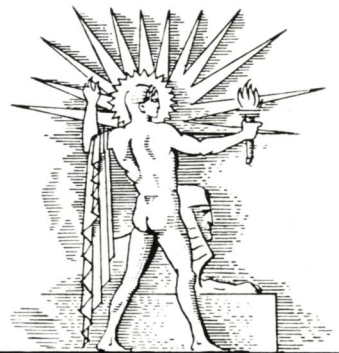


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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE •



August 8, 1942

To Aid Observers

See Page 88

A SCIENCE SERVICE PUBLICATION

Do You Know?

Immunity against *mildew* is imparted to tents if the canvas is treated with copper naphthenate.

The Army has re-designed its five-gallon *water can*, saving 70% to 80% in shipping space.

The *elm leaf beetle* is native to Europe; it was introduced into America in the nineteenth century.

An agricultural experiment station reports 95% effectiveness of ammonium sulfamate solutions in eliminating *poison ivy*.

Lubricants on the propeller shaft of a torpedo must not wash off in salt water, or deteriorate during the long period when the "tin fish" may lie idle before launching.

Portable tents for Army post commands are equipped with "light trapped" ventilators and canvas flaps over the windows, so they can be used at night under *blackout* conditions.

One of the richest mines of *salvaged metal* in England has been from bombed sites, \$4,000,000 worth of bricks and metal having been removed from debris during the past year.

White and very pale colored houses are more highly visible by moonlight than neutral grays, bluish oxide reds, ultramarine, and several other colors now recommended for *air raid safety*.

Question Box

Page numbers of Questions discussed in this issue:

AERONAUTICS

What happens when Zero plane meets Fly- ing Fortress? p. 88.

ANTHROPOLOGY

Who are the Uzbeks? p. 88.

BOTANY

What fungicide causes faster growth of peas? p. 88.

ENGINEERING

Where is the longest suspension bridge in Latin America? p. 92.

FORESTRY

By what hazards may forest fires be started? p. 89.

GENERAL SCIENCE

What new body for promotion of research is planned in WPB? p. 85.

ICHTHYOLOGY

How can wild trout be told from those hatchery raised? p. 88.

MEDICINE

How much blood does the Army and Navy now need? p. 87.

What have age and sex to do with lung cancer? p. 86.

What vitamin relieves the pain after tooth extraction? p. 89.

METALLURGY

What group of scientists is studying the problems of aluminum, magnesium and manganese? p. 84.

MILITARY SCIENCE

How can a camp be hidden by natural vegetation? p. 92.

NUTRITION

What can babies eat to take the place of bananas? p. 87.

Why will meat be scarce after the war is over? p. 93.

PHYSICS

What advantage do neutron pictures have over X-rays? p. 89.

PLANT PATHOLOGY

What Japanese invader is attacking American wheat? p. 89.

PUBLIC HEALTH

What is blamed for the cases of jaundice in the Army? p. 83.

Where have Norway rats been found in large numbers? p. 86.

Why are scientists analyzing dust? p. 86.

RESOURCES

Why will cotton stockings be scarce? p. 90.

ZOOLOGY

How hot is it where the polar bears come from? p. 94.

Most articles which appear in SCIENCE NEWS LETTER are based on communications to Science Service, or on papers before meetings. Where published sources are used they are referred to in the article.

Thickening and thinning of *oil* due to temperature changes can now be partly controlled by addition of a chemical obtained from oil itself.

Stabilizers which keep guns on an even keel, while the tank on which they are mounted bounces over rough ground, are hydraulically operated.

Odorless paints, suitable for painting plaster, brick, cinder blocks, concrete blocks, and similar surfaces, are made with alkyl emulsions.

A mercury "bomb," exploded in *fluorescent lamps* during their manufacture, ejects the exact amount of mercury needed, eliminating large previous waste.

