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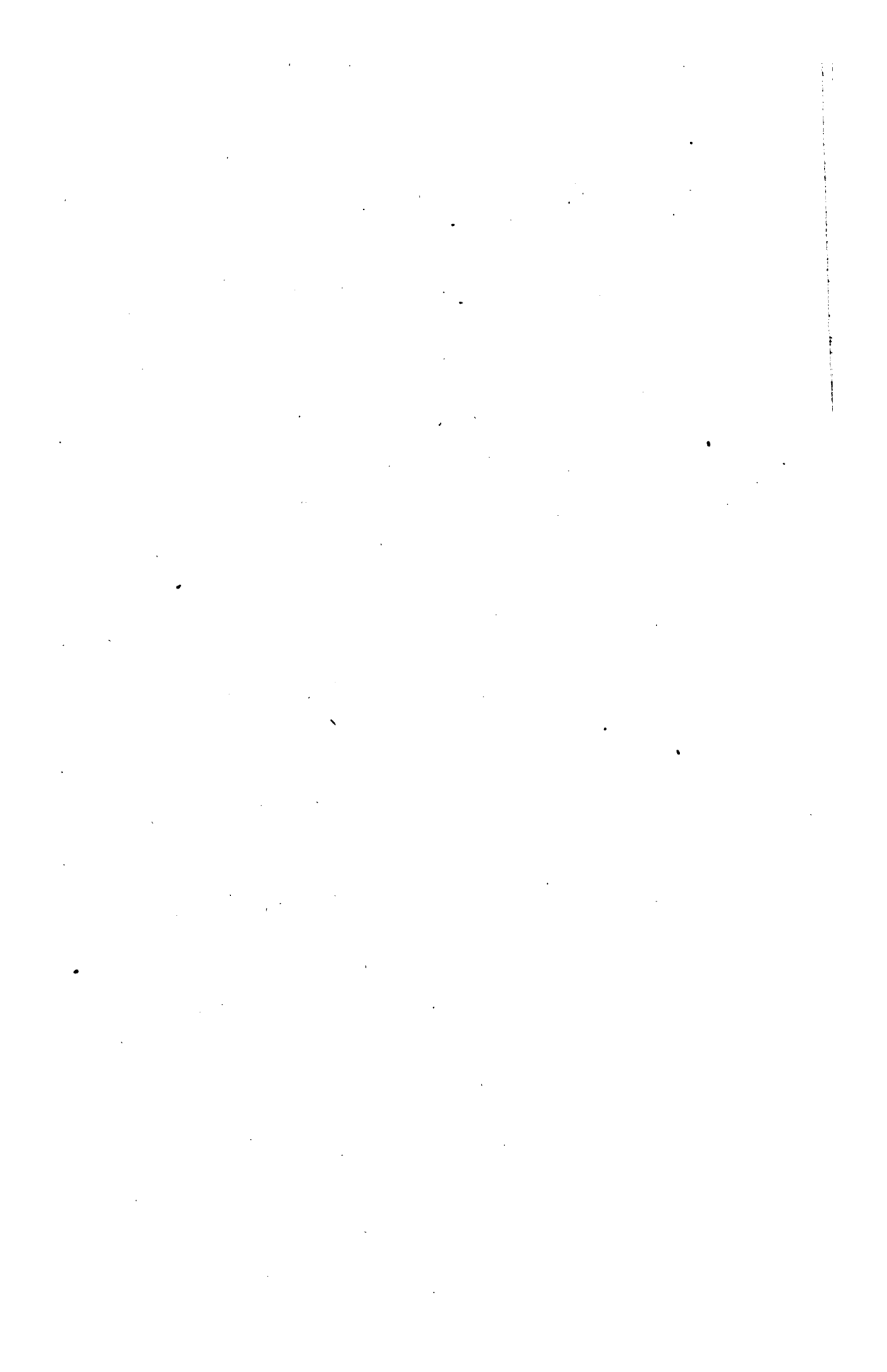
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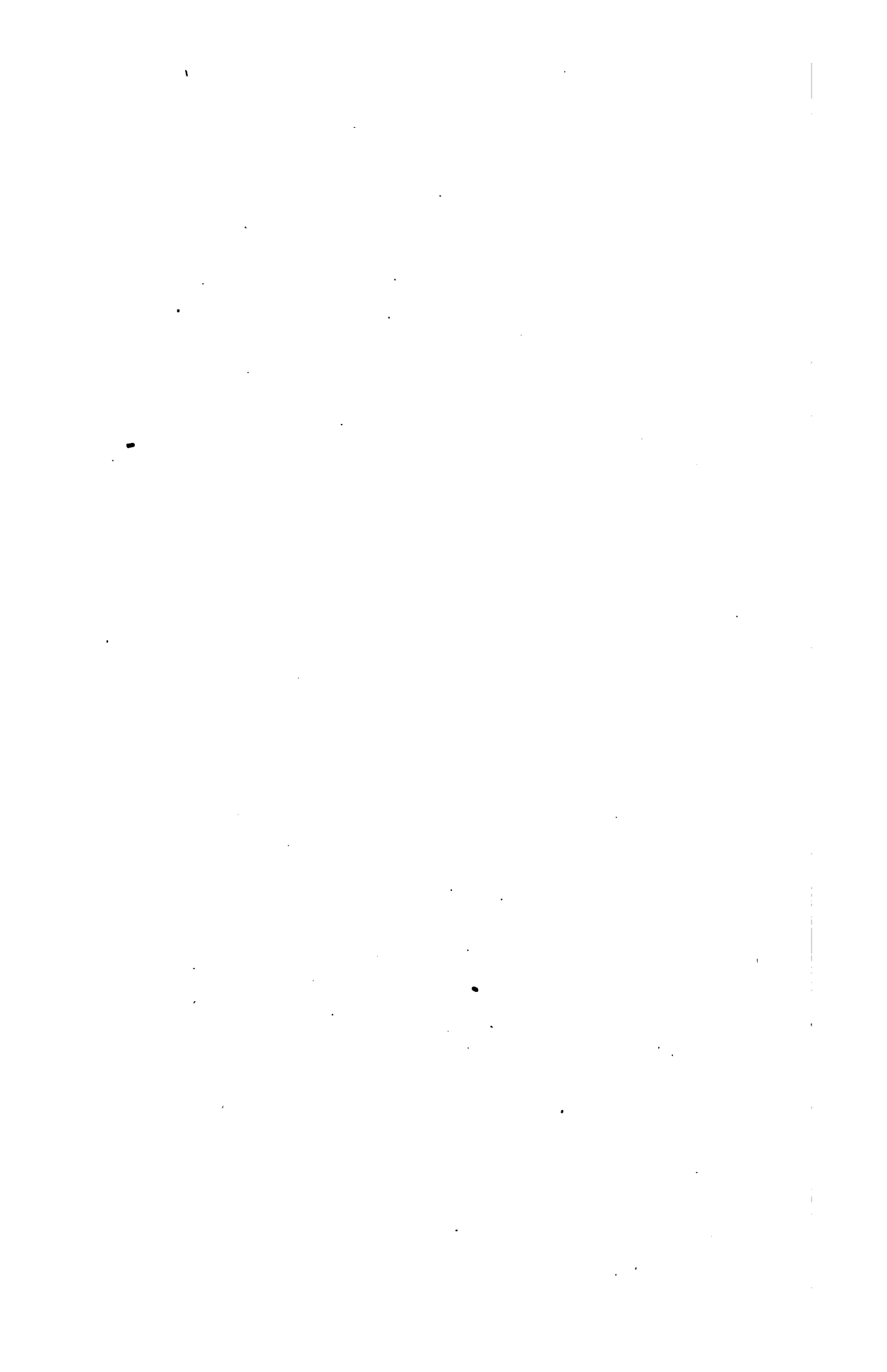


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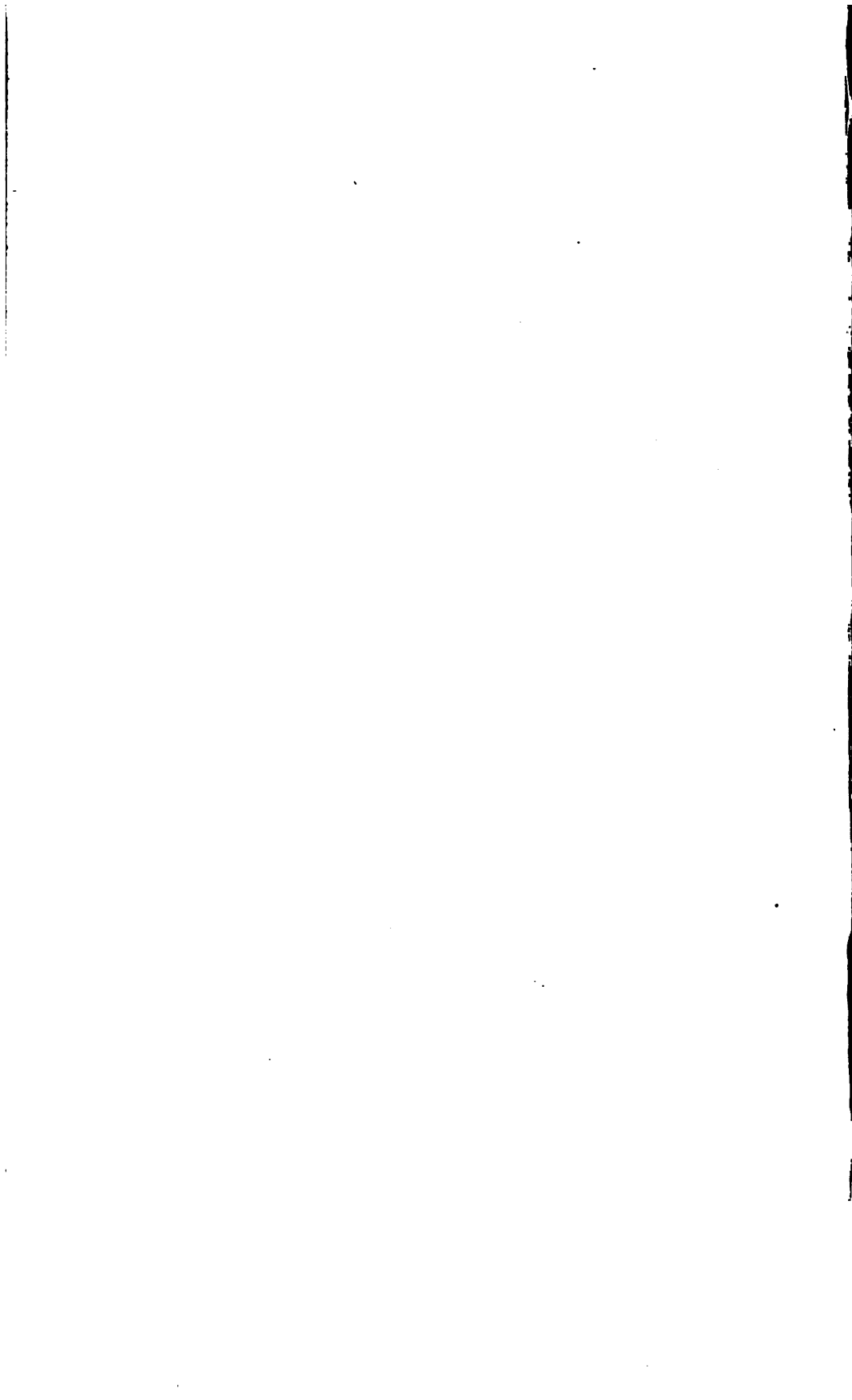
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THE AMALGAMATED ASSOCIATION OF IRON, STEEL AND TIN WORKERS

BY

JESSE S. ROBINSON

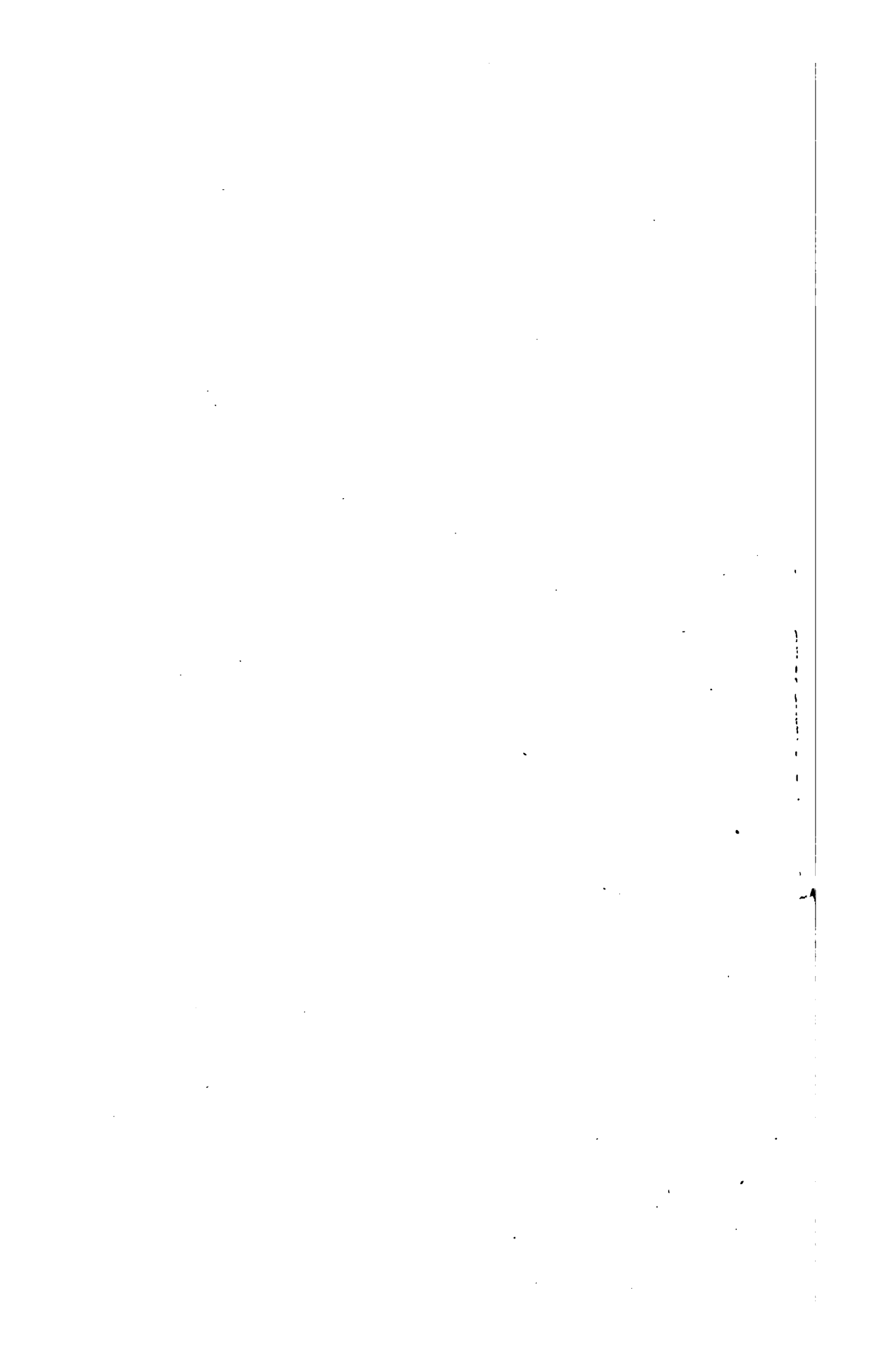
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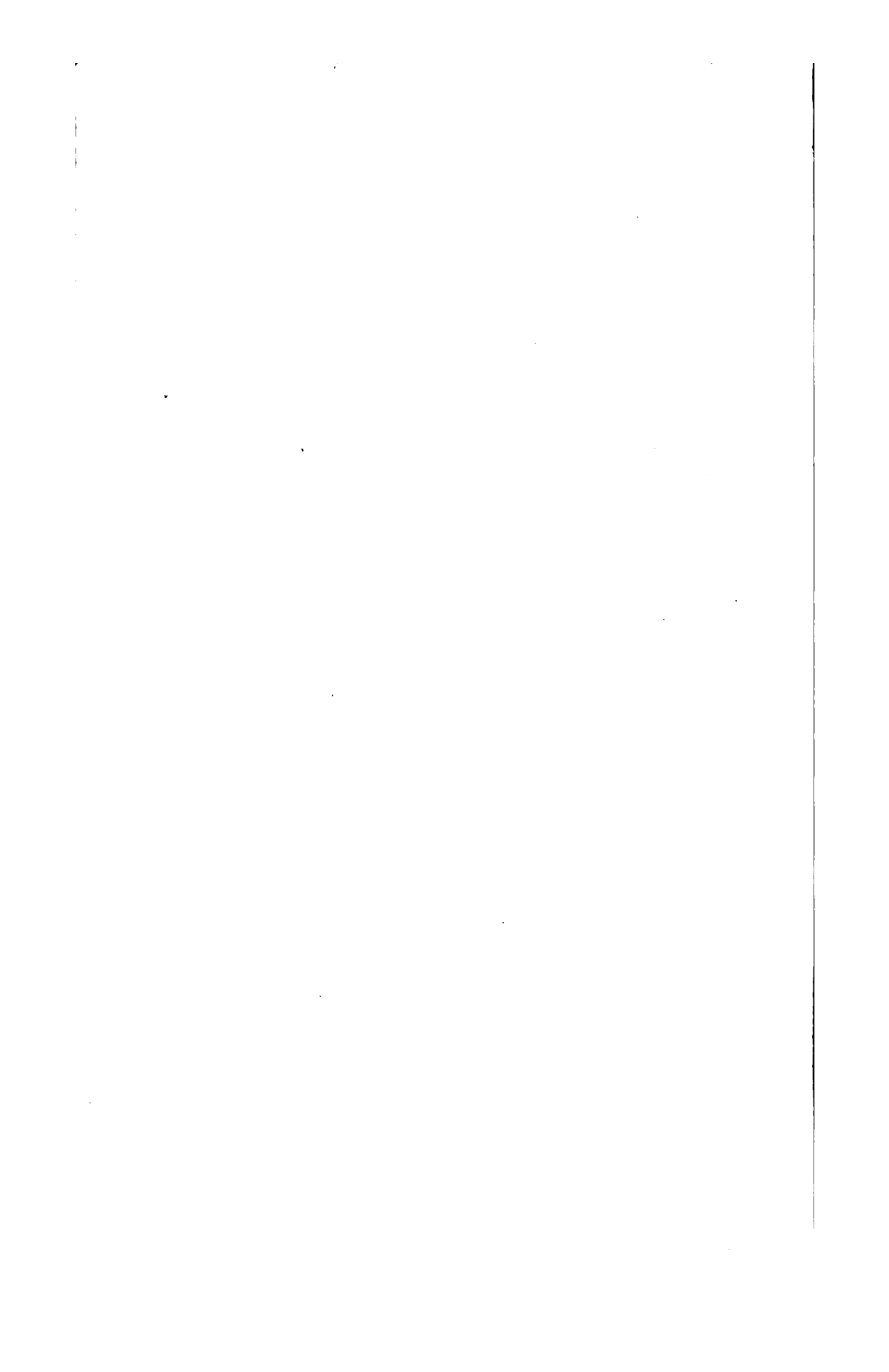
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BALTIMORE

1920



**THE AMALGAMATED ASSOCIATION OF
IRON, STEEL AND TIN WORKERS**



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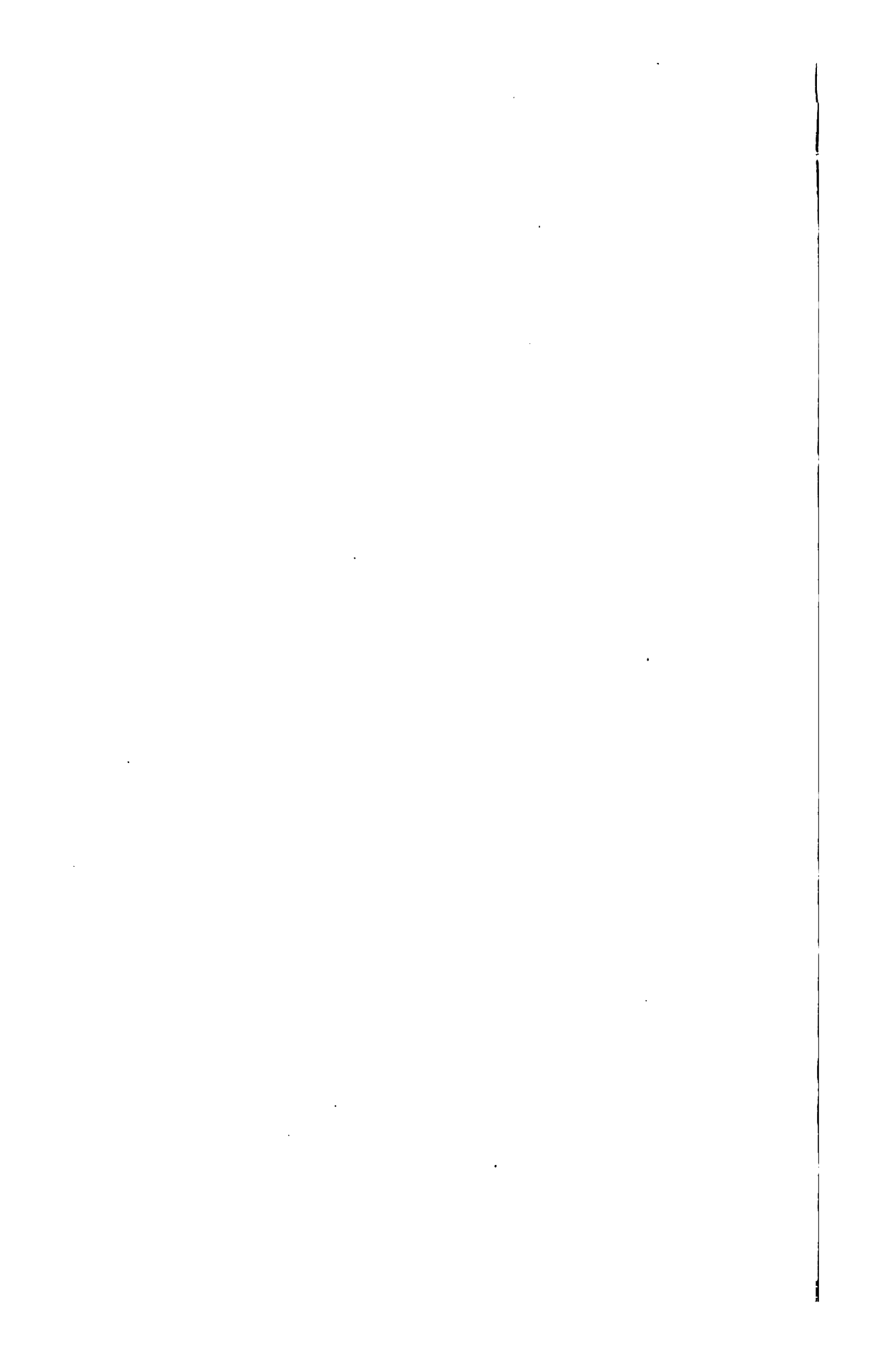
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CONTENTS

	Page
PREFACE	vii
CHAPTER I. History	9
CHAPTER II. Government	22
CHAPTER III. Jurisdiction	39
CHAPTER IV. Finances	57
CHAPTER V. The Benefit System	71
CHAPTER VI. The Standard Rate	87
CHAPTER VII. The Working Day	105
CHAPTER VIII. Restriction of Output	114
CHAPTER IX. Machinery	124
CHAPTER X. Apprenticeship and the Helper System	129
CHAPTER XI. Collective Bargaining	138

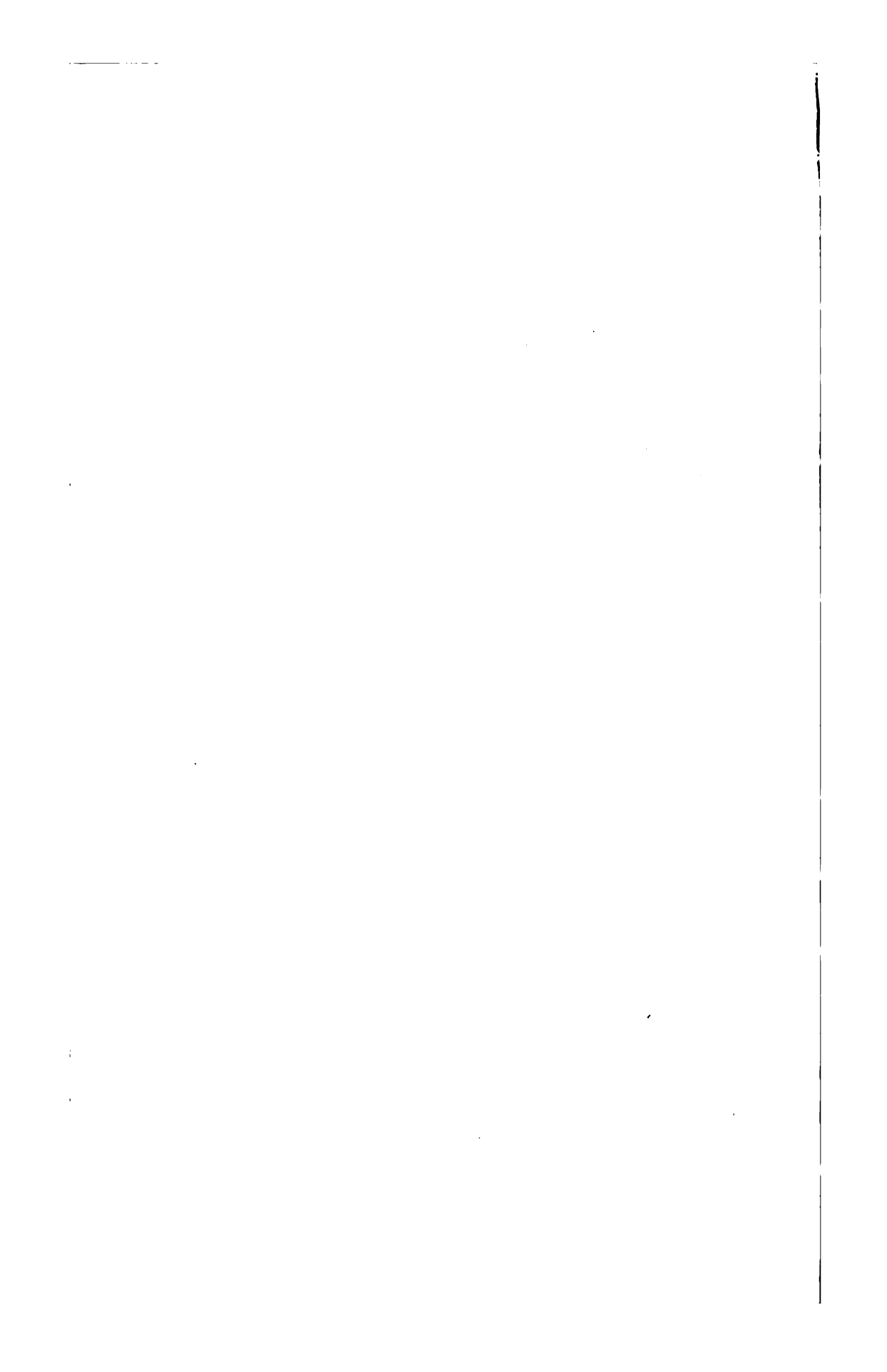


PREFACE

This monograph is the outgrowth of an investigation carried on by the author while a member of the Economic Seminary of the Johns Hopkins University. The chief sources of documentary information have been the trade-union publications contained in the Johns Hopkins library and the files of the Amalgamated Association. This study of the printed material has, however, been supplemented by intimate association and personal interview with officials of the union and with employers in the iron and steel industry. To these—and to Mr. John Williams, president of the union, and to Mr. M. F. Tighe, secretary-treasurer, in particular—the writer feels his deep indebtedness.

The number of references inserted as footnotes is, it is feared, abnormally great; but an endeavor has been made to supply them in each instance in order to show that the statements in the monograph are based upon concrete evidence and, it is believed, actual fact.

The writer desires to express his sincere appreciation to Professor Frank C. Lockwood, Department of English Literature, University of Arizona, for helpful suggestions in the preparation of the manuscript; and especially to Professor Jacob H. Hollander and Professor George E. Barnett, to whom he owes his first practical guidance in economic study.



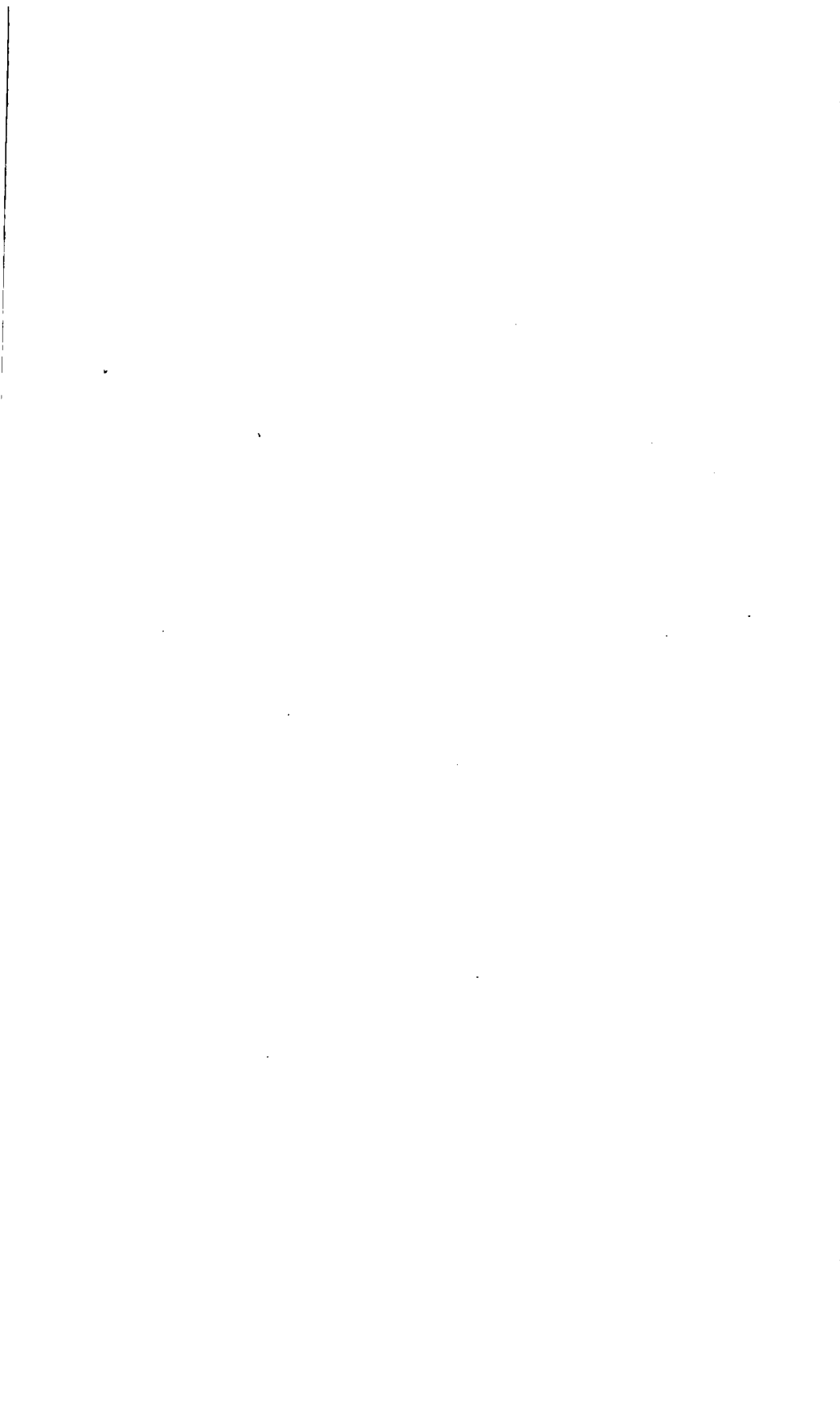
THE AMALGAMATED ASSOCIATION OF IRON, STEEL AND TIN WORKERS

CHAPTER I

HISTORY

The Amalgamated Association of Iron, Steel and Tin¹ Workers is a trade union which had its genesis in a combination of various organized labor forces of the iron and steel mills of this country about forty years ago. The tin workers were incorporated into the organization in the year 1881, when their importance as a distinct class of workmen justified membership. For fifteen years after its formation, the Association increased in strength, membership and influence. It consisted, in June, 1892, of two hundred and ninety-two lodges in good standing, and about twenty-four thousand taxable members, exclusive of those holding traveling cards. The great labor contest of 1892, unparalleled in the history of the organization and of great importance in the development of the American labor movement, ended disastrously for the union. This struggle, part strike and part lockout, took place at Homestead, Pennsylvania, between the Amalgamated Association and the Carnegie Steel Company, Limited, of Pittsburgh, owners of the Homestead Steel Works. The contest was hard fought, but the union was crushed. Gradually it was driven from one mill after another, until its complete overthrow in the East was consummated in the year 1901. Today its chief stronghold lies in the iron mills in the western section of the country.

¹ The word "Tin" was inserted in the name of the union in the late nineties. The president, in his 1897 report, addressed the convention as, "The Amalgamated Association of Iron, Tin and Steel Workers."



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was elected "Grand Master." The next year vigorous efforts were made to extend the influence of the organization, and a national union was formed in Pittsburgh, September 8, 1862. The convention declared that the association should be known as "The Grand Forge of the United States, United Sons of Vulcan." At the second annual session, held at Wheeling, W. Va., a constitution and by-laws were adopted.⁷

Local "forges" were instituted in New York, New Jersey, Maryland, Pennsylvania, Ohio, West Virginia, Kentucky, Illinois and other States. The convention of August 5, 7 and 8, 1865, reported the formation of more local forges in the four months preceding than during the entire seven years of its previous existence.⁸ Delegates from five different States were present, and the membership of the union had trebled. The next year traveling organizers were appointed, with Miles Humphreys as leader of the squad. The efforts of the organizers met with exceptional success, largely due to the rise in market prices and consequent success in demands for higher wages. They traveled throughout the iron manufacturing districts of the country and reported the establishment of forges in all the mills "with but few exceptions."⁹ Of the thirty-six active forges, all but one sent delegates to the session held in Pittsburgh in 1867.¹⁰ The reports of twenty-three forges showed a total membership of 1514, by no means all paid-up members.

The inability of the national body to provide financial support for members involved in labor difficulties caused a falling off in membership.¹¹ Until 1870, strikes and lock-outs were inaugurated solely by the men employed in the

⁷ McNeill, p. 271.

⁸ Fincher's Trade Review, November 16, 1865, quoted by John Fitch in "The Steel Workers."

⁹ Vulcan Record, vol. i, no. 1, p. 8.

¹⁰ No official record of the proceedings of the annual meetings of the National Forge was published until 1867, when the issue of the "Vulcan Record" and a "Semi-Annual Record" was begun.

¹¹ The funds in the treasury were not even sufficient to meet the expenses of the traveling organizers. Mr. Humphreys says he paid a balance of not less than \$100 out of his own pocket.

mill where the grievance arose, and financed entirely by voluntary subscription. Frequently strikes were lost through the lack of proper financial aid. The loss of a strike invariably caused the dissolution of the local union. Eleven forges lapsed in 1867, and sixteen the following year. The active membership was not more than six hundred. When in 1870 the control over strikes became centralized in the national body, and the machinery for the levying and collecting of strike assessments was perfected, the organization experienced a steady and rapid growth. The membership increased to 2000 in 1871, and to nearly 3500 in 1873. This was a high water mark. The effects of the panic depleted the ranks of the local unions during the next two years, although new forges were constantly being added. The growth of the union until 1875 may conveniently be observed in the following table:

TABLE SHOWING THE GROWTH OF THE UNITED SONS OF VULCAN

Reported to Convention at :	Year	Active Forges	Taxable Members ^b	Forges Reporting	Delegates	Forges Represented	Average Membership per Forge
Pittsburgh.....	1867 ^a	36	1514	23	51	35	65.8
Buffalo.....	1868	30	665 ^c	20	20	14	33.2
Semi-annual Report		22	652 ^c	19			28.7
Wheeling.....	1869	24	816	24	29	18	34.0
Semi-annual Report		26	1083	26			41.6
Harrisburg.....	1870	33	1265	33	42	27	38.3
Semi-annual Report		38	1454	38			38.2
Chicago.....	1871	50	1959	50	60	42	39.2
Semi-annual Report		54	2191	54			40.5
Covington.....	1872	70	2614	69	64	56	37.8
Semi-annual Report		76	3095	73			42.4
Troy (N. Y.).....	1873	81	3331	73	88	71	45.6
Semi-annual Report		92	3048	81			37.6
Youngstown.....	1874	99	3038	86	81	74	35.3
Semi-annual Report		99	2485	76			32.7
Philadelphia.....	1875	98	2732	93	73	67	29.3

^a No statistics are available for the years previous to 1867.

^b These figures represent the membership enrolled in the books, but not all members were active.

^c President J. O. Edwards later reported the membership for this year at 583 in June and 677 in December. By States there were thirty forges in Pennsylvania, 17 in Ohio and 29 in all other States together.

The Grand Forge¹² received no recognition from employers until 1865. Wages had steadily increased since the beginning of the war and there was little cause for disagreement. The attempt to reduce wages at the close of the war brought the manufacturers into conflict with the union. The strike lasted eight months; as a result, a scale of wages was devised and agreed upon, based on the selling price of bar iron. This scale, made on the 13th of February, 1865, was the first of its kind in the iron industry and doubtless in the United States. The plan embodied in the scale of 1865 by which wages fluctuate in accordance with the price of the product (the adjustments being made bi-monthly and wages fixed two months in advance), is still in force without substantial modification in the iron shops where the union is recognized.

The first national officers received no salaries. They did the work at night, after the day's work in the mill. In 1866 the organizers were paid the trade wages and traveling expenses. Later, the custom of presenting the president with a purse of a few hundred dollars at the close of a convention developed. As the union grew in importance, the duties of the national president demanded his entire attention and a salary was provided. The secretary likewise received pay for his work. In 1874 the duties of secretary were added to those of the president, and the salary was fixed at \$1500. The organization was financed by means of a tax, paid semi-annually. The levy for the support of members engaged in a legalized strike was made separately. Until 1870 this assessment was voluntary. The question of establishing sick and death benefits was discussed in several conventions, but each time the proposition was defeated.

