical data are available \$3,859,871 was received as premiums for insurance, while only \$1,861,289 or less than one-half was used for actual compensation of the injured employees.

While with the increase of the volume of business the average per capita charge for administration had declined materially during the ten years, 1889 to 1898, the cost of commission for obtaining new business has shown a slight increase. There was a decline in the total per capita expense, from 90 cents in 1889 to 39 cents in 1898, and apparently the greater part of it appears in the increased per capita benefits paid to the injured employee. The per capita amount of compensation increased from 44 cents in 1889 to 84 cents in 1898, while the profits of the insurance companies which were high in the earlier years declined considerably. Under the influence of competition from newly organized accident insurance companies, the proportion of the premiums paid to the insured in benefits increased from 21.6 per cent in 1889 to 49.6 per cent in 1898. In 1898 the expenses other than for benefits were 23.4 per cent of the premiums and the surplus 27 per cent.

The average premiums increased with the increase of the sum of insurance and also with the assumption by the companies of the civil liability of the employers from \$0.70 per workman in 1888 to \$1.46 per workman in 1898. Assuming the average wages for these 10 years to have been about \$105, the average rate of insurance increased from seven-tenths of 1 per cent to about 1.4 per cent of the wage expense; it was considerably higher in some industries, as for instance in mining, which perhaps explains the small number of miners insured. This excessive cost of private insurance was mentioned as an argument for compulsory state insurance during the deliberations of the Congress of Commerce and Industry in 1896. It was also claimed that in actual practice private insurance did not prove as favorable to the employees as in theory, the insurance companies often forcing the injured workman to accept a very low compensation.

New regulations for insurance companies, issued after the act of June 2 (15), 1903, went into effect, provide substantially that the insurance company shall assume all the duties and responsibilities under the law of June 2(15), 1903, in consideration of the payment of a premium, agreed upon between the insurance company and the employer, in terms of a definite percentage of the latter's wage expense. It was the avowed purpose of the law to stimulate the insurance of

the employers' obligations under the law, although such insurance was not made obligatory. Rules for the regulation of such insurance were issued by the minister of interior on December 22, 1903 (January 4, 1904).

The insurance company may decline to accept any insurance without stating its reasons for so doing. The employer must furnish the insurance company with an exact account of its wage expense, including the expense for board and lodgings of the employees and other forms of remuneration for work. Such a contract relieves the employer of all responsibilities according to the law, the insurance society assuming all such responsibilities; it receives information of all accidents, and must meet its obligations without delay; and it makes agreements with the injured or members of their families. Whenever the accident is due to the fault of the insured employer, as established by the courts, this does not relieve the insurance company of its responsibility to the injured employee; but the insurance company may recover the cost of the compensation and pensions from the employer. Such insurance may be organized with participation of the insuring party in the profits, and then 75 per cent of the profits must be redistributed among the insured employees according to the amount of annual premiums paid. This was a modification of the plan of collective insurance.

Another form of insurance is also recognized, known as "insurance of employers' liability." This is a combined form of insurance, as it covers both the liability under the new law of 1903, and under the general civil laws when the new law is not applicable. Under this form of insurance the obligations of the insurance company are toward the employer and not toward the injured employee, and the obligations of the employer toward the workmen are not transferred by law. The agreement as to the amount of compensation is made between the employer and employee, but in presence of a representative of the insurance company, and the amount of the compensation agreed upon is binding upon the insurance company only when approved by its representatives; otherwise the insurance company assumes obligations only up to the amount approved by its representatives. It is evident that under such contract the employer will rarely agree to anything not acceptable to the insurance company. If, therefore, an amicable settlement is found impossible, the insurance company assumes all obligations which may be imposed upon the employer by a court of law, provided, however, that the insurance company is not responsible if the accident was due to the criminal negligence of the employer, as established by the verdict of the court. The obligations of granting medical assistance are not assumed by the insurance company.

This is a form of insurance of the employer rather than of the employee, and it does not fulfill the requirements of the compensation act in regard to insurance of workmen. These conditions somewhat approach the form of insurance proposed by the St. Petersburg Mutual Insurance Society, which failed to receive the approval of the Government in 1898.

From the first day of the application of the new law serious difficulties arose between the employers and the insurance companies. The law clearly meant an important extension of the rights of the employees, which was equivalent to an increased burden upon industry. But there were no definite data by which the cost of this law to industry could be determined, for the available statistics of accidents in Russia were for only one year and were incomplete. Insurance seemed the only way for the manufacturers to protect themselves from excessive losses; but in view of the increased amount of compensation as compared with that paid by the private insurance companies prior to 1903 the insurance companies were uncertain and the rates quoted to manufacturers for insurance were very high, being for some industries 10 or even 14 per cent of the wages. A concerted movement was started among employers to obtain from the Government some delay of the date of enforcement of the law; petitions to that effect from the mining operators and metallurgical establishments of the south, the iron and steel manufacturers of the Baltic Provinces and the north, and from the manufacturers' association of St. Petersburg. But all these petitions were declined by the authorities, and the law went into effect on June 1 (14), 1904.

Two courses were left open to the employers who objected to the excessive rates quoted by the private insurance companies: Either to take the risk upon themselves and carry no insurance, or to organize mutual insurance companies. In the beginning a majority of employers preferred the first course, while the larger establishments organized private insurance funds for themselves. The experience of some industries during the first year established the fact that the cost was far below the estimates of the private insurance companies.

As a result the amount of private accident insurance rapidly fell since 1903. Unfortunately it was impossible to obtain complete data in regard to the activity of all private accident insurance companies since the enactment of the law. But the tendency is sufficiently clearly demonstrated by the data in regard to the insurance company "Rossiia," which was the leading accident insurance company in Russia. In 1898 356,179 wage-workers out of a total of 684,766 insured, or 52 per cent, were insured in "Rossiia." In the year 1905 there were only 87,015 persons insured, being a decline of 75 per cent in 8 years. The number of persons insured under the collective form in this company for the 7 years 1900 to 1906 is shown, together with

the amount of insurance carried, in the following table. The decrease is seen to have been over 80 per cent. The decline began as early as 1901, when the probability of some law granting compensation to injured workmen became strong, and because of the growth of mutual insurance. From 1902 to 1903, when the law was passed, the decline was 22.2 per cent, or nearly one-fourth. In 1904, when the law went into effect, the decline was almost one-half.

NUMBER OF PERSONS INSURED AND TOTAL AND AVERAGE AMOUNT OF INSURANCE AGAINST ACCIDENTS UNDER THE COLLECTIVE ACCIDENT INSURANCE OF THE ROSSIA COMPANY, 1900 TO 1906.

[Source: Assuranz Compass, 1908, p. 564.]

Year.	Number insured.	Amount of insurance against—					
		Death.		Permanent disability.		Temporary disability (per day).	
		Total.	Average.	Total.	Average.	Total.	Average.
1900.....	454,612	\$158,637,474	\$349	\$229,136,323	\$504	\$76,804	\$0.17
1901.....	402,144	138,236,612	344	201,568,836	501	61,615	.15
1902.....	359,937	127,716,166	354	187,778,597	522	57,438	.16
1903.....	279,919	96,578,910	345	143,114,424	511	39,523	.14
1904.....	137,351	117,137,543	853	160,953,297	1,172	22,905	.17
1905.....	87,015	63,975,809	735	90,629,701	1,042	11,544	.14
1906.....	88,766	60,972,914	687	86,529,662	975	11,161	.13

EMPLOYERS' MUTUAL ACCIDENT INSURANCE ASSOCIATIONS.

A movement toward mutual accident insurance appeared among the more progressive manufacturers in the middle of the nineties, simultaneously with the growth of private insurance. The Riga plan was the first outgrowth of this movement.

The authorization by the Ministry of Finance of the by-laws of the "Riga Society for Mutual Insurance of Manufacturers and Artisans against Accidents to their Workmen and Employees" in January, 1898, marked a definite step toward progress. A plan of a mutual insurance company was also elaborated by the manufacturers of Odessa which was more liberal than the Riga plan, but after the approval of the Riga plan by the Government the Odessa employers accepted its by-laws for their own organization.

The Riga society, though a purely voluntary association, considerably influenced further legislation, and therefore deserves special consideration. In addition, as an organization of the employers only, it extended its liability, i. e., the liability of employers, beyond the limits established by law and most favorable judicial decisions. The society undertook to conduct the defense, in all cases where a lawsuit had been instituted, and to meet the burden of a judgment. While this determines the responsibility of the society toward the employers, the by-laws separately stated the obligations toward the employee,

which were wider than those imposed by the law, or even by the private insurance companies. According to section 3, all injuries to workmen and employees were to be compensated unless caused by—

1. Unpreventable and unexpected external forces (*vis major*);
2. By acts of third parties, having no connection with the industrial establishment;
3. Such intentional acts of the fellow-servants as are not connected with the nature of the work;
4. Gross negligence of the injured.

The burden of proof that any of these conditions existed was placed upon the society. Roughly, then, the by-laws of the Riga company excluded injuries due to "*vis major*," to gross negligence, and to willful misconduct of employees or strangers. By this exclusion the protection granted extended not only to all cases where negligence of the employer or fellow-employee could be charged, but also to all cases of normal trade risk, to which the vast majority of industrial accidents is due; and not even contributory negligence of the injured deprived him of the right to compensation. As was shown above, this entire section went into the governmental plan with the one change of "*gross negligence*" for "*malicious intent*." The amounts of compensation being definite, there was no occasion for striking any bargains; but the workman not being a direct party to the contract, nothing could interfere with his effort to obtain a remedy under the old laws of civil responsibility. For permanent complete disability a life pension was given, amounting to the last year's earnings when not over 240 rubles (\$123.60); 66 $\frac{2}{3}$ per cent of the last year's earnings to single men or to women, and 75 per cent to married men, but in any case not less than 240 rubles (\$123.60) when the last year's earnings were over that amount. In case of death resulting from the injury within one year after the accident the widow or dependent widower was entitled to a pension amounting to 30 per cent of the last year's earnings, to be paid until death or remarriage; to each child until 15 years of age, 15 per cent if one parent survives, and 20 per cent if neither survives, and to the dependent parents 15 per cent each; the total amount of the pensions not to exceed 60 per cent of the annual earnings, and the shares of all the participants to be reduced accordingly. Temporary disability lasting more than 5 days entitled the injured to an allowance equal to one-half of the daily earnings, or more, in the discretion of the society.

The compensation system of the Riga society was more liberal than that of the law of 1903, because it granted a pension of 100 per cent in cases of complete permanent disability where the annual earnings were less than 240 rubles (\$123.60) and a minimum pension of 240 rubles (\$123.60) where the earnings were larger than 240 rubles (\$123.60), while the law of 1903 allows only 66 $\frac{2}{3}$ per cent of the earn-

ings. This may easily be explained, however, by the fact that in a law intended for the entire Russian Empire the minimum wage could not be as high as for the modern industrial center like Riga, where the wages are considerably higher than in the east. It was shown in a preceding section that the average wages for the entire country were considerably below 240 rubles (\$123.60). The Riga mutual insurance society began its operations in 1898 with a little over 3,000 employees insured. The Odessa society, organized under the same by-laws, began its operations in 1900, and another society was formed in the textile center Ivanovo Vosnesensk in 1901. The total number of employees insured in these mutual insurance companies in 1900 was 16,429; in 1901, 29,048; and in 1902, 76,046. The three mutual insurance societies named above existed in Russia before the adoption of the law of 1903. When the rules for collective insurance were promulgated by the minister of interior these three societies were provisionally permitted to continue their activity under these new rules. Similar mutual insurance companies rapidly sprang up in other industrial centers, some of them territorial associations of employers of various industries, others combining scattered establishments in one definite branch of industry.

The Kieff mutual accident association began its operations in September, 1904, the Moscow, St. Petersburg, Warsaw, Odessa, and Kieff sugar manufacturers' association in 1905, the Bielostok and Einseisk associations in 1906. Similar associations have been established since then in Vilna, Lodz, Tzaritzin, and other industrial centers.

As examples of industrial mutual companies, may be mentioned the Mutual Accident Insurance Society of Einseisk, organized in November, 1905, by the association of the gold mine operators of the Einseisk mining region, and the "Black Sea Shipowners' Mutual Association for Insurance Against Accidents to their Employees," organized in Odessa in August, 1905. Of these two, the former includes some establishments to which the law of 1903 is applicable, and others still subject to the general provisions of the civil law; and the society insures against liability under either, according to the general regulations of the minister of interior for such insurance. While the by-laws of each of these mutual societies must be specially approved by the Ministry of Interior, yet with very few minor exceptions they are modeled after one uniform plan. Participation in these societies is altogether optional, and may be canceled at will. The societies are permitted to reinsure their risks; they are also permitted to write accident insurance for individuals, and also insurance against liability for injuries sustained by persons who are not employees. The management of the society is intrusted to a board of directors, elected by the members; the latter have a vote if they insure at least 10 employees, and one additional vote for each 100 employees, but

not over 5 votes to each employer, or his proxy. The determination of the rate of the premium, which must vary with the nature of the industry, is left to the general meeting of the members. All establishments manufacturing explosives are excluded. Any other industry or establishment may be denied admission by the general meeting of the members. When the premiums collected are not sufficient to cover the liabilities incurred by the societies, the members may be assessed in proportion to the premiums they pay.

In Riga, where the first employers' mutual accident insurance society was organized in 1898, a new mutual society was formed in 1906 by proprietors of commercial, building, and construction enterprises, some rural industrial establishments, and similar firms which do not come under the action of the law of 1903, for insurance against civil liability; but the important feature of this society is that it offers to the employees a system of compensation "according to the regulations of the law of 1903." This is a direct voluntary extension of the law, to establishments specifically excepted from it, by the employers who prefer the obligations of the law of 1903 to the cost and results of litigation.

A somewhat similar condition is found in the Black Sea Shipowners' Mutual Association, above mentioned. As was pointed out previously, the law of 1903 does not apply to shipowners, which are subject, together with the railroads, to the special law of the civil code. This society obligates itself to pay compensation for all accidents, unless due to the malicious intent or gross negligence of the injured. Its scale of compensation is more liberal than that of the law of June 2, 1903. In case of complete permanent disability it pays 66 $\frac{2}{3}$ per cent of the actual annual earnings to a single person and 75 per cent to a married person, but in no case is the pension for total permanent disability to be less than 240 rubles (\$123.60). A proportionate part of this pension is given for partial disability. The scale of pensions in case of fatal accidents is the same as in the law of 1903. The allowance in case of sickness is 75 per cent of the daily earnings (and not 50 per cent, as in the compensation act), and may be increased to the full daily earnings, in consideration of special circumstances. The comparatively favorable conditions of this system of insurance are said to be due to the great demand for labor in Odessa.

The rapid growth of insurance of workmen in such mutual employers' associations is shown by the following table, from which it appears that the number of wage-workers insured has increased from 76,046 in 1902 to 311,689 in 1906, or more than fourfold in four years.

NUMBER OF SOCIETIES, PERSONS INSURED, WAGES OF INSURED, AND PREMIUMS PAID IN EMPLOYERS' MUTUAL ACCIDENT INSURANCE SOCIETIES, 1898 TO 1906.

[Source: Soviet Siezda Gornopromyshlennikov Iuga Rossii. Zakonoproekty po Stkakhovaniiu rabochikh. Kharkov, 1908.]

Year.	Number of active societies.	Number of persons insured.	Total wages of insured.	Annual premiums.		
				Amount.	Per person insured.	Per cent of wages.
1898.....	1	13,728	(a)	\$15,773	\$1.15	(a)
1899.....	1	17,000	(a)	33,046	1.94	(a)
1900.....	1	25,156	(a)	45,045	1.79	(a)
1901.....	2	27,831	\$3,861,698	42,786	1.54	1.11
1902.....	3	76,046	(a)	59,458	.78	(a)
1903.....	3	94,403	8,558,292	75,982	.80	.89
1904.....	4	158,304	15,701,683	180,494	1.14	1.15
1905.....	8	258,033	28,065,587	409,618	1.59	1.46
1906.....	10	311,689	35,313,308	547,001	1.75	1.55

a No data available.

The average amount of premiums per person insured is subject to fluctuations, which may be explained, however, by the differences in the compensation of the total number insured. In other words, the data for different years are scarcely comparable in any strict way, because each of the associations covered different industries, with different accident rates, different wage levels, etc. As the number of associations and the number of persons covered increases, the averages become more valuable; the increase in both averages shown (per person insured and per \$100 of wages) in 1904 is easily explained by the effect of the law, and for 1906 we find an average premium of a little over 1½ per cent of the wage expense, which corroborates the computation made on page 2137. For the separate mutual associations the data are more comparable from year to year. They are shown in the following table:

NUMBER OF PERSONS INSURED, WAGES OF INSURED, AND PREMIUMS PAID IN EMPLOYERS' MUTUAL ACCIDENT INSURANCE SOCIETIES, FOR SPECIFIED YEARS, BY SOCIETIES.

[Source: Soviet Siezda Gornopromyshlennikov Iuga Rossii. Zakonoproekty po Stkakhovaniiu rabochikh. Kharkov, 1908.]

Society.	Number of persons insured.	Total wages of insured.	Annual premiums.		
			Amount.	Per person insured.	Per cent of wages.
Riga Mutual Association:					
1898.....	13,728	(a)	\$15,773	\$1.15	(a)
1899.....	17,000	(a)	33,046	1.94	(a)
1900.....	17,210	(a)	33,193	1.93	(a)
1901.....	20,280	\$3,014,304	30,025	1.48	1.0
1902.....	22,848	3,285,029	35,017	1.53	1.1
1903.....	27,902	3,466,945	45,161	1.62	1.3
1904.....	57,223	6,907,178	121,468	2.12	1.8
1905.....	58,628	8,766,330	159,235	2.72	1.8
1906.....	63,681	8,661,662	182,341	2.86	2.1

a Not reported.

NUMBER OF PERSONS INSURED, WAGES OF INSURED, AND PREMIUMS PAID IN EMPLOYERS' MUTUAL ACCIDENT INSURANCE SOCIETIES, FOR SPECIFIED YEARS, BY SOCIETIES—Concluded.

Society.	Number of persons insured.	Total wages of insured.	Annual premiums.		
			Amount.	Per person insured.	Per cent of wages.
Odessa Mutual Association:					
1900.....	7,946	\$825,397	\$11,853	\$1.49	1.4
1901.....	7,551	847,393	12,761	1.69	1.5
1902.....	7,178	933,347	13,218	1.84	1.4
1903.....	6,930	937,038	12,817	1.85	1.4
1904.....	6,694	962,366	22,650	3.38	2.4
1905.....	7,191	1,045,624	25,618	3.56	2.5
1906.....	7,372	1,040,114	26,233	3.56	2.6
1907.....	7,556	1,069,592	24,935	3.30	2.3
Ivanovo Vosnesensk:					
1902.....	46,020	(a)	11,224	.24	(a)
1903.....	59,571	4,140,159	18,004	.30	.4
1904.....	74,307	7,082,474	29,318	.40	.4
1905.....	74,699	6,584,140	33,547	.45	.5
1906.....	84,717	8,801,231	38,152	.45	.4
Kief:					
1904 (b).....	20,080	749,644	7,048	.35	.9
1905.....	25,061	969,684	27,011	1.08	2.8
1906.....	33,272	1,535,154	36,213	1.09	2.4
Moscow (First Russian Insurance Association):					
1905.....	33,883	3,382,890	42,565	1.26	1.3
1906.....	48,356	5,368,763	76,681	1.59	1.4
St. Petersburg:					
1905.....	29,782	4,280,979	52,205	1.75	1.2
1906.....	34,470	5,283,600	69,310	2.01	1.3
Warsaw:					
1905.....	23,917	2,801,630	63,129	2.64	2.3
1906.....	28,633	3,631,780	91,919	3.21	2.5
Kief (sugar):					
1905.....	4,872	234,312	6,307	1.29	2.7
1906.....	7,246	326,809	9,013	1.24	2.8
1907.....	10,395	444,898	10,306	.99	2.3
Bielostok:					
1906 (c).....	3,942	467,203	10,766	2.73	2.3
1907 (d).....	4,066	523,034	15,817	3.89	3.0
Eniselsk:					
1906 (e).....		196,995	6,373	.....	3.2
1907 (f).....		303,263	9,611	.....	3.2

a Not reported.

b From September to December.

c December 1 1905, to December 31, 1906.

d January 1, 1907, to October 1, 1907.

e April 1 to October 1, 1906.

f October 1, 1906, to October 1, 1907.

PROPOSED REFORMS.

BILL OF 1905.

The step from voluntary to obligatory insurance was proposed in the draft of a law which was first published early in 1905. When the compensation act was passed the minister of finance was directed to prepare plans for a comprehensive scheme of workmen's insurance. In accordance with an imperial ukase the committee of ministers on December 24, 1904 (January 6, 1905), instructed the minister of finance to organize in conjunction with the Bureau of Industry of that ministry an inter-departmental commission for the preparation of a plan for insurance against accidents, sickness, and old age and invalidism. Representatives from all important chambers of commerce, mutual insurance companies, and other commercial bodies were invited into the commission. These resolutions of the

minister's committee were approved by the Emperor on January 17 (30), 1905; and the first draft of the complete law for all three branches of workmen's insurance was made public on March 29 (April 11), 1905.

This new draft did not change the essential provisions of the compensation act of 1903 or extend its scope, but simply applied the principle of obligatory mutual insurance and corrected a few of the defects of the existing system. It also excepted all cases during the first 6 weeks of sickness, which were to be transferred to the sick benefit associations to be organized in connection with sickness insurance. Each employer subject to the law of 1903 was to join either an industrial or a territorial association of employers; in exceptional cases of isolated establishments exceptions might be granted, and in such cases the old rules of 1903 remained in force unchanged.

DRAFT OF 1906.

The character and extent of the Compensation Law of 1903 was not affected by the plan of 1905. But within the last three or four years the need of introducing radical changes in the compensation law was widely discussed. In April, 1906, an interdepartmental conference, increased by invited representatives of commercial organizations and economic science, with the minister of commerce and industry, elaborated a new draft of an accident insurance law. This draft of 1906 represented in the main a combination of the law of 1903 and the plan for the organization of the territorial insurance associations of 1905. But there were important modifications. The exception of accidents due to gross negligence from the application of the law was abolished, only accidents due to the malicious intent of the injured being excepted. Other changes suggested are: The increase of the compensation for temporary disability from one-half the daily earnings to two-thirds; but with it a transfer of the care of all cases during the first six weeks from the accident insurance associations to the sickness insurance societies, the organization of which was contemplated; the increase of the number of annual working days to be used in computing annual earnings from 260, as in the law of 1903, to 280.

BILL OF THE CONSTITUTIONAL DEMOCRATIC PARTY.

In the first Duma, which was in session during the summer of 1906, many labor bills were introduced. The bill referring to workmen's accident insurance was based upon somewhat broader principles than the draft of the Ministry of Commerce and Industry of 1906. Proceeding from the existing law of 1903, the plan embodied the following general principles: The extension of the law to all employees

in industry, transportation, agriculture, and building; an increase of the pensions to the surviving children from one-sixth of the wages, as in the law of 1903, to one-fifth, and when orphans to one-fourth, the total limit of pensions remaining the same, namely, two-thirds of the wages; the raising of the age limit of children entitled to compensation from 15 to 17 years; the establishment of arbitration courts with representatives of capital and labor; and a system of obligatory insurance, with the privilege of choice between insurance in a mutual employers' association, a central government insurance office, or a private authorized insurance company.

DRAFT OF 1907.

The governmental consideration of an accident insurance system continued in December, 1906, and February, 1907. Another official draft was published in February, 1907. The draft of 1907 did not accept the suggestions as to the increase of the allowance for temporary disability from one-half to two-thirds the daily wages, nor as to the increase of the age limit of the children from 15 to 17 years; but the number of annual working days was increased from 260 to 280 days, the qualification of gross negligence was eliminated, and perhaps the most important change was the inclusion of railroads, steamship, and street railway companies; the draft is also more comprehensive than the law of 1903 as to the size of the manufacturing or mining establishments covered, including all establishments using mechanical or animal power or, when not using such power, employing not less than 10 wage-earners.

In the matter of organization of obligatory insurance, the draft of 1907 adheres to the Austrian models embodied in the draft of 1905; it requires the establishment of territorial employers' organizations and provides for industrial employers' organizations in exceptional cases by special permission of the central authorities.

BILL OF 1908.

After more than three years of deliberation a draft of the bill was agreed upon by the Government and introduced into the Duma on June 25 (July 8), 1908, together with many other labor bills.

The bill of June 25, 1908, preserves the Austrian form of territorial mutual insurance associations; but the organization of industrial insurance associations in exceptional cases may be permitted by the central insurance council to be established in connection with the whole insurance system. Government establishments are excepted from obligation of insurance, also establishments owned by the "Zemstvos" (provincial organs of self-government) and by municipalities. Isolated establishments may also be relieved from the

obligation by the insurance council. In the financial arrangements the Austrian system is also followed, and the capitalized value of the claims annually arising must be met by assessments for that year. The insurance associations must therefore establish a reserve and a surplus fund. The reserve contains the capitalized value of the obligations, and the surplus formed from the profits, etc., is to be used to meet unexpected losses. The funds are to be invested in government bonds or other securities guaranteed by the State, such as municipal land bank bonds and similar securities on a list authorized by the Government, and must be deposited with the state bank or sub-treasuries. By special authorization of the insurance council they may also be invested in real estate, in construction of hospitals and invalid homes, or in loans to members for construction of cheap dwellings, schools, hospitals, or similar institutions for the benefit of the employees.

The insurance associations are to be self-governing institutions under the supervision of the central workmen's insurance council. The constitution is to be prepared by representatives of industrial establishments. The constitution may be revised by the insurance council and must be approved by the minister of commerce and industry before it goes into effect. In case of failure of the association to prepare the draft of such constitution, the council may prepare one and present it to the minister for approval. The administration of the affairs of each association must be lodged in the board of directors and the general meetings of the members or their delegates, also an auditing committee and other select committees.

The general meeting must prepare the scale of contributions of individual members, with consideration of comparative hazard, and present it to the insurance council for approval of the minister of commerce and industry. In case of failure to prepare such a scale, or if the scale presented is not approved, the council may enforce one established according to its judgment. The contribution levied by the mutual associations must be paid promptly, and the association is empowered to levy fines for delay, and may collect the amounts due through the police. Such fines must be determined by the general meeting. The insurance associations, in the general meeting, may also establish rules and regulations for prevention of accidents, provided they do not conflict with existing legislation, and enforce them upon the members by means of fines up to 300 rubles (\$154.50). It may establish premiums for saving of lives and for invention of safety appliances and devices.

In so far as the organization of these mutual employers' insurance organizations are concerned, this bill does not differ in its principles from the drafts of 1905 or 1907. But the essential difference lies in

the absence of any provision for special insurance courts with representatives of employers and employees, which courts were promised in the draft of 1905 and which many students of labor insurance in Russia think essential to the proper working of the law.

Many more or less important modifications of the law of 1903 are introduced in this bill. The primary purpose is the establishment of a system of compulsory insurance. On the other hand, many rules of 1903, which the draft of 1907 showed a desire to amend, have been retained.

An important amendment of the law, suggested in the draft of 1908, is the exclusion of all reference to negligence, only self-inflicted injuries barring the victim or his dependents from the right to compensation. On the other hand, the application of the law is considerably restricted as compared with the draft of 1907, or, in some respects, even the law of 1903. The bill includes manufacturing, mining and metallurgical, steamship, railroad, and street railroad establishments, and thus seems to have covered the main branches of transportation service; but as not only government establishments but also privately owned public railroads are specifically excepted, this leaves only the small private industrial railroads, while the bill of 1907 included all railroad employees. Again, only those establishments are included which employ steam or other mechanical power and at least 20 employees permanently, or 30 employees when no mechanical power is used. This establishes a much narrower restriction than the draft of 1907, which had a minimum of 10 employees only, and no minimum of the number of employees at all where either mechanical or animal power is used.

The allowance for temporary disability is increased to two-thirds of the wages, as proposed in 1906, and against one-half granted by the law of 1903; but the payments of these allowances by the accident insurance associations is to begin after 13 weeks, as against 6 weeks according to the draft of 1905. Thus an increased burden is placed upon the proposed sick benefit funds, to which the employees contribute an equal amount with the employers, and only for the working days is such allowance granted. However, when the injured is not a member of any sick benefit fund he is entitled to the compensation from the day of the injury. The cost of medical treatment must be paid by the accident insurance fund when it is not furnished by the sick benefit fund.

The annual number of working days is reduced from 280, as suggested by the draft of 1907, to 260 days. There is no minimum pension for complete disability, but the annual earnings computed as above must not be lower for an adult than 260 times the standard wages of unskilled labor in the district. A full pension of 100 per cent is granted in case of complete helplessness, which is defined in the

text to include only cases of insanity, total blindness, and loss of both hands or both feet.

These are the important modifications proposed in the rules of compensation as established by the law of 1903, the bill following quite closely the law in regard to other compensation.

The substitution of the employers' association for the individual employers' responsibility has necessitated a complete change in the method of procedure. The essential point of the change is the complete elimination of the factory or mine inspector, who fulfills so important a function in the administration of the law of 1903. Notice of accident must be given to the police and to the insurance association, which may impose a fine for failure to give such notice. The association may send its agent to investigate the conditions of the accident, a function at present entrusted to the factory inspector. Both the claimant and the association may select their physicians, but the injured must allow himself to be examined by the association's physician, and on refusal to do so may be deprived of the entire compensation or part of it. Claims are to be made directly to the insurance association, which must render a decision within one month. Dissent from this decision must be lodged by the claimant within two months, after which the insurance association must reconsider the claim within one month. In case of further dissent with the decision, the case may be carried to court within 2 months. When the difference refers to the amount of compensation, the claimant may accept the amount offered without prejudicing his right to sue. And when a claim, rejected by the association, is allowed by the courts, or the amount granted is increased, all payments overdue must be paid up with interest computed at 6 per cent annually. The bill endeavors to discourage premature suing in courts by providing that in going to court before first making a claim directly to the insurance association, or before the expiration of the terms established by the bill, the claimant loses the right to receive court expenses and court fees.

Thus the procedure is simplified. Criticism has been passed upon this procedure because, while eliminating the factory or mine inspector, it substitutes no one to guard the interests of the workman. It seems to be assumed that in dealing with the insurance association the claimant has less need of such protection than when dealing with an individual employer, but the wage-workers are not represented in the insurance association. The plan for special insurance arbitration courts, included in the draft of 1905 to diminish tedious litigation, has been omitted in the draft of 1908.

STATISTICS OF ACCIDENTS.

ACCIDENTS IN MANUFACTURING ESTABLISHMENTS.

The statistics of industrial accidents in Russia are available for only a few years. Reports of industrial accidents were made obligatory on July 1, 1895. According to the rule promulgated by the Ministry of Finance, reports were to be made of all accidents, whether to workmen, other employees, or strange persons, provided the injury sustained caused disability to work for three days or more. The results of this order were so meager that for five years the Bureau of Industry, which collected these data, did not find them worthy of compilation and presentation. There was an improvement evidenced by the rapid increase in the number of accidents reported, and in 1901 the bureau felt justified in beginning the compilation and publication of the data.

The total number of accidents reported to the factory inspectors, as stated in the annual factory inspection reports, is shown in the following table to have increased from 27,135 in 1901 to 76,409 in 1908, or has nearly trebled. The increase came mainly in 1904, after the introduction of the compensation law, and as the increase since has been slight the data for the later years appear to be fairly reliable.

NUMBER OF FATAL AND NONFATAL ACCIDENTS IN MANUFACTURING ESTABLISHMENTS REPORTED TO FACTORY INSPECTORS, 1901 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel Promyshlennosti. Svod otchetov fabrichnykh inspektorov, 1900-1908.]

Year.	Accidents reported.			Year.	Accidents reported.		
	Fatal.	Nonfatal.	Total.		Fatal.	Nonfatal.	Total.
1901.....	(a)	(a)	27,135	1905.....	337	71,008	71,345
1902.....	(a)	(a)	29,349	1906.....	364	78,370	78,734
1903.....	(a)	(a)	35,138	1907.....	453	83,905	84,358
1904.....	395	69,302	69,697	1908.....	374	76,035	76,409

a Not separately reported.

In the preparation of the special statistical reports, a number of cases have been excluded, for many reasons, to make the data comparable with the statistics of persons employed. Since 1904 the accident reports are adjusted so as to cover only accidents as defined in the law. In the following table is given the number of accidents compared with the number of persons employed. The proportion appears to have increased from 14.6 per 1,000 employees in 1901 to 36.3 per 1,000 employees in 1906; even this proportion, however, is very small as compared with that in other industrial countries.

ESTABLISHMENTS SUBJECT TO FACTORY INSPECTION AND ESTABLISHMENTS REPORTING ACCIDENTS, WITH NUMBER OF WORKMEN EMPLOYED, AND NUMBER OF ACCIDENTS REPORTED, 1901 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdel Promyshlennosti. Statistika neschastnykh sluchaev s rabochimi v promyshlennykh zavedeniakh, podchinionnykh nadsoru fabrichnoi inspektzii, 1901-1906.]

Year.	Establishments subject to factory inspection.		Establishments reporting accidents.				Accidents reported.		
	Number.(a)	Workmen employed.	Number.	Per cent of total.	Workmen employed.		Number.	Per 1,000 workmen.	Per 1,000 workmen in establishments reporting accidents
					Number.	Per cent of all workmen subject to factory inspection.			
1901.....	17,538	1,690,906	2,919	16.6	(b)	(b)	24,744	14.6	.....
1902.....	16,085	1,649,972	2,856	17.8	1,025,508	60.2	25,847	15.7	25.2
1903.....	16,579	1,682,672	3,165	19.1	1,071,290	63.7	31,319	18.6	29.2
1904.....	14,066	1,651,957	3,612	25.7	1,172,426	71.0	47,205	28.6	40.3
1905.....	13,292	1,644,218	3,488	26.2	1,201,772	73.1	52,655	32.0	43.8
1906.....	12,903	1,658,985	3,593	27.8	1,234,766	78.0	60,142	36.3	48.5

^a The reduction in the number of establishments is explained by actual suspension of some, but mainly by exclusion of establishments from the jurisdiction of factory inspection. In both cases the smaller establishments were mainly affected, as indicated by the uniformity in the number of workmen employed.

^b Not reported.

Only 16.6 per cent of all establishments reported accidents in 1901, but by 1906 the proportion of establishments reporting increased to 27.8 per cent. The number of workmen in establishments reporting accidents in 1902 was 60.2 per cent of the total number of workmen subject to factory inspection, while in 1906 the proportion increased to 78 per cent. The increase both in the number of establishments reporting and of the workmen employed in these establishments was greatest in 1904, when the accident compensation law first went into effect, thus indicating direct dependence of accident statistics upon the accident compensation law.

But while the number of establishments reporting increased from 3,165 in 1903 to 3,593 in 1906, or 13.5 per cent, and that of workmen in the establishments reporting increased from 1,071,290 to 1,234,766, or 15.3 per cent, the number of accidents increased from 31,319 to 60,142, or nearly doubled. It would appear that the serious omissions in the statistics of accidents before 1904 were not due so much to establishments failing to report, altogether, as to reports from the larger establishments being incomplete.

For a proper application of the data presented in the tables which follow these facts must be considered: (1) While accidents to strangers were reported, they were excluded from the compilation; (2) accidents to office employees subject to the law of 1903 were reported, but excluded because the total number of employees not being known, their inclusion would be a disturbing factor; (3) in the reports of

1901 to 1903 accidents causing disability of not more than two days were excluded, and in the report of 1904 all accidents causing disability for not more than three days. This limits the comparative value of the reports for different years. In the vast majority of accidents the injuries are of slight duration; in 1904 out of 40,505 cases of temporary disability 12,441 cases, or 30.7 per cent, lasted four to seven days; the number of cases lasting three days, not reported in 1904 though reported in earlier years, must have been considerable.

(4) The data of industrial accidents collected by the factory inspectors refer only to those industries, establishments, and localities which are subject to factory inspection. Therefore the so-called "artisans' shops" are excluded—i. e., the smaller industrial establishments having less than 20 and in some cases less than 15 employees, and not employing mechanical power; also mines and metallurgical establishments, for which separate accident statistics and a separate system of inspection exist, all state factories and mills, and all industrial establishments under the jurisdiction of the Ministries of War, Navy, and Ways of Communication. While these data refer mainly to the manufacturing industry, another important limitation is found in the circumstance that factory inspection has as yet been introduced only in the 60 Provinces of European Russia and in some parts of Caucasus—namely, the Provinces of Baku, Tiflis, Kutais, Chernomorsk, and Batum. Accidents in the industrial establishments of the remaining Caucasian Provinces in Siberia and central Asia are also required to be reported by the act of 1903, but because the reports were insufficient and statistics of the number of workmen were lacking, these have not been included.

ACCIDENTS, BY INDUSTRY, SEX, AND AGE.—In the tables following are shown the number of workers employed in each industrial group, the number of accidents, and the number of accidents per 1,000 workers from 1904 to 1906. The data are given for all workers and separately for male and female workers; and also for adults (17 years and over), young persons (15 and under 17 years), and children (12 and under 15 years). The number of reported accidents per 1,000 workers has increased from 28.6 in 1904 to 36.3 in 1906. For the male workers the number of accidents per 1,000 in 1906 was 45.9 and for the female workers only 13.1. This is partly due to the fact that women are mainly employed in those industries where accidents are less frequent, namely, the manufacture of textiles and food products, these two industrial groups employing in 1906 82 per cent of all female wage-workers and only 52 per cent of the male workers. But a difference in the frequency of accidents to males and to females is noticed in each industrial group, indicating that the men are preferred for the more dangerous kinds of work, requiring close contact with power-generating engines and complicated machinery.

A comparison by the main age groups indicates that in 1906 the average number of accidents per 1,000 adults was 38.2, per 1,000 young persons 20.3, and per 1,000 children 15.3. No such concentration of the workers below 17 years of age exists as was found in the case of women, and the difference in the proportionate number of accidents seems to be mainly due to the nature of work intrusted to the younger employees.

The comparative frequency of accidents in various branches of industry is also shown in these tables. In the following statement the industries are arranged in order of the accident frequency during 1906:

ACCIDENT RATE PER 1,000 EMPLOYEES, IN MANUFACTURING ESTABLISHMENTS,
BY INDUSTRIES AND SEX, 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdel Promyshlennosti. Statistika neschastnykh sluchaev s rabochimi, 1906.]

Industry.	Accident rate per 1,000 employees.			Industry.	Accident rate per 1,000 employees.		
	Males.	Fe- males.	Total.		Males.	Fe- males.	Total.
Machinery.....	141.1	19.3	140.2	Sugar.....	21.6	10.9	20.2
Iron and steel.....	143.2	32.0	136.6	Chemical industry, not spec- ified.....	28.9	7.0	19.8
Mineral products, not speci- fied.....	69.5	22.4	64.6	Paper, parchment, and wall paper.....	27.3	4.8	19.5
Mineral-oil products.....	51.6	.....	51.4	Animal products (hides, leather, etc.).....	16.0	11.6	15.4
Chemicals.....	48.3	11.9	47.3	Food products, not specified.....	18.9	8.1	15.1
Explosives.....	50.2	16.5	42.4	Wool manufactures.....	16.4	8.5	13.5
Lumber sawing.....	38.2	49.6	38.5	Textiles, mixed.....	16.9	2.9	9.3
Metal work, not specified.....	40.9	23.8	38.5	Printing and engraving.....	7.1	3.8	6.8
Woodworking, not specified.....	32.3	42.4	35.0	Chinaware.....	6.1	2.9	5.1
Paper manufactures.....	41.7	7.0	26.3	Silk manufactures.....	7.8	2.1	4.4
Glass.....	27.6	15.5	25.8	Earthen and stone ware.....	3.6	3.6	3.6
Cotton manufactures.....	33.3	14.9	24.1				
Flax, hemp, and jute.....	22.8	20.0	21.4				
Flour milling.....	21.0	3.8	20.7				

Thus accidents are shown to be most frequent in the machinery and iron and steel industries, being, respectively, 140.2 and 136.6 per 1,000 employees. In the cotton-goods industry, which is the most important in Russia, the rate is 24.1 accidents per 1,000, and in the other branches of textile industry much lower. The differences in the frequency of accidents in the various branches of the textile industries may be explained by the larger size of the cotton mills where machinery and mechanical power are used extensively, while in the woolen and silk industries hand looms are still the rule. Thus in 1906 the average number of employees per establishment in the cotton industry was 614, in the woolen industry 139, and in the silk industry 129.

In the table following the accidents and accident rates are shown by industries and sex for the years 1904 to 1906.

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENTS PER 1,000 EMPLOYEES IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES AND SEX, 1904 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel promyshlennosti. Statistika nescastnykh sluchaev s rabochimi, 1904-1906.]

Industry and year.	Males.			Females.			Total.		
	Employees.	Accidents.		Employees.	Accidents.		Employees.	Accidents.	
		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.
Cotton manufactures:									
1904.....	213,613	4,567	21.4	201,720	2,041	10.1	415,333	6,608	15.9
1905.....	209,682	5,003	23.9	206,780	2,107	10.2	416,462	7,110	17.1
1906.....	220,175	7,322	33.3	220,017	3,284	14.9	440,192	10,606	24.1
Wool manufactures:									
1904.....	92,722	940	10.1	51,952	289	5.6	144,674	1,229	8.5
1905.....	88,281	1,004	11.4	50,876	312	6.1	139,157	1,316	9.5
1906.....	87,988	1,442	16.4	51,434	436	8.5	139,422	1,878	13.5
Silk manufactures:									
1904.....	12,590	57	4.5	16,913	18	1.1	29,503	75	2.5
1905.....	10,401	60	5.8	14,288	23	1.6	24,689	83	3.4
1906.....	9,623	75	7.8	14,035	30	2.1	23,658	105	4.4
Flax, hemp, and jute manufactures:									
1904.....	39,470	659	16.7	37,455	434	11.6	76,925	1,093	14.2
1905.....	45,104	887	19.7	42,341	521	12.3	87,445	1,408	16.1
1906.....	44,928	1,025	22.8	44,586	891	20.0	89,514	1,916	21.4
Textile industries, not specified:									
1904.....	12,605	123	9.8	15,152	35	2.3	27,757	158	5.7
1905.....	11,705	135	11.5	13,850	43	3.1	25,555	178	7.0
1906.....	11,785	199	16.9	14,044	41	2.9	25,829	240	9.3
Paper, parchment, and wall paper:									
1904.....	18,729	539	28.8	10,143	66	6.5	28,872	605	21.0
1905.....	18,419	589	32.0	9,587	47	4.9	28,006	636	22.7
1906.....	18,753	512	27.3	9,955	48	4.8	28,708	560	19.5
Printing and engraving:									
1904.....	31,217	219	7.0	3,048	21	6.9	34,265	240	7.0
1905.....	30,501	187	6.1	3,310	32	9.7	33,811	219	6.5
1906.....	30,978	221	7.1	3,453	13	3.8	34,431	234	6.8
Paper and printing, not specified:									
1904.....	8,548	354	41.4	6,546	42	6.4	15,094	396	26.2
1905.....	7,763	412	53.1	6,326	42	6.6	14,089	454	32.2
1906.....	8,994	375	41.7	7,180	50	7.0	16,174	425	26.3
Total paper and printing:									
1904.....	58,494	1,112	19.0	19,737	129	6.5	78,231	1,241	15.9
1905.....	56,683	1,188	21.0	19,223	121	6.3	75,906	1,309	17.2
1906.....	58,725	1,108	18.9	20,588	111	5.4	79,313	1,219	15.4
Lumber sawing:									
1904.....	50,480	1,779	35.2	1,425	23	16.1	51,905	1,802	34.7
1905.....	49,487	1,732	35.0	1,470	24	16.3	50,957	1,756	34.5
1906.....	49,732	1,901	38.2	1,392	69	49.6	51,124	1,970	38.5
Wood working, not specified:									
1904.....	19,948	574	28.8	6,682	208	31.1	26,630	782	29.4
1905.....	19,036	607	31.9	6,511	204	31.3	25,547	811	31.7
1906.....	19,178	619	32.3	7,245	307	42.4	26,423	926	35.0
Total wood manufactures:									
1904.....	70,428	2,353	33.4	8,107	231	28.5	78,535	2,584	32.9
1905.....	68,523	2,339	34.1	7,981	228	28.6	76,504	2,567	33.6
1906.....	68,910	2,520	36.6	8,637	376	43.5	77,547	2,896	37.4
Iron and steel:									
1904.....	76,357	9,317	122.0	3,989	132	33.1	80,346	9,449	117.6
1905.....	74,824	9,671	129.2	4,136	143	34.6	78,960	9,814	124.3
1906.....	71,402	10,227	143.2	4,526	145	32.0	75,928	10,372	136.6
Machinery:									
1904.....	140,549	15,321	109.0	1,132	12	10.6	141,681	15,333	108.2
1905.....	146,697	18,807	128.2	1,098	44	40.1	147,795	18,851	127.5
1906.....	134,109	18,923	141.1	983	19	19.3	135,092	18,942	140.2

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENTS PER 1,000 EMPLOYEES IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES AND SEX, 1904 TO 1906—Continued.

Industry and year.	Males.			Females.			Total.		
	Employees.	Accidents.		Employees.	Accidents.		Employees.	Accidents.	
		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.
Metal working, not specified:									
1904.....	39,359	1,364	34.7	5,795	95	16.4	45,154	1,459	32.3
1905.....	39,125	1,376	35.2	6,604	115	17.4	45,729	1,491	32.6
1906.....	39,683	1,625	40.9	6,765	161	23.8	46,448	1,786	38.5
Total metals, machinery and implements:									
1904.....	256,265	26,002	101.5	10,916	239	21.9	267,181	26,241	98.2
1905.....	260,646	29,854	114.5	11,838	302	25.5	272,484	30,156	110.7
1906.....	245,194	30,775	125.5	12,274	325	26.5	257,468	31,100	120.8
Glass manufactures:									
1904.....	36,817	924	25.1	6,945	78	11.2	43,762	1,002	22.9
1905.....	33,261	892	26.8	5,850	86	14.7	39,111	978	25.0
1906.....	33,311	921	27.6	5,928	92	15.5	39,239	1,013	25.8
China ware:									
1904.....	13,740	53	3.9	5,503	12	2.2	19,243	65	3.4
1905.....	13,561	47	3.5	5,336	12	2.2	18,897	59	3.1
1906.....	13,040	79	6.1	5,946	17	2.9	18,986	96	5.1
Earthenware:									
1904.....	55,946	145	2.6	6,605	17	2.6	62,551	162	2.6
1905.....	51,503	134	2.6	7,435	25	3.4	58,938	159	2.7
1906.....	44,114	158	3.6	6,408	23	3.6	50,522	181	3.6
Mineral products, not specified:									
1904.....	13,888	534	38.5	1,099	25	22.7	14,987	559	37.3
1905.....	12,945	574	44.3	1,125	23	20.4	14,070	597	42.4
1906.....	11,754	817	69.5	1,381	31	22.4	13,135	848	64.6
Total stone, clay, china, and glass ware:									
1904.....	120,391	1,656	13.8	20,152	132	6.6	140,543	1,788	12.7
1905.....	111,270	1,647	14.8	19,746	146	7.4	131,016	1,793	13.7
1906.....	102,219	1,975	19.3	19,663	163	8.3	121,882	2,138	17.5
Animal products (hides, leather, etc.):									
1904.....	41,280	456	11.0	5,228	24	4.6	46,508	480	10.3
1905.....	42,665	522	12.2	5,720	25	4.4	48,385	547	11.3
1906.....	40,172	641	16.0	5,442	63	11.6	45,614	704	15.4
Flour milling:									
1904.....	33,873	579	17.1	487	3	6.2	34,360	582	16.9
1905.....	33,169	585	17.6	437	.....	.....	33,606	585	17.4
1906.....	34,700	728	21.0	529	2	3.8	35,229	730	20.7
Sugar and sugar refining:									
1904.....	121,386	2,155	17.8	15,957	105	6.6	137,343	2,260	16.5
1905.....	126,839	2,259	17.8	17,661	154	8.7	144,500	2,413	16.7
1906.....	132,166	2,851	21.6	19,778	215	10.9	151,944	3,066	20.2
Food products, not specified:									
1904.....	76,269	1,133	14.9	36,280	187	5.2	112,549	1,320	11.7
1905.....	70,147	1,240	17.7	36,735	269	7.3	106,882	1,509	14.1
1906.....	70,948	1,324	18.9	37,971	308	8.1	108,919	1,632	15.1
Total food products:									
1904.....	231,528	3,867	16.7	52,724	295	5.6	284,252	4,162	14.6
1905.....	230,155	4,084	17.7	54,833	423	7.7	284,988	4,507	15.8
1906.....	236,914	4,903	20.7	58,278	525	9.0	295,192	5,428	18.4
Chemicals:									
1904.....	13,054	467	35.8	1,941	2	1.0	14,995	469	31.3
1905.....	10,483	519	49.5	259	7	27.0	10,742	526	49.0
1906.....	11,847	572	48.3	335	4	11.9	12,182	576	47.3
Mineral oils:									
1904.....	4,625	218	47.1	12	.....	.....	4,637	218	47.0
1905.....	4,241	160	37.7	36	.....	.....	4,277	160	37.4
1906.....	3,511	181	51.6	13	.....	.....	3,524	181	51.4
Explosives:									
1904.....	1,367	73	53.4	436	1	2.3	1,803	74	41.0
1905.....	1,444	94	65.1	520	4	7.7	1,964	98	49.9
1906.....	1,614	81	50.2	484	8	16.5	2,098	89	42.4

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENTS PER 1,000 EMPLOYEES IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES AND SEX, 1904 TO 1906—Concluded.

Industry and year.	Males.			Females.			Total.		
	Employees.	Accidents.		Employees.	Accidents.		Employees.	Accidents.	
		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.
Chemical industry, not specified:									
1904.....	23,001	602	26.2	15,808	106	6.7	38,809	708	18.2
1905.....	25,080	632	25.2	16,143	127	7.9	41,223	759	18.4
1906.....	24,353	703	28.9	17,355	121	7.0	41,708	824	19.8
Total chemical products:									
1904.....	42,047	1,360	32.3	18,197	109	6.0	60,244	1,469	24.4
1905.....	41,248	1,405	34.1	16,958	138	8.1	58,206	1,543	26.5
1906.....	41,325	1,537	37.2	18,187	133	7.3	59,512	1,670	28.1
All other industries:									
1904.....	2,169	77	35.5	102	.....	.....	2,271	77	33.9
1905.....	3,140	138	43.9	281	.....	.....	3,421	138	40.3
1906.....	3,382	242	71.6	460	.....	.....	3,842	242	63.0
All industries:									
1904.....	1,193,602	43,229	36.2	458,355	3,976	8.7	1,651,957	47,205	28.6
1905.....	1,179,503	48,266	40.9	464,715	4,389	9.4	1,644,218	52,665	32.0
1906.....	1,171,340	53,764	45.9	487,645	6,378	13.1	1,658,985	60,142	36.3

In the table following the accidents and accident rates for the years 1904 to 1906 are shown by industries and age groups.

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENTS PER 1,000 EMPLOYEES IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES AND AGE GROUPS, 1904 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdel Promyshlennosti. Statistika neschastnykh sluchaev s rabochimi, 1904-1906.]

Industry and year.	Adults.			Youths.			Children.		
	Employees.	Accidents.		Employees.	Accidents.		Employees.	Accidents.	
		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.		Number.	Per 1,000 employees.
Cotton manufactures:									
1904.....	368,341	5,940	16.1	40,467	556	13.7	6,525	112	17.2
1905.....	369,857	6,355	17.2	40,103	646	16.1	6,502	109	16.8
1906.....	394,098	9,525	24.2	39,945	930	23.3	6,149	151	24.6
Wool manufactures:									
1904.....	127,182	1,103	8.7	15,355	118	7.7	2,137	8	3.7
1905.....	123,225	1,183	9.6	14,299	120	8.4	1,633	13	8.0
1906.....	122,879	1,715	14.0	14,928	150	10.0	1,615	13	8.0
Silk manufactures:									
1904.....	25,352	64	2.5	3,275	10	3.1	876	1	1.1
1905.....	21,856	75	3.4	2,464	7	2.8	369	1	2.7
1906.....	21,001	95	4.5	2,131	10	4.7	526	.....	.....
Flax, hemp, and jute manufactures:									
1904.....	65,944	963	14.6	8,852	109	12.3	2,129	21	9.9
1905.....	75,142	1,259	16.8	9,444	123	13.0	2,859	26	9.1
1906.....	76,268	1,708	22.4	10,176	178	17.5	3,070	30	9.8
Textile industries, not specified:									
1904.....	23,567	146	6.2	3,823	11	2.9	367	1	2.7
1905.....	22,056	167	7.6	3,186	11	3.5	313	.....	.....
1906.....	22,337	227	10.2	3,182	13	4.1	310	.....	.....

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENTS PER 1,000 EMPLOYEES IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES AND AGE GROUPS, 1904 TO 1906—Continued.

Industry and year.	Adults.			Youths.			Children.		
	Em- ployees.	Accidents.		Em- ployees.	Accidents.		Em- ployees.	Accidents.	
		Num- ber.	Per 1,000 em- ployees.		Num- ber.	Per 1,000 em- ployees.		Num- ber.	Per 1,000 em- ployees.
Paper, parchment, and wall paper:									
1904.....	25,804	566	21.9	2,712	38	14.0	356	1	2.8
1905.....	24,801	587	23.7	2,799	47	16.8	406	2	4.9
1906.....	25,610	521	20.3	2,708	37	13.7	390	2	5.1
Printing and engraving:									
1904.....	26,650	177	6.6	6,136	51	8.3	1,479	12	8.1
1905.....	26,339	163	6.2	6,005	43	7.2	1,467	13	8.9
1906.....	27,130	185	6.8	5,806	35	6.0	1,495	14	9.4
Paper and printing, not specified:									
1904.....	11,714	376	32.1	2,629	12	4.6	751	8	10.7
1905.....	11,263	430	38.2	2,200	23	10.5	626	1	1.6
1906.....	13,020	404	31.0	2,579	21	8.1	575	.....	.....
Total paper and printing:									
1904.....	64,168	1,119	17.4	11,477	101	8.8	2,586	21	8.1
1905.....	62,403	1,180	18.9	11,004	113	10.3	2,499	16	6.4
1906.....	65,760	1,110	16.9	11,093	93	8.4	2,460	16	6.5
Lumber sawing:									
1904.....	49,534	1,745	35.2	2,269	52	22.9	102	5	49.0
1905.....	48,712	1,699	34.9	2,141	53	24.8	104	4	38.5
1906.....	48,610	1,884	38.8	2,350	78	33.2	164	8	48.8
Woodworking, not specified:									
1904.....	23,981	702	29.3	2,299	67	29.1	350	13	37.1
1905.....	22,842	762	35.4	2,379	41	17.2	326	8	24.5
1906.....	23,505	853	36.3	2,606	56	21.5	312	17	54.5
Total wood manufactures:									
1904.....	73,515	2,447	33.3	4,568	119	26.1	452	18	39.8
1905.....	71,554	2,461	34.4	4,520	94	20.8	430	12	27.9
1906.....	72,115	2,737	38.0	4,956	134	27.0	476	25	52.5
Iron and steel:									
1904.....	70,327	8,905	126.6	9,674	526	54.4	345	18	52.2
1905.....	71,746	9,301	129.6	6,752	550	74.1	462	13	28.1
1906.....	68,805	10,024	145.7	6,564	336	51.2	559	12	21.5
Machinery:									
1904.....	129,801	14,585	112.4	11,617	729	62.8	263	19	72.2
1905.....	135,554	17,979	132.6	12,033	860	71.5	208	12	57.7
1906.....	124,620	18,245	146.4	10,306	686	66.6	166	11	66.3
Metal working, not specified:									
1904.....	39,758	1,343	33.8	4,975	111	22.3	421	5	11.9
1905.....	39,309	1,400	35.6	5,991	91	15.2	429	.....	.....
1906.....	40,257	1,675	41.6	5,788	108	18.7	403	3	7.4
Total metals, machinery, and implements:									
1904.....	239,886	24,833	103.5	26,266	1,366	52.0	1,029	42	40.8
1905.....	246,609	28,680	116.3	24,776	1,451	58.6	1,099	25	22.7
1906.....	233,682	29,944	128.1	22,658	1,130	49.9	1,128	26	23.1
Glass manufactures:									
1904.....	30,668	807	26.3	7,577	115	15.2	5,517	80	14.5
1905.....	27,338	766	28.0	6,752	160	17.8	5,017	92	18.3
1906.....	27,823	802	28.8	6,572	132	20.1	4,844	79	16.3
China ware:									
1904.....	16,131	62	3.8	2,256	1	.4	856	2	2.3
1905.....	16,369	56	3.4	1,783	2	1.1	745	1	1.3
1906.....	16,077	92	5.7	2,189	4	1.8	720	.....	.....
Earthenware:									
1904.....	58,287	147	2.5	3,703	11	3.0	561	4	7.0
1905.....	55,403	143	2.6	3,064	16	5.2	471	.....	.....
1906.....	47,380	166	3.5	2,801	13	4.6	341	2	5.9
Mineral products, not specified:									
1904.....	14,088	538	38.2	863	21	24.3	36	.....	.....
1905.....	13,521	586	43.3	529	11	20.8	20	.....	.....
1906.....	12,450	832	66.8	605	15	22.6	20	1	50.0
Total stone, clay, china, and glass ware:									
1904.....	119,174	1,554	13.0	14,399	148	10.3	6,970	86	12.3
1905.....	112,631	1,551	13.8	12,132	149	12.3	6,253	93	14.9
1906.....	103,730	1,892	18.2	12,227	164	13.4	5,925	82	13.8

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENTS PER 1,000 EMPLOYEES IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES AND AGE GROUPS, 1904 TO 1906—Concluded.

Industry and year.	Adults.			Youths.			Children.		
	Em- ployees.	Accidents.		Em- ployees.	Accidents.		Em- ployees.	Accidents.	
		Num- ber.	Per 1,000 em- ployees.		Num- ber.	Per 1,000 em- ployees.		Num- ber.	Per 1,000 em- ployees.
Animal products (hides, leather, etc.):									
1904.....	42,881	463	10.8	3,366	16	4.8	261	1	3.8
1905.....	44,690	525	11.7	3,491	20	5.7	204	2	9.8
1906.....	42,256	675	16.0	3,133	29	9.3	225		
Flour milling:									
1904.....	32,679	549	16.8	1,648	31	18.8	33	2	60.6
1905.....	31,794	555	17.5	1,799	26	14.5	13	4	307.7
1906.....	33,243	690	21.0	1,977	29	14.7	9	2	222.2
Sugar and sugar refining:									
1904.....	128,838	2,177	16.9	8,424	81	9.6	81	2	24.7
1905.....	135,342	2,319	17.1	9,054	89	9.8	104	5	48.1
1906.....	141,661	2,942	20.8	10,159	115	11.3	124	9	72.6
Food products, not spec- ified:									
1904.....	101,054	1,260	12.5	9,703	59	6.1	1,792	1	.6
1905.....	96,227	1,439	15.0	9,668	64	6.6	987	6	6.1
1906.....	98,194	1,559	15.9	9,350	65	7.0	475	8	16.8
Total food products:									
1904.....	262,571	3,986	15.2	19,775	171	8.6	1,906	5	2.6
1905.....	263,363	4,313	16.4	20,521	179	8.7	1,104	15	13.6
1906.....	273,098	5,200	19.0	21,486	209	9.7	608	19	31.3
Chemicals:									
1904.....	13,568	467	34.4	1,162	2	1.7	265		
1905.....	10,588	517	48.8	152	9	59.2	2		
1906.....	12,016	570	47.4	163	6	36.8	3		
Mineral oils:									
1904.....	4,520	213	47.1	111	4	36.0	6	1	166.7
1905.....	4,175	152	36.4	100	3	80.0	2		
1906.....	3,408	176	51.6	111	5	45.0	5		
Explosives:									
1904.....	1,756	73	41.6	22			25	1	40.0
1905.....	1,919	97	50.5	20	1	50.0	25		
1906.....	2,049	89	45.4	49					
Chemical industry, not specified:									
1904.....	33,379	686	20.6	4,258	20	4.7	1,172	2	1.7
1905.....	34,915	723	20.7	4,975	28	5.6	1,335	8	6.0
1906.....	35,270	793	22.5	5,035	28	5.6	1,403	3	2.1
Total chemical products:									
1904.....	53,223	1,439	27.0	5,553	26	4.7	1,468	4	2.7
1905.....	51,597	1,489	28.9	5,247	46	8.8	1,362	8	5.9
1906.....	52,743	1,628	30.9	5,358	39	7.3	1,411	3	2.1
All other industries:									
1904.....	2,225	76	34.2	46				a 1	
1905.....	3,200	138	43.1	209			12		
1906.....	3,638	242	66.5	198			6		
All industries:									
1904.....	1,468,029	44,133	30.1	157,222	2,751	17.5	26,706	321	12.0
1905.....	1,468,133	49,376	33.6	151,396	2,959	19.5	24,639	320	13.0
1906.....	1,483,605	56,698	38.2	151,471	3,079	20.3	23,909	365	15.3

a Entered as found in the original report.

CAUSES OF ACCIDENTS.—In the table following the accidents are classified by causes, for all establishments, as well as for each one of the industrial groups, and the per cent of accidents due to each specified cause is shown in the table next following. All accidents are separated into two main classes: Those due to machinery or dangerous substances and those due to all other causes. In 1901, 47.26 per cent or nearly one-half of all the accidents recorded was due to machinery or dangerous substances, but this proportion declined to

2.61 per cent in 1902, 41.91 per cent in 1903, 38.05 per cent in 1904, and 37.8 per cent in 1906. This proportionate decline is probably due to a better recording of minor accidents, while those due to machinery or dangerous substances are usually of the graver kind. The most frequent cause of accidents is found in shop machinery operated by mechanical power. In 1906 this claimed 27.19 per cent of all industrial accidents; following this were accidents caused by loading and unloading, 17.11 per cent; hand implements, 15.07 per cent; collapse of buildings and falling weights, 7.70 per cent; and dangerous substances, 5.04 per cent. Falls claimed only 3.38 per cent, and elevators 2.03 per cent. The number of accidents due to power-generating engines, belts, and steam boilers are comparatively few, all these three classes claiming only 2.91 per cent.

The comparative frequency of accidents due to any one cause differs considerably in various branches of industry. Thus, in the textile industries machines with mechanical power are responsible for from one-half to two-thirds of all accidents, while in metal industry only about one-fifth, and in that of mineral products about one-sixth are due to this cause. In these last two branches a great many accidents are due to loading and unloading heavy materials; this is also true of the woodworking industry, food products (mainly sugar industry), and chemical industry (oil refining). Accidents from dangerous substances are met with most frequently in the chemical industry (manufacture of explosives) and in animal products (hides, leather, etc.). Hand implements are found to be most dangerous in the metal works and in the chemical industry.

NUMBER OF ACCIDENTS DUE TO EACH CAUSE, IN MANU

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel promysh]

Marginal number	Industry.	Accidents caused by machinery and dangerous substances.					
		Power-generating machines.	Belts, etc.	Machinery with mechanical power.	Machinery without mechanical power.	Elevators, derricks, etc.	Steam boilers and steam fittings.
1901.							
1	Cotton manufactures.....	46	99	2,526	25	61	60
2	Wool manufactures.....	10	63	610	9	7	20
3	Silk manufactures.....	3	2	15			
4	Flax, hemp, and jute manufactures.....	12	30	384	5	8	8
5	Textiles, not specified.....		3	38	4	2	
6	Paper, and printing.....	7	58	371	26	28	15
7	Wood manufactures.....	12	66	686	12	38	6
8	Metals, machinery, and implements.....	69	129	2,563	146	516	67
9	Mineral products.....	5	32	111	8	22	2
10	Animal products (hides, leather, etc.).....	4	9	66	2	4	10
11	Food products.....	57	167	383	19	136	82
12	Chemical products.....	10	16	146	4	8	12
13	All other industries.....	1		13		2	
	Total.....	246	674	7,912	260	832	282
1902.							
1	Cotton manufactures.....	40	115	2,567	24	46	42
2	Wool manufactures.....	15	57	602	10	7	12
3	Silk manufactures.....		1	32	2	1	
4	Flax, hemp, and jute manufactures.....	4	14	337	3	3	5
5	Textiles, not specified.....	2	5	65	2		3
6	Paper and printing.....	18	43	366	32	24	13
7	Wood manufactures.....	13	57	647	9	25	12
8	Metals, machinery, and implements.....	51	138	2,420	103	435	41
9	Mineral products.....	4	33	97	4	14	2
10	Animal products (hides, leather, etc.).....	7	8	54	4	7	1
11	Food products.....	47	155	354	19	78	65
12	Chemical products.....	9	16	142	6	10	19
13	All other industries.....	11		8		2	3
	Total.....	221	642	7,691	218	652	218
1903.							
1	Cotton manufactures.....	29	137	2,880	21	28	56
2	Wool manufactures.....	9	50	660	3	8	21
3	Silk manufactures.....	2	3	41		1	5
4	Flax, hemp, and jute manufactures.....	3	13	302	4	4	7
5	Textiles, not specified.....	1	2	67	3		
6	Paper and printing.....	14	34	384	17	21	11
7	Wood manufactures.....	20	65	864	19	30	11
8	Metals, machinery, and implements.....	45	149	3,015	126	536	61
9	Mineral products.....	3	25	132	5	19	6
10	Animal products (hides, leather, etc.).....	2	12	62	5	7	5
11	Food products.....	75	202	435	18	82	110
12	Chemical products.....	6	23	157	14	13	22
13	All other industries.....	7	1	8	1		3
	Total.....	216	716	9,015	236	749	318
1904.							
1	Cotton manufactures.....	28	90	2,963	10	50	47
2	Wool manufactures.....	6	75	613	7	14	4
3	Silk manufactures.....	1	2	32	1	1	3
4	Flax, hemp, and jute manufactures.....	4	25	539	16	3	4
5	Textiles not specified.....		4	72	7	1	
6	Paper and printing.....	16	36	484	54	19	26
7	Paper, parchment, and wall paper.....	11	28	234	26	11	16
8	Printing and engraving.....	1	4	144	20	4	5
9	Paper and printing, not specified.....	4	4	106	8	4	5
10	Wood manufactures.....	15	43	1,109	27	56	5
11	Lumber sawing.....	13	38	582	4	53	4
12	Woodworking, not specified.....	2	5	527	23	3	1
13	Metals, machinery, and implements.....	81	209	5,235	220	795	43

FACTURING ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906.

lennosti. Statistika neschastnykh sluchaev s rabochimi, 1901-1906.]

Accidents caused by machinery and dangerous substances.			Accidents from other causes.									Grand total.	Marginal number.
Dangerous substances.	Explosives.	Total.	Col-lapse of build-ings and falling objects.	Falls.	Load-ing, un-loading, etc.	Hand imple-ments.	Run over by wag-ons, etc.	Rail-road acci-dents.	All other causes.	Total.			
142	1	2,960	200	189	409	216	52	14	418	1,498	4,458	1	
31	-----	750	27	46	51	37	8	2	32	203	953	2	
2	-----	22	1	2	3	1	-----	-----	1	8	30	3	
11	-----	458	27	50	55	38	14	4	56	244	702	4	
2	-----	49	1	3	2	-----	-----	-----	2	8	57	5	
21	-----	536	55	41	87	57	14	19	45	320	856	6	
12	-----	832	146	86	223	84	14	29	29	611	1,443	7	
806	10	4,306	1,038	493	2,354	2,533	115	276	596	7,405	11,711	8	
47	3	230	98	58	89	59	20	43	56	423	653	9	
25	-----	120	9	25	35	25	5	2	41	142	262	10	
187	-----	1,031	365	244	431	174	30	226	243	1,713	2,744	11	
178	1	375	61	63	129	91	11	34	66	455	830	12	
9	-----	25	5	4	2	6	-----	1	2	20	45	13	
1,473	15	11,694	2,033	1,304	3,870	3,321	283	650	1,587	13,050	24,744		
183	-----	3,017	262	190	577	314	104	10	890	2,347	5,364	1	
27	-----	730	25	45	86	37	8	3	65	269	999	2	
1	-----	37	3	2	1	-----	-----	-----	6	12	59	3	
6	-----	372	22	15	28	41	10	5	79	200	572	4	
3	-----	80	7	4	12	8	2	-----	16	49	129	5	
24	-----	520	63	27	148	69	15	2	61	385	905	6	
17	-----	780	98	58	305	94	38	9	99	701	1,481	7	
579	12	3,779	861	310	2,379	2,495	256	78	1,260	7,639	11,418	8	
25	2	181	75	49	66	57	58	10	88	403	584	9	
30	-----	111	12	21	30	20	5	1	42	131	242	10	
256	2	976	481	164	501	198	114	161	366	1,985	2,961	11	
182	10	394	94	51	149	161	44	8	153	660	1,054	12	
11	1	36	3	6	5	20	1	4	14	53	89	13	
1,344	27	11,013	2,006	942	4,287	3,514	655	291	3,139	14,834	25,847		
240	1	3,400	254	202	850	422	101	6	1,250	3,085	6,485	1	
35	-----	786	43	48	75	50	3	1	67	287	1,073	2	
3	-----	55	2	2	1	5	1	-----	14	25	80	3	
4	-----	337	27	12	42	31	6	2	86	206	543	4	
6	-----	79	6	5	8	3	-----	-----	6	28	107	5	
34	1	516	56	36	138	63	6	16	78	393	909	6	
23	-----	1,032	113	84	439	149	45	8	148	986	2,018	7	
987	15	4,934	1,333	402	2,964	3,046	109	242	1,448	9,544	14,478	8	
32	1	223	86	41	83	78	26	36	103	453	676	9	
20	-----	113	16	17	41	30	4	-----	44	152	265	10	
236	1	1,159	552	182	505	204	195	98	486	2,222	3,381	11	
226	3	464	112	63	237	145	8	32	175	772	1,236	12	
8	-----	28	3	7	10	4	9	2	5	40	68	13	
1,854	22	13,126	2,603	1,101	5,393	4,230	513	443	3,910	18,193	31,319		
190	1	3,379	247	194	641	371	92	6	1,678	3,229	6,608	1	
46	-----	765	58	53	97	56	15	-----	185	464	1,229	2	
4	-----	44	1	2	2	11	-----	-----	15	31	75	3	
13	-----	604	67	44	79	53	18	1	227	489	1,093	4	
12	-----	96	5	5	11	11	2	-----	35	62	158	5	
57	-----	692	63	33	155	105	13	3	177	549	1,241	6	
28	-----	354	31	12	67	49	9	2	81	251	605	7	
3	-----	181	3	9	17	5	-----	-----	25	59	240	8	
26	-----	157	29	12	71	51	4	1	71	239	396	9	
29	-----	1,284	146	89	548	164	34	14	305	1,300	2,584	10	
18	-----	712	124	77	498	107	30	12	242	1,090	1,802	11	
11	-----	572	22	12	50	57	4	2	63	210	782	12	
2,030	14	8,633	2,194	589	5,469	5,113	242	98	3,903	17,608	26,241	13	

NUMBER OF ACCIDENTS DUE TO EACH CAUSE, IN MANUFACTURING

Marginal number.	Industry.	Accidents caused by machinery and dangerous substances.					
		Power-generating machines.	Belts, etc.	Machinery with mechanical power.	Machinery without mechanical power.	Elevators, derricks, etc.	Steam boilers and steam fittings.
1904—Concluded.							
Metals, machinery, and implements—Concluded.							
14	Iron and steel.....	23	96	2,198	109	244	12
15	Machinery and implements.....	39	99	2,661	71	530	21
16	Metal working, not specified.....	19	14	376	40	12	10
17	Stone, clay, china, and glass.....	7	53	205	12	33	1
18	Glass manufactures.....	3	11	96	2	2	.....
19	China ware.....	1	9	14	1	3	.....
20	Earthenware.....	1	10	26	4	8	.....
21	Mineral products, not specified.....	2	23	69	5	20	1
22	Animal products (hides, leather, etc.).....	2	11	91	9	9	1
23	Food products.....	59	203	535	39	111	87
24	Flour milling.....	14	111	157	4	23	9
25	Sugar and sugar refining.....	28	48	164	7	59	64
26	Food products, not specified.....	17	44	214	28	29	14
27	Chemical industry.....	15	27	195	13	16	12
28	Chemicals.....	6	6	31	4	5	6
29	Mineral oils.....	1	.....	18	.....	.....	3
30	Explosives.....	.....	.....	14	1	.....	1
31	Chemical industry, not specified.....	8	21	132	8	11	2
22	All other industries.....	3	2	4	.....	1	1
Total.....		237	780	12,077	415	1,109	234
1905.							
1	Cotton manufactures.....	40	106	3,118	13	51	49
2	Wool manufactures.....	14	71	764	3	11	9
3	Silk manufactures.....	.....	2	39	1	.....	1
4	Flax, hemp, and jute manufactures.....	5	39	691	13	17	10
5	Textiles, not specified.....	1	6	74	6	4	2
6	Paper and printing.....	15	52	474	26	39	14
7	Paper, parchment, and wall paper.....	5	39	236	3	24	6
8	Printing and engraving.....	5	6	139	14	5	.....
9	Paper and printing, not specified.....	5	7	99	9	10	8
10	Wood manufactures.....	11	74	1,069	10	34	12
11	Lumber sawing.....	11	61	539	2	30	7
12	Woodworking, not specified.....	.....	13	530	8	4	5
13	Metals, machinery, and implements.....	59	338	6,561	170	782	40
14	Iron and steel.....	13	89	2,200	76	243	13
15	Machinery and implements.....	40	229	3,865	66	525	22
16	Metal working, not specified.....	6	20	496	28	14	.....
17	Stone, clay, china, and glass.....	9	33	210	5	23	1
18	Glass manufactures.....	1	7	79	.....	1	.....
19	China ware.....	1	5	19	.....	1	.....
20	Earthenware.....	1	3	33	3	6	.....
21	Mineral products, not specified.....	6	18	79	2	15	1
22	Animal products (hides, leather, etc.).....	1	8	87	10	12	6
23	Food products.....	51	205	586	58	108	56
24	Flour milling.....	18	108	121	1	25	6
25	Sugar and sugar refining.....	20	51	247	22	56	38
26	Food products, not specified.....	13	46	218	35	27	12
27	Chemical industry.....	8	28	203	9	16	8
28	Chemicals.....	4	11	41	1	6	2
29	Mineral oils.....	2	2	5	.....	2	4
30	Explosives.....	.....	3	9	.....	1	.....
31	Chemical industry, not specified.....	2	12	148	8	7	2
32	All other industries.....	9	.....	14	.....	4	1
Total.....		223	962	13,890	324	1,101	209
1906.							
1	Cotton manufactures.....	52	161	4,423	25	78	111
2	Wool manufactures.....	7	96	936	11	7	18
3	Silk manufactures.....	1	.....	46	.....	1	7
4	Flax, hemp, and jute manufactures.....	6	65	916	25	10	16
5	Textile industries, not specified.....	2	4	98	4	1	4
6	Paper and printing.....	16	50	474	37	29	15

ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1900—Continued.

