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## WAR JOBS FOR WOMEN

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## WAR JOBS FOR WOMEN

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*Sources tapped: War Department, Navy Department, War Manpower Commission, Civil Service Commission, Woman's Bureau of the Department of Labor, Department of Agriculture, Institute of Women's Professional Relations, U. S. Office of Education, Office of Civilian Defense, American Red Cross, the Government's Subcommittee on Nursing, The American Association of University Women, The American Council on Education, and the Career Department of Mademoiselle Magazine.*

*Sources untapped: All those having succinct summarizing material on the subjects discussed here, or on other phases of this changing war picture, are invited to send them to the OWI Magazine Section, Social Security Building, Washington, D. C., for a possible future revision of this memorandum.*

November 1942.

This booklet was prepared for magazine editors. In response to requests it has been made available to the public. It is a publication about the war. When you have finished reading it, please pass it on to a neighbor or a friend for further circulation.

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## WAR JOBS FOR WOMEN

Every American woman wants to help win the war. The problem is how and where to fit into that big word which is daily growing bigger—*Womanpower*.

Many women already are on the jobs they can do best and are putting in full time. Some women still have odd hours in which they could give volunteer patriotic service. Great numbers of women who have hitherto been in the home are taking full time jobs to free men for combat duty as this country's warfare becomes more intensive. Greater numbers need to plan *now* for such service.

The War Manpower Commission estimates that  $4\frac{1}{2}$  million women will be engaged in direct war work by the end of 1942, and 6 million by the end of 1943.

But this by no means indicates that only  $1\frac{1}{2}$  million women must be added to the labor force. Because of the fact that nearly all able-bodied men over 14 are already in the labor force or in the armed forces, the bulk of the increase of  $5\frac{1}{2}$  million in the estimated civilian labor force and the armed forces during the fiscal year of June 1942 to June 1943 will have to be women. June is a peak month in labor requirements. In June 1942, there were 15 million women in the labor force. By June 1943, this number will have to be approximately 20 million.

This country, however, has not yet reached the situation where women *everywhere* are needed for all sorts of work previously done by men, as in England. Employment of women is still a local question which must be dealt with according to the need and the supply of womanpower in the community. There is no rule of thumb for the country as a whole. In crowded war industry-areas, the aim obviously must be to drain every bit of local labor-supply before calling in new labor which would create further overcrowding.

Since America continues to be a land of initiative, the final catalogue of the jobs that women do in this war will be what women make it. Furthermore the place of women in the war industry picture changes so fast that there is no keeping absolutely up to date. This memorandum, therefore, is not even an attempt at an exhaustive catalogue of women's war jobs, but is rather a guide to indicate some of the avenues opening to women, some of the typical jobs in them, and some of the sources of further information.

## To Find Out About War Jobs

In general, the following instructions are given for women seeking war jobs:

If you wish to volunteer for unpaid patriotic work, go to your Civilian Defense Volunteer Office.

For opportunities to work for pay in war industries, consult your nearest U. S. Employment Service Office.

For work in government, follow Civil Service announcements through your local post office.

If you wish to try for service with the Women's Auxiliary Army Corps (WAACS) apply at your nearest Army recruiting station.

If you have the aptitudes and the training required by Women's Reserve of the Navy (WAVES) submit a written request for a preliminary application blank to the Director of Naval Officer Procurement of your Naval District.

If you are a trained nurse wishing active duty with the armed forces, consult your local Red Cross Chapter or apply to the headquarters of any of the nine service commands of the Army. Or write for application forms to the National Headquarters, American Red Cross, Washington, D. C., or to the Office of the Surgeon General of the Army, 1818 H Street, NW., Washington, D. C. The Red Cross is official recruiting agency for both Army and Navy nurses, and also recruits medical technicians for the Army.

If you are a retired nurse, badly needed for work on the home front, consult your local hospitals.

Listen to the radio. Read the newspapers and magazines.

## SERVING UNCLE SAM

Government war jobs have swelled the population of the national capital to boom-city proportions, and have added materially to the working forces of many other cities. In a single year, 40,000 stenographers and typists—largest block of workers employed—were added to the government pay roll. The Civil Service continues its call for stenographers and typists, traditionally women's jobs, and asks all Federal departments to increase employment of women so that men may go into active service. Both War and Treasury Departments have announced such an employment policy. Sixty percent of the persons now being employed in the Federal government are women. It is estimated that hirings in the metropolitan area of Washington, D. C., alone will continue at the rate of 1,250 a week of which 750 will be women.

The increasing need for men in combat service has also prompted the setting up of the women's organizations of the armed services, the WAACS—Women's Auxiliary Army Corps; the WAVES—Women's Reserve of the Navy; and the WAFS—Women's Auxiliary Ferrying Squadron. Each of these three special services has its own system of recruitment. Civilian posts in War and Navy Departments are recruited, like the rest of the government war jobs, through Civil Service, often supplemented by personal application.

The trend for more women in civil posts and in necessary posts with the armed services as a war-time measure must of course continue. The need for great numbers of women for stenographic, clerical, and typist positions in Federal war agencies in Washington presumably will continue as long as the war lasts.

Women who derive their greatest satisfaction from the feeling that they are actually working with the fighting forces may tally up their own qualifications against the requirements listed by the WAACS, WAVES, and WAFS, and may

follow the formulation of other projected outfits such as the one now in process for the Coast Guard. As yet, however, these opportunities should be regarded as strictly limited in number by the legislation or financial budgets on which they were recently set up.

**WAACS.**—By the early part of 1943, 25,000 women officers and auxiliaries will be serving with the U. S. Army, freeing fighters from such jobs as operating switchboards, typing and clerical work, and operating office machines. WAACS with specialized training will also serve in aircraft warning units, as hostess aides and librarian aides, as drivers of automobiles and repairers of their motors, as pharmacists' assistants in the post exchange, as dieticians and cooks. The act authorizing this new women's auxiliary army will permit an ultimate enrollment of 150,000 women.

**Qualifications.**—For auxiliaries, must be a citizen, be between 21 and 45 years old, between 5 and 6 feet high, weigh a minimum of 100 pounds, pass intelligence tests, pass physical tests. Marriage is no bar. Must have no children under 14.

There is no longer opportunity to be appointed direct from civilian life to the Officers Candidate School of the WAACS. All future appointments to the Officers Candidate School will be from the ranks after completion of basic training. For the first WAAC officers candidates, some women over 45 years of age were accepted. This will not apply in the future, since promotion will be from the ranks and the age limit is 45 years.

**Special opportunities.**—WAAC units may go wherever the Army goes and so some probably will have foreign service. General Dwight Eisenhower, Commanding General, European Theater of Operations, has asked for communication and clerical platoons to be attached to large headquarters of the American Expeditionary Forces under his command.

**Pay and rank.**—The WAAC pay now corresponds to that of the Army. The following list shows the WAAC rank, the Army rank equivalent, and pay under the law recently passed by Congress:

Auxiliary . . .	Private . . .	\$50 per month;
1st Class . . .	Private, 1st Class . . .	\$54 per month;
Junior Leader . . .	Corporal . . .	\$66 per month;
Sergeant . . .	\$78 per month;	Leader . . .
Staff Sergeant . . .	\$96 per month;	Staff Sergeant . . .
		Technical Leader . . .
		Technical

Sergeant . . . \$114 per month; 1st Leader . . . Master (1st) Sergeant . . . \$138 per month. Officer's pay ranges from \$166.67 per month to \$333.33. And subsistence—food, clothes, living quarters, dental and medical care.

WAACS must enroll, in person, at recruiting stations where WAAC officers are assigned. This country has 52 main recruiting stations, 246 substations. WAAC officers are now stationed at 59 of these stations. Ask at any postoffice or Army headquarters about which of the WAAC-manned stations is nearest you.

**WAVES:** This branch of the U. S. Naval Reserve started with an initial plan for 1,000 officers, 10,000 enlisted women. The try-out was so satisfactory that the Navy now says it will take on as many as are needed. The purpose of the WAVES is to free men to go to sea, and their job qualifications are accordingly the same as those of the enlisted men and officers they are called upon to replace.

The technical nature of many of the Navy positions to be filled is indicated by the type of education and experience listed as desirable. Especially wanted are women good in such subjects as accounting, aeronautical engineering, astronomy, business statistics, civil, electrical, mechanical and radio engineering, electronics, mathematics, metallurgy, modern languages, physics. Other working knowledge which might help includes architecture, business administration, chemical engineering, chemistry, commerce, economics, English, finance, geography, geology, political science, history, industrial engineering, journalism, library science, mineralogy, psychology, and transportation. Experience listed as desirable includes supervisory jobs in telegraph and cable offices, and maintenance work on teletype machines. Also asked for are licensed radio operators, ultra-high frequency engineers, lexicographers, typewriting teachers, statisticians, business machine demonstrators, junior executives, and personnel supervisors. The first training schools opened were in radio, storekeeping, and Navy clerical work.

*Qualifications.*—Must be a citizen. Must pass physical and aptitude tests. Must have no children under 18 years of age. May be married, but not to a man in the armed services. After training period, may marry anyone but a Navy man and retain her status as a Naval Reserve.

