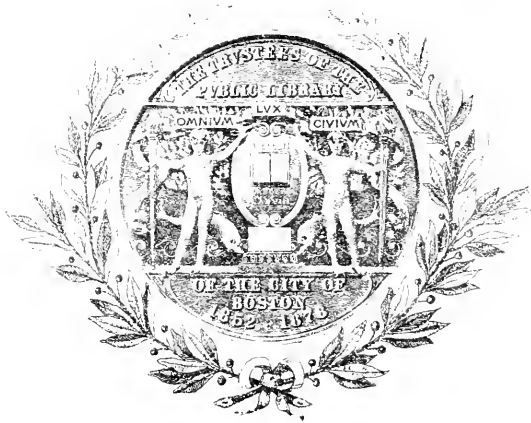


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NATIONAL DEFENSE MIGRATION

HEARINGS

BEFORE THE

SELECT COMMITTEE INVESTIGATING

NATIONAL DEFENSE MIGRATION

HOUSE OF REPRESENTATIVES

SEVENTY-SEVENTH CONGRESS

FIRST SESSION

PURSUANT TO

H. Res. 113

A RESOLUTION TO INQUIRE FURTHER INTO THE INTERSTATE
MIGRATION OF CITIZENS, EMPHASIZING THE PRESENT
AND POTENTIAL CONSEQUENCES OF THE MIGRA-
TION CAUSED BY THE NATIONAL
DEFENSE PROGRAM

PART 20

WASHINGTON HEARINGS

OCTOBER 28, 29, 1941

Printed for the use of the Select Committee Investigating
National Defense Migration



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OCTOBER 28, 29, 1941

Printed for the use of the Select Committee Investigating
National Defense Migration



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1941

SELECT COMMITTEE INVESTIGATING NATIONAL DEFENSE
MIGRATION

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CONTENTS

	Page
List of witnesses-----	V
List of authors-----	VII
Tuesday, October 28, 1941-----	8015
Testimony of Donald M. Nelson-----	8015-8020
Statement by Donald M. Nelson-----	8016
Testimony of panel of industrial engineers-----	8033
Testimony of Morris L. Cooke-----	8033-8068
Statement by Harlow S. Person-----	8034
Testimony of Harlow S. Person-----	8039
Statement by Morris L. Cooke-----	8042
Statement by S. T. Henry-----	8074
Testimony of S. T. Henry-----	8076
Statement by Alex Taub-----	8080
Testimony of Alex Taub-----	8081
Exhibits by panel of engineers-----	8093
Program for speeding defense effort and reducing unemployment and migration, by Morris L. Cooke, S. T. Henry, Harlow S. Person, and Alex Taub-----	8093
Employment in metalworking industries and utilization of plant facilities, by A. F. Hinrichs, Acting Commissioner, Bureau of Labor Statistics, United States Department of Labor-----	8095
Wednesday, October 29, 1941-----	8109
Statement by Arthur E. Burns-----	8109
Testimony of Arthur E. Burns-----	8123
Testimony of J. Douglas Brown-----	8133
Statement by J. Douglas Brown-----	8151
Testimony of Eric H. Biddle-----	8153-8169
Statement by Eric H. Biddle-----	8154
Introduction of exhibits-----	8176
Exhibit 1. Retraining and transference in the post-war economy, by Dr. Oscar Weigert, American University, Washington, D. C.-----	8177
Exhibit 2. Use of radio by United States Employment Service, by W. L. Mitchell, acting director, Social Security Board, Federal Works Agency, Washington, D. C.-----	8182
Exhibit 3. Press release, August 9, 1941, by Labor Division, Office of Production Management-----	8184
Exhibit 4. Placement, types of jobs, and States of origin in clearances through National Youth Administration regional centers, by Aubrey Williams, administrator, National Youth Administration, Federal Security Agency, Washington, D. C.-----	8185
Exhibit 5. Labor policies of major auto and supply companies as they affect migration, by Victor G. Reuther, assistant coordinator, United Automobile Workers, Congress of Industrial Organizations, defense employment division-----	8191
San Diego Exhibit 29. Survey of Housing and Migration by Consoli- dated Aircraft Corporation, San Diego, Calif.-----	8199
Index-----	8211

LIST OF WITNESSES

WASHINGTON HEARINGS, OCTOBER 28, 29, 1941

	Page
Biddle, Eric H., consultant, American Public Welfare Association, Washington, D. C.-----	8153, 8169
Brown, J. Douglas, chief, priorities branch, Labor Division, Office of Production Management, Washington, D. C.-----	8133
Burns, Arthur E., economic adviser, Work Projects Administration, Federal Works Agency, Washington, D. C.-----	8123
Cooke, Morris L., chairman, Shipbuilding Stabilization Committee, and technical consultant, Labor Division, Office of Production Management, Washington, D. C.-----	8033, 8068
Henry, S. T., assistant to the president, McGraw-Hill Co., New York, N. Y.---	8076
Nelson, Donald M., executive director, Supply Priorities and Allocation Board, Office of Production Management, Washington, D. C.-----	8015-8020
Person, Dr. Harlow S., consulting economist, Rural Electrification Administration, Department of Agriculture, Washington, D. C.-----	8039
Taub, Alex, technical consultant, Office of Production Management, recently appointed Chief of Conversion Section, Contract Distribution Division, Office of Production Management, Washington, D. C.-----	8081

LIST OF AUTHORS

OF PREPARED STATEMENTS AND EXHIBITS

	Page
Biddle, Eric H., consultant, American Public Welfare Association, Washington, D. C.-----	8154
Block, Dr. Herbert, research worker, New School for Social Research, 66 West Twelfth Street, New York, N. Y.-----	8056
Brown, J. Douglas, chief, priorities branch, Labor Division, Office of Production Management, Washington, D. C.-----	8150, 8151
Burns, Arthur E., economic adviser, Work Projects Administration, Federal Works Agency, Washington, D. C.-----	8109
Consolidated Aircraft Corporation, San Diego, Calif.-----	8199
Cooke, Morris L., chairman, Shipbuilding Stabilization Committee, and technical consultant, Labor Division, Office of Production Management, Washington, D. C.-----	8042, 8093
Employment and Occupational Branch, Bureau of Labor Statistics, Department of Labor, Washington, D. C.-----	8102
Henry, S. T., assistant to the president, McGraw-Hill Co., New York, N. Y.-----	8074, 8093
Hinrichs, A. F., acting commissioner, Bureau of Labor Statistics, Department of Labor, Washington, D. C.-----	8095
Labor Division, Office of Production Management, Washington, D. C.---	8184-8201
London and Southeastern Regional Board, London, England-----	8052
Mitchell, W. L., acting executive director, Social Security Board, Federal Security Agency, Washington, D. C.-----	8182
Nelson, Donald M., executive director, Supply Priorities and Allocation Board, Office of Production Management, Washington, D. C.-----	8016
Person, Dr. Harlow S., consulting economist, Rural Electrification Administration, Department of Agriculture, Washington, D. C.-----	8034, 8093
Reuther, Victor G., assistant coordinator, United Automobile Workers Congress of Industrial Organizations, defense employment division, Detroit, Mich.-----	8191
Taub, Alex, technical consultant, Office of Production Management, recently appointed Chief of Conversion Section, Contract Distribution Division, Office of Production Management, Washington, D. C.-----	8080, 8093
United Automobile Workers of America, Congress of Industrial Organizations, Detroit, Mich.-----	8191
Weigert, Dr. Oscar, associate professor of comparative social legislation, American University, Washington, D. C.-----	8177
Williams, Aubrey, administrator, National Youth Administration, Federal Security Agency, Washington, D. C.-----	8185

NATIONAL DEFENSE MIGRATION

TUESDAY, OCTOBER 28, 1941

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE INVESTIGATING
NATIONAL DEFENSE MIGRATION,
Washington, D. C.

The committee met at 10 a. m., in room 346, House Office Building, Washington, D. C., pursuant to notice, Hon. John H. Tolan (chairman) presiding.

Present were: Representatives John H. Tolan (chairman), of California; John J. Sparkman, of Alabama; Carl T. Curtis, of Nebraska; and Richard J. Welch, of California (guest).

Also present: Dr. Robert K. Lamb, staff director, and Mary Dublin, coordinator of hearings.

The CHAIRMAN. The committee will please come to order. The first witness will be Mr. Nelson, of the Supply, Priorities, and Allocations Board.

TESTIMONY OF DONALD M. NELSON, EXECUTIVE DIRECTOR, SUPPLY, PRIORITIES, AND ALLOCATIONS BOARD, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.

The CHAIRMAN. Mr. Nelson, we appreciate very much your coming here this morning, as well as your last appearance before this committee.¹ I wish to repeat to you that we are simply a fact-finding body. We do not cross-examine witnesses.

The committee was appointed a year ago last April for the purpose of investigating the interstate migration of destitute citizens. We have made our report to Congress on that subject, but in response to a persistent demand from many sources throughout the Nation, the Congress voted to continue our committee for the purpose of investigating national defense migration. Our first field hearing since that time was held in San Diego, which is one of the "hot spots" of defense migration in the United States. The city has had an increase of 100,000 in population on account of the defense effort.

Then we came back east to hold hearings in Hartford, Trenton, and Baltimore, and recently we conducted an investigation in Detroit.

Having read your statement, Mr. Nelson, I can appreciate the tremendous responsibility that has been placed upon you in your position as executive director of S. P. A. B. Our committee got the

¹ Mr. Nelson testified before the committee on July 17, 1941, in his then official capacity as director of the Division of Purchases, Office of Production Management. (See pt. 16, Washington hearings, July 15, 16, and 17, pp. 6575-6620.)

impression in Detroit that industrial dislocation, and the unemployment and migration which result from it, could best be alleviated by speeding up the defense program, so as to utilize all manpower and resources, and, of course, in accomplishing this, we shall be achieving our primary objective of insuring the safety of our country.

We are pleased to have you here again, Mr. Nelson. Our witnesses today include, in addition to yourself, a panel of very capable industrial engineers, who will endeavor to indicate from the technical and managerial viewpoint how defense production can be accelerated and dislocations minimized. This panel will include Mr. Morris L. Cooke, Dr. Henry S. Person, Mr. S. T. Henry, and Mr. Alex Taub. No doubt you are acquainted with some of them.

Mr. NELSON. Yes, sir.

The CHAIRMAN. I should like to add here that the interest of this committee in these over-all problems arises from the fact that there is today increasing dislocation in American industry, which in turn is spreading unemployment and at the same time threatening distress migration out of nondefense communities to centers where defense production is still expanding. These hearings, in addition to providing information for the use of numerous other individuals and agencies, enable us to have an informed opinion on which to base proposals of new legislation to Congress. We were pleased to learn of the agreement between General Motors and the U. A. W.-C. I. O.,¹ and also of the recent revision of estimates on the convertibility of auto production facilities. I also want to say at this time that I think the most compelling observation you make in your paper—and I think it is one that will catch the ear of the public—is [reading]:

One of the basic problems therefore is not how to distribute the gains but how to distribute the sacrifices and at the same time get the maximum of defense and other essential production.

I think that is a very fine statement.

Mr. NELSON. That is the root of the matter, Mr. Chairman.

The CHAIRMAN. Mr. Sparkman will now ask you some questions.

Mr. SPARKMAN. Mr. Nelson, your prepared statement will go into the record as it was presented to us. We have all read it over with much interest.

(The statement referred to above is as follows:)

STATEMENT BY DONALD M. NELSON, EXECUTIVE SECRETARY, SUPPLY, PRIORITIES, AND ALLOCATIONS BOARD, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.

I should like to state that I am personally in entire accord with the twofold objectives of your committee: first, to offer recommendations for alleviating consequent problems, where migration is a necessary corollary to defense activity; and second, to avert all unnecessary migration through minimizing defense dislocations.

In previous testimony before you, I have explained in detail my reasons for believing that we should do everything practicable, consistent with our defense needs, to prevent the immediate and the long-run undesirable results of large, unmanageable labor migrations. Among the practicable steps at our disposal is the allotment of defense orders to firms located where there are adequate supplies of labor. Labor supply is one of the important factors in allotment, both of supplies contracts and of construction contracts. But there are other factors, such as strategic requirements, supplies of materials, and technological conditions, which in many cases outweigh labor considerations and force a compromise decision. Then certain limited labor migrations may be necessary.

¹ See Exhibit 5, p. 8192.

So far as apportioning of defense contracts is concerned, responsibility has been given, as you know, to Mr. Floyd Odium's Contract Distribution Division, which works closely with defense contract officials in the military establishments.

Supply, Priorities, and Allocations Board, however, recognizes that labor migration may be caused not only by the geographic distribution of defense contracts, but also by the manner in which businessmen producing nondefense goods make their decisions concerning rate of operations. If output is curtailed, whether in large plants or small ones, unemployment must follow, and workers will have to look elsewhere for jobs. The ideal situation would be that these workers could find new employment close by, either because of a growing volume of defense business coming into the locality, or because non-defense industries were able to expand output to meet civilian demand.

All possible efforts should be made to approach this ideal situation. But there are limiting factors imposed by the nature of the defense program. In the first place, there are shortages of a number of materials, with the result that many plants face unavoidable curtailment. In the second place, technical matters such as the nature of machinery and equipment, the experience of labor and management, the special requirements of defense items for small tolerances, rigid inspection, and so on, make conversion of the curtailed plant difficult.

Now it is obvious that management itself plays an important role in the migration picture. Management can exercise much ingenuity in devising ways and means, through adaptation of plant, through simplification of design and substitution of materials, to avoid curtailment of operation. But in many cases this way out may prove too difficult and labor will be forced to move.

I do not believe that this Nation can afford to look upon its defense program as a boom or a gold mine. By its very nature, a defense program on so large a scale as ours means sacrifice, readjustment, economic loss. Arms and munitions do not enter into ordinary trade and consumption. The energies given to their production cannot also be given to ordinary peacetime pursuits.

DISTRIBUTION PROBLEMS

One of the basic problems, therefore, is not how to distribute the gains but how to distribute the sacrifices and at the same time get the maximum of defense and other essential production. At this time, there is a considerable amount of confusion among businessmen concerning their role, as makers of managerial decisions, in this program. Such confusion at the present time seems inevitable, and its removal is a problem common to government and business. As a matter of fact, the Government is acutely aware of the fact that confusion and uncertainties exist in business. Mistakes have, of course, been made, both by defense agencies and by business agencies. These mistakes are part of the cost of building up so vast an effort in so short a time. A successful business enterprise is often the result of many years of trials and errors. We are now going through the growing pains of rapid expansion. Probably business never before expanded at such a rate. From July 1940 to September 1941, actual expenditures for defense increased every month except two, over the preceding month, by amounts up to 50 percent per month. Confusion and growing pains cannot be avoided under such conditions, but aggressive efforts can be made to minimize such pains.

One step recently taken to aid in reducing and finally eliminating the confusion was the Executive order creating the Supply, Priorities, and Allocations Board. This Board, designed and functioning as a policy-making agency, has already, as you know, embarked on the task of establishing major, over-all policies as guides to the adjustment of industry to the needs of the national emergency.

One of this Board's first declarations, on September 2, was, in part: "The Board realizes the magnitude of its task. It recognizes as well that success requires a vigorous, united effort on its part together with unstinted cooperation from the public in accepting certain responsibilities necessary in the defense of our democratic institutions.

POLICY OBJECTIVES OF BOARD

"Our general policy is simple. Production shall be stimulated and organized to the limit of the Nation's resources. Every available man and machine must be employed either on direct defense requirements or at work essential to the civilian

economy. Along this road lies protection of our freedom and of the basic economy to maintenance of that freedom."

More specifically, the Board faced squarely the issue of eliminating the economic fat. It said: "We must forego the less essential, that we may have an abundance of the more essential. * * * Wherever possible to convert the less essential to military or essential civilian production, this will be done. Every means will be employed to expedite this process with a minimum loss of time for men and machines. But the less essential must go. This means working off the fat and hardening the muscles."

In this connection, I think we should not overlook the fact that Great Britain and her allies are said to be giving about 50 percent of their total productivity to making munitions and the other needs of war, while we here are not yet giving over 20 percent of our productivity to that effort. Nor should we for a moment forget that modern war is economic war, that it means battles of production behind the actual fighting lines, and that the production battles are decided not alone by materials but by labor and management.

To outline further the policy objectives of Supply, Priorities, and Allocations Board, I should like to add certain other declarations:

(1) "* * * * While recognizing that the civilian economy must be stripped of nonessentials, it must be kept in good running order and in more than stand-by condition.

(2) "Those materials, which may be hoarded * * * will be routed out and put to use where most needed in military and essential civilian production.

(3) "Scare buying against imaginary requirements of the future will be discouraged effectively.

(4) "The goal our country must reach to perpetuate our freedom and to assure victory for all who share our democratic philosophy means sacrifice. But we must make certain that sacrifices are not imposed because we are wasteful; because we fail to look ahead, or because proper use is not made of all available materials, men, and machines.

(5) "The Board believes that if the public knows why it must forego certain comforts * * * why, in substance, the fat must go and the muscles be strengthened, the cooperation vital to success will be had in full measure."

Following these and similar policy declarations, Supply, Priorities, and Allocations Board has met a variety of issues by—

(1) Denying of application for construction of a certain nondefense plant requiring large amounts of scarce and critical materials.

(2) Ordering compilation of full schedules of military and civilian requirements as far ahead as possible, to be broken down into schedules of raw materials, labor, and machinery needed for production.

(3) Planning for expansion of supplies of critical metals, and of certain dairy products.

(4) Permitting manufacture of commercial transport planes designed according to certain military needs.

(5) Refusing to issue priorities for the construction of nonessential public or private construction projects which use critical materials such as steel, copper, brass, bronze, aluminum, and so on.

(6) Putting in motion programs for collecting data on inventories of essential materials, in whatever hands they may be found.

(7) Providing for getting information from the appropriate divisions of Office of Production Management relating to the status of labor supply, labor training, machine tools and equipment, and plant and mine expansion projects.

These policies either have the effect of defining objectives, or of limiting specific actions by industry. These policies do not undertake to tell any individual what to do or how to do it, within the areas of action left open to him. And that is where the opportunities for individual initiative and individual planning are found. That also is where the responsibility for efficient action is placed so largely on the individual.

In responding to these opportunities, the individual business executive has ordinarily these choices:

CHOICES GIVEN THE BUSINESSMAN

First: To continue in his ordinary activity. This choice may not be easy. Risks of materials shortages, of competition for labor, of shifting demand, must be calculated in the light of the facts arising from a change-over in the total economy. To anticipate correctly the effects of cutting off the fat is

no simple problem. It may, in a given case, call for great ingenuity in re-designing of products through simplification, standardization, or substitution. Planning of an unusually high order, therefore, is called for.

Second: The businessman may choose to seek direct defense orders or be a subcontractor. Typically, these orders call for special production techniques, for plant conversion or expansion, for retraining of labor and supervisors. Furthermore, they call for different, and often more stringent, inspection methods.

Planning for direct defense orders also raises problems of pricing, financing, negotiating; of subcontracting, with its corollary problems, and of foreseeing post-emergency conditions.

Third: A businessman may choose—and this choice may in many instances require the greatest risks and therefore the greatest courage—to separate himself from a job he regards as nonessential in order to seek out an opportunity for rendering service to the Nation.

All these choices may involve special economic risks and sacrifice, perhaps long-lasting dislocation. Yet there is no reason to doubt that, in the interest of national unity and of speed in getting the job done and done well, the individual businessmen of this country will make these choices willingly. And if the initiative of the individual is applied energetically to the job of planning how to carry out his choice, there can be no doubt about the final outcome.

To speed up and direct the application of all industrial energy to the needs of the emergency, it seems to me that we must solve two basic problems. I should like to describe them briefly, and also to report that the process of finding solutions for these problems is already well under way. At this moment, I cannot give final answers to the problems, nor can I forecast in specific detail what administrative machinery will be set up to translate the solutions into action.

WHAT IS "MORE" AND WHAT IS "LESS" ESSENTIAL?

The first of these problems is to work out acceptable definitions, or guides to definitions, of what is "more essential," and what is "less essential." Our economy is complex, and we are going through the process of shifting a substantial and increasing portion of our productivity to direct military needs. Thus our consumption of metals in the production of arms, munitions, planes, ships, and so on has risen so greatly as to curtail and in some instances prevent the production of nonmilitary items. But we must not blindly divert too much, nor divert it either too soon or too late. The reason is simply that military demand is not the only essential demand. Our total economy, though it may be lean, must continue to function effectively. Otherwise, the military program itself would be jeopardized and might even fail of its goal. Health, safety, and good morale are economic essentials, and the supply of goods and services necessary to maintain those essentials cannot be permitted to fall below minimum levels. To determine what those levels are, and how to assure adequate economic supplies to support them, are parts of the problem of defining "more essential" and "less essential."

The other problem which I wish to present is that of coordinating the demands for essential goods and services with the supply. This is chiefly a problem in making a time schedule of the more essential demands—military and non-military—and then projecting allotments of materials and plans for production adequate to meet these scheduled demands. I need not emphasize the complexities of this task, but I should like to make clear the crucial importance of the time scheduling of total essential requirements.

Our experience to date indicates that mechanisms either exist or can be developed for coordinating demand and supply in such a way that industry will know fairly definitely what is ahead. Among the mechanisms are output curtailment programs, some of which already have been announced. For instance, the automobile industry will be curtailed on a percentage of finished output, or end-product basis. Copper, in contrast, will be controlled from both sides of the production structure: i. e., by curtailment of end products, and also by the mechanism of specific allocation of copper supplies to uses classified as essential.

In the application of these and other coordinating mechanisms, every attempt is being made, and will continue to be made, to avoid arbitrary or unfair discrimination among industries and individual plants. For this purpose, it is my hope to see the establishment of basic policies stating the principles to be followed in curtailments, allocations, and other coordinating mechanisms. These principles should cover such questions as maintenance of essential economic functions, and minimizing of actual economic hardships.

Now, there must be no question about the absolute necessity for restrictive and, in some cases, prohibitory economic policies. Shortages exist now and more shortages will develop, no matter how persistently we seek to expand the mining, processing, and finishing of essential materials.

But likewise, there must be no doubt about the emergency nature of our interference with the normal workings of a free economic system. One of our objectives is to maintain present freedom of business action as fully as is consistent with the emergency program we are building. Another objective is to preserve the framework of our economic system so that the post-emergency economy may return as quickly as possible to its normal ways of operating as a free economic society.

TESTIMONY OF DONALD M. NELSON—Resumed

Mr. SPARKMAN. I am not going to ask you at this point to describe the authority of S. P. A. B. or its administrative functions in greater detail than you have outlined them in your paper, because I believe that information will develop as we go along. Instead I would like to direct your attention to a more comprehensive question, which is well summarized in the prepared statement of Dr. H. S. Person, well-known economist and a member of the panel of industrial engineers who will follow you on the stand.

Dr. Person has this to say in his prepared statement:¹

The radical, the effective, the urgent step is still to be taken. There is still to be set up an agency, with the authority of common consent as well as of law, and with the competence of technical knowledge, whose task will be to organize all the plants of the Nation into one great coordinated national plant along the same lines in which the best-managed medium-sized plants are now organized.

We are very much interested in this quotation because at the time when your Board was established, we understood it was to do this very thing. Now, if Dr. Person is correct, we would like to have you tell the committee what your Board lacks to make it adequate to this task.

KNOWLEDGE OF TOTAL NATIONAL REQUIREMENTS ESSENTIAL

Mr. NELSON. Well, sir, in my opinion the one thing that has been lacking around here for some 14 months—and I believe it is no one person's fault—is a full knowledge of what the requirements are going to be. I can't hold the Army or the Navy to blame for that. If we look back at our situation 14 months ago and compare it with what we can see today, I think every one of us will realize that we are a good deal further along in the realization of the job.

To me the job is perfectly clear, although perhaps the magnitude isn't clear yet to the Nation. The President said last night: "Our job is to see that Hitler is licked." Now, just how much of a program that involves, how large the commitment for this Nation to undertake, has never yet been put on paper. However, I think progress is being made in that direction.

I think the whole question of what our industrial plans ought to be starts with the knowledge of what our requirements are. The first action that S. P. A. B. took was to request this information of the Army and Navy through its executive director. I submitted

¹ Dr. Person's statement appears on pp. 8034 ff.

that request, and we are now getting complete cooperation from the Army and Navy in our efforts to determine what all-out requirements may be for the defense of this country. Given that, given the knowledge of how many airplanes we need, how many tanks and anti-aircraft guns, how many implements of war of all kinds, and then given a schedule for delivery, we can proceed to do the very thing that Dr. Person talks about, and which I think is very essential. I have thought for a great many months that we need to know what our over-all requirements are, we need to know our time schedule; and having that information, it is comparatively easy for the President to organize the production set-up and the machinery for control. The S. P. A. B., or Supply, Priorities, and Allocations Board, sets major policy. It is appointed by the President with the authority to make decisions—decisions which can be overruled only by the President himself.

Now, you have that agency to make major decisions of all kinds. You have O. P. M., set up as a production organization to see that the materials are obtained, to see that purchases are well coordinated, to see that production is well planned. And I believe that if we start with some knowledge of what our problem is, what our requirements and time schedule are to be, then we can go about the job of properly planning the production of those materials which are needed, not alone for our own defense program, but to aid our friends and those who can put such weapons to good use in seeing that Mr. Hitler is licked.

That would be my first answer. I think anyone will say that the first thing you must do, if you have an industrial planning job on your hands, is to inform yourself on these questions: What are your aims? What are your requirements? How much time do you have?

AGENCIES HAVE NECESSARY AUTHORITY

Mr. SPARKMAN. If and when the requirements are known, then, it is your opinion that the present agencies do have the authority or the power to execute that program?

Mr. NELSON. Yes, sir. In cooperation with the Army and Navy, those agencies can see to it that we go ahead efficiently. If they don't do it, it can only be because of a lack of ability.

Mr. SPARKMAN. We all are attempting to realize the immensity of this program.

Mr. NELSON. That is what I want to make plain now.

Mr. SPARKMAN. And only a few days ago the President said it was to be greatly stepped up, probably doubled.

Mr. NELSON. Yes, sir.

Mr. SPARKMAN. In your statement you say this on the policy of your Board: "S. P. A. B. does not undertake to tell any individual what to do or how to do it within the areas left open to him."

Does this mean that if a firm does not choose to put its resources into the defense effort it will be free to stay out regardless of the contributions it might make?

Mr. NELSON. No, sir. That is not what was meant. A firm is not free so to choose. We have all the power and prestige that is needed to have that firm come in. We have the commanding section of the Selective Defense Act, and that act, implemented with a requisition clause, has been passed by Congress and signed by the President.

There is ample authority today vested in the proper agencies to bring anyone into this defense program whose services are absolutely essential.

S. P. A. B., in its decisions, has not been trying to tell people what to do. Rather, it has been trying as far as possible to eliminate uncertainty in people's minds. I think one of the most serious causes of confusion is uncertainty. In the businessman's mind, if there is uncertainty as to how many automobiles he is going to be able to make, for example, he is unable to plan his production and sales programs. His employees feel uncertain. His dealers feel uncertain. The public feels uncertain. Now, if you have a mechanism whereby that question can be settled—namely, the number of automobiles for which we can spare material, which is the determining factor in these limitation programs—this will eliminate the uncertainty in the picture.

LIMITATION PROGRAMS

These limitation programs, which have been prepared by the Division of Civilian Supply, will be made public so that each manufacturer will know about how big his own job will be. It should be perfectly apparent to the country at large that we cannot undertake this job and at the same time continue with "business as usual." It can't be done. We haven't the materials or the resources to do it, for the simple reason that as we spend more and more money, our civilian economy keeps on rising, until we are stymied. People make more money and they want to spend the money they have. They are perfectly willing to buy anything that they feel they want. It is obvious that we cannot carry through the defense effort and at the same time take care of the wants of the civilian economy on such a rapidly expanding national-income basis. It simply can't be done. It physically cannot be done. Therefore, the defense program must go forward, and the civilian economy must accommodate itself to the requirements of national defense.

This is all part of the same thing I discussed in answer to the first question. When we know the situation that is ahead of us, and we know our total resources, we are then able to determine how much material and services can be allowed to go into civilian production and how much must be reserved for the military. That is the job that I believe confronts us today. And under the Executive order of the President, S. P. A. B. can make major decisions applying to this whole field.

MR. SPARKMAN. When the information you mention is provided the Government agencies, then it will be their intention to give the businessman an opportunity to place his plants and resources at the disposal of the defense effort; but, failing in that, it is your opinion that there is ample authority already lodged in the proper Government officials to force him to do so. Is that correct?

MR. NELSON. Yes, sir; definitely.

MR. SPARKMAN. Suppose he was running two shifts, and it was felt he ought to be putting in three shifts. Could he be made to do that?

MR. NELSON. Well, I am not a lawyer and, therefore, I shall not attempt to answer categorically. As a matter of fact, that question hasn't come up. The question of whether you run one, two, or three

shifts depends largely on the circumstances of the individual plant. In some instances a three-shift operation is not as productive as a two-shift operation.

Mr. SPARKMAN. I was speaking of shifts only by way of illustration. What happens if the determination is reached that the firm is not producing to its utmost?

BOARD HAS AMPLE AUTHORITY

Mr. NELSON. I believe, sir, that there is ample authority to force such a firm to do so. It is my experience, however, in every case so far, that when that problem was put up to an industry, the industry has responded. I don't know of a single case in which an industry, having been shown a necessity for defense, has not made provision to take care of it.

Mr. SPARKMAN. That question was prompted by another part of your prepared statement, in which you say—

production shall be stimulated to the limit of the Nation's resources. Every available man and machine must be employed, whether on direct defense requirement or at work essential to the civilian economy.

Mr. NELSON. When we see the size of the program that is ahead of us, we are going to realize that it cannot be accomplished unless those conditions are fulfilled.

Mr. SPARKMAN. And you believe that ample authority exists to see that they are?

Mr. NELSON. Yes, sir; I do.

Mr. SPARKMAN. In the Detroit hearing, in reply to charges made by the United Auto Workers Union that the motor companies, in order to extend a profitable season, had refused to convert their facilities, automobile manufacturers replied that not one manufacturer has ever refused a request for production. Do you know how many manufacturers have been requested to make a specific item on the basis of an appraisal of their facilities? Is it a considerable number?

Mr. NELSON. I don't know how many. It is a very considerable number, and I don't know of any refusals.

Mr. SPARKMAN. You have always met with a good response and cooperation?

Mr. NELSON. In the situation affecting the automobile industry there was a difference of opinion at the start as to whether or not the machinery of the industry was adaptable to defense production without a great many changes. I heard the statement made by perfectly reputable people that only 20 percent of the machinery was adaptable. I think that has changed. I think that since then we have found ways and means of adapting that machinery, and will find ways and means of adapting it still further. I think our conception of the kind and type of machinery that can be adapted has changed, and is going to change a good deal more before we are through.

CONVERSION PROGRESS NOT SATISFACTORY

Mr. SPARKMAN. Is it your feeling that there has been satisfactory progress in the program of converting industry to the production of war materials?

Mr. NELSON. No, sir; I do not.

Mr. SPARKMAN. You do not think that conversion has come about as fast as might have been expected?

Mr. NELSON. I don't think so. I think there has been too ready an acceptance of the theory that in order to produce effectively we must buy new tools rather than adapt old tools to this production. I think the English and German experience shows quite clearly that you don't always need specially designed single-purpose machinery to be able to accomplish the objective.¹ True, it may cost more money, and it may not be quite as efficient. But I am of the opinion that a great deal of the present machinery of industry can be converted to the making of materials for defense. That comes about through a change in tolerances, due to ability of management to do the job, ability of the industry to adapt itself; and as I have said in this statement which I have given to you, I think management has to be more flexible. I think it is a two-way proposition. Management has to be more flexible and adapt itself more readily to what is needed, just as we in Washington must be more flexible in seeing this adaptation through.

Mr. SPARKMAN. Mr. Morris Cooke, who appears on the industrial engineers' panel which follows you, has submitted to this committee a statement which is sharply critical of the Army's present procedures and their training and ability for mobilizing defense production. I am quoting from the summary of his statement.

The Army, Navy, and Maritime Commission place all purchase orders. But these agencies are reluctant to assume any part of the responsibility for what happens under the contract, and seem to practice about the minimum of follow-up. The attitude is too legalistic for war. Procurement, which is the type of buying practiced by the military, is fairly easygoing and is not at all the equivalent of the term "production" as used in private industry where volume and tempo are what really count. Too much dependence is placed on the contractor, and as a rule too little pressure kept on him to do better than what he claims to be his best.²

What are your views on this statement?

Mr. NELSON. I should say, first, that the Army has the basic responsibility for getting the implements of war that it needs. It places the specifications. I also think the degree of adaptability required depends a great deal upon the size of the program which is contemplated. When we were thinking of this whole defense program in terms of a \$7,000,000,000 or a \$15,000,000,000 effort, if I had been a procurement officer for the Army or Navy, I would have wanted to place the contracts for that amount wherever the work could be done for the least amount of money. But I have always said that the way to force better buying, better distribution of orders, was to increase the size and tempo of the program. Then necessity would require that a great many things be done which were not forced under a narrower concept of the program, the program needed to attain the objective which I saw in the offing—namely, to see that Mr. Hitler was licked.

Mr. SPARKMAN. Now, I want to quote from the statement of Dr. Person, who will also appear on the engineers' panel. We may seem to be checking up on those fellows through you, but it is all related.

Mr. NELSON. I believe it is, sir.

¹ See pp. 8052-8056, and 8058-8068.

² Complete statement appears on pp. 8042-8052.

Mr. SPARKMAN. Dr. PERSON has come to the parallel conclusion that I got from Mr. Cooke. He says:

The military establishments appear to have no basis in experience for competent inventorying of national facilities and for organizing and following up production processes on a national scale.

He suggests further that a civilian group "skilled in engineering and the direction of production" be assigned the task of scheduling production, either as part of the military or as part of a separate over-all planning board. Do you think that the adoption of either of these suggestions would accelerate the defense program?

CIVILIAN DIRECTION OF PRODUCTION SCHEDULING SUGGESTED

Mr. NELSON. On that subject I would refer you to the chronological account of the development of the present organization. As I understand it, the obligation of O. P. M. in this connection is just that. They have civilian experts who work with the Army and Navy to assist them as the program develops. There can be more of a dependence upon those experts and better men will be brought in to take over. I do not mean to say that we necessarily have to have the present type of organization. But with O. P. M. set up, I have felt that it could be a means of bringing in the best civilian brains in the United States to help the Army and Navy. That is what I have always conceived the job of O. P. M. to be.

Mr. SPARKMAN. I want to refer to another member of the forthcoming panel, Mr. Henry. He has suggested that every contract that has a completion date beyond June 1942 be reexamined to determine (1) where more machine-hours per day and man-shifts per week could possibly be put to work on the contracts within the plants of the prime contractor (that is, go from a one or one-and-a-half shift basis as is prevalent in many defense plants to a three- or four-shift basis), and (2) how much of the contract could be farmed out to other factories which are not now completely occupied with defense work.¹ Do you agree with that?

Mr. NELSON. It is a very sensible suggestion. I am certain it is. I would go along 100 percent with it.

REEXAMINATION OF CONTRACT COMPLETION DATE

Mr. SPARKMAN. Would you also suggest that all outstanding large contracts, regardless of their completion date, be reexamined in the same way?

Mr. NELSON. Yes, sir. I have been on record several times before congressional committees in favor of such a procedure. That is one of the ways to speed up the work. Some of the terms of these contracts should also be reexamined. You must remember that some of these contracts are on a fixed-price basis and therefore if another shift is added it may involve even more expense, because usually the second shift is not as productive as the first, and the third is not as productive as the second, by a large margin. Therefore, speeding up the program involves another look at the contracts, another look at the total

¹ Complete statement appears on pp. 8074-8076.

amount, and at the time schedule. It should be remembered that the size of the job before any one company will affect its attitude toward doing the job. It will affect the attitude of the workers toward the job. That is just human nature. When they see the contract running out on a date, there is a natural tendency on the part of the worker to slow up, and there isn't the impetus on the part of the manufacturer or the managerial organization to force it through faster. Therefore I think the additional volume given to any concern should be a consideration in any reexamination of the contract.

In other words, there must be a time objective in this program, a definite date by which we feel a certain quantity of materials must be ready. There must be a definite plan and schedule of requirements. Then, as these contracts are reopened, and the size and tempo of the job are both increased, it may be necessary also to make adjustments in price. In some cases the additional quantity may actually lower the price. To me that seems basic in this whole effort.

Mr. SPARKMAN. It seems to me that these are very practical proposals, which not only would accelerate defense production, but also would bear upon the problem with which this committee is primarily concerned.

Mr. NELSON. You are referring, I assume, to the spread of employment throughout the United States, instead of building concentrations of defense industry in places which are already overpopulated. As I said the first time I appeared before you, we add tremendously to our civic burdens by overcrowding present centers of production. You have been in San Diego and you saw what had to be done in the way of providing new schools, sewers, and houses. Those needs are all extraneous to the contract, but they are there just the same. The Government has to pay the cost. Therefore, why not pay a minimum cost? I would suggest that you review the Executive order conferring authority on Mr. Floyd Odlum's Contract Distribution Service, which recognizes that the cost is as much as 15 percent additional on a given item when it must be produced in an area requiring all those additional facilities. Avoidance of excess production in already overburdened communities is money saved to the United States Government.

Mr. SPARKMAN. Can your board do anything about this problem through the allocation of materials?

BROAD POWERS GIVEN TO S. P. A. B.

Mr. NELSON. I feel that S. P. A. B. can do almost anything in almost any direction, because it is given the authority by the President of the United States and is headed up by the Vice President as chairman. I feel that it can go into this thing in almost any direction that may be needed. But I also think that any group undertaking this job must see what the total, over-all requirements are, and what the time schedule is.

Mr. SPARKMAN. Does S. P. A. B. review the delivery dates set by the Army and Navy?

Mr. NELSON. We have not up to the present, sir. We are attempting to get the total over-all requirements and time schedule.

Mr. SPARKMAN. Are those delivery dates set in consultation with O. P. M.?

Mr. NELSON. Yes, sir.

Mr. SPARKMAN. I should like now to sum up your view of the situation briefly. It is this, as I understand it: First, we do not yet know what the requirements are.

Mr. NELSON. Yes.

Mr. SPARKMAN. The manufacturers and the people themselves are not informed.

Mr. NELSON. Right.

Mr. SPARKMAN. Would you agree that the manufacturers and public have not yet come to a realization of how greatly they are going to have to curtail their normal production and normal wants?

Mr. NELSON. Yes.

Mr. SPARKMAN. You believe that when they have realized this, there will be a spirit of cooperation which will enable the program to move along?

Mr. NELSON. Yes; definitely.

Mr. SPARKMAN. But if there is a failure anywhere to cooperate properly, you think the necessary power is properly vested in some agency or some official to see that the program does move along?

Mr. NELSON. Yes, sir.

Mr. SPARKMAN. That is all.

Mr. CURTIS. Mr. Nelson, has S. P. A. B. or any other agency all the necessary information in regard to total national inventories of various materials?

Mr. NELSON. Yes, sir; the information in regard to total national inventory of materials is available, and also in regard to total national productive facilities. The individual inventories we are getting at through questionnaires. For instance, we have surveyed all the warehouses of the country through trust companies, railroad terminals, and the like.

Mr. CURTIS. Is that true of machines and tools?

Mr. NELSON. That is not true of machines and tools. I think we have pretty accurate information on materials, and we have the machinery set up for getting at the information we need on machines and tools. I think many surveys have been made.

EFFICIENCY OF GOVERNMENT SURVEYS EXPLAINED

Mr. CURTIS. In the gathering of this information, is it quicker and more effective to proceed as you have been doing through trade and business channels or to have the Federal Government authorize various censuses and inventories, which would require new organization and personnel?

Mr. NELSON. I have felt right along that the job could be done most efficiently by Government people working through the industry. You can assemble the information much faster by getting it from industry itself, and I believe that as we get to know more of our requirements, industries can better adapt themselves.

For instance, the washing-machine industry quite recently—and I think this is rather epoch-making in this defense program—seeing that it was to be curtailed, started its own survey, working with the Government to determine what type of things it could make. That industry has made a survey, working with the procurement officers of the Army and Navy, and has now taken contracts running into mil-

lions of dollars to make gun mounts. It is adapting its machinery to that particular item, after having worked out the contractual relations. It serves as a good example of an industry coming in and helping the Government by adapting its machinery to defense needs. Yes; I believe that the very best method of gathering the information is through industry itself.

Mr. CURTIS. That would be superior to utilizing a branch of the Government, such as the Bureau of Census, and assigning enumerators not trained in mechanics or anything else.

Mr. NELSON. Yes, sir. There have been too many surveys made by all kinds of organizations—State governments, chambers of commerce, the National Manufacturers' Association, and others—on what machinery is available. But I think we need a method that more directly animates the whole program. That is the ability of management to make the machines do the job. Just a plain enumeration of machines, in my opinion, has never been enough.

Mr. CURTIS. And the enumerator has to have knowledge of what is needed.

Mr. NELSON. Yes, sir. He must know how to adapt what we have to the need. It is that greater adaptability that I think that we will require. When we see the size of the program, bang-up before us, the whole question will be what we can do with what we have, rather than how we are to get new machinery for each job.

Mr. CURTIS. It has been my observation and conviction that the majority of the people, perhaps 100 percent of them, are decidedly loyal, and want to do their part, but sometimes they do not know how to do it effectively. No doubt small industry, small manufacturers or shops, especially in the interior of the country where they are not close to the big plants, are doing many things that seem confusing to official Washington. Would you care to make any comment on what small business is doing to secure defense orders?

NONDEFENSE CLINICS FOR LITTLE BUSINESS

Mr. NELSON. I don't know that I am competent to say what small industry is doing, or failing to do, for national defense. In general, I think we must try to devise some method of bringing these small fellows into the picture. A better knowledge on the part of Army and Navy procurement officers of the necessity for bringing these people into the program and a realization on the part of the larger contractors that these small fellows have ability to do many jobs, are helping to bring about a constructive change, I believe. We see that change coming. Just how many of those industries can be adapted we are not able to say. I don't think that anywhere near 100 percent, probably not more than 25 or 35 percent, can be fitted into the picture. But I should say that the thing that small business needs more than anything else is guidance on what to do and how to do it. That means guidance in each community. I have suggested to several communities the holding of nondefense clinics, which would help to show what substitutions can be made, how men who are doing a job now requiring critical materials may, through borrowing engineers from other organizations that have met the problem, be better able to adapt themselves. Oftentimes the small man does not have the engineering ability to make the necessary adaptations in method and I think that

just as defense-industry clinics, showing business how to adapt itself, we must hold nondefense clinics to show the nondefense industry how it can do a better job of carrying on.

Mr. CURTIS. It has been reported in the press that over 20,000 small firms have gone out of business in England since the war began, and that at least that many may be expected to do so in this country during the defense period. But I think you have outlined the policy of S. P. A. B. with regard to utilizing these resources and keeping these small firms in active civilian production.

Mr. NELSON. I have tried to answer that. We need to work first on showing them how to adapt themselves to defense, and on helping them to do other things in civilian production when they cannot continue as in the past.

EXPANSION OF PRODUCTION OF BASIC COMMODITIES

Mr. CURTIS. What has been done to expand facilities for the production of basic commodities, such as our 10,000 000 tons of steel?

Mr. NELSON. That is one of the problems that S. P. A. B. has tackled very energetically. It seemed that the first job we should do was to review every possible avenue of available supply, because no matter what we are making now, we are going to need a great deal more of the same thing. S. P. A. B. has reviewed with each of the agencies of the Government what might be done to expedite the procurement of more supplies. In the case of a material like copper, an increased supply might involve paying more money for metal from the marginal mine. This has been done. It means acceleration of the expansion of facilities, to produce more copper. S. P. A. B. is surveying every critical material to find out ways and means of expanding production. We have surveyed steel, copper, aluminum, magnesium, nickle, cobalt. In that field S. P. A. B. has done, in my opinion, an excellent job, and it will continue until we know more about the total over-all requirements.

Mr. CURTIS. The paying of more money for copper from the marginal mines may in the long run result in an economy, may it not?

Mr. NELSON. It is definitely an economy.

Mr. CURTIS. Because it saves reserves?

Mr. NELSON. Right, sir. I am positive that it is an economy, and it is recognized as such. Mr. Henderson, who has been entrusted with the job of price administration, has been keen to do that wherever we could increase production.

ALLOCATIONS PROCEDURE

Mr. CURTIS. Given a shortage in a critical material, and a need for curtailment of a less essential industry, what is S. P. A. B.'s procedure of allocation among various companies? More specifically, what is your viewpoint on permitting all small companies employing, say, 10 people or fewer, to utilize all the raw materials needed to meet 100-percent quotas until the large companies with their superior technical facilities and resources get into defense production?

Mr. NELSON. One of the things that S. P. A. B. undertook at its very first meeting was to instruct the executive director for supplies and priorities to see what could be worked out. We have a method

now which we think will be a simple allocation. We can't give them 100 percent of what they want, but I think that what is needed is to distribute a definite amount of materials, even though they may be scarce materials, to help a fellow over until he can readjust his business. I think within a week now we will have an announcement on something in this direction, that will go a good part of the way toward solving the very problem you have been talking about.¹ It has been one of my objectives to find a simple system whereby we could do two things: First, by giving a small amount of material, enable a man to manufacture a large volume of end product, therefore giving employment to people; and secondly to enable the small man to get small amounts of material that will help tide him over during the process of reconverting his business.

Mr. CURTIS. Will that system be such that a company will know for a period of months or maybe a year that there will be available raw materials up to, say, 60 percent or 70 percent of its past consumption?

Mr. NELSON. We can't do that until we know the total over-all requirements. We must know how much of that material we are going to need for military purposes before we can determine how much is to be allocated. We are getting that information in very good shape now, and I should say within 30 or 40 days we will have a pretty definite idea of just how large the military requirements are going to be. Then we shall start with a change in the method of allocation of that material to the military services and to industry. We are starting now to make experiments in allocations leading in that direction. I have said several times that I felt that the present system of priorities wouldn't work over a long period of time, particularly where there were shortages resulting from the demands of the military program. The present method of assigning a priority rating to an industry does not assure balanced quantities of the material. Until we know what the total over-all requirements are, however, we can't answer the question which you have asked me.

Mr. CURTIS. But that will be your ultimate objective?

Mr. NELSON. It has to come.

Mr. CURTIS. But the policy to be announced in a week or so will take care of the interim?

Mr. NELSON. Yes; particularly for small business.

Mr. CURTIS. I feel if the managers of small industry once find out what they can do, they will accept the situation and be glad to make the necessary sacrifice. They will make substitutions of their own, I believe, and they won't have so many problems to submit to Washington. Do you agree?

MISUNDERSTANDING OF PRIORITIES SYSTEM

Mr. NELSON. That is right, sir. I would like to say, however, that I think there has been some misunderstanding about the whole priorities system with respect to the small manufacturer. I have read in the press, and have seen statements made by the smaller manufacturers, to the effect that the priorities system tends to force them out. The sys-

¹ On November 7 the S. P. A. B. announced a change in policy, from a system of priorities to a system of allocations.

tem was not intended, certainly, to force the small manufacturer out, and we don't want to see any system used in that direction. What has happened, I think, to a very large extent—and I don't know that there is any way we can get at the problem—is that the smaller manufacturer has been cut off by many of the larger manufacturers, because when they have more business, the larger manufacturers of raw materials or of finished products have a greater demand than they can supply. The larger manufacturer or supplier of raw materials will cut off from his books the fellow with the least desirable credit rating, and in many instances priorities have been blamed when no priority has figured in the situation. I have had instance after instance of this pointed out to me, in which materials that were not even on priorities lists, such as paper, lumber, brick, glass, have been withheld from the smaller manufacturer. Often he says priorities have prevented him from getting his material, whereas his failure to get it really was due to the fact that he was being cut off in favor of someone else. A re-vamping of the priorities system will not stop that practice.

Mr. CURTIS. Are you able to say whether or not you will ever have to establish a priority with respect to newspaper print?

Mr. NELSON. I don't think so. But there has to be more conservation of paper. I think there is too much waste of paper in this country.

Mr. CURTIS. Congressional speeches, for example?

Mr. NELSON. I wouldn't limit it to congressional speeches.

The CHAIRMAN. Mr. Nelson, one of the fundamental needs to which you have called attention is a survey of our requirements, which you are making now.

Mr. NELSON. Yes, sir. We are working with the Army and the Navy to get those requirements.

The CHAIRMAN. Are you working out any plans for a comprehensive survey on a Nation-wide scale?

Mr. NELSON. That is being done, too, sir.

The CHAIRMAN. What about manpower?

Mr. NELSON. Yes, that also is being done, through Mr. Hillman's Division at O. P. M. He has a very good idea of the manpower in the United States.

USE OF EMPLOYMENT SERVICE ROLLS

The CHAIRMAN. The committee was startled a short time ago at one of our Washington hearings when it was stated that a survey had been made of the State and Federal employment agencies, and that at that time there were 5,000,000 persons registered and out of work.¹ Of course a good many more are not registered. I have always had the impression that the State and Federal employment agencies have not been given enough attention. I receive many letters from workers and I always tell them to file with the employment agencies. They come back months afterward, usually to tell me that no action has been taken on their application. I oftentimes wonder whether we couldn't make those lists a little more active than they are.

Mr. NELSON. I think you will find, sir, that Mr. Sidney Hilman has been working on that with his whole division, and is arriving at methods of making better use of the lists, and of making the Employment Service more adaptable to the needs of industry, in

¹ See testimony of Arthur J. Altmeyer, Washington hearings, pt. 17, p. 6782.

the hope that they will be used more by industry when industry needs people. He would be able to give you a much better picture of that than I can.

The CHAIRMAN. I think you are absolutely correct in pointing to the uncertainty in regard to what the small man can get and do, as an unfortunate situation. You will find, I think, that these people are willing to take a beating, but they don't want to take an unnecessary or unfair beating. One of the purposes in holding these hearings is to inform the public of what you are doing.

Mr. NELSON. In that connection, I have repeatedly said that the American public and the American businessman may submit to almost any kind of sacrifice if, first, they think it is necessary, and second, they feel that all are being treated alike. Those, to me, are the fundamentals that will guide the American people in making any sacrifice that may be necessary to reach any objective in which they believe.

The CHAIRMAN. The time element is pressing us, and is aggravating the problem. From your experience, you know probably more about it than anyone in this country. It took Hitler 7 years to prepare for war. Do you think we are doing about as well for the first 2 years as he did?

UNITED STATES OUTSTRIPS HITLER IN INDUSTRIAL PROGRAM

Mr. NELSON. I think we have done better. I don't think there is any doubt about that, and I would refer you to the record. We are building an airplane industry in a year that is bigger than the automobile industry, which took years to build up; we are building a new tank industry which, before it gets through, will be about as big as the automobile industry; and we are building an entirely new industry for the making of all kinds of guns and other implements of war. I think a great deal of progress has been made. However, we can't be satisfied with it, because a great deal more is necessary. It is going to take a great deal more if we are going to accomplish our objective.

The CHAIRMAN. Mr. Cooke estimates that only 40 percent of our tool capacity is being utilized at the present.¹ What plans has S. P. A. B. developed to use the remaining 60 percent?

Mr. NELSON. We haven't evolved a plan yet. The whole machine-tool situation is being surveyed by O. P. M., from two angles: First, with the object of increasing the production of machine tools, and second, to bring about a greater utilization of the machine tools that we have. I can't say at the moment that the O. P. M. study has reached a stage that would give us the information that you have asked for.

The CHAIRMAN. Mr. Cooke also states that it would be possible to increase our industrial efficiency by pooling the techniques of various individual firms.² Has anything been done along this line?

Mr. NELSON. Yes, sir; but not as much as should have been done. Techniques are being pooled to a considerable extent, although not on an orderly and well-planned basis. This is done through meetings of

¹ See p. 8050.

² See pp. 8048, 8049.

the industry, for passing on such techniques. I believe Mr. Cooke is right when he says we haven't done all we can in that direction.

The CHAIRMAN. In his statement he says that from an English viewpoint, large plants are easier to convert than small plants.¹ Can you give the committee some idea of how many small plants have been converted to defense production?

Mr. NELSON. No, sir; I have no figures on that. We could get them for you.²

The CHAIRMAN. I would appreciate that information. Thank you very much, Mr. Nelson. You have made a splendid presentation, and I know it will be valuable for the record of this committee.

Mr. NELSON. It is always a pleasure to appear before you.

The CHAIRMAN. We shall now hear the panel of industrial engineers.

TESTIMONY OF PANEL OF INDUSTRIAL ENGINEERS

The CHAIRMAN. Will the following gentlemen please come up and take chairs here? Messrs. Cooke, Henry, Person, and Taub.

Gentlemen, the committee is very glad to have you here today, as experts qualified to discuss the production problems of the defense program, and especially the problems of converting industry for all-out production of defense goods.

During a hearing we held in Detroit a month ago, unemployment and threatened out-migration due to the curtailment of the output of automobiles were discussed. We were told there that the convertibility of manufacturing plant was closely connected with questions of migration. We propose to ask each of you, in turn—Dr. Person, Mr. Cooke, Mr. Henry, and Mr. Taub—a few questions individually and then we will make the questions general, and give you an opportunity to amplify each other's answers.

TESTIMONY OF MORRIS L. COOKE, CHAIRMAN, SHIPBUILDING STABILIZATION COMMITTEE, AND TECHNICAL CONSULTANT, LABOR DIVISION, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.

The CHAIRMAN. Mr. Cooke, I wonder if you would be kind enough to introduce the panel, stating names and positions.

Mr. COOKE. To my left is Mr. S. T. Henry, assistant to the president of the McGraw-Hill Co. Next to him is Mr. Alex Taub, one of my colleagues in the Labor Division of O. P. M. Then there is Dr. Harlow S. Person, an economist, of New York, and now consulting economist to the Rural Electrification Administration.

The CHAIRMAN. And your own position, Mr. Cooke?

Mr. COOKE. I am chairman of the Shipbuilding Stabilization Committee and technical consultant to Mr. Hillman, head of the Labor Division of O. P. M.

¹ See p. 8044.

² The committee, subsequent to the hearing, was informed by the office of the Supply, Priorities, and Allocations Board that this information was being gathered, but that the report would not be completed in time for publication in the present volume. When received it will be published as an exhibit in a later volume of these hearings.

The CHAIRMAN. I should like to say to you gentlemen that you have filed with the committee some very valuable statements, and we will have them set forth in full in our record.

Dr. Person, I shall begin with your paper.

(The paper referred to above is as follows:)

STATEMENT BY DR. HARLOW S. PERSON, CONSULTING ECONOMIST,
RURAL ELECTRIFICATION ADMINISTRATION, UNITED STATES DE-
PARTMENT OF AGRICULTURE, WASHINGTON, D. C.

Summing up the problem before your committee, I take it that defense migration is a result, first, of giving defense contracts to large concerns in industrial centers rather than distributing them in accordance with existing labor supplies and productive capacities; second, of the inability of local plants in the absence of defense orders to secure supplies of critical materials to continue normal operations; and third, of the desire of workers in lesser centers to take advantage of the new defense jobs created in the larger industrial centers.

The problem of defense migration is not an isolated problem susceptible of direct solution. Looked at in large perspective it is a consequence of inability to organize and implement a war economy within the frame of "business as usual." It is a phase of the over-all problem of effective organization for the production of defense and war matériel. The solution lies along the following lines: First, speedy arrangements for all-out or maximum production for defense; second, maximum efficiency in implementing these arrangements; third, a planned optimum balancing of production for defense and production for civilian needs; in short, by bringing to bear on the organization of a national plant for production of war matériel that abundant production and engineering skill so manifest in private enterprise in the United States.

In expressing more detailed views it must be recognized that I have had no responsibility related to the problem that puts me in a position to answer questions calling for statistical replies; such as questions concerning the extent of the facilities for defense production in the United States and their geographical distribution.¹ There are defense agencies that have been in existence long enough to have made such an inventory, and they should be consulted. If an adequate inventory has not yet been made, it can still be made with rapidity if certain existing agencies with facilities for making such inventories are called on, and their facilities are effectively organized for the purpose. I have in mind, of course, not only Government agencies, but also national organizations of industrialists and of organized labor, the railroads, and other private agencies in a position to assemble data rapidly on a national scale.

During the past decade the Nazis have displayed amazing effectiveness in organizing for military aggression and for provision of the necessary matériel. They are showing amazing effectiveness in integrating the facilities of occupied countries into their own system of provision of matériel. In respect of their dominating purpose, efficiency of the pertinent organization and procedures is something to which the world has never before seen anything comparable. This makes the problem of the resisting democracies correspondingly difficult.

Great Britain also, within the 2 years since she perceived that her very existence is at stake, has developed a notable efficiency in organizing for war and for the procurement of war matériel. And—of outstanding significance—

¹ In identical letters sent to the four members of the panel prior to the hearing, the committee addressed the following set of questions as a means of suggesting some of the subjects on which its members wished to obtain views of the witnesses:

1. Has sufficient emphasis in the national-defense program thus far been put on the conversion for defense production of existing plant facilities?
2. How can we, consistent with defense needs, more fully utilize existing production facilities?
3. Where does excess capacity exist which should be utilized?
4. From a technical viewpoint what nondefense industries can be most readily converted?
5. What are the technical difficulties of converting different kinds of industries and different sizes of plants?
6. Are there significant differences as between large and small plants, large and small enterprises, mass production, and less specialized plants?
7. How can we more fully utilize labor displaced as a result of material shortages and the allocation program, and the already existing labor reserve?

Great Britain is succeeding in doing this without impairment of the fundamental qualities of democracy. I shall have more observations to make along this line before I conclude this statement.

ORGANIZATION OF THE NATIONAL PLANT

The most significant thing to me is that the United States possesses capacities for planning and organization in larger measure than does either of the nations to which I have referred; and the most appalling thing is that these capacities have been drawn on to so limited an extent. The most effective technique of organizing and planning for achievement of any predetermined purpose had its origin in the United States, was adopted by private industry in the United States long before it was adopted in other countries, has been integrated into our ways of doing things more extensively and more deeply than in any other country, and has in consequence developed more technicians skilled in management than in any other country. The United States is not only the country of origin of mass production—of large scale, specialized production on single-purpose machines—but it is the country of origin and of development of the most effective technique of production in middle-size and small plants—producers of items of variety on multiple-purpose machines. The urgent problem of rapid production of matériel for defense and for war confronting the United States is one of bringing these two superiorities into harmonious, effective relationship; of securing maximum advantage of the flexibility, adaptability, and speed of adjustment of the thousands of small plants of multiple-purpose machines to start the flow of production of urgently needed items immediately, while we are waiting for the huge mass production plants of single-purpose machines, less flexible and less speedily adaptable, to bring their great capacities to bear on the problem. The thousands of plants of the 75- and 155 millimeter class can win a lot of production victories while tracks are being laid to bring the ponderous 16-inch plants into action.

The superior capacity of the United States for technical organization and management of production is distributed among 100,000 production executives and engineers in middle-size and small plants, and we have not yet succeeded in making effective arrangements for assembling and focusing this capacity on the urgent production problem. The United States has been a land of such magnificent opportunity that promotion and corporate organization and finance have dominated the scene, and the geniuses along these lines have become the headliners of business. Consequently in time of emergency calling for experience in industrial functions we instinctively turn to these business headliners to take on the problem of production on a heretofore unheard-of national scale, but in so doing we are not drawing on the reservoir of genuine technical capacity for organization and production.

The radical, the effective, the urgent step is still to be taken. There is still to be set up an agency, with the authority of common consent as well as of law, and with the competence of technical knowledge, whose task will be to organize all the plants of the Nation into one great coordinated national plant along the same lines in which the best-managed medium-sized plants are now organized. While the national plant will be vast in its reach, and the component elements more varied and complicated, the principles and the technique to be applied are identical with those involved in efficient individual plants. Whole plants and their facilities become the primary factors of coordination, instead of machines; yet within the frame of coordination of each component plant, coordination of machines and processes in detail is effected even more efficiently.

We have in the United States learned to do things in this way up to the scale of the private multiple-plant corporation. Now we must do them on the scale of a national plant. The multiple-plant corporation has learned how to get results efficiently and dependably by a harmonizing of centralization and decentralization. The people acting through the Government must do the larger job of effective national defense by a similar harmonizing of centralization and decentralization on a national scale. It can be done if suitable technical abilities are wisely drafted to effect the organization and formulate the procedures.

This harmonizing of centralization and decentralization is of major importance. The impulse that assures the directing of all efforts in a coordinated manner toward a common end flows from the center out; the impulses that assure the common end through the effectiveness of a million and one detailed acts have their origin in and are applied at the points of detailed action.

THE MULTIPLE-PLANT CORPORATION

Let us look for a moment at the multiple-plant corporation. At the central general office are determined the major objective, the component objectives, general policies of operations, allocations of fixed and working capital, of materials, and so on. For each component plant is developed a defined objective—qualitative and quantitative—and a specific schedule. A frame of purposes, policies, facilities, and schedules is passed along to each component plant, but as long as each plant meets its schedules the general office does not attempt to regulate the operations of a plant within this frame.

The managing office of a plant receives this frame of directives and within it develops a consistent schedule of detailed operations for the plant as a whole, and a component consistent schedule of operations for each department of the plant. Each of these is a frame of component purposes, policies, facilities, and schedules for a department. As long as each department meets its schedules the general office of the plant does not attempt to manage the operations of a department within the frame.

A department may consist of shops or sections. The staff of a department manager studies the frame of directives received from the general office of the plant, and in turn within that frame develops a consistent schedule of detailed operations for each shop or section. Then within this frame of directives the shop or section proceeds to manage itself.

This system of frame within frame of directives is what effects harmonization of centralization and decentralization; it makes possible the two great components of effective results: First, efficiency of individual acts because their character is decided at the points of the acts; second, assurance that the detailed acts are directed toward a common purpose because the what, when, where, and how much involved in an act have been designed at a common center. From a center comes the maps, as it were, that guide the great cavalcade of detailed acts toward a common goal; but each operation in detail in the great cavalcade is performed in accordance with the judgment and skill of the local operative.

This arrangement for harmonizing centralization and decentralization is the only dependable one that human ingenuity has devised for successful conduct of operations on a large scale. It is the essence of effective military strategy, tactics, and operations, just as it is the essence of effective industrial organization and management. As I have suggested, our urgent national problem now is to effect an organization for production of defense and war matériel on the grand scale of a national plant of integrated individual plants.

It will require frame within frame of directives from a national center and through regional centers of planning and framing directives; but it will require also arrangements for the maximum of coordinated local autonomy at every work center in the system.

ALL-OUT PROGRAM REQUIRED

Let us be more concrete. I see our urgent problem as follows: The most rapid maximum production of defense and war matériel, with the least possible disturbance of peacetime livelihood activities. This does not mean the maintenance of business as usual with a residual production of as much war matériel as possible under that condition. It means just the opposite; it means the conversion to defense and war production of every suitable and necessary production facility, large and small, in lesser cities and villages and in rural areas as well as in great industrial centers. It makes production for civilian purposes the residual estate. But there must be no gypping in determining this residual estate; defense and war claims should go just as far as precisely calculated requirements indicate, and no farther; and production for civilian needs should be as effectively organized and conducted within its area as is defense and war production within its area. I should like to make a paradoxical observation here: There is likely to be more disturbance of the civilian economy if effort is made to preserve it by curtailing the defense and war economy, than there will be if the defense and war economy is given all the facilities it requires and conversion of plants to its needs is made completely and expeditiously to the extent required. Defense migration resulting from defense unemployment will be the greater if halfway measures are pursued; and will more likely be at a minimum if production for defense and war is all-out and

vigorous, and the activities widely decentralized as in a strong normal economy.

Having in mind our statement of the urgent problem, I see in imagination although with hazy outlines something like the following:

A supreme board of diplomatic-military strategy that plans a line of combined diplomatic and military activity for a year or two ahead. From this over-all plan there passes to the military establishments a frame of directives for military preparedness and action.

Within this frame each military establishment calculates its minimum essential requirements in detail and on a time schedule. This schedule of requirements then becomes a directive for organizing the Nation's production facilities so as to meet the military needs, and also so as to determine the residual capacity available for civilian needs and to organize this as effectively as the military procurement sector is organized.

PROCUREMENT OF MILITARY MATÉRIEL

The formal procurement of military matériel should be lodged in the military establishments. But at this point serious problems arise. Military establishments are apparently by nature not adequate for a large-scale emergency procurement task. Skilled in technical military matters they are not skilled in business matters. Especially in view of the fact that in time of emergency the problem is not one merely of procurement, i. e., placing orders in an open market, but one of inventorying the production facilities of a nation, organizing these for rapid achievement of maximum production, and then following up the national production activities for achievement of maximum production, just as an individual private enterprise pursues such follow-up activities. The military establishments appear to have no basis in experience for competent inventorying of national facilities and for organizing and following up production processes on a national scale; yet it appears desirable that these establishments actually execute the orders in order to maintain a function that has continuity through peace into war and back into peace conditions. To meet this condition there appear to be two alternatives:

1. Enlargement of the military establishments by incorporating in them an adequate organization of civilian personnel experienced and skilled in the engineering and the direction of production. The technical military activities of the military establishments for which there is a shortage of trained officers, and the design of matériel, the preparation of specifications and the scheduling of requirements on a quantity and time basis, would be reserved to the regular military personnel. The inventorying of national production facilities, organization of these into an effective national plant for defense production, negotiation and execution of contracts, follow-up of contracts and production processes, would be a responsibility of that part of the military organization made up of the civilian personnel selected for the purpose. This civilian part should be independent of the military part in its procurement activities except as to the tie-in at the top. In this manner procurement and its follow-up would be conducted by a personnel more experienced and competent in that function than the military personnel, yet the contracts would nominally be let by and in the name of the military establishment.

2. The other alternative would be to set up the procurement and accompanying production follow-up in an organization independent of the military establishments but as a procuring agency in accordance with their requirement schedules, assign to it the responsibility of inventorying and organizing the Nation's production facilities, negotiating contracts up to the point of letting them, and of following up the production processes and maintenance of a national flow of military matériel that meets the military schedules. The formal execution of the contracts as developed to the point of execution could be reserved to the military establishments.

The purpose of thus providing a special organization of competent production engineers and managers within or adjusted to the military establishments, is to make available to our defense efforts, as is not now adequately done, that fund of production management and engineering ability possessed by the United States in greater abundance than by any other nation. Given a clean-cut assignment and authority commensurate with the responsibility, the production engineering skill of the Nation could organize the national plant and establish a national flow of specified matériel comparable, although on a larger scale, with the regularity of the flow of work in the best managed private enterprises. The technique would be identical in essential features.

but with a larger number of frames of coordinating directives passing out from center to center to where the details of effective execution are organized and supervised.

CHALLENGE TO DEMOCRATIC OPERATIONS

Given a clean-cut assignment and authority commensurate with the responsibility—that is the condition precedent. That is the condition precedent to organization by a democracy of its production facilities adequate to meet on superior terms and stop once and for all the onslaughts of militarily efficient international highwaymen. The Nazis have made themselves amazingly efficient along certain pertinent lines at the sacrifice of every vestige of democracy. The British are achieving a reasonable efficiency within the frame of democracy and without sacrificing the essential of democracy, but at immense present sacrifice of individual privileges and great present restriction of individual opportunities. The Nazis have challenged the efficiency of democracies and in so doing have challenged their very existence. They have been preparing for their depredations for a decade. They have selected, tested, discarded, reselected, and retested personnel until they have a highly efficient operating organization for the particular purpose. We have hardly begun the building of an efficient machine by such measures. They have inventoried and brought under control not only the resources of Germany but also those of occupied territories. We have hardly begun inventorying our resources. They gave up "business as usual" on an individualistic basis long since, and have replaced it with blocked business in support of the particular aggressive purpose. Among us the sentiment of business as usual is still strong. They have eliminated personal interests that conflict with the national purpose; they have eliminated personal ambitions that are inconsistent with the national purpose; but these things still hamper us.

Organization for efficiency in overcoming onslaughts of international highwaymen, without sacrificing democracy, means that we must learn to distinguish between the fundamentals of democracy and the appurtenances of democracy. For a time we shall have to sacrifice the latter. It is quite possible, however, that if we preserve the fundamentals even at the sacrifice for a time of the appurtenances, of which some are obsolete, the new appurtenances that will inevitably develop after the emergency task is done will represent a stronger and more desirable democracy.

There was never a more democratic grouping of people than on the historic frontier of the United States. When Indian uprisings led to attacks on settlers and frontier communities these ancestors of ours organized their democracies for effective action. They knew the simple technical requirements and they organized them. They chose leaders especially, i. e., technically, competent to direct the particular job; formulated rough rules, regulations, and procedures; each man was assigned his part; and individually they obeyed the requirements of the situation and the directions of their leaders. It was similar in the days of vigilance committees, and posses to destroy cattle rustling. And when all these jobs were completed democracy had not been sacrificed; it was stronger than ever.

The problem confronting us today is identical in essence but vaster in scope and more complicated in detail. But the necessary procedure is in essence the same: draft technical leaders; organize for effective action; establish suitable procedures; obey orders; each for all and no especial privilege for any individual. The head of a small unsung enterprise (because he knows how to plan and produce) may become a leader, and the president of the largest corporation (whose ability is in the field of promotion) may become a simple private. Such circumstances arise out of the nature of the particular urgent task. After the emergency is over they can return to their accustomed activities. But during the organizing for and activities of the emergency it must be otherwise.

DEMOCRACY STRENGTHENED BY EFFECTIVE ORGANIZATION

There is one reassuring aspect of the technical lines of action suggested in this statement. Organization of the national plant for effective action in meeting the emergency, if along the lines of the best technique of production engineers and managers in individual plants, will be a positive move in the direction of a strengthened democracy. The best in technical management of

private enterprise has been developed on the basis of harmonious employer-employee relations—on more and more democracy in the shop. It has involved workers' consent, workers' participation in determination of standard procedures and schedules, in many instances consultation with workers on problems in the field of major policies.

Defense migration is coming to be more and more the result of a failure to distribute defense orders widely among the many thousands of plants of the country. The problem is to be met by so distributing orders as to bring every possible plant—small and middle-size as well as large—into a great national plant engaged in the production of defense and war matériel. This can be achieved only, on the one hand, by an all-out program of production for defense and, on the other hand, by bringing to bear on the organization of the national plant that abundant engineering and production skill that has been so manifest in private enterprise.

Viewed from a still larger perspective, solution of the defense migration problem through solution of the defense and war production problem along the lines here suggested, will constitute a considerable step in solution of the post-defense problem. Ghost towns will have been revived; new ghost towns will not have been created; the post-defense economy will rest on the basis of a highly productive but widely decentralized national industrial plant.

**TESTIMONY OF DR. HARLOW S. PERSON, CONSULTING ECONOMIST,
RURAL ELECTRIFICATION ADMINISTRATION, DEPARTMENT OF
AGRICULTURE, WASHINGTON, D. C.**

The CHAIRMAN. Dr. Person, you say in your paper that—

the Nazis have challenged the efficiency of the democracies and in so doing have challenged their very existence.

In another place you say that—

our failure to utilize our productive capacity is appalling.

To what do you attribute that failure?

Dr. PERSON. Fundamentally, I should attribute it to the difficulty and slowness of a democracy organizing itself for such action.

The CHAIRMAN. You also state in your paper:

The radical, the effective, the urgent step is still to be taken. There is still to be set up an agency with the support of common consent as well as at law and with the competence of tactical knowledge whose task will be to organize all the plants of the Nation into one great coordinated national plant along the same lines by which the best managed medium-sized plants are now organized.

