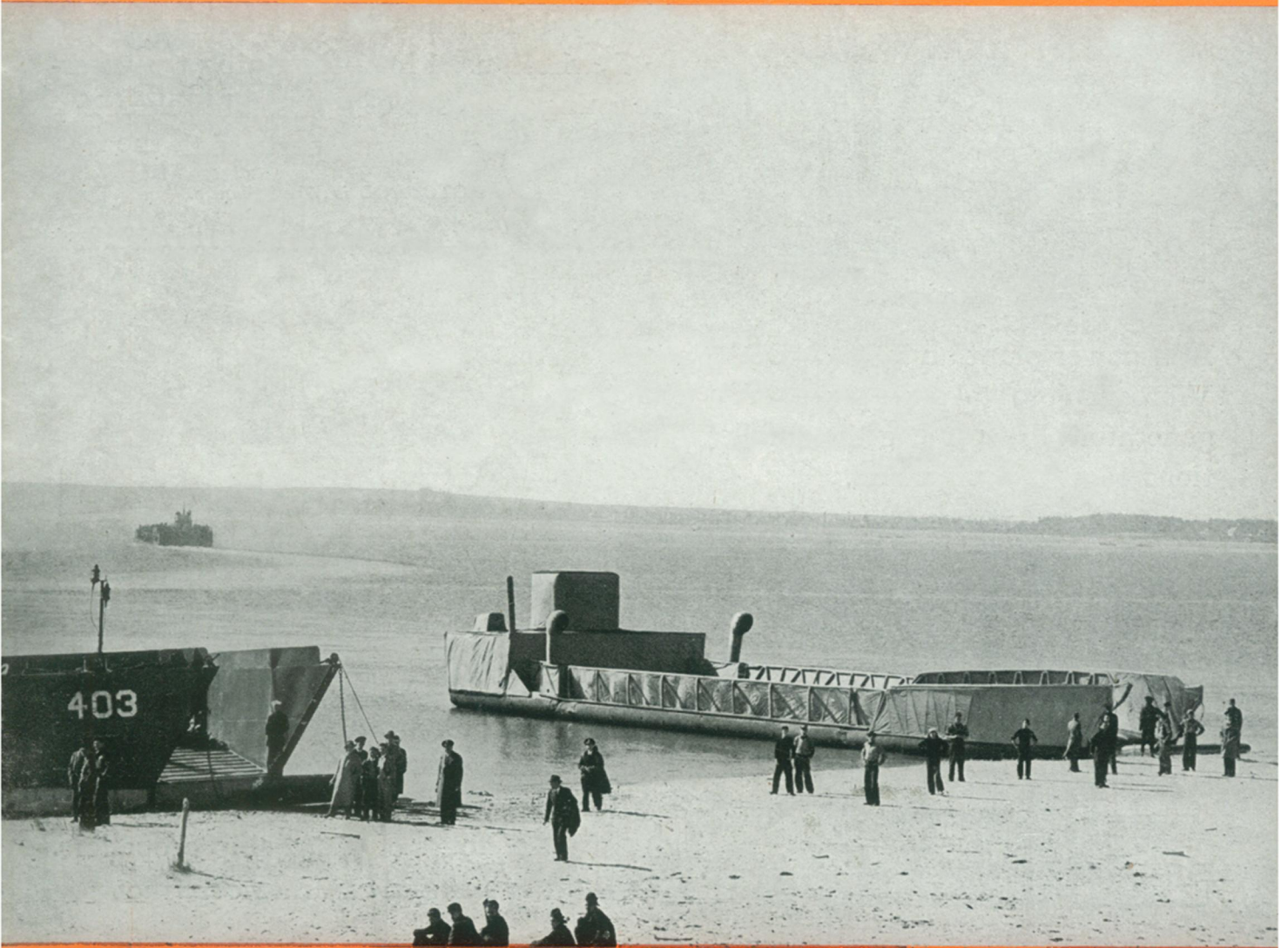


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SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • DECEMBER 15, 1945



