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LABOR ADMINISTRATION IN THE SHIPBUILDING INDUSTRY DURING WAR TIME. I

I. INTRODUCTION

The labor problems of the shipbuilding industry during the war illustrate in a perhaps heightened form the difficulties which all war industries experienced. A short study of its problems and the policies adopted may therefore throw some light upon the situation that confronted other production departments and upon the methods of the War Labor Administration.

It was the submarine menace that forced us to build ships. Up to our entrance into the war, the German submarines had sunk 11,500,000 tons of shipping. During this time only 7,000,000 tons had been constructed and the net loss from submarine sinkings alone was 3,500,000, to which must be added the loss from depreciation and other natural causes. During 1917 the underseas warfare increased in severity and, though the public was told from month to month that the submarine danger was over, by December of that year the total submarine sinkings had increased to 17,500,000 tons, or a net loss from this cause alone of 7,500,000.¹

¹ From December, 1917, to October, 1918, the race between destruction and construction was even. The sinkings and the new construction in these ten months were each approximately 5,500,000 tons. These figures are taken from statistics furnished by the British Admiralty.

A large fraction of the world's shipping was thus being destroyed at the time when there was an unprecedented need for ships to carry food, materials, and men from America to Europe. The success or failure of our efforts depended largely upon whether we could overcome the influence of the submarines. It was necessary, therefore, not only to counteract the submarines themselves, but to build ships as well and to build them on a scale hitherto undreamed of.

The United States Shipping Board had been created by congressional enactment in the fall of 1916 for the primary purpose of regulating shipping. It provided for government ownership only in case private ownership should prove incapable of furnishing an adequate American Merchant Marine. The Board organized but slowly in the winter of 1916-17 and incorporated the Emergency Fleet Corporation on April 16, 1917,¹ with the members of the Board acting as trustees of the Corporation.

There were, however, no funds to provide for building ships until the Urgent Deficiencies Act, passed on June 15, authorized the expenditure of \$500,000,000, of which \$250,000,000 was appropriated. This authority, however, was conferred directly upon the President and not upon the Shipping Board or Fleet Corporation. It was not until July 11 that the President delegated to the Emergency Fleet Corporation the power to construct vessels and to the Shipping Board the power to acquire vessels already constructed and to operate them together with such vessels as might afterward be built.²

However, a still further delay occurred. Mr. Denman, chairman of the Shipping Board, wanted to have a large number of wooden ships built, to which plan General George W. Goethals, General Manager of the Fleet Corporation, was opposed. A deadlock resulted and the entire shipbuilding program was held up.

¹ The full title of the Corporation is the United States Shipping Board Emergency Fleet Corporation.

² The Emergency Fleet Corporation in its development came to consist of two divisions: (a) the Division of Construction, which has become largely autonomous, and (b) the Division of Operations, which has been more closely under the direction of the Shipping Board proper. This article of course deals only with the former.

The situation was cleared by the resignation of both Mr. Denman and General Goethals and the appointment on July 25 of Mr. Edward N. Hurley, former chairman of the Federal Trade Commission, as chairman of the Shipping Board. Contracts were then let for both wooden and steel ships.

The Fleet Corporation was then faced with the fact that there were few shipyards that were available to build vessels for them. Shipbuilding in America had declined since the days of clipper ships and the average annual tonnage built in this country from 1900 to 1915 did not exceed 375,000 tons. A slight revival occurred in 1916, caused by the demand of the Allies for tonnage, but on April 1, 1917, there were only sixty-one shipyards in the country with a total of 215 ways which were capable of building vessels of over 3,000 tons. Moreover many of the wood-ship yards were unfit for construction purposes while the Navy Department with its pre-existing organization had contracted for the use of well over one-half of the steel-ship ways, thereby closing these ways to the Merchant Marine. The Fleet Corporation therefore was compelled to build shipyards before it could hope to have many ships.

When this late start attended by so many difficulties is considered, the fact that on October 1, 1918, less than fifteen months after the real inauguration of work, there were 210 shipyards with 963 ways engaged exclusively on Fleet Corporation work,¹ indicates the enormous expansion of the industry. The number of shipyards more than quadrupled and the number of ways quintupled in this period. The working force increased so rapidly that on October 1, 1918, there were approximately 375,000 employees in shipyards engaged on Fleet Corporation work, which was an increase in numbers of approximately 285,000 since October 1, 1917.

By January 1, 1919, a total of 3,385,000 tons had been built in this country and delivered to the Fleet Corporation, excluding ships which were completed when requisitioned, while there were building or under contract approximately 2,300 ships of a total tonnage of 12,500,000. These statistics, while somewhat

¹ There were in addition some 75 to 100 yards which were building ships either for private account or for foreign governments.

anticipatory, indicate in some measure the physical problems which the Fleet Corporation faced.¹

The task was made more difficult because many business men rushed into the shipbuilding business, lured on by the prospect of high profits, who knew no more about shipbuilding than Gilbert and Sullivan's immortal First Lord of the Admiralty knew about seamanship. While most of the old yards were under efficient management, the great majority of the new yards which were built during the war were owned and managed by men who were not familiar with the technical problems of shipbuilding and these yards were managed on the whole inefficiently.

However, not only were the majority of yards inefficiently managed, but each employer was intent only upon fulfilling his own contract and was not concerned with the success of the shipbuilding program as a whole. The truth of the "Invisible Hand," doctrine of Adam Smith, that every man who sought his own best interest thereby sought the interest of society as a whole, was tested in war time and this study of the shipbuilding industry may throw some light upon the validity of the theory.

The 285,000 men who were added to the shipbuilding rolls of 1917-18 were in a large part "green" and inexperienced. The depreciation in the building trades furnished, to be sure, many thousands of workers who could be adapted to shipbuilding without a great deal of preparation and other trades furnished men whose

¹ The following table shows the delivery record. This does not include fourteen vessels with an approximate total tonnage of 120,000 which were built for the Fleet Corporation in Japan.

CLASS	NO. SHIPS DELIVERED	DEADWEIGHT TONS
Ships Delivered August 3, 1917, to January 1, 1918		
Requisitioned steel.....	49	301,809
Ships Delivered January 1, 1918, to January 1, 1919		
Requisitioned steel.....	248	1,620,452
Contract steel.....	162	949,625
Contract wood.....	106	376,400
Contract composite.....	10	37,500
Totals.....	526	3,083,977

trade experiences had been similar to that of shipbuilding. But on the whole the men were inexperienced and ill-acquainted with the work which they assumed.

To add to these difficulties the relation between workmen and employees at the beginning of the war was in many sections one of either open or ill-concealed hostility. There was no clear-cut national labor policy and many shipyard owners did not recognize the principle of collective bargaining and refused to deal with any organization of their men. The general prejudice of workmen against the owners was heightened by the fact that the owners had reaped huge profits from the sale of requisitioned ships to the Shipping Board and expected liberal sums from the new contracts let by the Fleet Corporation. To these facts was joined the rapidly increasing cost of living which intensified the resentment normally existing between workmen and employers where the principle of collective bargaining is denied or abridged.

The Corporation therefore faced a labor situation which for difficulty has never been surpassed. It was compelled to build ships at high speed in every section of the country where shipbuilding had been previously moribund, in yards which were on the whole hastily and poorly constructed and managed by men not familiar with the industry. To do this it was compelled to increase its labor force almost tenfold within sixteen months which in the face of a labor turnover of approximately 230 per cent was equivalent to hiring two to three men for every man permanently retained. The Corporation, moreover, was compelled to do all this at the same time when all the other production departments of the government were expanding and clamoring for an increased labor force. The Fleet Corporation was therefore called upon to cope upon a national scale with a hastily mobilized, inexperienced, and unstable working force and with an individualistic group of contractors, both of whom were embittered with each other and distrustful of the Fleet Corporation itself. To produce from this welter a well-trained and suitable force of employees and to work out a labor policy as regards wages, hours, conditions of labor, and the principles of labor organization, which would build the maximum number of ships, was the task that the Fleet Corporation

faced. This was a heavy task to lay upon an organization just getting under way in August, 1917, in a country which was mentally unprepared for collective activity and organization.

II. ORGANIZATION CREATED TO DEAL WITH THE LABOR PROBLEMS

A. THE SHIPBUILDING LABOR ADJUSTMENT BOARD

The Shipbuilding Labor Adjustment Board, or, as it has been commonly termed, the "Macy Board," after the name of its chairman, has been perhaps the most important agency created to deal with the labor problems in the shipyards. Early in the summer of 1917 labor troubles were impending in many yards and it was felt that unless some agreement was reached the shipbuilding program would be balked by reason of strikes and labor disputes. After preliminary negotiations the memorandum creating the Shipbuilding Labor Adjustment Board was signed on August 20, by Franklin D. Roosevelt, Assistant Secretary of the Navy, and by E. N. Hurley and Admiral W. L. Capps, representing the United States Shipping Board and the Emergency Fleet Corporation, together with the presidents of all the important international unions having to do with shipbuilding with the exception of President W. L. Hutcheson of the Carpenters and Joiners.

