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# SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • OCTOBER 7, 1944



Jet-Assisted Takeoff

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A SCIENCE SERVICE PUBLICATION

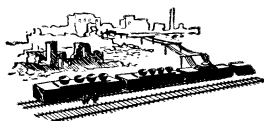
## Portrait of a Scientist

### KEEPING UP WITH *Electricity*

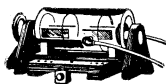
**SYNTHETIC FIREFLIES . . .** New Westinghouse fluorescent marker lamp rivals the firefly in economy of light generation. Tiny lamp, consuming only 1/10th watt, will prevent mishaps on dark stairsteps. Unlike lightning bug, it can be kept glowing continuously—at practically no cost.



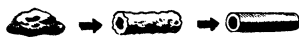
**1/50,000,000th OUNCE . . .** That's the weight of a single layer of oxygen atoms the size of an air-mail stamp. Westinghouse research engineers have built a delicate balance that measures the weight of such a microscopic layer of oxide on metal—to determine resistance of special alloys to high temperatures.



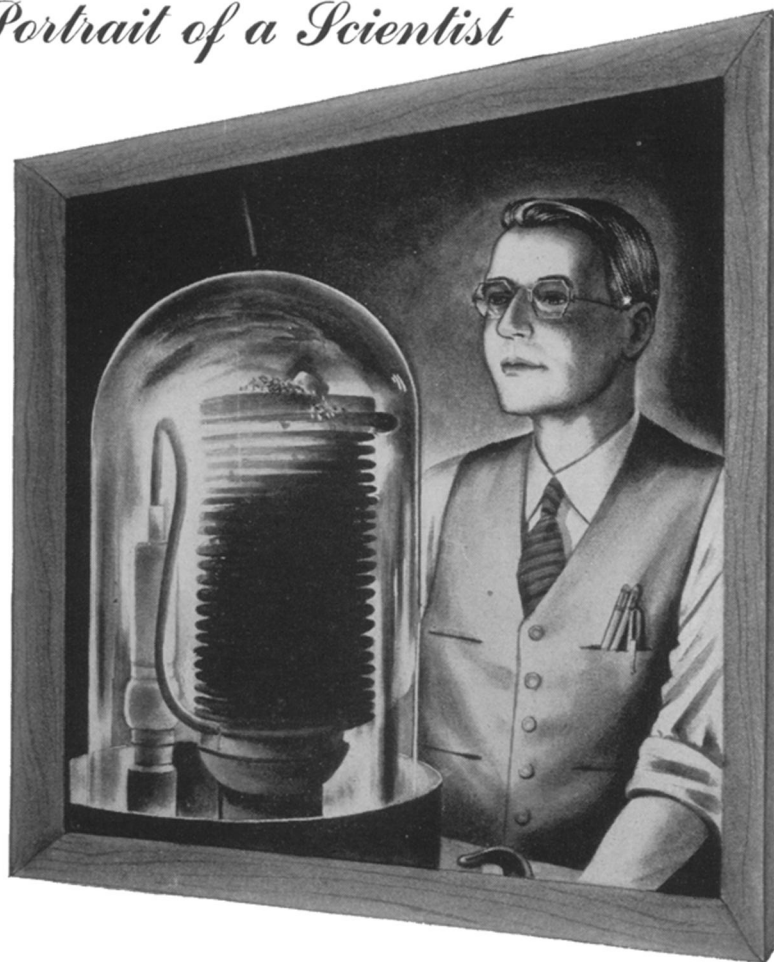
**POWERHOUSE ON WHEELS . . .** The retreating enemy knows that the quickest way to paralyze a city is to destroy its powerhouse. Advancing Allies know that the quickest way to restore order is to restore power. A 5000 KW power train, built by Westinghouse, moves in on railroad tracks, hooks up to power lines, starts boiler and generator . . . then lights come on, danger of epidemic is reduced, and order emerges.



**INSIDE STORY . . .** Transparent Lucite bearings now permit research engineers to visualize performance of lubricating oil in bearings, subjected to varying operating speeds and pressures. Red pigment shows where oil goes and what it does.



**PREFORMED PLASTICS . . .** New Westinghouse process in plastics manufacture "beats" resins into cellulose fibre, then shapes mixture over perforated copper form. Plastic is peeled off and dried, then placed in heated mold and pressed into final shape. Saves time in making reinforced plastics of intricate shapes.



