

UNITED STATES DEPARTMENT OF LABOR

FRANCES PERKINS, SECRETARY

WOMEN'S BUREAU

MARY ANDERSON, DIRECTOR



## Women's Work in the War

Women Stand Ready to Fill War Jobs  
Control of Industrial Home Work in War Time  
Standards for Lighting War-Production Plants  
War Emergency Acts Affecting Women in Manufacturing



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## Women Stand Ready To Fill War Jobs

Nearly 1½ million women were registered in the spring with employment offices all over the country, according to women advisers to the Social Security Board, who include members of the Women's Bureau staff. Since so many women already were waiting to be placed in war jobs, President Roosevelt announced to the press that no general registration of women was needed at present. In areas with acute labor shortages, local registrations may be necessary. Connecticut, for example, has undertaken one. With a large male labor supply still available, women will be used to a great extent in essential civilian occupations where the numbers of men are declining sharply; but men as well as women will continue to be taken on in war production.

Though the need for women workers has increased markedly, the major call for them still is in the future. All placements of women made by the Employment Service over the entire country increased by 36 percent from the third quarter of 1940 to the third quarter of 1941, but those of men increased by 70 percent. The number of men applicants for work declined by 48 percent, that of women by only 13 percent. There still were 3½ million men seeking jobs in February 1942. In England, increased unemployment among women was an early effect of the war. It was about a year and a half before women's unemployment fell to normal, and during that period no registration of women was necessary.

### Civilian Industries Release Women.

Besides the rolls of job seekers, a source supplying woman labor is in the various industries now curtailing their usual production because materials and plant capacity must be conserved for war uses. The more important woman-employers among these are as follows:

<i>Industry</i>	<i>Number of women in census of 1939</i>
Full-fashioned silk hosiery.....	59,500
Auto bodies, parts, accessories.....	40,900
Radios, radio tubes, phonographs.....	33,000
Electrical equipment (except radio).....	18,200
Silk throwing and spinning.....	17,500
Jewelry, jewelers' material, etc.....	14,300
Miscellaneous metal industries <sup>1</sup> .....	11,600
Clocks, watches, watch cases.....	11,300
Carpets, rugs, carpet yarns (wool).....	11,100
Office and store machinery, n. e. c.....	11,000
Games and toys.....	10,600
Stamped and pressed metal products.....	10,200
Wire work, n. e. c.....	8,800
Silk fabrics (broad and narrow).....	7,300
Needles, pins, slides, snaps, hooks, eyes.....	6,400
Advertising novelties.....	5,700
Refrigerators, air-conditioning units.....	4,200
Silverware, plated ware.....	3,700

<sup>1</sup> Includes such industries as washing, vending, and sewing machines, auto stampings, beauty-shop equipment, and a number of others, none with over 3,500 women.

Almost daily, new regulations add to this list. In many cases plants are converted to war manufacture and some employees stay on, but in many others there are considerable dislocations in employment.

### **New Women Employees in War Plants.**

In the first quarter of this year a million women were in war employment, twice the number before the Pearl Harbor attack. On the basis of this and the further increase before July, the Department of Labor expects that nearly two million more will be added in the other six months, reaching a peak in total woman-employment of over 15 million, about  $3\frac{1}{2}$  million of them on war work.

Less than a third of the expected hires in war plants in the first half of 1942 were to be in establishments that would take women in the types of jobs open, according to reports to the U. S. Employment Service from over 12,000 such plants. Largest numbers of anticipated openings were in making ammunition, aircraft, and electrical machinery. Occupations in which employment offices report that labor has been short but that women are now being taken on include work as detail assemblers, final assemblers, and machine-shop inspectors, as well as electrical assemblers, where women long have worked.

In such an important industrial State as New York, 1,400 employers reporting in April expected women to constitute only about one-fifth of the workers they would take on by the autumn of 1942. The male labor supply still was so large this spring that over 1,100 of these employers did not plan to include any women in their new labor forces before the fall.

### **Women Release Men in Civilian Industry.**

Reports on labor-market developments indicate that women are relieving men in the essential nonwar activities such as trade, personal service, and other nonprocess jobs. Estimates predict an *increase* by the end of 1942 of more than half a million women but a *decrease* of  $5\frac{1}{2}$  million men in nonwar occupations. Projected through 1943, the estimates indicate an enormous decline in manpower in these jobs not directly war-connected, but since much of this work is necessary to maintain the Nation at war a great increase in womanpower is indicated.