The reason for Mr. Hutcheson's refusal to sign the memorandum was never fully stated but was undoubtedly in part his belief that the memorandum should recognize the "closed" or union shop as the basis. His position was that unless this was uniformly provided the union officials would have no power of compelling the workmen to obey the rulings of the Board since they would have no control over the nonunion men. Union leaders would consequently be bound before the public to keep labor in line and yet would not be furnished with the authority to do this effectively.¹ From the standpoint of sheer logic this attitude of Mr. Hutcheson's was not ill-taken, but, although the Carpenters and Joiners Union has never been a party to the creation or continuance of the Adjustment

¹ It should not be inferred that the other labor officials who signed the memorandum did not appreciate this situation. They did, but they chose to waive this point, which the American people as a whole were probably not prepared to support, in the national interest.

Board, the Board has uniformly fixed wages and working conditions for these trades as for others, and their decisions have been obeyed by the Carpenters and Joiners nearly as faithfully as by any other trade.

1. *Analysis of memoranda and organization of the Board.*—This memorandum of August 20 was loosely drawn and is ambiguous in many respects. The most salient features of the agreement were as follows:

All disputes “concerning wages, hours, or conditions of labor” in the construction or repair of shipbuilding plants or the construction of ships, either carried on directly by the United States Shipping Board or the Emergency Fleet Corporation or under direct contract with them, were to be referred to a Board of Arbitration. It was implied, but not directly stated, that no strikes or lockouts were to be held pending an award of the Board.

This Board of Arbitration was to consist of three members. One was to be appointed by the Emergency Fleet Corporation, one to represent the public and to be nominated by the President, and one to represent labor and to be nominated by Mr. Gompers, the president of the American Federation of Labor. There were, however, other features in the personnel of the Board which made it cumbersome. The Navy was entitled to a separate representative when matters affecting it were raised. There were really to be two representatives of labor, one to sit when steel-ship yards were under discussion and the other when wood-ship yards were considered. In addition local employers and employees were each to be entitled to a seat on the Board.

In settling disputes in any plant, the Board was to consider as basic standards the wages, hours, and working conditions which were in force at such plant on July 15, 1917. Increases in the cost of living were to be the basis for altering wages, and the decisions of the Board could be made retroactive. Upon complaint by the majority of crafts at any plant the awards could be readjusted at the end of six months. To aid the Board in adjusting local difficulties, local examiners were to be appointed after nomination by both sides to the dispute.

Mr. V. Everit Macy was appointed by the President to represent the public, Mr. L. A. Coolidge, the Fleet Corporation, and Mr. A. J. Berres, Labor.¹ Owing to the opposition of Mr. Hutcheson to the agreement no member was appointed to represent the wood trades.

This memorandum proved faulty in several respects; the organization of the Board was over-elaborate and objections were advanced to taking the prevailing rate of wages in June, 1917, as the base. The Board's Pacific Coast decisions, which were issued in November, aroused so much opposition on the Pacific Coast that the life of the Board appeared doubtful. In order to save the Board a second memorandum was drawn up on December 8, which materially altered the organization and status of the Board.² The most important changes which were made were:

a) Simplification of the Board's personnel. Separate representation by local employers, employees, and by the navy was dropped

¹ Henry R. Seager, of Columbia University, was appointed as secretary of the Board and served to December 15, 1918, when he was succeeded by Willard E. Hotchkiss, of the University of Minnesota. L. C. Marshall replaced L. A. Coolidge as a member of the Board in August, 1918.

² The text of this memorandum was as follows: "When disputes arise concerning wages, hours, and conditions of labor in the construction or repair of shipbuilding plants, or of ships in shipyards, under the United States Shipping Board Emergency Fleet Corporation, or under said Shipping Board, or under contract with said Corporation, or with said Board, or if questions coming under the jurisdiction of the Board arise with reference to such construction in a private plant in which construction is also being carried on for the Navy Department, and attempts at mediation or conciliation between employers and employees have failed, the adjustment of such disputes shall be referred to an adjustment board of three persons, hereinafter called the "Board," one to be appointed jointly by the said Corporation and the Navy Department, one to represent the public and to be appointed by the President of the United States, and one to represent labor, to be appointed by Samuel Gompers, President of the American Federation of Labor. It is understood, however, that this memorandum shall in no wise serve as a precedent for procedure in government plants under the War or Navy Departments, except as may be authorized by such departments.

"The plants where such construction is being carried on shall be geographically districted by the Board. In each district, the contractors in whose plants such construction is being carried on, and the representatives of such international labor organizations as have members engaged in such production or construction in such plants, and as are selected for the purpose, by the labor member of the Board, shall be called upon, under conditions to be laid down by it, to agree upon a person or persons who shall act under the direction of the Board as Examiner or Examiners in

together with the dual representation of the national unions. The Board was now to consist of three members, one to represent the Emergency Fleet Corporation and the Navy, one to represent the American Federation of Labor, and one to represent the public.

b) Substitution of union rates and wages as the basic standards instead of the prevailing rate of July 15. The second memorandum prescribes that "as basic standards—the Board shall use the wage rate prevailing in the district in which such plant or plants are located, provided such wage rates had been established through agreements with employers and employees and were admitted to be equitable—where no agreements exist and where . . . a proper basis of wages and conditions is difficult to determine, the Board shall have the right to put into effect the rates which were awarded in other districts in which living conditions and the cost of living are substantially the same." This was plainly the establishment of

such district. If the Board deems it advisable itself to name an Examiner or Examiners, or if the representatives of the contractors and of the labor organization do not agree, then the Board shall by unanimous action select a person or persons for such position. The Examiner shall be subject to removal by the Board at any time by majority vote. It shall be the duty of the District Officer of the United States Shipping Board Emergency Fleet Corporation to report promptly to the Board, and to the Examiner of the district, if such Examiner shall have been appointed, any dispute with reference to wages, hours, or conditions of labor which he is unable to adjust satisfactorily to the principals concerned.

"As basic standards where such construction is being carried on, the Board shall use the wage rate prevailing in the district in which such plant or plants are located, provided such wage rates have been established through agreements between employer and employees and are admitted to be equitable. Consideration shall be given by the Board to any circumstances arising after such wages, hours, or conditions were established, and which may seem to call for changes in wages, hours, or conditions. Where no such agreements exist, and where as in the case of new industrial districts a proper basis of wages and conditions is difficult to determine, the Board shall have the right to put into effect the rates which were awarded after due investigation and determination in other districts in which living conditions and cost of living are substantially the same. The Board shall keep itself fully informed as to the relation between living costs in the several districts and their comparison between progressive periods of time. The decisions of the Board shall, under proper conditions, be retroactive, and it shall be the duty of the Board to make the decision effective. At any time after six months have elapsed following such ratified agreement or any such final decision by the Adjustment Board on any question as to wages, hours, or conditions in any plant or district, such questions may be reopened by the Adjustment

union rates as the standard, subject to the approval of the Board and taking into consideration the relative cost of living.

c) The creation of an Appeal Board. A Board of Review was constituted which was to consist of three members nominated by the Federation of Labor and three members named jointly by the Emergency Fleet Corporation and the Navy Department to which appeals against the decisions of the Board might be taken by either the employers or employees of any district.

2. *Jurisdiction of the Board.*—The exact sphere of the Board's jurisdiction was not clearly defined in the first memorandum nor was it indeed definitely settled by the second. It has been largely a matter of growth. The hazy points have been slowly cleared up

Board for adjustment upon request of the majority of the craft or crafts at such plant affected by such agreement or decision, provided it can be shown that there has been a general and material increase in the cost of living. The decisions of the Board will, in so far as this memorandum may be capable of achieving such result, be final and binding on all parties; provided, however, that either the employers or employees in any district may have the right to appeal from the decision rendered by the Adjustment Board to a Board of Review and Appeal to be made up as follows: Three members to be named jointly by the United States Shipping Board Emergency Fleet Corporation and the United States Navy Department, and three to be named by the President of the American Federation of Labor.

"It is hereby stipulated and agreed that this memorandum shall supersede and stand in place of the 'Memorandum for the Adjustment of Wages, Hours, and Conditions of Labor in Shipbuilding Plants,' signed August 20, 1917, and that it shall become effective this 8th day of December, 1917.

"(Signed) FRANKLIN D. ROOSEVELT, Acting Secretary of the Navy.

CHARLES PIEZ, Vice-president, United States Shipping Board Emergency Fleet Corporation.

WILLIAM BLACKMAN, Assistant to General Manager.

JAMES O'CONNELL, President, Metal Trades Department.

JOHN I. NOLAN, International Moulders Union of North America.

J. A. FRANKLIN, International President of Boilermakers Iron Shipbuilders of America.

JOHN WILSON, President, Pattern Makers' League of N.A.

MILTON SNELLINGS, General President, International Union of Steam and Operating Engineers.

G. C. VAN DORNES, General Vice-president, L.B. of B. & H.

F. J. McNULTY, by J. J. P., I.B.R.W.

JOHN J. HYNES, President, Amalgamated Sheet Metal Workers of America.

WILLIAM H. JOHNSTON, I.A. of M., per P. Flaherty."

and the following are the types of work over which the Board now has jurisdiction:

a) The construction or repair of shipbuilding plants which are paid for either by the Emergency Fleet Corporation or by the Navy.

b) The construction or repair of ships in shipyards either directly under the Emergency Fleet Corporation and the Shipping Board or under direct contract with either of these organizations.

c) The construction or repair of ships in private plants doing work for the Navy.

d) The outfitting of the vessels after launching with machinery and equipment.