Will you explain that a little more fully?

Dr. PERSON. If I may be permitted to refer to the first statement made by Mr. Nelson, I agree with him completely that all planning for action must start with a knowledge of what has to be done and what is wanted, and that the absence of that knowledge is always a limitation. But it seems to me equally important that some agency be concerned with organizing the facilities in advance for meeting the need as soon as its existence is known.

Now, so far as I can gather as an outsider looking in on preparedness, it seems to me that we have been dilatory in inventorying the production facilities of the country, plant by plant and machine by machine, and having this knowledge ready for immediate and effective use as soon as details of what is wanted are known. And my observation of organization and management in general would require that there be a very definite functionalized and specialized agency for this purpose, made up primarily of people concerned with organi-

zation—that is, experienced in organization, but also experienced in classifying and appraising plants and tools and machines. To sum up, we must have a functionalized and specialized agency made up of personnel with a very particular combination of information and experience.

IMPORTANCE OF MATERIALS INVENTORY

The CHAIRMAN. In other words, you feel that in the allocation of materials, whether for defense or nondefense, we will never know how to proceed if we do not first have an inventory.

Dr. PERSON. I agree with you.

The CHAIRMAN. That was also brought out in the Detroit hearing.

Dr. PERSON. We must know our materials, our manufacturing facilities, and our requirements. Knowledge of those three things is the very basis of good management, of effective, economical management, and management with a tempo to it.

The CHAIRMAN. To what extent do you think S. P. A. B. fails to meet that problem?

Dr. PERSON. I am not in a position to answer any such question in detail, Mr. Chairman. It is a quantitative question, and I cannot answer it quantitatively. My general conclusion or judgment is based on the information one gets from the press, and I have a positive feeling that we haven't gone as far or as rapidly as is technically possible.

I am not saying, Mr. Chairman, that there may not have been—what shall we call them?—psychological circumstances that make impossible at the present moment an achievement which is technically or theoretically possible. In my preliminary statement, Mr. Chairman, I had in mind rather the expression of an all-out view of the technical ways in which I think procurement for defense should be effected, without any particular implications as to the extent to which we had progressed in this all-out method. My idea was that perhaps I might offer to the committee some means of judging for itself how far we had gone, on the basis of testimony from other witnesses who are actually concerned with defense activities, and know what has been done.

The CHAIRMAN. Of course, you realize, like the rest of us, that this vast national-defense program has come upon us all at once.

Now, at another point in your paper you say:

Military establishments are apparently by nature not adequate for a large-scale emergency procurement task. Skilled in technical military matters, they are not skilled in business matters.

You continue:

The military establishment appears to have no basis in experience for competent inventorying of national facilities and for organizing and following up production processes on a national scale.

Would you like to enlarge on that in any way? I think that is very interesting.

Dr. PERSON. I think it is quite comprehensive as it stands. My judgment in that respect is based considerably on experience during the First World War, when I served as an officer in the Ordnance

Department, and later in a special unit attached to the office of the Under Secretary of War, concerned primarily with inspecting the organization and procurement procedures of the various supply divisions of the Army. Later, the work of this special unit apparently satisfied the Under Secretary of War to a degree that led him to make it at that time a part of the Inspector General's Department. My judgment is based on that experience even more than on any present observation of a casual nature, or on contacts of a casual nature.

ATTITUDE OF MILITARY ORGANIZATIONS TOWARD PROCUREMENT

I think the military organizations of the United States are extraordinarily efficient and expert in technical military matters. But I think they look upon procurement as simply a matter of placing the order—which is largely what their procurement procedure consists of in time of peace. It isn't necessary in time of peace to go beyond the placing of an order, particularly when speed is not of consequence and reliance can be placed on the manufacturer or other sources of supply. In time of war, or of intense activity for defense in facing the possibility of war, procurement must be looked on as a task that reaches far beyond the mere making of a contract with a supplier. It must involve inspecting the progress the supplier makes in manufacture, aiding him in methods of organization so far as is possible, and providing him with the necessary schedules and directives.

This extension of the responsibility of procurement beyond mere contracting would in my judgment constitute three- or four-fifths of the area of responsibility and activity in connection with procurement and would be responsible for, let us say, 90 percent of the development of tempo in procurement.

Now, I think there is a difference between military establishments in time of peace and military establishments in time of war or in periods of war emergency. But looking at them all together, in the large, their general idea of procurement seems to end with the making of a contract with a supplier, and in trusting to the natural processes of business to take care of delivery. However, in an emergency where speed is a factor, between this contract and delivery is an area of opportunity for an immense amount of aid to the supplier that will increase the tempo and also the precision of delivery.

The CHAIRMAN. Have you any suggestions as to how to make that improvement in the present situation?

Dr. PERSON. According to Mr. Nelson's testimony, there is adequate authority in existing agencies, and consequently I don't know that I want to make any suggestions. I have made my statement, describing what I consider to be the ideal set-up for the purpose.

The CHAIRMAN. I am very much interested in your statement that there is likely to be—

more disturbance of the civilian economy if effort is made to preserve it by curtailing the defense and war economy.

Dr. PERSON. My point of view is very positively for an all-out, complete organization for defense, and an all-out, complete demand on the facilities necessary for effective defense, leaving production for civilian demands, as I put it, as a residual estate in the whole situation.

But I believe that after the defense demands are known in detail and the capacities of the country, including the materials, are inventoried in detail, and after these capacities and materials are organized and arranged for meeting the defense requirements, the precise knowledge of facilities and materials left over will permit them then to be highly organized, with a new and advanced tempo of production that will go a very long way toward meeting basic civilian needs. Production for civilian needs can then be organized with a simplification and tempo that will take care of those needs in very large measure. Production for civilian defense should, under such circumstances, be organized and speeded up just as is that for defense or war—be not left to chance. Further, I believe that the exactness of this knowledge of the residual estate will avert that confusion and uncertainty that exist in the absence of such knowledge.

In other words, an all-out defense program, with all its claims strictly defined and recognized, will leave a positive knowledge of what can be done in respect to civilian needs and the whole problem of adjustment of civilian industry to the needs of defense will be less upsetting and disconcerting. When individual concerns have to set about insuring themselves against making mistakes in the face of lack of information, they often go further than it is necessary to go.

The CHAIRMAN. In other words, if we had definite knowledge as to the amount of steel produced in this country, say 100,000,000 tons, we could find out what the Army and Navy need; then if we knew we had 50,000,000 tons left, it should not be very difficult to apportion or allocate that 50,000,000 tons impartially and equitably for nondefense.

Dr. PERSON. And with that impartiality recognized by the people.

The CHAIRMAN. The people would know. They won't kick if they are getting an even break. That is substantially what we were able to observe in Detroit, where, if the big auto companies had been converted to defense, they would have had an assurance of materials and been able to avoid sudden large-scale lay-offs. Do you think that is correct?

Dr. PERSON. I don't know the facts of the industry sufficiently in detail to say that it is correct. There is a strong presumption in my mind that it is correct.

The CHAIRMAN. Thank you very much, Dr. Person. Congressman Sparkman will now interrogate Mr. Cooke.

Mr. SPARKMAN. Mr. Cooke, I have read your statement with much interest and I think it is a very fine statement, one that presents a clear picture with much logic.

(The statement referred to above is as follows:)

STATEMENT BY MORRIS L. COOKE, CHAIRMAN, SHIPBUILDING STABILIZATION COMMITTEE, AND TECHNICAL CONSULTANT, LABOR DIVISION, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.

Before beginning my testimony may I express to this committee my appreciation of the altogether helpful way in which it has assembled so much data of special interest to those of us doing our bit to put the national-defense effort on an effective basis. Common sense and the experience abroad both suggest that the minimum of migration is consistent with the maximum of defense effort.

Also before taking up the subject of the more effective utilization of existing production facilities, which is the special topic for today's hearing, may I say

that as Chairman of the Shipbuilding Stabilization Committee I have come to feel that the stabilization idea as first suggested by Mr. Sidney Hillman and later worked out by our committee, so that it today measurably controls the actions of over 300,000 workers in American shipyards, is the route by which much migration will be avoided. The zone standards set up for the four national water fronts have already inspired similar stabilization movements both in building construction and aircraft building. These standards were mutually arrived at by the three factors who were parties to them; i. e., the Government, the workers, and the proprietors of a hundred or more shipyards who are now working almost exclusively on Government orders. The less we do by Government fiat and the more our moves are the willing and joint action of the parties affected, the better it will be for our democratic ideals. I transmit herewith copies of the four zone standards as drafted for the west coast, east coast, Great Lakes, and Gulf water fronts. I will be glad to furnish this committee within a few days copies of a forthcoming brochure, *Ships for Freedom*, in which our methods and conclusions are quite fully described.

Although I have been in Washington since last October, first with the National Defense Commission and then with the Office of Production Management, not since early in this year have I had any public assignment which would enable me to speak in any factual or statistical sense of the progress made or of the details of problems being encountered in the drive to bring a larger percentage of the smaller manufacturing plants into the defense program—a movement which has in this country developed under the name of "farming out," in England under the name of "bits and pieces" or "odds and sorts." I was one of those who a year and more ago felt, as I still feel, that the defense effort of the United States would have to be intensified to a point where all of our available tools, all of our managerial skill, all of our labor was utilized—and that the quicker this was done the better.

FARMING OUT

Mr. Hillman, then a member of the National Defense Commission, was concerned about finding work for those in the distressed areas. I therefore undertook, within the Labor Division, to make reconnaissance studies of so-called ghost towns and ghost areas and of the ways in which both abroad and in this country those who were pioneering had found it possible to utilize idle labor and idle machines on defense work. Last winter and spring the Labor Division of the Office of Production Management issued a number of "farming-out bulletins" and in every way in its power sought to further the education both of persons in industry and of those in Government on what had been and could be done in the way of spreading defense work. In the course of time an administrative service was set up in the Office of Production Management for the express purpose of furthering this emergency type of subcontracting. Now this has been reorganized as the Division of Contract Distribution under Mr. Floyd B. Odum.

The early work of the Labor Division in furtherance of farming out has been described in testimony of Mr. Hillman before this committee, and the main results of our reconnaissance studies are available in the bulletins to which reference has been made. Not having had any direct responsibility in recent months for the efforts actually to distribute defense work more widely, I do not feel myself in a position to make comments on the organization of this work as it has been prosecuted by the several agencies of Government having charge. I shall devote my testimony today, therefore, not to speaking again of matters which have before been brought to the attention of the committee, but to a discussion of certain points affecting general method which I feel to be essential to the effective conduct of the defense program.

First, a word on the questions which the committee has specifically asked the panel.¹ Some of these can be readily answered. There can be no question but that thus far insufficient attention has been paid to the conversion for defense production of existing plant facilities. In reply to the query as to where there is excess capacity which should be utilized the answer is "almost everywhere." For even in those plants which are turning out all the defense goods of a given type that they can produce, there are usually individual machines which are idle a large part of the time. And there are very few plants, indeed, which operate 24 hours a day, 6 or 7 days a week, with anything like as much of

¹ See footnote, p. 8034.

their capacity utilized in the second and third shifts—especially the night shift—as competent observers believe possible. A report on the hours worked in various defense industries in June 1941 contained in the most recent publication of the Bureau of Labor Statistics in the series Utilization of Plant Facilities in Selected Manufacturing Industries Under the National Defense Program showed 70 percent of the employees in 299 selected plants on the first shift.¹

CONVERSION OF NONDEFENSE PLANTS

The inquiry as to what nondefense plants can from a technical viewpoint be most readily converted is easily answered in part. Since the great need is for precision work, and especially for machines and tools with which to manufacture the defense products themselves, the tool-room facilities in almost every type of industry can be used instantly. There are shortages reported in classes of work such as drop forgings and in certain types of processing such as heat treating where the required facilities might be carefully requisitioned not by plants but on a Nation-wide basis. Plants that do jobbing work, which are not specialized but could repair or make almost anything—especially where machining is required—could be used in any number. This group includes large numbers of small plants as well as those of intermediate and large size. The greatest need is for plants accustomed to precision work, but other plants can be upgraded. In general, I think we may say that in the kind of all-out production which circumstances now require it should be possible to use practically every machine tool in the country—reconditioned, or as they stand—excepting perhaps only those relatively few which were designed for a highly specialized purpose.

Questions as to the technical problems involved in converting plants in different industries and of different sizes are such that I personally could not answer them at all adequately even if time permitted. Among the industries which are now adversely affected by diversion of material to defense use there must be a considerable number of plants whose operations are so different from those which are now most needed that it is hopeless to consider their conversion. Among those which can be converted the problem will be greatest in the case of those plants whose equipment is not in good condition and whose workmen and managers are not accustomed to close work—although the difficulties here are usually exaggerated.

Measured in terms of ratio of results obtained to effort expended, it will, generally speaking, be more of a problem to convert small than large plants, partly because in a given case the results obtained will be smaller, and partly because the small plant is likely not to be so well equipped with management personnel capable of helping in making the change. This means that in many cases, though by no means all, the cost per unit will be larger. But this applies also, in only slightly less degree, to the conversion of large plants, and is a situation which must be definitely recognized in any all-out defense program. When it comes to converting old equipment to defense production, the ability to do good tooling is more important than the character of the machines themselves. And it may be said of small plants that, though the men who run them may not know much about planning, they are, generally speaking, intelligent and resourceful at tooling.

While I am in thorough sympathy with the effort to give employment to those who are being forced into idleness, and to save as many threatened businesses as possible, I think that this whole problem will in a way take care of itself if we turn our first attention, not to making work for those who do not have it but to getting done by every possible means the huge volume of defense production which we need. In the balance of my remarks I shall speak, therefore, rather in terms of how industry may be effectively mobilized for aid to the Government, than of how the Government may aid industry.

In any analysis of why we do not produce munitions more rapidly and with fuller use of all our capacity, first consideration should be given to the state of mind and habits of work of many of those in direct charge of procurement—officials, that is, of the War Department, Navy and Maritime Commission. Before discussing this I should note that because it has not seemed feasible to declare "M" day and thus throw into gear the Army's mobilization plans, certain difficulties have been encountered which otherwise would have been avoided. I

¹These were plants for which comparable data were available for June 1941 and December 1940. For a larger sample of plants including many for which data were unavailable the percentage on the first shift was 64. See statistics submitted by the Acting Commissioner of Labor Statistics, p. 8106. Neither group of plants includes the aircraft or aircraft engine industries which have gone farther than other industries in developing the second and third shifts.

have not made any special study of this plan, which was nearly 20 years in the making. But I suppose we can admit that the responsibility for not taking full advantage of it is pretty well distributed.

"PROCUREMENT" VERSUS "PRODUCTION"

Certainly an important part of our difficulty in speedily building up our defense production is psychological and may be most clearly grasped if we consider the difference between what lies behind the term "procurement," as used by those purchasing goods for the Government, and the term "production" as used in industry. The term "procurement," as its meaning has been developed over many years of peacetime purchasing, describes a certain type of assignment given to military men to acquaint them with the various types of things which are needed by the services and, in a general way, with the means used for obtaining them. The term "production" as used by American manufacturers, by way of contrast, implies volume and tempo.

One of the difficulties in maintaining a virile and effective military establishment in a democracy is to find a type of work for the officers to do in times of peace which will afford some training for their war-time tasks. Thus, the Army engineers are assigned the planning for, and execution of, a large part of the rivers and harbors work. In a similar atmosphere of doing something not merely for itself but as a kind of experience, the supply services have worked out their procedures for procurement (known among laymen as buying or purchasing), which include design, drafting, and specifications, advertising for bids, awarding of contracts, inspection and paying for the goods. There is no special reason in peacetime for hurry in the delivery of a preponderant part of the material so purchased.

In fact, for much of it—such as for complicated pieces like tanks, anti-aircraft guns, and airplanes—a protracted period of purchase is desirable. In peacetime such items are normally ordered a few at a time. Prior to 18 months ago three airplanes was probably the maximum number of fighting types ordered at one time. These small orders and this drawn-out purchasing procedure enabled those in charge to play advantageously with the design, even after the item had reached the manufacturing stage. It enabled our military men to take advantage of advances in the state of the art and to incorporate in our designs improvements which might be reported in the practice of foreign countries. These techniques tend to keep peacetime obsolescence at a minimum. But being under the necessity of keeping so many highly educated men occupied it was useless to estimate the over-all expense and a premium was all but put on drift in the acquisition of supplies.

In industry—where production, in contrast to "procurement," is the objective—there is constant pressure to increase both the volume of flow and the speed with which the product comes along. Every improvement in either volume or tempo reduces cost. It will naturally take some time for those accustomed to the nonchalance of procurement to acquire the attitudes and the type of activity required by our present far-flung objectives.

NO FOLLOW-UP IN MILITARY PROCUREMENT

Another basic psychological handicap under which our munitions production operates lies in the attitude of procurement authorities once orders have been placed. Under a military system orders as such have a different meaning and implication from what they have in nonmilitary life. When a military order is issued, the assumption is properly that it will be obeyed implicitly. Normally court-martial or some other drastic action follows when military orders are disobeyed. Follow-up on a military order is usually considered superfluous and only instituted when those in command consider that the difficulties of execution are such as may possibly require a quick change in plan. In fact in this attitude toward orders once issued lies one of the fundamental differences between any military regime and modern scientific management.

In industry the assumption is quite to the contrary. The competent manufacturer knows that the vicissitudes normally surrounding the execution of even the simplest production program are such that if no safeguards are erected some section of the program may not go through or may not go through on time, thus jeopardizing perhaps the larger plan on which it may be a key part. And so in manufacturing we have many varieties of what is known as follow-up—

some of them intricate and involved—but all tending to let us know the status of the plans being executed and to reveal at the earliest possible moment any likelihood of failure, so that the situation may be rectified.

The attitudes which I have just described are largely responsible, first, for the fact that defense orders were awarded en bloc to the comparatively few companies which had had experience in munitions production during times of peace, and with which the procurement agencies had been accustomed to work; and, second, for the appalling fact that once having placed the stupendous orders which Congress had authorized in many instances no adequate measures were taken to see that the work was actually done—and within the time limits required by the national emergency.

In my contacts with procurement officers I find that too often there is no real understanding of what farming out should mean. There is no clear recognition of the difference between normal peacetime subcontracting, that is, the purchase of materials or services which under normal manufacturing procedures would be obtained in much the same manner, and the emergency variety of subcontracting known as farming out in this country and as bits and pieces in England.

SUBCONTRACTING PRACTICES

In ordinary times there are many parts which every manufacturer finds it expedient and perhaps essential to buy from others: Bolts, nuts, springs, electric motors, and also parts designed for a particular product but most satisfactorily produced by specialists in a given line. The manufacturer of freight cars buys his brake shoes; the manufacturer of refrigerators his gadgets. The ball bearings for all General Motors cars are made by the New Departure Division of this same corporation at Bristol, Conn.

Since such purchasing of parts from supplying companies is good practice in normal times, it should, of course, be carried on also in connection with munitions production. But farming out called for by emergency conditions must go much further than this. What is needed now is that each manufacturer capable of doing the basic work on a product increase his output by having done for him outside of his plant as much as possible of the work which he would like to do himself, but which he is not prepared to handle in the volume and within the time limits required by the emergency. An increase in home plant size or capacity, besides calling for heavy capital expenditures, means delay. Farming out can bring much quicker results.

The late James Reed, Jr., president of Cramp's Shipyard, announced before his death a policy of not making anything in the shipyard which could be fabricated outside, on the theory that the larger the amount of work done outside, the greater would be the tonnage of ships completed in the yard.

Another illustration of how farming out may be used to multiply basic munitions capacity is afforded by aircraft manufacture. In normal times a typical maker of aviation engines would buy his crankshafts already forged by some firm, as Wyman Gordon Co. of Worcester, Mass., which specializes in the production of such forgings, but he would do the machining, grinding, and finishing of the crankshafts in his own plant. Because it has been the usual practice right along, the purchase outside of crankshaft forgings, even in the greatly augmented volume called for by the defense program, should not be regarded as constituting any real extension of farming out. It was, however, a true application of farming out when United Aircraft Corporation subcontracted the finishing of crankshafts to Leland-Gifford Co. of Worcester. As a further example, machine tool output could be vastly increased if more companies would follow the example set by some of having other companies machine or otherwise fabricate many of the parts which they normally make themselves.

If farming out is to be practiced widely enough to affect the defense program in any vital way it must be supported wholeheartedly in all the procurement activities of the Army, Navy, Maritime Commission, and the Machine Tool Section of the Office of Production Management. Where farming out has already been used, it has been due largely to the energy and/or acumen of individual prime contractors. It has not resulted from any appreciable influence or pressure on the part of agencies of government. And yet the gap between our defense plan (sixty-six billions) and our defense performance (as measured in terms of cash paid out) is widening all the while. This is not so much because of our failure to produce as because our ideas of what should be done are constantly and rapidly expanding.

In building volume in the flow of munitions, shipping, and even goods for citizen use, we must recognize two distinct kinds of activity:

- (a) Procurement proper, with unremitting pressure for increased output and advanced delivery dates; and
- (b) The concurrent improvement and amplification of manufacturing facilities.

SHOULD CHANGE ATTITUDE TOWARD PRIME CONTRACTOR

At the moment seemingly the most telling step as to production is that we should change our attitude toward the prime contractor. In getting defense work done we are too prime contractor conscious. When Mr. Hitler wants something done he insists on getting help from whoever can give it, whether prime contractor, subcontractor, or subsubcontractor. In fact, he issues instructions directly to foremen and subordinates.

With us, deference to prime contractors is an obsession, generated partly no doubt by legal considerations respecting responsibility, and partly by fear on the part of supply agencies that "interference" might detract from the performance of the product, with reluctance to assume the responsibilities inherent in the situation. In our desire not to relieve the prime contractor of any responsibility under his contract we fall into the error (1) of assuming that there is a limit to what we have the right to know as to the progress on the work entrusted to him; and (2) of failing to observe our obligation to keep continued pressure on a great many contractors to do better than what they claim to be their best. Further, we must follow the details of manufacturing progress so as to be reasonably certain of assemblies and sub-assemblies on their respective "must" dates. Where the prime contractor does not maintain the appropriate controls and records to provide this information within the plant they should be installed.

We must know, we must learn to know, the progress being made currently by the prime contractor and by each of his subcontractors and by each of his sub-subcontractors to the end of the story. It is knowledge as to the progress being made on ultimate components—small though some of them may be—that will be of the greatest assistance in putting farming out into practice. Where, as in the case of most items of matériel, the ultimate product is complicated and consists of a large number of pieces, an adequate follow-up means keeping track not only of each element which enters into the product but of each of its constituent parts. A single part missing may mean the uselessness of all the rest. "In 1918, 2,000,000 shells were ready to ship, but were not shipped because they lacked adapters and boosters."

We are not there yet, but we will rapidly get to the point where our attitude will be that expressed in an order of the Emergency Fleet Corporation in April 1918, "It is becoming increasingly apparent that Emergency Fleet Corporation cannot continue to be observers of the operations within the yards. We must do more than audit and inspect. We must encourage and help and, where conditions warrant, assume a necessary control—not only assume a measure of control but act on it."

IMPORTANCE OF "FOLLOW-UP" PROCEDURES

Now having recognized our right to know the day-to-day status of work on every part of the defense program, we must record currently, with the details coming up from the field, the progress being made on every part of the program, graphically and/or statistically and by one common method planned from the top. This follow-up work should be carried on through the various branch procurement agencies. Unless the form of this progress reporting is outlined by those pretty near the top in the scale of authority, it will never have the uniformity which will make possible reports intelligible and useful to top executives. In any plans adopted, of course, the many excellent devices now in use in certain of the district offices will naturally be incorporated.

In applying pressures aimed at increasing output, advancing delivery dates, and—above all—getting out those jobs which would otherwise hold up other parts of the program, it is essential that the procurement authorities be represented by men of experience and judgment who will know on which contractors and on what aspects of the work pressure should be put. Only men with specialized experience and training can get the best response from industry.

It would be fatal for the Office of Production Management to attempt to relieve the Army and Navy of their proper managerial responsibility for follow-up. In fact, one of the most important services the Office of Production Man-

agement can render is in encouraging the Army and Navy to execute for the benefit of all, this function which is inherently theirs to perform.

Now a word as to the improvement and increase of facilities aspect of our national production problem. On the assumption that there is and will continue to be more work than can be done, we need to utilize not only the facilities of plants that are organized to assume full responsibility in manufacturing for the Government, but we should pool other facilities in such a manner that a parent plant not only can keep itself busy but can keep busy a number of satellite plants which without coordination and pooling would be unable to function. Further, we are finding out, for instance, in York, Pa., that the effectiveness of pools can be constantly improved by community organization. A York community committee canvassed the department stores and other commercial establishments to find out which of their employees had formerly worked at a trade or had specialized competence that could be used in the manufacturing community as two and three shifts become increasingly necessary.

Pools do not follow any set pattern. In Connecticut a State-wide and industry-wide pool of clock makers have for a year or more been working on the development of a large-scale plan for manufacturing for time fuzes, first on their own and later in cooperation with the War Department. In Canada the paper and pulp industry is utilizing its maintenance shops on war work. These shops in normal times are operated to maintain machines and equipment at the mills. However, this only requires about 48 hours a week—leaving machine tools free for other work for some 96 hours in a 6-day week. A special committee of the Canadian Pulp & Paper Association known as the Wartime Machine Shop Board was formed to coordinate the different mills' shops and allocate orders where possible. Working through the board, several primary producers have been able to let subcontracts, on certain portions of their orders, to the pulp and paper machine shops, thereby speeding completion of the job and easing the strain on their own plants.

Again in Australia a group of some 50 automobile repair shops, both large and small, have banded together, under the general control of the Victorian Automobile Chamber of Commerce and the special direction of that one garage among their number which was best qualified, and undertaken to manufacture parts for Bren guns and other tools and munitions. Within 7 weeks after the first Government contract had been awarded, thousands of finished parts had been turned out, with rejections averaging less than 1 percent. Not only metropolitan garages, but those in widely scattered towns are included in the group. According to a visiting Australian industrialist, that country, having had its imports of machine tools largely cut off, is pressing all its available machine tools into 24-hour day service, using them where they are through farming-out procedures where possible, otherwise commandeering them. So many things which seem impossible until pressure comes can be carried out 100 percent in the light of new necessity.

Exhibit A describes the workings of one of the 12 regional boards which have been organized to make effective the "bits and pieces" movement in England—as well as aid Britain's defense efforts in other ways. Exhibit B is a chart of the organization of the board. Exhibit C shows a form used in clearing centers to obtain data on spare machine tool capacity. It will be observed that under the 1 regional board 10 clearing centers have been set up. Although at the time this description was written these centers had been functioning only 8 months, they had already been able, on the one hand, to help many firms find work suited to their facilities—especially smaller firms who would not otherwise have been able to deal with a whole job—and on the other to be useful in meeting the requirements of contractors having work to be done, but not the facilities to do it. In fact, recent reports show that these centers have now brought the record of requirements met up to 85 percent of requests, having started with not much more than 15 percent.

GERMAN FARMING-OUT METHODS

The research staff of the New School for Social Research, Dr. Alvin Johnson, director, has with the aid of German scholars recently completed a study of the Farming Out of Defense Work; German Methods and Experiences.¹ This report states that Germany very early subcontracted government work to co-operative groups of craftsmen. Subcontracting within industry proper, that is by prime contractors to smaller firms, was looked upon with disfavor in Germany until 1938. This was partly because the Nazi philosophy could not

¹ See p. 8056.

countenance middlemen making a profit on work done by others; and partly because the original German plan of economic mobilization contemplated shutting down a large proportion of the small firms, and concentrating armament production in the most efficient plants. Beginning in 1938, however, this policy was reversed, and since then the Government has encouraged and promoted subcontracting. While the bulk of the huge output of tanks, guns, planes, etc., has been supplied by large-scale industry, to some extent with the aid of labor and equipment taken from small industry, all the indications are that there has been a considerable increase in subcontracting during the last 2 years. Subcontracting is arranged both privately and through government agencies, which latter include order exchanges, called bourses.

Local, State, and regional production organizations are coming into being all over this country in answer to needs gradually being recognized. These follow in a measure patterns which have been functioning in Great Britain for some time. These agencies must be regularized and articulated so as to give to procurement and production the maximum of assistance. In every seat or potential seat of defense industry there should be developed clearing centers such as have been set up in England and in certain places in the United States, as in Providence, R. I., through which firms having incompletely utilized machine tools or other key equipment can currently make this fact known, and other companies having work to be done can easily learn where and when capacity is available.

"FARMING-OUT" OF ANTI-AIRCRAFT GUN PARTS

An excellent illustration of how much even of the most complicated defense mechanism can be farmed out is afforded by the manufacture of the Oerlikon anti-aircraft gun as carried on by an organization operating from Providence. The Swiss citizen who had had experience in making this gun and desired to set up its manufacture in this country at first sought to find a suitable factory which could be equipped to do the entire fabrication of the gun. He was told, however, that owing to the great shortage of machine tools and skilled labor it might be months before he would be in a position even to start tooling. At the suggestion, therefore, of the Rhode Island Industrial Commission, photostats and blueprints were made of the various parts and subassemblies and submitted to manufacturers who were thus enabled to make intelligent bids. Without going into all the detailed steps taken the final result was that instead of constructing or acquiring a factory, only an engineering and procurement office was set up and the actual manufacturing operations were entrusted to some eight major subcontractors.

One of these, a manufacturer of textile-finishing machinery, works exclusively on the gunmount. Although itself a subcontractor, this company in turn has some 10 to 15 sub-subcontractors, firms which do anything from large casting work to the production of small bushings and bearings. Of the sub-subcontractors, one operates an iron and brass works, others normally make gears, and others manufacture printing presses and other machinery. Another major subcontractor, whose normal business is the making of clothes-pressing machines, works on sights, a type of production completely foreign to anything this firm had ever done. Yet the Swiss engineer overseeing the operations stated that the production of this company, which was extremely rapid, equaled in quality anything turned out by the original factory in Switzerland. The tool and gage work for this subcontractor was sub-subcontracted to a small company which had been organized for the purpose of developing and making machinery for the production of electrical connectors. Other sub-subcontractors include a great rubber company which produces the eye piece, and a watch company, a cotton-gin company and a tool company which supply screw-machine parts.

Another major subcontractor, which has, however, no sub-subcontractors, manufactures subassemblies, which include the hammer plate, the breech block, the breech bolt, the ejector, the stop plates, and the stop double loading. Similarly another company fabricates miscellaneous parts going into the breech mechanism, including the buffer, the side bars, and the trigger mechanism; while another manufactures the breech case and the hand grips, and, aided by numerous sub-subcontractors, does a large amount of tooling and gage work.

While many of the firms which have united their efforts to produce this gun are located in Rhode Island, much of the work is also done in other States, including firms in Connecticut, Massachusetts, New York, New Jersey, Pennsylvania, and Maine.

SUBCONTRACTING A TWO-WAY PROCESS

In all projects for spreading defense work it is highly important to realize, however, that subcontracting is a two-way process. There is no use in organizing companies and communities to receive orders unless there is a parallel progress in making orders available. A serious failure of either end to keep pace with the other spells disillusionment.

As to the betterment of facilities at present in use and beneficial changes which could be made in plants about to be pooled, a book could be written. There should be set up in the Office of the Under Secretary of War, somewhere in the Navy Department, and in the Machine Tool Section of the Office of Production Management, management-engineering sections whose business it would be to look out over the field and help to raise in a thousand ways the efficiency not only of plant organizations but of individual machines as well. The recent tendency of the War Department to install management engineers in its district offices should be encouraged.

It is the universal testimony of management engineers that many machines now considered as nonusable on defense work can be made to function at an expense which is a fractional part of acquiring new ones. There are munitions plants that are now satisfactorily turning out work largely on reconditioned machines. Normally a machine tool fails because of wear and tear on a few parts. It is much quicker as well as cheaper to recondition those parts than to build and install a new machine. Those responsible for priority ratings on requests for new machine tools must canvass this opportunity for reconditioning old tools just as the possibility of increasing capacity through pooling and subcontracting should be explored before new plants are authorized. One of the most promising functions of these suggested management engineering sections would be to assess plant capacities in key industries. Too frequently the output of plants is gauged by a too casual estimate of their possibilities. Sometimes these estimates are such as will least disturb normal business. In this way some plants are rated high simply because they deliver what their proprietors have promised but without realizing their full potentialities.

When it comes to practical measures for spreading defense work to all industry, one of the most important keys to production is to be found in "exploding" a given product. This is an English term by which is meant so breaking up an item of matériel—a tank for instance—into its constituent assemblies and parts as to make clear to everyone properly at interest the character of the manufacturing involved. We are apt to consider a tank as just a tank and an airplane as just an airplane and let it go at that. As long as we think no further, this means that only sizable concerns can bid and it is hard to see how and where small concerns can have any part. "Exploding" visualizes the details of the work to be done, and prepares the way both for the separate construction of sizable sections of a product, and for the farming out of each separable operation where this makes possible the employment of capacity which could not otherwise be utilized. Tanks are now being manufactured, for example, consisting of some 30,000 parts, over 5,000 being different. A large proportion of these parts can, of course, be farmed out.

If the policy of farming out is to mean much in an emergency as challenging as that which now confronts the Nation a considerable reservoir of idle, or partially utilized, industrial capacity is presupposed. There are no statistics by which one can determine with any exactitude just what percentage of our total capacity is now being utilized, but after consulting a good many different people in a position to have an opinion I have adopted 40 percent as my best guess. Raise or lower this percentage as you like and you still have a stupendous volume of capacity yet to be put to work. And this capacity is immediately available without waiting for either new buildings or new machine tools.

But putting idle machines to work will not in itself guarantee useful implementations of war. There must be intelligent planning on the part of the procurement agencies. Each item of matériel and each of its constituent components must be placed on a production schedule showing when its manufacture is to begin and when it is to be finished. To make such schedules mean anything the follow-up must be such as to discover actual or threatened failures at the first possible moment.

RESPONSIBILITY FOR PRODUCTION

To complete my testimony I wish to make just two further points. First, it is important that we recognize the fact that, under our present set-up, the procurement agencies of the Army, Navy, and Maritime Commission have the primary

responsibility for production. Office of Production Management agencies are equipped to assist in various ways. Sometimes under Executive orders such as that providing for the recently set up Division of Contract Distribution in Office of Production Management, coordinate authority is provided for. But even in these cases, the initiating moves are fully within the province of the procurement agencies.

It is the procurement agencies then which in the first instance establish and are responsible for the relationship between the Government and its suppliers. It is well to recognize that these relationships are subject to constant change as the gravity of our situation gradually becomes recognized. When purchasing on a large scale began, our procurement agencies, after signing the contract for a given item, were loathe to interfere in any way with the methods of manufacture—not even to the extent of making suggestions—for fear of relieving the supplier of his responsibility under the contract. Generally speaking, the same attitude is pretty general today.

One notes that in England and even in Canada this attitude has been largely abandoned. Whenever it appears that production can be increased by a given supplier adopting a given course of action there is no hesitation upon the part of the procurement agency to outline in considerable detail not only what is to be done but even how it is to be done. When the Nation is in peril the niceties of ordinary purchasing can be ignored. The public interest must prevail over the rules which customarily control relations between buyer and seller.

I want to emphasize the fact that in a serious situation such as now confronts the American people just what constitutes cricket is largely determined by one's idea as to how grave the situation is. It has been the common experience both in this country and in England that at the start two or more concerns manufacturing the same item of material frequently refuse to exchange information and even to sit in the same room to discuss common problems. The attitudes born of our competitive system seem to carry over 100 percent. Gradually under proper leadership such concerns can be led to exchange experiences and jointly work for the solution of common difficulties.

As one conjures up the stress under which we may be operating a few months hence the pressure for this type of cooperation between suppliers will be increased. As a matter of fact in the manufacture of M3 tanks one can detect already several successive advances in cooperation. It is my judgment that we will not be doing our utmost on this important tank program until the half-dozen principal suppliers set up some intercompany organization to unify practices and act for the group in many matters such as purchasing and subcontracting where common policies will facilitate output. In connection with the \$12,000,000 contract recently awarded the washing machine industry—under which three concerns are to subcontract to 32 widely separated plants—it will certainly be necessary to have some central directing organization. There are doubtless other lines where organizational cooperation along comparable lines would facilitate maximum output.

Finally, may I suggest that one weakness in our defense organization which has been apparent for some months is the failure adequately to utilize the services of industrial and production engineers. I know of no agency of the Government—military or civil—where men of this type are in demand.

WAR BEING FOUGHT IN WORKSHOPS OF WORLD

War today is fought in the workshops of the world—especially in metal-working plants—quite as much as on the fighting fronts. Recognizing this situation, the Roster of Scientific and Specialized Personnel, an agency organized by the National Resources Board and the Civil Service Commission and attached to the Office of the President, has built up a list of nearly 200 industrial and production engineers—about 70 of whom are distinctly grade A and the balance all highly recommended. This list was completed early in March. In the following 3 months just one inquiry as to the names on this list was received by the roster, with no record of any appointments. I have not inquired recently, but I think I would know it if there had been any material change in the situation.

The engineers on this list were located and their records secured with the assistance of the American Society of Mechanical Engineers, the Association of Consulting Management Engineers, the Society for the Advancement of Management, and other highly esteemed agencies.

In World War No. 1, especially in the Ordnance Department under Generals Crozier, Wheeler, and Williams—successive Chiefs of Ordnance—the country was scoured for technical skills of this kind.

The layman is so conversant with differences in training, experience, and technical competence as between individuals within the same profession—as for instance among doctors—that it should not be necessary to point out that two engineers are more apt to have different aptitudes and experience than the same. There are literally hundreds of specialties practiced by the group known generally as engineers. If we are going to spread defense work geographically and to the smaller plants, or even if the larger plants are to be made more effective, it will be because the several branches of the Government directing defense work bring into the picture those types of engineers who are intimately acquainted with the mechanisms of production control, with machine shops, machine tools, and the processes under which materials are fabricated, and who because of their specialized knowledge can give unity of spirit and direction to the whole defense effort. Every time we order a new machine tool that is not absolutely needed we complicate our problem. Every time we learn how to use an idle tool, whether through its reconditioning or through organization of pools, it is a clear pick-up.

Farming out has its problems, and yet in the light of the current situation it is after all a relatively simple task. Only standard engineering practices are involved. Nothing that is entirely new has to be thought out. Doubtless there are some legal restrictions which could profitably be modified. But they can hardly be advanced as a general bar to the program. Nor are there any doubts as to the desirability of farming out. When it comes to theories governing price control and priorities there is plenty of opportunity for differences in opinion. It is by no means all clear sailing. But when it comes to utilizing idle manufacturing capacity, counteracting priorities and unemployment, and salvaging small-business enterprises through a policy of farming out the social advantages are obvious.

Our direct goal in all this planning, of course, is to unify and put to use the tool power of the Nation. But in achieving this objective by the methods suggested, we would put our whole back-of-the-line effort on a democratic basis. We should so plan the structure of contracting and subcontracting that in the smallest shop and in the smallest village—and if the need comes in our homes—every lover of liberty can find his station and feel himself or herself a part of a noble enterprise—one essential unit of an unconquerable people.

EXHIBIT A.—MEMORANDUM ON THE WORK OF THE LONDON AND SOUTHEASTERN REGIONAL BOARD

REPORT BY LONDON AND SOUTHEASTERN REGIONAL BOARD, LONDON, ENGLAND.
JULY 24, 1941

The London and South Eastern Regional Board is one of twelve in the country. The Board consists of eight official members and seven nonofficial members. The former are the Area Officers of the three Supply Departments—the Admiralty, the Ministry of Aircraft Production, and the Ministry of Supply—and representatives of the Board of Trade, Ministry of Labour and National Service and Ministry of Transport; the Emergency Repairs Department of the Ministry of Works and Buildings, and the Raw Materials Department. The nonofficial members consist of three representatives of employers and three of workpeople, from whom the Chairman and Deputy Chairman of the Board are chosen; if the Chairman is a representative of employers, the Deputy Chairman is a representative of workpeople, and vice versa. The seventh nonofficial member is the Chairman of the Regional Machine Tool Control Committee.

This combination of official and nonofficial members was designed to provide a link between the organs of government and managements and labour who have to carry on the actual work of production in the factories. It has been pointed out that effective policy must in considerable measure be regional in character. Government policy is bound to affect deeply the normal lives of individuals and the cherished traditions and rights of managements and Trade Unions. Whilst the central authority can lay down the general principles and assist through its central machinery in carrying out policy, conditions vary so much in different parts of the country that it is essential to make full use of local knowledge and adjust policy to local circumstances.

In practice, the combination of official and nonofficial members has made for stimulation of ideas, and there has been a constant flow upwards of constructive proposals. On many occasions valuable information as to local conditions has

been gathered and forwarded to the appropriate authorities. There has resulted a greater awareness on the part of Government Departments of the real state of affairs obtaining in industry and of criticisms and discontents which exist.

The Regional Board has been very useful in another respect. The representatives of the Government Departments concerned who have acted as members of the Board have developed a very real esprit de corps and unity of outlook. They have regularly sat round the same table and as a result of these friendly contacts, effective cooperation between their Departments has increased. Efficient coordination of the work of Government Departments is possible only when there is close contact at various levels of the administration, and not merely at the top. The Area Officers have functioned on a number of informal subcommittees which, but for their membership of the same Board, would probably never have come into existence. As a result, the Supply Departments have frequently helped one another by agreeing to the transfer of labour or manufacturing capacity when this was urgently necessary. The need for close cooperation between the Supply Departments is all the greater when it is remembered that a large proportion of the firms in the country are working for more than one Department. The Area Officers, who are the local representatives of their Departments, are in a position to arrange joint action in the case of individual contractors when this is desirable.

The primary function of the Board is to assist in harnessing industrial capacity to the war effort to the maximum possible extent. On the other hand, firms already largely engaged in war production periodically have some of their machine tools idle, due for example to changes of design, temporary shortages of materials, or bottlenecks in the production process. On the other hand, many firms have to be switched over from peace to war production. The attempt by the Board to utilise spare machine-tool capacity from its Headquarters was not successful. Quite apart from the large number of general engineering firms in the Board's Area, there were thousands of nonengineering firms whose capacity could in some measure be used for the war effort and who in many cases had useful machine tools available, e. g. for maintenance work. It was not possible to maintain the contact with these firms which was essential if use was to be made of their capacity.

The Board therefore decided upon a measure of decentralization and "broke down" the problems by setting up ten Clearing Centres (as they are called) in its Area. Each Centre is in charge of an officer with engineering experience, under the administrative control of the Board Secretariat. Attached to each Centre there is a District Advisory Committee consisting of representatives of employers and workpeople. The Committee's function is to mobilise the goodwill of local industry, to make its knowledge of local conditions available to the Board, and to forward constructive suggestions in relation to the production problem.

At the Centres there has been collected detailed information about the firms in the district, e. g., machine tool census returns, labour returns, labour inspectors' reports, information about Government Contracts, etc. Intimate contact between local firms and the Centre is encouraged as much as possible. The activities of the Centres may be conveniently summarized under the following heads:

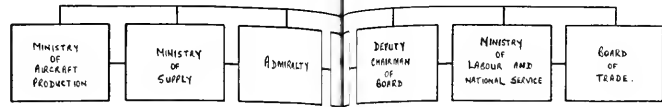
(1) CLEARING CENTRES AS CAPACITY EXCHANGES

The aim is to "marry" machine tool spare capacity and overloads. The Machine Tool Census, whilst containing a wealth of valuable information, constitutes a static record of machine tool capacity, whereas spare capacity is a constantly changing factor. Firms are therefore encouraged to contact their Clearing Centre whenever they have spare capacity or are experiencing overloads. The Centre works on analogous lines to an Employment Exchange, which links up workmen seeking employment and employers requiring labour. A considerable volume of contracts has been placed through the Centres, thus utilising spare capacity which probably would have remained idle otherwise. Two points of interest may be noted. The monetary value of a contract placed through a Centre is not an accurate index of its usefulness, as a serious bottleneck in production may be relieved by finding a few spare hours on an urgently needed machine. It has also been found by experience that large and powerful firms whose order books are full to overflowing frequently have substantial short-term machine tool capacity available, for reasons mentioned above, which can be utilised through the Centres.

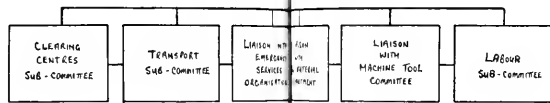
LONDON & SOUTH REGIONAL BOARD



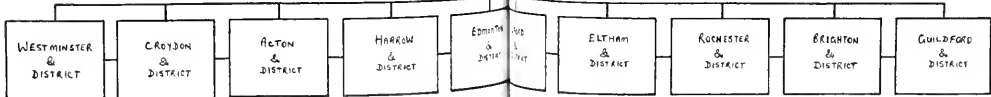
EXECUTIVE



SUB-COMMITTEE ASSIGNMENTS



DISTRICT CENTRES



EACH CENTRE HAS IN POST ITS OWN REGIONAL LABOUR SUPPLY WHO IS RESPONSIBLE TO THE MINISTRY OF PRODUCTION ENGINEERS AND A MEMBER OF THE CENTRE. THERE IS ALSO AN HONORARY CHAIRMAN AND THREE WORKERS TO ADVISE ON LOCAL MATTERS AND ALSO AN INSPECTOR OF PUNITIONS NATIONAL SERVICE. A MEMBER OF THE NATIONAL SERVICE IS AVAILABLE FOR CONSULTATION AT EACH CENTRE CONSISTING OF THREE EMPLOYEES

(2) ASSISTANCE TO NONENGINEERING FIRMS

To achieve a "total-war" effort it is essential to mobilise the maximum number of firms for war production. Very many firms whose peacetime production is disappearing are anxious to be so mobilised. In an effort to get war work they "badger" innumerable Government Departments, involving a considerable expenditure of administrative time, often with little result. The firms need guidance on how to switch over to war production and how to adapt their plant. This guidance cannot be given effectively by an overworked central administrative machine. Personal contact with a firm and an intimate knowledge of its personnel and equipment are necessary if quick and effective advice is to be given. It should be stressed that many nonengineering firms have useful machine tools, and that many firms with no such machines can make their contribution to the war effort.

The Centres set up by the Board have only been functioning for some eight months, i. e., they came on the scene at a fairly late stage in the rearmament programme, but they have been able to help many firms, especially the smaller firms who are not fully equipped to deal with the whole job by finding them capacity to suit their requirements.

(3) CLEARING CENTRES AS INFORMATION BUREAUX

One of the important functions of the Clearing Centres has been to serve as Information Bureaux. Government Departments receive innumerable enquiries which should properly be addressed elsewhere. Firms in difficulties, whether it be in connection with obtaining contracts, labour, or materials, seek to solve their problems by making application through an extraordinary diversity of channels. Quite recently, for example, there was forwarded to the Board from the Prime Minister's office, from the Ministry of Labour and the Ministry of Supply, correspondence with one firm relating to the same matter. Firms do not know which section of Government Machinery deals with their particular problem. The Clearing Centres have directed very many firms to the right Directorate or Control, with great saving of time and convenience to all concerned.

(4) COOPERATION BETWEEN CLEARING CENTRES AND GOVERNMENT DEPARTMENTS

Government Departments are beginning to appreciate the value of the Clearing Centre organization in increasing measure. The Ministry of Labour and National Service has already attached an Officer to each Clearing Centre, who is able to make use of the intimate knowledge of local conditions possessed by the District Advisory Committees and the Officers in charge of the Centres. This is a most interesting development. The Board itself is a regional organisation and it has further decentralised by setting up the Centres. Similarly the Ministry of Labour is "breaking up" its problems more and more, and at the end of the chain of decentralisation we find the Officers of the Board and the Ministry of Labour working intimately together at the Centres, so much so, that they use the same set of files.

The information collected at the Centres is of great value. Numerous Production Directorates of the Supply Departments each have their officers in the field searching for capacity. Some overlapping must result, and individual firms may be visited by a series of officers each seeking capacity suitable for his particular Directorate, but not very interested in other capacity which the firm may have. To an increasing extent the various Production and Progress Officers of the Supply Departments are contacting the Centres where detailed and up-to-date information about firms' spare capacity, backed by personal knowledge of the firm, is readily available.

In short, the Centres constitute valuable decentralised administrative machinery, serving as a link between Government and industry, commanding through the District Advisory Committees attached to them, the good will of employers and workpeople alike.

The Regional Board has been active in other fields. It has helped to introduce the "spotter system" in the London area, whereby neighbouring firms group themselves under local controls, so that the "alarm within the alert" signal can be given when there is imminent danger of enemy air attack.

TRANSPORT

The Board deals with any problem which it considers may affect production. For example, the transport of the workers. Transport is an essential adjunct to industry and they must be brought into step with each other if due consideration is to be given to the welfare of the workpeople. With the movement of many hundreds of thousands of workers to the districts where factories are located, new problems of transportation arose, and had to be considered more closely. It was felt that the unnecessary delays which the workers were experiencing in getting from their homes to the factories and vice versa were tiring them and resulting in a loss of energy with its consequent effect upon production. The Board invited the London Transport authorities to discuss this problem with them, with the result that all the necessary steps were taken to meet this very serious transport problem. The difficulties experienced in meeting emergency conditions have been overcome, with the good will and determination of all interested parties, with the view of making the National effort as effective as possible.

To meet changing conditions, the Board has organized the principal London firms in 32 Local Transport Groups, which will serve as a link between industry and the transport undertakings. The Groups will give advance information on changes of shift hours so that adequate transport services can be planned, and will endeavour to arrange the staggering of shift hours so as to minimise traffic loads at peak periods.

The broad result of the above analysis appears to be this. At a time when the national life and industrial activity are increasingly coming under Government control or direction, a very large expansion of administrative machinery is inevitable. For rapid and effective action a high degree of decentralization is essential. Further, when industry is engaged in the extremely complex and difficult process of switching over from peace to war production, when masses of regulations and new controls, limitations, and restrictions of normal industrial activity are constantly being imposed, firms need information and guidance. It is desirable that they should be able to apply for this to a local office, where a "living" personal contact can be made with officers, with intimate knowledge of local conditions, rather than they should adopt the inevitably slower process of written communication with the headquarters of some remote Government department. This living contact is of very great importance; it makes for mutual understanding between Government and industry and enables knowledge of administrative policy to be spread quickly and smoothly. It can often overcome the attitude of hostility toward bureaucracy which some industrialists are inclined to adopt.

The Clearing Centres set up by the Board are doing a very useful job of work, and their extension to the whole of the United Kingdom has now been approved by the Production Executive of the War Cabinet.

EXHIBIT C.—FORM USED BY ENGLISH CLEARING CENTERS TO OBTAIN DATA ON SPARE MACHINE TOOL CAPACITY

LONDON AND SOUTHEASTERN AREA BOARD

To CLEARING CENTER:

----- C. C. Serial No. -----
 ----- Date received in C. C. -----
 ----- Firm's Serial No. (if any) -----

Spare Machine Tool Capacity

Name of Firm ----- Phone No. -----
 Address ----- ¹ Firm's Executive -----
 Machine description
 and work dimensions -----

¹ Give the name of the executive able to handle this matter.

Spare Machine Tool Capacity—Continued

Subsidiary equipment
available for above ----- Machine Code No. -----

Grade of work possible
with above:

- ² 1. Max. machined dimension plus or minus .0015".
- ² 2. Max. machined dimension plus or minus .005".
- ² 3. Max. machined dimension plus or minus $\frac{1}{64}$ ".
- ² 4. Wider limits—give details -----

Material workable:

- ² 1. Nonferrous.
- ² 2. Light Alloy.
- ² 3. High Tensile Steels.

We could provide
tooling:

- ² 1. Cams and Jigs.
- ² 2. Press Tools.
- ² 3. Gauges.
- ² 4. Cutters.
- ² 5. Other Items:

Spare machine hours available per week -----
No. of weeks available -----

REMARKS:

(Signed) -----
(Date) -----

² Delete items which do not apply.

(The following letter and article were received subsequent to the hearing and, in accordance with instructions from the chairman, were included in the record.)

NOVEMBER 5, 1941.

HON. JOHN H. TOLAN,
*Chairman, House Committee Investigating Defense Migration,
Washington, D. C.*

MY DEAR MR. TOLAN: Herewith I send you a report on farming out of war contracts in Germany and some other relative information, all as drafted by the research staff of the New School for Social Research, 66 West Twelfth Street, New York, N. Y., Alvin Johnson, director. Dr. Johnson advises us that the inquiry was conducted under Dr. Herbert Block, the school's chief research worker in this field.

I have found this report very enlightening, and I am sure you will be interested in it. There is no harm in its being listed in any publication designed to enlighten our defense workers.

Yours very sincerely,

MORRIS L. COOKE.

EXHIBIT D.—"FARMING OUT" OF DEFENSE WORK: GERMAN METHODS AND EXPERIENCES

PREPARED BY DR. HERBERT BLOCK FOR THE NEW SCHOOL FOR SOCIAL RESEARCH,
DR. ALVIN JOHNSON, DIRECTOR

I. GENERAL SURVEY

The first economic group to get subcontracts in National Socialist Germany were the craftsmen. The public authorities, who were fully occupied with the huge rearmament program, were unable to negotiate individually with the many thou-

sands of workshop owners. It was therefore necessary to form organizations which could accept the governmental order, distribute it among the craftsmen, and control its execution.

Such organizations, called cooperative associations (*Lieferungsgenossenschaften*), had sprung up like mushrooms in the first World War, but with the restoration of peace all but a few were dissolved. When, however, at the end of 1932—prior to the creation of the Third Reich—a new tide of governmental contracts was approaching, cooperative associations of tailors and shoemakers at once emerged. Thus the Nazis had merely to be guided by precedence. They founded some 200 associations of mechanics, joiners, saddlers, and other trades in order to utilize their productive capacity for rearmament. A strict regulation of the association prevented such waste of effort as prevailed in the war of 1914-18.

The available material, cautiously evaluated, leads to the conclusion that these associations stood the test. The craftsmen, still under the influences of the great depression, were eager to participate in public contracts, and did not mind neglecting their private customers.

It was about 2 years after the Nazis came into power, that another type of organization came into existence, the cooperative group (*Arbeitsgemeinschaft*). The associations of the craftsmen formed groups of masons, carpenters, plumbers, etc., and put them to work in the huge building operations of the Third Reich. The owners with their employees and machines have been often transferred to remote places, while the members of the cooperative associations are working in the workshops. Although the latter are permanent organizations, the cooperative groups are founded only for the duration of a specific construction contract.

In addition, single workshops or groups of them have been placed with labor and machinery into large factories. Fewer persons may have been involved in this interesting type of organization than in the others, but the transformation of artisans into industrial workers is significant for the fate of craftsmanship in Nazi Germany. Hundreds of thousands of workshops have been closed down in recent years, and the craftsmen and their employees have been absorbed into the factories.

In the industrial field there is, as a rule, no need for new organizations to act as special centers for subcontracting, for each comparatively large enterprise is able to fulfill this task. Above all, subcontracting itself proved unnecessary so long as industrial capacity was not fully utilized or unemployed labor not fully absorbed. Therefore, up to 1938 the Government itself decided by the issue of its contracts who should benefit from its orders, and did not allow a concern to pass part of its governmental contract to other firms beyond the customary division of labor.

At the beginning of 1938 the situation took a different turn. Industry was fully employed and the businessmen no longer endeavored to obtain orders. The governmental departments had increasing difficulties in placing their orders and in getting the material in time. Since then they have encouraged and promoted subcontracting.

It is not easy to assess the results of the German experience in subcontracting. Certain general difficulties are obvious. The subcontracting firms are, as a rule, small and less efficient in technique and organization. Defects of the product and delays in delivery are bound to cause friction. Subcontracting raises the level of prime costs, and can be justified economically only because it saves the supplementary costs which would be involved in any expansion of industrial capacity. No statistical data have been published which would allow us to estimate the actual range of subcontracting. That it must have increased considerably during the last 2 years, especially in the metal industries, is indicated by the Government's having found it necessary to regulate by a special decree price fixing in subcontracting. The fact that small firms in the war-supplies industries seem to be fully employed also points in this direction.

It is interesting to note that the method of subcontracting is not in accord with the original German plan of economic mobilization, which intended to shut down a large part of the small firms and to concentrate armament production in the most efficient plants. The peculiar course of the present war—short of blitzkrieg followed by long months of relative military inactivity and the growing dangers of air attacks—favored the spreading out of orders. But, at the same time, the importance of this decentralization of production must not be overestimated. The huge output of tanks, guns, planes, etc., has been supplied by large-scale industry, which is constantly being expanded by the transfer of men and equipment from small firms. The tendency toward industrial concentration seems to be growing, especially in the consumer-goods industries.

The success of subcontracting is largely due to far-reaching standardization of the products and to an extensive training activity. The number of varied types of military equipment, as well as machinery and consumer goods has been drastically reduced. Thousands of instructors are at work all over the country training whole armies of workers, craftsmen, and even farmers in the production of war materials and in the use of substitutes.

The sources on which this report is based are referred to in appendix I. Nowhere has the whole problem been treated systematically. The political and economic press confines itself to discussing the question of formal organization. Information concerning the actual working of the subcontracting business had to be gathered from scattered references, primarily from technical periodicals. The material covers the period up to the spring of 1941.

II. SPECIAL PROBLEMS OF SUBCONTRACTING IN INDUSTRY

A. How to find suitable subcontractors.—Although defense orders were farmed out to craftsmen before large-scale industry took to subcontracting, the part which industry plays today in the war efforts is much more significant. As there is no compulsory subcontracting, a number of manufacturers have been reluctant to practice it, mainly because of their responsibility for the deliveries and because of the difficulties resulting from subcontracting. The press therefore has constantly stressed the importance of farming out and has exhorted the entrepreneurs to adopt this method.

Concerns which are willing to deal with smaller factories have two ways of accomplishing their purpose, a private way and an official one. The private way is:

1. Private contracts through inquiries of firms which are known or recommended, or which have answered or placed an advertisement. It goes without saying that middlemen play a big part in making contacts between prime contractors and potential subcontractors. These middlemen have obviously charged exorbitant commissions. Friedrich Landfried, Secretary of State in the Reich Ministry of Economic Affairs, spoke at the end of 1939 of "a parasitic crowd of middlemen putting commissions in their pockets without having done any responsible work." On September 11, 1940, a decree was issued which—repeating former ordinances—aimed at the elimination of all middlemen whose activities were not justified from the point of view of the whole economy, and which prohibited commissions unwarranted from the same point of view. The press admitted "numerous unpleasant occurrences" but admitted that the criterion "not justified from the point of view of the whole economy" was rather vague.

2. Official agencies: Official intermediaries between prime contractors and subcontractors are the district bureaus for the equal distribution of governmental contract (Bezirksausgleichsstellen für öffentliche Aufträge). They are the regional organizations of the Reich board for the equal distribution of governmental contracts which is a division of the Reich Ministry of Economic Affairs. The army, the navy, the air force and the party never place a single order without consulting or without at least informing the district bureaus which keep a complete card register of all firms fit for governmental contracts. These cards contain judgments of the party and the labor front on the political reliability, the financial standing, and the taxes of the entrepreneur; and data on the personnel, the productive capacity, the exports, and the fluctuations of output of the entrepreneur's plant.

Equipped with such vast information, the district bureaus intervened in behalf of the farming-out business, but their efforts seem not to be very successful; the bulk of subcontracting evidently is arranged privately. As the bureaus have a survey only of their district and as they wanted to facilitate the interregional distribution of orders, they created, conjointly with other authorities—so-called order exchanges (Auftragsbörsen) in western, southern, and eastern Germany. The order exchange for eastern Germany (Ost-deutsche Auftragsbörse), Berlin, may serve as an example of how these institutions are working.

3. Berlin order exchange: The order exchange which was opened in September 1940, in the building of the Berlin stock exchange, had the task of finding out subcontractors for the metal industries in the Berlin area. All the factories of the capital and its surroundings have been fully occupied; the district bureau (Bezirksausgleichsstelle) therefore was unable to overcome the bottlenecks. While the prime contractors admitted to the exchange have been Berlin manu-

facturers of arms and similar war supplies, the subcontractors have been firms of the metal-products industry in the east of the Reich.

The exchange covers a far-flung territory. German experiences taught that the distance between the prime and the subcontractor should not exceed 250 kilometers, or 155 miles. A greater distance causes a waste of time and money for the frequent visits which the prime contractor inevitably has to pay his subcontractors; it causes expensive freight charges; and from the point of view of the Government, it puts an unnecessary strain on the railroads, which are already overburdened. The order exchange for eastern Germany includes concerns located in Silesia, the Sudeten area, the so-called protectorate, the Provinces of Poznan (Poland), of Danzig-West Prussia, and of East Prussia. The distance from Berlin to Prague, to Breslau, or to Poznan is about 155 miles, but other parts of eastern Germany, e. g., Danzig or East Prussia, are outside the 155-mile radius.

The eastern firms admitted to the exchange were carefully selected. The competent district bureaus examined their political reliability, their commercial standards, and their technical efficiency with the utmost attention. The bureaus were informed about the needs of the Berlin prime contractors and chose only concerns which apparently were able to satisfy these wants. For instance, of 170 Silesian firms interested in getting subcontracts only 60 were admitted.

Nevertheless, there was, at least at the beginning of the exchange business, a discrepancy between the needs of the prime contractors and the facilities of the smaller firms. The Berlin manufacturers wanted to farm out what is called in German "Arbeiten der spanabhebenden Verformung," e. g., the work of transforming with machine cutting, such as turning, milling, drilling, planing, grinding, and cutting threads—operations which, moreover, must be executed with the utmost exactitude. Most of the factories in eastern Germany were not equipped for such operations; they were looking for sheet-metal work.

B. The contract and its execution.—If the small manufacturer apparently is able to satisfy the needs of the prime contractor, who usually first inspects the plant of the subcontractor, both manufacturers sign an agreement containing the following items:

1. Technical content: At the end of the last section we pointed out the kind of work which is farmed out by the Berlin arms manufacturers. In addition, appendix II contains a drawing of work pieces of the types usually farmed out.

The contract has to fix the exact dimensions of the work pieces and the tolerances. Parts which are not properly finished have to be overhauled. Usually they are returned, but sometimes it is preferable to give them the last finish in the prime contractor's plant in order to same time (the freight is charged to the subcontractor). A clause must be added to the contract concerning the procedure in such cases and the distribution of any additional expenses. When half-finished pieces are processed, part of them inevitably are impaired; the contract therefore must also deal with this problem.

It is often advantageous for the prime contractor to render the subcontractor some technical assistance. The small factory often lacks the appliances necessary for the production of the subcontracted parts, in which case the prime contractor usually furnishes such implements, or at least drawings of them, through his own machine-tools department. Moreover, he delegates instructors and foremen to acquaint the staff of the subcontractor with its task. If the small factory delivers defective pieces, work is facilitated when the prime contractor sends specialists to investigate the causes. Frequently obstacles are easily overcome by overhauling or by precise adjustments of the machines, by improved cooling or by supplying more efficient tools. It is expedient, however, to stipulate accurately the conditions of such assistance. Otherwise misunderstandings as to who shall bear the expenses will probably arise, assistance will be taken for granted, and the result will be a lawsuit.

The German experts of scientific management maintain that both parties have to establish some organization to handle the subcontracting business. The small factory needs an organization, however small, which rationalizes the working plans, the fixing of the piece wages, and the inspection of the finished goods prior to their delivery. It is profitable for the prime contractor to deal with the subcontractors as though they were units of his own corporation.

For further details of technique and organization, refer to appendix III.

2. Delivery: The timing of the deliveries is somewhat troublesome. The primary contractors are constantly pressed for a speedy delivery. The governmental departments are disposed to fix the terms too short; they designate as "urgent in the interest of the state" (staatspolitisch wichtig) orders which are

not pressing, and they constantly request delivery, for they know that he who does not insist will never get his material in time. Goering, in charge of the four years' plan, was compelled actually to prohibit attempts of the authorities to intimidate the manufacturers for the purpose of rapid delivery. It is most important for the prime contractor that the subcontractor deliver in time. That is a frequent obstacle, for the small manufacturer often has to overcome difficulties, at least in the beginning, which cause delay, or he may just be a man who has not learned punctuality.

3. Price: The cost price of subcontracted pieces offers the same problems in Germany as in other countries. There occur cases in which the plant of the prime contractor is less efficient than the plant of the subcontractor. If this is so, the prime contractor does not hesitate a moment to buy the necessary parts from the subcontractor. But we should not speak of subcontracting in a case of normal business relations between a prime contractor and a specialized supplier. Subcontracting in the technical sense is done only when the prime contractor cannot wait until he himself has built an additional plant or when it would be a waste of capital to enlarge the productive capacity for the short duration of a war boom. Thus we may say that—leaving aside the problem of depreciation—the original expenses of the subcontractor generally are higher than those of the prime contractor. Subcontracted parts are more expensive than the articles of the prime contractor's own factory.

The German Government is well aware of this fact. If the difference of the cost price alone would have increased the price of articles containing subcontracted parts no special regulation of the prices in the subcontracting business would have been published. The general rules would have been sufficient. However, subcontracting became a field of war profiteering. Interestingly enough, not so much for the subcontractors as for the prime contractors. It may be that some subcontractors made excessive profits, but our impression is that the prime contractors have been the sinners. Official investigations disclosed that the prime contractors "frequently charged intolerably high commissions" which increased the price of the finished goods and which sometimes may have reduced the profit of the subcontractor. There are indications that, on the whole, subcontracts yield lower rates than prime contracts. The small businessmen therefore are eager to get prime contracts rather than subcontracts.

The Government did not intervene before the subcontracting business had grown to a considerable extent. On September 11, 1940, the Reich, in order to lower excessive profits, published the decree, mentioned in section A, regulating commissions and the activity of middlemen. Another decree issued half a year later, in March 1941, covered a wider field; it regulated not only the commissions but the prices in the subcontracting business by prescribing in which cases the so-called LSO have to be applied.

LSO is an abbreviation of "Leitsätze für die Preisermittlung auf Grund der Selbstkosten bei Leistungen für öffentliche Auftraggeber," e. g., directions for the determination of prices on the basis of cost prices for suppliers to the Government. They were drawn up by the German price administrator in fall 1938 when it became evident that the price ceiling and other general price regulations were unable to prevent war profiteering on a large scale. The Government wanted to get the war materials as cheaply as possible for financial as well as for monetary and for social reasons. As the public authorities had to buy in a seller's market—their demands exceeded by far the supply—they resolved to replace the laws of the market by a rather sophisticated system of cost accounting. The prices had to be based on the production cost (including a suitable profit), not on the costs of individual plants in which system no businessman would have an interest in lowering the cost, but on "normal" cost leaving differential profits to the efficient concerns.

The decree of March 11, 1941, applied the LSO to subcontracts in a very discreet manner. The German Government, which never had any particular regard for private interests, was most careful—as a commentator put it—"not to disturb the purely private business relations between prime contractors and subcontractors" (*Der deutsche Volkswirt*, April 4, 1941, p. 1006). The LSO are applicable neither to subcontracts of little importance nor to marketable goods unless the market price is obviously exceeded. If the object of the subcontract is not a marketable good (e. g., if the subcontractor processes a semifinished article) and if the cost is considerable, the public authorities inform the prime contractor as to the prices of which "bits and pieces"—to use the English figure of speech—shall be computed according to the LSO. The prime

contractor passes these instructions on to the subcontractor, who thereafter has to expect an examination of his books by an official auditor, and a heavy fine in case he has not adhered to the directions of the price administrator.

However, if the contract is rather complex or if it has to be passed out in a hurry, the authorities may not be able to determine which pieces are subject to the LSO. In such a case they may invest the prime contractor with a so-called LSO authority (LSO Vollmacht) and now it is up to him to bind the subcontractors to the LSO. The authorization burdens the prime contractor with a great responsibility and therefore it is given only to very reliable firms. In any case the prime as well as the subcontractors have to act according to the "maxims of an economy in war" (nach den Grundsätzen der Kriegsverpflichteten Wirtschaft) which interdict highly profitable prices.

III. SPECIAL PROBLEMS OF FARMING-OUT TO SMALL BUSINESS

A. *Craftsmen.*—The decline of handicraft: Under the regime of Hitler who promised "a complete reconstruction" and "a new heyday of German handicraft," the number of workshops has been reduced considerably. As we mentioned before, hundreds of thousands of craftsmen have been induced or even compelled to become workmen. The press of the handicraft organizations has had to demonstrate to its readers "how more happily the workman lives than the so-called independent businessman." The number of establishments dwindled in 1936-37 (the year beginning April 1 and ending March 31) by 47,000; in 1937-38 by 57,000; in 1938-39 by 78,000. In the short period of 3 years 11 to 12 percent of all workshops vanished.

The war has accelerated this development because numerous craftsmen and journeymen have been drafted, and a multitude of workshops have had to close down for want of labor. In Thuringia, for instance, so many shoemakers were selected for military service that a great number of communities were left without a single cobbler. The Department of Commerce of Thuringia therefore induced a big shoe factory in Erfurt to establish a repairing service for 55,000 to 60,000 customers (for the present time of emergency, says the Ministry). The shoes are collected and returned by truck.

On the other hand, however, a large amount of defense work has been farmed out to craftsmen, for Germany wanted to utilize all her reserves of labor and machinery; the workshops, scattered over the whole country, are less endangered by air raids than the factories and, finally, the craftsmen "are less susceptible to enemy propaganda" than workmen.

2. The organization of farming out: A restricted number of relatively large workshops are efficient enough to participate individually in public tender and to accept large orders. For instance, there are craftsmen who are building finished speedboats in their boat yards. But the number of these large workshops amounted only to 3.4 percent of all workshops, according to a statement made in 1938. Consequently organizations had to be established as intermediaries between the authorities and the craftsmen.

These organizations have to fulfill numerous tasks: They have to choose those workshops which are prepared to cooperate in public contracts; they have to negotiate with them, to assist, to train, and to control them; they have to procure raw materials for them, i. e., they have to get the necessary permits, a business which the craftsmen individually never would bring to a conclusion. Last but not least, they have to take care of the financing. Several types of organization have been developed for these purposes.

3. Permanent cooperative associations (Landeslieferungsgenossenschaften): The present system of contract cooperatives has much in common with the set-up of those cooperatives established during the war of 1914-18. In both cases the cooperative societies were founded under the auspices of the handicraft associations and had their head office in a Reich center for handicraft contracts. But in the First World War the number of cooperatives was allowed to rise from 1,100 to 1,200, while today only one "Landeslieferungsgenossenschaft" (abbreviated Lageno) is admitted in each economic district and for each line of craftsmanship. At the end of 1940 there existed some 200 such associations. A dozen or more are established by the tailors, the shoemakers, the joiners, the saddlers and upholsterers, the cartwrights, the blacksmiths, the mechanics, the basket makers, the brush makers, the cap makers and furriers, the weavers,

and the knitters. There is a dozen cooperatives of ropers, net and sail makers working for the navy. The cooperatives of dyers and cleaners, for instance, dyed Czech and Polish uniforms which were confiscated in the occupied areas. Cooperative societies of goldsmiths have orders for the manufacture of Iron Crosses. According to a German author (U. Müller, pp. 62-64, see appendix I) it was the aim of the Nazi government from its beginning to develop the contract cooperatives as instruments of war supply production. "As the contract cooperatives are working almost exclusively for the army," details on their activities are not available "on principle."