### **Many Agencies Seek Employment of Women.**

Persons and agencies that formerly paid but little attention to the asset the Nation has in its women workers now are turning their attention to types of jobs women have done or can do, to ways of organizing a plant to introduce women into new work, to conditions necessary to secure best output with women workers, to most effective methods of training women, and so forth. The variety of groups, both official and private, that are issuing material along these lines, which naturally must draw freely on the Women's Bureau fund of information, is indicated by the partial lists of publications on women in war production appearing in the *WOMAN WORKER* of the past year.

A number of agencies having to do with training and labor supply—such as the Bureau of Employment Security—have sent to their far-flung field offices special bulletins of the Women's Bureau showing the types of jobs women perform in war industries, and the standards that have proved effective in maintaining the health and industrial output of women workers.

### **Jobs for Which Women Are Wanted.**

Specific jobs women are performing are mentioned in almost every issue of the **WOMAN WORKER**. Women have been reported in many places at work on assembly, inspection, and light machine work, grinding, burring, operating punch or drill presses, milling machines, small turret lathes, and so forth. There also are reports of women at work as overhaul and repair mechanics, assembling and disassembling machine guns for testing, and disassembling wrecked airplanes. The U. S. Employment Service has listed over 460 industrial jobs as suitable for women, though 40 percent of these would be suitable only with some breakdown of the job or rearrangement of the industrial process to enable women to perform them. At the time this was compiled, women worked in only a small proportion of these occupations. Not far from half the jobs listed as entirely suitable for women apparently would require only short training, that is, less than 6 months.

Reports of New York employers expecting to take on women by the fall of 1942 indicate an increase of women in airplane plants, operating drilling machines, lathes, power sewing machines, and filing, riveting, and boring devices, as well as on the assembly line; in plants making lenses, bomb sights, precision instruments, and fire-control apparatus, working as assemblers, grinders, honers, drill-press operators, solderers, cementers, welders, engravers, polishers, testers, and inspectors. Other women will turn out radio tubes and parts, work at radio repair; or they will be employed, chiefly up-State, in the electrical-machinery industry as assemblers, winders, inspectors, power-press operators, and X-ray technicians. Some of these firms will use women as core makers and turret-lathe operators.

### **Women in Training for War Industries.**

Reports are received constantly of women being trained in plants in all parts of the country. In some cases women are job instructors, and there are now a few instances of women training other women as job instructors. Women are in training in some plants as tool and gage makers, electric welders, computers, draftsmen, to mention but a few of the more skilled jobs, and in some cases to set up as well as to operate milling and tool-making machinery. In the special Government training courses, latest figures available show women as about 4 percent of those being trained for war industries. In the pre-employment and refresher courses over 6 percent of the trainees are women, in the supplementary courses a much smaller proportion. Recent data for New York alone show women in training as machine-shop and sheet-metal workers; in the schools, some were in radio communication, map preparation, mechanical drawing, cost accounting, electronics, and tool-drafting courses; a few were in chemistry, engineering, and metallurgy courses.

## Standards for Lighting War-Production Plants

Women workers in particular respond to bright, cheerful surroundings, according to British experience with the problems in lighting war plants. Good factory lighting definitely increases output. For black-out plans and 24-hour operation, some British factories made the mistake of painting all windows and skylights black, with immediate ill effects on output and workers' health and morale.

Some of the finest processes in the war-production program are performed by women's nimble fingers. This underlines the particular necessity to women workers of excellent lighting in war factories, now especially important because of pressure for added output, increased use of night shifts, and special black-out problems. Standards of the Illuminating Engineering Society published in detail by the Women's Bureau in 1932<sup>1</sup> have been revised recently as the American Recommended Practice of Industrial Lighting of the Illuminating Engineering Society, approved March 17, 1942, by the American Standards Association.

Though installations should be made by a competent illuminating engineer, production officers should be familiar with the factors involved. In addition to lessening eyestrain, good lighting contributes to greater accuracy of workmanship, resulting in improved quality of production, less spoilage, increased output, better use of floor space, easier maintenance of a clean and neat workroom, better supervision, improved morale, and greater safety.

