

## • New Machines And Gadgets •

⚙️ **HOMEMADE** air raid whistles that bellow in competition with the commercial models can be welded from odds and ends of pipes and pipe fittings. Hoping to relieve jammed production facilities for air raid equipment and save money for small communities or industrial plants, the inventor has offered his design to anyone interested.

Science News Letter, August 21, 1943

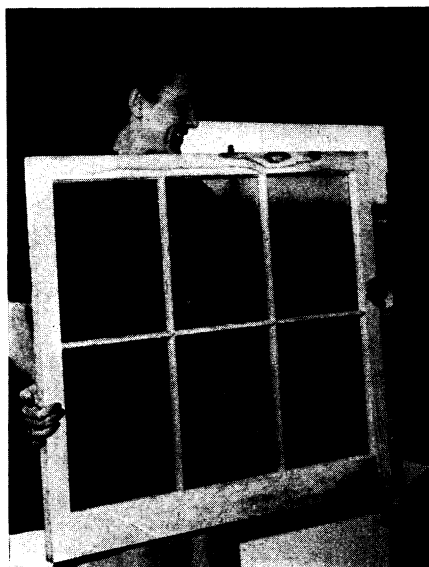
⚙️ **TELEPHONE** merry-go-rounds serve the double purpose of clearing cluttered desks and conserving needed communications instruments. Each turntable contains an inter-plant and an outside phone and rotates to service four desks, replacing eight phones at the usual two-per-desk allotment.

Science News Letter, August 21, 1943

⚙️ **INSOLES** for the Army's jungle boots are made of five layers of plastic screening. They permit more ventilation between the foot and the rubber sole, and are easily cleaned. Field tests show that a sharp reduction of fungus foot diseases may be expected through use of the new insoles.

Science News Letter, August 21, 1943

⚙️ **WIRE SCREEN** sandwiched between sheets of transparent plastic is put in frames to make office doors and partitions that bombs can never shatter, as shown in the picture. Originally designed as a safety measure, the light-weight material is now tagged for post-war use as movable partitions. Offices could thus



be shifted in size and arrangement to fit business needs.

Science News Letter, August 21, 1943

⚙️ **A SELF-LIGHTING** cigaret which ignites when scratched on a striking surface, recently patented, is an improvement over previous self-lighters. It is claimed that the striking tip will not fly off, does not lengthen the cigaret, and creates no noxious odors.

Science News Letter, August 21, 1943

⚙️ **"GRASSHOPPER"** PLANES used by the Army for observation are extremely maneuverable and can operate from small fields and dirt roads. Low landing speed increases their agility. Plastic cockpits give the pilot and observer a wide range of vision. Many of the planes have two-way radio equipment.

Science News Letter, August 21, 1943

⚙️ **SPEED SYNCHRONIZERS** enable pilots of multi-engined war and cargo planes to synchronize automatically all engines at the most efficient engine speed simply by adjusting a single control knob. This device promises to replace the present control system which requires the pilot to manipulate a separate lever for each engine.

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If you want more information on the new things described here, send a three-cent stamp to SCIENCE NEWS LETTER, 1719 N St., N. W., Washington 6, D. C., and ask for Gadget Bulletin 170.

### PHYSIOLOGY

## Old Eyes Must Be Geared To Do Work in War Plant

➤ WHEN mother takes Junior to the eye doctor to have his eyesight checked before he enters school, it might be a good idea to take grandpa and grandma along. Junior may be nearsighted or have astigmatism and need proper glasses so that he will be able to use his eyes without strain and to learn his lessons without the handicap of poor eyesight. Grandma and grandpa may before long be working in a war plant, if they are not already, and their older eyes will probably need special glasses to gear them to certain kinds of industrial work.

Any time after the age of 40 men and women are likely to find it increasingly hard to read the newspaper or the telephone directory or to thread needles. The medical name for this condition is presbyopia. It is due to loss of

elasticity of the eye lens as a result of which the lens can no longer be focused for near vision. Then it becomes necessary to wear eye glasses in order to see clearly at close range, as in reading and sewing. But the eyeglasses that enable grandpa and grandma to read the newspaper and darn Junior's socks may not give them the clear eyesight they need for reading the fine divisions on a micrometer gauge or inspecting the stitching on a parachute or gas mask cover. Even if the reading glasses are adjusted for the difference in working distance from ordinary reading or sewing distance, there may be other eyesight difficulties which would not be noticed in ordinary home life.

Older eyes gradually lose acuity of vision as well as ability to focus on near objects. Dark adaptation slows down and there is difficulty in color appreciation. Grandma knows whether her dress is red or blue but she might have trouble, for example, matching colors in material for camouflage unless some correction in her color appreciation could be made.

The need for paying attention to these seeing problems of old eyes, now that the "young eyes of our nation's men are at work in the bombardier's bay, at watch on the bridge of a destroyer, on guard on the desert," is stressed in a report from the *American Academy of Ophthalmology and Otolaryngology*.

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The new Brazilian steel plant at Volta Redonda will be able next year to produce all the steel needed for Brazilian armament and shipping.

