

PHYSICS

Produce Many Lenses

Makers of linotypes, refrigerators and other massive equipment develop mass production of small lenses for armed forces. Unskilled girls do the work.

► **MAKERS** of linotypes, refrigerators and other massive equipment have now developed mass production of small lenses for the armed forces; unskilled girls with only a couple of days training do the work.

Completed gunsights, periscopes, telescopes and binoculars are tumbling off production lines like so many thousands of match sticks.

Specifications call for accuracy measured in hundred-thousandths of an inch. These instruments match the quality of those turned out by famous German lens makers—and in a fraction of the time.

Now, instead of a highly skilled workman making and assembling each instrument, the job is broken down into a host of small simple operations, each one quickly taught to an unskilled worker. Combining such workers into a mass production line, a gunsight lens is produced from start to finish in a day.

Gunsights must be assembled in air-

conditioned rooms where workers wear lint-proof smocks and never touch a completed lens with anything but chemically cleaned forceps. For a speck of dust lying on the reticle, or sighting piece, would look as big as a boulder to anyone peering into the gunsight.

At the Minneapolis-Honeywell Regulator Company, which is doing such work along with companies like Nash-Kelvinator and Mergenthaler Linotype, they had a lot of trouble cleaning glass on rainy days.

Glass absorbs or releases moisture, depending on the humidity. On days when humidity was falling, moisture inside the glass came out and deposited small particles of salts on the lens surface. This made it almost impossible to clean the glass to the perfection required.

Company engineers solved the problem by developing a humidity system that keeps the moisture content of cleaning rooms the same at all times.

An improved method of photographi-

cally etching cross lines and intricate firing patterns on sighting reticles has also been developed. Unskilled employees turn out the most complicated reticles in half the time formerly required. They replace skilled workmen who cut the designs by hand on pantograph machines.

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NUTRITION

Mold Developed on Food Is Not Always Dangerous

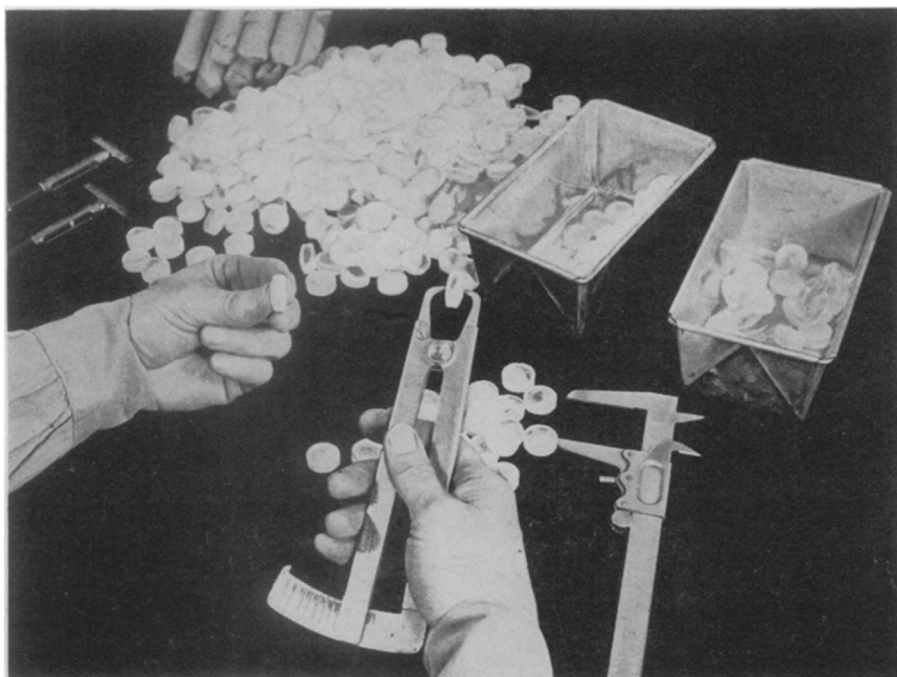
► **WHEN SUMMER** weather is wet as well as warm, many housewives have more than usual trouble with mold on bread or other foods. This year we cannot afford to waste any food, so it is especially important to keep mold from spoiling it. A chemical treatment for bread dough that is said to prevent mold growth has recently been developed, but unless you know that your bread has been so treated, you will want to try yourself to prevent its getting moldy.

The most important thing for fighting mold is to keep the bread dry. Many housewives in the summer keep the bread in the refrigerator where the low temperature, and the dryness in some mechanical refrigerators, stop the growth of the mold. Since most people do not like dry bread, however, it is generally kept in a closed box which, being damp and dark, favors the growth of mold. The bread box should therefore be scalded, sunned and aired frequently. Once a week is not too often.

Mold itself is not necessarily unwholesome. If you are fond of the more highly flavored cheeses, you know that some of them, Roquefort, for example, owe their delicious flavor to molds. Food that has begun to mold can be eaten without danger if the molding has not extended too far and not too much of it is eaten. If there is only a little mold on a loaf of bread that did not show any at the previous meal a few hours ago, probably the bread can be eaten. A little mold on top of a jar of jelly can be lifted off and the rest of the jelly can be boiled to stop further mold growth and then safely eaten. Jelly that has fermented from yeasts that got into it can be eaten, but you may not like the sharp taste.

The real danger of mold on food is that after a while the mold growth produces decomposition, putrefaction and decay of the food, which does make it unfit to eat.

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MASS PRODUCTION—Optical pressings are inspected for thickness to make sure that enough extra glass is available so that the lens can be ground and polished to proper dimensions.