

3-1911

Organized Labor's Attitude Toward Machinery

Paul Klapper

Follow this and additional works at: <https://egrove.olemiss.edu/jofa>



Part of the [Accounting Commons](#)

Recommended Citation

Klapper, Paul (1911) "Organized Labor's Attitude Toward Machinery," *Journal of Accountancy*. Vol. 11: Iss. 5, Article 4.

Available at: <https://egrove.olemiss.edu/jofa/vol11/iss5/4>

This Article is brought to you for free and open access by the Archival Digital Accounting Collection at eGrove. It has been accepted for inclusion in Journal of Accountancy by an authorized editor of eGrove. For more information, please contact egrove@olemiss.edu.

Organized Labor's Attitude Toward Machinery

BY PAUL KLAPPER, PH.D.

PART VII

CHAPTER V

Organized Labor's Policies Toward the Machines

We have just completed a detailed study of the attitude and action of typical labor unions when their respective crafts were mechanized. We were guided by the chronological sequence as far as possible, and hence our preceding chapter lacks systematization of events, and emphasis on union principles and policies, rather than on particular occurrences. Our justification, of course, is the fact that particular events and actions must be known before we can generalize with any degree of justice and accuracy. What we have seen thus far has shown us that machinery has not only tended to weaken and destroy the labor organizations themselves through a number of disintegrating causes, but also to bring demoralization, for the time being, into the ranks of the workmen through displacement, and its attending dire and distressing consequences. Organized labor's actions in machine matters were guided not only by these two results, but also by attempts to counteract them as far as possible, and thus save itself and those whose welfare is its *raison d'être*. Whatever means and methods were adopted were prompted either by an attempt to limit the output or to increase the jurisdiction of the union, and thus regain the lost monopoly of the labor of its craft. Let us consider each in its turn.

ATTEMPTS AT LIMITATION OF OUTPUT

Machinery and its application of mechanical power tended to increase the output in each industry by tremendous proportions. But at the same time it showed an equally strong tendency to decrease the numbers employed in almost the same ratio as the product was augmented. The results are obvious. Despite an increased demand due to lower prices, the market's demand for a particular commodity was soon answered, and often the market became overstocked. Labor unions tried to wrest one concession

and another from the employing classes, which sought to decrease the output in a given time so that the working season would last longer, and the number of artisans who were idle would be curtailed. They attempted to gain this policy through a number of demands, the most important of which are:

(a) *To Decrease the Hours of Employment.*—To start out with a general law that all reductions in the hours of labor are attempts to limit the output would be an injustice to the workmen and false from the point of view of economics. When men toil twelve and fourteen hours a day they are entitled to a decrease in the working time. When any industry is conducted on a time scale far in excess of the time of an average day's work, the workers can justly demand a reduction in hours, without being charged with an attempt to limit the output. We must differentiate, therefore, between a legitimate decrease in the hours of employment and one whose object is to produce a reduced output in an industry, which is an illegitimate demand.

There are many who hold that it is not profitable to the employer to keep his men working beyond the eighth hour on any day. As the time advances, they argue, an individual's strength gives out, his senses are less active, his mind numbed, and the expense of running machinery and paying for workmen is greater than the value of the stock produced. From statistics and experiment that they quote, they try to show that the output of the fifth, the ninth and the tenth hours is much below that of the others, but whether or not it is below the profit point is hard to estimate. Without going into the merits of the argument we must recall that when the work is 95% machine labor and 5% individual watching and guidance, these statements would hardly hold true. The tenth hour is as profitable as the second, the fourteenth as remunerative as the tenth.

Geo. A. Schelling, a well-known labor writer, says: "The theory that the reduction of hours of labor adds to the cost of production is fallacious, and cannot be maintained. Attention is called to the fact that the nations which are both the wealthiest and the strongest in the world's markets are those in which the hours of labor are the shortest, such as Great Britain and the United States. Contrariwise, the nations that are both the poorest and the weakest are those in which the longest hours of labor prevail." (*Leather Workers' Journal*, Feb. 1, 1901). This is a

Organized Labor's Attitude Toward Machinery

beautiful statement, but a splendid example of economic and intellectual astigmatism of the tendency to explain everything from one point of view in terms of one law. Such conditions as control of raw materials, shipping facilities, climate, soil, temperament of people are brushed aside for a pet theory. President John Mitchell, writing in the same paper, tells us: "Indeed, it is surprising to note the progress the miners have been making since the inauguration of the eight-hour day, three years ago. In many places they are organizing libraries, taking interest in public questions, and their family life has become much improved and sweetened. But you would be surprised to see the effect this has had in reducing drunkenness. The eight-hour day is the greatest temperance advocate I know."