It is important, not only to know over what types of work the Shipbuilding Labor Adjustment Board has jurisdiction, but also over what classes of work it does not have jurisdiction, for the Board has constantly been called upon to settle conditions in plants over which it felt that it had no jurisdiction conferred upon it by the memoranda creating it. After a somewhat protracted period of interpretation, the following types of work have been agreed upon as those over which the Board does not have jurisdiction:

a) Ships being built for private parties or foreign governments in this country and for the United States abroad.

b) Auxiliary plants. These are plants manufacturing boilers, engines, and other ship equipment or supplies for the Emergency Fleet Corporation. If the plant was inside the shipyard, however, the Board assumed jurisdiction.¹

c) The construction or repair of shipbuilding plants if such plants are built or repaired with the contractor's own money and not directly at the expense of the Fleet Corporation.

d) Navy yards. The Navy Department, however, after a time finally introduced the Board's awards in a somewhat modified form into all Navy yards.

e) The construction of dry docks and marine railways for which money was typically merely loaned by the Emergency Fleet

¹ The dividing line as to whether or not an auxiliary plant was inside a shipyard and hence under the control of the Board seems to have been whether a fence separated the auxiliary plant from the shipyard proper. If there was a fence, it was ruled as outside; if none, as inside.

Corporation to the contractor but where the ownership rested with the contractor.

3. *Analysis of awards by Board.*—The Board has really rendered two sets of decisions. The first set dealt with the individual districts in turn and was not completed until the middle of April, 1918, while the second set covered the country as a whole and was issued the last of October. By the first, the country was really divided into two districts as respects the wage scale, the Pacific Coast and the rest of the country; while the second set made rates substantially uniform the country over.

In September 1917 shipbuilding on the Pacific Coast was almost completely suspended by a general strike. Practically no work was going on in Seattle, Portland, or San Francisco. The settlement of these disputes therefore was the first great task which confronted the Board. After a series of hearings in the three coast cities which showed the bitterness between workmen and employers, the Board handed down its decision on November 4. As the result of an investigation carried on by members of the Faculty of the University of Washington, the Board decided that the cost of living had increased 31 per cent since June 1, 1916, and the wage rates were accordingly increased by that amount and were made effective for all the yards on the Pacific Coast.

The reasons for taking June 1, 1916, as the base instead of June 15, 1917 (as specified in the memorandum of August 20), were that wages in the shipyards had not been appreciably increased since the former date; also because the Board saw that a substantial wage increase was advisable if the men were to return to work. One Seattle shipyard had signed an agreement with its men, giving them \$6.25 for an 8-hour day, and had consequently attracted the most skilled workers to its plant.¹ In the face of this high wage, with the basic wage in other shipyards at the time of the strike approxi-

¹ This company had been shrewd enough to secure the Fleet Corporation's approval of a very liberal allowance for increased labor cost in its contract. It was only because of this contract provision that it was able to offer such high wages. This instance illustrates the extraordinary complex ramifications of policy which confronted the Fleet Corporation and the difficulty of working out a co-ordinated policy between the Adjustment Board, the Contract Division of the Fleet Corporation, and other agencies.

mately \$4.00 per day, the Board was faced with the necessity of granting a greater increase in wages than merely enough to offset the increased cost of living for the four months from June 15, 1917.

The rate thus established for most mechanics was \$5.25 for an 8-hour day, or 65½ cents per hour. The Board succeeded in getting the employers and employees of the San Francisco Bay and the Seattle districts (which were "closed shop" districts) to form an agreement by which working conditions were to be regulated. In the Portland district, where the contest between workmen and employers over the closed shop was very bitter, the Board submitted a memorandum to both sides which was agreed to by them. This memorandum provided for the establishment of the basic 8-hour day with such rates for overtime as might be established by the Board, together with the creation of a shop-committee system to settle grievances between workmen and the management. The employees agreed to withdraw their demands for a closed shop, but the Board specified that no discrimination should be practiced against re-employing striking workmen.

The unions generally along the coast agreed to give up their boycotting of the use of "unfair material."

The wage increases created by the Board were unsatisfactory to the Pacific Coast unions, especially those of Seattle, where, as has been mentioned, one of the steel-ship yards and certain of the auxiliary plants had granted on August 1 higher wage rates than those granted by the Board in November. Upon complaint of the workers in the other yards the Emergency Fleet Corporation, at the same time that the second memorandum was signed, granted a "war service premium of 10 per cent" based upon the minimum rate for eight hours straight time, to be paid to every worker in the Pacific Coast shipyards (outside the yards in the Seattle district, already paying a higher wage) who should work the full time of forty-eight hours in any six consecutive days. After February 1 this was to be converted into a permanent increase of 10 per cent irrespective of attendance. This placed the daily wage for the basic trades at \$5.775. It will thus be seen that, in order to keep the peace, the Emergency Fleet Corporation in this case really took the decision out of the hands of the Board and granted a further

increase on its own authority. This act, together with the new memorandum, undoubtedly saved the life of the Board.

While the Board was on the Pacific Coast, disputes occurred in several steel-ship yards on the Delaware River. These were temporarily adjusted by the promise of Vice-chairman Stevens of the Shipping Board that any decision that the Board would make would be retroactive to the date of the strikes. Upon its return from the coast the Board investigated the situation in these yards and on February 14, 1918, handed down its award for the Delaware River and Baltimore district. The most prominent features of this award were:

a) The fixing of a wage of 70 cents per hour for most mechanics and from $42\frac{1}{2}$ cents to 55 cents for helpers.

b) The wages established were made retroactive for all yards irrespective of whether a strike had occurred or not.

c) The recognition of the basic 44-hour week.

d) Not more than 60 hours' work a week was to be permitted unless ordered by the Emergency Fleet Corporation, and overtime in excess of 8 hours a day was to be paid for at one and a half times the straight hourly wage.

e) The establishment of a piece-rate scale for certain trades uniform for all yards in the district. In order to prevent any limitation of output the Board promised that it would not reduce the piece rates during the war.

f) No discrimination was to be allowed against the union or nonunion men.

g) A differential of ten cents an hour for "dirty" work, which in practice was broadened to include all repair work.

On March 4 the Board issued a decision covering the South Atlantic and Gulf yards which contained the following provisions:

a) A basic rate for most mechanics of 65 cents per hour.

b) Two grades of laborers; one at 40 cents per hour and "common" labor at 30 cents (the second being provided for negro labor).

c) The establishment of the basic 8-hour day with Saturday afternoons off for three summer months.

d) Work in excess of 60 hours per week not allowed except with permission of the Fleet Corporation, and hours in excess of

eight per day to be paid for one and one-half times the basic hourly wage.

e) Less skilled journeymen to be paid 10 cents per hour less than skilled mechanics for the first six months of their work.

f) Regulation of sanitary conditions.

g) The authorization of the shop committee system to deal with grievances.

This award was complained of and the Board changed its rulings by increasing the hourly wage of mechanics to that of the Delaware River scale and by abolishing the distinction between the different types of journeymen, although laborers were still divided into two classes.

Simultaneously with the revision of the southern district the Board announced its decision for the North Atlantic yards. The wages established by the Delaware River award were adopted for this district as well (with the exception of the provisions for "dirty work") and the institution of a shop-committee system was also authorized.

On April 19 the Board made this same scale applicable to the Great Lakes district and also authorized the shop committee system.

This completed the first set of decisions and established a uniform wage scale for the Atlantic Coast and Great Lakes. Due to the 10 per cent bonus which had been granted to Pacific Coast yards in December, the wage rates on the west coast were approximately 5 per cent higher.

The Board had by this time fairly firmly established itself. Though neither employers nor employees were wholly satisfied with the decisions, they had become convinced that for the duration of the war at least disputes should be referred to it for settlement rather than settled by a trial of strength between the two parties.

In order to obtain accurate statistics upon which to base its revision of the wage scale, which was authorized for every six months, the Board secured the services of the Bureau of Labor Statistics to conduct an investigation into the increase in the cost of living. Upon the basis of this investigation and hearings, at which both the Pacific and Atlantic Coast employers and employees

were represented, the Board was practically ready for its new decision by September 1, 1918.

The issuance of this decision was, however, delayed by the desire upon the part of the various governmental wage adjustment agencies to standardize their wage scales. Though the decisions of the Shipbuilding Labor Adjustment Board had been used as a guide by other adjustment agencies, there was a great deal of competitive bidding for labor by various government departments and there was a lack of any standardized wage policy to stabilize labor. Moreover, there were no boards to deal with the metal and building trades in shops doing contract work for the government. The month of September was accordingly spent in organizing boards for the metal and building trades and in conferences between the various adjustment agencies. Pending the formulation of a national wage policy, the Shipbuilding Labor Adjustment Board withheld its decision. Early in October these agencies submitted to President Wilson a program, to be issued as a presidential proclamation, including a recommendation for a differential wage in favor of shipyard work. The acuteness of the international situation together with other factors, however, caused delay in its promulgation. In the meantime, the workmen on the Pacific Coast became decidedly suspicious of the delay, the causes for which had not been clearly explained to them, and rumors were circulated that there was to be no decision. The situation became so acute and the probability of a general strike so strong that the Board was compelled to issue its decisions on October 24. The signing of the armistice, of course, prevented the program submitted by the adjustment agencies from being proclaimed by the President.

