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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • MARCH 11, 1944



Future Scientists Visit White House

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A SCIENCE SERVICE PUBLICATION

KEEPING UP WITH
Electricity

1000 REVOLUTIONS PER SECOND!

That's the speed of newest Westinghouse motor, producing a tool surface speed of 7,000 feet per minute. This 4 horsepower induction motor has a rotor only 2 inches long, diameter $1\frac{1}{4}$ inches. Westinghouse engineers are now developing a motor to go *twice as fast*.

B'R'R'R'R' . . . A polar bear would be right at home at 20° below zero in the Westinghouse "igloo" at East Pittsburgh. This cold chamber is 1500 times as large as the average electric home refrigerator. Here, Westinghouse engineers test ice-coated circuit breakers and other electrical switching equipment, to guarantee operation under worst winter conditions.

HIGH LIFE IS HARD on carbon generator brushes in high-flying bombers. They used to wear down to the pigtales in an hour or two, at 30,000 feet. Now Westinghouse engineers have developed a chemical treatment that keeps the brush face lubricated at stratosphere heights. Result: *fifty-fold* increase in brush life . . . enough for a dozen raids over Berlin.

EVER SEE A MILLIONTH of an inch? Probably you never will—but the Electrigage can *feel* as little as twelve millionths. Developed by Westinghouse and Sheffield Corporation, it can measure with a precision equal to finding an error of three-quarters of an inch in a mile. Infinitesimal movement of gauging stylus induces a tiny current, which is amplified 10,000 times.

AIR IS HEAVY STUFF when you start pushing it around at 400 miles an hour. That's why U. S. Army needed a 40,000 horsepower electric motor to create a man-made hurricane, for testing airplanes in Wright Field wind tunnel. It is the world's largest wound-rotor induction motor, designed and built by Westinghouse engineers.



Chemical analyses — *right now!*

Above is the laboratory model of the Westinghouse mass spectrometer, which sorts out dissimilar molecules according to their mass, and does it almost as fast as you can snap your fingers.

The mass spectrometer provides a new way to get the quick, accurate analyses that are needed to maintain precise process control. Take the synthetic rubber industry, for example. Formerly, five men took as long as three days to complete necessary chemical tests in the processing of artificial rubber—which meant that the results were often too late to be useful.

The new electronic "chemist," the Westinghouse mass spectrometer, now makes these tests in about 15 minutes.

For leadership in the electrical solution of industry's problems, look to Westinghouse. *Westinghouse Electric & Manufacturing Company, Pittsburgh 30, Pennsylvania.*

Tune in John Charles Thomas, NBC, Sundays, 2:30 p.m., E.W.T.

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ing born the scientific advances that will make our world immeasurably safer and happier.

Pioneering on this new frontier of research are RCA Laboratories in Princeton, New Jersey. Today RCA Laboratories are devoted to providing the fighting forces of the United Nations with the best radio and electronic equipment available. Tomorrow, this same skill will continue to serve America in creating new and finer peacetime products.

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TUNE IN! . . . RCA's great new show, 7:30-8:00 P.M. EWT, over the Blue Network, every Saturday ★ BUY WAR BONDS EVERY PAY DAY ★