Enlisted WAVES must have at least a high school or a business school diploma or have taken business school courses supplemented by experience comparable to a high school education. Ages 20 to 36 are eligible.

Officers must be graduates of an accredited university or college, or must have had two years of administrative or technical experience in business or professional fields in addition to two years' college. Age must be not under 20, not over 50.

*Special advantages.*—The technical training which the Navy gives is likely to prove a great employment asset after the term of service is over.

*Pay.*—Regular Navy salary scale for the position occupied. Enlisted WAVES receive subsistence and quarters allowance of \$2.75 a day in addition to a monthly base pay which ranges from \$50 a month for an apprentice seaman to \$126 a month for a chief petty officer. Officers receive rent and subsistence allowances in addition to the following annual base pay scale: Ensign, \$1,800; Lieutenant Junior Grade, \$2,000; Lieutenant Senior Grade, \$2,400. A cash allowance is made for uniforms at the time of entering the service—\$200 for enlisted women, \$250 for officers.

Apply in writing, stating age, educational background, and experience, also marital status, age of children, and husband's occupation to the Director of Naval Officer Procurement in your Naval District. Inquire at your post office for the nearest Naval Officer Procurement Station.

**WAFFS.**—This experimental auxiliary aviation unit, recruited on a Civil Service requirements basis and not created by Act of Congress as were the WAACS and the WAVES, is starting with about 40 active women pilots and 10 women engaged in administrative duties. Something of the large numbers of women pilots from which such an air auxiliary might eventually draw is shown by the fact that 3,500 women pilots have been accepted in the Civil Air Patrol organized a week before Pearl Harbor to work for Army and Navy. These CAP women pilots are presumably on their way to higher qualifications. A women pilot must be thoroughly qualified to be able to join the WAFFS.

*Qualifications.*—Must be a U. S. citizen between 21 and 35 years of age, have a high school education, possess a commercial pilot's license with 200-horsepower rating, have not

less than 500 hours of logged and certified flying time, and have had cross-country flying experience.

*Pay.*—\$3,000 annually, quarters provided.

Apply in writing to the Air Transport Command, War Department, Washington, D. C.

**Army and Navy nurses.**—All qualified nurses who can possibly do so should feel it their patriotic duty to serve with our armed forces in this critical time in the world's history. The Army must recruit 2,500 nurses a month, the Navy 500. That means that at least 36,000 graduate nurses a year must leave civilian posts to care for soldiers and sailors. Nursing is woman's primary and traditional job in war time. Although she is not subject to draft, it is as much the duty of a qualified nurse to serve her country as it is for a man of similarly valuable training to enter the armed services.

*Qualifications.*—Must be a graduate, registered nurse with at least three years' training in an accredited nursing school; must be between 21 and 40 years of age; must pass physical tests. Navy nurses must be unmarried. A rule went into effect on October 1 that nurses in the Army who marry will be continued in active service for the duration of the war and six months thereafter at the discretion of the Surgeon General. A married nurse, however, may not join the Army Nurse Corps.

*Special advantages.*—All nurses go in as officers—Second Lieutenant in the Army, Ensign in the Navy. If a nurse has aptitude in a special field, such as surgery or anesthetics, she is likely to be put into that field. Nurses with experience as hostesses for the commercial air lines are wanted for air ambulance duty. If an Army nurse has supervisory experience, she is likely to be advanced to First Lieutenant, and some even become Captains. Only two Army nurses are commissioned officers, the commander of the Corps is a Colonel, her assistant a Lieutenant Colonel. The superintendent of the Navy Nurse Corps is a Lieutenant Commander and her assistant is a Lieutenant. Army nurses actually share the fortunes of war with the U. S. troops wherever they go, and there is a good chance for foreign service for those who volunteer for such posts. For both Army and Navy nurses, opportunity for a continued interesting career is likely to open in the reconstruction work which must follow the war in all parts of the world.

**Pay.**—Base pay is \$90 a month. Promotions in rank in accordance with Army and Navy regulations. Nurses also get quarters, uniforms, subsistence. If a bill now in Congress is passed, an Army nurse will receive the same pay as an Army officer of the same rank—if she is a First Lieutenant, she will get the same pay as a First Lieutenant in the Army.

Enroll with your local Red Cross Chapter or write for an application blank to the National Headquarters of the American Red Cross in Washington; or apply to your nearest Army Service Command headquarters or write to the Surgeon General of the Army, Washington, D. C. The Red Cross is authorized by Congress to recruit both Army and Navy nurses, check their qualifications, make the necessary initial inquiries. When a summons comes from War or Navy Departments, only a final physical check-up is necessary before going into active service.

**Medical technologists.**—The Medical Department of the Army employs civilians as technologists as their services are required. The American Red Cross, through its Medical and Health Service, is enrolling women technologists between the ages of 21 and 53. The names and qualifications of all enrollees are submitted to the office of the Surgeon General of the Army. At present there is a great need for more dietitians and physical therapy technicians for service within and outside the continental United States. Write to the Director of Enrollment of Medical Technologists, American Red Cross, National Headquarters, Washington, D. C.

**Civilian posts in War and Navy Departments.**—The bulk of civilian hirings by the U. S. since 1940 has been for the Army and Navy, largely for jobs outside Washington. This fact is worthy of consideration by women seeking employment, as indicative of where the majority of the jobs are likely to be found. As of June 30, 1942, the date of latest available figures, approximately 275,000 women were working for the War Department, 40,000 of them in Washington, the rest outside. A little over 56,000 were working for the Navy, 14,000 in Washington, the rest outside. These combined totals were well over half the total number of women working in the entire executive Civil Service—about 550,000. Some of these civilian posts are colorfully “with the armed services.” For instance, estimate has been made that at least 25,000 women eventually would be employed in the field of radio

alone. Others follow more traditional Civil Service patterns for women workers.

*Army examples.*—Spectacular are the women's jobs performed on the Aberdeen, Md., Proving Grounds where former stenographers, salesgirls, and housewives test out anti-aircraft and machine guns, drive tanks, run 15-ton cranes. The Army Air Force has been using 50 experienced women fliers to train cadets at primary flight schools. Further use of women fliers will result from the school to be headed by Miss Jacqueline Cochran who was recently named Director of Women's Flying Training within the Army Air Forces. While many of her graduates will doubtless join the WAFFS, they will also be used for various other aviation jobs.

The Army expects to have 25,000 women by the end of 1942 in aviation field work inspecting planes, cleaning and inspecting parachutes, cleaning engines, and towing planes. The Signal Corps was so interested in getting good technicians among upperclass students and graduates of women's colleges that it sponsored a tour of the country last spring, adding 25 young women to the personnel of the Signal Corps Development Station at Fort Monmouth, New Jersey. *The Army never has been able to fill all its openings for women draftsmen.* Women work in War Department plants producing guns, tanks, parachutes, bombs, and clothing, and in arsenals and depots as chemical workers, precision metal workers and distribution clerks.

The Army must depend largely on good inspection to maintain high efficiency. It is depending more and more on women for good inspection. Its inspection jobs are most exacting and difficult, and women have been doing them well. To widen the field for women in this capacity, the Quartermaster Depot at Philadelphia has set up training courses for special technical inspections. Women inspect clothing and fabrics, guns, ammunition and other ordnance material.

*Navy examples.*—To a lesser degree and with fewer workers, the Navy has departed sharply from tradition. Notable was the admission of women workers in other than clerical positions to both Washington, D. C., and Brooklyn, N. Y., Navy Yards. As of July 1942, women in the Washington Navy Yard working on semi-skilled ordnance jobs numbered 1,023 as against 2,686 women clerical workers there. Employment of the large number of women in overalls was made possible by breaking down technical and precision operations.

Where men in years gone by have spent four years in general apprenticeship, women now learn not a trade but one operation. The Navy also employs women physicists, engineers, architects, designers, mathematical computers, laboratory workers, flight statisticians, photographic interpreters, and inspectors.

*Qualifications and pay.*—There are no specific educational requirements for clerical, stenographic and office machine jobs, and for unskilled jobs in the war plants. These jobs range usually from \$1,260 up to \$2,000. Women with administrative, technical, and scientific training can qualify for positions paying from \$2,600 on up to \$5,600. A very few posts under Civil Service pay as high as \$8,000.

*How to get civilian jobs with Army and Navy.*—Recruitment is by the Civil Service Commission. Go to your nearest first- or second-class post office and consult the Civil Service Secretary there. See "How Civil Service Works" at the end of this section.

*Training programs.*—While it is the purpose of the Civil Service Commission to furnish the Federal War Agencies with fully qualified personnel, this is now often impossible. It supplies the best personnel obtainable.

To meet the need for trained workers, training courses are given. Congress has provided funds to be allotted to state-owned schools through the Office of Education. With these funds, vocational courses are conducted in which workers are trained for jobs vital to the war-production program. For example, the War Department has arranged through the Office of Education to have training courses set up in various places to train women as well as men for such varied positions as junior optical worker, junior instrument maker, junior lens grinder, apprentice machinist, apprentice tool maker, senior clerk, auto mechanic, inspector of various types of ordnance equipment, storekeeper, engineering aide.