The October 24 decisions of the Board established the following conditions:

a) An increase of 20 per cent for the basic hourly wages for the Pacific Coast yards over those established in the November, 1917, decision. This was, however, only a 10 per cent increase over that granted in December by the Fleet Corporation.

b) The wages of the Atlantic Coast and Great Lakes were increased 15 per cent.

c) The increases for the Pacific Coast were made retroactive to August 1 and for the rest of the country to October 1.

d) The shop committee system was made universal for all shipyards where the shipyard owners were "not parties to joint agreements with the labor organizations of their respective districts."

e) The jurisdiction of the Board was extended to include draftsmen, leading men, and quartermen and guards. It was not extended, however, to include foremen and assistant foremen or clerical help.

f) Certain sanitary and hygienic standards were imposed upon the yards.

These decisions made the authorized wage scales for practically all full-fledged mechanics eighty cents an hour. Uniformity for these trades was secured for the first time for all shipyards in the country. The rates for helpers still varied, being fifty-eight cents for the Pacific Coast and fifty-four cents for the rest of the country. That a uniform standard for mechanics was not in reality completely effected will be shown when the enforcement of these rates is discussed.

Appeals against this decision of the Adjustment Board were taken up by many different groups. The workmen on the Pacific Coast were especially grieved at the small increase granted them by the Board. Various other groups, including certain shipbuilding associations, also appealed against individual features of the award. The decisions had pleased few on either side and the Board of Review and Appeal was compelled to review practically every item of the decision. The Appeal Board divided evenly upon these appeals, the three representatives of the Fleet Corporation and the Navy voting to uphold the Adjustment Board and the three representatives of labor voting to amend its decisions and grant higher increases in wages. Since no decision was rendered, the rulings of the Adjustment Board were therefore not reversed.

The Board also later revised its piece-rate decisions by granting a flat 10 per cent increase over the rates which it had established and limiting some of the abuses which had grown up around its orders, as well as more accurately defining "dirty work."

4. *Machinery of the Board.*—The Board originally divided the country into eleven districts, in each of which it appointed an examiner to represent it. These examiners were unpaid and were largely professional men. The work soon grew too heavy and too complicated for them to handle and they were given full-time assistants who were placed on a salary basis by the Fleet Corporation.

L. C. Marshall, of the University of Chicago, was made director of the Industrial Relations Division in May, 1918, and soon thereafter was made a member of the Board. Close co-ordination and effectiveness between the Board and the Fleet Corporation was thereby deepened.¹

As will be described, the Industrial Relations Division worked out a plan of co-operation with the Board whereby they had common representatives in the various districts and in most of the yards who were paid by the Fleet Corporation and who were more or less acquainted with the problems with which they had to deal. In the early stages of the work, however, the Board did not have a sufficient district organization to enforce its decisions, and it was not in sufficiently close touch with the Fleet Corporation to effect the best results.

5. *Principles followed by Board.*—a) The original memorandum creating the Board states that the Board should adjust matters concerning wages, hours, or conditions of labor “when disputes arise.” For a long time the Board was doubtful whether it could extend its jurisdiction in cases where a dispute had not occurred. In its early decisions the Board would not fix wages for trades unless they specifically appeared before it and demanded action. Gradually, however, it began to feel its way toward legislating for all the manual trades in all the yards of a district irrespective of whether disputes had arisen. For instance, its Delaware River decision of February made the rates which it established retroactive to all plants irrespective of whether a strike had occurred or not. The turning-point in the Board’s attitude, however, came with the

Now that the dust and smoke of battle have somewhat abated it is only fair to acknowledge publicly the extremely efficient and farseeing work of Mr. Marshall. It would have been difficult to have found a man who could have carried through more successfully the tasks imposed upon him.

decision for the North Atlantic yards when Mr. Coolidge stated that there should be a clear disavowal of any intention to impose the findings of the Board upon shipyards within which no disputes between employers and employees have arisen resulting in the failure of attempts at mediation or conciliation between those directly involved. The other two members of the Board, however, felt that such an attitude would encourage strikes since the only way that the claims of the workmen could be considered would be after such a strike or dispute had occurred. They, therefore, ruled that the findings of the Board should be binding upon all yards whether a dispute had occurred at that particular plant or not. This decision was undoubtedly wise and marked a final step in the interpretation of the memorandum.

The strongly organized Seattle and San Francisco unions also resented the attitude of the Board in making its rulings apply uniformly to all yards, irrespective of whether there was a dispute or not. Realizing that their economic strength was probably sufficient to secure higher wages than could be secured by the uniform rulings of the Board (which had to take into consideration the less-organized districts), in the summer of 1917 they strongly urged that the Board should keep its hands off and allow workmen to obtain whatever wages they could secure peacefully from their employers. This would have resulted, however, in consistently higher wages on the Pacific Coast and a consequent flux of labor to the coast which would have greatly impeded ship production. Mr. Marshall pointed out to the union representatives that the Fleet Corporation's contracts typically had provisions which specified that no wage rates could be paid by yards without the approval of the Corporation. The Fleet Corporation could accordingly refuse to allow shipbuilding companies to pay more than the Macy scale, even if the company itself was willing, and would thus create a dispute and throw the question into the hands of the Shipbuilding Labor Adjustment Board.

b) Principle of collective bargaining. The Board recognized the principle of collective bargaining. Indeed the memorandum creating it was a form of collective bargaining. To adjust grievances the Board provided for a system of shop committees in those

places where the shipyard owners were not dealing directly with the unions.

c) Reasons for omitting certain classes of workers. Foremen, assistant foremen, and clerical help were never included in the decisions of the Board. The first two classes were omitted because they were supervisory employees. The reasons for omitting clerical help were really twofold: First, it was difficult to standardize the various classes, and secondly, the clerical help were not articulate. The Board was probably not afraid of much trouble occurring by omitting this class of workers. This illustrates the tendency of even the best intentioned boards to be concerned with industrial peace rather than industrial justice. The control over these three types of workers was placed in the hands of the Fleet Corporation itself, and it made its own rules concerning them.

d) The principle of the basic 8-hour day¹ was established with rates ranging from time and a half on the Atlantic Coast to double time on the Pacific Coast for all hours worked in excess of this amount. As will be pointed out, the basic 8-hour day is not an 8-hour day at all, but primarily a wage measure.

e) Principles followed in fixing wages. The Board really had three principles in mind in fixing wage scales, the first two of which were explicit and the third implicit in their statements.

(1) The adjustment of wages to conform to the increase in the cost of living. This was the purpose mentioned in the memorandum creating the Board and was the one most commonly thought of by the public. It was vitally necessary if industrial peace was to be preserved. To throw the burden of maintaining the standard of life in the face of rapidly mounting prices upon the workers would have rendered strikes necessary in order to maintain the status quo.

(2) The adjustment of wages to produce a standardization of conditions between plants. The adoption of the different district scales made the rates uniform within each district. By April the wage rates were uniform for all the Atlantic Coast and the Great Lakes yards, while the Pacific Coast rates remained higher. As has been mentioned, the October decision effected a standardization for

¹ As has been stated, the basic 44-hour week was established in the Delaware River and Baltimore districts.

the country as a whole in so far as it was possible to create such a standardization by legislative *fiat*. The reason for standardization is, of course, obvious. It was necessary to stabilize working conditions and to prevent the shifting of labor from plant to plant and the consequent loss of stability and production.

(3) The third principle lying behind the wage decisions of the Board was seldom stated, but it was very real. The Board felt that not only should wages be kept in consonance with the increase in the cost of living and should be standardized, but that they should also be somewhat higher than the average wages in other industries so that workers might be drawn to the shipyards and that the labor supply which was needed to carry out the vast shipping program might be secured. It was this motive which was at least partly the cause for the 10 per cent bonus granted to the Pacific Coast workers by the Fleet Corporation in December. The Board itself asked for a 10 per cent differential for shipyard workers over other workers in the meeting of the national wage agencies in September, 1918, and were granted it both because of the fact that over 200,000 men were needed to carry out the building program of the next nine months, and also because of the rigors of shipbuilding as compared to indoor trades. In part, of course, the Board was able to attract men by merely automatically increasing wages to correspond with the increase in the cost of living, because wages in other trades did not increase so rapidly. A differential was therefore created, but the Board's desire was real and was undoubtedly one of their guiding principles in fixing wages, although it was seldom openly admitted.

B. ORGANIZATION INSIDE THE EMERGENCY FLEET CORPORATION TO DEAL WITH LABOR

After the entrance of the United States into the war, the administration of labor in shipbuilding was attended with industrial confusion and lack of general planning, similar to the situation in other production departments of the government. This general condition is not surprising in view of the immensity of the tasks, the entire absence of preliminary planning to mobilize and organize essential war industries, and the unsettlement caused by a demand

far in excess of the normal output and without time to train the required administrative organization. Furthermore, the unwillingness of responsible officials and our federal constitutional system with its traditional prejudice in favor of a separation of departments prevented the establishment of a central department of production, or Ministry of Munitions, according to the English precedent, in which the entire control of production, including labor, was placed for administrative purposes under one head. Each department of production was, therefore, confronted with its special tasks and with the further necessity of developing alone its own organization to administer production. This resulted in actual and extended competition between the departments to procure labor as well as supplies. The competitive waste and confusing effects of this fact need only to be suggested.