Members of the Lageno are the compulsory associations of the workshops, local cooperative societies, and individual craftsmen. As it may happen that large and urgent orders are pouring in at a time when the member workshops are already fully occupied, the Lageno signs agreements with outsiders who pledge assistance in such an emergency; these outsiders are called reserve troops (Bereitschaftstrupp).

The Lageno is entitled to negotiate on war contracts with the regional authorities; at the same time it has to execute the orders which are handed over by the Reich center. The allotment of the orders among the members is frequently done by confidential men of the guilds who at the same time distribute the raw materials and collect the finished goods. Each member gets a share in the order according to his productive capacity, his degree of employment, or his reliability; sometimes contracts are rotated among the members.

The members are usually usable to finance the business. The shares of the cooperative associations have a face value varying between RM (Reichsmark) 20 and 500. The guilds, which are not wealthy, are entitled by the German Department of Commerce to invest half of their estate in Lageno shares, but they are not allowed to acquire more than a seventieth of the capital of a single cooperative. Thus the capital is small and the same is true of the reserves. But the Central Bank of the German Cooperative Societies (Deutsche Zentralgenossenschaftskasse) and its banking system are ready to make advances against assignment of the claims. The public authorities allow such assignments as a special concession of the cooperatives of the craftsmen.

After overcoming many difficulties, the Lageno evidently fulfill the expectations of the Government. They have been useful in the execution of big orders which can be split up into many equal parts and which are easily supervised in production. It goes without saying that the craftsmen who participate in such orders have to be disciplined and for this purpose the Reich center has organized training courses.

The leaders of German handicraft have expressed their willingness to carry on these cooperatives beyond the present emergency and hope to oust the middlemen from certain markets, e. g., from the clothing business. These expectations are the more questionable as the craftsmen have been spoiled by the relatively easy public contracts. Throughout Germany complaints are heard about the negligence with which the craftsmen are treating their private customers. Many of them prefer going completely without private orders; others accept orders but do not carry them out or charge exorbitant prices (it is very difficult to apply the price ceiling to the individual work of craftsmen).

4. Cooperative groups for specific purposes (Arbeitsgemeinschaften): In the course of Germany's rearmament huge building operations became necessary: Military roads—the famous Autobahnen—big plants in regions which are less exposed to invasion and air raids, mostly in agricultural regions; houses for those workmen transferred to new industrial centers; caserns; and fortifications, especially the Siegfried Line at the French frontier. Artisans are predominant in the construction business and when those large plans were projected with the intention of carrying them out swift as lightning, it was impossible to rely upon only the industrial firms or the big craftsmen. It was necessary to utilize the productive capacity of the little fellows too.

These small craftsmen became organized, through the intermediation of the guilds, into a rather loose form called Arbeitsgemeinschaft. Such a cooperative group is an organization of craftsmen of different trades (for instance, masons, carpenters, painters, plumbers, etc.) for the purpose of carrying out a single project of large extent. The construction of the Siegfried Line offers a good example. Almost 300 Arbeitsgemeinschaften, with 1,300 persons and plenty of machines (e. g., 1,600 cement mixers) and tools were employed in the main lines

of the construction business (*Bauhaupt Handwerk*), leaving aside 300 middle-sized businesses with prime contracts. We learn from these data that the average *Arbeitsgemeinschaft* was rather small (at least in this case). Hundreds of *Arbeitsgemeinschaften* were busy in the accessory lines of the construction industry (*Bannebenhandwerk*). Moreover, there were groups of bakers, butchers, and other craftsmen whose task it was to supply the workers with bread and meat. The maintenance and repairing of the building machines was done by an organization of automobile mechanics (*Kraftfahrzeughandwerk*) which is said to have worked excellently.

5. Cooperative building societies (*Bauträger-Gesellschaften*) are owned by the organized handicraft, and do construction business for their own account. There are 17 companies of this type. The "Bauträger A. G., gemeinnützige Wohnungsbau-Gesellschaft des Handwerks der Ostmark in Vienna," forms a good example. The shareholders of this joint-stock company are the Deutsche Handwerks und Gewerbetag in Berlin (a head organization of the Chambers of Handicraft), the Chamber of Handicraft in Vienna, and the Zentralkasse südostdeutscher Genossenschaften also in Vienna (the central bank of the cooperative societies in southeastern Germany). The share capital amounted to RM1,500,000, according to the last available data. In 1939 the corporation completed 108 "Volkswohnungen" (apartments for working people); 313 were in the course of construction, half of it by order of the air force. Its assets consisted mainly of uncompleted houses (RM1,640,000 at the end of 1939), the biggest item among the liabilities being credits of governmental banks which do the greater part of the financing of the *Bauträger-Gesellschaften*.

Similar enterprises are the housing societies (*Hausbau-Gesellschaften*). But, in contrast to the "Bauträger-Gesellschaften," they are working for someone else's account. They act either as a trustee of the builder or as the administrative center of the numerous craftsmen who participate in a large building project. There are six of these companies located respectively in Berlin, Vienna, Munich, Brunswick, Weimar, and Trier. For instance, the Hausbau A. G. des Handwerks der Ostmark, *Arbeitseinsatzgesellschaft des Reichsstandes des Deutschen Handwerks in Vienna*, is owned by the same shareholders as the above-mentioned enterprise. In 1939 this company constructed in different parts of Austria 695 apartments for the army and 108 apartments for other builders' accounts, besides its participation in the construction of an electric substation in Carinthia. Rather important is the company in Brunswick (*Hausbau-Gesellschaft des Niedersächsischen Handwerks*) which organized the housing activities in the Salzgitter area where the Herman Goering-Werke are located. It is considered as one of its merits that it succeeded in transferring craftsmen with all their personnel and tools from regions lacking governmental contracts to the Salzgitter area where they worked in large groups (*Arbeitsgemeinschaften*). A corporation for the special purpose of building barracks is the *Unterkunfts-lager-Gesellschaft des Handwerks m. b. H.*

In some cases entire workshops or groups of workshops have been inserted into large factories. That means that the bosses of the workshops (e. g., mechanics or blacksmiths) with their journeymen, their apprentices, and their tools are absorbed by big concerns in which they are working not as artisans but as simple workmen. However, the crew of each workshop is paid as a unit and will be dismissed as a unit at some future day.

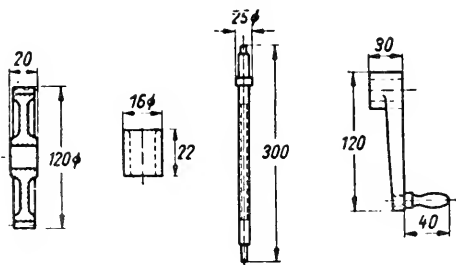
B. *Farmers*.—In conclusion, a few words on the participation of the peasant population in the defense work. With the help of small motors and machine tools they are manufacturing in the dull season simple and standardized parts of military equipment. Machine tools for this purpose were sent to the farmers as early as 1937 and several months later instructors came to train the farm people. It is worth while mentioning that in June 1939 a decree compelled the power stations to raise annually RM35,000,000 for a period of 5 years; this fund is destined to reduce the price of electric motors and machines bought by the farmers. The electrification of the countryside has the double purpose of intensifying agricultural production and of facilitating the farming out of defense work.

APPENDIX I. LITERATURE ON THE SPREADING OF GOVERNMENTAL ORDERS IN GERMANY

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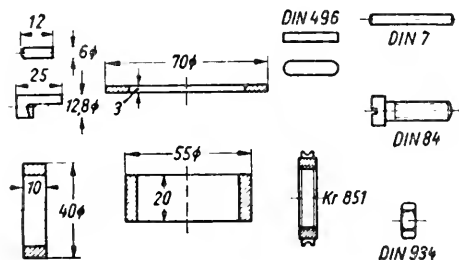
APPENDIX II. EXAMPLES OF WORK PIECES SUITABLE FOR SUBCONTRACTORS

[From Hans Gregor, Auftragsvergebung an Klein- und Mittelbetriebe. Zusammenarbeit zwischen Gross- und Kleinbetrieb, published in "Maschinenbau. Der Betrieb," August 1939, p. 373]



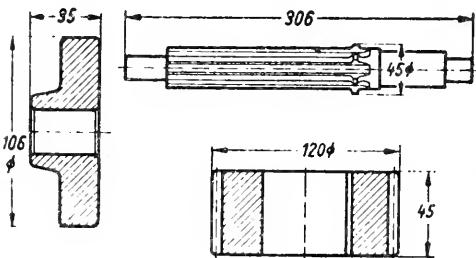
INDIVIDUAL ORDERS

of special pieces to be completely finished if possible, since their manufacture would not fit into the primary contractor's organization.



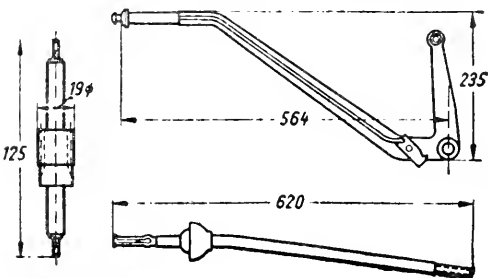
ORDERS FOR SMALL PARTS

Series of small items which at present would unfavorably burden the manufacturing schedule of the primary contractor.



SEMIFINISHING ORDERS

Special processing of series of pieces which could not be finished on time by the primary plant because of overburdening of its corresponding equipment.



ORDERS FOR SPECIAL MASS PRODUCTION

Series of pieces for which special equipment is not available, such as galvanizing plants, sheet metal departments, automatic machines.

[Dimensions in millimeters]

APPENDIX III. ORGANIZATION METHODS FOR SUBCONTRACTS AS USED BY GERMAN INDUSTRY

[Same source as appendix II]

Orders to subcontractors are passed on by the time study department to a special department particularly entrusted with placing these contracts on the outside. This special placement department receives the proper forms developed for internal use, such as index cards or working plans giving a detailed step-by-step description of the treatment of the workpiece. This department keeps a card index indicating subcontracting firms and showing blueprint numbers of formerly placed orders. When the new order is placed, either the card is supplemented accordingly or a new one is filled, indicating the order, number of pieces, price, working data, material, date of delivery, and internal order number for the purchasing department. Simultaneously, all available means are compiled to facilitate matters for the subcontractor.

German experience shows that difficulties are often met in the use of the final shop drawing containing all designations, and of the detailed working order. Many plants are not yet used to this sort of description, and, furthermore, the condition of the piece before it is actually worked is not immediately evident. Particularly significant are (1) instructions on the drawings concerning standards to be used, e. g., for fitting, designations of treatments, description of tapers, etc., which require up-to-date knowledge of the present state of standardization, and (2) indications of plant standards for commercial tolerances, lay-outs, and radii, and also hints regarding heat treatment.

Of great help is a drawing showing the processed stage of the workpiece ready for delivery to the primary contractor. Wherever necessary, all dimensions are specified with tolerances according to the rules of German standardization. The plant standards for commercial tolerances, adapted to those required by the army, are incorporated in the drawing, as well as the finishing details. The drawings are always accompanied by the working plan prescribing the practical working process and its various steps. Often this plan has to be supplemented by special explanations. As mentioned before, the primary contractor renders further assistance by providing jigs and tools or their drawings, or even skilled labor.

German experience and regulations require that all defects be pointed out after delivery of the first samples. Personal discussion is always recommended. In case of excessive complaints, experts have to be sent to the subcontractor's plant in order to influence management and personnel. For each delivery received, the primary contractor makes out an inspection report, comparing the given specifications with the results of the inspection, itemizing waste and parts needing adjustment and the costs accrued. The question of where to do the repair work has already been discussed (see B). The subcontractor receives a carbon copy of the report, together with a printed form letter informing him what he is going to be charged or credited with at the end of the month. Thus he is enabled to file his appeal before his account has been debited. It must plainly be pointed out that this report should be regarded entirely as constructive criticism.

According to German trade magazines, the following are the defects most often experienced with subcontractors: Eccentricity, resulting either in inaccurate subsequent work or, if the prescribed tooling allowance is not observed, in lack of material on the finished piece; incorrect distances or dimensions; inadequate centrations; insufficiently bevelled edges or poorly burred surfaces; lathe grooves. Many complaints relate to incorrect heat treatment due to lack of technical knowledge or an insufficient equipment at the subcontractor's plant.

TESTIMONY OF MORRIS L. COOKE—Resumed

Mr. SPARKMAN. In the résumé of your statement I find this quotation:

It is highly important to realize that subcontracting is a two-way process. There is no use in organizing pools and other production agencies to receive orders unless there is a parallel progress in making orders available.

Which brings up the question of procurement, and with reference to procurement you have this to say :

The supply agencies do not utilize to an appreciable extent the services of production and industrial engineers.

Will you please enlarge on that point?

Mr. COOKE. I have enlarged on it there in my statement. To a group such as you have on your panel, it is strange that there are any industrial engineers left in the country who are not engaged on defense, because anyone of us tackling the problem of improving the effectiveness, efficiency, and output of an individual plant would immediately recruit an adequate staff for that purpose. To put our defense program on a basis comparable with the accepted standards of production engineering means a large and widely distributed staff.

The Civil Service Commission, operating the roster of technical and scientific specialists, recruited a list of 200 industrial engineers, and had it completed back in March. Three months later I telephoned the Commission to find out what the flow had been, and they told me that there had been one inquiry and no record of any appointment.

UTILIZATION OF ENGINEERING SKILLS

As I say, that sort of situation is unthinkable from the viewpoint of the group you have here this morning. Those engineers ought to have been gobbled up at once. I don't think there is an appreciation on the part of the procurement agencies of the necessity for utilizing production, management, industrial, and processing engineers, if they are going to speak effectively to their contractors.

In our early correspondence from England we were advised to avoid the buyer-seller type, not because there is anything to be said against buyers and sellers in their place. But in building a proper production organization, we were cautioned to avoid the buyer-seller type and try to utilize the engineers, especially the production engineering type, and the figures show that that has not been done.

Mr. SPARKMAN. It is your conviction that these men who are trained to be experts in production and full utilization of productive capacities ought to be used by the Government at this time, when we are trying to speed up the production program?

Mr. COOKE. The supply of such men is limited, and it should have been exhausted for defense. I remarked only yesterday to Mr. Flemming, of the Civil Service Commission, that we see the demand beginning to come in now, as the various agencies discover that they are not getting the output they want, and which they are now realizing they should have. There is beginning to be an inquiry for men of that type.

Now, I dislike to express it in figures, but my judgment is that in the course of 3 or 4 months an extensive demand will have developed; so I suggested to Mr. Flemming that the Civil Service Commission should appoint somebody qualified in this field to see that these men are placed where they can be used most advantageously, because I am sure that it won't be many months before the supply will have been exhausted.

Mr. SPARKMAN. I was impressed by one statement in your paper, that "our attention should be turned first not to making work for those who do not have it but to getting done by every possible means the huge volume of defense production which we need." It is your belief, is it not, that if you get that production volume coming, work will be provided for those who need it?

Mr. COOKE. Absolutely. It is just another aspect of what Dr. Person discussed.

Mr. SPARKMAN. You argue for the use of industrial or production engineers in order to hasten that production volume?

Mr. COOKE. Yes; and I argue for coordinating the effort on a national basis. My view is that every machine and every individual must automatically be made a part of a vast production engine that will give us the outputs we are dreaming about—make us in fact the "Arsenal of Democracy."

It would have been much better—I can see the psychological impossibility of it, but I still say it would have been much better—if, when it was first proposed a year ago last July, we had undertaken an engineering study of what was needed. Let us say, it was to be \$120,000,000,000 worth of defense matériel. If that had been determined we would immediately have scaled the thing out so as to produce that matériel as and when wanted.

When you plan a water-power site, you don't plan to build a structure that will use a part of the available power now and a part of it at some other time. That just doesn't work. You plan the whole thing, and you install the machinery necessary to produce what you need at any given time. If it had been definitely stated that the defense program would require appropriations of approximately \$120,000,000,000—and I believe we will be there presently—and if an engineering study had been the basis of that estimate, we could have acted very much more intelligently. Our present procedure has been, from the start, one of nibbling at the problem. We engineers believe in seeing what the problem is, and then going to it.

Mr. SPARKMAN. You indicate in your statement that the failure sufficiently to utilize engineering ability is an essential feature of what you call the "legalistic attitude" of the Army, the Navy, and the Maritime Commission toward procurement. Would you explain that a little further? Is that the same thing that you referred to as "nibbling"?

Mr. COOKE. It is a phase of nibbling. I think the public is responsible for a very large part of the nibbling. The public hasn't waked up to the size of the problem, any more than some of the people in the Government have, and they react on each other.

I have tried to point out the difference between procurement and production. Procurement is obviously a peacetime approach to the acquisition of matériel, in which neither volume nor tempo is terribly important. In fact, in trying to find work for Army officers, the man who can intelligently string it out is probably the better peacetime employee. But coming into war, there is a psychological difficulty of getting verve into their work.

There are other reasons, too, why the approach of military procurement officers to this problem is inadequate in time of emergency. They feel that if they "fuss," as it might be expressed, with the work of the contractor, they might not get as good a product as they would

if they left it entirely to the man who knows how to turn out the work.

Then there is the legalistic attitude. It dominates the thinking of these officers. They feel that any interference on their part may affect in some way the legal validity of the contract.

But the chief difficulty is that these men are thinking in terms of procurement figures rather than production figures. If, alongside of the procurement hierarchy, there should be laid a hierarchy of production specialists—always under the Army, under military control—then I think we would begin to see things happen.

EXPLODING MATÉRIEL

MR. SPARKMAN. In your statement you make reference to the practice of English engineers of "exploding"¹ matériel, such as a tank, into its constituent parts so that the manufacturers might see what those parts are. Would you elaborate on that?

MR. COOKE. That is quite a common practice in England. Though I have no proof, I imagine that it is carried even further in Germany. Mr. Henry has just handed me a picture of the M3 tank that you might want to look at.² Obviously, only a big concern can bid on this kind of item or even consider making it. I don't know whether it is that particular tank, but there is one of them that has 30,000 parts, and 5,000 of them are different. In "exploding" such a product, you tear it apart, figuratively speaking, and spread the pieces out on the floor, and make pictures of them, so that a man can come along and say, "I can make a lot of those on my machinery."

MR. CURRIS. Isn't that what they are doing in the defense trains?

MR. COOKE. I know there are such trains, but I really don't know what the exhibits are going to be. I don't think that will turn out to be quite what I have in mind. They are going to have exhibits of things that the Army uses.

The Germans, as any of you who have been abroad know, have in practically all the smaller towns sidewalk markets where you can buy things—shoes, jewelry, and the like. And in Germany they also have exactly the same thing for military goods. They have bourses, sidewalk places, where one can go and look about and see what Germany wants. There a man can bid, either for himself or by getting together with others in a group. Mr. Henry suggests that is the Leipzig Fair.

At any rate, until we do break these items of matériel apart, there is no chance for the little fellow to get in.

In the last few days I have got the details of the Oerlikon gun. I have discussed that in my extended statement. Mr. Antoine Gazda, the inventor of that gun, manufactured it in Switzerland until he was surrounded, and then presumably he stuffed his pockets full of blueprints and came to this country and started in to inquire for a plant where he could build the guns the way he had built them in Switzerland. The Rhode Island Industrial Commission told him they had no such plant, and to build one would take a long time, "so why not let us help you build it through subcontracts?" This was done, and

¹ "Exploding," as used here, is an English term meaning breaking down of an item of matériel into its component assemblies and parts.

² See p. 8074A.

now there must be 50 or 75 different concerns that have made parts of that gun. It is now being made in 8 or 10 States, if my memory serves me right. It is a good example of a thoroughly successful scheme of manufacture. The gun is a complex mechanism, made by subcontracting, sub-subcontracting, and sub-sub-subcontracting.

Mr. CURTIS. Your point is that when we look at a complex mechanism like a tank, we see it as a whole, whereas—

Mr. COOKE. Whereas a tank is a tank, and it isn't. That is to say, it is an assembly of thousands of constituent parts.

Mr. CURTIS. And only a big concern could hope to manufacture that assembly, whereas if it were broken into its 30,000 parts, there is no telling how many manufacturers might contribute to the production of that tank.

Mr. COOKE. That is right. It is no criticism of the Baldwin Locomotive Works or the American Locomotive Co., or any of the others that got those contracts, that when they first started on them they knew as little about it as anyone else. They had to start in and "explode" the tanks for their own information.

Mr. SPARKMAN. You refer to "clearing centers" in the program of production. Will you tell us what you mean by that and how they can be utilized?

CLEARING CENTERS FOR EXCESS PRODUCTION FACILITIES

Mr. COOKE. Clearing centers for excess production facilities are operating in England, and in at least one place in this country. The one I am most familiar with is operated in Providence, R. I., under the auspices of the Rhode Island Industrial Commission. There are 700 metal-working plants in the Providence area. As I recall it, 200 of them are completely loaded, so that the clearing center operates among only about 500. It has in its office a complete inventory of every machine tool in those plants. A check-up is made every Thursday. The operating method is so worked out with symbols that one girl on the end of a telephone on Thursday is able to call up these plants and find out what they have that is idle in the way of machinery. This information is assembled and published in a newspaper—in the Providence Journal, I think it is—once a week. It includes the number of machine-hours on all types of machinery that are available. During the week anybody who wants extra work done contacts the clearing center. Let us say I am a contractor, making some parts for the Oerlikon Gun, and I have some tooling that I want done. I call up the clearing center and within a short time they can tell me where that can be done. On the other hand, suppose somebody unexpectedly finds a machine liberated in his plant. He calls up the center and says, "This machine is open. Do you know anybody who can use it?" The operation of one of these clearing centers in London recently was described by a labor leader who came over here, and who serves on one of the tank boards. He said, "We completed about 15 percent of the requests when we started in, and we are now completing about 85 percent of them." And Providence says that they take care of 80 percent of them. It is a marvelous thing, and there is no reason why greater use should not be made of that system. In the Middlesex area they have 4,000

metal-working concerns and 10 clearing centers. I think we should have 200 of these centers in this country. The technique is all worked out, and they could get started almost overnight.

Mr. SPARKMAN. Did you say the one in Providence is the only one you know of in this country?

Mr. COOKE. The only one I am familiar with as to details of operation.

Mr. SPARKMAN. What is the difference between a clearing center and a pool?

Mr. COOKE. You might have a number of pools operating within the area controlled by a clearing center. A pool, as we have been using the term, is formed when two or more manufacturers come together and decide: "Now, we haven't got the machinery with which to carry out any orders we know about. We associate ourselves, and possibly other people, and in that way we may build up the necessary facilities." The pools would use the clearing center. One of the most interesting instances of the pooling of machine facilities, which I have cited in my extended report, was described last week by Sir Herbert Gepp, from Australia. You may recall that the President said to Mr. Knudsen and Mr. Hillman that he wanted the machine tools of the country used—even those "in the garage in Hyde Park." That idea rather fascinated me. Then Sir Herbert told us that they had formed a pool of 50 garages in Australia, and he had a newspaper account, showing pictures of the things they were making. They had turned out, in the first 7 weeks, a quarter of a million dollars' worth of work, and with only 1 percent rejections. I think that unless we grasp the idea that we are going to use everybody, we are going to fail. Relatively, we shall merely enter into another phase of our nibbling.

Mr. SPARKMAN. In getting those clearing centers and pools into operation, is there any difficulty growing out of the reluctance of the persons concerned to share their experiences and problems?

COOPERATION BETWEEN MANUFACTURERS

Mr. COOKE. I don't think there is any trouble getting them started, but to get the full measure of cooperation takes time. One of the most remarkable things about the Providence center is that big concerns like Brown & Sharpe allow their machines to be used by outside concerns. That has never been heard of. There are certain types of machines, like boring mills, which they have to have, but which they don't use much; and I think up to a couple of years ago it would have been unheard of for a manufacturer to invite anybody to use his boring mill.

Mr. SPARKMAN. Mr. Cooke, a short time ago you said the failure of the production program to get going was partly the fault of the public, because people did not understand the magnitude of the program and of the demands to be made on them. Of course you didn't intend to attach any blame to the public for not understanding.

Mr. COOKE. I share it.

Mr. SPARKMAN. None of us knows the real magnitude of our prospective defense need. But it is your feeling that when the public is made aware of the demands that are going to be made on it, it will cooperate fully in this program.

Mr. COOKE. The only way to get going is to get its cooperation.

The CHAIRMAN. Thank you, Mr. Cooke. Our next witness is Mr. Henry. Mr. Henry, Congressman Curtis will ask you a few questions.

Mr. CURTIS. I have gone over your paper and it will be placed in the record in its entirety.

(The paper referred to above is as follows:)

STATEMENT BY S. T. HENRY, ASSISTANT TO THE PRESIDENT, MCGRAW-HILL CO., NEW YORK CITY, N. Y.

Labor dislocations on an extensive scale are now unavoidable in the shift that is being made from a peacetime economy to one that must become devoted far more than it is now to the production of war matériel. From 25 to 30 percent of our productive capacity will be on defense work in a few weeks; it must be double that. Lack of planning during the last year now makes it impossible to prevent the temporary loss of jobs of hundreds of thousands of men and women when such a shift becomes effective. But it is not too late to reduce enormously the number of workers so affected, if quick action is taken along lines that have been largely ignored to date in placing defense orders.

Buying procedure thus far for most lines of defense products has followed entirely too much the normal Government methods of doing business. Too many of those who have the authority to place orders have been unwilling to adopt policies that they may consider revolutionary. This unwillingness to accept responsibility for the limited number of inevitable mistakes that will be made in adopting such new policies is so evident that it needs no elaboration.

Meantime, curtailment of production of hundreds of types of civilian goods is beginning to spread rapidly. It is certain to become very extensive soon. Unless some of these revolutionary steps in the placing of defense orders are taken immediately, the number of people who will be out of a job in the next few months will be far in excess of the estimates of a few weeks ago.

The time for optimistic statements and expectations has passed. The country is confronted with a crisis in unemployment that still may be eased greatly, provided courageous leadership capable of doing a highly specialized management job is at once given the green light.

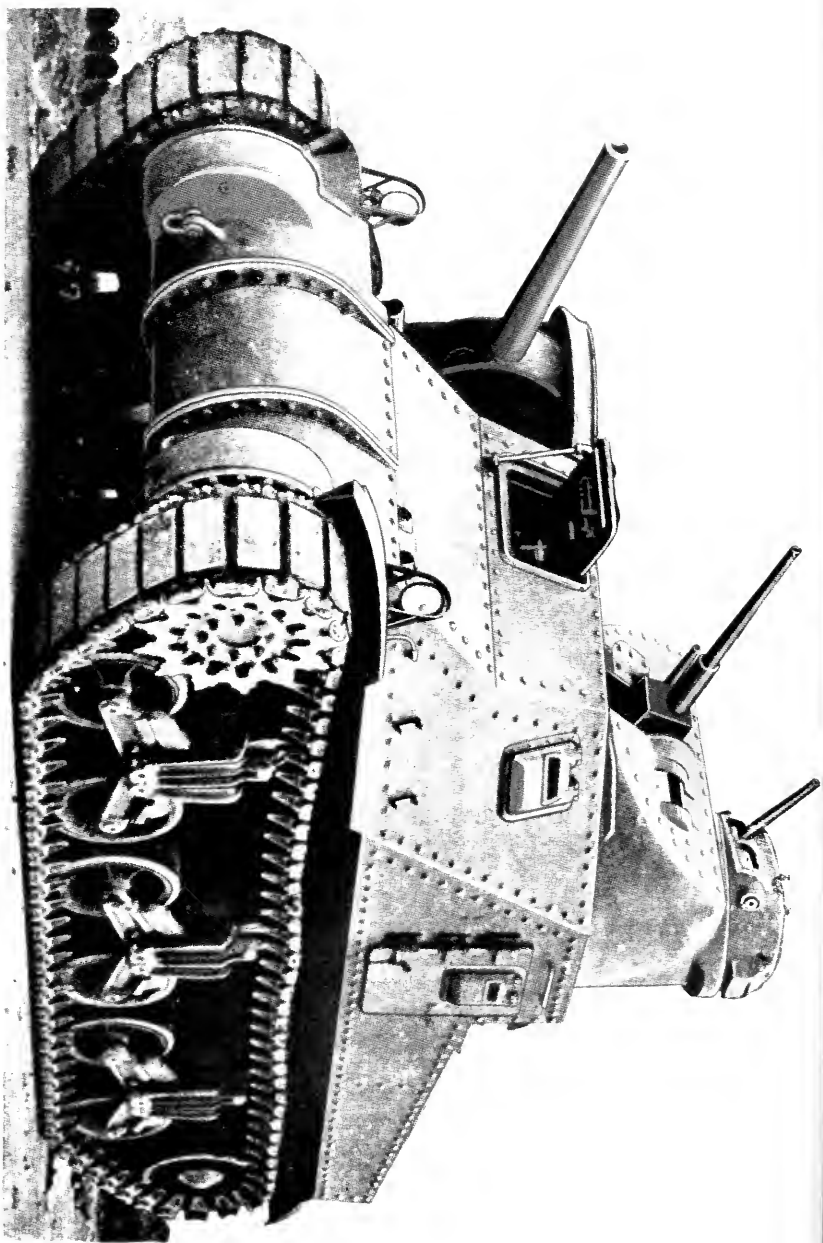
Generalizations such as these are easy to make. The question is how to get results. In other words, how to speed up defense production, and at the same time create jobs for those being thrown out of work in civilian-goods industries.

There are so many lines along which action might be taken that a few specific illustrations will serve best to prove the possibilities. Take the metal-working capacity of the country; that is, the machines which cut up, shape, and otherwise prepare steel, copper, brass, aluminum, and other materials into the parts that make guns, trucks, planes, and all of the mechanical equipment required by the Army and the Navy. In a word, the big and little machine shops.

METAL-WORKING CAPACITY OF COUNTRY

This metal-working capacity of the country—capacity vital to defense—is now working far less than it should. No recent reliable estimates are available, but the entire metal-working capacity of the country is said to be in use around 50 hours a week on the average. Full capacity, on a basis of three 8-hour shifts 6 days a week, would mean 144 hours; on a basis of two 10-hour shifts 6 days a week the total would be 120 hours. But anyone who knows plant operation realizes that in some lines of machine-shop operations it is difficult to keep production balanced. Allowing for these limitations, practical operating capacity is certainly not far from 100 hours a week under the forced-draft conditions that must be maintained to meet the defense production goals that have been set. The Timken Roller Bearing Co., at Canton, Ohio, is working 10,000 men on a 40-hour-per-man-per-week basis, running its machines constantly. This means 168 hours a week, so the 100-hour basis is quite reasonable when management is able and willing.

This sums up to the fact that our metal-working capacity, one of the most vital lines of production in the country, is at about half its easily sustained output. When this situation is presented to those in authority, all sorts of reasons are given for the poor showing. Lack of labor and scarcity of materials



Speedy production of tanks like the Army's M3 (shown above) depends on the use of existing machinery instead of waiting for new equipment. It was explained to the committee that whereas much time would be lost in production of new boring mills, which are necessary in the manufacture of frames for the revolving turrets, boring mills are available now in the plants making full-size sawing shovels and cranes. These machines are being worked an average of no more than 10 hours a week. (See testimony of S. T. Henry, pp. 8074 and 8076.)

are those most common. But in instances that have been run down officially, very few cases have been found where either lack of labor or inability to get supplies has prevented the machines in a shop being worked more hours per week than they are now. The percentage of output so affected is negligible.

The basic causes of our failure to use the machines we have at least 50 percent more than they are now being worked are twofold. First, there is a lack of willingness on the part of too many Army and Navy officers to change the policies they have always followed in placing orders. Second, too many industrialists of the country have thus far failed to realize the intention of the country to meet the commitments the Congress has made for the production of arms and war supplies. Until both these handicaps are overcome, not much progress may be expected in increasing the use of the existing metal-working capacity of the country to at least 75 percent of the time per week it could unquestionably be operated. An average basis of 100 hours a week should really be the minimum goal. Keep in mind the present rate is estimated to be about 50 hours.

There is no need to go into detailed estimates of the number of jobs that would be created by stepping up the use of our metal-working capacity from 50 hours a week to around 75 hours. The totals would certainly be in the hundreds of thousands.

When such suggestions are made the first question many in management raise is, "Where are the men with the necessary skills?" That is a most difficult problem. But so is winning the war. Moreover, this problem is being solved constantly by the more aggressive manufacturers of the country.

GENERAL ELECTRIC COMPANY

One outstanding example is the General Electric Co., which is adding around 1,000 employees a week to its pay rolls. General Electric is producing some of the most complicated and intricate armament machinery and apparatus on the schedules of the Army and the Navy. But it finds the necessary people constantly to expand its forces at a remarkable rate.

Talks with the responsible heads of the General Electric Co. quickly disclose their desire to try anything that will get quicker deliveries. Hundreds of other industrialists have the same attitude. They find the men and the materials. More industrialists need that point of view. Labor also even more seriously in some localities needs to realize the critical situation that call for all-out effort. Until both management and labor more generally get a better viewpoint, progress in stepping up our defense output will be slower and priorities unemployment will be greater than either should be.

One reaction of many in Washington who place defense orders to the idea of utilizing immediately more fully the existing metal-working capacity of the country, is that outstanding orders are being delivered remarkably well on schedule. But how about speeding up the schedules? Certainly far more than we are getting is needed at the earliest possible date. Increasing the use of the metal-working capacity we already have by half will secure that speed-up quickly.

M3 TANK

Much of this speed-up could be had before plants yet to be built may be more than half ready to run. At the same time, hundreds of thousands of workers who are facing idleness may, by this greater use of existing capacity, be given a job within a reasonable distance of where they now live. If advantage is not taken of this opportunity, then these workers will have to move to new locations. More specific instances of how existing capacity might be employed to get quicker deliveries than are possible from factories yet to be built could be cited. Take, for example, the Army's M3 tank.¹

The policy of the Army in securing tanks of this type has been to utilize great existing manufacturing plants or to build huge new plants. That was unquestionably sound, so long as there was unoccupied capacity in the existing plants, or so long as there was time to erect and equip entirely new factories. But both these conditions have passed. There are no more great idle plants and there is no time to build and equip great new complete plants. But there is an alternative which the Army has stated that it recognizes. That alterna-

¹ See photograph on opposite page.

tive is to utilize existing capacity that is not as fully employed as it might be. Army's recognition of this fact has thus far not produced any important results in the way of actual contracts awarded by the Army for tanks on the basis that the prime contractor must sublet the machining of parts. Purchase of components of the tank, yes; but not true subcontracting, although there now is authority for such procedure.

Now, to get right down to details in the carrying out of such a policy: Take the turret of this tank. It revolves 360° on tracks in the main frame, much the same as do the thousands of power shovels and cranes on everyday construction jobs. But the machining of these tracks has been held to require great fixed tools known as boring mills. Deliveries on new orders for boring mills are far in the future, so far that waiting for them might easily mean a Hitler victory.

But there is no need to wait in the case of these tank-turret machining jobs. To follow other procedure does mean adopting radically different policies than have obtained in placing orders on most of our defense program. But it is time to do some radical things. Hitler has.

One entirely practical policy of doing this machining job would be to pool together in an area of reasonable radius a group of manufacturers having all or most of the necessary machines to produce the parts for these tanks. These areas may be selected, for instance, so as to include or be adjacent to the plants that build the full-circle-swing shovels with big boring mills designed to do exactly the sort of work necessary to machine and finish the tracks for the turrets. In most cases these boring mills are working an average of not more than 40 hours a week, although the plants in which they are located are almost entirely on defense work and are operating the rest of their machines more hours than usual.

Objection might be raised to the impracticability of shipping the huge tank castings to the existing shovel and crane plants having the boring mills. But for years some of these shovel manufacturers shipped their heavy base steel castings to other factories for exactly the same operation. They found it practical in a competitive situation, certainly it ought not to be impractical under the urge of war needs.

There likewise is the possibility of specially designed single-purpose tools being developed as satisfactory substitutes for the highly complicated standard machines built to do a variety of work. Such an opportunity occurs in the development of a tool to do the single job of machining the races of the tank turret in place of the multipurpose boring mill.

These kinds of special tools might not be justified economically in a competitive peacetime industrial picture. As a method of obtaining quick deliveries and of meeting critical shortages they offer important possibilities. With them, it is possible in many cases to piece out existing installed metal-working capacity now operating only part time, or about to be made idle by curtailment of civilian-goods production. By combination of such existing equipment there are large opportunities to employ workers who will be made idle by the pending reduction in peacetime products.

These are merely a few of many opportunities for utilizing metal-working capacity already installed to do two things: First, to get more defense production quickly; second, to provide employment for great numbers of workers where they are, workers who will otherwise have to shift to new locations for a job. The chief difficulties in taking advantage of these opportunities lie in the inertia of those who can make the decisions on radically new buying procedures. The Congress has given them the authority. Until that inertia is overcome, few results may be expected and unemployment is certain to be far greater than it should.

TESTIMONY OF S. T. HENRY, ASSISTANT TO THE PRESIDENT,
McGRAW-HILL CO., NEW YORK CITY, N. Y.

Mr. CURTIS. As I gather, you have made two principal points, and they have been tied to one another. One is your criticism of military procurement and the other is your criticism of the idea that we must have newly designed machines to make what we need, instead of

trying to utilize existing machines. For the benefit of the committee, would you enlarge upon those two points?

Mr. HENRY. The military procurement officers, both Navy and Army, are military-minded rather than merchant-minded. Merchants like Mr. Nelson would approach the task from a merchant's point of view rather than from the point of view of a military technician.

Probably the best illustration of what I mean would be what happened in the last war. Along in the middle of July 1918 I was asked to step into the Hog Island situation, which was pretty well bogged down. That was probably the largest subcontracting job the country has ever seen carried into effect. It was totally a job of assembling ships. There had been the lack of follow-up similar to the situation that Mr. Person has remarked about. There hadn't been the pressure on delivery. For about 4 months I lived in a bag and made one-night stands in Pullmans on getting deliveries from about 150 subcontractors. Until we get under way in the present situation, until we make the same sort of demand for more speed-up that was put behind Hog Island, I don't see how we are going to achieve more complete employment of our production facilities.

Mr. CURTIS. To be specific, who should put on the pressure for speed?

Mr. HENRY. My opinion is that the people who place the orders are the only ones who have the authority to put on the pressure.

Mr. CURTIS. Instead of assuming that the job is being done as quickly as possible after the contract is let, there should be a follow-up by technical production experts. Is that your point?

Mr. HENRY. I think you had better go back of that a little bit. If I go to buy a machine and the manufacturer submits a proposition that he can complete the job within a year, that's when I'd begin to put on the pressure—before I gave him the contract. I would say: "That delivery isn't prompt enough. If you can't do better than that, we have got to get somebody who can."

MACHINE HOURS, NOT MAN HOURS

Long before the contract is let, there ought to be a certainty that the equipment of the concern taking the contract is going to be worked to reasonable capacity; and I mean by that, not working all machinery one shift, but, as I brought out in my statement, it is perfectly feasible to think of the metal-working capacity not as so many hours per man, but as so many hours per machine, up to 100 hours a machine per week.

Mr. CURTIS. That is how much more than the average now?

Mr. HENRY. In my statement I mention an estimate of 50 hours a week as the average use of the entire metal-working capacity of the country at the present time. That can be verified through the Bureau of Labor Statistics.

Of four leading producers in one of the most critical lines we have, none has more than 17 percent of its capacity on the third shift, one has none on the third shift, another has 8 percent on the third shift, and the fourth has 3 percent on the third shift. And, I repeat, those companies are producing one of our most urgent needs.

From the Bureau of Labor Statistics you can get a great deal of information on just how some of these critical-line industries are operating, and how far short of capacity their operations are. We are by no manner of means up to capacity production.

Mr. CURTIS. Is labor ready for full production?

Mr. HENRY. My answer to that question is set forth in my prepared statement. Timken is working 10,000 men on a 40-hour per-man per-week basis. This means 168 hours a week with machines running constantly. The company has sustained that rate of operation for some months. That, of course, is a management job, and a whale of a job. But they are doing it. General Electric is adding 1,000 men a week to their pay roll.

Now, when you ask about labor, those are two outstanding examples, and a good many others are doing the same sort of job.

Those are two outstanding examples; a good many others are doing the same sort of job.

When we come to the question whether there is work enough to go around, we must consider the magnitude of the defense program. I haven't the figures up to the moment, but I believe \$25,000,000,000 in contracts already has been let. Assuming the total is as high as \$30,000,000,000—which I doubt—that means we have \$30,000,000,000 left to let on a \$60,000,000,000 appropriation. Now, if we are ultimately going to appropriate \$120,000,000,000 we have let 25 percent of our total awards to be reached within the near future. My contention is, therefore, that although labor could be found and there would be jobs enough to go around, we can't do it working 50 hours a week. We can't do it in critical defense industries.

Mr. CURTIS. You mean by working the machines 50 hours a week?

MULTIPLE SHIFTS

Mr. HENRY. Yes. I am referring to the estimate I mentioned a moment ago, of 50 hours a week as the use we are making of our metal-working capacity. We can't fill defense needs with operations that low in critical lines. These examples I gave you were given to me in confidence, but I can give you this information. One of the critical industries is working 70 percent on the first shift, 25 percent on the second, and 5 percent on the third. It is impractical to run on a second and third shift as much as on a first, but England has found it better to run two 10-hour shifts rather than three 8-hour shifts, so the British are working about 120 hours. We are working 50 hours in some of our critical industries against a necessary 100, to be conservative. So we have a lot of possibilities for improvement in the existing facilities of critical industries.

Mr. CURTIS. How would you suggest that we go about utilizing existing machines more than we have, machines that do not reach the degree of perfection which new ones would?

Mr. HENRY. Mr. Cooke has been hammering on the use of existing equipment. Any concern that is in business is going to get all the business it can get with what it has. There is no doubt about that. It is going to extend deliveries just as late as it can get a backlog. That is all right in private industry, but where is the defense program to get off?

I was glad to hear Mr. Nelson agree with the suggestion that I had made, that we ought to examine all delivery dates. I think that is the first way to get a lot of work available quickly. Those are jobs on which designs have been approved, quantities determined; all the factors that permit you to go ahead quickly have been fixed. Let's take any type of machine. Any deliveries beyond the middle of 1942 are later than they ought to be if all the factors have been fixed—if designs, quantities, and requirements are known.

Now, I feel that it is entirely possible first to get the existing contractor to speed up a lot if he knows he is going to lose the tag end of the contract. He can put more men on the second and third shifts. He can subcontract more and thus will make quicker delivery. If the contractor really is loaded up, as some of the defense manufacturers are, then there is an opportunity to say: "Take some of those deliveries and advance them as is practical."

Here is an illustration of what I mean. The Pratt & Whitney engine for airplanes is about as intricately designed as any unit we have, except some of the precision instruments. Pratt & Whitney got up to all the production they could handle. They then gave two or three other airplane engine manufacturers the right to make that engine for a dollar a unit royalty, which was practically nothing.

That sort of policy, extended to many lines, would give us much quicker deliveries. If we recognize the fact that we are headed not for a \$60,000,000,000 program, but for twice that, and further that we have let something under \$30,000,000,000 to date—in other words, that we have three times as much to let as we have already under contract—it is evident that we have to use everything we have in the way of metal-working equipment.

Mr. CURTIS. I wish you would touch a little bit more on the utilization of older machines, as compared with those newly designed.

Mr. HENRY. Well, do you shave with a safety razor?

Mr. CURTIS. No.

Mr. HENRY. I use one. I expect it is 10 years old. I put a new blade in, and it works as well as a new one. When it comes to machine tools, it is largely a matter of tooling up. Now, I don't mean by that that the latest types of machines are not more economical than the early types. They certainly are. But the difference has been in the degree of competition. If you are in a company running with older equipment, and I have more modern equipment, I can produce a little cheaper than you, and I can beat you in competition. Now that we are into a war emergency, the difference of a few percent in cost becomes less important. It is the output we are after then. If we take some of the older machines and do an intelligent job of tooling, we can use many of them just as effectively in getting production as we can the most modern types.

Mr. CURTIS. Referring to this picture¹ of this huge tank with the turret [indicating], what you are getting at is that somebody who makes turrets for cranes ought to be put to the job of making those tank turrets. Is that correct?

Mr. HENRY. That turret can swing full-circle, or nearly so. I haven't seen the details of that particular design, but I believe the turret revolves on a pair of tracks with a ball bearing race between

¹ See p. 8074A.

the tracks to keep it from swaying. In principle that operation is exactly the same that you see on shovels and cranes on construction jobs. Every one of the manufacturers of those shovels and cranes has a boring mill, a certain type of machine tool that has a wide range of applications, but most of those boring mills in the shovel plants are used for cutting the raceways. They aren't used full-time. One plant that I have been connected with has one of those boring mills. Because of the limited need for this big unit, I doubt if that company today is working it more than an average of 2 hours per shift. There is no reason why that particular job of machining on the tanks couldn't be done by those boring mills.

Mr. CURTIS. Is it being done?

Mr. HENRY. Not by those shovel companies' boring mills. The boring mills in large plants like the Chrysler plant, or American Car & Foundry are building tanks in an assembly line. Their operations are quite different.

Mr. CURTIS. Is anybody working on that particular problem, or to obtain that objective at the present time? Or do we need to revert back to Mr. Cooke's suggestion that along with the procurement expert there must be placed a production expert?

Mr. HENRY. I expect you ought to ask Mr. Odium that.¹ I don't know.

The CHAIRMAN. Thank you very much, Mr. Henry. Our next witness is Mr. Taub, whose paper will be entered into the record at this point.

(The paper referred to above is as follows:)

STATEMENT BY ALEX TAUB, TECHNICAL CONSULTANT, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.²

I have been asked to give brief answers to certain questions³ which will be asked of a panel incorporating Dr. Harlow S. Person, Mr. Morris L. Cooke, Mr. S. T. Henry, and the writer.

One of the questions is, How can we, consistent with defense needs, more fully utilize existing production facilities? Some doubt is thrown on this question because it states "consistent with defense needs." At the moment the greatest drawback to the utilization of existing production facilities is the consistent advice that we get from the procurement agencies that the needs have all been covered and hence only the production facilities now under use can be used. It is entirely useless to organize the tremendous production facilities of this country unless work can be furnished for these facilities. Billions of dollars are released for this purpose but apparently it dries up very quickly.

The next question is: Where does the excess capacity exist which should be utilized? Bearing in mind the answer to No. 1, assuming we had worked for distribution, our larger facilities can be found in two national groups: The large mass producers of durable goods industry such as motorcars and household equipment and the small manufacturer normally running a business of his own, employing from two hundred to a thousand employees, sometimes used as a parts maker to the larger companies. Ten months ago, when I first returned to America, the state of mind of industries such as the motorcar industry was still against any interference of their normal business. Defense work was only acceptable to those who foresaw a possible cut in their output and these were very few. At that time the announced percentage of facilities available for defense work was in the neighborhood of 15 percent. Today, with curtailment on the premises, it is freely admitted that 50 percent of the facilities can be used for defense with a possibility in certain areas of extending this to 70 percent. We have one instance of actual practice where nearer to

¹Floyd B. Odium, Director, Division of Contract Distribution, Office of Production Management.

²Subsequent to the hearing it was announced that Mr. Taub had been appointed Chief of the Conversion Section, Contract Distribution Division of the Office of Production Management.

³See footnote, p. 8034.

90 percent is used. With proper planning, considerable employment can be absorbed without any facilities except empty buildings and a few cranes. The smaller manufacturer who, numerically by factory units and number of employees, far exceeds the large manufacturer can be brought into the picture only if his facilities can be used to their maximum even though this maximum doesn't complete a project. By pooling his facilities with the facilities of other properly geographically placed small factories a project can be completed.

AMERICA'S MECHANICAL INGENUITY OVERLOOKED

The present practice of examining a list of machine tools and determining by remote control what those facilities can make excludes the greatest facility that America has and that is mechanical ingenuity. By allowing a pool of these smaller factories to examine a defense item they can determine for themselves whether they can make it and who else to bring to their pool to complete the item. This is a principle we have been working on and in Toledo have actually formed that community into usable pools. The same is being done for smaller manufacturers in Detroit and again in Newark, N. J., and an attempt will be made to broaden this activity. We are sure that this will bring forward production facilities far in excess of anything that anyone has dreamed of and unfortunately very far in excess of available work.

The next question as to what industries can be most readily converted is best answered by saying the most difficult industry to convert is one such as the stove industry where most of the work is punch press and sheet metal. Defense items require this type of work in a very limited manner. However, that does not mean that if skilled press shop engineers were allowed to examine all defense items for the conversion of defense items from castings to stampings, that we might not be able to save machine tools and create work for that part of the durable goods industry that is being hardest hit.

The next question is: What are the technical difficulties of converting different kinds of industries and different sizes of plants? The technical difficulties are legion but they solve themselves when facilities are pooled. A Detroit manufacturer who was attending a distress meeting in Detroit told us that he had lost a \$500,000 order because he did not have more than 5 of a certain type of machine and needed 25, yet around the table of discussion sat all the machines he could want. Small tools and jigs can be had for the breaking of bottlenecks because we know there are many small tool manufacturers whose facilities are unused. A pool of such organizations is being formed now around Detroit, which will eventually offer a tool capacity for the making of tools and jigs needed for the production of any item. It is even conceivable that a combination of small tool shops with some of the better stove makers with their foundries could make machine tools, some of which are true bottlenecks today.

The other questions, we believe, are more or less fully answered in the above but I do want to underline the main drawback to the utilization of American facilities is the lack of defense contracts.

TESTIMONY OF ALEX TAUB, TECHNICAL CONSULTANT, OFFICE OF PRODUCTION MANAGEMENT, WASHINGTON, D. C.

Mr. CURTIS. Mr. Taub, you have spent quite a little time in England, recently, haven't you?

Mr. TAUB. That is right.

Mr. CURTIS. What was your profession before going to England?

Mr. TAUB. I have been an engine designer for 30 years.

Mr. CURTIS. And with whom were you associated or employed in this country?

Mr. TAUB. Ford, Packard, and General Motors, from 1917 to 1936.

Mr. CURTIS. And where did you go in 1936?

Mr. TAUB. I went to Vauxhall in England, to design a line of engines for that company.

Mr. CURTIS. Is that the General Motors Co. in England?

Mr. TAUB. Yes, sir.

Mr. CURTIS. In what capacity did you serve the English Government when the war came on?

Mr. TAUB. In 1939 and 1940 I served on the British Mechanization Board, in charge of consultation on automotive equipment, such as truck and tank engines.

Mr. CURTIS. How long did you serve the English Government?

Mr. TAUB. From the beginning of the war until 2 months ago.

Mr. CURTIS. I wish you would elaborate upon the observations in your prepared statement, and I should like to hear any comment that you might like to make on the discussion we have had here this morning.

Mr. TAUB. You understand that I am a rank amateur in meetings of this kind. I had much rather design a tank than talk about one. It is easier. You can prove what you are doing very quickly. But I would like to revert to the questions that were in your memorandum, if you don't mind, because in the last 2 months, having a roving commission, I have spent most of my time on plant conversion.

CONVERSION IN ENGLAND

In England there naturally was a lot of conversion because "business as usual" pretty well died overnight. Within the first 3 months of war, we weren't making any automobiles except for export. Within 6 months we were making no motorcars whatever. So it didn't take long to realize that we were going to convert. It was just a question of determining the suitability of a given plant to a particular defense item.

We found by experience that we could make 3-ton trucks on an assembly line that normally handled little 10-horsepower cars. It was largely a question of urgency, and of how many bombs were dropping outside. That makes a difference. Bombs have a way of speeding you along.

There was some mention made here of hours of work. It must be borne in mind that the night shifts in England were quite useless for a while, in that we had four or five interruptions during an evening. And we got very little good out of it. The total number of hours actually worked bore no comparison with the total number of hours on the books per month, because the men spent half of their time in the trenches.

Mr. CURTIS. What was the experience in England on what has been termed here as "exploding?"¹

Mr. TAUB. It isn't done quite that way, sir. The best thing I can do is to explain how a small motor-car company went about fulfilling a contract for making the 42-ton tank. The company was about half the size of the Studebaker Co. but had not as much equipment and certainly was nowhere near as up-to-date. However, there was some advantage in having non-up-to-date equipment. It allowed for a certain degree of freedom, whereas, had the company had fully up-to-date equipment, it would have had more single-purpose machines in the house, and fewer that they could put immediately into use for the new purpose.

¹ See footnote 1, p. 8071.

This organization had to coordinate the tank program, which meant to cover design, cover purchases and subcontracting. Among the subcontractors were 12 concerns, any one of which was several times larger than the parent company.

The Government was betting on the management, and that company spread the design. That is how the job was exploded. You can't design in a lump. You have to design in detail. So, as the job was developed, units were passed out to probable manufacturers, and by the time the job was ready, the experimental or pilot model was built, and the manufacturers had already made their production studies. But at no time was a tank built completely by some independent group, then burst into pieces, with someone saying, "Here are the pieces. Who can make them?" Always somebody in the industry was asked to master-mind the job as a whole.

That is the Government's way in England of bringing to its support the maximum of management and technical skill. They don't have a whole army of production engineers in the ministry of supply. They have fairly good men as consultants, who also act as carriers between one group and another, but the hard-hitting gentry are stationed where the work is going on—which is important, and which is where I believe they ought to be.

We must bear in mind that England is much smaller and more compact than America, and they can follow these methods perhaps more readily. But it did bring out this: That the business of building a tank arsenal capable of building everything in the tank was probably not the best way to do it; because without explaining to you how many tanks are being made per day, I can say that a small company is able to engineer and manage the production of tanks.

Some of the buildings in which these tanks may be assembled might be empty units of automobile-body makers. Floor space was available but no bodies are being built; and by installation of the proper types of hoists and cranes, tanks can be assembled there, using a tremendous amount of line labor—the unskilled type. That is a good practice on tanks. Does that cover the question you asked?

Mr. CURTIS. Yes. In our hearing in Detroit, the automobile manufacturers maintained that the industry's productive equipment was by and large not capable of adaptation to defense work. I was glad to learn that under the pressure of necessity they have in at least one instance increased from 15-percent convertibility to 90-percent convertibility. Do you know how much is being converted now?

Mr. TAUB. It is moving to the 50 percent mark. It depends entirely on how much work is being placed with the companies, rather than on the facilities that could be used.

Mr. CURTIS. Mr. Taub, can you describe what contribution such civilian industries as stove manufacturers and refrigerator manufacturers, and the like could make to the manufacture of defense products? To what extent are they now being utilized?

POOLING OF FACILITIES

Mr. TAUB. I can answer that question best by explaining to you that at present I am working on a pooling arrangement, and that I have spent time in three different places. In Toledo we were able to gather, under the auspices of the chamber of commerce,

representatives of some 400 metal manufacturers. A committee was formed to organize that group into pools. These pools have been formed on the basis of some knowledge as to the type of defense work they can do, the reason being that while any one of the members of the pool is usually turned down on defense contracts for lack of equipment, in combination they are able to bid without requesting new equipment. That procedure has been developed in Toledo to a point where pooled manufacturers have hired a production engineer as general manager, and a permanent committee has been set up to represent both labor and management. And they are now knocking at our door, saying, "We are ready with our pools. Where is the work?"

We have got to heed them. We are talking about large-scale production, and the need for capacity. We have taken an entire city area to find a pattern, and we have one now in usable form. These manufacturers have now come in, and are trying to make contracts for work. But evidently we are not setting up a procurement agency to handle this type of contract.

But we have to go on with the project, of the building of these pools, because that is the only way these stove and refrigerator people such as you mention can be used. We were able to point out to one stove manufacturer in Detroit that the automotive industry is short of cast-iron parts—mainly pistons. The motorcar manufacturers have had to substitute cast iron for aluminum because cast iron was practically all that could be had. The stove manufacturer rushed back and tried to get his foot in the door.

We have been able to pick out a few such items for a few individuals, but to handle these jobs for groups as they are now growing in size, we have to reduce the problems involved.

Mr. CURTIS. In the metal-working field, some plants have had to close down because of priority allocations, and perhaps some of these cannot be converted. We have had cited as an extreme example a zipper factory. Are there very many factories for which there is no hopes of conversion or of participation in defense work?

FEW FACTORIES NONCONVERTIBLE

Mr. TAUB. I don't think it is entirely hopeless for any large number. I am not going to say—and nobody else can—that we can utilize all the 180,000 factories in this country. But we are speaking about the group far enough up the line that should be used and that we can use.

Zipper-factory workers, after priorities have got through with them, have only hands and fingers left; but they are still good assemblers, and in all this defense work we need assembly. It is not hard to imagine a zipper factory converted to assemble small arms, if it were hooked in some way with a large organization making the necessary parts. And the same thing applies to larger factories with facilities that cannot longer be used, and which are to all intents and purposes just empty buildings. They, too, could be put to work on assemblies. There are few defense items in which assembly is not a very important item. We must bear that in mind in the grouping of the pools. The chances of conversion are not hopeless at all.

Mr. CURTIS. Isn't it true that, assuming it has adequate machinery, there is no plant too small to make a distinct contribution?

Mr. TAUB. I would draw the line, particularly as you say a "distinct contribution." A plant that employs 15 to 30 men might be used if it is near an operating defense plant, but you could hardly expect it to make a distinct contribution.

Mr. CURTIS. Let's change the phrasing. Could it make some contribution?

Mr. TAUB. That depends upon the nature of the plant. For the majority of the extremely small plants—if we are now talking about those in the 20-employee bracket—substitutes or allocations of material would have to be arranged. A percentage of those materials would have to be assigned to some of them, although it would be necessary to carefully scrutinize it to be sure that substitutions could not be made. A lot of them would be in such localities and so grouped that you might not be able to use them.

Mr. CURTIS. Take, for example, a concern that makes garage tools. It is small, but it turns out several gross of a given tool a day. Couldn't it likewise make simple braces that go on airplanes?

Mr. TAUB. Yes. A company capable of making several gross of garage tools could very easily make machine-gun mounts, and I wouldn't consider that a hopeless defense prospect. There are others, however, making imitation jewelry, and that kind of thing, that just haven't got the equipment. They can make "bits and pieces" for servicing defense items.

But there are trades that don't fit in, that will be equally hurt. Those will be the difficult people, and for them we must find substitutions.

The CHAIRMAN. Dr. Person, at the suggestion of Congressman Welch, of California, who is sitting to the right of Congressman Sparkman here, and who, though not a member of this committee, is a highly respected Member of the House of Representatives, I would like to ask you a question. Mr. Welch was very much interested in your testimony and in finding out if you care to express yourself on a situation that may affect the Rural Electrification Administration, which you serve as a consulting economist. Under the national-defense program there is going to be a drastic cut in the use of copper by nondefense industries. What effect will that have, if any, on the further electrification of farms and homes in this country?

Dr. PERSON. All right, if this is off the record.

(Answer to question on effect, if any, of cut in use of copper on rural electrification given off the record.)

The CHAIRMAN. Dr. Lamb?

Dr. LAMB. I have a few questions that I would like to ask to round out the record.

First, a general question, which I shall address to the panel without specifying any individual for an answer:

ABSORPTION OF WORKERS

How many additional workers do you believe could be absorbed by the metal-working industries if these facilities were utilized on a 100-hour week as contrasted with the present 50-hour week?

Mr. HENRY. Assuming they still work the same number of hours per week, the answer is just twice as many. I think if you go to the Bureau

of Labor Statistics, you can get a pretty accurate estimate of the actual number of metal workers employed in the industry, and a fairly accurate estimate of the number of working hours. If you multiply the total present employment by the ratio of machine hours per week that should be worked—100—to the average hours that are actually worked—50—that will give you the figure for the number of metalworkers who could be employed.

Mr. TAUB. I would like to interject a thought there. If you propose by any means at all to multiply the number of men engaged in the metal businesses that are going now as a whole, and if by good fortune we are able to bring into the band of usefulness all these others the question then arises, as it has in England's defense work at the present time: Where are you going to get the men?

Dr. LAMB. That was my next question. Are our present approaches to training adequate to build a labor supply capable of manning our industries efficiently, granted that we can utilize our existing facilities on an average of 75 to 100 hours a week? Would you like to answer that, Mr. Taub? That question has two parts, one with reference particularly to the metalworking industry.

Mr. TAUB. I don't think that training is going along at a very satisfactory rate. It is training which lifts one type of workman to another level, but when you are thinking of an all-out defense effort, you are thinking of drawing men from other walks of life, so that you will have enough to man the defense effort. No; there isn't a possibility of training enough of such men to meet the need that would be created by pressing plants to a hundred hours a week, plus all of those metalworking plants that should be used.

Dr. LAMB. In other words, the proposals which have been made here by the panel this morning, on the basis of machine capacity and its full utilization, will be limited by the shortage of adequately trained labor, particularly in the metalworking industries?

Mr. TAUB. Yes, sir.

Dr. LAMB. How is that problem to be overcome, assuming that all other factors as described here are capable of such an expansion?

Mr. TAUB. The end problem is to produce X number of defense units, and you discover that you can do that by working a hundred hours a week in every plant in the country. But you are assuming that for your defense needs the X number of defense units will be so large that this country cannot handle them. I don't think that is even barely possible.

Dr. LAMB. You would say, then, that in spite of the probable increase of the defense orders from a present \$30,000,000,000 to, let us say, \$120,000,000,000, the existing and easily trainable labor force, plus the existing metal-working capacity, can turn out the job?

Mr. TAUB. Yes, sir.

Dr. LAMB. That is a very encouraging prospect.

TIME ELEMENT

Mr. TAUB. You must bear in mind that a large percentage of this money goes for fairly large units, and you have not introduced the time element. If somebody suddenly telescoped the program, and said that everything must be finished by 1942, then you would have a problem indeed.

Dr. LAMB. Isn't that assumed? The committee has gone around the country, and we have been informed that the number of contracts which are standing in line, so to speak, at a given plant, add up in some instances to 2 or 3 years' backlog. Clearly a program of \$30,000,000,000, in those time-terms, is for all military and immediately practical purposes meaningless. The possibility of utilizing those materials for any early defense objectives is nil. I don't mean all materials, but the bulk of them.

Mr. TAUB. I understand what you are driving at, sir, and I appreciate that thought very, very keenly; but at the same time, you couldn't build the warships you have on schedule through the year 1942. That is the thing I have been talking about.

Dr. LAMB. Granted the impossibility of expecting an expansion on any such scale as would bring newly contracted battleships into effective use in 12 months' time, still we have been talking in terms of metalworking capacity for guides in discovering what an individual worker can be expected to roll off the line in 30, 60, or 90 days.

Mr. TAUB. That can be handled. We have not begun to scratch the capacity of normal working, without a 100-hour week.

Dr. LAMB. Even though those contracts are also standing in line, as I understand they are at the present time?

Mr. TAUB. Shipbuilding may be standing in line—some of the larger ships. Some of the smaller ships can be handled as Mr. Ford did the eagle ships in the last war. That can be planned. But, gentlemen, we haven't begun to use even the eight or nine major motorcar companies, whom we criticize so severely. And behind them are hundreds and hundreds of other plants.

Dr. LAMB. Would you attribute that failure to utilize the automotive capacity to a failure to give those companies contracts?

Mr. TAUB. That is right, sir.

Dr. LAMB. Which, I take it, gets back to the contention of Dr. Person that the failure to utilize capacity, and incidentally to let contracts, traces to the lack of an over-all plan into which such contract-letting fits.

LEGAL HANDICAPS FOR ARMY AND NAVY

Mr. TAUB. Yes; I think that is true. But I would like to underline here that while everybody is taking a whack at the Army—and I also have had some sour experiences with the Army—nevertheless, Army procurement officers are only the front; and my experience with them is that they are limited by the law of the land and also by the rules of their departments.

The Navy has one set of rules, that do not agree with the Army's rules, the Army's being broader. We do whack at procurement agencies, but I think if we look behind them, we would find that appropriations and the legal side of the picture are the two major drawbacks.

It is all right to talk about planning ahead. Say that we planned a year ago to spend \$120,000,000,000. If we had the same ideas we had at that time, we would be in an awful state, because we would have built a lot of new buildings, the same as we did in the original planning, and we would be worse off.

Dr. LAMB. I don't think the interest of the committee is in retrospective considerations, of what might have been, but rather in the discovery of what can be done from this point out to remove impediments in the way of defense production, such as have been pointed out by the members of this panel.

Mr. TAUB. May I give a specific example of what might be done? At the moment the Army needs trucks. It is not ordering trucks on the broadest scale possible. It is getting along with the fewest it can safely order. That is the truck program today. There will be a continuation of the truck program into next year. By next year a large part of the potential truck-making facilities will have been taken up with programs now in preparation, and the procurement of more trucks is going to be difficult. We are now running into a lull. Why can't we take next year's truck business and throw it into this year, fill in the lull, and not have the headache of trying to get them when they will not be available?

Dr. LAMB. Why can't we?

Mr. TAUB. Why can't we?

NEED FOR OVER-ALL PLANNING

Dr. LAMB. If I understand Dr. Person correctly, it is his contention that without an over-all plan, you are bound to have lulls. Lulls cannot be tolerated in an adequately operating over-all plan. Is that correct, Dr. Person?

Dr. PERSON. Correct.

Mr. TAUB. Whether we can form one over-all plan and make that suffice is uncertain. We know that in England there is much planning, and we have heard England's methods praised; but working from the inside, we found much that deserved no praise. They have had a new minister of supply every 5 or 6 months. They have had more shake-ups in England than even we have had here. So, what looks good from here is not quite so good at close range.

Whether or not one plan, no matter how good or how comprehensive, would be satisfactory, I don't know. I do know this, that it would help if we had at least one financial plan, if we knew that there would be enough money available to cover a large plan. It seems to me we already know that the war is going to cost at least so much, and that much should be provided. When the Army comes in and says, "We want this list of stuff," it should not have to scale down whenever the nonmilitary people say: "You can get along without this and that." I do not think encouragement to spending should be the order of the day, but discouragement to spending for this purpose shouldn't be the order of the day either.

However, I think that laying down an over-all plan burdened with details as to what materials we are going to use is dangerous. We are then freezing our designs. We know by bitter experience that these fellows who are setting the pace keep changing the rules, and we'd like to have the ability to change our products. An over-all plan in detail might interfere with that.

Dr. LAMB. I would like to amend the phrase, "an over-all plan," because I am not sure that it is an adequate term for what Dr. Person had in mind. I would say that his statement, as I read it, comes closer to being a description of two things: One, a series of

control policies which are closely integrated in their operations, so that there is a large degree of understanding governing them, not only as to the division of functions, but also as to the degree of cooperation required; and, second, as I understand Dr. Person, something approaching a flow-sheet of operations, and of the supply of materials backward, in the opposite direction from the orders and directives in process of development.

Those two related items are necessary, and I would like to have him correct me if I am misstating him as to his plan.

Dr. PERSON. That is right. We have got one job to do in the United States, on a national scale, and that is the formulation of one over-all plan which fans out maybe into a hundred different levels of planning. Now, the main point is that every one of these hundred constituent plans must head up into the one, and not be left to the judgment, the vision, or the interests of a hundred different agencies.

SUBCONTRACTING AND DECENTRALIZATION

Dr. LAMB. In summarizing the committee's interest in the matters which have been discussed here today I would like to point out that the committee has been particularly interested in the possibilities of subcontracting, and incidentally—although the two are not identical—in decentralization. The interest in these possibilities is based on the opportunity which they afford for a more adequate employment, not only of our materials and facilities, but particularly—and this is a primary concern of the committee—employment of manpower.

Excessive shifting about of population will probably in the end have to be repeated in the opposite direction at some future date. In other words, migration toward already overcrowded defense centers must be followed by a round-trip migration of those people back to the places where they came from, with no assurance that when they return to these points of origin they will be able to find jobs or assistance.

An improvement in the use of materials and manpower now would in large measure obviate the necessity for such excessive movement of workers in the filling of defense needs. Therefore, one of the questions which emerges from this discussion and which I should like to raise with the panel before closing it, is that of subcontracting.

I want to make a distinction at the outset, however, between what might be called in-bred subcontracting—that is, the practice of a large corporation or group of corporations of letting subcontracts to its subsidiaries or affiliates—and subcontracting among dissociated companies and individual plants. The intracorporate type of subcontracting serves useful purposes, but it is not in line with the discussion we have had this morning of decentralization or contracting out to uncoordinated firms and facilities.

Now, the committee has heard that the outward-directed type of subcontract is being avoided because, so it has been informed, of the headaches and extra cost involved. For instance, the work of the subcontractor must be redone on occasion.

What the committee is concerned with is how far this attitude exists among manufacturers, and to what extent it acts as a barrier

to exactly those procedures which this panel has advocated this morning. We would like to hear any one of you who cares to address himself to that problem.

Mr. COOKE. I would like to say that we have had, from a great many people from the President on down, statements favoring what I call "farming out," which is an emergency type of subcontracting. But, personally, I haven't been able to find a single instance in the Government service where the man who could really do it has done it. Now, doubtless there have been occasions, but the prejudice against it is so strong that I think even this committee would have difficulty in finding instances of its actually having taken place.

SUBCONTRACTING ENCOURAGED

Mr. TAUB. I would have to disagree with that. I haven't had any experience other than full cooperation on subcontracting, and I have heard the Army men encourage stipulation of subcontracts wherever possible. In one instance, a firm holding a contract for one of the automatic guns—a 20-millimeter—is making 3 percent of the parts and farming out 97 percent. That was cited to me as an illustration of how well it could be done.

Perhaps, before my time here, there may have been the situation Mr. Cooke describes. Mr. Cooke has been here longer than I have. He has perhaps had a different experience; but from my own in the contract-distribution group in O. P. M. and the Army, I must say that they all seem to be highly cooperative. To give you concrete examples of what they have done is difficult because the situation still seems to be in a state of flux.

Dr. LAMB. From this committee's experience, in going around the country, I think it would be correct to say that there are many professions of sympathy with the subcontracting procedure, and a good many instances of subcontracting of the kind that I described earlier, subcontracting among already affiliated companies. They may not be tied by actually overlapping stock ownership or interlocking directorates, but through operating and trade practices of long standing. There is no particular difficulty about those subcontracts, and in fact many large-scale manufacturers have advocated to the committee the piling on of orders so there would be more of them. I take it that the opinion of the panel this morning would be that that is not enough, granted that it is necessary to accomplish what has been advocated here, of bringing everybody into the job; and if that is the case, the problem that the committee still would need to raise is, how are you going to get it? Is it through contract clearing centers? Is it through pools? How are you going to get this mass distribution of contracts and subcontracts on a scale which will enlist all the available capacity and manpower?

IMPORTANCE OF ORGANIZED CONTRACT DISTRIBUTION

Mr. TAUB. It seems to me that if Mr. Odum's department is going to live up to what has been said about it in the newspapers, you certainly ought to have an organization big enough to offer the United States an adequate mechanism for distribution of contracts.

Assume now that they, or we—if they don't do it, we will—prepare the field to accept those contracts. If you have a large number of concerns in the field which, because they are shy a machine or so, are not able to accept the contract, then you just can't bring the two together; but if the contract distribution agency intelligently organizes individual companies into usable groups, then as defense contracts go into the field, they will find groups there waiting for work. That is exactly what will occur, from the standpoint of organizing the groups; but what will happen to the business of organizing the distribution of contracts is something else.

Dr. LAMB. I would like to ask Dr. Person in this connection whether, in his opinion, what is lacking is an active rather than a passive approach to the situation which you are describing. Granted that there is a passive situation such as, for example, the setting up and authorizing of Mr. Odhum's division, and the starting of trains around the country with certain bits and pieces laid out for the manufacturers, is something more in the way of activity required, Dr. Person, in order to make effective the set-up Mr. Taub has mentioned?

