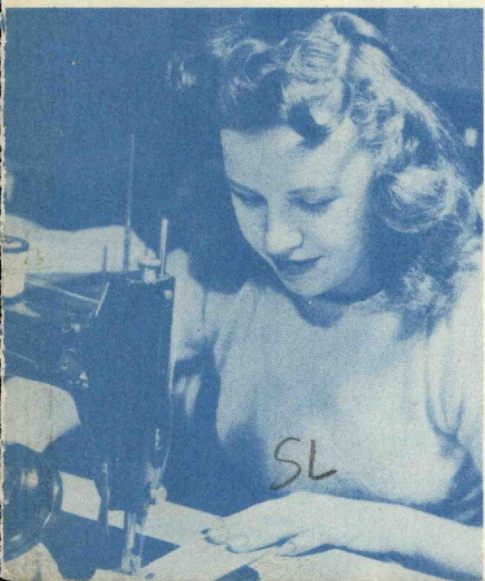


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WOMEN'S JOBS

*Advance and
Growth*

Women's Jobs

*Advance and
Growth*



United States
Department of Labor
MAURICE J. TOBIN, Secretary

Women's Bureau
FRIEDA S. MILLER, Director



United States
Government Printing Office
Washington : 1949

For sale by the Superintendent of Documents
U. S. Government Printing Office, Washington, D. C.
Price 30 cents

Letter of Transmittal

UNITED STATES DEPARTMENT OF LABOR,

WOMEN'S BUREAU,

Washington, June 6, 1949.

SIR: I have the honor to transmit to you the popularized version of the Bureau's technical bulletin, issued last December, *Women's Occupations Through Seven Decades*. This simpler, briefer account is intended to serve young women who are trying to decide what job they want to do. It will serve counselors, high school classes studying the U. S. economy, and agencies and organizations that habitually seek such material from us and find it more serviceable in this than in technical form.

This version was prepared by Sylva S. Beyer, editor, with the cooperation of Elisabeth D. Benham, assistant economist, of the Bureau's staff.

Respectfully submitted.

FRIEDA S. MILLER, *Director.*

Hon. MAURICE J. TOBIN,

Secretary of Labor.

Foreword

WITHIN THE NEXT FEW YEARS most of you, if you have not already, will be choosing the job you want to do. For now it is as customary for young women as for young men to work, at least until the young women marry. Some work after marriage, until their children are born. Some women, for various reasons, work even while they are raising families, or after their children are grown. There are few women in the United States who do not, at some time in their lives, hold a job.

If you had been living in 1836, you would, according to Harriet Martineau of England who came to visit us then, have had "before the opening of the factories . . . but three resources—teaching, needlework and keeping boarding houses or hotels. Now," she said, "there are the mills; and women are employed in printing offices as compositors as well as folders and stitchers." She also spoke elsewhere of women in domestic service and shoe binding. (Actually some other types of occupations provided jobs for women then, but probably not for many.)

Today, instead of from Harriet Martineau's brief list, you may choose from among 442 types of jobs out of the 451 there are.

If you are interested in what happened in our country to bring this about, what the jobs are, and which are chosen by the greatest number of women, you will find the story here. It is taken, for the most part, from the reports of the United States Census Bureau.¹ These, like many other books that seem incredibly dull, do, when one has caught on to their way of saying things, tell dramatic facts about ourselves. WE are the record. All the important events in our lives are or will be in it—our birth, our schooling, where we live, our marriage, our children, our job.

The story told here had its beginnings, of course, in the early days of this country. The year we take it up in some detail, however, is 1870, shortly after the close of the Civil War. For that is the year the Bureau of the Census first counted women separately from men in each of the jobs they were doing. For the moment, the story ends in 1940, when the last 10-year census was taken. It will be continued in the report of the 1950 count. What will you be in that report? a student? a secretary? operating a machine in a factory? a housewife? a farmer? a saleswoman? a telephone operator?

We hope this book, by telling you about jobs women have done and are doing, may be of help to you in making your own choice.

¹ Actually, the story here is a shorter and simpler form of the story told by Janet Hooks in her *Women's Occupations Through Seven Decades*, which you may have by writing the Women's Bureau of the Department of Labor. In writing her story, Miss Hooks grouped workers somewhat differently than the Census Bureau does, in order that she might compare them with groups of workers of 70 years earlier. Her report had the full approval of the Census Bureau.

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The Change in Women's Jobs

WE IN THE UNITED STATES use machines to produce goods more than does any other country in the world. We buy and sell more things than any other country. Our transportation system is the greatest and most complex. And in buying and selling—both goods and our services, or the work we do—we make use of money more than any other country. We live under an industrial economy. We are the most industrialized nation in the world.

THE CHANGE IN OUR ECONOMY THAT BROUGHT ABOUT A CHANGE IN WOMEN'S JOBS

If we had been living when this country was very young, we would have lived under an agricultural economy. Most of us would have been living on farms and doing work connected with farming. Most of the things we needed we and the men in our families would have grown ourselves and made at home. Tools, wagons and plows, cloth and clothing, shoes, furniture, and bedding were made at home. For some of the things we needed we would have exchanged, not money, but our services or things we had made and others needed. When we were about to be married, our neighbors came to help us build our house; we did not pay contractors, carpenters, bricklayers. We helped our neighbors bring in and thresh their wheat, and they helped us with our crop. Our job, as women of the family, was to cook for the many reapers and threshers. We prepared all the food in the home, spun and wove cloth, made clothing, cared for the sick and aged, trained the children. When children were born, often a midwife, more often simply a neighbor came to help. There were few doctors and no trained nurses. There were few teachers; fewer of us would have been going to school.

This very young country had immense natural resources—rich soil, valuable coal and iron beds, immense reaches of forest land, deep and broad rivers that provided both easy transportation and power, fine harbors in which ships could ride safely at anchor. More than anything, this country had tremendous drive and inventive genius.

This drive and this genius, making use of these tremendous natural resources, in less than a hundred years converted our agricultural economy into the most fully developed industrial economy in the world. It is in the process of that change that women have taken on such a great variety of jobs.

One can speak of two major advances in our evolution from an agricultural to an industrial economy, each of which provided new types of jobs for women. First came the development of machines and the building of factories, railroads, ships. From the point of view of jobs for women, the sewing machine was one of the most important of the machines. Clothing that had at first been made entirely at home, later in part by dressmakers, mantua makers, tailors, and tailoresses, came to be made almost entirely in factories, particularly after sewing machines came to be power machines, driven by electricity.

The second advancement in job opportunities for women came with the great expansion of commerce as rail and water ways webbed the country, ships and harbors were built. It came with the development of communications that followed the invention of the typewriter, telegraph, telephone, and the expanding of our postal system. The typewriter, in particular, opened up a whole new field of white-collar jobs for which women were said to be particularly well adapted.

The bustling activities engendered by commerce and communications themselves brought about whole new series of other activities in their train. People traveled; men left, in advance of their families, for jobs in other towns. They needed hotels and restaurants in which to sleep and eat away from home; they needed laundries to take care of their clothes. Then the people living at home also found these institutions great conveniences. Machines processed more and more of the foods that had been prepared at home and made more and more of the clothing; wholesale houses grew up to store and bring the food and clothing when needed to the retail stores—to the corner butcher, baker, and grocer, clothing stores, and hat shops—that sprang up in cities, towns, and villages.

"Sales techniques" developed: the merchants found better and better ways of hawking their goods, of bringing them to the attention of people and of stimulating people to buy. Finally the merchants turned that job over to experts, and the whole new field of modern advertising developed which has as its sole purpose the creation of "consumer demand."

All these developments opened up jobs for women.

Manufacturing and commerce could not be carried on effectively in rural areas. Factory workers could not live too far from their jobs. The factory itself had to be as close as possible to the receiving point for its raw materials, to the near markets for its products, and to shipping points for distant markets.¹ As manufacturing developed and commerce

¹ Now that many cities have become overcrowded and congested, there is a movement to build factories in country areas, made possible by the rapid train, truck, and plane transportation we now have.

grew, people tended more and more to leave the farm country to go where the job opportunities were, to live close together, to build up cities and towns where none had been before.

And living together in cities and towns in its turn created new types of jobs. Streetcars, busses, ferries became necessary, and gas, light, and water works—the great public utilities. More banks were needed. Theaters and other amusement places grew up. Newspapers and books became a daily necessity. All these brought about a variety of jobs, many of which were filled by women.

Twice then the doors of industry were opened wide to welcome women and little children in. First, when, although agriculture still occupied most of the people, the system of making things in the home began to give way to making them outside the home; then the infant factory production system had to find workers—many more workers—if it was to grow up and realize itself. And again, toward the end of the nineteenth century, when mass production was in full swing, then too, large-scale business organizations and distribution systems were in vital need of a new supply of workers, to carry on the interlocking activities of the great business networks. And here too women and children were an important source on which to draw for the needed help. As the whole economy of the country was going through its often stirring and dramatic changes, so was the economy of the individual family, particularly of the women in the family.

In the pioneer period the women in the home—mothers, daughters, and the kin who had no other home—produced goods and performed services for the family group that were of important economic value. Then spinning and weaving, preserving, baking, making cloth, clothing, and bedding, laundering and many other personal services began to be done commercially. Agencies outside the family came more and more to take on much of the care of the old and the sick. Much of the child training and many of the recreational activities which had been carried on in the family circle came more and more to be carried on outside the home.

All these shifts meant that the economic contribution of the women in the household became smaller and smaller. It meant that the family had increasing need for money income with which to pay for goods and services. It meant that in many households several members, including its women, had to work outside the home to help supply that money.

THE CHANGE IN CUSTOMS AND STANDARDS OF LIVING

The self-sufficiency of the pioneer family has disappeared. Today the family, particularly in towns and cities, generally lives in a rented dwelling; buys its clothing, its baked goods, other prepared foods, household furnishings and equipment; pays for much of its recreation. And not only that, but the sparse furnishings of the pioneer cabins have been replaced by countless modern day comforts and conveniences.

We became choosier in our tastes for the material things of daily life. New industries and services put their products at the command, not only of the few of us who are most well-to-do, but of the bulk of us who are "the average citizen." The living standards of the modern family are way and above those of a hundred, or fifty years ago. This modern "standard of living" is the very basis of the present industrial mass-production system. For wide and varied markets—people who will buy the products—are essential to that system. (And the well-being of the family, in turn, depends more and more on its money income.)

All these things have influenced the need of industry to employ women, and of women to take jobs. It has become commonplace, when jobs are not available in their home towns, for young women to go where jobs are to be found, although they continue to do this less than men.

Inventiveness and the mass-production system together turn out so great a number and variety of material comforts that they can meet any specific need in a variety of ways. Together with our system of advertising, this has created still further needs, the need, for example, to have what is in style, to do what is in fashion. The importance of styles and fashions in all sorts of commodities has grown tremendously—commodities ranging from dozens of types of hair curlers, through different glasses for an infinite variety of drinks, to clothing and automobiles.

Style and fashion also have a great effect on job trends. Flourishing new industries met the demand that arose when cosmetics were no longer disapproved and beauticians' services became a necessity. The spread of the cigarette smoking habit provided employment for great numbers of women. New job opportunities grew out of the everyday use of silk, rayon, then nylon stockings.

CHANGES IN FAMILY LIVING

In pioneer days, a large family was far more common than nowadays. Children, like a wife, were an economic asset to the farmer, usually an economic necessity. A farm, particularly in the days before the tractors and milking machines, took many hands to run it, many hands to feed and clothe the workers.

In the early days of the industrial economy, a wife and sons and daughters were still an economic asset, though a lesser one. For the children, often the wife, joined the father in the factories, in order that the family might be able to pay for the necessities that had become less expensive to buy than to produce at home.

Today the time of most children is spent at school. Relatively few contribute to the family income before they are grown. Today, in an era of apartment house living, it is difficult even to provide space for a large family.

In pioneer days, most girls married at what we consider a very early age. How many stories of these days have we not read in which an unmarried girl of 20 was considered an old maid? Nowadays the age at which girls commonly marry in the United States is between 21 and 22. Usually the girl's husband is a little less than three years older than she is. About 3 in 20 of the young couples have no children. The typical mother has three children. The first is usually born a year after marriage, the last when the mother is 28. When her youngest child is 18, the average mother is 45. Her children are married and have left home, usually when the mother is 50 or 53, and the family then consists again of only husband and wife.

Many women in the United States work for a wage or salary even while they have children who are under school age, particularly if there are school-age children to help take care of the young ones while the mother is away. More women work when all their children are of school age and a still greater number when their children are over 18.²

With the changes in our customs and standards of living, with so much that was formerly carried on within the family group now being done by businesses and community agencies, much more of the time of every member of the family is spent outside the immediate family circle, in playgrounds, at school, at work, at clubs for young and for old, in civic activities, at movies and theaters. The members of the family are less dependent on one another and more dependent on the community.

CHANGES IN PUBLIC ATTITUDES TOWARD WOMEN AS PAID WORKERS

Changes in styles and fashion are rapid and frequent. Social changes take place much more slowly. In spite of industry's need for workers, in spite of families' need for increased income, people did not readily accept the idea that women should work outside the home. The idea that "women's place is in the home" and nowhere else is still met with here and there. However, under the compulsion of an economy that is still changing, that is increasingly a money economy, that idea is waning.

When social changes do take place, it is likely that the new development will be built on old foundations. When factories and businesses began to take over many home activities, it seemed natural, and therefore more acceptable, that women should continue, in the new surroundings, with the work they had been doing for their own families. Under both our agricultural and our industrial economy, producing cloth and clothing, preparing food, caring for the sick, training children, have been

² There are (April 1948) 4 million mothers in paid employment, 3 million of whom are living with their husbands, 1 million of whom are living apart or who are widowed or divorced. The children of over 800,000 of these mothers are all under school age (under 6). Over three-fourths million have children of both school age (6-18 years) and of pre-school age.

women's work. But they have been carried on, in the two periods, in very different surroundings and by widely different methods.

Some public attitudes become crystalized and are then translated into laws and government programs. Such laws and programs have created many job opportunities for women. When laws made schooling compulsory, for example, more teachers were required. Public health programs required more nurses. Welfare programs brought more opportunities for social workers and for clerks and stenographers.

The attitude of some of the public and some employers, on the other hand, that certain types of work are not appropriate for women has limited women's job opportunities. There are people, for instance, who believe that even though women have the necessary qualifications, it is more suitable for a man to work on a job which requires dealing with the public, or one in which considerable traveling is necessary, or one that calls for supervising groups of men workers. Prejudices are strongest against married women workers, owing to survivals of the "women's place is in the home" idea and to failure to understand the economic problems which face married women and their families.

Opportunities in some fields are limited by the standards set up by those who are already working in the field, for example, in craftsmen's occupations like printing and carpentering. Many of these require a long apprenticeship before a worker is regarded as a full-fledged craftsman entitled to a craftsman's pay. Established craftsmen, moreover, and some employers limit the number who may become apprentices to some crafts. Such restrictions limit the number of women who may find a job in these fields.

Women are excluded from many jobs in manual work of all degrees of skill because such jobs require greater physical strength than the average woman has. On the other hand, inventions have lightened the physical effort required on a number of these jobs, and women have become eligible and have been hired for them.

There is no physical barrier to the employment of women in the professional occupations. Here the long and expensive training that is needed and the difficulty of becoming established have affected both men and women. But the public attitude, and particularly the attitude of men already in professional occupations, formerly barred women almost completely and during recent years have tended to keep the number of women small.

THE EFFECT OF WARS

There is one thing that will cause custom and the traditional way of doing things to change fast, and that is war. Men are called up for military duty; industries that supply the armed forces and industries that fill civilian needs are short of manpower; and women are called on to replace men and to do jobs for which they had formerly been considered

inadequate or unsuited. When peace comes, there is always a tendency to go back to prewar custom and tradition, but this never succeeds completely. Inevitably the range of occupations in which women hold jobs has been widened.

The Civil War brought women into schoolrooms, to replace men as teachers. It caused many women to take up nursing. It gathered groups of women together in "sewing rooms" to make clothing and other articles needed by men in the armies.

World War I added greatly to the variety of jobs women did in all types of factories, particularly in metal and machinery and other plants making war implements. It gave women a chance at more skilled work than they had previously been allowed to do. Many dropped out of these jobs after the end of the war, but some women continued to work in a large number of them.

World War I showed up women's special aptitude for assembly and inspection operations. In industries which were then developing, like the manufacture of electrical equipment and appliances, this aptitude assured women a permanent place. From some new types of jobs, like driving streetcars, they were dropped almost completely, but on other jobs, like that of elevator operator, a great many were kept on.

World War II again increased the scope of women's jobs. Necessity overcame the reluctance of employers, and women for the first time replaced men welders and riveters in sizable number; they worked in shipyards, even on railroads. Particularly in aircraft plants did they prove their worth. Here where, for example, some jobs had to be carried on in a confined space in a plane's interior, women's smaller size worked to advantage. It is still somewhat too soon to say what the long-time effects of World War II on women's employment will be, but it seems ever more certain that women have a permanent place in the aircraft industry, in the armed forces, in the plastic industries, to mention only a few.

THE EFFECT OF IMMIGRATION

The English, Dutch, Swedish immigrations which resulted in the first settlements in this country were only forerunners of great waves of immigration that later poured into the United States from many countries: Ireland, Germany, Italy, Scandinavia, Poland, Greece. Such immigrations affected occupational trends among women in several ways.

Over many years immigrant women provided a steady supply of recruits for household service occupations.

For the newly arrived woman immigrant who was handicapped by not being able to speak our language, who had had no occupational training or experience, household service for a long time offered the best chances for a job. When, later, fewer immigrants were admitted to the country, this source of household workers disappeared, in part for the

reason that as industry grew it had jobs for even the inexperienced unable as yet to speak English.

At times the influx of foreign-born women turned native-born women workers into new fields. In the early days of the cotton textile industry, for example, workers in many of the New England mills were native-born girls, chiefly from farm families. Later great numbers of Irish and French Canadians came into New England, and both their women and their men went to work in the cotton mills. The native young girls at the same time began to look for and find jobs as teachers, nurses, and white-collar workers for whom there was a rising demand.

In the clothing industry, too, immigration brought about a shift to the employment of growing proportions of men. The immigrations of the 1880's brought groups of people who did not speak English and who for that reason tended to crowd into occupations in which family members and friends, who had come to the United States before them, were already working. It became customary for employers or go-betweens to make contracts with the family head or leader for the work of whole family groups. Working conditions under this contract system were very bad indeed. This and other factors resulted in relatively more men and fewer women coming into the clothing industry after 1890, although women always remained in the majority. After 1930 their proportions rose again. The industry is now one of the most important for women.

CHANGES IN EDUCATION OF WOMEN

The changes in education are among the most important that have taken place under our changing economy. In pioneer days, those who received any education outside the home were relatively few, and those who received a university education fewer still. Our compulsory education laws have done a great deal to help young women to obtain jobs in a great variety of fields.

American women are becoming better educated each year. In 1940 the number of women high school graduates was 11 times as great as in 1900, and the number of women with a university or college bachelor's degree was almost 10 times as great as in 1900. And this was not because the number of women in the United States had increased 10 or 11 times. For the number of women in the country in 1940 who were 14 to 24 years old was only $1\frac{2}{3}$ times their number in 1900.

The number of girls who graduated from high school in the United States has always been greater than the number of boys who graduated. Not so in regard to universities and colleges, for these have always graduated more men than women. However, though only 1 out of every 3 college or university graduates was a woman in 1900, 2 out of every 5 were women in 1940.