The labor problem facing shipbuilders was one not merely of numbers of men but of their skill, immediate availability, steadiness, and intensity in productive effort. Agencies of administration to deal with these various phases were gradually evolved within the Emergency Fleet Corporation as the need for them appeared sufficiently urgent. They were, however, created and began functioning without due recognition of the vital connection between them. Anticipating somewhat the more detailed description to be given later, it may be pointed out for the present that the different functions of labor administration were at first discharged in as many as five separate and unrelated divisions of the Corporation. The Industrial Service Department was established in the Division of Construction in September, 1917, to deal affirmatively with the methods of employment and the development by industrial training and otherwise of the supply of labor in shipyards. In October, 1917, the management of the Corporation selected an assistant with general duties relating to labor, employment, and wages, and to represent the Fleet Corporation in dealing with labor questions before the Shipbuilding Labor Adjustment Board. In December a separate Division of Labor was created, "to have charge of the supply and distribution of labor; of all matters pertaining to the disputes of labor, and in co-operation with the Industrial Service Department of matters pertaining to the training and employment

of labor." At the same time a director of the housing problem in shipbuilding was designated. In January, 1918, the United States Shipping Board launched a campaign to recruit shipbuilding workers, and a Division of Shipyard Volunteers was created to manage the publicity and keep the records. In this same month a department of Health and Sanitation was created in the Division of Shipyard Plants and the activities of the later Safety Engineering Section were inaugurated with the appointment of a Chief Safety Engineer in the Insurance Department of the Finance Division.

These disjointed agencies of labor administration could hardly formulate or effectively enforce uniform policies in their respective fields. For example, with the Division of Labor created December 15, to act in regard to labor disputes, when the Emergency Fleet Corporation was already with the Navy Department a party to the memorandum of December 8 which established the Shipbuilding Labor Adjustment Board to deal with questions of wages, hours, and conditions of labor, was there not need for a clear conception and definition of the jurisdictions of these two agencies? Without this how was a labor policy for the Fleet Corporation to be consistently developed and enforced? Or, again, with an Industrial Service Department having no direct functional relation with the Health and Sanitation Department or with the Safety Engineering Branch, how were the varying needs of shipyards for the work of these different agencies to be determined in the order of their importance? And could their services be rendered in the order of greatest contribution to sustained output of shipping tonnage? Or, with the unco-ordinated and independent Division of Shipyard Volunteers recruiting two or three hundred thousand men to work in the shipyards, is it difficult to understand the dissatisfaction and disappointment among these enrolled recruits when plans for their transportation, placement, and employment in the yards never materialized? Or, with the Industrial Training Department functioning after January, 1918, with headquarters in a distant city away from kindred agencies of the Corporation and without any close correlation of its own plans and actions with those of a central agency of labor supply, what could be expected but an

undetermined condition as to the part the dilution of shipyard labor by training should play in filling labor requirements? Obviously, there was needed, so long as these conditions obtained, a central agency of control and co-ordination for all branches of labor administration within the Fleet Corporation.

I. GENERAL SERVICE DIVISION

A step toward co-ordination and centralization of administrative control was taken in February, 1918, with the formation of the Division of General Service. This brought under one head five general services which before had been scattered; namely, the departments of Welfare and Sanitation, Shipyard Volunteers, Industrial Service, National Service, and Housing and Transit Facilities. But the attempted centralization of control fell short of accomplishment because it was limited in scope. The Division of Labor, the Industrial Training Department, and the Safety Engineering Branch either remained independent or continued in other divisions. A single administrative labor control was thus frustrated. This failure gave evidence that the management of the Corporation did not yet recognize the value of a co-ordinated labor administration for the shipbuilding industry. It remained for further experience with functionally independent departments to demonstrate the necessity for thoroughgoing reorganization.

Under the continued operation of the separate agency plan it developed that each of six departments handling phases of labor administration had its own field representatives in various districts over the country. These representatives were responsible only to national departmental headquarters to whom they reported directly for action on all questions of policy and administration. This arrangement prevented the development of any constructively related plans for improved conditions of industrial relationship, as well as making impossible their efficient enforcement by a correlated force of field agents. The consequences were irritating delay, waste of energy, overlapping of authority, and inefficiency. The difficulties of the situation could only be removed (*a*) by a completely co-ordinated and centralized grouping of labor administration activities for purposes of control in the formulation of policies,

and (b) by a decentralized field organization to enforce decisions and policies on matters of general application and to act directly on all questions that could be locally administered.

2. INDUSTRIAL RELATIONS DIVISION

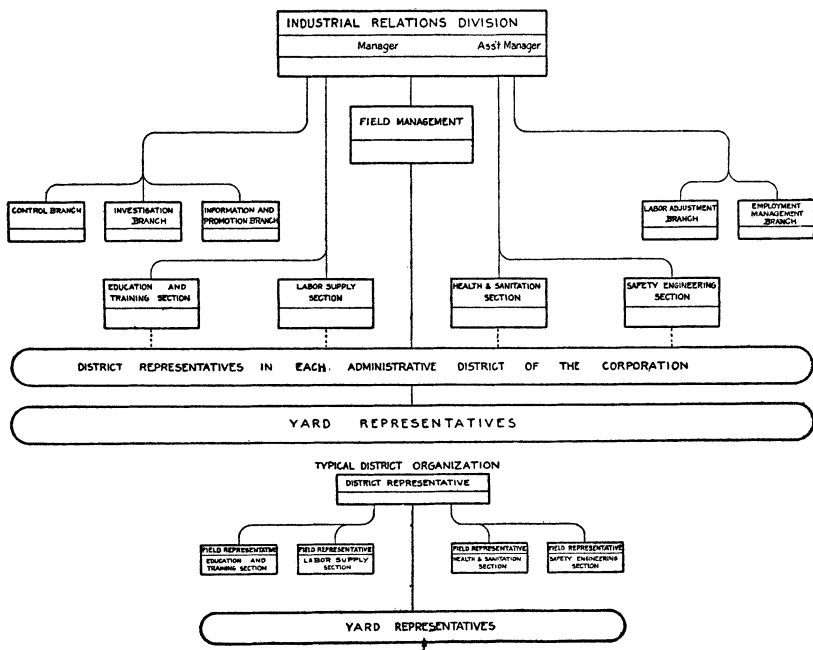
A well-conceived plan for bringing together the labor administration agencies of the Emergency Fleet Corporation was made in May, 1918. All activities having to do with the industrial relations of shipbuilding employers and employees were merged so as to function in one divisional group. The Division of General Service with its departments was absorbed, and the Safety Engineering, the Education and Training, and the Labor Sections were set up or combined under the direction of a single head.¹ The general plan of the Industrial Relations Division as it developed in actual operation is shown in the chart (p. 170). The Field Organization, as opposed to the Home Organization, is designed to secure, so far as practicable, decentralization of administration of labor matters. The Home Organization is intended to be a policy-fixing agency. The Field Management will be described after a description of the whole organization from the standpoint of the kind of work performed.

To assist in carrying on all the work of the Division, whether at national headquarters or in the field, three branches were at once planned and developed as staff functions. (a) The Control Branch had charge of the office administration, limitation of expenditures, and other budgetary matters. (b) The Investigation Branch brought together the information needed for disposing of current questions intelligently, studied questions of policy requiring more extended investigation, and accumulated reference studies dealing with a wide range of labor questions. (c) The Information and Promotion Branch prepared in proper form and circulated to all interested persons such information on labor matters as the Division produced or secured. The task here was not merely to keep the

¹ The Department Housing and Transit Facilities of the old Division of General Service was constituted as one of the construction divisions of the Corporation in charge of the \$75,000,000 appropriation for housing construction and of passenger transportation facilities for shipyard workers. The Division required a very large separate organization.

whole organization of the Division and of the Fleet Corporation informed of the policies and procedures for handling labor matters, but to conduct among employers and employees in the shipyards and auxiliary plants an educational campaign as to what are nationally approved practices in labor matters.

The administrative activities performed by the individual sections of the Division comprised in their development functions



of (a) supply, (b) adjustment, and (c) the administration of living, and of working conditions of labor. They may, therefore, be best described in the order of this group of functions as they actually developed. Under the centralized plan of control, the work that had been inaugurated previously in separate Divisions of the Corporation was continued and, wherever needed, extended in scope.

a) Labor supply.—

(1) Industrial Service Department. The Industrial Service Department was the first government agency of labor supply for

the shipyards. Its creation in September, 1917, marked the beginnings of affirmative treatment of labor problems by the Corporation in that it was established to develop the shipbuilding working forces and to improve the methods of employment in shipyards. It promoted accordingly industrial training and improved methods of employment, management in the shipbuilding industry, and organized branch departments for the work. These two lines of activity will be described as performed by the Industrial Training Department, which later became the Education and Training Section, and by the later-created Employment Management Branch, respectively. In November, 1917, the Industrial Service Department was given charge of the administrative regulations governing the "Emergency Fleet Classification List" for exempting shipyard workers from military service. Applications that came to the Fleet Corporation for shipyard employment were handled so far as possible in co-operation with the United States Employment Service by this department.