Dr. PERSON. You have the same perception of the answer that I have, Dr. Lamb—as revealed by the form of your question. It strikes me that it is a problem of aggressive, organized arrangement of the matter, as against casualism.

Now, in my main statement I made the suggestion that there should be a comprehensive organization of an engineering nature to plan and carry through the prime contracting. That is all that was implied in the statement; but between the lines, it should have carried with it the suggestion to carry clear through to subcontracting.

As I understand it, prime contractors don't hesitate to let subcontracts to other well-known and highly respected concerns of the same type. But the hesitancy is in reaching out and subcontracting to the numerous small, less well-known, and probably less efficiently managed concerns. Those are the ones that they have in mind when they say the trouble is that you have to do the work over. It strikes me that, just as there should be from the center in Washington an aggressive, dynamic reaching out of engineering ability and organization immediately to the prime contractor, this should carry on through by aiding the prime contractor to organize, on a lesser but adequate scale, a reaching down through to their subcontractors of the class that I am just now talking about. In other words, the planning rule of the prime contractor should be to plan for the subcontractors, and it should be in intimate contact with the planning going on in the subcontracting establishment; and, of course, good planning of the prime contractor carries with it precise and adequate specifications, and all the technical information necessary to do the job right, and there isn't left a large area of instructions. It could be covered by the word "need." If this primary consideration of adequate specification and instructions to the last detail by the prime contractor to the subcontractor has been taken care of, then planning by the prime contractor should embrace the planning going on in the subcontractor's concern. That is the way thousands of small enterprises can be brought into the orbit of effective defense preparedness.

Mr. HENRY. To carry out specifically what Dr. Person said: Of three concerns in one type of machine tooling—without mentioning

any names—two have national reputations and have done the job of subcontracting just exactly as you have said. They have taken many small concerns and educated them to make pretty close tolerance. The third concern, making the same type, has done no subcontracting. It has bought motors, but not done any subcontracting. They are all three competitive. But one has the wrong attitude. Commercially, it may be the right attitude, but he has done no subcontracting, and the other two have done a complete job of subcontracting. It is very important to understand not only the attitude in Washington, but also what the views are in the field. Do they want to subcontract?

CENTRAL SUBCONTRACTING SYSTEM ADVOCATED

Mr. COOKE. Let us assume that there are already eight concerns handling the M3 tank contracts. There isn't any doubt in my mind that those eight concerns ought to set up some sort of organization by which each has an assignment, and one of the essential parts of such a work would be to handle all the subcontracting. Otherwise these eight concerns go out on their own with various degrees of fancy subcontracting, and the small man who wants to get in has to contact each concern. A central subcontracting system for all eight would work much better. That would be one way in which, on that very extensive tank program, you would be able to expedite your subcontracting.

Mr. TAUB. That has been done. They are getting together so there will be less duplication of effort, and whoever happens to have facilities will be making parts for everyone interested. The scope of this will grow.

Dr. LAMB. In other words, if you were accepting bids on a given part, you would open that bidding to all the companies capable of making that part, which may be, at some time in the evolution of this plan, deliverable alternatively to any of these manufacturers.

Mr. TAUB. That is right.

Mr. COOKE. According to the instructions.

Dr. PERSON. I would like to make another observation, if I may. I notice that Congressman Curtis, in some of his questions, showed a very great interest in the little plants, and their possible disadvantage in the matter of equipment, in comparison with larger plants.

The following circumstance will throw some light on that: During the first World War, some of the largest brass concerns in New England were equipped with very up-to-date machinery, and in installing it they sold their more or less obsolete equipment where they could in an open salvage market. This older equipment was bought up by a lot of concerns which began making little bits of things. They were plants employing 5 to 15 workers, and were set up around the New England States. After the war was over and the market of the brass manufacturers had disappeared, there was a period of 8 or 9 years during which all those big concerns got along in the black in the production of big stuff like pipes and valves, but they were in the red all that time in their manufacture of spun brass and shell brass. The big firms couldn't compete with the little fellows to whom they had sold their old equipment.

This simply shows that equipment isn't all that enters into the calculations. One hundred percent good management and 90 percent

efficiency may go further than 100 percent efficient equipment and 90 percent good management.

There are other factors that matter, and I think we could rely on any comprehensive scheme which provided for the development of a very considerable amount of capacity and efficiency among these fingertips of concerns that exist all over the country.

(At this point, at the panel's request, testimony in answer to a question by Congressman Welch was given off the record. Subsequent to the hearing, permission was obtained from Congressman Welch and the members of the panel to include a summary of relevant details of the testimony; and, members of the committee concurring, the following summary is made a part of the record:

(Congressman Welch asked what the opinion of the panel was on Mr. Odum's recent statement that more than 20,000 small firms would probably be forced out of business as a result of the defense program.

(Mr. Taub indicated that it would probably prove to be true, considering the effect of the civilian production allocation programs on many small businesses and the slowness and difficulties connected with giving them contracts.

(Dr. Person pointed out that many small firms had very capable managements, and that, furthermore, there were very few small companies that could not make some positive contribution to the defense effort.

(Mr. Taub agreed with Dr. Person's statement, but emphasized the importance of incorporating the largest industrial facilities into the program first, if defense production was to be maximized. Referring specifically to the facilities of the eight automobile companies, he pointed out that these were not being fully utilized and that there are some 5,000 other large establishments, most of which are in a similar situation. Behind these there are 40,000 medium-sized establishments, he added, that should be put to work before the program could reach the 135,000 small establishments.—Ed.)

The CHAIRMAN. This discussion has been highly interesting to the committee, and you have given us a very valuable contribution, gentlemen. The committee stands adjourned until tomorrow morning.

ENGINEERS' PANEL EXHIBIT A—SUMMARY OF PROGRAM FOR SPEEDING DEFENSE EFFORT AND REDUCING UNEMPLOYMENT AND MIGRATION

(Subsequent to the hearing the following letter was received by the chairman:)

OFFICE OF PRODUCTION MANAGEMENT,
Washington, D. C., November 5, 1941.

Hon. J. H. TOLAN,

Chairman, House Committee Investigating Defense Migration,

Washington, D. C.

MY DEAR MR. CHAIRMAN: In answer to your request we hand you herewith a memorandum covering points to be observed in any program for the speeding up and improvement of defense efforts and as a means of reducing unemploy-

ment and migration. It is a brief joint summary of the main points in the testimony given by our panel at your hearing on October 28. You understand that we speak only as individual technicians and without any right or authorization to represent anybody but ourselves.

Trusting that it may be of some assistance to you in the prosecution of your important task and with best regards, we are

Yours very sincerely,

(Signed) MORRIS L. COOKE.
S. T. HENRY.
H. S. PERSON.
ALEX TAUB.

(The following letter of acknowledgment was sent to each of the signers of the above letter:)

NOVEMBER 18, 1941.

DEAR MR. _____: This is to acknowledge receipt of the joint statement prepared by yourself and your colleagues following your testimony before this committee on October 28.

It is indeed gratifying to us that you and your colleagues were able to agree on these points as a result of your testimony and mutual exchange of views before our committee.

With all good wishes, I am,

Sincerely yours,

JOHN H. TOLAN, *Chairman.*

(The memorandum referred to in the joint letter above is made a part of the record in accordance with instructions from the chairman. It is as follows:)

POINTS TO BE OBSERVED IN ANY COMPREHENSIVE DEFENSE PRODUCTION PROGRAM

DRAFTED FOR SELECT COMMITTEE INVESTIGATING NATIONAL DEFENSE MIGRATION BY
MORRIS L. COOKE, S. T. HENRY, H. S. PERSON, AND ALEX TAUB

1. The developing defense situation calls for a vastly increased production that will be a heavy load on industry for several years. This will call for all the genius and capacity which the United States possesses.

2. The situation is a challenge to Government and to industry effectively to organize total capacity and provide essential materials.

3. In thus meeting the major problem defense unemployment and defense migration will largely disappear.

4. The first step toward increase of production is for prime and subcontractors to increase their output and make earlier deliveries by working their machines more hours per week. They are tooled up and their operations are organized. This would immediately increase employment.

5. A second step that offers the largest unrealized possibilities for a quick increase in production is the farming out of defense work to plants not fully occupied. It is best to bring the maximum of work to existing facilities before moving machines or creating new plant.

6. It is a responsibility of Government to make those necessary arrangements beyond the capacity of individual plants to make for themselves.

7. Farming out, or emergency subcontracting, is always a two-way process. Manufacturers, no matter how small, must make their capacities known and go after orders. Procurement agencies and prime contractors must make their requirements known through offering of definite orders.

8. Procurement should include the maintenance of comprehensive schedules of things to be bought, i. e., a shopping list. Especially the larger items of matériel—tanks, airplanes, antiaircraft guns—can be broken up into their sub-assemblies and parts, thus making parts manufacture possible for even the smallest plants.

9. By pooling the complementary metal working facilities of small manufacturers located within manageable geographical range it is possible to execute many contracts that are not feasible for small individual plants.

10. To balance the requirements of metal working plants having on hand work to be done with others asking for work to do, exchanges, or capacity centers, should be set up in all manufacturing areas following patterns in successful operation at home and abroad.

11. At all levels of procurement, military personnel conversant with details of design and use of defense materials should be supplemented by civilian production engineers conversant with production organization and follow-up procedures. Together they should increase both volume and tempo of production by routinizing follow-up procedures so as to ensure and even advance delivery dates. The Government must assume the responsibility for initiative not only in placing orders but also in scheduling and expediting operations.

12. It is urgent there should be established within the civilian defense organization a section manned by production engineers of major experience and competence whose functions shall be to develop procedures for—

- (a) Maintaining a classified inventory of facilities,
- (b) Maintaining a classified inventory of requirements,
- (c) Keeping records of balances in detail of requirements and facilities,
- (d) Establishment of standard practices in procurement, production organization, and production follow-up, and
- (e) Promotion of that adjustment of national facilities to requirements necessary for speedy increase in the volume and tempo of defense production.

13. Any production program is necessarily contingent on the materials supply. We should plan immediately to increase the production or importation of any materials of which the supply is inadequate. Price ceilings should be raised where this is necessary to get results.

14. A labor supply adequate for a vastly increased defense-production program can be made available through extensions in current training programs. The supply may further be extended through the employment of women. The hours worked by individuals can in many cases be lengthened.

15. From the owner-management of the 135,000 small plants of the country may be recruited much of the supervisory staff necessary to handle the expanded labor forces of the larger defense organization.

16. As one illustration of the theme of all these suggestions and because of its urgency, special efforts should be made to have as many shipbuilding requirements as possible fabricated outside of the yards. Through subcontracting such work should be scattered as widely as possible.

17. In the meantime:

(a) All contracts which call for deliveries after July 1, 1942, should be reviewed with a view to advancing delivery dates and thereby affording additional immediate employment. Some of these contracts may advantageously be renegotiated.

(b) Any orders for new machinery and equipment must be very closely scrutinized. None should be placed where machines that are idle or that might be rebuilt could be used instead.

(c) Surveys of our total requirements for defense now in progress should be hurried to their earliest possible completion.

ENGINEERS' PANEL EXHIBIT B—EMPLOYMENT IN METALWORKING INDUSTRIES AND UTILIZATION OF PLANT FACILITIES

MATERIAL SUBMITTED BY A. F. HINRICHS, ACTING COMMISSIONER, BUREAU OF LABOR STATISTICS, UNITED STATES DEPARTMENT OF LABOR, WASHINGTON, D. C.

OCTOBER 30, 1941.

Mr. A. F. HINRICHS,

Acting Commissioner, Bureau of Labor Statistics,

Washington, D. C.

DEAR MR. HINRICHS: At a hearing before this committee in Washington on October 28, Mr. Morris L. Cooke referred to a series of reports of the Bureau of Labor Statistics on Utilization of Plant Facilities in Selected Manufacturing Industries Under the National Defense Program, which he indicated showed that 70 percent of the employees were on the first shift.

Another witness before our committee, Mr. S. T. Henry, indicated a basis for estimating increased employment which could be furnished by the metal working

industries if the Bureau of Labor Statistics would be able to furnish us estimates of employment at present and recently provided for by the metal working industries. The particular metal working industries Mr. Henry referred to included manufacturers of machinery as well as manufacturers of various finished and semifinished fabricated metal products (including for example, refrigerators, transportation equipment, ferrous and nonferrous castings, stampings, etc.).

In order to complete our record of Mr. Cooke's and Mr. Henry's testimonies, could you please furnish the committee with the complete series referred to by Mr. Cooke as well as the estimates of employment by the metal working industries indicated by Mr. S. T. Henry.

In connection with our record of this Washington hearing we are also interested in obtaining estimates of the absolute number employed in each of the major industrial groups, broken down wherever possible into defense and nondefense employment. Could you also submit to us data showing recent employment trends on an absolute basis in each of the principal durable consumers' goods industries and other industries such as rubber and silk manufacturers which have been or are expected to be curtailed because of the defense program. We are interested in annual averages for the years 1937-40 and monthly figures for the years 1940 and 1941. Would it be possible for you to furnish us with this material by November 7?

May I again express our appreciation of the excellent work and cooperation of your Bureau.

With all good wishes, I am
Sincerely,

JOHN H. TOLAN, *Chairman.*

DEPARTMENT OF LABOR,
BUREAU OF LABOR STATISTICS,
Washington, November 18, 1941.

HON. JOHN H. TOLAN,
*House Committee Investigating National Defense Migration,
Washington, D. C.*

MY DEAR MR. TOLAN: I am enclosing the basic data which you requested in your letter of October 30. The attached table presents annual employment averages for 1937-40 and monthly averages for 1940 to date in the metal-working industries and selected consumer goods industries as well as the major components of nonagricultural employment.

In connection with your request for an employment break-down between defense and nondefense for the major industrial groups, I regret that it has not proved feasible on the basis of present data to prepare such estimates. On an over-all basis the Bureau of Labor Statistics has estimated that defense employment averaged 2,700,000 nonagricultural employees in the second quarter of 1941, and 3,400,000 in the third quarter of this year. The estimates include employment at all stages of production, exclusive of agriculture, and represent employment required to produce defense output over and above the current volume of nondefense output in the second and third quarters of 1941.

I am also forwarding the reports on utilization of plant facilities that you requested. If the Bureau can be of further assistance to you, please do not hesitate to call upon us.

Cordially yours,

A. F. HINRICHS,
Acting Commissioner of Labor Statistics.

(The material referred to above is as follows:)

Nonagricultural employment estimates by major components, selected metal-working industries, and restricted consumer goods industries, 1937-41

[In thousands of employees]

Industry	1937 annual aver- ages	1938 annual aver- ages	1939 annual aver- ages	1940 annual aver- ages	1940 (monthly averages)											
					Jan- uary	Febru- ary	March	April	May	June	July	August	Sep- tember	Oct- ober	No- vember	De- cember
Total nonagricultural employment	35,561	33,362	34,624	35,756	34,751	34,656	34,852	34,882	35,163	35,425	35,454	35,902	36,528	36,867	36,986	37,608
Employees in nonagricultural estab- lishments	29,443	27,229	28,481	29,613	28,608	28,513	28,709	28,739	29,020	29,282	29,311	29,759	30,385	30,724	30,843	31,465
Mining	949	834	791	853	854	849	835	845	845	838	837	839	846	856	863	875
Construction	1,148	1,001	1,241	1,337	1,012	939	991	1,118	1,249	1,321	1,378	1,443	1,511	1,654	1,709	1,720
Transportation and public utili- ties	3,102	2,835	2,984	3,024	2,935	2,941	2,940	2,956	3,000	3,032	3,059	3,081	3,120	3,121	3,065	3,039
Trade and related establishments, Federal, State, and local govern- ment	6,233	6,012	6,144	6,266	6,062	6,026	6,201	6,122	6,197	6,254	6,159	6,168	6,321	6,362	6,433	6,584
Financial, service, and miscel- laneous	3,593	3,662	3,708	3,797	3,694	3,695	3,702	3,716	3,751	3,799	3,828	3,839	3,853	3,876	3,881	3,931
Manufacturing	4,144	4,059	4,119	4,173	4,078	4,084	4,100	4,160	4,202	4,214	4,218	4,226	4,255	4,187	4,167	4,180
Metal-working industries:	10,273	8,827	9,544	10,170	9,974	9,974	9,926	9,832	9,776	9,824	9,832	10,163	10,479	10,668	10,735	10,856
Machinery, not including transpor- tation equipment	1,097.6	804.6	877.1	1,038.3	995.6	1,001.4	1,001.5	1,005.5	1,008.7	1,019.2	1,027.9	1,055.6	1,090.4	1,127.5	1,161.7	1,205.1
Agricultural equipment	77.5	56.4	54.2	61.1	60.2	62.8	63.9	62.9	62.1	61.1	58.1	58.4	59.4	60.0	60.8	63.7
Cash registers, adding machines, etc.	20.6	19.0	17.8	18.1	17.6	17.8	17.8	17.9	17.9	18.1	18.0	17.9	18.3	18.4	18.6	18.8
Electrical machinery, apparatus, supplies, turbines, water wheels, etc.	257.2	183.1	200.2	240.2	226.2	226.0	226.2	225.7	226.6	229.7	230.9	237.1	247.3	258.2	268.2	279.8
Foundry and machine-shop prod- ucts	32.9	27.5	31.6	52.3	40.0	42.4	42.9	44.7	47.5	50.4	53.4	56.1	58.5	61.1	64.0	67.1
Machine tools	428.3	314.7	339.5	402.6	386.4	388.0	386.4	386.4	383.6	385.2	383.6	399.5	411.0	424.1	437.6	453.5
Radios and phonographs	47.2	36.9	42.7	66.0	55.7	58.0	59.7	61.2	62.6	64.8	66.4	67.2	70.2	73.0	75.2	78.1
Textile machinery and parts	48.4	29.5	39.4	42.4	40.1	37.1	35.8	37.7	40.1	41.5	42.2	46.2	46.9	48.0	46.9	46.6
Typewriters and parts	25.3	14.1	23.5	25.2	26.5	26.4	26.3	26.1	25.2	24.3	23.6	23.5	24.0	24.5	26.4	26.4
Transportation equipment	21.4	16.0	17.5	16.8	17.5	16.5	16.1	16.0	15.8	15.5	16.0	16.5	17.2	17.8	18.3	18.5
Aircraft	666.6	417.0	540.2	688.4	657.5	654.3	667.5	658.9	657.7	644.0	562.0	591.5	715.4	786.2	841.2	841.2
Automobiles	24.0	23.1	39.7	90.1	63.7	64.5	66.6	69.3	74.9	81.6	88.1	97.4	105.4	115.2	123.3	131.2
Cars, electric and steam-railroad	516.7	305.4	394.2	448.0	466.3	455.5	460.7	451.0	442.2	422.4	331.4	344.3	451.8	503.8	522.7	524.3
Locomotives	40.6	20.3	23.8	35.8	33.5	37.5	38.8	36.4	33.1	32.5	32.1	32.5	34.0	35.7	39.1	41.9
Shipbuilding	9.0	4.8	4.6	6.7	5.5	5.6	5.5	5.4	3.5	3.6	6.0	6.4	6.9	7.6	8.2	8.9
	62.3	54.5	66.7	93.7	74.8	77.6	82.0	83.1	86.1	88.6	92.6	98.5	102.3	107.4	111.0	120.2

Nonagricultural employment estimates by major components, selected metal-working industries, and restricted consumer goods industries, 1937-41—Continued

(In thousands of employees)

Industry	1937 annual averages	1938 annual averages	1939 annual averages	1940 annual averages	1940 (monthly averages)														
					January	February	March	April	May	June	July	August	September	October	November	December			
Metal-working industries—Continued.																			
Nonferrous metals and products.....	270.5	215.6	214.8	284.6	273.8	267.3	263.3	262.6	265.8	266.8	263.7	263.3	262.6	265.8	266.8	263.7	263.9	327.2	
Aluminum manufactures.....	23.7	19.2	23.5	29.4	27.1	27.3	27.3	27.6	27.9	28.5	27.5	27.3	27.6	27.9	28.5	30.7	33.3	33.4	
Brass, bronze, and copper products.....	83.1	63.1	73.7	90.6	88.3	83.5	81.9	81.7	82.7	84.4	83.8	81.9	81.7	82.7	84.4	95.4	105.7	109.4	
Clocks, watches, time-recording devices.....	23.2	17.7	18.5	20.8	19.8	19.9	19.5	19.6	19.9	19.6	19.8	19.5	19.6	19.9	19.6	21.9	23.3	23.2	
Jewelry.....	22.8	21.2	23.2	24.3	22.3	22.9	22.6	22.3	22.9	23.4	23.8	22.6	22.3	22.9	23.4	25.8	27.6	26.2	
Lighting equipment.....	21.7	15.8	18.8	20.9	21.0	19.9	19.4	19.0	19.0	17.4	19.4	19.4	19.0	19.0	17.4	22.5	24.1	24.9	
Silverware and plated ware.....	11.4	10.7	11.8	12.2	12.0	12.0	12.0	12.0	11.6	10.8	11.9	12.0	12.0	11.6	10.8	12.4	13.0	13.4	
Iron and steel and their products.....	1,021.2	762.8	855.5	977.3	966.2	951.7	907.8	909.1	925.5	947.9	933.3	907.8	909.1	925.5	947.9	1,013.8	1,064.9	1,084.7	
Bolts, nuts, washers, and rivets.....	16.8	12.4	14.4	16.4	16.6	16.2	15.8	15.0	14.8	15.5	16.3	15.4	15.0	14.8	15.5	16.7	18.2	19.1	
Cast-iron pipe.....	17.6	15.3	16.6	17.8	16.7	17.0	16.8	17.1	17.3	17.6	17.8	16.8	17.1	17.3	17.6	18.4	19.4	19.7	
Cutlery and edge tools.....	16.8	14.2	15.8	17.5	17.5	17.4	17.2	17.3	16.9	16.5	17.3	17.3	17.1	16.9	16.5	17.9	18.7	18.3	
Forgings, iron and steel.....	18.3	12.1	14.0	17.5	17.2	17.1	16.3	15.9	15.7	16.1	15.7	15.9	15.9	15.7	16.1	18.3	19.1	21.1	
Hardware.....	53.1	37.9	45.1	50.8	53.2	52.1	50.8	49.3	41.9	42.6	49.2	50.4	49.3	41.9	42.6	52.0	54.1	57.8	
Plumbers' supplies.....	25.2	22.1	23.4	26.0	24.8	24.7	24.7	24.7	25.0	25.5	26.2	24.7	24.7	25.0	25.5	26.8	27.5	29.2	
Stamped and enameled ware.....	61.0	44.5	50.5	55.9	52.5	53.4	53.0	51.9	50.7	50.8	53.0	53.0	51.9	50.7	50.8	54.6	63.1	65.1	
Steam and hot-water apparatus.....	39.6	31.3	33.8	38.9	36.9	36.5	36.7	36.5	36.7	36.8	37.5	36.5	36.5	36.8	36.4	38.8	44.2	44.3	
Stoves.....	49.8	36.6	40.8	44.4	36.7	40.4	42.7	42.8	43.5	43.1	45.9	42.7	42.8	43.5	43.1	47.6	49.0	48.8	
Structural and ornamental metal work.....	38.8	29.9	34.2	38.3	36.3	35.4	34.7	35.1	36.3	37.5	38.5	34.6	35.1	36.3	37.5	41.2	42.7	44.7	
Tin cans and other tinware.....	33.1	28.3	29.3	30.0	28.3	28.0	28.3	28.9	31.0	32.0	32.8	28.6	28.9	31.0	32.0	31.8	30.6	29.9	
Tools (not including edge tools, machine tools, etc.).....	17.6	13.7	15.5	17.7	17.2	17.2	16.9	16.5	16.4	16.8	16.7	16.7	16.5	16.4	16.8	17.1	19.0	20.9	
Wirework.....	33.4	23.0	26.9	30.3	30.9	29.2	29.3	29.0	27.4	24.5	29.3	29.1	29.0	27.4	24.5	29.6	31.3	37.2	
(Blas furnaces, steel works, and rolling mills)	501.9	369.3	414.6	483.6	491.3	477.1	453.1	443.4	464.5	483.6	440.5	440.5	443.4	464.5	483.6	500.7	508.8	526.3	
Additional metal-working industries:																			
Pumps.....	()	()	24.2	28.8	26.3	26.8	26.3	28.7	28.8	28.7	28.3	28.7	28.7	28.8	28.7	29.0	29.7	30.9	32.0
Screw-machine products.....	()	()	16.9	21.0	19.6	19.5	19.5	19.4	19.5	19.6	19.5	19.5	19.4	19.5	19.6	20.8	23.0	24.1	25.3
Machine-tool accessories.....	()	()	25.2	33.8	28.4	29.5	30.9	32.9	33.9	35.2	34.6	32.9	32.9	33.9	35.2	34.6	37.4	39.8	39.8
Refrigerators and apparatus.....	()	()	35.2	40.4	38.9	42.3	44.4	44.3	42.3	40.9	44.3	44.3	43.1	42.3	40.9	38.8	32.9	34.4	44.4
Sewing machines.....	()	()	7.8	8.3	8.0	8.1	8.2	8.4	8.4	8.4	8.3	8.3	8.4	8.4	8.4	8.4	8.5	8.6	8.6
Washing machines, etc.....	()	()	7.5	7.9	8.1	8.5	7.9	7.4	7.3	7.1	7.9	7.9	7.4	7.3	7.1	7.9	8.2	8.3	8.1

Selected consumer's goods industries:															
Rubber products.....	129.8	100.6	113.7	118.7	120.9	118.2	117.1	113.7	112.5	112.0	112.2	120.1	124.4	126.8	130.9
Automobiles.....	516.7	505.4	391.2	448.0	466.3	455.5	460.7	451.0	442.2	422.4	331.4	451.8	503.6	522.7	524.3
Refrigerators and apparatus.....	(1)	(1)	35.2	40.3	38.9	42.3	44.4	44.3	43.1	42.3	40.9	32.9	32.1	39.5	44.4
Radio and phonographs.....	48.4	29.5	39.4	42.4	40.1	37.1	35.8	37.7	40.1	41.5	42.2	46.9	48.1	46.9	46.6
Stoves.....	49.8	36.6	40.8	44.4	36.7	40.4	42.1	42.7	42.8	43.5	43.1	47.6	49.9	49.6	48.8
Hardware.....	53.1	37.9	45.1	50.8	53.2	52.1	50.8	40.4	49.3	41.9	42.6	52.0	54.1	56.0	57.8
Aluminum manufactures.....	23.7	10.2	23.5	29.4	27.1	27.3	27.5	27.3	27.6	27.9	28.5	30.7	32.1	33.3	33.4
Jewelry.....	22.8	21.2	23.2	24.3	22.3	22.9	23.2	22.6	22.3	22.9	23.4	25.5	27.7	27.6	26.2
Lighting equipment.....	21.7	15.8	18.8	20.9	21.0	19.9	19.4	19.4	19.0	19.0	17.4	24.8	24.1	24.8	24.9
Silverware and plated ware.....	11.4	10.7	11.8	12.2	12.2	12.0	11.9	12.0	12.0	11.6	10.8	12.4	13.0	13.6	13.4
Sewing machines.....	(1)	(1)	7.8	8.3	8.0	8.1	8.2	8.3	8.4	8.4	8.1	8.4	8.5	8.5	8.6
Washing machines, etc.....	(1)	(1)	7.5	7.9	8.1	8.5	8.3	7.9	7.4	7.3	7.1	7.9	8.2	8.3	8.1
Hosiery.....	148.5	141.8	148.2	135.9	140.2	141.7	136.6	136.5	130.4	126.9	127.9	135.1	139.2	141.3	142.4
Silk and rayon goods.....	116.9	90.0	92.8	81.3	91.5	86.7	83.2	81.0	78.1	75.0	76.0	79.9	81.2	82.0	82.1

† Not available.

Nonagricultural employment estimates by major components, selected metal-working industries, and restricted consumer goods industries, 1937-41—Continued
 [In thousands of employees]

Industry	1941 (monthly averages)											
	January	February	March	April	May	June	July	August	September			
Total nonagricultural employment.....	36,621	36,928	37,227	37,676	38,306	38,858	39,381	39,626	40,065			
Employees in nonagricultural establishments.....	30,478	30,785	31,084	31,533	32,163	32,715	33,188	33,483	33,922			
Mining.....	852	854	864	864	862	876	888	900	906			
Construction.....	1,621	1,678	1,681	1,775	1,782	1,816	1,895	1,921	1,957			
Transportation and public utilities.....	3,012	3,028	3,056	3,113	3,185	3,239	3,290	3,365	3,365			
Trade and related establishments.....	6,165	6,173	6,259	6,421	6,463	6,530	6,512	6,564	6,659			
Federal, State, and local government.....	3,887	3,906	3,935	3,983	4,049	4,126	4,164	4,210	4,229			
Financial, service, and miscellaneous.....	4,142	4,164	4,187	4,327	4,353	4,394	4,394	4,420	4,420			
Manufacturing.....	10,797	10,982	11,152	11,370	11,537	11,775	11,995	12,168	12,386			
Metal-working industries:												
Machinery, not including transportation equipment.....	1,237.0	1,270.2	1,308.3	1,383.0	1,438.9	1,485.4	1,525.7	1,553.7	1,580.9			
Agricultural equipment.....	66.6	64.2	59.0	75.0	76.0	76.5	76.3	76.5	76.0			
Cash registers, adding machines, etc.....	18.9	19.5	20.3	21.0	22.6	22.6	23.3	24.1	24.1			
Electrical machinery, apparatus, supplies.....	281.8	303.4	314.7	327.6	342.5	353.2	364.3	372.3	375.2			
Engines, turbines, water wheels, etc.....	70.9	75.4	79.0	82.0	86.6	91.1	95.0	100.2	103.0			
Foundry and machine-shop products.....	466.7	477.0	491.3	516.8	536.2	552.9	566.8	570.8	584.3			
Machine tools.....	80.9	84.1	86.9	89.6	92.7	95.8	97.9	99.5	100.9			
Radies and phonographs.....	43.4	42.6	43.8	46.6	51.1	53.1	55.5	59.5	62.5			
Textile machinery and parts.....	27.4	28.5	28.5	30.4	31.1	31.9	32.6	33.3	33.3			
Typewriters and parts.....	18.3	18.2	18.7	19.4	20.1	20.1	22.1	21.8	21.8			
Transportation equipment.....	861.0	885.8	908.5	938.2	969.0	1,003.8	1,011.4	966.1	1,075.1			
Aircraft.....	141.1	149.6	155.8	166.0	176.5	188.5	203.8	240.0	222.9			
Automobiles.....	517.5	523.9	529.6	533.2	540.0	542.8	511.0	440.2	496.9			
Cars, electric and steam-railroad.....	44.0	43.8	45.0	46.8	50.5	54.0	56.5	56.6	60.7			
Locomotives.....	9.6	10.3	10.8	11.6	12.6	13.2	14.7	15.3	15.8			
Shipbuilding.....	130.7	139.6	148.2	160.9	169.0	184.2	204.2	210.8	239.1			
Nonferrous metals and products.....	327.0	335.9	341.7	345.9	348.9	354.0	357.8	363.4	368.8			
Aluminum manufactures.....	34.5	34.5	34.3	33.3	33.7	34.9	33.8	36.0	37.0			
Brass, bronze, and copper products.....	23.2	23.8	24.3	24.9	25.3	25.5	25.8	25.6	24.5			
Clocks, watches, time-recording devices.....	24.1	25.7	26.2	26.2	26.2	26.8	28.0	29.6	30.1			
Jewelry.....	24.4	25.2	25.3	25.6	25.4	25.8	26.3	26.1	28.6			
Lighting equipment.....	12.7	13.3	13.9	14.1	14.1	14.3	14.2	14.4	14.6			
Silverware and plated ware.....	1,090.9	1,115.5	1,135.4	1,154.8	1,185.0	1,214.3	1,228.5	1,248.6	1,254.1			
Iron and steel and their products.....	19.7	20.7	21.4	22.0	22.9	23.5	23.8	24.3	24.2			
Bolts, nuts, washers, and rivets.....	19.7	20.1	20.4	20.8	21.2	21.8	22.0	22.0	22.3			
Cast-iron pipe.....	18.0	18.3	18.9	19.5	19.8	20.1	20.6	21.3	21.8			
Cultry and edge tools.....	21.8	22.5	23.2	23.7	24.4	24.9	25.6	26.2	26.9			
Forgings, iron and steel.....	58.0	59.1	60.2	60.2	60.0	60.8	58.4	58.2	58.5			
Hardware.....	29.5	29.9	30.4	30.4	30.8	30.9	30.7	31.0	29.9			
Plumbers' supplies.....	29.5	29.9	30.4	30.4	30.8	30.9	30.7	31.0	29.9			

Stamped and enameled ware.....	63.3	66.9	68.9	69.7	72.4	73.1	74.7	75.8
Steam and hot-water apparatus.....	44.4	45.7	46.4	47.0	48.4	49.3	51.4	55.0
Stoves.....	44.2	46.6	48.0	51.3	53.3	54.5	55.1	54.6
Structural and ornamental metal work.....	46.2	47.4	48.0	49.0	50.5	52.1	53.0	53.0
Tin cans and other tinware.....	30.7	31.4	32.3	33.1	36.4	39.9	43.9	43.8
Tools (not including edge tools, machine tools, etc.).....	21.7	22.6	23.3	23.8	24.2	24.8	25.5	25.8
Wirework.....	37.0	37.4	37.7	37.8	38.4	38.9	34.9	37.9
(Blast furnaces, steel works, and rolling mills).....	533.6	541.7	548.6	558.4	571.4	585.2	605.9	605.1
Additional metal-working industries:								
Pumps.....	33.5	35.7	38.2	40.0	42.1	44.3	47.1	47.8
Screw-machine products.....	26.6	28.3	29.3	30.2	31.2	32.3	33.8	34.3
Machine-tool accessories.....	42.2	45.6	48.2	50.7	53.2	55.9	59.8	61.0
Refrigerators and apparatus.....	46.4	49.7	52.2	53.1	54.4	54.5	50.6	48.3
Sewing machines.....	8.8	8.9	9.2	9.5	9.8	10.1	10.1	10.5
Washing machines, etc.....	8.3	8.9	9.4	9.8	10.3	10.4	9.4	9.7
Selected consumer's goods industries:								
Rubber products.....	132.7	135.2	138.1	141.0	142.9	148.7	150.2	149.7
Automobiles.....	517.5	523.9	529.6	533.2	540.0	542.8	440.2	496.9
Refrigerators and apparatus.....	46.4	49.7	52.2	53.1	54.4	54.5	50.6	48.3
Radios and phonographs.....	43.4	42.6	43.8	46.6	51.1	53.1	55.5	62.5
Stoves.....	44.4	46.6	48.6	51.3	53.3	54.5	55.1	54.6
Hardware.....	58.0	59.1	60.2	59.9	60.0	60.8	53.4	59.5
Aluminum manufactures.....	34.5	34.5	34.3	35.3	35.7	34.9	36.6	37.6
Jewelry.....	24.1	25.7	26.2	26.2	26.2	26.8	29.6	30.1
Lighting equipment.....	24.4	25.9	25.3	25.6	25.4	25.8	26.1	28.0
Silverware and plated ware.....	12.7	13.3	13.6	13.9	14.1	14.3	14.4	14.6
Sewing machines.....	8.8	8.9	9.2	9.5	9.8	10.0	10.1	10.5
Washing machines, etc.....	8.3	8.9	9.4	9.8	10.3	10.4	9.4	9.7
Hosiery.....	139.3	139.2	140.2	138.4	139.4	139.1	138.0	132.8
Silk and rayon goods.....	81.7	83.6	84.5	86.1	86.2	87.1	85.4	79.4

Estimated number of wage earners in 18 defense industries by months, June 1940 to September 1941, inclusive

Industry	1940						
	June	July	August	September	October	November	December
Blast furnaces, steel works, and rolling mills ¹	464,500	453,600	436,200	500,700	598,800	517,300	526,300
Foundry and machine-shop products ¹	385,200	389,600	390,500	411,000	424,100	437,600	453,500
Electrical machinery, apparatus, and supplies ¹	229,700	230,900	237,100	247,300	258,200	268,200	279,800
Smelting and refining—copper, lead, and zinc ¹	29,600	30,200	31,000	31,300	32,100	32,100	32,800
Brass, bronze, and copper products ¹	82,700	84,400	90,000	95,400	100,800	105,700	109,400
Aluminum manufactures ²	27,900	28,500	29,900	30,700	32,100	33,300	33,400
Machine tools ¹	64,800	66,400	67,200	70,200	73,000	75,200	78,100
Abrasives ²	8,900	8,600	9,200	9,800	10,100	10,700	11,100
Machine-tool accessories ²	33,900	35,200	34,900	34,700	35,700	37,400	39,900
Screw-machine products ²	19,500	19,600	20,800	21,900	23,000	24,100	25,300
Aircraft ²	81,600	88,100	97,400	105,400	115,200	123,300	131,200
Shipbuilding ¹	88,600	92,600	98,500	102,300	107,400	111,000	120,200
Optical goods ²	13,700	13,000	13,600	13,900	14,400	15,100	15,700
Instruments ²	20,100	20,500	21,100	21,900	23,400	21,800	26,100
4 additional industries ^{2,3}	44,900	48,800	52,600	56,200	59,500	62,500	65,700
Total, 18 selected defense industries.....	1,595,600	1,640,000	1,699,000	1,752,700	1,817,800	1,878,300	1,948,500

Industry	1941								
	January	February	March	April	May	June	July	August	September
Blast furnaces, steel works, and rolling mills ¹	533,600	541,700	548,600	558,400	571,400	585,200	598,200	605,900	605,100
Foundry and machine shop products ¹	466,700	477,000	491,300	516,800	536,200	552,900	566,800	578,800	584,300
Electrical machinery, apparatus and supplies ¹	284,800	303,400	314,700	329,600	342,500	353,200	364,300	372,300	375,200
Smelting and refining—copper, lead, and zinc ¹	33,200	33,800	31,100	34,000	34,500	34,500	34,800	35,100	34,900
Brass, bronze, and copper products ¹	111,600	114,500	117,500	118,800	120,000	123,200	123,500	125,600	126,900
Aluminum manufactures ²	34,500	34,500	34,300	35,300	35,700	35,100	36,000	36,900	37,600
Machine tools ¹	80,900	84,100	86,900	89,600	92,700	95,800	97,900	99,500	100,900
Abrasives ²	11,600	12,000	12,600	13,200	13,600	13,900	14,100	14,400	14,700
Machine-tool accessories ²	42,300	45,600	48,200	50,700	53,200	55,900	57,700	59,800	61,000
Screw-machine products ²	26,500	28,300	29,300	30,200	31,200	32,300	33,400	33,800	34,300
Aircraft ²	141,100	149,600	155,800	166,000	176,500	188,500	203,800	222,900	240,000
Shipbuilding ¹	130,700	139,600	148,200	160,700	168,700	183,800	204,200	211,200	233,100
Optical goods ²	16,000	16,700	17,400	18,100	18,600	19,200	19,500	20,100	20,200
Instruments ²	26,200	27,000	28,500	29,900	31,100	32,800	34,000	35,400	35,500
4 additional industries ^{2,3}	71,000	77,000	81,200	86,600	93,100	101,600	110,900	118,500	126,900
Total, 18 selected defense industries.....	2,013,700	2,084,800	2,148,600	2,235,300	2,319,000	2,407,900	2,499,100	2,570,200	2,636,600

¹ Adjusted to 1937 Census of Manufactures levels.

² Adjusted to 1939 Census of Manufactures levels.

³ Aero engines, firearms, ammunition, and explosives.

Prepared by: Bureau of Labor Statistics, Division of Employment Statistics.

UTILIZATION OF PLANT FACILITIES IN SELECTED MANUFACTURING INDUSTRIES UNDER THE NATIONAL DEFENSE PROGRAM¹

REPORT BY EMPLOYMENT AND OCCUPATIONAL BRANCH, BUREAU OF LABOR STATISTICS,
UNITED STATES DEPARTMENT OF LABOR, WASHINGTON, D. C.

JUNE 1941.

The tempo of defense production has been sharply accelerated during recent months through the extension of multiple-shift operations and increased use of

¹ Excerpted.

overtime. Many concerns which under normal peacetime conditions operated their plants only one shift per day, 5 or 5½ days per week, according to an investigation recently made by the Bureau of Labor Statistics, have extended their operations to two and three shifts per day, 6 or 7 days per week. Except in continuous process industries, however, there are only a few establishments that operate the plant continuously with four 44-hour shifts. * * *

Multiple-shift operating schedules were predominant in all of the industries covered during June 1941. There were only 76 of the 935 reporting establishments which were operating exclusively on one shift per day. These were principally smaller establishments and together account for only 1 percent of all the workers covered. In the blast furnaces, steel works, and rolling mills; chemicals; and smelting and refining industries, continuous manufacturing processes are used and virtually all of the plants operate three shifts per day, 7 days per week. Most of these plants have four shifts of workers which are rotated in order to keep the plant in operation continuously three shifts per day, without lengthening the hours of the individual worker. Average hours worked per wage earner in these industries, therefore, are around the 40-per-week level. In machine tools and machine-tool accessories, inability to secure sufficient numbers of skilled workers resulted in many plants operating two long shifts in preference to three shifts per day. In this industry, many two-shift plants are operating in excess of 20 hours per day, thereby necessitating an average of from 14 to 15 hours of overtime per week for each worker.

Considerable variation appears among industries in the extent to which extra shifts were staffed. The largest percentage of employees on other than the day shift occurs in blast furnaces, steel works, and rolling mills, where 47 percent of the wage earners were employed on evening or night shifts. By contrast, in the industries manufacturing railway cars, locomotives, electrical machinery and equipment, in private shipyards and in chemical plants, less than 30 percent of all the workers were on extra-shift work.

Some qualifications must be kept in mind with respect to the use of employment by shifts as an indication of the degree to which plant capacity is actually used. Except in unusual instances we should not expect to find an equal division of workers employed on all shifts. For example, in steel mills operating continuously at full capacity, three shifts per day, half of the total plant force is usually occupied on the day shift. This large proportion of workers on the first shift is explained by reason of work supplementary to basic production, such as repairs, maintenance, and unloading materials. Also it may be the case that the operations of finishing departments are governed by the production of ingots and therefore may not be required to operate three full shifts to handle the entire ingot output. In steel, the fact that second and third shifts do not have as many workers as are on the first shift, is not to be interpreted as meaning that output could be increased significantly unless ingot production could be expanded to the point where finishing departments could operate three full shifts.

In machine-tool plants, assembly departments are geared to the output of machine departments, and, in many instances, need not operate more than one shift per day until machine departments are expanded. Many plants in this industry have expanded their over-all capacity by subcontracting parts of their machine work.

In private shipyards, over three-fourths of all the workers are employed on the day shift. According to comments from many reporting firms in this industry, the extension of night work beyond that done under cover is questionable as the lack of satisfactory lighting lowers efficiency and increases the danger of accidents. In some shipyards, however, substantial numbers of workers were employed on evening and night shifts.

Despite difficulties such as those mentioned above, there undoubtedly exist widespread opportunities to increase defense production through fuller utilization of present plant facilities on second and third shifts. Two programs which will help toward this goal are: (1) Widespread training to develop an adequate supply of skilled workers, and (2) more subcontracting, particularly of items creating bottlenecks in plants with unbalanced production.

TABLE 1.—*Distribution of employment by shift in selected plants by industry, June 1941*¹

Industry	Number of plants	Total employment		Percentage distribution of employment by shift		
		Number	Percent of total	First shift	Second shift	Third shift
Total.....	935	1,312,498	100.0	64.2	22.7	13.1
Plants operating 1 shift.....	76	14,390	1.1	1.1	-----	-----
Plants operating 2 shifts.....	217	149,814	11.4	9.2	2.2	-----
Plants operating 3 shifts.....	642	1,148,294	87.5	53.9	20.5	13.1
Aluminum manufactures.....	22	15,474	100.0	64.9	22.2	12.9
Plants operating 1 shift.....	3	282	1.8	1.8	-----	-----
Plants operating 2 shifts.....	3	659	4.3	3.6	.7	-----
Plants operating 3 shifts.....	16	14,533	93.9	59.5	21.5	12.9
Ammunition, explosives, firearms, and ordnance materials.....	118	113,500	100.0	63.4	23.8	12.8
Plants operating 1 shift.....	12	1,435	1.2	1.2	-----	-----
Plants operating 2 shifts.....	35	26,041	22.9	19.2	3.7	-----
Plants operating 3 shifts.....	71	86,084	75.9	43.0	20.1	12.8
Blast furnaces, steel works, and rolling mills.....	196	471,503	100.0	53.1	26.0	20.9
Plants operating 1 shift.....	2	562	.1	.1	-----	-----
Plants operating 2 shifts.....	9	4,805	1.0	.7	.3	-----
Plants operating 3 shifts.....	185	466,136	98.9	52.3	25.7	20.9
Brass, bronze, and copper products.....	58	83,962	100.0	62.2	25.3	12.5
Plants operating 1 shift.....	1	136	.2	.2	-----	-----
Plants operating 2 shifts.....	7	5,094	6.1	5.2	.9	-----
Plants operating 3 shifts.....	50	78,732	93.7	56.8	24.4	12.5
Cars, electric and steam railroad.....	47	23,962	100.0	83.8	11.6	4.6
Plants operating 1 shift.....	20	3,004	12.5	12.5	-----	-----
Plants operating 2 shifts.....	11	4,756	19.9	18.1	1.8	-----
Plants operating 3 shifts.....	16	16,202	67.6	53.2	9.8	4.6
Chemicals.....	90	60,897	100.0	70.3	16.4	13.3
Plants operating 1 shift.....	-----	-----	-----	-----	-----	-----
Plants operating 2 shifts.....	-----	-----	-----	-----	-----	-----
Plants operating 3 shifts.....	90	60,897	100.0	70.3	16.4	13.3
Electrical machinery, apparatus, and supplies.....	117	227,224	100.0	72.0	20.6	7.4
Plants operating 1 shift.....	10	3,850	1.7	1.7	-----	-----
Plants operating 2 shifts.....	25	21,538	9.5	7.6	1.9	-----
Plants operating 3 shifts.....	82	201,836	88.8	62.7	18.7	7.4
Engines, other than aero.....	17	26,383	100.0	66.9	23.6	9.5
Plants operating 1 shift.....	-----	-----	-----	-----	-----	-----
Plants operating 2 shifts.....	2	1,633	6.2	5.1	1.1	-----
Plants operating 3 shifts.....	15	24,750	93.8	61.8	22.5	9.5
Locomotives.....	10	14,214	100.0	75.9	19.7	4.4
Plants operating 1 shift.....	-----	-----	-----	-----	-----	-----
Plants operating 2 shifts.....	5	1,594	11.2	10.1	1.1	-----
Plants operating 3 shifts.....	5	12,620	88.8	65.8	18.6	4.4
Machine tools.....	102	84,997	100.0	69.6	24.5	5.9
Plants operating 1 shift.....	5	1,179	1.4	1.4	-----	-----
Plants operating 2 shifts.....	64	40,112	47.2	36.4	10.8	-----
Plants operating 3 shifts.....	33	43,706	51.4	31.8	13.7	5.9

¹ Numbered table 2 in original.

TABLE 1.—*Distribution of employment by shift in selected plants by industry, June 1941—Continued*

Industry	Number of plants	Total employment		Percentage distribution of employment by shift		
		Number	Percent of total	First shift	Second shift	Third shift
Machine-tool accessories.....	39	12,356	100.0	69.8	23.0	7.2
Plants operating 1 shift.....	3	93	.8	.8	-----	-----
Plants operating 2 shifts.....	24	7,533	60.9	48.8	12.1	-----
Plants operating 3 shifts.....	12	4,730	38.3	20.2	10.9	7.2
Shipbuilding.....	77	146,814	100.0	77.5	17.8	4.7
Plants operating 1 shift.....	20	3,849	2.7	2.7	-----	-----
Plants operating 2 shifts.....	32	36,049	24.5	19.9	4.6	-----
Plants operating 3 shifts.....	25	106,916	72.8	54.9	13.2	4.7
Smelting and refining.....	42	31,152	100.0	70.0	16.6	13.4
Plants operating 1 shift.....	-----	-----	-----	-----	-----	-----
Plants operating 2 shifts.....	-----	-----	-----	-----	-----	-----
Plants operating 3 shifts.....	42	31,152	100.0	70.0	16.6	13.4

* * * Overtime continued to be an important factor in increasing defense production. It was most widespread in the machine tools and accessories industries where virtually all the workers worked overtime, averaging 13 hours weekly at the time of the June survey. In private shipyards, more than 80 percent of the workers average 11 hours of overtime during the week and in plants manufacturing firearms, ammunition, explosives, and ordnance materials, an average of 9½ hours of overtime was worked by 74 percent of the wage earners during the week. In continuous-process industries, the use of staggered shifts eliminates, to a large extent, the need for overtime. Consequently, in blast furnaces, steel works, and rolling mills, smelting and refining, and chemicals, only 20 to 30 percent of the wage earners worked overtime.

The average workweek for the individual worker in a multiple-shift plant is dependent, to a large extent, on whether the plant or department in which he is employed operates two or three shifts per day. * * * Thus, the average worker in two-shift plants worked nearly 20 percent more hours per week than the average in three-shift plants. The longer workweek for workers in two-shift plants results from the lengthening of shifts with daily overtime as contrasted with 8-hour shift schedules in three-shift plants. Overtime, therefore, was most extensive in two-shift plants where 82.6 percent of all the workers worked an average of 13.2 hours of overtime during the week. In three-shift plants, 46.6 percent of the workers averaged 8.6 hours of overtime during the week, a considerable portion of this overtime being worked in departments which operated two long shifts.

While some two-shift plants reported operations extending as long as 140 hours during the week, actual production time usually occupied from 110 to 120 hours in plants operating long shifts, as shown by the average hours worked per week in these plants. In three-shift plants operating in excess of 150 hours during the week, average hours per worker declined, indicating the use of four shifts of workers to achieve continuous operation.

TABLE 2.—*Employment and hours worked in selected plants, June 1941*¹

Shift schedule and plant hours per week	Number of plants	Total number of wage earners	Average hours worked per week per wage earner	Percentage of workers working overtime	Average weekly hours of overtime per overtime worker
Total, all plants.....	235	1,312,498	43.6	50.8	9.4
1-shift plants, total.....	76	14,390	43.6	47.6	8.7
40 to 49.9 hours.....	59	10,962	41.6	39.8	5.7
50 to 59.9 hours.....	14	2,519	49.5	72.9	14.6
60 hours and over.....	3	909	52.1	71.1	12.5
2-shift plants, total.....	217	149,814	50.8	82.6	13.2
70 to 79.9 hours.....	7	3,135	38.6	22.2	6.8
80 to 89.9 hours.....	42	17,712	49.2	49.9	5.4
90 to 99.9 hours.....	35	26,632	45.5	71.0	9.2
100 to 109.9 hours.....	32	14,104	51.3	93.5	12.6
110 to 119.9 hours.....	48	49,789	52.0	88.4	14.2
120 to 129.9 hours.....	22	13,370	51.1	92.1	14.2
130 to 139.9 hours.....	19	10,311	56.7	97.5	17.9
140 hours and over.....	12	14,781	55.5	97.2	17.4
3-shift plants, total.....	42	1,148,094	42.7	46.6	8.6
110 to 119.9 hours.....	3	3,180	40.4	40.3	6.3
120 to 129.9 hours.....	50	32,178	40.3	40.0	7.0
130 to 139.9 hours.....	46	54,626	43.1	64.4	7.0
140 to 149.9 hours.....	90	95,222	46.2	76.3	9.0
150 to 159.9 hours.....	39	44,245	44.8	68.5	9.4
160 hours and over.....	414	918,843	42.3	41.7	8.6

¹ Numbered table 4 in original.

Considerations which prevented expansion of second and third shifts were reported by 670 of the 135 surveyed plants. The most common deterrent was a reported shortage of skilled workers. However, while 343 plants reported difficulties in securing adequate numbers of skilled workers, only 76 indicated it as the exclusive consideration. Other factors operated to prevent expansion in the remaining cases. Thus, 75 reported shortage of skilled workers in combination with shortages of material and equipment, and 66 reported a combination of shortage of skilled workers, of supervisory personnel, and of materials and equipment. Shortage of materials or equipment was reported by 355 plants, 138 of these indicating it as the sole factor preventing expansion of extra shift work. Lack of orders, legal restrictions, or the fact that present schedules are adequate under existing contracts may be considered as primary causes preventing expansion, and were reported by a total of 212 plants.

In machine-tool plants, the skilled worker shortage was particularly acute, as shown by the fact that 28 plants reported it as the only deterrent to expansion and 48 plants reported it together with other factors. The principal factor preventing expansion in brass, bronze, and copper plants was shortage of materials or equipment. In this industry, 22 plants stated that the above shortages were the only factors and 22 others indicated that materials and equipment shortages in combination with other reasons prevented expansion of evening and night shifts. In the electrical industry many plants employ large numbers of female workers; and legal restrictions such as maximum hours and night work laws for women prevented the expansion of second and third shifts in 21 of the reporting establishments. Other plants in this industry were affected by shortages of skilled workers and of materials and equipment.

It may be seen from the foregoing summary that wide variations exist in operating schedules among the defense industries and among the individual plants in each of the industries. Further expansion in defense production can be accomplished through a more efficient utilization of present plant facilities on evening and night shifts. The principal deterrents at the present time are: (1) Shortages of skilled workers, (2) shortages of supplies, parts,

and materials, and (3) lack of balance among production departments. These problems are being met through training programs, upgrading of workers, exercise of priorities, and allocation of materials, increased subcontracting and expansion of bottleneck departments.

OPERATING SCHEDULES IN MACHINE-TOOL PLANTS SEPTEMBER 1941

REPORT BY BUREAU OF LABOR STATISTICS, UNITED STATES DEPARTMENT OF LABOR,
WASHINGTON, D. C.

Machine-tool plants continued to expand their second and third shifts between June and September 1941, according to preliminary reports received by the Bureau of Labor Statistics from firms employing more than two-thirds of the workers in this industry. Wage earners in 79 reporting plants increased from 63,900 in June to 69,000 in September—a gain of approximately 8 percent. The number of workers on second and third shifts increased by 12 and 22 percent, respectively, during the 3-month interval, though even in September less than a quarter of the workers were on the second shift and only 7.5 percent were on the third. While Sunday operations were still not extensive in September, a number of plants have increased their week-end operation since June. The number of workers at work on Sunday during June represented 5.7 percent of the total in the 79 plants. In September, on the other hand, the number at work on Sunday had increased to 9.8 percent of the total plant forces. Aggregate man-hours worked in the 79 plants during the surveyed week in September amounted to 3,650,000—an increase of 240,000 hours over the midweek of June.

Practically all of the workers in the reporting plants continued to work overtime in September. Overtime averaged 14 hours per week for 96 percent of the workers and showed little change since June.

As indicated by previous surveys, the largest number of wage earners were employed on the main shift, inasmuch as maintenance, supply, and assembly operations are performed principally on one shift. In September the distribution of all wage earners, by shift, shows 67.6 percent on the first shift, 24.9 percent on the second, and 7.5 on the third shift.

NATIONAL DEFENSE MIGRATION

WEDNESDAY, OCTOBER 29, 1941

HOUSE OF REPRESENTATIVES,
SELECT COMMITTEE INVESTIGATING
NATIONAL DEFENSE MIGRATION,
Washington, D. C.

The committee met in room 346, House Office Building, Washington, D. C., at 10 a. m., pursuant to notice, Hon. John H. Tolan (chairman) presiding.

Present were: Representatives John H. Tolan (chairman), of California; John J. Sparkman, of Alabama; Carl T. Curtis, of Nebraska; and Richard J. Welch, of California (guest).

Also present were: Dr. Robert K. Lamb, staff director, and Mary Dublin, coordinator of hearings.

The CHAIRMAN. The meeting will please come to order. Mr. Burns will be the first witness. Mr. Burns, we appreciate very much your coming here this morning. Mr. Sparkman will ask you some questions based on your statement.

(The statement referred to above is as follows:)

STATEMENT BY ARTHUR E. BURNS, ECONOMIC ADVISER, WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON, D. C.

LABOR DISPLACEMENT IN NONDEFENSE INDUSTRY

Material shortages are creating job losses in hundreds of communities throughout this country. The metals essential for armament purposes are too scarce to meet both armament and nonarmament needs. Consequently civilian industry is asked to give way; increasingly it will find itself unable to get the materials and equipment necessary for sustained operations.

Reductions in employment and production face many enterprises, especially small business. Many will be forced to shut down. Loss of work resulting from shortages of materials and equipment in nondefense industry can be expected to increase rapidly in the months ahead.

The public awareness of this problem of priorities unemployment is indicated by the various estimates made of its probable size. The National Association of Manufacturers stated that 3,000,000 factory workers might be affected. Price Administrator Henderson gave 2,000,000 as the probable displacement. Mr. Floyd Odum, director of the Office of Production Management, Contract Distribution Division, also estimated a displacement of over 2,000,000. The Bureau of Employment Security estimates 1.5 million as the number displaced. The Associated Industries of New York State predicted, on the basis of a survey, that some 788,000 industrial workers would be affected in that State alone.

The Work Projects Administration has made no over-all estimate of the displacement of workers likely to be caused by material and equipment shortages. The estimates given above are cited to show that the problem is expected to be serious. Reports from the State Work Projects Administration offices show that dislocations and job losses are growing. The monthly Work Projects Administration sample study of employment and unemployment showed a drop of 700,000 in

employment from August to September. Part of this drop undoubtedly was caused by material shortages.

The first real impact of material shortages will be felt during this winter. There seems to be no reason to expect a lessening of the difficulty in the spring and early summer of next year. The acceleration of armament production will require increasing amounts of materials. Vastly increased arms production can be achieved only at the expense of civilian production. Consequently material shortages will grow worse, and Government restrictions will become tighter during the course of the next year. There seems to be no basis for the optimistic view that restrictions will be lightened and the dislocations in nondefense employment will be reduced after the first of the year.

The best face that can be put on the situation is that material and equipment shortages will slow up appreciably the expansion of total employment in the next year. Some hundreds of thousands of displaced workers will experience a period of unemployment before they find new jobs in this expansion.

From the standpoint of job displacement, the most serious single factor in the situation is the Supply Priorities and Allocations Board ruling on construction materials. The Office of Production Management estimates that construction employment—defense and nondefense—will average 600,000 less in 1942 than in 1941. To this loss in direct employment, we must add the workers who will be affected in the material-supply industries and trades. This combined figure will exceed 1,000,000 workers.

The loss of work in the construction field and in civilian industry generally will be spread widely over the entire country. On the other hand, the increases in employment because of defense contracts is relatively concentrated in the big industrial centers. Twenty industrial centers have received about 60 percent of the contracts; 71 percent of the awards have gone to 12 States. The incidence of displacement will be widespread; the incidence of absorption will be concentrated. Unemployment will increase in many areas where defense stimulation is negligible.

This process of widespread displacement and concentrated absorption threatens to become the setting for considerable migration, some of which will be aimless and fruitless. Skilled workers will migrate to places where their particular skills are not in demand. Unskilled and semiskilled workers will flock to defense centers where there is already a surplus of such workers and where relief agencies, housing, and public facilities are already strained. With the exception of certain highly technical skills, the present labor supply in most defense centers will be sufficient for some time to come without further migration.

In this connection, it should be stated that the relatively low level of Work Projects Administration employment throughout the country (40 percent below the same period in 1940) may encourage migration to some extent. Workers who lose employment in civilian industries are not likely to get Work Projects Administration jobs in large numbers because (1) (Work Projects Administration quotas are low and (2) the number now eligible but not employed by Work Projects Administration is greater than the number now at work on Work Projects Administration projects. Consequently, some of those displaced workers that cannot obtain Work Projects Administration employment are likely to migrate in search of defense jobs.

In some instances (Detroit for example) local displacements will supply the labor needs of defense industries for some time to come. Migration, therefore, would be pointless and would add to the local relief problem in such areas.

As already pointed out, the displacement of labor resulting from material and equipment shortages will occur in all parts of the country. The largest single industry that will be affected is the widely scattered construction industry. Direct and indirect employment in this industry is likely to be reduced by at least 1,000,000 workers in 1942, compared with this year.

Priority unemployment has begun to strike hard already in manufacturing industries producing durable consumers' goods. The largest of these and the biggest consumer of metals is the automobile industry, already scheduled for a 50-percent reduction. As testimony already presented to this committee has indicated, the defense contracts held by automobile manufacturers will only partially offset the effect of scheduled curtailment in passenger-car production.

According to the Michigan Unemployment Compensation Commission, 175,000 automobile workers in Michigan alone will lose their jobs by next January.¹ At

¹ This figure assumes that hours will be reduced so that a 50-percent cut in production will mean only a 40-percent cut in employment.

least 30,000 additional workers in related trade and service fields will be displaced, so that total displacements will amount to 205,000 by the end of January. To offset this decline, the Michigan Employment Service estimates that defense employment will increase about 90,000 by January, leaving a net increase in unemployment of 115,000. There is little prospect that these workers will be absorbed in defense plants before the summer of 1942. If civilian production quotas are lowered still further, the period of reabsorption will extend to the end of 1942.

Throughout the country the curtailment of automobile production will affect supply firms, assembly plants, dealers, and service agencies adversely. Other industries that depend in large part on automobile production will be forced to curtail or, if possible, to shift to defense production. As this committee has disclosed, shifts of this sort are often attended by loss of work and other disruptions.

An Office of Production Management order effective September 30, reducing the output of mechanical refrigerators to 43 percent of average monthly sales during fiscal 1941, will reduce employment in the industry by about 17,000. Additional displacements will occur in factories supplying parts and in sales forces. Scarcity of materials is likely to compel the industry to curtail production more drastically than the Office of Production Management requirement. This industry is largely concentrated in areas having relatively little defense work.

The curtailment plan for washing machines is about the same as for refrigerators. Radio-set manufacturers have already begun to curtail production to some extent. Producers of most electrical appliances are expected to face percentage cuts similar to those for refrigerators and washing machines. Aluminum, copper, nickel, chromium, and their alloys are the materials that will be rationed to the electrical-appliance companies.

The laundry-equipment industry, manufacturing domestic washers and ironers, faces a 30-percent curtailment order. When supply firms and salesmen are included, this will mean that approximately 13 500 workers will be laid off.

A wave of shortages in many vital chemicals will hit soon. The affected civilian-product industries include users of dyes, plastic manufacturers, the paper industry, paints and varnishes, and perhaps the glass and soap industries.

The recent Supply Priorities and Allocation Board order limiting the use of copper and brass will strike at a wide range of industries. These are among the most widely used metals and curtailment of their use in nondefense industry will limit employment in this field.

WORK PROJECTS ADMINISTRATION FIELD REPORTS

Work Projects Administration State and local administrators are supplying us with current information regarding the effect of material shortages on the employment situation. The Indiana State administrator, for instance, has informed us that reports from 40 plants indicate that 3,690 employees had been laid off by September 15, and that an additional 5,595 are scheduled to lose their jobs. Curtailments in automobiles and automobile parts were chiefly responsible, but stoves, furnaces, refrigerators, wire and cable, and structural steel for bridges were also involved.

The employment outlook in Evansville, Ind., is illustrative of the type of situation that calls for forthright remedial measures. Five hundred workers in the automobile industry have lost their jobs. Two companies producing refrigerators are preparing to dismiss 2,000 or more employees. Since there are few prospective job openings in the community, need for Work Projects Administration employment is expected to develop on a large scale.

The Work Projects Administration State administrator for Iowa has reported that 10 firms have laid off 767 workers and lay-offs are threatened for an additional 3,220. A hosiery company with 600 employees in Des Moines and Boone has completely closed down for lack of silk and nylon. Shortages of copper wire and zinc threaten to bring about dismissal of the entire force of 1,200 employees at a company producing dry batteries at Dubuque, a city where there is little likelihood of marked employment expansion in other lines.

This Iowa report is the first to emphasize the potential effects of building-material shortages. Since at least 40,000 workers are employed in the construction industry in Iowa, the prospective curtailment of operations in this field is likely to have a more serious effect on employment than the shortage of metals for manufacturing industries.

In Ohio 179 manufacturing plants have laid off 28,000 workers. It is estimated that the lay-offs will amount to 100,000 during the next 6 to 9 months. Displace-

ments in Cleveland affected 2,000 workers in September and are expected to reach a total of 25,000.

Information supplied to Work Projects Administration by the Ohio State Employment Service indicates that aggregate lay-offs in Toledo numbered 2,500 by early September and that this figure would be substantially increased. A propeller company will begin operating a new plant with about 4,000 employees, but not until next March. Displacements have been especially large in Mansfield and Dayton as a result of the curtailment of refrigerator production. At Hamilton the Work Projects Administration State administrator reports that a stove manufacturer expects to begin lay-offs that will probably total 1,000. Only a small proportion of these workers can be placed in local industries. Substantial lay-offs in other areas, particularly in the smaller communities, threaten to create a serious unemployment problem.

Communities that depend largely upon a single plant or industry suffer most from material shortages. Belleville, Ind., for example, is faced with a serious problem because of the threatened curtailment of stove manufacturing, the town's chief industry, with 1,500 employees. Two-fifths of the total employment in Manitowoc County, Wis., has been provided by the aluminum-ware industry which has virtually closed down. Defense contracts specially placed in this "distress area" have not made up the loss in nondefense employment.

SUMMARY OF EVIDENCE

The evidence from Work Projects Administration field reports, from the State employment service reports, from the Office of Production Management, surveys of business organizations and labor unions all point to the conclusion that (1) priorities unemployment is now an existing, although relatively small, problem and (2) that a substantial increase in displacement, probably affecting as many as 2,000,000 workers in nondefense construction, manufacturing, and related fields is virtually certain to occur in the near future.

The situation in the nondefense industries will grow worse in the course of the next year, not better. Although defense employment is increasing and will continue to increase, it is by no means certain that this increase will offset displacements over the next 6 months. It should also be stressed that defense employment is still a relatively small part of total employment. It is clear that increases in defense employment cannot take up all those displaced in civilian industry. Many civilian industries cannot shift to defense work. Part of the displaced labor will not be in areas where defense employment is increasing. Some will be above the age limits frequently found in defense industries; others will not have the appropriate skills and training. For the latter, much can be done by expanding present training programs.

The coming months will see substantial decreases in some industries and considerable increases in defense industry. These movements will be attended by frictions and maladjustments and a great many workers will suffer losses in employment and income.

These dislocations will become important at a time when many industries are undergoing seasonal declines. Agriculture, construction, trade, and some manufacturing industries normally reduce employment during the winter. The normal seasonal decline in the nondefense field will be intensified this year by material shortages. At the same time, these seasonal declines in employment will increase the difficulty of absorbing the priorities unemployed during the winter.

The combined effects of the factors mentioned above will probably bring about a drop in employment of considerably more than 2,000,000 workers by the middle of winter.

GOVERNMENTAL MEASURES

The situation created by actual and threatened material shortages calls for remedial and ameliorative measures by Government. This problem is essentially a national problem, growing out of national policies, and the measures taken should be primarily Federal.

To place the burden on the locality is, in effect, leaving it largely with the unemployed. Unemployment insurance is a first line of defense, and undoubtedly large numbers of workers will find other jobs before exhaustion of benefit rights. But many will not, and some cannot qualify for benefits in the first place.

Along another front, efforts are being made to retrain displaced workers. The Work Projects Administration training program is part of this effort. Most of those trained thus far, however, come from the unemployed group as a whole,

not those recently displaced. To do much for the displaced workers would require a substantial expansion of the Work Projects Administration training program. A substantial increase in the training program for these workers with the limited funds now available to the Work Projects Administration could be brought about only at the expense of those now on the program.

Attempts are being made by the Office of Production Management to place defense orders in civilian-goods plants affected by material shortages. Subcontracting and other means of widespread distribution of defense work are being pushed. Although this policy may be successful in the course of time, in the period under consideration there will be a substantial problem of displacement. The wide distribution of contracts, however successful, does not get at the root of the problem. This problem is one of material and equipment shortages. When scarce materials are being utilized to the limit, further subcontracting means little more than that defense jobs are provided in one plant rather than in another. Contract distribution spreads work, but as long as shortages exist it can do little to increase jobs.

The basic remedy is to increase supplies of scarce materials, plant, and equipment. The time consumed in this expansion needs no elaboration. It is sufficient to say that the increases cannot occur fast enough to prevent widespread curtailment in civilian production and employment.

WORK PROJECTS ADMINISTRATION AND PRIORITIES UNEMPLOYMENT PROBLEM

With the funds available to it at the present time, the Work Projects Administration can do relatively little to ease the hardship arising out of priorities unemployment.

The appropriation for the present fiscal year is \$875,000,000, enough to provide employment to approximately 1,000,000 workers a month. There are 1,040,000 workers on the program at the present time.

In addition, there are approximately 1.2 million workers eligible for Work Projects Administration employment who are not at work because funds are inadequate.

Each month well over 100,000 workers leave Work Projects Administration jobs, most of them to take private jobs. Their places on projects are taken by the eligible workers waiting assignment.

Because of this group of eligible workers, no large numbers of workers displaced because of material shortages are likely to get Work Projects Administration employment. It should be emphasized that each winter unemployment normally increases for seasonal reasons. The Work Projects Administration has always increased its employment to meet this seasonal problem. Priorities unemployment will get serious just about the time that seasonal unemployment will increase the pressure for Work Projects Administration jobs. There is not enough money to meet all of the increased need for employment on Work Projects Administration projects this winter. As it stands now, the priorities unemployed who go on local relief and become eligible for Work Projects Administration jobs will simply swell the large number of persons that are now waiting assignment.

If it is the view of Congress that Work Projects Administration employment should be provided to displaced workers pending their absorption in industry, additional funds will be necessary. The amount needed will, of course, depend upon the number to be employed. If Congress is to provide that these workers be given project employment, we believe such employment should be provided on the basis of referral by a public employment office of those workers jobless because of shortages arising out of the defense program.

An expansion of the program under a policy as outlined would occasion no difficulties. The program is geared to rapid changes. Projects are ready for immediate prosecution. These projects would encounter no serious difficulties under the Supply Priorities and Allocations Board materials ruling. The Work Projects Administration has shifted its construction work to projects that need few metals. Airport grading, runway construction, roads, and similar projects require little or no materials that would be affected by the Supply Priorities and Allocations Board ruling. At the same time, these projects are essential to defense; by using otherwise idle labor to construct them there is a clear gain in defense effort. At the same time, the personal and family tragedy of destitution is averted.

An increase in Work Projects Administration training—both vocational school and in-plant training—would also be possible if additional funds were provided. Such training would equip displaced workers to take jobs in defense industries. In addition, these activities could take the direction of training workers to take

jobs left open in the "upgrading" shift of workers from nondefense to defense work.

The general situation may be summarized as follows:

1. Material shortages, especially in nondefense industries, are now adding to the jobless problem.
2. These shortages will grow more serious in the months ahead. Construction and the durable-consumers-goods manufacturing industries will be hit hardest.
3. Job displacement in nondefense work is likely to exceed job increases in defense work over the next 6 months.
4. Subcontracting and other means of spreading the work are not likely to prevent widespread displacement for a considerable time.
5. Unemployment insurance will be the first line of defense for most of the displaced workers, but its short duration and somewhat limited coverage will leave large numbers in need.
6. The present appropriation gives the Work Projects Administration little chance to give jobs or training to any substantial number of these workers. If they are to get either, additional funds for the Work Projects Administration will be needed.
7. Should such a policy of providing public employment be adopted, these workers should be referred to project employment by a public-employment office.
8. Expansion of Work Projects Administration employment would not absorb materials listed as strategic defense items.