The first known organization in the finishing trades was a local union instituted in Troy, N. Y., August 6, 1864,

¹² This title was changed to National Forge at the convention in 1870 in Harrisburg. The titles of the officers were also changed, the Grand Master being designated as "President," and the Grand Vulcan as "Vice-President." The officer of "Grand Knight" was eliminated.

known as the "Troy Iron Rollers Association." It was composed of "all rollers, roughers and catchers" having "a practical understanding of the business." In 1865 the "Iron Mill Rollers Union and Benevolent Association of Elmira" was organized.¹³ Trade union activity among the heaters has been recorded as early as 1865. On the 6th of July, 1865, delegates of heaters' unions met in convention at Cleveland, Ohio, to organize a national union, or more properly, to effect a more complete national organization.¹⁴ Although the movement would appear from these facts to have been rather widespread, the finishers' unions appear to have completely disappeared in a short time.

The first permanent local unions of men employed at the furnaces and rolls in the finishing departments originated in Chicago.¹⁵ In 1861, a local lodge of heaters was organized under the name of "The Associated Brotherhood of Iron and Steel Rail Heaters." Other local organizations sprang up within the next few years, and in August, 1872,¹⁶ nine lodges sent delegates to a convention in Springfield, Illinois. Membership was extended to include heaters in bar, plate and guide mills.¹⁷ In 1873, the brotherhood had twenty-two lodges and a membership of 480, with lodges in seven States—Illinois, Missouri, Michigan, Kentucky, Ohio, Pennsylvania, and New Jersey. Rollers and roughers were made eligible, and the name of the organization became "The Associated Brotherhood of Iron and Steel Heaters, Rollers and Roughers of the United States."¹⁸

The organization as an independent body lasted only four years. It had few members east of the Alleghany moun-

¹³ Fitch, *Steel Workers*, p. 81.

¹⁴ Fincher's *Trade Review*, July 22, 1865, p. 64, quoted by Fitch.

¹⁵ *National Labor Tribune*, April 28, 1888, p. 2, col. 1. See also Fitch, pp. 81, 82.

¹⁶ According to Jarrett (McNeill, p. 277) Friendship Union Lodge of Chicago is the earliest; and it was this lodge that took the initial steps to "form" a national union by calling a convention August 30 and 31, 1872.

¹⁷ *Pennsylvania Bureau of Industrial Statistics*, 1887, p. G 2, quoted by Fitch.

¹⁸ Fitch, p. 82.

tains. The officers were unsalaried, the president and secretary receiving merely an occasional donation for their services. The income of the union never exceeded \$500, raised by per capita assessment. In case of strikes, voluntary contributions were made for those engaged therein. No sick or death benefits were established, and the control of strikes was left entirely to the local bodies, as was also the adjustment of wages. Internal dissension dissipated much of the energy which should have been devoted to building up a strong organization, and the brotherhood was not as effective as it might have been. When it was merged with the other two bodies in 1876, the Committee on the State of the Order reported fourteen lodges in good standing, having in all 412 members. Sixteen lodges sent no report to the convention, and three needed financial assistance.

An organization of roll hands was formed in a North Chicago mill in 1870. The Heaters' Union, as has been noted, admitted rollers and roughers in 1873, but the Roll Hands' Union admitted all men engaged about the train of rolls—catchers, hookers, straighteners, and buggymen, as well as highly paid rollers and roughers. To some extent, therefore, the jurisdictions of the unions conflicted.

The Roll Hands organized a national union at Springfield, Illinois, June 2, 1873, with fifteen lodges and 473 members. It was named "The National Union of Rollers, Roughers, Catchers and Hookers of the United States." At the second convention, held at Columbus, Ohio, in April, 1874, in view of the admission of two other classes of workmen, buggymen and cold straighteners, the name of the association was changed to "The Iron and Steel Roll Hands Union." The Roll Hands' Union was never very large. Strikes were ordered by the local unions, and strike benefits paid by voluntary subscription. No sick or death benefits were paid. The limit of a day's work was fixed at six rounds.

It is difficult to trace the beginnings of unionism in other branches of the iron industry. Mr. Fitch refers to an announcement in the Boston "Weekly Voice" of August 2, 1867, of the "seventh annual" convention of "Nail Makers of the United States and Canada" in New York City. The correspondent referred to it as "one of the strongest and most permanent organizations of mechanics in this country." In 1876 there were a few local lodges of nailers, but no national organization.

The main reason for consolidation of the unions in the iron trade may be briefly stated. In time of strike, it was a source of weakness that the various trades were in no position to act in concert. If, for example, the puddlers had a grievance, bar already puddled was purchased and the heaters and rollers would continue at work. The formation of the Amalgamated Association was one of the earliest attempts in American trade-unionism to substitute industrial unionism for separate organization by trades.

Impressed with the necessity of organizing the separate factors into one large union, the members of Columbus Lodge no. 11 of Iron and Steel Roll Hands at Columbus, Ohio, began to agitate the amalgamation of all men working in iron and steel rolling-mills into one body. The three local organizations in Columbus formed an amalgamated association and put their theory into practice in the settlement of disputes in the works. The matter was discussed in the columns of the National Labor Tribune¹⁹ and editorial comment served to crystallize sentiment in favor of the movement. The mill men of Louisville, Kentucky, and New Albany, Indiana, met in Louisville December 10, 1874, and framed an appeal to the mill men all over the country, which was published in the Tribune.²⁰

At first the Roll Hands were jealous of their independence, due to the fact that most of the trades represented in their organization were not admitted to the Heaters' and

¹⁹ The National Labor Tribune is a labor paper, established in Pittsburgh in 1873, devoted chiefly to the interest of the iron, steel and mining industries.

²⁰ National Labor Tribune, December 26, 1874, vol. ii, no. 51, p. 1.

Puddlers' Unions. This feeling soon disappeared, and the Roll Hands in 1874 sent a representative to the Heaters' convention at Covington, Kentucky, in July of that year, for the purpose of effecting a consolidation of those bodies. Committees representing the Heaters and Roll Hands met at Indianapolis, Indiana, August 3, 1875, and after four days adopted a constitution and by-laws. The Sons of Vulcan at the time were assembled in convention at Philadelphia. Although the question of amalgamation had received favorable consideration in the Youngstown convention of the previous year, no definite action had been taken. The Heaters and the Roll Hands, uncertain what action the Puddlers would take, decided not to wait. On August 23, 1875, however, a communication was received from the Sons of Vulcan stating that favorable action had been taken. A meeting of the three committees was held in Pittsburgh, December 7, 1875, and a constitution and a code of by-laws for the government of the proposed Amalgamated Association were adopted. Copies of the new constitution were printed and submitted to every lodge and forge throughout the country. Delegates were instructed by the local organizations and sent to the conventions of the three unions which by arrangement met simultaneously in Pittsburgh on the first Tuesday of August, 1876.

Each organization met in separate session, voted to amalgamate, and, after disposing of such business as pertained to the individual society, announced its readiness to enter into a joint session to consider the subject of amalgamation. On August 3, 1876, the delegates of the three associations and one from the United Nailers met in Emerald Hall, Pittsburgh. Only two amendments were made to the proposed constitution which was then adopted as a whole. On August 4, 1876, the delegates "declared themselves an amalgamated body," and the Amalgamated Association of Iron and Steel Workers of the United States was formed.

The Association was generally successful until 1892. In 1878, however, the price of iron fell and there were many

strikes both against the reduction of wages and the "contract system," by which the first four weeks' wages and a percentage, usually twenty-five per cent, of all subsequent wages were retained until the end of the year, then to be paid to the men if profits should "justify such payment." In 1879 trade revived, and there was a cessation of strikes. In 1881 Canada was included within the jurisdiction of the association, and colored men were made eligible to membership. In 1883 the steel rail manufacturers reduced wages one third and strikes were frequent. The union, however, won the majority of its demands. Membership grew rapidly for several years, from 10,000 in 1880 to 11,800 in 1883. Reverses in strikes caused a decline of membership to 6000 in 1885, but after that the association grew rapidly—to 15,000 in 1888, and nearly 25,000 in 1892, when it undertook the great strike at Homestead, and was defeated.

In 1892 the union began to decline. The membership fell to 10,000 in 1898, then increased until 1902, when the union was rooted out of all steel mills in the East. The convention of 1909 reported a membership of 8,000, when a strike against the American Sheet and Tin Plate Company, the last subsidiary company of the Steel Corporation to deal with the union, depleted its ranks one-half.

The industry has at no time been thoroughly organized. In 1878 it was roughly estimated that there were 30,000 workers eligible to membership in the union.²¹ Of these, a little over 4000 were organized, or scarcely fifteen per cent. Half of the mills were reported "unorganized"; these were principally in the Eastern and New England States.

The union was at its highest point of membership, 24,068, in 1891. The number who were eligible was probably 100,000. There were eight districts, with centers at Pittsburgh, Wheeling, Cincinnati, Chicago, Indianapolis, Youngstown, Birmingham and Philadelphia, respectively. The first, or Pittsburgh, district had always been the stronghold

²¹ Proceedings, 1878, pp. 139-140.

and the "model" in organization. The sixth, or Youngstown, district ranked second. The eighth, or Eastern district, although it had at this time a large number of local unions, was never permanently organized.

The accompanying table shows the decline of the organization from 1892 to 1912, and its very partial recovery in recent years. The three big strikes—in the years 1892, 1901 and 1910—tell their own silent story in the figures. The Pittsburgh and Youngstown districts, it will be noticed, lost their position of prestige for organization; effective

NUMBER OF LOCAL UNIONS, BY DISTRICTS

District	1891	1902	1912	1916	Central City
First	94	30	7	4	Pittsburgh.
Second	18	19	8	7	Wheeling.
Third	17	10	7	8	Cincinnati.
Fourth	18	17	9	12	Chicago.
Fifth	17	18	7	7	Indianapolis.
Sixth	53	41	16	18	Youngstown.
Seventh	7	11			Birmingham.
Eighth	54	9			Philadelphia.
Ninth		10	12	14	St. Louis.
Tenth			3	4	Reading.
Isolated	12	9	8	16	
Total	290	174	77	90	
Total membership	24,068	14,467	4,318	7,860	
Average membership per union	83	83	56	87	

GROWTH OF THE SONS OF VULCAN

Year	Number Delegates	Number Lodges	Members	Average Lodge Membership
1867	51	36	1514*	66
1868	20	30	665	33
1869	29	24	816	34
1870	42	33	1265	38
1871	60	50	1959	39
1872	64	70	2614	38
1873	88	81	3331	46
1874	81	99	3038	35
1875	73	98	2732	29

* Overestimated.

organization shifted to the West, where unionism in these trades is still alive. Repeated efforts have been made to regain the East, and various expedients have been adopted from time to time, but without success.

GROWTH AND DECLINE OF THE AMALGAMATED ASSOCIATION

Year	Number Delegates	Number Lodges	Members	Average Lodge Membership
1877.....	75	111	3,755	34
1878.....	89	113	4,044	36
1879.....	105	104	5,400	52
1880.....	193	155	9,550	62
1881.....	173	166	10,359	62
1882.....	213	197	16,003	81
1883.....	153	183	11,800	64
1884.....	149	160	9,242	58
1885.....	88	107	5,702	53
1886.....	121	106	7,219	68
1887.....	172	154	11,426	74
1888.....	194	172	14,946	87
1889.....	194	189	16,117	85
1890.....	253	234	20,781	89
1891.....	294	290	24,068	83
1892.....	254	291	20,975	72
1893.....	168	234	13,613	58
1894.....	96	150	10,000	67
1895.....	85	125	10,000	80
1896.....	111	132	11,000	83
1897.....	123	145	10,500	72
1898.....	117	153	10,050	66
1899.....	140	145	11,050	76
1900.....	202	181	14,035	78
1901.....	200	160	13,893	87
1902.....	212	174	14,467	83
1903.....	201	185	15,198	82
1904.....	207	183	14,306	78
1905.....	166	157	10,904	69
1906.....	170	144	11,410	79
1907.....	150	139	10,216	73
1908.....	115	124	7,472	60
1909.....	97	114	6,295	55
1910.....	116	103	8,257	80
1911.....	69	85	4,355	51
1912.....	69	77	4,318	56
1913.....	87	79	6,304	80
1914.....	88	87	6,880	79
1915.....	81	85	7,283	86
1916.....	99	90	7,860	87

CHAPTER II

GOVERNMENT

The Sons of Vulcan, the oldest and most important of the constituent societies of the Amalgamated Association, adopted a constitution and by-laws in 1863. The committees which formulated the constitutions both of the Roll Hands' and of the Heaters' Unions borrowed, with slight changes and unimportant omissions, the constitution of the Puddlers' Union.¹

The joint committee of the three unions which drew up in 1875 the tentative draft of the constitution of the Amalgamated Association likewise used the Vulcan constitution as a basis upon which to build. The system of government employed by the puddlers was continued by the consolidated body.

From what societies the Sons of Vulcan have borrowed in piecing together their instrument of government cannot be determined. It is reasonably certain that they obtained it from no one source. The fraternal societies, no doubt, exercised an important influence on the government of this as well as of nearly all the older unions.²

Fraternal orders have influenced the government of the union in minor ways. The mystery of a secret pass word, the ceremony of initiation, the regalia, and other forms

¹The first available constitution of the Sons of Vulcan is to be found in the Proceedings of 1869. It contains the Grand Forge constitution in full "along with all amendments adopted since 1866" (Vulcan Record, no. 4, pp. 23-31). The first sub-forge constitution is printed in the Proceedings of 1870 (*ibid.*, no. 6, pp. 56-67).

²G. E. Barnett, "The Printers: A Study in American Trade Unionism," in *American Economic Association Quarterly*, third series, vol. x, no. 3, p. 58. Professor Barnett has pointed out that the constitution adopted by the first permanent national trade union in the United States, the National Typographical Union, was borrowed by the committee "almost without change . . . from the Constitution of Odd Fellows of the United States of America."

associated with the secret society, have been introduced into the labor organization. The influence of the fraternal order is shown also in the use of names, such as "grand forge," or "grand lodge," "subordinate lodge," "grand vulcan," "grand knight," "conductor" or "guide," "door-keeper," or "inside and outside guards." But the constitution of the Sons of Vulcan provides for a more highly centralized form of government than any fraternal order was likely to possess.

The nature of the government of the early local unions in the iron trades of the United States cannot be set forth definitively. No constitution of any of these early unions is extant. No doubt, government is too high-sounding a phrase to apply. The workmen gathered in simple and informal shop meetings, and elected a presiding officer *viva voce*. These meetings were held sometimes within the industrial establishment, more often perhaps in some dingy room over a store or a saloon, usually on Saturday night. They were clandestine in character, because of the workmen's fear of discharge. When the need arose, special committees were created to lay the demands of the journeymen before the employer.

The form of government of the local union, so far as we know, has never undergone any radical change. It is still essentially government by mass-meeting. Originally five "practical workers" was the minimum number necessary to organize a local union. In 1880 the minimum was increased to ten. The whole body of members assembling "at least once in every two weeks" is the final authority for the transaction of all business, legislative, executive and judicial. The general meeting may adopt amendments to the by-laws, may bring to trial accused members and by a two-thirds vote suspend or expel them, and may order the payment of bills for local expenses; but it has no power to declare a strike. The sole authority to legalize a strike is vested in a special committee created for this purpose by

the national assembly. In any important business, the local society appoints a committee to investigate the matter and report at the next meeting; but no decision is binding except by a vote of the members. The meetings are held in some convenient hall, or sometimes several local unions join to rent a building where each may have its office and meeting room. During the meetings the officers are stationed in various parts of the room, upon slightly raised platforms or behind small tables, the procedure resembling that of a fraternal order.

The Amalgamated Association endeavors to divide the local unions when they reach considerable size. In early times, a single local society frequently had members working in several mills. When the membership became too large for proper administration of local affairs, members of the same mill were organized in separate unions. By about 1880 the number of members in a single union from the larger mills became so great as to impair the efficiency of the general meeting. The local unions were again divided so that the different branches of the trade were organized into separate lodges. Thus, the finishers belonged to one local union, the boilers to another, the steel workers to a third, and so on. In 1890 the average membership of a subordinate lodge was less than ninety, the largest having over four hundred members, and the smallest less than a dozen. Only in a few of the larger local unions was there any danger of the monthly meeting degenerating into an unwieldy body.

A second less important method employed by the association to limit the size of the subordinate lodges is by restricting the choice of lodges in which an itinerant member may deposit his card. According to the constitution, any member removing from one locality to another, and obtaining a situation, is required to deposit his card in the lodge which controls the mill wherein he works, and all cards not deposited within four weeks thereafter are annulled. Where there are two or more lodges in one mill,

the members are obliged to join the lodge relating to the department in which they are employed. This regulation keeps the separate local unions intact, with a more or less homogeneous membership.

The limitation on the size of the local unions has two advantages. In the first place, the reduction of the size of the general meeting lessens the chance of ill-advised legislation. Secondly, since the local unions in each mill must act in concert, the decision of important matters must be referred to a joint committee—the district or executive committee. It is obvious that a general meeting composed of over a thousand members, such as there were in the Jones and Laughlin Mills in 1890, could not carefully and wisely pass upon affairs of importance.

The general meeting is a crude mechanism for rendering judicial decisions and for transacting executive business. In the period between regular meetings matters are constantly arising which demand immediate consideration. This defect is somewhat lessened by the creation of certain committees, although the local union is reluctant to delegate its functions. Many committees are appointed for particular purposes. Certain standing committees have also emerged, the most important of which is the mill committee. The national union has adopted rules requiring the subordinate lodges to create such committees, "consisting of three members, on each turn, from each department represented in the lodge." It is the duty of the committee "to superintend and guard the interests of the Association in their several departments" and to adjust, if possible, all difficulties which arise between the manager of the works and any member or members of the union.³ Two other standing committees of the local union are the grievance committee and the auditing committee. The former considers

³ In 1912, in order to facilitate the work of the mill committee, local lodges were authorized to draw up shop rules, which were to be submitted to the management for approval. These rules were to regulate conditions not covered by the scale or the constitution (Proceedings, 1912, p. 9825).

charges against a member who is brought to trial; the latter audits the accounts of the officers who have charge of the funds.

The important officials of the local union are a president, a recording secretary, a financial secretary, and a treasurer. The financial secretary keeps accounts of receipts and expenditures. The local dues of the secretaries and treasurer are sometimes remitted as pay for their services. The minor officers are a vice-president, three trustees, an inside guard, an outside guard and a guide. In recent years there has been added a journal agent, who solicits patronage for the trade journal, and for his effort receives a small compensation. All the officers work at their trades and perform their official duties during spare time. A business agent is rarely employed by any local union.

The distinctive feature of the constitution of the Amalgamated Association of Iron and Steel Workers, adopted in 1876, was the supreme authority given to the annual convention of delegates⁴ from the local societies. The national union has power to elect its officers, to decide "all matters of general importance relating to the welfare of the several Lodges," and to determine "the customs and usages in regard to all matters pertaining to the interests of the Association." Executive and judicial as well as legislative functions are exercised by a single body. In the exercise of its legislative power it has equal authority to pass every kind of law. No distinction between constitutional and statutory law is recognized. At one moment, therefore, the assembly may be remodeling the constitution or transferring important functions from the subordinate societies to the national union; at another, it may be passing

⁴ The convention meets at present annually on the first Tuesday of May. Delegates to be eligible must be clear on the secretary's books, must be working at some trade under the jurisdiction of the union, and must have served six months in some office of the local union. The national lodge pays railway fare only; the local union pays other necessary expenses. Any sub-lodge failing to send a delegate without sufficient excuse is fined fifty dollars.

a rule that no member be allowed to smoke in the assembly hall while the convention is in session.⁵

In its judicial capacity, the convention considers grievances brought by national officers, local unions, or individual members. The charges may be some violation of the rules of a local union, equally as well as dereliction in duty to the national union. The assembly, in one instance, may suspend or even expel a local union for serious violation of the rules; while, in another case, it may be sustaining a subordinate lodge in imposing a fine of a dollar or two on a member for some petty misdemeanor. Much valuable time of the convention is wasted in the consideration of trivial appeals.

The principal executive functions of the assembly are the levy of taxes, the appropriation of revenue, and the ratification of agreements. The convention fixes the amount of dues and assessments; it controls disbursements; it has the final power in making agreements. The Amalgamated Association, continuing the practice established by the Sons of Vulcan, for a time held two conventions annually, one to regulate the internal government of the organization, the other to draw up the scale of wages to be demanded from the employers. The district conventions, as also the scale convention, composed of delegates elected by the various district conventions, always met immediately before the joint conference between employers and employes, and outlined the terms which its representatives were to demand. Since 1885, these conventions have been merged.⁶ The national assembly elects its own officers and audits their accounts.

As the union grew in numbers the convention became too large to transact business efficiently. While the number of

⁵ Any amendment to the laws must previously have been sent to the national lodge to be printed in the "programme of business." This provision was made in 1877.

⁶ By the merging of these conventions, the union effected a saving estimated at \$3000 a year. The session was changed to meet in June instead of in August, and the date of scale termination from June 1st to July 1st (National Labor Tribune, August 15, 1885, p. 4, col. 1).

delegates in attendance at the first few conventions of the Association was only about a hundred, there were nearly three hundred present in 1891, and over two hundred in 1902. Careful formulation of policies or proper sifting of evidence in judicial cases by such a body is impracticable. In consequence the assembly has followed the practice of creating committees to perform certain duties. The duties of these several committees are not always carefully coordinated. For example, the work of the committee on grievances and that of the committee on appeals is very similar. Amendments to the rules are drafted and submitted to the assembly not only by the committee on constitution but also by committees formed for wholly different purposes. Amendments are frequently recommended, for example, by the president, one of the several vice-presidents, or the secretary-treasurer in their reports to the convention. The committee on officers' reports considers these proposals independently of the committee on constitution. It is not surprising, therefore, that conflicting resolutions are occasionally passed by the convention.

The efficiency of the convention as a governmental instrument is limited by the infrequency of its sessions—once each year—and by the shortness of the sessions. The length of the session, however, has been extended as the importance of its activities has increased. In 1876 the convention lasted three days, whereas it lasted seventeen days in 1902. Two weeks, the average duration of the convention, or even three weeks, the maximum period, seems a very short period in which to adopt needed legislation, settle judicial cases, elect officers, levy dues, appropriate funds, audit accounts, and transact numerous other matters of business which accumulate from one year to the next. There must also be taken into account time lost in waiting for committees to report. Little can be accomplished the first day, since the credentials of the delegates must be examined. After listening to an address of welcome by a municipal executive or a local trade union leader, a recess

is taken until the committee on credentials is ready to report. Then follows the appointment of committees and assignment of work to each group. Since nothing can be done until the committees have formulated their reports, the delegates are usually entertained in the meantime by a picnic or a visit to some point of interest in the city. Consequently, much of the business is crowded into the latter part of the session. During the last few days the election of officers must take place, and the selection of a city for the next convention. If the contest is close, still more time is consumed in electioneering and wire-pulling, and in taking a number of ballots. Only a very few days are spent in considering new rules and in formulating trade policies.

In fixing the basis of representation in the convention the same opposition has existed between the large and small local unions as existed at the time of the founding of the American Commonwealth between the large and the small States. The members of the large unions demanded that representation should be proportional to membership, pointing out the unfairness of equal representation and minority rule. The small local societies clung to the principle of equal representation, fearing that under the other plan two or three large societies might dictate policies. "A subordinate lodge with less than one hundred members shall be entitled to one representative. A sub-lodge with one hundred and twenty-five members shall be entitled to two representatives, and one representative for each additional hundred."

The smaller unions, however, are by no means as fully represented at the annual sessions as are the large unions. The system of representation by proxy has never been tried. The Association has always paid the railway fare of their delegates in order to place the branches at a distance from the place of meeting at an equal advantage with those near at hand, as well as to aid the small local societies which could not otherwise afford to send representatives. The subordinate unions have had to bear the other expenses of

their delegates. The cost of sending a delegate is obviously a heavier burden to a small union than to a large one. At the Pittsburgh session in 1891, only 220 subordinate unions out of 300, or 70 per cent, were represented. The 220 unions represented had, however, 23,300 members, or 96.8 per cent of the total membership.

There are two objections to the national union's paying all the expenses of the delegates. First, the large local unions would be taxed in order that the small ones might be represented. Secondly, if the expenses of representatives were borne by the national organization, the size of the convention would become too large for governmental efficiency. The increase in the number of subordinate lodges has been partly due to the tendency to split up the original local unions into small units according to branch of trade or nationality. The result has been that the convention has grown in numbers. In 1877 seventy-seven delegates were present, in 1883 there were a hundred and fifty-three, and at the convention of 1891, two hundred and ninety-four. Proposals to reduce the size of the convention by grouping the societies into districts which would elect delegates to represent all the unions in the several districts have been steadily defeated. The local unions, jealous of their political prerogatives, have refused to be merged in any form of district organization.

As the activities of the national union increase, the convention decreases in effectiveness as a means of transacting business. The history of the convention may be marked off roughly into three periods characterized respectively by (a) the predominance of the representative assembly; (b) the enlargement of the power of the officers; (c) the struggle for the referendum.

① During the first of these stages, the convention was practically the sole organ of government. Its functions were primarily legislative and judicial. The officers were elected from the delegates at the convention or those who had been delegates at a previous convention, and their duties were

chiefly in connection with the sessions. They consisted, originally, of a president (known as grand master), a vice-president (with the title of grand vulcan), a secretary, a treasurer, a conductor or guide, and a doorkeeper. There was also an officer, with the title of grand knight, whose duty it was to display to the delegates his knowledge of the ritual. The office of grand knight was abolished in 1870, and in 1874 the offices of president and secretary were amalgamated. The officers were elected for one year, and assumed their duties at the close of the session at which they were elected.

The amount of executive work in the interval between sessions was very limited. The issuing of charters and cards, the preparation of the convention proceedings for publication, the collection and disbursement of the small revenue needed for general expenses, and the collection and distribution of voluntary strike contributions, constituted the important administrative duties during the first period of the union's history. In 1867 the national officers seldom heard from local officers. At first the officers were unpaid. Later, the secretary was voted annually by the convention a certain sum of money. The president was customarily presented with a purse by the local unions.⁷ In 1872 the donation amounted to seven hundred and sixty-six dollars. The free will offering was always sufficiently large to prevent the positions going begging, and the convention usually continued the same men in office for several years.

The second stage appears with the growth of the activities of the central organization. It is marked by the creation of paid and unpaid officials and boards of management which levy assessments, sanction the declaration of strikes, and perform many detailed executive duties, make judicial decisions, and sometimes exercise a very limited legislative power during the period between conventions. A district

⁷ The Heaters "agreed to pay" their president, known as Grand Worthy Sire, \$200 for the year ending July 7, 1874 (MS., Proceedings Heaters, 1874).

executive committee has the power to declare strikes.⁸ A board of investigation makes judicial decisions, and has been known to make new rules on the ground of expediency. The final authority, however, still resides in the representative assembly. It continues to elect officers, to audit their accounts, and to remove them for misdemeanors or neglect of duty. At the same time, the influence of the paid officers grows rapidly. They devote their entire time to the work of the union, and thus gain an intimate knowledge of the conditions of the trade and the internal affairs of the association. The delegates must rely greatly on their judgment. Accordingly, by far the larger part of the time of the convention is devoted to the ratification or rejection of the legislative and executive program outlined by the officers in their reports to the assembly of delegates.

This stage was quickly attained in the union of the iron boilers and puddlers, whose activities increased so rapidly that it was necessary to have one man devote his entire time to the affairs of the union. In 1873, all power—executive, judicial and even legislative—was vested during the interval between sessions in a single paid official, known as the president. He was voted a salary of \$1500 “clear of all traveling expenses.” The president acted as financial and corresponding secretary, supervised the publication of the convention proceedings, and chartered new local societies. When time permitted, he attempted to organize the workers in non-union mills. He visited localities where a strike threatened, and endeavored to adjust the difficulty. In the interpretation and enforcement of the national constitution, he was at once policeman and judge. As a legislator, he advanced new rules not covered by the existing constitution, and broke the rules whenever he thought the emergency called for such action. He could not declare a strike, nor was he entrusted with the care of funds; otherwise his power was absolute during the period between conventions.

⁸ The national officers may be brought to trial, reprimanded, suspended, or expelled by a similar board.

Early in the history of the union, the president appointed deputies, one for each state, whose duty it was to organize local unions, to visit localities where strikes were imminent or in progress, and whenever possible adjust the difficulty. No provision was at first made for paying these officials. In 1867 the system of state deputies was abandoned, the country was divided into districts, and a deputy appointed for each district. These officials worked at their trade, and received compensation for lost time and traveling expenses incurred in the discharge of their duties. This feature of government was carried over without change into the Amalgamated Association in 1876.

As the Association increased in size, however, and new functions were constantly being assumed, it was found difficult for the president and the deputies to perform all the duties of administration. New offices were created to meet this condition. The president was given the assistance of a secretary, to be appointed by him and paid fifty dollars per month. In 1880 the convention created the office of secretary, the official to be elected from among its delegates at a salary of \$1000 per year. Again, in 1890 an assistant secretary became necessary. In order to concentrate the funds in the hands of one responsible person and thereby facilitate administration, the offices of secretary and treasurer were combined in 1901.

Instead of deputies, the Association created the office of vice-president, whose duty was that of strike deputy and organizer. One vice-president was elected for each of the eight districts. These officials appointed three deputies to assist them in their duties. They were paid for lost time and expenses. In 1905 the system of district vice-presidents was altered. Five paid vice-presidents, one for each division—boiling, finishing, sheet and tin—and one for the East, were elected. In 1909 this number was reduced to two who were continuously employed at a fixed salary of \$1440 a year.⁹ One vice-president represented the boiling and

⁹ The convention of 1916 increased the salary to \$1800.

finishing divisions, the other the sheet and tin divisions. Each vice-president appointed one deputy to each of the districts of his division, to assist him in administration.

The enlargement of the functions of the national union has had a tendency to increase the importance of the president and the secretary-treasurer. The president acts as chairman of the annual assembly and of the general executive board.¹⁰ Since 1890 he has been a member of each district executive committee, which has power to declare strikes for that district. In conjunction with the vice-presidents and their respective deputies, he enforces the rules of the national union, and with them as a board of investigation brings to trial delinquent subordinate unions in the several districts. The decision of the board is final, unless non-concurred in by a two-thirds vote of the convention. The president travels frequently to various parts of the country to organize new local unions, to encourage the weak ones, and to adjust disputes between the workmen and their employers. The secretary-treasurer acts as secretary of the meetings of the convention and of the general executive board. He keeps the financial accounts, and has charge of the funds. The president and the secretary-treasurer together administer the funds.

Perhaps the greatest power of the president is his influence over legislation. The constitution from the beginning has given to the executive the power to appoint the various

¹⁰ The national executive board superseded the advisory board in 1907, and, like it, this board had no definite functions except the vague one of advising the national officers in matters "not clearly defined by law" (Constitution 1911, p. 14). It was composed of the national president, secretary-treasurer, and divisional vice-presidents. In 1909 there were added to the board the assistant secretary, managing editor of the Journal, and residing trustee; and in 1915, the insurance secretary. In 1913 its functions were defined to include, in addition to subjects not covered by the rules, "all rulings on, or interpretations of, the scale of prices, footnotes, memorandum of agreement, addenda, convention actions and resolutions"; and any constitutional laws made by the national president, vice-presidents or national executive board are printed in the financial statements and read in the lodge meetings of the local unions (Constitution 1913, p. 15).

committees of the national assembly. All proposals are considered and sifted by the various committees, who make their reports to the delegates. Even if proposed measures are presented to the convention, the unfavorable action of a committee constitutes a serious check to its adoption. By the judicious selection of members for service on the several committees, the president is able to influence appreciably the action of the session.

The other elective officers of the national union are three trustees, who hold the bonds of the president, the secretary-treasurer, and assistant secretary, audit the accounts of the national lodge quarterly, and deposit with the president their bond for the faithful performance of their duty. A managing editor is elected to edit the "Amalgamated Journal." In the nineties, the national president was empowered to appoint an assistant to act as organizer. At present, this power of appointment is vested in the executive board.

The third stage, namely, the substitution of government by popular vote for the representative form of government, is of recent origin, and is even now in process of development. First mention of this new and more democratic form of government was made in 1894, when a local union of Akron, Ohio, presented a resolution to have scales of prices and constitutional amendments made "by the adoption of the Initiative and Referendum."¹¹ Again, in 1901, it was proposed to elect all national officers by the membership at large.¹² These proposals were rejected by the delegates in convention. By 1911 sentiment in favor of the referendum had increased to such extent that it received the endorsement of the committee, and was adopted in the matter of constitutional amendments. Any proposition to change the laws required the endorsement of five lodges in three States within sixty days' time before it could legally be submitted to popular vote. The columns of the "Amalgamated Journal" were open for discussion. The propo-

¹¹ Proceedings, 1894, p. 4687.

¹² Proceedings, 1901, p. 6182.

sition was submitted to the membership by the national secretary "without preamble or comment." Amendments proposed by the national convention also required the sanction of a referendum vote before they became a part of the constitution. All amendments went into effect sixty days after their approval. The national president, secretary, and the editor of the Journal constituted a board to canvass the votes and publish the results. This provision did not apply to the wage scale or the appointment of conference committees.¹³ The law soon proved defective in that certain details important to the working of the law were not included. To add to the problem, an insurgent movement developed.¹⁴

Immediately the Newport, Kentucky, lodge—a leader in the insurrection—set about to have submitted to a referendum vote what it had advocated unsuccessfully in the convention, namely, the election of the national officers by a direct vote of the membership. The executive board thought it was "contrary to the expressed will and judgment of a majority of the delegates" of the last session. The proposed amendment received the legal endorsement of five lodges. Since the law provided no date for closing the debate in the Journal columns, the board decided that five lodges, by vote, could close the discussion. The proposition was submitted to the membership, but the result was disappointing. Some lodges having a membership of a hundred cast less than a dozen votes; others did not vote at all. So the matter remained unsettled until the next annual session.

¹³ Proceedings, 1911, pp. 9189-9192, 9372-9374; Constitution, 1911, p. 72.

¹⁴ During the year 1912-1913 two movements, insurgent in character, took place. The one originated among the workmen in Niles, Ohio, and was in the nature of a secession, the new organization styling itself "The Industrial Iron and Steel Workers of America." The other was a radical movement within the organization, and the leaders of it called themselves "The Progressive Movement of the A. A. of I. S. and T. W." The Progressives advocated, among other things, industrial unionism and the extension of the referendum. How far these outbreaks influenced the more liberal use of the initiative and referendum is uncertain. The present officials would deny that they had any influence.

In 1912 it was enacted that the national officers should be elected by means of the initiative and referendum, and also be subject to recall. The term of office was lengthened to two years. A call for nominations was sent out on the first of February; two candidates were named by each local union for each position; nominations by five lodges entitled a candidate to a place on the ballot; majority vote elected, except in the case of trustees, in the case of whom the three receiving the most votes were chosen. The results of the election were sealed and forwarded by registered mail to the national office, and remained unopened until a canvassing board of five members counted the vote and announced the results of the election at the next convention.

Similar machinery was provided for the recall of a national official. Upon the request of ten subordinate lodges, a reelection was held. No newly-elected officer could be recalled until he had served three months in office. Nor was the president or either vice-president subject to removal from May 1 to August 31, that is, during the conference season when scales were being signed, or while a strike was in progress in which ten per cent of the membership was involved. When a petition was initiated by a local union for the recall of an official, the reasons for such action were set forth in two hundred words upon the printed ballot. The official in an equivalent space gave his "justification of his course in office."

The defects in the provision for the adoption of constitutional amendments were also remedied. The essential changes were: the proposed amendment was to be printed in the Journal, and the matter was to be open for free discussion for sixty days, the time-limit for the receipt of proper endorsement. Members in good standing only were entitled to vote, and all votes were to be cast at a single meeting of the local union. Any proposition purporting, in the opinion of the officials, "to question the integrity and veracity of any officer or member" or tending "to weaken the position of the organization in a strike . . . or scale settle-

ment" was first submitted to the lodges in a special circular. A majority vote decided whether or not it should be submitted to a referendum. It was further provided that the constitution as amended June 1 should go into effect on August 1, and be in force for a year.¹⁵

Thus far the results of the referendum vote have by no means vindicated its advocates. Only a small percentage of the membership votes on the propositions. The total vote on the constitutional amendments proposed by the convention of 1912 was 534, or 12 per cent; in 1916, 1,176 votes, or 16 per cent. The maximum vote on any single proposal during the year was less than 2000, and the minimum, 944; the average, 1,394, or barely 25 per cent. During the year 1914-1915, a proposal was submitted to popular vote, giving the American Federation of Labor power to levy and collect a tax or assessment on the members of affiliated unions to support strikes of a general character. It was adopted by a vote of 560 to 384; the total vote cast being 944, or 14 per cent of the membership. This vote is ridiculously small, in view of the importance of the issue, which affected the income of every member.

The appended table shows the votes cast upon matters submitted to the referendum:

TABLE SHOWING THE PERCENTAGE OF MEMBERSHIP VOTING ON REFERENDUM PROPOSITIONS

Year	Total Membership	Votes Cast for Convention Amendments	Per Cent. Membership Voting	Average of Votes Cast for Amendments During Year	Per Cent. Membership Voting
1912-'13...	4,318	534	12	1,416	33
1913-'14...	6,304	758	12	1,763	28
1914-'15...	6,880	1,091	16	944	14
1915-'16...	7,283	1,176	16		
Average ...	6,196	890	14	1,374	25

¹⁵ In 1916 three changes were effected: (a) the national executive board was empowered to offer amendments for referendum vote; (b) the amended constitution went into effect on the 1st of September, one month later, except in case of (c) a referendum initiated by a local lodge or the executive board during the year. If approved by a majority vote, the proposition became effective thirty days after its adoption, and was printed in the Journal until the constitution was reprinted.

CHAPTER III

JURISDICTION

“The primary aim in the formation of a trade union,” according to Professor Barnett,¹ “is to obtain unity of action among the workmen in that trade. For the attainment of effective unity it is indispensable that within a given territory there shall be but one union.” Accordingly, it is the custom of each national union to define the territory over which it claims jurisdiction and the class or classes of workmen from which it expects to recruit its membership. These claims are called respectively territorial jurisdiction and membership jurisdiction.

The Iron and Steel Workers found no great difficulty in defining the classes of workmen over which each subordinate union should have jurisdiction. By reserving to itself the right to determine what classes of employees should be eligible to membership in the local societies, the national union eliminated the question of membership jurisdiction so far as the subordinate lodges were concerned. Among the early organizations—the Vulcans, the Heaters and the Roll Hands—only “practical workmen,” that is, journeymen, were within the jurisdiction of the union for the purpose of organization and admission to membership. Each local union controlled the regular admission of persons at work within its own jurisdiction, and only the more highly skilled workmen gained admittance. Even after the Association had opened its doors to helpers and other classes of semi-skilled workers, local unions not infrequently discriminated against them.