Accidents caused by machinery and dangerous substances.			Accidents from other causes.								Grand total.	Marginal number.
Dangerous substances.	Explosives.	Total.	Col-lapse of build-ings and falling objects.	Falls.	Load-ing, un-loading, etc.	Hand imple-ments.	Run over by wag-ons, etc.	Rail-road acci-dents.	All other causes.	Total.		
953	1	3,636	647	164	2,224	1,260	121	43	1,354	5,813	9,449	14
971	6	4,398	1,406	384	3,060	3,633	113	51	2,288	10,935	15,333	15
112	7	599	141	41	185	220	8	4	231	860	1,459	16
207	2	520	121	75	318	238	49	18	449	1,268	1,788	17
172	.....	286	59	40	138	143	3	1	332	716	1,002	18
5	.....	33	5	5	9	5	2	.....	6	32	65	19
6	.....	55	16	9	31	7	8	.....	6	30	107	20
24	2	146	41	21	140	83	36	11	81	413	559	21
36	.....	159	18	26	45	50	5	4	173	321	480	22
218	7	1,259	321	214	958	250	75	203	882	2,903	4,162	23
10	5	333	23	39	44	39	4	2	98	249	582	24
120	1	491	235	114	634	129	61	198	398	1,769	2,260	25
88	1	435	63	61	280	82	10	3	386	885	1,320	26
217	4	499	121	78	272	183	31	25	260	970	1,469	27
120	2	180	32	29	88	56	7	8	69	289	469	28
35	.....	57	23	17	27	50	.....	.....	44	161	213	29
17	2	35	7	4	12	10	.....	.....	4	39	74	30
45	.....	227	59	28	145	67	23	16	143	481	708	31
18	.....	29	5	8	13	9	3	.....	10	48	77	32
3,083	28	17,963	3,367	1,410	8,608	6,607	579	372	8,299	29,242	47,205	
228	.....	3,605	234	161	821	381	109	8	1,791	3,505	7,110	1
39	3	914	53	45	96	71	14	2	121	402	1,316	2
1	.....	44	2	1	11	8	.....	.....	17	39	83	3
18	.....	793	70	42	114	96	38	2	253	615	1,408	4
8	.....	101	6	5	19	13	1	.....	33	77	178	5
64	.....	684	87	41	195	118	24	3	157	625	1,309	6
37	.....	350	43	23	74	51	18	2	75	286	636	7
6	.....	175	8	.....	14	7	.....	.....	15	44	219	8
21	.....	159	36	18	107	60	6	1	67	295	454	9
18	.....	1,228	160	102	524	164	62	7	320	1,339	2,567	10
13	.....	663	131	90	456	103	56	7	250	1,093	1,756	11
5	.....	565	29	12	68	61	6	.....	70	246	811	12
2,390	17	10,357	2,220	810	6,131	6,172	319	106	4,041	19,799	30,156	13
1,030	7	3,676	595	204	2,288	1,280	139	35	1,597	6,138	9,814	14
1,230	3	5,980	1,551	553	3,632	4,651	170	67	2,247	12,871	18,851	15
130	7	701	74	53	211	241	10	4	197	790	1,491	16
214	1	496	140	106	366	371	72	15	227	1,297	1,793	17
199	.....	287	39	66	177	277	5	3	124	691	978	18
1	.....	27	7	1	9	4	.....	.....	11	32	59	19
1	1	48	23	9	20	14	29	2	14	111	159	20
13	.....	134	71	30	160	76	38	10	78	463	597	21
47	.....	171	42	40	73	102	7	.....	112	376	547	22
243	3	1,310	402	219	942	371	306	39	918	3,197	4,507	23
3	2	284	24	46	74	57	4	6	90	301	585	24
161	.....	595	275	102	641	198	275	32	295	1,818	2,413	25
79	1	431	103	71	227	116	27	1	534	1,078	1,509	26
265	5	542	135	75	273	212	44	8	254	1,001	1,543	27
149	.....	214	29	35	92	77	9	1	69	312	526	28
27	.....	42	10	11	29	52	1	3	12	118	160	29
21	4	38	16	1	10	18	.....	.....	15	60	98	30
68	1	248	80	28	142	65	34	4	158	511	759	31
16	1	45	12	22	27	14	3	1	14	93	138	32
3,551	30	20,290	3,563	1,669	9,592	8,093	999	191	8,255	32,365	52,655	
279	.....	5,129	431	282	1,290	608	151	32	2,683	5,477	10,606	1
40	.....	1,115	102	75	194	81	22	2	287	763	1,878	2
4	.....	59	3	6	10	11	1	.....	15	46	105	3
22	.....	1,060	94	58	158	105	24	15	402	856	1,916	4
5	1	119	10	7	34	18	.....	.....	52	121	240	5
43	.....	664	131	46	115	92	7	16	148	555	1,219	6

NUMBER OF ACCIDENTS DUE TO EACH CAUSE, IN MANUFACTURING

Marginal number.	Industry.	Accidents caused by machinery and dangerous substances.					
		Power-generating machines.	Belts, etc.	Machinery with mechanical power.	Machinery without mechanical power.	Elevators, derricks, etc.	Steam boilers and steam fittings
	1906—Concluded.						
	Paper and printing—Concluded.						
7	Paper, parchment, and wall paper..	6	34	221	12	14	13
8	Printing and engraving.....	8	6	134	21	3	2
9	Paper and printing, not specified.....	2	10	119	4	12	2
10	Wood manufactures.....	8	66	1,271	6	50	10
11	Lumber sawing.....	7	58	567	1	40	8
12	Woodworking, not specified.....	1	8	704	5	10	2
13	Metals, machinery, and implements.....	68	352	6,934	176	858	69
14	Iron and steel.....	18	95	2,401	73	248	28
15	Machinery and implements.....	35	230	4,014	51	594	33
16	Metal working, not specified.....	15	27	519	52	16	8
17	Stone, clay, china, and glass.....	13	28	210	5	27	5
18	Glass manufactures.....	5	5	85	2	2	2
19	China ware.....	2	3	10		1	1
20	Earthenware.....	1	7	34		5	
21	Mineral products, not specified.....	5	13	81	3	19	2
22	Animal products (hides, leather, etc.)....	2	9	131	10	7	10
23	Food products.....	39	284	714	45	123	88
24	Flour milling.....	19	118	166	3	15	22
25	Sugar and sugar refining.....	12	97	304	7	74	48
26	Food products, not specified.....	8	69	244	35	34	18
27	Chemical industry.....	13	25	186	11	25	14
28	Chemicals.....	6	12	43	3	12	8
29	Mineral oils.....	3		9	1	2	
30	Explosives.....		1	9	1	2	
31	Chemical industry, not specified.....	4	12	125	6	9	6
32	All other industries.....	6	1	16	1	2	8
	Total.....	233	1,141	16,355	356	1,218	375

ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Concluded.

Accidents caused by machinery and dangerous substances.			Accidents from other causes.							Grand total.	Marginal number.	
Dangerous substances.	Explosives.	Total.	Col-lapse of build-ings and falling objects.	Falls.	Load-ing, un-loading, etc.	Hand im-plements.	Run over by wag-ons, etc.	Rail-road acci-dents.	All other causes.			Total.
15	.....	315	41	26	45	43	5	10	75	245	560	7
5	.....	177	11	7	16	6	.....	1	16	57	234	8
23	.....	172	79	13	54	43	2	5	57	253	425	9
18	.....	1,429	217	154	514	177	41	41	323	1,467	2,896	10
12	.....	693	184	143	487	124	36	38	265	1,277	1,970	11
6	.....	736	33	11	27	53	5	3	58	190	926	12
1,811	14	10,282	2,702	829	5,886	6,688	220	234	4,259	20,818	31,100	13
719	9	3,591	797	191	2,352	1,501	129	80	1,731	6,781	10,372	14
948	2	5,907	1,758	571	3,289	4,911	86	148	2,272	13,035	18,942	15
144	3	784	147	67	245	276	5	6	256	1,002	1,786	16
165	2	455	179	119	463	450	58	51	363	1,683	2,138	17
130	1	232	56	49	200	274	3	2	197	781	1,013	18
3	.....	20	11	10	14	12	3	5	21	76	96	19
4	.....	51	26	10	24	10	17	16	27	130	181	20
28	1	152	86	50	225	154	35	28	118	696	848	21
63	.....	232	49	42	116	129	5	5	126	472	704	22
333	1	1,597	513	293	1,184	439	376	37	989	3,831	5,428	23
8	.....	351	47	64	98	65	7	1	97	379	730	24
204	.....	746	351	143	803	251	353	24	395	2,320	3,066	25
91	1	500	115	86	283	123	16	12	497	1,132	1,632	26
254	5	533	177	95	283	213	25	66	278	1,137	1,670	27
143	1	228	39	29	98	63	12	20	87	348	576	28
26	.....	41	7	22	32	59	2	1	17	140	181	29
12	4	29	11	2	16	19	.....	4	8	60	89	30
73	.....	235	120	42	137	72	11	41	166	589	824	31
24	.....	58	25	26	43	54	2	2	32	184	242	32
3,031	23	22,732	4,633	2,032	10,290	9,065	932	501	9,953	37,410	60,142	

PER CENT OF ACCIDENTS DUE TO EACH CAUSE, IN MANU

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdel promysh]

Marginal number.	Industry.	Accidents caused by machinery and dangerous substances.					
		Power-generating machines.	Belts, etc.	Machinery with mechanical power.	Machinery without mechanical power.	Elevators, derricks, etc.	Steam boilers and steam fittings.
1901.							
1	Cotton manufactures.....	1.03	2.22	56.66	0.56	1.37	1.35
2	Wool manufactures.....	1.05	6.61	64.01	.95	.73	2.10
3	Silk manufactures.....	10.00	6.66	50.00	.....	.....	.....
4	Flax, hemp, and jute manufactures.....	1.71	4.27	54.70	.71	1.14	1.14
5	Textiles, not specified.....	.....	5.26	66.66	7.02	3.51	.....
6	Paper and printing.....	1.99	6.78	43.34	3.04	3.27	1.75
7	Wood manufactures.....	.83	4.57	47.54	.83	2.64	.42
8	Metals, machinery, and implements.....	.59	1.10	21.89	1.25	4.41	.57
9	Mineral products.....	.77	4.90	17.00	1.22	3.37	.31
10	Animal products (hides, leather, etc.).....	1.53	3.44	21.19	.76	1.53	3.81
11	Food products.....	2.08	6.09	13.96	.69	4.96	2.98
12	Chemical products.....	1.20	1.93	17.59	.48	.96	1.45
13	All other industries.....	2.22	.....	28.89	.....	4.45	.....
Total.....		1.00	2.72	31.98	1.05	3.36	1.14
1902.							
1	Cotton manufactures.....	.75	2.14	47.86	.45	.86	.78
2	Wool manufactures.....	1.50	5.71	60.26	1.00	.70	1.20
3	Silk manufactures.....	.....	2.04	65.31	4.08	2.04	.....
4	Flax, hemp, and jute manufactures.....	.70	2.45	58.92	.52	.52	.87
5	Textiles, not specified.....	1.55	3.87	50.39	1.55	.....	2.33
6	Paper and printing.....	1.99	4.75	40.44	3.54	2.65	1.44
7	Wood manufactures.....	.88	3.85	43.68	.61	1.69	.81
8	Metals, machinery, and implements.....	.45	1.21	21.20	.90	3.81	.36
9	Mineral products.....	.68	5.65	16.61	.69	2.40	.34
10	Animal products (hides, leather, etc.).....	2.89	3.31	22.32	1.65	2.89	.41
11	Food products.....	1.59	5.23	11.95	.64	2.63	2.20
12	Chemical products.....	.85	1.52	13.47	.57	.95	1.80
13	All other industries.....	12.36	.....	8.99	.....	2.25	3.37
Total.....		.86	2.48	29.76	.84	2.52	.84
1903.							
1	Cotton manufactures.....	.45	2.11	44.53	.33	.43	.86
2	Wool manufactures.....	.84	4.66	61.51	.28	.74	1.96
3	Silk manufactures.....	2.50	3.75	51.25	.....	1.25	6.25
4	Flax, hemp, and jute manufactures.....	.55	2.39	55.61	.74	.74	1.29
5	Textiles, not specified.....	.93	1.87	62.62	2.80	.....	.....
6	Paper and printing.....	1.54	3.74	42.25	1.87	2.31	1.21
7	Wood manufactures.....	.99	3.22	42.81	.94	1.49	.55
8	Metals, machinery, and implements.....	.31	1.03	20.83	.87	3.70	.42
9	Mineral products.....	.44	3.70	19.53	.74	2.81	.89
10	Animal products (hides, leather, etc.).....	.75	4.53	23.39	1.89	2.64	1.89
11	Food products.....	2.22	5.97	12.87	.53	2.43	3.25
12	Chemical products.....	.49	1.86	12.70	1.13	1.05	1.78
13	All other industries.....	10.29	1.47	11.77	1.47	.....	4.41
Total.....		.69	2.29	28.78	.75	2.39	1.02
1904.							
1	Cotton manufactures.....	.42	1.36	44.84	.15	.76	.71
2	Wool manufactures.....	.49	6.10	49.88	.57	1.14	.33
3	Silk manufactures.....	1.33	2.67	42.67	1.33	1.33	4.00
4	Flax, hemp, and jute manufactures.....	.37	2.29	49.31	1.46	.27	.37
5	Textiles, not specified.....	.....	2.53	45.57	4.43	.63	.....
6	Paper and printing.....	1.29	2.90	39.00	4.35	1.53	2.10
7	Paper, parchment, and wall paper.....	1.82	4.63	38.68	4.29	1.82	2.64
8	Printing and engraving.....	.42	1.67	60.00	8.33	1.67	2.08
9	Paper and printing, not specified.....	1.01	1.01	26.77	2.02	1.01	1.25
10	Wood manufactures.....	.58	1.66	42.92	1.05	2.17	.19
11	Lumber sawing.....	.72	2.11	32.30	.22	2.94	.22
12	Woodworking, not specified.....	.26	.64	67.39	2.94	.38	.13
13	Metals, machinery, and implements.....	.31	.80	19.95	.84	3.03	.16
14	Iron and steel.....	.24	1.02	23.27	1.15	2.58	.13

FACTURING ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906.

Iennosti. Statistika neschastnykh sluchaev s rabochimi, 1901-1906.]

Accidents caused by machinery and dangerous substances.			Accidents from other causes.								Marginal number.
Dangerous substances.	Explosives.	Total.	Collapse of buildings and falling objects.	Falls.	Loading, unloading, etc.	Hand implements.	Run over by wagons, etc.	Railroad accidents.	All other causes.	Total.	
3.19	0.02	66.40	4.48	4.23	9.17	4.84	1.16	0.31	9.41	33.60	1
.....	3.25	78.70	2.83	4.83	5.35	3.88	.84	.21	3.36	21.30	2
6.67	.....	73.33	3.33	6.67	10.00	3.33	.....	.....	3.34	26.67	3
1.57	.....	65.24	3.85	7.12	7.84	5.41	1.99	.57	7.98	34.76	4
3.51	.....	85.96	1.76	5.26	3.51	.....	.....	.....	3.51	14.04	5
2.45	.....	62.62	6.43	4.79	10.16	6.66	1.64	2.22	5.48	37.38	6
.83	.....	57.66	10.12	5.96	15.45	5.82	.97	2.01	2.01	42.34	7
6.88	.80	36.77	8.86	4.21	20.10	21.63	.98	2.36	5.09	63.23	8
7.20	.45	35.22	15.01	8.88	13.63	9.03	3.06	6.58	8.59	64.78	9
9.54	.....	45.80	3.44	9.54	13.36	9.54	1.91	.76	15.65	54.20	10
6.81	.....	37.57	13.30	8.89	15.71	6.34	1.09	8.24	8.86	62.43	11
21.45	.12	45.18	7.35	7.59	15.54	10.96	1.33	4.10	7.95	54.82	12
20.00	.....	55.56	11.11	8.89	4.45	13.33	.....	2.22	4.44	44.44	13
5.95	.06	47.26	8.22	5.27	15.64	13.42	1.14	2.63	6.42	52.74	
3.41	.....	56.25	4.89	3.54	10.76	5.85	1.94	.19	16.58	43.75	1
2.70	.....	73.07	2.50	4.51	8.61	3.70	.80	.30	6.51	26.93	2
2.04	.....	75.51	6.12	4.08	2.04	.....	.....	.....	12.25	24.49	3
1.05	.....	65.03	3.85	2.62	4.90	7.17	1.75	.87	13.81	34.97	4
2.33	.....	62.02	5.43	3.10	9.30	6.20	1.55	.....	12.40	37.98	5
2.65	.....	57.46	6.96	2.98	16.35	7.63	1.66	.22	6.74	42.54	6
1.15	.....	52.67	6.62	3.92	20.59	6.35	2.56	.61	6.68	47.33	7
5.07	.10	33.10	7.54	2.72	20.83	21.85	2.24	.68	11.04	66.90	8
4.28	.34	30.99	12.84	8.39	11.30	9.76	9.93	1.71	15.08	69.01	9
12.40	.....	45.87	4.96	8.68	12.40	8.26	2.07	.41	17.35	54.13	10
8.65	.07	32.96	16.24	5.54	16.92	6.60	3.85	5.44	12.36	67.04	11
17.27	.95	37.38	8.92	4.84	14.14	15.27	4.17	.76	14.52	62.62	12
12.36	1.12	40.45	3.37	6.74	5.62	22.47	1.12	4.50	15.73	59.55	13
5.20	.11	42.61	7.76	3.64	16.59	13.59	2.53	1.13	12.15	57.39	
3.70	.02	52.43	3.92	3.11	13.11	6.51	1.56	.09	19.27	47.57	1
3.26	.....	73.25	4.01	4.48	6.99	4.66	.23	.09	6.24	26.75	2
3.75	.....	68.75	2.50	2.50	1.25	6.25	1.25	.....	17.50	31.25	3
.74	.....	62.06	4.97	2.21	7.73	5.71	1.11	.37	15.84	37.94	4
5.61	.....	73.83	5.61	4.68	7.47	2.80	.....	.....	5.61	26.17	5
3.74	.11	56.77	6.16	3.96	15.18	6.93	.66	1.76	8.58	43.23	6
1.14	.....	51.14	5.60	4.16	21.75	7.38	2.23	.40	7.34	48.86	7
6.82	.10	34.08	9.21	2.78	20.47	21.04	.75	1.67	10.00	65.92	8
4.73	.15	32.99	12.72	6.06	12.28	11.54	3.85	5.33	15.23	67.01	9
7.55	.....	42.64	6.04	6.41	15.47	11.32	1.51	.....	16.61	57.36	10
6.98	.03	34.28	16.33	5.38	14.94	6.03	5.77	2.90	14.37	65.72	11
18.20	.24	37.54	9.06	5.10	19.17	11.73	.65	2.59	14.16	62.46	12
11.77	.....	41.18	4.41	10.29	14.71	5.88	13.24	2.94	7.35	58.82	13
5.92	.07	41.91	8.31	3.50	17.22	13.51	1.64	1.42	12.49	58.09	
2.88	.02	51.14	3.74	2.93	9.70	5.61	1.39	.09	25.40	48.86	1
3.74	.....	62.25	4.72	4.31	7.89	4.56	1.22	.....	15.05	37.75	2
5.34	.....	58.67	1.33	2.67	2.67	14.66	.....	.....	20.00	41.33	3
1.19	.....	55.26	6.13	4.03	7.23	4.85	1.65	.09	20.76	44.74	4
7.60	.....	60.76	3.17	3.17	6.96	2.53	1.26	.....	22.15	39.24	5
4.59	.....	55.76	5.08	2.66	12.49	8.46	1.05	.24	14.26	44.24	6
4.63	.....	58.51	5.12	1.98	11.08	8.10	1.49	.33	13.39	41.49	7
1.25	.....	75.42	1.25	3.75	7.08	2.08	.....	.....	10.42	24.58	8
6.57	.....	39.65	7.32	3.03	17.93	12.88	1.01	.25	17.93	60.35	9
1.12	.....	49.69	5.65	3.44	21.21	6.34	1.32	.54	11.81	50.31	10
1.00	.....	39.51	6.88	4.27	27.64	5.94	1.66	.67	13.43	60.49	11
1.41	.....	73.15	2.81	1.53	6.39	7.29	.51	.26	8.06	26.85	12
7.76	.05	32.90	8.35	2.25	20.85	19.49	.92	.37	14.87	67.10	13
10.09	.01	38.49	6.85	1.73	23.54	13.33	1.28	.45	14.33	61.51	14

PER CENT OF ACCIDENTS DUE TO EACH CAUSE, IN MANUFACTURING

Marginal number.	Industry.	Accidents caused by machinery and dangerous substances.					
		Power generating machines.	Belts, etc.	Machinery with mechanical power.	Machinery without mechanical power.	Elevators, derricks, etc.	Steam boilers and steam fittings.
1904—Concluded.							
Metals, machinery, and implements—Concluded.							
15	Machinery and implements.....	0.25	0.65	17.35	0.46	3.46	0.14
16	Metal working, not specified.....	1.30	.96	25.77	2.74	1.44	.69
17	Stone, clay, china, and glass.....	.39	2.96	11.47	.67	1.85	.05
18	Glass manufactures.....	.30	1.09	9.58	.20	.20	.....
19	China ware.....	1.54	13.85	21.54	1.54	4.61	.....
20	Earthenware.....	.62	6.17	16.05	2.47	4.94	.....
21	Mineral products, not specified.....	.36	4.12	12.34	.89	3.58	.18
22	Animal products (hides, leather, etc.).....	.42	2.29	18.96	1.87	1.87	.21
23	Food products.....	1.42	4.88	12.85	.94	2.67	2.09
24	Flour milling.....	2.41	19.07	26.98	.69	3.95	1.55
25	Sugar and sugar refining.....	1.24	2.12	7.26	.31	2.61	2.83
26	Food products, not specified.....	1.29	3.33	16.21	2.12	2.20	1.06
27	Chemical industry.....	1.02	1.84	13.27	.89	1.09	.82
28	Chemicals.....	1.28	1.28	6.61	.85	1.07	1.28
29	Mineral oils.....	.46	.....	8.26	.....	.....	1.38
30	Explosives.....	.....	.....	18.92	1.35	.....	1.35
31	Chemical industry, not specified.....	1.13	2.97	18.64	1.13	1.55	.28
32	All other industries.....	3.89	2.60	5.19	.....	1.30	1.30
Total.....		.50	1.66	25.57	.88	2.35	.50
1905.							
1	Cotton manufactures.....	.56	1.49	43.85	.18	.72	.69
2	Wool manufactures.....	1.06	5.40	58.06	.23	.84	.68
3	Silk manufactures.....	.....	2.41	46.99	1.21	.....	1.20
4	Flax, hemp, and jute manufactures.....	.36	2.77	49.08	.92	1.21	.71
5	Textiles, not specified.....	.56	3.37	41.57	3.37	2.25	1.12
6	Paper and printing.....	1.15	3.97	36.21	1.99	2.98	1.07
7	Paper, parchment, and wall paper.....	.79	6.13	37.11	.47	3.77	.94
8	Printing and engraving.....	2.28	2.74	63.47	6.40	2.28	.....
9	Paper and printing, not specified.....	1.10	1.54	21.81	1.98	2.20	1.76
10	Wood manufactures.....	.43	2.88	41.64	.39	1.33	.47
11	Lumber sawing.....	.63	3.47	30.70	.11	1.71	.40
12	Woodworking, not specified.....	.....	1.60	65.35	.99	.49	.62
13	Metals, machinery, and implements.....	.20	1.12	21.76	.56	2.59	.13
14	Iron and steel.....	.13	.91	22.42	.77	2.48	.18
15	Machinery and implements.....	.21	1.22	20.50	.35	2.78	.12
16	Metal working, not specified.....	.40	1.34	33.27	1.88	.94	.....
17	Stone, clay, china, and glass.....	.50	1.84	11.71	.28	1.28	.06
18	Glass manufactures.....	.10	.72	8.08	.....	.10	.....
19	China ware.....	1.69	8.48	32.21	.....	1.69	.....
20	Earthenware.....	.63	1.89	20.75	1.89	3.77	.....
21	Mineral products, not specified.....	1.01	3.02	13.23	.34	2.51	.17
22	Animal products, (hides, leather, etc.).....	.18	1.47	15.91	1.83	2.19	1.10
23	Food products.....	1.13	4.55	13.00	1.29	2.40	1.24
24	Flour milling.....	3.08	18.46	20.68	.17	4.28	1.03
25	Sugar and sugar refining.....	.83	2.11	10.24	.91	2.32	1.58
26	Food products, not specified.....	.86	3.05	14.45	2.32	1.79	.79
27	Chemical industry.....	.52	1.81	13.16	.58	1.04	.52
28	Chemicals.....	.76	2.09	7.79	.19	1.14	.38
29	Mineral oils.....	1.25	1.25	3.12	.....	1.25	2.50
30	Explosives.....	.....	3.06	9.19	.....	1.02	.....
31	Chemical industry, not specified.....	.26	1.58	19.50	1.06	.92	.26
32	All other industries.....	6.52	.....	10.15	.....	2.90	.72
Total.....		.42	1.83	26.38	.62	2.09	.40
1906.							
1	Cotton manufactures.....	.49	1.52	41.70	.23	.74	1.05
2	Wool manufactures.....	.37	5.11	49.84	.59	.37	.96
3	Silk manufactures.....	.95	.....	43.81	.....	.95	6.67
4	Flax, hemp, and jute manufactures.....	.31	3.39	47.81	1.30	.52	.84
5	Textiles, not specified.....	.83	1.67	40.83	1.67	.42	1.66
6	Paper and printing.....	1.31	4.10	38.88	3.04	2.38	1.23
7	Paper, parchment, and wall paper.....	1.07	6.07	39.47	2.14	2.50	2.32
8	Printing and engraving.....	3.42	2.56	57.27	8.97	1.28	.....
9	Paper and printing, not specified.....	.47	2.35	28.00	.94	2.83	.47

ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Continued.

Accidents caused by machinery and dangerous substances.			Accidents from other causes.							Marginal number.	
Dangerous substances.	Explosives.	Total.	Collapse of buildings and falling objects.	Falls.	Loading, unloading, etc.	Hand implements.	Run over by wagons, etc.	Railroad accidents.	All other causes.		Total.
6.33	0.04	28.68	9.16	2.51	19.96	23.69	0.74	0.34	14.92	71.32	15
7.68	.48	41.06	9.67	2.81	12.68	15.08	.54	.27	17.89	58.94	16
11.58	.11	29.08	6.77	4.19	17.79	13.31	2.74	1.01	25.11	70.92	17
17.17	.....	28.54	5.89	3.99	13.77	14.28	.30	.10	33.13	71.46	18
7.69	.....	50.77	7.69	7.69	13.85	7.69	3.08	.....	9.23	49.23	19
3.70	.....	33.95	9.87	5.56	19.14	4.32	4.94	3.70	18.52	66.05	20
4.29	.36	26.12	7.33	3.76	25.04	14.85	6.44	1.97	14.49	73.88	21
7.50	.....	33.12	3.75	5.42	9.38	10.42	1.04	.83	36.04	66.88	22
5.24	.16	30.25	7.71	5.14	23.02	6.01	1.80	4.88	21.19	69.75	23
1.72	.85	57.22	3.95	6.70	7.56	6.70	.69	.34	16.84	42.78	24
5.31	.05	21.73	10.40	5.04	28.05	5.71	2.70	8.76	17.61	78.27	25
6.67	.07	32.95	4.77	4.62	21.21	6.21	.76	.23	29.25	67.05	26
14.77	.27	33.97	8.23	5.31	18.52	12.46	2.11	1.70	17.70	66.03	27
25.59	.42	38.38	6.82	6.18	18.77	11.94	1.49	1.71	14.71	61.62	28
16.05	.....	26.15	10.55	7.79	12.39	22.93	.....	.....	20.19	73.85	29
22.98	2.70	47.30	9.46	5.40	16.22	13.52	1.35	1.35	5.40	52.70	30
6.36	.....	32.06	8.33	3.96	20.48	9.46	3.25	2.26	20.20	67.94	31
23.38	.....	37.66	6.49	10.39	16.89	11.69	3.89	.....	12.99	62.34	32
6.53	.06	38.05	7.13	2.99	18.24	13.99	1.23	.79	17.58	61.95	
3.21	.....	50.70	3.29	2.27	11.55	5.36	1.53	.11	25.19	49.30	1
2.96	.22	69.45	4.03	3.42	7.29	5.40	1.06	.15	9.20	30.55	2
1.20	.....	53.01	2.41	1.20	13.25	9.64	.....	.....	20.49	46.99	3
1.27	.....	56.32	4.97	2.98	8.10	6.82	2.70	.14	17.97	43.68	4
4.50	.....	56.74	3.37	2.81	10.68	7.30	.56	.....	18.54	43.26	5
4.88	.....	52.25	6.65	3.13	14.90	9.01	1.83	.23	12.00	47.75	6
5.82	.....	55.03	6.76	3.62	11.64	8.02	2.83	.31	11.79	44.97	7
2.74	.....	79.91	3.65	.....	6.39	3.20	.....	.....	6.85	20.09	8
4.63	.....	33.02	7.93	3.96	23.57	13.22	1.32	.22	14.76	64.98	9
.70	.....	47.84	6.23	3.97	20.41	6.38	2.41	.27	12.49	52.16	10
.74	.....	37.76	7.46	5.13	25.97	5.87	3.19	.39	14.23	62.24	11
.62	.....	69.67	3.58	1.48	8.38	7.52	.74	.....	8.63	30.33	12
7.93	.05	34.34	7.36	2.69	20.33	20.47	1.06	.35	13.40	65.66	13
10.50	.07	37.46	6.06	2.08	23.31	3.04	1.42	.36	16.27	62.54	14
6.52	.02	31.72	8.23	2.93	19.27	24.67	.90	.36	11.92	68.28	15
8.72	.47	47.02	4.96	3.56	14.15	.16	.67	.27	13.21	52.98	16
11.93	.06	27.66	7.81	5.91	20.41	20.69	4.02	.84	12.66	72.34	17
20.35	.....	29.35	3.99	6.75	18.10	28.32	.51	.31	12.67	70.65	18
1.69	.....	45.76	11.86	1.69	15.26	6.78	.....	.....	18.65	54.24	19
.63	.63	30.19	14.47	5.66	12.58	8.81	18.24	1.25	8.80	69.81	20
2.17	.....	22.45	11.89	5.02	26.80	12.73	6.37	1.68	13.06	77.55	21
8.58	.....	31.26	7.68	7.31	13.35	18.65	1.28	.....	20.47	68.74	22
5.39	.07	29.07	8.92	4.86	20.91	8.23	6.79	.86	20.36	70.93	23
.51	.34	48.55	4.10	7.86	12.65	9.74	.68	1.03	15.39	51.45	24
6.67	.....	24.66	11.40	4.23	26.56	8.21	11.39	1.33	12.22	75.34	25
5.23	.07	28.56	6.83	4.71	15.04	7.69	1.79	.06	35.32	71.44	26
17.18	.32	35.13	8.75	4.86	17.69	13.74	2.85	.52	16.46	64.87	27
28.33	.....	40.68	5.51	6.66	17.49	14.64	1.71	.19	13.12	59.32	28
16.88	.....	26.25	6.25	6.88	18.12	32.50	.62	1.88	7.50	73.75	29
21.43	4.08	38.78	16.32	1.02	10.20	18.37	.....	.....	15.31	61.22	30
8.96	.13	32.67	10.54	3.69	18.71	8.56	4.48	.53	20.82	67.33	31
11.59	.73	32.61	8.70	15.94	19.57	10.15	2.17	.72	10.14	67.39	32
6.74	.05	38.53	6.77	3.17	18.22	15.37	1.89	.36	15.69	61.47	
2.63	.....	48.36	4.07	2.66	12.16	5.73	1.42	.30	25.30	51.64	1
2.13	.....	59.37	5.43	3.99	10.33	4.32	1.17	.11	15.28	40.63	2
3.81	.....	56.19	2.86	5.71	9.52	10.48	.95	.....	14.29	43.81	3
1.15	.....	55.32	4.91	3.03	8.25	5.48	1.25	.78	20.98	44.68	4
2.08	.42	49.58	4.17	2.92	14.17	7.50	.....	.....	21.66	50.42	5
3.53	.....	54.47	10.75	3.77	9.43	7.55	.58	1.31	12.14	45.53	6
2.68	.....	56.25	7.32	4.64	8.03	7.68	.89	1.79	13.40	43.75	7
2.14	.....	75.64	4.70	2.99	6.84	2.56	.....	.43	6.84	24.36	8
5.41	.....	40.47	18.59	3.06	12.71	10.12	.47	1.17	13.41	59.53	9

PER CENT OF ACCIDENTS DUE TO EACH CAUSE, IN MANUFACTURING

Marginal number.	Industry.	Accidents caused by machinery and dangerous substances.					
		Power generating machines.	Belts, etc.	Machinery with mechanical power.	Machinery without mechanical power.	Elevators, derricks, etc.	Steam boilers and stem fittings.
	1906—Concluded.						
10	Wood manufactures.....	0.28	2.28	43.89	0.21	1.72	0.34
11	Lumber sawing.....	.36	2.94	28.78	.05	2.03	.41
12	Woodworking, not specified.....	.11	.86	76.02	.54	1.08	.22
13	Metals, machinery, and implements.....	.22	1.13	22.29	.57	2.76	.22
14	Iron and steel.....	.17	.92	23.15	.70	2.39	.27
15	Machinery and implements.....	.18	1.22	21.19	.27	3.14	.17
16	Metal working, not specified.....	.84	1.51	29.06	2.91	.90	.45
17	Stone, clay, china, and glass.....	.61	1.31	9.83	.23	1.26	.23
18	Glass manufactures.....	.49	.49	8.39	.20	.20	.20
19	China ware.....	2.08	3.12	10.42	.....	1.04	1.04
20	Earthenware.....	.55	3.87	18.79	.....	2.76	.....
21	Mineral products, not specified.....	.59	1.53	9.55	.35	2.24	.24
22	Animal products (hides, leather, etc.).....	.28	1.28	18.61	1.42	.99	1.42
23	Food products.....	.72	5.23	13.15	.83	2.27	1.62
24	Flour milling.....	2.60	16.17	22.74	.41	2.05	3.01
25	Sugar and sugar refining.....	.39	3.16	9.92	.23	2.41	1.57
26	Food products, not specified.....	.49	4.23	14.95	2.15	2.08	1.10
27	Chemical industry.....	1.74	1.50	11.14	.66	1.50	.83
28	Chemicals.....	1.08	2.08	7.47	.52	2.08	1.39
29	Mineral oils.....	1.06	.....	4.97	.55	1.10	.....
30	Explosives.....	.....	1.12	10.11	1.12	2.25	.....
31	Chemical industry, not specified.....	.48	1.46	15.17	.73	1.09	.73
32	All other industries.....	2.48	.41	6.61	.41	.83	3.31
	Total.....	.39	1.90	27.19	.59	2.03	.62

NATURE OF INJURIES.—Wounds and fractures constitute the greater portion of industrial accidents (72.39 per cent in 1906), and the second largest group consists of traumatic injuries without laceration (18.48 per cent), most of which are injuries of a lighter nature. Of wounds and fractures, the most important items are injuries to the fingers, these constituting 33.36 per cent of all accidents, as against 14.01 per cent to the lower extremities. Injuries of the left-hand fingers claimed 16.96 per cent and those of the right-hand fingers almost as many, 16.18 per cent, while injuries to fingers of both hands were rare.

Considerable variations exist between the different industrial groups in regard to the nature of injuries. Burns and scalds are most frequent in the chemical industry, especially in the production

ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Concluded.

Accidents caused by machinery and dangerous substances.			Accidents from other causes.								Marginal number.
Dangerous substances.	Explosives.	Total.	Collapse of buildings and falling objects.	Falls.	Loading, unloading, etc.	Hand implements.	Run over by wagons, etc.	Railroad accidents.	All other causes.	Total.	
0.62		49.34	7.49	5.32	17.75	6.11	1.42	1.42	11.15	50.66	10
.61		35.18	9.34	7.26	24.72	6.29	1.83	1.93	13.45	64.82	11
.65		79.48	3.56	1.19	2.92	5.72	.54	.32	6.27	20.52	12
5.82	0.05	33.06	8.69	2.67	18.93	21.50	.71	.75	13.69	66.94	13
6.93	.09	34.62	7.69	1.84	22.68	14.47	1.24	.77	16.69	65.33	14
5.00	.01	31.18	9.28	3.02	17.36	25.93	.45	.78	12.00	68.82	15
8.06	.17	43.90	8.23	3.75	13.72	15.45	.28	.34	14.33	56.10	16
7.72	.09	21.28	8.37	5.57	21.66	21.05	2.71	2.39	16.97	78.72	17
12.83	.10	22.90	5.53	4.84	19.74	27.05	.30	.20	19.44	77.10	18
3.13		20.83	11.46	10.42	14.58	12.50	3.13	5.21	21.87	79.17	19
2.21		28.18	14.37	5.52	13.26	5.52	9.39	8.84	14.92	71.82	20
3.30	.12	17.92	10.14	5.90	26.53	18.16	4.13	3.30	13.02	82.08	21
8.95		32.95	6.96	5.97	16.48	18.32	.71	.71	17.90	67.05	22
5.58	.02	29.42	9.45	5.40	21.81	8.09	6.93	.68	18.22	70.53	23
1.10		48.08	6.44	8.77	13.42	8.90	.96	.14	13.29	51.92	24
6.65		24.33	11.45	4.67	26.19	8.19	11.51	.78	12.88	75.67	25
5.58	.06	30.64	7.05	5.27	17.34	7.54	.98	.73	30.45	69.36	26
15.21	.30	31.92	10.60	5.69	16.94	12.75	1.50	3.95	16.65	68.08	27
24.83	.17	39.58	6.77	5.04	17.01	10.94	2.08	3.47	15.11	60.42	28
14.37		22.65	3.87	12.16	17.68	32.60	1.10	.55	9.39	77.35	29
13.49	4.49	32.58	12.36	2.25	17.98	21.35		4.49	8.99	67.42	30
8.86		28.52	14.56	5.10	16.63	8.74	1.33	4.98	20.14	71.48	31
9.92		23.97	10.33	10.74	17.77	22.31	.83	.83	13.22	76.03	32
5.04	.04	37.80	7.70	3.38	17.11	15.07	1.55	.83	16.56	62.20	

of chemicals and explosives, in the manufacture of glass, and in the iron and steel industry; i. e., in those branches of industry in which incandescent materials are handled. The chemical industry presents especial danger of burns to eyes. Wounds and fractures of fingers are frequent in all industries, but are relatively highest in wood-working, not specified, constituting 78.2 per cent of all accidents in that industry in 1906. Traumatic injuries to eyes show the highest proportion in the machinery-building industry, due to flying particles of metal. Injuries to lower extremities are highest in the sugar refineries and earthenware establishments.

In the two tables following the number and per cent of injuries of each class are shown by industries for the years 1901 to 1906.

NUMBER OF INJURIES OF EACH SPECIFIED CLASS, IN MANU

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel promysh]

Industry.	Burns and scalds.				Trau- matism without lacerations.	Wounds, fractures, etc.		
	One part of body, ex- cept eyes.	Sev- eral parts of body, ex- cept eyes.	Eyes.	Total.		Head, face (except eyes), and neck.	One eye.	Both eyes.
1901.								
Cotton manufactures.....	140	91	36	267	598	299	106	.....
Wool manufactures.....	20	22	5	47	107	53	12	.....
Silk manufactures.....	1	1	.....	2	1	1	.....	1
Flax, hemp, and jute manufactures.....	15	7	2	24	108	50	19	.....
Textiles, not specified.....	4	.....	.....	4	8	2	1	.....
Paper and printing.....	39	12	3	54	69	47	16	.....
Wood manufactures.....	7	11	2	20	201	100	19	1
Metals, machinery, and implements.....	677	225	283	1,185	2,103	588	907	10
Mineral products.....	24	22	10	56	69	61	20	.....
Animal products (hides, leather, etc.).....	11	20	4	35	17	24	2	.....
Food products.....	107	128	13	248	124	188	46	4
Chemical industry.....	45	46	34	125	123	32	20	1
All other industries.....	1	6	1	8	4	2	1	.....
Total.....	1,091	591	393	2,075	3,532	1,447	1,169	17
1902.								
Cotton manufactures.....	172	88	37	297	1,149	358	107	.....
Wool manufactures.....	21	20	2	43	136	34	17	.....
Silk manufactures.....	2	1	.....	3	5	1	.....	.....
Flax, hemp, and jute manufactures.....	9	5	2	16	119	40	14	1
Textiles, not specified.....	5	4	1	10	21	7	3	.....
Paper and printing.....	25	17	3	45	144	60	17	.....
Wood manufactures.....	11	17	2	30	319	93	20	.....
Metals, machinery, and implements.....	713	193	251	1,577	2,602	508	862	7
Mineral products.....	29	16	2	47	116	42	16	1
Animal products (hides, leather, etc.).....	9	13	8	30	32	12	5	1
Food products.....	164	161	14	339	207	172	49	2
Chemical industry.....	72	52	42	166	263	38	40	.....
All other industries.....	4	9	4	17	9	8	5	.....
Total.....	1,236	596	368	2,200	5,122	1,373	1,155	12
1903.								
Cotton manufactures.....	226	125	91	442	1,505	444	136	6
Wool manufactures.....	22	26	9	57	182	53	13	.....
Silk manufactures.....	3	7	1	11	4	6	2	.....
Flax, hemp, and jute manufactures.....	11	6	2	19	108	26	9	.....
Textiles, not specified.....	2	5	.....	7	18	4	3	.....
Paper and printing.....	22	23	4	49	157	42	22	.....
Wood manufactures.....	15	22	2	39	449	79	47	1
Metals, machinery, and implements.....	969	234	364	1,567	3,847	661	904	22
Mineral products.....	30	15	5	50	123	58	20	.....
Animal products (hides, leather, etc.).....	13	14	2	29	54	12	1	.....
Food products.....	184	184	25	393	598	191	61	.....
Chemical industry.....	77	68	42	187	321	50	32	2
All other industries.....	6	5	.....	11	12	5	1	.....
Total.....	1,580	734	547	2,861	7,378	1,631	1,251	31
1904.								
Cotton manufactures.....	196	116	55	367	1,519	378	132	5
Wool manufactures.....	20	31	13	64	196	44	15	.....
Silk manufactures.....	3	4	2	9	8	6	3	.....
Flax, hemp, and jute manufactures.....	16	4	3	23	270	52	36	.....
Textiles, not specified.....	11	5	1	17	27	10	5	.....
Paper and printing.....	35	49	10	94	142	39	30	1
Paper, parchment, and wall paper.....	19	25	5	49	61	17	15	1
Printing and engraving.....	5	6	1	12	19	8	1	.....
Paper and printing, not specified.....	11	18	4	33	59	14	14	.....
Wood manufactures.....	18	20	6	44	513	121	40	.....
Lumber sawing.....	11	13	5	29	440	105	33	.....
Woodworking, not specified.....	7	7	1	15	73	16	7	.....
Metals, machinery, and implements.....	2,065	411	564	3,040	5,908	1,006	1,930	25
Iron and steel.....	1,073	221	217	1,511	2,208	297	402	3
Machinery and implements.....	891	155	318	1,364	3,420	652	1,398	18
Metal working, not specified.....	101	35	29	165	280	57	130	4

FACTURING ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906.

Iennosti. Statistika neschastnykh sluchaev s rabochimi, 1901-1906.]

Wounds, fractures, etc.													Asphyxiation by gases.	Drown- ing.	All other in- juries.	Grand total.
Shoulder, arm, or wrist.			Fingers.			Lower extremi- ties.			Trunk.	Internal injuries without external wounds (chest, abdomen, skull).	Total.					
R'ht	Left.	Both.	Right hand.	Left hand.	Both hands	R'ht	Left.	Both.								
344	238	18	1,034	847	13	297	285	2	81	20	3,584	1		8	4,458	
83	85	1	248	212	2	35	41	3	14	5	794	4		1	953	
2	4	12	5							1	26		1		30	
64	51		139	156	1	40	37		9	4	570				702	
3	1		20	15		1	2				45				57	
67	55	3	203	193	3	61	53	3	17	8	729			3	856	
101	100	3	285	313	16	112	103	3	37	27	1,220			2	1,443	
580	646	28	1,785	1,960	25	837	761	17	176	86	8,406	2		15	11,711	
59	53	1	96	75	2	56	53	8	28	8	520			1	653	
19	21	14	34	42		12	16	1	7	4	196			1	262	
218	202	6	370	326	6	431	355	25	114	59	2,350	7		2	2,744	
45	40	3	124	116	2	63	32	6	11	22	517	3		1	613	
3	4		9	8		3	2			1	33				45	
1,588	1,500	89	4,352	4,263	70	1,948	1,740	68	494	245	18,990	17		9	24,744	
310	308	8	1,090	986	18	335	283	4	64	19	3,890	2		26	5,364	
98	64	3	261	241	1	33	41	3	12	12	820				999	
2	2		19	12	1	2					40	1			49	
43	38		115	108	2	22	27		16	1	427			10	572	
7	5	1	27	34		4	5		4		97			1	129	
73	63		202	189	3	42	41	3	15	8	716				905	
86	64		277	374	3	89	64	4	33	23	1,130			1	1,481	
487	510	6	1,775	1,827	26	695	685	21	160	78	7,647	2		3	11,418	
33	45	3	88	65	3	44	39	1	23	7	410	6		3	584	
27	17	1	34	39		15	6		7	5	169	1		1	242	
191	181	7	424	366	6	411	429	10	136	20	2,404	5		4	2,961	
41	49	1	127	132	4	53	47	5	21	16	574	4		47	1,054	
2	6		10	11		6	10		4		62			1	89	
1,400	1,352	30	4,449	4,384	67	1,751	1,677	51	496	189	18,386	21		12	25,847	
350	306	9	1,233	1,144	17	394	390	7	50	16	4,502			36	6,485	
87	90	1	261	235	1	36	38		13	6	834				1,073	
5	4		16	26		2	2		1	1	65				80	
40	26	2	117	104	1	39	26	1	12	3	406			10	543	
3	12	1	27	27		1	3			1	82				107	
57	55	1	200	186	2	57	56	1	20	4	703				909	
108	99	3	366	523	5	118	104	8	47	20	1,528			1	2,018	
580	552	8	2,177	2,325	36	739	771	20	160	81	9,036	3		2	14,478	
51	48		113	88	2	54	40	2	19	5	500			3	676	
12	15		45	45		8	11	2	7	4	162			1	265	
210	177	3	505	419	5	323	356	8	79	35	2,372	12		6	3,381	
37	48	3	174	156	2	57	60	2	16	18	657			71	1,236	
5	4	1	5	11		2	4		4		42			3	68	
1,545	1,436	32	5,239	5,289	71	1,830	1,861	51	428	194	20,889	15		4	31,319	
363	310	9	1,258	1,211	14	464	422	8	44	56	4,674			48	6,608	
106	88	2	314	256	4	45	49	4	20	21	968			1	1,229	
4	6		16	18		3	2				58				75	
56	59	5	229	199		59	63	1	15	19	793			7	1,093	
10	10		27	34		5	8			3	112			2	158	
102	89		303	272	4	58	63	2	22	16	1,001			4	1,241	
49	52		148	125	1	31	29	1	13	7	489			3	605	
35	12		72	61	2	8	2		4	3	208			1	240	
18	25		83	86	1	19	32	1	5	6	304				396	
142	119	4	445	754	4	158	139	8	62	26	2,022			1	2,584	
108	84	2	301	339	1	136	129	8	58	24	1,328			1	1,802	
1,374	1,154	23	3,964	4,389	77	1,415	1,430	40	269	305	17,199			91	26,241	
427	366	9	1,502	1,495	31	476	489	14	73	110	5,694	1		35	9,449	
673	708	12	2,221	2,631	41	886	873	25	187	179	10,504			43	15,333	
72	80	2	241	263	5	53	68	1	9	16	1,001			13	1,459	

NUMBER OF INJURIES OF EACH SPECIFIED CLASS, IN MANUFACTURING

Industry.	Burns and scalds.				Trau- matism without lacera- tions.	Wounds, fractures, etc.		
	One part of body, ex- cept eyes	Sev- eral parts of body, ex- cept eyes.	Eyes.	Total.		Head, face (except eyes), and neck.	One eye.	Both eyes.
1904—Concluded.								
Stone, clay, china, and glass.....	188	41	22	251	216	80	39	2
Glass manufactures.....	164	21	15	200	53	42	9	
China ware.....	3	4		7	7	4	1	
Earthenware.....	2	8		10	27	12	3	
Mineral products, not specified.....	19	8	7	34	129	22	26	2
Animal products (hides, leather, etc.).....	23	9	11	43	56	27	8	
Food products.....	204	128	23	355	805	236	71	1
Flour milling.....	8	14	3	25	118	31	17	1
Sugar and sugar refining.....	141	66	11	218	461	144	37	
Food products, not specified.....	55	48	9	112	226	61	17	
Chemical industry.....	112	64	62	238	251	55	67	2
Chemicals.....	57	29	42	128	61	23	21	2
Mineral oils.....	19	16	8	43	41	7	25	
Explosives.....	11	5	3	19	10	1	8	
Chemical industry, not specified.....	25	14	9	48	139	24	13	
All other industries.....	8	6	4	18	15	7	4	
Total.....	2,899	888	776	4,563	9,926	2,061	2,380	36
1905.								
Cotton manufactures.....	252	95	53	400	1,479	345	101	2
Wool manufactures.....	24	21	15	60	100	45	28	
Silk manufactures.....	2	3	2	7	17	6		
Flax, hemp, and jute manufactures.....	20	12	5	37	218	91	50	
Textile industries, not specified.....	9	5	1	15	14	5	4	
Paper and printing.....	49	32	12	93	116	58	28	1
Paper, parchment, and wall paper.....	28	18	10	56	64	32	11	1
Printing and engraving.....	5	2		7	25	3	1	
Paper and printing, not specified.....	16	12	2	30	27	23	16	
Wood manufactures.....	18	17	4	39	509	134	49	1
Lumber sawing.....	12	11	2	25	418	126	47	1
Wood working, not specified.....	6	6	2	14	91	8	2	
Metals, machinery, and implements.....	2,249	491	729	3,469	5,648	1,179	2,318	39
Iron and steel.....	1,144	256	251	1,651	1,850	288	499	13
Machinery and implements.....	1,022	197	447	1,666	3,577	846	1,704	24
Metal working, not specified.....	83	38	31	152	221	45	115	2
Stone, clay, china, and glass.....	173	41	26	240	217	76	47	1
Glass manufactures.....	161	30	19	210	45	29	22	1
China ware.....	1			1	3	3		
Earthenware.....		2	1	3	27	10	4	
Mineral products, not specified.....	11	9	6	26	142	34	21	
Animal products (hides, leather, etc.).....	25	23	12	60	67	34	19	
Food products.....	188	151	32	371	765	203	103	1
Flour milling.....	7	9	5	21	156	22	20	1
Sugar and sugar refining.....	135	104	21	260	479	118	52	
Food products, not specified.....	46	38	6	90	130	63	31	
Chemical industry.....	105	97	83	285	195	61	60	1
Chemicals.....	52	36	61	149	67	24	27	1
Mineral oils.....	12	14	6	32	30	5	12	
Explosives.....	9	8	9	26	4	4	4	
Chemical industry, not specified.....	32	39	7	78	94	28	17	
All other industries.....	3	12	3	18	19	17	5	
Total.....	3,117	1,000	977	5,094	9,364	2,254	2,812	46
1906.								
Cotton manufactures.....	301	169	109	579	2,516	591	185	
Wool manufactures.....	35	38	11	84	304	106	27	
Silk manufactures.....	8	7	1	16	22	2	1	
Flax, hemp, and jute manufactures.....	29	15	12	56	319	153	61	
Textile industries, not specified.....	9	8	1	18	38	10	13	
Paper and printing.....	34	22	11	67	85	66	38	1
Paper, parchment, and wall paper.....	15	10	5	30	43	27	21	
Printing and engraving.....	3	3		6	17	13	6	1
Paper and printing, not specified.....	16	9	26	11	31	25	6	

ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Continued.

Wounds, fractures, etc.													Total.	As-phyxiation by gases.	Drown ing.	All other in-jur-ies.	Grand total.
Shoulder, arm, or wrist.			Fingers.			Lower extremi-ties.			Trunk.	Internal injuries without external wounds (chest, abdomen, skull).							
R'ht	Left.	Both.	Right hand.	Left hand.	Both hands	R'ht	Left.	Both.									
188	136	5	274	240	11	130	142	3	41	24	1,315			1	5	1,788	
140	95	2	174	126	7	63	70	1	11	9	749					1,002	
2	6		11	12		3	6		4	2	51					65	
9	12	1	15	15	1	23	20	1	8	2	122			1	2	162	
37	23	2	74	87	3	41	46	1	18	11	393				3	559	
19	26		72	79		23	23	2	12	15	306				75	480	
242	242	7	640	574	10	390	422	14	67	55	2,971	6	3	22	4,162		
35	37	1	130	95	1	29	22	1	12	11	423	2	1	13	582		
86	87	5	240	267	4	302	341	11	31	18	1,573	3	1	4	2,260		
121	118	1	270	212	5	59	59	2	24	26	975	1	1	5	1,320		
76	63	1	201	241	4	100	85	3	29	40	967	1		12	1,469		
17	16	1	50	50	1	35	26	2	9	19	272			8	469		
13	6		25	36		8	6		3	5	134				218		
	5		9	9		3	6	1		3	45				74		
46	36		117	146	3	54	47		17	13	516	1		4	708		
2	3		8	8		3	4	1	2	2	44				77		
2,482	2,305	56	7,751	8,275	128	2,853	2,852	86	583	582	32,430	8	7	271	47,205		
423	331	10	1,365	1,256	26	520	557	13	78	75	5,152	2		77	7,110		
148	112	4	341	291	6	55	73	1	18	31	1,153			3	1,316		
1	8		21	14		1	5			3	59				83		
107	115	5	287	249	5	94	101	3	28	17	1,152			1	1,408		
18	15		41	41	1	11	4	1	3	5	149				178		
101	95	2	273	276	3	97	99	8	32	25	1,098			2	1,309		
60	53	2	101	119		48	45	4	23	15	514			2	636		
15	12		77	57	1	4	11	1	4	4	187				219		
26	30		95	100	2	45	43	3	8	6	397				454		
148	117	4	441	682	4	160	161	14	74	23	2,012		1	6	2,567		
114	90	4	281	276	3	136	139	12	64	16	1,309		1	3	1,756		
34	27		160	406	1	24	22	2	10	7	703			3	811		
1,569	1,493	38	4,591	4,911	92	1,809	1,934	58	480	471	20,982		1	56	30,156		
456	454	9	1,518	1,505	30	584	621	10	134	142	6,293			20	9,814		
984	966	29	2,802	3,109	55	1,149	1,226	44	328	308	13,574		1	33	18,851		
99	73		271	297	7	76	87	4	18	21	1,115			3	1,491		
163	132	1	286	260	2	138	163	3	45	17	1,334			2	2,793		
123	91	1	144	143	2	63	78	2	19	5	723				978		
5	7		14	11		4	8		3		55				59		
10	10		23	24		17	22		5	2	127			2	159		
25	24		105	82		54	55	1	18	10	429				597		
36	28		90	111	2	25	41		17	14	417		1	2	547		
296	285	13	703	658	12	458	451	15	91	52	3,341	12		18	4,507		
44	35	2	113	97		23	19	3	8	9	396	4		8	585		
90	94	7	260	271		336	351	10	52	22	1,663	7		4	2,413		
162	156	4	330	290	12	99	81	2	31	21	1,282	1		6	1,509		
67	67	3	236	256	3	103	111	8	30	45	1,051	5		7	1,543		
25	17	1	53	63	3	28	28	1	11	24	306			4	526		
5	7		20	28		6	10		1	4	98				160		
8	4		17	12		5	11		3		68				98		
29	39	2	146	153		64	62	7	15	17	579	5		3	759		
9		1	19	20		13	9	1	5	1	100			1	138		
3,086	2,848	81	8,694	9,025	156	3,484	3,709	125	901	779	38,000	19	3	175	52,655		
597	461	10	1,906	1,859	25	780	792	17	130	77	7,430			81	10,606		
146	124	3	442	364	3	101	85	6	29	47	1,483		2	5	1,878		
4	7		26	22		4	1				67				105		
142	111		372	353	5	125	124	4	55	29	1,534		1	6	1,916		
13	16		50	43	1	9	16		4	9	184				240		
106	90	1	267	253	2	101	82	5	36	16	1,064		1	2	1,219		
64	49		115	90		45	40	4	22	7	484		1	2	560		
22	14		74	63	1	9	5		3	3	211				234		
20	27	1	78	100	1	47	37	1	14	6	369				425		

NUMBER OF INJURIES IN EACH SPECIFIED CLASS, IN MANUFACTURING

Industry.	Burns and scalds.				Trau- matism without lacera- tions.	Wounds, fractures, etc.		
	One part of body, ex- cept eyes.	Sev- eral parts of body, ex- cept eyes.	Eyes.	Total.		Head, face (except eyes), and neck.	One eye.	Both eyes.
1906—Concluded.								
Wood manufactures.....	15	18	4	37	476	130	59	.....
Lumber sawing.....	9	13	1	23	443	113	47	.....
Wood working, not specified.....	6	5	3	14	33	17	12	.....
Metals, machinery, and implements.....	2,021	508	891	3,420	5,823	1,332	2,712	56
Iron and steel.....	1,045	289	292	1,626	2,065	354	527	17
Machinery and implements.....	875	179	555	1,609	3,503	922	2,038	37
Metal working, not specified.....	101	40	44	185	255	56	147	2
Stone, clay, china, and glass.....	156	38	24	218	248	68	62	2
Glass manufactures.....	125	14	16	155	58	24	17	.....
China ware.....	1	4	.....	5	7	7	3	.....
Earthenware.....	.....	4	.....	4	23	5	3	.....
Mineral products, not specified.....	30	16	8	54	160	32	39	2
Animal products (hides, leather, etc.).....	38	19	23	80	109	27	13	1
Food products.....	214	160	54	428	942	260	140	12
Flour milling.....	12	17	5	34	184	34	20	9
Sugar and sugar refining.....	159	100	23	282	607	149	82	1
Food products, not specified.....	43	43	26	112	151	77	38	2
Chemical industry.....	104	84	89	277	185	67	71	1
Chemicals.....	55	36	62	153	52	29	28	.....
Mineral oils.....	11	8	7	26	49	9	13	.....
Explosives.....	5	9	2	16	2	.....	2	.....
Chemical industry, not specified.....	33	31	18	82	82	29	28	1
All other industries.....	17	7	7	31	47	10	15	2
Total.....	2,981	1,093	1,237	5,311	11,114	2,822	3,397	75

ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Concluded.

Wounds, fractures, etc.												As-phyxiation by gases.	Drown- ing.	All oth- er in- juries.	Grand total.
Shoulder, arm, or wrist.			Fingers.			Lower extremi- ties.			Trunk.	Internal injuries without external wounds (chest, abdomen, skull).	Total.				
R'ht	Left.	Both.	Right hand.	Left hand.	Both hands	R'ht	Left.	Both.							
147	155	3	513	841	6	180	208	10	100	27	2,379	.....	1	3	2,896
116	118	2	329	304	3	166	182	9	86	25	1,500	.....	1	3	1,970
31	37	1	184	537	3	14	26	1	14	2	879	.....	.....	.....	926
1,585	1,527	22	4,577	4,912	65	1,948	1,846	67	577	594	21,820	2	.....	35	31,100
575	517	16	1,520	1,503	20	639	630	20	143	194	6,675	2	.....	4	10,372
921	888	4	2,736	3,055	43	1,204	1,136	44	410	364	13,802	.....	.....	28	18,942
89	122	2	321	354	2	105	80	3	24	36	1,343	.....	.....	3	1,786
183	171	5	363	338	7	169	185	7	68	31	1,659	3	.....	8	2,138
125	115	5	194	136	7	75	68	2	24	7	799	.....	1	.....	1,013
6	12	.....	15	10	.....	9	14	.....	6	1	83	1	.....	.....	96
15	8	.....	25	28	.....	19	26	2	8	9	148	1	1	4	181
37	36	.....	129	164	.....	66	77	3	30	14	629	1	.....	4	848
48	40	.....	123	148	3	33	38	1	18	18	511	1	.....	3	704
353	279	9	795	779	12	563	575	29	170	64	4,040	7	3	8	5,428
57	43	1	129	113	1	29	30	4	19	13	502	5	3	2	730
110	104	4	335	365	5	427	444	18	95	36	2,175	1	.....	1	3,066
186	132	4	331	301	6	107	101	7	56	15	1,363	1	.....	5	1,632
87	64	1	264	256	2	147	147	6	46	45	1,204	1	.....	3	1,670
25	21	1	68	71	.....	47	35	2	22	19	368	1	.....	2	576
10	3	.....	21	21	.....	4	11	1	7	6	106	.....	.....	.....	181
4	9	.....	11	23	1	2	15	.....	2	2	71	.....	.....	.....	89
48	31	.....	164	141	1	94	86	3	15	18	659	.....	.....	1	824
10	12	1	31	34	.....	10	8	.....	4	24	161	.....	.....	3	242
3,421	3,057	55	9,729	10,202	131	4,170	4,107	152	1,237	981	43,536	14	10	157	60,142

PER CENT OF TOTAL INJURIES IN EACH SPECIFIED CLASS, IN

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel promysh]

Industry.	Burns and scalds.				Traumatism without lacerations.	Wounds, fractures, etc.		
	One part of body, except eyes.	Several parts of body, except eyes.	Eyes.	Total.		Head, face (except eyes), and neck.	One eye.	Both eyes.
1901.								
Cotton manufactures.....	3.14	2.04	0.81	5.99	13.42	6.71	2.38	.....
Wool manufactures.....	2.10	2.31	.52	4.93	11.23	5.56	1.26	.....
Silk manufactures.....	3.33	3.33	.....	6.66	3.34	3.33	.....	3.33
Flax, hemp, and jute manufactures.....	2.14	1.00	.28	3.42	15.38	7.12	2.71	.....
Textiles, not specified.....	7.02	.....	.....	7.02	14.04	3.51	1.75	.....
Paper and printing.....	4.56	1.40	.35	6.31	8.06	5.49	1.87	.....
Wood manufactures.....	.49	.76	.14	1.39	13.93	6.93	1.32	.06
Metals, machinery, and implements.....	5.79	1.92	2.41	10.12	17.95	5.02	7.74	.09
Mineral products.....	3.68	3.37	1.53	8.58	10.57	9.34	3.07	.....
Animal products (hides, leather, etc.).....	4.20	7.63	1.53	13.36	6.49	9.16	.76	.....
Food products.....	3.90	4.67	.47	9.04	4.52	6.85	1.68	.14
Chemical industry.....	5.42	5.54	4.10	15.06	14.82	3.86	2.41	.12
All other industries.....	2.22	13.33	2.22	17.77	8.89	4.44	2.22	.....
Total.....	4.41	2.39	1.59	8.39	14.27	5.85	4.72	.07
1902.								
Cotton manufactures.....	3.20	1.65	.69	5.54	21.42	6.68	1.99	.....
Wool manufactures.....	2.10	2.00	.20	4.30	13.62	3.40	1.70	.....
Silk manufactures.....	4.08	2.04	.....	6.12	10.21	2.04	.....	.....
Flax, hemp, and jute manufactures.....	1.57	.88	.35	2.80	20.80	6.99	2.45	.17
Textiles, not specified.....	3.88	3.10	.77	7.75	16.28	5.42	2.33	.....
Paper and printing.....	2.76	1.88	.33	4.97	15.91	6.63	1.88	.....
Wood manufactures.....	.74	1.15	.13	2.02	21.54	6.28	1.35	.....
Metals, machinery, and implements.....	6.24	1.69	2.20	10.13	22.79	4.45	7.55	.06
Mineral products.....	4.95	2.74	.36	8.05	19.86	7.19	2.74	.17
Animal products (hides, leather, etc.).....	3.72	5.37	3.31	12.40	13.22	4.96	2.07	.41
Food products.....	5.54	5.44	.47	11.45	6.99	5.81	1.65	.07
Chemical industry.....	6.83	4.93	3.99	15.75	24.95	3.61	3.80	.....
All other industries.....	4.49	10.12	4.49	19.10	10.11	8.99	5.64	.....
Total.....	4.78	2.31	1.42	8.51	19.82	5.31	4.47	.05
1903.								
Cotton manufactures.....	3.48	1.93	1.40	6.81	23.21	6.85	2.10	.09
Wool manufactures.....	2.05	2.42	.84	5.31	16.96	4.94	1.21	.....
Silk manufactures.....	3.75	8.75	1.25	13.75	5.00	7.50	2.50	.....
Flax, hemp, and jute manufactures.....	2.03	1.10	.37	3.50	19.89	4.79	1.66	.....
Textiles, not specified.....	1.87	4.67	.....	6.54	16.82	3.74	2.80	.....
Paper and printing.....	2.42	2.53	.44	5.39	17.27	4.62	2.42	.....
Wood manufactures.....	.74	1.09	.10	1.93	22.25	3.91	2.33	.05
Metals, machinery, and implements.....	6.69	1.62	2.52	10.83	26.57	4.57	6.24	.15
Mineral products.....	4.44	2.22	.74	7.40	18.20	8.58	2.96	.....
Animal products (hides, leather, etc.).....	4.91	5.28	.75	10.94	20.38	4.53	.38	.....
Food products.....	5.44	5.44	.74	11.62	17.69	5.65	1.80	.....
Chemical industry.....	6.23	5.50	3.40	15.13	25.97	4.05	2.59	.16
All other industries.....	8.83	7.35	.....	16.18	17.65	7.35	1.47	.....
Total.....	5.04	2.34	1.75	9.13	23.56	5.21	3.99	.10
1904.								
Cotton manufactures.....	2.97	1.75	.83	5.55	22.99	5.72	2.00	.08
Wool manufactures.....	1.63	2.52	1.06	5.21	15.95	3.58	1.22	.....
Silk manufactures.....	4.00	5.33	2.67	12.00	10.67	8.00	4.00	.....
Flax, hemp, and jute manufactures.....	1.47	.37	.27	2.11	24.70	4.75	3.29	.....
Textile industries, not specified.....	6.96	3.16	.63	10.75	17.09	6.33	3.16	.....
Paper and printing.....	2.82	3.95	.81	7.58	11.44	3.14	2.42	.08
Paper, parchment, and wall paper.....	3.14	4.13	.83	8.10	10.58	2.81	2.48	.17
Printing and engraving.....	2.08	2.50	.42	5.00	7.92	3.33	.42	.....
Paper and printing, not specified.....	2.78	4.54	1.01	8.33	14.90	3.54	3.54	.....
Wood manufactures.....	.70	.77	.23	1.70	19.86	4.68	1.54	.....
Lumber sawing.....	.61	.72	.28	1.61	24.41	5.83	1.83	.....
Woodworking, not specified.....	.90	.90	.12	1.92	9.34	2.05	.90	.....

MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906.

Iennosti. Statistika neschastnykh sluchaev s rabochimi, 1901-1906.]