Increased attention is also being given to training-on-the-job for employees not adequately trained, and other training is given for the up-grading of employees to be subsequently assigned to more difficult work.

**Other Federal agencies.**—While the word "war" is specifically linked with Federal agencies created for the purpose of doing some special war-time job, such as War Production Board, War Manpower Commission, Office of War Informa-

tion, Office of Economic Stabilization, and Office of Price Control, all Federal agencies are now doing some kind of war work and are therefore war agencies. From now on, employment of women in all these Federal war agencies necessarily must be increasingly on a replacement basis, as men whose duties are not absolutely essential to the war are drawn off by the draft or by volunteering for the armed services. This will mean war-duration jobs for trained women in a great variety of vocations.

*Employment opportunities fall into three main categories.*—(1) Stenographic, clerical, and office machine jobs; (2) Administrative, technical, and scientific positions requiring specialized training and experience; (3) Highly specialized scientific posts formerly filled only by men, and for which women are now being sought.

*Stenographic, clerical, office machine jobs.*—These are the jobs, urgently necessary to the conduct of the war, which have drawn thousands of girls to Washington, will draw thousands more. The girls in them are serving their country just as surely as are the boys who go to camp. Applicants must pass written examinations. These tests have become shorter, easier, as demand became more urgent. For a purely clerical position, not even shorthand and typing skills are necessary. Applicants must pass physical tests. Girls who have finished high school, haven't finished college, or who have finished college but have no working experience often can find work in line with the subjects of major interest to them in school. Many government departments now offer in-service training, to help girls qualify for advancement. Those who can type 35 words a minute can qualify as typists; those who can in addition take dictation at 96 words a minute can qualify as stenographers. So great has been the need for stenographers that at one time 60 examiners were sent out over the country to recruit them, give them examinations in their home towns, grade the papers immediately, and put the girls who passed right on the train for Washington.

Typical "in Washington only" positions as announced by the Civil Service Commission September 1, 1942, and their starting salaries, depending on ability, were: addressograph operators, \$1,260 and \$1,440; alphabetic card punch operator, \$1,260; blueprint operator, \$1,260 and \$1,440; graphotype operator, \$1,260; mimeograph operator, \$1,260; junior typist,

\$1,260; junior stenographer, \$1,440; tabulating machine operator, \$1,260 and \$1,440; photostat operator, \$1,260.

*Administrative, technical, scientific positions.*—For college graduates without experience a large crop of "junior" posts have sprung up in the past few years. A special examination for college graduates was announced by the Civil Service Commission in 1939, and each spring since graduates by the thousands have been examined in about a score of optional subjects, qualifying as junior chemists, junior agronomists, junior engineers, junior physicists, junior economists. Starting salary is usually \$2,000.

Almost any professional or business career a woman may have started will find its counterpart in the varied activities of the Federal Government in wartime.

The career woman who wishes to take a war-time position in government should look at the list of open examinations at the local post office to find out whether there is one which fits her qualifications. If so, all she has to do is take the examination and, presuming that she passes it, await an offer of appointment. If there is no examination in which she is interested, she should write a letter to the Civil Service Commission describing her qualifications. The Commission, being the central recruiting agency of the Federal Government, will inform her as to whether there is need for persons with her qualifications and, if so, where the need exists.

In fields of special wartime need, the Civil Service Commission, instead of specifying the closing date for an examination, keeps it open continuously. One such field is nursing. Junior graduate nurses get one year in-service training in veterans' hospitals in the Public Health Service, or in the Indian Service at a starting salary of \$1,620 a year; a junior public health nurse starts at \$1,800; nursing consultants get \$2,600 to \$5,600. Architects qualified in design, specifications, and estimating get \$2,000 to \$3,200; engineering draftsmen, \$1,440 to \$2,600. Chemists, \$2,600 to \$5,600. A junior chemist examination at \$2,000 was closed to men applicants last June, will be open to women until the needs of the Service have been met. Only women are taking the test for technical and scientific aide at \$1,400 to \$2,000.

It is usual for positions of this type to be qualified for on the basis of an "unassembled" examination. No written test of set question is required, the applicant being rated on the

basis of sworn statements submitted in his application, corroborated by evidence based on investigation and interview. Those who make the most able and best-backed-up presentations of their education and experience are the most likely to get the position applied for. When taking an unassembled Civil Service examination, remember that the person who will read and grade it doesn't know you personally. Where real experience is necessary, state it fully and clearly and offer proof wherever possible. If you expect to occupy a professional position, make your presentation look professional, not amateurish. Each examination announcement states qualifications in great detail and specifies salary.

**Highly specialized scientific posts.**—The National Roster of Scientific and Specialized Personnel, maintained by the War Manpower Commission, stands ready to list all highly trained women and to make their special qualifications known to any employing agency concerned with the war effort. So great is the shortage in chemistry and some other scientific fields that an effort is being made to search out the "hidden scientists," those who have married and retired from college faculties or high posts in industry. Largest number of women Doctors of Philosophy now registered on this roster are in the field of psychology.

Women university graduates are advised that there is urgent need for women in the following scientific fields: physics, metallurgy, meteorology, geology, radio, and all forms of engineering—electrical, chemical, mechanical, sanitary. A few women engineers are employed at the present time in the Federal Government. The field of engineering will be calling more and more for women to fill vacancies. Women with training in architecture are wanted as draftsmen. Other fields in which openings are occurring are personnel work, public administration, economics and statistics.

**How the Civil Service works.**—Boards of Civil Service Examiners are located in 5,000 cities—each city having a first- or second-class post office. There are also 13 regional Civil Service offices, usually located in post offices or customhouses. Announcements of current examinations are posted in all these places on bulletin boards. A Civil Service Secretary there will give application forms on request and will assist in filling them out.

Where positions are purely local in nature, announcement of the examination is made locally. This makes possible recruiting of local people for local jobs. Therefore, if you want to work near home, don't write to Washington until you have first consulted your own Regional Civil Service Office.

Thousands of positions, however, are filled as the result of announcements from Washington. If you want to be notified when an examination in which you are interested is next announced, send your name to the U. S. Civil Service Commission, Washington, D. C., or to the Director of the Civil Service Region in which you live. Your request will be kept on file, and when the examination is next announced you will be sent a copy of the announcement and the proper application form. Regional offices are located in Boston, New York, Philadelphia, Winston-Salem, N. C., Denver, Atlanta, Cincinnati, Chicago, St. Paul, St. Louis, New Orleans, Seattle, and San Francisco. By going personally to the Civil Service Commission office in any of these cities, you may obtain expert advice. The Civil Service Secretary in each first- and second-class post office also is informed on the workings of the system and ready to answer inquiries. Any question which is not answered satisfactorily in this fashion may be submitted in writing to the U. S. Civil Service Commission in Washington, D. C.

You will be told when and where to report for an examination by the Civil Service Commission in Washington or its regional office. When your examination has been passed on by the examiners, the Civil Service Commission will inform you of your rating. If you pass, your name is placed on a list of eligibles, arranged in order of the ratings received. The Civil Service Commission does not *give jobs*. Appointments are made by other Federal departments and agencies from the Civil Service list of eligibles.

All positions on the Federal pay roll are quite literally war-time jobs, the ruling being that employment is for the duration of the war and not to exceed 6 months thereafter.

## IN THE WAR INDUSTRIES

In the past 2 years, the United States has swung into total war production. Vast new war industries have created new and crowded communities. Older industries have converted to the uses of war. All agriculture has been keyed to the Food for Freedom program.

In the course of this gigantic movement, women by the tens of thousands have gone as workers into the war factories. This was done despite a considerable initial prejudice against them, shown by a survey of employers earlier in the change-over to war production. Women have also gone to work in the fields and orchards.

To manipulate the machines that produce guns, tanks, ammunition, hundreds of thousands of women who have never been in the labor market before will soon be taking jobs. A prediction that 50 percent of the workers on these machines will be women is regarded as not overshooting the mark.

Enormous advances in the proportions of women to be employed in 1943 were foreshadowed by preliminary results of a questionnaire submitted to 1,000 management executives by the magazine, *Modern Industry*. Exclusive of office employees, the sampling of the Aviation Industry showed 1 percent employed in 1941, 15 percent being employed in 1942, expectation of 65 percent to be employed in 1943; in the Electrical Industry, the percentages ran 6 percent in 1941, 9 percent in 1942, an anticipated 35 percent in 1943; in the Instrument Industry, 10 percent in 1941, 35 percent in 1942, an anticipated 60 percent in 1943; in the Pharmaceutical Industry, 45 percent in 1941, 55 percent in 1942, an anticipated 75 percent in 1943; in the Tool and Die Industry, 2 percent in 1942, an anticipated 20 percent in 1943; Machinery, none in 1941, 10 percent in 1942, an anticipated 50 percent in 1943; Hosiery, 65 percent in 1941, 75 percent in 1942, an anticipated 80 percent in 1943.

Other outstanding evidences of the woman-hiring trend were noted in the Labor Market, publication of the Federal Security Agency. Approximately 21,800 manufacturing, mining, construction, transportation, communication, and utilities establishments reported that of 12 million workers employed in July, 2 million were women. The WPA was quoted as reporting that employment of women in all industries over the past year has risen 2.1 million as compared with an increase of only 1 million men. In Detroit, 26 percent of the persons hired in a recent 60-day period were women. A large producer of radio equipment in New York planned to employ 1,300 women out of a total staff of 1,600.

