

occurring in all parts of the world, has undertaken special research in air-raid defense methods. The work of this scientific organization, which before the war was directed toward insuring stability of buildings in earthquake zones, has now been applied to the construction of bomb shelters and other essential buildings in the war zones.

The same institute, together with the Academy of Sciences and other research organizations, has undertaken extensive prospecting for strategic war materials and has taken up for solution problems of military engineering, primarily in the field of aviation.

Two chemical institutes devoted to colloid-electrochemistry and physical chemistry, which had to be moved from Moscow deep into the rear, are now working on subjects closely related to war industries.

One of the most striking war inventions is that of the military engineer Kostikov, awarded the title of Hero of the Soviet Union. The Soviet press said that his innovation had already been successfully tested in battle and had won high praise.

The Soviet Academy of Sciences, which has always expressed warmest admiration for American and British scientists, recently elected as honorary members Dr. Gilbert N. Lewis, professor of chemistry at the University of California; Dr. Walter B. Cannon, professor of physiology at Harvard University; and Dr. Ernest O. Lawrence, professor of physics at the University of California.

To the scientists of America, the Soviet Academy makes this appeal: ". . . We call on you American scientists, our dear comrades, to . . . unite all the efforts of your people in the struggle

against Hitlerism, to mobilize all your science and technique for the victory of democracy over Hitlerite barbarism. The united technical thought of freedom-lov-

ing countries, together with the military valor of our peoples, will assure the defeat of fascism in 1942."

*Science News Letter, October 17, 1942*

#### MEDICINE

## Eye Injuries Frequent

**Reduction of accidents has not kept pace with development of new treatments. Great strides have been made in preventing blindness.**

► REDUCTION of blinding eye injuries has not kept pace with the progress in the past 20 years in reducing blindness from disease, Lewis H. Carris, director emeritus of the National Society for the Prevention of Blindness, charged at a meeting of the St. Louis Society for the Blind.

The Leslie Dana Gold Medal for outstanding accomplishments in the movement for protecting eyesight was presented to Mr. Carris at the meeting.

"Industry as a whole has been slow to realize that investment in eye protection pays dividends both in eyes saved and in lowered cost of production," Mr. Carris declared.

As a happy exception and an example of what can be accomplished, he cited the record of the Pullman Company where in 10 years not one worker of the 25,000 employed has lost an eye.

Greatest progress in saving eyesight, apparently, has been made through laws requiring the use of a prophylactic in the eyes of all newborn babies to prevent ophthalmia neonatorum. In 1906-07, Mr. Carris reported, over one-fourth (28.2%) of new pupils enrolled in schools for the blind were blind because of this disease. By 1941-42 the number had dropped to about 7%.

Mr. Carris paid tribute to Dr. Gerhard Domagk, discoverer of the first of the sulfa drugs which are now saving eyesight threatened both by gonorrhea and by trachoma.

Orthoptic training for development of binocular vision and depth perception, so important in these days of aerial warfare, dates back a century or more but has been enormously improved and refined in the last two decades during which other notable achievements in eyesight saving have been made.

The average person identifies orthoptic training with the correction of crossed eyes. It has lately helped some of the

young men originally rejected for service in the air forces to meet the visual requirements of this branch of the Service, Mr. Carris stated.

Great strides in preventing blindness due to detached retina were noted. Mr. Carris quoted one authority as saying that improvements in operating technique during the past few years have resulted in one-half the cases being reported cured, though once this condition was practically hopeless.

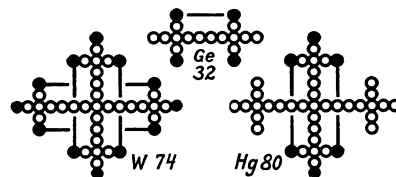
*Science News Letter, October 17, 1942*

#### PHYSIOLOGY

## New Lens Simplifies Examination of the Eyes

► A LENS which changes its focus in the same way that the human eye does, namely, by changing the curvature of its surfaces, has been patented by Robert Graham of Ohio State University. The oculist in testing the eyes, instead of trying one lens after another, may put this single lens before the eye. Turning a little knob changes the focus, and a needle on a dial indicates the power. Two crossed cylindrical lenses of very thin glass (0.0028 inch) with liquid between them are used. Squeezing these together along the edges changes the curvature.

*Science News Letter, October 17, 1942*



Vortex-atom structures of germanium, tungsten, and mercury. Copyright 1942 by Carl F. Krafft. These and many other diagrams are presented with apologies to the physics authorities of today who still tell us that the vortex-atom is an exploded fallacy, that the atom is known to have a nucleus and that the atom cannot be represented by picture or diagram. Free upon request.

C. F. Krafft, 1322 Amherst Ave., Richmond, Va.

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