### creating a better yardstick for testing wartime metals

Spectrum analysis provides the *quickest* and *most accurate* method for checking the composition of metals used in making guns, planes, tanks and ships.

Iron has long been used as a *yardstick of comparison* in spectrography—because of the large number of lines in the iron spectrum.

Formerly, the best standard obtainable was *iron only 99.9 per cent pure*—containing impurities that produced confusing lines in spectrographic pictures.

Westinghouse research engineers tackled the difficult problem of producing a purer iron—a *better yardstick* for testing wartime metals.

They accomplished this by fusing the

purest iron obtainable in a high-frequency induction furnace, surrounded by an atmosphere of hydrogen gas.

**Result: iron 99.99 per cent pure—containing only 1 part metallic impurities in 10,000 parts of absolutely pure iron!**

Today, this ultra-pure iron is "mass-produced" by Westinghouse at the rate of 1000 pounds per year—and is used in all parts of the anti-Axis world to improve the quality and performance of war material.

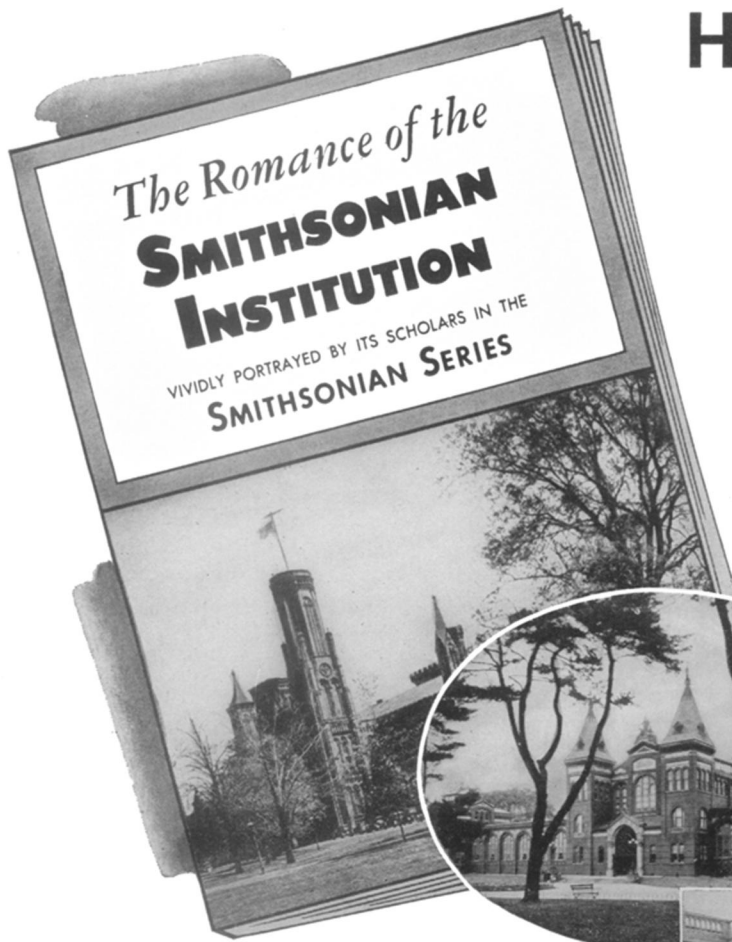
A significant contribution, by Westinghouse, to industry at war and in the days of peace to come. *Westinghouse Electric & Manufacturing Company, Pittsburgh 30, Pennsylvania.*

# Westinghouse

PLANTS IN 25 CITIES OFFICES EVERYWHERE

WESTINGHOUSE PRESENTS John Charles Thomas, Sunday 2:30, EWT, NBC  
Ted Malone, Monday, Wednesday, Friday 10:15 pm, EWT, Blue Network





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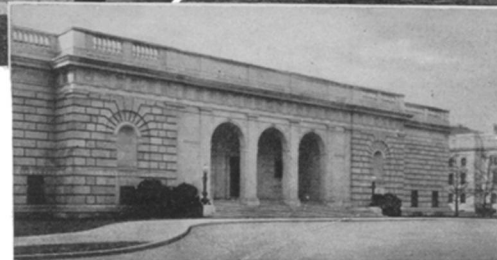
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