But this does not throw any light on the unsentimental question—"Why does the introduction of machinery mark an immediate movement on the part of the workers to reduce the hours of labor, if not for the purpose that was suggested, viz.: to curtail the output per day, and thus increase the length of the working seasons of the year?" No sooner was the jar and bottle blowing machinery installed, than the glass workers began a campaign for an eight-hour day in their craft. They soon abandoned the demand because they realized that since the glass factories were running almost all day and all night, an eight-hour day would mean three instead of two shifts, twenty-four instead of twenty hours. Their resolution adds: "While this would be good under the present (hand labor) conditions, it would work hard in the reign of automatic machinery. Thus we would have three sets of apprentices, who would turn out an extra supply of journeymen, just at the time when we want to reduce the labor supply." It was a question of immediate gain vs. future loss, and the glass workers decided to wait. (Convention, 1904, p. 41.)

The iron moulders and the shoe workers began a crusade for an eight-hour day, but the strikes and lockouts followed in such rapid succession that the unions realized the hopelessness of the situation and sought to keep their men from complete displacement. In answer to the charge, the president of the Iron Moulders' Union admitted that some local unions were guilty, but he added that the central body and its leaders do not tolerate arbitrary limitation of output by workmen and locals, and that they are equally opposed to excessive exactions by employers, for he

The Journal of Accountancy

added: "It is as much the duty of a trade union to protect its members against the excessive day's work as it is to protect him in his wages. We cannot ask a worker to consent to be driven like a slave to the point of exhaustion, nor to tamely submit to exactions which shorten our lives and prematurely incapacitate us for useful toil." (Toronto Convention, 1902.)

No labor union carried on a more vigorous campaign than did the International Typographical Union for a uniform eight-hour day, nor was any body of organized labor so successful. Under the old hand-setting process, a man would set for six or seven hours, and spend three or four in distributing type and in "pasting up the dupes." But since the linotype abolished the long process of breaking up set matter and assorting the type, the employers made little objection to an eight-hour day on the linotype. Then, too, newspapers want men during those hours when the paper is preparing for the press. After that time they are not needed much. This peculiar trade condition accounts for the fact that no strong sentiment manifested itself against the reduced day's work. But in the book and job printing offices, where conditions differed, we do not find the employers prone to grant the eight-hour day, since its inauguration meant a decided decrease in output. How successful the printers have been we can see from the following tables compiled from figures and reports gathered by the Typographical Unions, the Typothetæ, and the United States Industrial Commission.

The first table represents 476 locals of 450 cities, whose jurisdiction contains 363 morning newspapers, 436 evening newspapers, 390 weekly papers, and 466 book and job printing offices. The results are as follows:

COMPARISON OF HOURS—HAND VS. MACHINE OPERATORS

Hours	Hand	Machine	Hours	Hand	Machine
36.....	..	1	51.....	2	1
40.....	..	2	53.....	45	10
42.....	..	2	53½.....	4	..
44.....	..	1	54.....	349	64
45.....	..	2	56.....	3	1
47.....	1	..	57.....	5	1
48.....	24	130	58.....	3	..
49.....	..	2	59.....	19	1
50.....	1	..	60.....	3	1
50½.....	1	..			

Organized Labor's Attitude Toward Machinery

1903

Name of Union	Hours per Week	
	No. Machine	By Hand
Indianapolis.....	48	59
Philadelphia.....	48	59
Albany.....	48	59
Chicago.....	36-48	59
New Orleans.....	42-48	59
Detroit.....	50	56
Minneapolis.....	54	59
Cleveland.....	48	59
Syracuse.....	48	54
Richmond.....	54	60
Toronto.....	51	54
Brooklyn.....	48	59
Hartford.....	48	59
Columbia.....	48	59
Montreal.....	45-54	59
Seattle.....	48	54
Madison.....	60	60
Poughkeepsie.....	60	60
Hoboken.....	48	60
Cincinnati.....	40	48
St. Louis.....	48	48
Buffalo.....	48	54
Rochester.....	48	48
New York, No. 6.....	48	48
Newark.....	48	48
Average.....	48.24	54.04