Wounds, fractures, etc.													Asphyxiation by gases.	Drowning.	All other injuries.
Shoulder, arm, or wrist.			Fingers.			Lower extremity.			Trunk.	Internal injuries without external wounds (chest, abdomen, skull).	Total.				
Right.	Left.	Both.	Right hand.	Left hand.	Both hands.	Right.	Left.	Both.							
7.72	5.34	0.40	23.19	19.00	0.29	6.66	6.39	0.04	1.82	0.45	80.39	0.02		0.18	
8.71	8.92	.11	26.02	22.25	.21	3.67	4.30	.32	1.47	.52	83.32	.42		.10	
6.67	13.33	40.00	16.67							3.33	86.66		3.34		
9.12	7.27		19.80	22.22	.14	5.70	5.27		1.28	.57	81.20				
5.26	1.75		35.09	26.32		1.75	3.51				78.94				
7.83	6.42	.35	23.72	22.55	.35	7.13	6.19	.35	1.98	.93	85.16		.12	.35	
7.00	6.93	.21	19.75	21.69	1.11	7.76	7.14	.21	2.56	1.87	84.54		.14		
4.95	5.52	.24	15.24	16.74	.21	7.15	6.50	.15	1.50	.73	71.78	.02		.13	
9.04	8.12	.15	14.70	11.48	.31	8.58	8.11	1.22	4.29	1.22	79.63		.15	1.07	
7.25	8.02	5.34	12.93	16.03		4.58	6.11	.38	2.67	1.53	74.81		.38	4.96	
7.94	7.36	.22	13.49	11.88	.22	15.71	12.94	.91	4.15	2.15	85.64		.26	.47	
5.42	4.82	.36	14.94	13.98	.24	7.59	3.86	.72	1.32	2.65	62.29	.36	.12	7.35	
6.67	8.89		20.00	17.78		6.67	4.45			2.22	73.34				
6.42	6.06	.36	17.59	17.23	.28	7.87	7.03	.27	2.00	.99	76.74	.07	.04	.49	
5.78	5.74	.15	20.32	18.38	.34	6.25	5.27	.07	1.19	.36	72.52	.04		.48	
9.81	6.41	.30	26.13	24.12	.10	3.30	4.11	.30	1.20	1.20	82.08				
4.08	4.08		38.78	24.49	2.04	4.08			2.04		81.63	2.04			
7.52	6.64		20.11	18.88	.35	3.85	4.72		2.80	.17	74.65			1.75	
5.42	3.88	.77	20.93	26.36		3.10	3.88		3.10		75.19			.78	
8.07	6.96		22.32	20.89	.33	4.64	4.53	.33	1.66	.88	79.12				
5.81	4.32		18.70	25.26	.20	6.01	4.32	.27	2.23	1.55	76.30		.07	.07	
4.27	4.47	.05	15.55	16.00	.23	6.08	6.00	.18	1.40	.68	66.97	.02	.03	.06	
5.65	7.71	.51	15.07	11.13	.51	7.54	6.68	.17	3.94	1.20	70.21	1.03	.51	.34	
11.16	7.03	.41	14.05	16.12		6.20	2.48		2.88	2.07	69.84	.41	.41	3.72	
6.45	6.11	.24	14.32	12.36	.20	13.88	14.49	.34	4.59	.67	81.18		.17	.14	
3.89	4.65	.09	12.05	12.52	.38	5.03	4.46	.47	1.99	1.52	54.46	.38		4.46	
2.25	6.74		11.23	12.36		6.74	11.23		4.49		69.67			1.12	
5.42	5.23	.12	17.21	16.96	.26	6.77	6.49	.19	1.92	.73	71.13	.08	.05	.41	
5.40	4.72	.14	19.01	17.64	.25	6.08	6.01	.11	.77	.25	69.42			.56	
8.11	8.39	.09	24.33	21.90	.09	3.36	3.54		1.21	.56	77.73				
6.25	5.00		20.00	32.50		2.50	2.50		1.25	1.25	81.25				
7.37	4.79	.37	21.55	19.15	.18	7.18	4.79	.18	2.21	.55	74.77			1.84	
2.80	11.22	.94	25.23	25.23		.94	2.80			.94	76.64				
6.27	6.05	.11	22.00	20.47	.22	6.27	6.16	.11	2.20	.44	77.34				
5.35	4.91	.15	18.14	25.92	.25	5.84	5.15	.40	2.33	.99	75.72		.05	.05	
4.01	3.81	.05	15.04	16.06	.25	5.10	5.33	.14	1.10	.56	62.41	.02	.01	.16	
7.54	7.10		16.72	13.02	.29	7.99	5.92	.29	2.81	.74	73.96			.44	
4.53	5.66		16.98	16.98		3.02	4.16	.75	2.64	1.50	61.13		.38	7.17	
6.21	5.24	.09	14.94	12.39	.15	9.55	10.53	.24	2.34	1.03	70.16	.35		.18	
2.99	3.89	.24	14.08	12.62	.16	4.61	4.85	.16	1.90	1.46	53.16			5.74	
7.35	5.88	1.47	7.35	16.18		2.95	5.88		5.88		61.76			4.41	
4.93	4.59	.10	16.73	16.89	.23	5.84	5.94	.16	1.37	.62	66.70	.05	.01	.55	
5.49	4.69	.15	19.04	18.33	.21	7.02	6.38	.12	.68	.84	70.73			.73	
8.62	7.16	.16	25.55	20.83	.33	3.66	3.98	.33	1.63	1.71	78.76			.08	
5.33	8.00		21.33	24.00		4.00	2.67				77.33				
5.12	5.40	.46	20.95	18.21		5.40	5.77	.09	1.37	1.74	72.55			.64	
6.33	6.33		17.09	21.52		3.16	5.07			1.90	70.89			1.27	
8.21	7.17		24.42	21.92	.32	4.67	5.08	.16	1.78	1.29	80.66			.37	
8.10	8.59		24.46	20.66	.17	5.12	4.79	.17	2.15	1.15	80.82			.50	
14.58	5.00		30.00	25.42	.83	3.33	.83		1.67	1.25	86.66			.42	
4.54	6.31		20.96	21.72	.25	4.80	8.08	.25	1.26	1.52	76.77				
5.50	4.61	.15	17.22	29.18	.15	6.12	5.38	.31	2.40	1.01	78.25		.04	.15	
5.99	4.66	.11	16.70	18.82	.06	7.55	7.16	.44	3.22	1.33	73.70		.06	.22	
4.35	4.48	.25	18.42	53.07	.38	2.82	1.26		.51	.25	88.74				

PER CENT OF TOTAL INJURIES IN EACH SPECIFIED CLASS, IN MANU

Industry.	Burns and scalds.				Traumatism without lacerations.	Wounds, fractures, etc.		
	One part of body, except eyes.	Several parts of body, except eyes.	Eyes.	Total.		Head, face (except eyes), and neck.	One eye.	Both eyes.
1904—Concluded.								
Metals, machinery, and implements.....	7.87	1.57	2.15	11.59	22.51	3.83	7.35	0.10
Iron and steel.....	11.35	2.34	2.30	15.99	23.37	3.24	4.25	.03
Machinery and implements.....	5.81	1.01	2.07	8.89	22.31	4.25	9.12	.12
Metal working, not specified.....	6.92	2.40	1.99	11.31	19.39	3.91	8.91	.27
Stone, clay, china, and glass.....	10.51	2.29	1.23	14.03	12.08	4.47	2.18	.11
Glass manufactures.....	16.37	2.09	1.50	19.96	5.29	4.19	.90	.....
China ware.....	4.62	6.15	.....	10.77	10.77	6.15	1.54	.....
Earthenware.....	1.23	4.94	.....	6.17	16.67	7.41	1.85	.....
Mineral products, not specified.....	3.40	1.43	1.35	6.08	23.08	3.94	4.65	.36
Animal products (hides, leather, etc.).....	4.79	1.88	2.29	8.96	11.67	5.63	1.67	.....
Food products.....	4.90	3.08	.55	8.53	19.34	5.67	1.71	.02
Flour milling.....	1.37	2.41	.52	4.30	20.28	5.33	2.92	.17
Sugar and sugar refining.....	6.24	2.92	.49	9.65	20.40	6.37	1.64	.....
Food products, not specified.....	4.17	3.63	.68	8.48	17.12	4.62	1.29	.....
Chemical industry.....	7.62	4.36	4.22	16.20	17.09	3.74	4.56	.14
Chemicals.....	12.15	6.18	8.96	27.29	13.01	4.90	4.48	.43
Mineral oils.....	8.71	7.34	3.67	19.72	18.81	3.21	11.47	.....
Explosives.....	14.86	6.76	4.05	25.67	13.52	1.35	10.82	.....
Chemical industry, not specified.....	3.53	1.98	1.27	6.78	19.63	3.39	1.84	.....
All other industries.....	10.39	7.79	5.19	23.37	19.48	9.09	5.19	.....
Total.....	6.14	1.88	1.64	9.68	21.03	4.37	5.04	.08
1905.								
Cotton manufactures.....	3.54	1.34	.75	5.63	20.80	4.85	1.42	.03
Wool manufactures.....	1.82	1.60	1.14	4.56	7.60	3.41	2.13	.....
Silk manufactures.....	2.41	3.61	2.41	8.43	20.48	7.23	.....	.....
Flax, hemp, and jute manufactures.....	1.42	.85	.36	2.63	15.48	6.46	3.55	.....
Textiles, not specified.....	5.06	2.81	.56	8.43	7.86	2.81	2.25	.....
Paper and printing.....	3.74	2.45	.92	7.11	8.83	4.43	2.14	.08
Paper, parchment, and wall paper.....	4.40	2.83	1.58	8.81	10.06	5.03	1.73	.16
Printing and engraving.....	2.28	.91	.....	3.19	11.42	1.37	.46	.....
Paper and printing, not specified.....	3.53	2.64	.44	6.61	5.95	5.07	3.52	.....
Wood manufactures.....	.70	.66	.16	1.52	19.83	5.22	1.91	.04
Lumber sawing.....	.68	.63	.11	1.42	23.80	7.18	2.68	.06
Woodworking, not specified.....	.74	.74	.25	1.73	11.22	.99	.25	.....
Metals, machinery, and implements.....	7.45	1.63	2.42	11.50	18.72	3.92	7.69	.13
Iron and steel.....	11.66	2.60	2.56	16.82	18.85	2.93	5.08	.13
Machinery and implements.....	5.42	1.04	2.37	8.83	18.98	4.49	9.04	.13
Metal working, not specified.....	5.57	2.55	2.08	10.20	14.82	3.02	7.71	.13
Stone, clay, china, and glass.....	9.65	2.29	1.45	13.39	12.10	4.24	2.62	.06
Glass manufactures.....	16.46	3.07	1.94	21.47	4.60	2.97	2.25	.10
China ware.....	1.69	.....	.....	1.69	5.09	5.09	.....	.....
Earthenware.....	.....	1.26	.63	1.89	16.98	6.29	2.52	.....
Mineral products, not specified.....	1.84	1.51	1.00	4.35	23.79	5.70	3.52	.....
Animal products (hides, leather, etc.).....	4.57	4.21	2.19	10.97	12.25	6.22	3.47	.....
Food products.....	4.17	3.35	.71	8.23	16.97	4.50	2.29	.02
Flour milling.....	1.20	1.54	.85	3.59	26.67	3.76	3.42	.17
Sugar and sugar refining.....	5.59	4.31	.87	10.77	19.85	4.89	2.15	.....
Food products, not specified.....	3.04	2.52	.40	5.96	8.61	4.17	2.05	.....
Chemical industry.....	6.80	6.29	5.38	18.47	12.64	3.95	3.89	.06
Chemicals.....	9.89	6.84	11.60	28.33	12.74	4.56	5.13	.19
Mineral oils.....	7.50	8.75	3.75	20.00	18.75	3.13	7.50	.....
Explosives.....	9.18	8.17	9.18	26.53	4.08	4.08	4.08	.....
Chemical industry, not specified.....	4.22	5.14	.92	10.28	12.38	3.69	2.24	.....
All other industries.....	2.17	8.70	2.17	13.04	13.77	12.31	3.62	.....
Total.....	5.92	1.90	1.85	9.67	17.78	4.28	5.34	.09
1906.								
Cotton manufactures.....	2.84	1.59	1.03	5.46	23.72	5.57	1.74	.....
Wool manufactures.....	1.86	2.02	.59	4.47	16.19	5.65	1.44	.....
Silk manufactures.....	7.62	6.67	.95	15.24	20.95	1.91	.95	.....
Flax, hemp, and jute manufactures.....	1.51	.78	.63	2.92	16.65	7.98	3.18	.....
Textiles, not specified.....	3.75	3.33	.42	7.50	15.83	4.17	5.42	.....

FACTURING ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Continued.

Wounds, fractures, etc.														Asphyxiation by gases.	Drown- ing.	All other in- juries.
Shoulder, arm, or wrist.			Fingers.			Lower extremity.			Trunk.	Internal injuries without external wounds (chest, abdomen, skull).	Total.					
Right.	Left.	Both.	Right hand.	Left hand.	Both hands.	Right.	Left.	Both.								
4.47	4.40	0.09	15.11	16.72	0.29	5.39	5.45	0.15	1.03	1.16	65.54	0.01	0.01	0.34		
4.50	3.87	.09	15.89	15.81	.32	5.03	5.17	.14	.76	1.16	60.26	.01		.37		
4.39	4.61	.08	14.49	17.16	.27	5.78	5.69	.16	1.22	1.17	68.51		.01	.28		
4.93	5.48	.14	16.52	18.03	.34	3.63	4.66	.07	.62	1.10	68.61			.89		
10.52	7.61	.28	15.32	13.42	.62	7.27	7.94	.17	2.29	1.35	73.55		.06	.28		
13.97	9.48	.20	17.37	12.57	.69	6.29	6.99	.10	1.10	.90	74.75					
3.08	9.23		16.92	18.46		4.62	9.23		6.15	3.08	78.46					
5.55	7.41	.62	9.26	9.26	.62	14.20	12.34	.62	4.94	1.23	75.31		.62	1.23		
6.62	4.11	.36	13.24	15.56	.54	7.33	8.22	.18	3.22	1.97	70.30			.54		
3.96	5.42		15.00	16.46		4.79	4.79	.42	3.50	3.11	63.75			16.62		
5.81	5.81	.17	15.38	13.79	.24	9.37	10.14	.34	1.61	1.32	71.38	.14	.08	.53		
6.01	6.35	.17	22.33	16.32	.17	4.98	3.78	.17	2.06	1.89	72.65	.37	.17	2.23		
3.80	3.85	.22	10.62	11.81	.18	13.36	15.09	.49	1.37	.80	69.60	.13	.04	.18		
9.17	8.94	.08	20.45	16.06	.38	4.47	4.47	.15	1.82	1.96	73.86	.08	.08	.38		
5.17	4.29	.97	13.68	16.41	.27	6.81	5.79	.20	1.97	2.72	65.82	.07				
3.63	3.41	.21	10.66	10.66	.21	7.46	5.54	.43	1.92	4.05	57.99			1.71		
5.96	2.75		11.47	16.52		3.67	2.75		1.38	2.29	61.47					
	6.76		12.16	12.16		4.05	8.11	1.35		4.05	60.81					
6.50	5.08		16.52	20.62	.42	7.63	6.64		2.40	1.84	72.88	.14		.57		
2.60	3.90		10.39	10.39		3.90	5.19	1.30	2.60	2.60	57.15					
5.26	4.88	.12	16.42	17.53	.27	6.04	6.04	.18	1.24	1.23	68.70	.02	.01	.58		
5.95	5.35	.14	19.20	17.67	.37	7.31	7.83	.18	1.10	1.05	72.46	.03		1.08		
11.25	8.51	.30	25.91	22.11	.46	4.18	5.55	.08	1.37	2.35	87.61			.23		
1.21	9.64		25.30	16.87		1.21	6.02			3.61	71.09					
7.60	8.17	.36	20.38	17.68	.36	6.68	7.17	.21	1.99	1.21	81.82			.07		
10.11	8.43		23.03	23.03	.56	6.18	2.25	.56	1.69	2.81	83.71					
7.72	7.26	.15	20.86	21.08	.23	7.41	7.56	.61	2.44	1.91	83.88			.15		
9.43	8.33	.31	15.88	18.71		7.55	7.08	.63	3.62	2.36	80.82			.31		
6.84	5.47		35.16	26.03	.46	1.83	5.02	.46	.46	1.83	85.39					
5.73	6.61		20.32	22.03	.44	9.91	9.47	.66	1.76	1.32	87.44					
5.77	4.56	.16	17.18	26.57	.16	6.23	6.27	.54	2.88	.89	78.38	.04		.23		
6.49	5.12	.23	16.00	15.72	.17	7.74	7.92	.68	3.65	.91	74.55		.07	.17		
4.19	3.33		19.73	50.06	.12	2.96	2.71	.25	1.23	.86	86.68			.37		
5.20	4.95	.13	15.22	16.28	.31	6.00	6.41	.19	1.59	1.56	69.58		.01	.19		
4.95	4.63	.09	15.47	15.34	.31	5.95	6.33	.10	1.36	1.45	64.12			.21		
5.22	5.13	.15	14.86	16.49	.29	6.10	6.50	.23	1.74	1.63	72.00		.01	.18		
6.64	4.90		18.18	19.92	.47	5.10	5.84	.26	1.20	1.41	74.78			.20		
9.09	7.36	.06	15.95	14.50	.11	7.70	9.09	.17	2.50	.95	74.40			.11		
12.58	9.30	.10	14.72	14.62	.21	6.44	7.98	.21	1.94	.51	73.93					
8.47	11.86		23.73	18.64		6.78	13.56		5.09		93.22					
6.29	6.29		14.46	15.09		10.69	13.84		3.14	1.26	79.87			1.26		
4.19	4.02		17.59	13.74		9.04	9.21	.17	3.01	1.67	71.86					
6.58	5.12		16.45	20.29	.37	4.57	7.49		3.11	2.56	76.23	.18		.37		
6.57	6.32	.29	15.60	14.60	.27	10.16	10.01	.33	2.02	1.15	74.13	.27		.40		
7.52	5.98	.34	19.32	16.58		3.93	3.25	.51	1.37	1.54	67.69	.68		1.37		
3.73	3.90	.29	10.77	11.23		13.92	14.55	.41	2.15	.91	68.92	.29		.17		
10.74	10.34	.27	21.87	19.22	.80	6.56	5.37	.13	2.05	1.39	84.96	.07		.40		
4.34	4.34	.20	15.29	16.59	.20	6.68	7.19	.52	1.94	2.92	68.11	.33		.45		
4.76	3.23	.19	10.08	11.98	.57	5.32	5.32	.19	2.09	4.56	58.17			.76		
3.13	4.37		12.50	17.50		3.75	6.25		.62	2.50	61.25					
8.17	4.08		17.35	12.24		5.10	11.23		3.06		69.39					
3.82	5.14	.26	19.23	20.16		8.42	8.17	.92	1.98	2.24	76.28	.66		.40		
6.52		.73	13.77	14.49		9.42	6.52	.73	3.62	.73	72.46			.73		
5.86	5.41	.15	16.51	17.14	.30	6.6	7.04	.24	1.71	1.48	72.17	.04	.01	.33		
5.63	4.34	.09	17.98	17.53	.23	7.35	7.47	.16	1.23	.73	70.05			.77		
7.77	6.60	.16	23.54	19.38	.16	5.38	4.53	.32	1.54	2.50	78.97		.10	.27		
3.81	9.67		24.76	20.95		3.81	.95				63.81					
7.42	5.79		19.42	18.42	.26	6.52	6.47	.21	2.87	1.52	80.06		.05	.32		
5.42	6.67		20.83	17.92	.41	3.75	6.67		1.66	3.75	76.67					

PER CENT OF TOTAL INJURIES IN EACH SPECIFIED CLASS, IN MANU

Industry.	Burns and scalds.				Trau- matism without lacerations.	Wounds, fractures, etc.		
	One part of body, ex- cept eyes.	Sev- eral parts of body, ex- cept eyes.	Eyes.	Total.		Head, face (except eyes), and neck.	One eye.	Both eyes.
1906—Concluded.								
Paper and printing.....	2.79	1.81	0.90	5.50	6.97	5.41	3.12	0.08
Paper, parchment, and wall paper.....	2.68	1.78	.89	5.35	7.68	4.82	3.75	.....
Printing and engraving.....	1.28	1.28	.....	2.56	7.27	5.56	2.56	.43
Paper and printing, not specified.....	3.76	2.12	1.41	7.29	5.88	6.12	2.59	.....
Wood manufactures.....	.52	.62	.14	1.23	16.43	4.49	2.04	.....
Lumber sawing.....	.46	.66	.05	1.17	22.49	5.74	2.39	.....
Woodworking, not specified.....	.65	.54	.32	1.51	3.57	1.84	1.30	.....
Metals, machinery, and implements.....	6.50	1.63	2.87	11.00	18.72	4.28	8.72	.18
Iron and steel.....	10.07	2.79	2.82	15.68	19.91	3.41	5.08	.17
Machinery and implements.....	4.62	.94	2.93	8.49	18.49	4.87	10.76	.20
Metal working, not specified.....	5.66	2.24	2.46	10.36	14.28	3.14	8.23	.11
Stone, clay, china, and glass.....	7.30	1.78	1.12	10.20	11.60	3.18	2.90	.09
Glass manufactures.....	12.34	1.38	1.58	15.30	5.73	2.37	1.68	.....
China ware.....	1.04	4.17	.....	5.21	7.29	7.29	3.13	.....
Earthenware.....	.....	2.21	.....	2.21	12.71	2.76	1.66	.....
Mineral products, not specified.....	3.54	1.89	.94	6.37	18.87	3.77	4.60	.24
Animal products (hides, leather, etc.).....	5.40	2.70	3.26	11.36	15.48	3.84	1.85	.14
Food products.....	3.94	2.95	1.00	7.89	17.35	4.79	2.58	.22
Flour milling.....	1.64	2.33	.63	4.65	25.21	4.66	2.74	1.23
Sugar and sugar refining.....	5.19	3.26	.75	9.20	19.80	4.86	2.67	.03
Food products, not specified.....	2.64	2.63	1.59	6.86	9.25	4.72	2.32	.12
Chemical industry.....	6.23	5.03	5.33	16.59	11.08	4.01	4.25	.06
Chemicals.....	9.55	6.25	10.76	26.56	9.03	5.04	4.86	.....
Mineral oils.....	6.08	4.42	3.87	14.37	27.07	4.97	7.18	.....
Explosives.....	5.62	10.11	2.25	17.98	2.25	.....	2.25	.....
Chemical industry, not specified.....	4.01	3.76	2.18	9.95	9.95	3.52	3.40	.12
All other industries.....	7.03	2.89	2.89	12.81	19.42	4.13	6.20	.83
Total.....	4.96	1.81	2.06	8.83	18.48	4.69	5.65	.13

FACTURING ESTABLISHMENTS, BY INDUSTRIES, 1901 TO 1906—Concluded.

Wounds, fractures, etc.												Asphyxiation by gases.	Drowning.	All other injuries.
Shoulder, arm, or wrist.			Fingers.			Lower extremity.			Trunk.	Internal injuries without external wounds (chest, abdomen, skull).	Total.			
Right.	Left.	Both.	Right hand.	Left hand.	Both hands	Right	Left.	Both.						
8.70	7.38	0.08	21.91	20.75	0.16	8.29	6.73	0.41	2.95	1.31	87.28	.....	0.08	0.17
11.43	8.75	.....	20.59	16.07	.....	8.04	7.14	.71	3.93	1.25	86.43	.....	.18	.36
9.40	5.98	.....	31.62	26.92	.43	3.85	2.14	.....	.....	1.28	90.17	.....	.....	.....
4.70	6.35	.24	13.35	23.53	.24	11.06	8.71	.24	3.29	1.41	86.83	.....	.....	.....
5.08	5.35	.10	17.71	29.04	.21	6.22	7.18	.35	3.45	.93	82.15	.....	.04	.10
5.89	5.99	.10	16.70	15.43	.15	8.43	9.24	.45	4.36	1.27	76.14	.....	.05	.15
3.35	4.00	.11	19.87	57.99	.32	1.51	2.81	.10	1.51	.21	94.92	.....	.....	.....
5.10	4.91	.07	14.72	15.79	.21	6.26	5.94	.21	1.86	1.91	70.16	0.01	.....	.11
5.54	4.99	.15	14.66	14.49	.19	6.16	6.07	.19	1.38	1.87	64.35	.02	.....	.04
4.86	4.69	.02	14.44	16.13	.23	6.36	6.00	.23	2.16	1.92	72.87	.....	.....	.15
4.98	6.83	.11	17.97	19.82	.11	5.88	4.48	.17	1.34	2.02	75.19	.....	.....	.17
8.56	8.00	.23	16.98	15.81	.33	7.91	8.65	.33	3.18	1.45	77.60	.14	.09	.37
12.34	11.35	.49	19.15	13.43	.69	7.40	6.71	.20	2.37	.69	78.87	.....	.10	.....
6.25	12.50	.....	15.63	10.42	.....	9.37	14.58	.....	6.25	1.04	86.46	1.04	.....	.....
8.29	4.42	.....	13.81	15.47	.....	10.50	14.37	1.10	4.42	4.97	81.77	.55	.55	2.21
4.36	4.25	.....	15.21	19.34	.....	7.78	9.08	.35	3.54	1.65	74.17	.12	.....	.47
6.82	5.68	.....	17.47	21.02	.42	4.69	5.40	.14	2.56	2.56	72.59	.14	.....	.43
6.50	5.14	.17	14.65	14.35	.22	10.37	10.59	.53	3.13	1.18	74.42	.13	.06	.15
7.81	5.89	.14	17.67	15.48	.14	3.97	4.11	.55	2.60	1.78	68.77	.69	.41	.27
3.59	3.39	.13	10.93	11.91	.16	13.93	14.43	.59	3.10	1.17	70.94	.03	.....	.03
11.40	8.09	.25	20.28	18.44	.37	6.56	6.19	.43	3.43	.92	83.52	.06	.....	.31
5.21	3.83	.06	15.81	15.33	.12	8.80	8.80	.36	2.75	2.70	72.09	.06	.....	.18
4.34	3.65	.17	11.81	12.33	.....	8.16	6.08	.34	3.82	3.29	63.89	.17	.....	.35
5.53	1.66	.....	11.60	11.60	.....	2.21	6.08	.55	3.87	3.31	58.56	.....	.....	.....
4.49	10.11	.....	12.36	25.84	1.12	2.25	16.85	.....	2.25	2.25	79.77	.....	.....	.....
5.83	3.76	.....	19.90	17.11	.12	11.41	10.44	.37	1.82	2.18	79.98	.....	.....	.12
4.13	4.96	.41	12.81	14.05	.....	4.13	3.31	.....	1.65	9.92	66.53	.....	.....	1.24
5.69	5.08	.09	16.18	16.96	.22	6.93	6.83	.25	2.06	1.63	72.39	.02	.02	.26

RESULTS OF ACCIDENTS.—Comparatively few of the accidents reported were fatal, only 385 in 1901, 320 in 1902, 312 in 1903, 382 in 1904, 332 in 1905, and 371 in 1906. The accidents resulting in total permanent disability, next in gravity, have constantly declined, from 138 in 1901 to 60 in 1906, and this is probably due to greater efforts to establish the degree of disability, due to the compensation act of 1903. Proportionately, both these grave classes of accidents have declined, the fatal accidents from 1.56 per cent to 0.62 per cent, and the cases of total permanent disability from 0.56 per cent to 0.10 per cent, and together from 2.12 per cent to 0.72 per cent, mainly because of the better registration of lighter injuries, resulting either in partial permanent disability or in temporary disability and eventual recovery; the former have increased in number from 4,069 in 1901 to 10,296 in 1906, or over 150 per cent, and proportionately from 16.44 per cent to 17.12 per cent; while the cases resulting in temporary disability have also more than doubled from 1901 to 1906, increasing from 20,152 to 46,994.

The per cent of increase has been greatest in the group of partial permanent disability, and the increase has been rapid since the act of 1903 went into effect, there having been 3,166 such accidents in 1902, 4,146 in 1903, 5,753 in 1904, 8,196 in 1905, and 10,296 in 1906. This seems to indicate a more favorable adjustment of claims of the injured, as permanent disability, even if slight, leads either to a pension or to a payment of the capitalized value of the pension, which is ten times the amount of the pension.

Proportionately fatal accidents are found to be highest in 1906 in the manufacture of earthenware, flour milling, mineral oils, etc. In other years the comparative frequency of fatal accidents was very different. They were least frequent in 1906 in woodworking, and in the textile and metal industries. This, however, was due to the larger number of slight accidents rather than to the comparative safety of these industries. As a matter of fact, the largest number of fatal accidents occur in the metal industry, woodworking, and the food industry (flour milling and sugar refining), where heavy machinery is used.

The cases of total permanent disability are so few (less than 0.1 per cent in 1906) that no general tendency is disclosed by the data. As to cases of partial permanent disability they are numerically greatest in the metal industries, cotton manufactures, and the food industry, while proportionately they are most frequent in the printing industry, wool, and other branches of textiles.

The table following shows the results of accidents, by industries, for the years 1901 to 1906.

RESULTS OF ACCIDENTS IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES,
1901 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel promyshlennosti. Statistika neschastnykh sluchaev s rabochimi, 1901-1906.]

Industry.	Accidents resulting in—								Result of accident unknown.	Total accidents.	
	Temporary disability.		Total permanent disability.		Partial permanent disability.		Death.				
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.			Number.	Per cent.
1901.											
Cotton manufactures.....	3,806	85.38	8	0.18	618	13.86	26	0.58			4,458
Wool manufactures.....	660	69.26	8	.84	264	27.70	21	2.20			953
Silk manufactures.....	20	66.67			9	30.00	1	3.33			30
Flax, hemp, and jute manufactures.....	563	80.20	4	.58	124	17.66	11	1.56			702
Textiles, not specified.....	38	66.67			19	33.33					57
Paper and printing.....	606	70.79	8	.94	227	26.52	15	1.75			856
Wood manufactures.....	1,004	69.58	18	1.24	373	25.85	48	3.33			1,443
Metals, machinery, and implements.....	9,806	83.73	50	.43	1,791	15.29	64	.55			11,711
Mineral products.....	461	70.60	13	1.99	139	21.29	40	6.12			653
Animal products (hides, leather, etc.).....	191	72.90	2	.76	56	21.38	13	4.96			262
Food products.....	2,278	83.02	22	.80	326	11.88	118	4.30			2,744
Chemical products.....	683	82.29	4	.48	117	14.10	26	3.13			830
All other industries.....	36	80.00	1	2.22	6	13.33	2	4.45			45
Total.....	20,152	81.44	138	.56	4,069	16.44	385	1.56			24,744
1902.											
Cotton manufactures.....	4,795	89.39	10	.18	486	9.06	32	.59	41	0.78	5,364
Wool manufactures.....	719	71.97	3	.30	250	25.03	14	1.40	13	1.30	999
Silk manufactures.....	40	81.63			6	12.25	1	2.04	2	4.08	49
Flax, hemp, and jute manufactures.....	466	81.47	1	.17	85	14.86	5	.88	15	2.62	572
Textiles, not specified.....	104	80.62	1	.77	21	16.28			3	2.33	129
Paper and printing.....	674	74.47	15	1.66	182	20.11	16	1.77	18	1.99	905
Wood manufactures.....	1,120	75.62	12	.83	271	18.29	38	2.56	40	2.70	1,481
Metals, machinery, and implements.....	9,960	87.23	41	.36	1,256	11.00	58	.51	103	.90	11,418
Mineral products.....	426	72.95	6	1.03	100	17.12	35	5.99	17	2.91	584
Animal products (hides, leather, etc.).....	182	75.21	4	1.65	41	16.94	10	4.13	5	2.07	242
Food products.....	2,460	83.08	14	.47	361	12.19	82	2.77	44	1.49	2,961
Chemical products.....	908	86.15	3	.29	99	9.39	25	2.37	19	1.80	1,054
All other industries.....	73	82.02	2	2.25	8	8.99	4	4.49	2	2.25	89
Total.....	21,927	84.83	112	.43	3,166	12.25	320	1.24	322	1.25	25,847
1903.											
Cotton manufactures.....	5,646	87.06	6	.09	739	11.40	28	.43	66	1.02	6,485
Wool manufactures.....	759	70.74	2	.19	277	25.81	16	1.49	19	1.77	1,073
Silk manufactures.....	60	75.00			15	18.75	3	3.75	2	2.50	80
Flax, hemp, and jute manufactures.....	466	85.82	1	.18	69	12.71	2	.37	5	.92	543
Textiles, not specified.....	74	69.16			28	26.17	2	1.87	3	2.80	107
Paper and printing.....	701	77.12	1	.11	178	19.58	10	1.10	19	2.09	909
Wood manufactures.....	1,595	79.04	11	.55	335	16.60	34	1.68	43	2.13	2,018
Metals, machinery, and implements.....	12,403	85.67	41	.28	1,787	12.34	58	.40	189	1.31	14,478
Mineral products.....	515	76.18	3	.44	104	15.39	23	3.40	19	3.49	676
Animal products (hides, leather, etc.).....	204	76.98	4	1.51	40	15.10	7	2.64	10	3.77	265
Food products.....	2,789	82.49	12	.36	441	13.04	87	2.57	52	1.54	3,381
Chemical products.....	1,044	84.47	3	.24	113	9.14	39	3.16	37	2.99	1,236
All other industries.....	42	61.77	1	1.47	20	29.41	3	4.41	2	2.94	68
Total.....	26,298	83.97	85	.27	4,146	13.24	312	.99	478	1.53	31,319

RESULTS OF ACCIDENTS IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES,
1901 TO 1906—Continued.

Industry.	Accidents resulting in—								Result of accident unknown.		Total accidents.
	Temporary disability.		Total permanent disability.		Partial permanent disability.		Death.				
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
1904.											
Cotton manufactures.....	5,735	86.79	5	0.08	807	12.21	31	0.47	30	0.45	6,608
Wool manufactures.....	833	67.78	3	.24	360	29.29	19	1.55	14	1.14	1,229
Silk manufactures.....	60	80.00	.....	.....	15	20.00	.....	.....	.....	.....	75
Flax, hemp, and jute manufactures.....	830	75.94	3	.28	243	22.23	2	.18	15	1.37	1,093
Textiles, not specified.....	107	67.72	1	.63	46	29.12	3	1.20	1	.63	158
Paper and printing.....	986	79.45	1	.08	213	17.16	30	2.42	11	.89	1,241
Paper, parchment, and wall paper.....	490	80.99	1	.16	91	15.04	18	2.98	5	.83	605
Printing and engraving.....	177	73.75	.....	.....	57	23.75	2	.83	4	1.67	240
Paper and printing, not specified.....	319	80.56	.....	.....	65	16.41	10	2.52	2	.51	396
Wood manufactures.....	2,062	79.80	7	.27	447	17.30	33	1.47	30	1.16	2,584
Lumber sawing.....	1,389	77.08	5	.28	348	19.31	33	1.83	27	1.50	1,802
Woodworking, not specified.....	673	86.06	2	.26	99	12.66	5	.64	3	.38	782
Metals, machinery, and implements.....	23,325	88.89	26	.10	2,612	9.95	84	.32	194	.74	26,241
Iron and steel.....	8,642	91.46	6	.06	725	7.68	36	.38	40	.42	9,449
Machinery and implements.....	13,416	87.49	18	.12	1,712	11.17	41	.27	146	.95	15,333
Metal working, not specified.....	1,267	86.84	2	.14	175	11.99	7	.48	8	.55	1,459
Stone, clay, china, and glass.....	1,580	88.37	5	.28	162	9.06	33	1.84	8	.45	1,788
Glass manufactures.....	963	96.11	.....	.....	36	3.59	1	.10	2	.20	1,002
China ware.....	47	72.31	.....	.....	14	21.53	2	3.08	2	3.08	65
Earthenware.....	103	63.58	1	.62	38	23.45	19	11.78	1	.62	162
Mineral products, not specified.....	467	83.54	4	.71	74	13.24	11	1.97	3	.54	559
Animal products (hides, leather, etc.).....	391	81.46	.....	.....	69	14.38	15	3.12	5	1.04	480
Food products.....	3,422	82.20	14	.34	594	14.27	112	2.69	20	.48	4,162
Flour milling.....	393	67.53	3	.52	154	26.46	30	5.15	2	.34	582
Sugar and sugar refining.....	2,016	89.20	6	.27	191	8.45	47	2.08	.....	.....	2,260
Food products, not specified.....	1,013	76.74	5	.38	249	18.86	35	2.65	18	1.37	1,320
Chemical industry.....	1,248	84.96	4	.27	177	12.05	13	.88	27	1.84	1,469
Chemicals.....	405	86.35	2	.43	53	11.30	5	1.07	4	.85	469
Mineral oils.....	188	86.24	2	.92	26	11.92	.....	.....	2	.92	218
Explosives.....	61	82.43	.....	.....	11	14.87	2	2.70	.....	.....	174
Chemical industry, not specified.....	594	83.90	.....	.....	87	12.28	6	.85	21	2.97	708
All other industries.....	61	79.22	1	1.30	8	10.39	2	2.60	5	6.49	77
Total.....	40,640	86.09	70	.15	5,753	12.19	382	.81	360	.76	47,205
1905.											
Cotton manufactures.....	5,863	82.46	10	.14	1,100	15.47	23	.33	114	1.60	7,110
Wool manufactures.....	808	61.40	3	.23	474	36.02	16	1.21	15	1.14	1,316
Silk manufactures.....	60	72.29	.....	.....	19	22.89	2	2.41	2	2.41	83
Flax, hemp, and jute manufactures.....	982	69.75	3	.21	380	26.99	4	.28	39	2.77	1,408
Textiles, not specified.....	108	60.67	.....	.....	65	36.52	2	1.12	3	1.69	178
Paper and printing.....	998	76.24	3	.23	265	20.24	20	1.53	23	1.76	1,309
Paper, parchment, and wall paper.....	487	76.57	1	.16	119	18.71	16	2.52	13	2.04	686
Printing and engraving.....	152	69.41	.....	.....	62	28.31	.....	.....	5	2.28	219
Paper and printing, not specified.....	359	79.08	2	.44	84	18.50	4	.88	5	1.10	454
Wood manufactures.....	1,994	77.68	5	.19	494	19.24	43	1.68	31	1.21	2,567
Lumber sawing.....	1,330	75.74	3	.17	360	20.50	37	2.11	26	1.48	1,756
Woodworking, not specified.....	664	81.87	2	.25	134	16.52	6	.74	5	.62	811
Metals, machinery, and implements.....	25,089	83.19	17	.06	4,158	13.79	78	.26	814	2.70	30,156
Iron and steel.....	8,735	89.01	3	.03	1,017	10.36	23	.23	36	.37	9,814
Machinery and implements.....	15,143	80.33	11	.06	2,888	15.32	48	.25	761	4.04	18,851
Metal working, not specified.....	1,211	81.22	3	.20	253	16.97	7	.47	17	1.14	1,491

RESULTS OF ACCIDENTS IN MANUFACTURING ESTABLISHMENTS, BY INDUSTRIES,
1901 TO 1906—Concluded.

Industry.	Accidents resulting in—								Result of accident unknown.	Total accidents.	
	Temporary disability.		Total permanent disability.		Partial permanent disability.		Death.				
	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.	Num- ber.	Per cent.			Num- ber.	Per cent.
1905—Concluded.											
Stone, clay, china, and glass.....	1,562	87.11	3	0.17	186	10.37	20	1.12	22	1.23	1,793
Glass manufactures.....	910	93.05			50	5.11	5	.51	13	1.33	978
China ware.....	49	83.05			8	13.56	2	3.39			59
Earthenware.....	102	64.15	1	.63	44	27.67	7	4.40	5	3.15	159
Mineral products, not speci- fied.....	501	83.92	2	.33	84	14.07	6	1.01	4	.67	597
Animal products (hides, leather, etc.).....	441	80.62			89	16.27	8	1.48	9	1.65	547
Food products.....	3,616	80.23	7	.15	730	16.20	92	2.04	62	1.38	4,507
Flour milling.....	425	72.65	2	.34	129	22.05	23	3.93	6	1.03	585
Sugar and sugar refining.....	2,055	85.16	4	.17	279	11.56	41	1.70	34	1.41	2,413
Food products, not specified.....	1,136	75.28	1	.06	322	21.34	28	1.86	22	1.46	1,509
Chemical industry.....	1,282	83.08	7	.45	202	13.09	21	1.37	31	2.01	1,543
Chemicals.....	452	85.93			64	12.17	4	.76	6	1.14	526
Mineral oils.....	132	82.50			24	15.00	3	1.87	1	.63	160
Explosives.....	86	87.76	2	2.04	8	8.16	2	2.04			98
Chemical industry, not speci- fied.....	612	80.63	5	.66	106	13.97	12	1.58	24	3.16	759
All other industries.....	98	71.02	1	.72	34	24.64	3	2.17	2	1.45	138
Total.....	42,901	81.47	59	.11	8,196	15.57	332	.63	1,167	2.22	52,655
1906.											
Cotton manufactures.....	7,980	75.24	5	.05	2,403	22.66	49	.46	169	1.59	10,606
Wool manufactures.....	1,166	62.09	4	.21	658	35.04	19	1.01	31	1.65	1,878
Silk manufactures.....	84	80.00			15	14.29			6	5.71	105
Flax, hemp, and jute manufac- tures.....	1,397	72.91	1	.05	425	22.18	9	.47	84	4.39	1,916
Textile industries, not specified.....	149	62.08			82	34.17	4	1.67	5	2.08	240
Paper and printing.....	857	70.31	7	.57	300	24.61	16	1.31	39	3.20	1,219
Paper, parchment, and wall paper.....	400	71.43	4	.71	129	23.04	12	2.14	15	2.68	560
Printing and engraving.....	135	57.69	3	1.28	80	34.19	1	.43	15	6.41	234
Paper and printing, not speci- fied.....	322	75.76			91	21.41	3	.71	9	2.12	425
Wood manufactures.....	2,191	75.65	5	.17	595	20.55	37	1.28	68	2.35	2,896
Lumber sawing.....	1,435	72.84	3	.15	446	22.64	36	1.83	50	2.54	1,970
Wood working, not specified.....	756	81.64	2	.22	149	16.09	1	.11	18	1.94	926
Metals, machinery, and imple- ments.....	24,908	80.09	21	.07	4,323	13.90	73	.23	1,775	5.71	31,100
Iron and steel.....	8,986	86.64	5	.05	1,286	12.40	25	.24	70	.67	10,372
Machinery and implements.....	14,503	76.57	14	.07	2,697	14.24	38	.20	1,690	8.92	18,942
Metal working, not specified.....	1,419	79.43	2	.11	340	19.04	10	.56	15	.84	1,786
Stone, clay, china, and glass.....	1,855	86.76	4	.19	222	10.39	27	1.26	30	1.40	2,138
Glass manufactures.....	953	94.07	1	.10	47	4.64	3	.30	9	.89	1,013
China ware.....	74	77.08	1	1.04	17	17.71	1	1.04	3	3.13	96
Earthenware.....	124	68.51	1	.55	41	22.65	11	6.08	4	2.21	181
Mineral products, not speci- fied.....	704	83.02	1	.12	117	13.79	12	1.42	14	1.65	848
Animal products (hides, leather, etc.).....	544	77.27	1	.14	130	18.47	11	1.56	18	2.56	704
Food products.....	4,323	79.64	7	.13	864	15.92	100	1.84	134	2.47	5,428
Flour milling.....	497	68.08	1	.14	191	26.16	30	4.11	11	1.51	730
Sugar and sugar refining.....	2,629	85.75	1	.03	331	10.79	44	1.44	61	1.99	3,066
Food products, not specified.....	1,197	73.35	5	.31	342	20.96	26	1.59	62	3.79	1,632
Chemical industry.....	1,363	81.62	5	.30	234	14.01	22	1.32	46	2.75	1,670
Chemicals.....	484	84.03	1	.17	80	13.89	4	.69	7	1.22	576
Mineral oils.....	138	76.24	3	1.66	33	18.23	5	2.76	2	1.11	181
Explosives.....	77	86.52			10	11.24	2	2.24			89
Chemical industry, not speci- fied.....	664	80.58	1	.12	111	13.47	11	1.34	37	4.49	824
All other industries.....	177	73.14			45	18.60	4	1.65	16	6.61	242
Total.....	46,994	78.14	60	.10	10,296	17.12	371	.62	2,421	4.02	60,142

DURATION OF TREATMENT.—The following table throws some light upon the average duration of disability due to accidents. According to the regulations supplementary to the law of June 2, 1903, the number of days during which sick allowances of half the wages were paid must be reported, these allowances being paid until complete recovery or until the degree of disability is established. While the data are admitted to be somewhat inaccurate, since only working days were included in some cases, and all days in other cases, and no data were available for some cases, nevertheless the statistical error is said to be probably small. Not only do the majority of industrial accidents terminate in complete recovery, after temporary disability, but a large proportion of these cases last a very short time. In 1904, 12,441, or 30.72 per cent of the temporary disability cases, were cases terminating in complete recovery after 7 days of treatment or less; 11,899, or 29.38 per cent, after 8 to 14 days of treatment, and 6,087, or 15.03 per cent, after 15 to 21 days, so that 75.13 per cent of all the cases lasted 3 weeks or less. The average length of treatment for cases of temporary disability was only 17.8 days; for the cases of permanent disability it was considerably longer, 71.1 days, the general average for all cases being 24.3 days.

In 1905 the proportion of temporary disability cases lasting only 7 days or less declined to 28.73 per cent, and in 1906 was 28.85 per cent. On the other hand, the number of cases requiring from 8 to 14 days of absence from work increased from 29.38 per cent in 1904 to 30.23 per cent in 1906, so that over 59 per cent of these cases lasted not over 2 weeks; and the proportion of cases lasting not over 3 weeks was, in 1904, 75.13 per cent; in 1905, 73.71 per cent, and in 1906, 73.89 per cent. In general there has been a slight lengthening of the average duration of disability of the temporary cases from 17.8 days in 1904 to 18.8 days in 1905, and 19 days in 1906, while in the general group of permanent disability cases there was a decrease from 71.1 days in 1904 to 67.2 days in 1905 and 64.4 days in 1906. This is due to the increase in the number of minor cases which, by a more favorable adjudication, are considered cases of permanent disability.

DURATION OF TREATMENT IN ACCIDENTS RESULTING IN TEMPORARY DISABILITY, PERMANENT DISABILITY, AND DEATH, IN MANUFACTURING ESTABLISHMENTS, 1904 TO 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel promyshlennosti. Statistika neschastnykh sluchaev s rabochimi, 1901-1906.]

Duration of treatment.	Accidents resulting in—									Total accidents.		
	Temporary disability.			Permanent disability.			Death.					
	Number.	Per cent.	Average days of treatment.	Number.	Per cent.	Average days of treatment.	Number.	Per cent.	Average days of treatment.	Number.	Per cent.	Average days of treatment.
1904.												
7 days and under.....	12,441	30.72	5.1	274	4.73	3.4	320	83.77	1.6	13,035	27.92	4.9
8 to 14 days.....	11,899	29.38	10.8	319	5.50	11.3	22	5.76	10.5	12,240	26.22	10.8
15 to 21 days.....	6,087	15.03	17.6	315	5.44	17.9	15	3.93	17.6	6,417	13.75	17.6
22 to 28 days.....	3,228	7.97	24.8	375	6.47	25.2	6	1.57	23.8	3,609	7.73	24.8
29 to 35 days.....	2,129	5.26	31.3	451	7.78	32.1	4	1.05	31.5	2,584	5.54	31.4
36 to 42 days.....	1,375	3.39	39.0	411	7.09	39.4	.....	.....	.....	1,786	3.83	39.1
43 to 49 days.....	839	2.07	45.7	401	6.92	45.6	2	.52	44.0	1,242	2.66	45.6
50 to 56 days.....	534	1.32	53.1	362	6.25	52.8	.....	.....	.....	896	1.92	53.0
57 to 63 days.....	410	1.01	59.6	409	7.06	60.1	.....	.....	.....	819	1.75	59.9
64 to 70 days.....	261	.64	66.8	270	4.66	66.9	2	.52	68.0	533	1.14	66.9
71 to 77 days.....	193	.48	73.9	268	4.62	74.3	.....	.....	.....	461	.99	74.1
78 to 84 days.....	151	.37	80.8	241	4.16	81.0	1	.26	81.0	393	.84	80.9
85 to 91 days.....	135	.33	88.4	236	4.07	88.1	.....	.....	.....	371	.79	88.2
92 days and over.....	481	1.19	142.0	1,390	23.99	154.4	6	1.57	161.0	1,877	4.02	151.3
Unknown.....	342	.84	21.6	73	1.26	79.1	4	1.05	1.0	419	.90	31.4
Total.....	40,505	100.00	17.8	5,795	100.00	71.1	382	100.00	6.6	46,682	100.00	24.3
1905.												
7 days and under.....	12,252	28.73	5.4	417	5.17	3.2	264	79.52	1.6	12,933	25.34	5.3
8 to 14 days.....	12,641	29.64	10.8	488	6.05	11.2	32	9.64	10.6	13,161	25.78	10.8
15 to 21 days.....	6,542	15.34	17.8	461	5.72	18.4	7	2.11	17.6	7,010	13.73	17.8
22 to 28 days.....	3,783	8.87	24.7	535	6.63	25.2	5	1.51	24.8	4,323	8.47	24.8
29 to 35 days.....	2,470	5.79	31.7	668	8.28	31.9	3	.90	30.7	3,141	6.15	31.7
36 to 42 days.....	1,385	3.25	39.1	635	7.87	39.3	4	1.21	38.0	2,024	3.97	39.1
43 to 49 days.....	941	2.21	45.8	571	7.08	45.8	3	.90	46.0	1,515	2.97	45.8
50 to 56 days.....	651	1.53	52.7	530	6.57	52.9	2	.60	50.5	1,183	2.32	52.8
57 to 63 days.....	470	1.10	59.9	521	6.46	60.2	.....	.....	.....	991	1.94	60.1
64 to 70 days.....	309	.72	66.7	427	5.29	67.0	.....	.....	.....	736	1.44	66.9
71 to 77 days.....	241	.56	73.4	359	4.45	74.1	3	.90	74.0	603	1.18	73.8
78 to 84 days.....	172	.40	81.1	325	4.03	81.0	.....	.....	.....	497	.97	81.0
85 to 91 days.....	167	.39	88.2	300	3.72	88.2	1	.30	8.6	468	.92	88.2
92 days and over.....	626	1.47	134.9	1,829	22.68	149.4	8	2.41	182.5	2,463	4.82	145.8
Total.....	42,650	100.00	18.8	8,066	100.00	67.2	332	100.00	9.8	51,048	100.00	26.4
1906.												
7 days and under.....	13,481	28.85	5.4	681	6.74	2.3	200	79.02	3.0	14,452	25.27	5.2
8 to 14 days.....	14,127	30.23	10.7	557	5.52	11.5	28	7.63	10.6	14,712	25.72	10.8
15 to 21 days.....	6,922	14.81	17.7	629	6.23	18.3	11	2.99	17.5	7,562	13.22	16.4
22 to 28 days.....	3,919	8.39	24.8	638	6.32	25.2	7	1.91	25.0	4,564	7.98	24.8
29 to 35 days.....	2,568	5.50	31.7	764	7.57	31.9	3	.82	33.3	3,335	5.83	31.7
36 to 42 days.....	1,575	3.37	38.8	748	7.41	39.3	3	.82	38.3	2,326	4.07	39.0
43 to 49 days.....	1,034	2.21	45.8	712	7.05	46.0	1	.27	44.0	1,747	3.05	45.9
50 to 56 days.....	712	1.52	52.9	700	6.93	53.1	4	1.09	51.3	1,416	2.48	53.0
57 to 63 days.....	603	1.29	60.1	735	7.28	60.0	2	.54	57.0	1,340	2.34	60.0
64 to 70 days.....	374	.80	67.0	552	5.47	67.1	3	.82	67.0	929	1.62	67.1
71 to 77 days.....	281	.60	73.9	491	4.86	74.0	3	.82	74.3	775	1.36	74.0
78 to 84 days.....	248	.53	80.6	390	3.86	80.9	3	.82	82.3	641	1.12	80.8
85 to 91 days.....	157	.34	87.4	375	3.71	88.5	.....	.....	.....	532	.93	88.2
92 days and over.....	730	1.56	135.4	2,126	21.05	145.4	9	2.45	144.9	2,855	5.01	142.8
Total.....	46,731	100.00	19.0	10,098	100.00	64.4	367	100.00	9.3	57,196	100.00	27.0

Altogether the number of days of treatment until final determination of the result of injury for all cases was as follows:

TOTAL DAYS OF TREATMENT IN CASES OF ACCIDENT, BY RESULT OF INJURY, 1904 TO 1906.

Result of injury.	1904.	1905.	1906.
Temporary disability.....	721,736	802,070	886,024
Permanent disability.....	411,706	541,813	650,516
Death.....	2,549	3,265	3,425
Total.....	1,135,491	1,347,148	1,539,964

Thus in two years there has been an increase of 22.8 per cent in the total days for which temporary disability payments were made, while the number of accidents has increased 22.5 per cent. There does not appear, therefore, to have been any undue tendency to protract the duration of treatment.

ACCIDENTS IN MINES AND METALLURGICAL ESTABLISHMENTS.

The statistics of accidents in the mines and metallurgical establishments are available for a much longer period than for the manufacturing industries; but since the data are very incomplete for the earlier years, it was thought sufficient to give the data for the last 12 years, 1896 to 1907. Even for this period the number of recorded accidents has increased from 9,867 in 1896 to 72,910 in 1907, and the rate from 20.2 to 111.9 per thousand, which makes the earliest data of comparatively little value. The number of employees, the number of accidents recorded, and the accidents per 1,000 employees are shown in the table following:

NUMBER OF EMPLOYEES, ACCIDENTS RECORDED, AND ACCIDENT RATE PER 1,000 EMPLOYEES IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF SCIENTIFIC MINING COMMITTEE, 1896 TO 1907.

[Source: Sbornik Statisticheskikh svedenii o gornozavodskoi promyshlennosti Rossii, 1896-1907. Data for the Duchy of Finland, which are included in the original report, have been eliminated.]

Year.	Number of employees.	Accidents recorded.		Year.	Number of employees.	Accidents recorded.	
		Number.	Per 1,000 employees.			Number.	Per 1,000 employees.
1896.....	489,038	9,867	20.2	1902.....	621,993	33,585	54.0
1897.....	543,468	10,365	19.1	1903.....	605,925	44,597	73.6
1898.....	588,406	20,552	34.9	1904.....	595,526	67,119	112.7
1899.....	633,743	13,257	20.9	1905.....	577,757	62,018	107.4
1900.....	710,824	29,100	40.9	1906.....	638,468	71,901	112.6
1901.....	678,731	23,335	34.4	1907.....	651,614	72,910	111.9

The statistics are published by the scientific mining committee of the Ministry of Agriculture and State Domains in its annual reports of the mining industry of Russia. The reports embrace, besides the

mining industry proper, also the metallurgical establishments, and they follow no well-defined rule in regard to the limits between the metallurgical and metal-working industry. An examination of the table following shows that while the number of accidents reported from the mines has been regularly increasing, due to improvement of statistical service, the accidents in the metallurgical establishments (mainly iron and steel mills) fluctuated greatly as from 8,602 in 1897 to 18,349 in 1898, then again to 9,876 in 1899; and increased to 25,195 in 1900, to drop again to 17,509 in 1901. These violent fluctuations are explained by the fact that some very large steel-manufacturing plants furnished data and were included in the metallurgical report for the years 1898, 1900, 1902, 1903, and 1904 and did not furnish any data and were not included in the years 1896, 1897, 1899, 1901, and 1905.

NUMBER OF ACCIDENTS IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF SCIENTIFIC MINING COMMITTEE, 1896 TO 1907.

[Source: Sbornik Statisticheskikh svedenii o gornozavodskoi promyshlennosti Rossii, 1896-1907. Data for the Duchy of Finland, which are included in the original report, have been eliminated.]

Year.	Coal mines.	Gold and platinum mines.	Iron, copper, and other mines.	Quarries.	Oil wells and salt mines.	All mines and quarries.	Metallurgical establishments.	Mines and metallurgical establishments.
Fatal accidents:								
1896.....	125	46	39	65	17	292	86	378
1897.....	151	33	53	40	31	308	95	403
1898.....	251	42	69	51	50	463	145	608
1899.....	205	50	64	62	60	441	147	588
1900.....	288	36	58	50	65	497	142	639
1901.....	327	35	50	49	53	514	133	647
1902.....	267	55	32	36	39	429	95	524
1903.....	211	53	45	50	38	397	113	510
1904.....	266	50	59	38	30	443	112	555
1905.....	380	53	61	26	32	552	117	669
1906.....	350	48	40	20	45	503	99	602
1907.....	363	74	70	29	11	547	116	663
Nonfatal accidents:								
1896.....	295	286	443	179	55	1,258	8,228	9,486
1897.....	601	299	408	64	83	1,455	8,507	9,962
1898.....	708	426	392	72	142	1,740	18,204	19,944
1899.....	1,147	635	419	430	309	2,940	9,729	12,669
1900.....	1,503	673	476	311	445	3,408	25,053	28,461
1901.....	1,717	557	618	328	2,092	5,312	17,376	22,688
1902.....	4,726	592	608	209	2,407	8,542	24,519	33,088
1903.....	7,711	779	649	250	3,484	12,873	31,214	44,087
1904.....	20,853	915	2,381	162	4,536	28,847	37,817	66,664
1905.....	23,468	1,090	2,396	132	3,083	30,169	31,180	61,349
1906.....	27,871	1,382	3,283	142	4,289	36,967	34,332	71,299
1907.....	29,410	1,703	4,143	162	900	35,885	36,362	72,247
All accidents:								
1896.....	420	332	485	244	72	1,553	8,314	9,867
1897.....	752	332	461	104	114	1,763	8,602	10,365
1898.....	959	468	461	123	192	2,203	18,349	20,552
1899.....	1,352	685	483	492	369	3,381	9,876	13,257
1900.....	1,791	709	534	361	510	3,905	25,195	29,100
1901.....	2,044	592	668	377	2,145	5,826	17,509	23,335
1902.....	4,393	647	640	245	2,446	8,971	24,614	33,585
1903.....	7,922	832	694	300	3,522	13,270	31,327	44,597
1904.....	21,119	965	2,440	200	4,566	29,290	37,929	67,119
1905.....	23,848	1,143	2,457	158	3,115	30,721	31,297	62,018
1906.....	28,221	1,430	3,323	162	4,334	37,470	34,431	71,901
1907.....	29,047	1,777	4,073	191	911	36,432	36,478	72,910

The general increase of the number of accidents reported in 1900 was due to the union of the local mining councils with the factory councils into local councils on factories and mines. From 1903 the effect of the workmen's compensation law of June 2 (15), 1903, which demanded accurate accident statistics, was to increase the number of reported accidents by more than 50 per cent.

In the original reports from which the tables were compiled no comparison was made between the number of accidents and the total number of workmen, and different classifications were used. In order to obtain the accident rate in the various branches of the mining industry the two classifications were carefully adjusted. For reasons given above, the rates do not approach any degree of accuracy until 1903, and therefore such comparison is made only for the last three years. The rate of accidents for the entire industry in 1903 was 73.6 per thousand. The enforcement of the compensation act increased it to 112.7 in 1904.

Contrary to popular impression the work in the metallurgical establishments is more hazardous than that in the mines, the first showing in 1905 a rate of 127.7, and the latter one of 92.4 only. There are many differences in the various classes of mines and quarries. The quarries showed an accident rate of only 4.3 per thousand. This rate may be explained by the fact that the great majority of quarries with very few employees do not come under the provision of the compensation act of 1903, and no increase has taken place in the number of accidents reported since 1904. Thus in 1905 there were 3,920 quarries with 36,820 employees, or less than 10 employees per establishment. In the gold mines the rate is also very low—14.9 per thousand—because most of the gold is obtained in Russia by processes of surface mining. In the other metal mines the rate rises to 48.5, and in the oil fields to 65.3, while in the coal mines it is as high as 198.4 per thousand.

In regard to the results of the accidents, the cases are classified into fatal and nonfatal, no further information as to the nature of injury in the recovered cases being given. The data for fatal accidents are much less subject to fluctuation, and evidently more comparable for the entire decade. They constitute about 1 per cent of all accidents; in the coal mines the proportion rises to about 1½ per cent. In 1903 one out of every 1,188 employees shown in the table following was fatally injured; and in 1907 one out of every 983. In the coal mines the proportion was 1 out of every 454 in 1907.

NUMBER OF EMPLOYEES, ACCIDENTS REPORTED, AND ACCIDENT RATE PER 1,000 IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF SCIENTIFIC MINING COMMITTEE, 1903 TO 1907.

[Source: Sbornik Statisticheskikh svedenii o gornozavodskoi promyshlennosti Rossii, 1903-1907.]

Industry.	Number of employees.	Accidents reported.				Number of employees to each fatal accident.
		Fatal.	Nonfatal.	Total—		
				Number.	Per 1,000 employees.	
Metallurgical establishments:						
1903.....	280,987	113	31,214	31,327	111.5	2,486
1904.....	260,049	112	37,817	37,929	145.9	2,322
1905.....	245,146	117	31,180	31,297	127.7	2,095
1906.....	281,535	99	34,332	34,431	122.2	2,844
1907.....	264,136	116	36,362	36,478	138.1	2,277
Coal mines:						
1903.....	105,774	211	7,711	7,922	74.9	501
1904.....	117,743	266	20,853	21,119	179.3	443
1905.....	120,214	380	23,468	23,848	198.4	316
1906.....	145,392	350	27,871	28,221	194.1	415
1907.....	164,819	363	29,410	29,047	176.2	454
Gold, silver, and platinum mines:						
1903.....	90,633	53	779	832	9.2	1,700
1904.....	81,703	50	915	965	11.8	1,634
1905.....	77,203	53	1,090	1,143	14.9	1,457
1906.....	74,366	48	1,382	1,430	19.2	1,549
1907.....	72,484	74	1,703	1,777	24.5	979
Iron, copper, and other mines:						
1903.....	42,653	45	649	694	16.3	946
1904.....	48,177	59	2,381	2,440	50.6	816
1905.....	50,678	61	2,396	2,457	48.5	831
1906.....	52,980	40	3,283	3,323	62.7	1,324
1907.....	61,071	70	4,143	4,073	66.7	872
Quarries:						
1903.....	43,946	50	250	300	6.8	879
1904.....	41,605	38	162	200	4.1	1,095
1905.....	36,820	26	132	158	4.3	1,416
1906.....	34,875	20	142	162	4.7	1,744
1907.....	34,367	29	162	191	5.5	1,185
Oil wells and salt mines:						
1903.....	41,932	38	3,484	3,522	84.0	1,104
1904.....	46,249	30	4,536	4,566	98.7	1,542
1905.....	47,696	32	3,083	3,115	65.3	1,492
1906.....	49,605	45	4,289	4,334	87.5	1,103
1907.....	54,737	a 11	a 900	a 911	.....	.....
All mines and quarries:						
1903.....	324,938	397	12,873	13,270	40.8	818
1904.....	335,477	443	28,847	29,290	84.2	757
1905.....	332,611	552	30,169	30,721	92.4	603
1906.....	352,245	503	36,967	37,470	106.4	700
1907.....	387,478	547	35,885	36,432	94.0	713
All mines and metallurgical establishments:						
1903.....	605,925	510	44,087	44,597	73.6	1,188
1904.....	595,526	555	66,664	67,119	112.7	1,073
1905.....	577,757	669	61,349	62,018	107.4	864
1906.....	638,468	602	71,299	71,901	112.6	1,061
1907.....	651,614	663	72,247	72,910	111.9	983

a Data are incomplete.

ACCIDENT STATISTICS ACCORDING TO REPORTS OF MINE INSPECTORS.—Notwithstanding the high rate of 112 per thousand, the accident statistics gathered by the scientific mining committee and presented in the preceding table are far from complete. Since the accident compensation law of 1903 went into effect, the mining department of the Ministry of Commerce and Industry has undertaken the publication of accident statistics through its mining inspectors, who exercise the same functions in regard to the mining and

metallurgical establishments as the factory inspectors do for the manufacturing industry.

The reports for 1905 and 1906 are available, and, notwithstanding a certain lack of statistical accuracy (which manifests itself mainly in the fact that in many instances the items in the tables do not add to the total), the data of these reports are thought sufficiently important to be presented here. The reports embrace only such mining and metallurgical establishments as are subject to mine inspection and include only about 500,000 workmen as against 650,000 recorded by the mining committee, which includes also the establishments of the State and Crown. Nevertheless the mine inspectors record a larger number of accidents (69,031 in 1905 against 63,018, and 75,907 in 1906 against 72,910), and a very much higher accident rate, which in 1906 reached 150 per thousand. The rate in the metallurgical establishments rises to 177 per thousand and in the coal mines to 247.6.

NUMBER OF EMPLOYEES, ACCIDENTS REPORTED, AND ACCIDENT RATE PER 1,000 IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF MINE INSPECTORS 1905 AND 1906.

[Source: Ministerstvo Torgvoli i Promyshlennosti. Gorny Department. Statistika neschastnykh sluchaev s rabochimi, 1905, 1906.]

Industry.	1905.			1906.		
	Em- ployees.	Accidents reported.		Em- ployees.	Accidents reported.	
		Number.	Per 1,000 em- ployees.		Number.	Per 1,000 em- ployees.
Metallurgical establishments	188,080	29,377	156.2	176,436	31,226	177.0
Metal mines	49,987	2,380	47.6	47,344	3,143	66.0
Coal mines	117,589	32,232	274.1	140,139	34,697	247.6
Gold mines	81,715	1,188	14.5	76,342	1,599	20.9
Salt quarries	3,204	11	3.4	2,133	13	6.1
Quarries	7,491	160	21.4	14,787	176	11.9
All others and unclassified (a)	38,412	3,683	95.9	46,697	5,053	108.2
Total	b 483,882	69,031	142.7	b 504,555	75,907	150.4

^a Data from the Caucasus mining district, including mainly oil wells, were not classified by branch of industry.

^b This total is not the correct sum of the items; the figures are given as shown in the original report.

The nature of the injuries sustained in mines and metallurgical establishments is given in the following table, and the same classification being used as for accidents in manufacturing establishments, comparisons are made possible. Burns are very frequent in the metallurgical plants, representing 14.31 per cent of all accidents. Injuries to the upper extremity and fingers seem less frequent than in manufacturing establishments, being, in 1906, 27.6 per cent against 35 per cent.

NUMBER AND PER CENT OF INJURIES OF EACH SPECIFIED CLASS IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF MINE INSPECTORS, 1905 AND 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Gorny Department. Statistika neschastnykh sluchaev s rabochimi, 1905, 1906.]

Nature of injury.	Accidents in—										Total.	
	Metallurgical establishments.		Metal mines.		Coal mines.		Gold mines.		All other.			
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.
1905.												
Burns and scalds:												
One part of body (except eyes).....	2,862	9.71	31	1.23	264	0.81	6	0.51	18	1.72	3,181	4.57
Several parts of body (except eyes).....	754	2.56	21	.84	166	.51	7	.59	23	2.19	971	1.39
Eyes.....	602	2.04	10	.40	62	.19	1	.08	11	1.05	686	.99
Total.....	4,218	14.31	62	2.47	492	1.51	14	1.18	52	4.96	4,838	6.95
Traumatism without lacerations...	8,136	27.60	309	12.31	11,149	34.28	281	23.69	102	9.72	19,977	28.71
Wounds, fractures, etc.:												
Head, face (except eyes), and neck....	1,383	4.69	208	8.28	2,842	8.74	131	11.05	79	7.53	4,643	6.67
One eye.....	960	3.26	99	3.94	1,458	4.48	42	3.54	104	9.91	2,663	3.83
Both eyes.....	61	.21	14	.56	51	.16	3	.25	4	.38	133	.19
Shoulder, arm, or wrist—												
Right.....	1,506	5.11	141	5.62	1,451	4.46	78	6.58	59	5.63	3,235	4.65
Left.....	1,224	4.15	152	6.05	1,494	4.59	65	5.48	43	4.10	2,978	4.28
Both.....	64	.22	5	.20	62	.19	2	.17	5	.48	142	.20
Fingers—												
Right hand..	3,453	11.71	342	13.62	3,940	12.11	103	8.68	110	10.49	7,948	11.42
Left hand..	3,050	10.34	319	12.70	4,274	13.14	105	8.85	124	11.82	7,872	11.31
Both hands..	144	.49	7	.28	68	.21	1	.08	2	.19	216	.31
Lower extremity—												
Right.....	2,075	7.04	351	13.98	1,737	5.34	131	11.05	127	12.11	4,421	6.35
Left.....	1,766	5.99	317	12.62	1,801	5.54	135	11.38	132	12.58	4,151	5.97
Both.....	74	.25	18	.72	69	.21	7	.59	2	.19	170	.25
Trunk.....	318	1.08	92	3.66	857	2.64	41	3.46	38	3.62	1,343	1.93
Internal injuries without external wounds (chest, abdomen, and skull).....	355	1.20	84	3.35	413	1.27	21	1.77	51	4.86	924	1.33
Total.....	16,433	55.74	2,149	85.58	20,511	63.07	865	72.93	880	83.89	40,839	58.69
Asphyxiation by gas.....	31	.11	2	.80	98	.30	5	.42	1	.10	137	.20
Drowning.....					15	.05	6	.51			21	.03
All other injuries.....	661	2.24	18	.72	254	.78	15	1.27	13	1.24	3,774	5.42
Grand total..	29,479	100.00	2,511	100.00	32,522	100.00	1,186	100.00	1,049	100.00	69,588	100.00
1906.												
Burns and scalds:												
One part of body (except eyes).....	2,865	9.15	39	1.23	233	.66	11	.70	25	2.47	3,173	4.14
Several parts of body (except eyes).....	720	2.30	17	.53	193	.55	4	.26	17	1.68	975	1.27
Eyes.....	738	2.36	21	.66	62	.17	6	.38	11	1.09	845	1.10
Total.....	4,323	13.81	77	1.42	488	1.38	21	1.34	53	5.44	4,993	6.51

^a This total is not the correct sum of the items; the figures are given as shown in the original report.

^b Including a duplication of 557 injuries to persons who received injuries of more than one kind. This total is not the correct sum of the items; the figures are given as shown in the original report.

NUMBER AND PER CENT OF INJURIES OF EACH SPECIFIED CLASS IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF MINE INSPECTORS, 1905 AND 1906—Concluded.

Nature of injury.	Accidents in—										Total.	
	Metallurgical establishments.		Metal mines.		Coal mines.		Gold mines.		All other.			
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.
1906—Concluded.												
Traumatism without lacerations...	5,872	18.76	454	14.25	11,151	31.58	381	24.37	95	9.40	17,953	23.43
Wounds, fractures, etc.:												
Head, face (except eyes), and neck....	1,287	4.11	301	9.45	2,968	8.40	173	11.07	92	9.10	4,821	6.29
One eye.....	1,344	4.29	167	5.24	1,529	4.33	65	4.16	76	7.52	3,181	4.15
Both eyes.....	126	.40	21	.66	53	.15	14	.89	4	.39	220	.29
Shoulder, arm, or wrist:												
Right.....	1,142	3.65	193	6.06	1,761	4.99	100	6.40	46	4.55	3,244	4.23
Left.....	1,089	3.48	156	4.90	1,817	5.15	61	3.90	40	3.96	3,163	4.13
Both.....	52	.17	13	.41	64	.18	2	.13	4	.39	135	.18
Fingers—												
Right hand	4,518	14.44	679	21.31	4,605	13.05	140	8.96	92	9.10	10,034	13.09
Left hand..	5,401	17.26	389	12.21	4,826	13.67	136	8.70	95	9.40	10,907	14.23
Both hands	96	.30	18	.56	55	.16	3	.19	4	.39	176	.23
Lower extremity—												
Right.....	2,640	8.44	288	9.03	2,058	5.83	182	11.64	84	8.31	5,255	6.86
Left.....	1,896	6.06	205	6.43	2,111	5.98	153	9.79	103	10.19	4,468	5.84
Both.....	59	.19	18	.56	106	.30	14	.90	12	1.19	209	.27
Trunk.....	257	.82	76	2.39	941	2.66	55	3.52	84	8.31	1,413	1.84
Internal injuries without external wounds (chest, abdomen, and skull).....	701	2.24	117	3.67	538	1.52	31	1.98	81	8.01	1,468	1.91
Total.....	20,618	65.88	2,641	82.88	23,492	66.53	1,129	72.23	817	80.81	48,699	63.55
Asphyxiation by gas.....	19	.07	1	.03	39	.11	5	.32			64	.08
Drowning.....	1	(a)			2	.01	5	.32	2	.20	9	.01
All other injuries...	463	1.48	13	.41	140	.39	22	1.40	34	3.36	672	.88
Grand total..	231,296	100.00	3,186	100.00	335,312	100.00	11,563	100.00	11,011	100.00	76,629	100.00

^a Less than one-hundredth of 1 per cent.

^b The total is not the correct sum of the items; the figures are given as shown in the original report.

^c Including 4,205 injuries the nature of which is not reported. This total is not the correct sum of the items; the figures are given as shown in the original report.

RESULTS OF ACCIDENTS.—Fatal results of accidents are proportionately more frequent in the mining establishments than in manufacturing, the proportion of fatal accidents in mines in 1906 being 0.82 per cent as against 0.62 per cent in manufactures. On the other hand, the cases of permanent disability are not so frequent, as only 8.21 per cent resulted in permanent disability as against 17.12 per cent in the manufactures.

The number and per cent of accidents resulting in temporary disability, permanent disability, and death are shown in the table following:

RESULTS OF ACCIDENTS IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF MINE INSPECTORS, BY INDUSTRIES, 1905 AND 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Gorny Department. Statistika neschastnykh sluchaev s rabochimi, 1905, 1906.]

Industry.	Accidents resulting in—												Total accidents.
	Temporary disability lasting—						Permanent disability.				Death.		
	3 weeks.		3 to 13 weeks.		Over 13 weeks.		Partial.		Total.				
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Num-ber.	Per-cent.	
1905.													
Metallurgical establish-ments.....	22,742	77.41	4,941	16.82	345	1.17	1,210	4.12	16	0.05	116	0.39	a29,377
Metalliferous mines.....	1,640	68.91	452	18.99	35	1.47	199	8.36	8	.34	46	1.93	2,380
Coal mines.....	22,248	69.03	6,331	19.64	549	1.70	2,717	8.43	25	.08	361	1.12	a32,232
Gold mines.....	791	66.58	213	17.93	48	4.04	48	4.04	2	.17	50	4.21	a1,188
All other and unclassified (b).....	2,510	65.13	583	15.13	40	1.04	619	16.06	5	.13	67	1.74	a3,854
Total.....	49,931	72.33	12,520	18.14	a1,077	1.47	4,793	6.94	56	.08	640	.93	a69,031
1906.													
Metallurgical establish-ments.....	23,439	75.06	5,705	18.27	480	1.54	1,489	4.77	14	.05	95	.30	a31,226
Metalliferous mines.....	2,288	72.80	568	18.07	52	1.65	183	5.82	10	.32	39	1.24	a3,143
Coal mines.....	21,620	62.31	8,634	24.88	745	2.15	3,313	9.55	12	.03	339	.98	a34,697
Gold mines.....	1,037	64.85	313	19.59	35	2.19	86	5.38	10	.62	66	4.13	a1,599
All other and unclassified (b).....	2,341	44.66	1,060	20.22	103	1.96	1,158	22.09	8	.15	85	1.62	a5,242
Total.....	50,725	66.83	16,280	21.45	a1,404	1.85	6,229	8.21	54	.07	624	.82	a75,907

a This total is not the correct sum of the items; the figures are given as shown in the original report.

b Data from the Caucasus mining district, including mainly oil wells, were not classified by branch of industry.

CAUSES OF ACCIDENTS.—The causation of accidents in mines and metallurgical establishments, as shown in the following tables for 1905 and 1906, is very much different from that in manufacturing establishments. Cave-ins, collapse of structures, and falling objects are responsible for over one-fourth of all the accidents reported, loading and unloading for nearly one-fifth, and transportation by rail for about one-eighth, so that these three classes alone claim from 55 to 60 per cent of the accidents. While in manufacturing establishments accidents due to machinery or dangerous substances represent nearly two-fifths of all accidents, in mines and metallurgical establishments these causes are comparatively unimportant, claiming in 1906 only 18.8 per cent. Hand implements in manufactories caused 15 per cent, and in mines and metallurgical establishments only 8.85 per cent of the total number of accidents. As accidents due to collapse of structures, falls, loading, and railroad transportation are likely to be more severe, this difference in causation carries with it a correspondingly greater gravity than injuries in manufacturing establishments. Especially is this true of the coal mines, where the three causes specified were responsible in 1906 for nearly three-fourths of all accidents.

CAUSES OF ACCIDENTS IN MINES AND METALLURGICAL ESTABLISHMENTS, ACCORDING TO REPORTS OF MINE INSPECTORS, 1905 AND 1906.

[Source: Ministerstvo Torgovli i Promyshlennosti. Gorny Department. Statistika neschastnykh sluchaev s rabochimi, 1905, 1906.]

Cause of accident.	Accidents in—										
	Metallurgical establishments.		Metal mines.		Coal mines.		Gold mines.		All others and unclassified.	Total.	
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.		Number.	Per cent.
1905.											
Engines.....	251	0.85	2	0.08	37	0.11	7	0.59	100	397	0.57
Transmission apparatus	305	1.04	3	.13	203	.63	19	1.60	62	592	.86
Working machinery.....	2,170	7.38	59	2.48	434	1.35	26	2.19	219	2,908	4.21
Lifts, elevators, etc.....	606	2.06	52	2.19	902	2.80	30	2.53	119	1,709	2.47
Steam boilers and steam fittings.....	254	.86	14	.59	193	.60	11	.93	51	523	.76
Explosives.....	15	.06	59	2.19	274	.85	39	3.28	34	421	.61
Injurious gases.....	173	.59	1	.04	63	.19	4	.34	5	246	.36
Poisonous and injurious substances.....	3,395	11.56	36	1.51	264	.82	6	.50	112	3,813	5.52
Cave-ins, collapse, and falling objects.....	2,941	10.01	676	28.40	13,019	40.40	322	27.10	431	17,389	25.19
Falls.....	1,409	4.80	196	8.24	1,112	3.45	95	8.00	202	3,014	4.37
Loading, unloading, and carrying.....	7,824	26.63	751	31.55	4,259	13.21	95	8.00	731	13,661	19.79
Transportation, railroad.....	2,115	7.20	99	4.16	5,840	18.12	217	18.27	184	8,455	12.25
Transportation, water.....	6	.02	.....	.....	32	.10	8	.67	.....	46	.07
Animals.....	51	.17	31	1.30	363	1.13	55	4.63	51	551	.08
Implements.....	2,929	9.97	247	10.38	2,383	7.39	134	11.28	550	6,243	9.04
All others.....	4,976	16.94	154	6.47	2,812	8.72	113	9.51	1,008	9,063	13.13
Total.....	29,377	100.00	2,380	100.00	32,232	100.00	1,188	100.00	3,854	69,031	100.00
1906.											
Engines.....	224	.72	2	.06	14	.04	30	1.88	139	409	.53
Transmission apparatus	240	.77	4	.12	265	.76	24	1.50	13	546	.71
Working machinery.....	2,529	8.10	43	1.36	297	.86	25	1.56	437	3,331	4.38
Lifts, elevators, etc.....	492	1.57	47	1.49	791	2.28	30	1.88	131	1,491	1.96
Steam boilers and steam fittings.....	190	.61	18	.57	125	.36	5	.31	86	424	0.58
Explosives.....	16	.05	64	2.03	152	.44	39	2.44	14	285	.37
Injurious gases.....	54	.17	6	.19	57	.16	5	.31	6	128	.16
Poisonous and injurious substances.....	3,529	11.30	25	.79	166	.48	14	.88	151	3,885	5.11
Cave-ins, collapse, and falling objects.....	3,892	12.46	946	30.09	13,933	40.16	445	27.83	469	19,685	25.93
Falls.....	1,804	5.78	303	9.64	1,260	3.63	144	9.01	331	3,842	5.06
Loading, unloading, and carrying.....	7,660	24.53	562	17.88	4,432	12.77	123	7.69	996	13,773	18.14
Transportation, railroad.....	2,267	7.26	608	19.34	7,477	21.55	209	13.07	122	10,683	14.07
Transportation, water.....	8	.02	.....	.....	14	.04	5	.31	1	28	.03
Animals.....	63	.20	28	.89	365	1.05	68	4.25	37	561	.73
Implements.....	3,213	10.29	291	9.25	2,359	6.80	225	14.07	637	6,725	8.85
All others.....	5,050	16.17	199	6.33	2,991	8.62	208	13.01	1,113	9,561	12.59
Total.....	31,226	100.00	3,143	100.00	34,697	100.00	1,599	100.00	5,242	75,907	100.00

^a This total is not the correct sum of the items; the figures are given as shown in the original report.