Factors necessary to consider are quality and quantity. Quality includes absence of glare as well as diffusion, direction, and distribution of light. Glare may be defined as any brightness causing discomfort, annoyance, interference with vision, or eye fatigue, and it may injure the eye and disturb the nervous system.

Quantity of light is measured in units of foot-candles, an arbitrary unit of measurement. Ease, accuracy, and speed of output are increased on a task, sometimes to a remarkable extent, by increasing the amount of light, with due consideration of distribution and contrast. The acceptable level varies with the requirements of each task. For types of work where women are now being employed extensively, the *minimum* standards for levels of illumination as recommended by the Illuminating Engineering Society are given in the following list. In the Recommended Practice of Industrial Lighting, already referred to, is a much more complete table.

<sup>1</sup>U. S. Department of Labor. Women's Bureau Bul. 94. State Requirements for Industrial Lighting. 1932.

<i>Types of work</i>	<i>Minimum illumination (Foot-candles measured at work, 30 inches above floor)</i>
Assembly :	
Rough .....	10
Medium .....	20
Fine .....	B
Extra fine .....	A
Cloth products:	
Cutting, inspecting, sewing—	
Light goods .....	10
Dark goods .....	A
Hangars, aeroplane:	
Repair department .....	50
Inspection :	
Fine .....	B
Extra fine .....	A
Machine shops:	
Fine bench and machine work, fine automatic machines, medium grinding, fine buffing and polishing .....	B
Offices :	
Stenographic work .....	50
Bookkeeping, typing, and accounting .....	50
Sheet-metal works :	
Punches, presses, shears, stamps, spinning, medium bench work .....	20C
Welding .....	30

A=These tasks involve (a) discrimination of extremely fine detail work under conditions of (b) extremely poor contrast, (c) for long periods of time. Illumination levels above 100 foot-candles are recommended.

B=These tasks involve (a) discrimination of fine detail under conditions of (b) a fair degree of contrast, (c) for long periods of time. Illumination levels from 50 to 100 foot-candles are required.

C=These tasks require the discrimination of fine detail by utilizing (a) the reflected image of a luminous area or (b) the transmitted light from a luminous area.

## Control of Industrial Home Work in War Time

A tendency toward increased industrial home work in making Army and Navy uniforms was the experience in early days of World War I. Later, both the Quartermaster General and the Chief of Ordnance of the Army issued orders that "no work should be given out to be done in rooms used for living purposes." Present indications are that cooperation of management and clothing unions, together with style changes and other factors, now have sharply curtailed this system in the clothing industries.

### Fair Labor Standards Act Cuts Home Work in Knitwear.

A recent Wage-Hour Division order practically bans most industrial home work on knitted outerwear after the first of next December. Certificates to do home work may be obtained only for persons who did such work before August 20, 1941, or who are to do it under supervision of a State vocational rehabilitation agency or a sheltered workshop. In either case, home work is allowed only for persons unable to adjust to factory work because of age or physical or mental disability, or unable to leave home because caring for an invalid.

### Jewelry Home Work Also Rigidly Cut.

The order for knitted outerwear is the second to virtually do away with home work in an industry in which it has been general. The first was in jewelry making, and was effective November 3, 1941, under much the same terms as the more recent knitwear order. (See *WOMAN WORKER*, November 1941.) The orders are based on authority under the Act to "prevent the circumvention or evasion" and "safeguard the minimum-wage rates established." Hearings have been held also on home work in the women's and children's apparel, glove, and button and buckle industries.

### Home Work on Army and Navy Clothing.

In World War I, Navy clothing made at Charleston, S. C., was done entirely in factory, but in Brooklyn, N. Y., home workers sewed stars and tape on sailor collars, made undress jumpers, blue serge overshirts, and white cotton jumpers for the Navy. They worked chiefly in their dining rooms, kitchens, or living rooms, sometimes in bedrooms, and in a few cases separate sewing rooms were used.

Though the Army no longer gave out work to New York tenement dwellers, home workers did about a third of the sewing of Army shirts made at one of the Philadelphia stations and in Indiana near Louisville, Ky. Efforts were made to fumigate these garments, but the system was not effective in destroying all germs. Moreover, the capacity of fumigating facilities at Louisville was 14,000 shirts, but 17,000 to 20,000 a day were received. Some of these were made in shanties with no sanitary facilities, built on low ground covered with water at flood seasons. Wastefulness of the home-work system

was emphasized by the fact that it required 21,000 workers to do at home what 3,000 factory workers could do, and by the congestion of transportation due to shipping materials and completed garments to and from the substations and to the workers carrying their bundles back and forth from depots to homes. Reports for one Indiana branch showed that a fourth of the home workers lived at a distance of 50 miles or more.