EXHIBIT A.—DUPLICATE REGISTRATIONS AT EMPLOYMENT OFFICES

REPORT BY ARTHUR E. BURNS, ECONOMIC ADVISER, WORK PROJECTS ADMINISTRATION,
FEDERAL WORKS AGENCY, WASHINGTON, D. C.

It is possible for a worker to register at several employment offices. However, the Bureau of Employment Security states that this is a negligible factor, as indicated by local analyses of the records. Migratory workers sometimes register at several offices, but unless they return to these offices periodically their names are removed from the active files. This amounts to an automatic reduction of this negligible duplication.

The Bureau of Employment Security states that this duplication is offset by group placements made in many agricultural areas. Group placements of workers are made without the individual registration of these workers. In these areas, therefore, the applications and placements are understated by the reports.

The over-all figures on registration at the public-employment offices, consequently, are not affected materially by the small amount of duplicate registration. In September 1941 there were 4,300,000 people registered at the public-employment offices.

In the defense areas the local offices clear the files each month in order to keep the records current. This, of course, reduces the amount of duplication in the records.

EXHIBIT B.—EXTENT OF PRIORITIES UNEMPLOYMENT, BY STATES

REPORT BY WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON,
D. C.

OCTOBER 16, 1941.

In the attached table the 48 States are classified on the basis of the extent to which they now appear to be affected by priorities unemployment. As of the middle of October eight States were hard hit or seriously threatened. These are listed below with an indication of a few of the localities most severely affected, either because of a large absolute volume of lay-offs or because they are small towns having few alternative employment opportunities:

Illinois: Quincy, Belleville, Elgin, Rockford, and Bloomington.
Indiana: Evansville, Anderson, Connersville, Muncie, Fort Wayne, and Kokomo.

Michigan: Detroit, Flint, Muskegon, Pontiac, Lansing, Grand Rapids, Greenville, Tecumseh, and Adrian.

New Jersey: Paterson, Passaic, Burlington, Bloomfield, and Trenton.

North Carolina: Asheville, Burlington, Charlotte, Durham, High Point, Morganton, and Roxboro.

Ohio: Mansfield, Cleveland, Hamilton, Toledo, Dayton, and Cincinnati.

Pennsylvania: Meadville, Indiana, Scranton, Wilkes-Barre, Erie, and Philadelphia.

Wisconsin: Manitowoc-Two Rivers, Kenosha-Racine, Ripon, Eau Claire, West Bend, and Milwaukee.

The classification presented in the attached table does not take into account the possible effects of the recent Supply Priorities and Allocations Board order forecasting a severe curtailment of construction activity. The effects of this policy, on top of shortages of building materials already in evidence, will be widespread. Many of the States listed as "moderately involved" or "little involved" will be "seriously threatened" if nondefense construction is substantially shut down. The extent of the effects of such curtailment will vary directly with the relative importance of construction in the State's economy and inversely with the amount of the State's defense activity.

As other materials shortages develop and as additional limitation orders are issued more States will shift into the "seriously threatened" column. The present tabulation merely summarizes the situation as of mid-October.

The classification is based on data available from a wide variety of sources, including reports by the Work Projects Administration State administrators in response to the assistant commissioner's lettergram of August 20.

Extent of priorities unemployment, by States

States hard hit or seriously threatened	States moderately involved	States little involved
Illinois. Indiana. Michigan. New Jersey. North Carolina. Ohio. Pennsylvania. Wisconsin.	Alabama. California. Connecticut. Delaware. Florida. Georgia. Iowa. Kansas. Maryland. Massachusetts. Minnesota. Missouri. Nebraska. New York. Oklahoma. Rhode Island. Tennessee. Texas. Virginia. West Virginia.	Arizona. Arkansas. Colorado. Idaho. Kentucky. Louisiana. Maine. Mississippi. Montana. Nevada. New Hampshire. New Mexico. North Dakota. Oregon. South Carolina. South Dakota. Utah. Vermont. Washington. Wyoming.

EXHIBIT C.—PRIORITIES UNEMPLOYMENT IN INDIANA

REPORT BY WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY,
WASHINGTON, D. C.

SEPTEMBER 30, 1941.

The Indiana State administrator reports that as of September 15, 3,690 workers are known to have been laid off by 19 Indiana plants on account of priorities or product curtailment. The report, which provides information on a total of 40 industrial concerns, states further that an additional 5,595 are scheduled to lose their jobs. Curtailments in the automobile and automobile parts industries were chiefly responsible: 1,945 employees had been dismissed by September 15, and 2,335 more were expected to be laid off.

In the other industries involved, actual or anticipated lay-offs were primarily due to shortages of metals (steel, aluminum, copper, zinc, nickel) in nondefense manufacturing. In addition to automobiles, industries most widely represented were stoves and furnaces, refrigerators, wire and cable, and structural steel for bridges.

In relation to size of community, Connersville (population 13,000) appears to have been hardest hit to date. The Rex Manufacturing Co. producing refrigerator cabinets and commercial trailers dismissed 800 workers in Connersville; and the Stant Manufacturing Co. (auto parts) laid off 115. Of the former Rex Co. workers, 350 obtained work in Richmond while 450 are receiving unemployment-compensation benefits.

The situation in Evansville is potentially even more serious because there are few prospective job openings in the community. Five hundred workers in the automobile industry (Chrysler and Briggs) have lost their jobs, and at the Sunbeam Electric Manufacturing Co. (refrigerators) it is expected that 1,500 to 1,800 employees will be dismissed. In Evansville and nearby, the outlook is unfavorable for reemployment and the need for Work Projects Administration employment is expected to develop on a large scale. Other Indiana localities where it appears that priorities unemployment may strike with special force are Auburn, Columbia City, Fort Wayne, Kokomo, and Muncie.

EXHIBIT D.—PRIORITIES UNEMPLOYMENT IN WISCONSIN

REPORT BY WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON, D. C.

The Work Projects Administration State administrator of Wisconsin reports that as of September 15, 25 manufacturing establishments for which information was obtainable had laid off 1,286 workers because of materials shortages and that additional lay-offs numbering 4,005 were anticipated.¹ The Wisconsin State Council of Defense, on the basis of information from nearly 400 companies, estimates that lay-offs will exceed 14,500. Displacement is likely to be greatest in aluminum ware, automobiles, and silk hosiery.

A number of communities are seriously threatened because of priorities unemployment. In the Manitowoc-Two Rivers area, where several thousand aluminum workers are normally employed, manufacturers have already laid off nearly a third of the workers. Although shipbuilding is providing expanding employment in Manitowoc, most of the displaced aluminum workers are not acceptable for this kind of employment. Present defense contracts at the aluminum plants are not sufficient to meet the existing prospective displacement.²

In Eau Claire a firm manufacturing aluminum pressure cookers has laid off half of its 800 employees. Some of the displaced workers are already on Work Projects Administration, the State administrator reports, and others will eventually apply. The largest employer in Eau Claire is a rubber-tire plant with more than 2,500 employees. Lay-offs to mid-September numbered only about 30, but anticipated reduction in output was expected to cause further displacement. Reports from Eau Claire agree that substantial reductions in employment are certain to result in the need for extensive public assistance.

The small town of Ripon may be even harder hit. A washing-machine plant with 445 employees provides three-fourths of the male employment in the town. Lay-offs at this plant numbered between 100 and 120 by September 15, and further dismissals are reported in prospect.

In the Kenosha-Racine area metals-using plants fabricating consumer goods (Nash-Kelvinator and Simmons are the largest) and a silk-hosiery mill provide a large proportion of all jobs. Displacement as of September 15 numbered 600, with at least that many more in danger of lay-off in the near future. With nearly 5,000 industrial workers already unemployed in this area, further displacement presents a serious problem.

Other localities where priorities unemployment is likely to be especially severe include Milwaukee, which has large hosiery mills, automotive and other metals-using plants; Sheboygan (toys, kitchen utensils, light fixtures, furniture); Kewaunee (aluminum utensils); La Crosse (automotive and heating and ventilating equipment); West Bend (aluminum utensils, washing machines).

¹ Reports of Work Projects Administration administrator for Wisconsin, dated September 24 and October 7, sent in response to Mr. Gill's lettergram of August 20.

² Article on priorities unemployment in Wisconsin, Wall Street Journal, October 4, 1941.

EXHIBIT E.—PRIORITIES UNEMPLOYMENT IN THE SCRANTON-WILKES-BARRE AREA OF PENNSYLVANIA

REPORT BY WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON, D. C.

OCTOBER 1, 1941.

On August 2 the Office of Production Management prohibited the throwing, spinning, or other processing of raw-silk stocks, including those already in possession of the mills. This and a subsequent order require that silk be used only for the production of defense items including parachutes, powder bags, and igniter cloths.

The effect of the order on employment in the Scranton-Wilkes-Barre area was immediate. A field survey shows that by September 19 more than 4,200 silk workers had been laid off in the area, of whom 2,659 were in Scranton.¹ Throwing was most seriously affected with a displacement of more than 3,800, or about 56 percent of those engaged in that branch of the industry. In addition, more than 400 weavers lost their jobs. In all, about 38 percent of the silk workers in the area had been laid off by September 19.

The displacement of the silk workers seriously aggravates an unemployment problem that has existed in the area for some time. It is locally estimated that even before the silk order there were more than 50,000 unemployed workers in Lackawanna and Luzerne Counties. Most of these are former miners. Though the mines are now operating at a higher capacity than for several years, this has meant in most instances a longer workweek for those who are employed rather than an increased working force. Lackawanna County has a larger percentage of its population receiving relief (15.3 in August) than any other county in Pennsylvania and Luzerne County has nearly as high a proportion (12.2 percent).

The Office of Production Management arranged a meeting on September 17 and 18 in Scranton and Wilkes-Barre in an attempt to institute the "Buffalo plan" for the reemployment of the displaced silk workers. An examination of the local situation, however, indicates that the chances of rapid reabsorption are slight. The possibility that a substantial proportion of the displaced workers will return to the silk industry within a short period of time is considered to be almost negligible. In general, the silk plants are awaiting further developments and so far have made little attempt to secure defense contracts. The industry is agreed that such defense contracts as may be obtained can at best provide employment for relatively few of the displaced workers.

Conversion of the silk plants to the use of substitute raw materials likewise appears to offer little hope for reabsorption. The concerns are reluctant to convert to rayon or nylon if there is a possibility that silk will again become available. A few of the larger plants are making an attempt to switch over to rayon or nylon but the smaller plants, which account for a majority of the workers, are typically unable to finance the necessary capital investment. Moreover, there is little possibility that the supply of rayon can be immediately increased, while the plastics needed for nylon are already subject to priority control.

Absorption in alternative employment offers similarly small hope. The bulk (at least 85 percent) of the 4,200 displaced workers are women, practically none of whom have had any training other than that received in the silk mills. The only local industries which indicate a willingness to reemploy women workers are the garment and cigar-making industries. In both of these industries, however, manufacturers indicated that only trained workers could be employed. With regard to cigar making it is doubted whether the contemplated training program can readily be undertaken since it requires a large capital investment to simulate actual working conditions. Relatively few of the garment plants have received defense orders, and those which have other contracts have been unable to get machine parts and materials, particularly findings such as buttons, snaps, zippers, silk thread, etc. A recent order giving a high priority rating to machine equipment and parts for the textile industry will alleviate this situation in some measure but the local feeling is that continuing disruption of supply shipments will hinder capacity production for months to come.

Furthermore, even if the garment industry were in a position to absorb a large part of the silk workers the problem of training remains. The training

¹The number of displaced silk workers was distributed as follows: Scranton, 2,659; Wilkes-Barre, 1,314; Hazleton, 184; Nanticoke, 58; and Pittston, 16. These figures understate total lay-offs by an unknown amount, since not all firms are reported.

program recently proposed calls for the installation of 100 power-sewing machines. The machines, however, have not yet been secured. With this equipment, only 100 workers can be trained every 2 months, operating one shift; even if classes are put on a 2- or 3-shift basis, the problem of retraining by this means would be one of several years' duration. There is also considerable doubt as to whether many of the displaced workers will be able to qualify for the fast tempo required of power-machine operators. More than 65 percent of the displaced women are over 27 years of age, and the garment manufacturers in the past have been reluctant to hire workers over 27.

As yet there has been little distress resulting from the displacement since most workers are eligible for unemployment compensation. While a few of the unattached girls are already moving out of the area in search of jobs elsewhere, it is almost inevitable that many of the displaced workers will be forced to apply for public assistance. A sample check of the unemployment compensation records shows that about one-half of the number are married; of these, some 12 percent have husbands who are not working at present. Of the unmarried women almost three-fourths have dependents. It is apparent that though many of those displaced are "secondary workers," their earnings have constituted an important part of the family income. Local relief officials in Scranton feel that the first effects of the lay-offs will be felt within a month when increased grants will be necessary for cases already receiving relief. From then on it will be a case of increasing the rolls, with most of the workers attempting to secure Work Projects Administration employment.

It is clear that reemployment opportunities for the 4,200 workers already displaced are far from bright. Moreover, it is expected that 650 additional workers in the throwing branch of the industry will be displaced within the next 30 to 60 days. By that time the materials which are now in process will have been largely exhausted. The weaving branch of the industry, now employing nearly 4,000 workers but so far not seriously affected, will begin to feel the effects of the decrease in the amount of yarn available and will also be forced to lay off large numbers of workers.

EXHIBIT F.—ESTIMATES OF ADDITIONAL WORKERS NEEDED BY APRIL 1942 IN DEFENSE INDUSTRIES

REPORT BY WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON,
D. C.

SEPTEMBER 11, 1941.

The Bureau of Labor Statistics has recently estimated that a total of 1,408,581 additional workers will be required for on-site employment in defense industries between April 1941 and April 1942.¹ This is 2.7 percent of the total labor force. The estimate does not cover labor requirements for all branches of industry; many of the additional workers needed will undoubtedly come from nondefense industries. Such transfers will be sharply stimulated by priorities, materials shortages, and product curtailments.

In the 4 months since the estimate was made the increase in employment in two of the defense industries covered has been considerably below the rate necessary to reach the estimated gains. Employment statistics for the other industries covered are not available. In aircraft manufacturing the increase thus far has been a rate of about 300,000 workers per year rather than the estimated 408,441, while the actual increase for shipbuilding has been at a rate of about 240,000 workers per year in contrast to an estimated 323,990.² Unless the rate of increase is greater during the latter part of the period than thus far, the net addition for the year covered by the estimates will be closer to 1,000,000 workers than the estimated 1,408,581. Moreover, as already stated, many of these workers will transfer from other industries.

¹ U. S. Department of Labor, mimeographed release, "Defense Labor Requirements by Occupation" (by States)—prepared May 20, 1941.

² The Bureau of Labor Statistics estimates that shipbuilding employment rose by some 60,000 in the 3 months Apr. 15 to July 15, and that aircraft employment increased 100,000 between Apr. and Aug. 1.

HIGH PROPORTION OF SKILLED AND SEMISKILLED WORKERS REQUIRED

Taking the four industrial groupings together it appears that 46 percent of the needed workers are classified as skilled or professional and another 38 percent as semiskilled (table I). Only 227,483, or 16 percent, of the total needed will be unskilled workers. Among the individual industries there is little significant variation in the proportion of unskilled workers required; it amounts to 20 percent in shipbuilding and to only 15 percent in the other three groups.

TABLE I.—Additional workers required in defense industries by April 1942, by industry and by skill group¹

Defense industry	Total		Professional and sub-professional		Skilled		Semiskilled		Unskilled	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total.....	1,408,581	100.0	91,184	6.5	550,859	39.1	539,055	38.3	227,483	16.1
Shipbuilding.....	323,000	100.0	32,360	10.0	155,472	48.0	71,258	22.0	64,780	20.0
Aircraft.....	408,441	100.0	32,675	8.0	147,039	36.0	167,460	41.0	61,267	15.0
Machine tools and ordnance.....	291,611	100.0	14,550	5.0	113,728	39.0	119,561	41.0	43,742	15.0
Other.....	384,629	100.0	11,539	3.0	134,620	35.0	180,776	47.0	57,694	15.0

¹ Bureau of Labor Statistics, "Preliminary estimate of the number of additional workers required by April 1942 in the manufacture of aircraft, vessels, machine tools, ordnance, and other defense items," May 20, 1941.

Work Projects Administration can expect to supply very few of the professional and subprofessional workers and very few of those classified as skilled, since few workers of the types needed remain on the rolls. Moreover, unless the semiskilled workers remaining on Work Projects Administration rolls are retrained or unless employers' hiring standards are substantially modified, Work Projects Administration will probably contribute a relatively small proportion of the semiskilled group. It is the unskilled position which Work Projects Administration will most commonly fill, and of these there are fewer than 230,000. This is less than one-fourth of present Work Projects Administration employment. Moreover, approximately 25 percent of these positions have now already been filled.

GEOGRAPHICAL CONCENTRATION OF REQUIRED WORKERS

The 21 States for which the Bureau of Labor Statistics supplies separate estimates are responsible for 93 percent of total labor requirements, and 10 States alone will have 68.2 percent of job openings in these defense industries (table II). These requirements contrast with the distribution among the States of the total labor force and with active registrations at offices of the United States Employment Service, and even more sharply with Work Projects Administration employment. The same 21 States which will require 93 percent of the labor have only 66.4 percent of the Work Projects Administration employees (as of August 6, 1941); 72.5 percent of the active registrants (as of May 31, 1941); and 71.7 percent of the total labor force according to the 1940 census (table II).

TABLE II.—Additional workers required in defense industries by April 1942, total labor force (1940), active registrations at U. S. Employment Service, and Work Projects Administration employment, continental United States, and 21 States

State	Additional workers required by April 1942 ¹			Total labor force ²			U. S. Employment Service active registrations ³			Work Projects Administration employment ⁴		
	Number	Percent	Cumulative percent	Number	Percent	Cumulative percent	Number	Percent	Cumulative percent	Number	Percent	Cumulative percent
Continental United States.....	1,408,581	100.0	100.0	52,840,762	100.0	100.0	5,148,490	100.0	100.0	1,012,274	100.0	100.0
California.....	142,300	10.1	10.1	2,953,257	5.6	5.6	374,510	7.3	7.3	42,907	4.2	4.2
Pennsylvania.....	140,300	10.0	20.1	3,987,737	7.5	13.1	328,861	6.4	13.7	70,015	6.9	11.1
New Jersey.....	121,562	8.6	28.7	1,857,061	3.5	16.6	187,175	3.6	17.3	28,777	2.8	13.9
Ohio.....	105,434	7.5	36.2	2,759,925	5.2	21.8	286,808	5.6	22.9	52,136	5.1	19.0
New York.....	99,796	7.1	43.3	5,979,597	11.3	33.1	564,835	11.0	33.9	80,686	8.0	27.0
Michigan.....	91,840	6.5	49.8	2,128,291	4.0	37.1	133,743	2.6	36.5	33,635	3.3	30.3
Maryland.....	71,539	5.1	54.9	770,914	1.5	38.6	37,371	.7	37.2	5,219	.5	30.8
Indiana.....	65,970	4.7	59.6	1,327,345	2.5	41.1	211,466	4.1	41.3	23,535	2.3	33.1
Missouri.....	64,650	4.6	64.2	1,516,708	2.9	44.0	200,380	4.0	45.3	34,987	3.5	36.6
Connecticut.....	56,162	4.0	68.2	775,677	1.5	45.5	38,873	.8	46.1	4,022	.4	37.0
Illinois.....	49,298	3.5	71.7	3,362,522	6.4	51.9	285,142	5.5	51.6	67,726	6.7	43.7
Washington.....	45,600	3.2	74.9	714,538	1.4	53.3	38,177	.7	52.3	11,678	1.2	44.9
Massachusetts.....	45,100	3.2	78.1	1,843,624	3.5	56.8	174,937	3.4	55.7	38,197	3.8	48.7
Texas.....	42,150	3.0	81.1	2,465,918	4.7	61.5	332,171	6.4	62.1	57,340	5.7	54.4
Virginia.....	34,007	2.4	83.5	1,035,404	2.0	63.5	69,849	1.4	63.5	12,157	1.2	55.6
Kansas.....	30,500	2.2	85.7	674,287	1.3	64.8	63,462	1.2	64.7	15,659	1.5	57.1
Alabama.....	28,824	2.0	87.7	1,015,744	1.9	66.7	119,592	2.3	67.0	24,160	2.4	59.5
Tennessee.....	24,466	1.7	89.4	1,067,228	2.0	68.7	135,514	2.6	69.6	24,324	2.4	61.9
Maine.....	18,300	1.3	90.7	328,235	.6	69.3	31,024	.6	70.2	3,737	.4	62.3
Nebraska.....	16,500	1.2	91.9	499,491	.9	70.2	49,552	1.0	71.2	14,466	1.4	63.7
Oklahoma.....	15,400	1.1	93.0	805,949	1.5	71.7	65,444	1.3	72.5	27,129	2.7	66.4
Total for 21 States.....	1,309,698	93.0	93.0	37,869,452	71.7	71.7	3,732,886	72.5	72.5	672,492	66.4	66.4
Rest of country.....	98,883	7.0	100.0	14,971,310	28.3	100.0	1,415,604	27.5	100.0	339,782	33.6	100.0

¹ Bureau of Labor Statistics, "Preliminary estimate of the number of additional workers required by April 1942 in the manufacture of aircraft, vessels, machine tools, ordnance, and other defense items," May 20, 1941.

² Census of Population, "Employment status of the population 14 years old and over," 1940.

³ Bureau of Employment Security, Research and Statistics Division, "Preliminary reports of employment security operations," June 21, 1941. Data are for May 31, 1941.

⁴ Aug. 6, 1941 (subject to revision).

NEED FOR ADDITIONAL WORKERS SMALLEST IN AREAS WHERE WORK PROJECTS ADMINISTRATION EMPLOYMENT IS GREATEST

In almost all cases the demand for additional workers is smallest in areas where Work Projects Administration employment is greatest. In the 27 States (and the District of Columbia), where employment gains for defense industries are expected to be smallest, only 93,000 workers are estimated to be needed, whereas these same States employ 340,000 Work Projects Administration workers.

The relationship between the geographical distribution of needed defense workers and that of Work Projects Administration workers is best shown by relating both the estimates of additional workers and Work Projects Administration employment to the size of the labor force. It appears from table III that the intensity of Work Projects Administration employment is lowest where the intensity of demand for workers is highest. In Maryland, for example, where needed workers constitute 9.3 percent of the labor force, Work Projects Administration workers make up only 0.7 percent of the labor force. A similar relationship prevails in other active defense States, such as Maine, Connecticut, Pennsylvania, New Jersey, Ohio, Michigan, Indiana, Virginia, and Washington. Conversely, the intensity of Work Projects Administration employment is relatively high in Illinois, Massachusetts, Texas, Tennessee, and Oklahoma—States where defense labor needs are estimated to be small relative to their labor force. In a few States—Missouri, Kansas, Alabama, and Nebraska—the intensity of Work Projects Administration employment is above average, while defense labor needs are also greater than average. In these States defense activity is highly concentrated in a few localities, whereas Work Projects Administration employment remains relatively high in those parts of the States which are little affected.

TABLE III.—Additional workers required by April 1942 in defense industries, and Work Projects Administration employment as percentages of total labor force, continental United States, and by States

State	Percentage of labor force		State	Percentage of labor force	
	Total additional workers required by April 1942 ¹	Work Projects Administration employment ²		Total additional workers required by April 1942 ¹	Work Projects Administration employment ²
Continental United States.....	2.7	1.9	Washington.....	6.4	1.6
California.....	4.8	1.5	Massachusetts.....	2.4	2.1
Pennsylvania.....	3.5	1.8	Texas.....	1.7	2.3
New Jersey.....	6.5	1.5	Virginia.....	3.3	1.2
Ohio.....	3.8	1.9	Kansas.....	4.5	2.3
New York.....	1.7	1.3	Alabama.....	2.8	2.4
Michigan.....	4.3	1.6	Tennessee.....	2.3	2.3
Maryland.....	9.3	.7	Maine.....	5.6	1.1
Indiana.....	5.0	1.8	Nebraska.....	3.3	2.9
Missouri.....	4.3	2.3	Oklahoma.....	1.9	3.4
Connecticut.....	7.2	.5	Total for 21 States.....	3.5	1.8
Illinois.....	1.5	2.0	Rest of country.....	.7	2.3

¹ Bureau of Labor Statistics, "Preliminary Estimate of the Number of Additional Workers Required by April 1942 in the Manufacture of Aircraft, Vessels, Machine Tools, Ordnance, and Other Defense Items," May 20, 1941.

² Aug. 6, 1941 (subject to revision).

CONCENTRATION OF LABOR REQUIREMENTS STRIKINGLY SIMILAR TO CONCENTRATION OF PRIME DEFENSE CONTRACTS

The 21 States which the Bureau of Labor Statistics estimates will need 93 percent of the added defense workers had received 90.2 percent of the prime defense contracts awarded through June 30, 1941 (table IV). The concentration of labor demand is slightly greater than the concentration of defense contracts.

TABLE IV.—Additional workers required in defense industries by April 1942 and prime defense contracts awarded through June 30, 1941, continental United States, and by States

State	Additional workers required by April 1942 ¹		Total defense contracts ²	
	Number	Percent	Amount	Percent
Continental United States.....	1,408,581	100.0	\$12,180,450,000	100.0
California.....	142,300	10.1	1,335,186,000	11.0
Pennsylvania.....	140,300	10.0	744,081,000	6.1
New Jersey.....	121,562	8.6	1,424,915,000	11.7
Ohio.....	105,434	7.5	536,949,000	4.4
New York.....	99,796	7.1	1,159,670,000	9.5
Michigan.....	91,840	6.5	791,090,000	6.5
Maryland.....	71,539	5.1	366,018,000	3.0
Indiana.....	65,970	4.7	389,894,000	3.2
Missouri.....	64,650	4.6	372,570,000	3.1
Connecticut.....	56,162	4.0	595,896,000	4.9
Illinois.....	49,298	3.5	363,746,000	3.0
Washington.....	45,600	3.2	433,376,000	3.5
Massachusetts.....	45,100	3.2	715,636,000	5.9
Texas.....	42,150	3.0	433,577,000	3.6
Virginia.....	34,007	2.4	552,119,000	4.5
Kansas.....	30,500	2.2	95,203,000	.8
Alabama.....	28,824	2.0	215,110,000	1.8
Tennessee.....	24,466	1.7	81,135,000	.7
Maine.....	18,300	1.3	187,876,000	1.5
Nebraska.....	16,500	1.2	14,409,000	.1
Oklahoma.....	15,400	1.1	176,169,000	1.4
Total for 21 States.....	1,309,698	93.0	10,984,625,000	90.2
Rest of country.....	98,883	7.0	1,195,825,000	9.8

¹ Bureau of Labor Statistics, "Preliminary estimate of the number of additional workers required by April 1942 in the manufacture of aircraft, vessels, machine tools, ordnance, and other defense items," May 20, 1941.

² Office of Production Management, Bureau of Research and Statistics, "State distribution of defense contract awards, June 1, 1940, to June 30, 1941," July 11, 1941.

On a State-by-State basis there is a great deal of similarity between the proportion of contracts allocated to particular States and the proportion of labor required in defense industries, suggesting that the contract data present a reasonably accurate indicator of anticipated defense labor needs. California, which will require 10.1 percent of all new workers, has 11 percent of all defense contracts awarded. Pennsylvania and New Jersey, which together have 17.8 percent of the defense contracts, have 18.6 percent of the job openings. Conversely, in the States where few workers are required, few contracts have been awarded. For example, in Maine, where 1.3 percent of the total number of job openings were located, 1.5 percent of the defense contracts had been awarded.

TABLE V.—Prime defense contracts and facilities, 1940 population, defense contracts and facilities per capita, and Work Projects Administration employment by Work Projects Administration regions and States

Work Projects Administration region and State	Prime defense contracts and facilities cumulated from June 1, 1940, through July 31, 1941 ¹		Population 1940 ²		Prime defense contracts and facilities per capita	Employment on projects financed with Work Projects Administration funds ³	
	Amount (000 omitted)	Percent	Number of persons	Percent		Number of persons	Percent
Continental United States.....	\$17,073,391	100.0	131,669,275	100.0	\$129.67	1,016,839	100.0
Region I.....	1,850,263	10.8	8,437,290	6.4	219.30	54,432	5.3
Connecticut.....	731,276	4.3	1,709,242	1.3	427.84	4,159	.4
Maine.....	192,518	1.1	847,226	.6	227.23	3,587	.3
Massachusetts.....	811,265	4.8	4,316,721	3.3	187.94	36,860	3.6
New Hampshire.....	24,523	.1	491,524	.4	49.89	3,669	.4
Rhode Island.....	84,839	.5	713,346	.5	118.93	3,956	.4
Vermont.....	5,842	(⁴)	359,231	.3	16.26	2,201	.2
Region II.....	4,632,312	27.1	30,290,327	23.0	152.93	193,800	19.1
Delaware.....	25,657	.1	266,505	.2	96.27	1,352	.1
District of Columbia.....	21,919	.1	663,091	.5	33.06	4,990	.5
Maryland.....	593,473	3.5	1,821,244	1.4	325.86	5,271	.5
New Jersey.....	1,555,305	9.1	4,160,165	3.2	373.86	27,447	2.7
New York.....	1,454,127	8.5	13,479,142	10.2	107.88	53,014	8.2
Pennsylvania.....	981,831	5.8	9,900,180	7.5	99.17	71,726	7.1
Region III.....	1,426,925	8.4	18,931,805	14.4	75.37	150,422	14.8
Florida.....	177,596	1.0	1,897,414	1.4	93.60	20,363	2.0
Georgia.....	147,154	.9	3,123,723	2.4	47.11	23,199	2.3
Kentucky.....	60,668	.4	2,845,627	2.2	21.32	25,349	2.5
North Carolina.....	114,600	.7	3,571,623	2.7	32.09	23,524	2.3
South Carolina.....	87,048	.5	1,899,804	1.5	45.82	20,666	2.0
Tennessee.....	183,327	1.1	2,915,841	2.2	62.87	25,081	2.5
Virginia.....	656,532	3.8	2,677,773	2.0	245.18	12,240	1.2
Region IV.....	3,893,441	22.8	29,175,393	22.2	133.45	236,233	23.2
Illinois.....	553,189	3.3	7,897,241	6.0	70.05	67,143	6.6
Indiana.....	531,381	3.1	3,427,796	2.6	155.02	23,099	2.3
Michigan.....	1,252,814	7.3	5,256,106	4.0	238.36	33,687	3.3
Missouri.....	522,376	3.1	3,784,664	2.9	138.02	37,330	3.7
Ohio.....	924,739	5.4	6,907,612	5.3	133.87	52,493	5.1
West Virginia.....	108,912	.6	1,901,974	1.4	57.26	22,481	2.2
Region V.....	835,781	4.9	12,869,913	9.8	64.94	104,716	10.3
Iowa.....	116,704	.7	2,538,268	1.9	45.98	15,405	1.5
Kansas.....	279,838	1.6	1,801,028	1.4	155.38	15,386	1.5
Minnesota.....	88,661	.5	2,792,300	2.1	31.75	27,373	2.7
Nebraska.....	184,431	1.1	1,315,834	1.0	140.16	15,167	1.5
North Dakota.....	395	(⁴)	641,935	.5	.61	3,049	.3
South Dakota.....	165,752	1.0	642,961	.5	.61	5,170	.5
Wisconsin.....	165,752	1.0	3,137,587	2.4	52.83	23,166	2.3
Region VI.....	1,455,752	8.5	18,081,282	13.7	80.51	173,810	17.1
Alabama.....	290,774	1.7	2,832,961	2.1	102.64	24,775	2.4
Arkansas.....	43,834	.3	1,949,387	1.5	22.51	22,199	2.2
Louisiana.....	127,610	.7	2,363,880	1.8	53.98	20,834	2.0
Mississippi.....	108,260	.6	2,183,796	1.6	49.57	20,380	2.0
Oklahoma.....	215,798	1.3	2,336,434	1.8	92.36	28,076	2.8
Texas.....	669,426	3.9	6,414,824	4.9	104.36	57,576	5.7

See footnotes at end of table.

TABLE V.—Prime defense contracts and facilities, 1940 population, defense contracts and facilities per capita, and Work Projects Administration employment by Work Projects Administration regions and States—Continued

Work Projects Administration region and State	Prime defense contracts and facilities cumulated from June 1, 1940, through July 31, 1941		Population 1940		Prime defense contracts and facilities per capita	Employment on projects financed with Work Projects Administration funds	
	Amount (000 omitted)	Per cent	Number of persons	Per cent		Number of persons	Per cent
Region VII.....	\$2, 978, 917	17. 5	13, 883, 265	10. 5	\$214. 57	103, 396	10. 2
Arizona.....	17, 206	. 1	499, 261	. 4	34. 46	4, 109	. 4
California.....	2, 080, 208	12. 2	6, 907, 387	5. 2	301. 16	43, 034	4. 3
Colorado.....	145, 425	. 9	1, 123, 296	. 9	129. 46	11, 313	1. 1
Idaho.....	2, 657	(⁴)	524, 873	. 4	5. 06	4, 884	. 5
Montana.....	1, 740	(⁴)	559, 456	. 4	3. 11	5, 691	. 6
Nevada.....	6, 724	(⁴)	110, 247	. 1	60. 99	1, 003	. 1
New Mexico.....	11, 221	. 1	531, 818	. 4	21. 10	7, 555	. 7
Oregon.....	58, 677	. 4	1, 089, 684	. 8	53. 85	6, 308	. 6
Utah.....	29, 048	. 2	550, 310	. 4	52. 78	6, 821	. 7
Washington.....	618, 400	3. 6	1, 736, 191	1. 3	356. 18	11, 170	1. 1
Wyoming.....	7, 611	(⁴)	250, 742	. 2	30. 35	1, 508	. 1

¹ Office of Production Management, Bureau of Research and Statistics: "State distribution of defense contract awards, June 1940 through July 1941"; release of Aug. 22, 1941. Includes prime defense contracts and facilities awarded by the War and Navy Departments of \$50, 000 and over. This tabulation should not be compared with previous tabulations which do not include Defense Plant Corporation commitments, defense aid contracts, and a revision of the construction figures in order to reflect the present estimate of the final cost of each construction project for which a contract has been awarded or a letter of intent or project order issued. The latter (referred to as "facilities") are all included in the above tabulation. As in previous tables, the above tabulation excludes manufacturing project orders to Army and Navy Establishments (totaling \$2, 684, 000, 000), and defense housing and other awards not made by the War and Navy Departments. The latter total \$1, 546, 000, 000.

² Department of Commerce, Bureau of the Census.

³ Work Projects Administration, Division of Statistics; release of Sept. 2, 1941; showing the number of persons employed on Work Projects Administration projects, by State, on Aug. 27, 1941 (subject to revision).

⁴ Less than 0.05 percent.

TESTIMONY OF ARTHUR E. BURNS, ECONOMIC ADVISER, WORK PROJECTS ADMINISTRATION, FEDERAL WORKS AGENCY, WASHINGTON, D. C.

Mr. SPARKMAN: Your statement in full, Mr. Burns, has been incorporated in our record. We appreciate the great care you have shown in its preparation and we feel certain it will be a decided contribution to our hearings. I want to ask you some questions based upon that statement.

First, what is the W. P. A.'s estimate of the number of workers who are likely to lose their jobs within the next year as a result of the defense program?

Mr. BURNS. The W. P. A. has made no detailed estimate of that, although I believe between 2,000,000 and 3,000,000 is a rather reasonable figure.

Mr. SPARKMAN. Between 2,000,000 and 3,000,000 thrown out by defense dislocation?

Mr. BURNS. That is right.

Mr. SPARKMAN. Will that be the result of closing down small plants through inability to get materials?

Mr. BURNS. The general shortage of materials and the elimination of certain types of activities, such as construction.

Mr. SPARKMAN. Your estimate will include workers who would be affected by S. P. A. B.'s new construction order?

Mr. BURNS. That is right.

Mr. SPARKMAN. Does it include service workers?

Mr. BURNS. Yes; I should think that figure would include all displacements.

AREAS OF GREATEST LABOR DISLOCATION

Mr. SPARKMAN. Have you any information as to the areas that are likely to be affected by unemployment due to defense dislocation?

Mr. BURNS. The evidence so far indicates that the States most likely to be affected are Wisconsin, Ohio, Indiana, Michigan, and Pennsylvania. Those are, I believe, the ones most affected right now. At least, our reports indicate that those areas have suffered some displacements already, with considerably more in prospect. However, displacements will be much more widespread than that.

Mr. SPARKMAN. Why are those particular areas the ones most affected?

Mr. BURNS. Immediately because there is a fairly large number of durable consumers goods produced in those areas. Those industries feel the shortages of materials very quickly.

Mr. SPARKMAN. Of course, the effect will be felt to some extent everywhere.

Mr. BURNS. Yes; it will.

Mr. SPARKMAN. Or at least in widely scattered areas.

Mr. BURNS. And S. P. A. B.'s ruling on building construction will probably make the effects very widely felt because home building is the most widely scattered industry in the country, and indications are already present that the industry is curtailing somewhat outside the defense areas.

Mr. SPARKMAN. Now, the areas that are taking on additional workers are restricted geographically. Is it your view then that we may expect this wave of unemployment to bring about a rather large-scale migration?

Mr. BURNS. I think there is a good chance of that, because as the workers are displaced in other areas through the shortages in materials, they are more likely to move into these areas where they hear about good jobs. So I think the closing down or restriction of nondefense industries is certainly likely to set the stage for a considerable migration of workers.

Mr. SPARKMAN. Is it your impression that much of this migration will be a blind migration—that is, that the people will simply start out for places where they hear that there is work or where they have a hunch that there may be?

Mr. BURNS. That is the way most migration starts. I don't think there has been any considerable amount of directed migration. Usually the migrant has heard about a job. I believe your committee has shown that people get telegrams or hear from their relatives or friends, and they move on the strength of that and nothing more.

Mr. SPARKMAN. Very often they find themselves no better off in their new locations and often much worse.

Mr. BURNS. I think that in some of the big production centers the nondefense industries will supply workers for the defense plants so they would not need any migrants coming in, at least for some months to come, or perhaps a year.

Mr. SPARKMAN. In your statement you refer to an estimate made to this committee recently in our Detroit hearings by the Michigan Unemployment Compensation Commission, that displacement resulting from curtailed automobile production would be 250,000 by the end of January, next year. This decline, it is estimated, will be offset by an increase in defense employment of only 90,000 in January, leaving a net unemployment there of 160,000. Of course, in addition to these there will be a large number of service workers thrown out of their jobs. All these workers and their dependents will probably number well over a quarter of a million persons. And that is only one State we are dealing with. In your paper you point to many other areas which will be similarly affected. Now, I want to ask you this question: Can any considerable number of those displaced workers be absorbed on the W. P. A. rolls?

W. P. A. ABSORPTION OF DISPLACED LABOR

Mr. BURNS. Not at the present time, and under the present appropriation to the W. P. A. The W. P. A. rolls are just a little in excess of 1,000,000 at the present time, and there are a little more than another million who are eligible to get jobs but who can't be put on the program; so that any further additions to this eligible group are not likely to get jobs as long as the appropriation is limited to the amount at present.

Mr. SPARKMAN. You mean that there are something like 2,000,000 persons certified or eligible for W. P. A., and your appropriation will provide for the employment of only about 1,000,000?

Mr. BURNS. That is right.

Mr. SPARKMAN. Therefore, newly displaced workers would simply be an addition to that number which is already beyond what you can take care of.

Mr. BURNS. That is right. Some of them might be given jobs. As a matter of fact, a few of them have been given jobs in Wisconsin. But that happened to be in a special locality where there wasn't much of a waiting list. In most areas there is a substantial waiting list, and if any new workers become displaced and eligible, they have to take their turn.

Mr. SPARKMAN. Where jobs might be available for these displaced workers, can they obtain any assistance from the W. P. A. for transportation?

Mr. BURNS. That is possible only under these circumstances: If they apply and go on the W. P. A., and then are placed on a training project, they can be sent to an area to get that training, and the transportation will be paid for them. That is being done under the present training programs, to a limited extent.

Mr. SPARKMAN. That is only for the purpose of getting training?

Mr. BURNS. That is right.

Mr. SPARKMAN. And if they are already skilled workers in that same line they would not be eligible for the training program?

Mr. BURNS. No. And there would be no basis for paying their transportation.

Mr. SPARKMAN. So we can't see much hope for any help from the W. P. A. for transporting these workers who are displaced; because almost all of those men are skilled workers already?

Mr. BURNS. Not necessarily. You speak of the substantial number of service workers and construction workers. Now, they might be able to get jobs in mechanical trades which would require some training. If they happen to live in an area where there are no defense jobs, they could be certified at that point on a training project and sent to the area where there were defense jobs and vocational-school facilities and be given training at that point, and their transportation would be paid.

Mr. SPARKMAN. According to your figures, we face a very large amount of unemployment due to defense dislocation. I certainly agree with the statement that you make in your paper that the Federal Government has a responsibility for the disemployment of these people. Even where they can be reemployed on other defense jobs, there will necessarily be a period of unemployment. If they have savings, they will be ineligible for your program. Do you know whether any part of the defense establishment is discussing ways and means of providing employment for these people, or some other type of assistance without requiring certification by local relief authorities?

Mr. BURNS. I don't know of any such plan in the defense agencies. We believe, however, that it would be desirable to prevent this particular group of workers from applying for relief before getting employment. As it stands under the present appropriation act, we must take only people who are certified. That is why, in my paper, I suggested that if these people are given work, it would be preferable for them to be referred directly by a public employment office to the projects where they are rather than through the relief process.

Mr. SPARKMAN. The committee is interested in the possible reemployment of these workers on defense jobs. You mentioned the fact that there is a possibility of a training program and that the number of these people thrown out of work by the defense dislocation—service workers, related workers, and the like—might profit from that training program. To what extent is the W. P. A. able with its present funds to assist these workers during the training period?

TRAINING PROJECTS

Mr. BURNS. The W. P. A. at the present time has about 35,000 people on training projects. With the present money, it could increase that possibly up to 100,000 or a little better. Any substantial increase over and above that probably would require additional money.

Mr. SPARKMAN. Do you pay these people who are taking the training program the same wages you pay regular W. P. A. workers?

Mr. BURNS. Yes; the workers who are selected for the training program are already on W. P. A. jobs, and they are transferred to the training project at the rate they were getting before the transfer. If they are new workers coming into the program, they are assigned the unskilled rate for the training period.

Mr. SPARKMAN. What changes in the present administrative procedures would be needed to refer to project employment workers who are displaced by defense dislocations?

Mr. BURNS. There would be no administrative problems so far as W. P. A. is concerned. They would merely be asked to accept referrals of those workers by the public employment office instead of through the local relief office. It would be a very simple matter there; the

only major change necessary is a legislative one which would permit the referral of workers to our program by a public employment office.

Mr. SPARKMAN. Is there a shortage of materials used by W. P. A. projects, or are they likely to encounter serious difficulties under S. P. A. B.'s materials ruling?

Mr. BURNS. There hasn't been much difficulty at the present time, partly because most of the W. P. A. construction projects use materials that aren't affected by the S. P. A. B. ruling. There has been a shift in the type of project, away from buildings that use these scarce materials, so there is no likelihood that these projects will be affected by the S. P. A. B. ruling in the future. As I pointed out in my paper, it will be possible to increase the number of projects without running into that difficulty because the basic construction materials are not scarce. It is only the metals that are scarce, and our projects don't use a great quantity of metals.

Mr. SPARKMAN. Would you tell us something about the various types of training program now under operation in the W. P. A.?

Mr. BURNS. There are two basic types. One is very small. That is the in-plant training. There are just a few hundred workers, I believe, receiving that kind of training at the present time. The bulk of the workers receive training in the vocational-school facilities. Those people are certified by our organization to the schools and are given training there. The types of workers correspond to the general specifications of employers. They are given training in the kinds of skills that employers are demanding in the locality.

Mr. SPARKMAN. Can both of these types be adapted to help do the job of shifting workers from nondefense to defense jobs?

Mr. BURNS. They can. They have already. A fairly substantial number of workers have been shifted into defense work. As a matter of fact the training program is limited to training workers for defense jobs at the present time. Those workers displaced in nondefense industries will have to go on relief and then be referred to our program before they can get that training, and the point that I made in my paper was that if they could be referred directly to a training program without going through the relief process it would be much better for the people themselves.

Mr. SPARKMAN. What steps do you believe could be taken to assist those displaced workers above the age limits in defense industries and below the age limits for pension benefits?

Mr. BURNS. I don't think a great deal can be done as long as industry maintains its present hiring standards. They can be given project employment; they can be given some training which would fit them for work if employers wanted them; but the real difficulty is that industry has held to those hiring standards, and anything of importance to be done for these older workers must be done by breaking down the barriers which industry places against them.

Mr. SPARKMAN. Isn't it true that, since the inception of the defense program, the average age of the W. P. A. workers has gone upwards considerably?

AGE OF WORKERS

Mr. BURNS. It has gone up. Early in 1939 the average age of W. P. A. workers was approximately 39 years. And at the present time it is almost 43 years. If we look at the figures in detail we notice

that the percentage of workers in the 20 to 25 or 20 to 30 age group is much less, and the percentage in the 40 to 50 age group is considerably higher now than 2 years ago.

The CHAIRMAN. Mr. Burns, in your statement you say there are 1,040,000 on the W. P. A. rolls in the country today.

Mr. BURNS. Approximately that; yes.

The CHAIRMAN. And there are about 2,000,000 eligible to go on?

Mr. BURNS. Altogether there are about 2,200,000—almost 1,200,000 above our employment at present.

The CHAIRMAN. At hearings recently held by this committee some witnesses testified there are about 5,000,000 unemployed employables registered in the State and Federal employment agencies in this country.¹ Is it possible that any of those WPA workers you have mentioned are registered with those agencies?

Mr. BURNS. Yes; they are supposed to be registered with the public employment offices. I believe about five million people altogether are registered now. Of that number there ought to be 1,000,000 W. P. A. workers.

Mr. SPARKMAN. Is it possible that a good number of those may have obtained employment without notifying the office?

Mr. BURNS. It is possible. I believe however, the employment office gets a record from the employers, stating that these people have been given jobs.

Mr. SPARKMAN. If they are referred by the employment office that is true, but if they are employed without having been referred by that office, they don't necessarily get it by name.

Mr. BURNS. Not necessarily. Sometimes they do, but if they don't their practice is, I believe, to drop the name after three months.

Mr. SPARKMAN. They require reregistration every three months?

Mr. BURNS. Something like that; and if they don't reregister, they are automatically dropped out of the files.

Mr. SPARKMAN. Does a person ever register who is actually working?

Mr. BURNS. Yes.

Mr. SPARKMAN. Then a great many may be holding jobs?

Mr. BURNS. Not a very large number. I think the Employment Service estimates that about 5 percent are employed and looking for better jobs. The great bulk are not employed and are looking for work.

Mr. SPARKMAN. You think, then, that by their frequent registration and close check on them, that figure of 5,000,000 should be fairly accurate, or fairly up to date?

Mr. BURNS. It should be fairly up to date. How accurate it is, I don't know. A few years ago the number of people registered at the public employment offices was much less than the total number of unemployed. I should guess that there would be a larger percentage of the unemployed registered now than 5 or 6 years ago, because the program is older and people are more familiar with the public employment offices, and the offices have a better coverage. So it might be now that the public employment office figure is a fairly good measure of unemployment, or at least a better measure than it was a number of years back.

¹ See testimony of Arthur J. Altmeyer, Washington hearings, part 17, p. 6782.

Mr. SPARKMAN. I have heard of persons registering at more than one employment office. Do the employment offices always clear with one another on such registrations?

Mr. BURNS. I don't know.

Mr. SPARKMAN. I wonder how many of these might be duplicate registrations?

Mr. BURNS. Probably not a great many among the bulk of the people, because they would be likely to register at the offices nearest their places of residence.

The CHAIRMAN. Where can we get the answer to that question?

Mr. BURNS. The Bureau of Employment Security.¹

DUPLICATE REGISTRATIONS

Mr. SPARKMAN. In my section when a defense project draws help from half a dozen counties around it, a person resident in one of the other counties might register in his own employment office, but comes to the county where the project is physically located and registers also, feeling that those people will get a prior call. I have known them to go down to counties 50 or 75 miles away and do the same thing there. I don't know to what extent those duplicate registrations have been carried on. But it would be interesting to know.

Mr. BURNS. I could get a detailed statement on that for insertion in the record.

The CHAIRMAN. I would be glad to have you do so, Mr. Burns.¹

Now, with winter coming on, and with over 1,000,000 eligible W. P. A. workers, what is going to become of those people? Have you any suggestion how to help them?

Mr. BURNS. Some of them, of course, will get other jobs. The displacement of 1,000,000 workers doesn't mean an increase in unemployment by that amount. Some of them will get jobs in defense industries. Some will get temporary jobs in retail trade during the Christmas season. Some of them will have unemployment-insurance benefits. A large number will undoubtedly apply for relief, and add to the eligible but not employed group on W. P. A.

The CHAIRMAN. Those figures on displacement approximate figures that the committee has received on defense migration. There are 2,000,000 to 3,000,000 people who have left their home States and gone to defense centers in other States. The residence requirements of these States of destination range all the way from 1 to 5 years. If this war emergency ends, the migrants will have lost their residence in their home States and will not have gained that status in the State of destination. What can be done for those people? They can't go on relief.

Mr. BURNS. A number of possibilities are open. One is that the W. P. A. may certify those workers directly without taking the certification of the local relief agency. That has been done in the past, and it would then make it possible for those nonresident people to get public employment. That is one way out of the difficulty.

The CHAIRMAN. To get public employment if public employment exists.

¹ See Exhibit A, p. 8114.

Mr. BURNS. If it doesn't exist, those people will simply be out of luck. They can't get local relief. They can't get project employment. They will simply live off their relatives and neighbors, or in any other way they can.

The CHAIRMAN. The thing that has impressed me all through these hearings—we have been holding them for a year and a half now—is the aimlessness, the blind travels, of these people. They don't know where to go. They hear a rumor or someone sends them a letter or telegram. Do you know anything that the Federal Government is doing today to give active information to the people of the various States of the Union, as to where there is work and where there is not work?

ORGANIZATION OF LABOR MARKET

Mr. BURNS. The public employment offices are attempting to make the labor market a better organized market. They are attempting to dissuade workers from moving into areas where there is a surplus of labor. They are trying to direct workers to areas where there is a shortage of labor. They have done a considerable amount of that work during the defense period. However, a large number of the workers moving about the country probably are moving on the strength of just such information as you describe. The public employment offices have not educated the workers as a whole to accept their advice, and only their advice, as to where jobs happen to be available.

The CHAIRMAN. Have you ever seen an article in a newspaper advising the people before they moved out of the State to go and get information at the employment office?

Mr. BURNS. I haven't heard that they did that, and I believe most of them don't.

Mr. CURTIS. May I interpose right here: Two of the daily papers at Lincoln, Nebr., featured full-page advertisements suggesting to people that they not just pull up and leave—get in a car and try to find high defense wages—and impressed upon them the importance of the accuracy of their information, and urged them not to desert what they had in quest of that pot of gold. About 2 weeks ago in some newspaper convention in Chicago these papers were awarded the first place for having the finest community advertisement in America.

The CHAIRMAN. That is in your own State?

Mr. CURTIS. Yes.

The CHAIRMAN. Who paid for the advertisement?

Mr. CURTIS. The chamber of commerce, I think.

The CHAIRMAN. Don't you think the Federal Government should get into that?

W. P. A. TRAINING IN RELIEF CATEGORY

Mr. CURTIS. I don't know. There are a lot of these people traveling around who can't even read. [To Mr. Burns:] You are economic adviser to the W. P. A. I want you to give me some advice this morning. I have a letter on my desk from a father of three children, and he has done farm work for the last 5 or 6 years. He was a farm hand and made \$35 a month and supported a family of five. He stayed off relief and off W. P. A. He has an opportunity now to enroll in a sheet-metal school and take that course and equip himself for some better

type of work. Two other individuals who have never accepted farm work, and who have been on relief, can support their families while they go to school from funds of the W. P. A. educational program, and here is an individual who would make a fine employee in the defense program. He has rendered a service to the Federal and State Governments in the past year by staying off relief, and they say to him: "We can't help you go to this school unless you go down to the W. P. A. office and get certified." Has that problem been up before you?

Mr. BURNS. In more or less those terms; yes; it has. But there isn't really anything, or not very much, that the W. P. A. can do about it, because the law requires that people who get on the W. P. A. must be certified as in need. The only way to get around that particular kind of difficulty is to permit on the training program anybody who needs training and who has fair prospects of a job and to pay wages for the month or 2 months required for the training. That would give us the utmost mobility in our training work.

Mr. CURTIS. Canada and England have that, haven't they?

Mr. BURNS. I believe so. But as long as we limit the training to people who are on relief, and exclude those people who have managed to stay off and who might have a job, such as the man you mention, that program would be closed unless they took the other way out and applied for relief in order to get the training.

Mr. CURTIS. I personally handled this case, and I took it up with several officials here because it strikes me that an individual who was willing to sacrifice and support a family of five on \$35 a month and do a type of work that many people scorn because of its long hours and poor pay should not be penalized by the lack of opportunity to get some of this training.

Mr. BURNS. I agree with you completely, and I think it would be most desirable to take the training part of this program out of the relief category so that the opportunities to get training would be open to more people.

Mr. CURTIS. I didn't recommend to this individual that he seek certification on W. P. A., because I think it would hurt him and his children the rest of his life in his chances of getting jobs and going on and being self-sustaining. But that is the only avenue open to him.

Mr. BURNS. As things stand now, that is true.

Mr. CURTIS. Chairman Tolan made reference to a public-works program. They can't build anything, can they? Hasn't S. P. A. B. stopped all public construction?

Mr. BURNS. No. Only that kind of construction which uses strategic materials and which is not of a defense character or necessary for public safety and health.

Mr. CURTIS. Can you mention any construction that doesn't use strategic materials?

CONSTRUCTION NOT REQUIRING STRATEGIC MATERIALS

Mr. BURNS. Yes. The building of roads doesn't require brass, copper, aluminum, steel, and other scarce materials. The basic building materials such as lumber, gravel, sand, cement, brick, stone—those materials are quite plentiful except in a few isolated cases—and road work, recreational facilities, streets, and curbs, use those kinds of materials and not the strategic metals. That is why I pointed out in my

statement that the character of the construction program of the W. P. A. at the present time is such that it does not compete with defense work and its expansion would be possible without getting banged up by the S. P. A. B. ruling.

Mr. CURTIS. Is there a shortage of skilled laborers to carry on those projects?

Mr. BURNS. There is in some cases, although at the present time there are about 150,000 on the program who are in the skilled category. The kind of work that I have in mind—road work especially—doesn't require the high degree of skill that building construction requires, so that the question of shortages in skilled labor doesn't really arise in this connection.

Mr. CURTIS. There definitely would be a shortage of the heavy equipment needed, wouldn't there?

Mr. BURNS. There is likely to be a shortage of heavy equipment.

Mr. CURTIS. There is going to be heavy pressure for the construction of roads urgently needed for defense.

Mr. BURNS. That is right, and our program is building a large number of those so-called access roads at the present time. That is probably the largest single type of road job that the W. P. A. is doing, and much of it doesn't require heavy equipment. A good road can be put in with a lot of men doing most of the work and a minimum amount of equipment, so that the shortage of equipment that is likely to develop in the future probably would not be a serious factor either.

Mr. CURTIS. But any public works that deals with water control, flood control, storage dams, and the like is hurt by the S. P. A. B. ruling, is it not?

Mr. BURNS. Heavy construction work, if it isn't for defense purposes, will be affected seriously by the S. P. A. B. ruling.

Mr. CURTIS. But the type that will not is that which requires mostly hand labor.

Mr. BURNS. That is right. And also a minimum of metal.

RECERTIFICATION

The CHAIRMAN. What about workers on relief projects who go into nondefense industry and then are unemployed when the plants shut down? Can they be recertified?

Mr. BURNS. The law stipulates that if they leave the project to take private employment and then lose that employment through no fault of their own, they are to be given their jobs back again. That right now might be the source of considerable difficulty for the W. P. A., because it is employing now the highest average number that is possible throughout the year. If there is any substantial number of people coming back, leaving private employment, we are legally obliged to give them work, and I think that requirement might cause some difficulty for the W. P. A.

The CHAIRMAN. Would you have to let out the ones you had hired?

Mr. BURNS. Yes; and some workers who have been employed for some time in nondefense industries for that reason will not have much chance of getting W. P. A. employment as things stand now, because people who left to get farm labor a few months ago have the right to get the first jobs that open up under the law.

The CHAIRMAN. Thank you very much for appearing before us, Mr. Burns.

The committee will take a 5-minute recess.

**TESTIMONY OF J. DOUGLAS BROWN, CHIEF, PRIORITIES BRANCH,
LABOR DIVISION, OFFICE OF PRODUCTION MANAGEMENT, WASH-
INGTON, D. C.**

The CHAIRMAN. The committee will please come to order. Mr. Brown is our next witness.

Mr. BROWN. Here, sir.

The CHAIRMAN. Will you take a seat there, Mr. Brown? Mr. Brown, this is the second day of our Washington hearings on the dislocations of industry and the labor market arising from defense activities as they are related to the problem of migration. Last month we held hearings in Detroit and learned that approximately 200,000 automobile workers would be faced with unemployment, at least temporarily, and that the situation that existed at that time warranted an estimate that there would still be as many as 100,000 workers not reemployed by next summer.

Since coming back to Washington we have heard of similar situations throughout the country, situations in which a great deal of unemployment is expected to result because of metal shortages and the allocation program.

Yesterday Mr. Donald M. Nelson, of S. P. A. B., and a panel of industrial engineers testified for us on the possibility and problems of putting all the Nation's manpower to work on defense orders, and the consequent curtailment of civilian projects and services.

We have asked you here today to supply us with information on the industries and communities which are being affected by curtailment of normal civilian production, and particularly to tell us what is being done for these people. As I understand it, you are chairman of that branch of Mr. Hillman's Labor Division of O. P. M. which is concerned with this problem of unemployment and labor displacement resulting from defense dislocation.

We have submitted to you an outline of material which we need in our consideration of this problem. The committee received from you yesterday a letter in which you state that in the press of work you had no time to prepare a statement. You add that you intend later to provide additional material if we care to have you submit it. We'll grant you that privilege. Our record will stand open until November 10 to receive this material.¹ Instead of asking you to make an extemporaneous statement, I will ask Congressman Curtis to put to you certain questions he would like to ask. We have had a good deal of conflicting testimony on priorities and allocations, and would like further information on that.

Mr. CURTIS. Mr. Brown, would you please tell us what are the more important industries which have already been or may be threatened with curtailment in the very near future, approximately how many people these industries now employ, and approximately how many of those people will be unemployed in the near future?

¹ Mr. Brown's prepared material, received subsequent to the hearing, appears on pp. 8150 to 8153.

MEASUREMENT OF PRIORITIES UNEMPLOYMENT

Mr. BROWN. I might explain, first, that we can give figures as to the men employed normally in the industry, but in the measurement of priorities unemployment there are several statistical difficulties. We ourselves would be as much interested in an exact measurement as anyone.

Let us take first the question as to whether one takes a gross displacement figure or a net figure of unemployment. The information that really helps in the formation of policies is the net figure. In the city of Los Angeles, for example, if there are certain people displaced, and at the very same time tremendous increases in the aircraft industry, from the point of view of social impact that is very different from a condition such as that of the one-industry town in the Midwest where there is no defense pick-up. In our own studies, therefore, we have found it necessary to particularize, to take community by community and measure the impact in that single labor market, and then to decide in our certification proceedings—which I'd like to explain if you care to have me do so—whether a community is adversely affected to the extent that it ought to come under the certification program.

To offer examples: Men laid off in the jewelry industry in the Connecticut Valley would quickly be reemployed, whereas in the washing machine industry in Newton, Iowa, there might be a different condition, because the plants there are not getting defense contracts, and it might be that unemployment would last several months, or might continue indefinitely or until the worker moves to some other locality.

In answer to your question I have here the figures on the normal number of employees in such industries as jewelry, stoves, aluminum manufacturers, agricultural implements, refrigerators, domestic washing machines, furniture, radios, business machines, rubber tires, rubber goods, and sewing machines—all selected as likely to be affected.¹ But, as you can see, there is a vast degree of difference of impact right in those industries, as between, say, stoves on the one hand, and radio equipment on the other. So, as I say, it is very difficult to make an exact measurement of priorities unemployment.

INDUSTRIES AFFECTED

Mr. CURTIS. About how many industries would be affected?

Mr. BROWN. I would say, since the shortages are now reaching not merely the highly specialized types of material, like magnesium, but are reaching such fundamental materials as steel, cast iron, and copper, that practically every industry using metal will be affected to some degree. And it is a question of what the net effect will be, with defense employment picking up where nondefense leaves off.

Mr. CURTIS. What will be the gross unemployment due to enforcement of priorities in all industries, say, for 1941? Beyond that we don't know where we go in priorities.

Mr. BROWN. I have seen these estimates, and in our own work we would be as much responsible for the development of them as anyone. But frankly, after putting in a great deal of thought, we have not felt it either possible or, for that matter, desirable in a development of public policy, to venture a definite figure. I think it would lead to confusion rather than to assistance in the development of public policy.

¹The figures referred to appear in Mr. Brown's prepared statement. See p. 8151.

May I mention two or three difficulties? One is the question of totalizing community lay-offs—that is, as among communities. A doctor does not average up the degrees of fever among the patients in a given ward. The impact of unemployment of a hundred men in a small community is very different from the impact of unemployment of 5,000 men in a large community. Furthermore, situations change very rapidly. In a given community such as one of the Midwest cities getting defense contracts at this time, the impact may be weighted by 2 or 3 months, so that unemployment insurance may help to carry those people, and there is a very definite prospect of reemployment.

Mr. CURTIS. Who said 2,000,000 men would be displaced?

Mr. BROWN. I think Mr. Leon Henderson made that statement in a newspaper interview.

Mr. CURTIS. How did he arrive at that figure?

Mr. BROWN. I assume that was a matter of personal judgment.

Mr. CURTIS. How does that compare with your estimate?

Mr. BROWN. It seems a very large overestimate.

Mr. CURTIS. What did that estimate include? Merely the people engaged in making things?

Mr. BROWN. That may have been what Mr. Henderson had in mind. If so, he was thinking of total displacement—that is, of the total number of persons who might leave their jobs, without taking into account the fact that many of them found other jobs.

Mr. CURTIS. He was speaking of factory workers, was he not?

Mr. BROWN. Yes; those employed in industries using metals and similar materials for fabrication.

DISPLACEMENT AMONG DISTRIBUTORS

Mr. CURTIS. Is there any estimate of the displacement of people in the distribution of things?

Mr. BROWN. I don't know, because the distribution trades have not been nearly as hard hit. The group that has been hit in the distribution field are the salesman for manufacturing companies or the jobbers. In the retail trades there is a diversity of products sold, as in the large retail stores; and as some products become scarcer others will fill in. But the specialized salesmen are certainly apt to be affected, because now those companies are selling to the Government and don't need their sales forces.

Mr. CURTIS. The average garage sells cars, refrigerators, radios, and washing machines; and there are as many people engaged in distributing cars as making them.

Mr. BROWN. I would say the salesmen of automobiles will be affected.

Mr. CURTIS. Your answer is that nobody knows how many of these people will be displaced?

Mr. BROWN. I would say more than that. There is a vastly increasing knowledge. It is our job—the job of the Bureau of Employment Security and the Bureau of Labor Statistics and various other agencies—to make available knowledge on conditions in specific plants and in specific areas. Priority unemployment hits different plants in the same town and different towns at widely different times. It isn't like depression unemployment. I have been a student over the years of employment security. In studies in the Social Security Committee of the Social Science Research Council, we were dealing with depres-

sion unemployment where all of industry was affected at the same time by the same vast economic change. Priority unemployment, however, has various technical aspects. The aluminum-goods manufacturing industry was hit last summer; then came copper, with a slower timing and less severity; then steel, in which the relative shortage is not nearly as acute even yet as that in copper. According to the uses a company makes of these different materials, so is it affected.

FACTORS INVOLVED

Another factor is the tremendous increase in demand for armaments. That demand affects a company and its community according to the initiative or adaptability of that particular firm to defense production. It is a hit-or-miss phenomenon. That is why it is so important to get full knowledge of the individual community, and that is what we are driving at as hard as possible. We are economic doctors, of a sort, dealing with specific cases; and the totals therefore are not nearly as significant as if the condition were one that could be reduced to a universal average.

Mr. CURTIS. In other words, loss of jobs by a great number of people, by reason of priorities, in an area that had quite a little defense activity would create a lesser problem than in an area that had nothing?

Mr. BROWN. Exactly, sir. Let us consider Los Angeles or Baltimore, or the New Jersey, New York, and Philadelphia metropolitan areas. Priority unemployment, in which neither specialized skill, nor age, nor other isolating factors plays a part, has been absorbed very quickly, and a factor in that absorption has been earnings. Men saw the possibility of good earnings—overtime wages, overtime pay—in the defense work. They shifted very rapidly.

There was a different situation in Manitowoc, Wis, which is 90 miles north of Milwaukee, and where it takes a very big decision for a man to move his family down to Milwaukee. That is where priority unemployment really hits.

Mr. CURTIS. Could you tell us approximately how many towns and cities would be affected by the curtailment of these industries, in addition to Michigan communities about which we learned first-hand?

Mr. BROWN. I can show how we are getting our information, and I can discuss certain communities because we have surveyed them. The survey procedure got going early in September.

COMMUNITY SURVEYS

We are using the Bureau of Employment Security machinery and the United States Employment Service, which are Federal agencies, and 48 State employment services. We have in process 104 community surveys and we are adding daily. At the present time we have 75 back, and we have had 35 communities acted upon by our certification committee.

Eleven community surveys have indicated definitely the need for certification for remedial programs recommended by the contract certified by us, recommended by Mr. Odlum's Division,¹ then the Army and

¹ Division of Contract Distribution, Office of Production Management.

Navy. In all those cases the Army and Navy have acted. We are sure of the exact conditions in 75 communities.

In addition, we are watching closely about 500 additional communities. The way we build up our list concerning those communities is to make note of all the companies producing any product which is subject to a curtailment order, like automobiles, refrigerators, or washing machines, and any company using quantities of aluminum, copper, etc., and then to keep watching each community or industry in which we have a representative in our priorities branch. In those 500 communities we know that there is likelihood of priority unemployment. Many times we know it even before the employer does because we send our men out, or the employment service does. The employer naturally assumes things will go on. But our job is not to rely on the reactions of the individual employer alone, but to keep watching ahead as to the effect on that plant and that community. So that there is a shadowy zone there embracing those 500 communities which we are now watching. It could be expanded, and probably will, as priorities cut deeper, maybe to a thousand. But it is a shadowy boundary line. It is very hard to give a distinct number. That is the figure that we are operating on.

Mr. CURTIS. Do you come in contact with problems like this: Assume a certain railroad community has not been very active for some time—not nearly as active as it was in the days before trucks and automobiles. But some 200 miles away from there, there is booming defense activity. Under those circumstances, the railroad workers may be routed out of that center. Isn't that true?

Mr. BROWN. Yes.

BUFFALO PLAN

Mr. CURTIS. At our Detroit hearings representatives of the Labor Division of O. P. M. described in some detail the operation of the so-called Buffalo plan. From O. P. M. releases and other numerous sources we have heard that the Buffalo plan offers a concrete constructive means of transferring men from nondefense to defense jobs with a minimum loss of time, thus averting unnecessary migration and unemployment. We have consequently been interested in examining the plan in detail. Following the Detroit hearings, members of our field investigating staff were sent to Buffalo, and we have studied what materials have been made available to us through your own and other O. P. M. offices.

On the basis of this material there are certain questions we wish to put to you. In a report on approximately 3,200 workers laid off by General Motors at the end of July, the Labor Division stated in our Detroit record that they had, on September 17, specific evidence of the reemployment of 1,275 men. Do you have evidence of further reemployment?

Mr. BROWN. That is outside of my immediate jurisdiction, but I can obtain the figures for you. That work was carried out under the Labor Supply Branch of the Labor Division. The priorities branch concerned itself with the policies of curtailment orders, priority orders, and the certification of communities adversely affected. In the matter of operation, of actual transfer of men, the Labor Supply Branch, working with the employment service, carries on. I can obtain from Commissioner Flemming those figures.

Mr. CURTIS. If you will provide them for us, we shall have them placed in the record.

Mr. BROWN. Yes, sir.

Mr. CURTIS. Do you not think that any plan which attempts to put men back to work should have certain controls, so that the responsible organizations would know specifically what the progress of its work is?

Mr. BROWN. May I explain to you just what we are doing? I think that will indicate to you the reasons for my earlier statement. I might say first of all that when I came down here in early May, I had the feeling that curtailments would have to be carried further, in order to assure sufficient materials for the defense program, and that that would involve very considerable lay-offs of people.

In the beginning, Commissioner Lubin was in charge, and I later took his place. We started in having a representative of the Labor Division with every priority committee. I sat as a labor consultant on the Priorities Board under Mr. Stettinius. Then a change was made to industry branches—the present arrangement. A representative of the Priorities Branch of the Labor Division sits with every industry chief in a consideration of allocations, priorities or other orders affecting in any way the displacement of labor.

POLICY OF LABOR DIVISION

It is our policy in our consultations with those industry chiefs, first to watch those cases where, by the provision of a limited amount of material, a business can be kept in operation if it is moving over to defense

That is No. 1: That the going-concern values in that company be preserved, that the men be there—the management, the foremen, and so forth—working and on the ground, so that in a move from non-defense to defense, that company's status as a going concern is preserved. We urge that materials be provided to the fullest extent possible to do that.

Secondly, we are watching all hardship cases—that is, where the cutting off of the material creates a condition of serious hardship among the employees of the company or in a community. That is another reason why we need to know the condition in communities throughout the country.

As time went on we found that cushioning effects—that is, putting the brake or cushion on the shock—were not nearly effective enough, and beginning in June we began planning on various means of helping to put contracts into communities where priorities displacement had been serious. Mr. Levis¹ and Mr. Mehornay,² under the direction of Mr. Knudsen and Mr. Hillman, with Army and Navy representatives, started with the secretaries and with others to work out arrangements whereby communities adversely affected could be given special consideration. These efforts were to draw upon the experience of Mr. Mehornay, Mr. Nehemkis,³ and others. There were certain proposals

¹ William E. Levis, member of the Planning Board, Production Division of Production Management.

² Robert L. Mehornay, chief of defense contracts, Contract Unit, Production Division, Office of Production Management.

³ Peter R. Nehemkis, special assistant, Contract Unit, Production Division, Office of Production Management.

for adjustment of procurement procedure to permit more small contractors previously in other lines of industry to come into defense work.

DEVELOPMENT OF THE DIRECTIVE

That negotiation went on for some time. We had very fine cooperation from the armed services, and early in September the directive, based on an agreement between OPM and the Army and Navy, was developed. Under that directive, after certification of the findings on the part of the Priorities Branch, Labor Division, going to the Contract Division, there is established first the fact that priority unemployment is serious, and second, the type of contract and determination of the particular firm in the community that can do the job. Then the Army and Navy, through their divisions of contract distribution—each having such a division—proceed to put contracts into those places.