1904

Number of Hours in Week's Work	Hand-Office Compositors				Machine-Office Compositors			
	A. M. Paper	P. M. Paper	W'kly Paper	Book and Job	A. M. Paper	P. M. Paper	W'kly Paper	Book and Job
Union reporting less than 36 hours	...	...	...	...	1	1	1	1
" " 36 to 40 hours	7	5	...	1	12	8	4	4
" " 41 " 47 " "	18	13	4	1	43	26	14	12
" " 48 " " " "	151	127	84	70	284	323	218	185
" " 49 " 54 " "	39	73	83	103	19	45	30	34
" " 54 " " " "	149	289	342	434	49	124	87	89
" " 55 " 60 " "	2	7	7	12	1	2	1	2

Prof. Barnett, who gathered figures of 1,536 local unions, reports as follows in his "The Introduction of the Linotype."

The Journal of Accountancy

IN FORCE JAN. 1, 1904

Number of Hours in Week's Work	Morning Newspaper Offices	Evening Newspaper Offices	Weekly Paper Offices	Book and Job	Total	
Unions reporting less than 48.....	48	38	11	18	115	} 68%
“ “ 48.....	266	297	199	193	934	
“ “ more than 48 but less than 54.....	15	37	38	23	113	} 32%
“ “ 54.....	53	139	93	86	371	
“ “ more than 54.....	1	...	...	2	3	
Total.....					1,536	100% scales

Since 1904-1905 the eight-hour day has been extending gradually, until over 85% of the union offices in the country have succeeded in establishing it. We have seen how different a story the boot and shoe workers and iron moulders have to tell.

2. *To Force a Time Scale Rather Than a Piece System.*—Of the many and varied methods of paying wages, the time and the piece systems are the most common. Under the former a worker is paid a stipulated sum per hour, or hours, or day, or week, regardless of the amount produced. If his efficiency or speed is such as to class him as an inefficient laborer, the employer discharges him and hires a more capable man in his stead. Under the latter system a worker is paid a stipulated sum per article produced, per piece, hence the name. The owner is less concerned about efficiency; for inefficiency, producing less, earns less, and is thus its own punishment. Under the time system a worker tries to produce an average man's work and no more, since there is no extra reward for additional skill and output. Under the piece system, the abler men are offered an incentive in the form of extra salary, and hence they strain every nerve and fiber to increase their personal product. Evidently the piece system militates against a scheme to keep the output at a minimum. Hence we find all the unions we selected invariably opposed to this method of reckoning wages and urging upon its members and locals to adopt the time scale.

President Martin Fox, of the Iron Moulders' Union, speaking on this subject, said: "We are hopeful that in a short time we can overcome the difficulty that is being met with, if we can agree

Organized Labor's Attitude Toward Machinery

with employers' associations on the wage system which shall prevail in the operation of these machines. The wage question is the real point of friction in the machine problem. A great deal of opposition has been met with from employers who fear we want to control the machine, i. e., the output. This is not our purpose." (Ind. Com., Vol. XIV, p. 150.)

The wage question here referred to reflects the action taken by the Detroit Conference in April, 1901, when the Special Committee reported that the inequities produced by the machines can be abolished, and the "equities of the situation preserved—by a stipulated day's output for a wage mutually agreeable to both—if the machines are not controlled, but keep belching forth their product, the special trade will be overrun, and special overproduction will result."

The constitutions of the various moulders' local unions contain clauses like the following before 1903, the period of general defeat: "No member of this union shall be allowed to work on machinery by the piece, or encourage the same, and any member knowing a brother to so offend, shall report same to union." Not until 1906 did the union relinquish the demand for the time scale and decide to allow each subordinate union to accept a piece system.

Mr. John Fritz, a millionaire steel foundry owner, speaking on the piece system, says: "It is terrible how the workmen are being goaded on. We have no right to shorten a man's life by spurring him on to break the record of yesterday. The piece systems and all bonus systems are injurious stimulants to production. The employer should pay his man a fair price for a day's work and be content." (Munsey, May, 1907—H. N. Casson.)

In 1891, when the linotype had hardly passed the experimental stages, a committee on machine matters reported that the convention pass a resolution demanding "that all subordinate unions, when fixing the time scale for the machines, shall demand a time scale exclusively, for the machine labor is of a more exhaustive character, mentally and physically, than the hand work." The convention rejected the report at once. It expressed its opinion that the piece system is bad for the worker and for the trade, but, since it favored the speediest adjustment to the new conditions, it would not curtail the principle of local autonomy which pre-

The Journal of Accountancy

vailed. Hence each union was to try to force a time system, but if matters came to an issue, the piece system should be accepted (39th Convention Report). At every succeeding convention till 1899, resolutions demanding the abolition of the linometers, clocks which registered the output, were thrown out, but the officers nevertheless stigmatized them as vicious.