ACCIDENTS TO RAILWAY EMPLOYEES.

The reports of the Russian railways contain data of accident statistics for over 20 years, and they show a very low accident rate. Thus in 1906, according to these reports, there were 11,784 accidents, of which 814 were fatal, the number of employees being 825,315, which gives an accident rate of only 14.28 per 1,000 employees. It

seems certain that only the grave injuries are reported, as is shown by the fact that the fatal accidents constituted nearly 7 per cent of the total number of accidents reported. But another more accurate source gives a very much larger number of accidents. This is the series of annual reports of the medical service of the Russian railways, from which the following tables were compiled for 1902 to 1907. The number of accidents is over seven times as large as that reported by the railroad administrations, and the rate has rapidly increased from 55 per thousand in 1902 to 102 per thousand in 1907.

NUMBER OF ACCIDENTS TO EMPLOYEES IN RAILWAY SERVICE, 1902 TO 1907.

[Source: Ministerstvo Putel Soobshchenia. Upravlenie zheleznykh dorog. Otchet o vrachebno-sanitarnom sostolanii zheleznykh dorog 1902-1907.]

Year.	Number of accidents.											
	In train service.				Outside of train service.				Total.			
	Light.	Severe.	Fatal.	Total.	Light.	Severe.	Fatal.	Total.	Light.	Severe.	Fatal.	Total.
1902....	5,218	1,036	367	6,621	26,729	1,029	120	27,948	32,017	2,065	487	34,569
1903....	8,054	1,209	479	9,742	31,747	1,176	109	33,022	39,791	2,385	588	42,764
1904....	9,646	2,050	449	12,145	37,403	1,429	123	38,955	47,049	3,479	572	51,100
1905....	8,437	1,643	525	10,605	44,020	1,826	275	46,121	52,457	3,469	800	56,726
1906....	15,603	1,846	662	18,111	56,067	1,763	177	58,007	71,670	3,609	839	76,118
1907....	15,301	1,967	682	17,950	62,554	2,133	210	64,897	77,855	4,100	892	82,847

NUMBER OF EMPLOYEES, NUMBER OF ACCIDENTS, AND ACCIDENT RATE PER 1,000 IN RAILWAY SERVICE, 1902 TO 1907.

[Source: Ministerstvo Putel Soobshchenia. Upravlenie zheleznykh dorog. Otchet o vrachebno-sanitarnom sostolanii zheleznykh dorog 1902-1907.]

Year.	Employees.	Accidents.							
		Fatal.		Severe.		Light.		Total.	
		Number.	Per 1,000 employees.	Number.	Per 1,000 employees.	Number.	Per 1,000 employees.	Number.	Per 1,000 employees.
1902....	628,021	487	0.77	2,065	3.29	32,017	50.98	34,569	55.04
1903....	662,567	588	.88	2,385	3.60	39,791	60.06	42,764	64.54
1904....	709,531	572	.81	3,479	4.90	47,049	66.31	57,100	72.02
1905....	726,825	800	1.10	3,469	4.77	52,457	72.17	56,726	78.04
1906....	763,425	839	1.10	3,609	4.73	71,670	93.88	76,118	99.71
1907....	808,444	892	1.10	4,100	5.07	77,855	96.30	82,847	102.47

TOTAL NUMBER OF ACCIDENTS.—It is possible to combine the statistical data for manufacturing industry, mining and metallurgical industry, and railroads, and to obtain approximately the total number of industrial accidents in Russia, not including agriculture or commercial establishments. In the following table this has been done for 1906. The accidents included comprise those recorded by the factory inspectors, mine inspectors, and the railroad service. The statement is not altogether complete, for many smaller establishments and many government manufacturing establishments, not

subject to factory inspection, are omitted. But as far as the data go they show 1,834 fatal and 210,333 nonfatal accidents, giving a total of 212,167 accidents for 2,927,965 employees, or a rate of 72.46 per thousand.

TOTAL NUMBER OF EMPLOYEES AND OF RECORDED ACCIDENTS AND ACCIDENT RATE PER 1,000, 1906.

[Compiled from preceding tables.]

Industry.	Employees.	Accidents.					
		Fatal.		Nonfatal.		Total.	
		Number.	Per 1,000 employees.	Number.	Per 1,000 employees.	Number.	Per 1,000 employees.
Manufactures.....	1,658,985	371	0.22	59,771	36.03	60,142	36.25
Mines and metallurgical establishments.....	505,555	624	1.23	75,283	148.91	75,907	150.15
Railroads.....	763,425	839	1.10	75,279	98.61	76,118	99.71
Total.....	2,927,965	1,834	.63	210,333	71.83	212,167	72.46

SICKNESS INSURANCE.

The field of "sickness insurance," which includes all forms of provision for workmen in case of sickness, may be divided into (1) medical care of the diseased, and (2) financial assistance to him and those dependent upon him for support during the time of inability to work, resulting from such sickness. Whenever such sickness follows an industrial accident the various compensation acts, described in the preceding sections, meet this condition by requiring the employer to furnish both the cost of medical help and the allowances to the injured and his family. As far as sick benefits are concerned, the law requiring that fines collected in establishments shall be used for that purpose is the only general legislation on the subject. In addition, some provision for the sick may be found in isolated branches of industry: In government mining, and in metallurgical, and a few other industrial establishments. Establishment sick benefit associations are found mainly in the mining industry of the western Provinces, such as Poland and the Baltic region; and industrial sick benefit associations are found in the larger industrial centers. Information in regard to these private local funds is very meager.

The need of a better system of provision for the sick is strongly felt in Russia, and a system of obligatory sick insurance through establishment benefit associations forms a part of the general plan of compulsory workmen's insurance, discussed both in the governmental schemes and by society at large since 1905. A bill to that effect has been introduced into the Third Duma in conjunction with the bill for a new accident-insurance law.

MEDICAL AID.

HISTORY.

To understand the development of Russian legislation in regard to medical assistance to workmen employed in factories it is necessary to point out that, in theory, medical aid is considered a proper governmental function, to be supplied in cities by the municipal government, and in the rural districts by the so-called "zemstvos"—organs of local self-government. In provinces where zemstvos have not been organized the duty of furnishing medical aid to the rural population devolves upon the governmental authorities. In practice only a very few municipalities have met this duty, and in those provinces which have as yet no zemstvos the organization of medical aid is purely formal and perfunctory. On the other hand, the zemstvos have, since their organization in the early sixties, always looked upon the organization of medical aid as one of their most important functions. The combined budgets of these zemstvos amount to many millions of dollars, and about one-fourth of the total expenditures is being devoted to medical aid in rural communities. There are many free hospitals and dispensaries in each county (*uyezd*) where a zemstvo exists, and the Russian peasant may be said to be fairly well provided with free medical assistance.

LAW OF 1866.—The law which imposed upon the factory owners the duty of furnishing medical aid to their factory employees dates from the year 1866. It owes its origin to the beginning of an epidemic of Asiatic cholera in Moscow. The governor of Moscow, considering the large factories with their insanitary conditions and large number of workers a possible means of spreading the cholera epidemic, in a report to the minister of interior suggested that the owners of large factories be required to establish hospitals and employ physicians in connection with their industrial establishments. As a result of this suggestion a decision of the committee of ministers was approved by the Emperor August 26 (Sept. 7), 1866, ordering as a temporary measure that "there be established in connection with each factory employing 1,000 workers a hospital with ten beds, and at each factory employing more than 1,000 workers 15 beds or more, and at each factory employing less than 1,000 workers 5 beds or more, at the rate of one for each 100 workers." Though the order was declared to be a temporary measure no time limit was mentioned, and the law is still in force.

The indefinite language of this law and the absence of any punitive measures for noncompliance with its demands or any organ of inspection and control, except the police authorities, left the entire problem in a very unsatisfactory condition. The language of the order showed that the intention existed at that time to follow it up with a systematic

law regulating the question of medical aid to factory employees, for the minister of interior was ordered to present a plan for such legislation to the Imperial Council. In 1867, and again in 1874 in connection with a proposal of a law for regulation of conditions of employment, these legislative propositions were discussed, but without success, as the Imperial Council judged the law of 1866 to be sufficient and refused to go any further in this matter. The effect of this law was far from uniform; its execution depended mainly upon the zeal and energy of the provincial governors. In some factories good hospitals were established; in others the beds were left without medical attendance, and in a great many localities the law was entirely disregarded. In many factories the costs of these medical establishments were charged to the workmen.

LAW OF 1886.—This latter abuse was checked by the law of June 3 (15), 1886, regulating the conditions of employment and the relations between employers and employees, which among other things prohibited the deducting of the cost of medical aid from the wages of the workmen (Code, Vol. XI, 2, Industrial Code, sec. 102). On the other hand, it established serious limitations to the extent of medical aid to the workmen required of the employers, by laying down the rules that the employer could discharge any workman at two weeks' notice and immediately in case of a contagious disease. Evidently a dismissed employee had no claim to medical aid from the employer after the termination of the employment.

The law of June 3 (15), 1886, established municipal factory commissions for St. Petersburg, Moscow, Odessa, and Warsaw, and provincial commissions for the separate Provinces, and these commissions were intrusted among other things with the administrative regulations of the problem of medical aid to factory employees.

EXTENSION OF THE LAW TO MINING AND METALLURGY.—By a decree of March 9 (21), 1892, the provisions of the law of 1886 were extended to apply to the mining and metallurgical industries and were embodied in the Mining Code. Local mining commissions were established with functions parallel to those of the factory commissions, including the regulation of medical assistance to the employees. A law requiring proprietors of mining and metallurgical establishments to establish hospital facilities for treatment of sick employees had been on the Russian statute books for sixty years before similar provisions were made for factory industries, namely, in the general mining law of July 13 (25), 1806, for the mining industry was developed much earlier than manufactures. The greater danger to health and life from work in the mines was evident, and many of these establishments were owned from the beginning of Russian industry by the State or Crown, which was more inclined to take care of its employees.

According to this law, both the State and private mining and metallurgical establishments employing 200 persons or more were required to have a hospital and one or more resident physicians; but in the case of privately owned mines the law remained a dead letter until 1892. Finally both the local factory commissions and the local mining commissions were united into factory and mining commissions by the act of June 7 (19), 1899, which also established a central factory and mining commission and put it in control of the local commissions, for the purpose of unifying this work. The central commission is required to formulate general principles for the administration of the law of 1866, but the actual administration is still in the hands of the local commissions and exercised through the factory and mine inspectors. Provincial commissions were established in 64 provinces; in 35 of these such regulations were established, and in the remaining 29, mostly nonindustrial provinces, practically nothing was added to the ambiguous language of the law of 1866.

While the establishment of factory hospitals was mandatory according to the exact language of the law of 1866, it was nevertheless evident that for small industrial establishments with 100 or even less employees the organization of such a private hospital would either be a great hardship, possibly not demanded in view of the existence of good hospitals in the immediate vicinity, or would become a pure formality without any substantial benefit to the employees. Nor was it clear whether the law applied to factories with less than 100 workmen, whether 5 beds was the minimum number for a factory hospital, and what the requirements were in regard to medical attendance. In answer to inquiries from the Moscow provincial factory commission it was explained in 1887 that conditions had changed considerably during the preceding two decades, and that the growth of the activity of zemstvos and municipalities in supplying hospital facilities has made the organization of special factory hospitals unnecessary in many cases, and that as a substitute for the required hospitals factory owners may in certain cases be required to enter into agreements with zemstvos and other bodies for the supply of hospital and other medical facilities to their employees.

REGULATIONS OF MOSCOW.

As an example of the regulations established by the provincial factory commissions, those in force since February 1 (13) 1897, in the province of Moscow, outside of the city of Moscow, may be briefly mentioned. Factories employing 500 or more workmen are required to have a factory hospital with one bed for each 100 workmen, a resident physician and a "feldsher" (a medical assistant of a somewhat higher grade than a trained nurse). When the number

of workmen exceeds 3,000 two physicians must be employed, one of whom shall reside at the factory. Factories employing from 17 to 500 workmen may be freed from this obligation if they make arrangements with the zemstvo hospital or any other hospital, or several factories may combine for establishing a common hospital. In exceptional cases such arrangement may be permitted to factories having more than 500 workmen. When the factory hospital has less than 5 beds the physician need not reside at the factory, but must live not more than 7 versts (4.7 miles) from it, and must visit it at least three times a week, while the hospital must have a resident "feldsher." When the factory has no hospital of its own, and the distance to the hospital with which such arrangements have been made is more than 3 versts (2 miles), the factory must have an emergency room with all necessary appliances for first aid to sick or injured, and, if the number of workmen exceeds 200, also a "feldsher." Artisans' shops employing no more than 16 workmen are not subject to any of these requirements. In factories employing more than 500 workmen the hospital is required to consist of three divisions—a general ward, a contagious ward with facilities for isolation when necessary, and a dispensary for outside patients. Where both men and women are employed there must be separate rooms for each sex in both the general ward and the contagious ward. The rooms must contain a minimum air capacity of 3 cubic sazhen (1,029 cubic feet) per each bed; there must also be warm privies. In factories employing from 200 to 500 workmen the hospital must contain at least four rooms—two wards, an examination room, and a waiting room for outside patients. In factories employing less than 200 workmen at least two rooms are required, one for the beds and one for the outdoor patients. Where 200 or more women are employed, a special maternity room must be provided and also the services of a resident trained midwife; where less than 200 women are employed, such room and the services of a midwife must be furnished by the employer when necessary. Information must be furnished the factory commission in regard to the exact measures taken for compliance with these regulations.

REGULATIONS OF OTHER LOCALITIES.

The above regulations of the Moscow commission have been quoted as a type. Considerable variations of greater or less importance are found in other districts. Quite uniformly establishments with no more than 16 workmen are excepted, while the regulations quoted require that hospital facilities, either in factory hospitals or other hospitals by arrangement, shall be furnished by all factories above that size; others except factories with less than 100 and in some cases

less than 50 workmen, requiring for these smaller factories only dispensary treatment or treatment at the homes of the employees. In some districts all factories, no matter how large, are permitted to substitute arrangements with zemstvo or other hospitals for establishment of factory hospitals; such permissions are more readily granted in cities than in rural districts. About one-half of the commissions, while waiving the demands for factory hospitals altogether or permitting joint factory hospitals or arrangements with other hospitals, nevertheless require emergency wards, under certain varying conditions, such as distance to the nearest hospital or physician, number of employees, or presence of dangerous machinery. Only three commissions, those of St. Petersburg, Moscow, and Warsaw Provinces, require maternity wards in factories employing considerable numbers of workers. A few commissions have established a maximum time limit of three months for this free medical help.

In contradistinction to the requirements of the law of 1866 special municipal taxes for the purpose of supporting hospitals for wage-workers have been established in 16 cities, most of which are important industrial centers.

SPECIAL TAX ON WORKMEN FOR SUPPORT OF HOSPITALS.

City.	Year established.	Amount of tax.	City.	Year established.	Amount of tax.
St. Petersburg.....	1842	\$0.52	Nikolalev.....	1894	\$0.52
Ivanovo-Voznesensk.....	1860	.39	Warsaw.....	1894	.52
Kharkof.....	1869	.26	Astrakhan.....	1896	.52
Kronstadt.....	1881	1.03	Nakhichevan.....	1896	.52
Moscow.....	1890	.64	Batoom.....	1898	.52
Vladivostok.....	1892	1.03	Akerman.....	1899	.31
Odessa.....	1892	.31	Khabarovsk.....	1899	(a)
Rostov.....	1893	.52	Blagovchensk.....	1899	(a)

^a For males \$1.03, for females \$0.52.

The tax in St. Petersburg and Ivanovo-Vosnesensk had been introduced before the law of 1863 was promulgated. In the other cities the special tax for hospital purposes was introduced, although it evidently imposed a duty upon the workmen, which according to the law of 1866 devolved upon the employers. The tax in St. Petersburg differs from that in all other cities enumerated in that it applies to domestic servants, construction workers, unskilled laborers (so-called "black" laborers in Russia), drivers, in short, to practically all wage-earners except factory workers, and so it does not come in conflict with the legislation in regard to factory hospitals. In the other cities all wage-earners are included, and in some cases other groups of persons of approximately the same economic status, such as peddlers, teamsters, etc. The law establishing the tax in Ivanovo-Vosnesensk permits the employer to pay the tax for his employees,

but does not require him to do it. In view of the law of 1866 charging the factory owner with the cost of medical aid to the employees, and the provisions of the law of 1886 prohibiting the factory owners from charging their employees for hospital service, the natural question arose, whether this tax should not be paid by the factory owners; but in response to an inquiry from the Warsaw municipal factory commission, the Ministry of Finance decided that such prohibition of the law of 1886 (Industrial Code, sec. 102), was directed only against factory owners and not against municipalities, and that the hospital tax must be paid by the persons taxed.

In return for this tax the wage-earners obtained the right of free medical treatment in hospitals, not only for themselves but for their minor children.

The obligations of the factory owners have been considerably modified by this hospital tax in the cities affected. The St. Petersburg municipal factory commission waives the demand for factory hospitals in view of the sufficient number of municipal hospitals, though, as was stated above, in that city the factory employees do not pay the hospital tax and have no right of free medical treatment. Instead, the factory owners are required to meet the cost of treatment of their employees in the hospitals. In addition the factories are required to provide for a dispensary for treatment of outside patients by a physician, and also for an emergency ward for first aid. The factory physician must visit the factory at stated intervals, the frequency of which depends upon the size of the factory, from a weekly visit, where the number of workers is 50 to 100, to daily visits to factories employing over 1,000 persons, in addition to which the factory physician must treat the patients at his house, or if necessary at their houses.

MEDICAL AID IN MANUFACTURING INDUSTRIES.

For the study of the practical results of this legislation two reports are available which indicate the developments within the last decade. The first investigation was undertaken by the Department of Commerce and Manufactures of the Ministry of Finance in 1897, and the results were published in 1899. The investigation is based upon data obtained by the corps of factory inspectors in 1898 and covering the calendar year of 1897. The investigation was repeated in 1908 for 1907 by the Department of Industry of the Ministry of Commerce and Industry through the factory inspection system, and while the report of this investigation has not yet been published, the main data were printed in one of the official publications of the Russian Government.

NUMBER AND PER CENT OF ESTABLISHMENTS AND OF WORKMEN EMPLOYED, AND EXPENDITURES, IN FACTORIES SUBJECT TO INSPECTION PROVIDING MEDICAL AID, BY FORM OF AID, 1897 AND 1907.

[Source: Ministerstvo Finansov, Departament Torgovli i Manufaktur, Vrachebnaia Pomoshch fabrichnym rabochim, 1899. Vestnik Finansov, 1910, No. 5.]

Form of aid.	Establishments.				Workmen employed.				Expenditures.			
	1897.		1907.		1897.		1907.		1897.		1907.	
	Num-ber.	Per-cent.	Num-ber.	Per-cent.	Number.	Per-cent.	Number.	Per-cent.	Total.	Average per employ-ee.	Total.	Average per employ-ee.
Hospital.....	710	3.7	964	6.8	514,615	35.4	798,279	43.9	\$1,211,111	\$2.35	\$2,858,568	\$3.58
Emergency wards	449	2.3	327	2.3	173,134	11.9	123,093	6.8	308,294	1.78	332,466	2.70
Dispensaries.....	1,464	7.6	2,932	20.6	223,797	15.4	461,551	25.4	376,823	1.68	1,360,025	2.95
Agreements with zemstvos.....	215	1.1	295	2.1	30,980	2.1	43,950	2.4	37,974	1.23	73,631	1.68
Agreements with municipalities..	13	.1	37	.3	7,964	.6	6,458	.4	24,706	3.10	10,320	1.60
Agreements with Red Cross.....	57	.3	87	.6	17,656	1.2	29,852	1.6	32,134	1.82	113,657	3.81
Agreements with other hospitals.	33	.2	122	.8	8,511	.6	21,651	1.2	14,661	1.72	54,089	2.50
Independent, unsatisfactory facilities.....	547	2.8	675	4.7	40,652	2.8	43,766	2.4	42,966	1.06	71,296	1.63
Total.....	3,488	18.1	5,439	38.2	1,017,309	70.0	1,528,600	84.1	2,048,669	2.01	4,874,052	3.19
No provision.....	15,804	81.9	8,808	61.8	436,616	30.0	290,029	15.9	.....	.....	.....	.....
Grand total.	19,292	100.0	14,247	100.0	1,453,925	100.0	1,818,629	100.0	.....	.....	.....	.....

NUMBER OF PERSONS PROVIDED FOR.—Altogether 19,292 manufacturing establishments with 1,453,925 workers were subject to factory inspection in 1897. Of these 3,488 establishments, or 18.1 per cent, had some systematic provision for rendering medical aid to its employees, but these few establishments employed 1,017,309 workers, or 70 per cent of the total.

Ten years later (1907), 14,247 manufacturing establishments, with 1,818,629 workers, were subject to factory inspection; of these, 5,439 establishments, or 38.2 per cent, providesome form of medical assistance, and these establishments employed 1,528,600 persons, or 84.1 per cent of the total. Thus, during the ten years a considerable extension of medical facilities took place. While the increase of the proportion of establishments furnishing medical aid from 18.1 per cent to 38.2 per cent is partly due to the fact that a large number of small establishments have during the decade been exempted from factory inspection, yet the actual increase from 3,488 to 5,439 establishments is 55.9 per cent, and the number of workers furnished some form of medical assistance has increased from 1,017,309 to 1,528,600, or 50.3 per cent.

The facilities for medical aid were best in large establishments, as is shown by the fact that less than two-fifths of the establishments

were giving medical assistance and the number of workmen provided for exceeded four-fifths. The close dependence of the size of the factory upon the medical facilities is shown in the following table:

NUMBER AND PER CENT OF FACTORIES SUBJECT TO INSPECTION GRANTING MEDICAL AID AND NUMBER AND PER CENT OF WORKMEN PROVIDED FOR, BY NUMBER OF EMPLOYEES IN FACTORIES, 1897 AND 1907.

[Source: Ministerstvo Finansov Departament Torgovli i manufaktur. Vrachebuaia pomoshch fabrichnym rabochim, 1899. Vestnik Finansov, 1905, No. 5, 1910, No. 5.]

Number of employees.	Factories.						Workmen.					
	1897.			1907.			1897.			1907.		
	Total.	Providing medical aid.		Total.	Providing medical aid.		Total.	Provided with medical aid.		Total.	Provided with medical aid.	
		Number.	Per cent.		Number.	Per cent.		Number.	Per cent.		Number.	Per cent.
15 and under...	8,778	155	1.77	3,799	326	8.58	63,865	1,787	2.78	36,601	3,502	9.57
16 to 50.....	6,195	838	13.53	5,698	1,507	26.45	176,600	28,119	15.91	167,416	49,727	29.70
51 to 100.....	1,961	718	36.59	1,999	1,144	42.77	143,024	54,159	37.84	144,492	85,976	59.50
101 to 500.....	1,812	1,283	70.80	2,023	1,764	87.20	414,079	320,475	77.38	472,901	423,925	89.64
501 to 1,000.....	352	309	87.77	429	415	96.74	242,185	211,933	87.53	306,039	295,839	96.66
Over 1,000.....	194	185	95.34	299	283	94.65	414,172	400,836	94.76	691,180	669,631	96.88
Total.....	19,292	3,488	18.06	14,247	5,439	38.18	1,453,925	1,017,309	69.97	1,818,639	1,528,610	84.05

Thus, of the small factories with fifteen workmen or less only 8.58 per cent in 1907 furnished medical aid, while of the factories with over 500 employees over 95 per cent had some medical facilities.

In these large factories provisions were usually satisfactory even at the time of the earlier investigation in 1897. The development of the last ten years manifested itself largely in the middle-sized factories employing from 16 to 100 workmen, as the number of such factories giving medical aid increased from 1,556 in 1897 to 2,651 in 1907.

Altogether, over 30 per cent of the workmen were left without any medical assistance in 1897 and 16 per cent in 1907, although it is prescribed by the law for all factories. This may be partly explained by the small size of some establishments. Thus out of 8,808 establishments providing no medical assistance at all in 1907, 8,519, or 96.7 per cent, employed 100 workmen or less, 7,664, or 87 per cent, 50 workmen or less. Of all the 290,029 workmen deprived of medical assistance, 209,304, or 72.7 per cent, worked in factories employing 100 persons or less, 150,798, or 52 per cent, in factories employing 50 persons or less. Nevertheless, this is not the only explanation, for of the factories employing over 100 persons each, 289, with 70,728 wage-workers, were not providing any assistance. The proportion of workers receiving some assistance varied considerably in different provinces. At the time of the first investigation (1898) 60 provinces had an organized system of factory inspection, but only 18 had issued

regulations in regard to medical aid. Only 10 provinces had such regulations before 1896, and in these 10 provinces the organization of medical aid was very much superior to the rest of the country. At present 35 provinces have such regulations (^a) and the general situation has accordingly improved considerably.

METHOD OF PROVIDING MEDICAL AID.—The methods of providing medical aid, and consequently its quality, were subject to great variations. The tables enumerate the main classes.

These were the separate factory hospital, either for one factory or supported by several factories; factory emergency wards, either separately or cooperatively supported; factory dispensaries; and arrangements with other public and private agencies. The comparative value of the separate medical institutions declines in the order named. Only hospitals provide full medical aid and care, emergency wards doing very little hospital treatment, and dispensaries treating exclusively ambulatory cases; i. e., cases of slight illness, usually not accompanied with disability. Arrangements with zemstvos and with other hospitals were often satisfactory.

In addition, 675 factories, mostly of the smaller class, with 43,766 workmen, provided some form of medical aid in 1907 by employing a physician or a nurse, but this aid was of such unsatisfactory nature that in the official reports this service is described as almost worthless.

Taking the establishment as a basis, the most frequent method of rendering this medical aid was by dispensaries, which in 1897 existed in 42 per cent of all establishments furnishing medical aid and in 1907 in 54 per cent; next followed factory hospitals and emergency wards. But as far as the number of workmen provided for is concerned, the factory hospital is the most important institution, as over one-half of the workmen had factory hospital facilities at their disposal.

Independent hospitals, emergency wards, and dispensaries made the largest gains within the decade which elapsed between the two investigations, the number of workmen thus protected increasing from 910,546 to 1,382,923. Agreements with zemstvos, municipalities, red cross societies, or other hospitals for treatment of the factory workers, while permitted, are few and do not show any tendency to increase.

The quality of the medical assistance declines with the size of the factory establishments. In the larger factories the hospital predominates. Of the factories with 1,000 employees or over, 69.23 per cent have separate hospitals; of those with 501 to 1,000 employees, 49.88 per cent have hospitals; and so on in a rapidly declining scale. The greatest proportion of emergency wards was found in the factories with 501 to 1,000 workmen, 12.59 per cent, though they were also

^a Mikulin, *Fabrichnaia inspektzia v Rossii*, p. 171.

NUMBER AND PER CENT OF EMPLOYEES IN FACTORIES SUBJECT TO INSPECTION PROVIDED WITH MEDICAL AID, BY FORM OF AID AND SIZE OF ESTABLISHMENT, 1907.

[Source: Viestnik Finansov, 1910, No. 5.]

NUMBER.

Form of aid.	Employees in factories employing—						Total employ-ees.
	15 per-sons and under.	16 to 50 persons.	51 to 100 persons.	101 to 500 persons.	501 to 1,000 persons.	Over 1,000 persons.	
Hospitals.....	251	4,393	7,418	94,114	153,127	538,976	798,279
Emergency wards.....	22	1,259	4,057	50,942	42,727	24,086	123,093
Dispensaries.....	1,976	29,314	53,014	213,961	80,200	83,086	461,551
Agreements with zemstvos.....	374	2,771	4,681	20,203	8,726	7,195	43,950
Agreements with municipalities.....	28	366	753	1,739	522	3,050	6,458
Agreements with Red Cross.....	9	245	1,011	15,255	5,779	7,553	29,852
Agreements with other hospitals.....	24	1,392	1,932	8,915	4,758	4,630	21,051
Independent, unsatisfactory facilities.....	818	9,987	13,110	18,796	.....	1,055	43,776
Total.....	3,502	49,727	85,976	423,925	295,839	669,631	1,528,610
No provision.....	33,099	117,689	38,516	48,976	10,200	21,549	290,029
Grand total.....	36,601	167,416	144,492	472,901	306,039	691,180	1,818,639

PER CENT.

Hospitals.....	0.69	2.62	5.13	19.90	50.03	77.98	43.89
Emergency wards.....	.06	.75	2.81	10.77	13.96	3.49	6.77
Dispensaries.....	5.40	17.51	36.69	45.24	26.21	12.02	25.38
Agreements with zemstvos, etc.....	1.19	2.86	5.80	9.76	6.46	3.24	5.60
Independent, unsatisfactory facilities.....	2.23	5.96	9.07	3.97	.....	.15	2.41
Total.....	9.57	29.70	59.50	89.64	96.66	96.88	84.05
No provision.....	90.43	70.30	40.50	10.36	3.34	3.12	15.95
Grand total.....	100.00	100.00	100.00	100.00	100.00	100.00	100.00

COST OF MEDICAL AID.—In the official reports from which these data are taken, the cost of medical assistance is also given. The cost is quite considerable and is increasing. It increased from \$2,048,069 in 1897 to \$4,874,052 in 1907, or more than doubled in ten years, the per capita cost increasing from \$2.01 to \$3.19. This per capita cost is fairly uniform for establishments of different size, but this uniformity is brought about by the smaller establishments substituting less satisfactory and consequently cheaper forms of medical assistance, namely, emergency wards and dispensaries for hospitals. The difference in the per capita cost for different forms of medical assistance is much greater. Arrangements with Red Cross hospitals showed an average cost of \$3.81 per capita, in factory hospitals the average cost was \$3.58, in emergency wards \$2.70, and in dispensaries \$2.95, while arrangements with zemstvos and municipalities were cheaper.

The total and per capita cost of medical aid to the factories subject to inspection are shown by form of aid and by size of establishment in the table following:

TOTAL AND PER CAPITA COST OF PROVIDING MEDICAL AID TO EMPLOYEES OF FACTORIES SUBJECT TO INSPECTION, BY FORM OF AID AND SIZE OF ESTABLISHMENT, 1907.

[Source: Viestnik Finansov, 1910, No. 5.]

TOTAL COST.

Form of aid.	Cost in factories employing—						Total.
	15 persons and under.	16 to 50 persons.	51 to 100 persons.	101 to 500 persons.	501 to 1,000 persons.	Over 1,000 persons.	
Hospitals.....	\$658	\$13,692	\$39,106	\$408,818	\$537,702	\$1,858,592	\$2,858,568
Emergency wards.....	77	5,159	19,612	158,184	94,818	54,616	332,466
Dispensaries.....	7,543	103,942	160,896	600,990	216,490	270,164	1,360,025
Agreements with zemstvos.....	446	4,255	8,984	32,842	15,372	11,732	73,631
Agreements with municipalities.....	71	397	702	4,014	1,185	3,951	10,320
Agreements with Red Cross.....	164	607	3,112	56,964	23,255	29,555	113,657
Agreements with other hospitals.....	154	5,506	4,695	23,189	11,789	8,756	54,089
Independent, unsatisfactory facilities.....	2,943	24,123	21,066	22,492	.....	672	71,296
Total.....	12,056	157,681	258,173	1,307,493	900,611	2,238,038	4,874,052

PER CAPITA COST.

Hospitals.....	\$2.62	\$3.12	\$5.27	\$4.34	\$3.51	\$3.45	\$3.58
Emergency wards.....	3.50	4.10	4.83	3.11	2.22	2.27	2.70
Dispensaries.....	3.82	3.55	3.03	2.81	2.70	3.25	2.95
Agreements with zemstvos.....	1.19	1.54	1.92	1.63	1.76	1.63	1.68
Agreements with municipalities.....	2.54	1.08	.93	2.31	2.27	1.30	1.60
Agreements with Red Cross.....	18.22	2.48	3.08	3.73	4.02	3.91	3.81
Agreements with other hospitals.....	6.42	3.96	2.43	2.60	2.48	1.89	2.50
Independent, unsatisfactory facilities.....	3.60	2.42	1.61	1.20	.....	.64	1.63
Average.....	3.44	3.17	3.00	3.08	3.04	3.34	3.19

MEDICAL AID IN MINING AND METALLURGICAL INDUSTRIES.

The situation is somewhat more favorable in the mining and the metallurgical industries, both as regards legislation and the actual practice. Originally the Government controlled a large share of these industries and it took better care of its employees. On the other hand, the isolated position of the mining and metallurgical establishments, together with the greater frequency of accidents and diseases, makes the necessity of systematic medical aid more pressing. By the Mining Code of 1806 each government mining or metallurgical establishment with over 200 workers was required to have a hospital and a physician, and another article of the same code required private establishments to comply with the same requirements as regards medical assistance. The temporary law of 1866 did not apply specifically to mining and metallurgy, but the law of June 3, 1886, conferred upon the factory commissions, among other functions, the right to issue regulations concerning the care of the health and life of the workmen, and by the extension of this law to

the mining and metallurgical establishments on March 9, 1892, the same rights were given to the mining commissions established in the principal mining regions. In conformance with this law, the mining commissions passed regulations concerning the organizations of medical aid on the following dates:

(1) The central mining commission (the northern, northwestern, Volga, and Moscow mining territories) on April 9, 1893.

(2) The Ural mining commission on July 31, 1896, and amended August 9, 1897.

(3) The western mining commission on April 6, 1896.

(4) The south Russia mining commission on May 18, 1893.

(5) Southeastern mining commission on November 18, 1898.

(6) Caucasus mining commission on March 12, 1897, amended July 17, 1897.

(7) Western Siberia mining commission on December 15, 1900.

(8) Eastern Siberia mining commission on May 3, 1899.

While the special mining commissions in European Russia were abolished by the law of June 7, 1899, the regulations remained in force.

There are considerable differences between the regulations of different mining commissions, but those adopted by the Ural commission may be taken as a type; both because the Ural mining territory claims nearly 150,000 out of a total of 480,000 persons employed in mining, or nearly one-third, and also because the regulations of the central commission, with 30,000 employees under its jurisdiction, of the western commission, with 42,000 employees, and of the Caucasus commission, with 43,000, are very similar to those of the Ural commission. Thus these rules apply to about 265,000 workers, or over 55 per cent of those employed in mining.

These regulations of the Ural commission are as follows: All private mining and metallurgical establishments are required to furnish medical aid to their employees free of charge according to the following conditions: Establishments employing less than 100 workers and located within the distance of 15 to 25 versts (10 to 17 miles) from a hospital may furnish only an emergency room without permanent beds. The establishment employing from 100 to 400 workers must have a permanent hospital ward with not less than one bed for each 100 workers, and a permanent "feldsher" (medical assistant), and must call a physician whenever necessary. Establishments employing over 400 workers must have a hospital with a private pharmacy, not less than one bed for each 100 workers employed, a permanent physician, and the necessary number of "feldshers." While no such hospital facilities are required of the smaller establishments, they must make arrangements with hospitals in the vicinity for such sick employees as require hospital treatment. Owners of establishments

located near each other may enter into agreements for the establishment of common hospitals.

Each mining and metallurgical establishment must be provided with the necessary medical and surgical appliances for giving first aid to persons injured or suddenly taken ill, and also with conveyances for transportation of such patients to the nearest hospitals. In addition the very large establishments, employing over 1,000 persons, must organize a permanent emergency service for first aid to the injured and sick.

New hospital buildings must be erected with due regard to the demands of hygiene. They must be located in a dry place at some distance from dwellings and such shop buildings as would unfavorably influence the course of treatment, and be provided with good drinking water. The hospitals must be well lighted, ventilated, and heated. The wards must contain at least 5 cubic sazhen (1,715 cubic feet) of air space, 1 square sazhen (49 square feet) of floor space, and one-sixth square sazhen (over 8 square feet) of window space, per bed. The ceiling must be at least 14 feet high. Each hospital must be provided with a reception ward, a bathroom, an operating room, a morgue, rooms for the "feldshers" and servants, a kitchen, a laundry, a bath house, and similar accessories. The dispensary must be separate from the hospital wards. All toilet rooms must be heated, have proper ventilation, and be in the same building with the hospital. Every hospital must be provided with a special room for contagious diseases, permitting perfect isolation when necessary. This contagious ward must have its own bathroom and toilet facilities. There must also be a special room for preparation and distribution of drugs, and a room for disinfection of clothing and dressings.

STATISTICS FOR 1904.—A special investigation of the conditions obtaining under these regulations was made through the mining inspectors in 1904. The main results of this investigation are shown in the following summary statement, where data for European and Asiatic Russia are shown separately:

SUMMARY OF MEDICAL AID IN THE MINING AND METALLURGICAL ESTABLISHMENTS, 1904.

[Source: Tigranov, G. Th, i Gussiatnikov. Vrachbnaya pomoshch rabochim na gornyykh zavordakh, 1907.]

Item.	European Russia.	Asiatic Russia.	Total.
Number of establishments.....	3, 833	659	4, 492
Number of employes.....	426, 334	54, 744	481, 078
Number of hospitals.....	213	126	339
Number of beds in hospitals.....	4, 244	1, 025	5, 269
Emergency rooms and dispensaries.....	355	170	525
Beds in emergency rooms and dispensaries.....	314	322	636
Total number of beds.....	4, 558	1, 347	5, 905
Cost of building hospitals, etc.....	\$2, 823, 731	\$212, 472	\$3, 036, 203
Cost of building per bed.....	\$620	\$158	\$514
Annual cost of medical aid.....	\$1, 476, 132	\$229, 348	\$1, 705, 480
Cost of medical aid per employe.....	\$3. 46	\$4. 19	\$3. 54
Number of workmen per bed.....	94	41	81

The investigation disclosed 339 hospitals with 525 hospital wards and 5,905 beds, built at the cost of \$3,036,203, or \$514 per bed. This was an average of one hospital bed for 81 employees, which shows compliance with the requirements of the regulations. The total cost of medical aid was \$1,705,480, while the average cost per employee was \$3.54, or 10 per cent more than in the factories.

The detail statistics of this report for 1904 were prepared in harmony with the investigations of the factories for 1897 and 1907, thus permitting many comparisons. The tables show the organization of medical aid, by size of establishments, both for the number of establishments and employees. The detailed data quoted refer only to European Russia, including the entire Caucasus; but are exclusive of Asiatic Russia, for which the information is too fragmentary for detailed analysis.

Combinations for the establishment of hospitals are more popular in the mining industry than in the factories, 1,011 establishments, or over one-fourth, furnishing medical aid in that way. Next in popularity are agreements with the zemstvos, while independent hospitals are much less frequent.

Altogether less than three-fifths of the establishments were furnishing organized medical aid, nearly three-tenths providing their own hospital facilities, nearly two-tenths having agreements with various hospitals, and less than one-tenth having various substitutes for hospital treatment. The establishments making no systematic arrangement for medical aid almost all belonged to the small type, 1,417 of the 1,568 employing 15 workers or less and 143 from 16 to 100 workers. One establishment with 1,623 employees is reported as having no systematic medical aid, but in reality this comprises all the small gold-mining enterprises of a district where the actual number of establishments was not ascertained. As would be expected from the regulations, the separate hospitals are most frequent among the large establishments, and emergency wards and cooperative hospitals among the small establishments.

NUMBER AND PER CENT OF MINING AND METALLURGICAL ESTABLISHMENTS PROVIDING MEDICAL AID, BY FORM OF AID AND SIZE OF ESTABLISHMENT, 1904.

[Source: Tigranov, G. Th, i Gussiatnikov. Vrachebnaya pomoshch rabochim na gornykh zavodakh, 1907.]

NUMBER.

Form of aid.	Establishments employing—					Total establishments.
	15 persons and under.	16 to 100 persons.	101 to 500 persons.	501 to 1,000 persons.	Over 1,000 persons.	
Separate hospitals.....	1	8	29	25	61	124
Hospitals of several establishments combined.....	399	337	194	36	45	1,011
Separate emergency wards.....	5	44	64	8	.....	11
Emergency wards of several establishments combined.....	37	71	24	1	.....	133
Separate dispensaries.....	1	6	10	2	1	20
Dispensaries of several establishments combined.....	3	29	17	2	1	52
Agreements with zemstvos.....	240	308	5	1	2	556
Agreements with municipalities.....	108	17	3	.....	.....	128
Agreements with Red Cross.....	.....	2	1	.....	.....	3
Agreements with other hospitals.....	8	21	13	3	.....	45
Total.....	802	843	360	78	110	2,193
No organized medical aid.....	1,417	143	7	.....	1	1,568
Not reported.....	53	17	2	.....	.....	72
Grand total.....	2,272	1,003	369	78	111	3,833

PER CENT.

Hospitals.....	17.60	34.40	60.43	78.20	95.50	29.61
Emergency wards.....	1.85	11.46	23.85	11.54	.....	6.62
Dispensaries.....	.18	3.49	7.32	5.13	1.80	1.88
Agreements with zemstvos, etc.....	15.67	34.70	5.96	5.13	1.80	19.10
Total.....	35.30	84.05	97.56	100.00	99.10	57.21
No organized medical aid.....	62.37	14.26	1.90	.....	.90	49.91
Not reported.....	2.33	1.69	.54	.....	.....	1.88
Grand total.....	100.00	100.00	100.00	100.00	100.00	100.00

The actual situation is more favorable to the employees than the preceding table would indicate. It appears from the following table that 78.92 per cent have the benefit of either independent or cooperative establishment hospitals, 6.46 per cent more are treated in other hospitals by agreement, and nearly 10 per cent may go to either emergency wards or dispensaries, most of these having also the right to treatment in near-by hospitals when such treatment is necessary, so that altogether about 20,000 workers, or less than 5 per cent of the employees, are not provided with medical aid.

NUMBER AND PER CENT OF EMPLOYEES OF MINING AND METALLURGICAL ESTABLISHMENTS PROVIDED WITH MEDICAL AID, BY FORM OF AID AND SIZE OF ESTABLISHMENT, 1904.

[Source: Tigranov, G. Th, i Gussiatnikov. Vrachebnaya pomoshch rabochim na gornykh zavodakh, 1907.]

NUMBER.

Form of aid.	Employees in establishments employing—					Total employees.
	15 persons and under.	16 to 100 persons.	101 to 500 persons.	501 to 1,000 persons.	Over 1,000 persons.	
Separate hospitals.....	10	515	8,364	16,515	144,206	169,610
Hospitals of several establishments combined.....	2,829	14,172	42,700	23,570	83,567	166,838
Separate emergency wards.....	49	2,617	13,611	3,944	.....	20,221
Emergency wards of several establishments combined.....	322	2,897	3,667	796	.....	7,682
Separate dispensaries.....	12	295	2,506	1,192	1,200	5,205
Dispensaries of several establishments combined.....	32	1,350	3,432	1,510	1,303	7,627
Agreements with zemstvos.....	2,500	11,106	1,022	590	3,745	18,963
Agreements with municipalities.....	769	708	494	.....	.....	1,971
Agreements with Red Cross.....	.....	39	150	.....	.....	189
Agreements with other hospitals.....	63	1,251	2,985	2,128	.....	6,427
Total.....	6,586	34,950	78,931	50,245	234,021	404,733
No organized medical aid.....	11,405	5,848	1,227	.....	1,623	20,103
Not reported.....	620	614	264	.....	.....	1,498
Grand total.....	18,611	41,412	80,422	50,245	235,644	426,334

PER CENT.

Hospitals.....	15.26	35.47	63.50	79.78	96.66	78.92
Emergency wards.....	1.99	13.32	21.48	9.43	.....	6.54
Dispensaries.....	.24	3.97	7.38	5.38	1.06	3.01
Agreements with zemstvos, etc.....	17.90	31.64	5.78	5.41	1.59	6.46
Total.....	35.39	84.40	98.14	100.00	99.31	94.93
No organized medical aid.....	61.28	14.12	1.53	.....	.69	4.72
Not reported.....	3.33	1.48	.33	.....	.....	.35
Grand total.....	100.00	100.00	100.00	100.00	100.00	100.00

The total annual cost and the per capita cost are shown in the next table. Agreements with zemstvos seem the cheapest way to provide medical help, while independent hospitals are the costliest. The per capita cost of these hospitals decreases with the increase in the size of the establishment. For the smaller establishments a cooperative hospital is very much cheaper than an independent one, but this difference declines with the increase in the size of the establishments.

The data of the table do not give the correct total of the expenditures of the mining and metallurgical industry for medical help to the workers, because over 40,000 employees provided only with emergency rooms or dispensaries at the establishment, receive in addition, when necessary, hospital treatment at some hospital in the vicinity at the expense of the employer.

TOTAL AND PER CAPITA COST OF PROVIDING MEDICAL AID TO EMPLOYEES OF MINING AND METALLURGICAL ESTABLISHMENTS, BY FORM OF AID AND SIZE OF ESTABLISHMENTS, 1904.

[Source: Tigranov, G. Th, i Gussiatnikov. Vrachebnaya pomoshch rabochim na gornykh zavodakh, 1907.]

TOTAL COST.

Form of aid.	Cost in establishments employing--					Total.
	15 persons and under.	16 to 100 persons.	101 to 500 persons.	501 to 1,000 persons.	Over 1,000 persons.	
Separate hospitals.....	(a)	\$5,083	\$54,330	\$87,176	\$572,099	\$718,688
Hospitals of several establishments combined.....	\$13,761	51,356	190,326	69,796	294,198	619,437
Separate emergency wards.....	129	14,385	42,607	7,669	.....	64,790
Emergency wards of several establishments combined.....	379	1,284	5,578	2,553	.....	9,794
Separate dispensaries.....	408	1,450	10,731	3,610	4,606	20,805
Dispensaries of several establishments combined.....	45	4,570	10,479	4,929	4,679	24,702
Agreements with zemstvos.....	591	2,866	672	(a)	361	4,490
Agreements with municipalities.....	52	1,328	374	.....	.....	1,754
Agreements with Red Cross.....	.....	41	193	.....	.....	234
Agreements with other institutions.....	15	1,454	2,790	536	.....	4,795
No organized medical aid.....	1,287	1,543	206	.....	.....	3,036
Total.....	16,667	85,360	318,286	176,269	b 879,548	b 1,476,132

PER CAPITA COST.

Separate hospitals.....	(a)	\$9.87	\$6.49	\$5.27	\$3.97	\$4.21
Hospitals of several establishments combined.....	\$4.86	3.03	4.45	2.96	3.52	3.71
Separate emergency wards.....	2.63	5.50	3.13	1.94	.....	3.20
Emergency wards of several establishments combined.....	1.17	.44	1.52	3.20	.....	1.27
Separate dispensaries.....	3.40	4.91	4.28	3.03	3.84	4.00
Dispensaries of several establishments combined.....	1.40	3.38	3.05	3.26	3.57	3.24
Agreements with zemstvos.....	.24	.26	.65	(a)	.10	.24
Agreements with municipalities.....	.07	1.87	.77	.....	.....	.89
Agreements with Red Cross.....	.....	1.06	1.29	.....	.....	1.24
Agreements with other institutions.....	.24	1.16	.94	.25	.....	.75
No organized medical aid.....	.12	.29	.16	.....	.....	.15
Average.....	.84	2.08	3.96	3.51	3.73	3.46

^a Not reported.

^b This total is not the correct sum of the items; the figures are given as shown in the original report.

MEDICAL AID TO RAILROAD EMPLOYEES.

Of all industrial employees, those employed by the railroads are best provided with medical aid. The State as well as private railroads support a large number of hospitals and emergency wards, in which not only the employees themselves but the members of their families receive gratuitous medical and surgical aid. In the following statement are given the main data concerning these medical facilities of the railroads for 1902 and 1907, indicating their rapid growth within the five years in which the mileage has increased from 35,655 to 40,197 miles, or less than 13 per cent.

MEDICAL STAFF AND HOSPITAL FACILITIES PROVIDED FOR RAILROAD EMPLOYEES,
1902 AND 1907.

[Source: Ministerstvo Putei Soobshchenia. Otdiel zheleznykh dorog. Otchet o vrachebno-sanitarnom sostoianii zheleznykh dorog, 1902, 1907.]

Year.	Medical staff.					Hospital facilities.				
	Physicians.	Drug-gists.	Med-ical as-sistants, mid-wives, etc.	Other em-ployees.	Total.	Hos-pitals.	Emer-gency wards.	Beds.		
								In hos-pitals.	In emer-gency wards.	Total.
1902.....	642	56	1,741	1,672	4,111	74	694	2,234	1,362	3,696
1907.....	891	88	2,406	2,399	5,784	114	849	3,688	1,583	5,271

As is shown in the table following, the number of persons entitled to the medical aid increased from 1,802,237 in 1901 to 2,794,795 in 1907, and the members of the families constituted nearly 2,000,000, or over 71 per cent of the entire number. The cost of this medical aid nearly doubled within this period, while the average cost per person entitled to treatment increased from \$1.63 to \$1.98, and the average cost per person employed increased from \$3.76 to \$4.86.

NUMBER OF RAILROAD EMPLOYEES AND OF MEMBERS OF THEIR FAMILIES AND
EXPENDITURES FOR MEDICAL AID, 1901 TO 1907.

[Source: Ministerstvo Putei Soobshchenia. Otdiel zheleznykh dorog. Otchet o vrachebno-sanitarnom sostoianii zheleznykh dorog, 1902-1907.]

Year.	Number of employees.	Members of families.	Total en-titled to aid.	Expenditures for medical aid.		
				Total.	Per em-ployee.	Per per-son en-titled to aid.
1901.....	545,554	1,256,683	1,802,237	\$2,050,350	\$3.76	\$1.63
1902.....	628,021	1,400,134	2,028,155	2,372,844	3.78	1.69
1903.....	662,567	1,523,817	2,186,384	2,517,453	3.80	1.65
1904.....	726,825	1,635,098	2,361,923	2,698,066	3.71	1.65
1905.....	709,531	1,761,276	2,470,807	2,900,808	4.09	1.65
1906.....	763,425	1,883,828	2,647,253	3,450,496	4.52	1.83
1907.....	808,444	1,986,351	2,794,795	3,935,586	4.86	1.98

The main items of expenditures are shown in the table following. Nearly one-half of the expenditure is for salaries and traveling expenses of the medical staff, and the bulk of the other half for medical and surgical supplies and the cost of keeping the patients in the railroad hospitals or in other hospitals:

EXPENDITURES OF RAILROADS FOR MEDICAL AID TO EMPLOYEES AND MEMBERS OF THEIR FAMILIES, 1901 TO 1907.

[Source: Ministerstvo Putei Soobshchenia. Otdiel zheleznykh dorog. Otchet o vrachebno-sanitarnom sostoianii zheleznykh dorog, 1902-1907.]

Year.	Salaries, traveling expenses, etc.	Rent, heat, light, cleaning, and repairs.	Furniture, etc.	Medical and surgical supplies.	Keeping patients in railroad hospitals.	Keeping patients in other hospitals.	Funeral expenses.	All other expenditures.	Total.(a)
1901.....	\$1,117,879	\$242,321	\$55,614	\$302,973	\$129,100	\$155,392	\$18,367	\$19,074	\$2,050,350
1902.....	1,291,053	269,795	77,067	323,079	144,471	176,436	34,131	55,106	2,372,844
1903.....	1,358,197	286,863	66,623	360,069	153,705	207,416	33,905	50,624	2,517,453
1904.....	1,404,512	307,327	83,706	359,724	185,536	223,649	33,369	100,244	2,698,066
1905.....	1,478,075	339,793	91,801	397,010	252,268	255,205	50,406	62,001	2,900,808
1906.....	1,667,729	388,233	107,056	534,319	292,787	374,999	41,967	43,498	3,450,496
1907.....	1,914,440	431,608	111,894	582,501	311,245	397,199	48,060	138,743	3,935,586

a For most of the years the totals are slightly different from the sum of the items; the figures are given as shown in the original reports.

The extent to which the employees utilize these medical facilities is shown in the next table. There were 229.6 cases for each 100 employees in 1901 and 279 per each 100 employees in 1907, an increase of 21.5 per cent in six years. The members of the families do not apply for medical aid as frequently, but here, too, the increase was from 107.5 per 100 in 1901 to 130.9 in 1907, or 21.8 per cent. As the number of members of families exceeds that of employees by nearly 150 per cent, the actual treatment given to them was greater than to the employees, notwithstanding the very much higher sickness rate of the former. Altogether nearly 5,000,000 cases of illness are being treated by the railroads' medical staff.

NUMBER OF EMPLOYEES OF RAILROADS AND MEMBERS OF THEIR FAMILIES TREATED BY THE RAILROAD MEDICAL STAFF, 1901 TO 1907.

[Source: Ministerstvo Putei Soobshchenia. Otdiel zheleznykh dorog. Otchet o vrachebno-sanitarnom sostoianii zheleznykh dorog, 1902-1907.]

Year.	Employees.			Members of families.			Total.		
	Number.	Cases treated.		Number.	Cases treated.		Number.	Cases treated.	
		Total.	Per 100 employees		Total.	Per 100 members.		Total.	Per 100 persons.
1901.....	545,554	1,252,520	229.6	1,256,683	1,351,036	107.5	1,802,237	2,603,556	144.5
1902.....	628,021	1,383,765	220.3	1,400,134	1,552,615	110.9	2,028,155	2,936,380	144.8
1903.....	662,567	1,492,527	225.3	1,523,817	1,704,896	111.9	2,186,384	3,197,423	146.2
1904.....	726,825	1,568,755	215.8	1,635,098	1,851,658	113.2	2,361,923	3,420,413	144.8
1905.....	709,531	1,757,581	247.7	1,761,276	1,975,076	112.1	2,470,807	3,732,657	151.1
1906.....	763,425	2,074,901	271.8	1,883,828	2,293,743	121.8	2,647,253	4,368,644	165.0
1907.....	808,444	2,255,763	279.0	1,986,351	2,599,854	130.9	2,794,795	4,855,618	173.7

PROPOSED REFORMS.

The foregoing statistical data show that in manufactures, mining, and railroads the employers expended in 1907 nearly \$12,000,000 in furnishing medical aid to some 2,750,000 employees and their families; but nevertheless the system is not considered satisfactory.

The shortcomings of the system of medical aid to workers in private establishments, as established by the temporary rules of 1866 and the later fragmentary legislation, were disclosed in the report of the factory inspector above quoted, and since the beginning of the present century a plan for a comprehensive law has been under preparation in the Ministry of Finance. A draft of this plan was made public in 1903, and referred for criticism to the Ministries of Justice, Agriculture, Interior, and Ways of Communication. A later draft embodying the changes suggested by these ministries was made public in 1905. The proposal at that time seemed very near becoming a law, but action on it was postponed for the consideration of the newly established Duma, in connection with the intended complete revision of the entire labor legislation. The plan was again under discussion in connection with the problem of labor insurance in the spring of 1908, but no action has as yet been taken.

This proposed law establishes the principle that workmen employed in factories, mills, mines, and metallurgical establishments privately owned must be furnished medical aid at the expense of the employer. The earlier draft included the private railroad shops, but it was pointed out by the minister of ways of communication that all railroad employees had been provided for, under more favorable conditions, since 1893. This medical aid may include first aid to the injured or those suddenly taken ill, medical advice, medicine, dressings and similar appliances in ambulatory cases, medical attendance in confinements, full hospital treatment and subsistence in cases requiring confinement in bed, or in exceptional cases, treatment, medicines, etc., but without subsistence, when the patient prefers to remain at home, with the permission of the attending physician. When the nature of sickness is such as to cause disability to work, such medical aid must be given until recovery, but not longer than three months, though in exceptional cases this limit may be extended to six months. In these cases the duration of treatment does not depend upon the employment contract. In cases which do not cause disability the employer is required to furnish treatment only up to the expiration of the employment contract.

To meet the requirements of this plan, the employer may establish and support hospitals and dispensaries independently or in conjunction with other employers of labor, and in such cases the medical institutions of the factory must satisfy in every particular the stand-

ard requirements to be published by the medical council of the Ministry of Interior, or he may enter into agreement with municipal authorities or the zemstvo to furnish this aid in their medical institutions for compensation. It was the intention of the legislative plan to encourage such agreements, and it provided, therefore, that when the employer desired to enter into such an agreement public institutions could not decline to accept it. For such services the employer could be required to pay the municipality or zemstvo annual compensation for the current cost, as well as a lump sum for the organization of the necessary hospital facilities, the rates of compensation to be fixed by the municipality or zemstvo under approval of the civil authorities and the factory and mining commissions. Appeals against the decisions of the latter are permitted to the ministers of finance and interior, and penalties are provided for failure to carry out the demands of the law. This legislative proposal has evidently abandoned the specific demands of the old temporary law of 1866 as to the number of beds, and left the elaboration of all practical details to administrative regulations.

The destructive tendency of this new proposal is its effort to transfer the organization of medical aid from the factory to the local civil authorities, while recognizing the duty of the employer to meet the financial burden. This was the result of the many disclosures, official as well as private, that the organization of medical aid in factory hospitals and dispensaries was not entirely satisfactory. In an official report on this matter, published in 1905, it is frankly admitted that the law of 1866 "forces upon the employer a function utterly foreign to him, which in the very nature of things can not be satisfactorily fulfilled." It was recognized at the same time that there were a few highly satisfactory factory hospitals, and these should not be absolutely prohibited. The choice between an independent hospital and an agreement with existing hospitals is left with the employer; but a high standard is established for private hospitals which would require such a high cost that in the majority of cases an agreement would be considerably cheaper, and the local hospital authorities are not permitted to decline to enter into such agreement. Finally the argument is brought forth that such agreements are preferable for the treatment of the employee's family, since by no principle can the employer be required to furnish hospital facilities for the benefit of the workmen's families, while if the local authorities will extend their hospital facilities in accordance with agreements with factory owners room will be found for the workmen's families as well.

In view of the preparation of this draft of a special law for regulating conditions of medical aid to employees of the manufacturing, metallurgical, and mining industries the draft of a general labor insurance law of 1905 did not contain, in its chapter on sickness insurance, any

reference to medical aid. When subsequently the proposal of a labor insurance law was broken up into its component parts and a special bill prepared for each branch of labor insurance, the matter of medical assistance was combined with that of sick benefits into one bill. Nevertheless the essential features of the proposal remained the same as in the drafts of 1903 and 1905. In the draft of December, 1906, presented to the Duma in June, 1908, the obligation of furnishing medical aid and that of furnishing sick benefits are still kept separately, because of the conviction that the workmen's sick benefit associations to be established in the factories and mines would not have any experience with the work of furnishing medical aid and could not be expected to cope with this important problem successfully. The burden of the cost of medical aid is left upon the employer. It is provided, however, that the employer may transfer this duty to the sick-benefit fund by mutual agreement, in addition to the option of making similar agreements with other employers or public hospitals in the vicinity. Where no such agreement exists, the wage-worker obtains the right to receive treatment in the hospitals of the municipal or zemstvo authorities, and the actual cost must be borne by the employer. The elaboration of the regulations and the entire administration of the law is to be placed in the hands of the labor insurance council, the establishment of which is contemplated in the general scheme of labor insurance.

FINANCIAL ASSISTANCE DURING SICKNESS.

Much less has been accomplished for financial relief during illness of workmen than for medical aid. If the sickness requires hospital treatment, subsistence is given to the patient free, in compliance with a decision of the Ministry of Finance. By the law of 1886 subsistence was a part of the hospital treatment and the employer could not charge for it. The conditions of life of the majority of the Russian factory workers are such that serious cases requiring confinement in bed can not be satisfactorily treated at home. Only two-fifths of the factory workers had factory hospitals at their disposal. Where only dispensary treatment is furnished, and in all cases not requiring hospital treatment, no subsistence is granted; besides, in case of hospital treatment the family of the patient is without income. The only general legislation which endeavors to meet this situation is that referring to "fine funds."

FINE FUNDS.

The imposition of fines and penalties upon employees is a feature of Russian industry. Before the adoption of the law of 1886 regulating the relations between employers and employees, fines in some

establishments furnished considerable returns to the employers. This abuse was remedied by law, which regulated the imposition of fines and provided that the proceeds be used for the relief of the workmen only. This and all other provisions of the law of 1886 were extended in 1892 to the mines and metallurgical establishments.

According to this law the manager of the industrial establishment may by his own authority impose fines for only three reasons: (1) For faulty work, (2) for absence without excuse, (3) for "disturbance of the peace and order," such as tardiness, carelessness with machinery or with fire, lack of cleanliness, fights, quarrels, disobedience, drunkenness, gambling, or any conduct contrary to the factory rules. The fines must be imposed according to a definite scale approved by the factory inspector. The actual amount of fines imposed must not exceed one-third of the wages due at pay day, but when the sum of fines imposed would exceed that limit the manager may dismiss the employee. Against these fines the employee has no appeal, but if the factory inspector during his visit of inspection discovers cases of illegal fining, he must hold the manager responsible for it. The amount of fines collected in each establishment constitutes a special fund, which may be used only for the benefit of the employees with a special approval of the factory inspector in each case, and in conformity with the regulations to be published by the minister of finance in regard to the purpose and methods of such relief. According to these regulations promulgated by the minister of finance on December 4 (16), 1890, subsidies from these funds may be granted for the following purposes only: Permanent or temporary disability due to sickness; pregnancy, if work has been discontinued two weeks before childbirth; funeral expenses; sudden loss of employee's property through fire or other causes. The fund is administered by the employer, but all sums over 100 rubles (\$51.50) must be deposited with the state savings bank, and the accounts of this fund are subject to the control of the factory inspectors. The factory commission may, upon its own judgment, grant the employers the right to grant subsidies not to exceed 15 rubles (\$7.73) each, but this permission is subject to recall when the subsidies are granted extravagantly or not in conformity with the laws and regulations. On the other hand, the factory inspectors may grant such subsidy when the manufacturer unjustly refuses it to a needy workman; but the manufacturer may enter a complaint with the local factory commission against such acts of the inspector.

In comparatively few factories are fines levied. While the data do not go back of 1900, even for the eight years 1900 to 1907 the number of establishments in which the collection of fines is authorized has declined, and also the number of factories in which fines

have actually been imposed. The percentage of establishments imposing fines decreased from 26.8 in 1900 to 20.2 in 1907, and the percentage of workmen employed in such establishments decreased from 70.8 to 63.7. The decline was greatest in 1906 and 1907, immediately following the extraordinary wave of strikes in 1905 and 1906. But in 1908, the last year for which data are available, there has been a slight increase of fining.

Fines are most frequent in the larger establishments, for while the factories imposing fines constituted, in 1905, 26.5 per cent of the total, the number of workmen employed in these factories constituted 71.5 per cent.

The accumulated fine funds on January 1, 1900, amounted to \$1,240,583, and by January 1, 1905, had reached \$1,561,694, but since then has been declining. The income of these funds consists only of fines and interest on the money accumulated; the other revenues are mainly due to the sale or purchase of securities. While the income from interest was gradually increasing, due to increased accumulations, the amounts collected in fines were steadily declining. On the other hand, the benefits were increasing, being in 1905 much greater than the sum of the fines. In the years 1905 to 1907 exceptionally small amounts were collected in fines, so that the benefits granted were larger than the fines collected, and this has caused a decrease in the amount of the funds. With the reestablishment of normal industrial conditions in 1908 the amount of fines has again increased.

The following table shows the income and expenditures of these funds for 1900 to 1908:

INCOME AND EXPENDITURES OF FINE FUNDS IN RUSSIAN FACTORIES, 1900 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel Promyshlennosti. Svod otchetov fabrichnykh inspektorov, 1900-1908.]

Year.	Amount of funds. (a)	Income.				Expenditures.			
		Fines.	Interest.	Other. ^(b)	Total.	Benefits.	Other expenditures. (c)	Transfers to central fund.	Total.
1900.....	\$1,240,583	\$296,166	\$44,818	\$108,097	\$449,081	\$256,631	\$97,298	\$662	\$354,591
1901.....	1,353,761	285,850	45,632	250,910	582,392	258,752	245,659	13,536	517,947
1902.....	1,415,461	273,043	48,807	170,731	492,581	258,203	167,746	13,365	439,160
1903.....	1,471,529	271,631	48,886	93,761	414,278	266,184	93,468	5,016	364,668
1904.....	1,522,133	276,012	53,751	73,919	419,132	275,977	89,111	14,496	379,584
1905.....	1,561,694	163,157	55,837	74,811	293,805	282,824	76,264	7,715	366,803
1906.....	1,498,438	142,462	51,786	74,800	269,048	248,354	79,541	4,264	332,159
1907.....	1,432,831	160,801	50,376	85,435	296,612	242,730	89,985	4,267	336,982
1908.....	1,400,847	222,819	49,056	79,189	351,064	265,142	65,430	5,982	336,554

^a By adding the excess of income over expenditures for each year to the amount of the fund for the preceding year somewhat different amounts will be obtained. The discrepancies are due to many corrections made in the original reports.

^b Mainly sale of securities.

^c Mainly purchase of securities for investment.

^d This total is not the correct sum of the items; the figures are given as shown in the original report.

The causes for fines imposed are shown in the next table. The total number of cases in 1908 was 2,690,036, and the average fine since 1905 was only 8 cents. Fines for faulty work are most frequent, constituting in 1908, 78.7 per cent of all cases, but the average fine is only 6 cents. The average fine for unexcused absence is much higher, being 22 cents in 1908; and for disorderly conduct, 14 cents.

NUMBER, AMOUNT, AND AVERAGE OF FINES COLLECTED FROM FACTORY EMPLOYEES, BY CAUSES, 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel Promyshlennosti. Svod otchetov fabrichnykh inspektorov, 1908.]

Cause of fine.	Number of cases.	Amount of fine.	
		Total.	Average.
Faulty work.....	2,118,157	\$117,970	\$0.06
Unexcused absence.....	337,717	72,707	.22
Disorderly conduct.....	234,162	32,142	.14
All causes.....	2,690,036	222,819	.08

While the total amount of fines is considerable, their proportion to wages received was small, being only 13.8 cents per each \$100 of wages in 1908, or 17 cents per workman. It amounted to about 20 cents per \$100 of wages and 22 cents per workman before 1905, and was considerably lower during the three years 1905 to 1907.

As a source of relief for the workmen, these funds are not very important. In 1908 a total of \$265,142 was distributed in 92,611 payments, or \$2.86 per each payment, and the cases of more than one payment were rare. Relief for temporary disability from sickness is the most important item, and this, with the sums granted for permanent disability from sickness and for pregnancy, or what may be termed for purposes of sick relief, in 1908 was 60 per cent of the total amount distributed.

This form of relief is entirely voluntary with the employer, except in cases in which a factory inspector may grant a small sum in opposition to the decision of the employer.

The table following shows the number, amount, and average of each kind of benefit paid out of fine funds.

NUMBER, AMOUNT, AND AVERAGE OF BENEFITS PAID OUT OF FINE FUNDS, BY KIND OF BENEFITS, 1900 TO 1908.

[Source: Ministerstvo Torgovli i Promyshlennosti. Otdiel Promyshlennosti. Svod otchetov fabrichnykh inspectorov, 1900-1908.]

Year.	Perma- nent disability due to sickness.	Tempo- rary disability due to sickness.	Preg- nancy.	Funeral expenses.	Loss of property by fire.	Other objects or causes.	Total.
1900.							
Number of payments.....	(a)	(a)	(a)	(a)	(a)	(a)	(a)
Total amount.....	\$48,872	\$79,309	\$38,000	\$40,973	\$28,625	\$20,852	\$256,631
Average.....							
1901.							
Number of payments.....	3,613	31,060	16,910	13,675	4,957	3,605	73,820
Total amount.....	\$33,149	\$95,782	\$33,632	\$42,670	\$36,140	\$17,379	\$258,752
Average.....	\$9.15	\$3.08	\$1.99	\$3.12	\$7.29	\$4.82	\$3.51
1902.							
Number of payments.....	5,859	32,486	20,744	15,598	4,671	6,670	86,023
Total amount.....	\$39,155	\$89,575	\$36,475	\$45,307	\$26,291	\$21,400	\$258,203
Average.....	\$6.68	\$2.76	\$1.76	\$2.90	\$5.63	\$3.21	\$3.00
1903.							
Number of payments.....	6,520	35,279	21,166	16,184	5,174	4,556	88,899
Total amount.....	\$42,597	\$90,005	\$35,085	\$45,341	\$34,397	\$18,759	\$266,184
Average.....	\$6.53	\$2.55	\$1.66	\$2.80	\$6.65	\$4.12	\$2.99
1904.							
Number of payments.....	7,014	34,311	22,301	18,174	4,241	6,179	92,878
Total amount.....	\$45,106	\$91,784	\$38,189	\$50,581	\$25,265	\$25,052	\$275,977
Average.....	\$6.43	\$2.68	\$1.71	\$2.78	\$5.96	\$4.05	\$2.97
1905.							
Number of payments.....	6,575	32,464	18,984	20,241	4,510	9,691	92,465
Total amount.....	\$41,528	\$90,122	\$32,995	\$56,451	\$28,906	\$32,822	\$282,824
Average.....	\$6.32	\$2.78	\$1.74	\$2.79	\$6.41	\$3.39	\$3.06
1906.							
Number of payments.....	6,537	29,820	17,599	17,968	5,077	8,353	85,354
Total amount.....	\$37,136	\$73,198	\$32,481	\$51,075	\$30,670	\$23,794	\$248,354
Average.....	\$5.68	\$2.45	\$1.85	\$2.84	\$6.04	\$2.85	\$2.91
1907.							
Number of payments.....	6,433	28,379	20,144	19,252	5,189	6,103	85,000
Total amount.....	\$36,151	\$72,957	\$33,233	\$52,197	\$25,268	\$22,923	\$242,730
Average.....	\$5.62	\$2.57	\$1.65	\$2.71	\$4.85	\$3.76	\$2.86
1908.							
Number of payments.....	9,029	31,989	19,834	21,169	4,048	6,542	92,611
Total amount.....	\$46,105	\$78,169	\$36,347	\$58,340	\$23,325	\$22,855	\$265,142
Average.....	\$5.11	\$2.44	\$1.83	\$2.76	\$5.76	\$3.49	\$2.86

^a Not reported.

CENTRAL FINE FUND.—Through forced or voluntary liquidations of numerous establishments, their penalty funds remained in charge of factory inspectors in absence of any object for which they could be

lawfully used. A central penalty fund for relief of sick and injured workmen was established by the law of May 29 (June 10), 1895. Into this fund all penalty funds of liquidated establishments must be paid, and, in addition, all fines imposed by the factory commissions or by the courts upon employers for infractions of factory legislation. The fund was so small that not until June 28 (July 11), 1901, six years later, were the conditions of its application announced. According to the rules^a) only the interest on the capital and one-half of the fines collected in any one year may be used for purposes of relief. The selection of cases for relief is left to the chief inspectors of the six districts, into which the entire factory inspection area in Russia is divided. It may be given either in the form of lump-sum payments, not over \$51.50, or pension not over \$4.12 per month for a period not exceeding three years, unless extended by special order of the minister of finance (now of the minister of commerce and industry). Relief may be given only to workmen employed or previously employed in establishments subject to factory inspection and only to workmen in most urgent need, preferably in cases of complete disability from illness or accident or to families of deceased workmen. In judging the merits of the case and the amount of pension to be granted, the inspector must consider the causes of disability, the degree of distress, the length of time the workman was employed in industrial establishments, his earnings, and whether he is receiving any other relief, whether for injury, by friendly agreement, or through an award of the court, or from the establishment fine fund. Though this last qualification is included in the rules of June 8 (21), 1901, a special amendment to the law was approved February 19 (March 3), 1904, to the effect that persons receiving compensation for injuries by virtue of the law of June 2 (15), 1903, are not debarred from the right to receive relief from the central fine fund. On January 1, 1901, the central fine fund amounted to 271,141 rubles (\$139,638) and by January 1, 1909, it had increased to 594,225 rubles (\$306,026). The income from all sources, transfers of establishments, special fines, and interest on accumulation in 1903 was 84,488 rubles (\$43,511); in 1904, 65,253 rubles (\$33,605); in 1905, 53,452 rubles (\$27,528); in 1906, 104,006 rubles (\$53,563); in 1907, 52,979 rubles (\$27,284); and in 1908, 78,226 rubles (\$40,286). The granting of relief from this fund began on July 1, 1902, and during the six months of that year amounted to 24,442 rubles (\$12,588); during 1903 it amounted to 43,939 rubles (\$22,629); during 1904, to 39,801 rubles (\$20,498); during 1905, to 38,254 rubles (\$19,701); during 1906, to 43,551 rubles (\$22,429); during 1907, to 35,865 rubles (\$18,470); and in 1908, to 41,069 rubles

^a Balabanov, M. *Fabrichnye zakony. Sbornik zakonov, rasporyazhenii i raziasnenii po voprosam russkavo fabrichnavo zakonodalelstva.*

(\$21,150). The total number of beneficiaries in 1905 was 1,282, the average benefit being therefore about 30 rubles (\$15.54).^(a)

FINE FUNDS FOR STATE EMPLOYEES.—The principle of fine funds for the benefit of the employees has been extended in later years to private mining and metallurgical establishments, by the decree of March 9 (21), 1892, making the law of 1886 applicable to them; to the workmen employed by the navy department on October 8 (20), 1892, the maximum allowance being 60 rubles (\$30.90) and not more than once a year; and to the employees of the arsenals and ammunition factories of the war department on April 21 (March 3), 1895. In other departments, or in those special groups of industry where special sick benefit funds (*Kassy*) exist, which will be described hereafter, the proceeds of fines and penalties are turned into these funds. This is done in all state mining and metallurgical establishments, in all private mining and metallurgical establishments of Poland, in some private mining establishments of Russia proper, and on railroads.^(b) An imperial fine fund exists also for the mining industry similar to that for the manufacturing industry. On January 1, 1901, it amounted to about 245,000 rubles (\$126,175).^(c)

SICK BENEFIT FUNDS.