These women will come from the 4.4 million homemakers in urban life who are under 45 years of age and do not have children under 16; from the 9.1 million such homemakers under 45 who have children under 16; and from the 9.5 million nonfarm homemakers over 45.

*Why a factory or farm job.*—The woman who takes a factory or farm job has the great satisfaction of knowing that she is each day producing some physical thing which will help win the war. This vital fact has lured many girl graduates of universities and colleges into wage jobs in the war production plants and fields. They argue that they can work with their heads later on, and that while their country needs such service in order that freedom can go on in the world, they will earn a living with their hands and consider it a worth-while part of their life experience.

*Orderly hiring.*—Fitting women into war industry is a community-by-community job, which must be done with wise forethought to prevent overcrowding, bad housing conditions, outcroppings of juvenile delinquency and child neglect, and frittering away of labor resources.

The War Manpower Commission has been set up by the Federal Government to accomplish use of the entire working force of this Nation—its men, its women, its youth even down to high-school age. This commission also must safeguard children, our future manpower. It is estimated by this commission that something like 6,000,000 additional women must enter the labor force by the end of 1943. These are in addition to 14,000,000 already at work. Not all these women workers will go into direct war production.

But since all civilian production is now being cut to essentials—just what is needed for all of us to carry on the war—all work will become in effect war work. From now on women will also have to “man” many essential civilian services, driving trucks and trolley cars, taking over many of the jobs on newspapers, in radio stations, in telegraph offices, banks, essential retail services.

To assist in this gigantic recruiting job the War Manpower Commission has created a Women's Advisory Committee of twelve members—outstanding women from all parts of the country. They will advise in all matters of major policy as they affect women and the contributions they can make in the prosecution of the war.

**General employment policies.**—Several governmental agencies concerned with induction of women into industry have formulated some important general guiding policies. Among them are the following:

*Equal pay.*—The National War Labor Board established as a policy in three cases which came before it the principle of equal pay for equal work for women in war industry. This was hailed by the Federal Women's Bureau as a victory for women workers and for advocates of fair wage policies—a great advance over the situation in the last war. To pay women less than men for the same work undermines the whole pay structure, causing employers to take women on as “cheap labor” and precipitating male unemployment in normal times.

*Day care.*—The War Manpower Commission has given an opinion that employment by industry of mothers of young children should in general be deferred until all other sources of labor supply have been exhausted. It is granted, however, that there will be exceptional cases in which mothers of young children will be employed—for instance, when the mother's wage is necessary to support an adequate standard of living; when the community is so overcrowded that it cannot house additional workers and must make use of all possible women already there; and when the mother of small children has had special training which will make her immediately and exceptionally useful. In such cases, satisfactory day care for small children must be set up by the communities. Such day care may consist of (1) *foster family care*, in which the child of a working mother is cared for, under com-

munity supervision, by a private family; (2) homemaker service, in which a person is sent into the child's own home to carry on in place of the mother; and (3) by group activities outside the home—nursery schools, day schools, play schools, vacation camps. A Day Care section has been set up by the War Manpower Commission in the Office of Defense Health and Welfare Services to work out the entire problem of safeguarding the children of the women who go into war production jobs.

*Pregnancy.*—The Women's Bureau and Children's Bureau of the U. S. Department of Labor, in consultation with medical specialists and industrial women, has recommended as a general policy that provisions for maternity care and leave should not jeopardize a woman's job nor her seniority privileges. A minimum of 6 weeks' leave before the birth of a child and at least two months after is considered essential to the welfare of mother and child. It is urged that a woman expecting a child give first consideration to her own health and to safeguarding the health of her child. While some women who are pregnant or have young children may find it necessary to work, the labor market does not justify recruiting them, and they are warned against certain occupations which are especially hazardous during pregnancy, such as work requiring lifting or exposure to toxic substances.

*General working conditions.*—Women whose lives have been in home and school must become familiar with a whole new working environment. Take the important subject of safety. One college girl said: "Safety is a foreign word until you feel the deadly quality in a plant." Women are working with high explosives. They are working with deadly chemicals. They are working with machinery that could maim or kill. In the war plants' training courses, safety is constantly emphasized. To aid both employers and workers in attaining the best possible working conditions, the Federal Women's Bureau is issuing a series of pamphlets and leaflets. Those issued by the Women's Bureau thus far are: Effective Industrial Uses of Women; Lifting Heavy Weights; Safety Clothing; Hazards to Women in War Plants; Washing and Toilet Facilities; Time for Meals and Rest; Night Work and Shift Rotation. Two other useful publications are When You Eat Out and Work Clothes for Women, which may be obtained from the Office of Information, Department of Agriculture.

**War industries employing women.**—The list of war industries which women have already entered to a large or small extent includes: Aircraft and Parts; Small Arms and Artillery Ammunition; Agriculture and Canning; Communications; Chemicals (industrial); Chemical Products; Electrical Machinery; Firearms, Guns, Gas Masks, Parachutes; Machinery; Machine Tool and Machine Shops; Radio Parts and Equipment; Rubber Goods (industrial); Scientific and Professional Instruments, Photographic Apparatus and Optical Goods; Surgical, Medical, and Dental Instruments and Supplies; Ship and Boat Building and Repairing; Sighting and Fire Control Equipment; Tank and Auto Parts and Equipment; Transportation; Utilities; Oil Refineries; Mines; Lumber and Saw Mills.

To this should be added the whole familiar and tremendous field of civilian goods and service, since keeping essential civilian life going is part of the over-all planning for war industries.

**Women have proven worth.**—Two years ago, when little use had been made of women in the war industries, the Women's Bureau of the Department of Labor drew up a list in eight categories of the jobs that women could do. *Now large numbers of women are doing all of these things.*

This list two years ago included: (1) Manipulative skills, such as operating machines, drill presses, milling machines, light punch and forming presses, bench and watchmakers lathes, burring and polishing lathes, light-duty automatic screw machines, and light turret lathes; also assembly work requiring use of hand tools, sheet metal forming and riveting and hand finishing by filing and burring; welding; soldering; electrical work; spray painting. (2) Inspection, including visual, by gage, and by calibration, and checking and testing raw materials. (3) Packing. (4) Factory service, such as production planning and routing, drafting, timekeeping. (5) Supervising. (6) Training. (7) Personnel relations, such as interviewing and hiring women, nursing, and welfare work. (8) General office clerical work.

High-pressure production for two years has proven that women *excel in the tasks that require sharp eyes, suppleness of wrist, delicate touch, repetitive motion, exactness.*

Employment of large numbers of women has also been made possible by breaking down tasks which have heretofore re-

quired years of training, or a man's strength, into their component parts and assigning to women the operations they can do.

**How to look for a job in war industry.**—Military regulations forbid the publication on a nation-wide scale of names of war industry plants or numbers of employees. However, in each locality, the most available industries and the approximate size of their working forces are well enough known to indicate labor opportunities. Where the labor situation is not complex much hiring is done directly by the plants. However, the problems of war have brought to the fore the services of the United States Employment Service. If you are seeking a job in any of the war plants in your vicinity, go to your nearest office of the United States Employment Service and register. If you have no training, you will be referred to training facilities. For the great mass of women's jobs in war production most of the training courses are no more than 6 weeks in duration, many are even shorter. In many plants training is given right on the job. For unskilled jobs there are no educational requirements, but aptitude tests are often given by the Employment Service and have proven most helpful in putting the right person into the right job.

**How USES works.**—The United States Employment Service is an agency which for the past 9 years has been serving both workers and employers, fitting people to jobs throughout the United States. Its offices were State-operated until January 1, 1942. Then the many State-operated employment services were brought under one central control at Washington because of the necessity of a national, coordinated effort to locate, train, and place in the war industries the rapidly increasing numbers of men and women required for mass production. The USES functions through 1,500 full-time offices and twice that number of part-time offices.

The Employment Service urges every employer to give it, far enough in advance to enable it to find the workers he needs, a list of job-openings which he expects to have at any given time, and the requirements for each job by occupation and skill. It asks the employer not to advertise for workers and particularly not to hire workers away from other employers, but to give the Employment Office a chance to send to him qualified people who are unemployed or employed in a nonessential capacity. Every other month, officers of many

of the important war establishments sit down with representatives of USES to size up labor needs.

The Employment Service keeps in closest working relationship with all labor-training programs. Knowing the employers' needs, it can give the right recommendations on training applicants to fill those needs, and can refer applicants to training courses most likely to result in getting jobs.

To each worker the Employment Service says: "You can speed up the war production of your country by getting the job you can best do and which needs most to be done. Your local United States Employment Office exists for the purpose of fitting workers to jobs."

**War Training Programs.**—Women who have had no experience whatever in running machines must become lathe operators, riveters, drillers, welders, metal workers of all types and descriptions. That in itself means one of the biggest training programs on which this Nation has ever embarked.