Higher education, of course, means greater opportunities for women in the professions. But chances of going to a college or university came

to women slowly and were at first very few. Before 1830 there were hardly any places at all where women could go for more than a high school education. In the 1830's people became conscious of and concerned about this and began to do something about it. Oberlin College, which opened its doors in 1833, was coeducational from the beginning. In that same decade a number of seminaries for women were also opened. These were possibly not of full college rank, but they did provide a better education for women than had been available before. One of these schools was Wesleyan, at Macon, Ga.; another Mount Holyoke, in South Hadley, Mass. Two were in New York State, in Troy and Elmira. Step in advance though they were, they still were a long way from providing women opportunities for education equal to the best then available to their brothers.

It was not until 1865 and the opening of Vassar, that a college with a rich course of studies, adequately equipped and endowed, and with the highest standards, comparable to those of the best colleges for men, was available to women.

So successful was this venture that the pattern was followed in the next 10 years and after by the founding of other similar colleges—Smith, Wellesley, Bryn Mawr, Radcliffe, and Barnard.

Today there are many separate colleges for women, with standards equal to the best provided for men. The universities of the country also admit women to study, not only as undergraduates but in most of the professional and graduate schools as well. Still it cannot be said that there is equality of educational opportunity. Some law schools, some medical schools, still exclude women. Others admit them under more restricted terms than those men are admitted under. In the libraries of a great university, according to the *New York Times*, women have only limited privileges. In one to which they were admitted for the first time during the war, they must sit behind pillars at one end of the room; to another, they are admitted only on Saturday afternoons. And it was not so long ago, that a young woman who wished to take a course in constitutional law, at a leading university which excluded women from its law school, was told she might attend if in a corner of the room a curtain could be rigged up for her to sit behind.

However, women have come far, and are going further. They are now being admitted as students, and even a few as teachers, to some of the universities that have been most hide-bound toward admitting them heretofore.

POPULATION CHANGES

One other set of changes must be mentioned, those that take place in the numbers of people in this country, in the numbers of those in various age groups, in the numbers who attend school, are married, etc., because these changes are also closely related to the employment of women.

We have already spoken of the smaller size of families now than in pioneer days. This fact is important in that it cuts down the number of years the care of small children prevents women from taking jobs. Some women of course have no choice but to take jobs, to provide or help provide the necessities of life, whether or not small children at home need them.

The number of women workers in 1940 was 13 million—just about the same number as of all workers—both men and women—who were working in 1870. Of course, the total of all women in the country was three times as great in 1940 as in 1870, but the number of women who were workers was *seven* times greater.

To some extent the increase in the number of women workers is due to the fact that "the population is aging," which is only saying that fewer children die in infancy, more live to adulthood, and moreover, live to a ripe old age. This is particularly true of women. In 1870 the median age of women was 20 years (that is, half the women in the country were younger than 20, half were older). In 1940 their median age was 29. This of course means that there are more women, proportionately, of the ages during which women work than there were in 1870. In 1940 it was more common for women aged 20 to 24 to be in the labor force than for those in any other age group.

In the early days of our becoming an industrial economy, it was common for even very young children to work, long hours, on heavy and often hazardous jobs. There still are regions and particular industries in which young children are not adequately protected by child labor and education laws, but it is true that the great majority of children are safeguarded. The proportion of not *only* children but of young people—all those under 20—in the labor force has been steadily decreasing.

The Advance of Women White Collar Workers

PROBABLY MOST GIRLS in high school who are thinking about a job have a white-collar job in mind. Certainly the white-collar workers were an important group in 1940, if only by virtue of their sheer numbers—about 3 ½ million. The only group who outnumbered them were women in the service occupations, by about one-fourth million. What started the white-collar workers off to such a flourishing growth was the typewriter.

The first practical typewriter was put on the market in the 1870's. It was operated by women from the very first. Other types of office machines were invented later, but these too were run largely by women. These machines, and particularly the typewriter, in the operation of which women showed so much adaptability and skill, began the custom of at least one woman in practically every office. By 1940 about three-fourths of the women white-collar workers were in offices.

For "white collar" does not mean only office work. "White collar" is in fact a rather vague term. We mean by it here what the Census calls "clerical, sales, and kindred workers." We do not include, as is sometimes done, professional and semiprofessional workers, for we talk about them later.

The number of women white-collar workers in 1870 was a very mere fraction of those in 1940—1/257; in round numbers, 13,500 as against 3 ½ million. (By 1949 there were nearly 6 million.)

If you had met 20 women white-collar workers in 1870, the chances are that 14 would have been in saleswork; 3 would have been office workers; 2, hucksters or peddlers; and 1, a telegraph operator. If you had met 20 in 1940, however, the chances are that only 5 would have been in sales work, 14 would have been office workers and 1, a telegraph, telephone, radio, or wireless operator.

There were women mail carriers in both 1870 and 1940, and women hucksters and peddlers in 1940, but so few compared to other women white-collar workers that it is unlikely you would have met them in an average group of 20.

OFFICE WORKERS

When someone mentions "office worker," you usually think: "Stenographer, typist, or clerk, probably a woman." That is not the image you would have evoked in 1870. For in that year women stenographers, typists, and secretaries; shipping and receiving clerks; and other clerical and allied works—these three groups together added up to less than 1,000, whereas men in these three fields added up to nearly 29,000.

In 10 years the women's numbers more than doubled. In another 10, they multiplied 20 times—a tribute to the typewriter and to women's skill in using it. By 1900 they had doubled again, and there was now a fourth group of workers, the women who operated the adding and billing machines and the like—machines that were now beginning to come into their own.

In the next 10 years the number of women office workers more than tripled. In the next, between 1910 and 1920, they did not quite triple, but the greatest number of women ever in any 10-year period elected office work—nearly 652,000. This was the period in which war brought about a great expansion in all employment of women.

CLERK IN A PERSONNEL DEPARTMENT





FILE CLERKS

Since 1920 the *rate* of increase has slackened considerably. In 1940 there were less than four-fifths again as many women office workers as in 1920. But when one is talking in millions, that is still a great number.

The over 1,860,000 women office workers (stenographers, typists, secretaries; office machine operators; shipping and receiving clerks; other office clerks and allied workers) in 1940 meant that there was one of these women workers for every 71 people in the country. (In 1870 there was only one to every 42,800 people.) What this signifies is the still growing importance of women in the vast network of business and distributing activities.

In taking on office work, women did not replace men. They found entirely new opportunities for themselves. As we said, they were the typists from the beginning, and in general the first operators of other office machines. From 3 in 100 of all of the office workers in 1870, women came to be well over half in 1940. The way men and women lined up in these jobs in 1940 was roughly this:

- Of every 25 shipping and receiving clerks: 1 was a woman; 24 were men.
- Of every 25 other office clerical and allied workers: 9 were women; 16 were men.
- Of every 25 office machine operators: 21 were women; 4 were men.
- Of every 25 stenographers, typists, and secretaries: 24 were women; 1 was a man.



OFFICE MACHINE OPERATORS

Which of the four fields of office work did most of the 1,860,000 women choose? Roughly—

59 out of every 100 chose to be a stenographer, typist, or secretary.

1 out of every 200 chose to be a shipping or receiving clerk.

38 out of every 100 chose other office clerical and allied work.

3 out of every 100 chose to be office machine operators.

Office worker jobs have attracted a great many women because such jobs have been held to carry relatively high social status, partly because they were felt to require more mental effort than, say, jobs at a machine in a factory. However, the rapid increase in the use of office machines, and the fact that more and more work done with them is being broken down into specialized, repetitive jobs, is beginning to make it doubtful that they require much mental agility.

And what of women office workers and marriage? It appears that the tendency not to hire married women, and to dismiss those who do marry, limits married women's opportunities in office work. At any rate, women office workers do not have as large a representation of married women as do all women workers taken together. But, as among all women workers, married women's representation among office workers is growing.

BOOKKEEPERS, ACCOUNTANTS, AND CASHIERS

Bookkeepers, accountants, and cashiers were long among the elite of the white-collar workers. Few among them were women in 1870—only about 900. Men were 40 times as numerous. But after 1880 the propor-

tion who were women increased fast, until by 1930 and 1940 a little better than half were women, but by then, women numbered close to half a million.

What was responsible for this increase? The ever larger units into which businesses were organized, the ever growing day-to-day financial transactions and need for recording and analyzing them, the need for accurate knowledge of costs and profits, the need to supply government authorities with figures for income tax and other purposes. And these made it necessary to introduce machines into general accounting. For, the cost of doing by hand all the work required would have been prohibitive. Here, too, machines were among the factors which opened up a field of considerable opportunity for women.

In 1870 there had been 1 woman bookkeeper, accountant, or cashier to every 45,000 people in the country; by 1940 there was 1 to every 277.

TELEPHONE AND TELEGRAPH OPERATORS

Boys were the first telephone operators. The industry, developed in the early 1870's, was a completely new one, unrelated to any that had been carried on in the home. There was no connection in the public mind between the telephone operator's work and any work women had done before, to make it seem appropriate work for women.

ACCOUNTANT



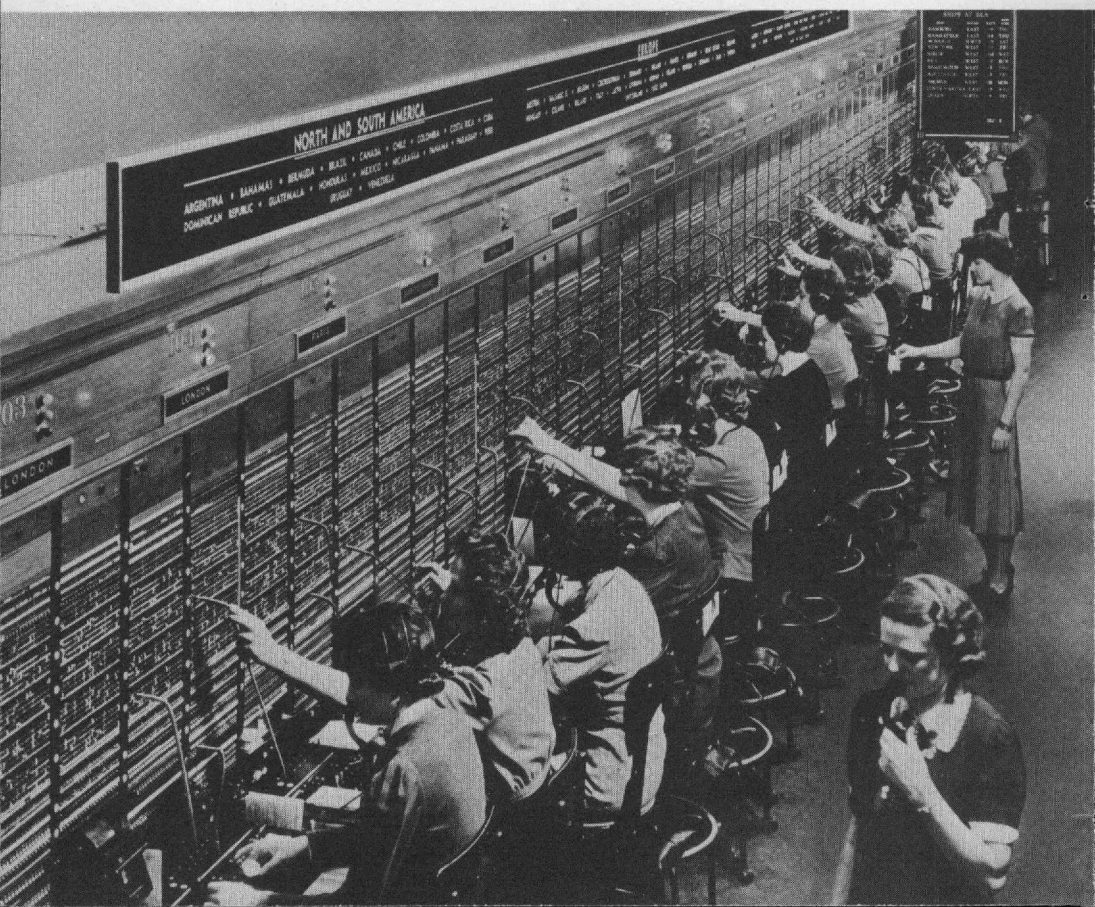
But the boys would "answer back" to the telephone service subscribers. They were even known to hunt up a cranky customer after work and fight it out.

After about 2 ½ years of this, girl operators were hired, with satisfaction to both subscribers and the company. Before long, girls had practically supplanted the boy operators. By 1900 women were 80 percent of the operators; by 1940, 95 percent.

The common battery switchboard was introduced into the telephone industry around 1900. It cut down considerably the time it took an operator to put through individual calls. But more and more people had telephones installed in their homes. Even more important, businesses adopted the telephone to speed up their lively, expanding activities. So that, in spite of the greater number of calls each operator could handle, more operators had to be hired to take care of the work.

The high rates of increase in the number of telephone operators came before 1920. From 1920 to 1930 the rate of increase slackened. The dial system for local calls and other technological improvements were installed, still further increasing the number of calls one girl could handle. But more and more telephones were put into use, and the actual number of operators continued to grow, if somewhat more slowly.

TELEPHONE OPERATORS—OVERSEAS SWITCHBOARD



But during the depression of the 1930's, following the 1929 stock market crash, the number of telephone customers dropped off. To cut down expenses, the telephone companies introduced still further labor-saving devices and employed fewer workers. Even in 1940, after business conditions had improved, there were fewer telephone operators than there had been in 1930.

The dial system is already in use, in a few cities, for long distance telephoning. It will be extended to other cities. And this will mean a still further cut in the number of operators needed. However, an occupation that offers jobs to nearly 200,000 women is an important one to consider.

The development of the telegraph dates back to the 1840's. It, too, opened up new fields for men and women. The opportunities for women telegraph operators, however, were not nearly so great as for telephone operators, and between 1930 and 1940 their numbers fell off at an even greater rate than those of telephone operators.

The radio industry did not really get under way until the 1920's, and women have not been a sizable group among the radio operators.

Taking all operators together—telegraph, telephone, and radio—the number of women among them grew from about 300 in 1870 to about 246,600 in 1930 and dropped to 205,600 in 1940. Whatever the 1950 census tells us of a rise or fall in their numbers since then, it is certain that the number of jobs women hold in this field will continue to be significant.

ATTENDANTS IN DOCTORS' AND DENTISTS' OFFICES

Nowadays the girl who is a doctor's or dentist's assistant does some of the things he used to do for himself. She sterilizes and lays out the instruments he is going to use, prepares the patient for examination or treatment, prepares the materials and equipment the doctor calls for during the treatment, keeps the patient comfortable, and may help in the laboratory work. These are the duties which make her job different from that of other types of office assistants. But like the other assistants, she also keeps the records and books, handles the telephone, makes appointments.

We do not know how many girls were doctors' or dentists' attendants before 1910, for that was the first year the census made a count of them separate from girls in somewhat similar kinds of work. That year the census counted 5,000. By 1920 there were twice as many, and by 1930 twice as many again.

Between 1930 and 1940 the number of attendants did not increase at nearly so fast a rate—only by a little over one-fifth. This may have been because, during the depression years, doctors and dentists were less able to afford the services of an assistant. It is also true, though, that those attendants who were nurses may that year have been counted by the census with trained nurses rather than with the other attendants.

In any case, it is likely that the tendency of doctors to specialize more and more, and their consequent need to keep more elaborate records, means more assistants will be hired in a period when doctors and dentists can afford them. Many doctors and dentists, who had had no assistant before the war, became used to assistants' service in the Army or Navy, and were not inclined to do without it on returning to civilian life. Because of the great shortage of doctors, too, many have hired assistants in order to be free themselves to take care of as many patients as possible.

The attendant's job is one that is related to the stenographer's, typist's, and secretary's job, to which women were found to be particularly adapted, and it is related also to the job of caring for the sick in the home, which has always been a woman's job. So it is not strange that in 1910 you would have found that 4 out of 5 attendants were girls or women, and that, in 1940, 19 out of 20 were—almost 30,000 women in all in 1940.

AGENTS AND COLLECTORS

Seventeen women agents, collectors, or credit "men" were counted by the census in 1870. In 1940 it counted almost 23,500, but by then the group included agents, credit men, purchasing agents and buyers, county agents and farm demonstrators, and bill and account collectors. For as new types of jobs develop, the people in them must be counted in *some* group, at least until there are enough of them so that the Census feels the time has come to set up a separate classification for them, as it did in 1910 for doctors' and dentists' office attendants.

County agent and farm demonstrator jobs, for instance, developed fairly recently, after farming and home economics came to be regarded as practical sciences and to be taught in universities. The job of the agents and demonstrators, who are frequently graduates of farm and home economics courses, is to see that information and instruction on improved methods of farming and running a farm home get to the people in rural areas. The agents give practical demonstrations of equipment and tools or of new, improved ways of doing things. They talk these things over with the farmer and his wife. Sometimes they get groups of farmers and farm women together, to talk to them, or to get them to discuss a problem together. They often organize clubs for young people, to get them started in the right direction on farm, farm home, and community work.

A considerable number of these county agent and demonstrator jobs are held by women—29 out of every 100 in 1930, and 43 out of every 100 in 1940. Here again the work is related to the work women did in pioneer days in or around the home.

But these county agents and demonstrators are only a small portion of the agents, credit men, purchasing agents and buyers, bill and account collectors. Taking all these workers together—only 8 in 100 were women in 1930; in 1940, 11 in 100.

MESSENGERS AND ERRAND AND OFFICE GIRLS

Workers called "messengers and errand and office boys and girls" never included many girls—only 46 in 1870; and only 8,500, the largest number ever counted, in 1920. By 1940, 5,000 fewer were counted, in part, perhaps, because girls less than 14 years old were not included. (The census up to that time had been counting all workers 10 years of age or over, but that year began to count only those 14 years old or over.) At any rate, only 1 out of every 25 messengers and errand and office "boys" was a girl in 1940.

The number of girls among telegraph messengers was especially small—less than 1 in 50 in 1940. Some States do not permit girls under 21 to work delivering telegrams or personal messages. The undesirability of the work for young girls has without doubt limited the number who are now in it.

MAIL CARRIERS

Only 1 in every 100 mail carriers in 1940 was a woman. Altogether we had 1,500 women mail carriers then. In 1870, when the postal system of course was an infant compared to the giant it is now, only 5 women were mail carriers. It is likely that most women mail carriers are working in rural districts, where there are not nearly so many kinds of jobs to choose among as in towns and cities. Also, the rural mail carrier's job has an advantage over the city mail carrier's: mail is delivered by car, instead of on foot in a heavy pouch slung over the back.

MESSENGERS



WORKERS IN SALES JOBS

The age we are living in is called many things, among them "The Distribution Age." It is called that because of the tremendous number of businesses, kinds of jobs, and people involved in getting goods from the point where they are grown or made into the hands of the people who eat or use them. Nearly 3 million people were needed for the job in 1940, to work as salesmen and saleswomen, buyers, sales agents, canvassers, garage and filling station attendants, clerks in stores. Seventy years earlier, fewer than a quarter of a million (of whom 9,000 were women) had handled it. In the 70 years between 1870 and 1940 women grew in number to over 850,000. From 1 for every 4,411 persons in the United States in 1870 women in selling jobs came by 1940 to be 1 for every 154 persons.

New and varied ways of distributing goods began to develop shortly after the Civil War. Department stores came into being, mail order houses, dry goods and grocery chain stores. All provided various kinds of selling jobs for women. The most flourishing period—the one in which the greatest number of women took up the work—was 1920 to 1930. The depression years that followed slowed them up.

SALESGIRLS



Out of all the various types of selling jobs they might have chosen, 9 out of 10 women who had such jobs in 1940 had picked the saleswoman or the store clerk job. Only about 5 out of 10 men in selling jobs made this choice, preferring other kinds of selling jobs.

Before 1900 the producers had sold their products to wholesalers and jobbers, "middlemen," who in turn sold the products to the stores in which people bought the food and goods. After 1900 still another way of distributing goods developed, and new sales "techniques." The producers hired their own traveling salesmen and sales agents, to sell the products directly to the stores or "outlets." The men did very well for themselves in these selling jobs; only 1 in 50 of the jobs was held by a woman.

