AERONAUTICS

## Folding-Wing Planes Save Money All Around

➤ AIRPLANES with folding wings save money for both flyers and airport operators. With folding-wing planes the cost of hangar construction per plane would be cut two-thirds or more, and the number of planes which could be accommodated at a small airfield greatly increased, stated John H. Geisse, assistant to the administrator for personal flying development, Civil Aeronautics Administration.

A standard-type hangar 56 feet square will hold only four airplanes in individual enclosures, Mr. Geisse said. Yet ten planes of the same size with folding wings could be stored in the same size building, each in a separate room with generous locker and bench space. The ten-plane hangar would cost the airplane operator substantially less than the present-day four-plane design, the saving being largely in the kind of doors used and in obviating the need for expensive trusses.

At present there is a serious shortage of small airports in the larger cities and as private flying increases it is expected to become critical. Being able to accommodate two or three times as many planes might make mid-city skyparks more attractive from an investment standpoint, Mr. Geisse pointed out, in calling on manufacturers to consider incorporating folding wings in their new-design personal planes.

*Science News Letter, March 9, 1946*

ENGINEERING

## Individual Tickets Printed as Needed

➤ AIR TRAVELERS and railroad passengers will have less waiting in line when each ticket seller has a new ticket-printing machine, for his individual use, and also a series of push buttons which manipulate light flashes on a reservation board to tell him what spaces are available on a plane or in a Pullman. Both devices are under experimental tryout.

The printing machine on the ticket agent's bench is easy to operate. The agent sticks a two-by-two inch blank ticket into it, presses down the necessary keys, and it comes out with the starting point and destination printed. It also prints the date, the agent's identification, a serial number, and the cost of the transportation and the government tax. The complete process takes but a moment. Considerably less time is required than is now taken in the ordinary process of filling in the destination with a rubber stamp or pen and ink, and stamping the date on the ticket.

Another advantage of the ticket-printing machine, various models of which are now being tested in use by several railroads and airways, is that it makes a permanent record at the same time that it prints a ticket. At the end of his day, the ticket seller has no summary report to make up; it is all given in the machine.

One airline reservation office, at least, is trying out a visual automatic space system which is cutting the time required in making reservations. When a reservation is requested, the clerk presses one of the push buttons before him, and a light flashes on a large reservation board, placed where it can be seen by every reservation clerk in the room, showing what spaces, if any, are available on the particular plane desired.

*Science News Letter, March 9, 1946*

CHEMISTRY

## New, Rich Source of Vitamin C Discovered

➤ A NEW, very rich source of anti-scurvy vitamin C has been discovered in the West Indian cherry. Dr. Conrado F. Asenjo and Dr. Ana Rosa Freire de Guzman, of the School of Tropical Medicine at San Juan, Puerto Rico, state that this is "one of the richest if not the richest edible fruit source" of the vitamin so far described in scientific literature. (*Science,* Feb. 22)

These cherries supply about 34 times as much vitamin C as oranges, it appears from the analyses of the Puerto Rican scientists which give the average vitamin C content of 100 gm of edible cherries as 1,707 mg. One cherry, it seems, would supply four or more times the amount of vitamin C recommended by nutrition authorities for the day's ration of this vitamin.

These cherries, commonly called acerola in Spanish, grow on small trees native to tropical and subtropical America. They are fleshy, bright red when ripe and have what the scientists call "an agreeably acid taste." About six of them would weigh one ounce.

Botanists will recognize these cherries under the name, *Malpighia punicifolia L.,* and will know that in spite of their common name, they are only distantly related to the cherry family.

*Science News Letter, March 9, 1946*

# IN SCIEN

MEDICINE

## Epilepsy Remedy Controls Abnormal Behavior As Well

➤ TRIDIONE, a new compound recently reported effective in controlling petit mal epilepsy, also succeeds in controlling the psychomotor attacks which some epileptics have, Dr. Russell N. DeJong, of the University of Michigan Medical School, reports. (*Journal, American Medical Association,* March 2).

Patients with psychomotor attacks, or psychic equivalents or variants as they are also called, do not have convulsions in the attack though they may have some contortion of the trunk muscles or may stand immobile with a slow rotation of the body, Dr. DeJong points out.

Abnormal or automatic and sometimes violent behavior, with confusion and loss of memory for the attack, are the chief characteristics of psychomotor attacks. The patient may commit crimes during an attack. The seizure may last for a few minutes or many hours and the patient is usually not aware of what he is doing during an attack.

Dr. DeJong reports improvement, sometimes spectacular, in five cases treated with tridione. The drug is taken by mouth three times a day. Since most of the patients also had grand mal and petit mal attacks as well as the psychomotor ones, other drugs to control these were also needed.

*Science News Letter, March 9, 1946*

CHEMISTRY

## Illinois Chemist Awarded Royal Society Medal

➤ DR. ROGER ADAMS, head of the department of chemistry of the University of Illinois and chairman of the board of directors of the American Chemical Society, has been awarded the Davy Medal of the Royal Society of London for his work in organic chemistry and his recent research in the alkaloid field.

Dr. Adams is now in Berlin as a special adviser to Lt. Gen. Lucius D. Clay, deputy military governor of the American occupation zone in Germany. During the war, he was in Washington with the NDRC.