Under the conditions prevailing in November, 1917, with a continual drain of labor from industry into the Army it was recognized that definite action must be taken promptly in order to insure an adequate labor force for the government's ship-construction program. The United States Public Service Reserve was then intrusted with the responsibility of enlisting a reserve of skilled and semiskilled mechanics in nonessential industry who would hold themselves in readiness to go to the shipyards when needed and called. A campaign of publicity was at once begun in fourteen northwestern states. In order to hasten the work, the United States Shipping Board in January, 1918, inaugurated another movement for volunteers. Agreement was then made by which the two recruiting campaigns were merged and extended to cover the entire nation. The Division of Shipyard Volunteers was, on January 16, 1918, placed in charge of the work of publicity and maintaining records. A goal of 250,000 enrolled mechanics was set, and quotas were assigned to each state. The enrolment reached 280,000. Each man was given a button and a certificate and directed to "wait until called." The United States Employment Service was designated as the agency for placing the men in the shipyards.

It pursued the policy of meeting shipyard calls for labor from the unemployed; if there were not enough unemployed to fill a requisition, the balance were drawn from the reserve of volunteers. The Shipyard Volunteers Department in April, 1918, was put under the Industrial Service Department to permit it to assist in the final placement of the recruits in the shipyards in co-operation with the Employment Service. Within a few months this work was abandoned.

(2) Labor Supply Section. The Labor Supply Section in August, 1918, succeeded to the function of the old Industrial Service Department of helping to meet the labor shortage in point of numbers. It was not engaged in actually recruiting labor, but in using the recruiting machinery of the United States Employment Service and co-operating closely with it in every way possible. Plans were under way to make the recruiting for shipyards, as done by the United States Employment Service, more effective by guiding it according to detailed schedules of shipbuilding labor requirements. The Section was also charged with the finding of any new sources of labor that might be available and with assisting the introduction of women in shipyards to the extent of which such introduction might prove feasible and desirable.

During the period of the draft an important phase of labor supply was its relation to military service. The Draft Classification and Transfer Branch of the Labor Supply Section administered the Emergency Fleet List, supplying information as to industrial classification, obtaining the transfer of skilled workmen from the Army, and during the demobilization has arranged to assist in placing discharged and disabled soldiers in shipyards. Through the field organization of the Industrial Relations Division the Section was empowered to do everything possible to see that the labor supply was effectually allocated.

(3) The Industrial Training Department. One original function of the Industrial Service Department was that of directing the administration of industrial training, as a device for building up the forces of shipyard workers. In October, 1917, there were in the country about 12,000 men in wood-ship yards, and approximately 70,000 workmen engaged in the construction of steel ships for the Emergency Fleet Corporation. But there was an immediate or

prospective demand for five or six times as many. Owing to the fact that a large number of the old established yards were engaged on work for the Navy Department, a considerable percentage of the skilled workmen in the yards were not available for merchant-ship construction. The production managers of the Fleet Corporation were, therefore, confronted with the task of quickly increasing by large proportions the effective shipyard working forces. A system of expedited training of skilled workers and of improving the skill of workmen formerly employed at shipbuilding, allied, or other trades proved to be the most effectual method of overcoming the shortage. No similar system seems ever to have been followed elsewhere.

(4) Education and Training Section. The Industrial Training Branch of the Industrial Service Department originated the plan in November, 1917, and the Education and Training Section which was created in May, 1918, fully developed it. A group of fifty-eight staff instructors who had been specially trained for this work under central direction organized and conducted at convenient centers over the country a total of thirty-seven instructor-training schools for teachers of the shipbuilding trades. At first the plan comprised the training only of skilled men to become instructors who were to be made use of by the shipyards in their own way for the training of recruits. An intensive six weeks' course was given to picked men sent by the shipyards. For example, riveters or shipfitters were taken directly from the yards for a time and trained intensively in the principles and practical methods of imparting their knowledge of riveting or shipfitting to green hands. These trained instructors went back to their respective yards to form the teaching staff and carry on the expedited training. The Fleet Corporation reimbursed shipyards to the amount of \$5.00 per day toward the expense of each mechanic sent to take the instructor training.¹ The yards and instructors mutually agreed to maintain for six months at least their relations of employer and employee.

A further development of the plan beyond merely training instructors seemed necessary to the Industrial Service Department, the Training Department, and to the Construction Managers of

¹ See circular letter of November 1, 1917, sent to shipyards and shipbuilding contractors, and signed by the general manager of the Emergency Fleet Corporation.

the Fleet Corporation. The management of a shipyard might fail to utilize the trained instructors to best advantage, either through indifference or failure to appreciate the possibilities of training as a source of labor, or from pressure of time or other circumstances. Advice and assistance in prosecuting a program of training were, therefore, needed. Accordingly the Industrial Training Branch promoted the establishment of separate training departments in the shipyards and made provision for supervising their work. As a result, training of recruits was conducted in about seventy-five shipyards, in a majority of which distinct training departments have functioned. Men were adapted to the work of the various trades while engaged on production in the course of daily work. On an average it required from twenty to sixty or more training days (varying according to the difficulty of learning different trades) for an apt learner to qualify for transfer from a training to a regular job. In order to induce men to enter and in order to insure better supervision of a shipyard's training department the Fleet Corporation provided a bonus of fifty cents a day both to the yard and to the learner during the period necessary for his training.¹ Each trained workman to receive the bonus must remain in the employ of the company a total of seventy-eight days including the training period. The distinctive features of this system were (a) that it involved not the rapid development of a green hand into a full-fledged mechanic, but the adaptation to shipbuilding of men for the most part from nonessential trades or trades allied to the shipbuilding crafts; (b) that the instruction was not given in any formal school or class, but while performing the day's work; and (c) that the plan as executed along these lines has not encountered serious opposition from organized labor. For these reasons the shipbuilding-training program was an invaluable source of labor supply in an emergency, with essential benefits lasting beyond the war period.

The backward state of shipbuilding in this country in 1917 was such that with the suddenly enlarged production program there was urgent need for qualified foremen, superintendents, and even

¹ See circular letter of December 12, 1917, sent to all shipyards and signed by the general manager of the Emergency Fleet Corporation.

executives, as well as other experienced personnel down to the boy who heats or passes rivets. Comprehending this condition, the Education and Training Section, besides carrying out the above-mentioned plan for supplying trained workmen, proceeded in an attempt to deal with the general situation. Three branches of educational activity were developed, therefore, to supplement the training system and meet the personnel needs of the industry.

(a) In recognition of the fact that there is certain auxiliary knowledge essential to a workman in many of the trades which cannot be given "on the job," the Education and Training Section devised plans in the summer of 1918 by which this can be given "off the job" outside of working hours. By arranging with city vocational schools or with the shipyards, supplementary training courses in elementary blueprint reading, ship construction, and nomenclature have been begun or successfully completed for a total of 4,015 persons. Blueprint reading without drawing has been taught with satisfactory results to inexperienced men in ten days.

(b) In order to meet a need for technically educated men, such as naval architects and marine engineers, the branch in technical education ascertained the situation in the shipyards and linked up our technical colleges and schools with the work. Intensive training courses of eleven weeks each were given to eighty-five men, most of whom were either civil, mechanical, or electrical engineers. Two shipbuilding companies and an individual offered thirty-five scholarships of \$100.00 each to men who would take the course. In addition lectures on shipbuilding and ocean transportation were given by the head of the Technical Education Department in forty-seven colleges to arouse interest, and about nine hundred technical men were in this way brought into shipbuilding during 1918. This branch has also been charged with the work of getting knowledge regarding efficient production methods in one yard across to different yards.

(c) The branch in electric welding had for its purpose to overcome the backward condition of the use of welding in building ships. It has sought to develop methods, symbols, nomenclature, and welding processes for instruction purposes. Instructors were furnished who have given electric-welding courses to sixty or more men to

be engaged in ship construction. Finally, the Education and Training Section arranged with a private organization for the giving at reduced rates to shipyards of special lecture courses for the training needs of executive heads and foremen of ship-building companies. These courses were available to any company that desired to take advantage of them, and several schools for shipyard executives have been conducted.

(5) Employment Management Branch. The work of promoting the organization of employment departments, of recruiting, training, and placing employment managers, and of advising in regard to all methods of handling and keeping labor in the yards was a unique step forward in American industrial experience. Yet it met a definite need, and was fraught with distinct national gains to be realized, not merely while the industry was under the pressure of war demands, but permanently. A new industry had suddenly expanded, the labor force for which was consequently insufficient and unstable. This condition was aggravated by the inexperience of the new shipyards in employment and personnel methods. Employers too were bidding among themselves in competition for the available labor. The "turnover" in all yards had become excessive and wasteful.

The art of employment management consists in developing sources of labor supply that will provide a sufficient number of competent employees, in selecting and placing employees in the jobs to which they are best fitted, and making such other adjustments affecting employee relationships in the plant as will promote genuine co-operation and understanding between the management and the employees. It is essentially a production problem.