The union has uniformly refused to allow local unions to be divided on the basis of nationality. Agitation for sepa-

¹ Barnett, p. 41.

rate unions of German members arose in the early societies. In 1872 the national president of the Vulcans suggested the establishment of a German branch and the creation of a national official to issue charters to German forges. The delegates, particularly those of German origin, opposed the movement, and Julius Arnd refused to accept the presidency of such a branch, if established, on the ground that it was not "necessary."² In 1874 there was a similar agitation among the Roll Hands to grant separate charters to German local lodges, but no action was taken. It was decided, however, to have two hundred copies of the constitution and by-laws printed in the German language. The Roll Hands at no time had more than five hundred members, so it is apparent that a considerable percentage of their membership was German-speaking.³

The policy of the union has been to divide the larger local organizations on the basis of trade. In the early history of the union, when the local societies were small, no such regulation was necessary. But, as the local societies grew in size, it was found expedient for the boilers to be in one local union, the finishers in another, and the steel workers in a third. In 1883, for example, the finishers complained that they were not adequately represented in the annual meeting, and threatened to secede. The establishment of separate unions of finishers and of boilers put an end to this growing dissatisfaction. Applicants for admission to membership in the union were required to join the lodge governing the trade in which they were employed. The same rule applied to members who took out traveling cards and moved from one locality to another. Such a member must deposit his card in the local union in whose jurisdiction he was to work. In 1891 a further subdivision was made, providing for separate subordinate lodges for tonnage men and men working by the day or by the hour.⁴

² Vulcan Record, vol. i, no. 10, p. 22.

³ Proceedings, Iron and Steel Roll Hands, 1874, p. 25.

⁴ Constitution, 1891, art. 23, sec. 1.

The problem of defining the territorial jurisdiction of subordinate unions was even more simple. At the outset, the Puddlers organized a forge wherever a nucleus of a half-dozen workmen could be found willing to assume the responsibility of a charter. These forges were located at convenient centers. There was usually one forge to a city in which one or more mills were located. When conditions seemed to warrant it, a new society was chartered in the same city. Accordingly, in any one city, a local forge might have members working in several mills. In 1873, in order to put an end to this state of confusion, the territory assigned to a forge was made coextensive with a particular "mill." Members obtaining permanent employment in a mill under the jurisdiction of another forge were required to transfer their membership to that forge. In 1880, when some of the larger societies were subdivided according to trade or allied trades, a further limitation of the jurisdiction of a subordinate union became necessary. In case there were two or more lodges in the same mill, a local union had jurisdiction, not over the entire mill, but only over a particular department in the mill.

In the matter of national jurisdiction the situation has been less favorable. Not only has the union had its membership claims disputed, but it has time and again been forced to struggle in order to preserve its territorial jurisdiction intact. The controversies have resulted in dual-union disputes. "In a dual-union dispute," according to Dr. Whitney,⁵ "the jurisdiction claimed by one of the disputants is either exactly coextensive with that claimed by the other or is entirely included within it." In other words, it is a dispute not as to which trade the particular work belongs, but merely as to what union shall have control over the workers in a particular trade. A dual union, then, is "an organization which claims the right to maintain itself as a body independent of, and usually rival to, another asso-

⁵ N. R. Whitney, *Jurisdiction in American Building-Trades Unions*, p. 62.

ciation controlling the same classes of workmen and operating within the same territory." The Association has never experienced any serious disputes over demarcation.

The tendency of the national union has been to widen the scope of its territorial jurisdiction. When the Puddlers formed a permanent organization and adopted a constitution in 1862, they gave it the title, "Grand Forge of the United States, United Sons of Vulcan." Thus, at the very outset, the union claimed the right to organize in all the territory embraced in the United States. An identical claim was made by the Heaters in 1872, and the Roll Hands in 1873. The three unions, when they combined in 1876, called themselves the "Amalgamated Association of Iron, and Steel Workers of the United States." In 1882 Canada was included within the jurisdiction of the Amalgamated Association.⁶ Again, in 1908, the national union extended its jurisdiction to include all of North America. This action was taken to preclude the possibility of another organization in Canada. Local unions have been organized in Canada and in Mexico from time to time, but most of these have been short-lived. Jurisdiction beyond the confines of the United States has been potential rather than actual.⁷

Similarly, the membership jurisdiction of the union has been constantly widened. The Vulcans admitted none but "puddlers and boilers." The Heaters included in their number rollers and roughers, as well as heaters, but refused admission to all other classes of workmen. Partly as a reaction against the undemocratic Heaters' Union, which granted membership only to the highly paid men, the Roll Hands' Union was organized, and its membership consisted of practically all men working around the trains of rolls-catchers, hookers, buggymen and straighteners, as well as rollers and roughers. Both the Heaters and the Roll Hands

⁶ Proceedings, 1882, p. 956.

⁷ In 1885 the Association lost the only lodge it then had in Canada, Ontario Lodge, located at Hamilton; Canada was considered "more expense than gain" (Proceedings, 1885, pp. 1574, 1669). Its readmission was left to the discretion of the president (Proceedings, 1887, p. 2118).

claimed the right to organize rollers and roughers, and to this extent there was an overlapping of jurisdiction. These two organizations were of short duration, and their consolidation with the Vulcans put an end to all craft disputes.

For many years after its formation, the Amalgamated Association consisted exclusively of skilled workmen. At the outset, only "puddlers, boilers, heaters, roll hands, nailers, hammermen and helpers" were admitted.⁸ Helpers had been consistently debarred by the constituent organizations, and their admission to membership at first encountered strong opposition. Though eligible, they were frequently discriminated against. Prior to 1877 large classes of workmen, skilled as well as unskilled, were ineligible to membership. In this year, four new classes of semi-skilled workmen, namely, knobblers, turners, boiler-plate men, and sheet-iron shearmen, were admitted.⁹ In 1887 the president proposed that "all branches of labor directly interested in the manufacture of iron and steel should be made eligible to membership." The measure was adopted in 1889, and "all men working in and around rolling mills, tin mills, steel works, nail, tack, spike, bolt, and nut factories, and all works run in connection with the same, except laborers, were admitted." Laborers might be admitted at the discretion of the subordinate lodge.¹⁰ Foremen have been consistently excluded from membership.¹¹ Chain works were later included in the list of mills and factories, but otherwise the membership jurisdiction of the Association remained unchanged.¹² Since 1911, as a result of the agi-

⁸ Constitution, 1876, p. 6.

⁹ Proceedings, 1877, pp. 50, 74-77.

¹⁰ Proceedings, 1887, pp. 1953, 2118; 1888, p. 2352; 1889, pp. 2686, 2687, 2791; Constitution, 1910, art. 1, sec. 1.

¹¹ Constitution, 1912, art. 17, sec. 16.

¹² The Association has always rigidly adhered to the principle of trade-union autonomy. This was the crux of the dispute with the Knights of Labor. In 1888 furnace builders were refused membership, because the Bricklayers claimed jurisdiction over them (Proceedings, 1888, p. 2273). For similar reasons, water tenders, stationary engineers and firemen were not admitted in 1900 (Proceedings, 1900, p. 5845). Yet, the Association in 1907 refused to grant to the

tation for industrial unionism, the Association has opened its doors to laborers, thus extending its jurisdiction to embrace all men in the iron, steel and tin industry.¹³

Immigrant skilled workmen have ordinarily been affiliated in separate local unions. Now and then, particularly in the eighties, a cry of protest against the large numbers of incoming aliens has been heard. In 1879 the secretary communicated with the Amalgamated Ironworkers' Society of Great Britain concerning immigration to this country, declaring that "bad results would accrue from an influx of people to our shores, for whom there was no possible chance of employment."¹⁴ In consequence of the large immigration and importation of laborers under contract, the Amalgamated Association in 1884, as did many other trade unions about this time, urged upon Congress the enactment of restrictive legislation,¹⁵ and began to discriminate against immigrant workmen in admission regulations. A rule requir-

Electrical Workers jurisdiction over men in charge of the crane and charging machine in the open-hearth plant at Granite City, Ill., "simply because the machine had electricity for its motive power" (Proceedings, 1907, pp. 7922-7924); and the Electrical Workers did not force their claim before the American Federation of Labor. Also, in 1916, the Blacksmiths claimed jurisdiction over the bolt and nut workers at Kansas City, Mo., but the Amalgamated has held that they are not blacksmiths and will not relinquish its jurisdiction over them (Proceedings, 1916, pp. 11521-11523).

¹³ A "Central Secret Lodge" was established in 1904, for the purpose of enlisting as members workmen employed in non-union plants. The following rules, with reference to membership in the Secret Lodge, were adopted: (1) Applications must be endorsed by the vice-president of the district or division. (2) Applicants must be working in a mill where no Amalgamated lodge exists. (3) Withdrawal or honorary cards must be applied for by members leaving the locality or the trade through the secretary of the Central Lodge. (4) The initiation fee was two dollars, and the quarterly dues \$1.00, payable in advance. (5) No strike benefits were paid, but members in good standing were entitled to death benefits. (6) A member who was suspended and not reinstated was "stigmatized a non-union man." The Central Lodge dates from September 24, 1904, and is yet extant. It has not, however, justified the large hopes held by those who advocated its establishment. In 1906 it was decided to enforce the spirit of the law that laborers be admitted "for the good of the Association."

¹⁴ Proceedings, 1880, pp. 363, 366.

¹⁵ Proceedings, 1884, p. 1390.

ing citizenship of members was frequently proposed as a national provision.¹⁶

To what extent the unskilled workmen will be organized in subordinate lodges is uncertain. They are not unlikely to suffer discrimination, as did the helpers in the earlier days. The advantage of such an alliance appears greatly in favor of the unskilled. A vast organization of unskilled workers in all industries does not seem possible, since the constant tide of immigration during normal times makes any effective regulation of the supply of general laborers impracticable.¹⁷ It entails a sacrifice upon the skilled, who will have to fight the battles of the unskilled. On the other hand, the introduction of machinery has forced many of the highly-skilled trades from their position of aloofness. As division of labor becomes more minute, as the old method of apprenticeship fails, and as the groups of skilled and semi-skilled are being recruited by the promotion of the common laborers to an ever increasing extent, there is a growing tendency to admit such potentially dangerous competitors to the union. The growing spirit of class consciousness may effect a satisfactory alliance of skilled and unskilled.

The Iron and Steel Workers, in 1913, widened the scope of its membership jurisdiction by the merger of the Tin Plate Workers International Protective Association with the Amalgamated Association. The Tin Plate Workers' Union was instituted in 1898, and it was composed of what were commonly known as "wash house" men.¹⁸ At the time of its organization, only seven out of twenty-one tin-plate plants had local unions. The Amalgamated Association had organized principally the hot-mill men, but it felt

¹⁶ Proceedings, 1888, pp. 2482, 2497.

¹⁷ T. W. Glocker, "Amalgamation of Related Trades in American Unions," in the *American Economic Review*, September, 1915, vol. v, no. 3, pp. 572-575.

¹⁸ The Tin Plate Workers also admitted female employees. At the time of consolidation, the local union at Steubenville, Ohio, had a few female members. These became members of the Amalgamated. There are none now belonging to the Association.

that the tin house workmen could best serve their own interests by having a separate organization, and arranging their own scale.¹⁹ The organization was never large numerically, having at the time of its affiliation with the Amalgamated about five hundred members.

The difficulties encountered with the American Sheet and Tin Plate Company, and the gradual loss of control of the sheet and tin industry, lent impetus to the movement to consolidate. An invitation was extended the Tin Plate Workers to join with the Amalgamated as early as 1906.²⁰ When the Iron and Steel Workers became involved in the 1910 strike, the American Federation of Labor advised consolidation, and the following convention of the union gave the executive board full power to act.²¹

Nothing definite was done until June, 1913, when the executive board met and outlined the terms of consolidation. These were presented at a joint meeting of both organizations on July 30 of that year, and the arrangement was agreed to. The Amalgamated Association was given "full and complete jurisdiction," and the president of the Tin Plate Workers was employed in the capacity of organizer. Local tin-plate unions, it was agreed, should receive charters and supplies free of charge, and should be required to pay no initiation fee, except the regular two dollars for insurance.²²

The Association from the beginning did not discriminate against negroes by constitutional provision.²³ They were

¹⁹ Proceedings, 1900, pp. 5718, 5762.

²⁰ Proceedings, 1906, p. 7761.

²¹ Proceedings, 1910, p. 8843.

²² Proceedings, 1914, p. 10428.

²³ The early unions out of which the Amalgamated was formed did not admit colored workmen. Even after the Association was formed, the white workmen refused to work with them or afford them any protection. Accordingly, colored men "scabbed" on the strikers in the mills at Pittsburgh and Homestead. Membership in the union was offered the negro only after he had made himself indispensable to the organization. Recent attempts have been made to organize the colored workmen, but without much success (Proceedings, 1905, p. 7255; 1908, pp. 8259-8260, 8333, 8340). In general, unionism has been more of a hindrance than a help to the negro. (R. R. Wright, Jr., "One Hundred Negro Steel Workers," in Wage-Earning Pittsburgh, pp. 106-109.)

not engaged in the industry to any considerable extent, and as to the few that were, all available evidence supports the conclusion that none were admitted.²⁴ In 1877 the union refused to declare them eligible, but in 1881 provided for their inclusion within the class of eligible persons, "past experience having taught the craft that they were indispensable."²⁵ Wherever possible, separate lodges of colored members were organized, as, for example, Garfield Lodge in Pittsburgh in 1887. The number of negroes in the organization, however, has never been large.

Although occasional protests are heard against the admission of incompetents,²⁶ the aim of the Association has been to make the conditions of membership as simple as possible. There is no provision in the rules for a specified term of apprenticeship as a requisite for membership. The "helper" system has made such a regulation unnecessary, since the helper has an opportunity of watching the work of a journeyman and of thus acquiring a trade. Despite much opposition, it was found necessary to admit helpers into the union at an early date. A two-thirds vote is required to admit and to expel. The Association has considered a few cases of appeals by non-members who were rejected for insufficient cause, and has made certain persons members-at-large, though the union has not specifically recognized this right.

During the history of the Amalgamated Association, no distinct trade organization, that is, a trade union whose members did not previously belong to the Association, has ever disputed its jurisdiction. A possible exception to this statement is the Knights of Labor. The Knights of Labor was a completely rival organization to all trade unions, in that it sought to unite all workmen in one large union "with-

²⁴ The men in the Birmingham, Ala., rolling mill, and in other plants in the South refused to work with negroes, even though they were legally eligible to union membership (Proceedings, 1900, p. 5874; 1905, p. 7255).

²⁵ Proceedings, 1876, p. 82; 1881, p. 708.

²⁶ Proceedings, 1884, p. 1363.

out regard to nationality, sex, creed or color."²⁷ In 1880 the Knights of Labor admitted negroes, and in 1885 the negroes flocked into the ranks of the order in the South.²⁸ The Knights of Labor was organized by industries, rather than by trades, so that an iron and steel local assembly would include in its range all men working in a single mill, both skilled and unskilled. Indeed, the Knights sometimes embraced all sorts of workmen, including common laborers and gas producer men.

Friction between the local unions of the Knights of Labor and the Amalgamated Association in those places where both organizations had members working in the same mill was constant. In 1883 a Pittsburgh labor paper²⁹ stated that the steel workers of Braddock, Pennsylvania, had had their wages reduced steadily for five years, and declared that this was due to weakness, resulting from a division of the union forces into two separate organizations. In December of the same year, the men of the Edgar Thomson Steel Works at Braddock were notified of a reduction of thirteen per cent, to take effect at the beginning of the next year. A joint committee of the local unions of the Association and the Knights of Labor held a conference with the company, and were informed that the reduction was to affect only the tonnage men. This affected every member of the Amalgamated Association, but only a small part of the Knights of Labor. The assemblies of the Knights refused to act in any way. This meant, of course, that they would continue work; and the tonnage men, as they had done the year previous, accepted the reduction.

The most serious dispute between the Association and the Knights of Labor occurred in 1887 at the Mingo Steel Works.³⁰ After the United Nailers were readmitted to the Amalgamated Association many of the men at this plant

²⁷ Proceedings, General Assembly, Knights of Labor, 1884, p. 780.

²⁸ F. E. Wolfe, *Admission to American Trade Unions*, p. 116.

²⁹ National Labor Tribune, December 22, 1883.

³⁰ Proceedings, 1887, pp. 1935-1945; National Labor Tribune, February 26 and March 5, 1887.

joined the Knights of Labor. The skilled men of the nail factory, however, organized an Amalgamated lodge so as to get the higher scale. The local union was composed of heaters, rollers, and roll hands of the nail mill. One day a crane broke, and since the Knights of Labor agreement, under which the men were working, provided that "only actual tonnage" be paid for, the men, realizing it would require several hours to repair the crane and that they would not get a full day's work, went home. The manager next morning discharged them.

Both unions, each claiming jurisdiction, took up negotiations in an attempt to effect a settlement. The executive committee of the Amalgamated legalized a strike February 10. A joint committee of both organizations was suggested but refused. The Knights declared the mill open, and endeavored to start it up. The manager, after ten days, since the Knights were unable to operate the plant, arranged a conference with the Amalgamated Association, and signed a scale.

In 1886 the Knights of Labor invited the Amalgamated to join them.³¹ The offer was submitted to a vote of the local unions, and almost unanimously refused. The next convention forbade members of the Association to belong to the Knights "after April 1, 1888."³² This action served to accentuate the breach between the two organizations. The Knights organized "National District Assembly 217, Iron, Steel and Blast Furnacemen, Knights of Labor," and applied to the American Federation of Labor for a charter which was not granted.³³ To this assembly the Knights admitted, in the words of Secretary Martin, "anybody and everybody working in and around rolling mills and steel mills." The first annual convention was held in Pittsburgh, June 4, 1888, and eighty delegates were reported from eight

³¹ Proceedings, 1886, pp. 1806-1808.

³² National Labor Tribune, June 25, 1887, p. 4, col. 3; Proceedings, 1887, p. 2129.

³³ Financial Statement for quarter ending October 31, 1889, p. 4.

different States.⁸⁴ Secretary Martin, in order effectively to counteract the inroads of the Knights of Labor, advised all Amalgamated unions to "take in every man in the mills outside of common labor, and him too, if necessary." Thus the influence of the Knights upon the Amalgamated Association served, in a measure, to democratize the union.⁸⁵ Similar disagreements with the Knights took place in 1888 and 1889, as the result of conflicting wage scales; also, at the Chicago Steel Works, as late as 1892. The Knights of Labor, however, did not succeed in getting control of any great number of mills. After the formation of the American Federation of Labor, the power of the Knights waned, and it has since played no important part in the organization of the iron and steel trade.

Similarly, in recent years, the Industrial Workers of the World have shown activity in organizing unions in iron and steel mills.⁸⁶ Like the Knights of Labor, the I. W. W. is a dual union with respect to all craft unions. This has been recognized by the Association, which forbade its members to unite with the I. W. W. on the ground that it was a dual organization.

⁸⁴ National Labor Tribune, June 9, 1888, p. 1, col. 5.

⁸⁵ Secretary Martin, in urging the local unions to admit the unskilled, said: "Be liberal and admit to membership the men whom the Knights of Labor are playing to reduce wages. . . . We mean the unskilled workmen. . . . Yes, even the daily laborer. We have nothing to lose and all to gain by the admittance of these men. All they ask is recognition. Failing to get that, they naturally seek and get in the Knights of Labor." He chided the local unions for being "aristocratic" and "narrow" (Financial statement for quarter ending January 31, 1888, p. 5).

⁸⁶ In 1906 the I. W. W. were trying to secure a foothold at Reading, Pa., by scattering literature, talking with the men, and making arrangements for meetings (Proceedings, 1906, pp. 7494, 7500, 7678). In 1910 the Clark Rolling Mill, of Massillon, Ohio, was placed on the prohibitive list, because the men refused to organize; whereupon, the men formed a local union of the I. W. W. "with the consent of the manager" (Proceedings, 1910, p. 8859). In 1915 a disruptionist movement was originated in the Wheeling district by certain malcontents, advocating industrial unionism, but President Williams declared that the Association would "never become the tail of a kite to any seceding organization, particularly one of the character of the I. W. W."

In 1882 the finishers were dissatisfied because they were outnumbered by the puddlers and not adequately represented in the annual meetings, and there was agitation for a reorganization and some discussion of a new union.⁸⁷ Similarly, in 1883, a local union of Terre Haute, Indiana, issued a circular which urged the withdrawal of the boilers and a reorganization of the old "Sons of Vulcan." The president of the national union threatened to revoke its charter unless the local union retracted the action, and the Terre Haute organization renounced the circular by a small majority. President Jarrett had urged the organization of separate lodges for the crafts as a means of lessening the friction between the finishers and the boilers. This plan was put into effect a little later and the dissension was temporarily stopped.

The nailers seceded from the union in 1885. The nailer had been accustomed to good wages. Due to the introduction of machinery, there was so considerable an increase in productive capacity that nail manufacturers restricted the output. Nail mills were not infrequently idle six months in a year, yet new machines were constantly being added to old plants, and occasionally a new factory was built. Machines were multiplied to such an extent that even the demand of a very prosperous year could not have kept the nailers in work much over half time. The nailers had two other grievances. First, the law provided that the number of apprentices to be taken on should "not exceed two per cent (outside of nailers' sons) of the machines per annum."⁸⁸ Some years the nailers would not admit the legal quota, and in that case the Association granted the employer the privilege of hiring "green hands" up to the two per cent mark. To this the nailers objected. Again, there was dispute as to the price for cutting steel nails. The scale convention held in Pittsburgh, April 5, 1884, made the price for cutting nails out of steel "when harder than iron" twenty per cent

⁸⁷ Proceedings, 1882, p. 967; 1883, pp. 1113-1114.

⁸⁸ Constitution, 1884, p. 36.

extra. Not a few nailing lodges in the vicinity of Wheeling refused to abide by the scale, some even claiming to prefer cutting steel to iron. This caused an altercation with the boilers, who, when the nailers continued to cut steel for the same price as iron, were thrown out of work. Hershey Lodge, of Bellaire, in January, 1885, issued a circular "to the nailing fraternity," charging the Association with partiality to the puddlers and discrimination against the nailers, and calling for a meeting of the nailers in Wheeling on February 5. Hershey Lodge, upon its refusal to rescind its action, had its charter revoked two weeks later. This local union then began to work for the withdrawal of the nailers from the Amalgamated Association, and issued a call for a convention of nailers to be held in Wheeling on April 2, 1885. At this convention a resolution was passed to withdraw, and the new organization was called "The United Nailers of America."³⁹

Practically all lodges of nailers voluntarily withdrew and allied themselves with the new organization. The few that remained the Amalgamated advised to join the United Nailers, so that the new union would be free to arrange their scale for the next year without interference. According to Secretary Martin, the loss occasioned by the secession of nailers was 835; of these, 153 were nail feeders. The first annual convention was held in Wheeling July 14, 1885, and lasted four days. Delegates were present from the neighboring states of Pennsylvania, Ohio, and Kentucky only. Nail-plate heaters and rollers were admitted, and the name changed to "The Nailers' and Nail Plate Rollers' and Heaters' Association." The wage scale occupied most of the delegates' attention.

The Nailers, because of hostility to the nail feeders who took their jobs, refused to admit the feeders. The nail feeders, accordingly, organized a union, known as the "Nail Feeders' Union of the Ohio Valley."⁴⁰ So, too, those feeders who were opposed to taking the nailers' places organized

³⁹ Proceedings, 1885, pp. 1558-1559.

⁴⁰ National Labor Tribune, April 25, 1885, p. 4, col. 2.

a similar short-lived organization, "The United Nailers, Rollers and Heaters of the United States."⁴¹

The Nailers, during their existence as a separate organization, had anything but smooth sailing. Failing in an attempt at a conference with the Western Nail Association, unsuccessful in the maintenance of a wage scale, in frequent bickerings with the recalcitrant nail feeders, they turned for protection back to the Amalgamated. When the twenty-three delegates met in Pittsburgh, June 1, 1886, not a voice opposed the proposition to apply for readmission. The Amalgamated met in June, and nine of the nailers presented the petition, "most respectfully" begging "your honorable body to allow us to return to the protecting wing of the Amalgamation," and to it was appended a long list of names. The request was granted, not quite unanimously, and the Amalgamated undertook to settle the nailers' strike then in progress. A compromise scale was effected and signed, and after the bitter feeling between the nailers and feeders subsided, the nail feeders were likewise gradually reorganized.

Factional feeling and internal strife were rampant throughout the nineties. At different times the puddlers manifested a rebellious spirit, though no definite action was taken. Roll turners,⁴² tin-plate workers,⁴³ wire drawers,⁴⁴ rod-mill men,⁴⁵ each in turn, threatened the union with secession and the formation of separate organizations. These "Judases," says Vice-President Larkin, "appear in times of trouble," when the union is facing a reduction. In 1892, when the conflict with the Carnegie Steel Company was at its hottest, some finishers, principally in the mills of Pittsburgh and Youngstown, in an effort to dodge the strike tax for the enforcement of the closed shop, formed a short-lived finishers' union called "The National Union of Iron and Steel

⁴¹ Ibid., September 5, 1885.

⁴² Proceedings, 1894, p. 4564.

⁴³ Proceedings, 1895, pp. 4808-4812.

⁴⁴ Ibid., pp. 4812-4813.

⁴⁵ Proceedings, 1899, pp. 5626-5627.

Workers of the United States." They enlisted a following under the promise of no assessment, and sought to get a scale signed so that their members might "black-sheep" under the guise of unionism. The inducement of no assessments had a distressing effect on the collection of the tax from members of the Association and, according to President Garland, "disheartened the men at Homestead to such a degree that they lost hope of winning the strike."⁴⁶ The Amalgamated refused to recognize the finishers as a rival organization, on the ground that it would form a "precedent" for any small group of seceders to demand recognition in the future. The Finishers' Union established temporary headquarters at Youngstown, but within a few years it disbanded and its members drifted back into the fold of the Amalgamated.

Perhaps the gravest disruption in the history of the Association was the secession of the puddlers in 1907. The movement originated in Brown's Tenth St. Mill, Pittsburgh.⁴⁷ A meeting of puddlers, scrappers, and muck mill hands was called in the Old City Hall, on the 24th of February, and a temporary organization was effected. At the next meeting on Sunday, March 10, the puddlers decided to withdraw in a body from the Amalgamated Association, and for sentimental reasons the new union assumed the title of the early puddlers' union, "Sons of Vulcan." The first convention was held in Pittsburgh in June of that year, and delegates from sixteen lodges were present.⁴⁸ Headquarters were established in Pittsburgh. They sought a reciprocal agreement with the Amalgamated, but of course the Association would not consider such an arrangement. The Sons of Vulcan drew up a scale, which was a prototype of the Amalgamated scale, and, in the attempt to have it signed,

⁴⁶ Proceedings, 1893, pp. 4325, 4350-4351.

⁴⁷ The reasons for the formation of a separate union of the puddlers were "the failure of the Amalgamated Association to secure satisfactory conditions for the Boiling Department, and the belief that their interests can best be subserved by being independent of all other departments" (Proceedings, 1907, pp. 7914-7915, 7918).

⁴⁸ National Labor Tribune, June 6, 1907.

came into conflict with the Association in a number of places.

The Sons of Vulcan met with considerable success for several years although they had few lodges outside of the Pittsburgh and Youngstown districts. It is doubtful if, at any time, they had an active membership of over a thousand, although they claimed a much larger number. Internal bickerings and dissension crept into the organization, and the last convention was held in Pittsburgh in 1913. Since that time, the Amalgamated has been gradually recovering its lost members.⁴⁹

Two attempts to form dual unions were initiated during the interval between the conventions of 1912 and 1913. The one was a secessionist movement, originating in the sheet and tin mills of Niles, Ohio. The aim in view was to include in one organization "practically all workmen working in and about said industries, with one single exception—that is, the rollers."⁵⁰ The new organization, "The Industrial Iron and Steel Workers of America," in a manifesto, declared for direct action as a means of securing justice, and began the campaign by walking out of the Empire plant at Niles. The cooperation of the union and the employers prevented this insurgent movement from gaining any appreciable vogue.

The other disturbance was avowedly a movement within the parent organization, and not a secession from it. It was styled "The Progressive Movement of the Amalgamated Association of Iron, Steel and Tin Workers." It was an attempt to place the control of the Association in the hands of a democratic minority, who sought to reorganize the union on an industrial basis. The Progressives also advocated the extended use of the initiative and referendum, and the right of recall. These innovations have since been introduced, and after their adoption, the movement lost its purpose.

⁴⁹ Proceedings, 1915, p. 10993.

⁵⁰ The roller, being the highest-priced workman, was naturally the object of envy of other workmen.

The employers have always been on the side of the conservatives. They consider a trade agreement with the union, covering those men most indispensable to the trade, as a safeguard against a more extensive organization of their employes which might force terms for all in the mill. The unskilled laborers, from whom the future skilled men must be selected, are largely Southern Europeans whose allegiance to union principles is slight. These men, at present, are largely ignored by those who compose the union membership. If the democratic minority should gain control, it is probable that a reorganization would take place along industrial lines. The movement thus far has been unsuccessful.

CHAPTER IV

FINANCES

The early national unions, because of their loose organization, did not require large financial resources. The chief functions of a national union, in the earlier days, were the supervision of a "traveling card" (by means of which a member moving from the jurisdiction of one local union to that of another became entitled to all the privileges of membership), and the collection of voluntary contributions for the aid of local unions in conducting strikes.¹ Thus, the funds of the Heaters' Union were never over a few hundred dollars.

Revenue.—As a consequence of these limitations, both in activity and in authority, the early organizations in the iron and steel trade were granted revenues of meager character. A per capita tax was paid, at regular intervals, by each local union for the privilege of representation in the annual convention. In the case of the Roll Hands, it was a monthly assessment of twenty-five cents per member.² The Sons of Vulcan levied a "semi-annual tax," the amount per capita being fixed by the president and varying according to the funds required.³

As the Sons of Vulcan extended its functions, larger revenue was granted. The annual tax increased irregularly from fifty cents in 1867 to \$1.75 in 1873. Delegates to the convention in 1872 were paid wages for lost time, in addition to railway fare, by the national union. In 1873 a salary was paid the president. These expenditures were reflected in the increased capitation tax, as seen in the semi-annual assessments from 1867 to 1873:

¹ A. M. Sakolski, *The Finances of American Trade Unions*, p. 11.

² *Constitution, Iron and Steel Roll Hands*, 1874, p. 11.

³ *Vulcan Record*, no. 14, pp. 18, 34; *Constitution*, 1874, p. 9.

Year	First Assessment	Second Assessment	Total
1867.....	25 cents	25 cents	50 cents
1868.....	50 "	30 "	80 "
1869.....	30 "	30 "	60 "
1870.....	50 "	50 "	\$1.00
1871.....	50 "	25 "	75 "
1872.....	75 "	50 "	\$1.25
1873.....	50 "	\$1.25	\$1.75

The "per capita tax" method of supporting the national union was continued by the Amalgamated Association. It was a convenient fiscal device. The principle of local autonomy was preserved; and local unions apportioned their funds to suit their own peculiar needs.⁴ The local unions were financed by means of monthly dues. Some revenue accrued from initiations, reinstatements and fines, but these sources of income were of minor importance.

The amount of the ordinary per capita tax has increased proportionately with the growth of the activities of the national organization. Also, the extension of the field of collective bargaining has meant increased cost of administration. The quarterly assessment, which in 1885 was twenty-five cents, was increased to fifty cents in 1900, and since 1905 has been one dollar. Journal dues of \$1.20 annually were added in 1901, and raised to \$1.50 in 1907. The convention has frequently exempted lodges from the per capita assessment, if it has been clearly shown that they were unable to pay. The capitation tax was designed to cover ordinary administrative expenses, although frequently the revenue from this source was insufficient and the deficit was borrowed from the defense fund. In 1914 this method of financing was remedied by the consolidation of all funds.

An increase in the national revenue by means of an assessment of a higher per capita tax upon local unions carried with it, as a corollary, the requirement of higher dues from the individual members of the subordinate unions. The

⁴ The so-called "community of funds" system (which provides for the merging of the local funds with the national resources) has never met with the favor of Association leaders.

value of high dues and large treasury funds as a means of promoting the strength and stability of the organization had been generally recognized by the Association leaders, but the members were reluctant to grant more revenue until their immediate interests were involved. The big steel strike of 1901 was the most effective factor in breaking the persistent opposition to increased local dues.

The substitution of a tax on earnings for the capitation tax has been discussed in the convention at various times. In 1905 the session considered the introduction of the "percentage system" for the collection of national dues. Two advantages of the new system were presented: the automatic exemption of unemployed members, and a more equal distribution of the burden of taxation. The chief argument in opposition was the difficulty in determining the amount of dues under this system. Two years later, the percentage system of dues was reconsidered, and the conference committee endeavored to arrange for collection by employers. The employers expressed a willingness to enter into an agreement to collect the dues of union members, but the proposal was defeated at the referendum.

Although the Association was unwilling to adopt the percentage system, it was clearly felt that uniform national dues were undesirable, since the membership differed widely in earnings. In lieu of the rejected percentage system, a plan for graded dues was adopted in 1905. The monthly dues were graded as follows: members earning \$2.50 per day or less, 65 cents; over \$2.50 and less than \$5.00, 80 cents; and \$5.00 or more, \$1.00.⁵ This system of dues, although the grades have been changed twice, has since continued in force.⁶

⁵ Proceedings, 1905, p. 7217.

⁶ The scales of dues in 1912 and in 1916 were as follows:

Daily Earnings	Monthly Dues ⁶	
	1912	1916
Less than \$2.50 ^b	.60	.85
\$ 2.50 to 5.00	.80	1.05
5.00 to 7.50	1.25	1.25
7.50 to 10.00	1.25	1.50
10.00 to 15.00	1.50	1.75
15.00 and more	1.75	2.00

The national revenue has been partly made up of such incidental receipts as charter fees, initiation fees, fines, interest, and the income derived from the sale of stationery and supplies. The Journal also has been a source of annual gain.⁷ These sources of revenue require but brief consideration. Charters were originally granted a newly-organized local union for the sum of five dollars. Supplies were purchased separately. Because of the fact that new organizations would deprive themselves of necessary supplies in order to save expense, the national union in 1887 decided to make the charge for organizing a local lodge twenty-five dollars. This included equipment requisite to carry on its business properly.

Initiation fees mean a considerable item where the membership is growing and the personnel constantly changing. Until 1909 the charge for initiation was left to the discretion of the local unions. In 1906 the national union fixed the minimum⁸ at five dollars, and provided that two dollars of this amount should be placed in the benefit fund. Fines are employed chiefly by local unions.

The importance of a reserve fund for "defensive" purposes while realized by the leaders of the union, has not been appreciated by the membership at large. The Iron and Steel Workers have never been willing, or able, to build up a big reserve fund which would enable the members to engage successfully in protracted strikes. In the early unions, no effective measures were taken to accumulate central reserve funds for the purpose of defense. The Heaters' and Roll Hands' organizations left the settlement

⁶ In 1916, the dues covered all purposes (Constitution, 1916, p. 70); in 1912, all excepting the assessment for the benefit fund, for which twenty-five cents per month was collected.

⁷ The monthly dues of laborers earning \$1.75 per day or less were fixed at sixty-five cents.

⁸ The annual gain from the publication of the Journal has ranged in the years 1910-1916 from \$500 to \$5000.

⁹ Since 1913, members earning less than \$2.50 per day may be initiated for \$3.00 (Proceedings, 1914, p. 10665).

of wage disputes to the local unions and their strikes were financed largely by voluntary contributions.⁹

Until 1870 the puddlers financed strikes by "voluntary donations."¹⁰ The Sons of Vulcan, in the convention held at Harrisburg that year, passed a resolution empowering the president "to levy a per capita tax upon all taxable members . . . sufficient to pay to each member" engaged in a legal strike "the sum of not less than three dollars a week."¹¹ Strike levies were made, but only about one-third of the assessments were paid.¹² In 1874 a new system was adopted, whereby each district supported its own strikes.¹³ Only when one-third of the membership was on strike was national aid granted. In 1876 provision for a "protective fund" was incorporated in the constitution of the newly-formed Amalgamated Association. Local unions were to "deposit in bank the sum of twenty-five cents per member per month, subject to the call of the president in case of strike."¹⁴ Members in good standing engaged in a legal strike were entitled to five dollars weekly benefit.¹⁵

The system of protective funds, maintained by the local unions and held in local treasuries, was subject to abuse and neglect. In 1878 President Bishop said that legitimate claims were not met "for the simple reason that at least half our lodges and members neglect our revenue laws and consequently sub-lodge treasuries are empty." The members were neglectful or refused to pay, officers were indifferent, and the protective fund was "a mere name and nothing more."¹⁶ In some cases the money was used to defray local expenses. The reserve fund was supplemented

⁹ The Roll Hands in 1874 levied a strike assessment of ten cents per month (Proceedings, 1874, p. 14); but the defense fund was never large enough to be effective.

¹⁰ Vulcan Record, no. 6, 1870, p. 31.

¹¹ Ibid., p. 26.

¹² Ibid., no. 14, 1874, p. 10.

¹³ Ibid., pp. 29, 41, 43.

¹⁴ Constitution, 1876, p. 13.

¹⁵ Weekly strike benefits were reduced to four dollars in 1879 (Proceedings, 1879, p. 282). They have remained at four dollars per week since.

¹⁶ Proceedings, 1878, pp. 122, 125.

by special assessments, but only slight relief was afforded. The difficulty of collection and the delay in receiving returns made the assessment method of raising funds peculiarly unsuited for strike financing. Such levies frequently did not bring returns until the occasion for them was past.¹⁷

The need of a strong national reserve fund, because of the existence of manufacturers' associations in the trade and the possibility of general strikes, was apparent to the leaders, but the members had to learn the lesson by experience. The big strike in 1882, which included three districts, was lost because of lack of funds and the inability of the assessment method to supply them. The union then decided to build up a permanent reserve fund. The revenues applied to it consisted of a quarterly per capita tax of seventy-five cents.¹⁸ When the protective fund was "depleted by a long and continuous drain," it was the duty of the president to levy a special assessment to replenish the fund.

The amount of this assessment varied. In 1893 the president was empowered to levy an assessment of from one to five per cent of earnings for a period of one month, whenever the amount in the fund fell below \$25,000. Even this was insufficient in the tin-plate strike in 1894-1895. In 1902, after the big steel strike, an assessment was provided for every three months until the reserve fund reached the sum of \$200,000. This provision was annulled the following year, and the matter of assessments was put in the hands of the advisory board. In 1905 a percentage system of assessment was established, graded in accordance with

¹⁷ Proceedings, 1880, p. 355; 1882, p. 922. Secretary Martin, in his report to the convention of 1880, said: "It is high time the Association got down to plain practical working in this regard, and devised ways and means for the accumulation of a contingent or strike fund, so that when necessity required we would be prepared to financially sustain a strike of a thousand members for a year at least."