Mr. CURTIS. That is interesting, Mr. Brown; but this Buffalo plan has been held out as a model, and I want to know more about it. The O. P. M. Labor Division at the Buffalo office has to make weekly reports to the New York State employment service, does it not?

Mr. BROWN. I suppose that is their procedure, sir.

Mr. CURTIS. Will you see to it that we get copies of those weekly reports?

Mr. BROWN. I will be glad to take it up with them, sir.¹

Dr. LAMB. There are a few questions I'd like to ask to see if we can understand the work of the Labor Supply Division and indicate the manner in which you cooperate. As I understand it, from what you have just stated, the Priorities Division is responsible for determining the communities which are going to be affected by curtailments, through the presence of representatives of the Labor Division at the meetings of the industry branches of O. P. M.

Mr. BROWN. That is right.

Dr. LAMB. So you are in a position to initiate investigations of these communities, but you do not, yourselves, conduct these investigations?

Mr. BROWN. I might put it this way: Our people sit almost continuously with the industry branches, as they are called, from day to day so that when it comes to our attention through the various representatives we have in these committees or branches that a certain type of industry, or, for that matter, a particular company, is adversely affected, then we decide whether to ask the United States Employment Service, under the Bureau of Employment Security, to make a special survey of that community.

REPORTS ON LAY-OFFS

Meanwhile they have automatic machinery which is operating all the time. Instructions have gone out to the staff of the Bureau of Employment Security and to all the State and local employment offices that where there is a lay-off involving 50 or more men, or where there is short timing involving 200 or more men, a special report must come back to the regional labor supply officer; and as it is found that those

¹The reports to which reference is made appear in this volume as Exhibit 6, p. 8197.

conditions are accumulating in a community, the regional labor supply officer himself can initiate a survey. All that material is coming up to the Bureau of Employment Security, and to us, so that just as we are developing information from O. P. M. action at this end, we likewise have developed an automatic channel, plus special reports from the field, because we don't want to rely merely on information initiated at our end.

Dr. LAMB. You emphasized the difficulty of securing satisfactory figures on the over-all problem which is developing, and indicated some skepticism on the part of your Division as to its magnitude. The position which you take, I think, is an understandable one—namely, that this situation changes fairly rapidly, that there are factors which are local or limited to a single industry, that contracts are being let by the Army and Navy which affect these communities, and so on. And therefore I take it, from what you have said, that your general policy is to operate a large-scale and well-worked-out over-all plan and machinery for continuous reporting and keeping up with developments, rather than to attempt to give out at any one moment over-all figures which might be alarming and, in your estimation, misleading.

Mr. BROWN. That is right.

Dr. LAMB. You described yourself as one of a number of "economic doctors" dealing with specific cases, and explained that in these surveys you are making you are using the Bureau of Employment Security machinery to assist you. To keep the analogy, the relationship between these physicians would, I assume, be quite close. It would be necessary for you to know that your prescription for an individual community had been carried out by the Labor Division.

REABSORPTION PROGRAM UNDER O. P. M.

Mr. BROWN. Yes, indeed. I serve as a member of the Labor Supply Committee, and in that capacity am concerned with the operations of reabsorption, so to speak, of men displaced due to priority action. However, there are various other channels which we use to secure reabsorption. The Labor Division is represented on the Plant Site Board of O. P. M. It is part of our job to be sure that they know of these communities where lay-offs have occurred, so that in the choice of location of a plant, where other things are equal, certainly, and even if they are not equal, there will be an effort made to place the plant in a community where there have been lay-offs. That is sound policy in the advancement of the defense program, because an adequate labor supply exists there to produce for defense.

Dr. LAMB. However, with respect to such placement of plants, the number of those to be placed will never be in proportion, I assume, to the placing of contracts which would enlist the services of already existing facilities and men in communities spread throughout the country.

Mr. BROWN. Of course, the contracts are far greater in volume, and I would say it is better public policy to bring the job to the man in his existing employment relationship.

Dr. LAMB. I wanted to establish the difference in magnitude and the possibilities of those two operations. Contract distribution is much more directly a means of solving this priority unemployment in most

communities. Now, as I understand it, your division operates at two extremities of the process—first discovering prospective lay-offs, either from presence on the priorities committees or through the machinery you describe, coming up from the field regional offices; and second, at the other end, assisting in the location of contracts for plant sites at exactly the right point to take care of the problem.

CLEARANCE COMMITTEE

Mr. BROWN. We do what may be described as both the public health job and a case-practice job. In our public health job, we are watching curtailment of manufacture of automobiles, refrigerators, washing machines, and such, and curtailment in the use of aluminum, copper, and other materials, to see that the impact of each is cushioned to permit adjustment, giving the overwhelming importance to the defense program. We never question for a second anything that is necessary for the greatest efficiency of the defense program. But if it would add to the efficiency of the defense program to make an adjustment in this or that direction, it is our job to watch that and in consultation to bring it up to Mr. Nelson. I sit on the clearance committee through which all these orders go before they go to Mr. Nelson. It is merely an advisory committee. That gives us an opportunity to discuss the labor-displacement aspects of the matter at the other extreme, after the curtailment has affected the community, and taking the more extreme cases, we pick it up at that end.

Dr. LAMB. So it is essential that you keep close tabs between the two ends of the operation. Consequently, the success of what has come to be called the Buffalo plan or its equivalent, from community to community, is directly related to the success of your operations, is it not?

Mr. BROWN. Yes, indeed.

Dr. LAMB. That is to say, the Buffalo plan can't work unless contracts have been let in the community which will take up the slack, whatever the machinery for transferring the workers from one job to the other.

BUFFALO PLAN

Mr. BROWN. The Buffalo plan is in essence, a method of transfer or a facilitation of transfer. On the curtailment side, the fact that the auto industry went down under curtailment orders was a condition with which we were concerned. The fact that contracts went into Buffalo for aviation and certain other things was a condition with which we were concerned from the manpower side. As an operational matter, Labor Supply, with the Employment Service, had a very important job to perform in bridging the gap between the lay-off here and the pick-up there.

Dr. LAMB. In the case of Buffalo, the contracts were already let.

Mr. BROWN. That is right.

Dr. LAMB. Prior to the announcement of the Buffalo plan.

Mr. BROWN. Yes.

Dr. LAMB. And in fact our information from our field investigators is to the effect that the employment which was made possible at the time the Buffalo plan was announced was largely due to the availability of these jobs at the moment. The aircraft and other defense jobs were open. In fact, we have also—and I'd like to check this with

you—the impression that most of the workers involved were employed by these companies prior to the announcement of the Buffalo plan.

FUNCTION OF O. P. M. LABOR DIVISION

Mr. BROWN. There is, of course, a very normal process of transfer. The worker has initiative to seek another job, and through the employment service system, he is assisted and directed to it. That is the normal process. The function of O. P. M. Labor Division is, you might say, to help oil the machinery, and we all know that every employer, in his employment procedure, follows certain patterns. He likes people of certain ages or men of certain training. The job from the O. P. M. standpoint is to help build up a community attitude, and a willingness on the part of employers, because this is defense, and it is an emergency, to broaden the scope of their hiring, to take men displaced from other plants in their own community.

For example, an employer may say, "These men are laid off by this other employer, and in 6 months they will be reemployed by him." And O. P. M., through its representatives can say, "Despite that fact, it is important in your community, and in helping in the defense program, to take those men even for 6 months, because they are trained men, whose services we don't want to lose in the defense effort."

Dr. LAMB. In this particular instance, the employment which these men secured in the aircraft and other companies was for the most part not secured through the assistance of the employment service. Is that correct?

Mr. BROWN. I would say that is normal. The figures, as I remember them, in England, where the employment service has been developed to a high degree of effectiveness, show about one out of five placements were made through the employment service. A large amount of the initiative in securing a job must come from the individual.

EFFECTIVENESS OF BUFFALO PLAN

Dr. LAMB. What I am concerned with here is how your Division—by that I mean the whole Labor Division—is in a position to assert that, for example, the Buffalo plan is a success, if it does not have a complete record of all the persons laid off and all the reemployment records on those persons.

Mr. BROWN. I wasn't in Buffalo. I know of the development through being on the committee at the Washington end. I think that what was felt by those in charge was that this method—counting on community cooperation to bridge this job-to-job step—was highly desirable, and that the response in the Buffalo community was favorable. As to the number of people who were actually placed, I don't know the figures. I am sure they were not as favorable as anyone of us would like, because there are various resistances, either from the individual worker or from the employer. It often happens that the man does not get the job in another plant in the community, but moves out to some other place, goes back to the farm or to some other town, and someone else comes in and gets the job. Now, the best thing we can do is to be sure he gets a job and the defense plant gets full employment.

Dr. LAMB. How do you know that he gets the job? This committee wants to know what success the Buffalo method or other methods are having. In the second place, we are interested in the Buffalo plan itself, because it has been offered as a model, and if the model was not successful, it calls in question the general methods, particularly when you had such favorable circumstances as you had in Buffalo, where the airplane plants were expanding rapidly when the Buffalo plan was announced, and took workers even before the machinery of transfer was set up.

Consequently, the real question is as to the method, and I am asking about the way in which the employment service can keep track of these people to enable you to have an accurate count. For example, your own figures, given us at Detroit, indicate that 44 percent of those who had found jobs, to your knowledge, found them on their own, and 40 percent found them with the assistance of the employment service; and of those 40 percent who found them with the assistance of the employment service, a good many cannot be checked with the employers, according to our information from the State employment service, because the jobs which they secured are described in lump, and the employers have never given a list of employees hired who came from the original plants.

Mr. BROWN. I would say that is normal. The proportion using the employment service—that is, 40 percent—is fairly high, and indicates that in an emergency a larger proportion use it than otherwise. When a man loses his job, he hears of other openings; he has worked previously in the Detroit areas, and so forth; he is known there. His tendency is, rather than use the machinery, to go direct. I think anyone of us would. We first try out our best chances, then we fall back on the employment system. So we register to get unemployment insurance, and meanwhile they go to work for us, using the machinery.

The first 44 percent of the cases had contacts. The next 40 percent were the ones who used the employment service, and even some of those went out and got jobs individually.

Dr. LAMB. My point is that figures show 40 percent who we know have found jobs through the employment service, and 44 percent who found jobs themselves, and these figures are far short of the total of 3,500. By comparison with the 3,500 they account for only 1,250. On top of that, the number who actually registered with the employment service and who didn't find jobs but who went into training is quite large, and of those who went through training and found jobs, the wages received are far below those of the ones who went direct and found jobs for themselves.

Mr. BROWN. My only answer is that in the handling of human beings, when you are trying to assist them in a readjustment in their work, you never get perfect results. What you try to do is the best you can. As a student of the problem and as a member of the advisory committee of the Social Security Board, apart from my Office of Production Management relationship, I would say that as far as I can see, the Buffalo plan is the best we can develop to help in this situation.

Mr. CURTIS. I am trying to figure out what this method, or Buffalo plan, is. I have some of these figures before me. Up there in Buffalo 3,200 men were laid off by General Motors, and by September 17, we learned that 1,275 had been reemployed, and then there were

about 781 of whom there was no record, and 1,003 didn't have any job.

Now, in spite of that 1,003 who didn't have any jobs, there were 3,000 who had been reemployed or were hired by defense employers in the area at that time. Three thousand people were employed, and we have a record of the use made of the employment service.

I realize that none of these plans works very well. What was the Buffalo plan? Did you have an agreement or procedure by which, at a given date when these men went out of work, there was an agreement entered into that they go to work over there? Was it written?

Mr. BROWN. That was under the labor supply branch, Labor Division. Commissioner Flemming is chief of that. But I will tell you to the best of my ability. My understanding was that the labor supply branch went to four of the principal employers of Buffalo and said, "See here, as an advantage to the community, as sound public policy, we would like your cooperation in the reemployment of these fellows who were laid off."

Mr. CURTIS. What else did they do?

VOLUNTARY COOPERATION

Mr. BROWN. It was a case of voluntary cooperation. There was no pressure or power on the part of O. P. M. to compel. The principle of free enterprise dominated the action. What was asked was their cooperation. Now, the idea was that the employment service, the employers and labor groups, all having a common interest in helping to lick this problem in Buffalo, would cooperate to get those men reemployed.

Mr. CURTIS. They made a call on these four people standing with defense contracts, and explained the situation and asked them to take these men on, but no formal procedure or contract or agreement was entered into for the transfer of these people. Is that correct?

Mr. BROWN. It was through the New York State Employment Service.

Mr. CURTIS. Did they have a written or formal agreement of any kind?

Mr. BROWN. The agreement would be only a policy agreement anyway. The only specific thing would be that employer X would hire employee Y. X would say, "It's on the level that I am willing to cooperate. I will employ to the best of my ability as many of these fellows as I can, because of matters of skill, training, and age, which affect the employment of an individual."

Now, O. P. M.'s interest was that those employers be as liberal as possible to broaden the scope of their employment procedure, to take as many as they possibly could.

The Buffalo plan was merely an effort on the part of the O. P. M. to impress upon those who were hiring men to take fellows who had lost their jobs and facilitate through the employment service the actual registration and placement machinery. That was a normal job of the New York State Employment Service, but O. P. M. was interested in encouraging and helping them in any way in the development of adequate machinery, such as arranging for more interviews and so that men could come in the evenings, getting cooperation, as I surmise—I am not sure of this—through the State employment

service, or regional labor supply committee, enabling these men to come to the employment offices evenings, and have interviews, making it easier for the men laid off to register, and encouraging in individual companies the hiring of these men.

NO TRANSFERS EN BLOC

Mr. CURTIS. Then the answer would be that no plan was worked out to transfer those men en bloc from one plant to the other?

Mr. BROWN. It couldn't be.

Mr. CURTIS. There was no plan to transfer them individually and check back?

Mr. BROWN. As a student of industrial relations, I don't see how an employer could guarantee ahead of time to take a certain individual employee.

Mr. CURTIS. Then the result in Buffalo wasn't any different from what it might have been if the mayor of the town had made a proclamation and said, "I would like you to hire these men."

Mr. BROWN. No; I think there was a very real difference, because the agency that had to do with production for defense in Washington felt it was sufficiently important to have its people go to Buffalo and help build up public attention, and the cooperation of companies to do this job.

Mr. CURTIS. Those defense expanding plants wanted skilled workers.

Mr. BROWN. Yes.

Mr. CURTIS. And those workers wanted jobs, and they would have thought of that if O. P. M. hadn't.

Mr. BROWN. No. When an employer goes out to hire people he has certain specifications. Some employers like farm boys, others like older people, or younger people. Some would rather take new men and train them themselves, and others take men already trained. But when a certain bloc of men is laid off across the street, it isn't necessary at all that the employer on this side of the street go over and employ those men, lock, stock, and barrel. He has his own individual pattern of employment procedure.

Mr. CURTIS. Which is what the Buffalo plan didn't do?

Mr. BROWN. I think it did, but I would assume there is no way of testing it. Probably the figures that you mentioned, of 1,275 reemployed, might have been 800 or 600 if there hadn't been this added impetus. The question whether anything could have been done to raise that figure by another thousand is anybody's guess. It was a first attempt, and done with entire good will, and probably the Labor Supply Branch learned a lot and will be able to get a better response in the future.

Mr. CURTIS. There were a lot more jobs available in expanding defense plants than you placed.

Mr. BROWN. That is true, but let's put ourselves in the position of the employer in those expanding defense plants. We feel we are free citizens. We are free enterprisers. We have to lick the defense job, but we have certain opinions as to what type of employees we want to hire. The men laid off by the automobile company will be used again by the automobile company. One employer says, "I will take new men from the country because they will be with me indefinitely. If I take these automobile workers they will be back in their old jobs in 6 months and I will have to hire somebody else."

Mr. CURTIS. That is what I am getting at. This whole thing depends on many and varied factors and reasons. The Buffalo plan wasn't a plan to abridge those.

Mr. BROWN. No magic. You just did the best job you could and developed as much response as you could.

The CHAIRMAN. It was simply a volunteer plan.

Mr. BROWN. That is right.

The CHAIRMAN. Creating the psychology of taking care of fellows who wouldn't otherwise be taken care of.

Mr. BROWN. That is right.

The CHAIRMAN. It was volunteer, but you were attending to something that was not attended to at all before.

Mr. BROWN. That was the mechanism of the employment service, but the O. P. M., with its national status, came in and said, "It is important in the defense program that this be done." And immediately it affected judgments and attitudes of people who might otherwise not have been influenced.

IMPORTANCE OF UNITED STATES EMPLOYMENT SERVICE

The most important agency in all these placement operations is, of course, the United States Employment Service. It has 32,000 employees. There have been millions and millions of dollars spent by the Federal Government to build it up. It has 1,500 full-time offices, and, like the post office, it is a tremendous national machine. But at a time like this it has to be helped along and built up, and where a serious displacement occurs, as in Detroit, it is natural that the O. P. M. or any other defense agency should come in and help that machinery along and obtain public support and good will.

Mr. CURTIS. Mr. Brown, I have before me here a release bearing the date of August 9, 1941, from O. P. M. This is the first paragraph:

Machinery set up through Government, management, and labor cooperation for reemployment and training of 3,600 displaced automobile workers in the Buffalo industrial area should serve as a national model in overcoming the unemployment created by shut-down of nondefense plants, Acting Director General Sidney Hillman, of Office of Production Management, said today.¹

INTANGIBLE DIFFERENCES IN BUFFALO PLAN

Now, I have tried to follow your testimony, but as nearly as I can figure out, that plan constituted an appeal to the employers to hire these men, and assistance to the employment service of some few interviewers and a few hours of their time.

Mr. BROWN. I think you have taken some of the flesh off the bones, which gives life to a thing of this sort. It is difficult to take up point by point what a procedure is that makes it worth while. I might say I am entirely convinced that the type of job done in Buffalo is worth while. It is difficult to spell out the difference between that and the utterly automatic method of having men go down to the employment office, wait for jobs, and have the employer decide whether or not he goes to the employment office to seek men. What was done involves a good many intangible differences, but the most important one is not the change in machinery, but the change in attention given to that situ-

¹ See Exhibit 3, p. 8184.

ation by the agencies of Government and the cooperation obtained by both the men and the management in using whatever machinery was available.

Mr. CURTIS. But you will admit that there was no tangible and formal agreement entered into, written or oral, for the transfer of any men?

Mr. BROWN. I would not want to answer that, because I am not sure, but I can find out for you.

Mr. CURTIS. There was no system to check individual cases, as to which came to the employment service and which did not?

Mr. BROWN. I think there was, because that is the normal employment service procedure—keeping record of interviews. This is a free country. A man quits on Saturday afternoon and goes back to the farm. I don't think we as individuals would want him tagged, so to speak. If he does not want to come to the employment service to register for his benefits, I don't think we want at this stage to force him to report.

Dr. LAMB. But what about the men who did not register with the employment service but were placed with the employers? As I understand it, there is no record of the number of men who have been on the employers' rolls, but only over-all figures from these four companies as to how many former Chevrolet workers have been employed.

COST OF LABOR-MARKET SURVEY

Mr. BROWN. May I use this illustration? I am chairman of the Social Security Committee of Social Science Research Council. We have been very much interested in labor-market surveys, to know just where individuals go, from here and there. In order to do that we had to spend \$60,000 additional funds to make a study in Fitchburg, Mass., and two other communities. It took a tremendous lot of time.

Dr. LAMB. But you did not have the support of the O. P. M., and this particular instance—the Buffalo plan—has been celebrated as perhaps the outstanding success of the O. P. M. Labor Division. You have, in this particular instance, no record of what became of these men who were employed by the very employers to whom you appealed.

Mr. BROWN. The study in Fitchburg took over a year. They had to go through the employment records—that is, individual names, pay rolls, and so forth. I can assure you that if time were given for field surveys, for the study of pay rolls, you could find exactly what happened to most of these employees.

Dr. LAMB. These things happened side by side in Buffalo: 3,200 workers were laid off and several defense contracts were signed. The rolls of the Bell Aircraft Corporation could be checked, especially if they were in alphabetical order.

Mr. BROWN. But those are the easy ones. Where it is hard is where the man left Buffalo and got an even better job out of town.

Mr. CURTIS. Was this leaving Buffalo part of the Buffalo plan?

Mr. BROWN. No; but it's part of human nature.

Mr. CURTIS. I agree with you that you can't change human nature. That is the reason I am not so excited about Buffalo.

BUFFALO PLAN A STEP IN RIGHT DIRECTION

Mr. BROWN. It was a step in the right direction. It was a first step taken in using more effectively the greater public response to machinery for transferring men from one job to another. We have a lot more to do. It is a huge job, and O. P. M. as much as any agency of Government is the first to ask the advice and help of all public officials in doing its job, because it has a pioneer job to do.

Dr. LAMB. In closing this particular part of the discussion, I think it ought to be emphasized that there were laid off by General Motors 3,244 men, and 6 weeks later, as of September 17, 1941—these figures are from the galley proof of the material submitted at our Detroit hearing by the O. P. M. Labor Division¹—as of September 17, 1941, there were reemployed and working 803 from those registered with the employment service, or approximately 25 percent of the total, and that figure of 803, as I understand it, was statistically arrived at by lumping the employers and not checking individual cases.

In addition to this, about 472 not registered with the employment service had found employment themselves, and there again there is an absence of check.

One other question about Buffalo. Do you happen to know for what period of time the representative of O. P. M., Labor Division, was in Buffalo?

Mr. BROWN. I don't know, sir. Of course, the regional labor supply committee is operating continuously. It is district 2 for New York State. It would be a question of how frequently they reconsidered the Buffalo situation.

Dr. LAMB. My information is that all the work of follow-up after the meetings were held fell upon the State employment service, and that they are expected to do the entire job.

RELATIONSHIP OF AGENCIES

Mr. BROWN. May I explain the relationship there? The State-Federal Employment Service is tied into the labor-supply committee. It is a part of the Labor Supply Branch of O. P. M. You see, the intention was that O. P. M. should use, wherever possible, other agencies of Government, rather than duplicating, and it has had very good cooperation from the employment service. It would be quite wasteful for them to duplicate. I can assure you that O. P. M. appreciates tremendously the fact that New York State did carry on, and the fact that O. P. M. didn't have to have men there all the time.

Dr. LAMB. My impression from the report of the investigator is that the State employment service does not appreciate the burden which is placed upon it and the lack of continuous assistance for particular emergency situations of this kind and would appreciate some machinery whereby the O. P. M. could keep, for the duration of at least the peak emergency period, representatives in the area to assist them.

Mr. BROWN. Which would be reflected in a request on our part for a very considerable additional budget. To lick the job of labor supply in this country will require a very substantial additional budget and additional funds to the employment service. But I am no expert on that.

¹ See statement by Eric A. Nicol, Detroit hearings, part 18, p. 7491.

Dr. LAMB. There is another question I would like to ask with respect to the automobile lay-offs. Is there any way in which a more comprehensive scheme than the Buffalo plan, or than the one worked out, for example, between General Motors and U. A. W., could be put in force, whereby curtailments would be foreseen sufficiently in advance so that placement of individual workers, either in a job or in training for a job, could be part of a comprehensive and forward-looking arrangement? I ask for this reason: It seems to me that if it can be foreseen that as of the 1st of January, for example, a certain number of workers will be laid off by a given company, and the management can tell you what plants will be involved, you could institute a program 3 months in advance for training and placement. Is that being done?

PROGRAM FOR EMPLOYEE REABSORPTION

Mr. BROWN. Yes, indeed. You haven't asked me concerning other procedures that we are following. In the case of the automobile industry, in the very first curtailment programs, we had both management and men in Washington discussing the various remedial steps involved in cushioning the slack and getting those men into defense production.

The plan involves adjustment of hours, both on the civilian automobile employment and on the defense production, including the question, should the automobile industry go into four-crew operations—that is, four 40-hour-week shifts—which would take four times as many men. If, on the other hand, the automobile industry drops to 32 hours—and it has in some cases—that makes a ratio of men to facilities of 5 on the defense side to 1 on the nondefense. In other words, it pulls men into defense production that much faster, and tends to hold them in civilian production that much longer by spreading the work in the civilian.

There were also discussions on the status of the men to be transferred, in point of seniority and training. I might say that the three major companies certainly have very adequate training facilities, compared to many other corporations.

In addition, there were the questions of additional contracts going in there, the type of contract, the tank program, the questions of which communities should receive subcontracts. We have a working arrangement with 3 large motor companies now, whereby there is a two-way channel of communication as to which are the cities where they could place subcontracts and supply orders within their own corporation; and from our end as to which are the communities where it would help most to do it. If there are 20 different communities that are able to produce a part for a tank or anything else, within the General Motors organization, they are taking our advice as to which of those 20 should be selected. The fact that other firms in some of these areas are adversely affected makes it desirable to discriminate in this manner. We are seeking the cooperation of all prime contractors for that sort of thing because they involve, through their orders, billions of dollars. It isn't a question of location of contracts from Government alone, but likewise the subcontracting done by the big contractors.

The CHAIRMAN. Thank you very much. We are a little bit behind our schedule. We appreciate your coming here.

(The following letter and statement were received subsequent to the hearing, and, in accordance with instructions from the chairman, were made a part of the record:)

NOVEMBER 14, 1941.

Hon. JOHN H. TOLAN,

*House Committee Investigating
National Defense Migration,*

Congress of the United States, Washington, D. C.

MY DEAR CONGRESSMAN TOLAN: Attached is a statement that I have written in answer to the request submitted in your letter of November 1.

In my statement I have tried to be as brief and concise as possible, realizing that a large volume of statistics could be compiled on the various subjects discussed in my statement.

I am enclosing some lists of firms in industries that have been or are likely to be affected by priorities on materials or by production curtailment programs. Also, I am enclosing a sample copy of a community survey indicating the kind of material that we have on a large number of communities. These lists and other material are confidential. I request that they not be made a matter of public record.¹

Since Mr. Flemming has already submitted material to you regarding the Buffalo plan, for the publication of which arrangements have already been made, I am following your suggestion by not submitting further material regarding the Buffalo plan.

The enclosed statement, I hope, is the sort of material that your committee wished to have.

Sincerely yours,

J. DOUGLAS BROWN,
Chief, Priorities Branch, Labor Division.

550 HOUSE OFFICE BUILDING,
November 25, 1941.

Mr. J. DOUGLAS BROWN,

*Chief, Priorities Branch, Labor Division,
Office of Production Management,*

Social Security Building, Washington, D. C.

DEAR MR. BROWN: This is to acknowledge receipt of your letter of November 14, with the accompanying statement, which we are including in our record, together with your testimony before this committee.

In order to be able to evaluate more fully the priority unemployment problem and to check on the effectiveness of existing programs, our committee would like you to submit for the record brief summaries of the conditions in each of the communities which your agency has surveyed. We would, furthermore, like you to indicate which of these communities have already been certified and what favorable results have been accomplished in each case as a result of the present certification procedure.

If these summaries are already available, we would appreciate it if you could forward them to us immediately, so we could include them in our record of the Washington hearings. If they are not immediately available, could you forward them to us at as early a date as possible, so that we may include them in the record of our next hearing?

I wish to thank you again for the material which you have already presented to the committee.

With all good wishes, I am,

Sincerely yours,

JOHN H. TOLAN, *Chairman.*

¹ Material referred to as confidential is held in committee files.

STATEMENT BY J. DOUGLAS BROWN, CHIEF, PRIORITIES BRANCH,
LABOR DIVISION, OFFICE OF PRODUCTION MANAGEMENT, WASH-
INGTON, D. C.

NOVEMBER 13, 1941.

There are certain difficulties in attempting to supply your committee with the detailed information that was requested. I shall, however, attempt to answer as best I can the items which the committee has listed in outline form.

The industries whose production will be curtailed or limited by material shortages and allocation programs would include most industries in this country—all those that use the metals under priority, certain chemicals and various imported products. A list of the materials already subject to priorities and curtailment orders would indicate how widespread the effects of such priorities and curtailment orders will be. The following are some of the industries that have already been affected or are likely to be affected in the near future: Automobiles, silk manufacturers, refrigerators, vacuum cleaners, furniture manufacturers, office appliances, cooking utensils, sewing machines, radios, metal fasteners, iron and steel foundries, brass foundries, cleaning establishments, producers of various textile products using silk, rayon, nylon, and various scarce chemicals, building construction, rubber tires, other rubber goods, washing machines, coin machines, jewelry and ornaments, electrical household appliances, stoves, tableware, incandescent lighting, manufacturers using cork, electroplating establishments, die-casting establishments, and agricultural implements.

COPPER CONSERVATION ORDER

Conservation Order No. M-9-C curtailing the use of copper prohibits over 100 different uses of copper after December 31 and curtails all other uses, except for defense and the conduction of electricity, to 70 percent of the firm's copper consumption in 1940. This order alone will affect over 100 different industries. The shutting off of virgin aluminum for practically all nondefense purposes and similar curtailment of scrap aluminum for nondefense has also affected a large number of industries.

The Bureau of Labor Statistics has made estimates of factory wage earners in a large number of the industries mentioned above. For example, the Bureau estimates that there are 29,900 wage earners in the jewelry industry; 54,600 in the stove industry; 36,600 in the aluminum-manufacturing industry, including castings, shapes, and aluminum ware; 75,900 in the agricultural-implement industry, including tractor manufacturing; 50,600 in the refrigerator industry; 9,300 in the domestic washing-machine industry; 186,600 in the wood- and metal-furniture industry; 62,500 in the radio industry, including the manufacture of phonographs; 46,200 in the business-machines industry; 65,700 in the rubber-tire industry; 64,600 in rubber goods other than tires; and 10,100 in the sewing-machine industry.

It is impossible to predict the trend of employment in the various industries already mentioned. The trend of employment in each industry depends upon the scarcity of the materials for nondefense purposes, which in turn depends upon the availability of ships for importing and the rapidity with which defense production consumes scarce materials. It also depends upon the extent to which these industries are able to obtain defense work and to engage in defense production. For example, it would have been impossible to predict in August that employment in selected Michigan automobile plants during the week ending October 25 would amount to a total of 347,189 compared with a total of 355,371 representing the peak employment total for these same plants as reported in May or July before the change-over.

We have lists containing the names and locations of firms in a large number of industries that have been or may be affected by material shortages or production curtailment programs. Let me emphasize that the lists for the various industries are not complete.

Reductions in working time or lay-offs from a few hours to a number of weeks have occurred in thousands of plants in this country because of material shortages or allocation programs. In our files we have records of hundreds of firms which have either experienced lay-offs or reduced working time or anticipate that they will experience reduced employment because of priorities. Although a list of such plants might be compiled, the degree to which the firm has been affected or threatens to be affected and the period of time that the firm will be affected is not always certain, so that the compiling of such list presents numerous difficulties.

A large number of communities have been affected by material shortages and curtailment programs.

COMMUNITY SURVEYS

We have surveys of over 100 communities in which one or more plants have been affected by priorities or threaten to be affected by priorities. The Labor Division, in collaboration with the Division of Contract Distribution, has already certified to the armed forces for special consideration more than a dozen communities that are threatened with serious priority unemployment. The community surveys range from 3 to 20 pages in length, and generally include a statistical summary. In addition, we have material on hundreds of other communities indicating that one or more plants in the community have experienced or are threatened with curtailed employment because of priorities. The staff of the committee is thoroughly familiar with all this material. Representative examples of community surveys are being submitted.

There are various ways to alleviate dislocations resulting from priorities and production curtailment programs. One obvious way is to assist the firm to convert to defense work. In this way effective working forces can be maintained intact so that the working unit is not disrupted. The problem of assisting firms to convert to defense work falls primarily under the jurisdiction of the Division of Contract Distribution. However, the Labor Division has taken an active part in programs for the spread of defense work. For example, I participated in the negotiations that led up to the program adopted by the Office of Production Management Council on August 19 and embodied in the Army directive of September 5, by which communities threatened with serious priority unemployment may be certified to the armed forces for certain special considerations in the letting of defense contracts.

COMMUNITY CERTIFICATION

So far over a dozen communities have been certified to the armed forces by the Office of Production Management, beginning with Manitowoc, Wis., which was acted upon by the Labor Division on September 11, and which received its first contract under the certification procedure on September 24. In addition to the certification of communities for special consideration in the letting of defense work, there are other means of avoiding or alleviating dislocations and labor displacement as a result of priorities. The concern may be able to utilize substitute materials that are not under priority or that are less scarce. This has occurred on a widespread scale—indeed, so widespread that it renders any calculations of displacement based on previous consumption of the materials invalid.

In addition to the utilization of substitutes or conservation on the use of the material, dislocations and labor displacement may be modified through allocations of the material in certain ways. The Priorities Branch of the Labor Division has staff members assigned to each of the commodity or industry branches of the Office of Production Management, who are there for the purpose of anticipating labor displacement and working out programs for alleviating or remedying such displacement. Many allocations have been made bearing in mind the effect of such allocations upon employment in the community or in the industry. Where small amounts of material will keep a large number of workers employed, such factors have been borne in mind in making allocations of the material.

Where the firm, for various reasons, does not convert to defense, where the community is not certified, where substitution or conservation have not been pursued, and where allocations of small amounts of material will not solve the problem, it may be necessary to transfer and train the workers for some type of work in another firm. The transfer and training of employees is part of the work of the Labor Supply Branch of the Labor Division. The success of the certification procedure and of obtaining small amounts of "critical" materials in order to avoid large lay-offs, both of which fall within my branch of the Labor Division, depends upon one's definition of success. We have, in numerous instances, been able to avoid sizable lay-offs by obtaining material for certain firms which either had not been receiving their equitable share of the material or which were in the process of conversion to defense work, and whose staffs would be disrupted if they had not received this material prior to the completion of their program for conversion.

It is a little early to attempt an evaluation of the success of the certification procedure. Following certification, contracts are placed in the certified community. However, it takes some time before contracts placed can be transformed into increased employment in the community. Nevertheless, we are now planning

to withdraw certification from certain communities where it appears that sufficient defense work has been placed, so that over a period of time there will not be a serious problem of priority unemployment unless certain unforeseen changes occur.

EFFECT OF CERTIFICATION

Mansfield, Ohio, for example, has received prime contracts from the Army for \$6,350,000 since certification, and in addition \$380,000 of subcontracts on ordnance material alone. Furthermore, one company there is apparently in line for work on an item in connection with chemical warfare. Since the labor costs will perhaps average 35 percent, the contracts already placed in Mansfield since certification will amount to a pay roll of over \$2,000,000, which presumably will be spread over a 10-month period. In addition, Westinghouse has indicated that they will transfer to their Mansfield plant as rapidly as it can be arranged some of the defense work that they have been carrying in their eastern plants.

The certification procedure has not been so successful to date in Meadville, Pa., because the equipment of Talon, Inc., is specially designed for producing zippers, and zipper-making machines cannot be used for military items. Consequently, in this case it would be necessary for the concern to put new equipment into its present plants in order to engage in defense work in buildings other than its present toolroom. Through allocations and a program of conservation and substitution, this company has been able to carry on operations at 75 percent of normal so that it has not felt impelled to change its plants over to new types of defense business.

The success of the certification procedure depends upon the willingness of concerns to bid for defense business. This most companies under present circumstances are very ready to do. Consequently, we do not anticipate future difficulties of any magnitude on this particular score.

We plan to cope with dislocations due to priorities according to the pattern that has already been established, which includes certification of distressed communities, allocations of materials to firms where a small amount of materials will prevent a large volume of unemployment or where failure to receive materials would impair a program of conversion from nondefense to defense work, the use of substitute materials and measures for conservation, the training of workers for defense work, and the placement of displaced workers in defense employment.

The CHAIRMAN. Our next witness is Mr. Biddle.

TESTIMONY OF ERIC H. BIDDLE, CONSULTANT, AMERICAN PUBLIC WELFARE ASSOCIATION, WASHINGTON, D. C.

The CHAIRMAN. Mr. Biddle, we are pleased to have you here with us this morning. Would you please outline for the committee the main features of the program developed by England for transferring labor from areas of declining industrial activity to more active areas, indicating to what extent migration is voluntary or compulsory, and what allowances are made for lodging, transportation, the moving of families, and for meeting any continued liabilities in the area left?

Mr. BIDDLE. May I ask the indulgence of the committee? I have been back a fairly short time and have been rushed about the country on a number of activities in connection with my mission. I am testifying on very short notice, and with very inadequate preparation.

The CHAIRMAN. We will give you all possible latitude, Mr. Biddle. Your prepared statement will be entered as a part of the record.

(The statement referred to above is as follows:)

STATEMENT BY ERIC H. BIDDLE, CONSULTANT, AMERICAN PUBLIC WELFARE ASSOCIATION, WASHINGTON, D. C.¹

BRITISH MANPOWER AND THE WAR

(HOW IT IS MOBILIZED—HOW DISTRIBUTED—HOW CONSERVED)

The following statement is presented in three parts:

Part I. Mobilization and distribution of manpower.

Part II. Brief outline of recent changes in British social security measures.

Part III. Labor policy and administrative methods.

I. MOBILIZATION AND DISTRIBUTION OF MANPOWER

From the viewpoint of the American observer, the administrative machinery for the mobilization of Britain's manpower for the armed forces and war industries possesses one outstanding characteristic. And that is the centralized responsibility of the Ministry of Labor and National Service for all matters relating to manpower. Thus, since the beginning of the war, the Minister of Labor and National Service has been made responsible for the registration of men called up for national service (this applies to the call-up for the military service and essential war industries); the application of the Schedule of Reserved Occupations; the combing out of skilled men from the armed forces as they have become more urgently needed in growing defense industries; regulating the distribution of labor between occupations according to war-time priorities; transferring workers needed in defense industries located at some distance from their homes; the organization of a comprehensive system of industrial training; provision of war-time health and welfare facilities for workers.

Meanwhile, through the local Labor Exchanges, the Ministry has carried on its day-to-day work of administering Unemployment Insurance and the public employment service. Furthermore, the Ministry carries on its established machinery for dealing with industrial disputes: namely, the conciliation service, the National Arbitration Tribunal, etc. Also, since the beginning of the war, the Factory Inspection Services have been transferred from the Home Office to the Ministry of Labour and National Service.

Thus, it will be seen that Parliament has vested in the Ministry of Labour and National Service substantially all of the functions which, in the United States are carried out by the Department of Labor, the Labor Supply of the Office of Production Management, the Employment Security Division of the Social Security Board, and insofar as they are comparable, the services corresponding to those which are administered in the United States by the National Labor Relations Board and the Selective Service system. Moreover, account might also be taken of the still further diffusion of responsibility in the United States resulting from the fact that some of these responsibilities are vested in the governments of the several States.

During the last war, the above-mentioned functions relating to labor supply were in Britain dispersed among an even greater number of agencies than we now have in the United States for that purpose. In other words, from the experience of the last war, Britain learned to concentrate administrative responsibility for all manpower questions under the Ministry of Labor and National Service.

The objective of the British manpower policy has been to mobilize and augment its labor forces and to arrange for its distribution between alternative uses. The manner in which this is accomplished might be conveniently divided into these three stages:

(a) To withdraw from the total available manpower the several million men and women needed for the armed forces and the civil defense services.

¹ In addition to the official documents mentioned in the statement, material made available by Political and Economic Planning, London, contributed greatly to the preparation of this statement. The author is also indebted to Dr. Carter Goodrich, of Columbia University, who has recently returned from a mission to Britain, for the material which he made available and for his valued suggestions.

(b) To provide the necessary manpower to maintain the output of goods and services for the armed forces and for essential civilian needs. This stage involves not only the employment of those who were at the time unemployed or unoccupied but also the provision of adequate resources for industrial training and retraining and the transfer, on a large scale, of men and women from less to more essential work.

(c) To bring about the maximum of efficiency of all workers. In this connection, the British have found it necessary and desirable to increase the scope of existing social services and to add a number of new social services which will later be referred to under this heading.

A. MANPOWER FOR THE ARMED FORCES AND CIVIL DEFENSE

Men registered for the armed forces are "reserved" from military service at specified ages in cases where they are in one of a great variety of skilled occupations. Thus, certain skilled workers are "reserved" in civil occupations if above the age of 25. In other occupations, reservation takes place at age 30 or 35. The purpose of the schedule is to enable the demand for men for the service to be met with the least possible dislocation of military and necessary civil production. In the most recent "Schedule of Reserved Occupations," promulgated April 10, 1941, a new principle was adopted by the Ministry of Labor and National Service known as Protected Work. From that date not only the occupation but the work upon which the men are engaged is taken into account. Under the latter schedule, a lower age of reservation is now fixed for a man in such an occupation engaged on work which is protected. All places of employment in which work is protected will be included in a Register of Protected Establishments. Firms are being admitted to the latter register if they are (a) in certain essential industries such as chemical manufacture; (b) if they are producing as a rule not less than 80 percent of current output for the government or for export; (c) road, rail, and air transportation; (d) the building industry; (e) if they qualify as a nucleus firm under the plans for industrial concentration (under this plan several industries may group about one nucleus firm to carry on for the duration of the war, especially where total output for the industry is reduced because of wartime restrictions.)

The deferment procedure is complementary to the arrangement for protected industries. Men below the age of reservation for their occupation or in an unreserved occupation doing essential work, can have their military service deferred.

The Schedule of Reserved Occupations is a product of the experience of the last war where a large number of skilled men were allowed to volunteer for service and later to be recalled for their civilian occupations. In the present war, not only was there the question of the highest possible rate of protection of munitions and equipment, but the necessity for recruiting and equipping large numbers of men and women for the civil-defense services.

The first Schedule of Reserved Occupations was published in January 1939. Until the outbreak of the war, the schedule imposed no restriction upon persons joining any branch of service in their trade or professional capacity. Restrictions applied only to service outside of volunteers in a trade or professional capacity which would involve whole-time duty in time of war. A war-time schedule came into operation at the outbreak of the war when compulsory military service was adopted, affording a greater measure of reservation than the original schedule. The schedule is constantly under review and is amended from time to time in the light of the varying manpower needs of national defense. Amendments are made under the authority of the Ministry of Labor and National Service, generally as the result of recommendations by a Committee on which the Service and Supply Departments are represented and the meetings of which are also attended by representatives of other Government departments concerned. As a result of the changes made during the past year, many thousands of men who professionally had been reserved, have been released from the military service and vice versa. For example, there were a large number of clerical workers, teachers, and professional men whose age of reservation was reduced from 30 to 25. On the other hand, a considerable number of occupations which were professionally reserved only up to the age of 30 were reserved until 35 owing to the importance of the work involved. In certain cases, men have been provisionally released from the service to return to industries in which their skills were needed. Thus, as a result of this kind of combing-out process, 30,000 men working in the mechanical trades were released from the Army in the spring and summer of 1940.

B. EMPLOYING THE UNEMPLOYED AND TRANSFERRING MANPOWER FROM NONDEFENSE TO DEFENSE INDUSTRIES*Unemployment.*

By the summer of 1941, unemployment had virtually ceased to exist. In Britain as of July, 1941, there were only 219,577 wholly unemployed and registered at the Employment Exchanges compared with 840,027 on April 15, 1940. 219,577 wholly unemployed may seem to indicate considerable unemployment but in point of fact, most of these people were in transit from one job to another. I personally analyzed the live registers of several employment exchanges during the past summer and found that the majority of the persons whose names appeared there had been unemployed but a short time (three weeks or less) and were clearly in transit from one job to another. Those who had been unemployed for a longer time were generally found to be persons in the upper age group actually unemployable either because of ill health or other causes.

The special effort which is now in process is directed to those who are not ordinarily employed but who may be unoccupied at the present time. This particularly applies to women. The principal device for finding out what numbers are available from this category is the Registration for Employment Order, 1941. This Order allows the Minister of Labor to specify any class or description of persons and call upon them to register. After registration, persons can be called upon for a selection interview and can then be required to take up a new employment even if this involves changing the person's existing employment. It is stated that every attempt will be made to reach agreement as to the type of work into which the person can best be fitted. The only age groups that had been registered up until August of this year were men of the ages 41 and 42 and women between the ages of 20 and 25. Registration of women of the 25-30 year age groups was planned to take place before the year end.

Unemployment trends.

In June 1939 there was in Britain an estimated totally occupied population of 22,000,000 persons. In June 1939, there were 13,774,000 insured workers in employment of whom 4,401,000 were women and girls (Ministry of Labor Gazette, 1940). There were at this time some 1,350,000 unemployed registered at the Employment Exchanges. Since that time, a very large number of men have been absorbed in the armed forces, but despite the demands of the armed forces and war industries, it is interesting to note that unemployment increased steadily during the first winter of the war. It was not until March 1940 that any real improvement was recorded. By the middle of April 1940, the total had fallen to approximately 972,000, the lowest total of unemployed for twenty years. The figure maintained fairly constant through October and then decreased steadily to the low figure already mentioned (219,577) in July 1941.

The so-called priority unemployment problem, it will be seen, continued to be a major factor as late as the second winter of the war.

Transfer of workers from nondefense industries.

The second main way of finding workers for defense industries is by transferring them from nondefense industries. This can be done in two ways—financial and direct—for effecting the transfer of workers and other resources from nondefense to defense industries. Britain's demand for nonessential (from a defense point of view) commodities has been reduced by increasing income and excise taxes through compulsory savings and by encouraging voluntary savings.

But these financial measures have not been sufficient, and direct measures are being used increasingly. Rationing of raw materials such as wool, cotton, and leather and the Limitation of Supplies Order were the first steps and these were succeeded by "point" rationing of clothes and footwear. There are indications that rationing of other scarce goods will logically follow. It has often been pointed out that only if rationing is extended will it be possible, in a country where there is still considerable income inequality, to reduce nondefense supplies further. Where buying power is unequal, total supplies have to be very high (in relation to the size of the population) to insure that the low-income groups will be able to procure necessities.

The aim of the Limitation of Supplies Order was to conserve raw materials and also to set free storage space and displace labor increasingly in the manufacture of these materials which were subject to limitation. This second object was, however, defeated in many cases because factories simply worked short time when production quotas were cut. Habit, domestic and other ties kept many workers from accepting essential jobs at even higher wages.

After much public criticism, the Board of Trade was therefore forced to take action in order to concentrate production in a reduced number of factories working full time. An explanatory memorandum of the Board of Trade stated that it was for each firm which wished to qualify as a "nucleus" concern to make arrangements with other firms to make it possible to operate to capacity. Firms would also be required to insure that production was concentrated in areas where competing demands for labor for defense industries were less severe and that the labor at least was adaptable and of the type likely to be absorbed in new employment. During the early months, very few satisfactory voluntary arrangements were completed. Last summer the Board of Trade was forced to fix dates after which Government arrangements would be enforced.

Concentration of industry:

The concentration of industry is being accomplished in two ways: First, by closing down factories, thus allowing personnel to find work in defense industries, and, second, where the factory is maintained intact as a productive unit with a new defense industry output. The second method is resorted to less frequently. Competent authorities point to the advantage of the second method as a means of keeping efficient management intact. This point of course involves the whole problem of subcontracting as a factor relating to the utilization of the full labor supply. There appears to have been developed no plan of universal application to all industries in respect to this problem, but there has been a good deal of improvisation on the "cut-and-try" basis within various branches of industry. So great has been the friction in a number of industries (as for example, the building industry) as to bring up the question of a basic reorganization of that industry to meet developments of the war as well as to deal with the post-war reconstruction problem.

Industrial training.

The development of the defense industries created a steadily increasing demand for certain types of skilled workers, machinists, etc. To meet this demand, the Ministry of Labor and National Service asked employers to undertake the training of workers who showed promise and at the same time converted the Government Training Centers, used before the war for training the unemployed, into schools for producing workers for the defense industries. Following the change of government in May of 1940, aggressive steps were taken to develop the Government Training Centers and renewed vigor was added to the campaign for employers to cooperate by training men in their own workshops.

At the Centers such trades as draftsmanship, fitting, instrument making, machine operating, sheet-metal working, electric and oxy-welding are taught. The field of requirements is being constantly widened and many older men hitherto unemployed are being given a chance to acquire a trade. The training which is now being given will involve instruction of persons who have no special skill and in other instances provides for up-grading courses for workers who already have a certain degree of skill. Usually the employer provides the equipment and instructors and the Ministry pays for them on the basis of so much per student-hour. Some of the newer establishments provide for the training of women as well as men. An agreement between the Engineering Employers' Federation and the Amalgamated Engineers Union to allow men and women to be trained "on the bench" provided that the allowances given be not greater than those given at the Training Centers and provided that the men when trained should not remain in the factory where the training was received.

Some time after the outbreak of the war the Centers were thrown open to men already in employment and since that time a man has been able to give up his job, provided it is not essential to the war effort, in order to train himself for a defense industry. The invitation to men employed in nondefense jobs to change over to defense industries met with very large response and in the latter months of 1940 and the early months of 1941 approximately half of the men in the Centers were men who came to training from other employment. The Centers consist of big training workshops, run on factory lines. Training is chiefly practical. In August 1941 there were 35 Government Training Centers. For a long time the flow of recruits to the Centers was restricted because of the low rates of pay; also partly because the Centers had once been only for the unemployed. Last summer (1941) the wages of trainees were considerably increased. The present rates of payment to trainees may be said to equal approximately the minimum rate for ordinary unskilled labor.

At the present time it is estimated that between 150,000 and 200,000 workers a year are passing through the Government Training Centers. By far the greatest number of workers are still being trained in private industry or in Government factories "on the bench." Here the rates of pay of trainees are fixed by means of the bargaining process between Employers and Trade Union Councils within the industry. Compensation is also now provided for factory owners for time lost owing to the liabilities incurred when trainees are taken on.

It is the opinion of some critics that adequate recognition still is not being given to the need to alter production methods, not only in order to economize on skilled labor—as, for example, by avoiding short runs of production—but also in order to simplify the training. Many critics also believe that there is still insufficient recognition of the fact that the range of jobs for women workers is constantly widening and that there are few jobs for which women cannot be trained. I observed women taking part in a wide variety of industrial operations. The manager of one important defense industry plant informed me that a little over fifty percent of the personnel there were women. Many of these women were engaged in high precision work requiring considerable skill. The manager stated that for many of the operations he preferred women and added that he hoped to increase considerably the proportion of women employed as the plant was being expanded. In a number of instances I saw women employed on various processes such as welding, grinding, and boring machines and riveting operations where their performance was said by the foremen to be excellent.

Briefly summarizing the provisions for compensating the workers while in training, the position is this: (a) The worker receives a wage as a trainee which will be supplemented by an additional subsistence allowance if he has a wife and/or dependent children; (b) if training takes place away from the worker's home town, he will receive his fare to the Training Center, a subsistence allowance while undergoing training, and payment for the loss of time while traveling to the Center. If training takes place in a Government Training Center, all of these costs will be met by the Government. If training takes place in industry, the costs will be met by the employer if such has been the pre-war practice in the particular industry. Otherwise the Government will subsidize the private employer for his training costs.

Transference of labor.

Employers in defense industries are required to notify the Labor Exchange of all vacancies. Where such vacancies cannot be filled locally, the local Exchange will notify the Region and so on to the Central Clearing House until the vacancies are filled. To illustrate what happens in the case of transferred workers, I am using the following hypothetical cases:

Take the case of Henry Thomas who, we will assume, has been working in Yorkshire in an industry whose output has been decreased because of the war restrictions. He has lost his job and so goes to the Labor Exchange in Leeds. He has the skill and work record that indicate he can fill a job in an essential war industry in Birmingham. He agrees to take the job. The Leeds Labor Exchange will then pay his train fare to Birmingham and will pay him five shillings for the time which he will lose in transit (10 shillings if the time in transit exceeds four hours). On his arrival in Birmingham, Thomas will be directed to a hostel where he can obtain temporary living accommodations until he can be billeted. This is the responsibility of the Industrial Welfare Workers now attached to the Labor Exchange. Thomas will then report to the Birmingham Labor Exchange and be directed to his new place of employment. If he has left his wife and children in Leeds and continues to maintain a home for them there, he will receive, in such case, a maintenance allowance of three shillings a day from the local Labor Exchange in addition to his wages. If he desires it, the Industrial Welfare Worker of the Labor Exchange has a duty to put him in touch with some community organization in Birmingham which will assist him in adjusting to his new living conditions. It may be such an organization as the Y. M. C. A. or a worker's club or some other existing organization in the community.

It happens that his new place of work in Birmingham employs more than 250 workers. The plant is, therefore, required by the Ministry of Labor to operate a canteen which serves hot meals. This is because of the tendency towards restriction of diet under war ration conditions. The factory inspector of the Ministry of Labor is also empowered to require that full or part-time medical services are available at the factory. The Ministry of Labor has also required that the factory shall have on its staff a welfare worker familiar with the personnel work.

Now let us take the imagined case of George MacFarlane who, we will assume, works in a little town in Worcestershire. George has lost his job because of war conditions and he does not have the type of skill that is in demand in a war industry. He discusses the matter with an interviewer at his local Labor Exchange. It is arranged that he shall take a course at the Government Training Center in Birmingham which is one of thirty-five such centers operated by the Ministry of Labor throughout the county. He goes to Birmingham, his fare paid by the local Labor Exchange. He reports to the Birmingham Labor Exchange, is referred to the training center for his course of training. While in training, he will receive a nominal weekly wage, plus his board and lodging. Since he is maintaining a wife and children at his home in Worcestershire, he will receive a maintenance grant for their support that will continue during his training course. While he is still in Worcestershire and unemployed, waiting for posting to the Birmingham Training Center, he will receive his unemployment insurance grant at his local Labor Exchange.

Economy of manpower in defense industries.

In this section I have in general considered the transfer of workers from non-defense to defense industries. Another important factor is the distribution of various classes of labor within defense industries. It is not only a question of whether the job is necessary for the war effort, but also whether the man is necessary for the job. Since skilled workers were scarce as compared with unskilled, heavy labor as compared with ordinary labor, men as compared with women, young and unattached workers as compared with others, it became clear that no job could be allowed to retain a worker in one of the scarce categories if it could possibly be carried by a substitute. Thus, bottlenecks are caused by the shortage of workers of the particular kind of skilled experience. The Ministry of Labor and National Service called for a special registration of machinists under the Industrial Registration Order, 1940, also of ex-shipyard workers under Industrial Registration Order, 1941, of Marine Engineers, merchant seamen and coal miners under the Registration for Employment Order. Last summer when coal stocks had fallen below a safe margin, the Government, seeking to increase stocks by 20,000,000 tons by the end of October, estimated the need for 50,000 additional miners. Because of the fact that the total output was materially decreased following the loss of continental markets, many miners had transferred to other essential industries such as aircraft production. It will probably be very difficult for the Ministry of Labor to withdraw ex-marine engineers or coal miners from aircraft firms whose objections are supported by the Ministry of Aircraft Production. It was this type of problem that strongly supported demand for the establishment of a Minister of Production with overriding powers during the production debates held in Parliament in July, 1941.

The transfer of workers from one type of work to another has sometimes been held up because of difficulties of wages and other conditions. Men, for instance, were needed for various kinds of heavy work such as iron ore mining, land drainage. These could be obtained from aircraft factories where semiskilled work is now being undertaken by women, but wages in the aircraft factories have been considerably increased, thereby making the men very reluctant to transfer to jobs at ordinary unskilled labor rates.

Because of the financial policy of the Government, directed to the objective of maintaining stable prices (increased taxes, stimulation of savings, price and rent controls, etc.) these inequalities in the wage structure do not appear to have increased in Britain at as fast a rate as they appear to be rising at the present time in the United States.

On the other hand, there is in the United States still a large pool of unemployed available for training in defense industries. Moreover, there remains still the priority unemployed to be absorbed in defense industries. Hence, transferring of semiskilled workers among defense industries has not yet developed in the United States to the same degree.

Great pressure has developed in England to economize in the use of youth and women who are free to leave their homes, since many women have had to leave home to join the services or to move to districts where there were heavy demands for labor in defense industries. There is an increasing pressure to release such women from jobs in offices, factories, and shops which can be done by older women, even in cases where younger women previously had been engaged to replace men who had entered the service.

There has been much criticism of the location of some of the new factories to the effect that they are not built in areas of ample labor supply, and this problem has

been increased by the necessity for the evacuation of women and children from target areas, in which case they often take the living accommodations required for war workers.

C. EFFICIENT UTILIZATION OF LABOR

Many critics of the Government assert that no comprehensive wage policy has been developed in relation to a coherent national financial policy. They contend that because of this deficiency certain of the newer defense industries offer higher wages than obtain for corresponding jobs in the older industries and thereby tend to churn the labor supply unnecessarily and to increase mobility of labor to an undesirable extent.

Early in 1941 the Ministry of Labor issued the Essential Work (General Provisions) Order, 1941, and has subsequently issued a number of specific essential work orders. Under the provisions of the Essential Work Order the Minister may schedule any undertaking as an essential undertaking if he is satisfied that—

(a) the terms and conditions of employment are not less favorable than the recognized terms and conditions as provided for by the Conditions of Employment and National Arbitration Order, 1940 (i. e., wage standards and working conditions are up to that standard);

(b) that satisfactory provision for the welfare of persons employed in the undertaking exists; and

(c) that where, in his opinion, provision should be made in the undertaking for the training of workers, adequate provision exists for such training.

The Essential Work Order also provides that once an undertaking is scheduled an employer may not dismiss a worker (except for serious misconduct) nor a worker leave the employ of the establishment without the permission in writing of a National Service Officer; that (except in cases of serious misconduct) employment shall not be terminated without a week's notice to the employee, and further provides that any person employed in such an undertaking shall at all times receive a "normal wage" for the prescribed working hours in that industry if that person is during normal working hours—

"(1) capable of and available for work; and

"(2) willing to perform any services outside his usual occupation which, in the circumstances, he can reasonably be asked to perform during any period when work is not available for him in his usual occupation in the undertaking."

The Essential Work Order defines the way in which the "normal wage" is calculated for the purpose of this "guaranteed wage" provision. The Order also provides for the establishment of appeal machinery through which both employers and employees may appeal from the decision of the National Service Officer where it is so desired.

If a person employed in a scheduled undertaking absents himself from work without leave or reasonable excuse or if he is persistently late at work, the Order provides that the employer may report such absence or lateness to a National Service Officer (at the local Labor Exchange) who has power to require punctuality and regular attendance.

Essential Work Orders applying to particular industries had been issued in respect of four major groups of labor, up to August 1941; i. e., shipbuilding and ship repairing; the merchant navy; coal mining; building and civil engineering. A separate plan has also been developed in respect of dock workers.

The Select Committee on National Expenditure (a Standing Committee of the House of Commons) in its recent reports has had much to say concerning the unemployment of labor resulting from excessive waiting time and because of absenteeism (i. e., unexcused absence from work where no sufficient reason is subsequently given by the absentee). The first of these problems is partly a question of management since it relates to the utilization of limited supplies. Partly, it is a problem of distribution of limited supplies.

In the recent reports of the Select Committee, attention was called to the direct association between absenteeism of workers and overlong hours of work. In the most recent report of that Committee, there was shown to be correlation between declining productivity and excessive hours in certain war industries. Especially was this true in the period following Dunkirk when the critical situation stimulated a program of long hours of employment.

Industrial welfare.

The Ministry of Labor and National Service has divided its welfare program, administratively, into two sections, devoted respectively to welfare inside the factory and welfare outside the factory. War conditions have demonstrated that the ramifications of each type exists over a far wider field than had been generally realized before the war.

In Britain (as in the United States), personnel and welfare management has been increasingly recognized in recent years as a distinct function of management which is delegated to a special department. The foreman who once selected his own labor at the factory gates generally has been superseded in this function by the Personnel Management. The personnel manager is also often responsible for training new labor, for introducing employees to their work in the first vital weeks when labor turn-over is at its highest. Frequently, canteens, safety measures, and health of the workers are further responsibilities of the personnel and welfare department. The development of this managerial function is not by any means a new feature beginning with the war. However, under war conditions, growth of this practice in industry has enormously increased. Throughout the country there is a growing awareness of the need for adequate personnel management in all defense industries.

The main new personnel problems concern women. Many women who are being brought into employment today have never worked in factories. Others are being transferred to strange jobs. Day nurseries are often the answer to the problem of mothers' helpers. Arrangements for part-time employment exist. War industrial companies frequently have adjusted the time schedule of their shifts to permit women to do their shopping. These are but a few of the questions that have stimulated the development of factory personnel and welfare departments in Britain since the war began.

Welfare requirements on the Ministry of Labor (inside the factory).

The Minister of Labor last year established the Factory Welfare Advisory Board to advise him on all questions of welfare inside and outside the factory. The Factory (canteens) Order, 1940, gave factory inspectors the power to direct that a canteen serving hot meals, be established wherever necessary in every factory employing more than 250 persons; while still another order gave inspectors the power to insist that whole or part-time medical care should be provided for factory workers. The Essential Work Orders have finally given the Minister a very definite stake in management since they state that before scheduling a factory under these orders, the Minister must be satisfied that there is adequate provision for welfare inside and outside the factory. Many factories without satisfactory provisions of this kind have been registered provisionally, but the pressure on employers to take action will now be very much stronger.

Welfare outside the factory.

Another section of the Ministry of Labor is concerned with conditions of the workers outside the factories. Special welfare officers have been appointed in every division of the Ministry to discharge this second function. They are intended to insure that:

- (a) Transferred workers have a proper place in which to live;
- (b) They have adequate means of obtaining food, particularly those workers who cannot obtain meals at home or at lodgings or in the factory;
- (c) There are facilities for recreation and adult education;
- (d) Provision is made for the young children of mothers who are working in the factory;
- (e) Adequate transport facilities are available;
- (f) The health of the workers is safeguarded.

How this formidable list of duties has been carried out could be learned only by intensive study. Undoubtedly performance varies from place to place. There are certainly not a sufficient number of trained welfare officers to insure that these provisions are fully complied with. The fact remains, however, that they are recognized as problems and they are stipulations of the Ministry which is responsible for the entire manpower supply. There is no doubt in my opinion that these functions are among the most important having to do with the operation of the production machinery in Britain under war conditions, bombing, black-out, evacuation of children, etc.

Housing.

In many of the new defense industry areas, there is a housing shortage. It is difficult to spare labor and materials for house construction today but in some cases it has been absolutely necessary to build houses in these districts. In other instances, householders have been prevented by the government from letting rooms without the permission of the local billeting officers. In some instances, hostels have been built for migrant workers. A "National Service

Hostels Corporation, Limited" was established in the spring of 1940 to take control of such hostels. The biggest hostels have been set up near the new government munitions factories. Housing problems are severest near these factories for the reason that they have been located for strategic reasons, in the most out-of-the-way places.

Agricultural labor.

The Agricultural Wage Board recommended to the counties the adoption of an agricultural minimum wage which has been accepted by all of the counties, I believe, with the exception of Cornwall, where it was decided that no change was warranted. The minimum wage so established is 48 shillings a week. The problem in England has been not only to hold the present acreage in cultivation but to increase the acreage, thus resulting in an increase in the number of agricultural laborers required. The latter supply has largely been met by such devices as the Woman's Land Army, organized under the auspices of the Ministry of Agriculture, by means of which women from the towns and cities are enlisted for service on the land. It will be noted that under present British conditions, there is less tendency for normal agricultural labor to migrate to the cities than might normally be the case. Because of the fact that industrial cities are the chief targets of enemy air attack, because of housing shortage, conditions under the black-out, etc., the higher wages of the city offer less attraction than in ordinary times.

The number one defense requirement—the health and welfare of the people.

Among the vivid impressions which this witness received in Britain during the past year none is more indelibly fixed than this; namely, that the strengthening of health and welfare measures ranks with the building of guns, tanks, and planes as a defense priority. Under the circumstances, the health of the British people is being maintained beyond all expectations. The supplies of animal proteins, fats, and sugar have greatly deepened the concern of the government with problems of nutrition and the maintenance of nutritious food for all groups of the population. Yet there is as yet no evidence that any serious effects have been visited on any substantial number of the people by virtue of food shortages. However, if these ill effects have been avoided, this has been brought about only by prodigious effort on the part of all concerned and in the face of a food-distribution system geared to the pre-war conditions of surplus supplies which could tolerate a greater degree of waste and inefficiency.

The principal exceptions to the major (favorable) trend are to be found in the fairly significant increase in the incidence of tuberculosis and, during last winter, of nose, throat, and chest diseases, and certain of the communicable children's diseases. The Ministry of Health ascribes the increase of tuberculosis to overlong hours of work and to the increased amount of factory work done by women. Conditions of overcrowding, resulting from the destruction of housing, transfer of war workers, etc., contribute to this undesirable trend. While the increase in incidence of the above types of illness was in some instances quite large, relatively, still the absolute increase was in no case large, considering all the circumstances.

The witness can merely summarize here the following measures which have been taken to strengthen and expand the health and welfare measures particularly during the last year. Few, if any, voices of England are raised today to complain that these are nondefense expenditures. Sometimes one wonders whether, in this as in other matters, it is necessary for the bombs to fall in order that a nation may learn.

II. A BRIEF OUTLINE OF THE CHANGES IN SOCIAL SECURITY PROVISIONS

PUBLIC ASSISTANCE

Under the provisions of the Prevention and Relief of Distress Act, a war measure, the Assistance Board, which formerly administered Unemployment Assistance, is now enabled to give financial assistance to any person or family which suffers a loss of income due to war causes, provided that the actual present income of the person falls below certain levels. The means test which is thus required is somewhat less rigid and the scale of grants somewhat higher than the Unemployment Assistance scale of assistance payments. Thus, if an individual loses his income due to war reasons, e. g., the closing of a small shop, professional office or other such case, aid can be received under the provisions

of the Prevention and Relief of Distress provisions. Prevention and Relief of Distress grants are financed 100 percent from the national exchequer.

Old-age Supplementary Insurance Act passed in 1940.

Under this Act the Assistance Board may, subject to a means test, supplement the Old-Age contributory pensioner's income, if such pension (which the pensioner receives of right) is not adequate. Thus the pensioner is relieved of the necessity of applying to the local Public Assistance Committee for poor relief.

Civilian injury assistance.

If a civilian is injured by enemy action, the Assistance Board will grant the injured person assistance under a stipulated scale which is somewhat higher than the ordinary assistance rates. This form of assistance is given without any means test whatsoever. If the disability from such injury continues beyond three months, the person is entitled to a pension, temporary or permanent, depending upon the nature of the medical findings.

War-damage insurance.

All real property in the United Kingdom is covered by compulsory war-damage insurance with respect to which premiums are paid on the progressive income-tax principle. Under the War Damage Act, chattels also may be insured against war damage at the option of the owner within certain maximum limits. While compensation under this Act is contemplated to be adjusted at the end of the war, the Assistance Board is empowered to make immediate grants for household goods, chattels, workers' tools, etc., necessary to reestablish the family in satisfactory conditions for the duration of the war.

Increased benefits.

Under the National Unemployment and Health Insurance Acts, benefits have been increased to meet the increased cost of living. Similarly Public Assistance scales in all categories have been increased. At the same time, payments of the worker and the employer to the Unemployment Insurance Fund have been slightly increased. The latter increase is not because of actuarial requirements, but, rather, as a part of the program of increased taxation and savings as an anti-inflationary measure. Actually the debt of the Unemployment Insurance Fund, which stood at £95,000,000 at the beginning of the war, has been extinguished and the reserve of the fund is now increasing at the rate of approximately £50,000,000 a year. The purpose is to meet the probably increased demand upon the fund at the end of the war.

INCREASED SCOPE OF SOCIAL INSURANCE

The coverage of Unemployment and Health Insurance has been extended to cover nonmanual workers receiving salaries of £420 per year and less. Since agricultural labor is covered under special plans, this means that the overwhelming majority of all workers in the United Kingdom are now covered by the National Unemployment and Health Insurance plans.

Old-age contributory and supplementary old-age insurance.

Under both of these categories the age at which women are eligible for benefits was in the early part of 1941 lowered by Act of Parliament from age 65 to age 60.

British restaurants and factory canteens.

Because of the transfer of war workers, the separation of workers from their families and food rationing, etc., the Ministry of Food is encouraging all local authorities to open British Restaurants; that is to say, public restaurants which usually serve a hot midday meal. In some instances the restaurants serve also a morning and evening meal. Here anyone may buy a meal at prices which range from about 8 pence to a shilling. For those who cannot afford to pay, the local authorities will provide free tickets. These are operated directly by the Local Authorities under the supervision of the Ministry of Food. As of August, approximately 1,200 of these restaurants were in operation, something over 200 in London alone. The requirements of the Ministry of Labour concerning factory canteens have been previously described.

Day nurseries and nursery schools.

The Ministry of Health is encouraging local authorities to extend the facilities of day nurseries and nursery schools to meet the problems of children and working mothers. In addition to the voluntary agencies of this kind which had already been in operation, some 300 have been established by local authorities under the general supervision of the Ministry of Health.

Medical care.

The Emergency Medical Service, which was originally planned to act as a casualty service for civilians injured by enemy action, is a National scheme based regionally upon the public and voluntary hospitals and utilizing some 5,000 physicians and a large nursing reserve. The physicians serve either part or full time, arrangements varying with the local situation. Gradually, the coverage of the Emergency Medical Scheme has been extended to cover such categories as unaccompanied (evacuated) children, who are treated free of charge. The extended coverage of the Emergency Medical Scheme now covers some ten categories of persons, such as evacuated mothers and children, transferred war workers, etc. Generally, persons in the latter-mentioned categories are expected to make some payment, according to means. It is, however, the basic purpose of the Ministry of Health to provide, through this scheme, medical service as required, irrespective of means.

III. LABOR POLICY AND ADMINISTRATIVE METHOD

Because of the various restrictive measures such as the Essential Work Order and the National Arbitration Order, many persons in the United States tend to think of British labor as being virtually conscripted under war conditions, because of the restrictions that tend to prevent workers from moving from place to place and from job to job.

In Great Britain today the general tendency is to complain that not enough compulsion is applied. Critics include not only the Conservatives but also many Labor Party adherents who visualize the more complete rationalization of manpower for all-out defense purposes.

Actually the Government has not taken advantage of these most extensive powers of compulsion, but has rather relied upon persuasion and the extensive machinery of consultation which exists in Great Britain as between Trade Unions and employers' associations rather than upon compulsion.

The basic power over labor is contained in No. 58-a of the Defense Regulations under which the "Ministry of Labour and National Service * * * may direct any person in the United Kingdom to perform such services in the United Kingdom * * * as may be specified by the direction * * *."

This power is implemented by the National Arbitration Order, the purpose of which is to eliminate strikes and lock-outs. The Essential Work (General Provisions) Order, and the specific orders which have been issued under this, together constitute the central support of the system. It is to be noted that compulsion under these orders operates both as to employers and employees and enforces upon the employer standards of "guaranteed wages," working conditions, welfare conditions, bargaining rights, etc.

As of July 25, 1941, the provision of the Essential Works Order had been applied to 11,086 establishments employing 3,696,000 workers, and the process is being actively extended. In this, as in other aspects of the Government's labor policy, it is the clear intent of the government to provide protection and guarantee advantages to the workers to whom compulsion is applied.

COMBING OUT OF SKILLED LABOR

It is the job of the local Labor Supply Inspector attached to the local Labor Exchange to be combing out continually the supply of skilled labor from certain factories in order to spread the supply more evenly according to the needs.

In one notable case the Ministry of Labour's representative negotiated arrangements under which a large firm in an industry, relatively unessential in the defense program, agreed to release nearly 1,600 young women in order to permit their employment in nearby defense industries. The terms, which were successfully contrived to make the transfer as easy as possible, are indicated in the document below, which was substantially that posted in the factory. It should be added that representatives of the Trade Union, as well as of the Ministry and the employer, joined in explaining the arrangement to the workers at a meeting in the workers' canteen.