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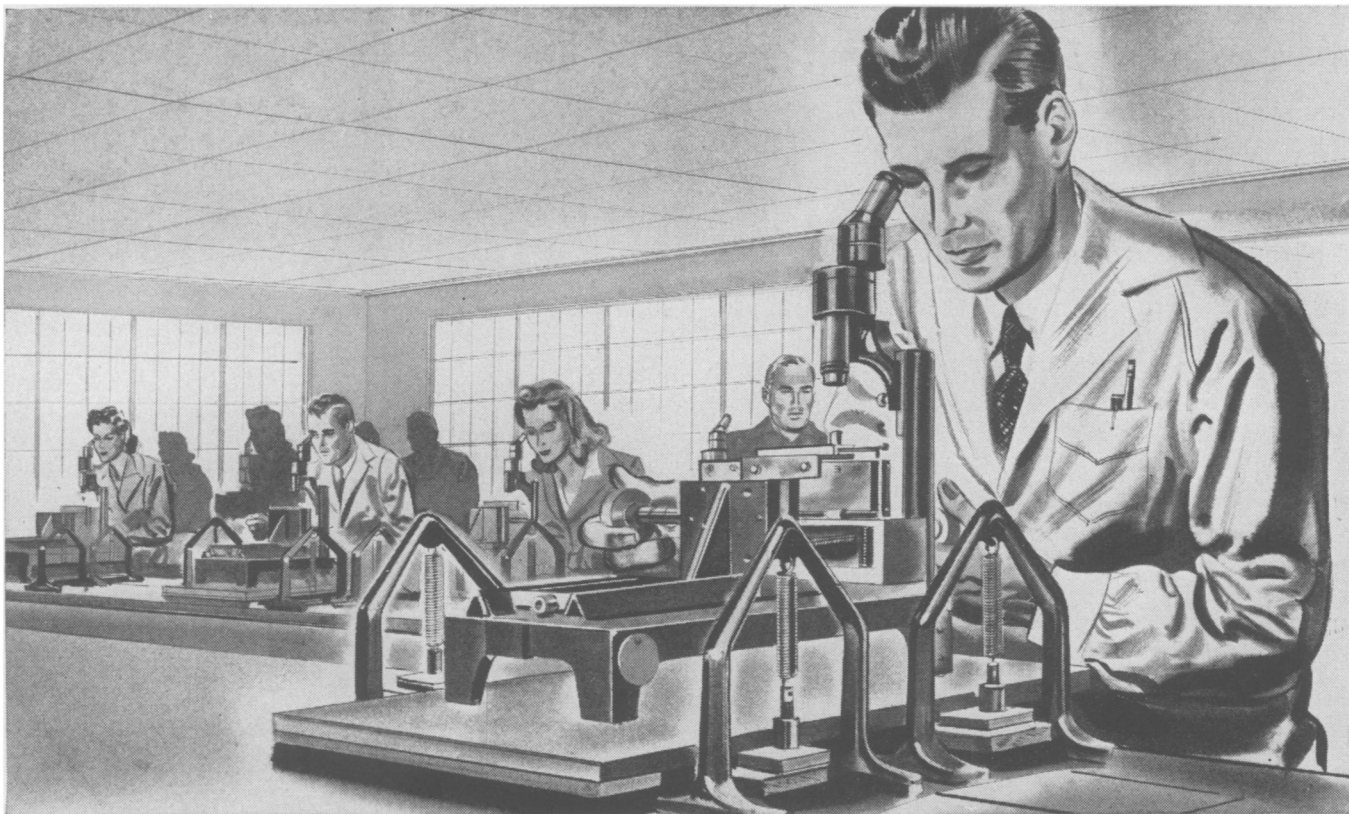
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Dust takes a holiday

A TINY SPECK OF DUST . . . no bigger than a gnat's whisker . . . may loom as large as a battleship, if trapped in the lens system of a bomb sight during assembly

Abrasive grit plays havoc in the mass production of precision-built aircraft motors.

Industrial fog . . . from vaporized coolants for cutting tools . . . reduces lighting levels and may injure the health of workers in blackout plants.

Dust and dirt are the invisible saboteurs that constantly threaten the life of machinery . . . cut down wartime production . . . impair the quality of precision parts when quality counts as never before.

Many filtering mediums have been used to remove air-borne dust and dirt from ventilating systems. None has proved as efficient or as economical as the *Westinghouse Precipitron*.

There's good reason for this. The Pre-

cipitron removes dust *electrostatically* by attracting highly ionized dust particles . . . as small as 1/250,000 of an inch . . . to electrically charged plates. Here they adhere, allowing 90% dust-free air to flow to the ventilating fans.

The Precipitron first saw the light of day in the Westinghouse Research Laboratories when G. W. Penney, electro-physicist, studied the possibility of adapting the electrostatic precipitation principle to ventilating systems.

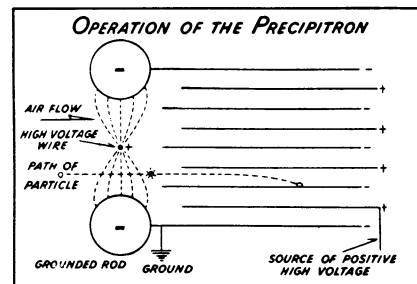
Westinghouse engineers lowered the applied voltage of the older system, from as high as 100,000 down to 13,000 volts. They cut dangerous ozone concentration to less than 1 part in 100,000,000. By separating the ionizing and collecting elements, they increased efficiency . . . and reduced installation, operating, and maintenance costs.

Thousands of Precipitron cells are now supplying dust-free air at Naval air stations where bomb sights are overhauled . . . and in war production plants

making binoculars, range finders, and submarine periscopes.

A combined Precipitron capacity of 15,000,000 cubic feet per minute has been installed in stores, hospitals, textile mills, steel-mill motor rooms, laboratories, hotels, homes . . . wherever dust-free, pollen-free air is essential.

The Precipitron is but one of many examples where Westinghouse "know how" has been applied to speed war production . . . to forge better weapons for victory.



Westinghouse