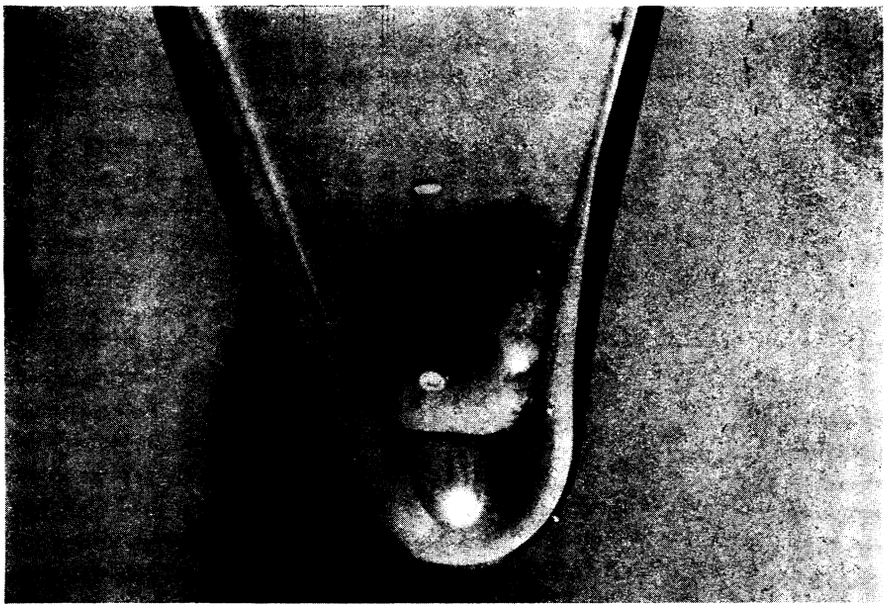

ATOMIC BOMB ELEMENT—A compound of plutonium, isotope 239, one of the first pure compounds ever isolated, is shown as a colored cloudy mass resting on the rather thick bottom of a test tube. What is seen is about 20 micrograms of greenish-brown plutonium hydroxide and magnification is about 50 diameters. This compound was made about three years ago (1942) and the plutonium was made by bombarding uranium with neutrons from a cyclotron, predating by far anything made by the chain reaction used in making plutonium for actual use in the atomic bomb. The two or three white spots and black spot are merely imperfections in the photograph. Photograph from Dr. Glenn T. Seaborg, one of the discoverers of plutonium. Plutonium is one of the two fissionable elements used in the atomic bomb, the other being uranium 235.

they were not purposely introduced. We might in turn export such baneful growths as bindweed or wild morning-glory, Canada thistle and cocklebur, all of which are native to this continent.

Success in biological warfare would call for close cooperation of scientists. Biologists of all kinds would have to work as hard, and perhaps on almost as sweeping a scale, as the physicists when they made atomic energy available for military purposes. Meteorologists would have to be consulted even more closely than they are before the launching of an air attack or the use of the gases and smokes of chemical warfare; for the spores and other propagating bodies of the fungi, bacteria and crop-ruining parasites are very choosy about the conditions of temperature, moisture and sunlight under which they will operate. Geologists and soil chemists would very likely have a word to say about the chances of the germs falling on favorable ground.

Taken all round, then, biological warfare directed against the enemy's food supply would call for the intensive application of much knowledge and skill by many scientifically trained men. But if it proved successful, its effects would be as damaging in the fields as a rain of fire-bombs over a city.

Science News Letter, January 12, 1946

AERONAUTICS

New Long-Range Patrol And Search Bomber

➤ A NEW Navy long-range patrol and search bomber, recently announced, is the first Navy land plane conceived and built especially for this particular purpose. It has a range of more than 3,500 miles with a full patrol load, a speed of over 300 miles an hour, is equipped for fighting if necessary, and carries a ton of the very latest radio and radar apparatus.

The new plane will be designated as the P2V, Neptune, and was built by Lockheed Aircraft Corporation. The first Neptune has already been extensively tested, and additional planes will be delivered soon.

Neptunes are designed to be used to patrol regions around Navy continental and island bases, and to search waters ahead of a moving fleet. For the purpose, a self-sustaining plane is necessary, one that can fly long distances, cover wide expanses with its search radar, protect itself and deliver an accurate attack. From nose to tail, it is fitted for long-out, lone-wolf tasks.

This patrol plane is equipped with two Wright 3350 radial engines and with four-bladed propellers. It can fly on one engine in an emergency. It is armed with six 20-millimeter cannon, 16 five-inch high-velocity aircraft rockets, and four .50-caliber machine guns. It can carry 8,000 pounds of explosives, including two aerial torpedoes.

The gross weight of the Neptune is 58,000 pounds. A high degree of maneuverability is claimed for it because of its particular design. It is a mid-wing monoplane with a wing-spread of 100 feet. Its fuselage is 75 feet long, and the plane has tricycle landing gear. Its normal crew is seven.

Science News Letter, January 12, 1946

ICHTHYOLOGY

Only Three "Left-Eyed" Flounders on Record

➤ THERE ARE only three authentically known cases of winter flounders with eyes on the left side of their heads instead of on the right, states Dr. E. W. Gudger of the American Museum of Natural History. Of these, only one is now represented by an actually existing specimen, which is in the American Museum collections. (*Science*, Dec. 28.)

Flounders and their ichthyological relatives are odd fish. In early youth they settle to the bottom and lie down on one side all the rest of their lives, except for very brief spurts of swimming. Their "underneath" eyes migrate around so that both right and left eyes come to be on the same side of the head.

Some species apparently flop on either side more or less indifferently, so that "right-eyed" and "left-eyed" specimens appear in more or less equal numbers. However, in the winter flounder, known scientifically as *Pseudopleuronectes americanus*, the tendency to lie on the left side and have eyes on the right is practically universal. Only the three exceptions noted by Dr. Gudger have ever been seen.

Science News Letter, January 12, 1946

There are over 50 *electric devices* that can be used in average homes.