This constructive activity which the Industrial Service Department originally started in the fall of 1917 was for the improvement of employment management. At first the work was confined to an educational campaign for a better administration of employment methods in the shipyards. Surveys of the employment departments in several yards were later made. In June, 1918, the Employment Management Branch was created in the Industrial Relations Division and it effectually co-operated with the War Industries Board in bringing about later the offering of an intensive

six weeks' course of training in employment management at certain universities. It recruited picked men to take the course either from yard employment departments, or from other sources. The former were, of course, to return to their respective yards after training, while those from outside were held in reserve to be placed in employment managerships as openings developed. The Fleet Corporation reimbursed the shipyards to the amount of \$6.00 per day for the loss and expenses of each man sent from a yard for the training period. In order to induce outside men to take the training and become reserves for placement as employment managers, it also provided a bonus of \$4.00 per day to each man during his course. Both classes of trained managers were under special contract to remain in the employment and service department of their respective yards at least six months. This training program was followed up by definitely promoting the establishment and administration of properly organized employment departments, and by placing trained employment managers in the yards. Consultant and advisory relations with all yards were also maintained through special field representatives as well as directly from the home office.

b) Labor adjustment.—

(1) The Labor Division. The Shipbuilding Labor Adjustment Board in August, 1917, was constituted as the adjustment agency of the Fleet Corporation "when disputes arise concerning wages, hours, or conditions of labor." By wise counsel and administration disputes might, however, often be prevented from arising. On account of the vital factor of labor in building ships the general management of the Corporation, therefore, October 15, 1917, selected as assistant a former trade-unionist and ex-United States Commissioner of Conciliation with advisory duties relating to labor, employment, and wages, who was also to act as special representative of the Fleet Corporation in dealing with labor questions before the Shipbuilding Labor Adjustment Board. But since the Fleet Corporation was the final power for the enforcement of the findings of the Adjustment Board in so far as they applied to merchantship building, there was still a need for a definite agency within the Corporation with a field organization of its own. An agency of

this character, if properly constituted as to personnel and powers, could not only mediate in appropriate cases of impending friction between employers and employees but also act for the Fleet Corporation in all matters pertaining to labor and assist in carrying out the Adjustment Board's decisions. A "Division of Labor" was accordingly created within the Corporation in December, 1917, to serve as an agency of labor supply and distribution, to handle all labor disputes, and to co-operate with the Industrial Service Department, which was now placed in this division, in the industrial training and employment management work. The training program and employment management movement were in these earlier stages continued along lines already described.

There was at times considerable confusion of the functions and jurisdiction of the Labor Division with those of the Shipbuilding Labor Adjustment Board. Under the agreement constituting the Board it was given, but did not at first exercise, the power not only to fix wages and other conditions of employment, but also to conciliate and adjudicate labor disputes in the shipyards. As a mediating and conciliating agency of the Fleet Corporation, the Labor Division differed from the Board in that during its six months of existence it dealt with causes of disputes in the incipient stage, while the Board, representing also the Navy Department, took cognizance at first only of disputes that could not be adjusted by mediation between shipyard employers and employees.

The Industrial Relations Division in May, 1918, superseded the Labor Division and its field representatives were either discontinued or used in other capacities. The labor administration of the Fleet Corporation was thereafter gradually put on a more definite, easily understood, and efficient working basis. The principle underlying the centralization of labor control in the Industrial Relations Division emphasizes the fact that a proper administration of all the elements affecting labor in production prevents the emergence of industrial disputes. Accordingly it has been established that the only contact of the Division with labor disputes in shipyards is its co-operation with the Shipbuilding Labor Adjustment Board in the administration of the Board's rulings. In order to avoid

confusion and for other practical reasons the field organization of the Division has been constituted to serve the shipyards also as the field organization of the Adjustment Board.

(2) Labor Adjustment Branch. The Fleet Corporation was building, not only the hulls of ships in shipyards, but was also furnishing fittings, supplies, and machinery produced in so-called auxiliary plants so as to be able to turn over to the Shipping Board complete ships. One of the most interesting developments in shipbuilding during war time was the breakdown of purchasing by individual shipbuilding companies. Attempted hoardings, delays, and inefficiencies flowing from private purchasing compelled the Fleet Corporation to take over a large part of the purchasing of raw materials and ship equipment and the allocation of these from central storehouses to the individual plants. The problems of the Corporation, both labor and financial, were thereby greatly increased. There were several thousand plants scattered in every section of the country which were producing raw material or equipment directly for the Fleet Corporation and which were as vital to the shipbuilding program as the shipyards themselves. The power that existed to fix wages and conditions of labor in these plants resided in the Corporation by virtue of its reservation of that power in its contracts. Since the auxiliary plants were not included within the jurisdiction of the Shipbuilding Labor Adjustment Board, it was found necessary in August, 1918, to constitute partly out of the old Division of Labor a new Labor Adjustment Branch in the Industrial Relations Division to handle the adjustment of labor disputes in such plants. A representative, called a senior examiner, was placed in most of the supply districts to assist in the field in carrying on the conciliatory activities to which the work of the branch has been confined. The Fleet Corporation did not attempt to exercise the power which it had in respect of the auxiliary plants to fix their wages and conditions of employment because of the part the auxiliary plants were typically producing for other government departments and often for private parties as well. But in order to enable certain plants to complete their supply contracts with the Corporation, the Supply Division did, after investigation, allow (in a few

cases) reimbursements for wage increases deemed necessary to hold their workmen in the plants in view of wage increases authorized by the Shipbuilding Labor Adjustment Board.

c) Administration of living and of working conditions of labor.—

(1) Housing Conditions. One of the most perplexing problems for the shipbuilding and other government production departments was the lack of housing facilities for the enormously increased concentration of labor in certain regions. This was caused by the sudden expansion of war industries, including the multiplication of shipyard plants which in many cases had to be entirely furnished with working forces. For the most part these industrial developments occurred in or near already congested localities. Since the labor force must live where the government's operations were conducted, the need for housing and transit facilities in the winter of 1917 became acute for various shipbuilding centers. As an illustration, the experience of one shipbuilding company may be cited to show the conditions which had to be faced: 18,000 men were employed, 11,000 men were brought in and put to work, and the company had net, at the end of eight months, 400 men. One-half of an absolutely equipped plant was not operated because they could not keep and house the labor in that vicinity.

In order to deal with this situation the United States Shipping Board in the fall of 1917 appointed an advisory committee which made a cursory investigation of housing conditions at the shipyards and recommended action toward relieving the situation.¹ But it was first thought that effective measures could not be taken by the Board, as no special financial provisions had been made by law for such an unlooked-for situation. The problem therefore seemed to be to secure the necessary legislation adequate for the needs when fully determined. In November, 1917, a special assistant to the president on housing for the shipyard workers was appointed by the Shipping Board, and in February, 1918, was made Director of the Housing Department in the Emergency Fleet Corporation. After further consideration the situation was regarded as so acute that action was taken to start government

¹ Hearing before Committee on Commerce, United States Senate, Sixty-fifth Congress, second session, Vol. I, p. 363.

construction of houses at once at the most critical points in view of the insufficiency of private capital for the purpose. Thereafter the Department of Housing and other departments pressed the matter of a congressional appropriation for housing to a successful conclusion in March, 1918.

The housing construction program for shipyard workmen was advocated by the management of the Fleet Corporation as a matter of business necessity for the success of building ships. It was found impossible to get and to keep men in shipyards where housing was lacking. Furthermore, it was recognized that the maximum production of ships depended in final analysis upon efficiency in production, and that this in turn depended upon the maintenance of the highest attainable standard of physical well-being of individual workers, stable conditions of employment, and a minimum labor turnover. These things could only be secured when decent housing facilities were available.

The Department of Housing and Transit Facilities for providing sufficient housing for the enormous increase of shipyard workers was transferred from the General Service Division in May, 1918, to the Passenger Transportation and Housing Division. Its task was so great that it required a very large organization for the purpose. The Housing Division, therefore, never became a co-ordinate part of the Industrial Relations Division. The housing of workers in auxiliary plants has been a less acute problem since such plants are typically located in well-established communities. Where it is acute, it is being handled in co-operation with the Department of Labor Bureau of Industrial Housing and Transportation.

Community conditions and relations in new and congested communities present many difficulties. The Industrial Relations Division has done little in this field. Certain parts of it were covered by the Passenger Transportation and Housing Division. The Secretary of Labor has appointed a Commission on Living Conditions of War Workers in the Bureau of Industrial Housing and Transportation. It is stated that the commission will be equipped to procure and provide recreation, educational facilities, sanitation, law enforcement, and other services and utilities in war-industry centers.