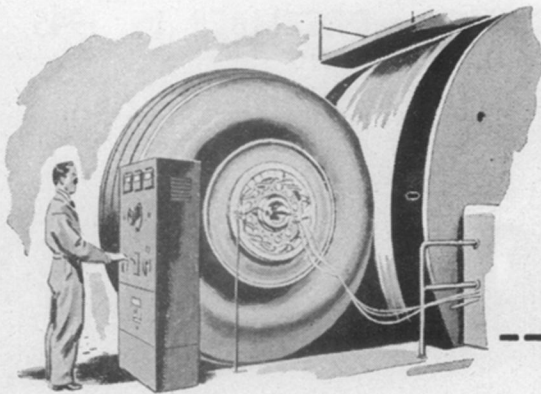
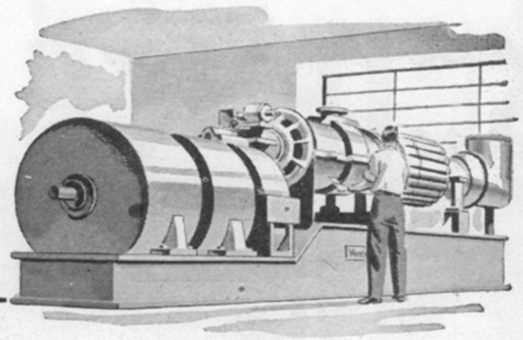
Deceiving Decoy

See Page 374

A SCIENCE SERVICE PUBLICATION

In a laboratory a **SCIENTIST** experiments with a new gas turbine—using heat-resisting alloy blades that are far stronger, at 1100° F., than ordinary steel at room temperature.

...the name on the **GAS TURBINE** is Westinghouse.



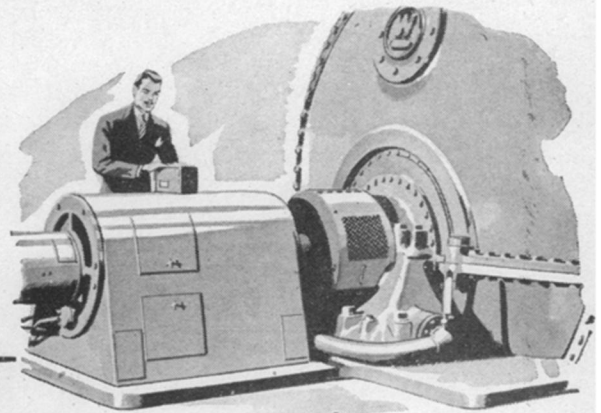
On a special machine a **TESTER** employs a Rototrol* for smoothly accelerating a large flywheel, used in determining the wear-resisting qualities of tires and brakes—for huge air transports of the future.

...the name on the **ROTOTROL** is Westinghouse.

*Registered Trademark

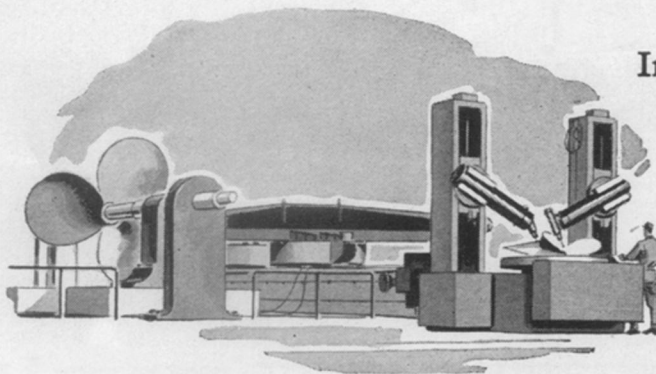
In a power plant an **ENGINEER** uses a Vibrograph to “take the pulse” of a turbo-generator . . . recording the smallest vibrations as a trace on a film.

...the name on the **VIBROGRAPH** is Westinghouse.