### **Recent Progress in Home-Work Control.**

The past few years have seen great progress in defining and controlling industrial home work. The problem was widely studied and some control instituted under the N. R. A. in 1933-35. The Fair Labor Standards Act requires payment of the same rates to home workers as to factory workers. Most home workers are women. Investigation showed that employers of home workers accounting for one-third of such workers actually registered in five States held active State home-work permits but had failed to obtain the handbooks required by the Wage-Hour Division.

Beginning in March 1939 the Wage-Hour Administrator required employers of home workers to keep special records for a 6-month period to determine whether they were complying with the statute. In November 1939 a court decree obliged back wages to be paid by 11 of the country's largest manufacturers and sellers of knitted garments, perhaps the most important of all home-work industries. A permanent injunction restrains the companies from further violation, either directly or by subterfuge. (See WOMAN WORKER, March and July 1939, January and March 1940, January 1941.)

The Wage-Hour Division reported late in 1940 that, though but slightly more than 1 percent of all cases litigated under the F. L. S. A. concerned home workers, almost 25 percent of the back wages ordered went to home workers, who constituted 13 percent of all receiving such wages. The average sum restored to home workers was almost twice the average for all workers, a rough index of the extent to which home workers, in contrast to other employees, were exploited.

### **Situation in the Apparel Industry.**

The Wage-Hour Division made a comprehensive survey of home work on women's and children's apparel and presented the facts at hearings in the spring of 1942. The study includes interviews with home workers and with employers, reports on handbooks issued, special questionnaires to employers. It gives as a very rough estimate a maximum of some 9,600 home workers in the industry. The report shows that of some 3,300 home workers in 220 firms inspected in the spring of 1941, over three-fourths were in three States as follows: New York, 39 percent; Pennsylvania, 20 percent; Texas, 18 percent. Employment in the same year on infants' and children's wear showed a different distribution: Pennsylvania, 40 percent; Texas, 38; New York, 3.

The setting of rates for home workers was found to be haphazard. If work was also done in the factory, home workers were paid the same rate as plant workers. If not, a sample maker in the factory or a few home workers were timed, or the statement of the home worker was accepted. Some employers divided the prevailing min-

imum rate by a rough estimate of the number of units that might be done in an hour. According to information from some 400 home workers, nearly half the work was done by hand, nearly one-third wholly by machine, the remainder a combination of the two. In general, hand work as done at home was not done in the factory, but home machine work was. Most firms had a factory force far in excess of those working at home, but a few had no factory force. Some large branches of the industry were highly seasonal, especially blouses, dresses, handmade underwear, and some types of neckwear. But seasonal variation of the home-worker force was even greater than that of the factory, since so often home workers were used only to supplement the factory force at the peak of the season.

#### **Home Work on Gloves.**

Under the minimum-wage provisions of the Fair Labor Standards Act, glove manufacturers representing 90 percent of the production in the industry agreed with the Government to pay back wages, affecting home workers chiefly in New York, Wisconsin, Illinois, and 20,000 in Puerto Rico. The records of the Wage-Hour Division indicate that at some time in about two years' prior to June 30, 1941, handbooks were distributed to more than 8,200 home workers, 97 percent of them in New York State. Of more than 1,000 home workers reported by the Bureau of Labor Statistics in 1941, only 35 were working outside New York.

This is one of four industries for which New York State has issued special orders sharply curtailing home work. (See *WOMAN WORKER*, September 1941.) Hearings have been held under the Wage-Hour Act that may extend similar restrictions to this industry in other States, as has been done for apparel and knitwear, since already New York glove manufacturers have made inquiries about the home-work regulations in New Jersey, New Hampshire, Vermont, and Pennsylvania with the view to increasing the amount of home work going to those States.

## War Emergency Acts Affecting Women in Manufacturing

At time of writing only 10 States have found necessary any legal changes or new laws that affect women's employment to meet emergency needs for industrial production.<sup>1</sup> The work standards required by law are such as experience has proved will best aid maximum output as well as the workers' health. Of the few legal adjustments that have been made as to labor standards, a number are relatively minor.