So closely is the pressing need for training linked up with the whole question of man and woman power, that the vocational training functions of the Federal Government have been placed under the War Manpower Commission, and the U. S. Office of Education maintains a representative in each of the eleven regional offices of the War Manpower Commission.

Women are welcomed into each of the three great training programs which help workers to prepare for and progress in war jobs.

By far the greatest of these programs is *Vocational Training for War Production Workers*. In the past 28 months, 3,100,000 persons have been trained for war work under this U. S. Office of Education program in 2,500 vocational schools. Women did not enter these courses in any numbers until about 9 months ago, and only 140,000 of those trained have been women. By and large, these were mostly women already used to industry who were refreshing old skills or changing over from peace to war operations. From now on, the numbers will increase rapidly, and will consist more and more of women absolutely new to industry. Classes are of high school level, and are concentrated chiefly on machine manipulations, assembly, and inspection work. As of August 31, enrollment of women in these vocational training courses was 61,826 of

which 45,546 were being trained to take jobs and 16,380 were studying to advance themselves. Women constituted around 26 percent of those training to enter industry. It is estimated that 100,000 women will be enrolled in vocational training courses by December 1942.

The second of these programs, the *Engineering, Science and Management War Training Program*, offering intensive courses of college and postgraduate character, is conducted in some 175 colleges and universities by the U. S. Office of Education. The women taking these courses naturally will be few in comparison with the great numbers to be trained in the vocational schools. But women who are qualified for such specialized training should take advantage of the unusual opportunity, created by war necessities, to obtain higher education in classes offered free by the Government. These courses cover a great variety of subjects, often keyed to local needs. In California, for instance, a woman might train as a petroleum inspector and go to work in an oil refinery. In the East, she might be trained to become a detailed draftsman, a physicist, or a chemist. If she has had the education and the aptitudes necessary to qualify for some of the higher courses, she might, as one instance, train for and get a job in aerodynamics. An estimated 13,000 women are currently enrolled in the ESMWT program.

Many industries conduct *In-Plant Training Courses*, set up by the industry itself with the expert advice of the War Man-power Commission. Admission to many of these courses is no more difficult than showing promise in an aptitude test. In a few of the skilled trades, such as printing, women also enter on the longer apprenticeship programs and their numbers have been somewhat increased as a result of the war.

Women have been admitted in large numbers to a within-the-government training program. In government-owned and government-operated arsenals, air depots, navy yards, quartermasters' depots, courses are organized for new workers and those seeking promotion. The U. S. Office of Education conducts these courses at the request of War and Navy Departments.

With the opening of high schools and colleges in September 1942, the whole curriculums were newly organized for war purposes.

The American Council on Education recently issued a bulletin urging college girls to take enough mathematics and science to provide for specialization in work needed for war, and to take courses not because they want them but because they are useful in the war effort.

"Production cannot wait," this bulletin stated. "Under present conditions, women students should plan their individual programs to equip them to fill a position at the end of any semester in case the crisis becomes so acute that the national interest demands their services."

Fields in which women were advised to take specialized training were: Health, including physicians, dietitians, nurses, laboratory technicians, experts in public health, bacteriologists, chemists, psychiatric social workers, occupational therapists, physiotherapists, and pharmacists; Diplomatic Services and Special Investigation, including linguists, mathematicians, and specially trained secretaries; Scientific Research, including physicists, chemists, geologists, mathematicians, agriculturists, and home economists; Business and Industry, including engineers, mathematicians, statisticians, accountants, and secretaries; Schools and Colleges, including teachers, nursery school experts, and psychologists.

Training for physical fitness was also emphasized as follows: "The student should be constantly reminded that illness slows down her efficiency, uses up the skill of doctors and nurses who are urgently needed for war services, and consumes valuable drugs and medical materials. In physical education departments, student health offices, and food services, the college has the facilities for a concentrated physical fitness program."

**A complicated task.**—The USES has catalogued more than 1,800 war occupations suitable for women, and about 900 non-war occupations suitable for women. Matching the requirements of thousands of different occupations with the qualifications or potentialities of millions of workers is obviously a task requiring all the skill and information which the Employment Service has amassed in its years of experience. For instance, if an employer changes from a peacetime industry to the making of some type of munitions, he may not even know what skills to look for in his workers. On the basis of similar change-overs in other places, the U. S. Employment Service can give him detailed job descriptions, training data

on all the occupations involved, information on which occupations are suitable for women, and a list of "job families"—jobs that are related to the ones which he has had in his plant and from which he can make a transfer of skills. It also may give applicants aptitude tests, so that the employer will know what applicants may be most quickly and satisfactorily trained.

**Geographical areas of opportunity.**—Women war workers are not needed or wanted equally in all parts of the United States. For example, a current list of industrial areas in which substantial opportunities now exist or are anticipated includes the following:

Springfield, Mass., and Bridgeport, Hartford, New Britain, and New Haven, Conn.

Buffalo, Elmira, Sidney, and Binghamton, N. Y.; Elkton-Perryville and Cumberland, Md.; Hampton Roads, Va. Also Washington, D. C., for Government workers.

Detroit, Mich.; Louisville, Ky.; Ravenna-Warren and Akron, Ohio.

La Porte-Michigan City, Ind.

Childersburg and Huntsville, Ala., and Aberdeen, Miss.

Little Rock, Ark., and Tulsa, Okla.

Texarkana, Tex. and Ark.

Ogden, Utah.

San Diego, Calif.

Women who live in these places might find the present an opportune time to register at the local employment offices. Of course there are many other localities where women workers are wanted. In regions of little demand it may take some patient waiting to fit into war production but the list of areas of opportunity will inevitably increase.

### How Women Fit Into Typical Industries

Representative of the way women are helping win the war on the production fronts of industry and agriculture are the following summaries of large woman-employing industries:

**Aircraft and parts.**—In October 1941, only 2,000 women were on the production lines in aircraft assembly plants. After Pearl Harbor, that number quickly doubled. By April 1942, there were about 17,500 women in the principal plants, yet in nearly half the plants women were still less than 5

percent of the production workers. Since then they have been hired in increasing proportions. By August, approximately 63,000 women were working in aircraft assembly, engine, and propeller plants.

As a conservative estimate, the Women's Bureau states, at least one-third of the jobs in the aircraft assembly plants could be done by women.

Girls in airplane assembly plants install powerlines, electrical systems, pedals, control parts, fittings. They rivet surfaces together. They sew the fabrics. They are experts at drilling holes. They do subassembly with handtools. They hand-finish sheet metal parts. They inspect at many stages of the work. They do the "spaghetti work" behind the instrument board, assembling the wires that are the life-lines of the bombers. They work with plywood; help in the paint, heat-treat, and anodizing departments.

Entrance rate of pay is the same for men as for women in almost all the assembly plants, and promotion is on the same basis with rates set according to the job. The entrance rate is usually 60 cents an hour. After three months, it goes up to 75 cents an hour. Top rate is \$1.10 to \$1.20 an hour. Highly specialized jobs may rate more pay.

A great opportunity for women's employment exists in the subassembly plants, because the parts and plane sections are comparatively small.

Opportunity for advancement in the airplane industry is good. A large proportion of women can be upgraded through training to fill positions requiring high degrees of skill and responsibility.

**Ammunition.**—By far the largest woman-employer among the major war industries is ammunition, including artillery ammunition and small arms ammunition. In some of these plants, many of which have been built in the east, middle west, and south, women can do from 70 to 90 percent of the jobs, and the estimate is that approximately two-thirds of the labor force of the entire industry may be women. It is estimated that 200,000 women will be at work in ammunition plants by the end of the year 1942.

Jobs that women can do in the making of artillery ammunition include: Machine operations on metal parts, and their assembly and inspection; machine operations on detonators, fuze primers, boosters, etc., and their assembly inspection,

loading, and packing; body and head machine operations on propellant primers and their assembly and loading; projectile manufacturing in which women work on the lighter munitions; light machine operations, inspecting and packing of cartridge cases; cleaning threads and miscellaneous light jobs on projectile loading and the lighter jobs in case loading and assembly; and practically all bag-loading operations. Because of their finger dexterity and patience, women are particularly adept at working with primers, detonators, and fuzes. In checking dimensions and weights women use micrometers, gages, and scales. An extreme instance of precision work is the job of a woman who uses tweezers to pick up very small paper disks which she weighs to make certain only one disk at a time is being used in loading the percussion elements for a primer.

*Training.*—Most of the training is done within the plants. A few women instructors and supervisors have been sent to Government arsenals for training.

*Pay.*—The principle of equal pay has not been effective in this industry. Beginning rate for a woman is 45 or 50 cents an hour. Top pay is usually \$1.10 to \$1.20 an hour.

*Agriculture.*—Girls driving trucks and tractors have suddenly become a familiar sight to those who travel American highways. Women helped get in the 1942 fruit crops of the west coast. Women helped get in midwestern crops. War Manpower Commission statisticians estimate that 70 percent more women were working on the farms in the summer of 1942 than in the summer of 1940.

This was because more than a million people had left the farms, families pulled to new industrial areas, men gone in the draft, girls gone to war jobs. More will go. Yet crops must be planted, cared for, and harvested to feed our civilians and our armies, and to feed our allies. In the face of labor shortage, production must be stepped up.