CONTRACTION OF PRODUCTION

"As a war measure production in these works is being reduced. The chief reason for this is to release workers, especially young women, for urgent and vital work at Government Factories, etc.

"In response to an urgent request from the Ministry of Labour, it has been decided to release from these works all female employees aged 20 to 24 years, inclusive.

"Please accept this letter as formal notice to terminate your employment on Friday the 1st of August, 1941.

"The Ministry of Labour have suitable vacancies at the following Royal Ordnance factories on work of the highest national importance.

(Here a number of specific Royal Ordnance Factories were listed.)

"Representatives of the Ministry of Labour and the Factories and Medical Officers will shortly attend this factory for the purpose of interviews and arranging medical examinations.

"Full particulars regarding hours, wages and conditions of labour will be furnished at these interviews.

"Those employees who cannot be absorbed immediately should remain at their present occupation until notified.

"It is with some reluctance that this notice is being issued, particularly as many of the employees concerned have been here since leaving school, *but the National need is urgent and imperative*, and it is the duty of those who are able to provide those in the front line with the necessary munitions of war.

When the National emergency ceases the Management hopes to be in a position to welcome back to their present position all those loyal and patriotic employees who have responded to their country's call in the hour of need.

"The Management desires to express appreciation for loyal services rendered and to wish you well in your new sphere of activity."

In these transfers and in the recruiting of labor, the official policy of the Ministry has been based on the dictum that, in industry at least, a volunteer is worth more than a conscript. "Directions" under the Defense Regulations have been issued only in a relatively small number of cases and there have been so far only 32 prosecutions (29 of them successful) for refusals to obey these instructions.

COMPULSION AND CONCILIATION IN INDUSTRIAL DISPUTES

The real implements in the field of industrial disputes are conciliation and persuasion, compulsion being used only as a last resort. The National Arbitration Order of July 18, 1940, definitely prohibited strikes and lock-outs, provided only that the Ministry of Labour and National Service does not refer the disputes to the prescribed agencies for settlement.

Two important points should be underlined with respect to the taking of these powers. In the first place, before promulgating this order, the Minister of Labour referred the proposed terms of the order to the Joint Consultative Committee of the Ministry of Labour, representing the Trades Union Congress and the British Employers Confederation. The Order was issued only with the consent of this Committee and the organizations which it represented. In effect, therefore, it represented an agreed declaration against industrial disputes on the part of organized workers and organized industry.

In the second place, as in every Government measure which has been adopted and which has placed compulsion on labor, the Order itself contains provisions definitely favorable to labor.

Thus in industries in which there are collective agreements arrived at by "organizations of employers, trade-unions, representatives respectively of substantial proportions of the employers and workers engaged," other employers in such industries must observe terms and conditions of employment not less favorable than those embodied in these agreements.

The same Order also includes the regulations requiring an employer to record departures from existing trade practices with respect to the employment of the particular types of labor.

Generally speaking, it has been the practice not to use the compulsory powers under this and other orders vesting powers of compulsion in the Government. Of course, they remain as a threat lying in the background.

In conversations which this observer held with employers, trade-union officials, and the Conciliation Officers in the Ministry of Labour, it was repeatedly emphasized that there is a strong urge on the part of all concerned to use the pre-war machinery of consultation and conciliation and to refrain from recourse to compulsory powers excepting as a last resort. The relatively small number of cases coming before the National Arbitration Tribunal is the best evidence that this is true.

THE PRACTICE OF CONSULTATION

One of the most notable features of British industrial policy during the war is the direct representation in many branches of the war effort of representatives of the Trade Unions and of the Employers. There is little abstract discussion of such general terms as "functional representation" and the actual instances of consultation have often grown up in an *ad hoc* and British manner as the evolution within certain establishments, from air-raid spotters representing the men, to parties for repairing immediate damage and finally to local production committees. Nevertheless, the encouragement of representation is a recognized Government policy and is sometimes attacked as such by critics of the Government.

The joint bodies of greatest significance for the war effort are the following:

1. The Joint Consultative Committee to the Minister of Labor, consisting of seven representatives of the Trades Union Congress and seven representatives of the British Employers Confederation;

2. The Central Joint Advisory Committee to the Production Executive, consisting of twelve representatives of the Trades Union Congress and twelve representatives of Employers, of whom six are chosen by the British Employers Confederation and six by the Federation of British Industries.

3. The Regional Boards of the Production Executive, each of which consists of three Trade Union representatives and three Employers representatives, in addition to the representatives of various Government Departments. The Chairman and Vice-Chairman of these Boards are named from the Employers and Workers Panels.

In addition, there are representatives appointed by the General Council of the Trades Union Congress on the following bodies:

- (a) All the Industrial Controls of the Ministry of Supply;
- (b) The Industrial and Export Council of the Board of Trade (concerned with the concentration of industry and other questions);
- (c) The Committee on Retail Trade of the Board of Trade;
- (d) The Central and Area Prices Regulation Committees;
- (e) The Trades Union Council Advisory Committee to the Ministry of Food.

The Trades Union Congress has also accredited representatives to each of the 12 Regional Commissioners for Civil Defense. Trades Councils in the various localities are also asked to nominate a "consumer representative" on each of the Retail Coal Prices Advisory Committees and they are also represented on local Food Control Committees. A more complete list of representative agencies will be included in a report on "Methods of Collaboration" which has been prepared by the International Labor Office for that organization's 1941 Conference.

In these various bodies the effectiveness, type and purpose of activity vary widely. I have not attempted to consider the cases in which the Trade Union members are expected to represent the general or working-class consumer. On the bodies directly concerned with industrial questions, the major function of such representation has been to secure in advance the understanding and acquiescence of the representatives of the interests that were to be affected by Government action and, therefore, to secure their help in extending and defending these measures before their constituents. Thus, the texts of the important regulations affecting labor, including the Essential Work Order, and the National Arbitration Order, were worked out in agreement with the Joint Consultative Committee, were amended where necessary to meet the interests of the parties, and were not promulgated until such agreement was secured.

Since this practice of consultation has evolved gradually over a period of years only to be increased at greater breadth and implemented by official action during the war, it is often thought that all parties concerned have come to regard it as the essence of cooperative action between employers' and employees' organizations. From many quarters have come criticisms of this practice of consultation, some of the critics arguing that it confuses administration with policy making; that it causes undue delay; that it decreases the vigor of the war effort by providing openings for logrolling and delaying activities. The practice has probably militated against the development of any national policy on wages and hours, which has been referred to earlier above, with consequent effect upon the mobility of labor as between essential war industries.

SOME RESULTS OF THE LABOR POLICY

Impartial observers in Britain during this period seem to be generally agreed that by and large the British Government's labor policy has been reasonably successful. In July of 1941 the records of the Ministry of Labour indicate the smallest number of man-days lost for any month on the record. Conversely, the month of July was probably the largest month of production in terms of man-days worked. One day during early August 1941 during a discussion of this matter with the Chief Conciliation Officer of the Ministry of Labour, he advised me that as of nine o'clock of that particular morning not a single industrial dispute in the United Kingdom was known to the Ministry of Labour. I spent a considerable amount of time in a particular district which has always been one of the traditional centers of unrest in Great Britain. While there I learned of a number of hotly disputed matters as between employers and labor. Yet, withal, there was a decidedly favorable contrast when present attitudes were compared with the attitude of both employers and employees which I observed in this same region during the past war.

Disputed questions included such points as dilution and upgrading of labor and the introduction of large numbers of women into industry, payments of wages, weekly wages to dock workers, piece rates, and overtime absenteeism. All of these questions are continually debated pro and con throughout the country. Despite this fact, the absence of unrest is marked. In general, observers appear to agree that the extent to which the Government has encouraged consultation and persuasion and refrained from the use of its powers of compulsion are factors of the utmost importance. To what extent the presence of labor leaders, such as Bevin, in the Government since May of 1940 has been a factor cannot be appraised in any exact way. Probably underlying it all is the fact that British labor by and large considers this war as much its own battle as do the employers.

IV. THE LABOR EXCHANGE

In connection with any discussion of the mobilization of manpower in Britain there is one device which deserves special mention, and that is the Labor Exchange. Several hundred Labor Exchanges and their branches are scattered about the country in strategic and convenient locations. Practically speaking, the Labor Exchange is the equivalent of our public employment office.

MACHINERY FOR WORKERS' APPEALS

In past years when unemployment was a big factor the worker had established the habit of going to the Exchange concerning his Unemployment benefits and to seek reemployment. When he wished to make a complaint against a ruling of the officials of the Exchange concerning his Unemployment Insurance Benefits, he could and did frequently appeal to the local Appeals Committee. This Appeals Committee consisted of one person representing the workers and one person representing the employers, together with an impartial chairman. The employer's and worker's representatives were each selected from a panel and they served voluntarily on appeal committees in rotation. The Chairman, usually a lawyer, a political scientist, or some other professional person, was employed by the Ministry of Labor and National Service and paid a fee for his service.

The machinery for appeals thus established in 1912 when the national Unemployment Insurance Act was first passed, has remained substantially unchanged in form and method. In the course of time, the members of these committees have acquired skill and experience in dealing with the wide variety of human problems that come before them.

Under war conditions these same appeal committees called by different names have formed the basis for practically every type of appeal by individual workers arising from the various national service regulations.

For example, take John Jones who has been called up for the military service and wishes to appeal for deferment of his service on the basis of unusual hardship. The Hardship Committee, on its own responsibility, may approve the deferment, providing the Committee is satisfied that the applicant has a good case.

Or perhaps Mary Jones has been requested by the local authority to comply with the compulsory fire watching order, which will obligate her to take her turn watching for fire bombs in her neighborhood of a target city. Mary Jones claims that compliance with this order would cause undue hardship. The Committee will decide Mary Jones' case. If she claims physical disability,

the Committee may order a medical examination and be guided by the Doctor's findings.

Henry Smith claims that an order issued under the Essential Work Order which restricts him from leaving an essential war industry will work a hardship on him. Again the Committee will decide the case on its merits.

The same procedure can be followed in other types of appeal by individuals from the orders which sometimes severely restrict their movements from one place of employment to another. The decision on each appeal is within the discretion of the Appeal Committees, subject, of course, to the general regulations of the Ministry of Labor.

The best evidence of the general success of this plan, which so vitally affects the British working people, is the fact that one hears so little discussion about the appeal machinery. Most striking fact of all is that the appeal machinery is so taken for granted that it hardly ever makes the news.

All of these and many other types of contract have given the workers in Britain a new and vital association with their local Labor Exchanges.

Closely related to the Labor Exchanges are the conciliation services of the Ministry of Labor and the factory inspectors. While the latter services are not actually located in the Exchange, they are all coordinated by an officer who is one of the 12 Regional Controllers of the Ministry of Labor.

At the center in London, the Minister of Labor is, significantly, Chairman of the Production Executive of the Cabinet which consists of the Ministers of the Supply Departments of the Army, Navy, and Air Force.

Thus, at the national level, questions of major policy affecting the competing labor requirements of the Ministries responsible for war production machinery and the military services have created constantly changing labor priority problems. From each of these spring an infinite number of problems which affect the well-being of individual workers.

Learning the lesson of the last war, the British concentrated in the Ministry of Labor practically all problems dealing with the recruitment, training, and distribution of workers among essential war industries, together with the new industrial welfare services. The need for many of these industrial welfare services has always existed but now that need has been sharply emphasized by war conditions. The Labor Exchange has become the tangible link between the individual worker and the machinery for organizing the war effort.

EMPLOYERS ALSO COME TO EXCHANGE

Employers, too, come to the Exchange. Employers in most of the essential war industries *are required by law* to notify the Exchange of their labor requirements. Inspectors from the local Labor Supply Committee, which is closely related to the Exchange, determine whether specific plants and factories are using skilled labor efficiently. The inspector, an engineer, will advise on production adjustments to effect economies in the use of skilled labor.

Among his other statutory powers, the Minister of Labor is empowered to remove skilled labor from a plant where it is being inefficiently utilized.

The employer possibly also serves on one of the Committee panels. Thus, the Labor Exchange has become a meeting ground locally for the representatives of employers, workers, and the Government. There are, of course, many elements of all of this that are not functioning smoothly. But these arise mainly from the human shortcomings inevitable in the face of new and vast administrative problems. Obstacles arise also from the terrific friction that is created by the increasing dislocation of the leisurely peacetime organization for the production and distribution of goods.

The fact that the British Unemployment Insurance and Public Employment Offices—that is to say, the Labor Exchanges—are a part of a national system within the Ministry of Labor and National Service seems to be one of the greatest elements of strength in the British situation.

Thus, the operation of the Labor Exchange can be geared to the necessarily rapid changes in manpower policy of the Government, subject, as they are, to the swift change of events. For, in the final analysis, the Minister of Labor and National Service is responsible for the supply of man and woman power.

To sum up a few of the more important functions of the British Labour Exchange then it is responsible for the—

- (a) registration of the Nation's man and woman power.
- (b) distribution of workers to the armed forces and to defense industries.
- (c) administration of hardship and other appeals.
- (d) recruitment of workers for industrial training schemes.

(e) administration of the Labor Supply Scheme.

(f) payment of travelling, lodging, and other allowances for transferred war workers.

The supervision of industrial welfare work inside and outside the factory.

All of these and other responsibilities have been concentrated around the Labor Exchange by the Ministry of Labor and National Service. Thus does the Ministry bring its message to every corner of the country, the better to carry out its enormous responsibility for the mobilization of Britain's man and woman power.

TESTIMONY OF ERIC H. BIDDLE—Resumed

Mr. BIDDLE. If any questions are raised here that I am not able to answer for the record at the present time, I will make note of them and supply the committee with the information, which I am sure I have available.

I have been in England the good part of the last year, particularly the last 6 months, returning in September. I should say that the British problem of labor supply might be divided into three divisions—and I think this will bear on the question and probably on all the other questions that might be asked:

First, of mobilizing several million men for the armed forces and for civilian production and military production.

Second, the recruitment from among the unemployed of a large body of workers to carry on civilian and military production for the armed forces' needs.

Third, the question of raising to the maximum of efficiency all the workers on their jobs.

The significance of this threefold division is that there is one agency of government which is responsible for all three of these phases. That is the Ministry of Labor and National Service, which has vested in it approximately the same functions as those which are vested in the Office of Production Management, Labor Supply Division, the Labor Department, Selective Service Board to a large extent, and the National Labor Relations Board, as well as the Employment Security Division of the Social Security Board; so that the Ministry of Labor envisages the entire problem of labor supply, and it is interesting to note the way in which it has developed along with that the concept of its responsibility for welfare provisions inside and outside the factory. A good many of these relate to this question of transfer of labor. As you know, sir, British labor is a good deal more immobile than American labor. It doesn't move about the country in the same way.

The CHAIRMAN. It hasn't the room either.

Mr. BIDDLE. That is right. So that a somewhat different problem is involved in the transferring of labor in Britain, because of both geography and habits.

The CHAIRMAN. When England started to do what we are doing now—shift from nondefense to defense—unemployment increased, didn't it?

Mr. BIDDLE. The number of unemployed registered in the national labor exchanges in June 1939 was about 1,300,000. You will remember that England had started the phase of activity that would correspond to our defense preparations after Munich. The period up to that point would hardly be significant, therefore, from the standpoint of transfers from nondefense to defense employment.

It is interesting to note, however, that the unemployment figure in England remained up in that range even after Munich, for a number of months, and as late as April of 1940 there were still some 840,000 on the live registers of the employment exchanges. Those were people insured under the Unemployment Insurance Act. That is the only way they have of measuring it in any positive terms. During the early part of that period exactly the same things were happening as are happening here now: Nonessential industries were closing down.

From that time to last spring the situation changed very rapidly, and in July of this year were some 219,000 unemployed registered on the live registers. That is probably an irreducible minimum.

The CHAIRMAN. We have about three times the population of England. So if you had a million unemployed there in England, that would correspond on a population basis to about 3,000,000 here, wouldn't it?

Mr. BIDDLE. Well, 1,300,000 on the live registers wouldn't mean quite that, sir, because the Ministry of Labor figures are only good as to those in insured occupations; so that 1,300,000 would possibly give you something under 5,000,000 correspondingly in the United States. In addition to that, probably some 30 to 40 percent of the workers are not covered by unemployment insurance, so those figures would not correspond to our gross estimated figures.

The CHAIRMAN. It was testified this morning, Mr. Biddle, that approximately 5,000,000 people are now registered with public-employment agencies in the United States.¹

Mr. BIDDLE. In those terms the figure wouldn't be very different from the pre-war British figure. The significant thing about the way in which this unified responsibility for the labor supply, for manpower supply, is expressed in the Ministry of Labor is its focus on the local employment exchange, which is the rough equivalent of our public employment offices.

Practically every contact which the worker has with war industry is at the labor exchange. Before the war he went there, just as he does in our exchanges, for unemployment compensation benefits; and if he were employed, he was covered by unemployment insurance. He went there twice a week perhaps to see whether there was a job available. So that he had that basis of operation at the outset; but shortly after the beginning of the war, when the Labor Ministry was made the Ministry of Labor and National Service and expanded its functions very rapidly overnight, that agency became responsible for registering men for the armed forces at the labor exchanges. Thus it became responsible for the registration of all men and women for any kind of industrial employment in connection with the war. At that juncture the labor exchange became the focus of the entire labor supply locally.

The CHAIRMAN. We have heard about the employment agencies all over the country, about getting these lists and keeping them active, but I think it should be remembered that we are dealing with 48 States; and England's problem is one thing and our problem is entirely different. They have a central agency there to take care of employment problems. Here we have 48 State agencies and some Federal agencies. I always think of England in terms of a State smaller geographically than Oregon, and I think we have to keep that in mind.

Mr. BIDDLE. It is not impossible though, sir, that there would be a national system here. It was contemplated, at the time the Unemployment Act was passed, that there might be a national system of unemployment offices, and one has seen it mentioned a number of times since then, more recently within the last few weeks. I would certainly emphasize that I am not urging any program here. I am simply pointing out, as far as I have been able to observe them from the British experience, things that might be useful to us.

The CHAIRMAN. What about migration from one part of the country to another? Has it been great or small?

Mr. BIDDLE. It has been tremendous. There has been a tremendous movement from place to place for a number of reasons. New war industries have been located in the valleys of Wales, in accordance with the dispersal policy of getting factories in less vulnerable areas. The bombing of industrial cities and the evacuation of children have also had effects on the industrial workers as well. So that there has been large movement of the population, and the dislocation resulting from that has been enormous. Particularly it has been true in the matter of transfer of the industrial workers, dock workers, and miners, and workers transferred from less essential to more essential war industries. All of that has led to movement.

HOW TRANSPORTATION IS PAID

The CHAIRMAN. What about transportation? Was it paid for?

Mr. BIDDLE. Yes. The procedure is something like this: At the center in London there is a clearinghouse for vacancies—labor requirements, in other words—and notification of these is sent to the various regions and subsequently to the district offices of the labor exchanges.

Let's take a case in point. The exchange in Leeds is notified of industrial workers needed in Birmingham. We will assume that a certain worker has lost his job because of a shut-down of an industry due to war conditions. At the labor exchange he will be interviewed. It looks as though he has the qualifications for the job in Birmingham. He agrees to accept the job. He is paid his fare to Birmingham. He is paid a wage of 5 shillings if the trip is less than 4 hours; and if it is more than that, 10 shillings.

The CHAIRMAN. Who pays that?

Mr. BIDDLE. The Government. It is paid at the labor exchange. When the worker goes to Birmingham, he is met at the station by a representative of the exchange, who directs him to a billet which the welfare officers of the factory, outside of the labor exchanges, are responsible for securing. Possibly it is a hostel, where he will stay overnight until he gets a permanent lodging. He reports to the exchange the following morning and is referred to his job.

Now, if he has left his family behind him in Leeds, and wishes to maintain them there, he will be paid while he is in Birmingham 3 shillings a night for maintenance allowance. That will be paid at the exchange—that is, in addition to his wage. On the other hand, he may wish to bring his family with him. He may have a house in Leeds, which he wants to retain. In that case he may receive a continuing liability allowance, perhaps indefinitely, for an amount not exceeding 25 night until he gets a permanent lodging. He reports to the exchange shillings a week. That is his alternative. He may get the maintenance allowance or the continuing-liability allowance, but not both.

The CHAIRMAN. Mr. Biddle, it might interest you to know that we have in the United States 28 States making it a crime to transport a poor person across State lines.¹ So we could probably learn something from England.

Over there, if a home or an apartment is bombed, and the family loses its shelter and furniture, what is done for those people?

Mr. BIDDLE. In the first place, those people will go to the Assistance Board, which was the national agency responsible before the war for providing unemployment assistance. The Assistance Board will, after an investigation of the case, make a decision of need, and will provide funds for establishing them, and also it will provide money to buy furniture and necessary household equipment at a new location. The local authority will secure a billet, or a number of billets, or it will provide a new house—that is, an unoccupied house—for the family. If they have an income from wages or otherwise, they go ahead and pay their rent. If they don't have, the money for that is made available by the Assistance Board. All of that takes place probably within 48 hours after the bombing incident occurs.

The CHAIRMAN. Would you please, Mr. Biddle, outline briefly for the committee the main changes which have been made during the war period in such social-security legislation as unemployment compensation, old-age benefits, and health insurance?

Mr. BIDDLE. First, the unemployment and health insurance acts have both been amended to increase benefits and premium payments. The additional benefits amount to 3 shillings a week in both cases, and they represent increases to meet the cost of living.

Both of these forms of insurance have also been increased in scope—that is to say, they cover a greater number of workers and groups that had not been covered before.

In the field of old-age insurance, which is very similar to our old-age security benefits in its general terms, first of all a supplementary old-age insurance act was passed in 1940 which had the effect of almost doubling the benefits, which had been very inadequate. And in addition to that, it was also made a law early in the year that the age at which women would be entitled to receive benefits was reduced from 65 to 60.

In the field of assistance the most significant changes have been made. Practically all forms of assistance have increased their rate scales to meet increased living costs.

The former Unemployment Assistance Board (now called the Assistance Board) is administering the supplementary old-age pensions on a means test and, in addition to that, is administering several new forms of assistance which have been adopted to meet war needs.

The most significant change, from the standpoint of this country, would be the so-called Prevention and Relief of Distress Act. That is a provision whereby assistance can be made available by the Assistance Board to anyone losing his income from practically any cause related to the war, on a less rigid means test than was used in unemployment assistance and at somewhat higher rates.

Now, if a man were displaced from his employment because of war conditions he might not be covered by unemployment insurance.

¹ On Nov. 24, 1941, the United States Supreme Court handed down its decision in the case of *Edwards v. The State of California*, No. 17, October term, 1941, declaring that such laws are unconstitutional barriers to interstate commerce.

If he were not, he would be available for assistance under the prevention and relief of distress. The coverage is very wide, and it is very widely interpreted by the board in administering it.

The Assistance Board also investigates applications for civilian injury pensions and assistance for people injured by enemy action, and also for civilians who have lost their property. Such compensable claims are covered under the War Damages Act, which will operate to compensate claimants after the war, but pending that time they can have their immediate needs met by the Assistance Board, and such payments will serve as a credit to the war damages insurance, which is compulsory. The act covers all real property.

IMPROVEMENTS IN HEALTH SERVICE

The CHAIRMAN. What about health?

Mr. BIDDLE. In the field of health significant improvements have been made in the British organized services. For example, the Emergency Medical Service was started in 1939, just before the war. It originally provided for civilian casualties, persons injured in air raids; and an elaborate hospital service has been set up in the country to deal with that problem. After the war struck it was apparent that there were needs that had not been taken into account—transferred war workers, the mothers and children who were evacuated from target cities, transferred civil servants, and various others. Practically all categories affected by the war situation are now eligible for treatment through the Emergency Medical Service, and if necessary for hospitalization, and they pay according to their means.

Attention has been given to the nutrition of all classes and groups in the population, exceeding anything that had happened in England before the war. Public health measures generally have been strengthened, necessarily because of damages to cities, but also because of all these problems of war areas.

The CHAIRMAN. Your latest figure on unemployment is something like 200,000?

Mr. BIDDLE. The figure dropped to some 219,000 in July.

The CHAIRMAN. Does the relief program take care of the unemployed?

Mr. BIDDLE. That 219,000 are probably for the most part receiving Unemployment Insurance. Because they are on the live registers and because of the fact that unemployment doesn't last very long at this time, most of those workers are passing from one employment to another. Meanwhile they are probably receiving unemployment insurance. But as for the people not covered by unemployment insurance, they would receive aid from the Assistance Board, which is financed entirely from national funds with the exception of the so-called unemployables, who would be receiving aid from the local unemployment committee and from the local council. That last group tends to be static, and is about the same in war or peace. All groups not covered by insurance would receive aid from the Assistance Board, and it would be financed from the national funds.

Mr. SPARKMAN. Mr. Biddle, I gather that most of these things you have been telling us about—these new benefits or additional benefits are limited to the period of war, rather than adopted as a permanent program. That is right, is it not?

Mr. BIDDLE. They have been enacted to meet conditions that have come out of the war.

Mr. SPARKMAN. Is it your understanding that they will be continued after the war, at least long enough to absorb the shock?

Mr. BIDDLE. I should think so. In England they are thinking of most of these measures as continuing for the period of the emergency.

Dr. LAMB. You treated earlier the question of the worker who, having a skill and having lost his job, was engaged to go to another city through the machinery set up for transportation. Suppose the worker displaced does not have a skill in demand in war industry. What are the arrangements that are being made to retrain him? I suppose there is a considerable shortage of labor in England at the present time in many lines. What provisions in terms of wage compensation or assistance are made for him while he is in training?

Mr. BIDDLE. The Ministry of Labor and National Service is responsible for the industrial training program. The worker will also probably be interviewed at the Labor Exchange and after a consideration of his skills and aptitudes generally, suggestions will be made to him, probably for a training course to be given either in one of the Government training centers or in industry under one of the Government training schemes.

Dr. LAMB. Do they have multiplicity of training arrangements such as exist in this country at the present time, or is the training limited to those types which you have just named?

Mr. BIDDLE. The governmental training schemes will of course mean variations according to practice in the industry under consideration, but in any case, even in the varied nongovernmental training schemes, the training rates will apply one rate of compensation.

If the trainee is in a government school he will receive a nominal wage plus a maintenance allowance for his wife and children, which is somewhat along the line of insurance compensation, although higher than the insurance compensation and lower than normal wages. If he is being trained in another city, he will receive board and lodging under this training scheme. Then if he goes to the nongovernmental training schools, he will receive a wage paid by the employer in the case of industry, but at rates that have been agreed upon in the public schedule for the industry.

Dr. LAMB. Without any contribution from the Government?

Mr. BIDDLE. There is a contribution from the Government in the form of subsidies to employers for loss of time in the training process, and that sort of thing. Not in the form of direct wages. After the training process is completed, incidentally, the employee may not continue in the same industry or same factory if he is trained in the Government school. He must go to another factory.

Dr. LAMB. What is the advantage to the employer for paying for training if he must go to another factory?

Mr. BIDDLE. The advantage to the employer is that he gets the protected-industry status. To become a protected industry is to enjoy the privilege of not having men called out. The employer must agree to this training program as a condition for becoming a member of the protected-industry group.

Dr. LAMB. What is the object for which this special reservation was designed—that is, that the worker may not work in the factory where he has been trained?

Mr. BIDDLE. That is an agreement between the employer and the trade-union. I can only assume it is to avoid the exploitation that sometimes comes up, and also the apprenticeship problem.

Incidentally, that worker whom you mention would receive unemployment compensation during his period of unemployment and after that receive aid from the Assistance Board until entering the training. Before being accepted for training, he might have to stand by for two or three weeks.

Dr. LAMB. Suppose he hadn't been placed?

Mr. BIDDLE. He would be placed immediately or be covered by one of those agencies.

Dr. LAMB. Would you say that there were any other significant differences in the British approach to the problem of training workers for defense industry?

Mr. BIDDLE. No. I think the significant difference is the combining of these functions so that the Ministry of Labor envisages the entire problem of manpower by including industrial workers and men in the military forces.

Dr. LAMB. Is it your opinion that this centralized arrangement, putting employment and unemployment and all of the related problems in the hands of the one Ministry of Labor and National Service, has worked out well?

Mr. BIDDLE. I should say it is the prime strength of the British situation at the present time. There are undoubtedly a good many weaknesses and points of friction still in the system, but they are largely a matter for adjustment.

Dr. LAMB. A large part of this system has been developed within the past year, although superimposed upon a more extensive system of public assistance and social legislation that existed in that country. Is that correct?

Mr. BIDDLE. Before the war the unemployment compensation existed, of course. So did the employment office.

LABOR PRIORITIES AS BETWEEN INDUSTRIES

Dr. LAMB. What about the problem of labor priorities as between industries, the problem of skills within those industries, and the needs for special types of workers? How is that handled?

Mr. BIDDLE. I should say that that is probably one of the most difficult spots in their entire problem. It is one of the causes, probably, for the demand from many quarters for a Ministry of Production. You may have seen something of the debates this summer in Parliament on that point. In the final analysis, the decision among those claims for priorities would probably rest in the Ministry of Labor. The assertion is often made publicly that the chairman of the production committee doesn't exercise his authority in respect of priorities rigorously enough. I don't know what the merits of that allegation are.

Dr. LAMB. The underlying problem has been discussed here this morning to some extent, of getting orders together with men, and the fact that two different agencies have these problems in hand. With the problem of labor supply before the Ministry of Labor, and with the problem of orders under another agency, are not complications likely to arise with respect to labor priorities?

Mr. BIDDLE. I should say the problem will have complications in any event, but as between the two viewpoints, it would seem to me that the problem embraces the entire labor supply question—that is, defense and nondefense—with all of its implications of factory welfare, and so forth; and I think it is best solved by lodging all of the manpower responsibilities in a single agency wherever it lies. I am inclined to think this is so, even if it should involve a departmental separation of labor supply from production, although that is certainly a moot question.

Dr. LAMB. Is there any special program for recruiting the resources of labor supply which are not ordinarily considered to be part of the Federal market—groups of women who are not usually employed and persons over a certain age who have skills which would require refreshing? What is the machinery for recruiting such groups for employment?

Mr. BIDDLE. There has been a registration of women up to the age of 25, and I think they are in the process of registering age classes up to 30. They are all being registered at the Labor Exchanges, interviewed there and referred to training. There is a good deal of this. It is done on a voluntary basis, but there is a good deal of public education going on, focused again through the labor exchanges and the public relations department of the Labor Ministry, to encourage women to go into industry. Again it revolves about the Labor Exchanges as far as actual recruitment is concerned.

The CHAIRMAN. Thank you very much, Mr. Biddle. We appreciate your coming here.

Miss DUBLIN. Mr. Chairman, I should like at this time to offer for the record a group of exhibits from sources not represented by witnesses.

The CHAIRMAN. The exhibits will be made a part of the record. If there is nothing further, the committee will stand adjourned.

(Whereupon, at 12:30 p. m., the committee adjourned, subject to the call of the chairman.)

EXHIBITS

EXHIBIT 1.—RETRAINING AND TRANSFERENCE IN THE POST-WAR ECONOMY

MEMORANDUM BY DR. OSCAR WEIGERT, ASSOCIATE PROFESSOR OF COMPARATIVE SOCIAL LEGISLATION, AMERICAN UNIVERSITY, WASHINGTON, D. C.

I. INTRODUCTION

The following memorandum is based upon two general assumptions:

(1) That public responsibility for transference and training will exist in the post-war economy. It will exceed substantially the level of such responsibility before the emergency.

(2) That in relation to the "unemployed in the labor market," training and transference will, in the post-war economy, be recognized as definite and integrated forms of social service.

These assumptions do not mean that in the post-war period, no responsibility for return and transference will be left to industry, to unions and to the individual wage earner. The coordination of their activities and of public service in these fields would be an important aspect of the future problem.

Public guidance of transference of workers—geographical translocation as well as industrial or occupational shifting—has, even during the present emergency, been less extended and active, than public guidance of training.

Should the public attitude in the post-war period swing back to traditional individualism particularly strong resistance might develop against public interference with the free choice of locality, occupation, and employer, even though such interference bore no formal compulsion. This resistance might be overcome by the urgent need for intervention. Public responsibility for training is backed by preemergency tradition—vocational schools, fostering of apprenticeship—and should meet less opposition if it is coordinated with the training policies of industry and labor.

We may conclude that the integration of training and transference into the social services for the unemployed will continue.

II. GENERAL CHARACTER OF TASK

Amount and character of the problems of transference, retraining in the post-war period will be defined by the following:

1. The time when the war ends.
2. The amount of dislocation—geographical, occupational, industrial—of the labor force.
3. The general structure of the labor force at the time when the war ends—age, sex, race, industry, occupation.
4. The degree to which up-grading of workers and the dilution of jobs have been realized.
5. The extent to which the transferred and the trained workers have taken root in their new localities and in their new jobs.
6. The general character of the post-war economy (*a*) during first transitional periods (*b*) in its more definite structure.
7. The level of employment and unemployment in the post-war time.
8. The future policies of management and labor in relation to job classification, promotion of workers, apprenticeship, other forms of training, their policies in regard to hiring and firing.
9. The degree to which "rights on jobs" will have been established by law or collective agreements.

10. The development that social services, social-security programs, and institutions of vocational education have undergone during the present emergency.

These are the most important specific considerations. But they may, for longer or shorter time, be overshadowed by general political developments—national as well as international.

III. SOME COMMENTS ON II

1. Time when the war ends is of fundamental importance for most of the other elements, particularly for those mentioned in Nos. 2, 3, 4, 5, 6, and 10. It is particularly important for—

2. The amount of dislocation. The diversity of magnitudes for differently timed endings of war is expressed by the National Resources Planning Board estimates of a total labor force of 55.4 millions in 1942, and of 60.4 millions in 1944. In 1942, 2.5 millions will be in military service, 11.7 millions in defense industries, and 41.2 millions in nondefense jobs, compared with 3.5 millions, 23.5 millions, and 33.0 millions for the same three groups in 1944. These figures should be compared with 0.4 millions in military service, 2 millions in defense industries, and 45.2 million employed in other jobs in 1939.

Of course, not all the defense workers of today, and of tomorrow, are, or will have been, dislocated. Many will work for defense in the same shops and even in the same jobs. But millions have, and will have, to migrate. And an even greater portion of the labor force has to shift to new employers, new industries and new occupations. A still greater portion endures some change in jobs or job requirements.

3. The general structure of the labor force at the end of the war will reflect these various changes. Its age, race, and sex structure will be of great importance for transference and retraining. Some information about this structure is becoming available, particularly statistical through the employment services. But much broader information is, and will be, urgently needed.

4. And 9, of paragraph II should be considered together. We may expect that up-grading of workers, and breaking down of jobs will reach much higher levels before this emergency ends. Whether these processes will be reversed in post-war time will be one of the primary problems of management and unions.

Up-grading, as well as breaking down, jobs may in some cases increase the versatility of workers, and in this way be helpful for later transference and training. On the other hand, many of these workers will have very limited operative experience, particularly if they have gone through the typical "pre-employment refresher" courses or through other quick forms of emergency training. Quick, intensive, specialized training may become a handicap if the organization of operations is reversed in post war time. This reversal seems more probable than the continuation of the present job policies.

5. Social and industrial stability of workers, and the establishment of rights on the job will have serious implications for transference and retraining. From the former may arise psychological resistance against renewed transference and retraining. Rights on the job on the other hand, particularly the right to return to preemergency jobs, would facilitate these processes. How far such rights will be realized depends very much upon—

6. The general character of the post-war economy, especially its level of employment and unemployment.

Under the assumption of an allied victory, the post-war economy should return to a better balance between its different branches. Some over-developed industries may survive in restricted form, others may be able to convert for peace-time production. Thus, some of the geographical, industrial, or occupational dislocation, suffered by workers during the present emergency may not need correction by transference or training. But a very substantial portion of the 23.5 millions defense workers, estimated by the planning board for 1944, would definitely lose their war work opportunities and have to look for new ones. Transference and retraining after the war will depend upon the nature of the post-war economy.

The planning board rightly insists that time will be needed to shift production and to shift workers. Only if the defense industries are liquidated systematically and gradually will there be sufficient time for planned transference of great numbers of workers.

How much time will be necessary for the post-war economy to reach a phase of relative stability? What transitional phases will be necessary? These questions are important for transference and retraining. Nothing could be less

desirable than transfer or training for temporary jobs or temporary places. It would be better to bridge the gap in time between the end of war and the growth of definite work opportunities by more extended ambitious training methods, than to give short, intensive training similar to that used in the present emergency. Apprenticeship in these trades where it is still economically justified should become much more predominant than it is today. Necessary as a program of public works will be in the transition period, these works should be organized and localized so that they do not demand new transference or training. Temporary maintenance of the worker, and his family will be better policy than hasty transference or training for only temporary positions.

Particularly helpful in transference and retraining will be—

7. The further development of social security programs, and social services. No greater step can be taken toward the realization of a definite program of transference and training in post-war time than the nationalization of unemployment compensation systems and the employment services. The coexistence of 51 separate compensation systems that do not mutually recognize credits earned in other States will prove to be a great obstacle to the transference of workers across State borders. Interstate clearance by the employment services—a difficult technical problem in any case—has much greater prospects of success in a national employment service.

Equally important is the liberalization and extension of unemployment compensation, as suggested by our committee, to give the worker the necessary breathing spell for substantial training and for well-considered translocation.

Not less desirable is the integration of public works and unemployment relief, with training programs, and with transference.

IV. CATEGORIES OF WORKERS INVOLVED

The labor supply at the end of the war will consist of two main groups. The majority will be "regular" workers of, at least, average employability who depend upon work for their own and their families' living. There will, however, be a substantial minority of "additional" workers who have been drawn into the labor force by the shortage of regular labor but who might not be considered employable in periods of labor surplus, or who do not depend upon jobs for their existence, e. g., the numerous old people who are potential beneficiaries of age benefits or assistance, small farmers and shop owners, married women, etc.

To this existing labor force will then be added the current afflux of new comers who again consist of two categories: the regular recruits of the labor market, particularly youth who do not go into higher education, and new groups of "additional" workers, who may be pushed into the labor market by unemployment of the family breadwinner or other losses in family income.

There will exist also in the labor force of post-war days the short-term movements that have been described by Howard Myers and others.

The policy of transference, retraining and training will have to reconsider these different categories. It should concentrate upon the "regular" workers and the "regular" labor market recruit. It would be wrong to hold "additional" workers in the labor force, or to bring them into the market if these "additional" workers have no sound prospects of adequate employment, or do not need employment.

This policy will be unusually delicate in its application to the "additional" workers who have been in the labor force of the emergency period, have built up credits for unemployment benefits and may try to use these benefits as a bridge to training courses or transference actions.

The first phase of the post-war period will see the return of the demobilized soldiers many of whom will have belonged to the "regular" labor force. It might seem easier to time and direct their return into work-life than any other group. Such planning and timing might, however, be seriously hampered by the popular pressure for fast demobilization. Many soldiers will need some retraining even if they return to their old jobs. It might be expected that this task will, in most cases, be dealt with by the employer. The demobilized soldiers should in any case be equipped with claims for unemployment benefits to give them the necessary maintenance during periods of transference and of out-industry training.

In the care of the demobilized soldier, military and civilian services will have to cooperate. Particularly important will be cooperation between public employment services and military authorities.

V. SPECIAL PROBLEMS OF TRANSFERENCE

The problems of transference are twofold: To oppose translocations that give no prospects of satisfactory earnings, and to organize and direct transferences that are economically and socially sound.

These problems are inseparable. The stronger the means are by which transference can be supported, the more might it be possible to hinder undesirable movements by refusing to use these means.

An indispensable tool for such a policy would be a public fund from which loans or grants for costs of transport could be made. Such loans or grants should cover also the transport of family members and the temporary maintenance of the worker and his family under clearly defined statutory conditions. This fund should be an integral part of unemployment compensation.

It might be possible to influence the process of translocation indirectly by some additional provisions in unemployment compensation, by authorization, for instance, to establish residence requirements for eligibility, or to define work in distant localities or outside of the worker's experience as "suitable work," perhaps only in the transitory period and only in relation to extended benefits.

Another important tool is the broadest possible information about the labor market, information usable by the labor-market expert, but also material that the individual worker can use in his decisions, like the farmer's use of the current reports of the Weather Bureau.

A large portion of translocations will, in any case, go on through individual initiative and on the individual's risk, and the task of the employment services, and of other authority, will in these cases be limited to information, encouragement, and warning.

The employment service should, in its current information about prospects and trends of the labor market in post-war time, closely cooperate with the labor unions, particularly on the local level, and request their assistance in the policy of translocation.

It is very fortunate for the public employment service that close contact with many employers has been established in the present emergency. But things will look very different in the post-war period. Many of these well-established contacts will vanish with the liquidation of defense industries. The position of the employment service will then, as before the emergency, depend upon its quality. Legal monopoly in placements, or legal compulsion to use the service, have only nuisance value if the service lacks in efficiency.

The process of liquidation and transference might well go on for several years. Even after this process has been ended, and when the post-war economy takes a more definite shape, financial support of necessary translocations should exist as definite function of a system of unemployment compensation.

VI. SPECIAL PROBLEMS OF RETRAINING

Insofar as post-war retraining and training does not depend upon private initiative, it should be coordinated with vocational education and apprenticeship programs, on the one hand, and with the employment services on the other.

The exploration of the labor market in its local and superlocal layers, the counseling of the applicant for training, the referral to the training institutions, or to industry as far as training is being carried out by industry itself, and the placement of the trained workers should remain in the domain of the employment services. Their knowledge of the labor market should also be used in the definition of objectives and methods of training. An excellent pattern for such a cooperation has been established during the last months, and should not be lost again. Equally important as a pattern for future developments is the creation of advisory committees of management and labor with vocational education. It seems desirable to establish close contact between these committees and the advisory committees of the employment services.

These suggestions have a much greater chance for realization in a national system than in 51 separate State employment services. The training program seems to be complicated by training work of the National Youth Administration. The same is true for training activities of other agencies such as C. C. C. and W. P. A.

Insofar as training is handled by private industry there should be close cooperation with public authorities in order to avoid duplication of efforts. But also labor has to be the third partner in this cooperation, because of its interest in amount and qualities of learners, trainees, and apprentices, and because of the influence it exercises by collective agreements.

Three aspects of the post-war economy fundamentally different from the emergency period, should affect general training policies:

- (1) Its broad industrial diversification and broad geographical dispersion.
- (2) Its mere definite character.

(3) The sharper distinction between skilled, semiskilled, and nonskilled workers and jobs.

Post-war objectives and methods of retraining and training should be fundamentally different from present objectives and present methods. Training of the "preemployment refresher," one of the strongest elements in the present public-training program, will be very useful during the transitional period for demobilized soldiers and defense workers who return to their old jobs. The same might be true for the "supplementary" courses. They might, however, lose in importance as far as "up-grading and breaking down of jobs" stops.

There will always be the need for "vestibule" training, and this need will not be satisfied entirely by industry itself. The public responsibility for unemployment compensation will push the authorities to use this method of training.

Compared with the present program, much more emphasis should be given to extended vocational training and to apprenticeship.

Today training necessarily is concentrated upon a limited number of industries and occupations, but its objectives will in the post-war period cover the whole gamut of economic activities, with special emphasis upon those that had to be neglected during the emergency, e. g., services of all sorts and agriculture.

Post-war training should be formally recognized as a social service. It should be integrated into unemployment compensation, in the same way as in Britain and other countries. That means that, on the one hand, training would, under certain statutory rules, become a condition of eligibility, and, on the other hand, unemployment compensation could be used for the maintenance of the trainee and of his family. It might be advisable to provide additional funds in the compensation scheme for additional remuneration of the trainee, and for certain general expenses as far as these expenses cannot be taken over by vocational schools.

VII. SUMMARY

(1) Transference and training, retraining as well as the training of the labor market recruits, should be included in post-war planning. Compared with public-work programs, transference and training require much smaller investments and they return the worker to a normal economic status. Of course, large post-war programs of public works will be indispensable but they must be coordinated with training and transference.

(2) The program of retraining and transference cannot be definitely established before the definite amount and character of dislocation, resulting from the present war economy, is known.

In addition a clearer picture of the post-war economy is needed. It is of uttermost importance to collect now and currently all available material on—

(a) Amount and character of translocation of workers—geographical, industrial, occupational.

(b) The structure of the labor supply, with special attention to the "additional" elements in it.

(c) The experience, that is now growing up, concerning methods and results of training courses.

(d) The changes in job requirements.

(e) The establishment of rights on jobs.

The excellent work of the Tolan committee on defense migration, in exploring the social situation of the translocated workers, will be of greatest help for the post-war plans. This work should be continued on the broadest possible scale.

A very important tool for retraining after the war would be created by the establishment of individual records that report the training experience of the emergency trainees. Such cards would have to be filled by the leader of the course, and then be kept in the files of the employment service, together with the trainee's application card.

(3) Nationalization of employment services and unemployment compensation systems would be one of the most important steps toward efficient transference and retraining in post-war time. Employment services need permanent support and attention to enter the post-war period on a higher level of efficiency.

The progress in labor market reporting should be intensified and extended. The question of current popular labor market reports asks for special study.

(4) Transference and training should be integrated with unemployment compensation as definite forms of social service. There should be provided, in integration with the compensation scheme:

(a) Grants and loans for costs of translocation.

(b) Maintenance of the trainee and his family during the training.

(c) Funds for additional expenses of trainees, and in special cases, for the costs of training courses.

(d) Authorization to establish certain residence requirements and training requirements as conditions of eligibility.

(5) Cooperation should be established—

(a) Between military and civilian authorities for preparing and operating the transference and, if necessary, retraining of the demobilized soldiers.

(b) Between the Department of Justice and the Labor Market Administration to coordinate immigration in post-war time with internal migration.

(6) Condition for successful transference and training would be current, close cooperation not only between the various interested agencies, but also between these agencies on the one hand, and management and labor on the other hand, both on the local as well as on the superlocal level.

EXHIBIT 2.—USE OF RADIO BY UNITED STATES EMPLOYMENT SERVICE

REPORT BY W. L. MITCHELL, ACTING EXECUTIVE DIRECTOR, SOCIAL SECURITY BOARD,
FEDERAL SECURITY AGENCY, WASHINGTON, D. C.

With the transfer of the United States Employment Service to the Social Security Board in 1939 and the establishment of the present Bureau of Employment Security, both the Board and the State employment security agencies have made an extensive effort to disseminate information on employment security to the public by radio. With the coming of the national defense program, this informational effort has progressively increased in view of the heavy responsibilities which the United States Employment Service has been given.

Emphasis in this radio program has been geared to the changing situation and to the administrative necessities of the employment security program, with particular stress upon the employment service. The chief categories in which information has been issued have been, (1) urging workers to register with local employment offices and, in particular, workers having skills needed in defense industries, (2) warnings to workers against undirected travel in search of defense jobs, (3) information regarding job openings, and (4) general information on developments in the defense program.

Over a period of 2 years, almost every form of radio activity emphasizing the above points has been carried on, in more or less degree. This includes speeches by Washington, State and local employment security and defense officials; interviews with these officials; dramatic sketches, transcribed and "live"; and spot announcements. National radio chains and local radio stations have cooperated.

The migration of defense workers, in which your committee is undoubtedly chiefly interested, has been given attention by the Board and State agencies during the past year. A continuous attempt has been made to influence migration by outright warnings to workers not to travel without prior checking with the local employment office, by pointing out that the local offices are the central clearing points for jobs, and by explaining the Government labor clearance system by which a worker in one locality, through his local employment office, can be put in touch with jobs in his line in other parts of the country.

The Board has been instrumental in securing several Nation-wide broadcasts in which these points were emphasized. For example, Administrator Paul V. McNutt was interviewed by Eric Sevareid over a Columbia Broadcasting System network on March 22, 1941; and Mr. Ewan Clague, Director, Bureau of Employment Security, was interviewed over a Mutual Broadcasting station on March 14, 1941. Mr. William Green, president of the American Federation of Labor, strongly emphasized this point in a speech over a National Broadcasting Co. network on April 3, 1941.

In addition to national broadcasts, the Board has prepared a large amount of finished and draft radio texts which have been very widely used by State employment security agencies.

In a series of transcribed radio messages, of which 700 transcriptions were made available to State agencies for local radio bookings, the danger of labor migration was stressed by Mr. Sidney Hillman of the Office of Production Management, and by Mr. Arthur Altmeyer, Mr. Ewan Clague, and Mr. Oscar Powell of the Social Security Board. Although we have no statistical data, we know that these transcriptions were widely used throughout the country, often supplemented by closing announcements from local employment offices, reiterating this message.

Draft radio materials prepared by us, carrying similar emphasis have been: A series of 13 radio interviews, "National Defense and You"; 30 spot announcements; a talk entitled "Meeting Labor Needs for National Defense"; an interview entitled "Jobs for Youth"; a speech for State employment security directors; and several sketches in a series of five dramatized radio programs, "Jobs for Defense," the latter about to be issued.

It should be pointed out that these draft materials are often used by 1 to 48 States and by many of the 1,500 local employment offices in the States. Consequently, the broadcast of this material is much more extensive than would be inferred by the single listing above.

Within the last year, all or part of a series of eight transcribed dramatic radio programs entitled "Jobs for America," which explained the placement functions of the United States Employment Service and urged workers to register for jobs, was broadcast over more than 400 radio stations in 47 States.

In addition to the Board's program, most of the State employment security agencies carry on active radio programs. A very considerable amount of broadcasting on labor migration has been done, particularly in those States where the influx of migrant labor has been a serious economic and social problem.

It is not possible to provide statistical data as to the extent of such radio broadcasting but from our examination of State agency informational materials, we can assure you that the activity has been continuous, extensive, and has utilized speeches, interviews, and spot announcements, chiefly the latter.

Enclosed herewith is a sampling of the text of some of the State agency broadcasts. Much of this material is of a draft nature prepared by State agencies for local office use. Consequently any one script may be used over from one to 25 radio stations in a State and, in the case of short announcements, may be broadcast by a station several times a day or week.

In addition to emphasis by radio both the Board and the State agencies have been utilizing other informational media to influence labor migration. For instance, last year we provided State agencies with a poster warning workers not to travel without first checking with local employment offices, for posting in local post offices throughout the country. Several pamphlets emphasized this point, as well as a number of speeches, news releases, etc. Likewise, many State agencies have been utilizing various media for issuing similar messages.

It is a major part of our present informational program to continue our efforts to reduce or direct labor migration by working with the informational staffs of our regional offices and the State agencies in those areas which are particularly affected. This will include those areas into which workers are migrating and those from which the majority of workers come.

[Enclosure]

EXCERPTS FROM STATE EMPLOYMENT SECURITY RADIO TEXTS ON LABOR MIGRATION

Illinois.

"The place to apply for work * * * either here in East St. Louis or anywhere else * * * is right here in East St. Louis at the Illinois State Employment Service at 437 Missouri Avenue. * * * An inquiry at 437 Missouri Avenue—before starting a job hunt to another city—will usually save the worker the disappointment that he ordinarily faces when he reaches his destination—the information that there are no openings or that only local labor is being hired."

"Unemployed workers * * * don't leave your home cities and travel around the country following rumors of jobs. The best way to get a job now is to register with the nearest office of the Illinois State Employment Service and then remain in your home town where you can be reached quickly when you are needed for a defense job. You've probably read in your daily paper about the letting of contracts for defense plants. * * * I want to ask any

unemployed worker who may have read about these plants * * * and who may have any idea of going to the towns where the plants are being built to look for a job * * * not to do it. I'm going to repeat that again for emphasis * * * don't * * * don't * * * don't go to towns where Government plants are being built to look for work. You will not get a job that way * * * you will cause a lot of unnecessary confusion * * * and you'll probably miss out on a job at home as well. * * * Practically all the jobs in connection with such plants * * * will be filled through the offices of the State employment services in the towns where the plants are located. * * * Men who rush to these towns * * * will be wasting time and money. * * * The best way to get a job in the defense industries * * * is to register with your local office of the State employment service and then stay right in your home town where you can be reached when the employment service needs somebody in your line of work."

Georgia.

"If you are looking for work, consult the ----- office of the Georgia State Employment Service. * * * Don't travel about until you have checked the job possibilities with the Employment Service. The local office is located at -----."

"If you are looking for work, you should register with the ----- Public Employment Office. * * * This office can get information about jobs available throughout the State as well as the country in connection with the national-defense program. * * * Do not travel looking for work in other cities until you have applied for work at the ----- office, located at -----."

Florida.

"Don't depend on rumor about jobs opening up in defense industries. Make certain by asking at the ----- office of the Florida State Employment Service, located at ----- * * * Save time and money by knowing where the job is before you start out."

Pennsylvania.

"You can save time and money by inquiring at your local Pennsylvania State Employment Office before traveling in search of defense jobs."

"I would recommend that you shouldn't leave your home town in search of work elsewhere * * * unless the local employment office tells you there is a definite opening somewhere else."

EXHIBIT 3.—PRESS RELEASE OF LABOR DIVISION, OFFICE OF PRODUCTION MANAGEMENT

Washington, D. C.

August 9, 1941

Machinery set up through Government, management, and labor cooperation for reemployment and training of 3,600 displaced automobile workers in the Buffalo industrial area should serve as a national model in overcoming the unemployment created by shut-down of nondefense plants, Acting Director-General Sidney Hillman, of Office of Production Management, said today.

Hillman received reports from Arthur S. Flemming, chief of the Labor Supply Branch of Office of Production Management, and Eli L. Oliver, Chief of Office of Production Management's Labor Relations Division, that four big defense plants in the Buffalo area agreed in a conference yesterday to employ at once 500 of the workers who lost their jobs when the North Tonawanda Chevrolet plant closed down for retooling. The plant will reopen in several months as an airplane-engine factory.

Eight hundred others have already been rehired, and 225 others are being retrained.

Hillman pointed out that the Buffalo-area problem was typical in many respects of the labor dislocations expected to result in the next few months from conversion of nondefense plants and from the operation of defense priorities which will deprive factories of their essential materials. Hence the pattern worked out for the Buffalo workers may be considered as a "pilot" which should be helpful in meeting similar situations elsewhere, Hillman said. In one-industry cities, addi-

tional steps will be necessary, such as the awarding of defense contracts to consumer-goods plants, especially among the small and medium-sized enterprises, he noted.

Flemming predicted at least half of the 3,600 would be employed within a month.

"Defense training facilities in the public vocational schools of the Buffalo area will be readjusted and streamlined to provide opportunity for training in the shortest possible time to those of the Chevrolet employees who are not now completely qualified, and who desire to equip themselves for future employment," Flemming reported. He estimated about three-fourths of the 3,600 will need some retraining to qualify for defense jobs.

Flemming also pointed out that the retraining period averages from 3 to 5 weeks, that the Buffalo plants have signified their willingness to hire all workers qualified by retraining and that each trainee will receive \$15 a week as unemployment compensation during the period of training.

Oliver reported that Walter Reuther, director of the General Motors division of the United Automobile Workers, Congress of Industrial Organizations, had taken special steps to cooperate and speed up the registration of the auto workers with the public employment offices. Under this procedure, Reuther is assigning union representatives of the employment offices to assist in registration and classifying of workers.

Expansion of fields of employment for the furloughed Chevrolet workers was promised through a statement by Nathan Cowan, subregional director of the Steel Workers Organizing Committee, who said his organization would help to aid the men get jobs in Buffalo area steel plants.

The four defense plants whose executives met with Office of Production Management representatives in working out the procedure were: Bell Aircraft Corporation, Worthington Pump & Machinery Corporation, Buffalo Arms Corporation, and the Curtiss-Wright Corporation.

EXHIBIT 4.—PLACEMENT, TYPES OF JOBS, AND STATES OF ORIGIN IN CLEARANCES THROUGH NATIONAL YOUTH ADMINISTRATION REGIONAL CENTERS

REPORT BY AUBREY WILLIAMS, ADMINISTRATOR, NATIONAL YOUTH ADMINISTRATION,
FEDERAL SECURITY AGENCY, WASHINGTON, D. C.

AUGUST 2, 1941.

MR. AUBREY WILLIAMS,

*Administrator, National Youth Administration,
Federal Security Agency, Washington, D. C.*

DEAR MR. WILLIAMS: Thank you for your letter of July 30. A copy of the hearing of July 21 will be sent you when it is printed.

As the committee understands it, the National Youth Administration residence centers in the various States are acting as clearing houses for out-of-State youth. Can you tell us whether a study is being made on out-of-State young people in the National Youth Administration residence centers as to their age, birthplace, last previous address, type of training undertaken, and industry entered upon completion of training?

We feel that the National Youth Administration is in an excellent position to guide the migration of young people into defense jobs, and we equally feel that complete studies made of such migration by the National Youth Administration would be of great value both to the National Youth Administration and to the committee in its work.

With all good wishes, I am,

Sincerely,

JOHN H. TOLAN, *Chairman.*

OCTOBER 28, 1941.

MR. JOHN H. TOLAN,

*Chairman, House Committee Investigating National Defense Migration,
Washington, D. C.*

DEAR MR. TOLAN: Attached are tables showing information on placements made at several of the National Youth Administration regional resident centers. These tables have been compiled in accordance with your request of August 2, 1941.

Detailed placement information was available for only a portion of the youth employed at these centers who obtained jobs in industry.

Accordingly the information presented in the attached tables represents only an incomplete picture of the placement situation. However, it may serve to give some indication of the types of jobs being obtained and their locations.

It should be noted that the length of time covered by the data varies in the different centers. Where available, the States of origin of the youth as well as the States of placement have been shown.

Sincerely yours,

AUBREY WILLIAMS, *Administrator.*

(The tables referred to above are as follows:)

TABLE A.—*Federal Security Agency, National Youth Administration—Out-of-State youth placed in private industry, National Youth Administration regional resident center, Nepaug, Conn., June 3 to Aug. 20, 1941*

State of placement and firm	State of origin						
	Total	Ala-bama	Arkan-sas	Missis-sippi	New York	Penn-sylva-nia	West Virgini-a
Grand total.....	233	6	14	34	30	61	88
Connecticut, total.....	231	6	14	32	30	61	88
Billings Spencer Co., Hartford.....	6				6		
Bullard Co., Bridgeport.....	4			4			
Fruehof Trucking Co., Hartford.....	1				1		
General Electric Co., Bridgeport.....	8						8
Hamilton Propeller Co., Hartford.....	10				4	1	5
Hand Lathe Co., Torrington.....	12			8		4	
Hanson & Whitney Co., Hartford.....	1				1		
Hartford Machine and Screw Co., Hartford.....	3			3			
Hartford Specialty Machine Co., Hartford.....	2			2			
Industrial Welding Co., Hartford.....	1				1		
M. & B. Co., Hartford.....	2		1		1		
M. & B. Co., New Haven.....	16	1				6	9
New Departure Co., Bristol.....	76	3	8	7	4	25	29
New England Blower Co., Hartford.....	1				1		
Nickerson Tool Co., New Britain.....	1				1		
Seoville Mfg. Co., Waterbury.....	1						1
Seth Thomas Clock Co., Thomaston.....	7					3	4
Sterling Blower Co., Hartford.....	1				1		
Torrington Co., Torrington.....	2				2		
Underwood-Elliott-Fisher Co., Hartford.....	20				7	13	
Union Hardware Co., Torrington.....	2					2	
United States Aluminum Co., Bridgeport.....	29	1		4		3	21
Vought-Sikorsky Aircraft Corporation, Bridgeport.....	22	1	5	4		2	10
Warren-McArthur Co., Bantam.....	3					2	1
New Jersey: Electric Boat Co., Bayonne.....	2			2			

TABLE B.—Federal Security Agency, National Youth Administration—Youth placed in private industry, National Youth Administration regional resident center, Quoddy Village, Maine, June 1, 1940, to Aug. 1, 1941

State of placement and firm	Type of work	Number of youth
Grand total.....		252
Connecticut, total.....		79
Hamilton Standard Propeller Co., Hartford.....	Aviation.....	3
Pratt and Whitney Aircraft, Hartford.....	do.....	8
Vought-Sikorsky Aircraft Corporation, Bridgeport.....	do.....	12
Subtotal aviation.....		23
Allen Manufacturing Co., Manchester.....	Machine shop.....	1
American Brass Co., Ansonia.....	do.....	2
American Steel & Wire Co., New Haven.....	do.....	1
Aluminum Co. of America, Bridgeport.....	do.....	1
Blake & Johnson Co., Waterville.....	do.....	2
Corbin Screw Corporation, New Britain.....	do.....	3
Electric Boat Co., Groton.....	do.....	2
Farrell Foundry & Machine Co., Derby.....	do.....	5
General Electric Co., Bridgeport.....	do.....	1
Geometric Tool Co., New Haven.....	do.....	1
Hamilton Standard Propeller Co., Hartford.....	do.....	2
Hanson-Whitney Machine Co., Hartford.....	do.....	1
Hartford Machine Screw Co., Hartford.....	do.....	1
Jacobs Manufacturing Co., Hartford.....	do.....	1
Laminated Shim Co.....	do.....	1
Leeds Electrical & Manufacturing Co., Hartford.....	do.....	1
Lewis-Engineering Co., Naugatuck.....	do.....	1
Lucas Machine Co., Bridgeport.....	do.....	1
Manning, Maxwell & Moore, Bridgeport.....	do.....	1
Maxim Silencer, Hartford.....	do.....	1
O. F. Mossberg & Sons, New Haven.....	do.....	1
New Britain Machine Co., New Britain.....	do.....	2
New Departure Co., Meriden.....	do.....	4
Pratt & Whitney Aircraft, Hartford.....	do.....	2
Remington Arms Co., Bridgeport.....	do.....	2
Standard Machine Co., Mystic.....	do.....	1
Stanley Works, New Britain.....	do.....	1
Yale & Towne Manufacturing Co., Stamford.....	do.....	1
Winchester Repeating Arms Co., New Haven.....	do.....	3
Subtotal machine shop.....		47
General Electric Co., Bridgeport.....	Radio.....	2
Air Systems Manufacturing Co., Bridgeport.....	Sheet metal.....	1
American Steel & Wire Co., New Haven.....	do.....	1
Trumbull Electric Co., New Britain.....	do.....	1
Vought-Sikorsky Aircraft Corporation, Bridgeport.....	do.....	4
Subtotal, sheet metal.....		7
Maine, total.....		13
John H. Jameson, Bangor.....	Agriculture.....	1
Lucas Tree Expert Co., Portland.....	do.....	1
Subtotal, agriculture.....		2
Hotel Eastport, Eastport.....	Cafeteria.....	1
Warren K. Wentworth, Kennebunk.....	do.....	1
Subtotal, cafeteria.....		2
Bates Manufacturing Co., Lewiston.....	Machine shop.....	1
International Harvester Co., Portland.....	do.....	1
Madison Woolen Co., Madison.....	do.....	1
Pepperell Manufacturing Co., Biddeford.....	do.....	1
Saco-Lowell Shops, Biddeford.....	do.....	1
Terry Roller Bushing Co., Bath.....	do.....	2
Worumbs Manufacturing Co., Lisbon Falls.....	do.....	1
Subtotal, machine shop.....		8
Thomas Laughlin Co., Portland.....	Sheet metal.....	1
Maryland, total.....		12
Glenn L. Martin Co., Baltimore.....	do.....	2
Do.....	Aviation.....	10

TABLE B.—Federal Security Agency, National Youth Administration—Youth placed in private industry, National Youth Administration regional resident center, Quoddy Village, Maine, June 1, 1940, to Aug. 1, 1941—Continued

State of placement and firm	Type of work	Number of youth
Massachusetts, total.....		45
Atlantic Bakery, Fall River.....	Cafeteria.....	1
Megowen-Educator Ford Co.....	do.....	1
Oceanside Hotel, Magnolia.....	do.....	1
Slade's Barbecue, Boston.....	do.....	1
Subtotal, cafeteria.....		4
Acushnet Process Co., New Bedford.....	Machine shop.....	1
American Bosch Corporation, Springfield.....	do.....	1
Atlas Tack Corporation, Fairhaven.....	do.....	1
Atwood & Morrill Co., Salem.....	do.....	2
Bethlehem Steel Co., East Boston.....	do.....	1
Bidwell & Thomas, Greenfield.....	do.....	1
Bird & Son Co., North Walpole.....	do.....	2
Brown & Sharpe Co., Hadley.....	do.....	2
Cogswell Manufacturing Co., West Springfield.....	do.....	1
Continental Screw Co., New Bedford.....	do.....	1
Fore River Plant, Quincy.....	do.....	1
General Electric Co.:		
Lynn.....	do.....	4
Pittsfield.....	do.....	3
Greenfield Tap & Die Corporation, Greenfield.....	do.....	1
J. W. Greer Co., Cambridge.....	do.....	1
F. A. Harris, Springfield.....	do.....	1
Johnson & Johnson Manufacturing Co., Hadley Falls.....	do.....	1
Lewis-Shepard Co., Watertown.....	do.....	1
Morse Turist Drill & Machine Co., New Bedford.....	do.....	1
F. W. Perlyshire Co., Waltham.....	do.....	1
Reed & Prince Co., Worcester.....	do.....	1
Simond's Saw & Steel Co., Fitchburg.....	do.....	1
Walworth Manufacturing Co., Boston.....	do.....	1
Warren Telechron, Ashland.....	do.....	1
Watertown Arsenal, Watertown.....	do.....	1
Winter Bros. Co., Wrentham.....	do.....	2
Worthington Pump & Machinery Corp., Holyoke.....	do.....	1
Subtotal, machine shop.....		36
Harvey Radio Laboratories, Cambridge.....	Radio.....	2
National Co., Radio Engineers, Malden.....	do.....	2
Subtotal, radio.....		4
American Sheet Metal Works, Watertown.....	Sheet metal.....	1
New Hampshire, total.....		4
Kingsbury Machine & Tool Co., Keene.....	Machine shop.....	1
Mackem Machine Co., Keene.....	do.....	1
Mayberry Shoe Co., Rochester.....	do.....	1
Nashua Brass Co., Nashua.....	do.....	1
Subtotal, machine shop.....		4
New Jersey, total.....		6
Brewster Aeronautical Corporation, Newark Airport.....	Aviation.....	1
Caleo Chemical Co., Bound Brook.....	Machine shop.....	1
Machine Repair, Sale Affiliates, Inc., Hoboken, N. J.....	do.....	1
Watson-Flagg Machine Co., Paterson.....	do.....	1
Subtotal, machine shop.....		3
Electric Boat Co., Bayonne.....	Sheet metal.....	1
Steel & Equipment Co.....	do.....	1
Subtotal, sheet metal.....		2
New York, total.....		59
Bell Aircraft Co., Buffalo.....	Aviation.....	18
Curtiss-Wright Corporation, Buffalo.....	do.....	18
Link Aviation Services, Binghamton.....	do.....	2
Pan-American Airways, New York City.....	do.....	1
Republic Aviation Corporation, Farmingdale.....	do.....	1
Subtotal, aviation.....		40

TABLE B.—Federal Security Agency, National Youth Administration—Youth placed in private industry, National Youth Administration regional resident center, Quoddy Village, Maine, June 1, 1940, to Aug. 1, 1941—Continued

State of placement and firm	Type of work	Number of youth
New York		
American Machine & Foundry Co., Brooklyn.....	Machine shop.....	1
Buffalo Forge Co., Buffalo.....	do.....	1
Deehler Dye Coating Co., Batavia.....	do.....	1
R. E. Dietz Co., Syracuse.....	do.....	1
International Paper Co., Niagara Falls.....	do.....	1
Intertype Corporation, Brooklyn.....	do.....	1
Manufacturers' Machine & Tool Co., New York City.....	do.....	1
Merrill Bros., Masfeth.....	do.....	1
Morse Chain Works, Ithaca.....	do.....	8
Rollway Bearing Co., Syracuse.....	do.....	1
Young & Young, New York City.....	do.....	1
Subtotal, machine shop.....		11
Pilot Radio Corporation, Long Island City.....	Radio.....	1
Bell Aircraft Co., Buffalo.....	Sheet metal.....	4
Fastern Wire Goods, New York City.....	do.....	2
Gleason's Works, Rochester.....	do.....	1
Subtotal, sheet metal.....	do.....	7
Pennsylvania: Line Utility Co., Jenkinstown.....	Electrical.....	1
Rhode Island, total.....		14
American Standard Watch Face Co., Providence.....	Machine shop.....	1
Brown & Sharpe Co., Providence.....	do.....	10
Franklin Machine Co., Providence.....	do.....	1
Screw Machine Products Co., Providence.....	do.....	1
Taco Heaters, Providence.....	do.....	1
Subtotal, machine shop.....		14
Vermont, total.....		19
Henry E. Girard, Burlington.....	Cafeteria.....	1
Bryant Chucking Co., North Springfield.....	Machine shop.....	1
W. K. Buckley Co., Burlington.....	do.....	1
Fairbank, Morse, St. Johnbury.....	do.....	2
Howe Scale Co., Rutland.....	do.....	1
Jones & Lamson, Springfield.....	do.....	12
Subtotal, machine shop.....		17
G. S. Blodgett Co., Burlington.....	Sheet metal.....	1

TABLE C.—Federal Security Agency, National Youth Administration—Out-of-school youth placed in private industry, National Youth Administration regional resident center, South Charleston, W. Va.

State of placement and firm or city	State of origin							
	Total	Illinois	Kentucky	Maryland	North Carolina	Pennsylvania	Virginia	Wisconsin
Grand total.....	87	1	6	1	12	51	14	2
Maryland, total.....	40		3	1	3	26	7	
Glenn L. Martin, Baltimore.....	38		3		3	26	6	
Maryland Drydock Co.....	1						1	
City of employment: Baltimore.....	1			1				
North Carolina, total.....	1				1			
Butler & Lee Drug Co., Dunn.....	1				1			
Pennsylvania, total.....	5					5		
General Electric.....	3					3		
Western Electric.....	1					1		
City of employment: Darby.....	1					1		

TABLE D.—Federal Security Agency, National Youth Administration—Out-of-school youth placed in private industry, National Youth Administration regional residence center, Weiser, Idaho, Jan. 1 to Aug. 4, 1941—Continued

State of placement and firm or city	State of origin							
	Total	California	Nevada	North Dakota	Oregon	Washington	West Virginia	Wyoming
Washington, total.....	7		1		1	5		
Carnation Dairy, Carnation.....	1				1			
Spokane Review, Spokane.....	1					1		
City of employment:								
Bremerton.....	1					1		
Centerville.....	1					1		
Olympia.....	1					1		
Spokane.....	1					1		
Walla Walla.....	1		1					

(The following correspondence was received after the publication of Part 18 (Detroit Hearings—Industrial Section) and is added to the record by authority of the chairman:)

EXHIBIT 5.—LABOR POLICIES OF MAJOR AUTO AND SUPPLY COMPANIES AS THEY AFFECT MIGRATION

LETTER AND STATEMENT BY UNITED AUTOMOBILE WORKERS, CONGRESS OF INDUSTRIAL ORGANIZATIONS

INTERNATIONAL UNION,
UNITED AUTOMOBILE WORKERS OF AMERICA,
Detroit, Mich., October 23, 1941.

The Honorable JOHN H. TOLAN,
Chairman, House Committee Investigating
National Defense Migration,
Washington, D. C.

DEAR MR. TOLAN: Your letter of October 17, addressed to Mr. R. J. Thomas, president of our international union, has been referred to this department for reply. We deeply appreciate the interest shown by your committee in the problems confronting the membership of our international union as they relate to the national-defense program.