Some sales techniques may be fairly new, but not the demonstrators'. They were using their's in 1870, explaining the usefulness and value of the product to possible buyers and showing how to operate it. And this field belonged primarily to women. From not quite 3 in 5 in 1870 they came to be over 4 in 5 of all demonstrators in 1940. In numbers they grew from about 500 to 8,700.

Taking all the people in all the selling jobs together—salesmen, saleswomen, buyers, sales agents, canvassers, garage and filling station attendants, clerks in stores—

4 in 100 were women in 1870
8 in 100 were women in 1880
15 in 100 were women in 1890
21 in 100 were women in 1900
25 in 100 were women in 1910
30 in 100 were women in 1920
27 in 100 were women in 1930
29 in 100 were women in 1940

Older women—women of 45 or more—fare well in the store clerks', saleswomen's, and demonstrators' jobs, better than, for instance, in office white-collar jobs. Married women fare even better—about two-fifths of the women store clerks, saleswomen, and demonstrators in 1940 were married.

HUCKSTERS AND PEDDLERS

In pioneer days it was mainly the hucksters and peddlers who distributed goods. We see and hear them less and less (except the Good Humor man, of course). They are no longer very significant to our economy. But there were still almost 57,000 of them—men and women—in 1940, about the same number there had been in 1880. About 2,500 of them were women in 1940 (as in 1880) and about 1,500 were in 1870. Women were always only about 3 or 4 of every 100 hucksters and peddlers.

INSURANCE AGENTS AND BROKERS

Selling insurance has provided a fairly small but a growing number of jobs for women. As our population has increased, naturally the opportunities for selling life insurance has. Another factor that has led more and more men and women to insure their lives is the insecurity of their dependents under a money economy. The farm homes that in earlier days always could make room for another relative, particularly one who could help out with the work, have become fewer and fewer. A man or woman's survivors are now dependent on a money income. Life insurance is a type of saving and to a large number of people has become more attractive than some other kinds of saving.

But it is only one type of insurance, although it has taken various forms and has been put to various uses. Also growing fields are automobile, fire, health, and accident insurance.

Women have definitely proved their ability to sell insurance. Decade by decade since 1910 the proportion they are of all insurance agents has been growing. It would seem that they would do particularly well if they specialized in selling to business and professional women, say to teachers, and to other women who are earning their own living.

Maturity is an advantage in the work, and older women therefore find opportunities good in this field. The median age of women insurance agents was 44½ years in 1940 (half were under, half over 44½ years old).

The first year the Census counted insurance agents as workers distinct from other groups was 1910, and that year it found fewer than 2,500 women. In 1940 it found over 13,000.

REAL ESTATE AGENTS

In selling and managing real estate women have done even better than in selling insurance, for there were 43,000 in the field in 1940, as agents, or managers, or building superintendents—14 times as many as in 1910. Enterprising women of maturity and judgment seem to be particularly likely to succeed, for the median age of women selling real estate in 1940 was 49.

Women, what is more, are becoming a larger proportion of all workers in the field. Only 2 in 100 in 1910, they came, 10 years later, to be 6 in 100; 13 in 100 after 10 years more; and finally 20 in 100 in 1940.

NEWSBOYS

Before 1940 there were never as many as 500 girls working as newsboys, and in 1940 only 1,600—a little over 1 in 50 of all newsboys. The fact that the work, like that of telegraph messengers, is not considered desirable for girls, has probably kept their numbers low.

Women Manual Workers

THE MANUAL WORKERS are the people we depend on to bake our bread, to can, preserve, and pack our fruits and vegetables, meats and fish, to make our candy and cigarettes, to weave and dye the cloth we wear or use in our homes, to sew our clothes, draperies, linens, to make the paper we use for writing and printing, for wrapping and boxes, to make our books, magazines, and newspapers, our shoes, leather, glass, pottery, chemicals, electrical machinery and appliances, clocks, watches, jewelry, our automobiles and railway cars—the million-and-one things that are necessities, the thousand-and-one that are luxuries. Almost 2 million of these people, who are indispensable to our daily and hourly living, were women in 1940. They helped build planes and ships and guns during the war, as well as civilian goods that had been made by men who had gone to war. (In 1947, the latest date for which we have figures for women in factories, they were estimated to be over 3 million.)

These manual workers use all degrees of skill, they have all degrees of responsibility. The jobs of many call for only a few simple motions repeated endlessly. Other jobs, like those of the riveter and welder, the engine lathe operator, the precision inspector who makes use of very fine measuring tools, the operator of a screw, milling, or grinding machine—all jobs in which women distinguished themselves during the war and in which women still work—these require great skill. The model maker uses ingenuity and initiative in the materials and methods she chooses in constructing a model. The watchmaker must undergo an apprenticeship and take an examination before she can qualify. The variety of skilled and semiskilled manual jobs is endless. They cannot all be listed.

So skilled are some of the manual jobs, and so mechanical are some of the white-collar jobs becoming, that the once popular idea that office jobs take brains and factory jobs take none no longer holds water.

In 1870 three-fourths of the women manual workers had jobs as tailors, dressmakers, and seamstresses outside of factories; making clothes and accessories in factories; or working in cotton mills. By 1940 only less than half were in those jobs. The rest were working on all the many

other types of manufacturing jobs, and some on construction work, others as chauffeurs and taxi drivers, some on subways, streetcars, and railroads, a few helping maintain telephone and telegraph lines, even a few in lumbering. One of the most interesting developments was that though only 1 in 50 of the women manual workers had worked in the "durable goods industries" in 1870—the industries that turn out iron, steel, and other metal products, finished lumber and furniture, and glass, clay, pottery, and stone products—by 1940, 1 in 10 of the women were here (and in 1947, 1 in 4).

FOOD WORKERS

Cooking, baking, and preserving were major activities in every household in the 1870's. Most of the food on family tables the country over appeared there as the result of unpaid work—the work of men who grew it, the work of women who prepared it. But both men and women also prepared food in factories for pay. A few made cheese, a few candy, some refined sugar, some others packed meat. Most, however, were millers and bakers. For the millers and bakers had had a head start—in the local grist mills of pre-Revolutionary days, in merchant flour mills, and in bakeries that made hardtack for ships' crews. (The shells of grist mills built by George Washington still stand in the vicinity of the Capital.)

During the 1870's the roller process and other improvements were adopted in flour mills, and in the seventies and eighties people also learned how to refrigerate, preserve, and can meat. These new methods of preparing and keeping food gave a tremendous push to commercial food production. At the same time more and more people were leaving the country for the cities. As they did, the need for factory-produced foods grew. And the fact that such foods were to be had made it easier for women to take up paid work outside the home.

The result of all this was that the number of women workers in food production grew from 2,500 in 1870 to over 150,000 in 1940 (and to over 250,000 in 1947).

Women were continuing customary household activities when they followed food preparation into the factories. In 1870 only 3 in 100 of the workers were women, but by 1940 (and 1947), 24 in 100. Clearly, however, men are taking a greater part in preparing food these days than they did before the work moved from the kitchen into the factory.

Meeting an average group of 25 women food workers in 1940, you would have found that, roughly, 6 worked in fruit, vegetable, and sea food canneries, 6 in candy factories, 6 in bakeries, 4 in meat packing houses, 2 in grain mills and other food factories, 1 in a dairy.

Canners and Preservers

The food industries tend to be seasonal, that is, are not apt to supply work the whole year round. This is particularly true of canning and



CANNERS—MAKING TOMATO JUICE

preserving fruits, vegetables, and sea food. They can be handled only when they are in season, and only near where they grow. Women who come into the factories in the canning season are mainly women living nearby.

Preserving fish and oysters was the industry's main activity before the Civil War. It was not then a very large industry. But by 1870 some of the fish packing houses had made efforts to keep going the better part of the year—packing fish in the winter and preserving fruits and vegetables in the summer. The industry was helped to grow by machinery for getting the fish, fruits, and vegetables ready, by using better ways of handling them during cooking and preserving, and by machinery for sealing the cans.

After 1900 came more changes that affected women's work. The sanitary, sterilized can was introduced. Machines were invented for vining and shelling peas, for husking, cutting, and silking corn, and for grading fruit and vegetables for size. The conveyor-belt system was adopted. These changes meant that 5 women, say, could get out 1,000 cans of

peas or corn, peaches or plums, when before it had taken 10. But so great did the industry grow that more, not fewer, women had to be hired. Where 5,500 women had been needed in 1910, 37,500 were needed in 1940. Quick freezing, a fairly new process that has put almost garden fresh fruits and vegetables on our tables, has given even greater impetus to the industry.

Confectionery Workers

Making candy and confections is also a seasonal industry. It employs many women the year round but the greatest number in the fall, before the big Christmas demand for candy. Women are particularly good at many of the candy-making jobs, some of which take great skill.

There is the hand dipper, for instance, employed only on expensive, hand-dipped chocolates, who must be quick, deft, and knowledgeable. She works with the candy centers and a small vat of melted chocolate or other icing material. Sometimes she herself prepares the chocolate. She must regulate its temperature, by a switch or valve attached to the vat, to keep the chocolate at the exactly right degree of fluidity. She drops the candy center into the vat of chocolate and then—the really tricky part of her work—with her fingers lifts it swiftly out of the chocolate,

CRACKER PACKERS



deftly twists or twirls it to give it a smooth, uniform coating, and strokes on it a decorative, identifying mark that tells what the center is made of. She may put a nut, cherry, or other garnish on top. Sometimes she uses a fork to lift the candy center out of the melted chocolate and to finish the surface, but then she is called a "fork dipper."

The hand decorator—sometimes called "ornamentor," or simply, "decorator"—also has a job requiring a certain amount of skill. Girls who have decorated cakes at home may know the equipment she uses—a bag, with a small nozzle, from which she squeezes the decorating material. On her deftness and art in moving the bag depends her success in decorating the candy—and, in part, its price.

The corder, who is also called "hand decorator," "streaker," "stringer," or "stroker," finishes the tops of candies that have already been coated in an enrobing machine. She takes a small amount of melted chocolate or other coating material between her fingers and, as the candies emerge from the enrober on a conveyor belt, strokes a mark on them, usually a diagonal or curved line, so that the candies can be identified and will look as though they had been hand-dipped.

Other skilled jobs in the candy industry, as well as less skilled ones, provide work for many women. The Census counted a little over 20,000 in the industry in 1910, and about 35,000 in 1940. It found that women were about three-fifths of all the workers in 1910, 1920, 1930, and 1940. (In 1947, they still were.)

Meat Packers

Not many women have worked at slaughtering and dressing meat—once the chief activity of the meat products industry. Jobs for women came in fairly recent times with the development of meat byproducts and specialties. They worked for the most part in the processing departments, where they did such jobs as trim meat, tie sausages, weigh and pack meat products, package lard. Particularly as higher standards of purity were adopted for meat products, and consumers began to feel safe in using them, jobs for women increased—from about 4,000 in 1910 to 24,000 in 1940. From 3 in 50 of all the workers, women came in those 30 years to be 9 in 50. (By 1947 they were 10 in 50.)

Baked Foods Workers

Bread, except that for ships' crews and travelers, all used to be made at home by women. Now it is almost all made commercially, chiefly by men, who also make most of the cakes and pies. The work is heavy and much of it is done at night. Women's share in this work is apt to be on the lighter jobs of finishing, packing, and wrapping.

Many women work with cookies, biscuits, and crackers. These were made at first by hand, but after 1840 by machinery. The first great boost

to the industry came through the demand for hardtack during the Civil War. Then, about 1900, a number of factories were merged into one. It made greater use of machinery, turned out a greater variety of cookies, crackers, and biscuits, and began to put them up in packages. Later companies followed suit.

Packing, wrapping, and labeling opened up new jobs for women. In 1910 about 7,000 women manual workers had jobs in the bakery industry; in 1940, three times as many. But their proportion to all manual workers—men and women—in baked products did not change much, for, 8 in 20 in 1910, they had increased only to 9 in 20 of these workers by 1940.

Dairy Workers

During the last half of the 1800's creameries, condenseries, and cheese factories began to take over the dairy farmer's job of processing milk and cream and of converting them into butter, cheese, condensed milk, and, still later, into ice cream. These new types of dairies had jobs for about 600 women in 1910, for about 6,500 in 1940—not a great number but a fast increasing one. These women were about 1 in 25 of all the workers in 1910 and about 3 in 25 in 1940.

Grain Mill and Other Food Workers

The food these workers produce include flour and sugar, cereals and breakfast foods, baking powder, macaroni, and the like. In 1910, 6,250 of the workers were women; in 1940, 14,600. Among every 100 workers—men and women—13 were women in 1910, 16 were women in 1940.

BEVERAGE WORKERS

The most spectacular thing that happened to women beverage workers was the Prohibition Act. Not a great many women had worked in the field—only 19 in 1870, and only 2,300 more by 1910.

Prohibition went into effect in January 1920, the year the next census was taken, and the number of women workers dropped to 900. By 1930, the number had gone up again, but by less than 70.

In 1933 the Prohibition Act was repealed, and the soft drink had come into great favor. By 1940, the number of women needed in the beverage industry had increased almost 8 times, to not quite 7,600. Still not a great number, but from one in a thousand of all the workers, women had come to be 11 in 100.

TOBACCO WORKERS

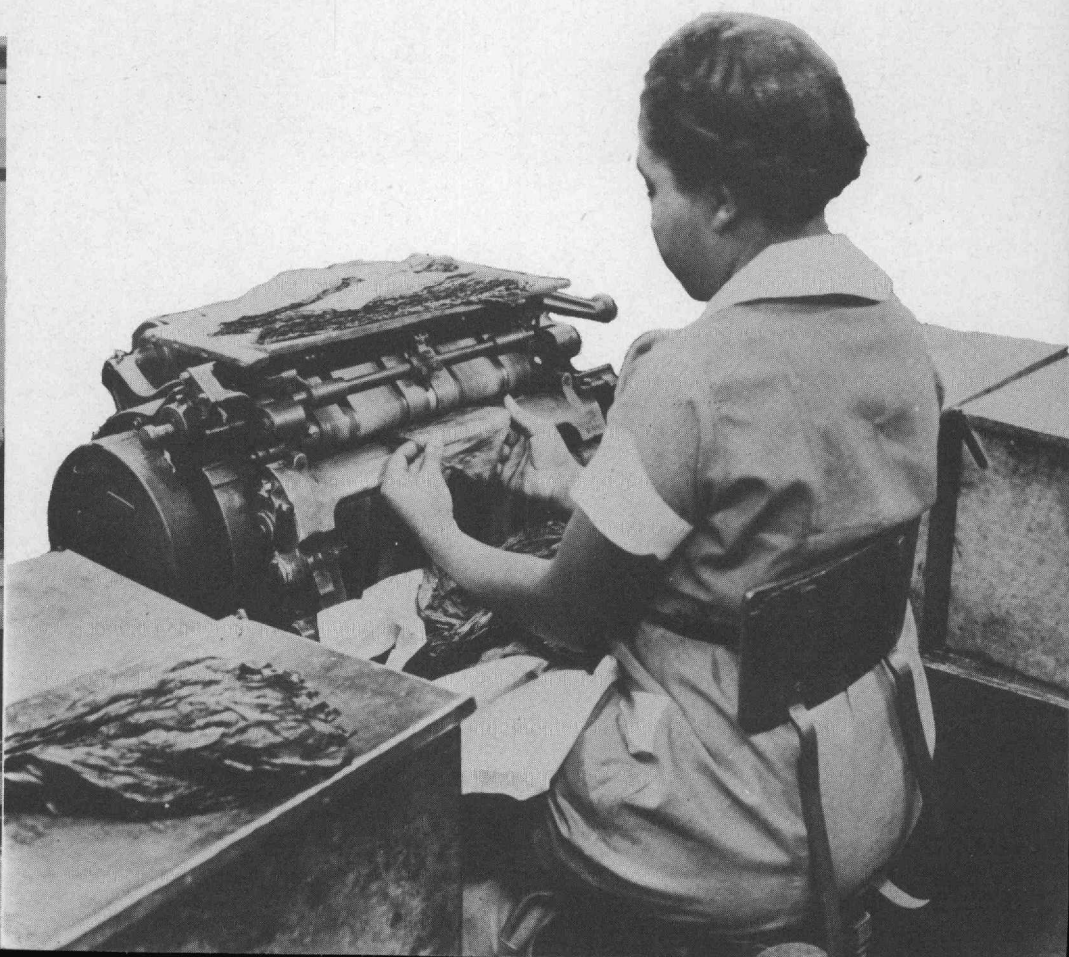
The discriminating smoker in 1910 had to have an "all-hand-made, long-filler cigar." Today a machine-made cigar gives him the same contentment. Cigarettes, hand rolled until 1880, now are the product of

completely automatic machines. (The machines themselves of course must be tended.)

Tobacco's shift to machinery, which at first deprived large numbers of workers of their jobs, helped eventually to bring about the hiring of many more women tobacco workers. For one thing, women were considered able to handle the machines. For another, men's unions resisted the coming in of machinery, and women who were not organized were hired instead.

The 4,300 women who were tobacco workers in 1870 were one-tenth of all tobacco workers then. By 1920 they had almost reached the 99,000 mark and were a good bit over half the workers. Men's growing preference for cigarettes as well as the fact that women became cigarette smokers helped the tobacco industry grow. But machinery also continued to improve, and with it the individual worker's output. After 1920 the number of women in the industry fell to 61,000 by 1940, but they were now more than three-fifths of all the workers (as they were in 1947).

WORKER MACHINE-STRIPPING TOBACCO





CIGAR PACKERS

TEXTILE WORKERS

The typewriter opened the doors of offices to women. Spinning machinery and the power loom threw wide the doors of cotton mills. They welcomed, not only women, but little children in. The general public, and particularly the employers, approved, for the women and children would be kept from idleness; their work would add to the wealth of the country.

By 1870 over 104,000 women and girls had entered textile mills; by 1940, nearly half a million (by 1947, well over half a million). They had fanned out from the cotton and woolen mills into silk and rayon mills, knit good factories, factories that dye and finish textiles, factories that make carpets and rugs and still other factories that make textile products such as lace, oilcloth, rope, and twine. Women were consistently between 4 and 5 out of every 10 of all textile manual workers.