The Department of Agriculture has outlined to Congress five necessary steps to meet the farm labor shortage: (1) Keep on the farms as many experienced managers as possible. (2) Recruit more industrial labor in the cities. (3) Use the services of *more women* and young people, training the inexperienced. (4) Develop efficient ways of transporting migrant farm workers to areas where they are needed. (5) Take good farmers off poor land and put them on good land.

The first women to go in numbers to the field have been the farm women, already familiar with farm ways, and they will be used more and more next year. But women from the cities will also be needed on the farms. Their use will depend upon the extent to which training and transportation can be provided.

The War Manpower Commission, in joint operation with the Department of Agriculture, has taken over the important task of getting help to the farms when and where it is needed. For farm and food-processing jobs, just as for war factory jobs, hiring is done through the United States Employment Service. In all of the 1,500 employment offices, farm placement people are available for advice, and in addition, the USES has opened thousands of volunteer farm labor recruiting offices.

In many towns and cities the Government has opened night schools to train women and girls to operate farm machines. A large harvester company has organized night classes at dealers' headquarters all over the grain belt to teach girls how to run tractors. High schools and colleges serve as training centers. On farm as in factory, training in the less-skilled type of labor is often on the job, the experienced teaching the less experienced.

*Pay.*—An effort is being made to bring into agriculture the same sort of orderly pay-scale arrangements that prevail in other industries. Volunteer wage standards should be maintained for all farm workers, and this is being done through setting up wage boards which hold hearings to decide the prevailing rate of pay. The pay scale varies in different sections of the country. Under Federal ruling, men and women engaged in interstate industries must be paid at least 30 cents an hour.

*Working conditions.*—Employment of women on farms brings up problems of health, housing, and transportation. These are discussed in a booklet which may be obtained from the Federal Women's Bureau, "Guides for Wartime Use of Women on Farms."

*Special war crops.*—Agriculture, like industry, has its unusual war jobs. For example, the guayule rubber industry of Salinas County, Calif., was faced with a male labor shortage and tried out a hundred women as weeders. It worked so well that eventually more than 1,700 women

were recruited from a 30-mile radius around Salinas to save the young guayule crop.

**Communications.**—In the telephone, telegraph, radiotelegraph and cable field, labor has become scarcer as messages mounted. This has resulted in appeals to the public to send only necessary messages and in using of women and girls for jobs previously done by men and boys.

At the end of 1940, over 60 percent of the 300,000 employees of telephone companies were women, mostly operators and clerical employees, but some in higher posts. There were also a few women lawyers and engineers, and around 250 draftsmen, a few supervisory foremen, and some 30 maintenance and construction workers. In 1941, telephone personnel had to be increased by 57,000 and 74,000 more hirings were necessary to fill vacancies. Far larger hiring figures will be tallied in 1942. While the telephone companies were still expressing a preference for men in their higher-paid posts, they were gladly granting women a place in the technical telephone field, when qualified women applied.

Radio has been a young man's industry, and so especially susceptible to the draft. Of the 5,500 qualified radio engineers, more than 1,000 have already entered army and navy and their recruiting continues by nationwide broadcast. As a result, women's colleges, among them Vassar, have opened training courses for girl technicians.

Finding it harder and harder to recruit boys for messenger work, Western Union began recruiting girls, now has 2,000 of them at work in cities of great message-load. Eighty are used in Washington, D. C., to carry messages between downtown office buildings and Government departments. Their use is considered very successful. They have to be 18 years old. They get \$100 a month. They buy their bicycles from the company as they work, paying a third down and thereafter \$1.25 a week.

**Chemicals and chemical products.**—This industry has a marked preference for men, yet inability to get men workers has caused the employment of women. It is estimated that essential industrial needs for graduate chemists and chemical engineers during 1942 will be from 2,000 to 3,000 more than the schools can put out or that otherwise will become available. Women as well as men are admitted to the chem-

istry courses offered by the Federal Government and described earlier in this article under the heading War Training Programs.

**Machinery.**—Women are beginning to enter the various branches of machine manufacture. Of 47 occupations in metal working industries in which labor shortages are expected to develop, 17 are wholly suitable and 22 are partially suitable to women. However, in 7 major New England firms, only 7 percent of the working force was women prior to September 1942, as against 45 percent women in the British machine tool industry. The percentage was even less in midwest industries. A large increase in women hirings was expected in the last months of this year to replace men called up by Selective Service.

**Rubber goods.**—Women constitute more than a fourth of the industry's labor force. Several large companies each employ more than 1,000 women, mostly on the production line. In Akron, Ohio, women will constitute 70 percent of the future hirings. They are employed in making life rafts, landing boats, flotation bags for planes forced down at sea, rubber vests, self-sealing gas tanks, and parts for gas masks.

**Scientific, optical, and surgical instruments.**—Women are adept as instrument makers because of the precision required. The proportion of women in the plants which make the instruments which direct weapons runs as high as 50 percent. Women have also been taken on extensively for making dental, surgical, and optical instruments. Special machining of dental burs and breaches in about 150 styles is done almost exclusively by women. They also test and inspect the sensitive pieces that go into gyroscopic instruments.

**Shipbuilding.**—Women are being used more and more in the shipyards, mostly as shipfitters' helpers, subassembly welders, and painters. At one Brooklyn Navy Yard they are now being used as chauffeurs, welders, burners, and small machine operators. They are also sewing in the sail lofts, doing repair jobs, and of course serving as clerical help.

**Transportation.**—In 1940, the *railroads* employed 47,000 women, mostly secretaries, stenographers, typists, office machine operators, and switchboard operators. With increased transportation loads traveling over all the railroads of the country, their numbers have materially increased. So have the numbers of women in the better paid positions—passenger

traffic representatives, freight traffic representatives, train stewardesses, city ticket agents, station agents, timekeepers, accountants, cashiers, bookkeepers, car tracers, rate clerks. In 1940, 400 railroad women got salaries of more than \$2,400; 2,300 got salaries of more than \$2,000. Now women are beginning to be employed in the more unusual railroad jobs, replacing men from the day-laborer level on up to ticket agents in sizable cities. In a few cases they are crossing flagmen and signal tower operators. They load and arrange materials in railroad storehouses, keep records, load and unload supplies. In roundhouses, they work as engine wipers, and pick up the scrap iron and wood left by repairers. One of the eastern railways has started training women college graduates as ticket agents and administrators in the traffic department. The Women's Bureau of the Department of Labor has served as consultant on standards for working conditions for women taking railroad jobs.

*Air transport* offers the modern miss a modern method of making an interesting life and livelihood. Twenty percent of the employees in air transport are women. Thirty percent will be women by the end of the year. Their stewardesses no longer have to be trained nurses, but still must have had one year of college. Other air transport jobs: making pressure charts, housekeeping both aircraft and station, secretarial and clerical work, giving information to the public.

*Motor transport*—driving commercial buses and trucks—employs very few women, could employ more. Women are now driving trucks carrying jeeps and ambulances from Detroit to seaboard cities; a few women drive buses.

A recent Federal report estimates there will be 300,000 women in transportation before the war ends, an increase of 180,000 over the present 120,000.

**Civilian goods.**—Our armed forces are large, but they are still small in number as compared to the numbers of civilians. Even though the armed forces require about three times as much food and clothing when in this country, and about ten times as much on foreign duty as do civilians, even though the metal industries are largely converted to war production, it still requires more workers and more plant facilities to feed and clothe civilians than to care for the armed forces. This work must go on. When men are called into service from these industries, women must fill in the production gaps.

In the making of men's suits and coats, women constitute 60 percent of the workers and that percentage will go up. In the women's garment trades, women already constitute between 80 and 90 percent of the workers. In the making of underwear and the knitting of stockings and socks, women are doing well over half the jobs. The percentage of women in the shoe industry has risen from 40 to 50 percent and will go higher. Necktie and cap making come very close to being all-woman industries. In manufacturing other than munitions, the working forces have in general been about half men and half women since 1940. From now on, the weight will increasingly fall on the women's side of the balances.

The needle-work trades, however, have presented a special problem in that the change from peace to war industries has thrown many skilled women out of jobs, particularly in New York City.

## IN BUSINESS AND THE PROFESSIONS

As the Army and Navy inducts into military life more and more doctors, dentists, nurses, teachers, bank tellers, newspaper reporters, and other business and professional people, some one has to take their places in civilian life. War also causes the creation of new professional jobs such as the specialist who must set up new day care programs for young children of women working in war factories and the paid personnel with service organizations such as the American Red Cross and USO.

Each community and section of the country can compile its own list of professional opportunities opening to women through the exigencies of war, enabling them to do a trained service for community and country, and thus free another person for active warfare or war production. For the country as a whole, the Institute of Womens Professional Relations, Connecticut College for Women, New London, has conducted research, repeatedly referred to in these pages.

A few examples of war jobs for women in business and professional fields follow:

**Banking.**—About 65,000 women are now employed in banks, about 25 percent of the total personnel. They are there because they proved their value to the financial world during the last war. Prediction is that if this war should continue another two years, their numbers will be doubled. A general high school education is required. Girls start in the junior clerical classification and work up under a system of promotion in the ranks made possible by special training courses. The American Institute of Banking offers a total of 18 courses in law, economics, accounting, investments, trusts, credit, and other financial subjects.