¹⁸ In 1903 the capitation tax was decreased to sixty cents, but in 1906 it was increased again to seventy-five cents. Men working in the East and in unorganized mills are exempt from the assessment for the protective fund. In case of strike they are entitled only to such support as the National Lodge is disposed to afford (Constitution, 1916, p. 24).

the number of men who were on strike. In 1909 a new plan of assessment was accepted, graded both as to the number of men on strike and the daily earnings of the members.

The strike of 1910 proved the inadequacy of this measure to meet the requirements of a great strike. A ten per cent assessment was levied, and the following convention provided that no special assessment of over two per cent of the earnings of members could be levied without submitting it to a vote of the membership.

The results of the new system were immediate. Whereas prior to 1880 benefits were not paid with any degree of regularity even in local troubles, and the legal provision to pay strike benefits was not effective after that date, the obligations of the national union were met promptly. The sympathetic appeal has not been used extensively as a supplementary method of supporting strikes. The union has realized that it is a confession of financial weakness. Only in cases of emergency, as in the great strikes of 1892, 1901, and 1910, has it been employed. In these struggles, however, the income from these appeals was large, and enabled the Association to continue the contest much longer than it otherwise could have done.

A minor source of revenue to the protection fund was the interest which accrued from the so-called "rebate fund." By the provisions of the rebate plan, entered into with the tin-plate manufacturers in October, 1902, a certain percentage of the wages of the men was held in trust, and on rebate trade (tin plate sent abroad intended for re-export, thus entitling the buyer to the drawback clause of the Dingley tariff) twenty-five per cent reduction from scale rates was paid the manufacturers upon presentation of documentary evidence. This arrangement was discontinued after the 1910 strike. The amount placed in the defense fund from interest on these trust funds was \$14,240.38.

In addition to the revenue for general and for defensive purposes, now for some years merged in a single fund, the

union devotes a part of its revenue to the support of a benefit fund. This subject will best be discussed, however, in connection with a description of the benefit features of the union.

Expenditure.—The development of the union is naturally characterized by an increase in expenditure. A rough dividing line in its fiscal history is the formation of the Association in 1876. Since that time, the expenditure has continuously, although irregularly, increased. The average annual expenditure of the Puddlers from 1867 to 1876 was \$8,036.70. The maximum amount spent in any one year was \$23,316.95 in 1875. The increase in disbursements from 1870 to 1875 was due to three innovations: (a) the adoption in 1870 of a national assessment plan for defensive purposes, (b) in 1872 the payment of wages and fare to convention delegates; and (c) provision in 1874 for a salaried official.

The following table shows the growth in expenditure of the Sons of Vulcan from 1867 to 1875:

Year	Member-ship	Expenditures			Per Capita Cost		
		General	Strikes	Total	General	Strikes	Total
1867...				\$1,650			
1868...	665	\$ 960	\$2,108	3,068	\$1.44	\$3.17	\$4.61
1869...	816	720	390	1,110	.88	.48	1.36
1870...	1,265	1,429	1,711	3,140	1.13	1.35	2.48
1871...	1,959	2,337	675	3,012	1.19	.34	1.53
1872...	2,614	2,387	6,330	8,717	.91	2.42	3.33
1873...	3,331	6,483	11,995	18,478	1.95	3.60	5.55
1874...	3,038	5,621	4,215	9,836	1.85	1.39	3.24
1875...	2,732	5,233	18,084	23,316	1.92	6.62	8.54

The establishment of a "protective fund" in 1876 marked a change in fiscal policy. The total expenditure is markedly greater during the years of the big strikes, namely, 1882-1883, 1892-1893, 1901-1902, 1905 and 1910-1911. Barring these periods of unusual disturbances, the annual per capita expenditure increased from \$1.26 in 1877 to approximately \$3.00 in 1885, \$8.00 in 1906, and \$10.00 in 1915. The aver-

age for the forty years of the union's history is \$6.71. In 1904 a death benefit fund was established; and in 1909 a sick and accident benefit. In 1914, a normal year, the annual per capita expenditure was \$12.62. The increase in expenditure far outstripped the growth in membership. Since 1900, roughly speaking, the expenditure has constantly increased while the membership has actually declined.

The growth of expenditure of the Association is conveniently shown in the following table giving the per capita expenditure for various purposes at five year intervals since 1877:

COMPARATIVE TABLE SHOWING THE GROWTH OF EXPENDITURE OF THE ASSOCIATION FOR VARIOUS PURPOSES, FROM ITS BEGINNING

Year	Membership	Per Capita Cost			Total
		General	Protective Fund	Beneficiary Fund	
1877.....	3,755	\$1.13	\$.13		\$1.26
1882.....	16,003	.82	3.32		4.14
1887.....	11,426	.79	.24		1.03
1892.....	20,975	1.67	5.51		7.18
1897.....	10,500	1.32	.20		1.52
1902.....	14,467	3.44	8.29		11.73
1907.....	10,216	4.39	3.35	\$.65	8.39
1912.....	4,318	7.70	.15	3.22	11.07
1916.....	7,860	5.09	.67	3.48	9.24
Average...		\$2.80	\$3.26	\$1.98	\$6.71

The disbursements of the union are classified under three heads, and correspond to the divisions made, until 1915,¹⁹ in the funds (a) for general purposes, (b) for "protective" purposes, and (c) for benefits.

(a) The disbursements of the union for administrative and miscellaneous purposes are classed as general expenditures. They include, besides the ordinary charges of administration and office management, the expenses of "organizing," printing, Journal publication, and the cost of

¹⁹ In 1915 the three funds were merged into one general fund; this obviated the necessity of transferring funds from one account to another.

conventions and conferences. These disbursements, as a rule, varied but slightly from year to year until 1900. In 1877 the annual per capita expenditure for general purposes was \$1.13; in 1899, \$1.47. Since then there has been a rapid increase in general expenditures from \$27,364.40 in 1900 to \$43,756.92 in 1914. The annual per capita expenditure has increased much more rapidly from \$1.95 in 1900 to \$8.08 in 1911. In 1914, a normal year, the per capita cost for general expenses was \$6.36. The increased outlay has been the result, chiefly, of the cost of publishing the Amalgamated Journal, undertaken in 1899,³⁰ and an increase in office expenses. The greater increase in per capita outlay is the result of a decrease in membership.

(b) The expenditure of the Association for "protective" purposes includes the benefits paid for the relief of members on strike, the expenses of administration and special donations made to assist local unions not legally entitled to benefits.

The introduction of labor-saving machinery, together with changes in the conditions surrounding the industry, have affected the amount of strike expenditure. The expenditure is highly variable from year to year. Strikes have frequently been of considerable magnitude, often covering a whole competitive district, but occurring only at long intervals. Such, for example, were the strikes of 1882, 1895, 1900, and 1910. Omitting from account the several great strikes, it will be noted that the per capita expenditure seldom exceeded \$3. In 1893 the per capita outlay for strikes was \$11.03; in 1902, \$8.29; in 1905, \$8.47; in 1910, \$19.59; and in 1911, \$25.89. These were years of unusually bitter contests.

(c) Since 1904, the Association has paid a death benefit. The amount, originally \$100, has since been increased; the

³⁰ Until 1903 subscription to the Amalgamated Journal was optional with the members. Since then a quarterly per capita tax has been levied for its support; 30 cents originally, but 37½ cents from 1907 on. The expenditures have been included in the disbursements for general purposes, but a separate account has been kept by the manager for convenience in comparison.

benefit is now graded according to the term of continuous good standing. In 1909 sick and accident benefits were included. The union pays a weekly benefit of five dollars in case of sickness or disability, for a period of thirteen weeks. From the table given above, it will be seen that in recent years the expenditure has greatly increased on account of the change made in the character of the benefits.

Administration.—Improvement in fiscal administration has progressed with the development of the Association. This progress may be described under three heads: (1) better provision for an administrative staff, (2) safeguarding of the union funds, and (3) improvement in the fiscal administration and discipline of the local unions.²¹

In the early years of the union, slight provision was made for an administrative staff. National officers, being unsalaried, attended to the business matters of the union after the day's work in the mill. Permanent headquarters were not established until the early seventies. The employment of paid officials and the establishment of permanent central headquarters mark the beginning of progress in financial administration. The offices of secretary and treasurer were combined in 1901, thus tending to promote fiscal efficiency.

The officer in charge of the financial administration of the union is the national secretary-treasurer. As secretary, he has full charge of the books; he must keep the accounts between the local branches and the central office. As treasurer, he receives and pays out all money belonging to the union, is custodian of the funds, and prepares reports, quarterly and annually, of all financial transactions.

The safeguarding of union funds against misappropriation has been, with every trade union, a serious problem. Being unincorporated, the union is without legal redress. The Iron and Steel Workers has been no exception to the rule, and certain defalcations have occurred, particularly in the local branches.

²¹ Sakolski, p. 123.

In order to safeguard the national funds, a board of trustees is elected to exercise supervision. The board holds the bonds of the officers; the amount of the security has been increased as the funds of the organization became larger. The trustees audit the accounts of the national union every three months, and a copy of their report is sent to each local union. They deposit with the president a bond, \$5000 in the case of the resident trustee and \$1000 for each non-resident trustee. The officials are authorized to secure these bonds from a reputable security company. The funds of the Association are deposited at interest in banking institutions from which withdrawals can be made on short notice, and are distributed in several banks so as to reduce risk.²²

The national association exercises very little control over the local unions in matters of financial administration.²³ Local officers are selected by the local membership. If they are remiss, the only expedient which the national union can employ is the suspension of the local union from the rights and privileges of the national organization—a step entailing numerical and financial loss, and generally causing discord.

The gravest problem in the fiscal administration of the Association has been the inefficient collection of national revenue. Through the gradual development of a card system, the national union was able to enforce the regular payment of dues, since the cards of a local union that was in arrears to the national organization were not to be accepted by other local unions. A local union, in debt to the national association²⁴ (unless exempted because its members were unemployed), received no support from the national union in case of trouble, and was not entitled to representation in the national convention.²⁵ If a local union in arrears sent

²² Proceedings, 1891, p. 3501.

²³ The only rules of the national union concerning local finances are provisions relative to the safeguarding of local funds: the treasurer is required to give bond; the local funds may not be divided, etc.

²⁴ The charter of a local union failing to send a delegate or to report for two successive sessions was rescinded (Constitution, 1874, p. 9).

²⁵ Vulcan Record, 1874, no. 14, p. 38.

a delegate to the convention, the amount of the indebtedness was deducted from the mileage of the delegate.²⁶ When the death benefit was introduced, in 1904, an additional incentive was afforded a subordinate union to keep in good standing. No claim for benefits was allowed if the union of which the deceased was a member was in arrears for its per capita tax or assessment. The number of unions actually suspended in recent years has been negligible.

Great difficulty was experienced in the prevention of "tax dodging." Local unions failed to report the full quota of members in good standing, and in this manner evaded a part of the burden of the per capita tax.²⁷ In early years members were provided with "due" cards, showing the debit and credit account of members with the local union. But the national union had no effective check on the number of members for whom the local union was required to pay a per capita tax.

Finally, a new system was devised to prevent the evasion of dues by subordinate unions. Every member²⁸ was given an "annual working card" and a card number. Under this system, it is the duty of the mill committee to see that every man is provided with a working card before going to work. The card number appears on the member's working card on the local ledger account of the member, and in the card catalogue of the national union. Every member, on payment of his per capita tax, has his working card receipted monthly by the financial secretary, and a member not in possession of a paid-up working card is not entitled

²⁶ *Ibid.*, 1875, pp. 6-7; *Proceedings*, 1916, p. 23.

²⁷ *Proceedings*, 1905, pp. 7253-7254.

²⁸ In 1900 members were provided with "a working card . . . issued at the end of each quarter upon payment of all fines, dues and assessments," and subject to the inspection of the mill committee (*Proceedings*, 1900, p. 5917). The next year, the "due card" was abolished, and the quarterly working card was made to serve as both due and working card (*Proceedings*, 1901, p. 6070). Since 1906 this card has been issued at the end of each year, called an "annual working card," and the member is not entitled to the benefits and privileges of the association, unless the card shows that the member is in good standing.

to any benefits. All claims for benefits call for card numbers, and unless the accounts of the local union and the national unions correspond, the claim is not allowed. It has thus been made practically impossible for a subordinate union to escape the payment of dues on every member. The advantage of the system in securing the payment of dues cannot be estimated, but its adoption appreciably increased the paying membership.

In order to facilitate the work of the local financial officers, as well as to avoid losses to the national union arising from errors in accounts, a uniform system of bookkeeping and accounting has been introduced in local unions. Printed ledgers, cash books and necessary blank reports are prepared and supplied by the central office, in which detailed instructions as to the method of accounting are set forth. The auditing of local accounts is likewise simplified.

CHAPTER V

THE BENEFIT SYSTEM

Any extension of the traditional functions of a trade union meets with determined opposition on the part of the members. Many influential trade unionists advocate confining the activities of the union to the maintenance of a minimum rate and to securing shorter hours of labor and better working conditions. They argue that the inclusion of mutual benefit features means diffusion of energy and loss of effectiveness.¹ Also, they maintain that a system of benefits militates against the prime requisite of trade unionism—extensive organization—in that the expense of maintaining benefits means higher membership dues, with the result that persons who might otherwise join the union are prevented from doing so.² The concrete proposition upon which issue was joined in the Amalgamated was the establishment of insurance against sickness, accident, and death. Unemployment insurance and old age pensions have never been seriously considered.³

At the second annual session of the Sons of Vulcan, held at Wheeling in 1863, a general constitution was adopted in which one of the specified objects of the organization was declared to be "to aid sick and distressed members." Shortly after the close of the Civil War the rapid growth of mutual insurance companies attracted the attention of trade unionists everywhere. The local union at Wheeling, through its

¹ A. J. Portenar, *Problems of Organized Labor*, p. 55.

² J. B. Kennedy, *Beneficiary Features of American Trade Unions*, p. 10.

³ Instead of paying unemployment benefits, the union has provided that in case members were thrown out of work "through overproduction or other causes," such as a double-turn mill going on single turn, the work should be equally divided (*Proceedings, 1886*, p. 1850; *Constitution, 1916*, art. 17, sec. 6).

delegate to the annual convention, proposed the introduction of benefit features by the national union. This subordinate lodge already had a beneficial society that was operating successfully.

In 1870 President Edwards recommended the establishment of a mutual benefit society. He proposed that administrative duties be performed by the local union, but that the dues and payments be regulated by the national lodge. The society was to be styled "The Boilers and Puddlers Cooperative Association." The plan was as follows: The national secretary was to be the executive of the association, keeping account of all money transactions. Any member of the union in good standing was to be eligible for membership. Upon the death of a member, the secretary was empowered to draw upon all local forges at the rate of one dollar for each member of the society. The sum of one thousand dollars was to be paid to the widow or heirs, and the balance—in case there was a surplus—was to be laid aside as a contingent fund. The age limit for admission was set at fifty, and membership was not to cease when a member for any reason severed his connection with the union.⁴

The scheme did not meet with favor in the eyes of the majority of local forges, and was reported back to the next session as "impracticable." However, the formation of local beneficial societies was strongly recommended by the committee. The opinion of the leaders was divided. President-elect McLaughlin was an ardent advocate of a national system, and in support of his argument cited examples of other national organizations in which the plan had worked successfully. "Aside from the benefits . . . individually," he said, "it will have a tendency to place our organization on a firmer basis and there will not be so many suspensions reported in each report. Then men will have something more at stake and will be more anxious to retain membership." Ex-President Edwards replied, in rejoinder, that

⁴ Vulcan Record, December 1870, no. 7, pp. 20-23.

a national fund would "act as a drag on the progress" of the organization, and that any plan for the collection and disbursement of the funds by the national lodge would be "so extensive and complicated in character that considerable annoyance and dissatisfaction would . . . result."⁵ As an alternative plan, he suggested the payment of one hundred dollars either by the local forge of which the deceased was a member or, in the case of forges having few members, by the combined resources of several small forges, grouped in a district, so that the assessment would be uniform and not exceed one dollar per member. Surplus funds were to be used for the benefit of widows and orphans. The proposal for a national system of benefits failed but there is evidence that the more prosperous lodges were paying benefits during these earlier years.

In 1878 the Mahoning Valley Mutual Relief Association offered to admit members of the Amalgamated to membership on the following terms: forty per cent discount from the regular membership fee; a member of the union was to be trustee ex officio of the Relief Association and another member general agent; collection of dues to be deferred in case the union became involved in a strike or lockout. The proposition was accepted, and Edward McGinniss was elected general agent. But it is doubtful if many availed themselves of the offer.

For twenty-five years, the question of benefits was discussed in the annual conventions. But the Association steadily voted down all proposals for a national system. A local union frequently paid \$50 in case of death of one of its members. Sick and disabled members were aided by voluntary contributions. For example, in 1880, a member was permanently incapacitated for work by the loss of sight, and he received donations to the amount of about \$2000.⁶ Another got \$1000, another \$500 and so on. In 1882 there was raised \$8,466.96 "for disabled members and persons

⁵ Ibid., December 1872, no. 11, pp. 20-21.

⁶ Proceedings, 1880, pp. 388-389.

on strike not entitled to benefits.”⁷ These charities were considered the first step “towards establishing a super-annuation fund for our disabled members.” It was not, however, soon realized.

An attempt to establish out-of-work benefits was made by a local union of nailers. The nailers, as has been noted above, suffered more from unemployment than any other craft in the industry. Not even in a good year could they hope for much more than half-time. To meet this exigency, the nailers of the Ohio Valley, at a meeting in Wheeling in 1889, decided to form a pool by assessing every working machine so much for the support of those who were idle. This action was commended as a “boon” to the trade and a “barrier against reductions in wages.”

Finally, in 1903, a measure for a national system was enacted. Ten per cent of all the money in the treasury of the national union was set aside for the purpose of creating a death benefit fund. This amounted to \$13,000. The law went into effect October 1, 1903. Provision was made for a death benefit of \$100.⁸ The per capita assessment was compulsory on all members. A preliminary membership of three months was necessary to entitle the heirs to benefits. An arrearage of three months in dues debarred from benefits.

Several reasons were urged for the adoption of a benefit system by the national union. Some maintained that it would attract new members, others that it was effective in retaining old members. Many saw in the system substantial aid in carrying out trade policies, namely, fewer suspensions either for misconduct or for non-payment of dues, and a stronger defense fund. More important reasons were the real need for benefits of this kind, the fact that nearly all other national organizations were thus aiding their membership, and the desire of the members to have benefits. In not a few cases the beneficiaries were reported by the secretary as “penniless.”

⁷ *Ibid.*, 1882, p. 992.

⁸ *Proceedings*, 1903, p. 6768.

Provision was made in 1904 for members in good standing who had retired from mill work to continue their membership in order to participate in the death benefit. At first the law required that retirement must be caused by old age or disability; in 1907, it was provided that members withdrawing by honorary card might by becoming "silent members" retain their rights to benefits. "Silent members" were assessed at the rate of one quarter's dues annually (not to exceed \$1.80) in addition to the regular death benefit assessment. Members who went to work without permission in a non-union mill could not continue as silent members.⁹

Experience soon demonstrated that the original assessment of ten cents per quarter was not sufficient to cover the amount of the claims and the cost of management. By 1906 the original fund had dwindled from \$13,000 to less than \$9000. The secretary stated that one reason was that the union was obliged to take bad risks which no insurance company would take. In order to place the fund on a paying basis the quarterly rate was increased to twenty cents per member.

The system of death benefits increased the desire for other benefits. The convention of 1906 appointed a committee "to formulate by-laws relative to the creation of a sickness, accident and out-of-work benefit fund to be conducted in conjunction with the death benefit fund." The committee investigated the matter¹⁰ and reported at the next annual session, and copies of the report were submitted to sub-lodges for final action. In 1908 the report of this special committee was adopted, with the exception of the provision for out-of-work benefits. The new benefit scheme, compulsory on all members, became operative Oc-

⁹ Proceedings, 1910, p. 9087; Constitution, 1905, p. 30.

¹⁰ Mr. Bowers studied the constitutions of all trades unions in the United States and one in New Zealand and presented in his official report the best features of other unions' plans. Sentiment in favor of extending benefits was crystallized through the columns of the Journal.

tober 1, 1908. The system which was initiated and which replaced the old death benefit will be discussed under three general heads: (a) the character of the several benefits; (b) the cost of benefits and the amount of claims paid; and (c) the administration of the funds.

The new law provided for death benefits graded as follows: (a) a death benefit of \$100, after three months' continuous good standing; \$150, after two years; \$200, after three years; \$300, after five years; and \$500, after ten years. The grading of the benefits serves a two-fold purpose: first, as a protection to the funds, since the minimum is hardly large enough to be attractive to "bad risks"; and second, as an effective agency in holding members. The requirement of a preliminary term of membership for eligibility to the benefit serves as a protection against the entrance of persons in ill health. Since no deliberate selection of risks is made, the mortality is higher than it would be if the applicants were examined. But the death benefit is considered not so much a matter of strict business as of charity; and the slightly increased cost is regarded as more than compensated for by the increased solidarity of organization. Members of the union quitting the trade, by becoming silent members, may continue the death benefit at a rate not exceeding \$2.60 a year, payable quarterly or yearly in advance. Any silent member failing to pay his fee allows his claim to lapse, and is not again permitted to become a silent member. No silent member is entitled to more benefits than the amount he would have received at the time of his withdrawal by honorary card. Applications for honorary cards and silent membership must be made at the same time.

The rate of mortality, according to the records of the union during the period of twelve and one-half years, during which death benefits have been paid, is fairly even. With the exception of one year, in which it was abnormally low (due perhaps to the abnormal condition of the union

occasioned by the 1910 strike), the rate has ranged from five to seven per thousand members. The average rate for the whole period is 6.2. The record of mortality for members not in good standing and so ineligible for benefits is not kept. Five hundred death claims to the amount of \$61,300 have been paid by the union, or an average of \$4,904 per year, and \$123 per claim. Until 1911 no claims were paid for more than \$100. In 1918 a part of the membership will be entitled to the maximum benefit of \$500. The average age of deceased members is forty-two years. The essential facts are set forth in the accompanying table.

TABLE SHOWING MORTALITY RATE FROM OCT. 1, 1903, TO MAR. 31, 1916 (Fiscal years ending March 31)

Year	Number of Claims Receiving							Total Number Claims	Total Amount Death Benefits	Union Membership	Mortality Rate per 1,000	Average Age		
	\$50 ^a	\$100	\$150	\$200	\$250	\$300	\$500					Yrs.	Mos.	
1904 ^b ..	16							16	\$1,600	14306				
1905 ...	54							54	5,400	10904				
1906 ...	60							60	6,000	11410	6.0	40		
1907 ...	55							55	5,500	10216	6.5	42		
1908 ...	50							50	5,000	7472	6.0	42	5½	
1909 ...	36							36	3,600	6295	5.55	36		
1910 ...	20							20	2,000	8257	6.0	42		
1911 ...	2	19	11					32	3,650	4355	3.0	41	6	
1912 ...	2	8	9	5				24	3,250	4318	5.0	40	5	
1913 ...		12	3	13				28	4,250	6304	6.0	43	4	
1914 ...		22	4	7		5		38	5,700	6880	7.0	42		
1915 ...		20	4	6	2	12		44	7,900	7283	7.0	43		
1916 ...		12	10	12	1	7		42	7,450	7860	7.5	42		
Total ..	4	384	41	43	3	24		499	\$61,300	8822 ^c	6.2 ^c	42 ^c		

It will be noted that despite the decline in membership the mortality rate has not risen, nor has there been a perceptible increase in the average age at death. On the other hand the average benefit paid is increasing rapidly. The net result will be a higher cost.

The union pays a total disability benefit upon the basis of the death benefit. The amount of the benefit is one-half

^a Wife's death benefit of \$50 was deducted from the member's death benefit.

^b Six months, October 1, 1903, to March 31, 1904.

^c Average.

of the amount which the member would be entitled to in case of death, and is deducted from the death benefit due the member at death. To be eligible to total disability benefits, the member must have been in continuous good standing for six months, and the disability must not be caused by "intemperance, debauchery or other immoral conduct." Up to 1917 the union has had but one case of total disability.

Upon the death of the wife of a member who has been in good standing continuously for six months immediately preceding his wife's death, the sum of fifty dollars (\$50) is paid to the member. This amount is deducted from the amount of the member's death benefit. The object of the payment of a wife's death benefit is, of course, the defrayal of the cost of burial. It is stipulated that the money shall be paid only in case, "at the time of her death, they are living together as man and wife," and also that "if the member dies first, the insurance on the wife ceases forthwith."¹¹ The preliminary good standing is computed from October 1, 1908, so the law did not actually become operative until April 1, 1909. There is no way to ascertain the mortality rate of members' wives, but the average age at death for the period of seven years is thirty-eight.

The following table shows the operation of the wife's benefit from 1909 to 1916, inclusive:

Year	Number Claims	Total Benefits Paid	Average Age of Deceased	
			Yrs.	Mos.
1909.....				
1910.....	27	\$1,350	41	6
1911.....	20	1,000	39	
1912.....	11	550	45	1
1913.....	16	800	36	8
1914.....	28	1,400	38	6
1915.....	31	1,550	38	
1916.....	24	1,200	38	
Total.....	157	\$7,850		
Average.....	24	\$1,121	38	

¹¹ Constitution, 1908, p. 36.

The greatest innovation was the provision made for sick and accident benefits. The Association pays five dollars a week, for a period of not more than thirteen weeks in all in any one twelve-month, to members sick or disabled so as to be incapacitated for work. The total amount that may be drawn in any one year is sixty-five dollars. It is provided that no benefit be paid if the sickness or disability is caused by "intemperance, debauchery or other immoral conduct."¹² In 1910 the law required that a member found under the influence of liquor should be put off the sick list. To be eligible to participate in the benefits, a member is required to have been in good standing continuously for six months,¹³ and he must not be indebted to the local lodge to the extent of three months' dues. Members thus in arrears or who have been suspended are not entitled to benefits for three months after dues have been paid or suspension raised.¹⁴ Payments do not begin for seven days after the sickness is reported, and no benefit is paid for a fractional part of a week. In 1914 it was found that certain members were drawing the maximum number of weeks' benefit yearly who were totally incapacitated for work. In order to prevent this drain on the funds, the union adopted the ruling that no member should receive benefits for more than two successive years for the same disease, unless he is able to work for at least three months during the year after the first claim. Likewise, members suffering from "incurable or constitutional diseases" were obliged to apply for a total disability payment, after which sick benefits were to be discontinued; and in 1916 the proviso was added, "unless members shall recover and work for at least six months."

¹² *Ibid.*, p. 30.

¹³ The preliminary period of six months was required of members depositing honorary cards before they became eligible to sick and accident benefits.

¹⁴ In 1909 this penalty was increased to six months; and arrearages were defined as "any debt either to the sub-lodge or to the National Lodge, or both, for dues, fines, assessments, etc., either separately or collectively."

The occasions for the disallowance of claims were alike for death and for sick and accident benefits, and may be illustrated by example. In 1907, 13 death claims were disallowed; 9 because the members were not in good standing, one each because of non-payment of dues, failure to deposit card within the allotted time, neglect of local lodge to send reports on time, and going to work in a non-union plant. Not infrequently in such cases the convention voted to "appropriate" or "donate" \$100 to the family. In 1911 there were 32 disallowed sick and accident claims; of these, 12 members were reported not in good standing, 16 were in arrears, 3 were ineligible because their lodges had failed to send to the national office quarterly reports, and one because of intemperance.

The union statistics of morbidity, as given below in tabular form, show that, during the period of eight years in which sick and accident benefits have been paid, the number of claims increased from about 450 to slightly over 800; the average was approximately 500 per year. The increase from 1912 is attributable to increase in membership; since the union does not pay out-of-work benefits, there is a tendency for those who are unemployed to feign illness. The exact number of such cases it is impossible to deter-

SICKNESS BENEFIT
(Fiscal years ending March 31)

Year	Number Claims Paid	Average Amount Per Claim	Total Number Weeks Disability	Total Membership Union	Per Cent on Basis of 13 Weeks
1909*.....	148	\$21.66	649	6,295	—
1910.....	443	22.14	1,952	8,257	2.0
1911.....	463	22.46	2,080	4,355	3.0
1912.....	371	23.39	1,738	4,318	3.3
1913.....	421	19.42	1,675	6,304	2.6
1914.....	668	26.12	2,907	6,880	3.3
1915.....	694	23.70	3,288	7,283	3.5
1916.....	812	21.28	3,457	7,860	3.4
Total.....	4,020		17,746		
Average...	536	\$22.52	2,366	6,444	3.0

* Six months, October 31, 1908, to March 31, 1909.

mine. The total amount paid for sick and accident benefits was \$88,755, averaging \$11,834 per year. However, there was little variation in the average amount paid per claim, or in the percentage of the membership receiving benefits on the basis of the maximum period of thirteen weeks. The average claim was about \$22; the rate of morbidity, on a thirteen-week basis, was scarcely three per cent.

The annual per capita cost of the death benefit, when established in 1903, was ten cents, and in 1906 twenty cents. The assessment was raised in order to put it on a sound basis. This kept the fund nearly on a parity for two years when the organization widened its field of activities to include death, disability, sick and accident beneficiary features. The per capita assessment for all benefits was placed at a fixed lump sum of 75 cents per quarter or \$3 per year. Members in good standing leaving the trade and desiring to continue the death benefit, as stated previously, were assessed \$2.60 per year and known as "silent members." In 1914 such members were also allowed to participate in the sick and accident benefit by paying \$2.25 per quarter, apportioned as follows: 75 cents for insurance, \$1.00 for national lodge dues, and 50 cents for local dues. As distinguished from the "silent members," they were designated as "part paying members."¹⁵

In addition to the per capita assessment, the national lodge received for the benefit fund \$2 for every initiation and reinstatement. The minimum initiation and reinstatement fee was fixed at \$5. Previously the fee for reinstatement varied; usually \$2 was collected. In 1913 the law provided for an initiation fee graded according to the earning power of the members; \$5 for members earning more than \$2.50 a day, and \$3 for those who were making \$2.50 or less per day. Also when a new lodge was chartered, two dollars was charged each member for the fund. Any surplus was utilized in building up a defense fund.

¹⁵ In 1917 it was provided that "part-paying" members must pay to the national lodge \$2.50 per quarter, the allocation of dues being as follows: 75 cents for benefits, and \$1.75 for all other purposes.

The figures seem to show that the fund is on a sound basis. In twelve and one-half years, the union has paid out for all beneficiary features over one hundred and fifty thousand dollars, an average of \$12,644 per year. Until 1907 there was an annual deficit. With the new system inaugurated in 1908, and the increased per capita cost, the balance in the benefit fund grew steadily from nine to thirty-three thousand in 1913, when the original loan of \$13,000 was replaced in the general fund. In 1914 the benefit fund was merged with the general fund. The reserve fund has since decreased, due chiefly to the payment of higher death benefits graded according to length of membership, and the fact that very little "new blood" has been added to the organization in recent years.¹⁶ The average cost of management has been thirteen cents.

The administration of the beneficiary system is carried on largely by the officers who manage the general affairs of the Association. The secretary-treasurer is the chief official concerned in administering the benefits. At first, he handled the entire business himself, but in 1904, by action of the convention, he was authorized to hire an assistant to be known as insurance secretary at a salary of one hundred dollars per month. Since that time the office has been made elective, and the incumbent is a member of the national executive board.

The national union handles all the funds and makes payment of benefits through the local unions. Naturally, the adjudication of claims is the most important administrative task. The national officials rely on the local unions for cooperation in preventing fraud. In case of death, a certificate properly signed is usually indisputable evidence of the fact of death. In the matter of sick and accident benefits, the local union is a more essential part of the administrative machinery of the national union. The system is guarded against fraud by the requirement of a physician's certificate, a sworn statement of the financial secretary or

¹⁶ Secretary Tighe's Report, Proceedings, 1912, pp. 9706-9707.

other officer, and an investigation by a committee of three members of the local lodge.

The administration of the death benefit is relatively simple. The local union reports the death and certifies to the good standing of the deceased member in the local lodge. If the records of the national union and the local union correspond, and the deceased member is clear on the records of both, the claim is approved by the national officers, and payment is made through "the president, vice-president and recording secretary, in conjunction with the corresponding representative,"¹⁷ to the designated beneficiary, or legal heirs of the deceased. The receipt of any one of the heirs is "a full acquittance and discharge of all claims" against either the local union or the national union on account of the death of a member. The report of the subordinate union to the national union, covering the case in point, contains a certificate validating the claim, sworn to before a notary public by the financial secretary, together with an abstract of the ledger account upon which the local officers based their decision for the payment of the claim. Upon receipt of a "claim for death benefit," the national insurance secretary, secretary-treasurer and president examine it, and if satisfied as to its validity, order immediate payment; if the claim is questionable, it is referred to the national executive board for final adjustment. A claim to be valid must be filed within six months after the death of a member. The decision of the board is "conclusive and final without appeal," except by the board's permission.

The adjudication of a disability claim is perhaps more difficult than that of a death claim. No definition of "total disability" is given. The fact and the cause of the total disability must be secured from a "reputable" physician in the locality of the member, the certificate sworn to before a notary public, and attested by the president, financial secretary and corresponding representative of the local union. This certificate must also contain the correct lodge record

¹⁷ Constitution, 1916, pp. 40-41.

of the member. The local officers forward the claim to the national union, and, if approved, payment is made through the local union to the legal claimant.

The greatest amount of care is required in administering sick and accident benefits. The chief defenses against fraud are the certificate of the attending physician and the statement of the visiting committee, together with the sworn record of the financial secretary. A member who becomes sick or disabled must notify within a week the financial secretary, vice-president, or a member of the sick committee, and fill out a blank giving date and cause of sickness or disability. No benefits are paid for a week. At the expiration of two weeks, the physician certifies to the date, nature, and cause of illness, and the sick or benefit committee certifies that the member is "unable to work" and that the disability is not caused by immorality. This report is forwarded to the national union. Each week thereafter a supplementary report, similar to the original claim, is sent to the national office. If the records of the member are clear, the local union is instructed to pay sick benefits to the member, and upon the termination of the sickness, the subordinate lodge is reimbursed by check from the national lodge.

The law provides that the local union shall arrange for a "benefit committee" to visit sick members, consisting of at least three members. The vice-president is chairman ex officio. This committee is required to have a reputable physician sign the reports, to visit every sick member, and to fill out blank forms provided for the purpose. If a committee is refused admittance, except by order of the board of health, it is not "obligatory" to pay weekly benefits until such refusal is discontinued. Visiting committees are not required to visit members having "malignant or contagious diseases," but to make a report of such cases on the benefit claims. Officers found guilty of obtaining benefits for a member fraudulently are fined twenty-five dollars. National officials, of course, cannot be sure of the honesty of the physicians and the good faith of the visiting committee.

Every member is catalogued on a card. The union has a mailing list for its Journal, and the address of every member is here recorded. Benefit payments are entered on a member's card. Members moving from one local union to another and attempting to draw more benefits than the legal provision are thus detected. In case an excessive morbidity is noted in any locality the matter is investigated. The same system is employed by the Molders.¹⁸

It may be well in closing this account to point out some of the advantages of beneficiary features to the union. As stated before, the real reason for their inauguration was the need of the members and the desire to meet this need. In addition to the individual benefits derived, however, there are certain general advantages to the system.

The effect of the benefit system upon the Association may be summarized as follows: (1) It tends to attract new members, and to make the membership more stable. While this cannot be proved, it is the settled opinion of the union leaders. In 1909 Secretary Williams said: "Our beneficiary features have now passed the experimental stage, and are fixtures that are destined to add strength and stability to our membership. It is my firm opinion that, had these features been added a number of years past, our numerical standing would be much stronger than it is at the present time." (2) If the fact that benefits serve to increase the membership is doubtful, certainly they are a factor in retaining members, once they join. Naturally a member is slow to drop his membership when at the same time he gives up his right to valuable and increasing benefits. (3) The presence of a large reserve fund, although it increases the probability of aggressive action, nevertheless is an incentive to conservative action. A union without funds, like a man without property, is inclined to be radical. Lastly, (4) the disciplinary power of the union over its members is strengthened by the use of benefit features. It is a club to

¹⁸ Kennedy, p. 115.

keep members paid up in their dues since by suspension a member loses the rights of continuous good standing. Besides, a member of a local union will not withdraw upon slight provocation, and thus lose the privilege of benefits.¹⁹

¹⁹ F. T. Carlton, *History and Problems of Organized Labor*, pp. 153-154.

CHAPTER VI

THE STANDARD RATE

The chief concern of the Amalgamated Association throughout its history has been the maintenance of "a fair remuneration to members for their labor."¹ Not only has the rate of wages been a matter of prime concern, but the union has also interested itself in such ancillary matters as the securing of regular periodic payments.

"In order to make any effective regulation concerning the price at which the workman in the trade shall sell their labor to the employers," Professor Barnett says, "it is necessary for a union to formulate or adopt a measure for the labor which is to be sold and to fix a price upon it. This price is ordinarily called a 'standard' or 'minimum' rate."² Below this rate no workman is permitted to work; the rate rests uniformly upon all the members of the union whom it is designed to affect. Remuneration in the iron and steel trade since 1865 has been by the piece. The scale in use is known as a "sliding scale," since it is so adjusted that rates advance and decline in accordance with the price of the finished product. By means of this mechanism, the union has sought to obtain its primary purpose of substituting collectively established rates of wages for those which its members could obtain by competition in individual wage bargains or by isolated strikes.

¹ Wages in the iron and steel industry have been the subject of several reports published by the Bureau of Labor Statistics, the Sixth Annual Report (1891), the Nineteenth Annual Report (1904), and Bulletins nos. 59, 65, 71, 77, 151, 168. Two Senate documents contain reports of investigations made by the Bureau of Labor Statistics and give valuable information as to wages in the iron and steel industry: (1) Report on Strike at Bethlehem Steel Works (S. Doc. no. 521, 61st Cong., 2d sess.); and (2) Report on Conditions of Employment in the Iron and Steel Industry in the United States (S. Doc. no. 110, 62d Cong., 1st sess., 4 vols.).

² Barnett, p. 108.

The present chapter deals with (1) the area over which the scale has been applied and (2) the three elements directly affecting the rate of remuneration, namely, (a) the differentiation in rate corresponding to differences in product, (b) the definition of the work, and (c) provisions for payment when material is made under abnormally difficult conditions.³

The Area of the Standard Rate.—In the development of the union there has been a gradual extension from a local scale to a national scale. The scale of the Sons of Vulcan originally covered all the puddle mills in Pittsburgh and the immediate vicinity. The originators of the scale, according to Miles S. Humphreys, the sole survivor of the group, "had no idea of its spreading" to other localities.