As a whole the sick relief furnished by the fine funds does not meet the demand. The relief granted is small and the chances for relief are slight in view of the limitations of the funds. The system of relief through special sick relief funds, organized and supported either by the workmen alone or by cooperation between the employers and employees, is growing in Russia, but it has so far a limited application, and is in the initial stages of development.

Workmen's funds are most frequently found in the mining and metallurgical industry; they were made obligatory on all establishments in this industrial group, owned by the State; they are found in almost all private mining and metallurgical establishments of Poland, and a number of various relief funds exist in the mining industry of South Russia. The progress of these funds is explained by the greater necessity for relief due to the dangerous nature of the work in mines and metallurgical establishments. While this consideration influenced the employees, the employers found in these funds some protection against the frequent liability suits arising from accidents to employees.

^a Ministerstvo Torgovli i Promyshlennosti. Ob obespechniei rabochikh na sluchai boliezni.

^b Trudy Vysochaishe Uchrezhdionnava Rossiiskavo Torgovo-Promyshlennavo Siezda 1896 goda, v Nizhnem Novgorodie, Tom 3.

^c Ministerstvo Torgovli i Promyshlennosti. Ob obespechniei rabochikh na sluchai boliezni.

Comparatively few of the workmen's or establishment funds are purely sick benefit funds. Most of them combine this with old-age or invalidity benefits, pensions to widows, or general relief. Before the compensation laws were adopted relief of accident cases claimed a considerable share of the income of those funds, to which the employers contributed. Those funds which are intended mainly for pensions will be treated later in connection with the subject of old-age insurance.

SICKNESS INSURANCE IN THE STATE MINES AND METALLURGICAL ESTABLISHMENTS.—The most favorable conditions of sickness insurance are found in the state mines and metallurgical establishments. According to the law of March 8 (20), 1861, organization of brotherhoods (*tovarishchestvo*) was required in all these mining and metallurgical establishments. Membership was made obligatory to all persons employed by the year. The law provided that these brotherhoods care for the workmen in case of illness, old age, or injuries resulting from accidents, provide for their widows or orphans, improve the morals of the working population, and further amicable relations between the employees and the Government. The latter is required by the law to establish free hospitals and grant sick relief. Every member of the brotherhood in case of illness is entitled, according to the provisions of this law, to free medical treatment and, if necessary, to hospital care during the period of two months, and in exceptional cases for a longer time. During this time married workmen who have children receive a subsidy equal to two-thirds of their wages; married workmen without children receive one-half of their wages; unmarried workers who support parents or other relatives from their earnings, one-third of their wages; while no money subsidy is granted to unmarried workers without dependent relatives. Further relief after the expiration of the two months' period is granted in equal amounts by the relief funds established in connection with these brotherhoods. These funds are intended primarily for old-age and invalid relief, and will be described later in connection with the subject of old-age pensions. In 1895 there were employed in the state mines and metallurgical establishments 24,000 persons, and on January 1, 1907, the total membership of these miners' brotherhoods was 19,589^a, while the total number of persons employed in the mining and metallurgical industry is over half a million people. This system of sickness insurance, entirely at the expense of the employer, has therefore a limited application.

BENEFIT FUNDS IN PRIVATE MINES AND METALLURGICAL ESTABLISHMENTS OF POLAND.—The workmen's relief funds in the private mines and metallurgical establishments of Poland were organized in

^a Ministerstvo Torgovli i Promyshlennosti. Ob obespechniei rabochikh na sluchai bolieznii.

1859. By 1880 there were 7 such funds, and 18 to 20 by the end of the last century. In 1898, according to the latest data available, 22,676 employees belonged to them.^(a) In 1906 the 13 most important funds had 26,944 members. They present a variety of types both as to the sources of income and the objects of their expenditures. The main feature upon which these funds agreed was the obligatory participation of all workmen employed in the establishment, while for the superior administrative employees participation was optional. The workmen contributed regularly, such contributions being defined in per cent of earnings, usually from 1 to 3 per cent, and deducted from the wages by the establishment. To some of these funds the employers contributed an amount equal to the total deductions from the wages, and in a few cases a greater sum. In several cases, however, the sum contributed by the employers was only one-half or one-third of the deductions from wages, while in one or two funds no regular contributions were made. In a very few cases the object is strictly limited to rendering medical aid, and the funds are known as hospital funds; in a few other cases they are strictly sick benefit funds. In the majority of cases the funds undertook to furnish medical advice, medicines, hospital care, sick benefits, accident relief, pensions for old age or invalidism, pensions to widows and orphans, as well as relief in many other emergencies. The funds for a long time remained unregulated by law, and when the question of their regulation was raised in 1884 by the local authorities, the Central Government suggested that they be left undisturbed until a general law was elaborated.

When the factory law of June 8 (20), 1886, was extended to mines and metallurgical establishments on March 9 (21), 1892, a demand was made by the administration upon the employers of these establishments to furnish medical assistance and hospital facilities, and the deductions from the wages for the cost of medical help was contrary to the provisions of the factory law. As a result, some of the employers established the required hospital facilities, relieving the workmen's funds from this duty, without making reductions in their contributions to the funds; others left the matter of medical aid to the funds as before, but paid to the funds the entire cost of this treatment. This conflict between the law and the practice of the miners' funds was made a subject of discussion of the convention of mine operators and owners of metallurgical establishments of Russian Poland in 1893, and the convention agreed upon the desirability of separate standard sets of by-laws and regulations for sick benefit funds and general pension funds. The Government was petitioned in accordance with this resolution. Standard regulations for sick

^a Kassy vsinopomoshchi rabochikh chastnykh gornykh zavodov i promyslov v Tzarstvię polskom, G. Th. Tigranov, 1900, p. 132.

benefit funds were published by the Ministry of Agriculture and State Domains February 7 (19), 1895, but none for the pension funds, since the draft presented did not meet with the approval of the ministry.

Since then a few sick benefit funds were established in the mines of Poland in accordance with the new regulations and a few older funds reorganized in conformity with them; the majority of the funds, however, remained mixed funds as before, although some made changes to conform more or less to the standards of the rules of February 7 (19), 1895.

The model by-laws given in condensed form below were made applicable to a comparatively small number of employees, but they represent the first legislative effort directed to the specific aim of sickness insurance.

MODEL BY-LAWS OF FEBRUARY 7 (19), 1895, FOR BENEFIT FUNDS IN PRIVATE MINES AND METALLURGICAL ESTABLISHMENTS OF POLAND.

According to these by-laws, all workmen employed at the mine or metallurgical establishment are required to join the funds, and also the foremen and overseers who do not earn more than 500 rubles (\$257.50) per annum. Other employees may be admitted to membership upon request. The income of the funds is derived from membership dues and an equal amount contributed by the employers. The membership dues may be expressed either as a uniform percentage rate upon the salaries and wages of all members, not less than 1 and not more than 3 per cent, or the members may be divided into three wage groups: (1) Persons receiving more than 400 rubles (\$206) per annum; (2) persons receiving less than 400 rubles (\$206) but more than 200 rubles (\$103); and (3) persons receiving 200 rubles (\$103) or less. In this case the dues for the three classes mentioned must be at least 35 kopecks (18 cents), 25 kopecks (13 cents), and 15 kopecks (8 cents) per month, respectively; the dues may be raised if agreeable to the majority of the members and to the management of the establishment, but not to over 3 per cent of the wages. The employer must contribute an equal sum, but this does not relieve the employer from the obligation to furnish medical aid free if the cost of it is not covered entirely by the employer's contribution. If the income of the fund exceeds the expenditures, a reserve must be accumulated. When this reserve exceeds 20 rubles (\$10.30) per member, the surplus may be used for educational, religious, or other purposes beneficial to the members.

In return for these payments the fund must guarantee to the members at least the following advantages: (1) Free medical advice and medicine, in case of sickness, to the members, their wives, children under 15 years, and dependent relatives, provided the physician, hospital, or drug store is used according to the direction of the management of the fund; (2) an allowance during sickness of a member of the fund if he is incapacitated by this sickness from earning his wages, provided the sickness has not been caused by intentional injury or by drunkenness or by fighting. The amount of this daily allowance is determined as follows: When the employees for the purpose of determining the dues are divided into three wage groups as stated above, an employee of the first class receives 40 kopecks (21 cents) if married, and 30 kopecks (15 cents) if single; an employee of the second class, 30 kopecks (15 cents) and 20 kopecks (10 cents); and of the third class, 20 kopecks (10 cents) and 12 kopecks (6 cents), respectively. When the dues are collected as a flat percentage of the wages, the minimum daily allowance is to be 30 kopecks (15 cents) for married and 20 kopecks (10 cents) for single members. When married members are treated in a hospital the family receives only one-half of the regular allowance; a single member receiving hospital treatment is entitled to only one-fourth of the regular allowance. Both medical aid and allowances may be given for three months; in exceptionally meritorious cases this limit may be extended to six months by the administrators of the fund; (3) funeral expenses in case of death of an employee of at least 15 rubles (\$7.72); in case of death of any member of employee's family a smaller sum may be given. If the death of the employee is due to injuries received during work, funeral expenses of not less than 25 rubles (\$12.88) must be paid by the employers. (This rule is super-

seded by the law of June 2 (15), 1903.) The right for allowance and medical aid lasts only as long as the employment in the establishments, and the dues paid into the fund are not returnable.

The management of the fund is intrusted to a board consisting of an even number of members, not less than six, one-half of whom are to be appointed by the employers, and one-half elected by the membership of the fund, only male members who are of age possessing a vote. Both the chairman and vice-chairman of the board are appointed by the employers from among their representatives on the board. The members of the board serve for three years and without remuneration. The board must meet at least once a year, and decides questions that come up by a simple majority vote. During intervals between meetings all the affairs of the fund are in charge of the chairman.

The most recent data obtainable in regard to all funds of the Polish mines and metallurgical establishments unfortunately are considerably out of date, referring to 1897; but they are an indication of the extent and nature of sick relief furnished. The 17 funds existing at that time had 23,516 members. The membership varied from 29 in one mine to 5,620 in a large metallurgical establishment. The accumulated capital of these 17 funds at the beginning of 1898 amounted to 360,470 rubles (\$185,642), or 15.33 rubles (\$7.89) per member. More detailed data exist for 13 funds, with 22,625 members. The total income of these 13 funds was 300,387 rubles (\$154,699), to which should be added 49,064 rubles (\$25,268), being the cost of medical treatment as supplied by 5 establishments at their own expense, making a total of 349,451 rubles (\$179,967), or 15.45 rubles (\$7.96) per member. Of this income 145,201 rubles (\$74,779) were contributed by the workmen, or 6.42 rubles (\$3.31) per capita, and 115,715 rubles (\$59,593) by the employers. Thus of the total income of the funds, 48.3 per cent was furnished by the workmen, 38.5 per cent by the employers, and 13.2 per cent from interest and other sources. If the 49,064 rubles (\$25,268) spent by the employers for medical help are included, the employers' contribution of 164,779 rubles (\$84,861) exceeds that of the employees. Of the 13 funds, in 8 both employers and employees contributed equal shares, and in 2 the employer's contribution was one-half that of the employees, while no contributions were made by employers to 3 funds. The total expenditures of these 13 funds were 302,526 rubles (\$155,801); of this 121,051 rubles (\$62,341), or 40 per cent., were spent for medical aid. Including the 49,064 rubles (\$25,268) at the expense of the employer, the total expenditures amounted to 170,115 rubles (\$87,609). In addition to this heavy expenditure for medical aid, 48,948 rubles (\$25,208) were paid in sick benefits, and 6,234 rubles (\$3,211) for funeral expenses. The expenditures of the funds for the usual purposes of sick benefit funds were 176,233 rubles (\$90,760), or 58.3 per cent. Pensions and lump-sum payments, partly to satisfy claims for deaths resulting from accidents, amounted to 118,792 rubles (\$61,178), or 39.3 per cent, leaving 7,501 rubles (\$3,863) for expenses and other benefits. The contributions of the employer almost cover the ex-

pense of medical aid, while the sick benefits, funeral expenses, and pensions are paid from the workmen's contributions.

A few data are available for these 13 funds, referring to the situation in 1906. The membership increased from 22,625 in 1897 to 26,944 in 1906, or 19.1 per cent. The contributions from the workmen increased from 145,201 rubles (\$74,779) to 165,328 rubles (\$85,144), or 13.9 per cent, the average contribution in 1906 amounting to 6.14 rubles (\$3.16) as against 6.42 rubles (\$3.31) in 1897. The contributions of the employers increased from 115,715 rubles (\$59,593) to 172,866 rubles (\$89,026), or 49.4 per cent. This increase is explained by the fact that 2 more funds were organized in conformity with the regulations of 1895, and receive equal contributions from the employers and employees. The expenditures for sick benefits increased from 48,948 rubles (\$25,208) to 91,843 rubles (\$47,299), or nearly doubled. Funeral expenses increased from 6,234 rubles (\$3,211) to 18,294 rubles (\$9,421). Pensions and lump-sum payments amounted to 176,656 rubles (\$90,978) as against 118,792 rubles (\$61,178) in 1897.

On June 30 (July 13), 1900, new rules were passed for regulation of these funds of the mines and metallurgical establishments of Poland. These rules legalized the combination of pensions with sick benefits in the same fund and on November 29 (December 12), 1901, new by-laws of all the mines were approved by the minister of agriculture and state domains. The effort to establish absolute uniformity was evidently abandoned for the time being. Considerable differences exist in the by-laws of different funds as to the amount of dues and sick benefits.

PRIVATE SICK FUNDS.—While the sick funds of the Polish mining and metallurgical establishments and the brotherhoods of the state mine and metallurgical establishments are the only groups regulated by law, similar sick funds are found in other localities and branches of industry; and in many other establishments financial assistance is given by the employers and entirely at their cost either voluntarily or as a result of specific agreements between the employers and employees. Unfortunately the data in regard to the development are very scant, as no comprehensive investigation has ever been undertaken, and this form of assistance owes its greatest development to the labor difficulties of 1905 and 1906. The following brief review is based upon official data given in the memorial on insurance against sickness presented by the Ministry of Commerce and Industry to the Duma in the summer of 1908.

The most satisfactorily organized establishment funds for sick benefits are found in the Polish industrial region, and here they have existed for a long time. In the Province of Piotrkow, which includes the textile center of Lodz, 110 factories with 37,000 employees out of

900 with 126,000 employees subject to factory inspection had such funds. The usual contribution of the members is 1 per cent of the wages; the employers contribute one-third or one-half of the contributions of the employees. The usual sick benefit is one-half the daily wage; in a few cases it is only one-third; benefits are usually limited to six weeks. The total income of the funds in the province is estimated at about 150,000 rubles (\$77,250) with about 50,000 rubles (\$25,750) contributed by employers.

In Russia proper the movement, while more recent, has assumed a broader form. During the strikes of 1905 and 1906 financial assistance during sickness was frequently one of the demands presented. These demands were met halfway by many individual employers, and even organizations of employers; and collective agreements to that effect have been concluded. Thus in June, 1906, all the lumbermen of Archangel signed an agreement to grant to their employees sick benefits amounting to one-half the wages for a period not exceeding one month, provided the sickness is certified to by the employer's physician. Similar agreements were made in 1905 by the printing shops, the lumber mills, millers, and other branches of industry of Samara. In Orenburg 44 manufacturers signed an agreement not to deduct the wages in cases of absence of the employee for one day on account of his sickness, or that of his wife, children, or parents; to give medical aid, but without pay, during two weeks to the worker who has been employed not less than three months; after seven years of employment, to give him medical aid and subsistence for one month; after two years of employment, for five months. Similar agreements were made in the Province of Baku, the great oil region, in December, 1904, February, 1905, and June, 1906. The first embraced the oil refineries, chemical factories, machine shops, electric stations and similar establishments; the second included the printing industry; the third the shipbuilding and beer brewing industries. The factory inspectors, in 1907, reported that some form of sick benefits was paid in 1,982 establishments, or about one-eighth of all subject to factory inspection; but these establishments gave employment to 586,480 persons, or one-third of all employees in manufacturing industry. The proportion rises to 42.3 per cent in the central industrial region; 43.9 per cent in the Polish provinces; 52.5 per cent in the Caucasus, and 60.3 per cent in the northwestern region, while it falls to 32.2 per cent in the northwest; 31.1 per cent in the north; 29.6 per cent in the central black soil region; 26.4 per cent in the Baltic Provinces; 24.5 per cent in the south, and 15.5 per cent in the east.

Half the daily earnings is the most frequent amount granted, this being the established rate in 962 out of 1,982 enterprises, or nearly one-half of them; 741, or 37.4 per cent of the establishments, grant

full wages, but such high sick benefits are usually limited in time to 1 month or even to 2 weeks. Occasionally a distinction is made between married and single employees; and in a few instances only married employees are entitled to receive such benefits. In some cases the right to receive benefits is conditioned upon a certain length of employment—from 6 months to 2 years. The limitations as to the time during which benefits are paid are always defined, but the terms vary considerably. In 717 establishments, or 36.2 per cent of all those reported as granting benefits, the limit is from 1½ to 3 months; in 515 establishments, or 26.5 per cent, until recovery; in 789 establishments, or 14.6 per cent, during 1 month; and in 269 establishments, or 13.5 per cent, only during 1 or 2 weeks; in 182 establishments, or 9.2 per cent, neither the amount nor the duration of the sick benefits is regulated by any rules, but depend entirely upon the judgment and good will of the management.

An interesting form of sick insurance is represented by maternity benefits, which were granted in 153 establishments; of these, 142 were located in the central industrial region (around Moscow), where employment of women in the textile industry is very common. These benefits are usually paid during 2 to 4 weeks, and occasionally for a longer period. In some establishments leave with half pay or full pay is granted for 2 weeks before and 3 weeks after childbirth.

Similar provisions for sick insurance are found in the private mining industry of European Russia. In the Province of Ekaterinoslav, where the coal and iron mining is concentrated, 104 establishments, with 41,628 employees, grant some sick benefits. Almost all the oil wells of the Baku district grant half pay to sick employees during from 1 to 3 months.

These examples offer sufficient evidence that the conditions of industrial life have forced this form of social insurance before legislative authority was ready to introduce it, and that sick insurance has made very rapid progress during a very short time. In summing up these facts, the official report of the Ministry of Commerce and Industry to the Duma says: "Evidently the payment of benefits to sick employees must be regulated immediately, for the purpose of preventing the straining of the relations between the workmen and the employers. The care of the sick wage-workers during illness should not be a matter of private initiative, but must be made a problem for governmental concern and be solved by the introduction of compulsory insurance."

INDUSTRIAL BENEFIT SOCIETIES.—In addition to the establishment funds, a considerable number of industrial benefit societies exist in Russia, i. e., societies consisting of workmen in a certain industry or occupation. While many such societies have been described from time to time, no statistical or any other recent information can be

obtained as to their number or the extent of their activity. The most frequent and important functions of these funds are sick and funeral benefits, though old age or invalid and widows' pensions are often given. Most of the societies described were found in the more progressive western border provinces, such as the Baltic provinces, and Poland, and the large industrial centers—St. Petersburg, Moscow, and Odessa. Thus, in the Baltic provinces 98 artisans' mutual aid societies were found in 1898, and 113 funeral societies. Often these mutual aid societies are found in connection with the artisans' guilds, and represent the beginnings of organized charity rather than a system of insurance. Among the Jewish industrial population of Lithuania and White Russia such funeral and sick aid societies are frequent.

Better regulated benefit societies, with constitutions, sometimes officially approved by the authorities, definite dues and benefits, are most frequent in the printing trade. Such funds exist in Warsaw, Riga, Dorpat, Reval, St. Petersburg, Moscow, Odessa, Kazan, Kiev, Saratov, Samara, Smolensk, Tomsk, Nizhni Novgorod, Ekaterinoslav, Orenburg, Orel, etc. Those in the western cities are the oldest, the society in Warsaw existing since 1814, in Riga since 1816, and in Dorpat since 1819. Of the printers' benefit societies of St. Petersburg, one was organized in 1834 and another in 1866; the Moscow society followed in a few years, 1869, while the last 10 mentioned were organized since 1900. The sick benefits are usually from 3 to 5 rubles (\$1.55 to \$2.58) per week, free medical advice is provided, and the funeral benefits are from 20 to 60 rubles (\$10.30 to \$30.90). Old-age pensions are granted to invalids after fifteen or thirty years of membership, the amount of pension varying according to the length of membership, also according to the amount of dues; two or three classes of dues are the rule rather than any percentage of the wages. Such organizations are also met with among the commercial employees.^(a)

PROPOSALS FOR COMPULSORY SICKNESS INSURANCE.

In 1902 the Russian Society for Development of Industry and Commerce appointed a commission which elaborated a complete legislative plan of compulsory sickness insurance and presented it to the Ministry of Finance. When the special interministerial commission was organized in conformity with the imperial manifesto of December 12 (25), 1904, and the resolution of the committee of ministers of December 24, 1904 (January 6, 1905), the instructions demanded the elaboration of a plan of compulsory sick insurance, the cost of which should be borne by both employer and employee.

^a K rabochemu voprosu v Rossii, S. N. Prokopovich, 1905.

The first draft of a sick insurance law was published on March 29 (April 11), 1905, in conjunction with the general plan for workmen's insurance.

PROPOSAL OF 1905.

This proposal for sick insurance embraced the same class of industries and establishments as the law of June 2 (15), 1903.

This insurance was to be effected by establishment sick benefit funds, to be organized in connection with each industrial or mining establishment employing over 50 wage-workers; smaller establishments might be joined together for the purpose of organizing a similar fund, and even establishments of the larger class in the same locality might do so, if both the employers and employees agree. Membership in these funds was to be obligatory for all workers employed either by the establishment or by its subcontractors, and also salaried employees receiving not over 1,500 rubles (\$772.50) per annum. Other employees may join the fund voluntarily.

The benefits paid by these funds were to be as follows: (1) Daily sick benefits amounting to from one-half to one-third of the daily wages of the worker, to be paid until perfect recovery or for a definite maximum limit which is to be established for each fund, but must not be less than three months; (2) maternity benefits to working women in case of childbirth, amounting to the earnings of four to six weeks; and (3) funeral benefits, equaling twenty to fifty times the daily wages.

Following the example of the German sickness insurance system, certain obligations toward the employees injured while at work, and covered by the compensation act of June 2 (15), 1903, were to be transferred for a certain time from the employers to the sick benefit associations. These include funeral expenses, sick allowances, and cost of treatment for six weeks. This transfer seems to be justified by the large burden which the contributions to the sick benefit association place upon the employer.

To meet its obligations the sick benefit association was to collect dues from its membership; the amount of these dues to be not less than 1 per cent nor more than 3 per cent of the actual earnings of the employees. The employer was to contribute to the association an amount equal to the total income from dues.

These dues and contributions, together with other incomes of the associations, such as interest upon money, constitute the "turn-over" or general fund, out of which the obligatory benefits must be paid. In addition, the association must possess a reserve, into which were to be paid the surplus from the annual operations of the association, the fines for delinquent payment of dues by the employer; and the membership might order a definite percentage of the dues of both

the employees and the employers to be paid into the reserve. The reserve was to be used to keep up the uninterrupted payment of benefits when the operating fund is exhausted.

A third fund was also provided, to be known as the fine fund, into which the fines levied upon the workers must be paid, and this fund was to be used only for additional benefit features, which each association may establish; the following feature being permitted by the proposed law: Medical treatment of members of families of workers belonging to the associations, sick benefits to the members of the family, funeral expenses in case of death of members of the family, maternity benefits to the wives of the workmen, and also various subsidies, other than sick benefits, to the needy workers.

In its main features this legislative proposal follows the provisions of the decree of February 7 (19), 1895, promulgating a standard constitution for the sick benefits of the Polish mining and metallurgical industry. The duty of furnishing medical help was not imposed upon the planned associations, in view of the special law proposed for regulation of the matter of medical assistance entirely at the expense of the employer; and the minimum scale of sick benefits allowed was considerably higher. On the other hand the distinctions between married and single workers was eliminated, and the amount of medical assistance furnished to the family of the worker would be very limited, since only the fine fund would be available for the purpose of such extension of the activity of the associations.

PROPOSAL OF 1906.

The draft of the law adopted about a year later at the insurance conference of April 15 to 21 (April 18 to May 4), 1906, organized by the Ministry of Commerce and Industry, followed the general plan of that of 1905, but introduced several important modifications.

The scope of the bill was made somewhat more comprehensive. It was not limited to those establishments which are covered by the accident law of 1903, but embraced all manufactures, mining and metallurgical industries.

The conditions of membership for the employees were left the same, and also the three classes of benefits, with the same limits of the minimum and maximum benefits, except that a maximum limit of sick benefits was established at 26 weeks. Provision was made for the sick benefit fund assuming the employer's obligation to furnish medical help, for an agreed stipulation, such agreements to be approved by the local factory inspection office. The combination of sick benefits with care of the sick was therefore permitted, though not required.

The main sources of income of the fund were to be contributions from the employers and employees as in the previous drafts; but per-

haps the most important change was the reduction of the share of the employer, from an amount equal to the contributions of the employees to one-half that amount, thus considerably limiting the income of the funds.

Thus, while each sick fund was to have the right to extend to the members of the family of the employees the cost of treatment, sick benefits, maternity benefits, or funeral expenses, the opportunity for such extended activity was evidently considerably reduced. Even the possibility was foreseen that with this reduction the maximum dues permitted (3 per cent of the earnings) might not be sufficient to meet the expenses of minimum benefits, and in such cases the employers were made responsible for the deficit.

PROPOSAL OF 1908.

The workmen's sickness insurance bill, which was introduced in the Duma January 25 (February 7), 1908, was much more elaborate than its predecessors. Organization and administration were more carefully worked out in this bill, representing for the time being the final conclusions of the Government. It contained many changes in the plan, though the basic principles remained intact. The bill covered the question of medical aid, but its organization was kept apart, as explained in the section dealing with that problem.

The bill is an essential part of the comprehensive system of labor insurance planned by the Government. It is not limited to manufactures and mining, but also includes railroads, inland navigation, and street railroad establishments. It is limited to establishments which employ steam or other mechanical power and at least 20 permanent wage-earners, or 30 permanent wage-earners where no mechanical power is used. This provision is expected to solve the question as to what establishment is a factory or mill. Small shops may be so advantageously located that a union with existing funds would present no difficulties; it is therefore provided that the labor insurance council may, upon recommendation of the local labor insurance commissions, extend the application of the law to establishments using mechanical power and employing not less than 5 wage-workers. Under special conditions the council may temporarily except certain small and isolated establishments from the operations of this law until these conditions have changed. Establishments of a temporary nature may be relieved by the local commission from the obligations imposed by this law; and appeals against such acts are brought to the central council, whose decision is final. This provision in regard to temporary enterprises was thought necessary because of the difficulties connected with a temporary organization of a sick benefit fund. When such changes take place in the nature of an establishment as to take it out of the class to which the bill applies, the obli-

gation of insurance ceases. All establishments owned by zemstvos and municipalities are excepted, for many such public institutions have already established systems of sick relief.

In the establishments covered by the law all permanent employees receiving less than 1,500 rubles (\$773) per annum (including the value of board and lodging), whether employed as workmen or in the offices, are subject to the insurance system. Temporary employees hired for less than two weeks are excepted. The maximum limitation of salary is taken from the law of 1903 and is identical with that in the accident insurance. Under special regulations, persons receiving more than that remuneration may voluntarily come under the insurance system.

According to this bill insurance against sickness must be by means of sick benefit associations. Establishments with 400 permanent employees or over have their individual sick benefit associations, and only in exceptional cases may the organization of independent associations be authorized by the local labor insurance commission in establishments with a smaller number of employees. Smaller establishments must unite for the organization of such association, or join existing associations.

The organization of joint associations must have the approval of the proprietors of the several establishments, as well as of the local labor insurance commissions. For the admission of a new establishment into an existing association, or the union of several existing associations into one, the agreement of these associations must also be obtained. Such agreements and approvals are necessary in view of the differences in the rates of accidents and sickness. This provision is limited by the clause authorizing the local labor insurance commission to order such unions on its own initiative, and thus the final decision of all such questions is practically taken out of the hands of the employees, who are the main contributors to the associations, and left entirely in the hands of the authorities. The membership of the employee in the association begins with the day of entering service and ends either with the expiration of such service or with change in the conditions. Voluntary members of the associations may resign at any time, provided they have held membership for at least one year.

The associations must have their own constitutions, but this right is subject to limitations. The right to prepare the constitution is left to the employer (the owner of the establishment). The employees are not permitted to have any voice in the matter. In addition, the central labor insurance council is directed to prepare a normal (standard) constitution and while the adoption of this constitution is not to be obligatory, its use is to be encouraged. The application for a permit to organize an association is made by the owner of the establishment

to the factory inspector, and if the use of the standard constitution is agreed to the inspector grants this permit. If a new constitution or any modification of the normal constitution is desired, the approval of the local labor insurance commission must be first obtained. If the employer does not make such an application within the time specified by the commission the latter may order the organization of the institution under the standard constitution.

The constitution must state the name of the association, place, list of establishments, method of election and functions of the board of directors, the organization, functions, and procedure of the general meetings, the revenues, their investments, etc., the expenditures, bookkeeping and accounting, the methods of amending the constitution, methods of liquidating the association if necessary, and care of books and documents during temporary suspension of the association. These details of the constitution must conform to the limitations established in the law.

The associations are permitted to enter into agreements with the employers to assume for a definite consideration the duty of furnishing medical help, and for this purpose they may establish hospitals and dispensaries and also enter into agreements with zemstvos and municipalities or private institutions for treatment of the sick.

The payment of benefits is the main function of the associations; this includes sick benefits, maternity benefits, and funeral expenses. Sick benefits are paid in all cases of sickness lasting over three days, except when sickness is self-afflicted with malicious intent or caused by fights or criminal acts. The exception of sickness lasting three days or less is expected to relieve the associations of minor cases which are not serious enough to cause financial distress to the wage-earners, or which may be due to malingery or debauchery, and which would prove to be a heavy burden for the association. The amounts of the sick benefits are left to the associations, but must fall within the following limits: For married persons with dependent families, from one-half to two-thirds the daily wage, and for persons without dependent families (whether single or married), from one-fourth to one-half of the daily wage.

These sick benefits are paid for not over twenty-six weeks in any one case of sickness, and not over thirty weeks to one person within the same year.

Those members of these associations who are at the same time insured against accidents (according to the new accident insurance bill) and are disabled in consequence of an industrial accident, are entitled to benefits from the day of the accident not to exceed 13 weeks. This obligation does not rest upon the sick benefit association when the injured person is not insured against accidents, but is covered by the law of June 2 (15), 1903, which entitles the injured person to receive

such benefits directly from the employer. If the injured person is neither insured against accident nor covered by the old law of 1903, he is entitled to receive his benefits from the associations on the same conditions as any other sick member.

The extension of the length of care supplied by the sickness association to the injured person from 6 to 13 weeks is the most important modification suggested in the last draft. It must be remembered that of all accidents, according to the statistical data for 1904, only 4 per cent required treatment for over 13 weeks, while 85 per cent required treatment for 6 weeks or less, so that an additional burden of 11 per cent of the accidents is thrown upon the sick insurance associations. The actual additional burden must be measured by a somewhat different method. Out of a total of 1,135,491 sick days for which treatment was granted in 1904, the accidents requiring treatment for not over 6 weeks claimed 550,695 days, or 48 per cent. To this must be added the first 6 weeks of treatment for all other cases, which amounted to 276,948 days, the total being 827,643, or 73 per cent. The treatment of cases lasting over 6 weeks but not over 13 weeks would impose an additional duty of 271,994 days, or 24 per cent, or about one-third of that of handling the cases lasting under 6 weeks.

Maternity benefits paid by the associations must be from one-half to two-thirds of the daily earnings. They are to be paid for four weeks from the day of confinement, and are paid only when the woman has belonged to some sick insurance association for three months previous to childbirth. To enforce the hygienic advantage of these maternity benefits, the associations are permitted to withhold them from women who return to hired labor before the expiration of four weeks.

The funeral expenses paid by the sick benefit associations must equal twenty to thirty times the daily earnings of the deceased. To simplify and accelerate the payment of such expenses in cases of death from accidents, the sick benefit associations make such payments, but as this obligation rests upon the accident insurance associations, the latter reimburse the sick benefit associations.

In all these benefits the payments are computed on the same basis of daily earnings as their contributions. The actual rates of benefits within the limits established by the law are determined by the association, in general meeting, for a year in advance. A few additional limitations are permitted to the association. Thus single members may be deprived of benefits altogether or receive smaller amounts than the legal minimum when they are being treated in a hospital at the expense either of the association or of any other third party; benefits may begin before the fourth day of sickness; they may be paid for holidays; a certain length of membership not exceeding two weeks may be required before the right to receive benefits is acquired (in

case of voluntary members no benefits must be paid within the first week of membership); members who do not comply with the rules of the associations or who disobey the physician's order may be deprived of their benefits, wholly or in part, and may be fined not to exceed 3 rubles (\$1.55) for each offense.

In addition to these obligatory benefits the associations may extend their activity to the members of the workmen's families. Any or all of the benefit features may be extended, as sickness, death, or childbirth in the workman's family often seriously affects his economic status. The amounts of such additional benefits must be definitely stated in the constitution of the association, and in no case must the expenditure for such additional benefits exceed one-third of the expenditure for the required benefits.

The revenues of the funds are to be derived from the same sources as in all the preceding plans of sickness insurance; primarily they consist of periodic contributions from the employees and employers, to which are added the following minor sources of revenue: Income from property and investments, voluntary contributions, fines and penalties imposed in accordance with the laws by the establishments and by the sick benefit funds, and miscellaneous revenues. Of these secondary sources the fines and penalties of the establishments are the most important ones, but these are decreasing.

The actual rate of the employees' contributions are determined by the association in general meeting, but must not be less than 1 nor more than 2 per cent of the earnings. Associations with less than 400 members may increase the rate to 3 per cent. While the maximum yearly salary of persons required to join the association is 1,500 rubles (\$773), or over 5 rubles (\$2.57½) per day, for the purposes of computing the contribution as well as the benefits the maximum earnings are put at 2 rubles (\$1.03) per day. The contribution of the employer is two-thirds that of the employees.

The above limits of the contributions of the employees and employers were established upon calculations based upon German sickness statistics, no such material for Russia being available. According to these data there are about 36 cases of sickness per 100 employees, and the average duration of each case of sickness is 40 days. This gives 1,440 days of sickness for 100 employees, or 14.4 days per employee. Taking the average number of working days to be 280, one-twentieth of it seems to be lost because of sickness. With a sick benefit varying from one-fourth to two-thirds of the wages, the cost of the benefits equals from 1¼ to 3½ per cent of the wages. As the employee contributes three-fifths and the employer two-fifths of the charges (disregarding the minor sources of revenue), the employee's contribution must be from three-fourths of 1 per cent to 2 per cent,

and that of the employer from one-half of 1 per cent to $1\frac{1}{2}$ per cent of the wages.

The miners' funds of many mining and metallurgical establishments in the Polish provinces require equal contributions from both parties, and by the proposals of 1905 and 1906 the employer was supposed to contribute one-half as much as the workman. The increase from one-half to two-thirds is somewhat compensated by the extension of the care of injured employees from 6 weeks to 13 weeks. The entire cost of medical treatment of all cases of sickness is paid by the employer. Voluntary members of the sick benefit associations pay all the cost of their insurance.

The financial organization is identical with that proposed in the draft of 1906. The association is required to have two funds, the general (operating) fund and the reserve. The contributions of the employers and employees, the revenue from property and investments, and the miscellaneous revenues are paid into the general fund. The remaining revenues are paid into the reserve. If at the time of the organization of the sick benefit association the establishment has a fine fund, this is turned over to the reserve. In addition annual contributions of from 5 per cent to 10 per cent of the payments of employers and employees, according to the constitution of the association, and also the annual surplus, are turned into the reserve. The contributions must be paid until the reserve is equal to the expenses of the association for the preceding two years, and they are renewed as soon as the reserve falls below that level. Voluntary contributions are disposed of according to their designations, in absence of which they go into the reserve.

Current expenditures are paid from the operating funds, and the reserve is used when the operating fund is exhausted. The reserve is intended to give stability to the financial status of the association and to save it from insolvency in case of an unexpectedly increased demand, such as an epidemic or a catastrophe involving many employees. It is further provided that when more than one-half of the reserve on hand in the beginning of the year has been spent, a general meeting of the association must be called for the purpose of adjusting the finances, either by increasing the contributions or by reducing the benefits within the limits established by the law, or by other means not contrary to the law.

In case of temporary embarrassment of the fund the employer must advance the necessary money as a noninterest-bearing loan, and if there are several employers united in one association this loan is distributed among them according to their respective contributions. To prevent the association from assuming excessive indebtedness, such loans are limited to a sum equal to the revenues for three

months. All revenues of the association must be used in liquidating this loan before any payments are made into the reserve.

In case permanent increase of dues becomes necessary the association, in general meeting, may raise the contributions of the employers and employees above the normal limits; but the same proportion of 2 to 3 must be preserved, and the employer's share must not exceed 2 per cent of the employee's wages. To be effective this measure requires the approval of the local labor insurance commission. If the sick benefit association should fail to take such steps as are here outlined the commission may order them on its own initiative. What further measures should be taken, if after all this is done the revenues of the association still remain insufficient, is not indicated in the law except in the provisions about the liquidation of the association. The provision of the plan of 1906, that the employer meet the excess of the charges on the association above the regular revenue, has been eliminated from the bill. On the other hand, the reduction of the contributions of the employers and employees below the legal minimum is permitted whenever the reserve exceeds the required limit.

Self-government is limited by the rights of the employers and by governmental control and regulations. The organs of administration are the general committee and the board of directors. The members of the general committee are selected by and from the general membership of the association. The number of such committeemen shall not exceed 100, and when several establishments are united in one association the number of committeemen must be proportioned to the number of members in the association. An important provision makes the chairman of the general committee, with a casting vote in case of a tie, a representative of the employer, or of the employers by mutual agreement. The employer and members of the association may appeal from the decisions of the general committee to the local labor insurance commission. The executive work of the association is performed by the board of directors, consisting of an odd number, partly elected by the membership of the association and partly appointed by the employer or employers, for a period of three years; the number of the elected directors exceeding that of the appointed, by one. The appointed directors need not be members of the association, and no qualifications are stated. The elected directors must be members of the association, of either sex, not under 25 years of age, never convicted of crime or for avoidance of military duty, not bankrupt, not under indictment, nor under police supervision, etc. Committeemen and directors may absent themselves from work for the purpose of attending to their official duties and may not be fined or discharged for such absence. The directors may be paid a compensation, if provided by the constitution. The board selects its chairman and vice chairman

from its membership, though the constitution may provide that the chairmanship shall be intrusted to the employer or his representative.

The executive work performed by the board includes the determination of the sickness, the calculation of the earnings of the members, and the granting of all benefits. Its decisions may be appealed to the general committee. It prepares the annual financial report, which must be audited by a special auditing committee and, after approval by the general committee, be forwarded to the local labor insurance commission. The general committee may at any time order an auditing of the finances, begin proceedings for removal of the directors, or bring criminal charges for malfeasance in office. The functions of a treasurer are intrusted to the employer, or where there is more than one to one of the employers selected by them. He keeps the funds, cash as well as securities, and may turn them over for safe deposit to a credit institution, the cost being charged to the association. The funds necessary for current expenses must be invested in government or other bonds designated by the Government. All payments due from employees are retained by the employers from the pay and paid together with the contributions of the employers, and for failure to do so the employers become personally liable for the amount and are fined to the extent of 1 per cent for each month of delay.

If the work of a manufacturing establishment is temporarily suspended the association may also temporarily suspend its activity without going into liquidation, and the property and books of the association are to be kept in accordance with regulations contained in the constitution. If the establishment goes out of business, the association must wind up its affairs, and after all obligations have been paid the assets are to be paid into the imperial funds existing for manufacturing industry and for the mining industry. If one association is joined to another because of decrease in its membership, the assets are transferred to the latter association. One association may be joined to another by the local labor insurance commission if it is unable to straighten out its financial difficulties, or is threatened with insolvency. If the action of an association is judged to be contrary to public peace and order it may be closed and liquidated upon approval of the labor insurance council.

The associations are directly subject to the control of the local labor insurance commissions, which have only a small representation of employers and employees. Above these stands the central labor insurance council.

The local commission has the final decision in the questions of organization of individual or joint associations; it may relieve any employer from the obligations of the law, but an appeal may be taken

to the council. The commission approves the constitutions and may order changes. It keeps a list of associations existing under its jurisdiction. It may order the liquidation of a fund (with the approval of the council) or join one fund to another. It must approve and may order an increase of the contributions over that established by the law. It may hear appeals and cancel any resolution adopted by the general committee of an association. If the general meeting or the board votes a sum of money which seems to the employer (who acts as treasurer) contrary to the law or constitution, he may appeal to the commission within three days.

The auditing and revision of the accounts may be undertaken by the factory inspectors on their own initiative, by orders of the commission or by the civil governor through his agents. The results are reported to the civil governor, who forwards them to the commission, of which he is a member, for consideration and action. When actions contrary to the law or the constitution are discovered, the commission orders the correction of such actions within a specified time, and it may remove the chairman or the board of directors for the same. The civil governor has authority to remove the chairman or the directors, not only for actions contrary to the law or the constitution, but also for acts contrary to public peace and safety, reporting such action to the commission within two weeks. The vacancies thus created must be filled in the same order as the original officers were elected, and if these offices are not filled within a specified time the commission may temporarily intrust the administration of the association to the employer or to a person designated by him.

OLD-AGE AND INVALIDITY INSURANCE.

What has been done in Russia to establish old-age and invalid pensions through legislation is almost exclusively limited to government employees. But in view of the many industrial and commercial enterprises owned and operated by the Russian Government this field is not an inconsiderable one, including as it does most of the railroads, many mines and metallurgical establishments, printing offices, and navy yards. Efforts for protection of employees against old age have also been made by the provincial governments (*zemstvos*), but these concern professional employees mainly. As against these public employees, workmen in private establishments, except railroad employees, have hardly been provided for at all through legislation, and private efforts are almost as meager.

The earliest pension legislation dates back to the time of Peter the Great, but was intended for navy employees only. It was enacted on January 13 (24), 1720. On June 9 (20), 1728, that legislation was extended to the army. The first pension act referring to industrial employees was promulgated October 28 (November 8), 1738, and

applied to some state factories. All this legislation included only cases due to invalidism or total disability caused by sickness. In reorganizing the system of army pensions, Katherine II was the first to introduce the old-age pension for a definite length of service. On June 22 (July 3), 1797, old-age pensions for workmen employed in the state mines of the Kolyvan-Voskresensk mining district were introduced, to be paid after twenty-five years of service, and on March 9 (21), 1804, these pensions were extended to the employees of the state factories at Olonetz. A general pension law for military and civil employees was promulgated on December 6 (18), 1827, which, with minor modifications, is now in force.

The modern era in the history of pensions on an insurance basis for the industrial employees of the Government begins with the act of March 8 (20), 1861, establishing the miners' fraternities in the state mines and metallurgical establishments, already mentioned in connection with sickness insurance. Their activity was insignificant until the issue of the temporary regulations of April 9 (21), 1881. They were reorganized by the law of May 26 (June 7), 1893. The establishment of pension funds for employees of private railroad companies was ordered by the law of May 30 (June 11), 1888. On June 3 (15), 1894, a law was approved providing for old-age pensions for the employees of the state railroads. This was extended and amended by the law of June 2 (15), 1903 (the same date as the workmen's compensation act for factories, mines, and metallurgical establishments), which is now in force. The employees of the government printing office were provided with a pension fund by the law of June 3 (15), 1894. On January 1 (13), 1900, a pension fund was established for the vast army of employees of the government spirit monopoly. On January 27 (February 9), 1903, a law was passed, and amended on April 18 (March 1), 1903, ordering the establishment of pension funds in all the industrial establishments of the ministry of the navy. In the two largest of these factories in St. Petersburg such funds have existed since 1898.

STATE MINERS' BROTHERHOODS.

The pensions system for employees of the state mining and metallurgical establishments was the first important and systematic effort in Russia to provide old-age and invalid pensions for industrial employees, though the number of workmen affected by it did not exceed 25,000. Its organization dates back to 1861, though the activity was insignificant for twenty years. Before the emancipation of the serfs in 1861, the state mines and metallurgical establishments utilized enforced labor. The law of March 8 (20), 1861, which changed the condition of the labor contract, also ordered the establishment of employees' brotherhoods (*tovarishchestvo*). The func-

tions of the brotherhood were very broad and included care for the workers in case of sickness, old age, or disability because of accidents, provision for their widows and orphans, improvement of the morals of the working population, and furtherance of amicable relations between the workers and the administration. The latter was required to further the ends of the brotherhood by establishing free schools and hospitals, employing physicians, and subsidizing the relief funds which were ordered to be established in connection with each brotherhood.

The minister of finance, under whose jurisdiction the state miners were prior to 1873, was ordered to issue detailed regulations in regard to the activity of these relief funds, but none were issued for some 20 years, and great variety existed in these funds before that time. On April 8 (2) 1881, i. e., about eight years after these miners had been transferred to the Ministry of State Domains, temporary regulations were promulgated; they were confirmed and made permanent on May 26 (June 7), 1893, and are still in force.

The relief funds of these brotherhoods combine the functions of a pension fund, sick relief fund, funeral benefit society, and savings and loan association. The sick relief activity of the funds has already been mentioned in connection with the subject of sickness insurance. Pensions to superannuated or invalid members of the brotherhood, their widows, and children represent the most important branch of this activity.

The regulations governing these benefit funds, as adopted in 1881 and slightly modified in 1893, are as follows:^(a)

All workers and office employees over 18 years of age who are engaged for at least a year are members of the brotherhood and of the relief fund. With other employees membership is optional.

The sources of income of the fund, established by the law of 1861, consist of (1) deductions from the earnings, 2 to 3 per cent (all funds except one making deductions of only 2 per cent), (2) contributions from the establishment equal to the total sum of deductions from the workers' earnings, (3) fines imposed upon the employees, and (4) other accidental sources. In cases of necessity the general fund of the brotherhood may be called upon to furnish the necessary sums.

Full old-age pensions are granted after thirty-five years of employment and amount to one-half the average wages or salary for the entire period. In a few occupations the harmful nature of the work is taken into consideration in shortening this period. Thus each year spent in dry grinding of steel blades counts for three years of

(a) Otvietstvennost predprimateliei za uviechia i smert rabochikh, V. P. Litwinov-Falinskii, 1900, p. 264. Kassy Gornorabochikh, G. Th. Tigranov, 1896, p. 9.

service. But pensions of smaller amounts must be granted when the employee is incapacitated for continuing in employment on account of old age, invalidity, chronic diseases, or injuries sustained. Under any of these circumstances the pensions amount as follows: After ten and less than fifteen years of employment, one-sixth of the average wages; after fifteen and less than twenty years of employment, one-fifth; after twenty and less than twenty-five years, one-fourth; after twenty-five and less than thirty years, one-third; and after twenty to thirty-five years of employment, one-half of the average annual earnings.

In case of death the widow having no children under 16 years of age receives until death or remarriage one-third of the pension to which the husband would have been entitled. If she has one child under 16 years of age she receives one-sixth additional, i. e., one-half of the husband's pension. If she has two or more children under 16 years of age she receives an additional one-third, or two-thirds of the pension altogether. If the widow is incapacitated for work she may receive a pension up to one-half of her husband's pension. An orphan under 16 years of age receives one-third of his father's pension; two or more orphans receive two-thirds of the pension. The same rates apply to children of a deceased employee whose mother does not receive any pension either because of remarriage or admission to a convent. Orphans may receive pensions even if the father had not been employed long enough to entitle him to one. When incapacitated for work children receive pensions for life, otherwise only until the completion of the sixteenth year. In case of transfer from one state establishment to another, the years of service in the former establishment are counted; the pensions are paid by the fund of the last establishment, and the accounts settled among all the funds concerned.

The fund takes charge of the cases of sickness after the expiration of two months, during which medical aid and financial assistance are supplied by the management of the establishments, the fund meeting the cost of treatment and paying benefits equal to those paid during the first two months, namely, to the single man or widower with dependent relatives, one-third of his wages, to the married man without children, one-half of his wages, and to the married man with children, two-thirds of his wages.

If an employee is dismissed because of disability due to poor health before having earned a pension, he receives a lump sum, which must not exceed one-eighth of his annual earnings. In case of death his widow may receive a sum equal to one-half the benefit he would receive, and if he leaves a widow with children under 16 years of age, or children without a mother, they receive three-fourths

of that sum. Other benefits may be granted in cases of great need not to exceed one month's earnings, if approved in each case by the general members' meeting.

The fund is also authorized to receive savings of the members, for which it may pay interest not to exceed 4 per cent per annum, and grant loans from its free funds, upon which it must charge a higher rate of interest than it pays upon the deposits of savings.

The administration of the affairs of the funds and the brotherhoods is intrusted to the general meetings of members and a council (*prikaz*) consisting of a chairman appointed by the administrators and four members elected by the membership. Thus the management of the funds is practically in the hands of the membership.

The financial organization is not based upon scientific computations, the premiums and pensions being entirely independent of each other. The reserves of the funds have been rapidly accumulating, but as the largest pensions are not due until after 35 years' membership in the funds, they evidently have not yet been called upon to meet their heaviest obligations. The accumulations of all the funds on January 1 (13), 1881, amounted to 396,344 rubles (\$204,117); on January 1, 1887, to 660,268 rubles (\$340,038); on January 1, 1895, to 1,130,139 rubles (\$582,022); and on January 1, 1907, to 2,042,762 rubles (\$1,052,022).

The length of service of the membership of these funds is shown in the following table:

MEMBERSHIP OF THE STATE MINERS' BROTHERHOODS ON JANUARY 1, 1907, BY LENGTH OF SERVICE.

[Source: Ministerstvo Torgovli i Promyshlennosti. Ob obespechniei rabochikh na sluchai bolezni.]

Length of service.	Members.	
	Number.	Per cent.
Under 10 years.....	14,339	73.2
10 and under 15 years.....	2,183	11.2
15 and under 20 years.....	1,254	6.4
20 and under 25 years.....	1,027	5.2
25 and under 30 years.....	417	2.1
30 and under 35 years.....	325	1.7
35 years and over.....	44	.2
Total.....	19,589	100.0

The figures in the next table indicate that a large number of employees avail themselves of the partial pensions after 10 years of employment. The number of pensioners on January 1, 1907, was 3,399, who received an aggregate pension of \$61,574 annually, or \$18.12 per annum. According to the relation of the pension to earnings, these 3,399 pensioners were distributed as follows:

NUMBER AND PER CENT OF PENSIONERS AND TOTAL AND AVERAGE PENSIONS PAID BY THE STATE MINERS' BROTHERHOODS ON JANUARY 1, 1907, BY RATE OF PENSION PAID.

[Source: Ministerstvo Torgovli i Promyshlennosti. Ob obespechneni rabochikh na sluchai bolezni.]

Rate of pension.	Pensioners.		Pensions.	
	Number.	Per cent.	Total amount.	Average per annum.
One-sixth of the wages.....	889	26.2	\$8,839	\$9.94
One-fifth of the wages.....	779	22.9	10,219	13.12
One-fourth of the wages.....	538	15.8	7,806	14.51
One-third of the wages.....	518	15.2	10,001	19.31
One-half of the wages.....	705	20.8	24,709	35.05
Total.....	α 3,399	α 100.0	61,574	18.12

α This total is not the correct sum of the items; the figures are quoted as found in the original report.

The total income of these funds amounted in 1906 to 293,378 rubles (\$151,090), of which 109,915 rubles (\$56,606), or 37.5 per cent, were contributed by the members; 95,410 rubles (\$49,136), or 32.5 per cent, by the management of the mines and factories; the interest on investments was 52,662 rubles (\$27,121), or 17.9 per cent; interest on loans 23,987 rubles (\$12,354), or 8.2 per cent, and miscellaneous revenues amounted to 11,404 rubles (\$5,873), or 3.9 per cent. The expenditures for the same year amounted to 193,032 rubles (\$99,411), of which the larger share was spent for pensions, 108,696 rubles (\$55,978) or 56.3 per cent; of this sum, 80,560 rubles (\$41,488), or 41.7 per cent, was paid to members of the brotherhood and 28,136 rubles (\$14,490), or 14.6 per cent, for pensions to widows and orphans. Temporary benefits for sickness claimed 59,986 rubles (\$30,893), of which only a small share, 7,646 rubles (\$3,938), was used for medical help, as the law grants such necessary help to the employees gratuitously. Miscellaneous expenses amounted to 24,350 rubles (\$12,540).

The loan operations of the brotherhood are considerable; 637,498 rubles (\$328,311) were loaned in one year, and 628,149 rubles (\$323,497) were repaid. The savings deposits were very much smaller, 14,980 rubles (\$7,715), and the withdrawals, 13,110 rubles (\$6,752), nearly equaled that sum.

RAILROAD EMPLOYEES' PENSION FUNDS.

The army of railroad employees, which is rapidly growing in Russia, has been enjoying for the last two decades a better provision for old-age and invalidity insurance than any other body of workmen and salaried employees in Russia. This is particularly true of the state railway employees; and as the Russian Government owns and operates over two-thirds of the entire railway system of the country, the vast majority of the railway employees enjoys the benefits of the system. But pension funds are obligatory for the private railway

employers as well. The law demanding the establishment of such pension funds by the private railway companies was passed on May 30 (June 11), 1888, six years before the law of June 3 (15), 1894, establishing the central pension fund for the state railway employees.

The following table shows the development of state and private railways in Russia from 1880 to 1905:

MILEAGE OF STATE AND PRIVATE RAILWAYS IN RUSSIA, 1880 TO 1905.

[Source: Ministerstvo Putei Soobshchenia. Otdiel Statistiki i Kartografii. Statisticheski sbornik ministerstva putei soobshchenia. Vypusk, 1—90.]

Year.	State railways.		Private railways.		Total miles of railway.
	Miles.	Per cent of total.	Miles.	Per cent of total.	
1880.....	43	0.32	13,571	99.68	13,614
1885.....	2,086	12.98	13,990	87.02	16,076
1890.....	6,196	32.71	12,744	67.29	18,940
1895.....	14,429	62.98	8,480	37.02	22,909
1900.....	22,407	68.03	10,529	31.97	32,936
1905.....	25,618	69.50	11,241	30.50	36,859

The first pension fund for railroad employees was established as early as 1858 on the Warsaw-Vienna Railway. Other private companies established funds within the next decade. By 1880 such pension funds existed in 14 lines operating over 5,500 versts (3,646 miles), which was nearly one-third of the railway mileage in Russia.

These pension funds were not based upon strict insurance principles. They were based upon length of service of the member and his salary at the time of separation from the service, and were to be paid to the members of the fund, their widows and orphans. There was little effort toward adjustment of the revenues and obligations of the funds, and this lack of adjustment very soon became noticeable, so that many of these funds went into liquidation, while in other cases such liquidation was forced upon them by the order of the Government.

The first effort to form a pension fund on strict scientific insurance principles was made in 1877 by the Kiew-Brest line, now a part of the Southwestern Railway System. Two smaller railway companies organized similar funds in 1885. Other railways desired to follow this example, but were hampered by the lack of scientific statistical data upon which to base their rates. The Ministry of Ways of Communication decided to elaborate a plan for one central pension fund for all private railroads. In 1881 a plan was presented by the ministry, but met the opposition of the minister of finance, who pointed out that a uniform system for all railroads might prove too heavy a financial burden for the less prosperous roads, and because of the guarantee of the interest on bonds and the dividends by the state treasury, indirectly a burden upon the latter. The minister

therefore suggested that the Government limit itself to issuing general rules in regard to establishment of individual pension funds.

In view of this attitude of the Ministry of Finance, the plan for a central pension fund was abandoned, and the Ministry of Ways of Communication applied itself to the elaboration of plans for individual pension funds for each railroad company. It was felt at the very beginning that many of the railroad companies were too small to have their own pension fund, since with the small number of employees it would be difficult to apply any annuity tables. It was decided therefore to permit the organization of a "saving and relief fund" where a pension fund was not practicable, and two separate drafts were prepared for these two types of organizations. They were presented to the State Council on December 22, 1887 (January 3, 1888), and were approved by the Emperor on May 30 (June 11), 1888. By a decree of the same date each private railway company is required to establish either a pension or savings fund; the pension fund is considered preferable, but the organization of a savings fund may be permitted, under special circumstances, by the imperial authority on recommendation of the Ministry of Ways of Communication. These funds are required to be organized in conformity with the standard rules approved on the same date, and the existing funds must be reorganized to conform with them. Each fund was required to have its own constitution and by-laws, provided they were in agreement with the "general rules" and approved by the ministry.

The general provisions for the establishment of the funds of either type may be thus briefly summarized: The basis of both funds consists of enforced savings of the employees, 6 per cent of the wages, 10 per cent of the premiums given to the employee for efficient service, and after each promotion in salary, the entire excess of the new over the old salary for three months; and additional payments from the funds of the railway company, not to exceed 50 per cent of the employees' contributions, both of which are credited to the individual accounts of the members, and in addition various other minor sources of income. From these credits benefits are granted to the members at the time of their separation from the service, or in case of their death while in service, to the widow and orphans. In the case of the savings and relief funds the benefits are in the form of a lump sum; in the case of the pension funds the benefits may be either in the nature of lump sums or in the form of pensions (annuities), depending upon the length of service or conditions of separation. The amount of the benefits, whether lump sums or pensions, depends upon the length of the service, the degree of disability, and also the amount credited to the employee in the fund, while in addition to that, in the case of pensions, the age affecting the probability of life of the pensioner is also taken into consideration.

PRIVATE RAILROAD PENSION FUNDS.

These funds may be established either by one railway company or by several companies combining for that purpose. The constitution and by-laws of each fund must be prepared by the board of directors of the railway company, adopted by the stockholders' meeting, and then forwarded to the minister of ways and communication for his approval in conjunction with the minister of finance and the state comptroller.

All persons permanently employed by the railway company, except the officers, are required to join the pension fund. Out of a total of 711,922 employees of the railroads (both state and privately owned) of Russia in 1904, 287,968, or 40.4 per cent, were common day laborers, 37,397, or 5.3 per cent, temporary employees, and 386,557, or 54.3 per cent, permanent employees.

The sources of revenue of the pension funds are as follows:

Contributions of the members, namely, entrance fees deducted from the salaries of employees at the time of their appointment, the amount to be determined by the constitution of each fund; monthly deductions of 6 per cent from the earnings of the employees, no salary being considered as above 2,400 rubles (\$1,236) for the purpose of this provision; 10 per cent deductions from the special premiums and awards granted; in case of increases of salaries, the difference between the new and old salary for the period of three months; and additional voluntary payments of the members.

The contributions from the railway company, namely, penalties imposed upon the employees by the company; net income from the sale of unclaimed baggage and freight after deducting the accrued railway charges; payments from the railway company due to its employees and unclaimed for 10 years.

The other sources of the fund proper are as follows: Interest on deposits and investments; profits from financial operation; money owed by the fund to its members or their families and unclaimed for 10 years; voluntary contributions and accidental revenues. In addition the railway company may transfer to the pension fund the following sources of revenue: Interest upon advance payments of salary and loans made by the railway company to its employees; rentals for right of placing advertising matter, and selling newspapers and books in the railway stations; and the unclaimed dividends on stocks and interest on bonds of the railway company. In addition the minister of ways of communication, in conjunction with the minister of finance and the state comptroller may require, if they judge it necessary, that the railway company pay to the fund monthly contributions not in excess of one-half the total income from the 6 per cent monthly contribution of the employees.

The income of the pension fund from these numerous sources is to be distributed as follows:

The entrance fees, monthly contributions, 10 per cent award deductions, and promotion deductions are all credited to the individual accounts of the members and their wives. The income from sale of baggage and freight, from the advertising and newspaper privileges, and the monthly contributions of the railway company are also thus distributed, provided, however, that the trainmen members be given a larger share than the other employees, that part of this contribution be used to guarantee the widows' share, and that part of these contributions may be diverted to the orphans' fund (to be spoken of presently) if the income of that fund be found insufficient. The income from additional payments of members and voluntary contributions must be distributed according to the wishes of the persons making them, or in absence of any instructions, according to the provisions of the preceding section. The income from interest on investments remains in the fund to which the investments belonged. The income from unclaimed obligations of the pension fund, penalties, interest upon advance payments and salaries, unclaimed payments of railroad companies, and unclaimed interest and dividends goes to form a special orphans' pension and relief fund. Profits from financial operations must be credited to a reserve until it reaches a certain limit established in the by-laws, and the excess in the reserve may be distributed among the individual accounts.

Both the members of the pension funds and their families (wives and children) acquire the right to pensions or lump-sum benefits. The actual amounts of either were not named in the law of 1888 as their determination was left to the individual funds on the basis of pension tables to be elaborated later.

Three classes of pensions were recognized, ordinary, increased pensions in case of disability, and pensions for injured employees. The ordinary and increased pensions must be determined with consideration of the following factors: The amount credited to the pensioner's account, his age at entering the railroad service, the length of service, the normal rate of growth of capital, the mortuary tables for railroad employees, members of families of railroad employers, and the conditions of loss of earning ability.

The right to the "ordinary pension" at separation from service is obtained after fifteen years' of service and membership in the fund. The maximum pension, with regard to the accumulated credits, is obtained after thirty years of service, provided the employee is not under 55 years of age (in case of trainmen 50 years). This pension is to be paid without regard to the continuance in the service or separation from it. After receiving such a pension the employee is relieved from membership in the fund and relieved from any payments.

A member of the fund suffering from total disability as a result of a grave and incurable disease requiring constant attendance and help, after ten years of employment and membership in the fund acquires a right to an "increased pension." In case of disability caused by injury in performance of duty the employee shall receive a pension independent of the length of time in service; this pension for injury to be of greater amount when disability to earn a living is complete, and of a smaller amount when the injured person is disabled only for continuance in railroad service. The excess of the value of pension for injury over that of the pension or lump sum to which the employee would have been entitled had he left the service on account of sickness must be paid by the railroad company to the fund. Both sickness and injury must be certified to after medical examination, and the officials of this fund may demand reexamination annually. All pensions are paid until death, recovery from disability, or loss of civil rights in consequence of a judicial sentence.

If the member be separated from the service before earning a pension, either on account of sickness or because the position is abolished, he is to receive in a lump-sum payment the total amount accruing to his credit; when the separation is induced by other causes only the amount of his own contributions to the fund is returned to him. When the separation, due to the causes last mentioned, occurred after ten years of service, the constitution of the fund may provide for paying out a definite part of the additional amounts accruing to his credit.

As stated above, not only the employee himself, but his widow and children have a right to a pension, so that the fund may be said to provide not only for old-age and invalidity insurance, but is a true pension fund. The rights of the family are created by the death of the member or the pensioner of the fund, loss of civil rights in consequence of a judicial sentence, or unexplained absence (disappearance) for over one year. In the text following the term "widow" is intended to include the wives of men of these two classes. A pension must be paid to the widow of each pensioner and employee who had been in service at least five years. The amount of the pension is to be determined by the by-laws in accordance with the ages of both the employee and his widow, and the amount of savings.

This pension is paid to the widow until death, loss of civil rights, remarriage, or the return of the husband from unexplained absence. When a widow with children remarries, her pension is transferred to the latter.

If the deceased had been in service less than five years the widow is to receive in a lump sum all the money credited to her, including not only the payments of the deceased, but all other additional credits.

In case of death of an employee receiving a pension for injury, his widow is entitled to one-half his pension if this amount is greater than the widow's normal pension to which she would have been otherwise entitled. When such an increased pension is granted the railroad company must compensate the pension fund for the computed value of the excess of this increased pension over the widow's normal pension or the widow's lump-sum compensation.

The children and the widow of a member of the fund who had been in service ten years, or of a pensioner, acquire a right to a pension under identically the same conditions. The amount of the children's pension must depend upon the salary or the pension of the parent, but not upon the amount of the accumulation. When both parents of an orphan have been members of the pension fund the orphans receive a larger pension. The children's pension is paid until the age of 18, except in cases of marriage before that age, loss of civil rights, or the return of the parent from unexplained absence. When the children are attending some secondary school they may receive a pension until graduation, but not after the completion of the twentieth year of age.

Children of an employee who had been in service less than ten years may be granted assistance in the form of a lump sum if the constitution of the fund so provides in accordance with the earnings of the parent and the means at the disposal of the fund.

The administration of the pension fund must be placed in the hands of the committee, which is subject to the administration of the railroad company. The company appoints one-half of the members of that committee and the membership elects the other half, while the president of the road is chairman of the committee. The cost of administration is met by the fund, and the salaries and other expenses must be approved by the railroad company. The current work is conducted by a paid secretary, who is appointed by the railroad company. While the questions before the committee are decided by a majority, and the chairman votes only in case of a tie, nevertheless there are other provisions which greatly magnify the influence of the railroad company at the expense of the elective representatives of the membership. Thus, if the chairman or all the appointed members of the committee present do not agree with the decision of the committee, the question must come for reconsideration before the board of directors of the railway company. The same holds true even if the committee forms a decision contrary to the opinion of the paid secretary in cases dealing with computation of pensions and awards.

The annual reports of the pension funds must be presented to the management of the railway company and by the latter to the Ministry

of Ways of Communication. The general supervision of the funds is vested in the latter ministry. Annually an account is taken of the finances of the funds for the purposes of determining whether the means are sufficient to cover the cost of accrued obligation computed according to the statistical tables embodied in the constitution.

It is evident that by this act only the general outline of the system of pensions is given. For the actual determination of the pension statistical data were lacking, therefore the enforcement of the act was postponed until such data would be available and their preparation was intrusted to a well-known mathematician, who had organized a pension fund for one of the largest private railway systems. This work was completed in about two years, and published in the end of 1890. However, by the decree of December 22, 1889 (January 3, 1890), the deductions from the salaries were ordered to begin on January 1 (13), 1890.

SAVINGS AND RELIEF FUNDS.

The organization of the savings and relief funds was considerably simpler. The conditions of membership are the same; also the sources of revenue (except that there are no initiation fees) and the system of administration. The differences are mainly in the substitution of lump-sum payments for pensions and in the method of distribution of the income from various sources.

In general the organization is as follows: Three funds recognized in each association—the savings fund, the general relief fund, and the special relief fund. Into the savings fund are paid those revenues which are contributed by the members directly; namely, the monthly deductions, the deductions from premiums, and the differences of salaries in cases of promotion; also additional voluntary payments, private contributions to this fund, and the interest and profits upon investments and operation of the fund.

The amount credited to each member in this fund is paid to him at the time of separation from the service; in case of death, to the beneficiary named by him or to his legal heirs.

Into the general relief fund are paid: The monthly contributions of the railway company, determined by the Ministry of Ways of Communication in conjunction with the minister of finance and the state comptroller, but not over 50 per cent of the monthly contributions by the membership, these being made simultaneously with the deductions from salaries and distributed proportionately to these deductions; the net proceeds from sale of unclaimed baggage or freight, computed annually and distributed proportionately to the annual deductions; interest and profits from investments and operations of the fund; special private contributions to this fund. These minor

revenues are distributed proportionately to the total accumulations of members in this fund. When the separation from the service takes place after ten years, the member receives 50 per cent of the amount credited to him in this general relief fund, and additional 5 per cent for each additional year of service, so that after twenty years of service the member receives the whole sum in this relief fund. The employees of the train service are entitled to 51 per cent of their credits after eight years and 7 per cent additional for each additional year, with the total credits after fifteen years of service. If the employee is dismissed from the service because of sickness or an injury, which disables him from further service, or because his position is abolished, he receives the total amount credited to him in the general relief fund without regard to the length of service. In case of death of the member the amount to his credit in the general benefit fund is paid over to his widow, or, if no widow remains, to his children; if neither widow nor child remains, the amount is distributed among the accounts of the other members of the fund.

Into the "special relief fund" are paid the fines collected, moneys due from the associations and unclaimed for ten years, salaries due to employees of the company and unclaimed for ten years, interest and profits, and the following three sources, at the option of the company: Interest on advances and loans to the employees, unclaimed dividends and interest on bonds, and rentals for the advertising and bookselling privileges in the stations. These revenues of the special benefit fund are not distributed among the members' accounts.

From this fund lump sum or annual benefits may be granted to an employee dismissed because of an injury or grave and incurable disease and unable to get along without some assistance. These benefits are additional to and independent of the payments from the savings fund and general benefit fund.

Benefits are also granted from this fund to children below 18 years of age of a deceased member, or of one dismissed because of injury or incurable disease, resulting in total disability and helplessness. These benefits consist of one lump-sum payment when the member had been employed less than eight years, and annual payments if he had been employed over eight years. In case of children attending a secondary school the benefits may be continued until the age of 20. The amounts of these benefits must be determined by the constitution and by-laws, taking into consideration all the conditions of the deceased parent's service and also the available means of the special benefit fund.

When both parents have been members of the fund, the continuance of one in the service does not interfere with the rights of the children for such additional benefits.

PENSION FUND OF THE STATE RAILWAYS.

With the rapid nationalization of the private railroads the question of pensions for the employees of the State grew in importance. In compliance with the law of May 30, 1888, pension funds were organized by fourteen railway companies and savings funds by seven companies, but most of these railway systems were soon bought by the Government and it assumed the obligations of the pension fund. It was the almost unanimous opinion of all the important officials connected with the operation of the state railways that one general fund for all state railway employees was preferable to separate funds for separate railways. A special commission was appointed for the consideration of this problem in 1889, but it soon found it necessary to suspend its activities because of absence of statistical data. After the publication of this data in 1890, another commission was appointed in 1892.

The commission decided that a pension fund was much preferable to a savings fund, as the guarantee of a continuous pension was more desirable than the payment of a lump sum, and the general plan of the State Railway Employees Pension Fund, approved on June 3 (15), 1894, and embodied in the constitution of the fund on September 2 (14), 1894, follows the line of the pension funds for private railways as described above.

Membership in this fund is obligatory to all employees and workmen of the state railways and the central offices of these railways, except members of private superannuation funds (*emeritalnya kassy*) which had been organized in the earlier years, persons entering the service at the age of 60 or over, persons employed for a term not exceeding one year, and all workmen during the first year of employment. Members of private superannuation funds and persons employed one year or under may join it voluntarily and are entitled to the same benefits as the obligatory members. Having once joined the pension fund, they can not give up this membership. Employees cease to be members when they are separated from employment in any state railway after thirty years of service, provided they have reached the age of 55 (in case of members of the train service, 50 years), and all employees having reached the age of 60, no matter what their length of service.

The sources of revenue of the pension fund are the same as for the pension funds of the private railroads; namely, the obligatory deductions from the earnings of the members, 6 per cent of the annual salary as initiation fee, 6 per cent of the monthly salaries as a regular monthly contribution, 10 per cent of the special prizes and awards, and the difference of salary for three months in case of promotion. For the purpose of these deductions no salary is considered as being

in excess of 2,400 rubles (\$1,236). Voluntary additional contributions may be made, not to exceed in any one year the annual sum of monthly contributions; and if intended to serve to increase the widow's pension, they must not exceed 50 per cent of the monthly contributions. The annual subsidy from the state treasury equals one-half of the annual sum of the monthly contributions of the members.

Miscellaneous revenues are the same as in the case of the private railway pension funds; namely, net proceeds from unclaimed baggage and freight, penalties collected, income from rentals for advertising and newspaper and bookselling privileges on railway stations, unclaimed payments due by the fund, contributions, and accidental revenues. Direct revenues of the fund consist of interest and profits. And finally at the time of establishment of the fund, or of acquisition of private railways, the fine funds and other funds and sums are added to the general pension fund.

The distribution of the various revenues is somewhat simpler than in the case of the private railway pension funds. The obligatory contributions of the members are credited to their individual accounts. The miscellaneous revenues (except the benevolent contributions, when the object is designated) and the fine and other funds transferred at the beginning shall constitute a special fund for payment of benefits and pensions to children and orphans of members and pensioners. From the interest on investments owned by the pension fund, the various funds are credited with 4 per cent per annum, and the remainder, if any, is transferred to a surplus fund. The monthly subsidies of the treasury are used, first, to cover any existing deficits; then, to swell the children and orphans' fund until it is brought to the full computed value of its obligations; of the remainder, amounts equal to one-half of the monthly contributions of the married male members are credited to personal accounts of the wives; what is left after that is distributed among the accounts of the members proportionately to their monthly contributions.

The surplus formed as indicated above is used to meet deficits and certain other payments which will be mentioned later; when it reaches 10 per cent of the computed value of all obligations the revenues due to the surplus are diverted into other channels; when the surplus falls below that level it again claims these revenues. All the amounts of the pension fund must be invested in government bonds, government guaranteed securities, or other specified securities.

Benefits paid by the fund may be either pensions or lump sums; and they may be paid only at the time of leaving the fund. Two classes of pensions are recognized, ordinary and increased. Ordinary pensions are paid at the time of separation from service after

at least 15 years of service, or at the end of membership in the fund and after at least 10 years of service, when it is paid as an addition to the salary.

The increased pensions are granted in cases of full disability because of a grave and incurable disease, after at least fifteen years of service and membership in the fund.

The amount of the pension depends upon the age of the pensioner and the amount of the accumulations credited to him, and is obtained by multiplying the sum of accumulation by a variable factor depending upon age, according to a table attached to the constitution, the factor being greater in case of the increased pension than that of the ordinary pension. The accumulated credits are computed each year for each and every member, one important provision being that the rate of interest varies with the age of the employee and his length of service, the minimum being 4 per cent. On the whole this rate of interest increases with the age of the employee at the beginning of service and also with the length of service, until it reaches the tenth year, when it very suddenly decreases, and again slowly increases during the further years of service. The computation of this interest is based upon many factors, such as mortality, chances of disability, and the relations between the normal and increased pensions.