3. *To Set a Maximum Limit to a Man's Work Per Day.*—The most direct form of limiting the output in any industry, and the means that have been meeting with greatest opposition from the ranks of labor as well as of capital, is the practice of fixing as low a given amount of work as possible, and deciding that that should be the measure of a day's work. When the worker has completed that, his day's task is at an end. Thus we find that till 1895 or 1896 it was the practice among the flint workers to set a maximum for a day's output. This limit was removed when the flint workers were threatened in the competition with non-union men. In the Window Glass Cutters' industry, the limit was set by the month, and men often worked until ten at night and on Sundays to complete the limit set, because they had idled their time away at the beginning. In 1901 the flint workers controlled fourteen branches of the trade, and in eight of these the quantity of a day's output was still limited. Only six had succeeded in introducing the unlimited system. (Ind. Com., Vol. XV, p. 426.) We find the same practice very common in England. "In some branches of the Potters and Glass Bottle Makers, a similar limitation of individual output has prevailed under the name of 'stint' or 'tantum.' In our light metal shops . . . the society has a tantum fixed which the men are not allowed to exceed; if they do, it is paid into the Society." (Webb, Ind. Democracy, Vol. II, p. 446.)

The iron moulders have no open minimum fixed, but complaint is constantly made that the men live up to a secret limit. How true this is we cannot say, but it may be only the expression of a lingering hostile individual attitude toward the machine. J. K. Webster (Pres. Webster Manf. Co., Chicago), when questioned by the United States Industrial Com., gave the following testimony (Vol. VIII, p. 150):

Ques.—Do the unions, as far as you know, attempt to fix the production of a man?

Ans.—Yes, this is a very decided tendency.

Organized Labor's Attitude Toward Machinery

Ques.—Do you consider that objectionable?

Ans.—Yes. Both to man and employer. No man has a right to see how little he can do.

Ques.—Is there never a slave-driving tendency on the part of the employer to make a showing?

Ans.—Yes. I think there is no doubt about it at all. That is the chief objection of the union to piece work."

While the Typographical Union was too wary of adverse criticism, and too experienced in trade union principles to attempt any such scheme, it nevertheless opposed what is known as the "bonus system." Under this method the employers offer to each worker a bonus for every thousand ems produced in a day, beyond a certain minimum. This caused an extra effort on the part of the operators which is most fatiguing, and makes labor intense. It also makes conspicuous the best as well as the poorest workers, and really changes the system to the piece scale. At the 42d, 46th, and 48th Conventions in 1894, 1900, and 1902 respectively, resolutions were passed which declared: "No machine operator shall be allowed to accept a bonus, based on setting so many thousand over a prescribed number, where such bonus is voluntary on part of employer and not provided for in scale of prices."

At the 41st and 48th Conventions, the constitution was amended to read: "No member shall be allowed to accept work where a task, stint or dead line is forced upon the operator," and "operators shall not accept a bonus for speed."

The printers have been criticized for their stand on the "bonus" question. It is asserted that a bonus or premium system confers benefits upon employer and employee, that when the rights of both have been fully secured, they are partners in further progress. It cannot be denied that to prohibit the bonus or premium system is one way of forcing a limited output, but the union was exceedingly anxious to keep as many men employed as possible. Hence they sought to reserve for the displaced men the extra work done, because of the incentive of the bonus.

4. *To Reduce the Number of Apprentices.*—In all the strong unions that have undergone a marked metamorphosis through machinery, there is a tendency to reduce the ratio of apprentices to journeymen in the shop. Since the labor markets of such crafts are over-supplied and the skill necessary for efficient work can be acquired in a shorter time, organized labor is anxious to reduce

this supply. Apprentices usually work for an especially low rate; hence employers try to have as many as they can, and produce an increased output at a decreased cost, thus aggravating the union's troubles. For years the moulders sought to uphold the ratio of 1:8, but in 1907 they were obliged to yield to 1:5, the ratio demanded by the employer.