Workmen in neighboring mills were soon quick to observe the advantages of the scale, and to seek a similar arrangement. The scale spread rapidly to all mills in the Pittsburgh district. In 1867 the Puddlers' Union divided its jurisdiction into districts, the object being to include in each district forges which should be governed by similar prices.⁴ By the time of the formation of the Amalgamated in 1876, all districts west of the Alleghany Mountains had scales for puddling, and continued effort had been made to secure a scale for the Eastern section. These attempts were attended with but temporary success in the East.⁵ The puddlers' example was followed by the workmen in the rolling branches of the iron trade. The Guide Mill Rollers made a scale for the Pittsburgh district by agreement with the iron manufacturers in April, 1872.⁶ In 1877, the first year after the amalgamation of the rolling branches with the puddlers, President Bishop pointed out the injurious effect of

³ D. A. McCabe, *The Standard Rate*, p. 19.

⁴ These district boundary lines were changed from time to time. In 1868 there were five districts, with centers at Pittsburgh, Wheeling, Youngstown, Chicago and Philadelphia, consecutively. In 1869 the third district shifted its center to Cincinnati (*Vulcan Record*, nos. 2-4).

⁵ *Vulcan Record*, 1870, no. 6, p. 19; *Proceedings*, 1877, p. 65.

⁶ A copy of this agreement is contained in *Proceedings*, 1880, Appendix.

mills working at low rates, and urged the necessity of establishing uniform prices for each branch of labor to prevent employers from forcing wages to the level of lower priced mills in the district, and recommended the adoption of uniform district scales by district conventions. The convention authorized the vice-president of each district to call a district convention for the purpose of formulating a district scale for all mills in the district, and an article was inserted in the constitution to this effect.⁷ For nearly ten years the Amalgamated Association adhered to the policy of district scales.⁸

These early district scales, however, did not cover all branches of work. It was difficult to make them uniform, and the rates originally applied only to the leading men of the crew. In 1879 scales were arranged in conference with the manufacturers for scrapping, knobbling, shingling and muck rolling. Such workmen as bar mill heaters and catchers, roll turners, and mill hands were still without uniform scales of prices.⁹ Two districts in particular were unable to enforce uniform district scales; the fourth district, centering about Chicago, in which practically all of the plants were steel mills,¹⁰ and the district east of the Alleghanies, where a condition of demoralization in the ranks of the organization persisted.¹¹ Special scales were drawn

⁷ Proceedings, 1877, pp. 57, 76; Constitution, 1878, p. 22; Proceedings, 1880, p. 469.

⁸ The eight districts which the Sons of Vulcans had in 1875 were continued by the Association. The five districts of 1869 had been retained, with boundaries somewhat changed, and three more added.

⁹ Proceedings, 1880, p. 343.

¹⁰ The rail mill lodges held a meeting in Chicago in December 1880, but it was impossible to agree on a uniform scale, because of "the different construction of mills and various other causes"; but a satisfactory base price for the different mills was established (Proceedings, 1881, pp. 561-562). Later a scale for steel-mill lodges of the fourth district was adopted in convention, but it was not strictly enforced (Proceedings, 1883, pp. 1183-1194; 1884, p. 1340). The Association was never able to establish with any degree of permanence a scale, district or national, for the large steel-rail mills.

¹¹ In 1880 a scale was granted for Philadelphia, with a differential of \$1 below Pittsburgh, but it did not affect neighboring mills to any great extent (Proceedings, 1880, p. 349 ff.; for copy of the agreement see Proceedings, 1881, Appendix).

up for mills doing special work or having equipment peculiar to themselves. For example, a steel rail mill of Chicago, because of exceptional automatic machinery, had a special agreement for the workmen.¹² Carnegie Brothers' plant at Pittsburgh was given a special scale for rolling; this was designed to cover mills of similar character, but separate contracts for specialty mills were made between the manufacturers and the workmen.¹³ The employers in the same competitive district were placed on an equal basis, the same prices being granted those having similar equipment.

In addition to the lodges governed by a district scale, there were a few lodges, outside any district, which were supervised directly by the national officials. These lodges followed as closely as possible the prices of the nearest competitive district, or agreed to a differential on the basis of the Pittsburgh scale, as for instance, the Birmingham, Alabama, agreement in 1882.

By 1885 the Iron, Steel and Tin Workers had obtained a uniform national scale for nearly all of the branches of their membership. This scale applied west of the mountains only, and was arranged in conference with the Western Iron Association. The union was never recognized by the Eastern manufacturers as a group, and a scale for the East could not be maintained. The Western scale, then, may be regarded as a uniform scale for the effective jurisdiction of the Association.

From the outset, there had been tendencies toward a uniform price in the several district scales of the union. The Pittsburgh district had long set the pace in the price for boiling throughout the trade. The prices for boiling in other districts were generally expressed in terms of a differential from Pittsburgh prices.¹⁴ The third district—

¹² Proceedings, 1884, p. 1320. This plant was the South Chicago Bessemer Works. The men had been working on a per diem rate; the output increased from 150 to 300 tons, and the men struck for a tonnage scale.

¹³ Proceedings, 1881, Appendix; Pittsburgh Scales of Prices, 1884-1885, p. 18.

¹⁴ Proceedings, 1880, pp. 408, 459, Appendices; 1882, p. 799.

Cincinnati—agreement adopted in July, 1881, was the Pittsburgh scale plus ten per cent, and the Wheeling or second district scale for the rolling branches in 1881-1882 was precisely the Pittsburgh scale. Nail-plate rolling west of the mountains was at the Pittsburgh price. The same was true of puddling and most of the finishing branches in the fourth district.

In 1880 the Association began the movement toward uniformity by requiring that all district scales be approved by national committees of the respective branches before being presented to employers. As a further step in the direction of uniformity, the convention of 1881 provided that the Pittsburgh price should be taken as the basis of all district scales.¹⁵ Accordingly, when the Pittsburgh district went on strike for an advance in prices in 1882 most mills in other districts became involved.¹⁶ The third district agreed to work with the understanding that it was to receive Pittsburgh prices when that scale was settled.¹⁷ When the settlement was reached that fixed the rates for the first, fourth, and sixth districts, the second district retained its differential for boiling of twenty-five cents above the Pittsburgh scale.¹⁸ With this exception, the settlement of 1882 left the scales for the various branches practically uniform for the region west of the mountains.¹⁹

The adoption of uniform scales in all branches as a definite policy was delayed by the refusal of certain districts to give up their differentials above Pittsburgh rates. In 1882 the Cincinnati and St. Louis divisions of the third district were compelled temporarily to accept Pittsburgh prices, but they were unwilling that such rates should be permanent.

The plan of taking the Pittsburgh scale as the basis of all

¹⁵ Proceedings, 1881, p. 693; Constitution, 1880, art. 14, p. 23; Constitution, 1882, art. 10, pp. 22-24.

¹⁶ Proceedings, 1882, p. 814 ff.

¹⁷ Ibid., pp. 804-806, 814-817; 1883, p. 1197.

¹⁸ Proceedings, 1883, pp. 1084-1088.

¹⁹ Certain classes of workmen in steel mills, such as steel-converting and furnace men, were as yet unprovided with a uniform scale. The union could not effectively organize them in all mills, and they were empowered where organized to arrange their own scales.

district scales proved unsatisfactory. Two objections were offered to it: first, the Pittsburgh district could not always effect a settlement, and other districts were left in an uncertain state; and again, the Pittsburgh district had the entire burden of the struggle, while all the others received equal benefits.²⁰ The convention of 1882 enacted that all district scales for iron mills should be referred to a national "scale convention," which should convene immediately before the stated convention. The scale convention was composed of the president, secretary, vice-presidents and delegates elected by the district conventions.²¹ The scales were still to be presented to the manufacturers in separate district conferences, by conference committees, appointed by the national president.²²

As ratified by the first scale convention which met in April, 1883, the price for puddling in the fifth district scale was \$6.00 per ton—fifty cents above the Pittsburgh price—and the prices for finishing mills were likewise higher than the Pittsburgh scale.²³ The same puddling rate of \$6.00 was adopted for the third district, and for finishing mills prices were fixed at ten per cent above Pittsburgh, the differential desired in 1881. The attempt to maintain prices higher than Pittsburgh, in both districts, met with failure. The third district was disorganized, and failed to enforce the scale generally. In the fifth district only four mills signed the district scale, and the agreement finally reached practically called for the Pittsburgh scale of prices.²⁴

The scale adopted by the 1884 convention was again uniform, except for the boiling differential of twenty-five cents in the Wheeling district.²⁵ This scale became generally

²⁰ Proceedings, 1882, p. 799.

²¹ *Ibid.*, pp. 961-962.

²² Constitution, 1882, art. 10, pp. 22-24.

²³ Proceedings, 1883, pp. 1082, 1197-1199.

²⁴ Proceedings, 1884, pp. 1346-1348, 1420-1423. An attempt was made to secure the Wheeling rate of \$5.75, but it could not be obtained.

²⁵ Proceedings, 1884, pp. 1333-1335; Scales, 1884-1885. The manufacturers, the year previous, did not meet with district committees for the first, second, fourth, and sixth districts, but with a general committee of the scale convention (Proceedings, 1883, p. 1078).

operative, except in the Cincinnati and St. Louis districts, which were badly disorganized. In 1885 the scale convention decided to ask for the existing prices, and also to make the price of boiling uniform for all mills west of the mountains.²⁶ This made the scale practically uniform. The failure of the conference committee that year to reach an agreement with the manufacturers as a body caused a split in the Western Iron Association. The Pittsburgh manufacturers finally broke ranks and signed the scale for their district, and this scale became the union scale for other districts. Any mill in the Association was privileged to start up under this scale. A uniform scale was thus enforced in finishing mills in 1885.²⁷ This scale was as nearly uniform as any single scale ever had been. Uniformity was brought about, however, by the refusal of employers in one district to pay a higher price than those in another, and not by the enforcement in lower-priced districts of prices paid in the districts enjoying a differential advantage.

A uniform scale was never maintained for the Eastern district, although many attempts were made to establish one based on the Western scale and a fixed differential. In certain years, such a scale was adopted for many branches included in the Pittsburgh scale.²⁸ In other years a scale was signed for Philadelphia and its immediate vicinity;²⁹ but in 1889, when there was a Philadelphia scale, only three mills outside of Philadelphia paid the same prices. An attempt was made as late as 1907-1908 to establish an Eastern

²⁶ The second district was persuaded to give up its twenty-five-cent differential.

²⁷ After 1885 the Association, in order to economize in the matter of expenses, eliminated the scale convention, and thereafter a wage committee recommended to the general convention for definitive action any desired changes in the scale. The convention met in June instead of, as before, in August; and the scale expired June 30. Conferees of the several divisions were appointed by the president to carry on negotiations with the manufacturers (Proceedings, 1885, pp. 1581, 1657, 1690; 1886, p. 1825; 1887, p. 1969).

²⁸ Vulcan Record, 1874, pp. 13, 19; Eastern Scale of Prices, 1890-1891.

²⁹ Proceedings, 1880 and 1881, Appendices.

scale, but it failed because of the variations in prices paid. The East has always been an expense to the Association without any permanent results.

The union was never successful in establishing a uniform wage scale for the workmen in the steel trade, particularly in the converting and rail-rolling departments. Allusion was made previously to the failure to establish district scales for them. The workmen arranged local scales for the various steel plants in which they were employed, differing according to equipment and working conditions.³⁰ In 1887 a special convention of steel workers formulated a scale, but, following the recommendation of the steel workers' wage committee, the convention of 1888 decided it would be unwise to attempt to enforce a uniform scale at that time.³¹ This practice of adopting local steel scales, after they had been approved by a wage committee, was continued by subsequent sessions. The Association lost control of the steel mills after the Homestead strike of 1892, and by 1900 the steel plants were weakly organized.³² After the struggle of 1901, the steel mills of the United States Steel Corporation were lost to the union.

Since 1885 the policy of the Amalgamated has been to maintain, west of the mountains, uniform prices for similar work and conditions. Since 1893 the scale has provided that, "whenever deviations from the Western Iron Scale . . . are made," either they shall be corrected or "all other mills shall receive the same."³³ This policy was carried out in practice. For example, in 1894, the manufacturers as a body failed, after many conferences, to reach an agreement. A few manufacturers agreed to the Association terms, and the scale thus signed became the union scale. In September the scale was modified in some particulars in conference with other manufacturers, and these changes, including cer-

³⁰ Proceedings, 1886, p. 1756, 1825 ff.; 1887, pp. 1922-1924, 1946-1947.

³¹ Proceedings, 1887, pp. 2145-2147; Programme of Business, 1888, p. 50; Proceedings, 1888, pp. 2221, 2275, 2337.

³² Proceedings, 1899, pp. 5664-5666; 1900, p. 5909.

³³ Proceedings, 1893, p. 4246; 1904, p. 7113.

tain reductions, were granted to all employers, including those who had previously signed. The union, though its membership has declined since 1901, still maintains the policy of uniform scales west of the mountains. It is the practice to hold three annual conferences, two on the puddling and finishing scales, and one for the sheet and tin division.³⁴

The national scale does not, however, contain scales for all union mills in its jurisdiction. A number of mills and departments of mills have from time to time been given separate special scales because of variations from the regular types. Also, the few scattered mills of the East controlled by the Association have individual scales. Finally, there are some members of mill crews, particularly on muck and finishing mills, working under the uniform scale who do not have their rates specifically provided in the scale. Hookers, for instance, did not obtain a scale rate until the 1916 convention; finishers and straighteners are not yet included in the scales of prices. The officials of the national union have repeatedly tried to extend the uniform scales so as to include these workmen but have failed because of non-uniformity in the work that these men are required to perform in different plants. The rollers in some instances employ these men. The roller may, if he chooses, do part of the work of his crew himself; frequently he plays the rôle of finisher.³⁵ The wages of such workmen may be adjusted by the local union either with the roller or with the employer.³⁶

Differentiation of the Rate.—The function of the piece scale is to provide a distinct rate for each variety of product

³⁴ These conferences are held with the Republic Iron and Steel Company, the largest producer of muck iron; the Western Bar Iron Association, composed of bar-iron manufacturers; and the Independent Sheet and Tin Plate Manufacturers, an association of independent manufacturers of sheet and tin plate (Proceedings, 1916, pp. 11,502-11,510).

³⁵ The finisher, on a bar mill, passes the long strip of molten iron through the rolls the last time.

³⁶ These workmen not provided for in the scale are not admitted to membership by many local unions.

and for each different type of conditions under which the product is normally made. These lines of differentiation are, chiefly, the form of the product, which includes variations in size, shape, and finish, and differences in materials entering into production.

The first of these—differentiation in the form of the product—is by far the most common of those variations that require rate differentiation. The particular variety of product for which a given rate applies is determined, in some cases, by a gradation in physical measurements; in others, by the measure of comparative time required. In the boiling department, a "heat" of, say, five hundred and fifty pounds normally requires less than two hours. The grade of skill necessary to produce a heat within this time-limit is that assumed to be the average among the workmen in the trade. If iron or any mixture of material required longer time for boiling, extra pay was demanded.³⁷ In the sheet and tin division, the price list for rolling iron and steel bars or plates into sheets was based on the physical dimensions of the product. The sheets were rolled into the desired thinness and size. The index of thinness is the gauge number,³⁸ and the gauge number indicates the weight per square foot. The smaller the gauge number, the thicker is the sheet and the greater its weight per unit of measurement.³⁹ The price is given per ton for each of the various gauge numbers in the list.⁴⁰ The thinner the sheets, the

³⁷ Scales of Prices, 1890-1891, p. 5, foot-note 2; and all subsequent scales.

³⁸ In 1893 the United States Standard Gauge was inserted in the scale (Proceedings, 1894, p. 4534). Previously the Partridge Standard Gauge had been used (Proceedings, 1887, p. 2161).

³⁹ Western Scales of Prices, 1916, pp. 36-38. The number of pounds considered a ton varied. In 1880 the union passed a rule prohibiting any department making more than 2240 pounds of iron (but not of steel) for a ton (Proceedings, 1880, p. 458). In knobbling, however, 2464 pounds is the standard weight of a ton, ten per cent being added to take care of loss (Western Scales of Prices, 1916, p. 17).

⁴⁰ The Association occasionally had trouble with mills in which the members were required by the management to work "light gauges" without extra pay. In such cases, the union rule was that the "mean price" should govern (Proceedings, 1905, pp. 7247-7253; 1906, pp. 7535, 7559-7560).

greater is the number of passes through the rolls required and, consequently, a longer time is required to reduce a ton of bar-plate to the specified gauge number, the price per ton for sheets of the same dimensions consequently increasing with the gauge number.⁴¹ Of course, it does not rise proportionately, since the difficulty does not increase in absolute ratio. The rates for rolling in "finishing" mills vary not only with the width of the rolls and the sizes of the iron, but also with the shapes. The great variety of shapes makes it necessary that the price list shall be descriptive of patterns as well as a schedule of rates according to differences in measurements.⁴²

Questions of rate differentiation are particularly difficult when the matter of the materials employed in production is involved. Such variations are more complex than variations in size and shape, and the greater effect upon earnings of price differentials according to materials has made the latter of greater relative importance. This is particularly true in the price for boiling. In this division of the trade, a tonnage rate for boilers is paid for working metal through a process. This rate originally presupposed that the pig iron worked was of standard grade, and the first scales contained no foot-note provisions for variations.⁴³

Gradually the manufacturers began to substitute iron of lower grade, or other materials to be worked with pig iron, and frequently these several materials were mixed and worked together. This practice gave rise to disputes as to the rates of pay, and consequently it became necessary to provide rates for these various materials or mixtures. As

⁴¹ Gauges eight and heavier, called "plates," are rolled in the plate mill; up to nineteen gauge—"firebed"—is rolled in a jobbing mill; gauges nineteen and lighter,— "sheets,"—are made in sheet mills (Western Scales of Prices, 1916, pp. 36-39).

⁴² *Ibid.*, 1916, pp. 25-34.

⁴³ The first scale (February 13, 1865) may be found in the national Labor Tribune, February 7, 1874, also in the Report of the Pennsylvania Bureau of Statistics, 1887, p. G. 15. The second scale (July 23, 1867) is given in the Vulcan Record, no. 13, December, 1873, p. 36, and also in the Report of the Massachusetts Bureau of Labor, 1881, p. 12. The third scale (April 14, 1875) is contained in the Vulcan Record, no. 16, 1875, pp. 34-35.

early as 1871 the national union upheld a local forge in a dispute involving a differential price for a particular kind of iron.⁴⁴ In 1874 workmen in the Pittsburgh and Youngstown districts demanded fifty cents extra for working "hoop iron." By 1875 differential prices were paid for working "castings," "hoop iron," and "scrap," and the convention considered the question of making such rates uniform. Uniform prices were not enforced until several years later. In 1877 the price for working "physic iron" was rated at one-fourth more than common iron.⁴⁵ From 1881 to 1916 five prices were added to the scale for materials rated higher than common pig iron, and, in a few cases, prices were added for materials rated at less than the regular boiling scale of prices.

The convention of 1894 enacted that the price for mixed material not provided for in the scale should be the "mean price" between those for the materials used.⁴⁶ Nevertheless disagreements as to the price for particular mixtures have been frequent.

In the finishing department, the question of rate differentiation to meet a difference in materials was raised when the practice of rolling steel in iron mills was introduced. Attention was first given the matter in 1880, when the convention adopted a resolution that in mills not working steel as a specialty "price and one-half"⁴⁷ should be paid. In 1884 the scale provided that "iron mills [except sheet mills] working steel" should pay "price and one-half for steel, except mild steel," the output of which equalled that of iron when working the same sizes. It was further provided that the rule of price-and-one-half should apply "when the output of steel is but three-fourths the output of iron."⁴⁸

⁴⁴ Vulcan Record, 1872, no. 10, p. 10.

⁴⁵ Proceedings, 1877, p. 83. The rule made was that boilers who made four heats of physic iron should be paid the same amount as for five heats of common iron.

⁴⁶ Proceedings, 1894, p. 4653.

⁴⁷ Proceedings, 1880, pp. 411, 444.

⁴⁸ Pittsburgh Scales of Prices, 1884-1885, p. 2, "Memorandum of Agreement."

The adoption of a price differential for steel could not be maintained. The justification for the higher price for steel was the diminished output, since the steel was rolled on rolls particularly adapted to iron. But the men proved the fallacy of this argument. Spurred on to increased output by the higher price, the workmen produced as much steel as iron, and in some cases even more steel than iron. What the result would be was evident—the employer insisted on an elimination of the differential rate. In 1886 the scale was altered so as to make the price for rolling iron and steel, for one class of finishing mills at least, identical.⁴⁹ The output continued to increase, so that by 1902 the rates for finishing steel had dropped slightly below the price for iron.⁵⁰ In 1906 steel rates were reduced again as compared with those for iron.⁵¹ In the sheet-mill division, likewise, a higher price for steel than for iron was maintained in the scale, up to 1904, for rolling the lighter gauges.⁵²

Definition of the Work.—Complementary to the necessity of standardizing the rate of payment for each variety of product is the need for defining in the scale the work which the piece worker must do for the specified rate. Without clear definition of the work, the practice is apt to vary considerably in different plants or localities. Such variations among the Iron, Steel and Tin Workers have been generally with respect to (1) the auxiliary work which may or may not be done by the man who receives the rate and (2) the payment by the worker, instead of by the employer, of helpers who work under the direction of the man receiving the piece price.

Generally the work required for a specified rate has been so well established by custom that it is not necessary to

⁴⁹ Proceedings, 1886, pp. 1756, 1825.

⁵⁰ Western Scales of Prices, 1902-1903, pp. 14, 22.

⁵¹ Amalgamated Journal, June 21, 1906. The scale, however, still provided that "where the output of steel is but three-fourths the output of iron," the rule of price-and-one-half should obtain.

⁵² Western Scales of Prices, 1903-1904, p. 25; 1904-1905, p. 25. A differential price was maintained for gauges 22 and lighter.

define it in the scale. Such practice has been fixed largely by protests on the part of workmen against innovations. In 1875 the puddlers successfully fought an attempt to make them wheel their own cinder, ore, and "fix," and to remove ashes, so as to dispense with certain laborers; and the advantage thus gained accrued to the workmen of other mills in the district.⁵³

Attempts to require the men to see that furnaces were in proper conditions for "heats" and to look after them when the heats had been drawn was a source of much friction. In 1878 twenty-five cents extra was demanded for "putting up a hot fix."⁵⁴ The constitution of 1888 states that any boiler found putting "jams" or "checks" in the furnace with brick or fire clay should be fined five dollars.⁵⁵ Similar regulations were adopted governing the prohibition of certain extra tasks in the case of other work. For example, the practice of sheet-mill heaters assisting in changing rolls was discontinued in 1880. In 1899 it was provided that rollers should be paid two dollars, and roll hands a day's wages of common labor for changing rolls. The same year a rule was adopted that "any tin roller or other member of his crew who should clean, grease or change rolls or other castings," should be fined for the first offense, and expelled from the union for the second offense, unless such work was paid for. There were many similar instances.

The most important rules defining the worker's tasks have from time to time been inserted in the printed copy of

⁵³ Vulcan Record, 1875, no. 16, p. 31.

⁵⁴ Proceedings, 1878, p. 169. Puddlers were generally expected to see that the furnaces were provided with "fix" before each heat. By "fix" is meant the mixture that was used to line the inside surface of the furnace so that the molten iron would not eat through the walls. "Hot fix" was molten metal used as "fix" and had to be heated first. By using "hot fix" a better grade of product was made.

⁵⁵ The "jam" is the wall-like partition which allowed only so much heat to come in contact with the iron. This rule was not intended to prevent a puddler from putting a ball of fire-clay in the "jam" during the week in order to keep his furnace working; but to keep puddlers from doing the work of furnace builders, especially on Sundays (Proceedings, 1888, p. 2263; National Labor Tribune, June 23, 1888, p. 4, June 28, 1890, p. 4).

the scale as foot-notes. They cover a variety of subjects. Several examples will illustrate. In the boiling and busheling department, the employer agrees to do "all necessary fixing, including the cutting of grates, hanging of doors, and all new brick work on bridges," except "the usual fixing between turns and heats." All heavy scrap for busheling must be cut into eight-inch pieces or smaller, and all materials placed within ten feet of the charging door.⁵⁶

The payment of helpers and assistants by the recipients of the piece rate has been for years an important feature of the working system in the Amalgamated. In the early days of the union the puddler and the roller were recognized as being in complete charge of the work of their respective departments. They hired the necessary helpers, and also paid them from their own wages.⁵⁷ The puddler paid his helper; the roller, the members of his crew. Scales have since been adopted for these workmen, first for the heater, then gradually for those employed about the set of rolls; and they are now paid by the employer.⁵⁸ Since the scale explicitly stipulated by whom the regular members of the crew should be paid, there has seldom been occasion for disagreement. Disputes have occurred chiefly over the payment of "extra" men who are needed on orders for heavy material.

Unless the employer furnished additional help when thus needed, or increased the rate, a reduction in the roller's wages was made. An extra man was usually required to handle the heavier sizes, and the difficulty of handling was greater than the increase in tonnage. Not infrequently, upon the request for extra help, the employer insisted that the roller should pay for it. Every branch of the trade ex-

⁵⁶ *Western Scales of Prices*, 1916, p. 9.

⁵⁷ J. H. Ashworth, *The Helper and American Trade Unions*, p. 72.

⁵⁸ Not until recently were scales made for the catcher, the rougher, and the hook-ups in the bar mill; and for the roughers, catchers, and the stranders in the guide mill. The only workmen now paid by the roller are the straightener and the finisher. Sometimes, particularly in the mills of only one furnace, the roller does the work of the finisher himself, since the output is small.

perienced disputes of this nature, resulting in a scale provision covering the points at issue. The Pittsburgh scale of 1887 provided that extra help be furnished for the heater by the employer on all iron and steel weighing over 160 pounds, and extra men (not to exceed two) for sheet-mill rolling "on all sheets thirty-six inches wide and over." The same scale contains a clause that muck-mill rollers shall be given additional help in rolling billets "one inch and a half or less."⁵⁹ The convention of 1899 adopted a resolution that, on bar mills, "one man's help shall be furnished by the company on piles of 150 pounds, and an additional man on piles of 250 pounds, to shove under at the rolls on all passes, and for every additional 100 pounds and over an additional man shall be furnished." Similar foot-notes have been inserted gradually in the scale until today there is a considerable number of such provisions. They have not, however, been gained without serious opposition from the manufacturers.

The Association has established the rates to be paid by members to helpers, who also belong to the union. Puddlers' helpers receive not less than "one-third and five per cent" of the puddlers' rates; heaters' helpers in sheet mills "not less than 40 per cent of heaters' wages." The helper frequently receives more than this; and, in some cases, the two men work the furnace "level handed," that is, on equal shares. In 1880 the rates to be paid by rollers to roughers and catchers were, by agreement, inserted in the scale. Since that time the wage rates of other workmen have been added to the scales. Men who are not "regular" members of the crew, employed about the rolls, but who belong to the union, make their own terms with those who employ them, subject to the scrutiny of the local union. Their wages may not be reduced during the scale year, and are subject to the fluctuations of the sliding scale.⁶⁰

⁵⁹ Pittsburgh Scales of Prices, 1887-1888, Memorandum of Agreement, pp. 3, 6, 18.

⁶⁰ Proceedings, 1899, pp. 5565, 5620; 1905, p. 7366; Constitution, 1901, art. 17, sec. 22; 1910, art. 17, sec. 21.

Within recent years, the Association has endeavored to include in the scale specified rates for all members of crews, and to have them paid directly by employers. In 1905 the sheet and tin agreement provided that "all regular tonnage and day hands" should receive their pay envelope from the office. This rule has since remained in force.⁶¹

Abnormally Difficult Conditions of Production.—Finally, deficient materials which make the production of iron or steel abnormally difficult have demanded attention on the part of the workmen because of the effect on earnings. In the puddling division, coal and iron of poor quality caused considerable trouble. In 1877 the puddlers in a Pittsburgh forge refused to fire their furnaces with slack coal, which did not produce sufficient heat and consequently increased their labor. In the same year there was a strike against poor ore.⁶² Such grievances became so numerous that, in 1883, the convention adopted a resolution that iron requiring more than an hour and three-quarters to make a heat should be considered a grievance. In 1885 it was provided in the scale that cracked or flawed iron made out of old rails be paid for, otherwise the price for working old rails should be ten per cent above that for working common pig iron.⁶³

In the sheet and tin divisions for a long time the "turn" system of working and payment was in vogue. This system is a combination of piece work and a guaranteed wage. The regular members of the crew were paid a fixed wage per turn, except the roller who received a tonnage rate. Their wages per turn and the stipulated number of "pairs" to be rolled per turn were fixed in 1880 and specified in the scales.⁶⁴ The turn limits agreed upon for those who were

⁶¹ Amalgamated Journal, July 6, 1905, p. 1.

⁶² Proceedings, 1877, pp. 46-47, 83.

⁶³ In 1878-1879 old rails were substituted for muck bar, and the puddlers complained that the iron was "of bad quality" and would not "stand the test of heating" (Proceedings, 1878, p. 131). A differential of thirty cents above the price of heating and rolling was demanded (ibid., p. 178), but could not be obtained (ibid., 1879, p. 224).

⁶⁴ Pittsburgh Scales of Prices, 1881, p. 15.

104 ASSOCIATION OF IRON, STEEL AND TIN WORKERS

paid by the roller and those paid by the employer were identical. If the number of pairs was increased, the turn wage increased proportionally. By the provisions of this system, if the members of the crew failed to reach the stipulated number of pieces,⁶⁵ through no fault of their own, they received the turn's wage. In 1905 the turn limits were given up entirely.⁶⁶ Thereafter, the turn workers were practically on an unlimited system until 1908, when they were put on a straight piece basis.⁶⁷

⁶⁵ The number of pieces per turn was generally the limit of output. These were usually averaged for a period of, say, two weeks. So the failure to reach the number on any one day meant no loss to the members of the crew in average earnings.

⁶⁶ Amalgamated Journal, July 6, 1905, p. 1.

⁶⁷ Western Scales of Prices, 1908-1909, pp. 32-40.

CHAPTER VII

THE WORKING DAY

The demand for a shorter work day in the iron trade began with the close of the Civil War, and the struggle has been kept up unabated until the present. The success of the union in diminishing the hours of labor has been gradual and continuous, though not uniform in the various departments of the industry. Reductions in hours of work once gained have been well defended and seldom relinquished. In times of depression, the incentive for employers to reduce wages is stronger than to increase hours, since there is less demand for labor. Efforts to maintain Sunday and the usual holidays as days of rest also have met with success. The shorter workday, although sometimes obtained by means of strikes, has been procured in most cases by trade agreement. The present discussion will concern itself with the development of the policy of the Association with reference to the standard hours of labor in the several departments—(a) boiling, (b) finishing, and (c) sheet and tin divisions. The problems of each were essentially different.

Boiling Division.—Complaints against slavish hours of labor were commonplaces among the early puddlers. In 1870 certain mills were reputed to be working fourteen and fifteen hours a day. The length of the day was fixed by custom; the puddlers fired their furnaces between three and four o'clock in the morning, and considered six "heats" a day's work. The time required varied with conditions, as for instance, the quality of the metal, but the puddler seldom quit before sunset.

The earliest reductions in the working hours were closely associated with measures designed to limit output. The

restriction on the number of heats,¹ and the limitation of the weight of the charge had considerably reduced the long hours of the puddler by 1890. The next year, in order to prevent the employment of hard iron from increasing the hours of the boiler, the convention enacted that the limit of time for a heat in a single furnace should be an hour and three-quarters.² This rule met with determined opposition for a few years on the part of the employers, but was ultimately acquiesced in.

These regulations, directly intended to restrict the output, at the same time prescribed a definite limit to the length of the working day. Five heats averaging an hour and three-quarters per heat would require approximately nine hours. In addition, the puddler must heat up his furnace before starting, do the ordinary "fixing" between heats and leave the furnace in shape for the next turn coming on. The time required for this supplementary work varies from one to two hours. Consequently, on double turn, the puddler generally averages over ten hours a day; and, on single turn mills, in which six heats are allowed, practically twelve hours. Such is the status of the hours of labor in the boiling division at present writing.³

Attempts to introduce the system of three eight-hour shifts in boiling have been, in general, unsuccessful. The objections have chiefly been on the part of the workmen, and are twofold: In the first place, earnings are less, since it is not easy to make five heats in eight hours, and it is imperative that the puddler have his heat out by the time the next turn comes on. Secondly, the workman enjoys less freedom under an eight-hour system. The puddler

¹ See below.

² Proceedings, 1891, p. 3330. The time limit for larger furnaces was graded as follows: double furnace, one hour, fifty minutes; double double furnace, two hours; Siemen's furnace, one hour, fifty-five minutes. The time was reckoned from the moment the door was dropped until the heat was ready to draw, barring accidents and unpreventable drawbacks.

³ The Louisville convention of 1916 adopted the eight-hour day for all departments, but it was not pressed in the conference with employers on account of the temporary scarcity of labor.

has always been accustomed to arrange for himself the time for starting and quitting. He objects to being hurried in order to produce a reasonable output. For these reasons,⁴ the three-turn system is considered impracticable. The Amalgamated has succeeded in resisting the demands of the manufacturers for three turns in union plants;⁵ there are, however, a few non-union mills employing three shifts.⁶

In the busheling department, the workmen generally work three shifts. This is explained by the fact that busheling requires only a few minutes for a heat. Scrap and swarth are used very largely, and the iron is not fomented. Consequently, bushelers need not come to work until about fifteen minutes before the muck mill begins to roll.⁷ The eight-hour system for bushelers has become so well established in practice that no specific rule is necessary. Practically the only exception among union plants is the Empire mill, Cleveland, where the nine-and-a-quarter-hours' rule obtains.⁸

Finishing Mills.—Long hours have been a characteristic feature of the work day in practically all finishing mills. In 1877 instances of heaters and roll hands working a fifteen-hour day were not uncommon. The Columbus session of that year provided, as a restrictive measure, that the first heating furnace should quit charging at three o'clock

⁴ A minor obstacle to the three shifts was the fear of introducing more men into the trade than could be absorbed (Proceedings, 1894, p. 4562).

⁵ For instances of disputes over the three-turn system, see Proceedings, 1885, pp. 1559-1560; 1893, pp. 4267, 4335-4336; 1894, pp. 4561-4562.

⁶ Several mills of the United States Steel Corporation, as for example, the Frankstown mill and the Wharton plant, both of Pittsburgh, and the A. M. Byers Co. of Girard, Ohio, work three shifts of eight hours.

⁷ The scale does not prescribe three turns for muck-mill hands, but it is provided in a foot-note that "on muck or puddle mills on which three crews are employed three rollers shall also be employed" (Proceedings, 1904, p. 6850; Western Scales of Prices, 1916, p. 14).

⁸ The nine-and-a-quarter-hours' clause was adopted in 1892 for scrapping and busheling departments to apply to mills not working shorter charging hours (Proceedings, 1892, p. 3856).

when the rolls started at five in the morning. After allowance for the time required to heat the furnace before the rolls began to operate, and the necessary time for drawing the last heat, this regulation did not limit working hours beyond a twelve-hour day. Resort was next had to limiting the daily output in the several mills—bar, nail, plate, and guide—to a fixed tonnage.⁹ This measure likewise proved ineffectual, since the workmen either employed the same time by working less vigorously or—even more commonly—violated the fixed limit. Finally, after repeated efforts, spurred on by the widespread agitation of the American Federation of Labor for the eight-hour day, the union, in 1892, adopted the so-called “nine-and-a-quarter-hour” system for all finishing departments.¹⁰ This clause fixed the length of the work day at “nine hours and fifteen minutes from the regular time the mill begins to roll until the first furnace commences to charge the last heat.” This rule has remained valid up to the present.¹¹

The Amalgamated Association, in its attempts to introduce the eight-hour day in finishing mills, encountered difficulty analogous to that experienced in the boiling division. The movement met with opposition both from the employers and the workmen. At the St. Louis convention of the American Federation of Labor, the representatives of the Iron and Steel Workers registered their votes in favor of the eight-hour day “in order to have the matter go out as being unanimous, but with the distinct understanding that it was utterly impossible [for the union] to enforce the movement in the mills at present, owing to the diversity of work and the irregular hours” of employment of the members “who work on the tonnage system.”¹² All members were urged to attend the mass meetings and show by their presence that the union “at heart” favored the propaganda,

⁹ Proceedings, 1878, pp. 176-177.

¹⁰ Proceedings, 1892, p. 3856.

¹¹ Western Scales of Prices, 1916-1917, pp. 21, 22, 32; the clause is inserted in scales for bar and 12-inch mills, specialty mills working pipe or skelp, guide, ten-inch, hoop, and cotton tie mills.

¹² Financial Statement, January 31, 1889, pp. 6-7.

but to take no active part in them, lest such action be "construed as committing [the organization] to the enforcement of the eight-hour system on May 1, 1890, the date set for its inauguration." Consistently with this position, the succeeding convention enacted that "wherever practicable, any mill, department or factory under the jurisdiction of this Association, desiring to do so, may upon agreement with the management arrange to work on the eight-hour system."¹³ The union did not, however, think it advisable "to go into conflict in order to obtain it." Several mills adopted it without any contest, such as the Homestead Steel Works, Oliver and Roberts' wire rod mill, and the Brad-dock Wire Company.¹⁴ This was practically as far as the Association got in the direction of the eight-hour day.¹⁵

The union more recently—in the conventions of 1915 and 1916—has adopted resolutions in favor of the eight-hour day in all union plants, that is, in the finishing and puddling departments as well. The reason for the delay by the convention was the opposition of the workmen. It meant a temporary wage reduction, and they were unwilling to accept it. Consequently, finishers generally work two turns—in the vernacular of the men—"the night turn can always shake hands with the day turn." The union leaders maintain that the three-turn system has been successful in plants in which it is now operating; that "it decreases the waste,

¹³ Proceedings, 1890, pp. 3029, 3137 ff.

¹⁴ National Labor Tribune, July 19, 1890, p. 4, and July 26, 1890, p. 4. For a time, the eight-hour day seemed to gain in popularity. The union was never successful in reducing the hours of labor in nail factories, although laws were passed to this effect (Proceedings, 1879, p. 262). Nor could the eight-hour turn be enforced in rail mills and steel plants, except temporarily. The Homestead Steel Works employed the twelve-hour shifts after the struggle of 1892, and the large steel plants of the United States Steel Corporation began to operate certain departments twelve hours a day, including Sunday, after the big steel strike in 1901.