The object of these complicated computations is that the increased pension due for complete disability at the end of 10 years of service be equal to 60 per cent of the full normal pension after 30 years of service, or at the age of 60; at the end of 11 years of service the increased disability pension must be equal to 62 per cent of the full normal pension, and increasing by 2 per cent for each additional year of service, become equal to the normal pension at the time when such pension is normally due (that is, either after 30 years of service or when reaching the age of 60). In any case the pension after 15 years of service must not be over 50 per cent of the amount of the annual salary or wages from which the 6 per cent deductions were made during the year preceding the granting of the pension; after 20 years it must not be over 75 per cent, and after 25 years not greater than this amount of wages. When the accumulated credits exceed the capitalized value of the pension the difference is paid over at the time when the pension is granted.

The conditions of discontinuance of the pensions are the same as for the funds of the private railways, namely, death of the pensioner, loss of civil rights, recovery from the disease for which the pension was granted, entrance into a monastery, or unexplained absence.

Upon the death (or legal death) of an employee who had been a member of the fund for five years, or was a pensioner of the fund,

the widow is entitled to a pension. The amount of this pension is computed by multiplying the amount accumulated to the credit of the widow by a coefficient depending upon the ages of both husband and wife at the time of granting the pension, which coefficient is shown in a separate table. The amount of accumulated widows' credits is computed annually, by adding to the credits of the last year (derived from the treasury's monthly contributions) the sum of accumulated credits of all preceding years with "interest;" this interest, like in the parallel case of the members' credits, is in reality an arbitrary coefficient of growth depending for the first five years of membership upon the age of the wife, and for the following years upon the ages of both husband and wife, and is shown in two elaborate tables.

If the employee marries while in service an amount equal to one-half the sum of his obligatory monthly deductions from pay, without interest, is credited to his wife. The total pension of the widow must not exceed two-thirds of the husband's pension. When the accumulations reach this level further credits to her name are discontinued. The widow's pension is paid until death, remarriage, entrance into a convent, or return of the husband from unexplained absence.

When the parent receives the so-called increased pension for complete invalidity, the children from a marriage consummated before the pension began are also entitled to pensions of the following amounts: One child receives 3 per cent of the average earnings of the disabled parent, after 10 years of service, and 0.1 per cent for each additional year of service, with a maximum of 5 per cent after 30 years of service. When two children are living they receive together $1\frac{3}{4}$ times as much as one child, three children $2\frac{1}{4}$ as much, four children $2\frac{3}{4}$ times as much, five children 3 times as much, six children $3\frac{1}{4}$ times as much, and seven or nine children $3\frac{1}{2}$ times as much. In any case each child's pension must not be over 100 rubles (\$51.50) per annum.

In case of the death (or legal death) of a pensioner or of one who has been a member of the fund for 10 years, one child receives 5 per cent of the average earnings for 10 years of service, and an additional $\frac{1}{2}$ of 1 per cent for each additional year, with a maximum of 15 per cent after 30 years of service. When more than one child remains the same proportions are observed as in the case of an invalid parent. The maximum pension for each child must not exceed 200 rubles (\$103), and for all children, 40 per cent of the average earnings. When both parents are dead the pensions to children are increased by 50 per cent. Children of a female employee, when the father is alive, may receive pensions only in case the father is totally disabled and when he does not receive any

benefits from the pension fund. In addition children are entitled to receive the pension of a widowed mother in case of remarriage or entrance into a convent.

The children's pensions are paid until the age of 18 (except where they are attending secondary schools, when the pension may be extended until the age of 21), marriage before that age, death, unexplained absence, loss of civil rights, recovery of parent from disease for which pension was granted, or return of parent from unexplained absence. When the children receive free education and board at government or public expense the pension is discontinued; when they receive a scholarship the pension is diminished by the value of such scholarship. In either case, however, the payments withheld are paid out to them at graduation with interest at 4 per cent.

While the usual method of payment of benefits is by pensions, yet under certain circumstances the payment of the capitalized value of the pension is permitted; namely, the entire pension when it does not exceed 25 per cent of the sum from which the monthly deductions were made during the year preceding the granting of the pension; or when the pension exceeds 50 per cent of this amount the capitalized value of this excess (but not over 25 per cent) may thus be paid. When such lump-sum payments are made 5 per cent of the amount is returned for the surplus fund. Capitalization is not permitted for pensions of persons remaining in the employ of the railways, for children's pensions, or for widows' pensions, except in cases of remarriage when there are no children entitled to pensions; in that case she may receive the capitalized value of a pension which would be due to her.

It was shown above that all pensions depended upon a certain length of service. If separation from service takes place before these limits have been reached (10 years in case of invalidity and 15 years in other cases), the rights of the members to their savings are not lost, but lump-sum payments take the place of pensions. These lump-sum payments consist of the accumulations to the credit of the employee, and his wife, if she be still alive. When separation takes place before 10 years of service are completed the payments consist of the contributions of the members without interest. After 10 years 25 per cent, after 11 years 40 per cent, after 12 years 55 per cent, after 13 years 70 per cent, and after 14 years 85 per cent of the interests, the treasury contributions, and profits credited to the accounts are added. These lump-sum benefits are the only benefits for persons entering the fund at the age of over 50 years. They receive all the sums credited to them, with 4 per cent compound interest, when they reach 60 years of age. In case of death

before reaching the age of 60 years the accumulated credits are paid out to their legal heirs.

In addition to the old age, invalidity, and death insurance, which are the proper functions of the fund, it is also made the financial agent for certain accident pensions. If the member is granted such accident pension from any source at the time of his separation from service, this pension must be paid by this fund, but simultaneously, the capitalized value of such pension (minus the capitalized value of any pension or lump sum to which the injured person is entitled under the law) is paid over to the pension fund. This rule applies also to pensions to survivors of an employee killed in an accident. When, however, the pension for the injury is smaller than that to which they would be entitled from the pension fund, the latter greater pension is paid.

Since the various amounts of pensions all depend upon the length of service, the methods and rules of computing these are important, especially with regard to noncontinuous service. These rules are quite complicated, but their general intent is that in case of interrupted service the length of service of the preceding periods may be counted in, provided the employee is in good health and makes good the financial obligations which he would have to meet if his services were not interrupted. On the other hand, the funds reassume those obligations toward the member, which might have been canceled by his premature separation from service. The same principles apply to the previous years of service for a private railroad. When a railway possessing a pension or savings and relief fund is acquired by the State the conditions of transfer of members must be specially provided for.

The administration of the fund is in charge of the state railway office of the Ministry of Ways of Communication. The following institutions were established: The general committee for the fund, with a central office attached; special committees for the individual railway systems, with local offices attached.

The general committee consists of a chairman and four members appointed by the minister of ways of communication. The number of the members of the local committees is determined by the central railroad office in accordance with the number of employees, but must not be under six. One-third of the membership is appointed by this office, and the others are elected by the membership of the fund. The director of the road is the chairman of the local committee. A special local committee is also provided for the employees of the central state railways office. Both the appointive and elective members of all committees must be members of the fund, receiving a salary of not less than 1,000 rubles (\$515) per annum. All the mem-

bers of the committee serve without remuneration. The local committees keep the accounts of the members within their jurisdiction, supervise the regular payments of all dues and incomes, and grant pensions and subsidies, while the general committee controls the funds, their accounting and investment, supervises the decisions of the local committees, and makes necessary changes, prepares the statistical and other reports, keeps the accounts of the pensioners, hears complaints and appeals from the decisions of the local committees, examines their accounts, etc. The decisions of the general committee may be appealed to the minister of ways of communication. The entire expense of the administration of the pension fund is met by the state treasury.

STATE RAILROAD EMPLOYEES' OLD-AGE PENSION FUND LAW OF 1903.

On the same day in which the fundamental Russian workmen's accident compensation act was approved, June 2 (15), 1903, a new law was promulgated for the old-age and invalidism pension fund of the employees of the Russian state railways, to go into effect January 1, 1904. Nearly nine years had elapsed since the organization of the fund, and the reports of the financial operations of the fund, coupled with severe losses from the depreciation of securities in which the assets were invested, showed a condition which was not altogether satisfactory and necessitated the revision of the regulations, mainly for the financial organization of the fund. The new law is extremely complicated, containing detailed regulations as to the organization of the numerous accounts and funds into which the pension fund is divided. It is sufficient here to point out the main changes as compared with the older law.

The rules in regard to membership were left practically unchanged. The same is true of the sources of revenue of the fund, except that a few minor sources were added to the long list of miscellaneous revenues, constituting an indirect subsidy from the State. These additional sources of revenue are: Salaries unclaimed by employees of the state railways for a period of ten years, the proceeds from the sale of grain sweepings from station platforms and warehouses, and the income from buffet and restaurant privileges. As would appear from the statistical data in a subsequent section, only the last mentioned amounts to a considerable sum.

The distribution of the revenues among the various accounts has been somewhat changed by the establishment of the state treasury subsidy fund in addition to the members' personal accounts, the children and orphans' fund, and the surplus. The regular contributions of the treasury, which are equal to one-half the members' contributions, go to this fund, and it is used to cover deficits in other accounts, to increase the pensions of persons leaving the service

because of invalidism, and to pay the pensions of widows of members with less than ten years' membership; the remainder is to be distributed among the members who have been over ten years in the fund and among their wives.

The most important financial measure consisted in granting to the pension fund a subsidy from the state treasury amounting to 10,000,000 rubles (\$5,150,000), to be paid in annual installments of 450,000 rubles (\$231,750), while the remainder is entered in the assets of the fund as a debt of the state treasury bearing 4 per cent interest. The distribution of this subsidy among the various funds was left to the minister of ways of communication, the minister of finance, and the comptroller of the treasury, the law demanding that part of it go into the personal accounts of members and part into the state treasury subsidy fund. Through this measure the pension accounts of the entire membership were materially improved.

The rules in regard to the payment of pensions and benefits have been considerably changed, but as they are very complicated no attempt is made to give here a detailed analysis.

In brief, the members are entitled to normal pensions, increased pensions, or lump-sum benefits, which are paid only at the time of leaving the fund, though not necessarily the service. Normal pensions are paid after at least 15 years of membership and increased pensions in case of complete disability after at least 10 years of service, and these pensions are computed according to special tables based upon mortality and disability tables and the personal accumulated accounts. In no case must the pension exceed the salary during the last year of service, and any excess is capitalized. These pensions are paid until death, and in case of the increased pensions until recovery, when the normal pension is substituted. Persons discontinuing membership in the fund before having acquired a right to a pension receive the accrued values of their accounts and also those of their wives. But if the employee is forced thus to leave the service and the fund because of complete disability, he receives in addition to his accumulated account an additional bonus from the state treasury subsidy fund, equal to one-half the average monthly salary during membership for each year in the service. This is a new provision for the benefit of the membership, introduced by the law of 1903.

Widows' pensions are granted to widows of members dying after 10 years of membership, widows of pensioners, and of such employees as have taken out capitalized values of their pensions but have left the accounts of their wives in the fund. The value of their wives' accumulations and that of their pensions are computed according to special tables, depending upon the ages of husband and wife, and also on mortality of railroad employees' wives.

If a member of the fund marries after 10 years of membership his wife is immediately credited from the treasury subsidy fund with an amount equal to that which would have accumulated to her account if she had been married from the beginning of her membership.

The widow's pension must not exceed two-thirds of the maximum limit of the member's pension, and if her account exceeds the capitalized value of that pension the difference is paid out to her in a lump sum. The widow's pension is paid until death or remarriage. Any voluntary contributions which had been made by the husband to her account are paid out to her at the time of remarriage.

If a member dies before completing ten years of membership his widow receives half of her husband's account (the entire account if no children survive), any voluntary contributions which may have been made in her favor, and a bonus equal to the one which he would have received were he forced to leave the service because of complete disability (one-half the average monthly salary for each year of service).

No pension or benefit rights are acquired by the wife who has married the employee after he was granted a pension.

Children's pensions have also been considerably modified. When the parent receives the increased pension for complete invalidity each child is entitled during the life of that parent to one-twelfth of the parent's pension, but the total for all children must not exceed one-fourth.

After death of a male employee who was a member of the fund for less than 10 years the children receive lump-sum benefits equal to one-sixth of the average monthly salary of the parent for each year of service. In addition to this they receive half the account of the parent, and where no widow survives the entire account of the father.

If the deceased parent held membership in the fund for 10 years or more, each child receives one-sixth of such pension as the parent would be entitled to if leaving service because of complete disability; if the deceased parent was receiving an increased pension at the time of death, then one-sixth of such pension; the total for all children in either case must not exceed one-half of such pension. Children of deceased female employees, with father living, receive a pension only in case of the father's disability. Orphans' pensions are 50 per cent greater than when one parent survives. If both parents were in the state railway service children receive their pensions at death of the father, even if the mother remains in the railway service. In case of the death of both parents the orphans receive the larger of the two pensions to which they were entitled. At the remarriage of the widow the children receive her share, but the combined total must not exceed the limit established for orphans.

The general conditions governing the payment of pensions to children remain the same as they were established in the law of 1894. The same is true with regard to the rules concerning capitalization of pensions, the payment of pension for injuries, the methods of computing the length of service, the adjustment of accounts in cases of reestablishment in service after resignation, methods of business procedure, and methods of administration of the fund.

The redistribution of the 10,000,000 rubles (\$5,150,000) granted by the treasury was effected in accordance with special regulations published December 24, 1903 (January 6, 1904), and February 4 (17), 1904. A special fund of 200,000 rubles (\$103,000) was also created for granting benefits to persons forced to leave the railway service on account of temporary sickness requiring treatment.

FINANCIAL AND STATISTICAL DATA.

The publication of the pension statistical data in 1890 made possible the organization of funds on private railroads under the law of 1888. At the same time the liquidation of the funds not conforming to the demands of the law was undertaken by the Ministry of Ways of Communication according to an imperial order promulgated on the same day on which the railroad pension law was approved.

Fourteen pension funds, established under the old principles, existed at the time. An actuarial examination of these fourteen funds showed that only three, organized with some regard to actuarial science, were found solvent, and the other eleven were financially unsound. In the case of an important railroad fund, for instance, the assets on January 1, 1893, were 1,700,000 rubles (\$875,500), while the obligations, computed on an actuarial basis, amounted to 5,500,000 rubles (\$2,832,500). In the fund of another railroad the assets and obligations were 1,050,000 rubles (\$540,750) and 4,823,000 rubles (\$2,483,845), respectively.

The liquidation in almost all cases was accomplished by means of an organization of a new fund in conformance with the law and tables of 1888; and several railroads contributed large amounts to the existing assets of the pension funds to straighten out their finances. Seven of these railroads organized pension funds, while four preferred the organization of savings-benefit funds.

Altogether 16 pension funds and 7 savings-benefit funds were organized in conformity with the law of 1888. Subsequently several of the railroads which had organized these funds were purchased by the State. By an order of the Government, approved May 26 (June 7), 1895, in case of five railroads the pension funds were joined with the State Railway Employees' Pension Fund, while the pension fund of the southwestern railroads and the savings-benefit funds of the

Nikolai Railroad (St. Petersburg-Moscow Railroad), the St. Petersburg-Warsaw Railroad, the Moscow-Nizhniï-Novgorod Railroad, and the Moscow-Kursk Railroad were left undisturbed provisionally for 10 years. In an official publication of the Ministry of Ways of Communication (^a) for the year 1900 the statement is made that in the beginning of 1905 there would be only one central pension fund for the employees of all state railroads, but the reports for 1906 and 1907 still show the individual existence of the one pension fund and four savings-benefit funds of the five railways mentioned.

A statistical study of the activity of all the railroad funds presents considerable difficulties because of the lack of necessary statistical information. The publication of the annual statistical reports as to the membership of all funds was recently suspended by the ministry because of a contemplated change in the organization of this statistical service, and the latest report published refers to January 1, 1903. For the financial operations of all these funds reports are available only for 1904 and 1905; and the latest available information for the mileage and total number of employees refers to the end of 1905. It is possible, therefore, to give only a more or less complete statement for all railroad pension funds for 1904 and 1905, while for the State Railway Employees' Pension Fund (which does not include all the state railways, as explained above), a more complete statistical presentation is possible.

MILEAGE AND EMPLOYEES OF RAILROADS AND MEMBERSHIP AND ASSETS OF BENEFIT FUNDS FOR SPECIFIED YEARS, BY CLASS OF FUND.

[Source: Svodnye balansy pensionnykh i sberegatel'no-vspomogatel'nykh Kass dielstvuiushchikh na russkikh zheleznykh dorogakh, 1905 and 1906. Statistika sluzhashchikh na zheleznykh dorogakh, uchastnikov pensionnykh i sberegatel'novspomogatel'nykh Kass. 1903. Statisticheski Sbornik Ministerstva Putei Soobshchenia. Vypusk 89. Zheleznyia dorogi v 1905.]

Class of fund.	Mileage, 1905.	Number of em- ployees, 1905.	Member- ship, 1903.	Assets.	
				1905.	1906.
State railway employees.....	18,650	392,788	151,795	\$32,115,249	\$35,672,960
Independent pension funds:					
State railways.....	4,597	85,008	45,969	12,767,752	13,737,638
Private railways.....	11,108	193,267	84,732	18,981,718	20,545,130
Total.....	15,705	278,275	130,701	31,749,470	34,282,768
Total pension funds.....	34,355	671,063	282,496	63,864,719	69,955,728
Savings benefit funds:					
State railways.....	2,360	77,861	47,456	11,420,274	12,131,595
Private railways.....	908	5,524	944	475,485	533,819
Total savings-benefit funds.....	3,268	83,385	48,400	11,895,759	12,665,414
Grand total.....	37,623	754,448	330,896	75,760,478	82,621,142

^a Ministère des Voies de Communication. Administration des Chemins de Fer de l'Empire. Recueil de la Direction du Compte des Pensions. St. Petersburg, 1900, p. 13.

As the data in the table refer to different years, it is not possible to make exact comparisons; but it appears that (with the exception of a few small local, mostly narrow-gauge roads) all railroads are provided with either pension or savings-benefit funds, and that about nine-tenths of the railroads, judging by mileage or by the number of employees, have pension funds, and only a few railroads (three large state-owned railroad systems and a few very small privately owned railroads) still have savings-benefit funds. Gradually the savings funds of these three state-railroad systems will be absorbed into the central State Railway Employees' Pension Fund, and all railroads will eventually be provided for in a uniform way.

A comparison of the membership of all the funds with the total number of employees shows that less than one-half of the employees hold such membership; but the class of the employees must be taken into consideration.

PERMANENT AND TEMPORARY EMPLOYEES AND DAY LABORERS ON RUSSIAN RAILROADS IN 1905.

[Source: Statisticheski Sbornik Ministerstva Putei Soobshchenia. Vypusk 89. Zheleznyia dorogi v 1905.]

Class.	Number.	Per cent.
Permanent employees.....	404,593	53.4
Temporary employees.....	43,231	5.7
Day laborers.....	309,788	40.9
Total.....	757,612	100.0

The day laborers are mainly unskilled laborers employed in construction work, and they do not come within the scope of the pension system. The total number of permanent employees in 1905 was 404,593; in 1904 the number was 386,557; and in 1903 it was 368,266. The figures for 1903 and 1904 did not include about 5,000 permanent employees of the so-called "local" railways, which are reported separately from the other railroads. The total membership of the funds in 1903 was 330,896.

For the statistics of membership of all the funds data are available for 1898 to 1903. In the table following the membership is shown by occupations. It has grown rapidly from 242,819 on January 1, 1899, to 330,896 on January 1, 1903. Among the occupations are included office employees, track walkers, telegraphers, trainmen, and ordinary workmen and watchmen.

MEMBERSHIP OF ALL RUSSIAN RAILROAD PENSION AND SAVINGS-BENEFIT FUNDS,
BY OCCUPATIONS, 1899 TO 1903.

[Source: Ministerstvo Putei Soobshchenia. Upravlenie zheleznykh dorog. Statistika sluzhashchikh na zheleznykh dorogakh, uchastnikov pensionnykh i sberegatelno vspomogatelykh kass 1899-1903.]

Occupation.	Membership for year ending January 1—				
	1899.	1900.	1901.	1902.	1903.
Office employees:					
General administration.....	14,940	16,239	17,611	20,919	22,558
Other offices:					
Higher officials.....	2,002	2,212	2,321	2,477	2,512
Other office employees.....	9,272	10,299	10,845	11,769	12,567
Other nontechnical employees.....	32,707	35,961	38,294	41,815	44,864
Care of roads:					
Chiefs of sections.....	3,305	3,518	3,670	4,006	3,850
Track walkers.....	62,460	65,086	67,910	72,927	77,334
Traffic and telegraph:					
Station masters.....	8,922	9,793	10,866	11,905	11,782
Telegraphers and signalmen.....	11,627	12,769	13,695	15,385	17,147
Couplers.....	5,102	5,623	6,127	6,773	6,534
Switchmen.....	21,210	23,272	25,437	28,578	31,070
Trainmen.....	22,773	25,285	28,329	30,627	31,717
Engineers and firemen.....	18,536	20,560	22,742	24,983	26,338
Oilmen.....	5,424	5,980	6,486	7,526	7,763
Workmen and watchmen.....	24,539	26,408	27,575	31,086	34,890
Total.....	242,819	263,005	281,908	310,776	330,896

The next table shows the membership, by sex and marital condition, and also the number of children. As the widows and orphans are also protected by these pensions and, in a lesser degree, by the savings-benefit funds, an effort has been made in this table to compute the total number of persons protected by these funds, by adding to the membership the total number of wives and children. The husbands of married female employees are not included, since they are provided for only in exceptional cases. Within four years the total number of persons so protected has increased from less than three-quarters of a million to nearly a million persons:

NUMBER OF PERSONS PROTECTED BY THE PENSION AND SAVINGS-BENEFIT FUNDS OF RUSSIAN RAILROADS, BY SEX AND MARITAL CONDITION, 1899 TO 1903.

[Source: Ministerstvo Putei Soobshchenia. Upravlenie zheleznykh dorog. Statistika sluzhashchikh na zheleznykh dorogakh, uchastnikov pensionnykh i sberegatelno vspomogatelykh kass 1899-1903.]

Sex and marital condition.	Persons protected on December 31—				
	1899.	1900.	1901.	1902.	1903.
MALE MEMBERS.					
Single.....	49,210	55,308	61,726	66,665	71,867
Married.....	164,646	176,184	191,359	207,158	224,274
With children.....	124,853	133,013	143,508	155,339	167,777
Without children.....	39,793	43,171	47,851	51,819	56,497
Widowed.....	3,942	4,219	4,486	4,747	5,096
With children.....	2,295	2,463	2,624	2,747	2,953
Without children.....	1,647	1,756	1,862	2,000	2,143
Total male members.....	217,798	235,711	257,571	278,576	301,237
With children.....	127,148	135,476	146,132	158,086	170,730
Without children.....	90,650	100,235	111,439	120,484	130,507

NUMBER OF PERSONS PROTECTED BY THE PENSION AND SAVINGS-BENEFIT FUNDS OF RUSSIAN RAILROADS, BY SEX AND MARITAL CONDITION, 1899 TO 1903—Concluded.

Sex and marital condition.	Persons protected on December 31—				
	1899.	1900.	1901.	1902.	1903.
FEMALE MEMBERS.					
Single.....	3,820	4,227	4,689	5,227	5,754
Married.....	18,212	18,906	19,835	21,025	22,187
With children.....	14,665	15,176	16,048	16,903	17,864
Without children.....	3,547	3,730	3,837	4,122	4,323
Widowed.....	1,366	1,468	1,523	1,596	1,718
With children.....	924	963	981	1,019	1,089
Without children.....	442	505	542	577	629
Total female members.....	23,398	24,601	26,097	27,848	29,659
With children.....	15,589	16,139	17,029	17,922	18,953
Without children.....	7,809	8,462	9,068	9,926	10,706
Total members (a).....	241,196	260,312	283,668	306,418	330,896
Members' wives.....	164,646	176,184	191,359	207,158	224,274
Children.....	335,296	356,794	380,075	406,524	432,962
Total persons protected by the pension system (b)	741,138	793,290	855,102	920,100	988,132

^a These totals do not agree with the totals of the preceding table; the figures are given as shown in the original reports.

^b The husbands of female employees, who are entitled to pensions only under exceptional circumstances, are not included.

The movement of membership is shown by the following table, which gives the number of admissions and the loss of membership by death and all other causes. Changes in the membership are found to be very great, amounting to over 20 per cent in some years. Most of these employees who leave the service have been in the service a short time only. In 1902, of 50,621 separations 27,233, or 54 per cent, took place before the expiration of a full year of service, and 16,136, or 32 per cent, were in the service over one year but less than five years; thus a total of 86 per cent were less than five years in service.

As persons leaving the service so soon are in the majority of cases entitled only to much-reduced amounts of benefits or repayments of deposits, the permanent employees correspondingly profit by such shifting in the personnel.

CHANGES IN MEMBERSHIP OF THE RAILROAD PENSION AND SAVINGS-BENEFIT FUNDS, 1899 TO 1902.

[Source: Ministerstvo Putei Soobschenia. Upravlenie zheleznykh dorog. Statistika sluzhashchikh na zheleznykh dorogakh, uchastnikov pensionnykh i sberegatelno vspomogatelnykh kass 1899-1902.]

Year.	Member-ship at begin-ning of year.	New members ad-mitted.	Loss of membership.			-Increase during year.	Total at end of year. (a)
			By death.	Other reasons.	Total.		
1899.....	242,819	68,119	1,791	48,835	50,626	17,493	260,312
1900.....	263,005	73,331	1,964	52,956	54,920	18,411	281,416
1901.....	281,905	77,522	2,076	50,933	53,009	24,513	306,418
1902.....	310,776	70,741	1,979	48,642	50,621	20,120	330,896

^a These numbers do not agree with the membership at the beginning of the year following; the figures are given as shown in the original report.

The causes of separation from the service are shown in the following table. Nearly 70 per cent are found to have resigned voluntarily, while about 16 to 18 per cent were removed by the administration; the cases of death by accident and disability by accident are very few; cases of death through other causes and disability due to illness are more numerous, but together they do not much exceed 8 per cent; as only these cases give rise to exceptional benefits, the permanent employees derive considerable profits from the frequent changes in the body of employees.

CAUSES OF SEPARATION FROM SERVICE OF RAILROADS, 1899 TO 1902.

[Source: Ministerstvo Putei Soobshchenia Upravlenie zheleznykh dorog. Statistika sluzhashchikh na zheleznykh dorogakh, uchastnikov pensionnykh i sberegatelno vspomogatelnykh kass 1899-1902.]

Year.	Death from—		Disability or disease caused by—		Position abolished.	Administrative order.	Superannuation.	Entered military service.	Transferred to day labor.	Voluntarily resigned.	Cause unknown.	Transferred to other roads.	Total.
	Accident.	Other causes.	Accident.	Other causes.									
1899...	147	1,644	109	2,620	552	8,809	281	599	709	34,907	71	178	50,626
1900...	185	1,779	65	2,492	575	9,488	349	920	484	38,305	42	236	54,920
1901...	143	1,933	74	2,341	1,011	8,917	449	592	650	36,493	86	320	53,009
1902...	96	1,883	45	2,317	587	8,462	497	610	721	35,219	9	175	50,621

The combined assets of the railroad pension and savings-benefit funds are considerable, exceeding \$82,400,000 on January 1, 1906, while the annual growth was over \$6,695,000. Nearly one-half (43.2 per cent) of these assets on January 1, 1906, belonged to the State Railway Employees Pension Fund, 16.6 per cent to the independent pension funds of state-owned railways, and 14.7 per cent to the savings-benefit funds of state-owned railways, so that 74.5 per cent of the assets are under direct state control. The bulk of these assets is invested in various securities. Thus on January 1, 1906, the amount so invested equaled \$71,090,316; of this \$9,383,314 or 13.2 per cent was placed in government bonds, \$6,356,042 or 8.9 per cent in state-guaranteed bonds of private railroads, and \$55,344,651 or 77.9 per cent in bonds of mortgage banks, while only \$6,309 were invested in railroad stocks. The only other item of importance is the debt of 10,000,000 rubles (\$5,150,000) of the state treasury to the State Railway Employees' Pension Fund, which, with the deduction of payments made and with accruing interest, amounted, on January 1, 1906, to 10,438,000 rubles (\$5,375,570).

The table following is a summary of the liabilities of the funds. The most important is the fund of individual members' accounts. These are made up principally of the members' personal contributions, interest on these contributions, and a few other minor sources. Next in importance is the wives' account fund. This is also made up of individual accounts, consisting principally of the regular contributions

of the state or railroad company and voluntary contributions by the members for the benefit of their wives' accounts. These accounts are used for paying pensions to widows of members dying in service.

Closely related to this is the third fund in the list—that of the pensioners wives. This fund is formed by transfer of the accounts of the wives from the preceding fund at the time the employee is pensioned, and it is designated to pay pensions to widows of the pensioners. The next three accounts represent the capitalized values of pensions granted to members, to widows, and to orphans; the necessary amounts being transferred from the respective funds.

The orphans' fund is intended for payment of pensions to orphans in case of death of their parents. The amount converted to this fund must be equal to the probable obligations, and is computed from the great volume of actuarial data in regard to the ages of the members and their wives and the number and ages of children. A great many of the miscellaneous revenues are diverted into this fund—fines and penalties, unclaimed salaries, the revenue from restaurant privileges (on the state fund only), and the additional necessary amount from the profits of the fund and even the railroad company's contributions.

The reserve is formed from the profits of the fund until it reaches a definite proportion (ranging from 5 to 10 per cent) to the standing obligations to the members, wives, children, pensioners, widows, and orphans.

The fund of unclaimed money due to ex-members is kept separately, because when such money is not claimed within ten years it reverts to the orphans' fund. The remaining liabilities consist mainly of special accounts for special benefit purposes, or actual debts of the funds to one another, or other debts.

LIABILITIES OF THE PENSION FUNDS OF RAILROADS.

[Source: Ministerstvo Putel Soobshchenia. Upravlenie zheleznykh dorog. Upravlenie dielami Zheleznodorozhnavo Pensionnava Komiteta.—Svodnye Balansy Pensionnykh i Sberagatelno-vspomogatelnykh Kass, dieistvuiushchikh na russkikh zheleznykh dorogakh, 1905, 1906.]

Accounts.	January 1, 1905.				January 1, 1906.			
	Central state railway pension fund.	Independent funds of state-owned railroads.	Independent funds of private railroads.	Total.	Central state railway pension fund.	Independent funds of state-owned railroads.	Independent funds of private railroads.	Total.
Members.....	\$18,366,449	\$7,124,216	\$11,028,683	\$36,519,348	\$19,841,750	\$7,705,770	\$12,236,839	\$39,784,359
Members' wives	3,204,888	2,084,841	2,930,652	8,220,381	3,397,760	2,227,165	3,208,099	8,833,024
Members' wives reserve.....	125,978	158,754	143,698	428,430	132,259	175,246	148,923	456,428
Pensioners:								
Old age....	165,216	1,255,971	1,354,068	2,775,255	221,711	1,346,575	1,432,853	3,001,139
Widows....	118,480	900,190	680,149	1,698,819	147,704	959,535	726,795	1,834,034
Orphans....	70,448	250,914	339,012	660,374	84,746	261,617	352,646	699,009
Orphans' fund.	1,914,119	245,085	760,434	2,919,638	2,174,848	237,735	777,512	3,190,095
Reserve.....	1,844,885	405,490	770,364	3,020,739	2,343,585	441,756	516,185	3,301,526
Unclaimed.....	360,188	89,441	273,125	722,754	636,728	135,166	437,316	1,209,210
All other.....	5,944,598	252,849	701,534	6,898,981	6,691,869	247,073	707,962	7,646,904
Total....	32,115,249	12,767,751	18,981,719	63,864,719	35,672,960	13,737,638	20,545,130	69,955,728

The organization of the savings-benefit funds is very much simpler. The savings fund is formed by all the personal contributions of the members, the interest on investments of this fund, and a certain share of the profits; from this fund the individual accounts are paid to the members at the time of separation from the service and in case of death to the legal heirs.

The general savings fund also consists of individual accounts, formed from the railroad companies' monthly contributions and such minor sources of revenue as the sale of unclaimed baggage and freight, also the interest on this fund, a portion of the general profits of the funds, etc.

Payments from this fund are made only to the members of the fund at the time of separation from the service, or to their widows or orphans, after a certain length of service.

In addition there is a special benefit fund, to which are diverted the fines and penalties, liabilities of the fund unclaimed for ten years, the advertising and newspaper-selling privileges, interest, and a portion of the profits of the general fund. Special benefits are paid from this in accordance with the constitution of each savings-benefit fund.

LIABILITIES OF THE SAVINGS-BENEFIT FUNDS OF RAILROADS, 1905 AND 1906.

[Source: Ministerstvo Putel Soobshchenia. Upravlenie zheleznykh dorog. Upravlenie dielami Zheleznodorozhnavo Komiteta.—Svodnye Balansy Pensionnykh i Sberagatelno-vspomogatelnykh Kass, dielstvuishchikh na russkikh zheleznykh dorogakh, 1905, 1906.]

Accounts.	1905.			1906.		
	State rail-ways.	Private railroads.	Total.	State rail-ways.	Private railroads.	Total.
Savings fund.....	\$6, 613, 236	\$271, 707	\$6, 884, 943	\$6, 867, 859	\$310, 454	\$7, 178, 313
General benefit fund.....	3, 186, 038	163, 658	3, 349, 696	3, 284, 682	179, 997	3, 464, 679
Special benefit fund.....	866, 743	33, 114	899, 857	869, 647	35, 444	905, 091
All other accounts.....	754, 257	7, 006	761, 263	1, 109, 407	7, 925	1, 117, 332
Total.....	11, 420, 274	475, 485	11, 895, 759	12, 131, 595	533, 820	12, 665, 415

The next table contains a summary statement of the income and expenditures of the pension funds and savings-benefit funds for 1904 and 1905. The various payments of the members are the most important sources of income. In 1905 the proportions were unusual on account of the 10,000,000 rubles (\$5,150,000) contributed from the state treasury to the state railway fund; thus in 1905 the contributions of the members was only 25 per cent of the total revenues of pension funds, while in 1904 members contributed 41 per cent.

The proportions in 1904 for the pension funds and the savings-benefit funds were as follows: 41.2 per cent from members, 29.6 per cent from employers, 29.2 per cent from financial operations for the pension funds, and 33.6 per cent, 40.5 per cent, and 25.9 per cent, respectively, for savings-benefit funds.

The savings-benefit funds have no entrance fees, which reduces materially the contributions of the members.

Many of the special sources of revenue of the funds are comparatively trivial. The income from advertising privileges and sale of

unclaimed baggage is the most important of those specially indicated. The state railway fund and a few independent funds have additional sources of income, such as the restaurant privilege and special subsidies which will be specially mentioned in a subsequent section. The activity of the funds may be gauged from the fact that the expenditure for 1904 was \$5,470,913, or, deducting the loss from depreciation of securities, \$4,823,550. Only a small portion of this goes for expenses of administration, less than 4 per cent. As a matter of fact, the expenses of administration of the state railway fund are assumed by the treasury, and those of one large private road (Warsaw-Vienna Railroad) by the railroad company; and eliminating these, the cost of administration was \$174,427 out of total expenditures of \$2,896,357, or 6 per cent. A further analysis of the expenditures shows that the greatest share of payments made is in the form of lump sums to persons who have not yet earned a pension. This is explained in part by the fact that the fund has existed only 16 years (1888 to 1905) and the number of persons who have earned a pension is comparatively small.

INCOME AND EXPENDITURES OF PENSION FUNDS AND SAVINGS-BENEFIT FUNDS OF RAILROADS, 1904 AND 1905.

INCOME.

[Source: Ministerstvo Putel Soobshchenia. Upravlenie zheleznykh dorog. Upravlenie delami Zheleznodorozhnavo Pensionnava Komiteta-Svodnye Balansy Pensionnykh i Sberagatelno-vspomogatelnykh Kass, diestvuiushchikh na russkikh zheleznykh, dorogakh, 1905, 1906.]

Item.	1904.			1905.		
	Pension funds.	Savings-benefit funds.	Total.	Pension funds.	Savings-benefit funds.	Total.
Members' contributions:						
Monthly deductions.....	\$3,233,511	\$622,292	\$3,855,803	\$3,112,171	\$603,816	\$3,715,987
Entrance fees.....	307,329		307,329	310,868		310,868
Promotion deductions.....	480,576	57,438	538,014	400,546	39,364	439,910
Premium deductions.....	167,799	24,337	192,136	181,411	24,533	205,944
Voluntary contributions.....	20,903	4,931	25,834	21,627	2,961	24,588
Total.....	4,210,118	708,998	4,919,116	4,026,623	670,674	4,697,297
Railway contributions and other revenues:						
Annual contributions.....	1,592,005	313,138	1,905,143	1,536,746	303,008	1,839,754
Interest on loans.....	13,057	3,405	16,462	12,231	2,751	14,982
Fines and penalties.....	33,837	6,809	40,646	64,314	14,165	78,479
Advertising privileges and newspaper selling.....	45,485	20,325	65,810	46,240	20,841	67,081
Sale of unclaimed baggage and freight.....	50,287	5,722	56,009	30,915	3,248	34,163
Unclaimed wages.....	30,263	3,515	33,778	24,341	13,575	37,916
Unclaimed interest on railroad stocks and bonds.....	2,363		2,363	2,415	22,016	24,431
Contributions.....	1,574	30	1,604	3,074	651	3,725
Railway companies' payments for pensions to injured.....	109,651		109,651	109,858		109,858
Other revenues.....	1,149,854	500,119	1,649,973	7,576,440	192,870	7,769,310
Total.....	3,028,376	853,063	3,881,439	9,406,574	573,125	9,979,699
Revenues from financial operations:						
Interest on investments.....	2,966,866	539,937	3,506,803	2,727,257	495,207	3,222,464
All other financial operations.....	19,177	5,042	24,219	17,630	2,684	20,314
Total.....	2,986,043	544,979	3,531,022	2,744,887	497,891	3,242,778
Grand total.....	10,224,537	2,107,040	12,331,577	16,178,084	1,741,690	17,919,774

INCOME AND EXPENDITURES OF PENSION FUNDS AND SAVINGS-BENEFIT FUNDS
OF RAILROADS, 1904 AND 1905—Concluded.

EXPENDITURES.

Item.	1904.			1905.		
	Pension funds.	Savings-benefit funds.	Total.	Pension funds.	Savings-benefit funds.	Total.
Lump-sum payments to members and widows.....	\$1,864,727	\$842,496	\$2,707,223	\$2,374,810	\$591,665	\$2,966,475
Members' pensions and capitalized pensions.....	663,121	.....	663,121	923,223	.....	923,223
Widows' pensions and capitalized pensions.....	372,460	.....	372,460	327,043	.....	327,043
Orphans' benefits, pensions, and capitalized pensions.....	192,744	.....	192,744	167,792	.....	167,792
Old claims repaid.....	212,937	176,009	388,946	176,819	161,238	338,057
Expenses of administration.....	133,585	40,842	174,427	134,900	38,403	173,303
Other expenses.....	312,289	12,340	324,629	974,079	46,914	1,020,993
Total expenditures.....	3,751,863	1,071,687	4,823,550	5,078,666	838,220	5,916,886
Loss from depreciation of investments.....	381,663	265,700	647,363	1,412,934	102,188	1,515,122
Total expenditures and losses....	4,133,526	1,337,387	5,470,913	6,491,600	940,408	7,432,008

Data are available for the State Railway Employees' Pension Fund from the date of its organization in 1895 to January 1, 1907. The assets at the end of the first year of its operations were \$2,575,233, and after 13 years reached \$38,565,513. The increase is uniformly continuous, except that during 1904 the increase in the assets was \$7,377,676, due to the allowance by the state treasury of 10,000,000 rubles (\$5,150,000) during that year, in accordance with the rules of June 2 (15), 1903.

ASSETS OF THE STATE RAILWAY EMPLOYEES' PENSION FUND ON JANUARY 1, 1895,
AND 1899 TO 1907.

[Source: Ministerstvo Putei Soobshchenia. Upravlenie zheleznykh dorog. Sbornik upravleniya dielami pensionnoi kassy sluzhashchikh na kazionnykh zheleznykh dorogakh, 1897. Ministère des Voies de Communication. Administration des Chemins de fer de l'Empire. Recueil de la Direction du Comité des Pensions, 1900. Ministerstvo Putei Soobshchenia. Upravlenie zheleznykh dorog. Otechot pensionnoi kassy sluzhashchikh na kazionnykh zheleznykh dorogakh, 1900-1907.]

Account.	1895.	1899.	1900.	1901.	1902.
Members' account.....	\$1,693,460	\$6,355,943	\$7,745,459	\$9,237,102	\$11,087,370
Wives' account.....	254,841	1,427,873	1,740,350	2,090,350	2,507,827
Orphans' fund.....	527,737	1,012,741	1,132,119	1,274,419	1,417,828
Members' accrued pension account.....	.....	35,222	55,159	84,634	114,778
Widows' accrued pension account.....	.....	83,259	115,918	155,863	208,050
Reserve pension account of pensioners' wives.....	.....	21,070	32,669	45,980	74,082
Unclaimed accounts.....	51,443	167,971	177,955	193,165	222,496
Reserve.....	26,492	823,415	829,297	455,173	896,795
Creditors' account.....	.....	550,659	543,663	651,894	902,746
All other.....	21,260	.....	195,258	220,701	155,743
Total.....	2,575,233	10,478,153	12,567,847	14,409,282	17,587,715

Account.	1903.	1904.	1905.	1906.	1907.
Members' account.....	\$12,909,238	\$14,848,358	\$18,366,449	\$19,841,750	\$21,187,275
Wives' account.....	2,917,637	3,382,603	3,204,888	3,397,760	3,581,186
Orphans' fund.....	1,556,217	1,699,001	1,914,119	2,174,848	2,445,757
Members' accrued pension account.....	169,122	234,102	165,216	221,711	179,785
Widows' accrued pension account.....	266,368	350,531	118,480	147,704	136,816
Reserve pension account of pensioners' wives.....	98,893	148,520	125,978	132,259	115,630
Children and orphans' accrued pension account.....	.....	.....	70,448	84,746	97,638
Unclaimed accounts.....	259,716	322,651	360,188	636,728	641,317
Reserve.....	2,002,182	2,391,149	1,844,885	2,343,585	2,829,628
Treasury subsidy fund.....	.....	.....	3,780,461	3,966,682	4,160,258
Creditors' account.....	1,244,126	1,244,887	2,038,276	2,623,082	3,099,873
All other.....	158,933	115,772	125,861	96,105	90,848
Total.....	21,582,492	24,737,573	32,115,249	35,672,960	38,565,513

The reports of the State Railway Employees' Pension Fund do not show any complete statement of income and expenditure. The main sources of revenue and the main expenditures for the years 1900 to 1906 are shown in the table following. Of the secondary sources of revenue, that from renting restaurant privileges is the most important. That was added after the reorganization of the fund in 1903, so that the chief sources may be classified into three groups—the employees' contributions, the state subsidy, and the interest on investments. In addition to the state subsidy shown, must be mentioned the annual payment of 450,000 rubles (\$231,750) in gradual settlement of the assumed debt of 10,000,000 rubles (\$5,150,000), with interest thereon, while the income from interest on investments is considerably reduced by frequent losses due to depreciation of securities.

PRINCIPAL SOURCES OF INCOME AND CLASSES OF EXPENDITURES OF THE STATE RAILROAD EMPLOYEES' PENSION FUNDS, 1900 TO 1906.

[Source: Ministerstvo Putei Soobshchenia. Upravlenie zheleznnykh dorog. Sbornik upravleniia dielami pensionnoi kassy sluzhashchikh na kaziionnykh zheleznnykh dorogakh, 1897. Ministère des Voies de Communication. Administration des Chemins de fer de l'Empire. Recueil de la Direction du Comité des Pensions, 1900. Ministerstvo Putei Soobshchenia. Upravlenie zheleznnykh dorog. Otchet pensionnoi kassy sluzhashchikh na kaziionnykh zheleznnykh dorogakh, 1900-1906.]

INCOME.

Class.	1900.	1901.	1902.	1903.	1904.	1905.	1906.
Members' contributions:							
Monthly deductions (6 per cent).....	\$1,284,260	\$1,435,204	\$1,556,236	\$1,683,644	\$1,555,310	\$1,582,862	\$1,786,139
Administration fees.....	220,905	266,105	237,824	230,226	174,914	170,387	223,632
Promotions.....	191,403	191,507	209,607	206,875	221,819	220,174	227,476
Prize-money deductions.....	55,429	58,180	61,529	70,701	70,234	72,183	68,312
Voluntary payments.....	4,544	4,934	5,532	6,487	3,192	3,550	3,068
Total.....	1,756,541	1,955,930	2,070,728	2,197,933	2,025,469	2,049,156	2,308,627
State subsidy.....	642,130	792,167	857,818	880,329	777,655	976,573	1,040,446
Other revenues:							
Fines and penalties.....	59,644	51,454	35,901	33,671	27,483	16,888	6,188
Unclaimed baggage and freight.....	15,075	29,578	19,505	23,211	16,318	23,759	17,872
Advertising and newspaper selling privileges.....	13,529	15,097	14,309	20,002	20,946	22,231	23,597
Restaurant privileges.....					123,330	156,196	187,042
Unclaimed wages.....					941	14,115	14,501
Other revenues.....	11,967	273	2,065	1,473	2,128	1,311	3,097
Total.....	100,215	96,402	71,780	78,357	191,146	234,500	252,297
Interest on investments.....	537,952	659,788	803,714	972,097	1,133,820	1,267,324	1,422,717

EXPENDITURES.

Premiums repaid.....	\$581,124	\$664,978	\$631,566	\$747,054	\$801,302	\$740,221	\$1,063,720
Payments to wives of members discharged before pensions were earned.....	16,300	24,719	25,804	21,002	62,625	39,426	66,856
Members' pensions.....		37,897	45,527	71,693	556,735	306,174	442,315
Widows' pensions.....				9,057	150,740	149,032	203,138
Childrens' and orphans' pensions.....						33,473	47,353
Unclaimed accounts paid.....	51,457	61,483	61,235	96,767	107,108	143,792	341,563

The reports of the State Railway Employees' Pension Fund are very incomplete, but they show that the assets are accumulating rapidly. As the latest reports available are for 1906, when only thirteen years had elapsed since its organization, few regular pensions have been paid out, and it is difficult to determine as to its solvency or as to the amount of pensions. The reorganization of 1903 and the voting of a subsidy of 10,000,000 rubles (\$5,150,000) were caused by an actuarial investigation showing that the reserves did not come up to the actuarial obligations.

PENSION FUND OF THE LIQUOR MONOPOLY.

The transformation of the business of liquor rectifying and most of the wholesale and retail liquor business into a government monopoly created a large and growing army of government employees, partly industrial but mainly commercial. As an experiment the monopoly was first introduced in 1895 in a few provinces on the Volga. Through rapid extensions the monopoly in 1901 covered European Russia, in 1902 was extended to western Siberia, and in 1904 to eastern Siberia. On January 1, 1899, the monopoly employed over 36,000, and in 1904 over 62,000, persons. A pension fund for these workmen and commercial employees was established and opened January 1, 1900. This fund follows the general principles of all Russian pension funds. The members remain masters of their individual accounts, and may demand the return of their savings upon separation from the service, but pensions only after fifteen years of service. The state treasury, i. e., the employer, contributes an amount equal to one-half of the obligatory monthly contributions of the members, and there are also other minor sources of revenue, but these additional amounts do not become available until after ten years of service, and then only partially so, and are fully available only after fifteen years.

An analysis of the law shows that it closely follows that of the railway pension fund. All employees of the liquor monopoly must be members of the fund except those who receive less than 120 rubles (\$61.80) per annum, or who are over 60 years old, or who are employed temporarily for not over one year. The revenues are obligatory and voluntary contributions of the employees, treasury subsidies, interest, and miscellaneous revenues. The obligatory revenues are those which have been found in most other funds; an initiation fee of 10 per cent of the first year's salary, 6 per cent of the earnings, 10 per cent of the special prizes, difference in salaries for three months in cases of promotion. The difference is found in the larger initiation fees, 10 per cent of the first annual wages. The treasury grants a sum equal to one-half of the obligatory deductions from

wages. Pensions, computed according to the accumulated account and the age, are granted at the time of separation from service after 15 years of service. The member who voluntarily retires from the service within two years is not entitled to any repayments. From the beginning of the third year and before the end of the tenth year he receives his own contributions without interest; after the completion of the tenth year he receives also the interest on his payments, and besides in the eleventh year 25 per cent, in the twelfth year 40 per cent, in the thirteenth year 55 per cent, in the fourteenth year 70 per cent, and in the fifteenth year 85 per cent of the additional amounts credited to his account. A distinct feature of this fund is the provision by which the bachelor or widower without children under 18 receives only 75 per cent of the amount due, though not less than his own contributions with interest accrued. The family of the employee who was separated from the service before having earned a pension has no claim upon the fund, but the widow and orphans of a member of the fund who died while in the service receive pensions, no matter what had been the length of service of the employee. The widow receives one-half of the pension to which her husband would have been entitled; each child under 18 years of age, when the mother is living, receives one-sixth of the pension, but all children receive no more than one-half the pension. Orphans receive one-fourth of the pension each; but the maximum for all orphans is three-fourths of the pension. The actual pensions of the employee, as well as of the widows and children, and the capitalized value of these pensions, are computed according to special tables, which in absence of satisfactory Russian mortality statistics were prepared from German mortality data.

Capitalization of parts of pensions in excess of 50 per cent of the annual wages, as well as of small pensions to widows and orphans, were permitted.

The general administration of the pension fund is intrusted to a central committee connected with the department of indirect taxation and liquor monopoly, of the Ministry of Finance, which takes care of the general control, of the investments, of the statistics, etc., and regulates the pensions. The chief of the department is ex officio chairman of the committee, and the members are appointed by the minister of finance, primarily from the leading officials of this department. The local administration is done by provincial committees, presided over by the local chiefs of excise taxation, and consisting of members appointed by the minister of finance.

An annual appropriation of 29,520 rubles (\$15,203) is made by the Government to cover the cost of administration of this pension fund.

STATISTICS.

The table following shows the total number of employees of the liquor monopoly, the membership of the pension fund, and the number and per cent of the total employees in each class exempted from compulsory membership:

NUMBER OF EMPLOYEES OF THE LIQUOR MONOPOLY, MEMBERSHIP OF THE PENSION FUND, AND NUMBER AND PER CENT OF TOTAL EMPLOYEES IN EACH CLASS EXEMPTED FROM COMPULSORY MEMBERSHIP AT THE BEGINNING OF EACH YEAR, 1901 TO 1906.

[Source: Ministerstvo Finansov. Otchiot Pensionnoi Kassy vol'nonaionnykh sluzhashchikh po kazionnoi prodazhe pitel, 1900-1905.]

Year.	Total number of employees.	Members of pension fund.		Employees not members of pension fund because—							
				Receiving less than 120 rubles (\$61.80) per annum.		Employed temporarily.		Over 60 years of age at time of employment.		Total.	
		Number.	Per cent of total employees.	Number.	Per cent of total employees.	Number.	Per cent of total employees.	Number.	Per cent of total employees.	Number.	Per cent of total employees.
1901....	43,793	26,424	60.4	6,221	14.2	10,481	23.9	667	1.5	17,369	39.6
1902....	61,685	42,441	68.8	6,770	11.0	11,766	19.1	708	1.1	19,244	31.2
1903....	62,612	48,922	78.3	5,957	9.5	6,926	11.1	732	1.1	13,615	21.7
1904....	62,457	50,403	80.7	5,658	9.1	5,744	9.2	652	1.0	12,054	19.3
1905....	62,465	49,780	79.7	5,008	8.0	7,078	11.3	599	1.0	12,685	20.3
1906....	64,628	45,025	69.7	3,766	5.8	6,315	9.8	562	.8	19,603	30.3

* Includes 8,960 (13.9 per cent) lower grade employees, receiving over 120 rubles (\$61.80) per annum, who declined to be members of the fund, in accordance with the order of December 2 (15), 1905, making membership in the fund optional for these employees.

The total number of employees at the time of organization of the fund was about 40,000, and by 1906 had reached 64,628, due to extension of the liquor monopoly. Within the same brief period the membership in the fund has nearly doubled, increasing from 26,424 in 1901 to 45,025 in 1906. In proportion to the total number of employees the membership in the fund has increased from 60.4 per cent in 1901 to 69.7 per cent in 1906. The exemption from obligatory membership applies to three classes, those receiving a salary of less than 120 rubles (\$61.80) per annum, those employed temporarily, for less than one year, and those who enter the service when over 60 years of age, the last group being numerically unimportant. The temporary employees represent the greatest exempted group, but it has rapidly decreased from nearly one-fourth of all employees to less than 10 per cent. The number of employees receiving less than 120 rubles (\$61.80) per annum is also gradually decreasing because of an increase in average salaries. From 1903 to 1906 the average annual wages of the male employees have increased from 422 to 453 rubles (\$217 to \$233), and the wages of the female employees from 332 to 351 rubles (\$171 to \$181), the average wages of all employees increasing from 398 to 423 rubles (\$205 to \$218).

The following table shows the membership by sex:

MEMBERSHIP OF THE LIQUOR MONOPOLY PENSION FUND AT THE BEGINNING OF EACH YEAR, BY SEX, 1901 TO 1906.

[Source: Ministerstvo Finansov. Otchiot Pensionnoi Kassy vol'nonaionnykh sluzhashchikh po kazionnoi prodazhe pitei, 1900-1905.]

Year.	Males.		Females.		Total membership. (a)
	Number.	Per cent.	Number.	Per cent.	
1901.....	21,507	85.2	4,917	14.8	26,424
1902.....	32,484	76.5	9,957	23.5	42,441
1903.....	36,153	73.7	12,769	26.3	48,997
1904.....	36,602	72.6	13,809	27.4	50,411
1905.....	35,125	70.1	14,652	29.9	49,777
1906.....	37,745	70.5	13,280	29.5	45,025

a Some of these totals do not agree with the sum of the items nor with totals in other tables; the figures are given as shown in the original reports.

The marked decrease in the membership of the fund from 1905 to 1906 is explained by the effect of the order of December 2 (15), 1905, which relieved all wage-workers and lower grade employees of the liquor monopoly from obligatory membership in the fund, making it optional. Because of this ruling the membership fell from 79.7 per cent of the total number of employees in 1905 to 69.7 per cent in 1906.

The effect of the rule may be seen from the tables showing the composition of the membership of the fund. Four large groups of employees may be differentiated, the clerical and administrative employees of the central and provincial offices, the salesmen in the liquor monopoly stores, the lower grade employees, and the workmen in warehouses and distilleries. The next table shows the number and per cent in each of these classes.

MEMBERSHIP OF THE LIQUOR MONOPOLY PENSION FUND, BY CLASSES OF EMPLOYEES, 1901 TO 1906.

[Source: Ministerstvo Finansov. Otchiot Pensionnoi Kassy vol'nonaionnykh sluzhashchikh po kazionnoi prodazhe pitei, 1900-1905.]

Year.	Employees of distilleries, warehouses, and laboratories, clerks, and bookkeepers.		Salesmen and collectors.		Lower grade employees (copyists, watchmen, etc.).		Workmen in warehouses and distilleries.		Total membership.
	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	Number.	Per cent.	
1901.....	2,468	9.4	19,799	74.8	1,704	6.5	2,462	9.3	a 26,462
1902.....	3,489	8.3	27,514	64.8	3,099	7.3	8,339	19.6	42,441
1903.....	3,561	7.3	29,335	59.8	3,669	7.6	12,432	25.3	48,997
1904.....	3,669	7.3	29,327	58.2	4,038	8.0	13,377	26.5	50,411
1905.....	3,654	7.4	29,690	59.6	3,792	7.6	12,641	25.4	49,777
1906.....	3,678	8.2	29,592	65.7	2,720	6.0	9,035	20.1	45,025

a This total is not the correct sum of the items; the figures are given as shown in the original report.

The salesmen and collectors constitute from three-fifths to two-thirds of the membership of the fund, while workmen constituted over one-fourth before the order of December 2 (15), 1905, went into effect, and only one-fifth the following year. This distribution of the membership of the fund differs materially from that of the employees, both because practically all of the persons receiving an annual remuneration of less than 120 rubles (\$61.80) belong to the classes of the lower grade employees and wage-earners, and that temporary employment is more frequent in the same classes, as is shown in the table following.

PROPORTION OF EMPLOYEES BELONGING TO THE LIQUOR MONOPOLY PENSION FUND, 1901 TO 1906.

[Source: Ministerstvo Finansov. Otchiot Pensionnoi Kassy vol' nonaiomnykh sluzhaschikh po kazionnoi prodazhe pitei, 1900-1905.]

Class of employees and year.	Number of employees.		Members of the fund.		
	Total.	Receiving over 120 rubles (\$61.80) per annum.	Total.	Per cent of all employees.	Per cent of employees receiving over 120 rubles (\$61.80).
Employees of distilleries, warehouses, and laboratories, clerks, and bookkeepers:					
1901	2,545	2,545	2,468	97.0	97.0
1902	3,672	3,672	3,489	97.7	97.7
1903	3,613	3,613	3,561	95.8	95.8
1904	3,724	3,723	3,669	98.5	98.5
1905	3,718	3,717	3,654	98.3	98.3
1906	3,754	3,752	3,678	98.0	98.0
Salesmen and collectors:					
1901	20,443	20,440	19,799	96.8	96.8
1902	28,187	28,185	27,514	97.6	97.6
1903	29,972	29,972	29,335	97.8	97.8
1904	29,856	29,856	29,327	98.2	98.2
1905	30,260	30,260	29,690	98.1	98.1
1906	30,093	30,093	29,592	98.3	98.3
Lower grade employees:					
1901	3,969	3,836	1,709	42.9	44.4
1902	5,366	5,240	3,099	57.8	59.1
1903	5,356	5,213	3,669	68.5	70.4
1904	5,356	5,236	4,038	75.4	77.1
1905	5,377	5,259	3,792	70.5	72.1
1906	5,326	5,206	2,720	51.1	52.2
Workmen:					
1901	16,843	10,758	2,462	14.6	22.9
1902	24,460	17,819	8,339	34.1	46.8
1903	23,671	17,857	12,432	52.5	69.6
1904	23,529	17,992	13,377	56.9	74.4
1905	23,107	18,218	12,641	54.7	69.4
1906	25,455	21,811	9,035	35.7	41.4
All employees:					
1901	43,831	37,610	26,462	60.4	70.4
1902	61,685	54,915	42,441	68.8	77.3
1903	62,612	56,655	48,997	78.3	86.5
1904	62,465	56,807	50,411	80.7	88.7
1905	62,462	57,454	49,777	79.7	86.6
1906	64,628	60,862	45,025	69.7	74.0

Practically all the employees of the first two groups receive over 120 rubles (\$61.80) per annum, while the lower grade employees nearly all receive over this amount, yet in 1904, the year of greatest membership, 24.6 per cent were not members of the fund. A very large per cent availed themselves of the opportunity offered by the decree of December 2 (15), 1905, so that by the end of that year only

51.1 per cent of the lower grade employees retained their membership in the fund.

The falling off was still greater among the class termed "workmen;" in the beginning of 1905, 4,889 received less than 120 rubles (\$61.80) per annum, and as many men were employed temporarily, only 54.7 per cent of the workmen and only 69.4 per cent of those receiving over 120 rubles (\$61.80) held membership in the fund; and so many availed themselves of the opportunity to drop their membership that on January 1, 1906, only 41.4 per cent of those receiving over 120 rubles (\$61.80), and altogether only 35.7 per cent of all the workmen employed remained in the fund. The reason must probably be sought first in the very heavy deductions which are a hardship when the very low rate of wages is considered, and also in the shifting character of the occupation; for according to the by-laws, a member leaving employment in the liquor monopoly before two years of service loses the accumulations credited to his account, including his own contributions to it. As appears from the table following, a great many changes take place in the body of employees, and in the aggregate the losses of such members are considerable. For the three years, 1903, 1904, and 1905, a total of 32,110 persons left the fund. Of these only 1,654 left by death or total disability, 16,645 resigned voluntarily, and 4,311 were dismissed.

CHANGES IN MEMBERSHIP OF THE LIQUOR MONOPOLY PENSION FUND, 1900 TO 1905.

[Source: Ministerstvo Finansov. Otschet Pensionnoi Kassy vol'nonalomnykh po kazionnoi prodazhe pitel, 1900-1905.]

Year.	Member-ship at beginning of year.	Admitted during year.	Members lost during year.							Total.
			Resigned voluntarily.	Dis-mitted.	Position abol-ished.	Died.	Totally dis-abled.	Entered military service.	Other reasons.	
1900.....	20,534	8,492	1,708	528	131	119	52	40	.....	2,578
1901.....	26,424	23,432	5,095	1,291	373	294	125	76	99	7,353
1902.....	42,441	14,977	5,161	1,828	567	302	152	127	220	8,357
1903.....	48,922	9,869	5,589	1,639	467	373	156	132	24	8,380
1904.....	50,403	8,495	5,420	1,411	339	369	171	1,387	28	9,121
1905.....	49,780	9,854	5,636	1,261	307	432	153	591	6,229	14,609

The following table gives the distribution of the membership by sex and marital condition, also including the number of children, and a computation of the total number of persons (members, wives, and children) protected by the pension fund. In 1906 the total membership was 45,025 and the number of persons enjoying the protection of the fund was 150,274, or more than three times the membership.

NUMBER OF PERSONS PROTECTED BY THE LIQUOR-MONOPOLY PENSION FUND, BY
SEX AND MARITAL CONDITION, 1901 TO 1906.

[Source: Ministerstvo Finansov. Otchet Pensionnoi Kassy vol'nonaionnykh po kazionnoi prodazhe pitei,
1900-1905.]

Sex and marital condition.	Persons protected on January 1.					
	1901.	1902.	1903.	1904.	1905.	1906.
MALE MEMBERS.						
Single.....	3,388	5,566	6,051	5,866	5,239	4,002
Married.....	17,792	26,377	29,552	30,094	29,235	27,120
With children.....	14,002	20,317	22,831	23,304	22,862	21,268
Without children.....	3,790	6,060	6,721	6,790	6,373	5,852
Widowed.....	367	541	612	642	651	623
With children.....	231	357	373	400	411	401
Without children.....	136	184	239	242	240	222
Total male members.....	21,547	32,484	36,215	36,602	35,125	31,745
With children.....	14,233	20,674	23,204	23,704	23,273	21,669
Without children.....	7,314	11,810	13,011	12,898	11,852	10,076
FEMALE MEMBERS.						
Single.....	1,615	4,082	5,714	6,193	6,400	5,523
Married.....	1,674	3,298	4,117	4,470	4,854	4,296
With children.....	1,153	2,094	2,589	2,808	3,123	2,803
Without children.....	521	1,204	1,528	1,662	1,731	1,493
Widowed.....	1,626	2,577	2,951	3,146	3,398	3,461
With children.....	1,142	1,791	2,065	2,166	2,331	2,354
Without children.....	484	786	886	980	1,067	1,107
Total female members.....	4,915	9,957	12,782	13,809	14,652	13,280
With children.....	2,295	3,885	4,654	4,974	5,454	5,157
Without children.....	2,620	6,072	8,128	8,835	9,198	8,123
Total membership.....	26,462	42,441	48,997	50,411	49,777	45,025
Members' wives.....	17,792	26,377	29,552	30,094	29,235	27,120
Children.....	45,836	66,627	75,957	79,255	81,140	78,129
Total persons protected by the pension system (a).....	90,090	135,445	154,506	159,760	160,152	150,274

a The husbands of female employees, who are entitled to pensions only under exceptional circumstances, are not included.

The main data in regard to the financial operations are brought together in the table following. Though the fund has been in existence a short time only, its accumulations are considerable, growing from 1,869,154 rubles (\$962,614) on January 1, 1901, to 12,533,271 rubles (\$6,454,635) on January 1, 1906. This is natural, since in the earlier years only a few pensions were paid, and these were small, fifteen years' membership being necessary for a full pension. While the expenditures are formally almost equal to the income, they mostly represent purchase of securities for investments. The income is seen to consist mainly of contributions by members, subsidies from the State, and interest on investment. The expenses, besides the payment of compensation and subsidies, are very small. The totals of the individual members' accounts are also shown, the main sources of growth of these being the 6 per cent salary deductions, but the large initiation fees and the deductions from promotions are quite considerable. The largest deductions in the earlier years were on account* of members leaving the service. Deaths claimed only small sums.

FINANCES OF THE LIQUOR-MONOPOLY PENSION FUND, 1900 TO 1905.

[Source: Ministertov Finansov. Otechlot Pensionnoi Kassy vol'nonaionnykh po kazionnoi prodazhe pitel, 1900-1905.]

Item.	1900.	1901.	1902.	1903.	1904.	1905.
Balance on hand at beginning of year...		\$962,614	\$2,355,677	\$3,536,438	\$4,590,208	\$5,362,862
Balance on hand at end of year.....	\$962,614	2,355,677	3,536,438	4,590,208	5,362,862	6,454,635
Income:						
Membership deductions and contributions.....	781,691	1,043,506	875,231	791,574	823,424	823,118
State subsidies.....	179,258	282,713	252,973	275,783	311,996	302,522
Interest on securities.....	12,996	94,283	144,110	193,503	241,516	288,875
All other.....	13,697	60,586	59,931	27,040	61,777	51,694
Total.....	987,642	1,481,088	1,332,245	1,287,900	1,438,713	1,466,209
Expenditures:						
Purchase of securities.....	805,920	1,474,980	1,255,993	1,084,358	1,084,174	1,101,375
Compensation, subsidies, etc.....		10,713	83,513	203,854	311,211	324,327
All other expenses.....	4,095	5,537	21,205	7,308	5,808	4,037
Total.....	810,015	1,491,230	1,360,711	1,295,520	1,401,193	1,429,738
Members' accounts:						
At the beginning of the year.....		740,187	1,780,242	2,830,150	3,747,905	4,588,339
At the end of the year.....	740,187	1,780,242	2,830,150	3,747,905	4,588,339	6,000,544
Added to members' accounts:						
Members' contributions—						
Six per cent salary deductions..	237,353	444,827	574,491	612,754	624,091	629,206
Ten per cent initiation fees.....	394,258	367,318	263,164	139,154	110,778	109,330
Promotion deductions.....	28,785	92,248	92,782	85,526	66,500	90,656
Premium deductions.....	95	18,341	12,957	14,529	21,021	16,485
Voluntary contributions.....	37	173	403	790	1,158	1,358
Total.....	660,528	922,907	943,797	852,753	823,548	847,035
All other items:						
Three per cent treasury subsidy....	117,953	221,938	286,852	306,314	311,943	314,478
Interest accrued.....		27,752	68,158	107,044	141,280	173,810
Profits distributed.....					48,340	92,543
Other items.....		41,921	48,961	30,063	35,901	44,333
Total.....	117,953	291,611	403,971	443,421	537,464	625,169
Grand total.....	778,481	1,214,518	1,347,768	1,296,174	1,361,012	1,472,204
Deducted from members' accounts:						
Died, leaving families.....	1,200	9,020	11,875	20,826	27,104	39,247
Died, without families.....	(a)	1,905	2,341	4,700	6,578	5,496
Left service after 2 years' service, but before pension limit.....			106,771	221,623	314,882	356,046
Left service before 2 years' service, but for valid reasons.....	3,279	16,671	29,016	29,237	94,785	61,901
Left service before 2 years, and without right to receive any payment.....	(a)	101,722	97,182	65,804	38,147	31,885
All other deductions.....	35,230	45,144	50,676	36,229	39,080	b 377,199
Total.....	39,709	174,462	297,861	378,419	520,576	871,774

^a Included in all others.

^b Including \$325,064 deducted accounts of members who abandoned membership in fund in conformity with the imperial order of December 2, 1905, relieving workmen and minor employees from obligatory membership.

The amount of normal pension depends upon the salary of the employee, the length of the service at the time of applying for a pension, and also upon his age.

The following table shows the accumulations which will accrue to a married male member 30 years of age at the time of the organization of the fund and receiving an annual salary of \$500:

VALUE OF ACCUMULATIONS AND AMOUNT OF PENSION OF A MARRIED MAN 30 YEARS OF AGE AT TIME OF ORGANIZATION OF FUND, RECEIVING AN ANNUAL SALARY OF \$500.

[Source: Otchet pensionnoi Kassy vol'nonomnykh sluzhashchikh za 1901 god., Vol. II, p. 39.]

Date.	Length of membership (years).	Age (years).	Value of accumulations.	Amount of annual pension.
December 31—				
1905.....	5½	35	\$330.78	.....
1910.....	10½	40	646.17	.....
1915.....	15½	45	1,029.90	\$63.44
1920.....	20½	50	1,534.08	103.24
1925.....	25½	55	2,181.91	160.81
1930.....	30½	60	3,023.15	248.20
1935.....	35½	65	4,142.96	385.30
1938.....	38½	68	5,003.72	504.37

It may be said, therefore, that a man of 30 would have to remain in employment over 38½ years to receive a pension equal to his salary and 30½ years for a pension of about one-half his salary; that after 15 years his accumulations would somewhat exceed two years' pay and his pension be equal to about one-eighth of his salary.

This salary of \$500 is higher than that received by the average workman in the liquor-monopoly service. The average salary of an employee, though varying slightly from year to year and showing a tendency to rise, is equal to about \$200. For an employee with this salary, but otherwise as described above, the value of accumulations after 20 years would be about \$600 and his pension a little over \$40 per annum; after 25 years the accumulations would be about \$875 and the pension \$64; after 30 years, \$1,200 and about \$100; and after 35 years, \$1,656 and \$154, respectively.

PENSION FUND OF THE GOVERNMENT PRINTING AND ENGRAVING OFFICE.

This fund was organized in accordance with the law of May 3 (15), 1899—i. e., about one year before the establishment of the Liquor Monopoly Pension Fund and was a successor to a relief fund existing since 1865. Having a smaller membership than either the railroad or the liquor monopoly fund and being similar to them in its organization, only a brief description will be given, as the original reports of this fund can not be secured. The main sources of revenue, such as the contributions of the employees and of the employer (the treasury in this case) are exactly the same as in the Liquor Monopoly Pension Fund, except that the income from penalties is also added; and the system of individual accounts as a basis for the computation

of pensions is identical with that of the other funds. The ordinary pension, thus computed, is granted only after 15 years of membership in the fund. In case of invalidity, however, so-called extraordinary pensions are granted, and these are based upon an entirely different principle, being arbitrary proportions of the earnings, as follows: After 10 and up to 15 years of service, 15 per cent of the earnings; after 15 and up to 20 years of service, 20 per cent; after 20 and up to 25 years, 30 per cent; after 25 and up to 30 years, 40 per cent; and after 30 and up to 35 years, 50 per cent of the earnings. As these proportions do not depend upon the accumulations, they may become an excessive charge upon the fund to be met by additional subsidies from the treasury. The conditions of return of the accumulations before the right for an ordinary or so-called extraordinary pension is acquired are the same as in the other pension funds described—namely, in case of separation from the service within two years no returns are made; in case of separation after 2 and before 10 years of service, his payments without interest; after 10 years, his payments and 25 per cent of all the other additions to his account; after 11 years, 40 per cent; after 12 years, 55 per cent; after 13 years, 70 per cent; and after 14 years, 75 per cent of these accumulations. These rates apply only to married men with families; single men or widowers without children receive only 75 per cent of the amount, but in no case less than his actual contributions.

The fund combines occasional financial assistance to its members and also a loan business with that of granting pensions. The administration of the fund is intrusted to elected members under the chairmanship of the director of the printing office. This fund is one of the few pension funds which were organized for the benefit of industrial wage-workers of a manufacturing plant.

OLD-AGE FUNDS OF THE FACTORIES AND HARBOR WORKS OF THE MINISTRY OF THE MARINE.

By the laws of January 27 (Feb. 9), 1903, and April 18 (May 1), 1903, old-age funds were established for the wage-workers employed in the factories and harbor works of the Ministry of the Marine. These funds are practically based upon a system of enforced saving with certain benefit features attached. Two separate funds are established—the saving fund and the benefit fund. The employee contributes to the saving fund 6 per cent of his earnings and the management of the establishment contributes half of that amount to the benefit fund. In each of the funds each employee has a personal account, which grows by contributions as well as by accruing interest. In case of death both accounts are paid to his heirs in the following order: His widow and children; and when no widow or children survive, to his mother; in her absence, to the dependent father or to the unmarried

sisters. If the employee is forced to leave the service because of an accident, disease, or old age, he receives both of his accounts in full. He is entitled to his account in the savings fund at the time of separation from service, no matter for what reason. But with the exception of death or separation because of disability, the payment of the individual account in the benefit fund is made the subject of rather complicated regulations. All occupations are divided into four classes, according to the danger element and severity of labor. In the first group, the most dangerous and difficult, the employee acquires the right to receive his entire benefit account after 15 years, in the second after 20 years, in the third after 25 years, and in the fourth group after 30 years. Before the expiration of these maximum limits only partial payments may be made from the benefit fund, as follows: 33 per cent after a specified number of years and an additional percentage for each additional year until the full amount is reached. In the first group, after 5 years; and for each additional year 7 per cent and 6 per cent alternately each year. In the second group, after 7 years; and for each additional year 5 per cent. In the third group, after 8 years; 36 per cent after 9 years; and 4 per cent additional for each year. In the fourth group, after 10 years; and 3.35 per cent additional for each year.

OLD-AGE FUND OF THE VOLUNTEER FLEET.

The above-described system of old-age provisions in the Ministry of the Marine has followed very closely after the system introduced by the law of July 27, 1896, for the employees of the so-called volunteer fleet (a private navigation company subsidized by the Government). According to this law there are two funds—a saving fund and a benefit fund. The employees contribute 10 per cent of their earnings to the savings fund and the management of the company contributes to the benefit fund 8 per cent of the earnings of those receiving 720 rubles (\$370.80) or less and 6 per cent of the earnings of those receiving more than 720 rubles (\$370.80). The right to receive the savings accounts is unlimited after one year of service; for the purposes of adjusting the payments for the benefit funds the employees are classified into four groups, (1) the workmen and employees on land, (2) the line officers, (3) sailors, except firemen, and (4) firemen.