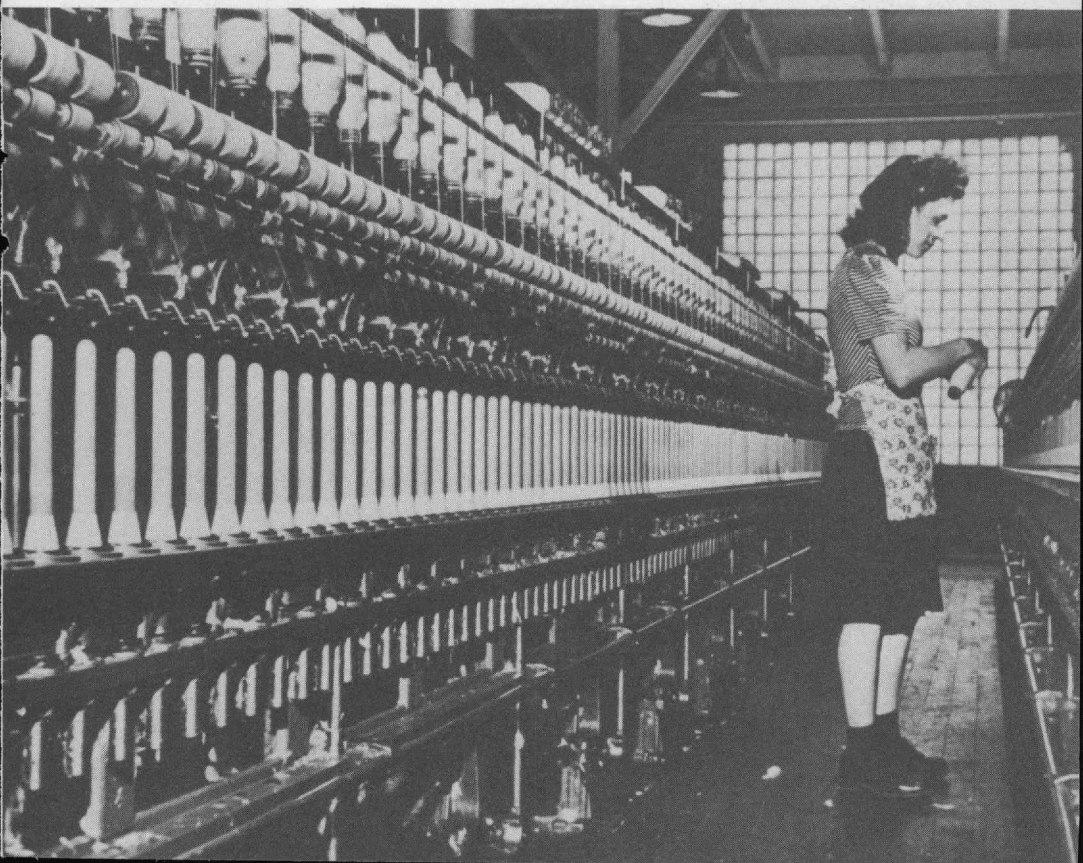
Cotton Workers

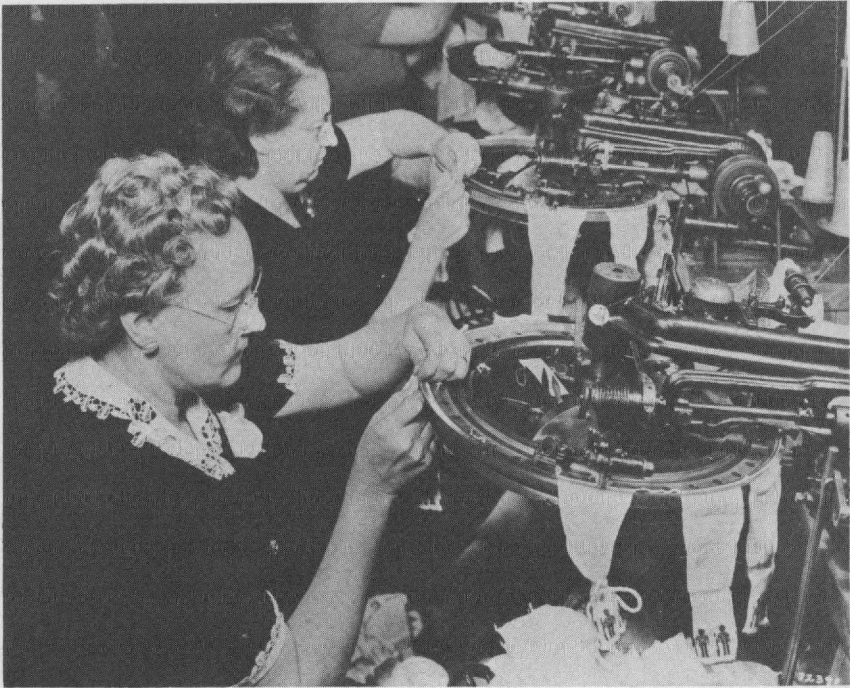
Spinning wheels beside the fireplace, long our symbol of home, were relegated to the attic when ring spinners in factories became the tools by which the carded fibers were spun into thread, ultimately to be woven into cloth. The spinning wheel had been run by women; so were the bulk of the ring spinners in the first cotton mills. After the 1840's men began to replace women as spinners, although ring spinning still gives employment to great many women.

Weaving, on the other hand, began as a man's job in the first mills. When power-driven looms came in to make the work lighter, however, when spinning machinery was producing more yarn than there were weavers to weave it, women were drawn into the work. During the 1850's weaving was considered a woman's job. Then, however, weaving machinery became constantly heavier and was run at greater and greater speeds. This, and the fact that many male immigrants were looking for jobs, led to women weavers being replaced by men again. From about 6 in 10 of all cotton workers in 1870, women came to be about 4 in 10 in 1940 (as they still were in 1947).

Children worked in the mills almost from the first days cotton milling machines were invented and installed. The children's learning how to

SPINNER IN A COTTON THREAD MILL





SEAMLESS HOSIERY LOOPER

run them was thought good for the community. Children less than 10 years old were working in southern mills as late as the 1900's, both as "helpers" and as regular workers on the pay rolls.

As people began to realize that work in the cotton mills was not good for either the health or the welfare of children, the industry decided to rely less heavily on their labor. Several things helped in bringing the industry to this decision. Foremost were child labor and compulsory education laws. Then changes in the machines made it difficult to use children to run them. Finally, minimum-wage laws made it illegal to employ anyone at wage rates below the minimum set by the laws, and it no longer paid to employ children when adults could be hired for the same money.

The first children to be helped were the youngest. In 1910, 5,130 girl workers 10 to 13 years old worked in the mills; in 1930, 107. Gradually older children were helped too. The 30,000 girls under 18 in the mills in 1910 had by 1940 come to be less than 2,500, and not many of these were under 16.

On the other hand, since 1920, women 20 to 44 years old in the mills have increased greatly in number and in the proportion they are of all the women in the mills. The proportion of those over 45 has increased too.

The proportion who are married women is also very great—two-thirds—in part, no doubt, a survival from the earliest days of cotton milling, when whole families worked in the mills.

Knit Goods Workers

Long after making cotton cloth had been turned over to the factories, knitting stockings was still a home industry (except in Pennsylvania). It was still chiefly women's work when factory-made stockings took the place of home-made ones. Women also worked in mills that knitted underwear, sweaters, caps, gloves, dresses.

After the Civil War people began to want to use factory-knit goods much more than they had before. Improvements in knitting machinery made it possible to meet their demands. The industry flourished, particularly after full-fashioned hosiery machinery was introduced in the eighties. More and more women were employed.

Women totaled 2,000 (better than half of all the workers) in 1870. By 1900 they had multiplied 17 times and were three-fourths of the workers. Then they began to give ground to men, particularly after 1920; in 1930 and 1940 they were only about two-thirds of all the workers.

It was after 1920 that full-fashioned hosiery began to be made and bought in great quantity. Women probably began to lose some of their lead because men were given most of the skilled jobs in this section of the industry. So great was the production of full-fashioned hosiery, however, that, even so, more women had come to work in the knit goods industry—125,000 by 1940.

Men do not have all the skilled jobs in the full-fashioned hosiery mills. The topper, for instance, who transfers the legs of stockings to foot-knitting machinery, has a highly skilled job, and is usually a woman. So is the looper, whose job of joining the two parts of the toe and the lower parts of the heel is equally skilled.

Wool and Worsted Workers

Newer types of textiles have to some extent taken the place of woolen and worsted materials. This had a serious effect on women working in such mills. Between 1920 and 1930 their number dropped from 64,000 to 49,000. "Modernization" of the industry, which made fewer workers necessary for a given amount of output, was in part the cause, even though modernization brought about some new kinds of jobs. (An example is the drop-wire girl's job, not a very skilled one. She places a drop wire on each warp thread, by hand, at the back of the loom, so that when a thread breaks the drop wire will fall and stop the machine.)

Exact figures for woolen and worsted workers separately from other workers are available only from 1910 on. Since then, women have become fewer relative to men, but were still more than 2 out of every 5 workers in 1940 (and in 1947) and had again passed the 61,000 mark.

Silk and Rayon Workers

Silk and rayon have become more and more important as wool and cotton, once the only fabrics in general use, have become less so.

Before 1910 the silk and rayon industry was almost entirely a silk industry. Rayon, rather poor material when first put on the market in about 1900, through great improvements made after 1920 won deserved popularity. By 1940 so many silk and cotton mills had shifted to rayon and so many new rayon mills had been built that it was now "the silk and rayon industry."

Women were the mainstay of the silk culture and weaving industry in colonial times. Bounties paid then, to stimulate the silk industry, were often paid to women. However, silk culture never became a highly important industry. Silk spinning and weaving did, and employed many women.

Just as in the cotton industry, developments in the silk industry brought about shifts of jobs from men to women and from women to men. Hand looms for weaving broad silk in 1870 were operated by men. Then power looms came in, and women took over in large numbers. Warping in 1870, on the other hand, was completely woman's work, but the horizontal warping mill came to replace the earlier type, and by 1910 men were almost exclusively the warpers. On ribbon weaving, it was the other way around again: men had customarily run the ribbon looms, but when, about 1900, high-speed looms came in, women took over most of the work.

From the low level of 2,300 workers in 1870, women came to be 75,700 in 1930, but dropped back to 48,200 by 1940. From seven-tenths of the workers in 1870, they came in 1940 to be only half the workers (and were still only a half in 1947).

Carpet and Rug Makers

The rapid rise in the standards of living in the United States was aptly illustrated by the clamor for carpets and rugs. The industry complied. Between 1870 and 1910, it boomed, helped by technical improvements in carpet making and by the fact that hand weaving in this country was taken over completely by machines.

From 6,000, women came in the same period to be 22,000 of the workers. Then, however, they dropped—to 12,000 in the next 10 years, and since have had their ups and downs. They had pulled up a couple thousand by 1930, but by 1940 had fallen back again to 13,000. Less than a third of the workers in 1870, almost half in 1900, they were nearly two-fifths of all workers in 1940.

Dyers and Textile Finishers

Textile finishing, as a factory industry, dates back to the colonies. Even at that early time, "every community boasted three mills—one for lumber, another for flour, and a third for finishing wool cloth."

Much of the home-produced cloth, just the same, was also dyed at home by the women. They gathered berries, nuts, and oak bark, grew Dyer's Broom and woad in their gardens, and made their own dyes. A woman, in fact—Eliza Lucas Pinckney—manager of her father's South Carolina plantation, introduced indigo as a crop to this country.

Colors and patterns, lovely though some of them were, were limited when dyeing was a home industry. As textiles came to be made in factories, almost every hue and pattern under the sun became possible, and fashion and style now rule here also.

Dyeing, printing, bleaching, and other textile finishing work was a well-established commercial industry by 1870. It employed 1,300 women, who were about one-seventh of all the workers. Both their number and the proportion they were of all workers see-sawed after that. By 1940 they reached the highest number ever—just under 7,000, but they were only one-eighth of all the workers.

CLOTHING WORKERS

One of the most important tasks women and girls had in Revolutionary days was making clothes for all the members of the family. Three-quarters of a million women carried on the work in 1940, but in a factory. (By 1947 they were four-fifths of a million.)

What brought on the change was the invention of the sewing machine in 1846 and the fact that standard sizes were developed when uniforms had to be made for the soldiers of the Civil War.

From an industry limited before 1830 to making clothes for sailors in port, the men's clothing industry had grown by 1870 to a point where "the mass of the male population of the United States was clad in ready-made clothing."

The cloak, usually made by a mantua maker in the Colonies, was the only woman's garment manufactured in any quantity by factories in 1870. By 1900, however, women's suits, lingerie, shirtwaists, had gone into the factory too.

More than any other manual work, making clothes still belongs to women. The three-quarter million women clothing workers in 1940 were the largest group of women in all manufacturing. They outnumbered the men 3 to 1—as they had, in fact, on an average, since 1870. At times they outnumbered the men 4 to 1. At others, men encroached on their 3 to 1 lead, as when such jobs as cutting, pressing, and basting were assigned to men, and as when various waves of immigration made both experienced and highly skilled male workers available. However, men in general do not have women's deftness and skill in placing and moving a garment about on the machine—work that is more important than the actual stitching. Women, it seems safe to say, will always do most of the work of clothing all the members of the country's families.

Apparel Workers

Actually there are three subgroups among the women clothing workers: the apparel and accessories workers, the dressmakers, and the tailoresses.

Taking the apparel and accessories workers alone from 1910 on—their numbers increased at an ever faster rate. The proportion they were of all the workers—men and women—also grew, from three-fifths in 1910, to four-fifths in 1940, when they numbered about 550,000. (By 1947, they had reached 800,000.)

APPAREL MAKER—INSPECTING NAVY WHITES



Dressmakers

What the women apparel and accessories workers gained between 1910 and 1940, women in the skilled sewing trades lost. Nearly 400,000 women left dressmaking occupations at the same time that nearly 350,000 additional women were becoming apparel and accessories workers.

Women practically had a monopoly in dressmaking jobs. In apparel factories some of the jobs that complete a garment are men's jobs. What happened in those 30 years, then, was that economic forces were pushing women out of a "women's occupation" into one in which both men and women work.

The rate at which women left dressmaking was less at the end of the 30 years, however, than at the beginning, so that conditions seem to be settling.

Tailoresses

Tailoresses are even more highly skilled than dressmakers. The Census classifies them as craftsmen. They work in coat and suit factories, in tailor shops, in clothing and department stores. Like the dressmakers, they lost ground between 1910 and 1940, not at as rapid an average rate, but they were a much smaller group to begin with, and were losing ground faster at the end of the 30 years than at the beginning. The whole tailoring occupation is, as a matter of fact, losing in importance, but the effect is greater on women than on men tailors.

HAT MAKERS

Long ago in this country the straw and felt hat makers were plying their trade in hand-made hats. (The cloth hat makers and milliners are not included here.) In 1789 a young Massachusetts girl discovered how to bleach and braid meadow grass and make it into bonnets. The felt hat industry is even older, dating back to the hand-made beaver hats of very early Colonial days. Not until 1840 were machines evolved for making hats of felt.

By 1870 the hat industry employed almost 5,000 women, who were nearly one-third of all the workers. By 1910 they had reached 14,000, but after that their numbers fell off, leaving them in 1940 at about the same point they had been in 1870.

WOODWORKERS

Offhand, we do not think of women in jobs as woodworkers, though the energy with which they mend and refinish antiques at home should have tipped us off. They were, to be sure, few in 1870, but every 10-year census count thereafter showed their numbers growing—by leaps in 1910

and 1920. World War I, as wars do, fostered women's employment in unexpected occupations and probably accounts in part for the spurt in the years just before 1920.

Over half the 32,000 women who were woodworkers by 1940 were helping make clothespins, matches, baskets, wooden boxes, and other small, light, standardized items that women can handle or pack with fair ease. Furniture and store fixture factories also had a goodly proportion of the women woodworkers—something under two-fifths of them. One-tenth were working in sawmills—not with a saw—for only one-hundredth were actually sawyers.

Although making furniture began to shift from shop to factory in 1840, not until the work became mechanized and specialized did it offer real opportunities for women. By 1940 almost 12,000 had found jobs in furniture and store-fixture factories. Most, but not all, of these jobs were in upholstery departments, in assembling, and in sanding.

HAT MAKER





PAPER MAKERS

Paper formerly was made from rags, as better papers still are, and until 1827 was made by hand in the United States. That year the machine was introduced. Forty years later the process of extracting cellulose from wood for use as a paper base was discovered. Machinery and wood pulp together made it possible to put a low-priced product on the market. Paper became much more widely used and for a far greater variety of purposes.

Just before 1900, for example, the paper box branch of the industry showed a great spurt. Before that time, most articles you purchased were handed you in a paper bag. Now some merchants began to put articles in individual boxes. The custom won such favor that a great demand arose for a large supply of boxes, at reasonable cost. The need fathered the necessary machinery for producing paper boxes cheaply, and the industry was off on its way to the important position it still holds.

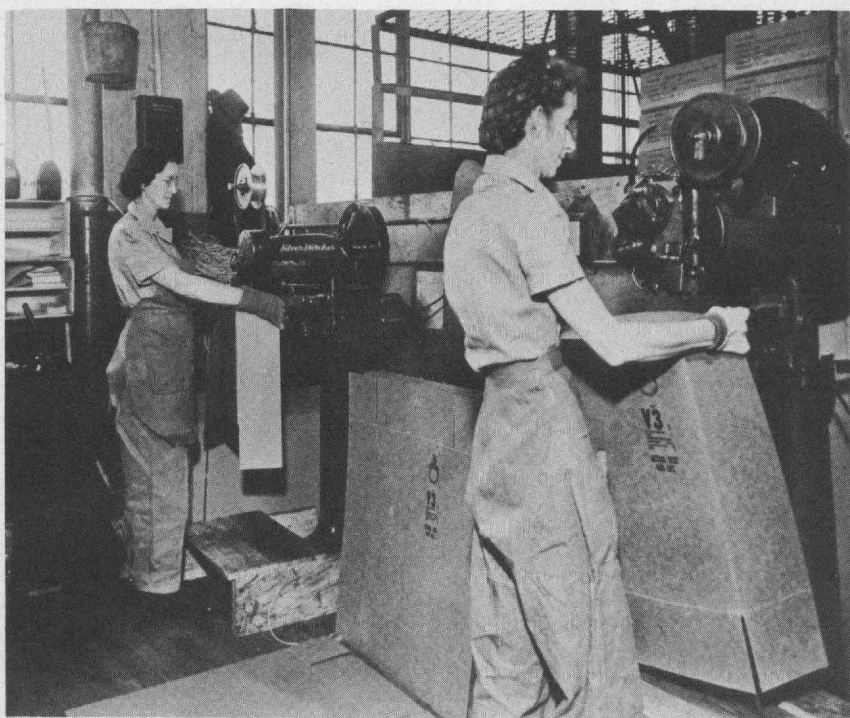
As the paper and paper-box industry flourished, as machinery improved, more women came into this work—an average of 7,000 every 10 years after 1870. From one-third of the workers in 1870, they rose to one-half in 1890 and 1900, and fell back to one-fourth in 1940, although in that time their numbers grew from 6,000 to 56,000. (By 1947 they were estimated to be 90,000.)

The industry really has three branches: The pulp, paper, and paper-board mills are one branch. The factories making paperboard boxes and containers are another. The third is the "miscellaneous pulp and paper products" branch. The first two have usually been the largest fields for women. Not quite so many women have been in the third whose miscellany of products includes envelopes, cards, tags, paper bags, novelties.

PRINTING AND PUBLISHING WORKERS

Forty-three thousand women in 1940 were setting type on linotype and monotype machines in composing rooms; feeding simple presses in press rooms; operating machines and doing most of the table work in

PAPER WORKERS—STITCHING CARTONS



linderies. (By 1947, it was estimated, these 43,000 had become nearly 100,000.)

The compositor and typesetter's job is highly skilled, requiring a 6-year apprenticeship. Nevertheless 8,000 women had served this apprenticeship in 1940 and were composing and setting type. But in 1910 their number had been almost 14,000.

For, in spite of the tremendous volume of printing that is done (so that this is called The Paper Age almost as often as The Machine Age), both men and women compositors, up to 1940 at least, had been becoming fewer, especially women. One in 10 of all the workers in 1910, women were only 1 in 20 in 1940.

Less than a fifth of the women in 1940 were compositors or typesetters. Women pressmen, electrotypers, stereotypers, engravers, photoengravers, or lithographers were far fewer.

The bulk—well over three-fourths of the 43,000 women printing and publishing workers—were "operatives and laborers," chiefly in binderies, in 1940. In fact, except for the journeymen binders who handle complicated machines, most of the workers in binderies are women. They serve a year's apprenticeship, for their work is semiskilled. Some of it is hand work, as in hand folding, hand sewing, pasting in inserts, assembling signatures (sets of pages). Some of the work is done with small machines, as in machine sewing, in gluing fabric reinforcements on signatures, and in feeding machines.

CHEMICAL WORKERS

Women work in a variety of chemical industries. This is nothing new to them. Before the Civil War "the trying kettle, the ash-leach, and the candle-mold continued necessary features of every well-conducted farm." Women had made their own dyes and, when, before 1860, dyes were the most important chemical, a woman played a part by growing and marketing indigo, as we said earlier. A few acids, salts, painters' colors, and medical preparations also were being produced then. The great expansion in the chemical industry did not come until the 20 years before World War I. New processes were discovered then, and byproducts put to use.