In 17 States, basic statutes covering women's work in manufacturing contain elastic provisions applying to work hours, night work, or allied subjects.<sup>2</sup> Others have issued emergency orders, or have granted permits where war work is involved. For the most part new laws, orders, or amendments apply specifically to war emergency.

All the major industrial States employing large numbers of women in manufacturing have made ample provision for emergency. In all, 33 States have established exemption procedures and 4 others are prepared to handle exemptions. Six either have no labor laws applying to women or their hour laws permit such a long maximum that no exemption would be needed.<sup>3</sup> Five other States have established no procedure.<sup>4</sup>

The list following shows the States that, from December 7, 1941, to date, have passed laws affecting labor standards for women. Further details of such action are shown in the *WOMAN WORKER* for May.

General emergency acts—Maine, Massachusetts, and Rhode Island.  
Weekly work hours—New York and Virginia.  
Rest or lunch periods—Maine, New Jersey, and New York.  
Night work—New Jersey and New York.  
Sunday or 7th-day work—New York and South Carolina.  
Holidays—Kentucky.  
Overtime pay—New York.

### LABOR LAWS FOR WOMEN IN 1942

The following laws have been approved in 1942, *in addition to the* war emergency acts affecting women's labor laws in Maine, Massachusetts, New York, and Virginia reported in the *WOMAN WORKER* for May:

<sup>1</sup> Changes in labor laws in Kentucky, Maine, New Jersey, New York, and South Carolina; war emergency acts that apply specifically (New York and Virginia) or that can be applied (Maine, Massachusetts, and Rhode Island) to labor provisions; and two additional States that passed laws in 1941 but before Dec. 7—Connecticut, an hour law; Nebraska, a night-work law; both described in the May *WOMAN WORKER*.

<sup>2</sup> Includes night-work-prohibition laws or orders in 4 States, 1-day's-rest-in-7 laws in 10 States, and 48-or-less-maximum-hour laws in 10 States; 22 States fix a maximum of over 48 hours a week in some manufacturing plants and 8 States fix no weekly hour limit.

<sup>3</sup> Alabama, Florida, Georgia, Kentucky, Mississippi, and West Virginia.

<sup>4</sup> Arizona, Louisiana, Maryland, Missouri, and Tennessee.

## War Emergency Powers

### Rhode Island.

Act effective until March 31, 1943, giving power to the Governor to cooperate with Federal authorities and with Governors of other States in matters pertaining to the common defense of the State and the Nation. (Approved and effective April 10.)

## Hours of Work

### Kentucky.

Suspension for the duration of the war of the observance of all legal holidays but Independence Day, Labor Day, and Christmas. (Approved March 12.)

### Maine.

Amendment to law for women requiring rest period of 1 hour after 6 hours of continuous work permits reduction to 30-minute rest period after 6½ consecutive hours in workshops, factories, manufacturing or mechanical establishments. (Approved January 24.)

### New Jersey.

For duration of the war the Governor is given power to suspend the law requiring a 30-minute meal period after 6 hours of work; but not over 8 hours are allowed without a meal period. (Approved and effective March 31.)

### New York.

Law of 1941 permitting employment of bindery workers at night and requiring overtime pay for hours over 40 to 48 was amended by striking out the overtime provision. (Approved and effective May 10.)

### South Carolina.

Amendments authorize the Governor to permit Sunday work in factories, stores, and machine shops during the National emergency in production of goods under Government contract. Persons conscientiously opposed to Sunday work shall be exempted without prejudice. (Approved and effective March 19.)

## Industrial Home Work

### New York.

Two amendments were passed—(1) requiring that home work must be distributed direct to workers by the employer and not through contractors or distributors, and (2) declaring that home workers are employees of their employers and not independent contractors. (Approved and effective May 5.)

## Minimum Wage

### New Jersey.

Amendment makes technical correction in the title of the minimum-wage law. (Approved and effective February 2.)

### New York.

Minimum-wage law has been amended to provide that appeals from determinations of board of standards and appeals must be taken direct to the appellate division of supreme court, third judicial department, on any question of law involved in any decision or order reviewed. (Approved and effective May 6.)