Enclosed are several copies of the agreement recently reached with the General Motors Corporation governing our labor policies as they affect the matter of migration. It will interest you to know that this agreement has already been adopted by all of the major automobile and automobile parts firms in the Nation, including among them Chrysler Corporation, Ford Motor Co., Packard Motor Co., Murray Corporation, Hudson Motor, Automotive Parts Association, Tool & Die Manufacturers Association, and many others. O. P. M. has approved this agreement and considers it applicable to the entire automobile and automotive-parts industry. Our union considers the signing of this agreement as an important and significant step toward the establishment of an orderly transfer of workers from civilian to defense work. Through the efforts of our parent organization, Congress of Industrial Organization, and the Office of Production Management we are seeking to extend this agreement or one similar to it to the other basic industries of our Nation, particularly steel, rubber, radio-electrical, etc. This is essential in order that in each community managements from all these various industries will be governed by a uniform agreement regarding full use of local skilled labor and their orderly transfer to defense work. On page 2 of our enclosed folder, Provision No. 3 under the "Industry-Wide Interpretation," you will note that this section provides that the local labor supply must first be exhausted before workers from without the community are given consideration. This should be of real importance to your committee insofar as this section accomplishes the very purpose which your committee is seeking to accomplish—the minimizing of migration during this period.

Provision No. 4 of this same "Industry-Wide Interpretation" makes it mandatory that local industry release skilled workers who are currently engaged in

civilian work, or who are only partially employed, to local defense employers who need them for defense work. This provision will greatly speed up the building of defense tools (which at present is the bottleneck). This will minimize the period between curtailment of civilian work and the beginning of defense work on a production basis. Obviously any conservation of much needed skilled labor in any community makes less possible the necessity of bringing workers in from other communities.

The international executive board of our union recently adopted the policy of swing shifts for the automobile industry and simultaneously proposed that the machine tool and production facilities of the automobile industry be pooled, regardless of consideration to corporation lines. These two proposals will not only increase the present defense force by one-third, but will also minimize the lay-off period resulting from auto curtailment. In making these proposals the automobile workers through their union believe that they are submitting practical suggestions to speed the defense of our Nation and simultaneously minimize social problems resulting from our defense effort.

Trusting that this information will be of further help to you in the important work of your committee, I remain,

Very truly yours,

VICTOR G. REUTHER,

Assistant Coordinator, U. A. W.-C. I. O. Defense Employment Division.

DEFENSE UNEMPLOYMENT—WHAT THE U. A. W.-C. I. O. IS DOING ABOUT IT

Sidney Hillman, director of the Labor Division of O. P. M. on September 17, 1941, issued the following six statements of policy which labor and management will be expected to follow in handling labor problems arising out of the curtailment of production in the automobile industry.

The statements of policy were prepared at a series of conferences in Detroit, Mich., participated in by representatives of the leading automobile manufacturers, the U. A. W.-C. I. O., and the Labor Division of the O. P. M. The text of the six statements follows:

STATEMENT NO. 1

Where a man working on nondefense production is laid off and obtains defense employment with another company, and that fact is certified to his former company, he will not have to report back for civilian production work in order to protect his seniority so long as he retains the defense employment to which he was certified. If he shifts from one defense employment to another, there must be a recertification as to his new defense employment. Employers concerned with the application of this policy will work out arrangements which will result in the maximum possible acceleration of the defense program.

STATEMENT NO. 2

Transfer of employees to defense work shall be by seniority in the following order:

First. Those fully qualified for skilled or semiskilled jobs on the basis of past experience and training.

Second. Those who can qualify within the period normally given to new employees.

When management and representatives of the workers are agreed that no employees or an insufficient number of employees with seniority are available in the first group, new, fully qualified employees will be hired.

STATEMENT NO. 3

When hiring new employees for defense work, qualified applicants working on nondefense work with seniority in local industry will be hired before workers coming from other localities. When so hiring, the qualified applicant with the longest seniority record will receive preference.

The senior employees among those working in plants where employment is decreasing who can be spared; who elect to accept such defense employment; and who are found acceptable will be the first released with full protection of their seniority rights.

STATEMENT NO. 4

Skilled tradesmen laid off, partially employed, or employed at occupations other than their trade or its equivalent in defense usefulness, will be released upon their request, with protection of their seniority rights, for full-time defense work (40 hours per week) at their trade. The need for these workers in defense employment will be certified to the worker's employer.

STATEMENT NO. 5

The above policies are to be construed as a pattern for industry and labor to follow and are not retroactive. It is understood that their application is a local community problem and must be worked out on the basis of cooperation between plants in a community and the workers involved.

The operating machinery to effect this point will be set up at an early date.

STATEMENT NO. 6—GENERAL PROVISIONS

1. Recall of employees: An employee loaned or laid off, whether unemployed or currently employed on defense or nondefense work, must report back for defense employment to the company with which he holds his original seniority, if and when called, on notice of at least 1 week. Recall of employees to defense work presupposes, and management will endeavor to provide, full-time employment, contingent upon the availability of the essential tools, material, and facilities. Skilled tradesmen will be subject to recall only for full-time defense employment at their trades or equivalent.

2. Defense training: For the purpose of these policies, defense training is to be considered defense employment, provided there is an understanding between the employer and the employee that the employee is being trained for a specific pay-roll job.

INDUSTRY-WIDE INTERPRETATION OF O. P. M. CURTAILMENT LABOR POLICIES

The following is an agreed upon interpretation of the policies enunciated by the Office of Production Management, September 17, 1941, as they affect all plants of the automobile and automotive parts industry:

PROVISION NO. 1

Where a man working on nondefense production is laid off and obtains defense employment with another company, and that fact is certified to his former employer, he will not have to report back for nondefense production work in order to protect his seniority so long as he retains the defense employment to which he was certified. If he shifts from one defense employment to another, there must be a recertification as to his new defense employment. Employers concerned with the application of this policy will work out arrangements which will result in the maximum possible acceleration of the defense program.

PROVISION NO. 2

Transfer of employees from nondefense to defense work in each local bargaining unit shall be in line with agreements regarding the transfer of employees. Employees fully qualified for skilled and semiskilled jobs on the basis of past experience and training shall be transferred in line with their seniority.

If no such employees or an insufficient number of such employees who have made application are available, management will notify the shop committee and new, fully qualified applicants may be hired.

If no such fully qualified applicants are available or it is necessary or desirable to train men for the work, employees with the greatest seniority working in the plant who have applied and who can qualify within the period normally given to new employees shall be given the opportunity to qualify before new employees are hired to be trained for the job.

PROVISION NO. 3

When hiring new employees for defense work, qualified applicants out of work on account of authorized government curtailment of nondefense production, or

employees working on nondefense production in local industry where they can be spared or loaned, and where curtailment in their industry is authorized for the near future, will be given preference in such employment based upon length of experience in the industry or occupation.

Such employees who are working or who have worked in local industries will be given preference over employees from other localities who have also been laid off because of curtailment.

Employees working in plants on nondefense work where employment is decreasing who can be spared or loaned; who elect to accept such defense employment; and who are found acceptable and so certified by the prospective employer will be released with full protection of their seniority rights.

PROVISION NO. 4

Skilled tradesmen, partially employed, or employed at occupations other than their trade or its equivalent in defense usefulness, will be released upon their request, with protection of their seniority rights, for full-time defense work (40 hours per week) at their trade. In instances in which a collective agreement provides for a reduction of hours below the 40-hour basis, and employees collectively elect such reduction, the schedule of hours so reduced shall be regarded as full-time employment for the purpose of this provision. The prospective employer must certify to the present employer that he has offered the employee full-time defense work (40 hours per week) at his trade, before the request is granted.

PROVISION NO. 5

The above provision shall become operative October 2, 1941 and shall not be retroactive, except that those provisions dealing with the protection of the employee's previously established seniority status shall be retroactive to September 17, 1941.

PROVISION NO. 6—GENERAL

(a) *Recall of employees.*—Any employee loaned or laid off, whether unemployed or currently employed on defense or nondefense work, must report back for defense employment to the company with which he holds his original seniority for work in the same community, if and when called, on notice of at least one calendar week. Recall of employees to defense work presupposes, the management will endeavor to provide, full-time employment, contingent upon the availability of the essential tools material, and facilities. Skilled tradesmen will be subject to recall only for full-time defense employment at their trades or the equivalent.

(b) *Defense training.*—For the purpose of these policies, defense training is to be considered defense employment, provided there is an understanding between the employer and the employee that the employee is being trained for a specific pay-roll job.

PROVISION NO. 7—SUPPLEMENT ON APPEALS

(This section is reserved for a provision outlining an appropriate appeal procedure for the handling of all grievances arising out of the above agreement which cannot be settled with local management. Such procedure should be negotiated immediately with your local management if your plant is not included among the corporations listed below.)

The following is a suggested section which has already been agreed to by the General Motors Corporation:

Any claim of discrimination by an individual employee arising out of these provisions may be reviewed by the shop committee with the local plant management but shall not be subject to further appeal. The shop committee is given the right to appeal any charge of general discrimination to the corporation through the defense employment division of the international union, U. A. W.-C. I. O. Such charges must be supported by written evidence at the time the appeal is made.

The above agreement affecting all plants of the automobile and automotive parts industry was approved October 6, 1941, by: U. A. W.-C. I. O.—O. P. M., and the following corporations: General Motors Corporation, Chrysler Corpora-

tion, Ford Motor Co., Automotive Parts Association, Tool & Die Manufacturers Association, Murray Corporation, Packard Motor Co., Hudson Motor, Wilcox Rich, Barnes-Gibson-Raymond Spring Co.

If your plant is not covered by any of the above corporations, you are still protected by the agreement, but you should arrange immediately to have your management accept the above agreement, either by signing same or by exchange of letters. Copies of the agreement may be secured through the office of coordinator.

CITY DEFENSE EMPLOYMENT COMMITTEES

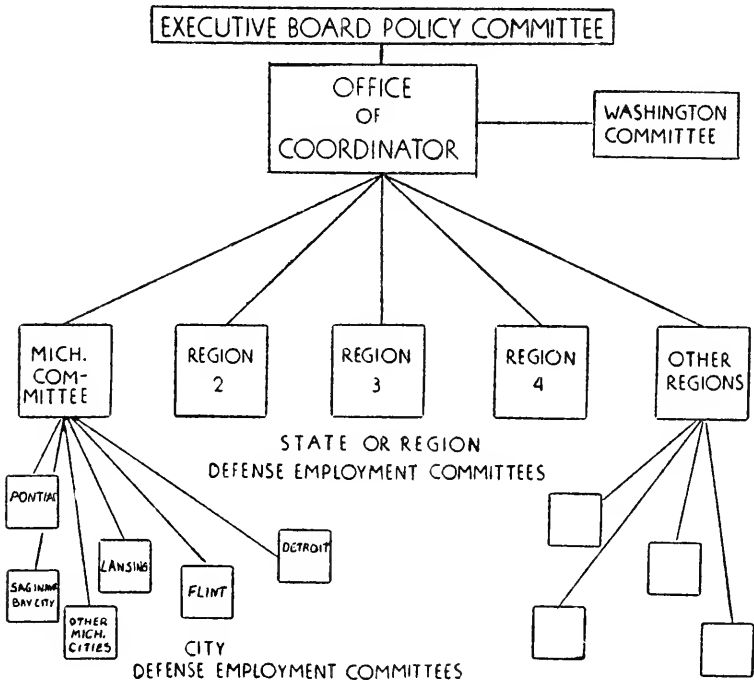
(A) FUNCTIONS

1. To cooperate with coordinator's office in the orderly transfer of civilian workers affected by auto curtailment to defense jobs.
2. To compile data regarding plants in their city which will assist the coordinator's office and the Washington committee in securing additional defense work.
3. To cooperate with local officers of State employment service to see that hiring and transfers affected through the Employment Service are in conformity with O. P. M. policy.
4. To help publicize and put into effect the defense employment program of the U. A. W.-C. I. O.

(B) WHERE COMMITTEES ARE TO BE ESTABLISHED

1. In every major city which will be affected by auto curtailment or which, because of considerable defense work, may be able to absorb additional workers.

STRUCTURE of DEFENSE EMPLOYMENT DIVISION UAW-CIO



(C) SIZE OF COMMITTEE AND MANNER OF SELECTION

1. It is suggested that each city committee consist of not less than three or four members.
2. The regional director may appoint members to these committees or may permit the local unions participating to select the members.
3. Each committee shall elect its own chairman.

(D) FINANCING OF CITY COMMITTEE ACTIVITIES

1. It is suggested that the chairman or some member of each city committee devote full time to these activities.
2. The regional director should endeavor to have the locals being serviced by these committees, share in the expenses entailed by the committees.

REGION OR STATE EMPLOYMENT COMMITTEES

(a) The chairman of each city committee within a given region or State shall constitute the region committee.

(b) The function of the region committee will be to assist the coordinator's office in the rapid dissemination of data and policy information to all city committees within each region.

U. A. W.-C. I. O. Defense Employment Division, 281 West Grand Boulevard, Detroit; Geo. F. Addes, coordinator; Victor G. Reuther, assistant coordinator

CERTIFICATION OF HIRE FOR DEFENSE WORK

When an employer hires a worker for defense work who was formerly employed by another firm with which he acquired seniority, that fact shall be promptly certified to that employer with which original seniority was acquired. Certifications shall be made on form SES 326 (sample below) provided for this purpose and shall be prepared in quadruplicate. The distribution of this form shall be as below:

1. One copy to the worker involved (who will turn it over to his local union or retain for his own record).
2. A copy for the certifying employer's file.
3. A copy to the former employer where seniority was acquired.
4. A copy to the local office of the State employment service.

NOTE.—*The responsibility for requesting certification rests with the individual member affected.*

(Sample)

SES 326

Re: -----
Code classification

CERTIFICATION OF HIRE FOR DEFENSE WORK

To ----- This is to certify that as of -----
(Name of company or corporation) (Date)

we have employed on defense work -----
(Name of person)

formerly employed
as a ----- by your firm as a -----
(Name of skill or classification)

----- By: -----
(Name of company) Title of person in charge of personnel
or employment

NOTICE TO THE WORKER WHO ACCEPTS A DEFENSE JOB

To protect your SENIORITY RIGHTS, it is necessary and to your advantage to see to it that this card is made out by your defense employer and a copy sent to the employer with which original seniority was acquired. You should also see to it that your new employer furnishes you with a copy which you should turn over to your union or keep for your own record.

EXHIBIT 6.—THE BUFFALO PLAN

INTEROFFICE MEMORANDA OF NEW YORK STATE EMPLOYMENT OFFICE TO LABOR DIVISION,
OFFICE OF PRODUCTION MANAGEMENT, FROM AUGUST 16 TO NOVEMBER 10, 1941¹

AUGUST 16, 1941.

This report briefly narrates the first week's activity relative to General Motors Co.'s displaced workers in this area.

The report is submitted in two sections. In part I, we outline what has been done towards the registration for employment, and the referral to national-defense training courses. In part II, Buffalo employer reaction to the hiring of this group is briefly discussed.

PART I

Following the meeting in the Lafayette Hotel on Thursday, August 7, we sent employees from this office to the three Buffalo companies affected by the Pratt & Whitney change-over, and listed all laid-off employees on individual 4 x 6 cards. These cards will be retained as a master control file and all activity such as training, referrals, placement, etc., in connection with any of these persons will be noted thereon.

On Saturday afternoon the staff of this office addressed envelopes to each of these workers and inserted a mimeographed letter which had been prepared by the union (a copy of this form is inclosed). Together with the mimeographed letter, we enclosed our Form 334 (copy enclosed).

General Motors employees were scheduled to report at the approximate rate of 700 per evening beginning with August 11. At that rate all of them will have been scheduled to report between the hours of 6 and 9 p. m. some evening this week. The response to the call-in to date has been rather disappointing. The first night approximately 200 reported. Each night since Monday evening less than 200 have responded. On Wednesday we selected approximately 200 who had failed to report on Monday and Tuesday evenings and directed telegrams to them (copy attached). The response to the telegrams also was unsatisfactory, bringing in but 70 workers.

Several reasons have been called to our attention for failure to respond to call-in, among them the following:

1. These workers are accustomed to a 5- to 6-week lay-off in the summer and this year, as in other years, are vacationing at this time.
2. Unquestionably, many of these people have found employment.
3. Many of these workers have returned to their homes in other sections of the country and are not now available for local employment.
4. Many of these workers, realizing that their opportunity for reemployment with General Motors will be greatly enhanced if they have acquired training along machine-shop lines, are attending full-time school (all day or all night) and therefore are not interested in immediate employment.

On Monday next, we will canvass all those who failed to respond to call-in, by means of a mimeographed letter in which we request that the applicant either report immediately or if unavailable, fill in a questionnaire and return it in a self-addressed envelope enclosed with the letter. We will be in a much better position to determine the number still available for local employment after we have completed this survey. We should have the results by August 22 and will immediately thereafter again report to you.

As claimants appear in our office during evening hours of this week, we immediately register those who are not registered and if possible, refer them to employment. Likewise, those who have previously registered are referred if there are available openings for which they qualify.

Immediately following the interview, those who cannot be referred to employment, as well as others who are interested, are escorted to representatives of the Board of Education (16 in number), located in a section of our office. There these workers are advised regarding the courses of instruction offered in the Buffalo national-defense schools and the referral to the school is made at this point. Almost all former General Motors workers are signing up for

¹ Submitted at request of the committee by Labor Division, Office of Production Management, Washington, D. C. See testimony of Douglas Brown, p. 8139.

national-defense training of some sort, with machine-shop practice and aviation subjects predominating. As a matter of fact, the capacity of the local defense classes is becoming somewhat taxed.

PART II

The Bell Aircraft Corporation has been quite cooperative in accepting laid-off General Motors employees. This office has access to all orders for workers which the employment manager of that company has, and they are pleased to have us refer qualified General Motors workers to these openings. This company has also employed many of these workers at its employment office. The number employed will be supplied in the next report.

I contacted Mr. Matoon, personnel director of the Curtiss Co., on August 11 and he advised that it was extremely difficult for him to commit himself at this time. He states that because his company went on a 6-day week on August 4, they now have a surplus of man power. He is of the opinion that they can absorb no additional workers within the next 3 weeks.

Mr. Matoon suggested, however, that I bring the registered cards of General Motors employees to his plant on Monday, August 18 and discuss these applications with his employment managers, Mr. Lucas and Mr. Bolton. After my meeting with these men, I am to see Mr. Matoon. A report of this meeting will be mailed promptly.

On August 11, Mr. Gray, personnel manager of Buffalo Arms Corporation and Houde Engineering Co. was also called. Frankly, he did not seem too cooperative. He pointed out that the Buffalo Arms plant had already employed 28 of these workers and the Houde plant had hired 32. When I advised him that we desired a requisition for workers so that we might refer qualified persons to him, during the mass-interview program being carried on each evening of this week, he suggested that I call him again on Wednesday, August 13. Mr. Gray stopped in at our office on August 12 and advised that he would call me the following morning. He failed to do so and upon calling his company, I was advised that Mr. Gray was out of town and had left no instructions with the employment manager of the Buffalo Arms Co. relative to the hiring of General Motors employees.

I asked the employment manager to have Mr. Gray call me on Thursday morning, but he did not do so. It is obvious that an effort is being made to evade the issue.

Because of Mr. Schanheuser's absence, I discussed the placement of General Motors workers with Mr. Yarrington, employment manager of the Worthington Pump Co. Mr. Yarrington assures me that his company is extremely anxious to cooperate.

I am to meet with Mr. Yarrington on Tuesday, August 18, at his office. I will have with me at that time the registration cards of these workers. The results of this meeting will also be reported to you.

Union officials seem to be quite well pleased with the arrangements for handling their workers. Representatives of the two locals (424 and 774) have been in attendance each evening and have offered full cooperation and assistance.

We will be able to give you definite figures regarding the number who reported, the number placed, etc., in our next week's report. You may rest assured that this service will make every effort to place these workers. I do not believe the cooperation of the Buffalo Arms Co. will be forthcoming until some pressure is exerted. We would be sincerely appreciative of assistance in handling this company. We believe a phone call from the Office of Production Management reminding Mr. Gray that his company is expected to cooperate would serve the purpose.

AUGUST 22, 1941.

The General Motors displaced workers who did not appear during the first week's evening registration hours have been sent the additional call in letter, with questionnaire attached (sample enclosed).

The personal response was again considerably below expectations, only about 10 percent appearing. An analysis of the completed questionnaires returned indicates that approximately 40 percent of this group are now employed, an additional 40 percent have failed to acknowledge this canvas either in person or by return of the questionnaire, the other 20 percent are still unemployed. It would seem that the following conclusions can now be drawn: It is, we think,

safe to assume that 80 percent of all those who did not appear during the original mass registration are employed or are not interested in employment, the other 20 percent are unemployed. When we have completed the processing of questionnaires we believe that we will have an active file of approximately 800 unemployed displaced General Motors workers.

The writer continues to contact the employment representatives of the four companies committed to cooperating in the employment of these workers.

On Monday, August 18, the employment manager of the Worthington Pump Corporation examined the cards in my presence and selected 8 General Motors displaced workers as prospective employees with this company. These persons have been referred, the results are not yet obtainable. He points out that his company is in a position to do but little hiring and that prior to our visit he had employed 17 of these men out of a total of 40 workers added to his company's pay roll. He assures us that he will attempt to use General Motors workers in all future openings. We believe that the placement of a large number with this company is impossible, in the near future.

On Tuesday evening, August 19, the writer met with Messrs. Boulton and Lucas, employment managers of the 2 local Curtiss plants. After an examination of the cards in fine, we received an order from the Curtiss Co. for 15 workers. This order has been filled. At the same time an order was given for 10 machine operators. The results of these referrals are not yet available. The following day an order was received from the Curtiss Checktowaga plant for 15 sheet metal workers with tools. We believe that it will be possible to fill 10 of these openings from among the General Motors workers.

Both employment managers express themselves as anxious to cooperate in the placement of these men. They both point out, however, that the orders from their production department for men have slowed down considerably and the addition of a large number at this time is not possible. Neither Curtiss plant is adding workers in numbers. Since the Buffalo meeting on August 6 between the Office of Production Management and employers, the Curtiss Co. advises that they have added 119 of these workers to their pay roll.

We have had no orders for workers from the Buffalo Arms Corporation which might permit the referral of General Motors employees. Mr. Harmon visited the employment manager of this company at my suggestion, on Tuesday, August 19, for the purpose of attempting to encourage wholehearted cooperation on the part of this company. This visit has as yet netted no tangible results. The employment manager of this company reports today that since the August 6 meeting they have added 10 former General Motors workers to their pay roll and they are considering several others for employment. We will continue to put forth the necessary effort in the case of this company.

The Bell Aircraft Corporation continues to cooperate. The employment manager of that company has expressed a desire to have us refer General Motors employees to all openings in which we believe they might possibly fit. He is handicapped, as are the Curtiss employment managers, by lack of orders from his production departments for men. This company has added 123 former General Motors employees to its pay roll since the August 6 meeting. We have arranged to meet with Mr. Gunderson, employment manager, over the week end at which time he will study the record of each General Motors employee registered with us and will indicate those he is willing to consider for future openings.

All employers point out that these workers will be much more readily adaptable to their work when they have completed the training courses in which several hundreds are now engaged. It is true that many of these workers have no experience which qualifies them for other than General Motors assembly employment. Further, the type of assembly work in which they were engaged in the General Motors plants was of such a nature that it did not qualify these men for aviation assembly, for example. Many of these men had been engaged, for instance, solely in the attachment of one automotive part, such as muffler, headlights, fenders, etc. Certain Buffalo companies still refuse to consider these workers for their openings. We are, however, gradually breaking down this resistance. The reason most frequently given by employers for their attitude is their firm belief that upon the reopening of the General Motors plant these workers will return.

We will continue to put forth effort toward the placing of these workers and will forward our next report to you on Saturday, August 30. We should be in a better position at that time to furnish exact figures. Union repre-

sentatives continue to visit our office daily and seem well pleased with the progress made.

AUGUST 29, 1941.

Former General Motors employees have not been absorbed in any great number during the past week, either by the four employers committed to cooperate or by other local industrial organizations. There has been a very apparent slackening in the employment acceleration recently which would naturally be reflected in the problem of placing the General Motors group. More specifically, the "four companies" are not hiring these men in anticipated numbers.

Several reasons may logically be advanced—apart from the fact that none of "the four" is in the market for men in large numbers. Obviously, after the first one-third or one-half of the displaced workers are picked up there remains a balance which is not as readily absorbed because of lack of skill or perhaps because there is not represented in this remaining group the same high caliber of men. In other words, a sorting process has taken place—skilled and semi-skilled are employed and the unskilled remain unemployed. Further, the employment representatives of none of "the four" appear to be in a position to use this unskilled group even in the openings which exist from day to day in their establishments.

No great difficulty is being experienced in selling the applicant who can, for example, operate a lathe or milling or similar machine, even though he cannot read prints or set up his own work. On the other hand, the placement of an ex-General Motors assembler presents a real problem and will continue to do so until one or more of the local employers hire men in quantity. There is predominately represented in the remaining unplaced group a good, better than average, unskilled factory type. They have everything to offer an employer who is willing to spend some little time breaking them in on any ordinary operation. However, when the employer states that he will hire nothing but men already skilled in one of his operations, the remaining group has little to offer. If either local aviation company were hiring at this time, there would be no problem.

Today the writer asked both aviation companies what might be looked for in the immediate future. Neither reply was encouraging. At the Bell plant the second shift on wing assembly is still discontinued and the work manager advises that very few additional workers will be added in the next month. Curtiss employment officials paint a similar picture, explaining that moving to the new plant has disrupted production and, until efficient production can be reestablished, they will add no additional help. There seems to be no hope at present that Curtiss will hire numbers of men during September. On the other hand, both Bell and Curtiss are using former General Motors workers in every opening possible. We are with some success, referring these workers daily.

The Worthington Pump Co. was able to use only two of the men we referred, after their preliminary selection from our records. They state, however, that there is a definite possibility that they can and will accept quite a number (probably 50) in about 1 month, to replace men who will complete on the job training at that time.

There seems to be no question as to the desire and willingness of the employment representatives of Curtiss, Bell, and Worthington to cooperate—they simply have not received orders for workers from the plants.

On Wednesday we received our first order, from the Buffalo Arms Corporation, on which it was possible to refer General Motors workers. The order called for 15 experienced milling machine operators. Ability to set up or read micrometers was not necessary. Several of the first group referred were rejected for various logical reasons and we immediately replaced those rejected with new referrals. We have as of today referred all those whom we feel qualified, or a total of 24. Upon checking with Mr. Rindge, personnel manager of the Buffalo Arms Corporation, this morning I was advised that 1 man had been placed in employment, 9 had been accepted and were being held for job openings as they arise in the very near future. Several others had apparently not yet filed formal application in spite of our referral and 4 others had passed the entrance tests but the result of the physical examination was not yet known.

Frankly, the results attained were more favorable than we had anticipated. We confidently expected that most of these men would be rejected. We will give you final results as to the number of placements in our next report.

On Thursday Mr. Rindge addressed a letter to me stating he had need for 44 workers of various highly skilled types such as turret lathe hands, internal

grinder hands, planer hands, etc. For all these openings, he demanded fully qualified hands, able to set up from prints, etc. I immediately advised Mr. Rindge by phone and by confirming letter that while we would be glad to work on the order, we would, I believed, be unable to refer either General Motors workers or others against these openings. There are no unemployed workers of this type available locally or elsewhere.

Additional returns resulting from our most recent call-in letters indicate that there are now 1,087 unemployed of which 935 are registered with us. There are 1,068 employed. A total of 1,433 have failed to respond to any and all our call-in efforts and we feel justified in stating that this group is also largely employed or not now available.

We have to date referred 1,082 former General Motors employees to local training schools but only 674 appeared for assignment to classes, school officials report.

As of Thursday, when only 1,028 General Motors workers had been reported placed in employment, the break-down of employees of that number was as follows:

Bell-----	300
Curtiss-----	169
Buffalo Arms-----	28
Worthington-----	19
Other companies-----	512
Total-----	1,028

Let us have your suggestions and criticisms. We believe that everything possible is being done at the local level. Any assistance you may be able to give will be most welcome.

SEPTEMBER 5, 1941.

Inventorying the results of the first month's effort to place displaced General Motors workers, leads us to the unchallengeable decision that the only organization in our city exerting real effort to attain the goal is the New York State Employment Service.

It is still true that certain of the companies are cooperating and are hiring some General Motors workers. We question, however, whether in any instance a man has been hired because he is a General Motors man. We do not believe that the bars have been lowered even slightly to permit one of these workers to qualify for any opening any of the four companies might have.

There have been so far but few tangible favorable results from the viewpoint of the General Motors workers. First and most important was obtaining the agreement of the four companies to discontinue hiring practices prejudicial to General Motors workers. Secondly, there was the mass registration and the attendant referral to defense vocational schools. Thirdly, we have religiously hounded the four companies and others for openings into which the men might be fitted and we have given every possible preference to General Motors workers in resultant referral. All of this has, of course, reacted favorably. The men appreciate our efforts and believe that we have given them preferential handling throughout. They know that we cannot manufacture openings but they uniformly agree that without exception, those who have landed jobs have done so because they were fully qualified.

Something more must be done—these men are not being employed rapidly enough.

At least three of the four employers could absorb more of these men, if pressure could be brought to bear on them. An analysis of the hiring done by these companies would, we know, reveal the fact that only a small percentage of all employees added are General Motors workers. We do not claim that these men can measure up to the employers' requirements for all of the job openings they have, but we can, from our knowledge of the companies' employment needs, state that if they were inclined to lean backward only a little, many more General Motors workers would have been absorbed, and additional numbers would go to work in the near future.

In further reference to the Buffalo Arms order for 15 milling-machine operators, which order was received and against which 24 men were referred last week, we can now report that only 3 General Motors men were hired. This is, of course, not satisfactory. We have had no report of additional openings

from this concern to which we might refer former General Motors employees.

Likewise, we have had no orders from the Bell Aircraft Corporation, although that company reports that additional General Motors workers have been hired during the week at their gate. Mr. Gunderson, employment manager of the Bell Aircraft Corporation, examined the General Motors registration files on Wednesday and assures us that when he obtains an order from his shop which will permit the employment of the type in that file, he will call us.

The Worthington Pump Co. has no need for more employees now and anticipates none for about 1 month. As previously stated, we believe that company can help but very little because of the nature of its employment needs.

The Curtiss Co., during one of my routine calls at about 3 p. m. on Wednesday of this week, advised that they had 70 openings for men who had 5 to 10 years' mechanical experience of almost any kind, such as machine operation, automotive experience, or the use of hand tools. We promptly advised them that the order could be filled with General Motors men and immediately sent 90 former General Motors workers police call messages. When we advised the Curtiss Co. at 11 on the following day that 45 men were already enroute to their plant, we were told to send no more since much of the order had been filled through selection from among the unemployed who had visited the company's employment office, and from applications on file.

Obviously, some benefit accrued to General Motors men through our efforts in this case; but we insist that if this company had desired, the entire seventy jobs might well have been filled by General Motors men. This is only one of the many examples which lead us to the conclusion that something more must be done and we must have some additional help. The companies must be reminded by someone besides the writer, that they are expected to live up to their commitments. An examination of job openings filled by other than General Motors workers in any of the plants would be interesting and would quickly and convincingly substantiate our opinions.

It must be remembered that the writer as manager of the New York State Employment Service industrial office, is in a difficult position in this assignment. It is not, we believe, advisable for us to antagonize any of the companies—hence, we can only continue to use every means at our command, short of threats, to encourage employers to consider dislocated General Motors workers for every possible opening.

SEPTEMBER 12, 1941.

There have been no new developments during the past week in the General Motors displaced-worker situation. Our records indicate that 1,213 employees are now reemployed. Eleven hundred and ninety-nine are not yet working and the status of 821 displaced workers is unknown.

We do not believe that there is any discrimination at this time against these workers. On the other hand, there has been no apparent inclination on the part of any employer to give them preference in employment of any kind. We are continuing to refer these men to every employment opening in which there is a possibility of placement. As pointed out previously, the majority of the men who remain in our files as unemployed do not have skills, hence, their placement presents quite a problem. Further, by and large, these men are not willing to accept the average beginning factory employment position which further complicates their placement.

During the past week we referred all of the remaining unemployed whose records show mechanical background of several years, to the Curtiss Aircraft Corporation, where they were considered for employment in the panel department. The results of these referrals are not yet available. We believe, however, that the placement of perhaps 50 former General Motors workers will result.

Within the next week or 10 days most of the workers who signed up for national-defense training classes will have completed their 5 or 6 weeks of training. Unless local companies can be encouraged to employ these men in preference to any others, it will be impossible to promptly place all those who complete their training.

We have had no further orders from either the Bell Aircraft Corporation, Buffalo Arms Corporation, or Worthington Pump Co. covering positions to which these workers were referable, with the exception that Bell has utilized about 15 of these men within the past week.

A representative of the General Motors Congress of Industrial Organizations local is in constant attendance in our office and we believe that the local is convinced that every possible effort is being put forth by this office in the placement

of their workers. They are, however, quite concerned over what they term the "failure of the four companies to employ General Motors workers as promised." They concur in our opinion that employers are not discriminating against their members, however.

The prospect for the future does not appear too bright. Our orders from the aviation companies are invariably for men who have had a background of automotive repair or other mechanical experience. We have, we believe, practically exhausted the supply of this type of worker in the group. We do not believe that it will be possible for local industry to absorb the machine-shop graduates which should be available within the next 2 weeks. Considering the small number of aviation trainees who have been absorbed by aviation companies recently, we are of the opinion that General Motors workers who have entered aviation training classes can also not hope to be employed immediately upon graduation.

Any constructive criticism or suggestions will be heartily appreciated.

SEPTEMBER 19, 1941.

There are now, according to our records, still 1,188 unemployed General Motors workers. Twelve hundred and seventy-five are employed and the status of SSI is unknown. There has been no increased acceleration in the rate of absorption of these workers. Unless special arrangements can be made with local employers (particularly Curtiss, Buffalo Arms, and Bell) to give the unplaced workers preferential consideration, we can foresee no great increase in the rate at which these people will return to work.

This situation is, we believe, coming into a very critical stage. The local defense schools will, within the next few days, release for placement several hundred General Motors men who will have had 5 to 6 weeks of defense training. These men confidently anticipate prompt placement—and there will by no means be a sufficient number of openings to which to refer them unless local employers grant preferential hiring. On the other hand, if these men are given first consideration for all openings, particularly by the "cooperating four," the problem will be solved.

We have to date received information from the national-defense school authorities that approximately 35 former General Motors men have completed their training. None of the four companies when advised by the writer of the availability of these graduates were, they advised, in a position to use these men. All of them agreed that the additional training would undoubtedly be an invaluable asset to the men in rounding out their experience and each of them promised to consider these men for all possible future openings.

In an effort to promptly place these men we immediately contacted every local employer of any size who might be in a position to absorb some of them regardless of the number. This drive has met with some success. We have placed six machine-shop graduates with one employer and are working on several orders for lesser numbers. While the problem of placing 35 trainees can well be handled, we cannot help but be perturbed over the problem which faces us when suddenly in the next few days several hundred defense graduates are handed us for placement. We do not believe, in any event, that all of the machine-shop trainees, for example, will be placed as machine operators even though the fullest cooperation were had from the four employers. However, we feel that the majority of them, with the full cooperation of the companies, will be placed in jobs of higher classification than would be possible if they had not had the defense training.

In substantiation of this viewpoint, the Curtiss Co. has stated that they believe these graduates would undoubtedly fit into their panel department wherein the previous specifications called for several years of such work as "auto mechanical, machine shop or work entailing the use of small tools." If the Curtiss Co. can now be convinced that preference must be given to the graduates in all openings of this kind, it will result in the placement of at least 200 of these workers in the very near future. We believe that a close check of the openings filled by the cooperating employers would conclusively indicate that many of the openings could reasonably be filled by these men.

We understand that Mr. Eric Nicol, Executive Assistant to Mr. Hillman, and Mr. S. Park Harmon, of the Social Security Board, will be in this office on Monday morning and will endeavor to assist us in selling employers on the proposition of full cooperation. If their visit has the anticipated results, the placement of several hundred General Motors workers should follow promptly.

SEPTEMBER 26, 1941.

For the benefit of those to whom this report is directed who may not be advised, Mr. Eric Nicol spent Monday of this week in Buffalo and visited the Cur-

tiss-Wright Corporation, the Bell Aircraft Corporation, and the Buffalo Arms Corporation. No visit was made to the Worthington Pump Co. since that company is not going to be in a position to hire General Motors workers or others in any number, and is fully cooperative.

The Curtiss Co. advised that it will employ 200 General Motors workers between the date of Mr. Nicol's visit and November 1. The Buffalo Arms Corporation promised to take 83 of these men during the same period. The Bell Aircraft Corporation promised full cooperation but due to the fact that they are now almost fully manned, could make no definite commitment as to the number they would be able to employ. We have had no call from any of the cooperating companies during this week.

Our records as of this date show that 1,177 are still unemployed. As previously pointed out, however, we believe, from the fact that call-in of these workers brings us only about two-thirds of the number called, many of those who are in our active file are already employed. We are, therefore sending questionnaires to all those in our active file and before next week's report is transmitted, we should have a completely accurate record of the employment status of General Motors workers and our active file should decrease by perhaps 25 percent.

We are continuing the referral of graduate trainees to other than "the four" with some success. If General Motors workers were willing to accept beginning factory employment, their placement in local industry would present no problem. Generally speaking, these men are not willing to accept this type of work. We have discussed this matter with union representatives who are in constant attendance in our office, and while they feel that their co-members should accept employment offered, while at the same time continuing national-defense training, the efforts of these union representatives to recruit workers for the unskilled jobs have been fruitless.

The school department has not yet turned over to this office records covering large numbers of graduates. We have requested the school department to send us an up-to-the-minute report of the status of General Motors trainees and next week's report will advise you of the exact number accepting training in each course of study.

OCTOBER 3, 1941.

Only one of the four local employers committed to cooperate in the return to employment of displaced General Motors workers, has placed an order with us for these men since Mr. Nicol's visit of September 24—the Bell Aircraft Corporation. Because of an unanticipated pick-up in their machine shop we have been able to refer to this company all General Motors employees who have had sufficient machine shop practice instruction in defense schools.

This order will result in the referral of approximately 79 General Motors men. The Bell Aircraft Corporation is accepting for employment trainees who have had 200 hours of instruction or those who have the approval for placement of their instructors, even though the hours of training are considerably less. Not all of these unemployed men are willing to accept the conditions of employment offered by Bell. To date 17 refused the employment on the basis of insufficient salary. A few others have refused because the employment offered in their case was night work. The starting rate is 50 cents per hour increased to 65 cents per hour at the end of the first month and to 70 cents per hour at the end of the fourth month. Forty-eight hours of employment are had each week in the departments to which these men are assigned.

We are particularly pleased as are the local Congress of Industrial Organizations officials that we are in a position to offer employment to the entire group of machine-shop trainees. It is an added indication of the willingness of the Bell Co. to cooperate in the problem.

The Curtiss Co. reports that approximately 10 General Motors workers have been hired since September 24. The employment office advises us, however, that they expect an order for 200 workers from the plant during the coming week and they hope to fill many of these openings from the General Motors group.

The Buffalo Arms Corporation reports that no General Motors workers have been added to their pay roll since Mr. Nicol's visit.

We sent questionnaires to all displaced General Motors workers in our active file late last week advising that unless the questionnaire were returned, we would assume the workers interested were employed or unavailable for employment. On this basis we have cleared the active file to the point where we now have but 527 active General Motors cases. One hundred and sixty-two

persons reported that they were working. Three hundred and fifty-one questionnaires have not been returned. We believe that the number of unemployed General Motors workers can now be estimated at approximately 600, since questionnaires are continuing to dribble in. Included in this group of 527 are approximately 50 already referred to the Bell Aircraft Corporation and an additional 25 who will be referred on the present order.

We now have an up-to-date report of the status of General Motors trainees. The school department reports that there are now in attendance 214 totally unemployed former General Motors workers. This figure does not include those accepting supplementary training while employed. The training received by the people includes other than machine-shop practice—aviation engine, welding, airplane fabrication, riveting, assembly, etc.

During the week William L. Genske, of Detroit, an United Automotive Workers official and a member of the National Defense Employment Committee, visited Buffalo and held a meeting with Buffalo area officers of the Congress of Industrial Organizations-United Automotive Workers. The purpose of the meeting as stated by Mr. Genske, was to "lay the ground work for the application of a plan evolved jointly by representatives of Office of Production Management and labor," in Buffalo. Also, the meeting resulted in the selection of a committee comprised of local union members. We question whether much will be done locally to effectuate the Michigan plan in this city. At no time during the meeting was dissatisfaction expressed with the handling of the local situation on the part of the State employment service. However, considerable displeasure is shown by union officials toward the Curtiss Co. and the Buffalo Arms Corporation. In their opinion, these companies are not cooperating. The writer does not entirely agree so far as the Curtiss Co. is concerned.

OCTOBER 10, 1941.

There has been very little activity in the General Motors displaced worker picture during the past week. Our records now indicate that a total of 3,343 have been laid off. There remains in our active file 598 workers totally unemployed and registered for work.

During the past week the Curtiss Co. added 14 for a total of 24 since Mr. Nicol's last meeting with the officials of that company on September 24.

The Buffalo Arms Corporation reports that 5 of these men have been hired—these are the first to go to work for that company since Mr. Nicol's visit.

We have completed the referral of all General Motors machine-shop trainees, recommended as ready for placement by the school authorities. Sixty-eight men were referred to the Bell Aircraft Corporation and to date we have had verification of 33 placements. A few placements are pending and the balance represents, for the most part, those who have refused the employment on the basis of the 50-cent-per-hour rate.

The Buffalo Arms Corporation called early this week to advise that they intended raising the beginning wage of General Motors men from the previous 45-cent-per-hour rate to 62½ cents per hour. We have suggested to them that we be permitted to refer the workers who refused the Bell employment at 50 cents per hour. We have not yet had permission to make this referral. The five accepted by the Buffalo Arms were also selected by that company from applications on file in their employment office. Apparently, they make quite a thorough investigation of each individual before considering him and therefore hesitate to permit us to refer these workers to them.

If the commitments made by the Curtiss and Buffalo Arms Cos. during Mr. Nicol's last visit are to be lived up to, exceptional General Motors hiring activity will have to be shown by these companies in the almost immediate future. We seriously question that the commitments will be carried out.

We still are of the opinion that a study of the employment records of at least two of the four would reveal the fact that if the full cooperation of these companies were given, the problem of placement of displaced General Motors employees would evaporate.

OCTOBER 17, 1941.

So far as we can definitely determine not a great number of ex-General Motors workers have found employment during the period covered by this report. We have, however, been able to refer national defense machine-shop course graduates to the Buffalo Arms Corporation for the first time. The order for these workers was an aftermath of a call made to Mr. Nicol by Mr. Peo of the Buffalo Arms Corporation in which Mr. Peo stated that there were, he understood, "only

40 displaced General Motors workers remaining unemployed in Buffalo out of which they had been able to hire but 4."

Mr. Nicol promptly called Buffalo to check on the statement and we called Mr. Gray, personnel manager of Buffalo Arms, to remind him that there were some 60 ex-General Motors workers still to be placed and that we still were awaiting permission to refer those who had completed the machine-shop practice course. (Reference to Buffalo Arms' unwillingness to permit us to refer these workers was made in last week's report.) Mr. Gray stated that apparently Mr. Peo had misunderstood the figures and then agreed that we might refer all available machine-shop practice graduates which we have done. As of today we have referred a total of 20. A few more will undoubtedly be sent in from the vocational schools and will be referred promptly. The Buffalo Arms Co. is not yet in a position to advise the results of the referral which began only yesterday morning.

The Curtiss Co. reports that "approximately 16" displaced General Motors workers were added to their pay roll during the period, making a total of 40 added since Mr. Nicol's visit to Buffalo.

The Bell Aircraft Corporation is now adding few workers and therefore, only a scattered few General Motors people. We repeat our last week's statement that the commitments made by the companies upon the occasion of Mr. Nicol's last visit to Buffalo cannot possibly, it seems, be lived up to.

Since there still remain 590 unemployed General Motors workers still to be placed and since the "cream" has already been placed, the problem of placing the balance is an extremely difficult one. This is particularly true since the remaining unskilled persons are not willing to accept average factory employment. We believe these workers should in some manner be encouraged to accept beginning factory employment available in this city. Their experience qualifies them for no other employment at this time. Several representatives of the union feel as we do. It seems, however, that the impression is prevalent among the workers that they will receive employment on a parity in wages with that which they enjoyed at the General Motors plants.

As previously stated on several occasions, merely because of the attitude of these workers, their referral to average factory beginning employment has been anything but satisfactory. We believe this matter is worthy of the attention of all interested parties since otherwise the placement of the balance of these people is practically impossible, at least until the General Motors plants reopen in Buffalo.

OCTOBER 24, 1941.

There has been no activity to speak of in the placement of displaced General Motors workers during the past week. We can foresee no activity of importance in the immediate future. Our active file of unemployed now totals 566.

The Buffalo Arms Corporation reports that 21 of these men have been hired by them since October 16. This is the largest number taken by the company in any comparable period. However, we do not expect that they will be able to continue employing at this rate, particularly because the people still remaining unemployed are not the type in which Buffalo Arms is interested. They have interviewed every unemployed General Motors worker who has completed a defense training course in machine-shop practice and have apparently no desire to interview those who have not had this training.

The Curtiss Co. in their telephonic report of this morning advises that they have added a total of 30 since Mr. Nicol's last visit. This number, by the way, is one less than that reported last week. The employment manager points out that their hiring has been restricted to the employment of skilled mechanics and the like.

It does not appear that we can expect much from the Bell Aircraft Corporation. The employment manager of that company advises that they face a lay-off of 300 workers due to the shortage of motors and propellers.

Employment activity in this city as a whole is down considerably from previous weeks. This is, we believe, to be expected in view of the lay-offs encountered in several of our larger industrial organizations. These lay-offs will, of course, have an unfavorable effect on the future placement of the displaced General Motors workers since those remaining to be placed have no particular skills to offer and the caliber of workers laid off by other companies now releasing workers, is at least as high as that possessed by General Motors unemployed.

OCTOBER 31, 1941.

There has been little opportunity to refer General Motors displaced workers during the past week. There are several reasons for this: First, none of the

cooperating employers are hiring in any quantity and, secondly, as previously pointed out, the General Motors workers still in our active file do not have the skill or training required by local employers who may be in the market for men, and, finally, there have been quite extensive lay-offs locally.

The active file of displaced General Motors workers is 588 as of today. Although the remaining workers represent those workers with the least skill, this office has made a total of 354 referrals covering the group. This is an indication that an effort has been made to place these people. It must also be remembered that very few of the General Motors displaced workers have been willing to accept referral to beginning factory employment. If this were not true, the total number of referrals would be considerably higher. Also, had these people been willing to accept beginning factory employment, we would not today have anywhere near the present number of unemployed to contend with.

Mr. Addis believes that these workers should accept the beginning factory jobs offered by this office. Mr. Sayen, Buffalo C. I. O. representative who is in close touch with the local situation, concurs. We have pointed out to Mr. Sayen that even though these people now decide that they are willing to accept this type of work, their placement will prove quite difficult in view of the slackened hiring.

In view of the above referred to lay-offs affecting upward of 1,500 workers, which lay-offs have been occasioned by the shortage of materials, we question whether it is advisable to continue to handle the displaced Chevrolet workers as a preferential group. We wonder whether it might tend to place all concerned in an embarrassing position.

The Buffalo plan, which originated to give preferential consideration to workers displaced by the conversion of the local General Motors plants to aircraft-engine production, has been in effect since August 7, 1941. On November 6, Mr. S. Park Harman, Chairman of the Regional Labor Supply Committee of the Office of Production Management, called a meeting in Buffalo to consider the status of the plan. It was the consensus of the meeting that the Employment Service submit to all interested parties a final report summarizing the results of the plan. This summary is contained in the three paragraphs following:

Of the 3,345 workers laid off, but 571 are unemployed and seeking work through the New York State Employment Service. 1,707 of the remainder are known to be working. 440 who dropped out of the plan and 463 who never entered the plan are assumed to be working. The assumption is based on the fact that those workers entitled to unemployment insurance benefits did not claim benefits or draw to exhaustion. The additional 164, in response to letters, stated that they were unemployed but did not enter the plan nor did they draw unemployment insurance benefits.

Thus 2,610 (78 percent) are known or reasonably assumed to be working. 571 (17 percent) are known to be unemployed, and the present status of 164 (5 percent) cannot be definitely determined.

Work opportunities were offered to more than 300 of the 571 unemployed persons, but either the worker was not entirely acceptable to the employer or the opportunity was not acceptable to the worker. Only 121 of this group are presently enrolled in national defense training courses. The courses in which most of them are enrolled will prepare them for employment in the converted motor plants rather than for work opportunity elsewhere.

It was also agreed at this meeting that additional lay-offs, now numbering approximately 2,200, by other local industrial plants facing problems of material shortages or of conversion to defense production, make necessary the consideration of a more comprehensive plan to afford to all displaced workers employment opportunities in local industries.

The current labor market situation was reviewed especially with respect to immigration of workers from other communities and other States. It was the sense of the meeting that local displaced workers should have preference over migrants coming into the community and that steps should be taken to formulate and implement a plan to effectuate this objective. Officials of the Regional Labor Supply Committee of the Office of Production Management are now studying these problems.

SAN DIEGO EXHIBIT 29.—SURVEY OF HOUSING AND MIGRATION

(On the following pages appears the second report of a survey made by the Consolidated Aircraft Corporation, of San Diego, Calif. The first report, covering 475 applicants for work who were questioned at random in the company's employment office during the week ended August 1, 1941, was received too late for inclusion in part 12, San Diego hearings, and was therefore published as "San Diego Exhibit 28" in part 17, Washington hearings.¹ The material that follows was based on a continuation of this survey, covering 500 applicants, during the week ended September 20, 1941.)

SAN DIEGO EXHIBIT 29.—SURVEY ON HOUSING AND MIGRATION CONDUCTED AT CONSOLIDATED AIRCRAFT EMPLOYMENT OFFICE AMONG APPLICANTS APPLYING FOR WORK, WEEK ENDING SEPT. 20, 1941

REPORT BY CONSOLIDATED AIRCRAFT CORPORATION, SAN DIEGO, CALIF.

TABLE 1.—Age, marital status, dependents, period of residence, and housing situation of applicants for work at Consolidated Aircraft Corporation, week ending Sept. 1, 1941

Description	Number	Per-centage of sample	Average	Description	Number	Per-centage of sample	Average
Number in sample.....	500			Time in California—			
Age of applicant.....			24.9 years. ¹	Continued.			
18 through 20 years.....	158	2 31		One week to 1 year.....	185	37	
21 through 27 years.....	237	3 47		One year or over.....	110	22	
28 through 35 years.....	63	4 13		Time in San Diego:			
36 through 49 years.....	33	7		One day.....	127	25	
50 years and over.....	9	2		Two days to 1 week.....	191	38	
Marital status:				Week to 1 year.....	145	29	
Married.....	165	33		One year or more.....	37	8	
Single.....	335	67		Applicants seeking			
Number of dependents.....			0.8.	housing accommoda-			
None.....	292	58		tions:.....	227	45	
One.....	98	20		Room and board.....	119	24	
Two.....	57	11		Houses or apart-			
Three.....	29	6		ments.....	108	21	
Four or more.....	24	5		Applicants not seeking			
Time in California:				housing accommoda-			
One week or less.....	205	41		tions.....	273	55	

¹ This figure shows applicants 1 year and 4 months younger than those shown in report of the survey for the week ended Aug. 1, 1941 (see pt. 17, Washington hearings, p. 6969.)

² Too young for draft.

³ Age groups from which draftees are selected.

⁴ Deferred under new law.

⁵ Above draft age.

TABLE 2.—Last previous States of residence of applicants seeking employment with Consolidated Aircraft Corporation, week ending Sept. 1, 1941

BORDER STATES		FARM STATES—continued	
Kentucky.....	3	South Dakota.....	10
Missouri.....	26	Wisconsin.....	6
Oklahoma.....	60	Total, 20 percent.....	101
Tennessee.....	2		
West Virginia.....	2		
Total, 18 percent.....	93		
		LAKE STATES	
		Illinois.....	20
		Indiana.....	5
Iowa.....	22	Michigan.....	5
Kansas.....	22	Ohio.....	3
Minnesota.....	18	Total, 7 percent.....	33
Nebraska.....	14		
North Dakota.....	9		

¹ See testimony of Maj. Edgar N. Gott, vice president, Consolidated Aircraft Corporation, and Herman R. Wiseman, personnel administrator, Consolidated Aircraft Corporation, San Diego hearings, pp. 4848-4859; and San Diego Exhibit 28, pt. 17, Washington hearings, pp. 6967-6970.

TABLE 2.—Last previous States of residence of applicants seeking employment with Consolidated Aircraft Corporation, week ending Sept. 1, 1941—Continued

SOLID SOUTH STATES		NEW ENGLAND STATES	
Alabama.....	8	Massachusetts.....	1
Arkansas.....	13		
Louisiana.....	8	PACIFIC STATES	
Texas.....	66	California.....	1
Virginia.....	1	Oregon.....	110
Mississippi.....	1	Washington.....	2
Georgia.....	1		
Florida.....	2	Total, 23 percent.....	113
Total, 20 percent.....	100		
MOUNTAIN STATES		SEABOARD STATES	
Arizona.....	11	New Jersey.....	1
Colorado.....	12	New York.....	4
Idaho.....	6	Pennsylvania.....	3
Montana.....	4	Maryland.....	1
Nevada.....	2	Total, 2 percent.....	9
New Mexico.....	5		
Utah.....	3	Grand total.....	500
Wyoming.....	7		
Total, 10 percent.....	50		

TABLE 3.—Percentage of employes of Consolidated Aircraft Corporation born in each State, November 17, 1941

State of birth:	Percent	State of birth—Continued.	Percent
California.....	11.4	Idaho.....	1.0
Texas.....	11.1	Oregon.....	1.0
Missouri.....	7.3	Louisiana.....	.8
Oklahoma.....	6.7	Montana.....	.8
Kansas.....	5.7	Tennessee.....	.8
Illinois.....	5.4	Wyoming.....	.8
Iowa.....	4.6	Kentucky.....	.6
Nebraska.....	4.3	Mississippi.....	.6
Minnesota.....	4.2	Connecticut.....	.5
Arkansas.....	3.1	Alabama.....	.4
Colorado.....	2.8	Maine.....	.4
New York.....	2.8	Maryland.....	.4
Foreign countries.....	2.5	New Jersey.....	.4
Arizona.....	2.0	North Carolina.....	.4
Ohio.....	2.0	Georgia.....	.3
Pennsylvania.....	2.0	Rhode Island.....	.3
Wisconsin.....	1.8	West Virginia.....	.3
Massachusetts.....	1.5	Florida.....	.2
Utah.....	1.5	Nevada.....	.2
Washington.....	1.3	Virginia.....	.2
Indiana.....	1.3	South Carolina.....	.1
Michigan.....	1.3	Vermont.....	.1
South Dakota.....	1.2	District of Columbia.....	.07
New Mexico.....	1.1	New Hampshire.....	.07
North Dakota.....	1.1	Hawaiian Islands.....	.04

TABLE 4.—Percentage of employes of Consolidated Aircraft Corporation by States in which they were last employed, Nov. 17, 1941

State last worked:	Percent	State last worked—Continued.	Percent
California.....	45.5	Oklahoma.....	3.3
Texas.....	8.3	Arizona.....	2.3
Missouri.....	4.5	Iowa.....	2.3
Illinois.....	3.6	Minnesota.....	2.3
Kansas.....	3.5	New York.....	2.2

TABLE 4.—Percentage of employees of Consolidated Aircraft Corporation by States in which they were last employed, Nov. 17, 1941—Continued

State last worked—Continued.	Percent	State last worked—Continued.	Percent
Nebraska.....	2.0	Maryland.....	0.4
Colorado.....	1.5	Massachusetts.....	.4
Wisconsin.....	1.3	New Jersey.....	.4
Michigan.....	1.0	North Dakota.....	.4
Ohio.....	1.0	Rhode Island.....	.4
Indiana.....	.8	U. S. Army.....	.4
New Mexico.....	.8	U. S. Navy.....	.3
Pennsylvania.....	.8	Connecticut.....	.2
Wyoming.....	.8	Florida.....	.2
Arkansas.....	.7	Georgia.....	.2
Tennessee.....	.7	Nevada.....	.2
Utah.....	.7	North Carolina.....	.2
Washington.....	.7	Kentucky.....	.1
Idaho.....	.6	Mississippi.....	.1
Oregon.....	.6	West Virginia.....	.1
Louisiana.....	.5	Virginia.....	.1
Montana.....	.5	Dist. of Columbia.....	.04
South Dakota.....	.5	Hawaiian Islands.....	.04
Alabama.....	.4	Canal Zone.....	.04

TABLE 5.—Length of time in California of employees of Consolidated Aircraft Corporation,¹ November 17, 1941

	Percent		Percent
Up to 6 months.....	34.9	2 to 3 years.....	3.5
7 to 12 months.....	9.9	3 to 5 years.....	5.4
1 to 2 years.....	14.0	Over 5 years.....	32.3

¹The average length of time in California of employees of Consolidated Aircraft Corporation is 6 years and 4 months.

INDEX

	Page
Allocations (<i>see also</i> Defense production; Supply Priorities and Allocations Board) :	
Copper curtailment order, effect of-----	8151
Factors considered in making-----	8152
Industries affected by-----	8151
Surveys of communities affected by-----	8152
Policy, Supply Priorities and Allocations Board-----	8029-8031
Army and Navy :	
Cooperation with Office of Production Management-----	8090, 8138-8139
Determination of defense requirements-----	8021
“Farming out” of contracts (<i>see also</i> Defense contracts— subcontracting-----)	8046-8047
Legal limitations on procurement-----	8087
“Legalistic attitude” toward procurement-----	8070-8071
Placement of purchase orders by-----	8024
Procurement methods-----	8045-8046
Procurement policies, suggested changes-----	8076-8077
Responsibility for defense production-----	8050-8051
Retention of managerial responsibility on defense con- tracts, advocated-----	8047-8048
Automobile industry; labor policy agreements-----	8192-8195
Buffalo plan :	
Discussed-----	8141-8146
Intangible accomplishments of-----	8146-8147
Official report on-----	8197-8207
Press release on-----	8184-8185
Results obtained-----	8148
Bureau of Employment Security :	
Registration at offices of-----	8114
Reports of lay-offs-----	8139
Business men (<i>see also</i> Small business) :	
Nondefense clinics for, suggested-----	8028-8029
Responsibility and opportunities under defense pro- gram-----	8018-8019
Certification of communities-----	8152-8153
Civil Service Commission: Roster of industrial engineers-----	8069
Clearing centers :	
Distinguished from “pools”-----	8073
For excess production facilities-----	8072-8073
Community surveys-----	8152

	Page
Congress of Industrial Organizations. (<i>See</i> United Automobile Workers—Congress of Industrial Organizations.)	
Conservation Order No. M-9-c-----	8151
Consolidated Aircraft Corporation: Survey on housing and migration of applicants to-----	8208-8210
Contracts. (<i>See</i> Defense contracts.)	
Conversion. (<i>See</i> Defense conversion.)	
Defense contracts (<i>see also</i> Defense production; Office of Production Management):	
Analysis of allocations, by regions and States-----	8122-8123
Apportioned by Contract Distribution Division-----	8017
Central subcontracting system for, advocated-----	8091-8092
Channelization of distribution-----	8140-8141
Costs of improper distribution of-----	8026
Development of the directive for-----	8138
Distribution methods-----	8149
"Exploding" for subcontracting-----	8050, 8071
Importance of follow-up procedures-----	8047-8048
Management engineering units advocated-----	8050
Pooling of facilities for-----	8048, 8081
Prime contractor control in-----	8047
Ratio of amounts let to appropriation-----	8078
Reexamination of completion dates, to speed production-----	8025-8026
Speed-up methods-----	8079
Subcontracting:	
German methods and experience-----	8056-8068
Gun parts to nonmilitary manufacturers-----	8049
Importance of, in production-----	8047
Support of Government agencies required-----	8047
Defense conversion (<i>see also</i> Great Britain):	
Coordination of demand and supply essential-----	8019
English experience-----	8082
Extent of utilization-----	8084-8085
Extent of plant availability-----	8043-8044
Governmental assistance in-----	8152
Machine adaptability-----	8023
Unsatisfactory progress charged-----	8023-8024
Utilization of existing capacity-----	8075
Utilization possibilities-----	8084-8085
Defense migration. (<i>See</i> Migration.)	
Defense production (<i>see also</i> Great Britain):	
All-out program required for-----	8036-8037
Capacities for, not used-----	8035-8087
Civilian direction suggested-----	8025
Democratic efficiency challenged in-----	8038
Extent of excess capacity-----	8043-8044
Integration of control policies-----	8088-8089
Hampered by procurement methods-----	8045
Knowledge of total requirements necessary-----	8020-8021
Metalworking industry-----	8074-8075
Pooling of facilities for-----	8073, 8083, 8084
Principal deterrents to-----	8106-8107

	Page
Defense production—Continued.	
Relationship between Government and its suppliers-----	8051
Summary of suggested program for-----	8093-8095
System used in England-----	8051, 8052
Two requirements for building volume-----	8047-8048
Unused capacities for, estimated-----	8050
Utilization of engineering skills required-----	8051-8052, 8069
Utilization of excess capacity-----	8080, 8081
Dislocations. (<i>See under</i> Employment.)	
Employment (<i>see also</i> Great Britain; Multiple shifts, National Youth Administration; Post-emergency planning; Work Projects Administration).	
Additional defense workers requirements, by industry and skill-----	8119
Additional defense worker requirements in relation to defense contracts-----	8121
Age limits-----	8127-8128
Areas of greatest defense dislocation-----	8124
Concentration of labor demands analyzed-----	8120
Cost of labor market survey-----	8147
Defense labor requirements, anticipated-----	8118-8119
Dislocations:	
Automobile industry-----	8110-8111
Construction workers-----	8109, 8110
Distribution trades-----	8135
Durable consumers' goods industries-----	8110-8111
Extent of, by States-----	8114-8118
General Motors workers at Buffalo-----	8197-8207
Government responsibility in-----	8111-8112
Labor policy agreement-----	8192-8195
Measurement of-----	8134
Nondefense industries-----	8109-8111
Practical difficulties in estimating-----	8134
Present and anticipated-----	8111-8112
Silk workers-----	8117-8118
Spread of, based on material shortages-----	8111-8112
Survey of problems of-----	8114
Uneven distribution of-----	8135-8136
Distribution by shifts, selected plants-----	8104-8105
Duplicate registration for-----	8114
Estimates, by major components, selected industries, 1937-41-----	8097-8102
Geographical concentration of required workers-----	8119
Increased by complete use of facilities-----	8085-8086
Increases:	
General Electric Co-----	8075
Machine-tool plants-----	8106-8107
Metalworking industry-----	8078
Industries likely to be affected by curtailments-----	8151
Intensity of Work Projects Administration employment compared to total labor force-----	8121
Labor force estimates-----	8178
Metalworking industry-----	8074-8075
Multiple shifts (<i>see also</i> Multiple Shifts)-----	8103, 8106-8107

Employment—Continued.	Page
Overtime.....	8103, 8105, 8106
Percent of employees on extra-shift work.....	8103, 8105
Reabsorption program under Office of Production Management.....	8031-8032, 8140
Reemployment factors.....	8145
Reemployment program, automobile industry.....	8149
Shift schedule and hours per week, selected plants.....	8106
Similarity between contract allocations and labor requirements.....	8122-8123
Skilled and semiskilled defense worker requirements.....	8119
Survey, applicants to Consolidated Aircraft Corporation.....	8208-8210
Tabulation of additional worker requirements, by States, and labor force.....	8129
Uneven distribution of workers between shifts..	8103, 8104-8105
Wage earners in 18 defense industries.....	8102
Employment Service:	
Buffalo plan, report by New York office.....	8197-8207
Organization of Federal agency.....	8146
Proportion of workers hired through.....	8143
Registration in States requiring additional defense workers.....	8120
Registrations of unemployed employables with.....	8128-8129
Relationship of Office of Production Management.....	8148
Use of radio by.....	8182-8183
England. (<i>See</i> Great Britain.)	
"Farming-out" (<i>see also</i> Army and Navy; Defense contracts—subcontracting; Maritime Commission):	
Bulletins on, issued by Office of Production Management..	8043
German methods and experience.....	8048-8049, 8056-8068
Oerlikon antiaircraft gun.....	8049, 8071-8072
Federal Security Agency (<i>See</i> Employment Service; National Youth Administration).	
General Electric Co.: Employment increases.....	8075
Germany (<i>see under</i> "Farming out"): Bibliography on spreading of orders.....	8066
Great Britain:	
Agricultural minimum wages.....	8162
Employment and transference.....	8156-8160, 8171-8176
Health and welfare of workers.....	8160-8162, 8172-8173
Industrial training.....	8157-8158, 8160, 8174-8175
Labor policy and administrative method.....	8164-8167
Migration.....	8171
Mobilization and distribution of manpower.....	8154-8162
Over-all planning.....	8088
Problems of labor supply.....	8169-8170
"Reservation" of skilled workmen.....	8155
Social measures, changes in.....	8162-8164, 8172-8173
Unemployment estimates.....	8169, 8170
Women workers.....	8158, 8161, 8164-8165, 8176
Health. (<i>See under</i> Great Britain.)	
Housing (<i>see also under</i> Great Britain): Of applicants at Consolidated Aircraft Corporation.....	8201

	Page
Indiana: Extent of labor dislocations in.....	8115-8116
Industries affected by curtailments.....	8151
Labor. (<i>See</i> Employment).	
Labor unions. (<i>See</i> United Automobile Workers, Congress of Industrial Organizations.)	
Little business (<i>See</i> Small business).	
London and Southeastern Regional Board: Composition and functions of.....	8052-8056, 8060
Machine-tool plants: Operating schedules.....	8107
Machine tools: Form used by English clearing centers to obtain data on.....	8055, 8056
Maritime Commission:	
"Farming out" of contracts.....	8046
"Legalistic attitude" toward procurement.....	8070-8071
Placement of purchase orders by.....	8024
Procurement methods.....	8045-8046
Responsibility for defense production.....	8050-8051
Material shortages: Extent of.....	8134
Metalworking capacity of country.....	8074-8075
Migration (<i>see also</i> Great Britain: National Youth Administration):	
Analysis of problem of.....	8034
Effect of low Work Projects Administration employment on.....	8110
Increased by labor displacements.....	8124
Minimized through skilled plant management.....	8017
Of applicants to Consolidated Aircraft Corporation..	8208-8210
Radio program to discourage.....	8182-8184
Related to defense contract distribution.....	8039, 8110
Scheduling of plant operations, as cause of.....	8016-8017
Multiple-plant corporation: Operation of.....	8036
Multiple shifts (<i>see also</i> Employment; Wages and hours):	
Distribution of employment, selected plants.....	8104-8105
Incomplete use of.....	8077-8078
Increased use in defense industries.....	8103
Machine-tool plants.....	8106-8107
Operating schedules.....	8106, 8107
Percent of employees on extra-shift work.....	8044-8103
National Youth Administration: Youth placement, showing State of origin of trainee and location of plant.....	8185-8191
Navy. (<i>See</i> Army and Navy.)	
Oerlikon antiaircraft gun: Example of successful "farming out".....	8049, 8071-8072
Office of Production Management:	
Community certification procedures.....	8152-8153
Division of Civilian Supply: Limitation programs prepared by.....	8022
Division of Contract Distribution:	
Apportionment of defense contracts by.....	8017
Coordinate authority for production.....	8050-8051
Labor Division:	
Collaboration with Division of Contract Distribution..	8152
Community surveys.....	8152

Office of Production Management—Continued.

	Page
Labor Division—Continued.	
Cooperation with Employment Service.....	8148
Industry's interpretation of policy statement....	8193-8195
Policy and program.....	8138, 8139, 8140, 8142
Press release of.....	8184-8185
Report to, on Buffalo plan.....	8197-8207
Sources of labor information.....	8134-8135
Statement of policy issued by.....	8192-8193
Training program.....	8152
Machine-tool survey.....	8032-8033
Pennsylvania silk workers: Defense dislocation of.....	8117-8118
Per capita distribution of defense contracts and facilities..	8122-8123
Post-emergency planning: Retraining and transference of labor.....	8177-8182
Priorities. (<i>See Allocations.</i>)	
Priority unemployment. (<i>See Employment, dislocations.</i>)	
Procurement. (<i>See under Army and Navy.</i>)	
Procurement of military matériel:	
Scope of an efficient program for.....	8039-8042
Suggested organization for.....	8037-8038
Radio, use of by Employment Service.....	8182-8183
Rhode Island Industrial Commission: Clearing center for in- dustrial facilities.....	8072
Roster of Scientific and Specialized Personnel: Creation and functions of.....	8051
San Diego, Calif.: Survey of housing and migration in....	8208-8210
Scranton-Wilkes-Barre area, Pa.: Extent of labor dislocations in.....	8117-8118
Shipbuilding Stabilization Committee: Four-zone standards set up.....	8043
Silk workers. (<i>See Pennsylvania workers.</i>)	
Small business (<i>see also Businessmen</i>):	
Allocations to.....	8029-8031
Effect of defense program on.....	8091-8092
German methods of "farming out" to.....	8063-8068
Pooling organizations by.....	8084-8085
Summary of program to speed defense effort.....	8093-8095
Supplies. (<i>See Allocations.</i>)	
Supply Priorities and Allocations Board:	
Allocations to small business.....	8029-8031
Authority of.....	8023, 8026
Efficiency of surveys directed by.....	8027-8028
Expediting procurement of basic commodities.....	8029
Functions and policy objectives of.....	8017-8018, 8022, 8026
Labor displacements attributed to construction ruling....	8110
National inventories of materials available to.....	8027
Survey of national requirements.....	8020-8021, 8031
United Automobile Workers, Congress of Industrial Organiza- tions:	
City defense employment committees:	
Functions and structure of.....	8195-8196
Labor policy agreement.....	8191-8195

	Page
Vital statistics: Applicants to Consolidated Aircraft Corporation -----	8208
Wages and hours (<i>see also</i> Employment; Multiple shifts):	
Overtime -----	8103, 8105
Shift schedule and hours per week, selected plants -----	8106
Wilkes-Barre, Pa. (<i>See</i> Scranton-Wilkes-Barre, Pa.)	
Wisconsin: Extent of labor dislocations in -----	8116
Women workers (<i>see also under</i> Great Britain): Displaced in silk plants -----	8117-8118
Work Projects Administration:	
Age of workers -----	8127-8128
Certification for training courses -----	8130-8131
Direct certification by -----	8129
Employment, by regions and States, in relation to defense contracts and population -----	8122-8123
Employment break-down in States requiring additional defense workers -----	8120
Employment percentages in States requiring additional defense workers -----	8121
Enrollments -----	8128
Estimates of defense dislocations -----	8123
Field reports on employment dislocations -----	8111-8112
Inability to absorb displaced workers -----	8110, 8113
Inadequacy of appropriation -----	8125
Recertification of defense workers -----	8132
Report on extent of priorities unemployment, by States -----	8114-8118
Road building projects -----	8131-8132
Shift in type of projects -----	8113
Summarization of labor situation by -----	8112-8114
Training programs -----	8126-8127
Transportation of workers to training areas -----	8125
Type of construction allowed during emergency -----	8131-8132

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