From less than 500 of the workers in 1870, women came by 1940 to be 38,000 (and, it is estimated, more than 100,000 by 1947). Most were working in the branch of the chemical industries that make soap, candles, dyes, turpentine, celluloid, fireworks, fuses, cartridges, drugs, and other products too many to list. Many women were also in the branch that turns out products made of rayon and like products. Only a few worked in the paint and varnish, petroleum refining, or petroleum and coal tar products branches. Women's best opportunities have been in the lighter chemical lines, and particularly in finishing and packing jobs.

In the whole chemical industry women were 1 in 10 of all the manual workers in 1940 (but 2 in 10 by 1947).

RUBBER WORKERS

Rubbers and automobile tires brought about the greatest rise in the number of jobs for women in one industry—the rubber products industry—a rise from 2,000 in 1870 to 26,000 in 1940 (and to about an estimated 52,000 in 1947). Rubbers and tires were made possible by Charles Goodyear of New Haven, Conn., and his discovery in 1839, after years of heartaches, headaches, and jeers from his townsmen, of how to heat crude rubber with sulphur (vulcanize it), so that it would keep both shape and elasticity, not melt in hot weather, nor become brittle in cold. The first rubber ever made was the crude rubber invented by Indians of South and Central America, long before Columbus' time, for balls, for shoes, for bottles, for making feathers adhere to the body.

Until the time of the automobile, before about 1910, the chief use made of rubber was for galoshes and other rubber footwear. Before that women had been from one-third to one-half of the workers. Between 1910 and 1920 more women came into the industry than in all the 40 years before.

The speed with which the industry became mechanized after 1920 resulted in still more jobs for women. Many worked in tube building, many in rubber manufacturing. Because of their dexterity they were in demand for making the smaller molded rubber goods items. In all branches of the industry they held jobs in finishing, inspecting, and packing departments.

The opportunities for women seem to be growing, for although men became somewhat fewer after 1920, women made slight gains.

FOOTWEAR WORKERS

Women—and children—became important to the shoe industry in the late 1700's, when shoe uppers were given out to them to be stitched and bound at home. Beginning about 1850, labor saving machines were introduced, the most important of which was the sewing machine. Women then began to come into the factories.

By 1870 the industry had become sizable and employed 10,000 women, though compared to the men they were few—only 1 woman to every 19 men. The women's job was still fitting and stitching shoe uppers. Even after 1900 this was their chief job, though they then began to branch out.

By 1900 shoemaking was no longer a highly skilled handicraft, but a completely mechanized industry. It was in the next 10 years that the greatest number of women came into the shoe factories and repair shops. Their numbers and their proportions have risen steadily since. By 1940 they had reached 102,000 and were 1 in 3 of all the workers.

LEATHER WORKERS

Through 1890 there never had been as many as 300 women workers preparing leather, that is tanning, currying, or finishing it. In the next 10 years, however, the machines in use were improved, and girls and women began to be hired in place of men. Still, it never became a promising field for women. Even in 1940, only 4,500 women were employed in it, and though they had made steady gains, they were then only one-tenth of all the workers (and by 1947, nearly one-eighth).

Women making leather products—pocketbooks, luggage, leather gloves and mittens, for example—in 1940 outnumbered those who worked preparing leather 5 to 1. In fact, women had practically all the many stitching jobs in 1940. Altogether there were nearly 25,000 women making leather products, and they were close to half the workers.

GLASS WORKERS

When one thinks of the early glass industry, the image before one's eyes is that of the glass blower and his skilled, picturesque, hazardous work in the furnace room. He was the symbol of the glass industry until about 1900. His work, like that of the molder and the presser, whose place was also in the furnace rooms, was "man's work." Women's work had remained secondary and chiefly in the finishing, inspecting, and packing rooms, although women had been "painting glass" as early as 1832. Between 1870 and 1900 their numbers rose from 180 to only 2,700.

During World War I a continuous-process method was introduced into the glass industry. That, and the increasing use of machinery, meant that skills like those of the glass blower were no longer very important, and that fewer workers of all kinds were needed. After 1920, in spite of the fact that people used more and more of the three chief types of glass products—containers, windows for buildings and automobiles, and table and kitchen ware—the numbers of both men and women glass workers fell off. The proportion of women increased, however, which meant that women had less of a setback than men. Glassware, like bottles and fruit jars, for example, was made in great quantities, but did not require the individual glass blower's skill. By the new process, automatic equipment blows compressed air into glass molds and moves them on to a conveyor. The conveyor carries them into the *lehr* (annealing oven) where they are subjected to high heat and slowly cooled. The job of finally taking them off the conveyor, examining, and packing them, is women's work.

After optical and scientific glass began to be made, the opportunities for women grew. When safety glass came in, and particularly after 1930 when nothing but safety glass was permitted in automobiles, women's opportunities became even better, until in 1940 women had 14,000 jobs in the glass industry; and, instead of 1 in 50 of the workers as in 1870, they were now 1 in 5. (By 1947 they were 1 in 4.)

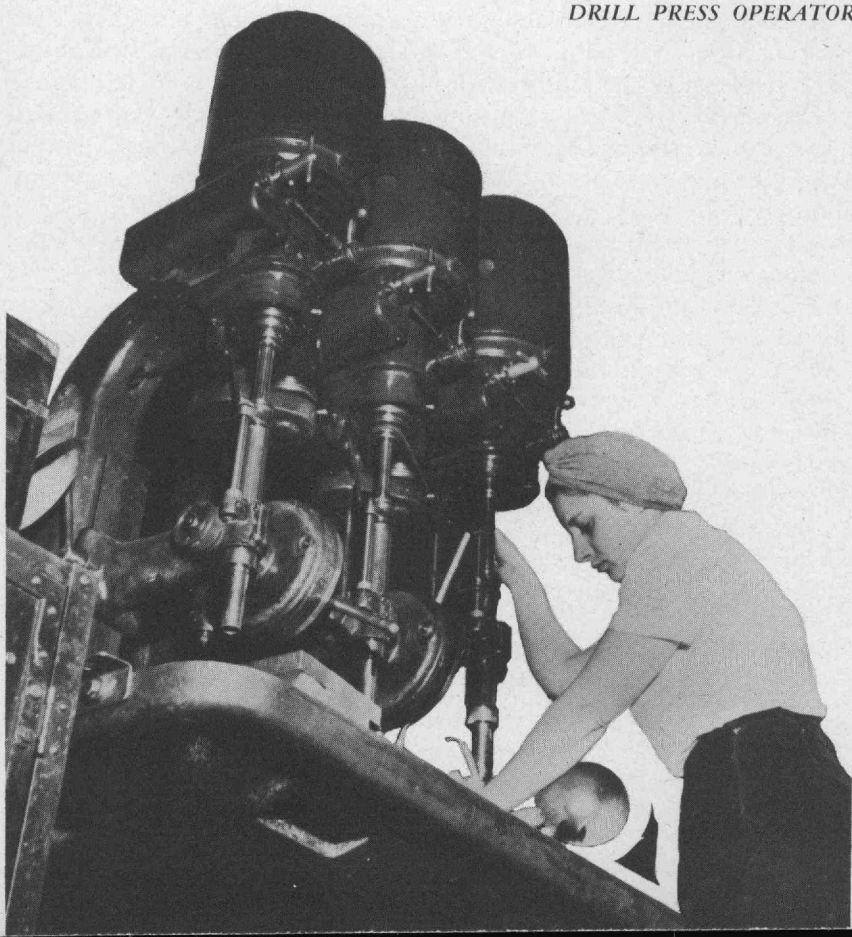
POTTERY WORKERS

These workers make the pottery and porcelain we use in cooking and on our tables, the pottery and porcelain vases and ornaments whose variety has no end. Women were but a handful of the workers in 1870—just over 100, although they had been in the industry many years. By 1940, however, they had reached 10,000.

In general, the heavy, disagreeable, or hazardous industries have not tended to employ many women. Not so pottery, with its dangers from the use of lead in glazes, from breathing in sand particles and contracting silicosis. For by 1940, 10,000 women were working in the industry. However, improvements in working conditions took place during the years women were taking up the work seriously.

In Europe, as well as in this country, women have usually had the finishing jobs—decorating, dipping, grinding, and polishing, though some have done the firing, particularly of small pieces of pottery and porcelain. World War I, which shut us off temporarily from European markets, gave a boost to the home pottery industry. Since then women have "belonged." By 1940 they were almost a third of all the workers. (By 1947, well over a third, in fact, more nearly two-fifths.)

DRILL PRESS OPERATOR





WORKER USING MAGNIFYING GLASS TO MAKE FINAL INSPECTION

STRUCTURAL CLAY WORKERS

These workers, who make brick, tile, and terra cotta, included only 80 women in 1870. Since then, not more than about 2,000 women have ever been in the work at one time. The materials that must be handled are heavy and make it unsuitable for women. At that, they were 1 in 25 of all the workers in 1940.

METAL TRADES WORKERS

Gains made by women during World War I placed 137,000 in the metal trades by 1940. (World War II helped to run the number up to more than 400,000 by 1947, it is estimated.) Many though they were, they still had only a small foothold in this immense industry. Four groups of metal products, in the main, are made with the use of their labor: clocks, jewelry, watches, and silverware; iron and steel products; machinery; automobiles and automobile equipment.

The long-run advances women made (from 5,000 women—1 in 25 of all the workers in 1870, to 2 in 25 of all the workers in 1940) came about, for the most part, through changes inside the industry itself. Special-purpose and combination machine tools were invented; improvements were made in their form and accuracy; oiling became automatic; alloys made cutting edges harder and sharper; assembly jobs were broken



WATCHMAKER

down, so that workers had fewer and simpler operations to carry out; lifting devices made it easier for women to move heavy pieces of work. As a result fewer skilled and more semiskilled workers could be used. It is a pattern of development that usually opens up opportunities for women.

Between 1910 and 1920, over 50,000 more women—the greatest number in any 10 years—came into the metal trades. World War I gave a great spur to the industry. Women were needed, not only to replace men, but for new types of jobs. They went into the machine shops to operate machines, to inspect finished products, and to do various kinds of handwork. They worked in assembly departments.

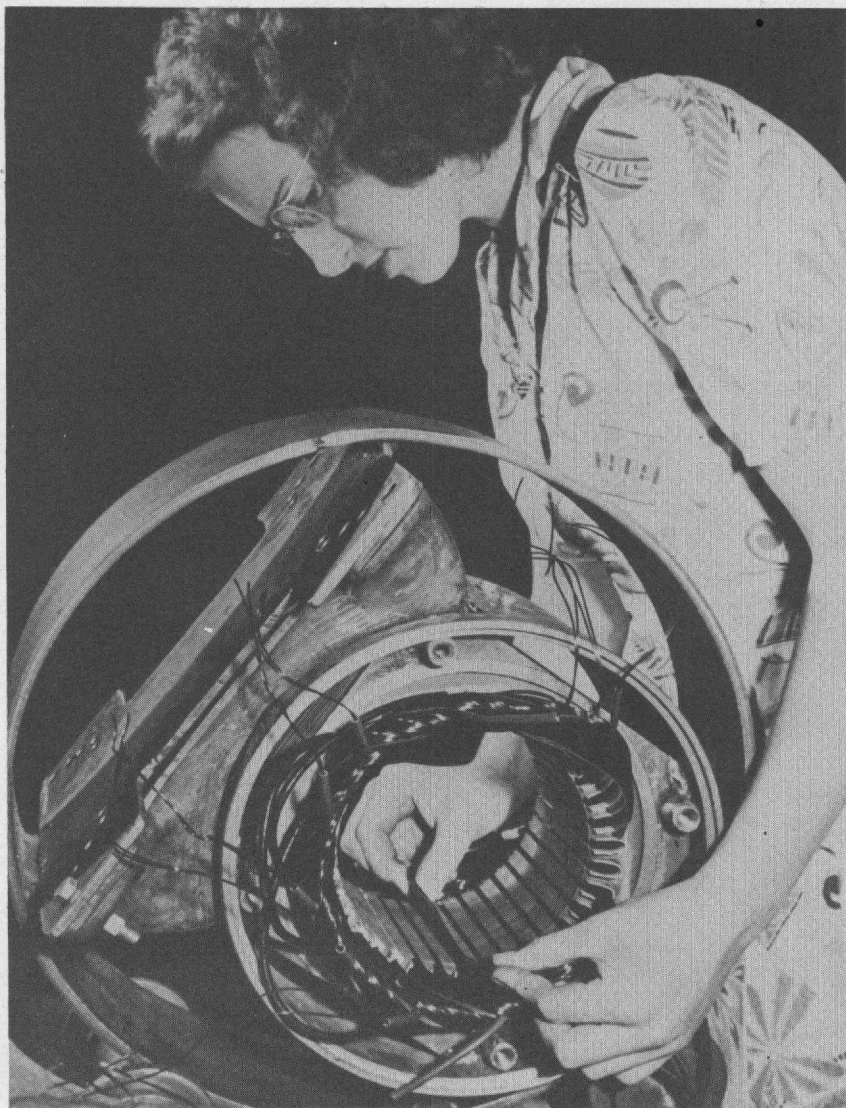
In the next 10 years, which included the depression years, few more women came into the metal trades, but comparatively few men also, for the proportion of women to men did not change.

Most of the women in 1940—something less than three-fifths of them—had jobs in the group of the metal trades that turn out iron, steel, and other metal products; machinery (other than electrical machinery); and transportation equipment (other than automobiles). Here their work ranged from sorting and inspecting tin plate (heavy work), to jobs on small articles like tin cans, enameled ware, wire, cutlery, and hardware.

Better than one-fifth of the women in 1940 were working in automobile and automobile equipment plants. They were few in the early

days of autos, but when the industry mushroomed between 1910 and 1920, their numbers mushroomed with it. Their work, for the most part, was such typical "women's work" as sewing in upholstery departments, rather than on heavier jobs. During World War II, however, when many auto factories converted to making planes, women were put on "men's jobs," and to some extent at least have stayed in reconverted plants. (In 1947 their number was still over twice what it had been in 1940.)

ELECTRICAL WORKER—INSTALLING COIL IN MOTOR



ELECTRICAL WORKERS

The history of the electrical industry illustrates how invention developed a whole new industry, in fact, a whole new way of life. It began with the telegraph in the 1840's. Then, in the 1870's, came the telephone; in the 1870's and 1880's, the dynamo, arc light, and incandescent lamp. After 1900, wireless transmission and the radio. New applications of electricity have followed in an unceasing stream. All require equipment to be made—equipment that ranges from spark plugs through the complicated mechanism of a "mechanical brain" or of a wireless transmission tower. That equipment meant 74,000 jobs for women in 1940 (and, it is estimated, more than 200,000 in 1947).

The use of electricity for light, in particular, opened up many opportunities for women, because the parts to be made are small and need delicacy of handling. When the radio industry began to develop in the 1920's, a great variety of assembling and inspection jobs became available. By 1940, women had two-fifths of all the electrical machinery and equipment jobs, and many of them were highly skilled workers.

ELECTRICAL WORKER—ASSEMBLY





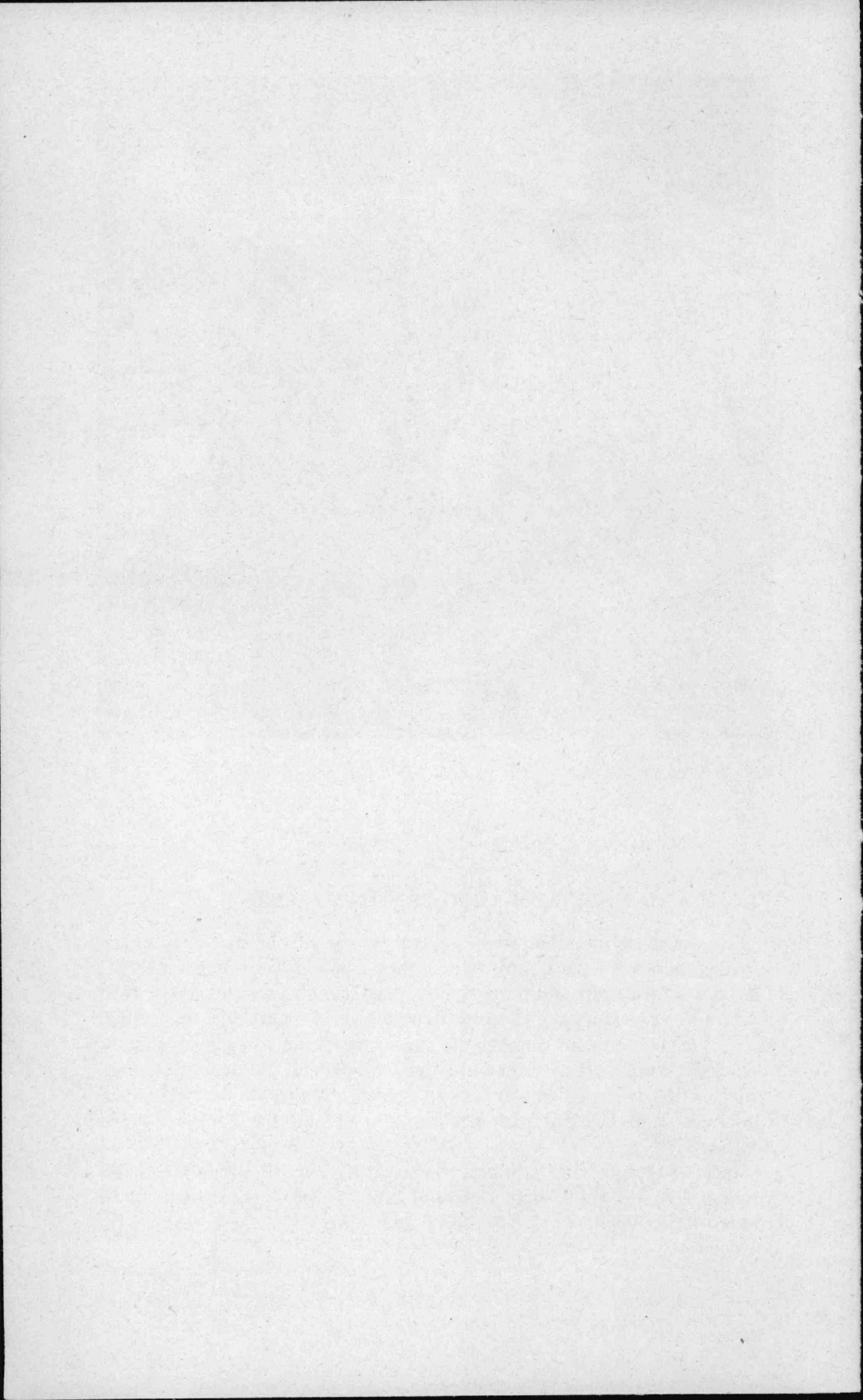
FOOD PACKER—BOXING FOR QUICK FREEZE

FRUIT AND VEGETABLE GRADERS AND PACKERS

There was a time when fresh vegetables were to be had only in the summer and fresh fruits only when they ripened in orchards nearby. Oranges were a rarity and other semitropical fruits curiosities. Now fresh fruits and vegetables come to us all year round, from one area where they have ripened, and then, as the sun moves to another, from that.

Coming long distances, they must be well packed. Because the purses which will pay for them are of different sizes, they must be graded. Quickness and dexterity are needed, and careful handling to avoid spoiling.

Since 1910 a growing number of women have worked as graders and packers. In 1940, there were 15,000 of them—almost three-fifths of all the workers. As the work is seasonal and temporary, these women are for the most part women who live nearby.