The minimum payment of 50 per cent of the account in the benefit fund is paid to employees of the first group after 10 years of service, of the second group after 9 years, of the third group after 8 years, and of the fourth group after 6 years. For each additional year 5 per cent additional is allowed to the first group, 5 to 6 per cent to the second, 6 per cent to the third, and 8 per cent to the fourth. The full amount is paid to the first group after 20 years, to the second after 18 years, to the third after 16 years, and to the fourth after 12 years.

In case of death or abolition of the position the entire value of both accounts is paid to the employee or his heirs, independent of the length of service.

PENSION FUNDS OF THE "ZEMSTVOS."

All the pension institutions described have been established by the Central Government for its own employees. A brief description of the pension funds of the "zemstvos" (the organs of local self-government) are of considerable interest, as evidence of the great popularity of old-age insurance in Russia, though the majority of the employees belong to the professional classes (physicians, nurses, agronomists, clerical employees) and so bear only an indirect relation to the problem of labor insurance.

The "zemstvos," organized in 1864, are representative bodies elected by the landowners and peasants. As early as 1868 the first zemstvo employees' pension fund was established by the provincial zemstvo of Tver; the Province of Nizhni Novgorod followed in 1871, and St. Petersburg in 1877. These led to a general law, promulgated on April 30 (May 12), 1883, regulating all pension funds to be established by the zemstvos. The law required the approval of the constitution by the Ministry of Interior as a necessary prerequisite and also the agreement of all the district zemstvos of a province for the establishment of a pension fund in that province. The contributions of the zemstvos were limited to 3 per cent of its budget. From 1883 to 1899 pension funds in conformity with the law were established by 14 zemstvos, while many others petitioned the Ministry of Interior for changes in the law regulating such pension funds, namely, that the agreement of the majority of the district zemstvos be sufficient or that the provincial zemstvos be granted power to make pension funds obligatory for the district zemstvos of its province. It was even suggested by some zemstvos that one central old-age pension fund for all zemstvos be established by cooperation among all zemstvos. Several zemstvos insisted that funds of the "insurance type" were preferable to those of the "emeritus type" (*Emerital'naja Kassy*).

Under the former is understood in Russia the type of pension fund in which the amount of pension depends largely upon the total payments made, while the "emeritus type" of funds grants pensions depending upon the salary at time of separation from service. It is almost impossible to construct any tables for the latter type of pension funds, so as to make them self-supporting. This type was popular for the earlier pension funds of government employees, when the Government undertook to cover any deficits; and of the 14 pension funds established before 1900, 11 were of that type. Under the influence of these memorials the Ministry of Interior elaborated a new plan for zemstvo pension funds, which passed the Imperial Council and was approved on June 12 (25), 1900. This new law is

based on the "insurance plan." It was the intention of the ministry to make the establishment of pension funds obligatory for all zemstvos, but the Imperial Council did not agree with that demand, leaving the organization of the pension fund to the decision of the provincial zemstvos. It also rejected the demand of the ministry, that all the existing pension funds be made to conform to the type outlined in the new law.

With the promulgation of the law the establishment of new pension funds proceeded very rapidly. One fund was opened in 1901, 6 in 1902, 4 in 1903, and at this time all the 34 zemstvos, with the possible exception of one or two, have pension funds. While the change from the old to the new type was not obligatory, a great many zemstvos have made such changes, leaving the old funds to carry only those employees who have been members in it for a series of years. Altogether 15 of the 34 zemstvos now have pension funds conforming to the new law of June 12 (25), 1900. Each one of these has its own constitution and by-laws, which differ from each other in minor details, but they must all conform to the general demands of the law.

The general basis of this law is a rather close imitation of that establishing the State Railway Employees' Pension Fund, the greatest fund of its kind. Membership in the fund is obligatory for all paid employees of the zemstvos (not excluding the elective officers) below a certain age (50 in some funds and 55 in others). The income of the fund is derived from (1) obligatory contributions of the members, of the same nature as in the railroad fund, namely, 6 per cent of the first year's salary as an initiation fee, 6 per cent of the monthly salary, 10 per cent of the special-prize moneys, the difference between the old and new salary for three months in case of promotion; (2) voluntary contributions of members, the amounts not to exceed the obligatory contributions; (3) contributions of zemstvos; (4) profits from investments; (5) miscellaneous revenues, such as fines, moneys unclaimed, etc. The distinctive feature of the law is the heavy contributions of the zemstvos, which must be equal to those of the members, i. e., 6 per cent of the salaries. This gives a total of 12 per cent of the salaries as an annual contribution to the pension. Under such conditions it is comparatively easy to grant liberal pensions.

The contributions of the members must be credited to their personal accounts, while the contributions of the zemstvos are distributed in the following order: The cost of orphans' pensions must be secured; then any deficit of the fund shall be covered, unless previously met out of the reserve; then the remaining sum is distributed among the accounts of wives, but not to exceed two-thirds of the members' contributions for the same year; and finally, if there is still any remainder, it is distributed among the accounts of the members.

Of the profits of investments, etc., one-half must be assigned to the reserve until it reaches 10 per cent of all obligations of the fund; the other half and the entire profits after the reserve has been sufficiently built up are distributed among the members' accounts.

The members have the right to receive a pension at separation from service after 15 years of service. Pensions may be given to employees forced to leave the service on account of total disability due to illness after 5 years' membership. The detailed regulations are determined by the constitutions of the individual funds. If no pension is granted all the sums accrued to the member's credit must be paid out to him. The same is true if a member is forced to leave the service through disability before the expiration of five years. In case of separation without disability before the expiration of 15 years, the member receives only his own contributions, without interest if leaving the service before five years, and with compound interest at 4 per cent if after five years of service. After 10 years of service 25 per cent of all other sums credited to his account must be paid, after 11 years 40 per cent, after 12 years 55 per cent, after 13 years 70 per cent, and after 14 years 85 per cent of all such amounts.

In case of death of an employee after five years of employment the widow receives a pension until death or remarriage, etc., the amount depending on the accumulations to the credit of her husband. If an employee dies before the end of five years of service the widow receives in one payment the sums credited to their accounts. Pensions must also be given to the children in case of death of the member after five years of service, to be paid until 18 years of age or marriage, and may be extended until the completion of secondary education, but not later than the age of 21. The same conditions as exist in the State Railway Employees' Pension Fund, modifying the pension, are made in case the children receive a scholarship from some other source.

A demand for the payment of the capitalized value of the pension may be made by the employee when the pension does not exceed one-fourth of his average salary for the entire period of service, and by the widow when it does not exceed one-sixth of the average salary. In all pensions to employees and widows, but not to children, the capitalized value of one-fourth may be requested by the pensioner.

The administration of the pension is left to the zemstvos and its administrative council (the *uprava*), while members of the fund may be invited into the special committee in charge of the fund.

These are the general requirements which the law demands from the pension funds. The individual funds may vary within the prescribed limits, but each individual constitution requires the approval of the Ministry of Interior. To expedite matters a standard constitution has been prepared by the ministry, by accepting which the

time necessary to obtain the approval is materially shortened; while the introduction of material changes in the model constitution has in some cases led to considerable delay.

The constitutions of the pension funds organized since 1900 are fairly uniform; the deviations from the normal constitution are not many, though some are important. The sources of revenue are uniform, though a few pension funds started with the transfer of large accumulations, made for old-age pensions, while others had no capital to begin with. The contributions from the members are usually as stated above, though one fund demands an initiation fee equal to one and one-half months' salary instead of 6 per cent of the annual salary; while in another fund the zemstvos contributes 8 per cent of the annual salaries instead of 6 per cent. In some funds no salaries are considered as above 2,000 rubles (\$1,030) for pension purposes, while others have no such limitations. Uniformly, any per diem expenses or traveling allowances, though paid in regular annual amounts, and also the part of salary designated for renting a home is not included, it being the custom of the zemstvos either to provide their employees with lodgings or to pay a specified sum for renting same.

All funds grant a pension to the employee at the time of leaving the service after at least 15 years; most funds grant a pension to disabled employees leaving the service after at least 5 years, though a few have preferred the payment of a lump sum equal to all accrued rights. The computation of amounts paid at time of leaving the service after 5 to 15 years for other reasons than disability is uniform and agrees with the plan demanded by the law and explained above. If the employee's wife is living at the time of his leaving the service without a pension, he is also entitled to certain payments on her account, as follows: If the employee leaves before the expiration of 5 years of service because of total disability, or before 15 years of service because his position is abolished, or if he leaves it for any reason at the age of over 60 years, then he is entitled to receive the entire amount credited to his wife's account.

If he leaves for any other reason he receives only his voluntary contributions to the credit of his wife, and in addition after 5 but less than 10 years of service, 10 per cent of all other amounts credited to his wife; after 10 years of service, 25 per cent; after 11 years, 40 per cent; after 12 years, 55 per cent; after 13 years, 70 per cent, and after 14 years of service, 85 per cent of all other amounts credited to his wife's account.

Almost no variations are found in the regulations concerning the children's pensions. These are not based upon the accumulations of individual credits, like the pensions or other benefits of the employ-

ees or widows. For that reason a special fund is provided for children's pensions.

The conditions of these pensions are specified in the general law, and have been stated before. The amount of the pension is computed as follows: Each child of a deceased employee having one parent living receives for each year of the present service one-half of 1 per cent of the latest salary which the deceased parent received for a full year. An orphan receives 50 per cent more than the half-orphan. The maximum sum of pensions to all the half-orphans left by an employee must not exceed 50 per cent of his salary. The pension for orphans must not exceed 75 per cent of the salary nor be less than 20 per cent. Pensions for death of the mother are not paid unless the father is completely disabled from earning a livelihood and is not receiving any subsidies from the fund. If both parents were employed in the same zemstvo, and the father dies, the children receive their pensions if the mother continues in service; when both parents die they receive the greater of the two pensions to which they are entitled.

The financial arrangements are also similar to those of the State Railway Employees' Pension Fund. Each member has a personal account to which all his obligatory contributions are credited. Voluntary contributions are assigned according to the wishes of the member, if consistent with the rules. Among these individual accounts are also distributed the remaining part of the monthly contribution of the zemstvo after the other obligations have been met, the profits and income from investment, or that part of it which does not go into the reserve (in which distribution the wives' accounts sometimes share equally with the members' accounts), and all other revenues not specially provided for.

Individual accounts are also kept for the wives of the married members. The credits of these accounts are taken from the obligatory zemstvo contributions after deducting the necessary amount for the children's fund and for covering any existing deficits for which the reserve is insufficient. Within each year not more than two-thirds of the obligatory monthly contributions of the members may be credited to their wives' accounts. The profit or income from investments, or at least that part which does not go into the reserve, is distributed among the wives' accounts, as well as among the accounts of members.

A special orphans' fund is established to guarantee the pensions to children. This must always be kept at the level corresponding with the amount of the orphans' fund obligations at the time, as computed from statistical data of mortality, etc. The income from fines is turned over to this fund, also accidental revenues, bequests, etc., without designation of purpose. The fund is kept at the

required level by adding to it the necessary amount from the monthly contributions of the zemstvos.

In addition there is a reserve fund. One-half of the profits and income from investments goes into the reserve. When pensions or parts of pensions are capitalized, 5 per cent of the sum paid to the pensioner is turned into the reserve, also unclaimed amounts due, and a few minor revenues, until the reserve amounts to 10 per cent of all the obligations of the pension fund. When this limit is reached, all these sources of income are distributed among the individual accounts of the members and their wives proportionally to the amounts credited to these accounts from the regular monthly contributions of the zemstvos. In some funds this distribution is made proportionally to the total amounts of these individual credits. A variation found is in distributing all extra sums so as to favor the employees receiving smaller salaries. This is accomplished in various ways. One is to divide the sum to be distributed into two unequal portions, then to distribute the larger portion among all members' accounts and the smaller portion only among those members receiving not more than a specified salary. Another method is to divide the employees into two or three classes and to give to the employees receiving smaller salaries a greater share per amount of salary than to the higher employees.

As in the railway funds, the rate of interest to the accumulations during the year depends upon the age, varying from 4.52 per cent at the age of 17 years to 8.85 per cent at the age of 70.

In determining the length of service, normally the years of continuous service in the particular zemstvo, with participation in the fund, are counted. At the time of opening the fund the years of previous service were taken into consideration. If the employee leaves the service before he is entitled to a pension, receiving a lump sum, and then reenters service, the years of his previous service will be counted if he reimburse the fund for the payments he and his wife had received. Otherwise he is considered a new employee. If the employee at the time of reinstatement receives a pension, and his new salary is greater than the pension, the payment of the pension is stopped, but its capitalized value at his age at the time is credited to his account. If his new salary is smaller than his pension, he is permitted to receive the pension. It is a rule of almost all funds that persons transferred from service in one zemstvo to that of another zemstvo may transfer their membership and all credits in the funds, including a credit for the years of service in the former.

The procedure prescribed by the standard constitution has been adopted by all new funds. It provides for thorough medical examinations whenever the pension for disability is claimed, and medical reexamination once a year.

In other cases documentary evidence as to age, length of service, etc., is sufficient. The adjustment of claims must be made within two weeks. Pensions must be paid in monthly installments. Lump-sum payments to widows are paid out at one time; to members only one-half of the lump sum due is paid at the time, the other half in six months, unless the member dies within that time, in which case the second half reverts to the reserve. Applications for capitalized value of pensions must be made within two weeks after the determination of the pension and before the first pension is paid. The administration may decline the application if made after two weeks; while applications made after receiving the first pension payment are not considered. Persons making no application for pension within two years, or taking no advantage of the pension granted, lose their right to claim the pension for the time expired. After 10 years they lose all their rights, and the value of the pensions or benefits is transferred to the reserve. The statistical basis upon which all computations are made must be revised every five years, but if any changes are found necessary the pensions granted, or the individual credits, must not be diminished in consequence.

The administration of the fund differs considerably from that of the railway pension fund in that the membership scarcely participates in it. The executive board of the provincial zemstvo (*Gubernskaya Zemskaya Uprava*) and a special committee, with the chairman of this board as chairman and chairmen of the boards of the district zemstvo as members, administers the affairs of the fund. The general supervision over the activity of these executive organs is left to the provincial zemstvo, which may add some members of the fund to the committee; and which must approve the budget for the expenses of administration. The main supervision over all funds is in the hands of the insurance committee of the Ministry of Interior.

Detailed annual reports, together with all required statistical information in regard to the membership, must be presented by the executive board to the zemstvo and, after being approved by the latter, are forwarded to the Ministry of Interior.

PRIVATE PENSION FUNDS.

The old-age pension funds described above, except those of private railroads, embrace only government institutions. The activity of the Government in regard to the broad field of old-age and invalidity insurance of private employees is as yet limited to plans and legislative proposals. Private initiative has done but little in the way of pensions for the wage-workers of the country. Among the salaried employees the pension fund principle is popular; applications of it are found among the employees of the zemstvos as described above,

among the employees of municipalities, and of many large financial, commercial, and manufacturing institutions.

The best known old-age pension institutions for wage-earning employees of private industrial establishments are the miners' funds of the Polish mining and metallurgical industry, but these have already been described in connection with the topic of sickness insurance.

EFFORTS FOR REFORM.

EFFORTS OF THE SOCIETY FOR ENCOURAGEMENT OF RUSSIAN INDUSTRY AND COMMERCE.

Early in 1902 the question of labor insurance was raised in the Society for Encouragement of Russian Industry and Commerce, and three commissions were appointed for the consideration of the three main branches of labor insurance, all under the chairmanship of and in collaboration with important officials. One of these commissions undertook the study of the problem of old-age insurance; and when the committee of ministers, on December 24, 1904 (January 6, 1905), established, in conformance with the imperial ukase of December 12 (25), 1904, a labor insurance commission under the Ministry of Finance, the material collected by the society was turned over to that commission.

In the opinion of the commission, an old-age insurance system must include all classes of wage-workers, not excepting the agricultural laborers and domestic servants, and insurance against invalidity in addition to that against old age proper. In regard to the age at which the regular old-age insurance should begin, no unanimous decision was reached, but the majority of members of the commission were in favor of a 60 or 65 year age limit. The question of pensions for the widow and orphans was discussed. As was shown above, such pensions, within certain limitations, are an essential part of all the government employees' old-age insurance funds. But such pensions require an additional cost which would be considered excessive in the beginning, besides presenting many technical difficulties in view of the absence of necessary statistical data, and it was thought wiser to disregard the demand for widows' and orphans' pensions in the immediate agitation for old-age and invalidity insurance.

The system of percentage deductions from wages, with individual accounts, was not considered feasible in view of the very low standard of wages. Instead, a system of arbitrary weekly contributions was thought preferable. For the purposes of such contributions it was suggested that the wage-workers be divided into classes according to their earnings: (1) Those earning less than 60 rubles (\$30.90) annually; (2) those earning from 60 to 120 rubles (\$30.90 to \$61.80); (3) from 120 to 180 rubles (\$61.80 to \$92.70); (4) 180 to 300 rubles (\$92.70

to \$154.50); (5) 300 to 480 rubles, (\$154.50 to \$247.20); and (6) 480 to 1,000 rubles (\$247.20 to \$515.00). Whether workers earning more than 1,000 rubles (\$515) annually should be required to insure against old age and invalidity was not definitely decided. For each of the six classes enumerated, definite weekly dues are to be collected, with an equal contribution from the employer, while the state treasury should contribute at least one-third of the value of the pension, and even more when necessary to bring the pension up to the required minimum. To members of each group a definite pension is to be paid, either at the regular age or at the establishment of disability from invalidity, but in no case unless 200 weekly payments had been made.

While no definite scale of pensions was prepared by the commission, yet in a report to the commission by one of the members the proposed pensions for the six groups were 18, 30, 48, 72, 120, and 180 rubles per annum. (\$9.27, \$15.45, \$24.72, \$37.08, \$61.80, and \$92.70.)

It was freely admitted at the time that the almost entire absence of statistical data made a scientific adjustment of contributions and cost of the pension impossible, but the need for pensions was stated to be so great that it did not permit of a delay until such data could be completed. It was expected that in the beginning the cost to the treasury might be heavy, but a gradual adjustment through periodical revision of rates could meet that difficulty in time.

PLAN OF 1905 FOR A GENERAL OLD-AGE INSURANCE SYSTEM.

The first comprehensive governmental plan for old-age and invalidity insurance of workmen employed in private establishments was published in 1905 as a part of the general workmen's insurance plan, the other parts of which were analyzed in preceding sections of this chapter.

This plan was somewhat of a compromise between the pension funds for government, zemstvo, and railroad employees, described above, and the plan of the Society for Encouragement of Russian Industry and Commerce. The pensions are based upon the value of the individual accumulated accounts, which consist mainly of equal contributions by the employers and employees. Special pensions are also provided for in cases of invalidity for widows and children. The main differences between this plan and the existing pension funds are, on the one hand, the guarantee of a minimum pension; when the accumulations do not cover its cost, the difference must be paid from the reserve, and the state treasury is to meet the obligations of the reserve if its funds are exhausted. That is to a slight extent a direct subsidy of the state treasury to the old-age and invalidity insurance. On the other hand, the obligatory payments

of both employer and employee are much smaller than in the described pension funds. Where those payments equaled 9 to 12 per cent of the wages, besides many other important sources of revenues, fairly large pensions could be paid after comparatively short periods of service. The contributions according to this plan of 1905 are greater than those contemplated by the Society for Encouragement of Russian Industry and Commerce; yet they equal only 3 per cent from each side. As a consequence the pensions must be quite small, but larger than in the earlier plans; this is evident from the amounts of the guaranteed minimum. After 25 years of membership in the fund the guaranteed minimum is only 36 rubles (\$18.54) per annum, or \$1.55 per month; and for invalids after five years only 24 rubles (\$12.36), or \$1.03 per month. Widows' pensions are granted only if the workman dies while a member of a fund, but not after he has received a pension.

PLAN OF 1906.

A radical change in the attitude toward the problem of old-age insurance took place in the conferences which elaborated the insurance plans of 1906. While the desirability of such insurance was still recognized, grave doubts were expressed as to its feasibility for the immediate future. It was pointed out that even in Germany the introduction of accident and sickness insurance preceded that of old-age and invalidity insurance by many years, and that that was the natural sequence in all other countries gradually working their way toward a complete system of obligatory social insurance.

The greatest difficulty was found in the peculiarities of organization of Russian industry and commerce, with the predominance of small artisans' shops, hand trades, home industry, and other branches of semi-independent workers. The simultaneous extension of the old-age insurance system over the entire body of industrial, commercial, and transportation wage-earners was thought out of the question, and under such circumstances the shifting of the wage-earners from a class of service included in the old-age insurance scheme to another not so included would be a very frequent occurrence, and the retention of the contributions made by the employee to the fund would work an injustice.

As a matter of fact, almost all existing Russian old-age pension funds repay the contributions of the insured at separation from service after a very brief period of service (usually two years). The German system of nonrepayment of these contributions would meet very strong opposition, and, on the other hand, the practice of repayment would be so frequent as to make the payment of pensions exceptional and also very difficult. In this combination of circumstances the commission of 1906 saw a cause of an automatic breakdown of the old-age pension system. It therefore proposed that the plan for

introducing such a system be indefinitely postponed, and in its stead a system of savings funds for individual establishments was recommended. Such savings funds may be established either upon the initiative of the employer or by vote of the employees. Membership in the savings fund was to be voluntary unless at least three-fourths of the employees vote for its establishment; in that case the establishment of the fund is mandatory and membership obligatory for all wage-workers employed at the time or subsequently. Under the voluntary organization the amount of savings is left to the discretion of the employees, but in the obligatory funds the savings are regulated by the proposed law, which requires them to be not less than 2 per cent nor more than 4 per cent of the earnings. These obligatory funds are more than savings funds and may be termed savings and benefit funds, for the employers are required to add at least 25 per cent to the contributions made by the employees. The accumulations are paid to the employee at the time of leaving his employment, according to the following regulations: The individual savings unconditionally, and of the benefits contributed by the employer 30 per cent after 3 years of service and 10 per cent additional for each additional year of service. Besides the savings and benefit fund, a surplus fund is also established, into which those portions of the benefit fund are turned which have not been paid out because of premature separation from service, and this fund is to be used for granting benefits to families of deceased employees. The savings funds are also permitted to grant loans to the members. The administration of these funds is to be intrusted to the general members' meetings and a board of directors consisting of representatives of the employer and employees.

Only in a very indirect way are these planned funds connected with old-age insurance. The only element is the gradual acquisition by the employee of a right to the employers' contributions to the saving fund. These rights are fully acquired in ten years, but at best they have a small value. With the average earnings of about \$100 per annum, the workmen's average contributions will be from \$2 to \$4 a year and the employers' average contribution to the benefit fund from \$0.50 to \$1.

PLAN OF 1907.

Notwithstanding the conclusions of the conference of 1906, which were discouraging to the idea of immediate organization of old-age and invalidity insurance, the Ministry of Commerce and Industry continued its work on the further elaboration of an old-age insurance plan, the results of which were published, together with much explanatory material, in May, 1907. This bill was not introduced in the Duma until June, 1908, together with the other insurance bills, and

so is evidently not considered a matter for immediate consideration; nevertheless the bill shows the gradual growth of the influence of the German insurance methods in Russia. While the plan of 1905 was based upon the system of personal accounts, thus following the existing pension funds for salaried employees, and the plan of 1906 had taken another step away from the pension principle toward simple saving, with a few slight benefit features, the plan of 1907, on the contrary, shows a strong tendency in the opposite direction. It is much nearer to the suggestions offered by the Society for Encouragement of Russian Industry and Commerce in 1902.

The bill was intended to establish obligatory old-age and invalidity insurance for all wage-workers and employees over 15 years of age in industrial, trade, commercial, and financial establishments. The central insurance office, to be established, shall have the right to extend this system of obligatory insurance to the following classes of persons either throughout the Empire or in definite regions: Domestic servants, independent artisans who do not employ any hired labor, persons belonging to "artels" (industrial cooperative groups), or performing work on order, even if they employ labor, but work together with their employees.

The following groups are excepted: (a) Agricultural laborers and employees of rural industrial establishments; (b) employees receiving no other compensation except subsistence; (c) privates in the army and navy performing industrial labor as a part of their duties; (d) aliens; and (e) persons over 60 years of age at the time of organization of this insurance system, or who had lost at least two-thirds of their working ability; also persons who at the time of adoption of the law hold membership in any pension fund granting old-age and invalidity pensions not inferior to those established by this act.

Furthermore, the following persons may be freed from the obligation of insurance if they so desire: Those who are not employed over twenty weeks throughout the year in establishments subject to compulsory insurance, and persons receiving pensions not inferior to the minimum pensions established by this bill, either from accident insurance or from any existing pension fund.

Thus the exceptions embrace a considerable class of wage-workers. The exception of agricultural laborers is perhaps the most important one. Next to it may be placed the group of persons employed not over twenty weeks per annum. That may include a great many persons in construction, building trades, and in such seasonal trades as sugar manufacturing and refining.

The amounts of old-age or invalidity pensions, funeral expenses, and also of weekly contributions depend upon the wages of the insured, who are classified for this purpose into five groups, as shown in the following tabular statement:

CLASSIFICATION OF INSURED PERSONS ACCORDING TO THE OLD-AGE INSURANCE PLAN OF 1907.

[Source: Official text of the bill and report accompanying same.]

Class.	Annual wages.	Old-age pensions.	Basic In- validity pensions.	Additional invalidity pension for each paid- up week.	Weekly premium.
1.....	\$103 and under.....	\$24.72	\$18.54	\$0.015	\$0.052
2.....	Over \$103 to \$206.....	37.08	24.72	.031	.103
3.....	Over \$206 to \$309.....	49.44	30.90	.046	.154
4.....	Over \$309 to \$412.....	61.26	37.08	.062	.206
5.....	Over \$412 to \$515.....	74.16	43.26	.077	.258

In computing the annual earnings the value of all compensation, food, lodgings, etc., must be considered; the annual earnings are taken as equal to 12 times the monthly earnings, 52 times the weekly earnings, or 280 times the daily wages. In case of piecework the class is determined by agreement between employer and employee, or by reference to an insurance inspector.

The premiums are to be paid weekly and in the amounts indicated in the table. The payments made while the insured person is employed are obligatory, and equal shares are contributed by the employer and employee. Voluntary payments may be made during nonemployment and then entirely by the employee. The level of old-age pensions is definitely established. To receive an old-age pension a person must be at least 60 years of age and show at least 1,000 "paid-up weeks." In addition to the number of weeks for which the premiums were actually paid in, either in the form of obligatory or of optional payments, the privilege is given to count the time spent in military service, or the time of disability due to sickness not to exceed 4 weeks in one year; in case of maternity, 8 weeks may be counted in one year. The right to a pension lapses when less than 40 weeks are paid up during two years. It may be reestablished by paying up new 200 weeks. The right to the pension is lost at death of the pensioner, or when the pensioner is granted another pension at least equal in amount, for disability resulting from injury. It may be suspended temporarily under certain conditions.

If an insured male person dies before acquiring the right to a pension a funeral benefit, equal to two-thirds of the annual value of the old-age pension of the same group to which the last 40 premium payments belonged, is paid to his widow or children. When these payments were distributed between different wage groups, a corresponding adjustment is to be made. In case of death of a female married insured person the surviving husband receives this benefit only in case of disability and dependency upon the earnings of the deceased wife.

The pensions for invalidity (inability to work) are granted either permanently or temporarily, without consideration as to age, but not before premiums for at least 200 weeks have been credited to the account of the insured, of which at least 100 weeks must have been actually paid in. The basic invalidity pensions as shown in the above table are smaller than the old-age pensions. In the five wage groups they represent, respectively, three-fourths, two-thirds, five-eighths, three-fifths, and seven-twelfths of the old-age pension. But the invalidity pensions are increased with the length of service. For each "counted in" insurance week a small increment is added to the annual value of the invalidity pension; provided, however, that only when 40 weeks have been counted within one calendar year, or 80 weeks within two calendar years, are these increments added. Only the first and the last years of insurance are excepted from this qualification, all the counted weeks giving the right to additional increments, no matter how many or how few there were within one year. Methods of computing the old-age pensions and basic invalidity pensions in case of change from one group to another during the insurance period are given in the bill.

The main revenue is to be derived from the weekly contributions. Many minor sources are mentioned, such as fines, proceeds from sale of insurance cards and pension books, incomes from investments, and fines and penalties; but with all these the need of a substantial subsidy from the state treasury is expected. This subsidy is of a double nature, first, the payment of the premiums for insured persons while performing military service; and, second, in meeting part of the cost of each old-age or invalidity pension, namely, 2 rubles (\$1.03) per month. The amounts thus due are to be paid every four months and in advance from the treasury into the insurance fund. The premiums during military service are to be computed at the minimum rate, 10 copecks (5.2 cents) per week. The cost of pension payments, of administration, and of medical care of pensioners are charged to the insurance fund. The fund must be placed on deposit with the state treasury, and that part of it which is not needed for current operation is to be invested in government securities or other designated securities.

The payment of weekly premiums is planned in accordance with the German system, which the bill closely follows in many details. Each insured person has a personal insurance card. The weekly premiums are paid by means of stamps pasted on this card by the employer, who is authorized to deduct half their value from the wages of the employee. Instead of additional voluntary contributions, provided for in earlier schemes, the bill permits the employee to have a stamp of a higher denomination than on his card, provided he pays the entire difference in cost. Full insurance cards are

exchanged for new ones by the insurance agencies when the number of weeks counted in for other seasons is certified to.

For the purposes of administration of this pension system a new administrative system is proposed by the bill, headed by a central insurance office, district insurance offices, insurance inspectors, insurance agencies, and county (*wieżd*) insurance councils. The entire administrative machinery is subject to the Ministry of Commerce and Industry. The agencies are planned in connection with offices of the state savings bank, post-offices, and other financial or administrative institutions of the central government and local governments, and sick benefit funds or insurance associations. These agencies perform mainly such financial operations as require relations with the insured persons or their employers. The insurance inspector supervises the activity of these agencies within his district and also regulates the administration of the law within that district. The district insurance office may be appealed to against the decisions of the inspectors, grant pensions or benefits, and administer the insurance funds in its district, etc. The general supervision of the law and the final decision of doubtful cases is left with the central insurance office.

The bill does not contain any provisions as to the mode of meeting a possible deficit beyond the demand that the rate of premium be revised not later than ten years from the organization of the fund, on the basis of statistical information obtained during the first years of its activity. A very careful actuarial computation of the expected cost of the old-age and invalidity pension was made in connection with the preparation of the bill, and the results of this computation used for determining the premium rates.

The annual premiums necessary, according to this computation, to meet the cost of the pensions are compared in the following table with the actual rates proposed in the bill. In this comparison it is assumed that there would be, on an average, 40 weekly premium payments per annum. It is also shown that the treasury subsidy of 24 rubles (\$12.36) per pension is equal to a premium of 1.62 rubles (83.4 cents) per annum.

COMPUTED NECESSARY PREMIUMS COMPARED WITH PREMIUMS PROPOSED IN THE OLD-AGE INSURANCE PLAN OF 1907.

[Source: Official text of the bill and report accompanying same.]

Class.	Necessary annual premium.	Annual premium proposed.	Annual value of government subsidy.	Total premium cost.	Surplus available for administration.
1.....	\$2.26	\$2.06	\$0.83	\$2.89	\$0.63
2.....	4.04	4.12	.83	4.95	.91
3.....	5.98	6.18	.83	7.01	1.03
4.....	8.12	8.24	.83	9.07	.95
5.....	10.45	10.30	.83	11.13	.68

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CHAPTER X.

WORKMEN'S INSURANCE IN SPAIN.

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INTRODUCTION.

Spain is probably the least industrially developed country of western Europe, a very large proportion of its population being engaged in agricultural pursuits. Unfortunately the statistical information concerning Spain is very scant. The latest occupational statistics, published by the Instituto Eugrafico y Estadístico, refer to 1889. They showed the following distribution:

POPULATION OF SPAIN BY OCCUPATION OR INDUSTRY, 1889.

Occupation or industry.	Persons employed.	Occupation or industry.	Persons employed.
Agriculture.....	4,854,742	Teachers, etc.....	39,136
Industry (textile and mineral).....	243,867	Hotel keepers, etc.....	14,449
Commerce.....	194,755		
Arts and trades.....	823,310	Total, known occupations.....	6,998,981
Domestic servants.....	409,549		
Merchant marine.....	115,764	Leisure classes.....	29,918
Professions (legal, medical, etc.).....	84,510	Asylum inmates.....	91,226
Religious (Catholic).....	72,077	Pupils in schools and colleges.....	1,719,955
Public employees.....	97,257	Not reported.....	8,728,519
Private and railway employees.....	49,565		
		Grand total.....	17,568,599

Thus of about 7,000,000 persons with known occupations, industry (textile and mineral) claimed only 3½ per cent and agriculture nearly 70 per cent. Adding together industry (textile and mineral) with arts and trades gives, for 1889, only a little over a million (1,067,177), or about 15 per cent of all persons with known occupations.

While the industrial activity of Spain must have increased considerably during the last twenty years, it is still very much below the other countries of western Europe.

Only the first steps have as yet been made by Spain in the field of workmen's insurance. The present status may be summarized in a very few words: Only two important measures have been passed in Spain concerning this field of labor legislation—the accident compensation act of January 30, 1900, and the act of February 27, 1908, establishing a national institute for old-age pensions, which began operations in 1909. The first-mentioned act introduced in Spain the system of compensation of workmen for industrial accidents in place of the older system of employers' liability. While putting upon the

employer the entire cost of such compensation, the Spanish act leaves the question of insurance to the option of the employer, though it endeavors to regulate and control the insurance companies writing accident insurance. The old-age insurance institute act of February 27, 1908, establishes only voluntary insurance of workmen against old age at their own cost, but with some subsidy from the State.

Thus the entire system of workmen's insurance in Spain is voluntary. The same holds true in sickness insurance, as far as this term can be used, there being in Spain a certain number of mutual benefit societies, whose most important function is mutual help in case of sickness. The membership of these societies is not very large, and any information concerning them is difficult to obtain. This chapter of the report, therefore, treats principally of accident insurance. The history of the law of 1900 is followed by an analysis of its provisions, by a few data concerning its applications, and by an account of the efforts made during the last decade toward the reform and extension of the law. Statistics of accidents in Spain are so unsatisfactory that only the most important data are reproduced.

In connection with the question of sickness insurance only some statistical information concerning the mutual benefit societies can be given. Under the caption of old-age insurance an account is given of the history of the efforts of the Institute of Social Reforms to establish a national old-age insurance institute, which efforts terminated in the act of 1908, the provisions of which are analyzed. Mention is also made of an interesting proposal to introduce a system of modified life insurance for workmen as a function of the national old-age insurance institution in connection with the proposal of a law to encourage home owning among the Spanish workmen, such life insurance to act as security for the home in case of death of the purchaser.

It is evident that Spain is not a leader in the field of workmen's insurance. It is following slowly the example of other Latin countries of Europe.

ACCIDENT INSURANCE.

HISTORY.

The accident compensation act (or "law in regard to industrial accidents," as its official title reads) of January 30, 1900, represents the most important Spanish legislation in the domain of labor insurance. Until the enactment of this law the compensation of workmen for industrial accidents was based upon the criminal and civil liability provisions of the Civil Code, which provisions were derived from the Roman legal ideas of responsibility for the results of one's

acts or for the acts of one's agent. Articles 1902, 1903, and 1908 of the Spanish Code are identical with articles 1382, 1383, 1384, and 1386 of the Code Napoleon, in effect in France and in Belgium, and the same requirements are found in the laws of Italy, Switzerland, Holland, etc. The results in Spain of the application of the laws relative to industrial accidents did not differ much from the results obtained in other European countries. By far the larger number of industrial accidents were uncompensated, while in the remainder compensation could be obtained only after expensive and prolonged litigation. It was stated by the Spanish delegate to the Third International Congress of Industrial Accidents and Social Insurance, held at Milan in 1894, that the absence from the Civil Code of any compensation provisions and the difficulty experienced in fixing the employers' liability had caused great neglect of all safety provisions and therefore increased the frequency of industrial accidents.

The shortcomings of the Civil Code were recognized as early as 1883, when the commission for social reforms (*Comisión de Reformas Sociales*) was organized to investigate the economic condition of labor in Spain. The question of compensation for industrial accidents was considered as one of the most important by the commission, and by June 7, 1887, it had formed the plan of a new liability act; but it took nearly thirteen years for an accident compensation law to be carried through the Spanish Cortes. The history of the repeated efforts in behalf of the injured workmen presents a picture of evolution from old to new socio-legal notions relative to employers' liability, a process of evolution which is far from complete, for, as will be shown presently, earnest efforts are still being made to extend and strengthen the law of January 30, 1900.

The bill formulated by the commission on June 7, 1887, proposed to extend the liability of the employer to all accidents which were not due to the negligence of the employee or to chance (whether "vis major," or ordinary chance). The burden of proof was to be shifted from the plaintiff to the defendant—i. e., from the employee to the employer. The employer's responsibility was to be taken for granted, unless he could establish that the accident was due either to the negligence of the injured employee or to unavoidable chance.

Thus the shifting of the burden of proof was the main proposed deviation from the old law, since the employer as before was to be responsible only for accidents due to his own or to his agents' negligence; moreover, the employer could withhold from the salary of the responsible agent the amount of indemnity he was sentenced to pay.

While the Civil Code makes the person guilty of negligence responsible for the whole amount of damages caused, the bill recommended by the commission in 1887 limited the amount of responsibility. When contributory negligence of the injured person was

established the courts were to adjust the claims to the respective degrees of negligence of both sides. This legislative plan was referred to a committee of the Senate, which returned it to the commission for social reform with instructions for further elaboration, suggesting that special attention be paid to the subject of prevention of accidents, and also to the creation of voluntary mutual insurance associations.^(a)

The further study of the problem by the commission of social reforms led to the legislative plan offered by the commission on May 2, 1891.^(b) This represented a step forward as compared with the plan of 1887, though the commission again took a middle ground between the principles of liability and compensation or insurance. The details of the plan were somewhat unique. The unavoidable character of certain accidents in industrial life constituting the so-called trade risk was recognized, and the principle of placing the responsibility for the results of such accidents on the industry as such was admitted. But an effort was made to draw a strict line of demarcation between such industrial accidents and "ordinary accidents" due to somebody's negligence, and it was thought that such "ordinary accidents" need not be treated any differently in industrial life than when arising under ordinary conditions and therefore should remain subject to the provisions of the Civil Code. While admitting the unsatisfactory condition of the problem under existing legislation, the commission concluded not to accept compulsory insurance as the best solution, using as arguments against the adoption of the German plan the high cost to the industry and the danger of encouraging carelessness on the part of employer and of employee.

The commission recommended that all accidents be divided into three classes: According to the employers' responsibility, to the injured employee's responsibility, and to the industrial responsibility or trade risk; only the latter class of accidents to be included under the proposed law. Such a law, in the opinion of the commission, had ten definite objects to accomplish: (1) Distinguish between an ordinary accident and an accident due to the nature of the industry; (2) leave the ordinary accidents under the jurisdiction of existing legislation and limit the special law to the "industrial accidents" proper; (3) define as carefully as possible what should be considered an industrial accident; (4) prepare a list of dangerous and health-injurious industries; (5) prepare a list of the most efficacious means and apparatus for the prevention of the more frequent accidents in each industry; (6) establish a graduated scale of compensation to the injured workmen who are entitled to it, from temporary and partial incapacity to fatal cases; (7) make the compensation depend upon

^aArbeiter Versicherung im Auslande, Dr. Zacher, Heft XV, pp. 17-19.

^bCongrès International, 2d session, Dr. Zacher, Berne, 1891, pp. 418-424.

earnings; (8) provide industrial tribunals (mixed juries) for deciding the questions of trade risk; (9) call labor delegates to testify regarding industrial accidents; (10) extend the jurisdiction of the special tribunals over the state industrial establishments.

The text of the legislative draft of 1891 endeavored to meet these requirements. An industrial accident was defined as an accident caused by the force or the speed of motors or machines, by the dangerous or injurious nature of substances employed in the industry, or by the condition of the atmosphere or the surroundings in which the employee is necessarily placed while at work. The Government was to publish complete lists (1) of the dangerous or injurious industries and (2) of apparatus and methods for prevention of accidents, with necessary explanations and diagrams. These lists were to be kept up to date and revised every five or ten years. The financial responsibility for such accidents was to devolve upon the enterprise. In order to measure and determine the responsibility it was to be ascertained to what extent the management of the establishment had made use of the preventive measures enumerated and described in the list. The employers were to be permitted to insure their employees, provided the indemnities to be paid by insurance companies were not below those prescribed by the proposed law. According to the draft of the law trade courts were to be established, which were to handle the cases and were to determine the amount of compensation to be paid; and labor delegates were to be heard in each case of industrial accident. Other accidents were left subject to the Civil Code.^(a)

On June 5, 1894, the Government introduced in the Cortes a bill in accordance with the commission's recommendations. In doing it, the Government largely used the text prepared by the commission, but introduced two important modifications.^(b) In order not to burden the home industry with excessive charges and because of the low standard of wages in the country, the scale of indemnity was reduced in nearly every case. The second important modification referred to the trade tribunals, or mixed juries, as they were designated in the original draft of the commission. The commission simply mentioned these tribunals as the proper jurisdiction for cases under this law, intending to introduce a special bill for their organization. In order to prevent the delay which would result from preparing this special law and to expedite the enforcement of the compensation laws, the Government introduced into its draft of the bill a few paragraphs relating to the organization of special tribunals. These were to consist of the mayor (*alcalde*) as chairman *ex officio*, and six members, namely, an attorney, an engineer, an employer, and a municipal

^a Congrès International, vol. 2, 1891, p. 417 and ff.

^b *Ibid*, vol. 5, 1894, pp. 155-158.

officer appointed by the mayor (*alcalde*), and two workmen elected by their comrades in the same occupation to which the injured person belonged. The tribunal was to make an effort to bring about an amicable agreement, but failing to do this it was to render its decisions by a majority vote. The procedure before these tribunals was to be brief, without legal formalities, and without appeal except for reasons specified, when the suit might be carried to the highest court.

To those persons who were in favor of compensating the workmen for accidents the bill of 1894 represented a certain step in advance of the earlier bill, inasmuch as it clearly admitted the doctrine of the responsibility of the industry for the results of trade risk; but besides the very low scale of compensation the chief drawback of the bill, it was claimed, lay in the fact that it did not at all do away with the costly and burdensome litigation; on the contrary, it exaggerated this evil by creating two classes of accidents (those that could be traced to the fault of somebody and those that could be credited to trade risk), with two legal systems, but with a very indistinct line of demarcation between the two classes, because of the great difficulty of defining an accident due to trade risk. The bill met with strong opposition and failed to become a law.

Nearly five years passed before the matter of compensation for industrial accidents was again brought before the Spanish Cortes. A bill to that effect was introduced in the Senate on December 2, 1899, by the Government, in conformity with a royal decree of November 30, 1899. Based mainly upon the French accident compensation act of April 9, 1898, this bill presented a great advance over all preceding proposals. Several European countries had passed compensation acts in the intervening years, and throughout industrial Europe there was a general approach toward compulsory insurance. The peculiar distinction between the trade risk and all other accidents due to somebody's fault (which was the chief feature of the plan of 1894) was discarded. The bill of 1899 excepted accidents brought about intentionally or through gross negligence of the victim or through force majeure. As far as the extent of the law is concerned, the industries to which it was to apply were carefully designated, and it included practically all manufacturing and transportation, agricultural labor only as far as the handling of machinery, and a few other less important branches of industrial life. The Government-owned establishments were made subject to the law on equal terms with private undertakings. This list remained practically unchanged in the final text of the law.

As between compensation by pensions and by lump sums, the bill favored the latter. Instead of definite sums, as in the draft of 1894, the later bill made the compensation dependent upon the earnings

of the injured. Substitution of pensions for lump-sum payments was permitted to the employers, if they guaranteed these payments to the satisfaction of the beneficiaries. The organization of special trade courts by special legislation was promised, but until that time the cases arising under this law were to be made subject to the jurisdiction of the courts of first instance.

These were the chief characteristics of the bill as introduced in the Senate on December 2, 1899, and sent to a special committee on December 5. On December 12 the bill was reported back from the committee with important changes, and further changes were made during the debates on the floor of the Senate, so that when passed on December 23 the bill differed considerably from the bill as introduced by the Government. Thus all employers who employed not over five workmen and who worked with them were excepted from the provisions of the law. On the other hand, while the original bill excepted manufacturing establishments where only human or animal energy is utilized, the exception of animal energy was taken out; to the establishments handling explosives or inflammable substances were added those handling toxic and unhealthy substances, and the work of loading and unloading was also added. Several minor concessions were granted to the injured and their dependents; to the death benefits were added funeral expenses not to exceed 100 pesetas (\$19.30); actual earnings were substituted for average wages; the minimum wage was increased from 1 peseta (19.3 cents) to $1\frac{1}{2}$ pesetas (29 cents); and the maximum of $7\frac{1}{2}$ pesetas (\$1.45) was stricken out; on the other hand, the age of children entitled to compensation, which was placed at 23 in the original bill, was reduced to 16 years, and in case of substitution of a pension to the widow for a lump-sum payment the pension was to be discontinued at remarriage and the pension of children at the age of 16. The most important change in the bill was the exemption of all accidents "due to the manifest fault of the victim," instead of those "due to the voluntary act or inexcusable fault of the victim." The term "manifest fault," while more difficult to define and limit, is much broader and permits of broader interpretation than "inexcusable fault."

The bill, in the form indicated, was placed before the Congress of Deputies on January 2, 1900, and referred to a committee, which reported favorably without change on January 12. Although the bill was thus recommended, the committee of the lower house expressed its opinion that the ideal solution of the problem would have been through voluntary insurance in mutual funds for each industry, but that such a system required a higher degree of education and development than Spain could claim at the time, and therefore for the present the system of direct compensation was the better.

The changes in the bill on the floor of the lower chamber were few, but some of them were important, namely, the two senate amendments were stricken out—the one excluding from the action of the law establishments with five or fewer employees, and the other excluding accidents due “to the manifest fault of the victim.” It was stated above that in the Senate this last phrase was substituted for “voluntary act or inexcusable fault.” In striking out the reference to the “manifest fault,” the lower house did not replace the preceding formula, and the bill in its later form was even more liberal than it was originally, only injuries due to vis major being excepted; the other changes were of a minor nature. The bill passed the Congress of Deputies on January 18, 1900; a joint commission accepted all the changes made in the lower house, and in its final form the bill was adopted in both chambers on January 27 and signed on January 30, 1900.

LEGISLATION IN FORCE.

The law of January 30, 1900, establishes the main principles, but goes little into details of procedure and administration. The Government was directed to publish all necessary regulations within six months. Several royal decrees formulating the necessary rules have been promulgated since then, namely, the decree of July 28, 1900, forming a complete set of by-laws; the decree of August 27, 1900, in regard to accident insurance companies; and the decrees of March 26 and July 2, 1902, extending the application of the law to the War and Navy departments, respectively. In addition, a large number of less important “royal orders” (*real ordenes*) interpreting certain articles of the law or modifying preceding decrees were promulgated from time to time. In the following analysis of the law all decrees and orders up to the close of 1910 have been considered:

INJURIES COMPENSATED.

The law guarantees compensation for all injuries to employees arising out of or in the course of employment, unless caused by vis major and altogether extraneous to the employment in which the injury occurs. As stated above, the exception of “accidents intentionally brought about by or due to the manifest fault of” the employee was stricken out in the lower house and only an indirect qualification as to fraud, imprudence, or negligence is left in the provision; when the accident is due to such conduct, the case must be carried to the criminal court, and the claim of the injured must be adjudged in harmony with the decision of that court. This provision applies to the employer as well as to the employee. Claims for damages for accidents not covered by this law remain subject to the provisions of the Civil Code.

INDUSTRIES AND PERSONS INCLUDED.

The extent of the application of the law is carefully stated. It covers factories, mills, and workshops in which other than human energy is used; mines, salt mines, and quarries; metallurgical establishments, machine shops, and navy-yards; building and construction, and repairing, including the bricklayers' occupation, and subsidiary occupations, as those of carpenters, locksmiths, stonecutters, painters, etc.; establishments manufacturing or handling explosives, inflammable, injurious, or poisonous materials; construction, repair, and maintenance of railroads, harbors, roads, canals, dams, aqueducts, irrigation, and similar works; agriculture and forestry establishments utilizing motors with other than human power (the law applying only to those employees in these establishments who are exposed to the danger from the machinery); transportation on land and water, including high sea and internal navigation; fishing and other similar industries; street, sewer, and drain cleaning; warehouses, coal, wood, and lumber yards; wage-earners employed in theaters; fire extinguishing; gas works, electric stations, stringing and maintenance of telephone wires; installation, repair, and dismantling of electric wires and lightning rods; loading and unloading; and similar industries not specifically mentioned in the above list.

The law applies also to arsenals, power and ammunition works, and similar establishments owned by the Government; to establishments owned by the provincial and local communal governments, and to all public works. Special regulations concerning the application of the law to the employees of the War and Navy ministries were approved on March 26, 1902, and July 2, 1902, respectively. Accidents in military exercises and maneuvers and target practice have been included within the protection of the law.

The law applies to all workmen performing manual labor outside their own residences for some other person, whether with or without compensation, and including helpers and apprentices. In the Ministry of War the law applies not only to civilians employed in manual labor but also to enlisted men, not above the class of sergeant, performing such labor.

BENEFITS.

The entire cost of compensation rests upon the employer. In the case of work given out by contract, the primary responsibility rests upon the contractor, but this does not destroy the subsidiary responsibility of the owner of the establishment. The state, provincial, and communal governments are treated like private employers for the purposes of this law.

The compensation paid may be classified according to the following four classes of injuries: Those leading to temporary disability, to permanent total disability, to permanent partial disability, and to death.

In case of temporary disability the injured employee receives from the employer an allowance equal to one-half of his daily wage from the day of accident until the day of recovery from disability or determination of the degree of permanent disability, or up to the end of one year. This allowance is paid for every day, including the holidays. If, after the expiration of that year, the disability still continues, the case must be treated as one of permanent disability. In addition to the allowance the employer must furnish the injured person with medical attention and drugs until recovery, or until such attention is no longer required. An exception is made for the injured enlisted man, who is supported by the State and receives medical treatment and medicines, but he is not entitled to the daily allowance in cases of temporary disability.

If the injury results in permanent total disability the employer must pay the injured employee an indemnity equal to two years' wages, but when the disability prevents the injured employee from working only at his usual occupation, but does not incapacitate him for all employment, the indemnity must equal only eighteen months' wages. When the disability for the usual occupation is only partial, though permanent, the employer must choose between providing the injured with some other employment at the old rate of wages or paying him an indemnity equal to one year's wages. These indemnities are in addition to those paid for temporary disability, and while treatment lasts medical help and drugs must be furnished. By the decree of July 28, 1900, the Government was authorized to institute a detailed investigation on the basis of experience gained from application of the law, with the view of preparing tables for the determination of various degrees of disability, which tables must conform to the rule that only such condition as prohibits any kind of labor be termed complete disability, while a condition prohibiting only the customary employment, but permitting some other occupation, must be considered as partial disability. In accordance with this order definite rules for determining the nature of permanent disability were established by the royal order of July 8, 1903. According to these rules the following injuries were to be considered as leading to total permanent disability: (1) Loss of both upper or both lower extremities, or of one upper and one lower extremity, or of their essential parts, i. e., hands or feet; (2) functional disorders of the locomotor apparatus, which as to consequences are analogous to loss of parts, of equal gravity with that of preceding rule; (3) loss of both eyes or of vision in both eyes; (4) loss of one eye, with loss of vision

in the other; (5) incurable insanity; (6) incurable organic or functional affections of the brain or of the circulatory or the respiratory systems, resulting directly from the mechanical or toxic effect of the accident.

The following injuries are classed as leading to partial disability: (1) Loss of right upper extremity, or of hand, or of all its fingers, even if the thumb remains, or loss of thumb and the second and third phalanges of all other fingers; (2) loss of entire left upper extremity, or of whole hand or of all the fingers; (3) loss of one lower extremity, or of foot or such portion of it as is necessary to erect posture or to walk; (4) functional injuries which may be taken as analogous to loss of parts as described above; (5) total deafness; (6) loss of one eye or of sight in one eye; (7) simple or double inguinal or crural hernia, or any other lesion which will influence the employer to decline to engage the worker for the same sort of work at which he was injured.

A combination of injuries leading separately to partial disability may put the case into the class of total disability if in addition to an injury leading to partial disability other injuries and lesions exist which, according to the following schedule, amount to 50 per cent reduction of ability, or to 42 per cent in a workman over 50 years of age, or to 36 per cent in a workman over 60 years of age. These limits are reduced by 2 per cent for women of all age groups, i. e., to 48 per cent, 40 per cent, and 34 per cent.

The schedule to be used for these calculations is as follows:

PER CENT OF DISABILITY ALLOWED FOR EACH SPECIFIED INJURY IN DETERMINING CASES OF TOTAL DISABILITY WHEN TWO OR MORE INJURIES EXIST.

[Source: Instituto de Reformas Sociales. Legislación del Trabajo, 1905.]

Nature of injury.	Per cent of disability.	Nature of injury.	Per cent of disability.
Loss of—		Loss of—Concluded.	
Right arm (a).....		Ring finger.....	9
Left arm (a).....		Little finger.....	13
Right forearm (a).....		Phalanx of any finger (a).....	6
Left forearm (a).....		Muscle (a).....	
Right hand (a).....		Leg (a).....	
Left hand (a).....		Foot (a).....	
Right thumb (a).....		Toe.....	6
Left thumb.....	30	Vision in either eye (a).....	42
Right index finger.....	24	Total deafness (a).....	
Left index finger.....	18	Loss of hearing in either ear.....	12
Second phalanx of right index finger.....	18	Double inguinal or crural hernia (a).....	18
Second phalanx of left index finger.....	9	Single inguinal or crural hernia (a).....	12
Middle finger.....	9		

a This injury is of itself sufficient to establish the existence of partial disability.

The valuation of the minor accidents is for the purpose of assisting in the determination of total disability.

As shown presently, the determination of the degree of disability must be by mutual consent, and various regulations exist for settling disputes.

In case of death resulting from the accident the employer must meet the burial expenses up to 100 pesetas (\$19.30) and furnish one of the following indemnities: (1) If a widow and children or grandchildren under 16 years survive they receive a sum equal to the average daily wages of the deceased for two years; when among the surviving children under 16 years of age there are some from a previous marriage of the deceased the widow receives one-half of the indemnity, and the other half must be divided equally among the children, the widow receiving the share of her children, while the portion due to the children from the first marriage goes to the person taking charge of them, whether it be the widow or some one else; (2) if only children or grandchildren under 16 years of age survive, a sum equal to the wages for eighteen months; (3) when only a widow without children (this is the language of the law, and it was explained by the royal order of February 25, 1903, that by "without children" was meant "without children under 16") survives, a sum equal to wages for one year; (4) when only dependent parents or grandparents over 60 years of age survive, a sum equal to ten months' wages for two or more survivors, and seven months' wages for one survivor. These death benefits are paid in addition to any allowance for temporary disability made before death ensues.

The employers may substitute the following pensions instead of the death benefits described above, provided they secure the payments to the satisfaction of the injured person or his beneficiaries: (1) A pension of 40 per cent of the annual wages of the deceased when the widow and children or grandchildren under 16 years survive; (2) a pension of 20 per cent to the widow if no children survive; (3) a pension equal to 10 per cent to each dependent relative in an ascending line (parents or grandparents), with a maximum of 30 per cent. The pension to the widow is discontinued at remarriage and to the children at 16 years of age. Nothing is said in the law about pensions instead of indemnity when only children or grandchildren under 16 years of age survive. Such substitution of pensions for lump-sum payments is not permitted in the War and Navy ministries.

All indemnities are to be increased by 50 per cent when the accident happens in an establishment which failed to provide the measures for prevention of accidents required by the law.

Since the amount of compensation depends upon the wages or earnings of the injured, the method of determining them is of great importance. In case of temporary disability the law speaks of daily wages (*jornal diario*); in case of permanent disability, of earnings or salary (*salario*); and in cases of fatal accidents, of average daily earnings (*salario medio diario*). By wages is meant the actual remuneration received by the employee in money, or in any other form, per day, not counting the holidays. By order of November 5, 1902, it

was explained that in cases of permanent disability the actual wages on the day of accident must serve as the basis of computation.

In fatal cases the indemnities to the relatives are computed from the average wages of the deceased. In any case the daily wages must not be considered less than 1.5 pesetas (29 cents), even in case of an apprentice receiving no pay.

The part of remuneration which the employee receives in kind, in lodgings, or in any form must be estimated according to local customary prices. When the wages are contracted for a certain definite task, the average wages for similar work in the same or similar industry must be taken.

In case of enlisted men in the War Department, who do not receive their entire wages in cash, the compensation must be computed from the fair cost of food and clothing in addition to the pay. In case of task wages the computation must be based on the earnings for the preceding fortnight or the average wages of workmen in the same or similar occupation. The minimum daily wage is considered as 1.5 pesetas (29 cents). The same rules apply to the Navy Department.

GOVERNMENTAL SUPERVISION.

Insurance against risks under this law is not compulsory, but various efforts are made to stimulate voluntary insurance, the Government undertaking to exercise careful supervision over the insurance companies. The law permits the employer to transfer any or all obligations to any insurance company or association authorized by the minister of interior to carry such insurance, by paying the cost of such insurance, provided the compensation paid by such insurance company is not lower than that granted by the law. The ministers of war and navy, for whom specified regulations have been issued, are not permitted to insure against the risk of accident indemnities. Insurance organizations, whether mutual societies or stock companies, desiring such authorization by the Ministry of Interior must completely separate the accident insurance business from other insurance business, furnish separate security, accept the requirements of the law in regard to compensation, and furnish to the Government complete reports as to their activity and financial standing.

The accident insurance business is further regulated by the decree of August 27, 1900, and orders of October 16 and November 10, 1900. In applying to the minister of interior for authorization to do accident insurance business the insurance company must furnish a copy of its charter, by-laws, address, names of directors, and amount of capital. A list of authorized companies must be published in the *Gaceta de Madrid* every three months. Reasons for refusing an authorization or for withdrawing it and for excluding an insurance society from the authorized list must be stated in writing, and upon

demand of the insurance company must also be published. A private insurance company must deposit a bond of 225,000 pesetas (\$43,425) with the Ministry of Interior, and a mutual insurance company must deposit 5,000 pesetas (\$965). The bond is reduced in case the insurance company or association has other bonds deposited with the Ministry of Finance as security in other lines of insurance. The bonds may be given in government, bank, railroad, industrial, or other securities or in real-estate mortgages, provided the property is located on the peninsula or in the adjacent isles. When the value of the securities falls 20 per cent below the value when accepted, the bond must be replenished. The company or society must agree to be subject to the special Spanish tribunals for consideration of accident cases. It must furnish its constitution, by-laws, regulations, rates of premiums, rules in regard to formation of reserves, mortality tables, interest tables, tables for computing the reserves for life pensions, annual balance sheets, and complete records of their transactions, which data shall be used for annual publication of reports in regard to accident insurance companies. If practicable, a valuation of all obligations incurred by the insurance companies shall be made every five years. These reports may be verified by the minister of interior as the minister of finance may verify the reports of other insurance companies.

The insurance written by these companies must conform to the demands of the existing laws, especially as to the classes of accidents covered and the form and amount of indemnities. It must not be written at lower rates than those formally in force. Moreover, if the ministry should decide that competition among companies has reduced the rates below a safe level, as shown by the experience of accident insurance companies in other countries, it may legally establish minimum rates. To advise the ministry in this supervision of accident insurance a special commissioner general of insurance (*asesor general de seguros*) is appointed in the ministry and he is to receive as compensation the proceeds of a special annual registry tax, which has been placed at one-tenth of 1 per cent of the amount of bonds deposited with the ministry.

Mutual insurance associations are subject to the same regulations as the stock companies with the important exception of the very great difference in the amount of bond. Mutual associations must contain at least 20 employers and insure at least 1,000 employees. The early regulations required these employers to be in the same branch or at least in similar branches of industry, the grouping in the case of similarity to be determined by the Ministry of Interior until a classification of industries is established. This was declared to be an arbitrary limitation, which permits the federation of mutual associations consisting of many different groups of smaller size as

long as the requirements as to 20 employers and 1,000 employees are fulfilled by the entire association. The members of a mutual association are mutually responsible for the obligation until complete liquidation. They may reinsure the life pensions in any of the recognized insurance stock companies.

PROCEDURE.

Procedure under this act is regulated mainly by the royal decree of July 28, 1900.

Within twenty-four hours from the time of the accident the employer must notify the authorities, in writing, of the accident, giving time and place, name of the injured, his wages, place to which he was taken, names of witnesses, name of the physician who gave the first help, and name of the insurance company if the injured is insured. In case of an accident occurring on board of ship the report must be made within twenty-four hours after arriving at a Spanish port or at a foreign port having a Spanish consul.

When an accident has occurred, the employer is required to furnish immediate medical help and drugs. The first obtainable physician must be called in an emergency, but for subsequent treatment the employer has the right to choose the physician. The name of the physician so selected by the employer must be communicated to the authorities within forty-eight hours. In absence of such report, the physician who is treating the injured employee is assumed to act on behalf of the employer. The employer's physician must be given the same privileges as a court physician if the injured employee is taken to a hospital. The employer's physician must furnish the following certificates: (1) At the time of the accident, whether the injured person has been disabled from performing his work (all the details of the injury to be stated in this certificate); (2) at the time of recovery, with permanent disability, the character and extent of such disability; (3) in case of death, the death certificate, giving the result of autopsy if one was performed.

These certificates are sent by the physician to the employer, who must forward certified copies, each bearing his signature, to the authorities within twenty-four hours. The contents of the certificate of recovery, with degree of permanent disability, must be communicated to the injured person, who may state over his signature on the same certificate whether he agrees with its contents.

In case of disagreement as to the question of complete recovery or the degree of disability, the injured person may designate his own physicians to make a reexamination in conjunction with the employer's physician; all physicians present must fill out a certificate stating either the opinion agreed on or the causes of disagreement. In the case of disagreement three copies of the certificate must be

prepared, one each for the employer, the injured person, and the civil governor of the Province, and the latter shall forward the certificate with all the papers pertaining to the case to the academy of medicine, which renders final decision in the case. The opinion of the academy is communicated to the civil governor and a copy of it is furnished to the employer and to the injured employee. The same procedure is followed when death occurs some time after the accident and doubt is raised whether it was due to the accident. Also a medical examination as to recovery or disability must be made in those cases where criminal prosecution is begun against the employee for criminal negligence or misconduct. If both parties can agree, no intervention of the authorities is required for the settlement of claims. Nevertheless certain necessary formalities must be complied with so that a record of each case may be preserved. The employer is required to notify the authorities as soon as he begins to meet the obligations of the law, and also when the final settlement is made, when a pension is granted, or when the obligations are transferred by insurance. All the conditions must be stated in the report, which must be signed by the claimants or their representatives as evidence of their agreeing to their settlements.

In the capitals of Provinces all reports must be sent directly to the office of the provincial governor or to the local police office. In all other municipalities the reports must be sent to the municipal authorities, who in turn must immediately forward them to the office of the governor. In addition it is required that the records of all cases be kept in the office of the civil governor, whence the statistical information is forwarded to the Ministry of Interior. In normal cases the registration limits the length of governmental interference in the cases.

While the settlement of differences arising out of claims is left to courts, the enforcement of the law and the regulations is in the hands of the civil authorities. When the employer fails to comply with any of the regulations, such as those requiring giving notice of an accident or furnishing medical help, complaints may be brought before the civil authorities. All such complaints are to be made in duplicate, one of which is returned as a receipt to the complainant with the signature of the proper officer.

The local civil authorities, upon receipt of such complaint, must immediately notify the civil governor and call upon the employer for compliance with the demands of the law and the regulations. If such action brings no result within forty-eight hours, the case is to be turned over to the judge of the first instance, who is to enforce compliance with the law. The civil governor is notified of this action. Failing to receive satisfaction from the local authorities, the interested party may appeal from their decision to the civil governor,

and from him to the minister of interior. Complaints arising out of differences of opinion in regard to the amount of compensation, but not out of noncompliance with the law, are to be turned over to the courts of first instance.

In all cases of noncompliance with the demands of the law and the regulations, the government authorities must support the complaints of the workers. Accordingly the local authorities inform the governor of any failure to comply with the law and the regulations, even if the injured employee has entered no complaint, or in case he has complained, if his complaint has not had the desired effect. The governor communicates with the employer and if necessary with the courts. All measures must be reported to the Ministry of Interior, but the ministry does not intervene unless the case reaches it through a complaint from either party or from the lower authorities.

By the original law, until the establishment of special tribunals for adjudication of such disputes, the cases under this act were placed under the jurisdiction of the courts of first instance and made subject to the rules for verbal procedure.

The time limit for entering suit is placed at one year. The employee appearing as plaintiff must be considered as a poor litigant, as far as expenses of litigation are concerned. All contracts waiving the benefits of the compensation act are to be adjudged null and void.

Though ten years have passed since the adoption of the compensation act, the courts of arbitration, consisting of employers and employees, have not yet been organized. On March 13, 1900—i. e., about six weeks after the adoption of the compensation act—a law was passed regulating woman and child labor, and communal and provincial commissions of social reforms were created for purposes of facilitating the administration of this law. The communal commissions were to consist of an equal number of employers and employees, not over six, the local mayor as representative of the civil authority, and a representative of the church. The provincial commissions of social reform consist of delegates from the local commissions, under the chairmanship of the civil governor. These commissions were to be established as a temporary measure until the adoption of a law in regard to the mixed courts of arbitration. Both parties may agree to submit their differences to these commissions in all cases except those involving criminal responsibility for the accident.

The procedure is slightly modified in regard to accidents to workmen employed in these two ministries. Whenever possible, first, an army surgeon, or, second, a navy surgeon, must be called to assist the injured employee of the Ministry of War, and the same rule applies in reversed order to the Ministry of the Navy. In either case a private

physician may be called in an emergency, if necessary. Further treatment must be left to the army or navy surgeon. The injured must enter a military or naval hospital, unless the physician in charge agrees to outside treatment. Refusal to be treated according to the official physician's order leads to loss of right to compensation. The necessary medical certificate is to be made by an army or navy surgeon, and when a disagreement arises between the surgeon and the injured employee as to the medical opinion it may be referred to two other army or navy surgeons, or to a board of two such surgeons and two physicians selected by the injured person. When there is a disagreement, the case is referred to the district military sanitary inspection office, which appoints a board of five with the chief inspector as chairman.

The reports of all accidents are sent to the office of chief of the military district, where a list of them is kept; reports of the cases where indemnity is granted are forwarded to the Ministry of War, and copies are sent to the Ministry of Interior. Applications for relief are made to the military governor and the amount allowed is charged to the appropriation for the work in which the accident has occurred, or to other funds if necessary. In case of disagreement, the injured or his dependents may seek redress before the judge of first instance. Similar rules govern the granting of compensation to employees in the Ministry of the Navy, naval officers being substituted for military officers in the regular procedure. The governors are required to transmit to the Ministry of Interior statistical schedules of accidents and indemnities and to publish annually statistics of industrial accidents. The form of blanks is prescribed. The preliminary report of the accident must be forwarded immediately to the ministry, and the complete statistical reports must be forwarded every three months. The employers are required to furnish all the information necessary for these reports. The duty of publishing these statistics was later transferred to the section of industry and commerce of the Ministry of Agriculture, Industry, Commerce, and Public Works, from which it was again transferred on December 31, 1904, to the Institute of Social Reforms.

PREVENTION OF ACCIDENTS.

A peculiarity of the compensation act is the inclusion in it of the subject of prevention or decrease of accidents, which were claimed to be excessive in Spain because of the inadequate use of methods of prevention.

For this purpose a technical commission was created to consist of one architect and three engineers, two of whom were named by and come from the commission (now institute) of social reforms and one from the Royal Academy of Exact Sciences. The members of this

commission were to serve without compensation. This commission was required to elaborate and present to the Ministry of Interior within four months a list of apparatus and measures for the prevention of accidents. The Government was ordered, after consulting with this commission, to issue regulations for the introduction of measures for the prevention of accidents and the protection of life, safety, and health of the workmen employed. It was further provided that the commission should establish a museum for the preservation of models of such safety appliances and for testing new mechanisms, with the view of including in the list those that proved to be serviceable.

The increase of the amount of compensation by 50 per cent where such required safety appliances have not been used is evidently intended mainly as a measure to stimulate strict compliance with the law.

In advance of the report of the commission the employers were required to use all possible means to insure the security of the worker. All customary precautions were made obligatory, such as railings on scaffolds, fences around wells, shafts, and ditches, signals when lighting fuses, brakes for elevators and transportation machinery, and similar appliances for new work and processes. Such appliances must be constructed with the purpose of protecting the worker against the consequences of ordinary carelessness which is the necessary result of continuous performance of dangerous work. In addition, the usual health and sanitary regulations must be complied with, and also the special orders of similar nature promulgated by the technical commission. Use of deficient machinery and appliances, execution of work with an insufficient working force or insufficient material, as well as intrusting unfit persons with dangerous work without giving them proper directions, shall be considered as negligence. Special care in complying with the regulations as to the safety appliances is demanded when children are employed in the establishments.

The list of safety appliances was published. It consists of six chapters, giving the required appliances for factories and workshops, construction, building, mining, generation and transmission of electricity, and commercial establishments and warehouses.

STATISTICS OF OPERATIONS.

Little information concerning the results of the application of the act of 1900 can be obtained, because statistical data are meager. The General Association of Insurance Companies published the following data concerning the number of cases compensated and the amount of compensation paid. It is probable that this table is far from being complete, but it is probably sufficiently accurate for the

purpose of showing the total and the average amounts of compensation, which amounts appear to be extremely small. The amounts expressed in Spanish denominations of pesetas were converted at the normal rate of 19.3 cents. As a matter of fact, however, the value of the Spanish peseta fluctuates between 14 and 17 cents, so the compensation is even smaller than shown in the table.

NUMBER OF ACCIDENTS TO WAGE-EARNERS AND COMPENSATION PAID, BY RESULTS OF ACCIDENTS AND YEARS, 1902 TO 1906.

[Source: Proyecto de Reforma de la Ley de Accidentes del Trabajo de 30 de Enero de 1900 (Instituto de Reformas Sociales, Sección Primera), 1908, pp. 718-719.]

Result of accident and year.	Number of accidents.	Compensation paid.	
		Total.	Per case.
Fatal:			
1902	162	\$42,874.54	\$264.66
1903	239	54,283.78	227.13
1904	244	59,003.52	241.82
1905	162	43,385.18	267.81
1906	158	32,216.42	203.90
Average for 5 years	193	46,352.69	240.17
Total permanent disability:			
1902	46	14,412.61	313.32
1903	38	10,662.34	280.59
1904	35	9,989.36	285.41
1905	73	25,529.89	349.72
1906	86	12,559.87	146.05
Average for 5 years	56	14,630.81	263.14
Partial permanent disability:			
1902	187	33,410.97	178.67
1903	325	54,686.09	168.26
1904	446	76,694.37	171.96
1905	395	61,167.00	154.85
1906	443	59,114.41	133.44
Average for 5 years	359	57,014.57	158.73
Temporary disability:			
1902	27,586	140,236.17	5.08
1903	31,388	173,618.03	5.53
1904	33,444	197,452.79	5.90
1905	26,686	175,541.43	6.58
1906	31,501	181,470.10	5.76
Average for 5 years	30,121	173,663.70	5.77
Total accidents:			
1902	27,981	230,934.29	8.25
1903	31,990	293,250.24	9.17
1904	34,169	343,140.04	10.04
1905	27,316	305,623.50	11.19
1906	32,188	285,360.80	8.87
Average for 5 years	30,729	291,661.77	9.49

If the data of this table are accurate, it is significant that the number of accidents each year does not show the tendency to increase that is shown in most countries under the influence of a compensation law.

These data include only accidents reported to insurance institutions. Since 1902 the Institute of Social Reforms has published annual accident statistics, which are on the whole less complete than the data of the insurance companies. For 1906 and 1907, these reports

state the number of accidents compensated by the employers directly and those compensated by the insurance companies. By reference to the data for these years, an approximate idea may be obtained of the extent of accident insurance practice by the Spanish employers. Of the cases in 1906 definitely reporting, 38.1 per cent were compensated by the employers, and 61.9 per cent by the insurance companies; in 1907, there were compensated 36.5 per cent by the employers and 63.5 per cent by the insurance companies.

NUMBER OF CASES OF ACCIDENTS COMPENSATED BY EMPLOYERS AND BY INSURANCE COMPANIES, BY RESULTS, 1906 AND 1907.

[Source: Instituto de Reformas Sociales. Estadística de los Accidentes del Trabajo ocurridos en los años 1906 y 1907.]

By whom compensated.	Cases of accident resulting in—			Total.
	Tempo- rary disa- bility.	Perma- nent disa- bility.	Death.	
1906.				
Employer.....	6,992	36	72	7,100
Insurance company.....	11,469	26	33	11,528
Not reported.....	4,172	17	69	4,258
Total.....	22,633	79	174	^a 22,886
1907.				
Employer.....	8,428	59	89	8,576
Insurance company.....	14,819	34	43	14,896
Not reported.....	6,917	8	75	^b 7,000
Total.....	30,164	101	207	30,472

^a Not including 1,639 cases not compensated.

^b Probably includes the cases not compensated.

It appears from the above data that insurance against accidents, though voluntary, became popular among the employers under the pressure of the law. No sooner were the law and the regulations promulgated than the insurance companies, both the domestic and foreign (French, Italian, and Swiss), reached out for the new business. During the first year of the application of the law 3,262 insurance contracts were issued, insuring 123,597 employees and collecting in premiums 678,569 pesetas (\$130,963.82). By 1906 ten private societies were inscribed in the authorized list of the private insurance companies. Because of the anxiety to acquire this new business the insurance rates were often reduced so low that it was not long before demands were made for establishing minimum rates through governmental regulation to secure the solvency of the accident insurance companies. Mutual associations also began to form, and by 1906 their number equaled that of the private insurance companies; but the number of workmen insured in these mutual associations is small, the number of compensated cases in 1906 amounting to only 2,054, or a little over 6 per cent of the total number.