¹⁵ Proceedings, 1902, p. 6261; 1907, pp. 7831, 7861. The eight-hour system was insisted upon in case of 10-inch, guide and hoop mills averaging \$35 per turn (based on a one-cent card rate) on a single furnace, and \$65 per turn on two furnaces; also in bar and 12-inch mills averaging 60,000 pounds on single, and 80,000 pounds on double furnaces.

increases the output, and in consequence of that fact decreases the cost of production"; that "to the men it gives assurance of sufficient time to rest and think, while under the present conditions all they can do is eat, sleep, and work";¹⁶ and finally, that it is the only means to maintain the wage rate, since manufacturers, in requesting a reduction, invariably point to the large output of certain mills and the large earnings of the workmen. The manufacturers, moreover, although they have in conference expressed a willingness to give the three-turn system a trial, as a body are not favorably disposed toward its introduction, because of alleged increased cost of production. The union feels disinclined to force it on employers for fear of "squeezing out" the high cost mills.

Sheet and Tin Plate Mills.—The sheet and tin-plate departments alone have the universal three-turn system, or the eight-hour day. As early as 1885, sheet mills were allowed to work three shifts of eight hours, providing the crews did not exceed the specified limit of output. This, however, was not conceded by the union without some opposition.¹⁷ The objections which the union offered to the introduction of the triple-turn were, principally, (a) overproduction, and (b) the admission of too many workmen into the trade, causing ultimate slackness of employment¹⁸ and reduction in wages. The manufacturers, on the other hand, jointed out the waste of keeping the furnaces hot between turns, and the necessity of continuous and uniform output in order to keep the rolls in proper working condition. The logic of their arguments was compelling; and within a few years the system of three turns for sheet mills was generally conceded. The eight-hour turn was pecu-

¹⁶ Proceedings, 1907, p. 7998.

¹⁷ For examples, see Proceedings, 1880, pp. 458-459; 1883, p. 1171; 1885, p. 1547.

¹⁸ In 1898 ex-President Garland, in his report to the convention, stated that three-fourths of the members of the union were working on the eight-hour system; and that the workmen who were employed eight hours per day averaged more days' work per year than those working the longer shifts (Proceedings, 1898, p. 5418).

liarily well adapted to working conditions in the sheet mill department.

When the tin business began to prosper about 1890, the union allowed the use of the three-turn system of operation for tin mills.¹⁹ In addition, the scale provided what should constitute the limit of output for a day's work. It was frequently the case that the crew produced the fixed tonnage in less time than eight hours, particularly when rolling the wider sizes of sheets. The manufacturer objected to any interval between successive turns, during which the rolls were allowed to cool off. They argued also that it was prodigal to be obliged to keep the furnaces hot when the mill was not running. Accordingly, they insisted that the crews "follow out," that is, one crew should succeed another without any loss of time. It was also pointed out by employers that this method of working, since the last crew would finish earlier on Saturday, would give the management an opportunity to make any necessary repairs in the plant.

The union did not view the practice of "following out" with favor. In the first place, the privilege—it was so alleged—was abused. Certain mills were reported to have finished the week's work by Saturday morning, and even earlier.²⁰ Such abuse, they reasoned, would, if continued, lead to a request by the manufacturers for a removal of the limit. As a remedial measure, the Association adopted a provision that "eight hours shall be a day's work on tin or black plate mills, said mills not to follow out except on Friday and Saturday, when a full day's turn shall not be made in less than seven hours and forty-five minutes."²¹ A penalty was attached—suspension or forfeiture of char-

¹⁹ Proceedings, 1890, p. 3142.

²⁰ In 1903 the sheet department of Zug's mill, Pittsburgh, finished the week's work "as early as midnight on Friday." The lodge of which the workmen were members was found guilty of violating the union rule in this respect, and ordered to give up the practice under threat of having its charter revoked (Proceedings, 1903, pp. 6596-6604).

²¹ Proceedings, 1900, p. 5736.

ter—but the law was not rigidly enforced. All restrictive measures as to output were abolished in 1905. The eight-hour shift has been continued in practically all tin-plate plants.²²

Until the early eighties, the national union made no attempt to preserve, as days of rest, Sunday and the usual holidays. The matter was left to local agreement between the workmen and the employer.²³ In 1883 the convention passed a resolution that "all Bessemer mills governed by this Association cease all Sunday work, except that which is necessary, after the first of January, 1884."²⁴ This action did not, of course, put an end to the practice, and protests were frequently made. The belief was held, as in the case of excessive production, that Sunday labor tended to reduce wages, as well as to cause physical harm of the workmen. Accordingly, steel and rod mills—which commonly operated on Sunday—were required to stop rolling not later than five o'clock on Saturday and not to commence again until Monday morning.²⁵

The Amalgamated provides not only that no skilled workmen be required to work on Sunday, but also for a shorter work day on Saturday. Puddle mills, on single turn, make five instead of six heats. Bushelers quit charging after seven hours. Finishing mills stop rolling seven hours from the time the mill started to roll; sheet and tin mills work the first eight-hour shift only. Such advantages have not been maintained, however, without vigilant effort.

Until 1903, the union provided no uniform rule as to working on holidays, with one exception. No member was

²² In a three-turn mill, no member of a crew was permitted to work longer than eight hours (Proceedings, 1901, p. 6051).

²³ Vulcan Record, 1872, no. 10, p. 43. Occasionally mills were constrained to cease operations on Sunday, by pressure of public opinion and local civic and philanthropic societies (National Labor Tribune, May 13, 1882, p. 4, col. 1).

²⁴ Proceedings, 1883, p. 1238.

²⁵ Proceedings, 1894, p. 4677; 1896, p. 4988; 1897, p. 5188. Many of the plants of the United States Steel Corporation, particularly the large steel mills, now non-union, operate on Sunday. In some instances, the state law requires one day's rest in seven.

allowed to work on Labor Day, under penalty of a fine of from five dollars to twenty-five dollars. In 1903 mills were forbidden to operate on six holidays—New Year's, Decoration Day, Fourth of July, Labor Day, Thanksgiving, and Christmas. Four years later, Thanksgiving, New Year's and Decoration Day were eliminated. The remaining holidays—Fourth of July, Labor Day, and Christmas—are still observed. Other holidays are left for local arrangement. A shorter workday is provided for days preceding holidays, such as is required for Saturday.

CHAPTER VIII

RESTRICTION OF OUTPUT

Restriction of output has been practiced both by employers and employees in the iron and steel industry. In 1904 there were at least seven associations or pools of manufacturers in which separate companies had entered into agreements to fix prices by restricting output.¹

The Amalgamated Association, until 1905, prescribed in the annual scale, negotiated with the manufacturers, numerous limitations upon the output of workmen in the various kinds of mills. These limitations took three forms: (a) restrictions on the size of the charge and the number of heats per turn in puddling mills; (b) restrictions on the number of bars to be rolled per turn in sheet mills; and (c) restrictions on the number of pounds of tin plate to be rolled in tin-plate mills. The prevalence of the team system combined with payment on a piece rate or tonnage basis was largely responsible for the union's action in limiting the amount of work of the majority of its members. The purpose of such regulations has been to prevent wage reductions,² exhaustion of the workers, and reduction of the

¹ Eleventh Special Report of the Commissioner of Labor, 1904, pp. 235-236.

² The union argument that excessive output tends to wage reductions was somewhat as follows: Let us assume that a puddler is working at a piece-rate of \$5 per ton; and that his average output per day was, in five heats, a ton and a quarter. His daily earnings, then, would be \$6.25. (Out of this amount he must pay his helper). By greater exertion and longer hours, the puddler makes six heats, and, if the output is a ton and a half, he averages \$7.50 per day. Immediately thereafter the scale is reduced to \$4.25 per ton, and his daily earnings for increased output are reduced to the former level of practically \$6.25. Again the puddlers seek to increase their output and, by still greater exertion, a few of them manage to make seven heats; whereupon, after a few months, the tonnage scale is cut to \$3.75, and only the more efficient workmen can now earn \$6.25 per day. Only a few men can earn a fair wage, while the majority

number employed; and it was the firm belief of union leaders that these effects were directly traceable to excessive output.³ The "health-of-the-worker" argument was given greatest emphasis by the union leaders. Since the entire team must work together, by "speeding up," any member who was physically inferior was subject to strain and over-exertion.⁴ The idea of making jobs for other workmen figured very slightly.

The puddlers were the pioneers in the adoption of measures for the curtailment of the finished product.⁵ The method employed was to limit the number of "heats" which a puddler might work. In 1867 the convention limited a day's work to five heats in double-turn mills, and six for a single turn.⁶ This applied to mills west of the Alleghany Mountains only, in consequence of the different mode of working in the East. This rule, however, did not immediately put an end to the practice of working extra heats and long hours. In 1870, for example, President John Edwards pointed out that "some mills were known to be working seven heats, from four in the morning to seven and eight o'clock at night," and that the men were "not only killing themselves, but depriving others from making a living by stopping the double turn."

The desire of the men to swell their earnings by increased output led to overcharging the furnace. Though the union

are thrown below it. The result is apparent. The higher rate is undermined, the quality of the product suffers deterioration, the health of the workmen is endangered, and the majority of them are underpaid (see, for example, Proceedings, 1889, pp. 2690-2691).

³ Proceedings, 1877, pp. 53-54; 1883, p. 1115; 1905, p. 7227.

⁴ Proceedings, 1886, p. 1834; 1887, pp. 1917, 1950; 1888, pp. 2307, 2326-2328; 1899, p. 5586; 1900, pp. 5741, 5909; 1902, p. 6441; 1903, p. 6701.

⁵ Puddling is the reduction of pig iron to muck bar. This is done by boiling the iron. In early times the metal was "baked," so to speak, instead of "boiled," until the alloyed metals became viscous or "pasty"; this was, in the strict sense, the process correctly described as "puddling." There is practically no puddling done in the United States today. The words "puddling" and "boiling" are used interchangeably, the former being more common in the East, the latter in the West.

⁶ Vulcan Record, 1867, no. 1, p. 10.

law did not cover this point, it was patent to the leaders that such action served to increase the evils which the union sought to ameliorate. Heats were charged so heavily that they could not be made in any less time, and in addition it required more laborious effort to handle the iron properly and the product was consequently of inferior quality.⁷ To remedy this defect, the convention of 1878 fixed the weight of a charge for a boiling furnace at 500 pounds.⁸ This made the day's output 2500 pounds for a double turn, and 3000 pounds on a single turn. Six years later the union increased the limit of weight for a charge to 550 pounds for single furnaces.⁹ This rule has since continued in force, modified only by provision for averaging the two weeks' work.

A minor question of dispute between the union and employers was the discharge of puddlers for breakage of machinery due to the large size of puddle balls. In 1887 the Association adopted a resolution that puddlers should work each heat into balls weighing not more than 250 pounds,¹⁰ in order to claim the protection of the union. If any part of the machinery was broken by putting in large balls, the puddler was subject to dismissal without recourse to the organization for redress. The matter of determining whether or not a particular breakage was due to the over-

⁷ *Ibid.*, 1873, no. 12, p. 51.

⁸ *Proceedings*, 1878, p. 179.

⁹ *Proceedings*, 1884, p. 1457. Turn limits were likewise fixed for other workmen in the puddling department, such as knobblers (*Proceedings*, 1881, p. 709), and bushelers (*Proceedings*, 1884, p. 1457). The weight of the charge was adjusted proportionately for larger furnaces which were introduced from time to time (*Western Scales of Prices, 1903-1904*, p. 6; *Constitution*, 1903, art. 18; 1916, art. 18).

¹⁰ *Proceedings*, 1887, p. 1924; *National Labor Tribune*, June 25, 1887, p. 4, col. 2. When the iron reaches the boiling stage, it is said to "have come to nature," somewhat analogous to the coming of butter in a churn. At this stage, the puddler works the molten metal into balls, and by means of tongs these balls are conveyed on a buggy, or more usually by a trolley, to a squeezer. The squeezer consists of a stationary rim and a revolving inner rim, containing teeth-like grooves, which operate somewhat on the principle of a coffee mill. It squeezes out much of the slag in the balls and elongates them into blooms, which in turn are passed through the rolls and drawn out into muck bars.

size of balls was left to the mill committees and the district deputies.

The most important problem was how to enforce the rule restricting average output. The Sons of Vulcan were never able to do this successfully. The Amalgamated Association, in 1889, required that, although the weight should be averaged for two weeks, the weight of each turn should be displayed on a board.¹¹ The next year it was provided that the penalty for wilful violation of the legal limit would be suspension, and the publication of the names of offenders in the quarterly report.¹² In 1901 the penalty was made either a heavy fine or expulsion. Lodges allowing this practice were fined for the first offense, and if they persisted in the practice the charter was withdrawn. The charter of a local union was rarely revoked for violation of the law—though there were such cases—and the abuse continued. The leaders of the union began to feel that the remedy lay, not in restricting the output, but in limiting the hours of the workday. So flagrant were the violations of the limit on swarth in the busheling department that, in 1905, in accordance with the agreement with the employers, other manufacturers were given the privilege of working without limits. The limit has been nominally retained in the puddling department, but it is no longer effective.

The manufacturers, as a rule, have not found the restriction on the output of puddle furnaces irksome.¹³ The scale in 1904 provided that five heats should constitute a day's work in double-turn or three-turn mills, but allowed six heats in a single-turn mill. Large mills usually employ three shifts so as to get the greatest possible production in twenty-four hours, and on three turns it is a physical impossibility to make over five heats per turn; usually only four can be made. Most employers agree that 550 pounds of pig iron is an economical charge; that it is as much as two

¹¹ National Labor Tribune, July 6, 1889, p. 4.

¹² Proceedings, 1890, p. 3167.

¹³ There were instances in which the union regulation was repugnant to the employer (Proceedings, 1883, p. 1168).

men (a puddler and his helper) can handle to advantage. It has also been found to be an economical charge as regards waste. In case the charge is excessive the iron must remain in the furnace longer, and the longer it is in the furnace the greater is the percentage of waste.

In puddling mills where the restriction of the union has applied, the production of each furnace on double-turn mills was 30,250 pounds a week.¹⁴ In such mills the puddlers regularly puddled that amount per week, barring accidents or other causes. There were no complaints that the limit of output was not reached; but in three-turn mills five heats were impossible in puddling certain kinds of iron. In summer the puddlers sometimes made only three or four heats in a turn—occasionally only two—on account of the extreme heat. The production of non-union mills was often not more than the union scale, and in some cases even less.¹⁵

The Amalgamated scale placed the limit of time for each heat in a single furnace at an hour and three-quarters.¹⁶ The time was reckoned from the moment the door of the furnace was dropped after charging until the heat was ready to draw, barring accidents and unavoidable detentions. If a majority of the furnaces required longer time, the management was notified.

In the finishing department limits were adopted from time to time, but without success.¹⁷ These limits on the weight of a day's output were replaced by a restriction as to the time. The nine-hour-and-fifteen-minute rule applies, that is, nine hours and a quarter is allowed for rolling "from the regular time the mill begins to roll" (say, five o'clock in the morning) "until the first furnace commenced to

¹⁴ This was calculated as follows: 550 pounds per charge \times 5 heats \times 11 turns per week. The union allowed but one turn on Saturday, and no Sunday work.

¹⁵ For instances, see Eleventh Special Report of the Commissioner of Labor, 1904, pp. 243-244.

¹⁶ The time for larger furnaces was proportionately longer. See *Western Scales of Prices, 1904-1905*, p. 6; 1916-1917, p. 5.

¹⁷ *Proceedings, Iron and Steel Roll Hands, 1873*, p. 9; *Proceedings, Amalgamated Association, 1880*, p. 414; 1888, p. 2290; 1892, p. 4108.

charge the last heat."¹⁸ Rolling all that is in the last charge, however, may require another hour. The scale also provided that "on all finishing mills the last furnace shall not be charged later than one hour after the first furnace." The object of this rule is to have each shift out of the way of the shift next in turn.

The sheet mill hands' scale fixed the limit of output per turn. The limit was expressed in number of bars, usually by "pairs."¹⁹ At first the union viewed with disfavor the operation of the third turn. In 1885, however, sheet mills were allowed to run three turns, of eight hours each, providing "no turn shall exceed 180 pairs single, or 105 double iron, and that no single or double turn mill shall exceed 216 pairs single, or 120 pairs double iron, for a turn."²⁰ Subsequent scales for many years were based on the limit of 105 pairs, or 210 bars, per turn for rolling in doubling mills, with but slight modification. This is on the basis of seven heats of 15 pairs per heat. The limits for iron and steel were identical; and a heavy penalty was provided for wilful violation of the scale.²¹

About 1900 manufacturers began to chafe under the union restrictions upon the output of its members. They

¹⁸ Western Scales of Prices, 1908-1909, and subsequent scales.

¹⁹ Sheet steel is made from steel bars varying in size and thickness according to the desired dimensions of the finished sheet. To prepare the bars for rolling they are heated in what are called "pair" furnaces, because the bars are heated in pairs. Fifteen pairs, or thirty bars constitute a heat, but often in practice a smaller number are heated at once. The bars are first rolled in a roughing-down mill, and then taken to a finishing mill. Sheets that will finish 24 to 28 gauge are matched in threes; sheets lighter than 28 gauge are matched in fours—that is, three or four sheets are rolled together. The sheet is ordinarily reduced one-half in length by doubling under a press, after which process it is reheated and rolled to the proper dimensions. The edges are then sheared to the required size. The team which operates a pair furnace and a set of rolls consists of seven men—a pair heater, a rougher, a catcher, a matcher, a heater, a roller, and a doubler. One shearman, one opener (who separates the sheets—and they do not adhere if properly rolled), and one scrap boy can generally handle the sheets that three teams produce.

²⁰ National Labor Tribune, August 15, 1885, p. 4, col. 2; Pittsburgh Scales of Prices, 1887-1888, p. 18.

²¹ Proceedings, 1890, p. 3167; 1903, p. 6773.

claimed the restriction was unjust, especially as it applied to sheets of all sizes, gauges, or weights. By 1902 the union had raised the limit to nine heats, or 135 pairs, on three-turn, and ten heats, or 150 pairs, on two-turn mills.²² This met the requirements of mills working sheets 30 or more inches wide and 104 inches long, as no greater number of sheets of such large size could be produced in one turn of eight hours. But when smaller sheets were worked, such as 24 by 72 inches and up to 28 by 96 inches, it was often the case that the men turned out the limit of 135 pairs in about seven hours, so that a mill would be idle an hour or more between each turn, or three or four hours in a day. Manufacturers asked that the limit be increased that they might be put on a parity with non-union mills, particularly those of the American Sheet Steel Company, in which the workmen operated the rolls practically for the full eight hours for each turn and in which no limit was placed on output.²³ It was pointed out also that even in union mills the men voluntarily violated the scale limit.²⁴

The chief objection made by the manufacturers, however, has been that the limitation endangered the chilled rolls.

²² *Western Scales of Prices, 1902-1903*, p. 29, foot-note 4. By this time, the three-turn system was practically universal in sheet mills.

²³ It has been shown by employers that average earnings per day were greater in non-union mills than in union plants. Piece rates were identical in both classes of mills, and working conditions were said to be similar. The greater earnings by non-union workmen was due to the fact that they made more heats and therefore their output was larger. The average daily earnings as given by one employer for four months in 1902 was \$2.56 in union mills, and \$2.67 in non-union mills; for the same period in 1903, earnings were \$2.68 in union plants and \$2.76 in non-union plants. Average daily earnings were 4.3 per cent higher in non-union than in union mills in the first instance, and 2.9 per cent in the second. A non-union employer showed that in a period of seven weeks in 1903 the average number of pairs rolled per turn was 152.55, or 13 per cent over the limit set by the union. In case of narrow iron and very light gauges, the number of pairs rolled per turn frequently exceeded 200. The price for rolling the lighter gauges is greater than that for rolling the heavy gauges, but the weight is relatively less, and consequently earnings are less. For the detailed statistics, see *Eleventh Special Report of Commissioner of Labor, 1904*, pp. 249-255; *Proceedings, 1904*, pp. 6909-6914.

²⁴ *Proceedings, 1903*, pp. 6720-6721; 1904, p. 6909 ff.

The rolls are costly and the smooth chilled surface requires careful treatment to prevent breakage and also to produce a good quality of iron. Rolls are likely to be cracked by too much pressure being put upon them, or by too sudden changes of temperature. The rolls are heated from the hot metal which passes between them, and unless the heat is regulated by the output—that is, by the number of bars passed between them—the expansion and contraction to which they are subject may cause them to break. For this reason, employers contend that there should be no arbitrary limitation, and that the conditions under which the rolls should be operated ought to be left to the judgment of the foreman and the skilled workmen. If the rolls are not in proper condition, the sheets will be unevenly rolled, causing them to “buckle.”

At the solicitation of the sheet manufacturers the Amalgamated Association called an “expanded sheet conference” in December, 1903, and modified the restriction of output, making it more liberal. The limit was increased from nine heats, or 135 pairs of bars, to 10 heats, or 150 pairs, to take effect January 1, 1904. The rule was modified in another respect. It was provided that the new limit was to be the average daily output during the “pay period,” which is usually a fortnight. Previous to this time, no shortage for a particular day could be made up on another day.²⁵

The new limit did not long meet the requirements. The members wilfully persisted in making overweight, and the company tacitly encouraged it. A rule was adopted that all overweight or surplus earnings should be collected by the lodge, in addition to a fine for violating the scale.²⁶ These measures were ineffective, since the sentiment of the work-

²⁵ Proceedings, 1904, p. 6914. The next year, the number of extra pairs per turn to make up shortage was limited to 15 (Proceedings, 1905, p. 7184).

²⁶ Proceedings, 1905, p. 7428. The “overweight secretary,” it was provided, should receive twenty-five per cent of all overweight collected.

men was not heartily in favor of their enforcement. Finally, in 1905, in conference with the American Sheet and Tin Plate Company, the limit of output was abolished.²⁷

The tin industry did not begin to flourish in this country until early in the nineties. The Cleveland convention of 1894, following the precedent established by the puddlers and sheet-mill hands, placed a limit on a turn's output in tin-plate mills.²⁸ The limit was 5000 pounds of Standard tin plates—that is, no. 30 gauge plates, 20 by 56 inches.²⁹ The alleged reason for the restriction was the fear of excessive output by the more able-bodied workmen and a consequent reduction of wages by manufacturers. The workmen also thought that by limiting the output the number of men who would be able to obtain employment would be increased.

The workmen soon proved that they were capable of a greater output. Accordingly, the limit was gradually increased until in 1903 it was 6250 pounds on no. 30 gauge.³⁰ In addition, there was a provision in the scales that the limit of output might be increased on the wider sizes of sheets.³¹

²⁷ Proceedings, 1906, p. 756a.

²⁸ Proceedings, 1894, pp. 4508, 4671. All turns are eight hours—three turns a day.

²⁹ In making tin plates, bars of steel are heated in pair furnaces and then passed through chilled rolls until the plates are of the required gauges. The steel plates are immersed in sulphuric acid, which removes all foreign substances, and are then placed in annealing furnaces. This process toughens the plates and makes them pliable. They are then passed through chilled rolls which give a smooth surface to the plates, are annealed once more, and after a final bath in sulphuric acid they are stored in water boshes to prevent rusting until they are required in the finishing department. In the finishing department the plates are passed through a flux which floats on top of the molten tin, then through the tin, then through palm oil, then through rolls which remove all surplus metal from the sheets, then through a branner which removes all oil and grease, then through what are known as "skin rolls," which remove all dust and polish the sheets, after which they are assorted. Most tin plates manufactured are nos. 30 and 31 gauges.

³⁰ Proceedings, 1895, p. 4777; 1904, p. 6902; Western Scales of Prices, 1902-1903, pp. 33-34; 1903-1904, pp. 34-35.

³¹ An excess of ten per cent above the limit on sizes 20½ by 56, and fifteen per cent above the limit on 26 inches wide and over (Western Scales of Prices, 1904-1905, pp. 34-35).

This was allowed because, as the employers pointed out, the wider sizes required faster work to keep the rolls to their proper temperature and shape.

The tin-plate scale in 1902 provided for an average of the week's work; but in making up lost weight, no more than 500 pounds could be made up in any one turn on 31 gauge and heavier, and 250 pounds on all lighter gauges. In case of a "drawback" the percentage excess could not be made on the same turn. The provision for averaging a week's output was omitted from the scales for subsequent years.

The manufacturers of tin plate found practically the same objections to the restrictive measures of the union as did the sheet-mill manufacturers. They claimed that it was arbitrary, unreasonable and unjust; that it endangered the rolls, exposed union employers to an unfair competition with non-union employers, and finally that the workmen, in saying that "the limit of human endurance" had been reached, had belied their statements by demonstrating the contrary regularly. Attempts to penalize members for violations of the limit proved futile;⁸² so the limit of output was removed by the union in 1905, simultaneously with the abolition of sheet-mill restrictions.

⁸² Proceedings, 1897, p. 5199; 1899, p. 5594; 1900, pp. 5792-5794; 1906, p. 7564 ff.

CHAPTER IX

MACHINERY

Probably no industry has been subject to such continual change and constant development directly and indirectly resulting from new inventions and the introduction of improved processes and labor-saving machinery as has the iron and steel industry. Improved methods of iron manufacture have lagged behind those of steel, but even these have been considerable. It would require too much space to trace the effects of all such innovations upon members of the union; but the most important of these will be discussed, and the attitude of the union toward them analyzed.

The most notable inventions affecting the industry have been the "Bessemer" and "Open Hearth" processes for manufacturing steel. Not until the late fifties—about the time the Puddlers' Union was organized—did Sir Henry Bessemer finally succeed in producing malleable steel from cast iron. In 1865 the new process was introduced in this country.¹ Production rapidly increased to an enormous extent. Many improvements followed, particularly in the manufacture of steel rails, and many workmen were thrown out of work by these new inventions and appliances.² The displacement of manual labor completely changed the relative strength of employers and employees; and to this is due, in large measure, the failure of strikes in the large Bessemer works, and in certain localities—particularly in the East—the complete subjugation of labor to the employers.

¹ The first Bessemer steel rails made in the United States were rolled at the North Chicago rolling-mill on May 24, 1865; but not until 1867 was any considerable quantity made. From 2550 net tons in 1867, the production increased to 1,438,155 net tons—the highest point—in 1882.

² Proceedings, 1885, p. 1563.

The actual amount of displacement occasioned by the new appliances varied with the size of the plant and the extent of the improvements made. In some cases, the number of workmen thrown out of employment was large. For example, in 1885, improved machinery was installed in the Edgar Thomson Steel Works, Braddock, Pennsylvania. The company immediately decided to run double turn, of twelve hours each, instead of the three eight-hour shifts. On the heating furnaces, at which 23 men per turn, or 69 men on the three turns, were formerly employed, 6 men per turn or 12 men on double turn were required—a displacement of 57 men on the furnaces. On the rail-mill train, 21 men were required for each turn, or 63 men for the three turns; to operate the improved train, only 6 men per turn, or 12 men in all, were necessary—thus displacing 51 men on the rail train. By putting the blooming and nail mills on double turn, there was a labor-saving of 62 chargers, helpers and others workmen. Consequently, in the blooming and nail mills alone, there was a displacement of 170 men. By introducing the two-turn system in the converting and blast-furnace departments, it was estimated 300 men were obliged to find employment elsewhere.³

The effect of the improved methods of operation was not only a reduction of the number employed but also a change in the piece rates of those workmen who were retained. Since uniform scales for steel mills were impracticable, special agreements were drawn up for individual plants. The problem of machinery was likewise a disturbing feature at the annual conference between the union and the

³ National Labor Tribune, February 7, 1885, p. 4, col. 1. For the reduction of wages occasioned, see *ibid.*, February 14, 1885, p. 4, col. 2. For a description of this mammoth automatic rail train, see *ibid.*, October 13, 1888, p. 4, col. 3. The immediate effect of the new machinery was the dissolution of two local unions at Braddock (*ibid.*, March 14, 1885). For other instances of great displacement of skilled men due to the introduction of machinery, e.g., in the manufacture of iron and steel bolts, nuts, rivets, washers, chains, forgings, and wrought iron pipe, see Thirteenth Report of the United States Commissioner of Labor, 1898, vol. i, pp. 291-296.

employers' association.⁴ Steel operators generally employed the twelve-hour turn. Wages were reduced in practically every instance, sometimes as much as one-third.⁵ The national union consented to local scales being signed for specialty plants even at reduced rates, provided it was clearly shown "that the work of the men was decreased" by the new piece of mechanism.⁶ Frequently, this provision was inserted in the local agreement. For example, in the signed contract between the workmen and the Illinois Steel Company, there was a clause pledging the men, in case the plant was improved in any way, "to assist in developing such improvement and abide by whatever modification such improvement may permit in the rates and number of men."⁷

One of the bitterest struggles for the control of a single machine in the trade was occasioned in the eighties by the introduction of an automatic nail-making machine. This new device for cutting nails displaced many nailers and nail-feeders.⁸ The capacity of the machine was prodigiously large. At fifty revolutions per minute, the machine turned out 900 eight-penny casing nails. This meant 48,000 nails, or 330 pounds, per hour. The simplicity of the new machines made it possible for one man to run at least six

⁴ National Labor Tribune, April 14, 1888, p. 2, col. 2. The Iron Age, the official organ of the manufacturers, alleged that the union laid claim to every new device projected "either by reason of improved processes, machinery or materials" (quoted in the National Labor Tribune, May 2, 1885, p. 4, col. 2); the Association through the editor of its paper, thus complained: "There should be an end somewhere to labor standing the brunt of cheapened production" (ibid., April 14, 1888, p. 1, col. 1).

⁵ Proceedings, 1889, p. 2736.

⁶ Proceedings, 1899, p. 5629.

⁷ Proceedings, 1891, p. 3412. For an instance of such adjustment with the Illinois Steel Co., see Proceedings, 1901, pp. 7027-7029.

⁸ The first invention was a self-feeding device, known as the Had-dock self-feeding machine (Proceedings, 1880, pp. 347, 407). The new appliance displaced the nail-feeders, as one man could tend more than one machine. Nailers were not permitted to put on a self-feeder nail machine, as it was deemed "injurious to the trade of the nail feeders" (Proceedings, 1882, p. 973). Employers demanded that nailers look after the machine for one-half the price of nailing, the firm to retain the other half and pay the feeder (Proceedings, 1880, p. 407; 1883, p. 1093).

machines.⁹ The nailer's skill was no longer an important factor in production; and to this is largely due the bitter feeling of the nailers against the nail feeders, who frequently got the nailing jobs by wage-cutting.

The policy of the union was to attempt to limit the number of machines which one man might operate. At first, it was enacted that four machines should constitute "one job," and members of the union were not permitted to hold more than one job.¹⁰ The provision, however, could not be enforced. In the first place, nail mills could not be effectively organized. Because of excessive production, mills were idle half-time. The men had no interest in an organization that could be of little benefit to them. Again, there were too many men competing for the decreased number of jobs. Nail feeders were equally as capable of running the machine as the skilled nailers. Consequently, the employers were able to drive a bargain with the union; if not, they began to run non-union. By 1889 Secretary Martin pointed out that nailers got little, if any, more for operating eight machines than they did previously for four.¹¹ There were instances of employers demanding that the men work ten machines.¹²

Varied and numerous were the mechanical improvements which invention and discovery made available in the puddling and finishing divisions. Improved furnaces made the work of the puddler somewhat less laborious and also increased the output.¹³ Continuous rolls, with new feeding devices; new machinery for blooming mills, having "all the levers that operate the screw, the rollers and the manipulators in one place"—thus making it possible for the roller

⁹ National Labor Tribune, January 28, 1888, p. 4, col. 1. The machine, it was said, cost \$600. It was introduced extensively.

¹⁰ Constitution, 1884, art. 18, sec. 5.

¹¹ Proceedings, 1880, pp. 2690-2691.

¹² National Labor Tribune, February 9, 1889. For a similar instance of one man's operating an excessive number of bolt machines, see *ibid.*, March 29, 1890, p. 4, col. 2.

¹³ For instances, see *Vulcan Record*, 1872, no. 10, p. 52; *Proceedings*, 1878, p. 172; *National Labor Tribune*, March 4, 1882, p. 4, col. 3; *Western Scales of Prices*, 1916-1917, p. 5.

to operate all these levers with ease; automatic shears and patent feeders; three-high rolls on sheet-bar mills; improved hoop mills; automatic straightening beds; and patents in tinning processes are a few of the many innovations that may be cited.

The union policy of dealing with these various devices was essentially the same in all cases. Two methods were employed. First, there was a revision in the scale at the next conference of employer and employed, and a new piece rate agreed upon. Where it was clearly shown that the labor of the workmen was actually lessened, the union accepted a reduction in the rate. If men were temporarily displaced they were obliged to seek employment elsewhere. In the second place, the union defined what should constitute a "job" for the workman; and no member was permitted to hold more than one job. For example, in 1884, the constitution provided:

One furnace, single turn, one train of rolls, double turn, four nail machines, one steel gas smelting furnace both turns, or two steel gas smelting furnaces, single turn, shall constitute one job. Also, one steel smelting gas furnace with a capacity of 24 crucibles shall constitute one job for one Teemer, two Puller-outs, and two Molders, and no Puller-out or Molder shall be required to fill more than six pots to each heat, and three heats shall be a day's work at all times.

Any workman holding "two or more jobs" was pronounced to be a "blacksheep," and union men might refuse to work with him.¹⁴ In 1890 it was provided that no member might work two or more consecutive turns at a job in a mill when other competent members in the immediate vicinity were suffering an enforced idleness. This one-job provision has been modified from time to time; but, in its amended form, it is in force today.

¹⁴ Constitution, 1885, art. 18, sec. 5; National Labor Tribune, June 25, 1887, p. 4, col. 3; Constitution, 1887, art. 18, sec. 14; 1916, art. 17, sec. 8.

CHAPTER X

APPRENTICESHIP AND THE HELPER SYSTEM

The Iron and Steel Workers, unlike many trade unions, have never attempted to establish a general system of apprenticeship. Certain apprentice regulations have from time to time been suggested for various branches of the industry,¹ but they have not met with favor in the annual conventions, except in the case of the nailers. In 1881 it was provided that "no nailer shall be allowed to take on an apprentice without the consent of three-fourths of the nailers in the factory in which they are employed," and the number of apprentices that might be taken on was fixed at "two per cent of the machines per annum." The following year, the convention passed a provision to the effect that a nailer having a son eighteen years old might teach him the nailing trade, but he was not allowed to instruct more than one son in three years. Furthermore, a nailer having a son who had reached the age of fifteen was not permitted to teach any other person.² In case the workmen did not take on the required number of apprentices, the employer had the right to do so, if he desired, up to the two per cent limit. This ruling, however, caused considerable friction, and was responsible, in part, for the secession of the nailers several years later. Thereafter, the Association judiciously avoided any national apprenticeship regulations for any branch of the trade.

Where rules for apprenticeship were needed, the matter was dealt with locally. There have been several instances in which local unions have thus legislated. For example,

¹ Vulcan Record, 1870, no. 6, p. 20; Proceedings, Iron and Steel Roll Hands, 1873, p. 8; Proceedings, Amalgamated Association, 1890, p. 3134, for wire drawers; 1900, p. 5930, for tin plate mills; 1902, p. 6471; 1909, p. 8715; 1916, pp. 11, 825.

² Proceedings, 1881, p. 709; 1882, p. 972.

Forward Lodge (no. 121), of New Castle, Pennsylvania, composed of wire drawers who were employed in the nail factory, in 1890 had local regulations governing apprentices, and introduced a resolution in the convention of that year providing an elaborate system of national control over apprentice wire drawers.³ Henry Cort Lodge (no. 81), composed of roll turners of the several shops in Pittsburgh, required three years' apprenticeship to become a journeyman roll turner.⁴ To what extent such provisions were made by local unions can not be determined from the scant references which have been recorded.

An apprentice system is impracticable in the iron and steel industry, in which workmen advance almost entirely by promotion. The Association, however, has always favored the employment and promotion of "helpers." A "helper" has been defined by Dr. Ashworth as "any person employed to help the skilled journeyman under whose supervision he works," as distinguished from an apprentice "who, by promise, indenture or covenant, for a specified time, is being taught the trade by a master of the trade or someone in his employ."⁵ For example, in the puddling department, a puddler usually has a helper and sometimes two helpers.⁶ They are employed to assist the puddler in his work, and are directly under his supervision. The helper proper gives the journeyman a spell. He takes hold of the paddle when cinder is put in to "thicken it up," that is, to make the flux. The second helper—commonly known as a "third hand," or "green hand"—generally breaks down the pig when it begins to melt, chocolate-like. He gives a "push" or a "shove" in drawing the heat, and does similar work that requires little knowledge or skill. The work of each "underhand" is so clearly understood by custom, that it is usually unnecessary to have specific rules defining it. Where

³ Proceedings, 1890, p. 3134.

⁴ Proceedings, 1891, pp. 3510-3511.

⁵ Ashworth, pp. 22-23.

⁶ A puddler, if he can do the work alone, need not take on a helper, unless the company can show that he is retarding the output unduly.

the work of a helper is made definite, it is done to prevent misunderstandings. The union encourages the promotion of helpers in regular order according to seniority, provided the workman next in line of promotion is able to handle the work.⁷ The advancement of helpers, however, is for the most part left to the employers. There is little or no complaint heard, since helpers are advanced automatically as vacancies occur. No helper can be employed who is under sixteen years of age.

The development of the helper system among the Iron and Steel Workers has been marked, in general, by two problems: (a) the organization of the helper, and (b) the hiring and paying of the helper.

(a) The early unions in the iron industry excluded unskilled and semi-skilled workmen from their organizations on the ground that the welfare of the trade demanded it.⁸ The Amalgamated Association changed this policy, and made helpers eligible to membership in the union.⁹ The term "helper" was defined as "the underhand or the as-

⁷ In earlier times, however, the union placed certain restrictions upon the promotion of helpers. In 1872 it was provided that any puddler allowing his helper "to ball heats," without the consent of the mill committee, should be fined or expelled (Vulcan Record, 1872, no. 10, p. 43). As late as 1891, a resolution was discussed requiring each puddler's helper to "help one year and be six months a member of the association before he be allowed the privilege of boiling a heat." But the motion was lost (Proceedings, 1881, p. 682).

The policy of the union with reference to the promotion of its members, as stated by the secretary-treasurer, is as follows: "The ranks of skilled workmen are filled by men who fill the minor positions; hence, we endeavor to prevent men from learning the skilled positions before they have served in the minor ones. If they are permitted to learn the skilled jobs, it would necessarily mean that those holding the minor positions would have no opportunity for improvement" (Report of Industrial Commission, 1901, p. 214). The line of promotion in the bar and guide mills is as follows: roller, catcher, rougher-down, rougher-up, hooker-down, hooker-up, straightener, and finisher. In the guide mill, the workman analogous to the hooker is called a "stranner"; otherwise, the seniority ruling is identical. Frequently a roller does not employ a finisher, but does that part of the work himself.

