of meats and vegetables rich in the vitamins which bread at present lacks. Or they can, on their doctor's advice, take vitamin chemicals in the form of pills.

For poor people, however, bread and cereals must be the mainstay of the diet for economic reasons. As for vitamin pills—it would cost nearly \$5.00 to buy at present drug store prices the amount of thiamin alone which can be had in enriched flour for less than 50 cents a barrel extra, and this extra 50 cents also pays for the nicotinic acid and iron that will be in the enriched flour.

As soon as enriched flour and bread become available, bakers and consumers will be urged by those guiding the nation's nutrition program to prefer this scientifically constructed loaf to formulas for bread which fail to provide all the nutritional elements called for in the specifications of the new flour.

Thiamin, nicotinic acid and iron are "musts" for the new, enriched bread and flour. Scientists recognize, however, that adding these three chemicals to bread is not the entire answer to the restoring of bread to its ancient estate as the staff of life. The coarse dark breads our grandfathers ate represented about 85% of the contents of the wheat berry. Our modern white flour represents only from 60 to 70%. Lost with this 30% to 40% of the wheat berry are not only thiamin, nicotinic acid and iron, but other members of the vitamin B complex.

Among these are riboflavin, pantothenic acid, vitamin B<sub>6</sub> and many others which have only recently been discovered. As these become available chemically, as thiamin and nicotinic acid now are, they will be added to enriched flour in the amounts considered desirable for the nation's welfare.

National defense needs have speeded the bread and flour revolution to a much earlier start than was expected. Millers had been developing this program, but were waiting for the U. S. Food and Drug Administration to announce a name and standards or definition, for the new flour. That announcement is anticipated in the very near future.

Meanwhile, the Nutrition Planning and Policy Committee of the federal government which is functioning in the national nutrition program with the advice of the National Research Council's committee on food and nutrition, has recognized the need for early action because of the emergency.

There is much reason to believe that a population receiving enough vitamins in its food is better able to withstand the stresses and strains of war and threats of war. This committee has urged the millers to start immediately making a flour which, as it becomes available, will provide an increase in vitamin consumption the country over. And the millers are moving full speed ahead.

Science News Letter, February 8, 1941



DEFENSE TRAINING

An instructor explains the mysteries of a lathe to one of the students in the WPA training course at Newton, Mass.

RADIO

## Television Broadcasting Not Limited to Wealthy

TELEVISION broadcasting is by no means limited to those with millions to invest," Allen B. Du Mont, president of the Du Mont Laboratories, said in a statement on the present status of television.

"It is the writer's honest opinion," he declared, "that a good start in television broadcasting can be made for as little as \$25,000. And that figure can even be shaved if need be. For that sum one can obtain a 50-watt video and audio transmitting setup, which will prove adequate for the average city coverage. The transmitting aerial will have to be at least 250 feet high for satisfactory coverage of the desired area. The film pickup, camera and associated equipment will round out the requirements.

"At this early date almost any kind of program material will prove adequate. Just as the local weekly paper has a place in the community, despite the overwhelming bulk and appeal of the big metropolitan daily, so the local television station can find a place despite the millions that may be talked about for big metropolitan enterprises."

Defense demands are temporarily slowing the development of television, thinks Mr. Du Mont.

"The greatest progress in any one year was scored in this video form of broadcasting during the past twelve months," he stated. "And, were it not for the tremendous demands of our national defense emergency which must be necessarily first in importance over all other activities in the laboratory, factory and transmitting station, television might well be on its commercial way this year."

Science News Letter, February 8, 1941

PSYCHOLOGY

## Uncle Sam Trains Girls To Make Shell Fuses

THE DEXTROUS fingers of girls are now being trained at Newton, Mass., by Uncle Sam for the delicate precision work of making time shell fuses.

Unique among the programs for training men for defense jobs is this WPA training course, the only one where women are being fitted for the defense industries. All those taking training at Newton are girls, and they have proved to be more adaptable than men at learning this particular kind of work.

Nearby watch factories, including the