Dr. Sakolski, in his study, "Entrance to the Trades," cites the following cases: "The five years' term of the Glass Bottle Blowers' Association, for example, is enforced only as a concession to the employers who are enabled thereby to employ a journeyman at apprenticeship wages. An apprentice glass bottle blower generally becomes efficient inside of half the term of apprenticeship. Similarly the term of apprenticeship for a kiln man in pottery is fixed by the union at three years, but the most radical of the employers declare, 'that an apprentice is a kiln man in one year if he is ever going to be.' The three years of apprenticeship of the Cigar Makers' Union under modern conditions is likewise held to be excessive and is forced only in exceptional cases. Immigrants, after a few weeks' instruction, are enabled to roll cigars with moderate speed and accuracy, and after a few months of steady practice, become proficient in their line of work." (U. S. Labor Report No. 67.) In most industries that were mechanized the degree of skill was reduced until it became nil. The apprenticeship problem and that of its ratio, therefore, solved themselves by ceasing to be questions. But where skill was still retained after the change, the union's efforts have always been to decrease the number of learners, while the employers sought their increase.

Through these four means, the unions sought to keep their members at work for periods that were more or less regular and save them from poverty and the wretchedness which follow upon the demoralization of an industry, as in the boot and shoe trade.

The second great problem that guided the union's machine policy was the loss that we noted in an earlier part of our study, of the monopoly, partial or whole, of the labor of its craft. Hence we now turn to

ATTEMPTS AT INCREASING THE UNION'S JURISDICTION

Since the introduction of machinery often made apprenticeship periods unnecessary, encouraged an influx of unskilled labor, native and immigrant, as well as women and children,

Organized Labor's Attitude Toward Machinery

brought new processes and hence new classes of workers, over-specialized an industry, and thus alienated a branch of the craft, organized labor found that the vital problem was to preserve its threatened power, to regain its waning control of the workers. Nothing can be done to counteract the tendency toward minute subdivision and specialization. Its disintegrating influence upon the union must go on. But effective measures can be taken to maintain an apprenticeship system and to enroll all new classes of workers, skilled and unskilled under the union banner. Hence the endeavors to increase or maintain the jurisdiction of organized labor over its craft were worked out along the following lines:

I. THE STRUGGLE TO MAINTAIN THE APPRENTICESHIP PERIOD

As far back as 1857 or 1860, the iron moulders decided on a minimum apprenticeship ratio of one learner to eight journeymen. In 1900, the officers and members of the executive board began a crusade which lasted for years, the object of which was to change the ratio to 1:5, so that the foundrymen would find less need of breaking union rules, and employing non-union "handy" men or helpers. But the convention, for years, refused to take action. The craft was in a state of change and they wanted to reserve what work they could for themselves, and keep out newcomers through a strict apprenticeship regulation. The *Iron Moulders' Journal* (the workmen's paper) says: "It is impossible to discover the reason which led the moulders to adopt this proportion though there are ample indications that the results were not reached through collection of statistics." The president cited the case of the stove moulders who changed to 1:5, and adds, "I doubt if one instance of serious injury to the journeyman moulder can be cited." In 1906 a special committee appointed, reported, "We, your committee, recommend that that part of the president's report be concerned in." This was passed because the ratio was really non-existent since the unions were completely defeated in the long struggles of 1903-1906, and the foundry owners disregarded all union laws and regulations.

The shoeworkers always guarded the apprenticeship rules very jealously. In the earlier constitutions of the Knights of St. Crispin, we find clauses which prohibit teaching, thus restricting the number of apprentices and tending to keep their trade door shut. But since the machines have so completely changed

The Journal of Accountancy

the craft, and reduced its skill, apprenticeship regulations and ratio are not taken seriously. They are found in the constitutions and agreements as a matter of form. After a few weeks, a boy can become a proficient machine shoemaker. In such an industry apprenticeship laws are useless.

The glass workers still guard the apprenticeship rules. In the 1902-3 wage scale regulations, we find a clause which sets the ratio in shops controlled by the Glass Bottle Blowers' Association at 15:1 and a declaration that "firms who for any reason reduce the number of journeymen must also reduce the number of apprentices who must serve a period of five years." In 1907 the time was reduced to four years owing to a persistent demand in the season when work was plentiful and help needed. But the union declared that, "whereas our apprenticeship rule of five years is looked upon by the boys and the parents as an imposition, we recommend a reduction to four."

At the 1902 Convention of the Flint Glass Workers, it was decided to allow one apprentice to two journeymen in small shops, but not in excess of 25% in smaller ones, and to fix the period at four years. Their President, Mr. Rowe, reporting to the convention said that he had tried to gain a fifty hour per week concession from the employers, but had failed. The factory owners declared that (1) they did not have enough help; (2) the union was not in a position to furnish it; (3) the union should increase the apprenticeship ratio to something higher than 25%; (4) it should allow the employment of machinists of any union to work the new machines. In commenting, the president said: "Our members are fearful to open the gates to an influx from these sources, as it may deluge them and demoralize their trade."