⁸ Minutes of Heaters' Convention, 1874; Proceedings, Iron and Steel Roll Hands, 1874, p. 20; Vulcan Record, 1872, no. 10, p. 23; 1875, no. 16, pp. 42, 44.

⁹ Constitution, 1876, art. I, sec. I.

sistant of all the trades named" in the constitution.¹⁰ The change of policy was due, principally, to two causes. In the first place, the journeymen were unable to control the helpers as long as they were unorganized or organized in separate unions. Moreover, the common interests of the two classes became more clearly recognized. The first of these reasons for organizing the helper was the most potent factor in persuading artisans to admit helpers into the organization. Experience had taught the journeymen that it was difficult, if not impossible, to control the mills if their helpers were unorganized or organized independently.

The Sons of Vulcan, in 1867, suggested "the propriety of organizing a helper's union, subordinate to the local forge," and that the helpers should "meet separately" and "be superintended by at least three members of the sub-forging, who shall be called superintendent, president and vice-president."¹¹ It was proposed that the helpers be assessed for strike purposes one-half as much as puddlers, and receive relief in like ratio. Whether any such local unions of helpers were instituted, cannot be said.¹² But in 1871 the puddlers' helpers of New Albany, Indiana, were on strike, and voluntary strike relief was collected for their support amounting to \$149. The men, in a letter of appreciation to President Hugh McLaughlin, expressed a desire "to be in some shape connected with the [puddlers'] organization."¹³ The fact that puddlers' helpers held meetings, declared strikes, and solicited strike benefits indicates the existence of at least a desultory local organization. Again, in 1873, the puddlers' helpers in Chicago called a strike contrary to the wishes of the puddlers. The president of the Puddlers' Union, in his report to the convention, intimated that these helpers had an independent local organization.¹⁴

¹⁰ Proceedings, 1877, p. 50.

¹¹ Vulcan Record, 1867, no. 1, pp. 10, 11, 18.

¹² It is doubtful, for, in 1872, the president called the attention of the delegates in convention to "the necessity of having the helpers organized," so as to assist each other in case of strikes (Vulcan Record, 1872, no. 10, p. 23).

¹³ Vulcan Record, December, 1871, no. 9, pp. 18-19.

¹⁴ Ibid., 1873, no. 12, pp. 11-12.

Not only were helpers likely to go on strike contrary to the will and interest of journeymen or "fore hand" puddlers, but sometimes they acted as strike-breakers. When the puddlers had trouble with employers, the helpers did not always go out on strike with them. The reason usually given for failing to cooperate was that the helpers had no organization and were not assured of strike benefits. The president of the Sons of Vulcan urged that helpers, in order that their support might be secured, be admitted to the union. As a substitute measure, the plan of half-assessment and proportional strike benefits for the support of helpers on strike was adopted.¹⁵ In Chicago the helpers refused to accept this plan and formed an association of their own. Later, when a new workman was employed contrary to the wishes of the helpers, they went on strike. The puddlers continued to work, and striking helpers went to Knightsville, Indiana, and, by taking the places of boilers who were then on strike, helped to defeat the boilers in their contest against the employer.¹⁶ Such action made it difficult for the journeyman puddlers to control the shops in that trade.

It is a significant fact that not until other expedients to control the helpers had failed did the Amalgamated Association adopt the policy of admitting them as members. In 1876 the more advanced helpers were admitted into the union,¹⁷ but not until 1889 did the union open its doors to all men working in and about iron and steel mills. At that time, the Knights of Labor were making inroads upon the jurisdiction of the Amalgamated, initiating in droves all classes who sought admittance, including common laborers.¹⁸ The Association, in order to meet this competition and to avoid trouble in the future, legislated so as to have complete control of all men working in and around mills. The present policy is to prevent as far as possible any discrimination

¹⁵ *Ibid.*, 1872, no. 10, p. 48.

¹⁶ *Ibid.*, 1873, no. 12, pp. 10, 11, 12.

¹⁷ For a time these helpers suffered discrimination (*Proceedings*, 1877, p. 50).

¹⁸ See chap. iii.

of the more highly skilled workmen against the unskilled, or common laborers.

A less important motive for organizing helpers was a growing consciousness of the common interest of all classes of workmen. If a journeyman lacked any of his assistants, his work was hampered. He must either do all the work himself or combine with other crews. In either event, earnings were greatly reduced. On the other hand, if journeymen were kept from work, their helpers were left unemployed. This intimate relationship and mutual dependence has, doubtless, served to turn sentiment in favor of a more democratic organization.

(b) The problems involved in the hiring and compensation of helpers have been, in the main, two: (1) who shall hire and pay them, and (2) how much shall they be paid.

As pointed out in a previous chapter, it was customary in the early history of the iron industry in this country for the puddler and the roller to be responsible for the work in their respective departments. They hired and paid their assistants. With the introduction of the manufacture of steel, sheet-iron, and tin plate, the same plan of employing helpers was adopted,¹⁹ and the system was established throughout the industry.²⁰

Within recent years, it has been the policy of the union to have all helpers paid from the offices of the firm. This method has two advantages. Obviously it is more convenient, and it is immaterial to the firm whether the whole amount be paid to the heads of the various crews or to the individual workmen. In the second place, this system of payment by the employer is conducive to a uniform wage rate for helpers doing the same grade of work. Otherwise the helpers may not abide by the union scale. Since a roller

¹⁹ The hiring of "green hands" was, in 1900, subject to the approval of the mill committee (Proceedings, 1900, p. 5873).

²⁰ The nature of the iron and steel industry is such as to require a certain number of helpers, and at the same time to make it difficult for helpers to encroach upon the work of the journeymen. For this reason, the helper system is not distasteful to the workers and helpers are naturally considered the rightful learners of the trade.

or a puddler is obliged to have help,²¹ the terms which a helper is likely to make with his contractor will then be determined by supply and demand. With so many employers, competition is sure to produce non-uniformity in the wages of helpers. This breach of union regulation can not easily be detected, since the wage agreement is known only to the journeyman and the helper. When the helper is paid by the firm, it is difficult to evade the law. The rate of pay for helpers is printed in the wage scale, and it can be violated only by rebate to the head of the crew or by extra wages paid to the helper.

While the policy of the union has been to favor the payment of helpers by the firm, it has never favored the hiring of the helpers by the firm. In 1899 the convention adopted the following provision, which has since been inserted in the constitution: "All men are to have the privilege of hiring their own helpers without dictation from the management."²² The union justifies its position on the ground that each journeyman is closely associated with his helpers, and is held responsible for the work turned out by his crew; consequently, it is advisable that the head of the crew have the privilege of selecting his own assistants. Again, since the output of the journeyman, and accordingly his earnings, depend upon the efficiency of the help employed, the hiring of the help by the journeyman shifts the responsibility from the employer to the "captain" of the crew.

The chief concern of the Amalgamated Association in connection with the employment and payment of helpers, however, has been not who shall hire and pay them, but how much shall be paid them. The Puddlers, as early as 1870, considered the subject of uniform wage rates for helpers, and a petition was submitted to limit the amount

²¹ In 1904 it was provided that "all rollers, doublers, and heaters," in tin and black plate mills, were "required to employ helpers at all times," under penalty of fine, suspension or expulsion (Proceedings, 1904, p. 7104).

²² Proceedings, 1899, p. 5684; 1907, p. 8060; Constitution, 1916, art. 17, sec. 21.

which should be paid a helper to "one-third," and in case of two helpers, "one-half of what the furnace makes." The committee to which the resolution was referred expressed itself in favor of the proposition, "but," the report continued, "to make it uniform through the action of this national forge would be impracticable," since all localities were not "a unit upon the subject."²³ The matter was referred to the subordinate unions for local treatment. The following year the deputies were authorized to call general meetings of "fore hand" boilers, or puddlers, with a view to establishing the "one-third rule" of paying help.²⁴ No definite action was taken, however, and the subject was brought up at subsequent conventions of the national forge.²⁵

Gradually the "one-third and five per cent" rule for the payment of puddlers' helpers was adopted in the various districts, and in 1891 it was made a national provision.²⁶ A number of local unions, particularly in the sixth, or western, district, protested on the ground that it reduced the wages of boilers "seven and one-half per cent," but the convention refused to reconsider the matter.²⁷ Uniform wage rates for helpers in all departments have from time to time been established. In sheet and tin mills, they were paid a specified rate per turn, and until 1905 the limit of a turn's work was fixed. Since then, they have been paid a piece rate. In nail factories, helpers were sometimes paid a fixed rate per heat. At present, heaters' helpers in jobbing mills receive thirty-five per cent of heaters' wages, in

²³ *Vulcan Record*, 1870, no. 6, p. 20.

²⁴ *Ibid.*, 1871, no. 8, p. 23.

²⁵ *Ibid.*, 1872, no. 10, p. 43; 1875, no. 16, pp. 44, 58, 62.

²⁶ *Proceedings*, 1891, pp. 3274-3275, 3279.

²⁷ *Ibid.*, pp. 3325-3326. This enactment caused ill feeling among puddlers in the West and there was talk of secession. The Advisory Board, in order to maintain harmony, construed the law to mean "one-third and five per cent on the net earnings of the boilers" rather than "on the whole output of the boiling furnace" (*Proceedings*, 1892, pp. 3849, 3857, 3952, 3984). For example, if the output of the furnace amounted to \$120, the helper would get one-third of \$120 or \$40, plus five per cent of \$80 (not \$120), or \$4, making a total of \$44—his share of the two weeks' piece-wage.

sheet mills, forty per cent. These rates are understood to be a minimum price. The helper may receive more than this if he can secure it from his employer. Very often, particularly in the boiling department, the journeyman and his helper work "level-handed," and divide the earnings equally. The constitution provides that "no member shall be permitted to discharge a helper, except for just cause," nor "reduce the wages of a helper during the scale year."

A minor question in the recruiting of the trade that has caused considerable discussion in the conventions of the union has been—in the vernacular of the workmen—"the practice of learning green hands." The objections to this practice were: (1) more men were drawn into the trade than the trade could absorb, and (2) an incentive was thus given to employers to reduce wages. The convention of 1878 passed a law forbidding members to give instructions to "green hands";²⁸ but a mechanic was permitted "to learn his sons and brothers." By a "green hand" was meant any person who had not worked at any of the trades under the jurisdiction of the union, and consequently was not eligible to membership. This rule, however, did not put an end to all disputes in this regard.

²⁸ Proceedings, 1878, p. 133; 1879, p. 230.

CHAPTER XI

COLLECTIVE BARGAINING

Every trade union finds it necessary to devise methods to enforce its rules. The most usual of such methods is that of collective bargaining.¹ This method of enforcement is supplemented in some unions by the boycott,² and the union label.³ The two latter devices have been unimportant in the iron and steel industry.

Developments in the method of collective bargaining in the iron and steel industry have moved *pari passu* with changes in the area governed by uniform prices. As pointed out in a previous chapter,⁴ the extent of territory over which the standard rate of wages is binding has been gradually enlarged.

The Iron and Steel Workers were the first union in the country to introduce a system of regular annual conferences at which joint agreements are made between employers and employed. These agreements cover both wages and the conditions of employment. The system of joint agreements in the iron trade had its beginning in a joint conference resulting in an agreement covering the wages for puddling in 1865. The puddlers had frequently made demands upon

¹ Legal enactment has played an inconspicuous rôle in the enforcement of the demands of the Iron and Steel Workers.

² The boycott has been tried by the Amalgamated on several occasions (National Labor Tribune, April 17, 1886, p. 1, col. 5; November 17, 1888, p. 4, col. 1; Proceedings, 1888, p. 2357; 1906, p. 7554), but this weapon has never been important in the successful outcome of any conflict.

³ The association adopted a union label in 1905 (Proceedings, 1905, p. 7442). It was used by two companies—the Champion Horse Shoe Company, of Pawtucket, R. I., and the Kansas City Nut and Bolt Company, of Kansas City, Mo. The adoption of the label did not bring as gratifying results as its advocates anticipated. The product of iron and steel mills is sold to individuals belonging to the employing class, who are not attracted by the label.

⁴ Chapter vi.

their employers for increases in wages. There had been many strikes, chiefly in the mills around Pittsburgh in the years previous to 1865. In 1849 and again in 1857 there were extended and prolonged strikes, and after 1857 smaller strikes were numerous.⁵

The conference of 1865 was desired both by the union and the employers. The initiative seems to have been taken by the employers.⁶ The puddlers, in concert with representative employers, finally established a scale of prices to be paid for boiling pig iron. The amount to be paid for boiling iron ranged from \$4 a ton, if iron was sold for 2½ cents a pound, to \$9 per ton, if the price was 8½ cents per pound. This is the first recorded sliding scale in the United States.⁷ The depression following the Civil War reduced prices to such an extent that the scale was repudiated. Two years later another joint conference drafted a new sliding scale. This agreement, with slight

⁵ For a review of labor conditions in the iron trade previous to the activity of the union, see the account of Miles S. Humphreys, first president of the Puddlers' union, in the Report of the Pennsylvania Bureau of Industrial Statistics, 1878-1879, pp. 150-151.

⁶ The plan of the sliding scale was suggested by B. F. Jones, of Jones and Laughlin's American Iron Works, Pittsburgh, and a tentative draft was made by Mr. Humphreys for submission to the employers (National Labor Tribune, April 14, 1888, p. 2; Pennsylvania Bureau of Statistics, 1887, p. G 2). A copy of the scale of 1865 may be found in the National Labor Tribune, February 7, 1874, and in the report of the Pennsylvania Bureau of Statistics, 1887, p. G 15.

⁷ There were no doubt sliding scales in England before this time. S. J. Chapman says: "The first sliding scale was Thornicroft's, which was introduced in 1840" (Econ. Journal, 1903, "Some Theoretical Objections to Sliding Scales," p. 186, note). Carlyle, writing in 1843, mentions "sliding-scales" (Thomas Carlyle, Past and Present, pp. 36, 180, 242), but he may have had in mind the sliding scales of tariff duties. However, the Webbs, relying upon a statement furnished by Mr. Daniel Jones, of the Midland Iron and Steel Wages Board, to Professor Munro, and cited in the latter's "Sliding Scales in the Coal and Iron Industries," p. 141, point out that the sliding-scale arrangement appears to have been familiar to the iron trade as early as the time when Carlyle wrote. "At the time of the great strike of Staffordshire puddlers in 1865," the Webbs further state, "a local understanding of a similar nature appears to have been in existence." Its introduction into the coal trade of Great Britain dates from 1874, though it was not until 1879 that its adoption became widespread (Sidney and Beatrice Webb, History of Trade Unionism, Appendix ii, pp. 484-485).

modification,⁸ was not terminated until 1874, when the manufacturers forced a strike against a reduction of wages. The strike lasted during the winter of 1874-1875, and ended with the manufacturers individually signing the scale.

In the course of time, the iron trade became specialized and split up into several branches. New methods of manufacturing soft steel enormously enlarged and changed the industry. Tin mills began to be built more extensively in the early nineties, and the manufacture of tin increased by leaps and bounds. Through all the changes, the Amalgamated Association clung to the old tradition, and endeavored to include all the new branches in the scale and to cover the whole of the country.⁹ Its passion for extension and completeness prevented the growth of geographically sectional societies such as exist in England and Scotland, or the separation of the steel workers from the iron workers. And throughout, the Amalgamated Association has held to its policy of annual conferences and joint agreement to sliding scales.

The original scale was signed by a committee of the puddlers and a like committee which represented the entire group of manufacturers. The strike of 1874 put an end to this practice. Since that date, the union has formulated its scale, and has presented it for signature to individual

⁸ A slight technical change was made in 1871, cutting up the divisions of advance or decline into tenths, instead of quarters, of a cent per pound in the price of pig iron. In 1908 a further change in the system of computation was made. The rate was subdivided into twentieths (Proceedings, 1908, pp. 8246-8247). This modification has continued to date. A copy of the scale of July 23, 1867, may be found in the report of the Massachusetts Bureau of Labor, 1881, p. 12; also in the *Vulcan Record*, December, 1873, no. 13, p. 36. The scale of April 14, 1875, is printed in the *Vulcan Record*, 1875, no. 16, pp. 34-35. The first scale in the finishing departments was a scale for guide mill rolling, April, 1872. A copy of the agreement is recorded by Jos. D. Weeks in the report of the Massachusetts Bureau of Labor, 1881, p. 14.

⁹ The scale of 1881-1882 was a pamphlet of fifteen pages and covered fourteen items. In 1890 there were separate pamphlets for iron and steel, the iron scale having thirty-one pages and the steel thirty-four. The *Western Scales of Prices for 1916-1917* contained fifty-four pages.

employers. In 1882 an association of manufacturers was instituted in Pittsburgh. The avowed object of this organization was "to attend to wages and labor."¹⁰ When the conferences between the union and the manufacturers failed to result in an agreement, the scale was presented by the union to individual firms. Frequently, as for example in 1885, after one employer had signed the union scale, the rest, although reluctant, would follow suit.¹¹ In 1888 a committee of manufacturers appeared personally before the delegates of the union assembled in convention. The arguments of the employers, however, had little weight, and no general conciliatory agreement was reached. The association of manufacturers was again dissolved, each member being authorized to act in his individual capacity relative to signing the scale. In 1890 the union held a conference with the Pittsburgh Iron Manufacturers, and the scale thus arranged was presented to mills in the West and South for signature.¹²

In 1893 the plan of holding divisional conferences was adopted. There were three divisions: one for the boiling department, including also scrapping and busheling, muck mill rolling, and knobbling; another, for the manufacturers of bar, guide, plate, structural and jobbing; and a third, for sheet, tin, and black-plate manufacturers.¹³ Later, separate conferences were held with the sheet and the tin-plate

¹⁰ The immediate purpose of the formation of an employers' association was to resist the union demand for a \$6 per ton boiling rate in 1882; and it was effective in doing this, as the outcome of the "Pittsburgh strike of 1882" bears testimony. It was distinct from the Western Iron Association, whose primary function was to fix prices. The organization was known as the Amalgamated Association of Manufacturers of Iron, Steel and Nails; its elected officers were A. F. Keats, president, and Joseph D. Weeks, secretary (*National Labor Tribune*, June 17, 1882, p. 4, col. 2; January 24, 1885, p. 4, col. 2). The need of such an organization of employers was urged by such organs as the *Iron Age* (quoted in the *Iron Molders' Journal*, September 10, 1876) and the *Journal of Industry* (Pittsburgh), June 22, 1880.

¹¹ *National Labor Tribune*, 1885, issues of May 9, 30, June 6, 13, 20 and 27.

¹² *Proceedings*, 1891, pp. 3357-3359.

¹³ *Proceedings*, 1893, pp. 4202-4203.

manufacturers.¹⁴ In 1899 because of alleged dissatisfaction with the Conference Committee, President Shaffer was authorized to request the manufacturers to meet all the delegates of each craft and settle the scale during the convention. The manufacturers replied that they considered it "impracticable" because of the various combinations of employers then pending.¹⁵

In 1900 the situation was as follows: four scales were drawn up annually by as many divisions of a general conference committee appointed by the annual convention of the Association,¹⁶ in consultation with the several interests involved. The employers were no longer represented, as they had been, by associations of manufacturers, but by single great companies which had supplanted the individual employers. Thus, one division negotiated a scale for puddling (that is, boiling) and allied processes with the Republic Iron and Steel Company, instead of with the Association of Bar Iron Manufacturers, because the company now included most of the muck and bar-iron mills.¹⁷ A second division made an agreement with the same company covering the prices of iron bars and plates and similar products. A third conferred with representatives of the American Sheet Steel Company, which included nearly all the sheet-steel mills in the country, and no longer with an Association of Iron and Steel Manufacturers. Finally, a fourth negotiated with the American Tin Plate Company, which had brought together nearly all the tin-plate mills.

¹⁴ In 1898 the conference on puddling and bar mill prices failed. The matter was referred to a vote of the membership. The local unions decided to have a joint meeting of all lodges, and have the conference reconvened. Accordingly, 91 delegates from the local unions met the employers in conference on July 31—an unusual event.

¹⁵ Proceedings, 1899, p. 5598.

¹⁶ The conferees have been appointed by the president, as a rule; in 1896, however, one division elected its own committee, while the others were appointed by the president, subject to the approval of the delegates (Proceedings, 1896, p. 4995).

¹⁷ The American Steel Hoop Co. (formerly known as the Carnegie Hoop and Steel Co.) refused to meet in conference with the Republic (Proceedings, 1903, p. 6572). Consequently separate conferences were granted until the Carnegie mill severed relations with the union several years later.

The scales in no case applied to unskilled laborers, not members of the union. Uniform annual agreements covering a majority of plants obtained in most branches of the trade in 1900; for example, prices were set for bar iron, various special forms of iron, sheet steel, and tin plate. On the other hand, conditions in steel-rail mills and in other classes of mills differed so greatly that uniform scales proved impracticable. In such establishments separate agreements were adopted from time to time. These were in the nature of local agreements and were not settled by the general conferences.

For some years after the formation of the United States Steel Corporation in 1901, two general conferences were annually held, the one known as the bar, and the other the sheet and tin conference. At the former the Republic Iron and Steel Company, the largest manufacturer of bar iron, dealt with the union. At the latter the American Sheet and Tin Plate Company, which was organized in 1903 by the merger of the American Sheet Steel Company and the American Tin Plate Company, represented the employers. In 1906 the independent manufacturers of bar iron, who had previously signed the scale agreed upon in conference with the Republic, organized the Western Bar Iron Association. This association is composed of twelve independent companies, organized because of the mutual interests involved in the competition with steel. One of the essential functions of the new employers' association is "to act as an organization with the Amalgamated Association and endeavor as far as practical to get a uniform rate and practice."¹⁸ Since that time, the scales arranged with the Western Bar Iron Association and the Republic Iron and Steel Company have been identical.

In 1909 the American Sheet and Tin Plate Company severed conference relations with the union; and the sheet and tin conference has since been held with the Western, sometimes known as the Independent, Sheet and Tin Plate

¹⁸ Proceedings, 1906, p. 7550.

Manufacturers, who had previously signed the American Sheet and Tin Plate agreement.

At present, then, two associations of manufacturers—the Western Bar Iron Association¹⁹ and the Western Sheet and Tin Plate Manufacturers' Association—are organized for the purpose of dealing collectively with labor. Mr. James H. Nutt, sometime trustee of the Amalgamated Association, acts in the capacity of secretary for both employers' organizations. In addition to the function of collective bargaining, these associations at their meetings, held whenever there is important business to transact, act on the tariff and discuss trade conditions, prices and other topics of common interest. Only those manufacturers who make agreements with the union are members of either employers' association. Assessments are made by the secretary to meet the expenses of the preceding month on the basis of the number of trains of rolls in each mill. There are only slight differences in the capacities of the mills represented, and each member has one vote.²⁰ In 1916, the Western Bar Iron Association had fifteen members; the Western Sheet and Tin Plate Association, ten.

The joint agreements consist chiefly of scales of wages for different classes of work. The agreement fixes first the base rate in each branch of the industry, such as boiling, busheling, etc. The sliding scale with a fixed minimum is based upon the market price of bar iron, and adjustments are bi-monthly.

¹⁹ The Republic Iron and Steel Company abides by the Western Bar Iron agreement.

²⁰ The employers' associations appoint conference committees to represent all the manufacturers who are members. Each employer usually sends a representative. Each committee has as its chairman Mr. Nutt, who is satisfactory to all interests. In 1905 the Republic sent but one official. The representatives of the union are appointed by the president. In recent years there were five from each of the four main divisions. The tin house, however, is generally represented by but one or two members. The president, vice-president and secretary are ex-officio members of each conference. In 1916 there were 15 conferees in the sheet and tin, and 13 in the bar-iron conference.

The principle of the sliding scale is not very clear. Mr. Miles S. Humphreys, one of the originators of the scale, said:

Iron had never sold below two cents and a half, and the puddlers at the time had no idea the selling price would go below three cents. The cost of living and the cost of production did not enter into the consideration at all; only a fair proportion of the profits or of the selling price.²¹

However, we do find one writer for the official organ of the puddlers trying to determine, in 1874, what the base of the scale should be in terms of the prices of commodities—potatoes, flour, meat,²² etc. The testimony of Mr. Humphreys is essentially corroborated by Mr. John Jarrett, the second president of the Amalgamated Association. He said, in substance: The puddlers realized that the profits of iron manufacturers were enormous and that wages were out of proportion to profits; but they had no actual figures to determine what these profits were. The scale was an experiment; and, though not based on absolute knowledge, the rate was constantly increased. The union was trying to hit upon a reasonable and equitable proportion. The puddlers in Great Britain got a shilling to the pound of the selling price, that is, one-twentieth, and a bonus increased it to one-sixteenth. American puddlers decided they ought to get one-twelfth, because of superior resources and better management. Such were the considerations.²³

²¹ Interview, November 30, 1914.

²² "The great question to be settled when an advance or decline of wages is proposed is: Does the present rate of wages leave the proper margin between the cost of living and what should be the reserve fund? If the usual margin is reduced, then wages should advance. If the margin is too large, then wages could come down without damage. . . . That all parties may be informed in the premises occupied by the boilers and puddlers, we give in pounds and measures the quantity of the nine principal commodities (flour, ham, sugar, tea, molasses, potatoes, rice, coffee and beef) used for living that the price per ton of boiling would procure at our wholesale houses in each quarter [of the years 1871-1874 inclusive], having been careful to make a weekly average, then monthly, and quarterly, D. P. H." (National Labor Tribune, December 19, 1874, p. 1).

²³ Interview, November 28, 1914.

It is significant that the views of the present officials of the union do not greatly differ from these given. Both the president and the secretary hold that the scale is fixed "on a common sense basis." It is a matter of "give-and-take." The association through its conference committee endeavors to calculate the cost of production, although the committee has no exact data. The main consideration is this: If the price of iron advances, they feel the men ought to have a "fair" share. Just what is meant by "fair" is uncertain; "they take what they can get."²⁴ Accordingly, it is apparent that the scale has not developed in accordance with scientific principles. The scale was not made; it grew.

The base of the scale has been subject to relatively little change. It has ranged from \$4.00 (the lowest) to \$5.50 (the highest). The progress due to science and invention is largely reflected in the corresponding minimum selling price. For example, the scale for boiling in 1865 was based on a 2½ cent minimum; for 1887-1888, on a two-cent card; since 1901, on a one-cent card. In the present scale, the differentials below the 1- $\frac{3}{10}$ ct. rate are small, because the manufacturers claim they are either running the mill at a loss or else they are barely covering expenses and keep the mill running for the sake of the machinery. The union accepts the truth of this statement. "We know," said one union official, "that at one cent the manufacturer can't make a profit; it isn't in the business." At 1- $\frac{3}{10}$ ct., it is alleged, the employer begins to run the plant at a profit, and the differential is greater. Instead of ten per cent, the advance in wages is nearly twenty per cent of the increased selling price.

Until 1895 the market price was based on the card rate of the Western Iron Association (an organization whose sole function, it appears, was to fix prices). This scheme caused considerable friction, because iron was frequently

²⁴ Interviews with President John Williams, and Secretary-Treasurer M. F. Tighe, September 30 and October 19, 1916. For an example of an estimate of cost of production, see Proceedings, 1895, pp. 4781-4782.

reported to be selling above the official card rate.²⁵ In June, 1895, an agreement was made with the bar-iron manufacturers that prices should be based on "the average selling price of base sizes of bar iron." This estimate of the average price received for the total product sold during a sixty-day period by all mills represented in the Association fixed the wage rate for the succeeding two months. The manufacturers furnished the secretary of their association with a sworn statement of prices; and, in case of doubt, a committee of the union might examine the employers' books and bills of sales.²⁶

The number of mills entering into these settlements has varied. In 1907 only the mills of the Republic Iron and Steel Company and the independent plant of the Union Rolling Mill, Cleveland, were represented in the bar-iron settlements. The sheet and tin prices were submitted by the American Sheet and Tin Plate Company. This was sometimes a cause for complaint, since the independent firms alleged that the "trust" at stated periods paid their selling agents one dollar per ton "rebate," whereas their original quoted prices did not include this differential. The union, in rejoinder, said that the American Sheet and Tin Plate Company had granted the advance to union and non-union mills alike, and thus maintained "the same relative competitive position" as previously. The average prices for 1915 were based on returns from four selected mills in the case of boiling and finishing, and on three plants each for sheet-mill and tin-plate workers.²⁷

The foot-notes determine the working conditions. Until 1905, they set certain limits upon output. At present, they fix prices for "extras," or special classes of articles, and make provision for shields on furnaces, supply of top buggies, payment for lost time, and payment for spoiled mate-

²⁵ Financial Statement of the Amalgamated Association for quarter ending January 31, 1887; National Labor Tribune, January 29, 1887, p. 4, col. 1; March 31, 1888, p. 4, col. 2.

²⁶ Proceedings, 1896, pp. 5014-5019.

²⁷ Proceedings, 1916, p. 11, 514.

rials. The footnotes also prescribe the number of helpers in some branches of the trade, and the sources of their wages; the number of rollers to be employed in each mill; the proportion of helpers' wages to that of skilled men in some instances, etc.

In the case of steel-rail mills, and various other classes of mills not covered by the uniform scale, the local agreements establish sliding scales based either upon the general scales, with allowances for local conditions and peculiarities, or based upon the prices of steel rails and other articles as published in standard trade journals.

Since the consolidation of the several unions in the iron and steel trade in 1876, the agreement has never been allowed to lapse. It has always been renewed and has steadily increased in scope. The agreement each year has usually represented a compromise between what the union asked and what the employers were at first willing to grant. In addition to the reasons which make this true in every trade agreement there are two reasons peculiar to the Amalgamated Association. The scale is in two parts—the base rate and the footnotes. Since there has been relatively little change in the base rates during the life of the agreement system, changes come principally through the footnotes. The officials of the union have found it to their advantage to demand a new agreement, even though few changes are expected. Many footnotes are requested, which the union leaders do not expect to be accepted. Others are presented in the hope that they may be accepted by the manufacturers on their face value or pass through as "jokers." A footnote once included is not easily eliminated.

The first scale was not signed for any particular period; it was simply made effective from a given date, but it was tacitly understood to last for a year at least. Ninety days' notice was required to terminate the agreement. The termination period was reduced to thirty days in the 1867 agreement. In May, 1876, the union submitted to the con-

ference a time-limit of one year to the life of the agreement, and effectively enforced this demand. The puddlers for the first time in the history of the organization enjoyed the assurance of work continuing for one year at least. This was hailed with delight, and the triumph thus scored has endured to the present.

Since 1876, then, the agreement has operated for one year, originally from June 1 to May 31; and later, from July 1 to June 30. The union has, from the very beginning, been insistent that the scale shall terminate in the summer, and not during the winter months when the men are least able to offer effectual resistance to employers' demands. Employers would prefer a long-time agreement—three to five years—since in the history of the agreements there have been few periods of decreasing wages and since they feel that a more settled condition of the trade would obtain under a long term wage contract. The union prefers a one year agreement.

The constitution of the union stipulates the methods to be used by the workmen in securing the adoption of the general scales. Any local union desiring a change in the scale must, after a formal vote in its favor, submit it to the national union. The national union, at least six weeks prior to the meeting of the annual convention in May, distributes to the local unions a printed copy of all proposed amendments to the scale. These proposals are discussed in local meetings and delegates come to the convention under instruction as to the wishes of their respective constituencies. A wage committee, appointed by the president, considers these proposals, and makes recommendations to the convention. It is decided by ballot what demands are to be made in conference with the manufacturers. A two-thirds vote of the delegates is required to recommend a change in the "base" of any existing scale. Nominally the convention adopts a scale, but in practice the terms are subject to modification by conference with the employer.

At the annual convention the president appoints a conference committee to meet the manufacturers. The number of conferees selected to represent the workmen has varied. The prime requisite is that each department shall be adequately represented. This was peculiarly necessary in the early years when all branches met the manufacturers in one general conference. Under the system of divisional conferences, naturally, members of the interested group are chosen. For example, in 1901, nine members represented the boiling department and in conference with the representatives of the Republic Iron and Steel company established a scale for boiling iron and the allied processes of scrapping, busheling, muck-mill rolling, and knobbling. A second division of the conference committee consisted of eleven members from the bar, guide, plate, and structural departments, and from jobbing mills working pipe iron. This division, in connection also with the representatives of the Republic Iron and Steel Company, adopted scales for a considerable number of different products falling under the heads indicated. A third division consisted of nine members of the steel and jobbing mills, who conferred with the members of the American Sheet Steel Company. Finally, there was a division composed of nine representatives of the tin and black-plate mills and tinning houses, who conferred with the representatives of the American Tin Plate Company. The president and secretary of the union were members of all the divisions.

The members of the employers' associations or of the industrial combinations usually send to the national conference one or more representatives from each plant. The number of conferees representing the manufacturers has varied greatly, the large corporations sometimes negotiating through one or two officials. In 1905 the Republic sent but one official; in 1901 the American Sheet and Tin Plate Company sent two. At present, the two employers' associations usually have a fair representation of members. As a matter of fact, however, it is not essential that there shall

be an equal number of employers and employees at the conferences. Votes are not taken jointly, but the members of each side stand together and continue negotiations with the other side until an agreement is reached. In connection with each proposal that requires formal action, the representatives of the two sides adjourn for separate caucuses, and, by vote among themselves, decide as to the position which shall be taken. If these two votes fail to result in an agreement, further negotiation in joint conference takes place.²⁸

The extent to which conference committees of the union were bound by the instructions of their constituents has been an important feature in the development of collective bargaining among the Iron and Steel Workers. In the early years of the scale convention, the conference committee had no power to act whatever. It was simply "messengers of the Association to carry its dictates to the manufacturers."²⁹ Later, the committee was given certain limited powers. For example, in 1885, it was instructed by the scale convention to demand the old scale, but, "if necessary, to accept a reduction of ten per cent upon all scales, except the sheet and jobbing mill scales."³⁰ In other years, the committee was given discretionary power on "extras" and "footnotes," but not on the "base" of the scale.

The Homestead disaster served to accentuate the need of a more liberal policy. President Weihe, upon vacating his office, voiced this sentiment in these words: "The aim of trade unions should be to remedy the strike system, by either adopting a method of arbitrating between them and employer, or granting conference committees more discretionary powers to overcome these bitter struggles that have so frequently taken place during the past few years."³¹ In

²⁸ In 1901, if one or more of the divisions of the conference committee failed to reach an amicable agreement, the general conference met and endeavored to adjust the matter.

²⁹ President John Jarrett's report to the convention, *Proceedings, 1883*, p. 1102.

³⁰ *Proceedings, 1885*, p. 1551.

³¹ Financial Statement of the Association for the quarter ending October 31, 1892.

1894, after a spirited discussion, the conference committee was given plenary power.³² President Garland maintained this authority during his term of office.

President Shaffer was not so successful as his predecessor in preserving the prerogatives of the conference committee. Consequently, in 1900, when full authority was withheld, the failure to reach an agreement in conference with employers meant the submission of the point at issue to a plebiscite of the local membership.³³ President Shaffer, in his report to the following convention, deprecated this restriction of the power of the committee,³⁴ but his eloquence was of no avail. The convention sent to the conferences of 1901 committees bound by instructions to demand that the scale be signed for all mills or none. The steel strike of 1901 was the outcome of this policy. Since 1901 the instructions of the convention have been advisory, not mandatory, and the conference committee has been granted plenary power to bargain.

In the case of rail mills and other classes of steel mills not covered by the general agreements above described, scales were adopted by conferences between the local union or unions affected and the individual employers. According to the constitution, the local lodges must formally vote upon proposed changes in scales. The holding of meetings by members of the organization outside the lodge room, for the purpose of "agitating" class legislation, was prohibited. A two-thirds majority was required to propose changes in the scales. In each plant there was a mill committee, or two or more committees, representing different classes of work. These committees presented the proposed changes

³² Proceedings, 1894, pp. 4697-4698.

³³ It required two-thirds of the voting membership to insist upon the demands which gave rise to the disagreement. If the local lodges insisted upon disagreement, all the members working in plants affected by the scale must cease work. As a matter of fact, there have been few general stoppages caused by failure to reach a settlement, although negotiations have been, in some instances, greatly prolonged.

³⁴ Proceedings, 1901, pp. 6033, 6049-6050.

in the scale to the officers of the company for adoption, and informal conferences for discussion of the terms were held. If an agreement was not reached, the case was referred to the district executive committee of the union, which conferred with the manufacturers. In case of failure to sign a scale before June 20, all departments of the establishment ceased work at that time.

The Association has consistently adhered to the principle of conciliation, and opposed the method of settling disputes arising under the agreement by arbitration. The makers of the original constitution provided for arbitration, but the convention in 1876 provided for settlement by "conciliation."³⁵ The officials of the union have repeatedly maintained that conciliation was the only equitable method of reaching a settlement, because no outsider understood conditions as well as the two parties involved.

All disputed questions are settled, if possible, in the mills in which they arise. These matters are taken up with the management by the mill committees, usually composed of three members, who represent the workmen in the different branches of the trade. If the dispute cannot be adjusted by the local committee, it is referred to the district executive board. Such questions usually relate to the wage scale or to trade usage. There must be no suspension of work while the committee has the matter under consideration. All decisions of the executive committee are binding until reversed; neither can an employer refuse to continue any one in his employ under the conditions laid down, nor can any workmen refuse to continue at work on those terms.

³⁵ Article 1, section 2, of the original draft read: "The objects of this Association shall be to obtain by arbitration, or by other means that are fair and legal, a fair remuneration to the members for their labor. . . ." The idea of arbitration being obnoxious to the delegates, the word "conciliation" was used in lieu of "arbitration." The early Puddlers' union, it would appear, did not oppose certain methods of arbitration (Vulcan Record, 1872, no. 10, p. 33; 1873, no. 12, p. 20); but the Amalgamated has been decided in its opposition (National Labor Tribune, September 23, 1883, p. 4, col. 1; May 31, 1884, p. 4, col. 1; December 25, 1886, p. 4, col. 1; July 16, 1887, p. 4, col. 4).

In 1901 the Republic Iron and Steel Company proposed a plan which would insure their plants continuous operation.⁸⁶ Previous to this time, at the expiration of the annual scale on June 30, there was a general stoppage of mills pending scale negotiations. The plan agreed upon was as follows: A yearly scale was presented to the Republic Iron and Steel Company by the first of May to take effect July 1. In case of failure to reach an agreement by July 1, one conciliator was selected by each side, and the two so selected chose a third. These three conciliators met the representatives of both sides in conference, and tried to effect an agreement. It was understood that mills were to run pending negotiations, and the wages finally agreed upon were to be paid during the period in which a settlement was being made.