(2) The National Service Section. Assuming a sufficient supply of workmen for the shipyards, the production of shipping tonnage might be retarded because the men were not fully aware of the consequences and importance of their daily work in meeting the country's demand for ships. Unprecedented measures were taken to overcome any obstacles that lay in the way of ship constructions. Thus there was seen to be a need for acquainting the workers in the shipyards with the real situation and for arousing them to their best efforts at production. With this in view the National Service Department was created in January, 1918, and in February it became a part of the General Service Division. It had for its purpose the stimulation of production by means of inspiring and educational patriotic addresses to the workers in the yards. Meetings were held at such times as would not interrupt the schedule of work. A nation-wide campaign was made, which ultimately included besides the shipyards the manufacturing plants producing auxiliary shipping supplies. Enthusiasm was aroused, and generally valuable results are ascribed to the work. In May along with the General Service Division the National Service Section passed for a short time into the Industrial Relations Division. Thereafter it became an independent section and continued its propaganda in aid of production.¹

(3) The Health and Sanitation Section. A Department of Health and Sanitation was established in January, 1918, as a part of the Division of Shipyard Plants. It was given charge of matters pertaining to the health of employees and the sanitation of shipyards or shipbuilding camps. In the main its activities were educational. In May it became a Section in the Industrial Relations Division. It has kept a small staff of sanitary engineers in the field as inspectors of health conditions and standards in the yards. These have sought to co-operate with other medical organizations in the different localities for the improvement of health

¹ After the establishment of the Industrial Relations Division, when some measure of budgetary control of its administration was being effected the National Service Section was projecting annual expenditures of about one million and a half dollars. The management of the Emergency Fleet Corporation deemed it advisable, therefore, to have the Section attached directly to the office of the Ship Production Department, under whose direction the expenditures had been permitted and by whom, presumably, they could be most effectively reduced.

standards and the enforcement of the sanitary codes of the states. This activity was regarded, not merely as a welfare measure for the workers, but as contributing measurably toward their greater efficiency. The work was a duplication to some extent of that for which the United States Public Health Service is fitted until, by an executive order of the President on July 1, it was made a co-ordinate part of the Public Health Service.

(4) The Safety Engineering Branch. Safety Engineering activities were inaugurated by the Fleet Corporation in January, 1918, with the appointment of a chief safety engineer in the Insurance Department. At this time attention was devoted only to the improvement of safety standards and education in government agency and investment plants in which the Corporation was directly interested. But with the establishment of the Safety Engineering Section in June in the Industrial Relations Division the work was extended over all shipbuilding plants, and a field staff of district safety engineers was appointed. Safety activities have been organized in fully 80 per cent of the plants, and visits of inspection and surveys of yard conditions were periodically made. Technical standards of safety specifications for plant construction and equipment have been prepared and made available for the engineering departments of the shipyards with a view to obviating rearrangements to fulfil legislative safety requirements. Much attention was given to the reduction of insurance premiums through merit rating. The importance of educating employees in safety measures to protect themselves and their fellow-workmen has been emphasized through plant safety organizations, meetings, posters, and safety literature. The object of all activity has been the prevention of accidents, not merely as a welfare measure, but as a direct contribution to production.

3. FIELD ORGANIZATION OF INDUSTRIAL RELATIONS DIVISION

This national organization of the labor administration in shipbuilding would, however, have been handicapped in operation, and largely perfunctory in character, without a properly directed local organization for enforcing in the field its policies and decisions. A decentralized field organization was therefore projected and developed during the summer of 1918. In each of the nine

shipbuilding districts into which the country had been divided there were appointed district representatives of the Industrial Relations Division, who had charge in their respective districts of the administrative activities of the Division, as well as serving as examiners for the Shipbuilding Labor Adjustment Board. Attached to each of these district representatives, as his assistants, are the field representatives of the various Sections of the Division. Under this arrangement their work can be carried on in co-operation.

In each of the shipyards of a size to warrant, a yard representative was placed in charge in that yard of all activities of the Division. He was under the immediate direction and control of the appropriate district representative, and acted in the capacity of the man on the ground to help the men and the management in the yards in every way possible in accomplishing the shipbuilding task.

During the brief period in which a decentralized administration has been operating it has demonstrated certain of its merits. (a) The general policies and decisions of the Industrial Relations Division and of the Shipbuilding Labor Adjustment Board have been more expeditiously made known in the shipyards, and hence could be better enforced. (b) Local questions have been also expedited to more satisfactory settlement. (c) Co-operation of the field representatives of the service sections of the Division has been effected, and their work correlated locally and nationally with reference to varying shipyard conditions. (d) Difficulties of the workers and of the management requiring adjustment have been settled on the ground with the assistance of a government representative with a minimum of delay, friction, and uncertainty. Shipyard workers and management have been brought into closer contact, and into a better understanding of the constructive ends that may be realized by a proper administration of labor.

4. RELATION OF SHIPBUILDING LABOR ADMINISTRATION TO OTHER WAR LABOR AGENCIES

Organized administration of labor in the shipbuilding industry represents in its field a type of organization equally adaptable to other government production departments, such as the Ordnance,

Aircraft, Quartermaster, or Navy. Although it developed under war conditions to meet an emergency need in ship production, it recognized the necessity of such control of labor as admits into consideration all elements affecting the life and work of the workmen, including health, sanitation, safety, training, housing, and a large and increasing co-operation of the men in the management. In the exercise of this control the shipbuilding labor administration has necessarily had contacts and relationships with other war-labor agencies. Some of these may now be briefly indicated.

The foregoing general description has presented the development and definition of the relations of the Shipbuilding Labor Adjustment Board and the labor administrative agencies of the Emergency Fleet Corporation. Essentially, the Board is a quasi-judicial body to deal with questions of labor disputes on shipbuilding contract work. Through the Industrial Relations Division the Corporation attempts the enforcement of awards rendered by the Board. An ingenious combination of the field personnel of these two bodies enables the district representatives of the Industrial Relations Division to function in a dual capacity as examiners for the Board. Organic relationship is in this way established and a practical basis is provided for the fullest co-operation.

The National War Labor Board was an adjudicating body for the settlement of any controversy arising between employers and workers in any field of production necessary for the effective conduct of the war, or in which delays or obstructions, in the opinion of the Board, might affect detrimentally such production. A statement of principles and policies which the Board laid down to govern its mediating and conciliatory actions was accepted and embodied as a fundamental part of the labor policy of the shipbuilding labor administration. This concerted agreement constituted an important step toward the formulation of a national labor policy. The National War Labor Board was available to serve in any and every other industry in the same way, and for the same purpose as the Shipbuilding Labor Adjustment Board was originally constituted to act in the shipbuilding industry. But the work and purposes of the Industrial Relations Division of the Fleet Corporation were constructive in character and designed so

that if properly executed there would be a minimum of industrial disputes in shipyards.

The War Labor Policies Board was created with the intention that it should formulate the policies and standards for all the government production departments. Its membership comprised representatives of the War, Navy, and Agricultural Departments, and of the Emergency Fleet Corporation, the Food and Railroad Administrations, the War Industries and National War Labor Boards. The chairman of the Policies Board was assistant to the Secretary of Labor and in charge of the labor administration for the determination of uniform policies to govern all plants. The Board furnished a medium through which the heads of the industrial service branches of all the production departments could counsel and arrive at common ground for the interpretation of labor standards that should be maintained.¹ It also prepared standard forms of contract provisions, for example, as to hours, and woman and child labor, for insertion in contracts thereafter executed by the various departments. The decisions and suggestions of the Policies Board were, however, enforceable only by the departments and agencies represented in its membership. Thus the Industrial Relations Division of the Fleet Corporation had representation in the Board, and accepted its formulations of policy and adopted for insertion in Emergency Fleet Corporation contracts its standard labor provisions. The Division then acted as the administrative body in the shipbuilding industry for carrying out these provisions.

The Department of Labor, as the organized department of the government in labor matters, held a central position of potential influence on developments taking shape in the various lines of government production. In some measure its work and organization have been correlated with a view to meeting and supporting the activities and purposes of the new industrial-service sections in the production departments. Thus, the Working Conditions Service has been organized with sections on Safety

¹ With no wish to be captious, it is not amiss to state what is an open secret, that the Policies Board in practice fell far short of the expectations that were placed in it at its inception. Many topics were considered, wide publicity given to the fact that they were under consideration, endless discussions indulged in, and in the end little or nothing accomplished.

Engineering, Industrial Hygiene and Sanitation, Women in Industry, and Training and Dilution. The Industrial Relations Division of the Fleet Corporation has co-operated closely at every point in utilizing the services of the various bureaus in the Department. The United States Employment Service was used continuously wherever possible for placing all applicants for shipyard work that came directly to the Fleet Corporation. The efforts of the Industrial Relations Division to discourage and prevent the "scamping" of labor by the shipyards were always made in co-operation with the local employment service agencies. The Labor Adjustment Branch of the Division also functioned in conjunction with the Bureau of Mediation and Conciliation of the Department of Labor. These various relations have indicated the way along which further success may be achieved.

Some of the advantages of centralizing the control and administration of all matters of industrial relationship may be now indicated. (a) There was afforded for the first time an opportunity to formulate definitely the labor policy of the Corporation and to organize a comprehensive scheme for decentralizing the administration of labor matters. (b) The closer co-operation of the various sections conduced to the use of similar administrative methods and interpretations of policies and to the avoidance of duplication of work, as in calling for unnecessary reports from the shipyards. It also made possible frequent conference and counsel on the part of the personnel of the Division, and this created an *esprit de corps* and added to the general efficiency. (c) Furthermore, a beginning of budgetary control of the labor administration was now made possible and soon resulted in some economies.

A subsequent article will treat the functioning of the organizations upon the problems faced in shipbuilding during the war, and consider the principles underlying the actions taken. The results can then be evaluated and the defects summarized.

P. H. DOUGLAS

Reed College

F. E. WOLFE

Ohio Wesleyan University