Women Service Workers

THIS MODERN WORLD in which we live needs not only a vast white-collar army to keep the wheels of business humming, and armies of manual workers to take raw materials and make them into things we can use; it needs people to do for us things that in bygone days were unnecessary or that we did for ourselves but now are far too busy to do.

Our present way of life would go to pieces without these people who take over our tasks at home; give us practical nursing care when we are ill; keep our public buildings, offices, and churches neat and clean; run elevators; clean, cook, and serve us meals in hotels and restaurants, lodging and rooming houses; launder, dry clean, and dye our clothes; groom us in beauty parlors and barber shops; take our tickets and usher us to seats in theaters and other amusement places. These and like things were being done for us by 3,700,000 women in 1940—the largest number in any one group of women workers in 1940.

SERVICE WORKERS IN PRIVATE AND IN PUBLIC HOUSEKEEPING

About three-fourths of all the women service workers in 1940 were carrying on with our housekeeping jobs—in our homes, and in our hotels, restaurants, offices, and other “public” buildings.

However, women have seemed to care less and less for the work. For though almost half of all women workers were in private or public housekeeping jobs in 1870, only about one-fifth were in 1940. World War I drew many of them into work more vital to the war. Between the two World Wars women took “housekeeping” jobs again, but many no doubt because the depression years left them little choice. World War II once more drew them away in great numbers, into jobs that offered better working conditions, better hours, better pay, and an opportunity to serve the country.

Between 1870 and 1940 women were also giving ground to men in “housekeeping” jobs, dropping from 43 in 50 of all the workers to 39 in

50. Also, the number of women in public housekeeping jobs has tended to increase at the expense of the number in private housekeeping jobs—which probably means two things: (1) that women prefer public housekeeping over private housekeeping jobs; and (2) people are depending more on laundries, cleaners, hotels, and restaurants, and less on having services supplied at home by a person hired to do them. It is not strange that the public housekeeping jobs should be preferred because in general working conditions, hours, and pay are somewhat better and the workers have protection under labor, workmen's compensation, and social security laws that workers in private housekeeping jobs generally do not have.

Problems of long hours, low wages, and poor working conditions are particularly serious in private household employment. Women are not eager, when they can find jobs in factories, offices, shops, to go into a field that has low standards of work and wages. The fact that immigrants became fewer also cut down on the number of women willing to enter household employment. Being fewer, household workers could ask and receive somewhat higher wages—in any case, wages higher than many people felt they could afford to pay.

PUBLIC HOUSEKEEPERS—CAFETERIA WORKERS



The demand for household employees has also become less pressing, partly because the work of running a household has become easier. Families have become smaller, and the houses and apartments we live in, too. Machinery and electricity have made household tasks lighter. More and more people eat at least some of their meals out.

Still, the shortage of household employees has been a hardship in many homes. The United States and Canada are making efforts to follow the example of England and particularly of the Scandinavian countries by setting up standards that will take away objections women now have to household jobs. If these efforts succeed, homes which have suffered because they lacked help, particularly homes in which there are small children, will benefit. For many women like housework and, given an even break, would prefer work in a home over a job in a store or office or factory.

LAUNDRY WORKERS

Women laundry workers' jobs felt two contradictory influences in recent years. One tended to add to the number of jobs, the other to make them fewer. Laundering has, on the one hand, gone with other services out of some homes into commercial plants, especially plants that give a high type of service at reasonable prices and that need then to hire more workers. On the other hand, such practical and efficient home washing machines have come on the market that many women, especially those prejudiced against commercial laundries, would rather do the washing themselves at home.

Home washing machines, perhaps with the help of laundromats, have kept ahead in the race. Though the 400,000 women laundry, cleaning, and dyeing workers of 1940 were 7 times as many as there had been in 1870, still they were 200,000 fewer than they had been in 1910. The wars and the depression had the same effects on the laundry workers they had on the public and private housekeeping workers.

Laundresses have been forsaking work in homes, in spite of better washing machines, or perhaps the washing machines were not brought in until the laundresses had left. At any rate, 150,000 fewer laundresses were working for private families in 1940 than in 1930. At the same time, laundresses in commercial laundries increased by about 10,000.

In homes, the service workers who did the laundry were almost always women, but not in the commercial laundries, though women were and still are the great bulk of the workers. Taking all laundry, cleaning, and dyeing workers together, including the laundry workers for private families, women were 9 in 10 of all the workers in 1870, but by 1940 had fallen to 7 in 10. The greatest shift to men workers came after 1920, when the "family-bundle business" grew by leaps and bounds and some of the work in laundries became too heavy for women to handle.

BEAUTICIANS, BARBERS, AND MANICURISTS

The girls who bobbed their hair about 1920 were doing much more for women than they knew. They started a fashion that swept the country and opened up innumerable jobs for women. The barber shops did the first hair cutting and trimming. But then it became important also to have one's hair waved and, gradually, to have all sorts of other "beauty treatments." Beauty parlors sprang up almost like mushrooms after a humid night in spring.

LAUNDRY WORKER



Between 1920 and 1940 some 185,000 more women became beauticians, barbers, and manicurists, making a total of 218,000 serving the need of America's women to be lovely and in style. Of course some of these women were manicurists in men's barber shops, but then some men were barbers and hair stylists in the women's beauty parlors. Men, as a matter of fact, seem to be better served in being made handsome than are women, for just under half of all the barbers, beauticians, and manicurists in 1940 were women—who serve mainly women; over half were men—who serve mainly men. To be more exact, there was 1 man barber, beautician, or manicurist for every 298 boys and men in the United States in 1940, and only 1 woman barber, beautician, or manicurist for every 301 girls and women.

In 1870 the men of the country fared even better, compared to the women, for nine-tenths of the workers in the barber and beautician field were men, few of whom served women. Only one-tenth of the workers—1,500—were women then.

One thing has happened since 1940 that is cutting into the women beauticians' jobs—the inexpensive gadget with which women can give themselves their own "permanents" at home. The cost of the home treatment is a fraction of that in a beauty shop. It is hard to say yet what the effect on jobs will be; many women have stopped using the beauty shops, but many never will.

PRACTICAL NURSES AND MIDWIVES

How many of the 104,000 practical nurses and midwives in 1940 were one or the other, it is not possible to say. Some may have been both. Though more and more babies are born in hospitals or at least under a doctor's care, many regions in the United States are not served by hospitals or doctors, and many people in cities cannot afford either. The midwife is still in great demand and the practical nurse is needed everywhere.

Although there were ten times the number of practical nurses and midwives in 1940 that there had been in 1870, still there were some 37,000 fewer than in 1930. For many more women than before were becoming trained nurses. Seriously ill people were being cared for increasingly by these trained nurses in hospitals and less often by practical nurses in the home.

Whether by practical nurses at home or trained nurses in hospitals, nursing, as always, is almost entirely women's work. During the 70 years between 1870 and 1940, over nine-tenths of all the practical nurses and midwives were women.

It is older women we depend on for the most part for practical nursing and midwifery: considerably over half the practical nurses and midwives were 45 years old or over in 1940; only about an eighth were less than 25 years old.

ELEVATOR OPERATORS

The Census first reported women elevator operators in 1900—30 of them. Ten years later they were 5 fewer. Then came World War I, and women had to take over men's jobs. Even when the war was over, and many men had come back to their jobs, women had been found capable of the work and continued to be hired for it. By 1940, 14,000 women were operating elevators. The job is definitely one of those to which women were introduced during a war and then were able to keep on working in it.

ELEVATOR OPERATORS



JANITORS AND SEXTONS

How much city life, with its numberless apartment houses, its huge office buildings, and many churches, has grown is shown by the fact that there were 378,000 janitors and sextons in 1940, over a tenth of whom were women. At one time, 1910, women were almost a fifth of all the workers. Therefore, although the number of janitors and sextons, including the number who are women, is growing, still, job openings are more and more for men rather than for women.

AMUSEMENT AND RECREATION SERVICE WORKERS

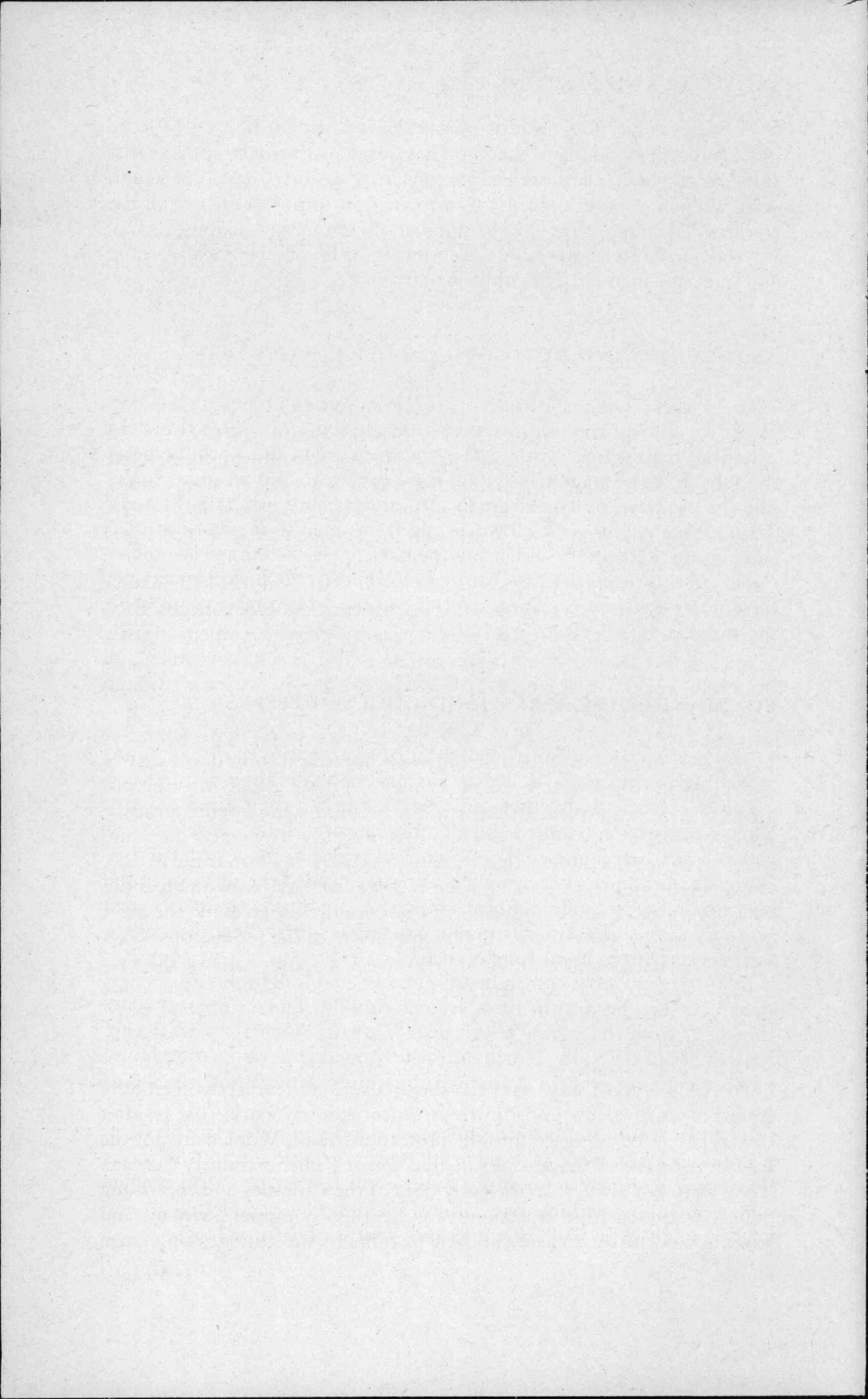
These workers do many kinds of jobs, from setting up pins in bowling alleys to shifting scenes on stages, from caddying on a golf course to ushering in a theater. Not too many women are in the work. Some of the jobs, like the stage hands', are too heavy work for women. Some, like the pin boys' or ushers' are in surroundings not generally thought desirable for young girls. However, the 47 women in the work in 1870 had become 3,600 by 1930. During the next 10 years commercial amusements grew considerably, so that by 1940 almost 12,000 women were in the amusement and recreation services and they were one-seventh of all the workers.

BOARDINGHOUSE AND LODGINGHOUSE KEEPERS

Workers without a family, who must have a home, who cannot afford to pay high prices for it, find their answer in boardinghouses and lodginghouses. Particularly when our cities first began their rapid growth, when construction boomed and factories began to hum, workers often had to leave their homes and go where the work was. At least until they could set up homes of their own again, they needed the services of the boardinghouse and lodginghouse keepers. Again during the wars, when workers were shifted to war manufacturing centers, cheap homes for workers away from home were needed.

In 1870 over 7,000 women boardinghouse and lodginghouse keepers provided such homes; in 1940, almost 101,000. The number in 1940, however, were thousands fewer than in 1910. With the continuing growth of our cities, the "small, intimate, home type" of boardinghouse has been giving way to commercial rooming houses and restaurant service.

The job of running boardinghouses and lodginghouses still has opportunities for women, nevertheless, for many people continue to prefer them over commercial rooming houses and restaurants. And women who were only something over half the boardinghouse and lodginghouse keepers in 1870, by 1940 were over nine-tenths of them.



Women Professional Workers

PROFESSIONAL WORKERS do not make things like the manual workers, or take part in selling and distributing things like the white collar workers, but like the workers we talked about in the last chapter, sell their services. The difference is that these services are more highly skilled and were learned through a long period of specialized training.

In 1870 the 94,000 women in professional work had had little choice outside of teaching: nine-tenths were teachers in schools or colleges. Each of the other professions gave jobs to 5,000 or fewer women—mostly fewer. About 1,000 women were nurses, only 1 was an architect, and none was a chemist, engineer, veterinarian, or library assistant (though 43 were librarians).

In teaching and nursing women were doing work that seemed to follow naturally from training children at home and from home-care of sick people. When new kinds of professions came about through our social and economic development, women found some opportunities in these too. The old, established professions, like law, medicine, and theology, were the ones most reluctant to allow women to come in.

Opportunities for higher education began to come to women about 1850. With the years, these opportunities grew, women made the most of them and, by 1940, 1 ½ million women were in the professions. Over half were still teachers, one-fourth were nurses, but none of the professions now excluded women.

TEACHERS

Teaching is and always has been the occupation in which women have found most of their opportunities for professional work, that is, after they began to be admitted into the professions at all. Women are not the teachers or most of the teachers in all countries. In this country they are. They were not always. In the early days of the Colonies and the young States, what teaching was done was by the "dominie," a man, and parents paid to send their children to him. In the colleges only men

taught, of course. Higher education was then still only for the few, and those few men. Some women, whose families were more broadminded than ordinary, were educated by private tutors.

By the time of the Civil War, however, the idea that the best citizens are informed citizens was becoming accepted, and with it, the belief that since not all parents could afford to pay for their children's schooling, such education should be a public expense. Massachusetts adopted the first compulsory school law in 1852. When Mississippi passed such a law in 1920, Nation-wide compulsory schooling had been achieved.

By the time of the Civil War, too, the high schools, normal schools, and seminaries, which had begun to be established for women some 20 years earlier, were turning out an available supply of women teachers. The 5 years of the Civil War drained the States of men. In both public and private schools, then, women took over, and they made good.

Some people believe that the fact that the Civil War came just when the public school system was developing accounts for the fact that most of our teachers are women. Other causes predate the Civil War: first, the fact that women were finding opportunities to become educated and able to teach. Then, there was a growing belief that women had peculiar gifts for teaching, including superior characters. They were also more likely than men to stay in the work. Above all, it was cheaper to hire them than men.

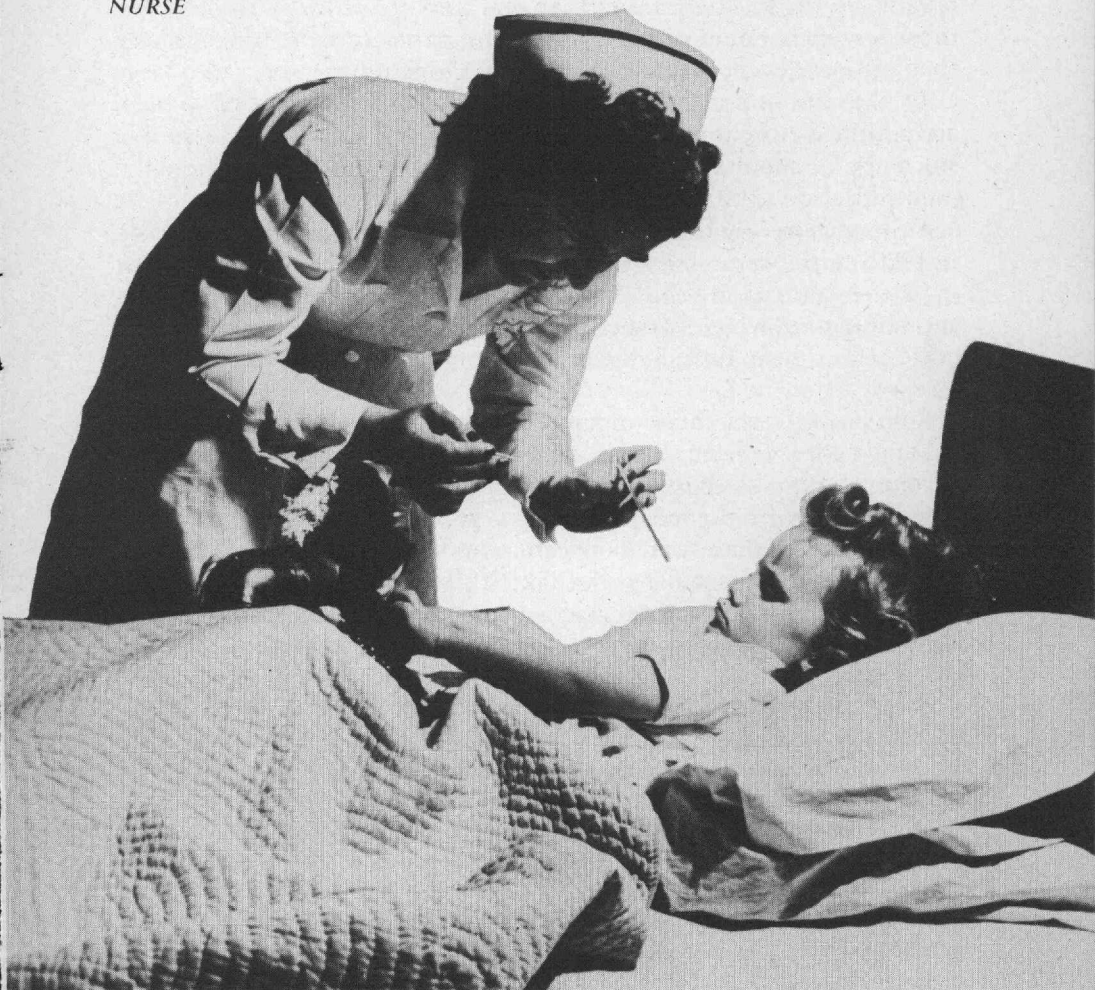
By 1870 almost 85,000 women were teachers and were two-thirds of all the teachers. Every 10 years thereafter an average of over 100,000 women came into the work, until by 1940 there were over 822,000.

Up until 1920, women took over more and more of the work. At that time, 4 out of 5 teachers were women. But between 1920 and 1930, many men came into the work, and continued to in the next 10 years, so that by 1940 women, instead of 8 in 10 of all the teachers, as in 1920, were only 7 in 10. Between 1930 and 1940 the number of women teachers actually dropped by over 50,000.

While women have nevertheless had a big edge on men in general teaching, this is not so in college teaching. They never were as much as one-third of the "college presidents, professors, and instructors." Since 1930, their proportion also has fallen off. In fact, in 1940 less than 3 in a hundred women teachers had attained this level of teaching.