Because of the delay in obtaining a conciliation board to adjust certain differences in 1904, a new method for choosing the third conciliator was adopted.⁸⁷ Each side selected one man, and the third conciliator was chosen in the following manner: Each side presented a list of ten names, from which the other side selected five. From these ten names, which were submitted to the two conciliators, they were to choose a third before the adjournment of the annual convention.

Upon the formation of the Western Bar Iron Association, a similar but more specific arrangement was entered into. A yearly scale was presented by June 1, and a conference held as soon as possible. If no agreement was reached by July 10, the points in dispute were referred to a board of conciliation selected in the same manner as had been provided for in the Republic agreement. If the conciliation board could not agree within thirty days, the scale

⁸⁶ James H. Nutt, who has for many years acted as adjuster in bar-iron mills and has been active in the conferences of employers and employees, a sort of buffer between opposing interests, is reported to have persuaded the Republic to arbitrate in case of the failure of the conference to agree; but the union rejected the proposal (Report of the Industrial Commission, 1901, vol. 17, p. 341).

⁸⁷ Proceedings, 1905, p. 7232.

was referred back to the conference committee. The books of the company were open for inspection to an examining committee, composed of the three conciliators and two union officials agreeable to the employers. It was understood that the mills were to operate, pending negotiations, at the old rate of wages; and that any proposed changes in the scale were to be considered in conference between January 1 and March 15, at which time either side was at liberty to terminate the scale if it so desired.⁸⁸

This scheme was tried in 1907, and the result proved disappointing to the manufacturers. A revised conciliation agreement was formulated the following March. Its essential differences from the former plan were these: (1) One conference only was held, and disputed points, instead of being decided by a board of outsiders, were referred to a subcommittee, composed of three representatives of each side. In the event the subcommittee was unable to agree, it might call in a disinterested person to act as conciliator. It was held that the sub-committee could be no more biased than the outsider whom it would select, and would be better able to understand the matters submitted to it and thus dispose of them with greater dispatch. (2) Either side might request another conference before calling in a conciliator, provided it had a modified proposition to submit with reasonable hope of settlement. (3) The time set for a decision was August 1—a ten days' shorter period—made possible by the provision for holding only one conference. (4) The failure to reach a settlement by August 1 did not end the negotiations, unless the conference committee so determined. This plan was not put to a real test, and in 1909 it was abandoned.⁸⁹

Since that time, the agreement has not provided for a conciliation board. A conference is held by July 1. In case of disagreement, old conditions continue for one month without strike or lockout while negotiations are being car-

⁸⁸ Proceedings, 1907, pp. 7903-7905.

⁸⁹ Proceedings, 1909, pp. 8517-8529, 8540.

ried on. These deliberations may continue longer than one month by mutual consent of the parties concerned. It is understood that there shall be no interruption of work during the life of an agreement. This plan is in effect with both the Western Bar Iron Association and the Republic.

Professor Marshall, in discussing the question as to how far it is possible for frank dealing in a friendly spirit between employers and employed to remove those unfair dealings, and suspicions of unfair dealings, which are the chief causes of industrial war, agrees that "the best method is that of conciliation"; and that, "for the settlement . . . of a price list for a wide area, a well thought out sliding scale seems to be the best means attainable under our present social conditions."⁴⁰ Conciliation, when thoroughly established and recognized, may pave the way for what may be called the automatic regulation of wages by sliding scales. Sliding scales, while by no means perfect,⁴¹ are theoretically a step in advance of the methods now generally in use. The principle on which they are based is that wages are to vary according to the selling price of the product.⁴² This general plan admits of considerable variety in application. But it usually provides that wages shall not decline below a certain point.⁴³ The employer is free to sell his material lower than this minimum, but he can not reduce wages below it. By this method, then, the laborer shares in the advance and the decline of the price of the product.

The chief advantages of these sliding scales may be said to lie on the one hand in their elasticity, and on the other

⁴⁰ L. L. Price, *Industrial Peace*, Preface, p. xvi ff.

⁴¹ See A. C. Pigou's estimate of Sliding Scales, *Principles and Methods of Industrial Peace*, pp. 137-146.

⁴² For an exhaustive definition of the sliding scale, see J. E. C. Munro, *Sliding Scales in the Coal and Iron Industries*, p. 6.

⁴³ The chief objections to the scale of the South Wales Miners was—in the words of the men—that "the confounded thing had no bottom" (W. J. Ashley, *The Adjustment of Wages*, p. 54).

in their automatic action. They admit of adaptation,⁴⁴ as we have seen, to diversified situations; and as Professor Munro has stated, they "give a steadiness" to trade and to wages.⁴⁵ Employers will avail themselves of fresh openings with more vigorous enterprise, if freed from the apprehension of a sudden and forcible cessation of industry. W. S. Jevons maintains, somewhat extravagantly, that the sliding scale, along with the system of arbitration, is to be regarded as a "stepping stone to some still sounder method of partnership and participation in profits which a future generation will certainly enjoy."⁴⁶

The chief difficulty in arranging a sliding scale is in fixing upon a basis. In both Great Britain and the United States, selling prices have been adopted by common consent as the suitable basis, and the variations in wages are to follow the fluctuations in prices. In the manufactured iron trade of the north of England, sliding scales were adopted on four occasions, based on the selling prices of iron, and each time they were abandoned. This was the result of the contention, by the one party or the other, that other circumstances besides mere selling prices should be taken into consideration. The arguments advanced on different occasions were the relative wages of ironworkers in other districts, the condition of the labor market, alteration in the cost of materials, transportation, etc., the character of the management of business undertakings, the contraction in the demand for iron, and the cost of living.⁴⁷ Pro-

⁴⁴ Because the principle of the sliding scale holds out such great promise of adaptability to different contingencies, Professor Munro has most enthusiastically described it as "the greatest discovery in the distribution of wealth since Ricardo's enunciation of the law of rent" (Munro, p. 26).

⁴⁵ Munro, pp. 17-18. In so far as scales, instead of settling disputes, avoid them, they certainly promote trade stability. Francis A. Walker points out that a strike following a period of overproduction may result in clearing the market more thoroughly than would otherwise be done (*The Wages Question*, p. 391, foot note); but the fact remains that employers are likely to enter upon contracts with greater confidence, if they have reasonable assurance that there will be no industrial disputes for a twelve-month.

⁴⁶ W. S. Jevons, *State in Relation to Labor*, p. 162.

⁴⁷ Price, pp. 66, 93.

fessor Munro urged, as to perhaps the most important of these contentions, that the scale may, and ought to take into account those elements in the cost of production which are subject to considerable variations.

In one important respect, a sliding scale is superior to other forms of wage adjustment. It automatically obviates disputes growing out of changes in the general level of prices. An employer who has bought his materials and entered into wage contracts when prices are high, and is compelled to sell his product when prices are low is at a disadvantage. Professor Marshall considers⁴⁸ that the best simple scale for the iron trade would probably be "based on the excess of the price of a ton of iron of a certain quality over the sums of the prices of the coal and ironstone used in making it"; but, inasmuch as these latter prices are subject to much the same influences as that of iron, he says, "the plan of basing the scale on the price of iron simply seems not to work badly." Money, he thinks, is a bad measure in which to express such an arrangement; the government could, and ought to publish from time to time "the money value of a unit of purchasing power," and scales should be based on that unit.

When the character of the basis has been settled, there are of course numerous matters of technique to be adjusted. How great a variation in price is to be held necessary to warrant a corresponding variation in wages? How much shall this variation in wages be, and shall it proceed according to a uniform succession or according to a principle of graduation? How often shall prices be ascertained, and wages revised? In general, it may be said that these questions can hardly be answered on any definite set of principles, but they must be answered by an appeal to the principles of stability of wages, and equality in bargaining power.

It has been pointed out by Professor Ashley⁴⁹ and others

⁴⁸ *Ibid.*, Preface, pp. xx, xxi.

⁴⁹ Ashley, pp. 56-57; Chapman, pp. 186-196.

that one great defect in sliding scales has been in the provision for fixing future wages by past prices. His argument is that future prices are not reasonably certain. Professor Pigou's argument seems more valid. He shows that, since the oscillations of the labor demand lag behind those of the public demand for the commodity in time, wage changes ought to take place after, and not contemporaneously with, the price changes in which they correspond. Only after prices have remained up for some time do employers generally expand their business, and, on the other hand, they hesitate about reducing production when a depression sets in.

These general considerations may be illustrated by the history of sliding scales as employed by the Iron and Steel Workers. It is the only trade in which the system has continuously existed. Here it has worked fairly well, although it has not been successfully applied to all kinds of work. The success or failure of the system must be considered in the light of such supplementary influences as the character of the union and its leadership, the nature of the industry, and the policies of leading employers in the industry.

The first question is whether the failure of the union to increase in influence proportionately with the growth of the industry is in any degree attributable to the system of sliding scales. The Association grew steadily during the first fifteen years of its existence, and the success of the union in the iron industry was continuous and progressive. Mr. Weeks pointed out in 1881 that not since the origin of the scale in 1865 had there been a single instance of disloyalty to it. In 1890 nearly all mills signed the scale.

In the steel industry the union never gained the foothold it enjoyed in the iron industry. In its strongest years it probably did not control more than half of the steel workers, and hence a majority of the steel mills were never unionized. The production of steel was growing rapidly. Frequent changes were made in the technique of the industry and with each improvement the union demanded the

full advantage of the new machinery⁵⁰ and tried to keep the per tonnage rate of wages at about the same level as before. Each improvement made possible the substitution of a greater proportion of unskilled labor for skilled workmen. The union did not organize these unskilled men and hence did not have their active support in labor disputes. Finally, the union limit of output restricted production to such an extent that continuous operation of the mills on either a two turn or a three turn basis was impossible. The refusal of the union properly to adjust the limit to meet this condition antagonized the manufacturers. In the steel industry, then, it was not the sliding scale but the adherence of the union to policies of limitation and restriction which was responsible for its failure. Increased production, introduction of technical machinery on a large scale, substitution of unskilled for skilled men,—all demanded new union policies. The rules of the Association were inelastic.

The iron industry, on the other hand, has experienced only slight changes in technique in forty years, and the skilled men still dominate the industry. Capital in the iron industry is far less concentrated. English-speaking workmen still hold the skilled positions. The union membership includes but a small proportion of the workmen, even in union plants, and the agreements cover probably less than half the men employed.

Up to 1890 there seemed to be fairly general satisfaction with the agreement system and the sliding scale. Employers in most cases appreciated the advantages of a standard wage scale, the adjustment of disputes and the intimate conference relationship. The growing dissatisfaction of the steel manufacturers with the union policies led in 1892 to the tragic strike at Homestead.⁵¹ The result of this ill-

⁵⁰ *Iron Age*, as quoted by the *National Labor Tribune*, May 2, 1885, p. 4, col. 2.

⁵¹ The writer, like Professor Ashley, "gladly" relieves himself "of the responsibility of pronouncing upon the merits of the dispute" by referring the reader to what he considers an impartial account of the strike in the *Economic Journal*, 1893, by Professor F. W. Taussig. For other accounts of the struggle, see article en-

fated strike was to disrupt the local branches of the union, and to create a state of affairs in which no workman dared join the Association.

The Carnegie mills were not the only non-union mills in 1892. A considerable number of plants in the American Sheet Steel Company and the American Tin Plate Company (though a minority in each branch) were unorganized. The scales signed annually in joint conferences, though doubtless affecting the wages paid in non-union mills, covered only such mills as the company regarded as union. Such was the situation when the United States Steel Corporation was formed early in 1901.

To narrate the history of the formation of that gigantic capitalistic combination would lead us too far afield. Suffice it to say that in the steel business there had come to be two groups of great consolidated companies: one, in which the Carnegie Company was the greatest, produced steel billets, ingots, bars, plates, and slabs; a second group of companies turned these materials into tubes, wire, tin plate, sheets, and other finished materials. Each group was beginning to feel the need of entering into the business of the other.⁵² To prevent conflict, the financial interests intervened and welded the opposing interests into one great organization—the United States Steel Corporation.

Three of the great companies with which the Amalgamated had been accustomed to arrange annual scales entered into this combination. The leaders of the union knew the policy of the Carnegie management and they naturally had misgivings as to the future of their organization. They decided to attempt the complete unionization of the trust. Accordingly, they demanded that the scale be signed

titled "Tragic Episode at Homestead in 1892" by Carroll D. Wright in *American Federationist*, September, 1901, p. 333; another, by J. W. Sullivan, "Drama of Homestead," *ibid.*, November, 1901, p. 467. Also chapter 1 of Miss Margaret F. Byington's book, "Homestead; The Households of a Mill Town."

⁵² E. S. Mead gives a history of the matter in the *Quarterly Journal of Economics*, August, 1901. See also A. Berglund, *The United States Steel Corporation*, pp. 62-63.

for all the mills belonging to the several companies, union and non-union alike.⁵³ The United States Steel Corporation accepted the challenge of "all or none," and, in the strike that followed, the Amalgamated was badly beaten. The union miscalculated its strength, and exaggerated the probable effect of the strike upon the stock exchange. There was little public interest, no panic in the money market, and the strike failed. It was not a strike for wages in the present, but avowedly one to compel complete recognition of the union, so as to influence wages in the future. With the failure of the steel strike, unionism was completely driven from the steel trade, the only steel mills which remained union being the few scattered shops of the Republic Iron and Steel Company and several small individual establishments. In 1909 the policy of the "open shop" in all mills was put into effect by the United States Steel Corporation. The union made a desperate fight, but was unable to secure any concessions.

⁵³ When consolidation became the order of the day in 1900, the union added this provision to its constitution: "Should one mill in a combine or trust have a difficulty, all mills in said combine or trust shall cease work until such grievance is settled."

INDEX

- Administration, fiscal, improvement in, 67; of beneficiary system, 82; visiting committee for, 84.
- Amalgamated Association of Iron, Steel and Tin Workers, 9, 10, 17, 18, 20, 22, 65; territorial jurisdiction of, 42; revenue of, 58; beneficiary features, 74; helpers, 102, 131, 133-134; policy of, 105, 107, 110, 112-113, 128, 140; eight-hour day adopted by, 109; restriction of output enforced by, 117, 160; strength of organization of, 159, 160.
- Amalgamated Ironworkers' Society of Great Britain, 44.
- Amalgamated Journal, election of editor of, 35; annual dues, 58; as source of gain, 60; expense of, 65, 66; mailing list, 85.
- American Federation of Labor, advisory function of, 46; application of Knights of Labor to, for iron and steel charter, 49; agitation of, for eight-hour day, 108.
- American Sheet and Tin Plate Company, strike in 1910, 19, 46, 63, 66; conference relations severed by, 143; scale negotiations of, 143; prices submitted by, 147.
- Annual dues. See Assessment.
- Apprentice regulations, 129.
- Arbitration, 153, 154 (note).
- Arnd, Julius, 40.
- Ashley, W. J., on sliding scales, 156 (note), 159.
- Ashworth, J. H., 101, 130.
- Assessment. See Revenue.
- Associated Brotherhood of Iron and Steel Heaters, Rollers and Roughers of the United States, 10, 14, 16, 22, 23, 39, 42, 57, 107.
- Associated Brotherhood of Iron and Steel Rail Heaters, 15.
- Auditing, committee on, 25-26.
- Barnett, G. E., 22, 39, 87.
- Benefit committee, 84.
- Benefit features, 64, 66, 78, 81; death, 72, 75, 76, 83, 84; out-of-work, 74; total disability, 77; disallowance of claims for, 80; advantages of, 85.
- Berglund, A., 78, 161 (note).
- Bessemer, Sir Henry, 124.
- Boilers and Puddlers Cooperative Association, 72.
- Boiling. See Puddling.
- Bowers, John A., 75 (note).
- Boycott, 138.
- Byington, Margaret F., 160-161 (note).
- Carlton, F. T., 86.
- Carlyle, Thomas, reference to "sliding scale" by, 139 (note).
- Carnegie Steel Company, strike in 1892, 53; constituent company of U. S. Steel Corporation, 161.
- Chapman, S. J., 139 (note); 158.
- Collective bargaining, as method of enforcement, 138; procedure in, 142, 143.
- Conciliation, 153 ff.
- Conference committee, 140-142, 150-152.
- Conferences, annual, system of, 95, 138; divisional, 141.
- Constitution, amendments to, 22, 28.
- Convention, annual, 26-29, 92, 93 (note), 142.
- Death benefit. See Benefit features.
- Displacement of labor, due to invention of machinery, 125.
- "Due" card, 69.

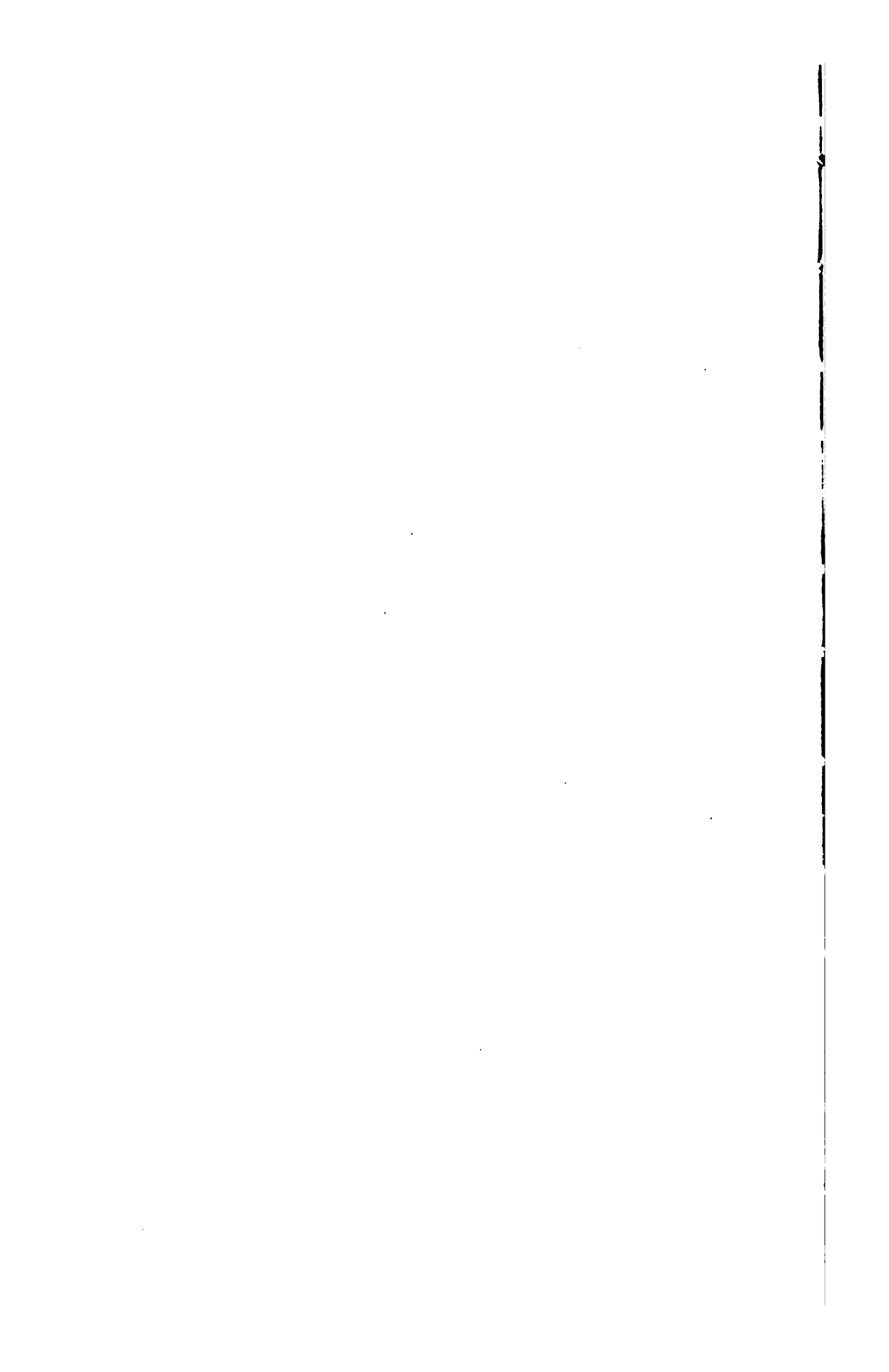
- Edgar Thomson Steel Works, 125.
- Edwards, J. O., 13 (note), 72, 115.
- Eight-hour day, introduction of, 106-108, 110, 118; adoption of, 106 (note), 109, 110.
- Employers' Association, 141, 150.
- Executive board, national, 34, 153.
- Expenditure, annual, of the Sons of Vulcan, 64; of the Association, 65, 66.
- Fitch, John, 15.
- "Following out," 111.
- Foot-notes, 101; purpose of, 147.
- Fraternal orders, 22.
- Gauge number, of sheets, 96, 97.
- Glocker, T. W., 45.
- "Green hands," 130, 134, 137.
- Grievance, committee on, 25-26.
- Heaters' Union. See Associated Brotherhood of Heaters, Rollers and Roughers of the United States.
- Heats, restriction on number of, in boiling department, 106.
- Helpers, 47, 101, 102, 130-135.
- Homestead Strike, 9, 54, 63, 94, 109 (note), 151, 160.
- Hours of labor, 105, 107, 109, 110, 112, 115.
- Humphreys, Miles S., 11, 12, 145.
- Immigration, attitude of union toward, 44.
- Industrial Iron and Steel Workers of America, origin of, 36 (note); aim of, 55; defeat of, 55.
- Industrial Workers of the World (I. W. W.), activity of, in iron and steel mills, 50.
- Initiative and referendum. See Referendum.
- Insurance. See Benefit features.
- Iron and Steel Roll Hands' Union, 10, 16, 22, 23, 39, 42, 57, 60, 107, 118.
- Iron and Steel Workers. See Amalgamated Association.
- Iron industry, labor conditions in, 10-11.
- Iron Mill Rollers Union and Benevolent Association of Elmira, 15.
- Iron, Steel and Tin Workers. See Amalgamated Association.
- Jarrett, John, 15 (note), 145, 151.
- Jevons, W. S., 157.
- Job, one, defined, 128.
- Joint agreements, 138, 144, 148, 159.
- Jones, B. F., 139 (note).
- Jones and Laughlin Mills, number of union workmen in, 25.
- Jurisdiction, membership, 39, 42-43; territorial, 42.
- Jurisdictional disputes, 43 (note), 47.
- Kennedy, J. B., 71, 85.
- Knights of Labor, 43 (note), 48-50, 133.
- Labor conditions, early, in iron trade, 139.
- Legal enactment, as means of enforcement, 138 (note).
- Machinery, labor-saving, 66, 116, 124-128, 159-160.
- Mahoning Valley Mutual Relief Association, 73.
- Marshall, Alfred, 156, 158.
- Martin, William, 50 (note), 62 (note), 127.
- Mead, E. S., 161 (note).
- Mean price, for working mixed material, 96 (note), 98.
- Mill committee, 25, 153.
- Morbidity, statistics of, 80. See also Benefit features.
- Mortality, rate of, 76, 77.
- Munro, J. E. C., 139 (note), 156, 157, 158.
- McCabe, D. A., 88.
- McLaughlin, Hugh, 72.
- McNeill, George E., 10 (note), 11 (note).
- Nail Feeders' Union of the Ohio Valley, 52.
- Nailers. See United Nailers.

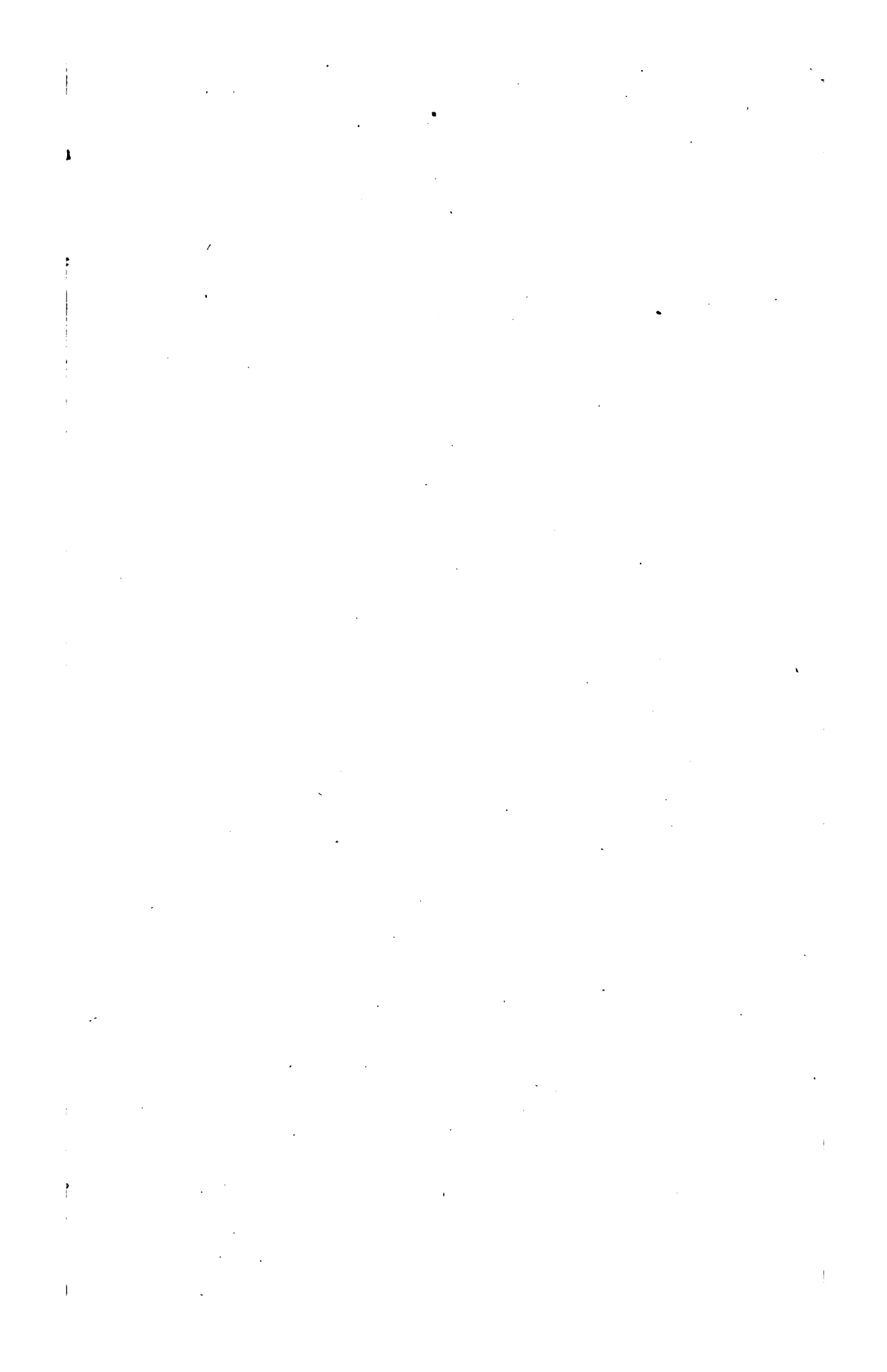
- Nailers' and Nail Plate Rollers' and Heaters' Association, 52.
- National Labor Tribune, 17 (note).
- National Lodge, 26, 39, 42, 58; affairs of, 31, 34, 37; territorial jurisdiction of, 41-42.
- National Union of Iron and Steel Workers of the United States, 53-54.
- Negro workmen, 46 (note), 47.
- Nutt, James H., 144, 154 (note).
- Old age pensions, 71.
- Out-of-work benefits, proposed, 74.
- Pigou, A. C., 156 (note), 159.
- Pittsburgh scale of prices, 90, 102.
- Portenar, A. J., 71.
- Price, L. L., 157.
- Progressive Movement, 36 (note), 55, 56.
- Puddlers' Union. See United Sons of Vulcan.
- Puddling, process of, 115 (note), 116 (note).
- Rebate fund, 63.
- Referendum, 35-38.
- Republic Iron and Steel Company, 142, 143, 154, 150.
- Reserve fund, defense, 60-62, 64, 66, 82.
- Restriction of output, 106-108, 111, 114, 115, 118, 119, 121-123, 160; by employers, 114; abolition of, 122, 123.
- Revenue, 58-64, 68, 81.
- Roll Hands' Union. See Iron and Steel Roll Hands' Union.
- Sakolski, A. M., 57, 67.
- Scales, 89, 94, 95, 103, 126, 135; uniform national, 90-93; definition of work in, 99; changes in, 149. See Sliding scale.
- Secret lodge, central, 44 (note).
- Sheet steel, how to make, 119 (note).
- Sliding scale, 14, 89, 101, 139, 145, 158; function of, 95; advantages of, 156; base of, 145, 146, 157.
- Sons of Vulcan. See United Sons of Vulcan.
- "Speeding up," 115.
- Standard rate, area of, 88; differentiation of, corresponding to variations in form of product, 96, 97; definition of work to be done for, 99; provisions of, when material is made under abnormally difficult conditions, 103.
- Steel strike, 19, 59, 94, 109; sympathetic appeal used in, 63; magnitude of, 66; cause of, 152.
- Strike benefits. See Revenue and Expenditure.
- Sullivan, J. W., 160-161 (note).
- Sympathetic appeal, 63.
- Subordinate lodge, 39, 41, 58.
- Taussig, F. W., 160 (note).
- Tighe, M. F., 146.
- Tin Plate Workers International Protective Association, 9, 45-46.
- Tin plates, how to make, 122 (note).
- Troy Iron Rollers Association, 15.
- Union label, 138.
- United Nailers, 10, 17, 51.
- United Nailers, Rollers and Heaters of the United States, 52-53.
- United Sons of Vulcan, 10, 11, 13, 39, 42, 61, 64, 105.
- United States Steel Corporation, 107 (note), 161; "open shop" policy of, 162.
- Unskilled workmen, 39, 43, 45, 160.
- Vulcan Record, 12 (note).
- Wages, 87 (note), 126, 120 (note), 135, 138.
- Walker, Francis A., 157 (note).
- Webb, Sidney and Beatrice, 139 (note).
- Weeks, Joseph D., 159.
- Weihe, William, 151.
- Western Bar Iron Association, formation of, 143; plan of conciliation with, 154, 155.

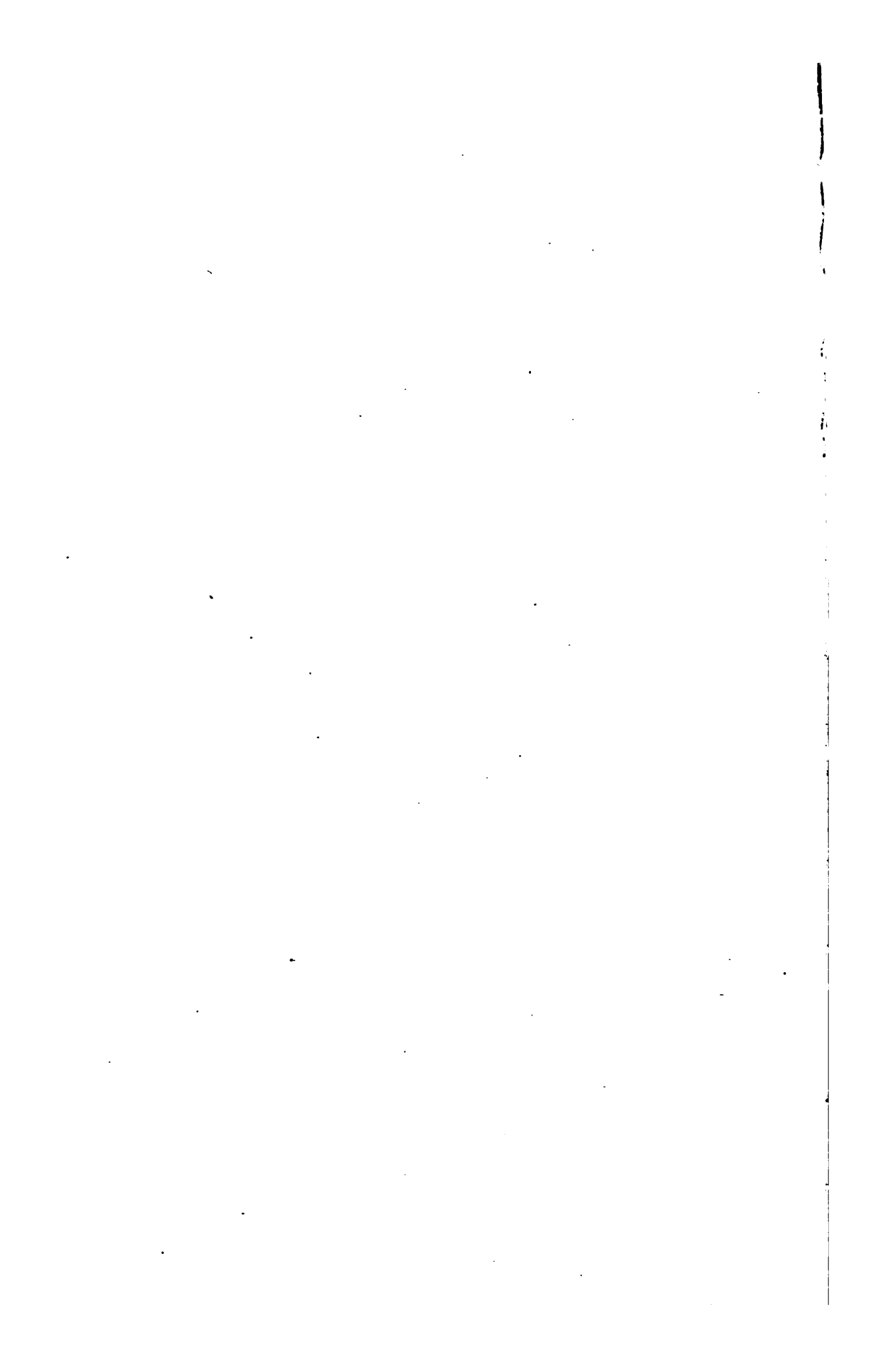
- Western Iron Association, 146.
Western scale of prices, as uniform scale, 90; for steel rolled in iron mills, 99.
Western Sheet and Tin Plate Manufacturers' Association, 143.
Whitney, N. R., 41.
Williams, John, 50 (note), 85, 146.
Wolfe, F. E., 48.
Working card, annual, 69.
Wright, Carroll D., 160-161 (note).
Wright, R. R., Jr., 46 (note).

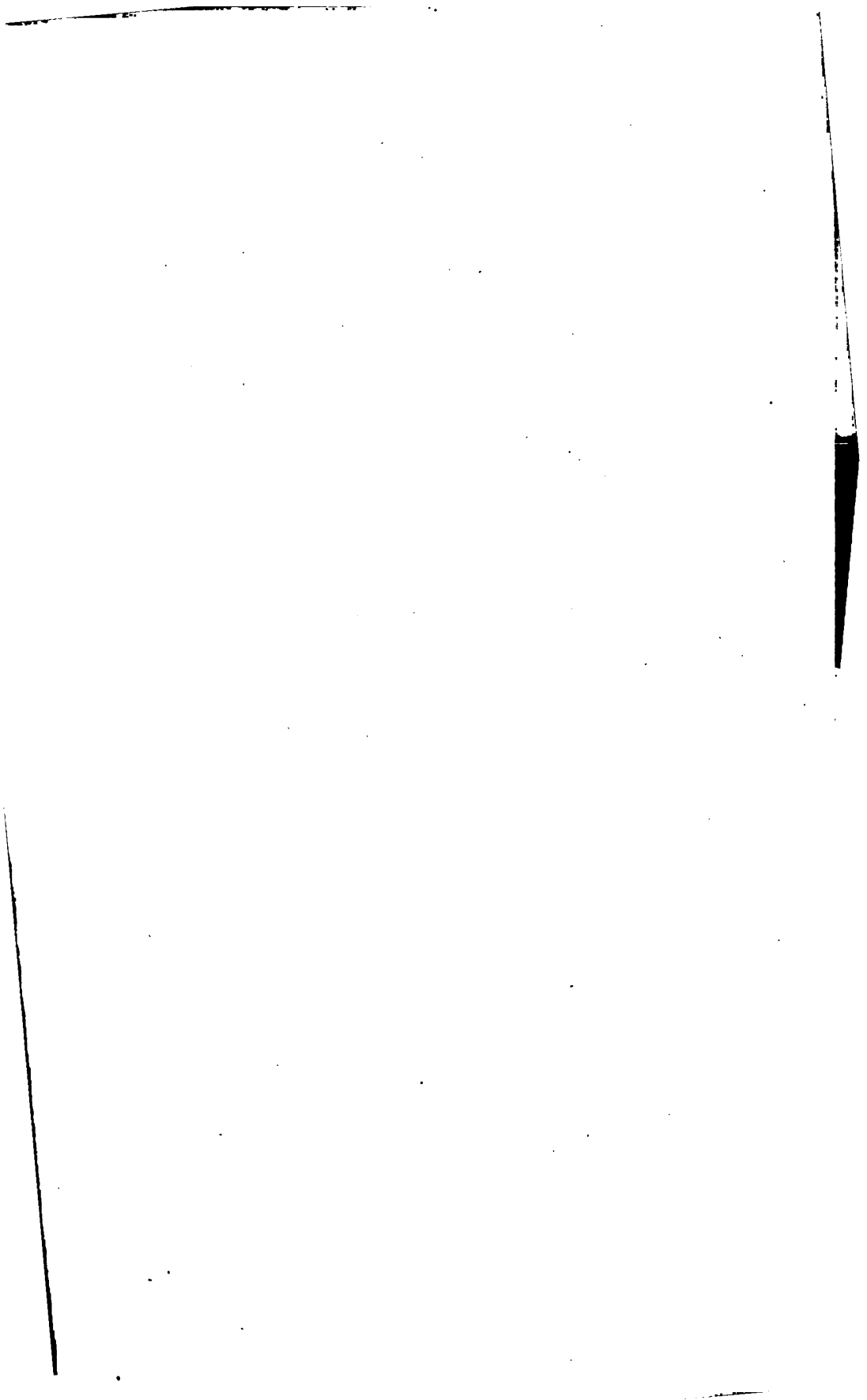
VITA

Jesse S. Robinson was born in Boston, Pennsylvania, February 2, 1889. He prepared for college in the high school of the neighboring city of McKeesport. In 1907 he entered Allegheny College, from which he received the degree of Bachelor of Arts in 1911, graduating with Phi Beta Kappa rank. During the spring of 1911 he was principal of public schools in Boston, Pennsylvania. From 1911 to 1913 he was principal of the high school at Easton, Maine. He passed the Oxford responsions in 1912, and was eligible for appointment as a Rhodes scholar from the State of Maine. During the summer of 1912 he was instructor in history in Allegheny College. In 1913 he entered the Johns Hopkins University as a graduate student in political economy, political science, and history.













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