*Science News Letter, March 9, 1946*

# CE FIELDS

BIOLOGY

## Motherless Male Insects Produced in Laboratoy

➤ FEMALE INSECTS in the laboratory of Dr. Anna R. Whiting of the University of Pennsylvania have laid eggs and new male insects have hatched from the eggs—yet the females were not their mothers. They had no mothers at all, only fathers.

This biological paradox resulted from the treatment of the female insects, before mating, with heavy ultraviolet irradiation. This destroyed or disabled the heredity-bearing chromosomes in their still-unfertilized eggs. When they were subsequently mated with males and the eggs thus fertilized, nothing but male chromosomes were available to form the essential parts of the new nuclei. So the new insects grew up with no trace of maternal heredity; their characters were all derived from the male parents.

The insects used in Dr. Whiting's experiments were tiny, gnat-sized wasps known to entomologists as *Habrobracon juglandis,* which play a useful role in orchard economy by laying their eggs in the eggs of destructive species of moths. This is the first known instance of growth to full maturity of motherless individuals from irradiated eggs. As much as 35 years ago, early stages in animal development from such eggs were observed, but these animals with only male parents died during larval development.

This experimental production of animal forms with only the father's kind of chromosomes in their cells has been named androgenesis, which is Greek for "birth from a male."

*Science News Letter, March 9, 1946*

ELECTRONICS

## Television on Bikini Will Give Close-Ups

➤ SUCH VARIED items as goats and television will play important roles in the atom bomb tests on Navy ships at Bikini Atoll in the Marshall islands this summer, Rear Adm. W. H. P. Blandy, commander of the task force, declared.

Admiral Blandy said television cameras on Bikini during the tests would give more distant observers a closer view of the experiments, while goats, pigs and sheep will be aboard the ships bombed to test biological reactions to the explosions.

On Bikini, the television cameras will be placed to give a clear picture of the lagoon where the tests will be made. Aboard the observing ships, the television screens will reveal closer pictures of the explosions than any observer could safely get otherwise.

Tethered to the decks of the ships, the animals will be closely examined after the bombings to determine some of the possible effects of the explosions on humans. The task force commander said that he regretted the necessity of using the animals, but declared that medical officers considered it essential to obtain more data on the bomb's effect on living animals, particularly in reference to shipboard conditions.

Admiral Blandy revealed that extensive preparations are already underway at Bikini for the tests. Minesweepers, now operating in the lagoon where the operations will be held, have destroyed 38 Japanese naval mines in the entrance, and they found five more mines washed up on one of the islands nearby. Hydrographic surveys are being made, and the ships that will be bombed are being made ready at Pearl Harbor.

The first test, aerial atom bombing of ships in the lagoon at Bikini, is now scheduled for May 15, while Admiral Blandy said the surface explosion will be done within four to six weeks after the first bombing.

The third atomic test, exploding a bomb underwater, will definitely not be conducted until next year, he reported.

*Science News Letter, March 9, 1946*

GENERAL SCIENCE

## Pure Science Fellowships To Be Resumed

➤ FELLOWSHIPS to young scientists for work on pure science research projects in Westinghouse laboratories will be awarded in May, it is announced by the Westinghouse Electric Corporation, which is resuming a practice suspended during the war. Three will be chosen. The subjects of research will be left to them, and need not have direct immediate application to Westinghouse's needs.

To be eligible for selection the young men must have training equivalent to that represented by a doctor's degree from a recognized university. The fellowship has a value of $3,300 a year.

*Science News Letter, March 9, 1946*

PHYSICS

## Meteorites Are Menace To Future Rocket Ships

➤ WHEN A ROCKET ship succeeds in rising into the upper atmosphere, it may have a catastrophic collision with a meteorite, warns Dr. Joseph Kaplan, University of California at Los Angeles, physicist.

Pointing out that the slowest meteorites speed into the earth's atmosphere at a velocity of about 30,000 miles per hour, Dr. Kaplan says that a rocket ship wouldn't have much chance in event of a collision. Faster meteorites, he adds, travel as fast as 180,000 miles per hour.

Upwards of 75,000,000 meteorites plunge into the earth's atmosphere every day, reports the physicist, but almost all of them are vaporized by friction with the air before they can strike the earth. If a rocket ship were sent into the upper atmosphere, he says, it might collide with a meteorite that had not yet vaporized.

Dr. Kaplan says that fortunately meteoric swarms are not very dense, with the most concentrated swarms averaging about one gram (1/30 ounce) of material in 20 cubic miles of space.

*Science News Letter, March 9, 1946*

ELECTRONICS

## Standards of Electrical Resistance Changed Little

➤ BASIC STANDARDS of electrical resistance established over ten years ago are still good to one part in a million, the National Bureau of Standards has announced.

Since every measurement of energy and power made by the electrical industry depends ultimately on the correctness of the ohm and the volt, frequent comparisons are made with the group of standard resistors and standard cells maintained at the Bureau of Standards.

Intercomparisons of resistance standards conducted by James L. Thomas, chief of the section on resistance measurement at the Bureau, have shown wirewound resistors he designed and constructed over a decade ago to be superior to any previously used. They are so stable in value that, of a group of ten, not one had changed from the average value of the group by more than one part in a million, equivalent, to a change in linear measurement of about one foot in a distance of 200 miles.

*Science News Letter, March 9, 1946*