It seems that women teachers now are older on the average than the group that were teaching 40 years ago, and more of them are married. There was a time when it was thought a woman who married lost some of her qualifications as a teacher, but the idea has begun to grow that perhaps married women make better teachers. At any rate, nearly a fourth of the teachers in 1940 were married.

As everyone knows, there is a great shortage of teachers now. Like other service workers, many left teaching for other work during the war, and found such work preferable. In the meantime the number of school children has grown immensely. It would seem that there will be openings in teaching for some time to come.



TRAINED NURSES

How important this profession has become is shown by the difference between the thousand nurses it is thought there were in 1870 and the 363,000 nurses there were in 1940. Before 1900 all nurses, "trained" and "practical," were lumped together with midwives as "nurses and midwives" and listed by the census with the domestic and other personal service workers. This is one of the fields of work that with the years developed into a profession.

Modern standards in nursing grew out of the Civil War. Schools of nursing were opened and both schools and hospitals continued to improve. The training the nurses received and the skills they learned en-

titled them to be classified with the "professional workers." As more and more hospitals and clinics were built and public health services set up by communities, States, and the Federal Government, more and more women found opportunities for work that satisfied their need to be of very direct service to others. Low wages, long hours, and the strain of the work for many years discouraged nurses, but with time, these too improved.

Nurses were very badly needed during World War I. After the war, and during the depression, there was an oversupply of nurses—at least there were more than people could afford to pay for. During World War II there was again a great shortage, and there is still, in hospitals, including veterans' hospitals, in mental institutions, and in the public health services.

Men's contribution to nursing has been very small compared to women's. Men were never as many as 1 in 10 of all the nurses, and from 1920 on nursing has been almost entirely a woman's job.

Nurses for the most part are neither very young nor very old. In 1940, three-fourths of them were between 20 and 44 years old. Only about a fifth of the nurses were married. (Taking all women workers together, a much larger proportion were married—nearly two-fifths.) The fact that many nurses must live at hospitals and that private-duty nurses must also generally be away from home and in addition work long hours make it hard to continue with a nursing career after marriage.

SOCIAL, WELFARE, AND RELIGIOUS WORKERS

Social, welfare, and religious work (except the clergyman's which is talked about later) also belongs mainly to women. For a period it was all considered semiprofessional, but social and welfare work, like nursing, developed into professions. The evil conditions that came with the Industrial Revolution, as when whole large groups of people were thrown out of work by the invention of some labor-saving device, showed the need for trained people to deal with the problems of the workers' families. In large cities people were herded together, yet were farther apart; neighbors did not come in to help in an emergency, the way they do in the country. Such services in large part became the job of social agencies.

In time schools connected with universities and separate social welfare schools were set up, and the trained social worker more often than not has a special degree like any other professional worker. Women in the work are generally more highly trained than men. In 1940 considerably over half the women had had 4 years or more of college training; less than half the men had as much training.

Social and welfare and religious work is still a field of growing opportunities for women. In 1940 women were three-fourths of all the religious workers (except clergymen) and almost two-thirds of all the

social and welfare workers. Together they had grown from 9,000 in 1910 to 74,000 in 1940; and from about half of all the workers—men and women—to over two-thirds.

MUSICIANS AND MUSIC TEACHERS

First men, then women, then men again had the advantage in this field. Music once was taught only privately and teaching provided work for the majority of workers in the music field. In the early days, like other teaching, it was chiefly men's work. But by 1870, 6,000 women were in the field, and they were a third of all the workers. Then, like other teachers, most of the music teachers came to be women. By 1910 women were 84,000 of the musicians and music teachers and were three-fifths of all the workers in the field.

After that, for whatever reason, the number of music teachers dropped off. Much more of our music came to us in movies, in theaters, over the radio. But most of the performers were men. The result was that by 1940, women musicians and music teachers had dropped to 66,000 and they were now only two-fifths of all the workers.

ARTISTS AND ART TEACHERS

Art and teaching art seem to offer even fewer opportunities to women than music and teaching music. From less than 500 in 1870 women artists and art teachers came to be 21,000 by 1940 (less than a third the number of musicians and music teachers), and this was a slight drop from 1930. And though they had risen from one-tenth of all artists and art teachers in 1870 to nearly half in 1890, by 1940 women were only a third. As some women drop out of the work, others will of course take their place. For one thing, teaching art in the schools by teachers who have that as their only responsibility has become customary in many school systems, and more often than not the art teacher is a woman. Art and teaching art do not, however, seem to be growing fields for women.

ENTERTAINERS

Most women entertainers are actresses or in dancing as dancers, dancing teachers, or chorus girls. (A fourth are actresses, two-fifths are in dancing.) Only a tenth of the men are actors or in dancing. For "entertainers" include a number of other types of workers: athletes, showmen, sports instructors and officials, motion-picture projectionists, and the owners, managers, and other officials of theaters, motion-picture houses, and other amusement and recreation places.

In entertaining, too, opportunities for women seem to have been falling off. From 800 in 1870, women came to be 29,000 of the entertainers in 1930, but by 1940 had dropped to 28,000. From a sixth of all the workers, they came to be a fifth, and then a sixth again.

The rate at which opportunities for women entertainers grew was much more rapid before 1900 than after. There was a spurt again during World War I, for during wars people seem to demand more entertainment. The depression probably had much to do with the decline among entertainers, as among musicians and music teachers, artists and art teachers. World War II undoubtedly brought new life to these fields again.

AUTHORS

A fair-sized list of women writers, some of whom are still well known today, could have been made well before 1870. Women had been authors, not only of novels, poetry, and cookbooks, but of religious and philosophical works as well. They contributed to the "great magazines" that date from the 1850's. Nevertheless, the Census listed only 115 women as authors in 1870. Few women, clearly, were earning their living as writers. Even today the writer, unless she is one of the few highly successful ones, usually must snatch the time for writing from her "leisure time," the time left over from jobs like teaching, or journalism, or from household responsibilities.

Few though they were in 1870, women were one-fourth of all the authors. In 1910 they were close to one-half, but by 1940 they had dropped back to one-third, and, their numbers had fallen off from 1930. The depression was bad for the book business as for everything else. Nevertheless, about 5,000 women were authors in 1940, and certainly many of them had won fame. Writing is one of the arts in which women's contribution is unquestioned.

LIBRARIANS

There were not many libraries in 1870 and only 43 women librarians, and they were one-fifth of all librarians. The 35,000 women librarians of 1940 are an indication of the rise in the educational and cultural level of the United States. Free public libraries are rated by some to be nearly as important in their way as the free educational system, for libraries can be used by both young and old. Many people, cut off from a formal education too early, can continue to educate themselves through the libraries. Certainly the public libraries opened up opportunities for the employment of women—opportunities that are still growing.

LIBRARY ASSISTANTS

The work of library assistants is clerical more than it is professional. Up to 1930 it was a small field and in fact smaller in 1930 than in 1910, when 3,000 women had been library assistants or attendants. Between 1930 and 1940 the number jumped from 1,500 to 17,000, largely as a result of the public emergency work programs during the depression.

Both the work of librarians and of library assistants and attendants is mainly women's work. From five-sixths of the workers in 1910, women librarians and library assistants fell to just over half in 1920, then rose again to three-fourths in 1930, and to four-fifths in 1940.

EDITORS AND REPORTERS

An educated population wants an endless number and variety of books, newspapers, magazines. As women took advantage of the opportunities for higher learning available to them after 1850, their training made it possible for more and more of them to take part in the work of turning out these books, newspapers, and magazines.

The same number of women were editors or reporters in 1870 as were librarians—43, but that number grew fast and steadily, to 16,000 in 1940. The opportunities increased for men too, but more rapidly for women; from less than one one-hundredth of the workers in 1870, women came to be one-fourth in 1940.

LIBRARIAN



WOMEN IN THE "LEARNED PROFESSIONS" AND RELATED FIELDS

Theology, law, and medicine are the three old, established professions which have been used as yardsticks to measure newer fields to see whether they may really be called professions. Even in these venerable fields training gradually became possible for women after 1850, though opposition to women working in them was very determined and widespread. Women, however, made considerable headway.

Women now have shown their ability to do professional work, and there is much challenging work beckoning in the "learned professions," but women seem to have a lessening interest in them.

Doctors

A medical diploma was given a woman for the first time in America in 1849. This marked the first step in women's effort to take part in a field of work which had been almost entirely their's in Colonial days—taking care of the sick and serving as midwives. (Doctors were few in those days.) During the last half of the 1800's a number of women made great efforts to get a medical education, then to get a chance to work in hospitals.

By 1870 there were over 500 women physicians and surgeons of various types. By 1940, 8,800 women were physicians, surgeons, or osteopaths. Nearly another 12,000 women were chiropractors, healers, and some other types of medical workers. Taken together all these women were about 200 fewer than they had been in 1930, but from 1 in 100 of all the workers in these fields—men and women—in 1870, they had come to be 1 in 10.

This was a very great advance, of course. In spite of the falling off between 1930 and 1940, the number of women had increased nearly 38 times over 1870. It is particularly interesting that actually women physicians and surgeons gained in number between 1930 and 1940, by almost 900. It was the osteopaths who lost out, by nearly 500 and the chiropractors, healers, and so forth, by over 600.

Dentists

This field too, offers opportunities for women, but the numbers of women in it have been falling off. From 25 in 1870 women dentists rose to almost 2,000 in 1920, and then fell to little over a thousand by 1940.

Ministers

Though the first woman graduated from a theological school completed her course as long ago as 1851, the resistance of both men

ministers and congregations to women's coming into this field has kept their numbers down.

Before 1910 the Census counted ministers with other religious and social and welfare workers. In 1910, however, the Census counted 685 women clergymen. Thereafter an average of about 85 a year were added, so that by 1940 there were 3,300. From 1 in 200 of all ministers they had come to be 5 in 200, but though their numbers had increased, it has been more and more slowly.

More women enter divinity schools than become ministers. In general, they prepare themselves for work as teachers of religious education, or as missionaries or administrators.

Lawyers

It has been particularly hard for women to break down the barriers which will let them actively practice law. Before 1870 legal training was generally obtained by studying or "reading law" in a law office. Few women found law offices willing to take them in. The opening of law schools in the next 30 years, however, made it possible for women to get a legal education in at least some of them.

The number of women lawyers and judges has stayed small, growing from about 500 to 4,500. The rate of that growth, however, is quite remarkable.

As in the ministry, many women in the field of law do not practice. They use their legal training in work as editors of legal publications, in business, in government, and in other professions. The figures above do not tell how many women have obtained law degrees, or even how many women have been admitted to the bar.

The proportion women lawyers and judges were of all lawyers and judges is about the same women clergymen were of all clergymen, both in 1910 and in 1940.

WOMEN IN SCIENTIFIC AND INDUSTRIAL PROFESSIONS

Technicians and scientists have become more and more important in industry, for the making of numberless new products we have is based on chemical and physical principles. Chemical and physical tests must be made at various stages in the manufacture of a growing number of these products. The complexity of large scale production also calls for technical services of engineers and the assistance of designers, draftsmen, and technicians. Large scale building needs the services of trained architects, for safe and economic construction, as much as for functional and artistic design. The introduction of scientific methods into agriculture affected the veterinary's profession. To some of these fields women contributed little, to others a good deal.



Designers and Draftsmen

Designing clothing, accessories, textiles has opened up work for a number of women—to about 9,000, in fact, in 1940. Women draftsmen have been fewer (about 1,500 in 1940); their chief opportunities came during World Wars I and II, when they took over the work of men draftsmen who had gone into the armed services.

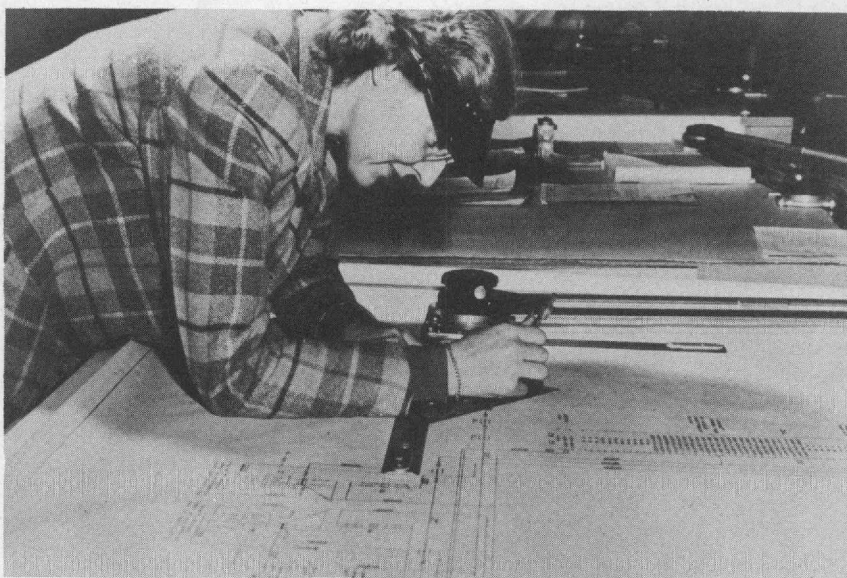
Women designers and draftsmen together had been only 13 in 1870—1 out of every 100 workers. By 1940 they were 9 out of every 100. Their numbers, though not large, have been growing fairly steadily. Interest in design is keen in our modern world. More and more of the articles we use are having design applied to them. It would seem that opportunities will continue to open up for women, many of whom have considerable aptitude for design.

Laboratory Technicians

The fact that there are no earlier census figures for laboratory technicians that can be compared with 1940 figures indicates that this new semiprofession had a meteoric rise. In 1910 and 1920 the work was so like many other kinds that technicians were grouped, under very general headings, with several types of workers.

By 1930, 8,000 women were grouped together as "technicians and laboratory assistants." In 1940 other workers were brought into the group—X-ray technicians; laboratory assistants in electric and steel manufacturing; testers in dairies, in radio, in rayon and silk mills, and in oil refineries; chemists' assistants; and other such workers. We now had a fairly clear-cut new semiprofessional field of work. Women were nearly 23,000 of these technicians and assistants and were one-third of all the workers; also a thousand women were technicians other than laboratory technicians and were one-tenth of all the workers.

DRAFTSMAN



Chemists, Assayers, and Metallurgists

More clearly professional and responsible than the work of the laboratory technicians is that of the chemists, assayers, and metallurgists. Far fewer women have had a part in it—only 1,700 in 1940. They have made strides, however, for in 1870, when a scientific education was practically impossible for women, not a single woman was reported by the Census in this field. By 1880, however, there were 49 women in it. In spite of the advance since, the number of women dropped between 1930 and 1940, as in other professional fields. The proportion women were of all the workers also continued to drop after 1920, when they were 5 in 100 of all the workers. In 1940 they were 3 in 100, back almost to the little over 2 in 100 they had been in 1880.

Technical Engineers

The fact that even a few women have been successful in finding a place in technical engineering is important. Women had not seemed much inclined to challenge the idea that this is exclusively men's work. Of the 278,000 technical engineers of 1940, about a thousand were women—not a great number but a start.

Because of the hard nut this field is to crack, it is interesting to see how the women engineers of 1940 lined up:

Civil engineers	231
Surveyors	101
Electrical engineers	224
Mechanical engineers	228
Industrial engineers	74
Chemical engineers	59
Mining and metallurgical engineers	74

Architects

Women began earlier and made more progress in architecture than in engineering. Architecture needs both artistic and technical ability; women's artistic talents have never been questioned as their technical capacities have been, and these talents gave them an "in." Then, too, a good deal of architecture deals with home-building, some of it with landscaping, and women's interest in and right to contribute to these has also been considered legitimate.

Only 1 woman was an architect in 1870. By 1940, not more than 500 were, but architecture is not in any case a very large field—only about 22,000 workers in all in 1940. Women were not an infinitesimal part of them as of the engineers, but better than 1 in 50 of all architects, and while their proportion has been growing slowly, it has been growing fairly steadily.

Veterinarians

As in most other fields, scientific method was applied also to agriculture. It advanced the profession of the veterinary also. At first his work expanded, when it was seen how much it could do for saving and improving all livestock. When horses, oxen, mules, and donkeys began to be supplanted by farm machinery, however, the veterinarian's services were needed for fewer animals, and the number of all veterinarians began to fall from the all-time high of some 13,000 in 1920. That year only one woman was a veterinarian. But when by 1940 veterinarians had shrunk to an 11,000 total, 100 of them were women, most of whom were probably working in dog and cat hospitals.

CHEMIST IN A PAPER MILL



OTHER PROFESSIONAL WORKERS

Photographers

Photographic work has a number of branches, women have gone into many of them, and in fact have a monopoly of some. In the profession of photographer, however, women are a minority although some of them have done work as outstanding as that of the best men photographers.

Beginning with 137 in 1870, the number of women photographers grew at a fast rate through 1900. Another spurt came between 1910 and 1920, probably because of a demand for them during the First World War. Since 1930 their number has grown more slowly than men's, so that by 1940 there were very few more than in 1930—about 5,000—and though they had grown from 2 out of 100 of the workers in 1870 to 15 out of 100 in 1930, they dropped back to 13 out of 100.

Funeral Directors and Embalmers

Earlier these workers were called "undertakers" and grouped with workers in trades. In 1940 they were placed in the semiprofessional group of workers and called "funeral directors and embalmers." The 20 who were women in 1870 came to be over 2,000 by 1940—a slow but fairly steady increase from 1 in 100 to 5 in 100 of all the workers.

Aviators

In the 1910 census aviators were grouped with showmen, which tells pretty clearly how they were regarded then. The tremendous growth of aviation since has made it a separate occupation. The technical knowledge needed—navigation, meteorology, physics—has made it a profession.

Few women have been reported as aviators—only 8 in 1920, 66 in 1930, and 51 in 1940—never over 1 in 100 of all aviators. These are the numbers of women who went into aviation as paid pilots. Many more hold pilots' licenses.

Businesswomen

THESE ARE THE WOMEN who own a business and often run it too, and women who run or have a large share of responsibility in running businesses for others. They may be "captains of industry" or milliners who own their own shops and work in them alone. Not many, however, have been captains of industry. Few, even, have had highly important positions running or sharing responsibility for running businesses of others. Those few, though, are an important vanguard.

Actually women were in business well before 1870—in a great variety of businesses, as ads in Colonial newspapers show. A shopkeeper's or tradesman's wife often worked as his partner. Many a woman, after her husband's death, kept going as the owner of such businesses as that of a tanner, printer, tailor, painter, shipwright, silversmith, or gunsmith.

BUSINESSWOMAN—SPECIALTY TRADE



Other women themselves opened a millinery or drygoods store, a pastry shop, a tavern, an inn. Women are known to have run such industrial enterprises as a fulling mill, a grain mill, a distillery. By 1870 there were 8,000 women in selected businesses with which 1940 comparisons could be made; in 70 years their numbers multiplied almost 40 times, to 319,000.

Throughout those 70 years most of the women were in trading businesses, though their proportion of all businesswomen fell off from seven- to six-tenths. The two next largest groups in 1870 were women in restaurant and cafe businesses and women in hotel businesses; first one group was in the lead, then the other, until by 1940 the first were two-tenths of all business women, the second one-tenth. Other groups, though smaller, increased in numbers and proportions over the years: women postmasters and women in mining, construction, manufacturing, transportation, and communications. Newer types of business women, who entered the field after 1870 and whose number in 1940 would raise the count of all business women that year considerably, are included in the discussion of types of business women that follows.

WOMEN IN FOOD BUSINESSES

The businesswomen in food and dairy products stores multiplied over 50 times between 1870 and 1940, from about 1,400 to over 69,000. The great development of chain stores did not stop their progress, for they rose from 1 in 100 to over 10 in 100 of all business people—men and women—in this retail field.