The data of the insurance companies show that the highest amount of compensation paid was in 1904, when it reached 1,777,929 pesetas

(\$343,140). A rough estimate of 50 per cent of this sum, or 889,000 pesetas (\$171,577), for the cases not insured would bring the total cost up to about 2,667,000 pesetas (\$515,000) in round numbers. The high cost of insurance and the failure of mutual insurance societies to compete successfully with the private insurance companies would probably increase this amount. In the proposed reform of the law the encouragement of the mutual insurance companies occupies a prominent position.

PROPOSED REFORMS.

REPORT OF THE LABOR DELEGATES.

The movement for the revision of the compensation act of 1900 became noticeable in 1904, when the labor delegates of the Institute of Social Reforms presented the above-mentioned memorial, and after more than three years of preparatory work the institute on July 4, 1907, published a draft of a new bill for presentation to the Government. The report of the labor delegates took up each article of the law of 1900 for consideration and suggested the following modifications:

(1) The delegates claimed that the wording of the law of 1900 embraced all bodily injury done to the workman, i. e., not only accidental injuries, but also occupational diseases, and asked for specific changes in the language of the law to clear away possible doubts.

(2) In view of the adverse decision of the courts they asked for a clear statement that where the employee contracted not only for his own wages but for those of his assistant or partner he should be considered an employee and not a contractor.

(3) Again, in view of the adverse decision of the supreme court as to the compensation in cases of ordinary negligence the memorial asked for an explicit declaration that trade negligence, or that which follows habitual exercise of any occupation, should not relieve the employer from his obligation. Only ordinary negligence is mentioned; by implication cases of gross negligence are left out of consideration, though in the language of the original law nothing was said of cases where the employers were relieved of their obligations because of the negligence of the employee.

(4) The report energetically protested against the injustice of granting the right of compensation to certain classes of employees and denying it to others; especially against leaving out agricultural laborers; it suggested that all industries and branches of work be covered by the law.

(5) In cases of temporary disability an allowance of half the daily wage is granted by the law; the question of holidays remained

open and was by the order of November 5, 1902, decided in favor of paying the allowance for the holidays as well. The labor delegates asked that this order be embodied in the law.

(6) In case of partial permanent disability the law permits the employer to substitute reemployment at the old rate of wages for a money compensation. In the report the possibilities of abuse of this method are claimed to be self-evident, and the exclusion of this clause was suggested.

(7) In furnishing medical help and drugs the law permits the employer to choose the physician and the drug store. Only in case of disagreement as to the medical opinion does the workman have the right to choose his physician as one of the referees. In the opinion of the labor delegates the employee should have a right to have a physician at his own expense in addition to the employer's physician from the beginning of the illness. The employer having the right to select the drug store is often guided by considerations of cheapness rather than of quality. The injured employee should have the right to select the pharmacy most convenient to him. The medical certificate as to cure or permanent disability is necessary for entering the claim. The employer's physician by delaying the issue of the certificate may seriously inconvenience the employee. To remedy this, the law should demand the issue of the certificate on the same day on which the treatment is discontinued and make the failure to do so the presumption that medical treatment was necessary until the certificate was issued by this or another physician.

(8) In stating the compensation to the descendants of the deceased employee the law specifically mentions legitimate children. This was stated to be at variance with the elementary principle of justice, and the removal of this qualification was strongly urged, so that the protection be extended equally to the natural children of the victim.

(9) The age limit of 16 years for children receiving compensation or pension was also criticized. It was pointed out that the children of deceased public officials are entitled to pension until 22 years of age, and the same age limit was suggested for the children of employees killed by accidents.

(10) While the compensation to a widow with children is equal to two years' salary, when only children or grandchildren survive the compensation is reduced to eighteen months. The labor delegates claimed that orphans were more helpless alone than when one of their parents survived, and that they should therefore be entitled to the same compensation as the widow.

(11) Relatives in an ascending line are granted compensation only when over 60 years of age and if dependent. Both of these

qualifications were claimed to be unnecessary and cause hardships, because a single worker, living with his parents, usually assisted them financially in some degree, and to that degree they were dependent upon him; the age of the parents was also of little importance as long as the fatal accident caused them a perceptible financial loss.

(12) Approving the measures for prevention of accidents, among others the preparation of the catalogue of safety appliances, the labor delegates suggested that in view of the rapid progress of technical knowledge the technical commission should publish an annual report.

(13) While approving the design of the law to stimulate accident insurance, the labor delegates criticised severely the provision of the law which relieves the insured employer of his responsibility, because the insurance companies were usually practicing a policy of delay to force the injured employee to agree to a peaceful agreement on terms unprofitable to him. Since the insurance contract is a transaction between the insurance company and the employer, the employee, not being a party to the agreement, should not be made to lose any rights thereby. The insurance company should be required to satisfy the claim within forty-eight hours after the disability is determined, barring which the employee should have the right to sue either his employer or the insurance company.

(14) The adjudication of these cases arising under the law is left to the ordinary courts of first instance (until the special tribunals be established), and the supreme court has ruled that in accordance with the Civil Code the defendant must be sued at the place of his residence, which in case of both the insurance company and the individual employer is often distant from the location of the establishment and therefore makes the prosecution of the suit almost impossible for the destitute employee. It was suggested by the delegates that these cases be put under the jurisdiction of the judge of the locality where the accident occurs.

(15) Under the law claims may be made within one year from the date of the accident. Meanwhile suits may be instituted by either side because of the alleged criminal responsibility for the accident. As the claim for compensation must be settled with reference to the sentence in the criminal proceedings, the term of one year must be exclusive of the time taken in these criminal proceedings. Again, the employer may neglect to make the required immediate report of the accident, which neglect delays the judicial action. The year should therefore be counted from the day of making the report.

(16) The law is explicit in declaring all agreements or contracts renouncing the benefits of the law as null and void, but some courts have interpreted this rule to mean only such agreements as have been made before the accident occurred. It was therefore sug-

gested that such changes be made in the wording of the law as would make clear that all such agreements were null and void, whether entered into before or after the accident.

(17) The report concluded this long list of amendments with an earnest plea in favor of supplementing the existing legislation by some provision for guaranteeing the payments. The absence of such guarantee was termed an inexplicable omission and the consequences as very detrimental to the interest of the workmen. Reviewing the various methods adopted by the several European Governments, the labor delegates found fault with the French system of a special guarantee fund, which makes the responsible employer meet the burden evaded by the irresponsible one; they discarded the Belgian system because it stimulates the commercial insurance companies that carry accident insurance mainly for the profit to be derived from it; they found the German system of obligatory insurance in industrial associations the most satisfactory one, but admitted that Spanish industry was not yet prepared for such an organization. But holding mutual insurance associations preferable to private insurance companies, for both the employer and the employee, the labor delegates devised and proposed a rather complicated system, which would give the employer a choice between forming mutual associations or contributing a small special tax. The latter was to form a fund, from which the compensation would be paid by the State to the victims of accidents or to their dependents. This plan was to be put in operation when the compensation could not be collected in any other way.

BILL OF THE INSTITUTE OF SOCIAL REFORMS, OF 1907.

The report of the labor delegates served as a basis for consideration of the law by various divisions of the Institute of Social Reforms and many of the suggestions made by the labor delegates were embodied in the final draft approved by the institute on June 28, 1907.

The following changes recommended by labor delegates were practically adopted by the institute without any changes, except in a few cases as to phraseology (the numbers being as in the preceding list of seventeen): (2) That an employee who contracts also for the wages of his helper or partner is not to be considered an employer, and is not to be deprived, therefore, of his right to compensation; (3) that accidents due to trade negligence be not excepted; (5) that in compensating for temporary disability by a per diem allowance the holidays be included; (6) the permission to substitute reemployment at the old wages for the legal compensation due for permanent partial disability is withdrawn; (8) illegitimate children are recognized; (10) children left orphans after death of

father from an accident receive the full two years' pension; (11) parents or grandparents need not be over 60 years of age or prove their dependence to receive compensation; (14) the place of suing is to be the same as the locality where the accident occurred; (15) the extension of the period of limitation in those cases where criminal proceedings are instituted is agreed to; (16) agreements renouncing any benefits or rights under the law are declared to be null and void even if entered into after the accident.

In addition a few other changes, almost all favorable to the interests of the employees, are embodied in the final draft of the institute. Thus, the person who accepts large contracts for work is to be considered the employer and be held responsible, nevertheless it is specifically provided that the liability of the original proprietor of the establishment continues, though subsidiary to the responsibility of the contractor. Workmen employed in a supervisory capacity, but not receiving more than 10 pesetas (\$1.93) per day in wages, and apprentices also are included among the classes of employees entitled to compensation. In the case of the apprentices such inclusion was ordered by the regulations, but it is now included in the text of the proposed law. The benefits of the law are also extended by this draft to foreign employees working in Spain.

The rights of the children of a female employee who is killed by accident are extended. Under existing law they are entitled to compensation only in case they have no father, or have been abandoned. These limitations are dropped from the new bill. Under existing law the widower is not entitled to any compensation for the death of his wife in consequence of an accident. The new draft proposes to give compensation to the widower who, during the life of his wife, depended upon her for support.

Though the institute suggested essential reforms in regard to the methods of determining the rate of wages, the final draft has not gone beyond including in the text of the law a few of the provisions of the "regulations," namely, that in this computation all forms of remuneration besides money wages must be taken into consideration, such as food, lodging, premiums, tips, etc., though only such additional remunerations must be considered which are normal in their character.

The changes suggested by the labor delegates were carefully discussed and modified in many particulars before the recommendations were given their final form.

OCCUPATIONAL DISEASES.—The suggestion of the labor delegates that the law cover all the occupational diseases, defined as all lesions which the workman may suffer because of the habitual exercise of his occupation, met with strong opposition. The economic section of the Institute of Social Reforms pointed out that such diseases, gradually

acquired, belonged to the domain of invalidity insurance, rather than that of compensation of employees for accidents, and offered an amendment, by which only diseases acquired in an immediate, direct, and certain manner be classed with industrial accidents. The legal section of the institute approved this amendment, claiming that it was not new legislation, but simply an interpretation by the supreme tribunal embodied in the text of the law. In the general session of the institute it was decided to eliminate this amendment and leave the text of the law in its original form.

EMPLOYMENTS COVERED.—The demand of the labor delegates that all employment be covered by the law, and no exceptions be made, was thought too sweeping. The claim was made that the law was in its experimental stage, and that it was preferable to extend its applications gradually, though it was admitted that such extensions were possible and desirable. The greatest opposition was aroused by the demand for the inclusion of the agricultural laborers, whom the labor delegates thought especially in need of protection. While this need was not denied, many difficulties were held to be in the way of realizing this plan, such as the general backward condition of Spanish agriculture and its consequent inability to meet the additional cost of such compensation, as well as the difficulty of differentiating between the class of employers and that of employees in Spanish agriculture with its predominant class of very small holdings. The economic section of the institute argued that the extension of the law to all agricultural employment would be possible only under a system of compulsory insurance, for which the Spanish rural population was not yet prepared. It proposed, therefore, to substitute gradual extensions for the sweeping inclusion of all agricultural employment. As the existing law already includes accidents arising from the handling of agricultural machinery working with mechanical power, the next proper step was to include all employees in large agricultural holdings on which at least six persons are permanently employed. Further extension of the law to mercantile establishments and to office employees of industrial establishments was also admitted to be feasible. The economic section suggested the following extensions: (a) Coke ovens and all establishments in which the products of mines and quarries are worked up; (b) glass factories; (c) chemical works, tobacco factories, and the manufacture of mineral and effervescent waters; (d) leveling and paving of streets; (e) mercantile establishments employing more than three persons; (f) agricultural, forestry, and fishery establishments employing constantly more than six persons; (g) employees in offices and stores of manufacturing and industrial establishments receiving less than 2,000 pesetas (\$386), when injured in consequence of the usual work in such establishments. In the final draft of the institute this list

was somewhat further extended by including all mercantile establishments, irrespective of the number of employees. The specific mention of all special branches of manufacturing industry, not only those suggested by the economic section but also those contained in the original law, was eliminated by substituting the general formula: "All factories, mills, and manufacturing establishments," while in the law of 1900 only those factories, mills, and manufacturing establishments are included which utilize mechanical power. In addition to this formula many separate branches of industry were included.

The question of extending the provisions of the law to agricultural workers was considered of such importance that a special investigation of the problem was undertaken by the institute. This report will be discussed later.

MEDICAL HELP.—The suggestion of the labor delegates as to the right of the injured workman to have his own physician and choose his own drug store was adopted by the institute with the limitation of the choice to such drug stores as were willing to charge according to the low prices established by the charity authorities.

AGE OF ORPHANS.—The desire of the labor delegates to extend the compensation to the children under the age of 22 years of a fatally injured employee was considered excessive, and in the institute's draft all children under 18 years of age or those incapacitated from earning a livelihood are included.

THE PREVENTION OF ACCIDENTS.—In the part of the law referring to the prevention of industrial accidents few changes were proposed by the labor delegates, but the Institute of Social Reforms proposed extensive changes in regard to the organization of the technical commission, which was founded by the law of 1900 before the Institute of Social Reforms. The essence of these changes consists in requiring this commission to report to the Institute of Social Reforms, to cooperate with the Royal Sanitary Council or the Academy of Medicine in all matters concerning industrial hygiene, and to intrust to the Institute of Social Reforms the administration of the law, and to organize an inspection service in the institute, providing administrative penalties for the infraction of the law.

INSURANCE.—The objection of the labor delegates to the employer being relieved of his obligation through insurance was sustained by the institute after considerable discussion, and the injured workman is to be given the right to sue his employer directly, even if the employer has insured his employees.

Perhaps the most important question is that of compulsory insurance or some other means by which the payment of an indemnity may be guaranteed. The plan for semiobligatory mutual insured suggested by the labor delegates was not accepted by the Institute

of Social Reforms. The economic section admitted the necessity of guarantee and the advantages of a system of insurance over any other method, but thought the time premature for a system of obligatory insurance similar to that of Germany, and suggested the following basis for the elaboration of a guarantee system:

(1) The employer must guarantee the payment of the indemnity; (2) by insuring either in a private commercial insurance company or in a mutual insurance association, or becoming his own insurer. (3) The Government shall determine the guarantee to be furnished by private or mutual insurance companies. (4) To become his own insurer, the employer must have a special authorization from the Government, which requires a bond, the amount depending upon the number of workmen and the size of the establishment. (5) The Government may order the organization of a mutual insurance association for a certain industry or group of industries. (6) All mutual insurance associations shall be free from all taxes. (7) Employers refusing to insure their workmen must pay a special tax, to be determined every three years by the Government for each industry. (8) A national industrial accident insurance fund should be established, made up of (a) these special taxes, (b) state subsidy if necessary, (c) fines for infringement of the insurance law, and (d) other miscellaneous sources. (9) The national fund pays the compensation due under this law in case of insolvency of the noninsured employer or that of the insurer. It may make an effort to collect this from the insolvent parties, and its claim shall have preference over other claims.

This system, proposed by the economic section of the institute, came close to a system of compulsory insurance. The cost of the state guarantee was placed primarily upon those employers who do not insure their workmen. This plan did not meet in its entirety with the approval of the institute. The final recommendations of the institute consist of the provisions of the existing law in regard to voluntary insurance, either in private or mutual insurance companies; the conditions prescribed in the regulations of July 28, 1900, are embodied in the law in regard to guarantee deposits; to this is added the establishment of a general guarantee fund, but indemnities only for death or total permanent disability are to be paid out of this fund. This fund shall be supported by a small tax upon manufacturing and mining establishments in general. The management of this guarantee fund and the general supervision of mutual accident insurance is to be intrusted to a special section in the National Institute of Savings.

The bill prepared by the Institute of Social Reforms, practically without change, was introduced in the Cortes by the minister of the interior on July 16, 1910.

EXTENSION TO AGRICULTURE.

The most important question in connection with the reform of the compensation law of 1900 was admitted to be its possible extension to agriculture, in view of its predominating importance in the economic life of Spain. While the draft of the bill approved by the institute limited the extension of the provisions of the law to those agricultural establishments employing permanently more than six persons, it is not looked upon as a final solution of the problem, as petty holdings predominate in Spain over large estates, the more so that the same draft has waved aside the distinction between large and small industrial establishments, existing in the present law, and recommended the extension of compensation to all manufacturing industry. The economic section of the institute was therefore empowered to make a thorough study of the conditions under which the compensation principle might be made applicable to all agriculture. The section has recently published the results of its studies, having examined all the existing legislation and legislative proposals of all countries regarding this question. Briefly, the conclusions are as follows: The extension of the compensation law to the smallest agricultural establishments does not present any insurmountable difficulties, though some modifications will have to be introduced. The section reiterated its conviction that a system of obligatory insurance, similar to that of Germany, would be best adapted to the needs of agriculture, and to petty industry in general; it could include all agricultural laborers, as well as those owning or renting small parcels of lands, and would not only provide an absolute guarantee and relieve the small employer of the danger of heavy cost for accident, but simplify the difficulty of differentiating between the employer and workman in petty agriculture. As, however, the institute has refused to indorse the principle of obligatory insurance in its entirety, the section suggests the alternative of voluntary insurance with the exception of compensation and medical help in temporary disability. For this a system of obligatory mutual insurance is deemed necessary, in view of the peculiarities of rural life in Spain, which makes control of cases of temporary disability and the prevention of abuses impossible without some system of cooperation by mutual insurance associations. Aside from this, the other adjustments recommended for the application of the law to the needs of agricultural establishments were of a minor nature.

STATISTICS OF INDUSTRIAL ACCIDENTS.

In Spain statistics of accidents are gathered only in connection with the compensation act, and that act does not cover all industries; in some branches of industrial activity, for instance in agriculture, the proportion of wage-workers included is comparatively small. An

important limitation of their value consists in the fact that in the absence of statistics of occupations and manufactures for Spain and of the number of workmen in each branch of industry, and especially in those establishments which are subject to the compensation act, it is impossible to compute the rate of accidents either for the industry as a whole or for any branch of the industry. The Institute of Social Reforms, recognizing the importance of such a basis for computations, has made an effort to organize a provisional enumeration of employees in establishments, and in the reports of accidents for 1907 an attempt has been made to compute the rate of accidents.

In addition to these limitations, the collection of statistical data is incomplete, according to the statements made by the institute in its reports. This institute was established by the decree of April 23, 1903, and among other duties was charged with the computation and publication of statistics of industrial accidents. The first report covers the year 1904. Previously these statistics were published by the section of commerce and industry of the Ministry of Agriculture, Industry, Commerce, and Public Works. According to the reports published by the institute there were registered in 1901 13,516 accidents and in 1902 32,343 accidents, the increase evidently being due to improvements in methods of reporting. During the five years, 1904 to 1908, for which statistics have been published by the institute, the number of accidents recorded was as follows: In 1904, 14,363; in 1905, 23,008; in 1906, 24,525; in 1907, 30,472; and in 1908, 25,505. In the three earlier reports complaints are made about the failure of many provincial governors to forward the necessary statistical reports, and it is stated that many accidents are not reported even to the local authorities. The data for the year 1907 only are claimed to be fairly complete and on the whole satisfactory. The decline in the number of accidents recorded in 1908 is partly due to the failure of the Province of Madrid to send in its report, except for the first six months, and so all accidents for that province were excluded. During the first six months 1,757 accidents were recorded in that Province, and during the whole of the preceding year 3,575 accidents were recorded; but even if this number is added to the number recorded in 1908 the total is far below 36,976, which was given for this year in the official report of the insurance companies. These data may be partly checked by the reports published by the General Association of Insurance Companies, although those reports are also incomplete, by reason of the fact that some proportion of the wage-earners remains uninsured. The table on page 2340, giving the data for the five years from 1902 to 1906 shows a larger number of accidents for 1904, 1905, and 1906 than do the official statistics.

In the later year the difference was not so great, but it was still in favor of the reports of the insurance association. It is probable that

the official record for 1904 includes only about one-third of all the accidents, those for 1905 and 1906 are still incomplete, and only those for 1907 are fairly complete. This limits the value of the data for comparative purposes.

The distribution of the accidents by age and sex of employees is shown in the following table. The small number of female employees injured is probably due to the slight participation of women in Spain in industry, though statistical data for a determination of this fact are lacking. Less than 3 per cent of the injured were of the female sex in the year 1907.

EMPLOYEES INJURED IN INDUSTRIAL ACCIDENTS, BY SEX AND AGE, 1904 TO 1908.

[Source: Instituto de Reformas Sociales. Estadística de los Accidentes del Trabajo ocurridos en los años 1904-1908. Boletín del Instituto de Reformas Sociales, 1911.]

Sex and age.	Number of employees injured in—					
	1904.	1905.	1906.	1907.	1908.(a)	1909.
MALES.						
10 and under 14 years	174	276	395	662	544	531
14 and under 16 years	752	1,212	1,249	1,825	1,507	1,686
16 and under 18 years	1,235	1,842	1,817	2,337	1,927	2,273
18 and under 40 years	11,718	14,407	15,693	19,140	16,188	18,315
40 and under 60 years		4,126	4,245	5,017	4,156	4,652
60 years and over	95	263	263	310	233	205
Age unknown		282	297	272	127	421
Total	13,974	22,408	23,959	b 29,567	24,682	28,083
FEMALES.						
10 and under 14 years	37	24	29	90	63	70
14 and under 16 years	78	95	89	163	173	122
16 and under 18 years	80	108	107	155	139	132
18 and under 40 years	192	292	257	412	348	395
40 and under 60 years		64	67	74	86	91
60 years and over	2	13	10	8	14	9
Age unknown		4	7	3	.....	42
Total	389	600	566	905	823	861
BOTH SEXES.						
10 and under 14 years	211	300	424	752	607	601
14 and under 16 years	830	1,307	1,338	1,985	1,680	1,808
16 and under 18 years	1,315	1,950	1,924	2,492	2,066	2,405
18 and under 40 years	11,910	14,699	15,950	19,552	16,536	18,710
40 and under 60 years		4,190	4,312	5,091	4,242	4,743
60 years and over	97	276	273	318	247	214
Age unknown		286	304	275	127	463
Total	14,363	23,068	24,525	b 30,472	25,505	28,944

a Not including the Province of Madrid.

b This total is not the correct sum of the items; the figures are given as shown in the original report.

The distribution of accidents by industries is shown in the following table, where the industries are arranged according to the number of accidents in 1907. Transportation, mines, etc., and the iron and steel industry together claim more than one-half of the accidents occurring during the five-year period.

NUMBER OF ACCIDENTS, BY INDUSTRIES, 1904 TO 1908.

[Source: Instituto de Reformas Sociales. Estadística de los Accidentes del Trabajo ocurridos en los años 1904-1908. Boletín del Instituto de Reformas Sociales, 1911.]

Industry.	Number of accidents in—					
	1904.	1905.	1906.	1907.	1908.(a)	1909.
Mines, salt mines, and quarries.....	2,794	4,276	5,116	6,760	5,921	7,286
Transportation.....	2,508	4,614	5,010	6,635	6,333	6,443
Iron and other metal manufactories.....	1,979	2,330	3,529	5,186	4,820	4,952
Construction work.....	1,473	3,271	3,618	3,231	2,280	2,721
Food products.....	510	1,154	1,115	1,564	1,367	1,518
Woodworking.....	957	1,185	1,024	1,146	1,119	1,309
Textiles.....	261	456	516	1,128	826	814
State and municipal service.....	151	483	417	704	452	468
Chemical industry.....	279	540	420	504	509	909
Electrical industry.....	213	243	208	347	270	260
Forestry and agriculture.....	200	157	242	250	274	386
Leather and hides.....	65	82	76	210	142	76
Paper and cardboard.....	163	266	162	127	103	119
Printing.....	38	92	66	107	87	101
Metallurgical establishments.....	1,280	1,897	540	102	11	.....
Tobacco.....	82	131	112	76	75	91
Clothing.....	66	81	50	35	32	25
All other and unknown.....	1,338	1,750	2,244	2,360	814	1,466
Total.....	14,363	23,008	24,525	30,472	25,505	28,944

a Not including the Province of Madrid.

b This total is not the correct sum of the items; the figures are given as shown in the original report.

The reports also include tables classifying the accidents by causes, but these tables are not entirely satisfactory and they are not reproduced for the reason that in the vast majority of cases the cause is not stated; thus in 1907, out of 30,472 accidents, 17,704, or 58.1 per cent, were reported as due to various causes, and 7,329, or 24.1 per cent, as due to unknown causes, leaving only 17.8 per cent of the cases for which the cause is stated. Of the accidents recorded in 1908, the cause was stated for only 7,555, or 29.6 per cent; and in 1909, for only 6,811 out of 28,944, or 23.5 per cent.

The data in regard to the results of the accidents are also unsatisfactory, as all injuries are classified in 7 large groups: (1) Fatal cases, (2) those producing total and (3) those producing partial permanent disability, (4) grave injuries, (5) light injuries, (6) injuries for which the classification is reserved, and (7) injuries the results of which are unknown. These data are presented in the following table. The striking feature of this table is the small number of cases of permanent disability and the large proportion of the light injury cases. The latter is explained in the report as due to the absence of a strict definition of an accident in the law, resulting in many minor injuries being reported. On the other hand, the small number of permanently though partially disabled is probably explained by the limited class of injuries which are recognized by the law of 1900 as leading to permanent disability.

NUMBER OF ACCIDENTS, CLASSIFIED BY RESULTS OF INJURIES, 1904 TO 1908.

[Source: Instituto de Reformas Sociales. Estadística de los Accidentes del Trabajo ocurridos en los años 1904-1908. Boletín del Instituto de Reformas Sociales, 1911.]

Year.	Light injuries.	Grave injuries.	Injuries as to the nature of which opinion is reserved.	Injuries of unknown result.	Injuries resulting in permanent disability.		Injuries resulting fatally.	Total.
					Partial.	Total.		
1904.....	13,008	224	895	.....	(a)	b 35	236	c 14,363
1905.....	19,177	475	976	2,155	21	20	225	c 23,008
1906.....	22,187	483	874	805	56	26	176	c 24,525
1907.....	28,062	376	1,043	783	80	19	207	c 30,472
1908 (d).....	22,506	477	1,365	979	69	4	178	c 25,505
1909.....	27,274	256	701	501	e 71	(f)	210	c 28,944

a Included with Injuries resulting in total permanent disability.

b Including Injuries resulting in partial permanent disability.

c This total is not the correct sum of the items; the figures are given as found in the original report.

d Not including the Province of Madrid.

e Including Injuries resulting in total permanent disability.

f Included in injuries resulting in partial permanent disability.

The reports indicate a decline in the number of fatal cases and in their proportion to the total number of accidents, which in 1904 was 1.64 per cent and in 1908 0.70 per cent. While this may in part be due to the better reporting of minor accidents, there has been an actual decline in the number of fatalities from 236 in 1904 to 207 in 1907. For 1908 the data are unfortunately incomplete, because the accidents in Madrid were not tabulated; but excluding the 14 fatal cases in Madrid in 1907 there still seems to be a decline from 193 to 178.

The distribution of the accidents by the day of the week are available only since 1906. As shown in the table following, the greatest number of accidents takes place on Monday. The number gradually falls toward the middle of the week, but rises again at the end of the week.

NUMBER AND RELATIVE FREQUENCY OF ACCIDENTS, BY DAYS OF THE WEEK, 1906 TO 1908.

[Source: Instituto de Reformas Sociales. Estadística de los Accidentes del Trabajo ocurridos en los años 1906-1908. Boletín del Instituto de Reformas Sociales, 1911. In computing the relative number the average number of accidents per day was used as a base.]

Day of week.	1906.		1907.		1908. (a)		1909.	
	Number of accidents.	Relative number.	Number of accidents.	Relative number.	Number of accidents.	Relative number.	Number of accidents.	Relative number.
Monday.....	2,989	120.4	4,838	113.3	4,174	114.9	4,707	114.1
Tuesday.....	2,751	110.8	4,764	111.5	4,011	110.4	4,583	111.1
Wednesday.....	2,642	106.4	4,663	109.2	3,980	109.6	4,513	109.4
Thursday.....	2,584	104.1	4,482	104.9	3,987	109.8	4,418	107.1
Friday.....	2,565	103.3	4,529	106.0	3,908	107.6	4,447	107.8
Saturday.....	2,739	110.3	4,740	111.0	3,884	106.9	4,576	110.9
Sunday.....	1,107	44.6	1,878	44.0	1,483	40.8	1,631	39.5
Total.....	17,377	.....	29,894	.....	25,427	.....	28,875	.....
Unknown.....	7,148	.....	578	.....	78	.....	69	.....
Grand total....	24,525	.....	30,472	.....	25,505	.....	28,944	.....

a Not including the Province of Madrid.

SICKNESS INSURANCE.

Sickness insurance of workmen is comparatively new in Spain. The progress made so far is due to private or cooperative efforts, without any interference, assistance, or regulation from the Government. There are hospitals and similar institutions for treatment of the poor, which are supported either by public or private charity and which do not make any special regulations for the wage-working population. As these establishments belong to the field of charity rather than of labor insurance, they will not be treated here. The existing institutions for medical or financial assistance during illness, which are organized more or less upon an insurance basis, may be classified in three groups: (1) The commercial sickness insurance companies; (2) the mutual sick benefit societies; and (3) the establishment funds.

COMMERCIAL INSURANCE COMPANIES.

Commercial organizations of sickness insurance confine their operations to the field of medical aid, and while not limited to wage-earners, they have become popular principally among this class, being organized mainly in the large cities and among people of small means who desire to escape the expense of private medical advice.

The plan of these sickness insurance companies is in some features similar to that adopted by various religious and fraternal associations in the United States. The insured secures free medical advice and drugs for a stipulated fee, which usually amounts to 1 peseta (19.3 cents) per month for a single member and 2 pesetas (38.6 cents) for a family. There is this difference, however, that instead of a physician or druggist being hired by a club or lodge under direct contract, they are hired usually at a much lower rate of remuneration by the managers of the insurance company, who derive large profits from the position of intermediaries between the insured and the physicians. The popularity of this form of insurance may be judged from the following figures. An official investigation in 1903 showed 30 such companies in Madrid alone. Of these, 21 reported their membership, which aggregated 35,434 families, with 141,736 persons insured and a gross income of over 1,000,000 pesetas (\$193,000) and net profits of 478,368 pesetas (\$92,325.02), or about 48 per cent of the gross income.^(a) Under such conditions many evils manifested themselves, such as an insufficient number of physicians, who received very low remuneration and who furnished hasty medical advice as well as adulterated drugs.

^a Les assurances sociales en Espagne, par Alvaro Lopez Nunez. (Congrès International des Assurances Sociales. 8^{me} session, Rome, October, 1908.)

These evils called forth, in 1903, the above-mentioned official investigation by the General Bureau of Health of the Ministry of Interior, which was carried on by several prominent professional men, physicians, and druggists. The report of this investigation subjected these insurance companies to severe criticism. As a result of this criticism the popularity of this form of insurance received a severe blow from which it is only now slowly recovering. Many of the small institutions suspended. Others have improved their methods, carrying out the provision of several regulating orders, such as the order of July 3, 1907, placing the maximum number of families to be attended by one physician at 150.

MUTUAL BENEFIT SOCIETIES.

Mutual benefit societies of workmen (industrial benefit societies) are growing rapidly in Spain. Their main function is mutual aid in case of sickness. The Institute of Social Reforms in 1907 published a report on workmen's associations in existence on November 1, 1904. It succeeded in obtaining altogether reports of about 65 per cent of existing organizations. Of the 1,867 organizations reported, 310,^(a) or 16.6 per cent, had mutual assistance, mostly in case of sickness, as their main aim, and their membership equaled 88,206^(a) out of a total membership of 348,265, or 25.3 per cent. The number of such societies is growing rapidly, as shown by the fact that of these 310 societies 200, or 64.5 per cent, were organized within the six years 1899 to 1904. In Madrid alone there are 42 societies, with a membership of 30,266.

There were 67 associations of workmen whose main object is defined in the report as "accion catolica;" but many of these associations also have funds for mutual assistance. These 67 societies had a combined membership of 31,957.

^a The report states the number of mutual benefit societies at 309 and their membership at 84,426. To these has been added the "La Mutualidad Obrera," with a membership of 3,780, described in the report as "Cooperativa médico-farmacéutica" (a society for cooperative medical and pharmaceutical aid).

The following table shows the years when various classes of funds were organized:

NUMBER OF WORKMEN'S SOCIETIES IN 1904, BY YEARS WHEN ORGANIZED AND OBJECTS OF SOCIETIES.

[Source: Instituto de Reformas Sociales. Estadística de la Asociación Obrera, en 1º de noviembre de 1904, pp. 285 and 286.]

Year organized.	Number of societies whose object is—							Total.
	Catholic.	Improvement of labor conditions.	Cooperative.	Mutual benefit.	Political.	Education and recreation.	Musical, etc.	
Before 1800.....		1		1				2
1801 to 1850.....		1		3			1	5
1851 to 1860.....		1		2		2	1	6
1861 to 1870.....	2	6	1	4		2	5	20
1871 to 1880.....	5	5	3	13		4	3	33
1881 to 1890.....	15	39	4	34	6	14	11	123
1891.....	1	6		5				12
1892.....		13	1	9	1	1	2	27
1893.....	2	8		1	2			13
1894.....	2	11	1	7	1	5	2	29
1895.....	4	10	1	4		1	7	26
1896.....	2	6	5	10	3	1	2	29
1897.....		26	3	9	6	5		49
1898.....	2	19	1	6	3	1	1	33
1899.....	1	80	2	12	1	2	2	100
1900.....	4	198	6	18	4	3	4	237
1901.....	5	129	9	32	5	3	8	191
1902.....	3	167	12	46	8	2	14	252
1903.....	8	224	12	40	12	18	11	325
1904.....	9	194	32	51	34	14	10	344
Not reported.....	2	5		2		1		10
Total.....	67	1,149	93	309	86	70	84	1,867

That this form of insurance or mutual aid is quite popular among all classes of Spanish society is shown by another statistical report published by the Institute of Social Reforms—a report on all associations for savings, cooperation, and mutual aid. Of 2,020 societies, with 437,347 members, 1,696 societies, with a membership of 358,014 (i. e., 84 per cent of the societies and about 82 per cent of the membership), had mutual help primarily in case of sickness as their main object.

On the basis of these figures, and considering the societies omitted from the enumeration in 1904 and those societies organized within recent years, the assistant secretary of the Institute of Social Reforms estimates the number of existing mutual aid societies in 1908 at about 800, with a membership of 150,000; and, including the families, that 750,000 persons were protected by sickness insurance.

NUMBER, MEMBERSHIP, AND MEMBERSHIP PER 1,000 POPULATION, OF WORKMEN'S MUTUAL AID SOCIETIES IN 1904, BY PROVINCES.

[Source: Instituto de Reformas Sociales. Estadística de la Asociación Obrera, 1907.]

Province.	Population (census of 1900).	Number of societies.	Membersh- ship.	Member- ship per 1,000 popu- lation.
Alicante.....	470,149	16	12,304	26.17
Badajoz.....	520,246	10	1,834	3.53
Barcelona.....	1,054,541	38	7,290	6.91
Cadiz.....	452,659	3	1,514	3.34
Canaries.....	358,564	4	1,652	4.61
Castellon de la Plana.....	310,828	13	1,392	4.48
Corunna.....	653,556	3	2,693	4.12
Cuenca.....	249,696	8	1,743	6.98
Gerona.....	299,287	20	3,063	10.23
Guipuzcoa.....	195,850	5	1,068	5.45
Huelva.....	200,880	12	2,348	9.00
Logroño.....	189,376	6	1,531	8.08
Madrid (a).....	775,034	18	30,228	39.00
Malaga.....	511,989	2	1,953	3.81
Murcia.....	577,987	9	1,825	3.16
Oviedo.....	627,069	7	2,507	4.00
Palencia.....	192,473	13	1,360	7.07
Seville.....	555,256	13	1,311	2.36
Tarragona.....	337,964	10	1,000	2.96
Toledo.....	376,814	7	1,212	3.22
Valladolid.....	278,561	8	1,138	4.09
All other provinces.....	9,358,895	85	3,460	.37
Total.....	18,607,674	310	84,426	4.54

a Includes one society, La Mutualidad Obrera, with 3,780 members, classified as a "cooperative society" whose functions are defined, however, as "a society for cooperative medical and pharmaceutical aid."

While the membership of these workmen's societies varies greatly—and some of them are small, as low as ten or twenty persons—the bulk of the membership belongs to very large associations. Thus the Railroad Employees' Association (*Asociación general de Empleados y Obreros de Ferrocarriles*), organized in 1888, with headquarters in Madrid, had in 1904 a membership of 17,300. No other organization approached this in number of members, there being altogether 12 organizations with a membership of over 1,000 each and a combined membership of 39,637, or nearly one-half of the total membership of the 310 societies. Among these 310 societies may be mentioned La Mutualidad Obrera, organized in Madrid in 1904, with a membership of 3,780; La Honradez, also of Madrid, organized in 1891, with a membership of 1,950; an establishment fund of the government tobacco factory in Alicante, Caja de Auxilio en beneficio del personal obrero de la Fabrica de Tabacos, organized in 1901, with a membership of 3,557; similar organizations in the tobacco factory of Cadiz, with 1,104 members; and one in the tobacco factory in Corunna, with 2,449 members.

Details of the operation of these institutions are difficult to obtain. La Mutualidad Obrera (the Workmen's Mutual Society), which is designated in the official statistical report as a cooperative society for furnishing medical and pharmaceutical assistance, in the year 1906 had 4,323 members. Of these members 3,847 had families, aggregat-

ing 13,388 persons, so that the total number of persons protected by the association was 17,711. In order to furnish the medical help this association employs 28 physicians, 1 obstetrician, 3 surgeons, 2 druggists, 10 midwives, and 10 nurses and assistants—altogether 54 persons on its medical staff—while the administrative duties require an additional force of 13 persons. The total income was only 39,860 pesetas (\$7,692.98), and the total expenditure 44,800 pesetas (\$8,646.40), leaving a deficit for the year, the second of its existence, of 4,940 pesetas (\$953.42).

The functions of these societies vary. A great many societies pay funeral expenses and give financial aid during illness, in addition to medical advice and treatment. In some cases an organization may carry these three forms of insurance, the membership in all or any of them being optional. Thus the "Universal Union of Encouragement and Representation of the Interests of the Working Class" in Madrid furnishes (1) medical help and drugs for the following monthly payments: For a single man, 0.60 peseta (11.6 cents); for a married man without children, 0.80 peseta (15.4 cents); and for married men or widows with children, 1.10 pesetas (21.2 cents). (2) Sick benefits for 30 days, and in exceptional cases only for 50 days, during one year, equal to double the monthly dues, which may be anywhere from 0.50 peseta (9.7 cents) to 1.50 pesetas (29 cents). (3) Funeral expenses, the cost being 0.30 peseta (5.8 cents) per month for children under 7 years of age and 0.15 peseta (2.9 cents) for persons over 7 years, with an additional entrance fee of 2 pesetas (38.6 cents) for persons over 40 and under 55 years of age, this age period being the limit of admission.

The majority of these funds and benefit societies are supported exclusively by the contributions of the members. In a few cases of establishment funds other sources of income are available, such as the fines imposed upon the employees and the voluntary contributions of the employers. The receipts from these sources, however, are small, and do not affect the truth of the general statement that the cost of medical help and the sick benefits is practically borne by the wage-earners themselves.

OLD-AGE INSURANCE.

The system of governmental pensions to military and civil employees is highly developed in Spain, and it has certain insurance features, inasmuch as from 10 to 20 per cent of the salaries are deducted for the support of these pensions. As the expenditures for such pensions claim about one-twelfth of the entire budget (in 1907, 42.3 million pesetas (\$8,163,900)), the burden of the support of these so-called "passive classes," as the pensioners are termed, has come to be considered a national problem in Spain.

But little had been done in Spain in the field of old-age and invalidity insurance for workmen, especially by the Government, until the National Institute for Old-Age Insurance was established by the law of February 27, 1908. This institute had not yet begun its operation by the end of the year 1908. Outside of this institute, whose work is all in the future, the existing provisions for the invalid and superannuated workers are limited to voluntary mutual insurance funds. These have never been studied statistically with any degree of detail, and therefore only a few individual examples can be given, though it may be stated that many of the mutual aid societies mentioned above in connection with sickness insurance are also old-age pension funds. These private and voluntary pension funds receive no assistance, either from the employers or from the State.

THE NATIONAL INSTITUTE FOR OLD-AGE INSURANCE.

On the subject of insurance and savings the prevailing opinion among the Spanish authorities was that private initiative in Spain was too weak, and that the saving habit was not sufficiently established to permit of any extensive development without governmental encouragement. This was the opinion also of a majority of the delegates of local savings banks and old-age insurance funds, at a conference called together in Madrid in 1904 to discuss the advisability of establishing a governmental insurance system. The initiative in this plan belonged to the Institute of Social Reforms, which delegated to a recognized authority on labor problems the preparation of a general report on the subject. After the report was presented to the institute the above-mentioned conference was called. The discussions emphasized not only the necessity of organizing some system of provision for the industrial employees in their old age, but also the importance of enlisting the support of the Government. The resolutions, adopted on October 20, 1904, were of a general nature and contained the following recommendations:

That the Central Government should organize an insurance fund upon its own guarantee and responsibility; that the aim of the fund should be to provide old-age pensions for wage-workers; that the insurance should be paid for in premiums by the insured, or by any one else for the benefit of the insured; that the business should be conducted strictly in accordance with the technical rules of insurance, in regard to the reserve, etc.; that the form of organization, management, and governmental control of the insurance fund should be elaborated by a special commission, consisting of representatives of the State, the Institute of Social Reforms, the important savings banks, and other similar institutions; that cooperation between the central governmental institutions and the existing private charitable savings

or loan institutions should be encouraged; that the local institutions should be intrusted with local representation of the pension insurance fund; that the local institutions should also be encouraged to contribute to the central fund a definite proportion of their profits, which would go to increase the pensions; that the capital of the fund should consist of a state subsidy, the premiums of the insured, and such other contributions as the Provinces or localities might make; that the insurance should be free from all taxation, similarly to the existing savings banks and mutual accident insurance companies; and that the old-age pensions should not be subject to assignment or attachment.

To carry these general principles into effect a special commission of the Institute of Social Reforms prepared the draft of a bill for the establishment of the national insurance institute. This bill was laid before the Institute of Social Reforms on May 25, 1905, and, with a few minor changes, was unanimously approved and transmitted to the Cortes on November 2, 1905.

The aim, organization, and methods of the institute were briefly summarized in the report of the special committee which accompanied the draft of the bill. The duty of the institute was stated to be, not only the management of a particular fund but also the stimulation of the popular interest in savings, insurance, and especially in old-age insurance, as well as in the encouragement of other local institutions of the same type. It was expressly recommended that the institute strictly adhere to the technical conditions of insurance. It was also suggested that the institute should be national in its scope, as the insurance theory and statistics are true only when applied to large numbers, and the larger the number of insured the less will be the friction in the application of theoretical calculations to actual practice. However, it is not the aim of the new institute to destroy or to compete with those pension insurance institutions which exist in Spain at the time of the organization of the National Institute for Old-Age Insurance. The purpose is not to establish a monopolistic institution but a model one. Therefore, cooperation between the national institute and the local institutions, such as the funds of Guipuzcoa and Barcelona, would be permitted, provided the local funds were also organized with strict adherence to insurance principles. This cooperation would take the form of coinsurance or reinsurance. In the distribution of state subventions the local funds would be permitted to participate. In this way it was thought that the organization of the national institute, in order to engage the power of the Central Government in the movement to stimulate old-age insurance, would not interfere with any private efforts that might be made in the same direction, and that private old-age insurance might grow even faster under the stimulus of the example set by the national institute. Financially the plan deviated from the wish

which carried the majority of votes in the conference, that the State assume the entire guarantee and financial responsibility of the institute. This was termed an "excessive official intrusion," and an autonomous institute was recommended. But in place of a continuous guarantee the State was expected to furnish the capital necessary for the organization and in addition to furnish annual subsidies, which would serve as a source of subventions to the pensions and also to cover the cost of administration. In the administration the autonomous principle is combined with that of state control, the power of appointment of the governing council being divided between the Ministry of Interior and the Institute of Social Reforms. After a delay of over two years the bill was passed by the Cortes without discussion and without any changes, and approved by the Crown on February 27, 1908.

The law establishing the National Institute for Old-Age Insurance, as passed and approved on February 27, 1908, stipulated that the minister of interior should immediately appoint a commission, in conformance with the rules for the governing council, to prepare the statutes, regulations, and tariffs, and that efforts should be made to make the organization of the office feasible within one year from the date of the promulgation of the law.

In conformity with these demands of the law a commission was appointed on March 8, 1908, with the chairman of the Congress of Deputies as presiding officer, and the commission held its first meeting for organization on May 11, 1908.

The constitution of the national institute, prepared by that commission, was approved by the royal decree of December 24, 1908. Notwithstanding this lengthy document of some 125 articles, the details of the operation of the institute were not yet determined, these depending upon the regulations (*reglamento*) and the tariffs to be prepared by the supervisory council of that institute.

The constitution took effect on January 1, 1909.

PROVISIONS OF THE LAW OF FEBRUARY 27, 1908.

GENERAL PURPOSE AND SCOPE.—The general purposes of the institute are stated broadly as follows: (1) To inculcate among the masses habits of provision for old age, especially in the form of old-age pensions; (2) to administer the mutual insurance of those who may voluntarily associate themselves for that purpose under the conditions most favorable to them, and (3) to stimulate and encourage the purchase of old-age pensions by procuring subsidies from public or private sources. Practically, however, the operations of the institute consist mainly in selling old-age pensions or deferred annuities to individuals of the working classes, either for "single time pay-

ments,' as explained below, or for recurrent premiums, to be paid for either by the beneficiaries or by other persons for the beneficiaries.

PERSONS INSURED.—The insurance is intended exclusively for the working classes, including those employed by the State. A salaried employee or an officeholder may be insured in the institute, if his salary does not exceed 3,000 pesetas (\$579) per annum and he has no right to a pension under other existing legislation. Foreigners of the male sex and of age, residing in Spain, may take out such pension insurance, provided they agree to abide by the decisions of the Spanish courts. Minors and married women may purchase insurance with reserved capital without anyone's authorization, while minors under 18 years of age require the authorization of the parent or guardian, and married women require the authorization of the husband for purchase of the old-age pension with alienated capital.

FORMS OF INSURANCE.—Similarly to the French, Belgian, and Italian systems, after which the Spanish institute is modeled, both forms of annuity insurance—those with alienated and those with reserved capital—may be written. In the former case no repayments are made at death of the insured, whether it occurs before or after reaching the pension age; in the latter case the entire capital, or the greater portion of it, is returned at death to the heirs.

PENSIONS.—The system of insurance being entirely voluntary, no definite pension is guaranteed. The amount of the pension insured, as well as the fact of insurance, is left entirely to the insured. The amount of the pension acquired is made dependable upon the free contributions of the insured or for the insured by other persons. The only limitation is that no premiums shall be received which would bring the amount of the pension acquired over 1,500 pesetas (\$289.50) to the same person.

The pensions purchaseable for given premiums will naturally differ for the two methods of insurance described above—that with alienated capital and that with reserved capital.

In accordance with the usual life insurance practice, various provisions are made for changes in the plan of insurance. In case of the insurance of an old-age pension with reserved capital the insured may demand the paid-up value of the reserved capital at any time before the old-age pension begins, or, before his old-age pension matures, he may use the value of this reserved capital for the purchase of a temporary annuity.

In the case of insurance with reserved capital the distribution of the capital among the relatives at the death of the insured does not depend upon the will of the deceased, but is regulated by law according to the degree of consanguinity, as follows: The widow, the children, and the parents have the preference, and only in the absence

of all such relatives does the capital go to other heirs. When the deceased leaves a family the capital is divided equally between the widow and the children, the widow receiving one-half and the children the other. If there are no children, the widow receives three-fifths and the parents the remainder. The amounts due to the heirs designated shall not be subject to any claims of other heirs or of creditors.

INVALIDITY.—The institute's activity does not contemplate special invalidity pensions. The constitution provides, however, that in case of absolute disability due to an industrial accident the insured person has the right to demand the conversion of his deferred annuity into one to begin immediately, provided it will amount to at least 60 pesetas (\$11.58) per annum. If not, the conversion must be delayed until the pension has reached that value. The pensions are not subject to cession or seizure.

SOURCES OF REVENUE.—The sources of revenue are as follows:

(1) Endowment of not less 500,000 pesetas (\$96,500) presented by the State.

(2) The premiums of the insured.

(3) Interest and revenues of social funds.

(4) An annual subsidy from the state budget, proportionate to the needs and the development of the institute, but not less than 125,000 pesetas (\$24,125) per annum.

(5) Other donations or legacies from public or private bodies or individuals.

The main sources of revenue for payment of the pensions is derived from the premiums to be paid by the insured.

The rates of insurance are not stated in the law. The general principle is laid down that the technical demands of the insurance theory must be strictly complied with. The governing council, with the assistance of a professional insurance accountant, is required to elaborate these rates in accordance with this principle, on the basis of the best mortality tables used by life insurance companies until a national mortality table may be obtained.

An assumed rate of interest not to exceed $3\frac{1}{2}$ per cent and a loading necessary to form a special reserve sufficient to meet the effects of fluctuations in mortality and in the interest rate must be charged in the premium tables.

In the constitution the French mortality table of 1902 (*Rentiers Français*, usually designated as R. F.) is specifically selected. The difference between the "one-time payment" and the "recurrent payment" plan is an actuarial difference, necessitating different premium tables. The "one-time payment" system leaves the amount of payments entirely to the insured, but assigns a definite pension value to each payment made, the actual pension to consist eventually

of the total amount of pensions acquired. The pension value of each payment is determined from tables prepared in accordance with the general requirements outlined above and depends upon the age of the insured and the age at which the pension is payable. In the recurrent premium plan the premiums are computed at an annual rate, but payments at slightly increased rates may be made semi-annually, quarterly, monthly, or even weekly. Premiums which exceed 60 pesetas (\$11.58) annually must be paid monthly.

The voluntary character of the insurance is the essential feature of the system, and the employers are not required to make any contributions to the fund, but the necessity of some form of material subsidy as an encouragement to individual thrift was recognized in the law. Accordingly the law provided for an initial capital of at least 500,000 pesetas (\$96,500) to be contributed by the state treasury, as well as annual appropriations to cover the cost of administration and also for subsidizing the individual accounts. These subsidies are to be distributed among the persons insured in the institution (including the business of reinsurance and coinsurance) with the following limitation: The subsidies are to be distributed only among such persons as have made some payments during the preceding year.

The constitution of the institute further excludes persons receiving pensions from government or private sources, or who are assisted in the payment of their premiums by the State, Province, or municipalities, or who are in a favorable economic condition as evidenced by payment of direct taxes above a certain limit to be decided upon in the regulations.

All such members who are Spanish citizens living in Spain and over 18 years of age are entitled to participate. There are some limitations upon the right of foreigners living in Spain to share in the subsidy. In order to obtain it, they must have lived ten years in Spain and must be citizens of a country which grants similar privileges to Spanish citizens. This latter qualification is waived in case of Portuguese subjects of Spanish-American countries. It may also be modified by diplomatic action.

The constitution of the institute further provides that the council elaborate rules for distribution of the subsidies to insured persons who have chosen the age of 55, 60, and 65 for maturity of pensions.

The amount of subsidy thus granted must be converted into additional pensions in accordance with the conditions and rates at the time of payment, or it may be converted into a temporary annuity to run until the maturity of the contracted pension. No subsidy to anyone insured shall exceed 12 pesetas (\$2.32) per annum during the first ten years of the existence of the institute. Preference should also be given to individuals whose insurance amounts to a pension of less than 365 pesetas (\$70.45) per annum, as against those whose pen-

sions might be increased by the subsidy to an amount exceeding that sum. Special subsidies should also be granted to those who because of advanced age at the time when the law goes into effect are obliged to contract pensions for a higher rate and shorter time. Also special subsidy funds granted for the benefit of individuals, or groups of individuals, must be distributed in accordance with the conditions of the grant and the special rules of the institute pertaining thereto. The methods of determining annually the actual amounts of benefits, subject to the above regulations, are described below in connection with the financial organization of the institute.

The conditions qualifying the insured persons to participate in the special or preferential subsidy are stated in detail in the constitution of the institute. A person possessing any of the following qualifications is entitled to receive this preferential subsidy:

(1) If the pension will not reach 365 pesetas (\$70.45), as determined by the assumption that the average payments for the three years preceding would be continued until the pension matures.

(2) If the person contracts to pay a higher premium for a pension to mature at a shortened period because of advanced age at the time of taking insurance. This applies to persons 45 years of age and over and only for the first fifteen years of the operation of the law.

(3) If the person contracting for an old-age pension with reserved capital assigns half of the reserved capital to his heirs.

(4) If the insured person also insures two children in the institute.

(5) If the insured person is included in a plan of collective insurance which satisfies the preceding condition.

(6) If the insured person depends upon an immediate pension because of absolute disability to work.

(7) If the insured person has for three years annually paid in under the plan of one time payments amounts sufficient to produce pensions equal to or greater than that purchased during the first year.

Only one preferential subsidy shall be given to those combining several of the qualifications enumerated above, except that an extra subsidy may be given for the disability qualification.

The preferential subsidies paid in virtue of qualifications 1, 3, 6, and 7 shall be discontinued when the qualifications cease, and in case of the first qualification (concerning the value of the pension being below 365 pesetas, \$70.45) when the pension later exceeds that limit, not only do the subsequent preferential subsidies cease, but the earlier ones are deducted.

FINANCIAL ORGANIZATION.—The revenues and property of the institute shall for no reason be used for any other purpose than the payment of pensions or annuities to the insured and for the expenses of administration. Moreover the law protects the contributions of the insured against the danger of being made to carry excessive

charges for expenses of administration by strictly defining the sources of revenue which may be used by the institute for such expenses. These sources are as follows:

1. Subsidy which is granted by the State for this purpose.
2. Interest on the endowment.
3. Any other donation intended for that purpose.
4. A special loading of the premiums, which must not exceed 3 per cent and must not be used to cover operations of a date preceding the establishment of this loading.

The financial organization of the institute demands the existence of a mathematical reserve to cover obligations toward the insured and of a special reserve as mentioned above. After the mathematical reserve and the special reserve have been formed, all surplus funds from each year's operations must be turned into the subsidy fund. The part of the annual appropriations from the State which is not used for expenses forms the foundation of the subsidy fund. To this all the above-mentioned surplus funds are added.

The subsidy fund is divided annually, in accordance with certain regulations, among all members entitled to it. The institution publishes annually detailed balance sheets of income and expenditures, and every five years it publishes a technical balance sheet showing the actual value of annuities purchased and of property and securities representing the mathematical reserve.

In the computation of the mathematical reserve the same table of mortality and rate of interest must be utilized as in computing the premiums of the insured.

ADMINISTRATION.—The organization of the institute is planned to combine its formal independence with reasonable governmental control. It has independent legal existence, its own system of administration, and the power to purchase, sell, and hold property, make debts, etc. The funds of the institute are entirely separate from those of the state treasury, and the State does not assume any responsibility beyond that of control as provided for by law. The general supervision rests with a governing council (*consejo de patronato*), which must elaborate the constitution and regulations (subject to the approval of the minister of interior), prepare the rates, and control the actions of the executive committee. The council consists of the presiding officer and fourteen members, to be appointed by royal decree upon nomination by the Ministry of Interior; the presiding officer and one-half of the members of the council are to be selected by this ministry directly, and the other half are nominated upon recommendation of the Institute of Social Reforms. In order to have the interests of both employers and employees represented in the insurance institute it is required that the seven nominees of the Institute of Social Reforms shall include one labor delegate and one employers' dele-

gate from the institute. Vacancies in the council are to be filled upon the nomination of the council itself, except that the chairman is always chosen directly by the minister of interior. The council elects an executive committee (*junta de gobierno*) of five members.

The headquarters, the main depository office, and the treasury of the institute, during the first ten years of its existence, at least, must be connected either with the Madrid Savings Bank or with some other national credit institution which may offer preferable conditions. It may establish agencies in Provinces and special localities, and even in foreign countries, if desirable for the convenience of the Spanish residents. The institute must make an effort to establish these branches in connection with the local savings banks or similar institutions for old-age pensions, it being required, however, that these institutions keep the insurance business entirely separate from their other functions.

RELATIONS BETWEEN THE INSTITUTE AND OTHER OLD-AGE INSURANCE FUNDS.—The national institute and all other charitable institutions which undertake to grant old-age pensions will have their relations made closer. First, they may insure old-age pensions for their entire membership, and for such collective insurance special facilities will be offered; second, they may reinsure a part of their operations, or, third, establish a coinsurance agreement. The business of reinsurance and coinsurance must share in the benefits of the subsidy fund of the national institute. Similar relations may be established with foreign institutions of a like nature.

GOVERNMENT CONTROL.—For the purpose of controlling the business of the institute the Government is empowered to examine, by means of a commission of three experts, into the business management and solvency of the institute during each quinquennial period, into the mathematically calculated reserve, and into the property and investments of the institute.

Several special privileges which may be considered as substantial subsidies are conferred upon the institute by reducing the cost of administration. In litigation the cost must be remitted as that of a charitable institution; its mail is granted the reduced rates of postage as for printed matter, and for telegraphic business it is to be charged half rates.

It is exempted from all income, industrial, land, insurance, stamp, or court taxes. The certificates which the institute requires from the members or their heirs are also exempt from stamp taxes.

EXTENSION OF THE REGULATIONS TO PRIVATE OLD-AGE INSURANCE INSTITUTIONS.—The law provides that the regulations contained in Chapter III of the law, and which refer mainly to conditions of membership, repayment of reserved capital, and special privileges,

may be extended to private funds of old-age insurance of workmen which accept the actuarial regulations established by the law for the national institute.

SUBSIDIARY FUNCTIONS OF THE INSTITUTE.—While the main function of the institute is that of insuring workmen against old age by means of old-age pensions, mention must be made briefly of the other functions prescribed for the institute by law in general terms and more specifically by its constitution. These consist in fostering and encouraging all methods of social providence, as old-age pensions, savings, etc., not only by managing the old-age insurance system, but by educational work as well.

According to the constitution, this educational work is to include methods like the following: The publication of a periodical devoted to this problem (under the title of *Anales del Instituto Nacional de Previsión*); the publication of special monographs on the various forms of social providence; the formation of a reference and a circulating library devoted specially to insurance and savings; the organization of public and private conferences, especially in workmen's organizations and in societies for the study of social problems; the training of organizers and advocates of popular providence and savings; the prize competition for private individuals and organizations working in that field; the efforts to bring about cooperation between local savings institutions; the constant communication with similar national and foreign institutions and with the Institute of Social Reforms; the arbitration of disputes in matters concerning the institution for social providence, provided such disputes have been submitted to the institute; the preparation of model regulations and tariffs for mutual benefit societies; the study of sanitary and hygienic measures which are of help and importance to popular insurance; collaboration with Spanish and international congresses, relating to the work of the institute, and the efforts to initiate such congresses; supplying information to the Government, when requested, and to other authorities concerning questions of insurance, savings, and other means of social providence.

PRIVATE VOLUNTARY OLD-AGE INSURANCE.

While establishing the national institute the Spanish Government does not undertake to monopolize the function of insuring workmen against old age. On the contrary, it undertakes to encourage private institutions which pursue the same objects, by granting them all the legal privileges and tax exemptions which the national institute possesses, provided they comply with certain conditions. The Government does not, however, grant them a direct subsidy.

The provision to that effect is contained in the law of February 28, 1908, and regulations concerning institutions analogous to

the national institute were promulgated by decree of December 10, 1908.^(a)

Societies which may be declared analogous to the national institute and granted those privileges include workmen's old-age pension funds, established independently or as parts of mutual benefit societies or similar organizations, provided they comply with the following conditions:

(1) That they are classified by the Ministry of Interior as beneficent institutions.

(2) That they pursue aims similar to those of the national institute, including the efforts to spread habits of old-age provision by various combinations of savings and insurance.

(3) That the old-age pension funds do not grant pensions exceeding the maximum established for the national institute by 50 per cent; that they are not combined with institutions for savings, which would permit the accumulation of capital giving an annual income greater than the maximum, 1,500 pesetas (\$289.50).

(4) That in computing their premium rates these old-age pension funds use either the French mortality table (R. F., Rentiers Francais), that of Deparcieux (C. R., Caisses Retraites), that of the Spanish Geographic and Statistical Institute, that of the London Institute of Actuaries, or any other permitted by the national institute, with a rate of interest of 3 or 3½ per cent and a surcharge not exceeding 2 per cent.

(5) That they establish a mathematical reserve according to the regulations prescribed by the national institute. As long as this mathematical reserve does not exceed 25,000 pesetas (\$4,825), a special reserve of 20,000 pesetas (\$3,860) must be kept, which may be reduced to one-half or one-fourth, if 50 per cent or 75 per cent of the pensions insured are reinsured in the national institute.

(6) That they utilize the surplus of each year to the common benefit of the insured, either reinforcing the special reserve or by adding subsidies to the pension accounts or for any other similar purpose.

(7) That if the institute pursues many different aims, the accounts of the old-age pension should be kept strictly separated from the others.

Societies which comply with such demands enjoy all privileges enumerated above (page 2368), except that the privilege of freedom from cession or seizure apply to the pensions only up to the limit of 1,500 pesetas (\$289.50).

For the purpose of recognizing such private institutions, or denying the application in case of absence of any of the conditions enumerated, the Ministry of Interior must advise with the superior commission of charities (*Junta Superior de Beneficiencia*), the National Institute

^a Boletín del Instituto de Reformas Sociales, No. LIV, December, 1908, p. 608.

for Old-Age Insurance, and in case of refusal also with the Institute of Social Reforms, upon the demand of the institution concerned.

Briefly, these regulations provide for guaranties that these societies are charitable or cooperative institutions not pursuing any aims of profit or gain; that they provide only for workmen or persons of moderate aims; that they conduct their insurance business in conformance with actuarial science, and that they are properly protected with necessary reserves. The regulations therefore are analogous with the laws for recognition of mutual benefit societies, which exist in Italy, France, Belgium, and Scandinavian countries.

In conformity with the law and the regulations, the following two institutions were, on May 8, 1909, recognized by royal decrees:^(a)

(1) The Barcelona Old-Age Pensions and Savings Fund (*La Caja de Pensiones para la Vejez e de Ahorros de Barcelona*), and

(2) The Leon Loan Office and Savings Fund (*La Monte de Piedad y Caja de Ahorros de Leon*).

The Barcelona fund, as explained in the royal decree conferring the privileges upon it, was recognized as a beneficent institution on November 22, 1905.

Its aims are to facilitate savings, help form deferred and immediate pensions or deferred capitals; the highest pension permitted is 2,250 pesetas (\$434.25); the savings bank does not grant any interest to accounts exceeding 5,000 pesetas (\$965), and does not insure for accumulated capitals, the interest upon which, at 5 per cent, would exceed 1,500 pesetas (\$289.50). The table of mortality used is *Rentiers Francais*, the interest rate assumed is 3½ per cent; the mathematical reserve amounted to 29,743.48 pesetas (\$5,740.49), and was sufficient to cover the obligations, and in every respect this institution complied with the demands of the royal decree of December 10, 1908.

The Leon institution is not an old-age pension fund; but one of its functions is that of a savings bank; it is destined for the use principally of workmen or other persons of moderate means. It was recognized as a beneficent institution on May 13, 1908, by a resolution passed on February 26, 1909, probably to comply with the requirements for recognition. This bank established a special form of savings accounts, the interest to be applied to the purchase of an old-age pension for the owner of the account; the limit for such an account is 10,000 pesetas (\$1,930), while for the ordinary interest-drawing account no interest is paid after 5,000 pesetas (\$965) have been deposited. This institution was held to comply with the requirements of the decree of December 10, 1908.

A few data are available concerning two private old-age insurance funds, the one in Guipuzcoa and the above-mentioned fund in Bar-

^a Boletín del Instituto de Reformas Sociales, No. LX, June, 1909, pp. 1298 and 1300.

celona, and these data are mainly significant as indicating the limited operations of these funds.

The Old-Age Retiring and Pension Fund (*La Caja de Retiros para la vejez y los invalidos del trabajo*) in San Sebastian, Guipuzcoa, was established in 1900, through private benevolence, in connection with the local savings bank. The Old-Age Pension Fund (*La Caja de Pensiones para la Vejez*), of Barcelona, was established more recently, in July, 1905, and is managed by a recognized Spanish authority on insurance. The experience of these two old-age and invalidity pension funds is instructive. The organization of both funds, while differing in detail, is based upon the Belgian system. Every payment is a premium for an annual pension to mature at 50, 55, 60, or 65 years of age. In case of invalidity the pension is granted in full which, according to payments made, would have been due at maturity. The maximum pension to be granted in the Guipuzcoa fund is 1,200 pesetas (\$231.60), and that in the Barcelona fund 1,800 pesetas (\$347.40). Insurance is granted according to the plan of both "alienated" capital and "reserved" capital. In the first case the pension stops with death, while in the latter case 90 per cent of the premium payments are returned to the family whether death occurs before or after the pension age. The choice between various methods of capitalizing the accrued pensions is also given.

The operations of the Guipuzcoa fund are unimportant. In 1905 the whole number insured was 357. The total amount deposited during the year was 5,583 pesetas (\$6,077.52), and the total capital was 44,435 pesetas (\$8,575.96).

The Barcelona fund began business on July 1, 1905, with 223 accounts, amounting to 64,048 pesetas (\$12,361.26). By October 31, 1907, that is, within twenty-eight months, the total deposits reached the sum of 2,270,599 pesetas (\$438,225.61), as against the total withdrawals of 918,459 pesetas (\$177,262.59). This appears to show a demand for old-age insurance among the wage-working populations of the large Spanish cities.

RAILROAD EMPLOYEES' FUND.

The most important old-age pension fund is the General Union of the Employees of the Spanish Railroads, established in 1888, which had 18,307 members on December 31, 1906. Its aims are: (1) To furnish pensions to members in case of invalidity and to their families in case of death; (2) to help members with loans; and (3) to defend their rights and interests. The pension fund is the most important feature of the organization. The income of the fund is derived mainly from monthly contributions of the members, equal to 3 per cent of their salary or wages. Ninety per cent of the income

from this source goes to the pension fund, 5 per cent to the loan fund, and 5 per cent to expenses of administration.

The pensions are granted (1) in case of invalidity, if the disabled employee has no other source of income; (2) in case of superannuation, at the age of 55 after at least 25 years of service, or at the age of 60 after 20 years of service, provided the member gives up his employment in the railroad service; and finally a pension to the member's family in case of death, in the following order: To the widow, the children, or to the parents. The pension fund of the association on December 31, 1905, amounted to 3,162,411 pesetas (\$610,345.32), and the loan fund 153,128 pesetas (\$29,553.71), giving a total on hand of 3,315,539 pesetas (\$639,899.03). The total income in 1906 was 849,925 pesetas (\$164,035.53). Of this amount, the monthly contributions of the members equalled 668,984 pesetas (\$129,113.91), and the interest on investments 140,023 pesetas (\$27,024.44), leaving 40,918 pesetas (\$7,897.18) from all other sources of income. The amount paid out in pensions was 391,673 pesetas (\$75,592.89), in other subsidies 15,918 pesetas (\$3,072.17), and the cost of administration was 32,316 pesetas (\$6,236.99), giving a total expenditure of 439,907 pesetas (\$84,902.05). The cost of administration constituted 7.3 per cent of the total expenses and only 3.8 per cent of the total receipts. The excess of the receipts over expenditures was 410,018 pesetas (\$79,133.47), bringing the assets on December 31, 1906, up to 3,725,557 pesetas (\$719,032.50). The number of pensions granted in 1907 was 172 (or 9.4 per 1,000), and the amount of these pensions 77,671 pesetas (\$14,990.50), being an average of 452 pesetas (\$87.24) per pension. The total number of pensioners carried on the rolls on December 31, 1906, was 931, and the total sum of pensions paid out during 19 years of its existence, 1,972,065 pesetas (\$380,608.55).^(a)

LIFE INSURANCE IN CONNECTION WITH WORKMEN'S DWELLINGS.

Some months before the National Institute for Old-Age Insurance was established by the Government an additional function was suggested for it by the Institute of Social Reforms. This was in connection with measures planned for the improvement of the housing conditions of wage-earners.

For several years the Institute of Social Reforms had under consideration a legislative proposal for government encouragement of improved housing conditions. Early in 1907 an exhaustive monograph was published on the subject, containing suggestions for such a law based upon a careful study of the conditions and existing legislation throughout Europe. The draft of a bill based upon these suggestions was presented to the institute by a special committee, in

^a *Arbeiterversicherung in Spanien*, Dr. Zacher, pt. xva, p. 29.

June, 1907, that is, about eight months before the national institute was established. The bill proposes the establishment of local housing commissions, confers many privileges and subsidies upon workmen who make efforts to acquire homes and upon associations organized for the purpose of building workmen's homes, establishes funds for extending loans for such purposes, etc.

The draft of the bill was formally approved by the Institute of Social Reforms on April 27, 1908, and referred to the Government. That proposals of the Institute of Social Reforms have considerable weight with the Cortes is shown by the fact that the bill establishing the National Institute for Old-Age Insurance was adopted as presented.

It is not necessary to present a detailed analysis of the entire bill relating to workmen's dwellings. The third chapter is devoted to a plan for combining life insurance with the purchase of cheap dwellings by workmen or other people of small means. The general purpose of the plan is to insure the payment of the debt contracted for the purpose of building or purchasing cheap dwellings, thus removing the main objection a man of moderate means might have to an undertaking of this kind, lest his unexpected death make it impossible for his family to meet the obligations. This branch of insurance is to be intrusted to the national institute. For this purpose a section of popular life insurance is to be established in the institute. The form of insurance is to be the same as that known in the United States as the endowment plan and for the total amount of the debt contracted, the policy to mature at the same time that the debt matures or at the death of the insured.

While being an integral part of the administrative organization of the national institute, this section is to be kept separate as far as its functions and accounts are concerned. It is to have its own initial capital, to be appropriated by the State, which should amount to at least 500,000 pesetas (\$96,500), of which 200,000 pesetas (\$38,600) may be invested in loans upon cheap dwellings at $3\frac{1}{2}$ per cent. The part of the assets equal to the mathematical reserve is to be kept intact and administered by the national institute.

The limit of the insurance is to be the value of the building, or 5,000 pesetas (\$965). A medical examination of the applicant for insurance is to be required, for which government physicians are to be appointed. In case of an abnormal state of health which is not grave enough to cause the rejection of the applicant, a modified policy may be granted with medical reexaminations at definite periods, the value of the policy in case of death being very low during the first period and gradually increasing according to certain tables.

The premiums are to be paid in monthly installments, with a reduction of 3 per cent in case of annual payments. If the payments of the

premiums are interrupted, the insured is to be given a reduced policy according to the paid-up premium, to mature at the same time as the policy originally contracted, but in exceptional cases the policy may be redeemed in cash. A policy may be renewed within eight months by the payment of delinquent premiums and interest charges computed at 3 per cent. A medical reexamination is to be required.

The insured is to receive dividends, which may be used either for reducing the premiums or for increasing the capital value of the policy. The original amount of the policy can not be attached or used for any other purpose than to pay the claim of the institution granting the loan upon the property. It is possible to transfer life insurance into pension insurance, or vice versa. If the premium is more than is necessary for the purposes of the insurance (i. e., the payment of the loan), the excess is transferred to the pension-insurance section of the institute and credited to the insured.

According to the latest information this feature of the proposed law was postponed. On July 16, 1910, the bill was introduced in the Cortes, but the provisions concerning the insurance feature were eliminated, the chapter relating to combining life insurance with the purchase of cheap dwellings being reduced to the statement that this matter will be treated in the special law concerning popular life insurance, to be introduced by the Government. It is explained in the preamble to the bill that it is intended to extend the operations of the National Institute for Old-Age Insurance to include such popular life insurance, and the matter of insurance in case of purchase of a dwelling will naturally form a part of that law.

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VITA



I. M. Rubinow was born on April 19, 1875, in the Province of Grodno, Russia. In 1883 he moved with his parents to Moscow, where he remained until 1892, receiving his secondary education in the Classical Department (Gymnasialabteilung) of a German school, Petri-Pauli-Schule.

He arrived in America in February, 1893, and entered the junior class of Columbia University in the fall of the same year, graduating in 1895 as A. B. He was appointed University Scholar in Biology for 1895-1906, and studied Biology, Physiology and kindred subjects under Professors Henry F. Osborn, Edmund Wilson, Frèderick S. Lee and others. In 1898 he graduated from the New York University of Medicine with the degree of M. D., and remained in medical practice until 1903. Meanwhile in 1900 he entered the School of Political Science of Columbia University, and studied there until 1903, taking courses in Economics; Statistics, Sociology and Political Philosophy, under Professors Edwin R. A. Seligman, Franklin H. Giddings, Henry R. Seager, Henry L. Moore and William A. Dunning.

In July, 1903, he gave up the practice of medicine to accept a position of examiner in the United States Civil Service Commission in Washington, D. C. In July, 1904, he was transferred to the Bureau of Statistics of the United States Department of Agriculture, as Economic Expert; in May, 1907, to the Bureau of Statistics of the United States Department of Commerce and Labor, as Chief of the Division of Foreign Statistics, and in March, 1908, to the Bureau of Labor of the United States Department of Commerce and Labor, as Statistical Expert.

He severed his connection with the United States civil service on May 1, 1911, to accept a position as Chief Statistician of the Ocean Accident & Guarantee Corporation in New York.

In the fall of 1911 he was appointed lecturer on Social Insurance in the New York School of Philanthropy.

He began his literary activity in 1897 as American correspondent of several Russian daily papers in St. Petersburg and Moscow, and since 1898 was the staff correspondent of all the publications of the Russian Ministry of Finance which include a daily and weekly, and at one time a monthly economic review.

In addition to fifteen years' of newspaper work he has published many Government reports and magazine articles on economic, statistical, financial and social topics in English and Russian, a list of which is given on the following pages.



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