**Day Care.**—The nursery school specialist and child psychologist will soon find her special training in great demand as communities organize for the day care of the children of women who are working in war plants.

With some stimulation from the Government, particularly through the WPA nursery school program, the number of nursery schools in this country has more than trebled since 1936. But their total is still so small as to be the merest sampling of what has to be done to make possible the actual physical care of children whose mothers are doing war work and to start young children of this country on the education they will have to have as a new generation faced with the task of remaking a war-shattered world. Already requests are coming to this Government from the other American republics for trained nursery school people. Some 200 colleges and universities of this country have reported that they maintain nursery school or kindergarten laboratories, some as part of academic courses and some in connection with colleges of home economics. High schools also, as part of Victory Corps activities, are setting up nurseries to serve the double purpose of caring for children of women in war plants and to give young girls taking home economics practical laboratory experience in the care of children. Some high schools already were maintaining nursery schools as laboratories for young girls taking courses in family life education or preparing for vocational work as nursery assistants. After-school care for older children brings in another large field. While the national day care program is now only in its beginnings, it seems certain to offer broad opportunities for trained supervisors, psychologists, nutritionists, women trained in music, art, construction, gardening, dramatics, nature lore, and physical education.

Women who are qualified for this work and are seeking a job in this field should apply to their State or local Department of Education since these agencies will have charge of personnel of nursery schools established with federal funds. A few experts will also be employed by State Welfare Services. Cooperative community nursery schools are often started by individual enterprise, women pooling to supply the salaries of trained supervisors for their children.

**Education.**—Shortages are apparent in teaching fields from which men have been drawn by war services. They also appear where women have taken better paying jobs in defense industries and government service.

Probably the most acute shortage is in small rural schools. In more than a fourth of the States, teachers' salaries are

under \$1,000 a year, as against \$1,260 to \$1,440 at starting salaries for clerical and typing jobs in government. The drainage off of teachers and potential teachers into war jobs has resulted in the issuing of emergency permits to teach in approximately three-fifths of the States. Since the rural school, which is the very bed-rock of our free educational system, employs about half of our teachers, girls qualified as teachers by high school education and additional teacher training could engage in no more patriotic war service than the peacetime job called teaching school.

In village and city elementary school and high schools the greatest shortages in order of the acuteness of the need are listed in a federal survey as follows: (1) Teachers of agriculture. (2) Teachers of industrial arts, and of trade and industrial subjects. (3) Teachers of general science, physics, and chemistry. Half the States have reported shortages in these subjects and no State has reported a surplus. (4) Teachers of physical education. Some men teaching these subjects who have been called into the armed services have reported that women could take their places in an emergency. (5) Public school nurses and teachers of health subjects. If the war continues long, tragic conditions are unavoidable unless there is planning and preparation to prevent nurse shortages and to encourage fitness programs. (6) Mathematics teachers. Women well versed in mathematics are wanted as teachers, especially in the smaller places. (7) Teachers of business and commercial courses. Here the shortage is likely to increase because of the numbers of business-trained women going into government and war industries. (8) Home economics teachers. This is a shortage that tends to grow in spite of the fact that married women whose husbands have been called into service are returning to their former vocations in the home economics field. The war emphasis on nutrition has given great impetus to teaching of home economics.

In spite of all these shortages, there are surpluses of teachers in some of the big cities, and in a few subjects. In twelve States, surpluses have been reported in teachers of history and social studies. Seven States have reported a surplus of English teachers and none has reported a shortage. Four States have surpluses of foreign language teachers. In New York and some other large Eastern cities, there are surpluses in almost every field.

To apply for teaching jobs—

In these 15 States, address the State Department of Education Placement Service: Alabama, Delaware, Florida, Idaho, Maryland, Maine, Massachusetts, Minnesota, Mississippi, New Hampshire, Oklahoma, Pennsylvania, Texas, Vermont, and Wyoming.

In the following 15 States, call on the free placement service provided for public school teachers by the U. S. Employment Service's State office: Arkansas, Colorado, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Maine, Missouri, Nebraska, North Dakota, South Dakota, Utah, and Wisconsin.

In these seven States, the State Education Association provides a free placement service: California, Michigan, Montana, North Carolina, North Dakota, Oregon, and South Carolina.

Many teachers still get jobs by individual application, dealing directly with Boards of Education. There are also more than 80 private teachers' agencies in this country. The usual charge is 5 percent of the first year's salary in the position obtained through them.

**Medicine.**—The shortage of civilian physicians should stimulate more women to enter and to return to the medical profession. However, at least one State medical school has closed its doors to women "for the duration." In 1940, there were 7,470 women physicians in the United States and all but 6 of the 77 medical schools admitted women. The training is long and arduous, 4 years medical school and 2 years internship in addition to 4 years college. Internships, residencies, and fellowships for women in the medical field have tripled in recent years. Women have made an especially strong showing in the field of mental hygiene and psychiatry. Of women graduated as physicians from accredited medical schools, only 1 in 3 continues a life career in active practice. Women physicians who have married and retired from practice should if possible, take refresher courses in order to be able to serve their country and their communities in the war emergency.

**Nursing.**—Because of the dire need of this Nation for nurses, in civilian life as well as in Army, Navy, and public health services, Congress has appropriated \$3,500,000 to stimulate nursing education. Present facilities to train nurses will be enlarged, new training centers will be established in

connection with colleges and universities in strategic areas throughout the country. Every girl who is qualified to become a nurse is urged to enter training. About 20,000 additional students are needed for the January and February 1943 classes to complete the 55,000 quota needed before July 1, 1943. There is every possibility that 65,000 students will be needed for the school year 1942-43.

In addition to the new crop of nurses which must be coming on, retired nurses should return to duty in the hospitals of their communities. It is estimated that approximately 100,000 nurses have left nursing for other work or for marriage, and are lost to the nursing registries. Refresher courses are offered to facilitate their return to active duty.

Enough women must go into nursing *now* to replace the nurses called into war service, to help shoulder the added burdens of the lessened numbers of doctors, to safeguard the health of workers in the war factories, to help teach the people better care of their health so as to relieve the overload on hospitals and doctors, to check up on children in the schools and prevent the spread of diseases which break out under wartime conditions, to educate the public in mental health so as to lessen the psychological impacts of war.

*Special advantages.*—Nursing has become a field which offers many interesting vocations aside from bedside care of the sick. The trained nurse of today has a profession which can carry her forward into more and more interesting fields of service. She can go anywhere and find opportunities. She can marry and raise a family with the serene knowledge that she has a skill which could be brushed up and put to work at earning a living at any time anything happened to her husband. She knows she is helping humanity when its need is greatest. In the post-war reconstruction period, nurses will also have great opportunity for foreign service in all parts of the world.

*Pay.*—The institutional nursing, nursing education, and public health nursing fields offer salaries from \$2,500 to \$6,000 yearly and even higher.

For further facts about nursing, write Miss Florence Seder, National Nursing Council for War Service, 1790 Broadway, New York City.

**Pharmacy.**—This is another of the many fields necessary to the safeguarding of civilian life in which women may be

used to replace men called by their country. Opportunities are opening in the great pharmaceutical laboratories as well as in the retail drug field. In order to be able to take an examination as a registered pharmacist, it is necessary to be a high school graduate, to be a graduate of an approved school of pharmacy, and to have had one year of practical experience. Salaries are around \$30 and \$40 a week. Positions may often be obtained through the school of pharmacy from which the woman is graduated.

**Journalism.**—In this war, as in the last one, more women are working in newspapers and general writing fields as a result of men going out into fighting fields. One Tennessee daily has an all-woman staff. A newspaper in a midwestern city tried an all-girl copy desk. Girls instead of boys are being used to run copy. The press associations are hiring more women reporters. But there is no real labor shortage, and specialized training is required for positions which still are comparatively scarce. Positions are obtained by individual application.

**War work organizations.**—In the last war the expression that a young woman of professional training had gone into war usually brought visions of Salvation Army lassies, Red Cross canteen workers, and uniformed girls on duty in the recreation rooms of the "Y." These same organizations under somewhat different plans and conditions give career-opportunities to women today.

*American Red Cross.*—In this war, the American Red Cross is the only organization permitted to send its members to serve with the troops in foreign countries. Wherever our fighting forces go into foreign lands, the Red Cross military and navy welfare service goes along to organize recreation programs in clubs and hostels and to make life pleasanter for the men in Army and Navy hospitals. In this country, this Service functions only in the hospitals of the military camps and naval bases. Women who enter this work must be between the ages of 25 and 40, must not have husbands in the armed services at the time they take the job, but are not dismissed if their husbands later enter military duty. A high degree of training and experience is required. Overseas positions fall into three categories: (1) Recreational work, requiring trained skill in music, dramatics, the arts, outdoor sports, and organization experience.

(2) Medical social workers in the hospital recreation program, requiring both recreational skills and scientific training in occupational therapy. (3) Secretarial help. Service in this country includes only the last two categories. Salaries range from about \$100 to \$150 a month for secretaries on overseas duty and \$135 up to \$225 for social and recreation work personnel. Apply to Personnel Director, American Red Cross, Washington, D. C.

