

An aerosol of naphthoxyacetic acid, one of the plant growth-promoting substances, released in a closed space containing a number of flowering but unpollinated tomato plants and left with them for 16 hours caused the setting of a high proportion of fruits, while untreated controls set very few. The aerosol-treated tomatoes ripened larger than

the less numerous controls, and were all seedless.

It was even found possible to get tomatoes to set fruit in the open field when the aerosol was released in the immediate neighborhood of their flowers. Further experiments are in progress.

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MEDICINE

## New Type Ear Defenders

A synthetic material better than rubber makes models which completely close the ear canal, eliminating almost all but bone-conducted noise.

► NEW TYPES of ear defenders, which shut out practically all noise except that perceived through bone conduction, have been developed by Dr. Norman A. Watson and Dr. Vern O. Knudsen, of the University of California at Los Angeles, in one of the few war research projects of the National Defense Research Committee so far published.

The new defenders are made of Neoprene, one of the synthetic rubbers, which the scientists state in their report to the Acoustical Society of America is "superior to rubber and entirely adequate for the purpose."

The superiority of the synthetic material for ear defenders comes from its being permanent; resistant to lanolin

(which is about the same as ear wax), soap, water and cleaning alcohol; non-irritating and non-toxic; non-inflammable; almost flesh-colored and therefore inconspicuous in the ear; and, after being washed with soap and water, without objectionable odor.

Some 50 different types of ear defenders were designed, molded and tested. The insulations against sound obtained with the widely different types were surprisingly near to the same value. This fact and many special tests, including one in which a heavily padded cloth hood was tied over the listener's face, head and ears, showed that the controlling factor in limiting the insulation possible with ear defenders is probably the vibrations of face and skull bones caused by the air waves.

On the basis of all tests made, two models were finally chosen for use when complete closure of the ear canals is permissible. These look alike, but one was specially designed for unusual shapes of ears. This has an extra compartment filled with an isoplastic, "tacky," non-elastic plastic loaded with metallic or metal oxide dust. Because of this "fill," the ear defender can be deformed to almost any shape of ear and will hold that shape.

A third type of ear defender was developed to provide automatic pressure equalization through it. This was accomplished by a drilled, cotton-packed insert sealed into the dividing wall of one of the ear defender models.

For those who have trouble removing the ear defenders, a modified design provides a longer flap at the outer end.

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**FOR THE NAVY**—The safety of Allied harbors and ships is the big responsibility of the men who have the job of laying and keeping intact the extensive network of anti-submarine and anti-torpedo nets put across the mouth of a port. The floats and buoys which support the tremendously heavy nets get careful attention, as well as the meshes themselves. A seaman is shown in this official U. S. Navy photograph spraying a pile of buoys with anti-fouling paint.

CHEMISTRY

## Scientific Fraternity Elects Honorary Member

► DR. Florence B. Seibert, known for her research on the chemistry of tuberculosis, has been elected a national honorary member of Sigma Delta Epsilon, graduate women's scientific fraternity.

Dr. Seibert, a chemist and bacteriologist of the Henry Phipps Institute of the University of Pennsylvania, has focused her research during the last two decades on the study and isolation of the active principle of tuberculin, which is widely used in the detection of tuberculous infection in man and animals. She has isolated the substance, a protein, in highly purified form and has studied its biological and chemical properties.

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