WOMEN IN RESTAURANT AND CAFE BUSINESSES

Many women, suddenly faced with the need to earn a living and untrained except in running a household, have started a boardinghouse. (We talked about them under "Boardinghouse and Lodginghouse Keepers.") Others, with similar problems, specialized somewhat more and opened restaurants or tea rooms.

About 750 women had gone into the business of running a restaurant, tea room, or the like by 1870, and they were only about one-hundredth of all people in this type of business. By 1900, 7,000 women were in the business. Then the custom of "eating out" became more common, particularly after 1900. Women with a talent for organizing restaurants and making them pay found that here was an opportunity for them. By 1940 over 66,000 women were in the business, and they were nearly one-fourth of all people in it.

BUSINESSWOMEN IN SPECIALTIES TRADES

A considerable number of women, for that time, were traders and dealers in certain specialties in 1870—3,500, and they were trading and

dealing in a large variety of goods. Some of the most important were cigars and tobacco; liquors and wines; sewing machines; crockery, china, and stoneware; agricultural implements; books and stationery; iron, tin, and copperware; newspapers and periodicals; gold, silverware, and jewelry; and musical instruments.

Women found trading and dealing a fast growing field of opportunity between 1870 and 1890. For 20 years, then, there was no great change. In the next 10 years, however, 4,000 more women took up this business, then 12,000 more, then 24,000, until by 1940 over 57,000 women were traders and dealers. New types of trading businesses had sprung up. Women now were also in such businesses as limited price variety stores, motor vehicles and accessories retailing, filling stations. From 1 in 50 of all these specialty traders and dealers in 1870, they had come to be 3 in 50 by 1940.

BUSINESSWOMEN IN GENERAL MERCHANDISE, APPAREL, SHOE, AND MILLINERY TRADES

The story of women's trading in these types of goods was somewhat different than the one of their trading in the specialties we just talked about.

The 864 women trading in these types of goods in 1870 had grown to 62,000 and nearly two-thirds of all such traders by 1890. In 20 years more their numbers doubled, but they were losing out to men for at the end of that time they were now only two-fifths of all the traders. The women traders have been falling off ever since—to 55,000 and to one-fourth of all the traders in 1940.

Part of the reason, at least, for the falling off of opportunities for women traders in this field is thought to be that in earlier days many of the goods traded were hand made, by women who both made and sold them; as customers became less interested in hand-made goods, women lost out.

BUSINESSWOMEN IN INDUSTRY

Women in this group may include the owner of a small local bakery, the silent partner in her deceased husband's machine shop, the president of a big coal company, the publisher of a large chain of newspapers. The degree of responsibility varies greatly, as does the amount of money income.

Actually this field includes mining; construction; manufacturing; automobile storage, rental, and repair services; railroads and railroad repair shops; street railways and bus lines; taxicab service; trucking service; other transportation; and communications. Seven-tenths of the women in this field in 1940 were in manufacturing.

From less than 300 in 1870, women rose to 27,000 by 1940 and at the same time from 1 in 200 to 7 in 200 of all business people in industry.



BUSINESSWOMAN IN INDUSTRY—RUNS HER OWN PRINT SHOP

Opportunities for women, though still limited, are growing. The daily papers, if nothing else, tell us of positions of great responsibility, paying high incomes, that some of these women hold.

WOMEN IN HOTEL BUSINESSES

In Chapter IV, *Service Workers*, we spoke of the women who opened boardinghouses and lodgings, to provide inexpensive places to live for other workers away from their own homes, and to provide themselves a means of earning a living. Still other women were encouraged to take up the more pretentious venture of running a hotel, a tourist camp, a motel. About a thousand women had done this in 1870—one thirty-third of all the people in the business. Their numbers grew at a rapid rate through 1910, thereafter not so fast, although by 1940 there were 22,000 of them, and they were a third of all people in the business.

WOMEN GOVERNMENT OFFICIALS AND INSPECTORS

Women have special interests and qualifications in some of the fields into which government has extended, for instance, factory inspection and health work. Following the granting of suffrage to women they have taken a greater part in civic and political life, and this, too, has led to their being considered more and more often for appointment to the general run of official posts. Also, as women's employment in government work generally increased, greater numbers of them have had a chance to get the background and experience necessary for supervisory jobs.

As a result, to the 3,500 women officials and inspectors in Federal, State, and local governments in 1910, 15,000 more were added by 1940. The proportion they were of all government officials and inspectors also rose steadily during that time, from 4 in 100 to 9 in 100.

WOMEN POSTMASTERS

Since the signing of the Articles of Confederation in 1777, running our postal system has been a Federal Government task. Women postmasters came on the scene that same year. About 250 were postmasters by 1870, and they were 3 of every 100 postmasters. Their numbers and the proportion they are of all postmasters has grown steadily, until by 1940 there were nearly 17,000 women postmasters who were 42 of every 100 postmasters.

WOMEN DRUGGISTS AND PHARMACISTS

There was probably not a woman in the Colonies who had not had handed down to her by her mother recipes for salves, for ointments, for various curative herb teas, and other home remedies. Handbooks for women's use in running their households then also included such recipes. Not until 1820 did the National Pharmacopoeia appear, the book which lists and sets up standards for drugs and medicines for the guidance of drug manufacturers, and of the pharmacists who were taking over from the women much of the work of providing remedies for illnesses and ailments. Women all over the country, however, still had their pet tonics and teas and salves for their families until very recent times. Your grandparents, if not your parents, will remember at least "spring tonics," sulphur and molasses, figs and senna leaves. In some parts of the country home remedies are still much in use.

By 1870 compounding medicines and preparing other remedies (other than those a few women still prepared at home) was almost entirely in the hands of men. Only 33 women were druggists or pharmacists, and they were a very small fraction of all druggists and pharmacists.

With the years, the standards for drugs continued to improve, new drugs came on the market, their preparation became far more scientific and complex, and it became necessary to have a specialized education in pharmacy to become a pharmacist dispensing drugs. Pharmacy is therefore now rated as a profession. One who simply owns or operates a drug store is in business as a druggist.

In the early days, the druggist was his own pharmacist. Here pharmacists and druggists have been grouped together, so that we might have figures we could compare with the figures for earlier years.

Women druggists and pharmacists have been a small but steadily growing group. By 1940 they numbered 6,000 and were 3 in every 50 druggists and pharmacists. Almost three-fifths of these women were actually professional pharmacists, two-fifths were in the trading business as druggists.

BUSINESSWOMEN IN BANKING AND FINANCE

Before World War I most women's jobs in banking and other financial houses were routine clerical ones. During the war women replaced men in a number of the more skilled jobs. This accounts in part for the rapid rate of increase, from 2,300 to 5,000, of women owners, managers, officials, and salesmen in banking and other finance between 1910 and 1920.

Their numbers still grew between 1920 and 1930, but then came the depression, which hit banks and other financial institutions particularly hard, so that from almost 9,000 in 1930, women dropped back to less than 7,000 by 1940.

Over the 30 years between 1910 and 1940 women gained a little on men, rising from 3 of 100 business people in banking and finance to 5.

WOMEN OFFICIALS IN ORGANIZATIONS

Since as far back as the early 1850's women's organizations have been increasingly important in American life. The members of some of these clubs were women who wanted to reach out beyond the daily round of their household tasks. Then, as more and more women became paid workers outside the home, women who had similar interests growing out of their work also formed organizations. These organizations, the trade unions, and organizations that were formed for social, civic, and philanthropic purposes offered women small but growing opportunities to become officials, managers, agents, and representatives in such organizations.

From 2,000 in 1910, the number of women who found careers in organizations rose to over 4,000 by 1940, but at the same time their proportion dropped from almost a fourth of all organization officials to well under a fifth.

BUSINESSWOMEN IN INSURANCE

We have already spoken of women insurance agents under "White-Collar Workers." Here we are speaking of women who are owners, managers, or officials of companies in the insurance business. The pattern of their growth in numbers is very like that of the women insurance agents. Few in 1910 (only 140), the rate of growth was rapid through 1930 and then slackened off. Their actual numbers still continued to grow, however, if not so fast, to almost 3,000 in 1940.

Relative to men, insurance businesswomen did somewhat better than women insurance agents. From 1 in 100 of all people in the insurance business, women came to be 7 in 100 by 1940, whereas the women insurance agents became only 5 in 100 of all insurance agents. As greater numbers of women came into the insurance field, more found opportunities for responsible positions. In clerical and other departments, where women's work was nothing new, experience made it possible for women to rise to positions as officers in the business.

Women Agricultural Workers

ONE OF THE MOST important movements that has taken place in American life is the shift of people from the country and farm work to cities and industrial work. Farmers and farm workers of 1870 were over half of all the country's workers. Until 1910 their number grew, but not as fast as the number of industrial workers. After 1910 farmers and farm workers became fewer. The 9 million persons in farm work in 1940 were not much more than one-sixth of all the workers in the country.

The number of very large farms has been growing in recent years, but to a great extent farming is still in the hands of the farmer (owner or tenant) whose acres are no larger than he and his family can handle. Roughly five-eighths of the people in farming in 1940 were farmers or farm managers or foremen, one-eighth were unpaid family workers, and only two-eighths were farm wage workers, which shows that most farms were run without hired farm help.

In this picture women's place, judging by official figures, is small. The census counted only something over one-half million women in farming in 1940. It left out of the count the bulk of farm wives whose work in the household is vital to the success of the farm. Five out of every ten of the women counted were unpaid family workers, 3 were farmers, and 2 were wage workers.

The pioneer farm was self-sufficient. All labor was hand labor and produced almost everything that was necessary to sustain life; little call was made on the outside world. Much less money exchanged hands then than now. The role of the farm wife and other unpaid women workers of the family was much more important then than even now. From Colonial days to the Civil War these women for the most part took care of the dairy, the poultry yard, the garden, in addition to their many other tasks. Some women made an independent living as planters or small farmers. Others hired out to care for the dairy or poultry on the farms of other persons. Although all these women did rather rough work, like cutting wood and milking, they were seldom "put into the ground" or used in the fields.



Shortly after the Civil War came the homestead movement. Farming livened up. Hand labor gave way to horse-drawn machinery. The character of farm work was changing. The number of women farmers, paid and unpaid women farm workers grew fast, almost until World War I, when there were over a million of them. After the war, their numbers shrank more and more until by 1940 there were about half a million. There had been not far from one-half million in 1870.

The women owner and tenant farmers, managers, and foremen grew from 25,000 in 1870 to 312,000 in 1900 and dropped to 154,000 in 1940. The women paid and unpaid farm workers began at 430,000 in 1870, rose to 895,000 in 1910 and dropped to 367,000—less than there had been in 1870.

For women farmers, managers, and foremen, the above figures are fairly accurate, but the figures for the farm workers are rather rough. The difficulty with the figures for the farm workers is that the censuses were taken at different times of the year (in 1870, 1880, 1890, and 1900 in June; in 1910 in April; in 1920 in January; in 1930 in April; in 1940 in March). But the agricultural work is seasonal—greatest at planting and at harvest time. The farmer is on his farm all year round and always has some work to do on it; he will report himself to the census as a farmer at any time. Help is hired, however, only during the busy seasons, and the unpaid family women are apt to report themselves as housewives in off seasons because they do little outdoor work then. Only at planting and at harvest time, then, could the census get a fairly accurate count of the paid and unpaid women farm workers. Even if the census could arrange to take the count the same month each year, the weather, which sometimes hurries and sometimes delays planting and harvest, might throw the count off.

Because of the unpaid work of the farm wife, the farm family has depended somewhat less on actual money income than the city family to reach a given level of living. The wife's work, of course, helps to bring a cash return to the farm, but more than that her kitchen garden, her chickens, ducks, and geese, her canning and preserving add to the family's health and well-being. In addition she often does many other things

FARM WORKERS



which the city family usually pays to have done—things such as making and taking care of clothing, making soap, furniture polish, hand lotions, bedding and mattresses.

The farm wife's household duties have generally kept her from working on the farm's cash crop. A study of cotton farming in Texas, for example, has shown that for the most part it is the unmarried woman on the farm who works in the fields. But counting farm wives who do work in the fields, the other unpaid women of the family who also do, and the women outside the family who are hired, they have not, since 1870 at least, been a very great proportion of all paid and unpaid farm workers—one-eighth in 1870, one-fifth in 1920, and one-tenth by 1940. The fact that farm products were so greatly needed during World War I, when men were being called away from the farms, probably accounts for the fact that 1920 was the peak year for these women's part in farm work.

Women farmers, managers, and foremen were an even smaller part of all farmers, managers, and foremen—less than 1 in 100 in 1870, 5 in 100 in 1900, and 3 in 100 in 1940.



Women in Trades and Crafts

WOMEN IN TRADES and crafts do not include women in the trading business, whom we talked of under "Businesswomen," but women who have a trade or a craft or are foremen. We do not have information on all of them all the way back to 1870, so that we cannot say what shifts took place before they reached a total of 122,000 in 1940.

One fact is fairly clear. The work of the craftsmen is skilled and has a long apprenticeship, often it calls for physical strength, union regulations have held down the number of people who may enter the craft; as a result, throughout these 70 years, right up through 1940, the crafts were not a field of wide opportunities for women.

There is even some doubt about the small numbers of women whom the census reported in specific crafts. A woman who was reported as a blacksmith, say, may simply have been the owner of a blacksmith shop left her by her husband; women reported as machinists, may have in fact been machine operators. Further, some of the gains between 1930 and 1940 may be not real but the result of different methods used by the census those years in counting and checking.

FOREMEN

The work of foremen is of many types, some much less responsible than others. The facts on their numbers are apt to be more correct than those on other craft workers. The 23,000 women in the field in 1910 went up in 1920, down in 1930, and up again, to 38,000, in 1940. Throughout the 30 years the portion they were of all foremen stayed about the same—somewhat under one-tenth.

All but a fourth of the women foremen in 1940 were in manufacturing, and of those in manufacturing, over half were in the textile products and apparel industries. Over a tenth were in food industries, under a tenth in the metal industries, the rest—considerably less than a tenth in each case—were in the other groups of manufacturing industries.

DECORATORS AND WINDOW DRESSERS

Decorating and window dressing have proved a fast growing though small field of opportunities for women, according to figures since 1900. Homemakers who are taking an ever livelier interest in decorating and redecorating their homes consult private decorators and decorators in department stores. Any number of magazines are spurring them on. Stores vie with one another on ever handsomer and more effective window displays (even calling on well-known artists—a Dali—for something really exotic). Both types of work are a "natural" for women, though training in commercial art and decorating schools is usually required before a woman can qualify for a position.

At any rate, from 300 and less than a tenth of all decorators and window dressers in 1900, women came to be 6,500 and over a fourth of all of them by 1930. Then came the depression, and while a few more women came into the work—less than 300—women dropped back to not much over a fifth of all decorators and window dressers.

PAINTERS

Beginning with 96 in 1870, women came to be over 10,000 of the painters in 1940, and rose at the same time from 1 in a thousand painters to 20 in a thousand—not great numbers, but growing ones, that mean new opportunities for women. A third of the women painters in 1940 were working in new buildings or helping maintain old ones. Two-thirds were in factories and shops, where they were 7 out of every 100 painters; their chief opportunities here were in spray painting.

PAPERHANGERS

Offhand, one does not think of paperhanging as likely to attract many women. Nevertheless, a larger proportion of the paperhangers than of the painters have been women—1 in 100 in 1870, rising to 6 in 100 in 1940. The total number of paperhangers is much smaller than the number of painters however, and the number of women paperhangers in 1940 was not very large—1,700.

UPHOLSTERERS

Upholstering is closely related to women's work in the home, and it is a venerable occupation for women, for women have been in the upholstery business since pre-Revolutionary days. However, there were only 141 women upholsterers in 1870, but their numbers rose steadily to just over 2,000 by 1940. Relative to men, their numbers wavered, from 3 in every 100 upholsterers in 1870, to 7 in 100 in 1920, back to 5 in 100 in 1940.

Women Protective Service Workers

THROUGH THE LONG COURSE of history women have had the role of keepers of the hearth and home and men the role of fighting for and protecting hearth, home, and the community of which they are a part. How much these historical roles have affected men's and women's jobs is shown by men's overwhelming superiority in numbers in the protective services.

Up through the 1940 census no woman had been a fireman, soldier, sailor, coast guardsman, or marine. Women were not accepted in the armed services until World War II.

In other protective services women's part grew with the public's realization of the importance of crime prevention. Women had a growing number of jobs in women's divisions in police departments, as store detectives, and as guards. They never were much more than 1 in 100 of these workers, however, although their actual numbers grew from 20 in 1870 to over 4,000 in 1940.

Remarks

TO SUM UP, about a fourth—over 11½ million¹—of the women in the United States who were 14 or more years old were employed in 1940. They were, in round figures:

White-collar workers	3,440,000	
Manual workers	1,970,000	
Service workers	3,723,000	
In public and private housekeeping		2,832,000
In other service work		891,000
Professional workers	1,493,000	
Businesswomen	319,000	
Agricultural workers	522,000	
Workers in trades and crafts	122,000	
Protective service workers	4,000	

To say that another way, in a group of 100 women workers, chances are there were:

- 30 white-collar workers
- 17 manual workers
- 32 service workers (24 in public or private housekeeping, 8 in other service industries)
- 13 professional workers
- 3 businesswomen
- 4 agricultural workers (half of them unpaid workers)
- 1 worker in trades and crafts

The protective service workers were fewer than 1 in 100.

Earlier chapters have told you something of individual occupations in which women were working and how these jobs developed, to give you a general view of the fields in which women work. If you wish to explore further, there are several publications that will serve you.

¹ Actually there were about 12½ million, including some 981,000 who have not been covered in this account, about 441,000 of them because they did not report their occupations to the census, about 540,000 because there were no groups of workers in earlier years with which to compare them.

First of all, if you wish further detail on the story that has been told here, you will want to refer to the book on which it is based, Janet Hooks' *Women's Occupations Through Seven Decades*, Bulletin 218 of the Women's Bureau of the U. S. Department of Labor.

The Women's Bureau has also published two leaflets, *Your Job Future After High School*, and *Your Job Future After College*, that have very helpful suggestions for girls planning what they want to do when school work is over.

Then, Marguerite Zapoleon of the Women's Bureau has written two series of booklets that tell a great deal about a number of specific jobs. The first series is *The Outlook for Women in Occupations in the Medical and Other Health Services* (Bulletin 203). The account of each job is a separate publication:

1. Physical Therapists
2. Occupational Therapists
3. Professional Nurses
4. Medical Laboratory Technicians
5. Practical Nurses and Hospital Attendants
6. Medical Record Librarians
7. Women Physicians
8. X-Ray Technicians
9. Women Dentists
10. Dental Hygienists
11. Physicians' and Dentists' Assistants
12. Trends and Their Effect Upon the Demand for Women Workers

Mrs. Zapoleon's second series is *The Outlook for Women in Science*, (Bulletin 223):

1. Science (General introduction to the series)
2. Chemistry
3. Biological Sciences
4. Mathematics and Statistics
5. Architecture and Engineering
6. Physics and Astronomy
7. Geology, Geography, and Meteorology
8. Occupations Related to Science

A third series, *The Outlook for Women in Social Work*, is being written. A byproduct of this series, *The Outlook for Women in Police Work*, is ready.

A very useful book, *Occupational Outlook Handbook—Employment Information on Major Occupations for Use in Guidance*, was prepared by the Department of Labor's Bureau of Labor Statistics in cooperation with the Veterans Administration.

The United States Employment Service issues helpful occupational guides. The Office of Education of the Federal Security Agency also issues guidance literature, especially on vocational guidance methods and techniques, but publishes also bibliographies of guidance literature. Recently the Office of Education prepared, and the Women's Bureau published, "Occupations for Girls and Women—Selected References."

The Department of Commerce has a number of booklets for people who want to set up a small business establishment, and the Department of Agriculture has booklets for people who want to take up farm work.

These and other publications you may have by writing the various agencies.