*United Service Organizations.*—The USO comprises six of the voluntary organizations remembered for gallant service records in the last world war—Salvation Army, Y. M. C. A., Y. W. C. A., National Catholic Community Service, Jewish Welfare Board, and National Travelers Aid Association. As well as offering recreation to soldiers in transit and on leave throughout this country, the USO has an Overseas Division which sets up recreation centers in such outlying territories as Alaska and Hawaii at the invitation of Army and Navy. Each of the six agencies hires and trains its own workers. The whole nation knows the club directors and the assistant club directors of the USO who organize the entertainment of servicemen and the athletics of factory girls, and give advice on personal problems. Applicants must be at least 23 years of age, be a U. S. citizen, have social service and recreation training and experience, and have excellent physical health and stamina. Apply to the personnel director of the individual agencies through National Headquarters of USO, 1630 Empire State Building, New York City.

## AS VOLUNTEERS

Modern warfare has created a new necessity for community protection. Civilian population as well as fighting forces are targets for enemy bombing. Cities must think in terms of how fast an airplane can fly over the top of the world as well as about how long it takes ships to cross the ocean. The interior of Arsenal America is filled with munitions and materials which must be guarded from sabotage. The fire-watchers' tower in the forest fastness has to have its counterpart in battalions of trained eyes in the towns. Women who don't go off to war must be increasingly the very backbone of this work.

There are in this country about 400 local areas, involving more than 1,000 communities which might be termed critical defense areas because of the concentration of military personnel or industrial war workers. In most of these places, population has risen rapidly, outrunning community facilities such as schools, recreation centers, and health clinics. Women have swung wholeheartedly into furnishing community services to these areas and must continue to do so as the need is still great.

The things which happen to human beings in war have been more terrible under the onslaught of the Axis than ever before in history. The victims of Germany and Japan must be helped. The American people have to be schooled in a new stamina to conquer a barbarism which by all standards of ordinary common sense is inconceivable.

The field of working with the problems of human beings has been pioneered by women, and in that field they are pre-eminent. Where their good works were once done in a casual and individualistic fashion, a new spirit of professional pride in the job has sprung up. The woman volunteer of today, whether available for full-time or part-time war work, takes training, keeps her work up to a high standard of quality and dependability. Volunteer service is one

field in which women actively may help to hold some of the social gains made in the past decade.

**Office of Civilian Defense.**—The OCD divides into two main branches, The United States Citizens Defense Corps and the United States Citizens Service Corps. Each must have its dependable staff corps capable of putting in long hours in an emergency.

*Citizens Defense Corps.*—In this corps, which is organized to minimize the effect of enemy action on life and property, women volunteers now work as: drivers, messengers, air raid wardens, in emergency food and housing services, in medical services as physicians and trained nurses and nurse's aides. As the draft accelerates it seems more than likely that women will have to replace men volunteers. They will hold a bigger share of the air raid warden posts and more of them will enter such services as fire watchers, auxiliary firemen, and auxiliary police services. From twenty to thirty-eight hours class training and drill are required to earn the OCD insignia and operate in these fields.

By all odds the most needed of these services, so far as women are concerned, is that given by the Nurses Aide Unit. Here Volunteer Nurse's Aides, trained by the American Red Cross, assist registered nurses so that they may serve a greater number of patients with their specialized and scientific skills. The nurse's aides take on such important and necessary tasks as cleaning and sterilizing equipment and feeding helpless patients, as well as carrying trays and other routine sick room tasks. In time of emergency, as regular members of an emergency medical service field unit team, they assist in the treatment of civilians on the scene of emergency action, or in casualty stations. Aides must be between the ages of 18 and 50, and must complete 80 hours special Red Cross training, which includes 45 hours of supervised hospital work. They are also pledged to complete, within one year of becoming a member, 20 hours of first aid and to give 150 hours volunteer work as a Nurse's Aide.

*Citizens Service Corps.*—War services which are carried on by unpaid civilians under this corps fall into the following general classifications: Salvage, War Stamps and War Bond Sales, Family Security Services, Child Care Services, Health and Hospital Services, Nutrition Services, Consumer Programs, Housing Programs, Recreation and Youth Group

Services, School and Education Programs, Library Services, Information Services, service as Neighborhood or Block Leaders, and Other Wartime Services. Women are active in all of them.

Candidates for this Corps qualify for membership by (1) completing a prescribed training course; (2) completing a prescribed apprenticeship; (3) completing 50 hours of volunteer work for which no specific training course is required.

Most of these services are explained by their titles which bring mental pictures of women collecting the scrap, selling war stamps and bonds, assisting in day care programs for children of working mothers, advising on food buying and helping in group feeding projects, leading consumer discussions and promoting clothing clinics, giving services to soldiers on leave, teaching Americanization classes.

Of special note, however, are the Neighborhood or Block leaders. The OCD is urging the adoption of the Block System, a natural avenue for action by women, by every town and city in the country, and the Extension Service of the Department of Agriculture is fostering its use in rural areas. Under this system, the community is organized for action in the field of civilian war services—salvage, car-sharing, nutrition, stamp and bond buying, growing victory gardens, sharing the meat—just as it is organized for action in an air raid. Block leaders are chosen in each block or neighborhood. They report to a sector block leader who in turn reports to a zone leader. On the block leader rests the responsibility for attending such meetings and reading such materials as are necessary for her to give a sympathetic explanation of the program to her neighbors and swing them into action.

To volunteer for such services, go to your local Civilian Defense Volunteer Office or your local Defense Council.

**American Red Cross.**—The Red Cross Volunteer Special Services, familiar in this war as in the last, have a total enrollment of nearly 3,000,000 women, who perform a variety of volunteer duties in the following corps: Production, Canteen, Motor, Volunteer Nurse's Aide, Hospital and Recreation (Gray Ladies), Home Service, and Staff Assistance.

The largest service is the Production Corps, which in the year ending June 30, 1942, turned out more than 71,000,000 surgical dressings and 6,500,000 garments including thousands of knitted articles.

The more than 9,000 Gray Ladies of the Hospital and Recreation Corps perform many services for patients in military and civilian hospitals.

The Canteen Corps with 25,362 members, specializes in emergency feeding. A total of 100,000 canteen aides has been trained to help this Corps in emergencies.

The Motor Corps, active in about 850 Red Cross chapters, has a personnel of approximately 12,000. Its members are trained in first aid, map reading, and motor mechanics. They drive on assignments from the Red Cross chapter, and occasionally give special services to the armed forces.

The Volunteer Nurse's Aide Corps has grown from 364 nurse's aides in 19 chapters on December 7 to approximately 30,000 aides in 678 chapters. A call has been issued for 100,000 nurse's aides.

To offer your services in any of these fields, apply to your local Red Cross chapter.

**USO.**—Volunteers by the hundreds help the USO give service to soldiers and sailors on leave or in transit and to workers in the war plants. These volunteers dance with the boys, give them competition at games, take them sightseeing, feed them sandwiches and coffee. They organize athletic classes and parties for women war workers. They also give welfare services to families. For volunteer work with the USO, apply to your local USO headquarters.

**Civic clubs.**—War time work to keep alive the many worthy projects of the many civic clubs of this country, and to carry along war responsibilities as well, is a worthy field for the women who comprise these clubs and work as volunteers. From the tens of thousands of possible illustrations which might be cited in this field, the following is chosen for the reason that it applies to one phase of the topic under discussion.

In cooperation with the National Roster for Scientific and Specialized Personnel, experimental War Job Information Centers were set up by the local branches of the American Association of University Women in the State of Connecticut, in Boston, New York, Philadelphia, and Baltimore.

These centers, manned by women who work as volunteers, help women find paying war jobs of the type which require specialized training and experience. They work closely with the USES, the Civil Service Commission, the personnel direc-

tors and officials of industry. They also keep current information on training facilities and refresher programs. Personal contacts with officials of government and industry have resulted in cordial relationships which make it possible to direct applicants to specific personnel departments, thereby saving much time and effort. Since some employers send directly to large colleges and universities for specially trained personnel, one of the purposes is to help women from smaller colleges. These experimental centers have proven so useful that the Association now is moving to make War Jobs Information Centers a national project, to be taken up by its branches wherever there is need of the service and there is the volunteer personnel to carry it on.

**The American Women's Voluntary Services.**—Conducts two free courses in communications which may lead to positions with the Army, Navy, or Civil Service; trains volunteers and offers opportunities for them to serve in motor corps, land armies, and various civilian protection fields. Recruiting is done by the local AWVS group.

**Aid to the United Nations.**—To the more fortunate people of this nation victims of the Axis must turn for relief. Among the many organizations in this field are the British War Relief Society, Bundles for Britain, United China Relief, Greek War Relief, and Russian Relief. This work is largely carried forward by volunteers.

**It's a woman's war now.**—No discussion of the work of the woman volunteer would be complete without emphasizing the fact that we are in this war all the way, it's a woman's war right now, and women should be thinking in terms of going into full-time work and carrying along many of their volunteer activities as side lines. It has been done in England. It can be done here by careful planning and hard work.

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