Mr. Rowe decided that the union should wait two years. If at that time the union should find that it could not supply the labor market, then machinists should be taken in and given membership as soon as they became proficient moulders. This is a better expedient than increasing the apprenticeship ratio, he believes, for in case of a slackened season, a machinist can go back to his old trade, but additional apprentices mean additional idlers on their hands.

John Graham Brooks declares: "The limitation of the number of apprentices is an inexcusable tyranny over American liberty." With this view the union does not concern itself. Its reason for existence is the preservation of its members. To limit

Organized Labor's Attitude Toward Machinery

the number of apprenticeships increases its jurisdiction and keeps the labor market from being overstocked. Whether the tyranny is excusable or not, the unions will continue to practice it as long as they can.

With the printers, apprenticeship regulations mean still more. They always hoped to raise the skill of the trade to such a degree that the craft would become a closed corporation open only to those specially trained in the work. In 1886, the old learners' system was revised; the new one set the period at five years, the ratio at 1:5, and demanded a guarantee that the boy would be given an "all-'round training." In 1892, when the linotype had come to stay, the Typographical Union realized its precarious position and hastened to outline its stand on the apprenticeship question. Since linotype is really printing, the new machines must come under the jurisdiction of the union for it really means no new power added to the labor organization, but an extension of the right that it already has to control new devices and improvements. The union in its eagerness to protect the displaced journeymen, to provide them with work, and establish as soon as possible the conditions and adjustments that existed prior to the introduction of the machine, made one discrimination and another against the apprentice lads. Some of these were slight, others far-reaching, but all aimed to reserve the operation of the linotype for the old hand printer.

In 1893, (41st Convention, p. 201) the following enactment was passed: "Apprentices may work upon the machine in the last year of their apprenticeship, but shall be paid two thirds of the wages of regular operators." That year and the following saw the introduction of 568 and 890 machines respectively, an increase of about 300% and a tripling of the men idle in the trade. The union found that it must further limit the concession to the apprentices and in 1894 (42d Convention, p. 31), it decided to allow them to operate the machines only the last six weeks of their period, provided they received full wages at the time. In 1899 (44th Convention, p. 50) it was decided to allow these lads to practice on the machines during the last three months of their apprenticeship, but the product was not to be used or sold by the employers. This may seem like a concession, but when we consider the last proviso, we can readily see that it was a very restrictive measure, for who would keep machines in his shops to give practice, and enjoy no remuneration? The apprentice was

The Journal of Accountancy

therefore kept busy at all hand work, for the results of his labor were then saleable.

At the 45th Convention (1899, p. 43) action was taken making it mandatory to register apprentices by signing uniform contracts which contained the union regulations. Thus the union was getting a surer hold on these boys and had better control of them. President Lynch in his address in 1901 (47th Convention), declared that entrance regulations were not designed to set a higher standard and emphasizes the fact that the higher the qualifications for entrance to a craft, the higher is the wage rate therein. Hence, "we must stop spoiling good blacksmiths and make better printers" by requiring each apprentice to serve a six months' trial period. In 1903 (49th Convention) it was proposed and passed that owing to the fact that trade adjustment had been made, conditions settled, and displaced men provided for, permission might be given to the apprentice to work on the linotype machine during his last three months and produce material which could be used by the employer, the wage rate being the same as that paid to those old journeymen who were learning to operate the machines.

In 1905, and again in 1907 (51st and 53d Convention, p. 248-255) the apprenticeship regulations were modified and embodied in the constitution. The content and scope of these which govern to-day, are briefly as follows:

1. To Better Control Apprentices.—No apprentice may leave one office and go to another without the written consent of the old employer and the signature of the president of the union.

2. Nature of Work.—All apprentices in publication offices where type-setting is done by machinery, must spend the last two years on the case (hand work) on all intricate work, the last six months on the linotype. The apprenticeship period is to be four years.

3. Proficiency.—To offset specializing tendency in the trades, a special committee shall study courses of study, and outline the best system of industrial training and shall spend a reasonable sum for library, teaching devices and the like.

We see then that the printers adhered to a strict apprenticeship policy in the hopes of (1) giving displaced men work, (2) affording journeymen handworkers the best opportunity to learn to work the linotype, and (3) keeping non-printers out of the printing trade. *(To be continued)*