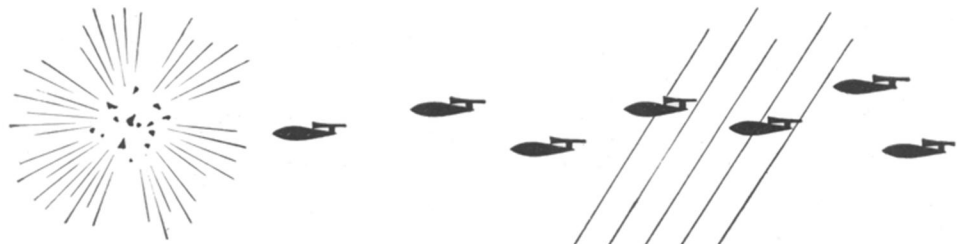
In a manufacturing plant an **OPERATOR** uses an electronic control to regulate the movement of milling cutters—for accurately machining irregular contours on giant ship propellers.

...the name on the **ELECTRONIC CONTROL** is Westinghouse.

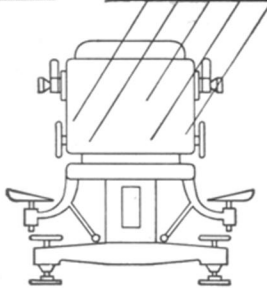
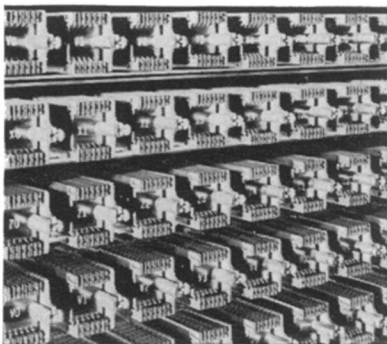
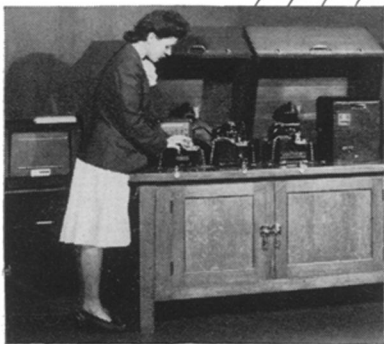


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PLANTS IN 25 CITIES OFFICES EVERYWHERE

NOW THAT Westinghouse technical skill and “know-how” have turned from war to peace, expect great things . . . from Westinghouse research, engineering, and precision manufacture.



Target practice with Relays and Keys



(Left to right) The operator punches the problem data on tape, which is fed into the computer. The solution emerges in the teletype receiver. Relays which figure out the problem look like your dial telephone system.

In designing the gun-control systems which shot down enemy planes, Army ballistic experts were faced by long hours of mathematical calculations.

So Bell Laboratories developed an electrical relay computer. It solved complicated problems more accurately and swiftly than 40 calculators working around the clock.

Resembling your dial telephone system, which seeks out and calls a telephone number, this brain-like machine selects and energizes elec-

tric circuits to correspond with the numbers fed in. Then it juggles the circuits through scores of combinations corresponding to the successive stages of long calculations. It will even solve triangles and consult mathematical tables. The operator hands it a series of problems with the tips of her fingers—next morning the correct answers are neatly typed. Ballistic experts used this calculator to compute the performance of experimental gun directors and thus to evaluate new designs.

In battle action, Electrical Gun Directors are, of course, instantaneous. Such a director helped to make the port of Antwerp available to our troops by directing the guns which shot down more than 90% of the thousands of buzz bombs.

Every day, your Bell System telephone calls are speeded by calculators which use electric currents to do sums. Even now, lessons learned from the relay computer are being applied to the extension of dialing over toll lines.



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EXPLORING AND INVENTING, DEVISING AND PERFECTING FOR CONTINUED IMPROVEMENTS AND ECONOMIES IN TELEPHONE SERVICE