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# SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE • JULY 14, 1945



Agile Aerialist  
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A SCIENCE SERVICE PUBLICATION

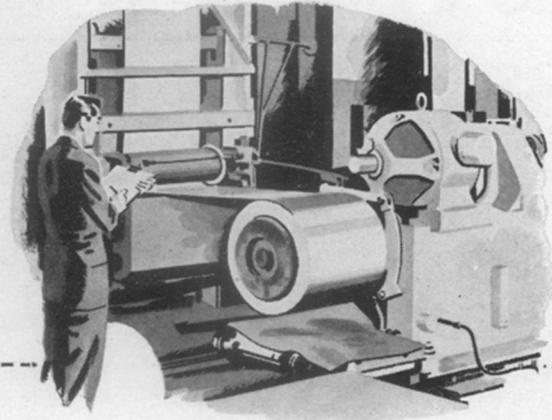
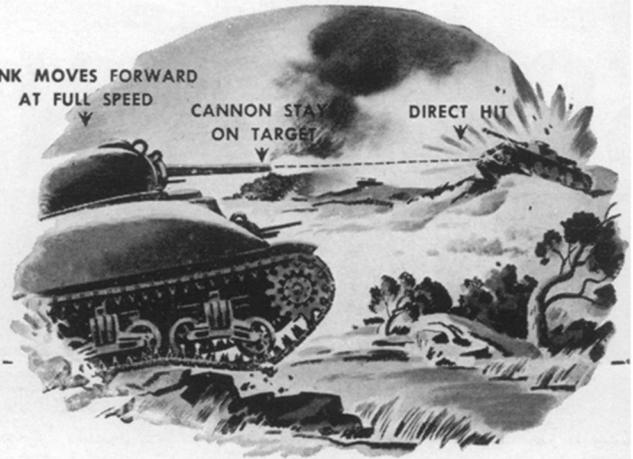
In an Army tank a GUNNER fires with deadly accuracy — while charging across rough terrain — because of a gun stabilizer, officially recognized as one *outstanding advantage* of our tanks over those of the enemy.

... the name on the GUN STABILIZER is  
*Westinghouse.*

TANK MOVES FORWARD  
AT FULL SPEED

CANNON STAYS  
ON TARGET

DIRECT HIT

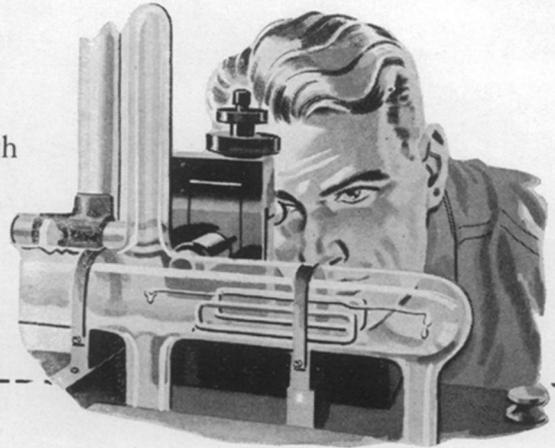


In a steel mill an ENGINEER uses an induction heater to fuse a mirror-like surface on dull electrolytic tin plate—helping to conserve *two-thirds* of our war-scarce tin supply.

... the name on the INDUCTION HEATER is  
*Westinghouse.*

In a laboratory a SCIENTIST uses a micro-balance to weigh a *single layer of oxygen atoms*— $1/50,000,000$ th ounce — to determine the corrosion resistance of special alloys at high temperatures.

... the name on the MICRO-BALANCE is *Westinghouse.*



In a bomber a BOMBARDIER “pin-points” his target with an American bombsight — controlled by a gyroscope which is driven by an electric motor, balanced to  $1/10,000$ th ounce.

... the name on the ELECTRIC MOTOR is *Westinghouse.*



**Westinghouse**  
PLANTS IN 25 CITIES OFFICES EVERYWHERE

TODAY — Westinghouse is producing vital war equipment and weapons, many of which must remain secret until after final Victory.

TOMORROW — These wartime developments will be turned to peaceful uses — products for industry and the home, backed by Westinghouse research, engineering, and precision manufacture.

## DUPLICATING A GERMAN VACUUM TUBE IN 3 DAYS

Just behind the battlefield, a telephone system lay dead. The retreating enemy, hoping to return, had not blown it up, but had taken with them its vacuum tubes. To put it back to work, the General ordered 1000 new tubes — spot delivery.

A sample tube was flown back to the United States and brought to Bell Telephone Laboratories. It was of German design, different from any American tube in both dimensions and characteristics. Could it be duplicated soon? The job looked feasible. Within three days, try-out models were on their way to Europe. Three weeks later, Western Electric Company had made and delivered every tube. They were plugged in; vital communications sprang to life.

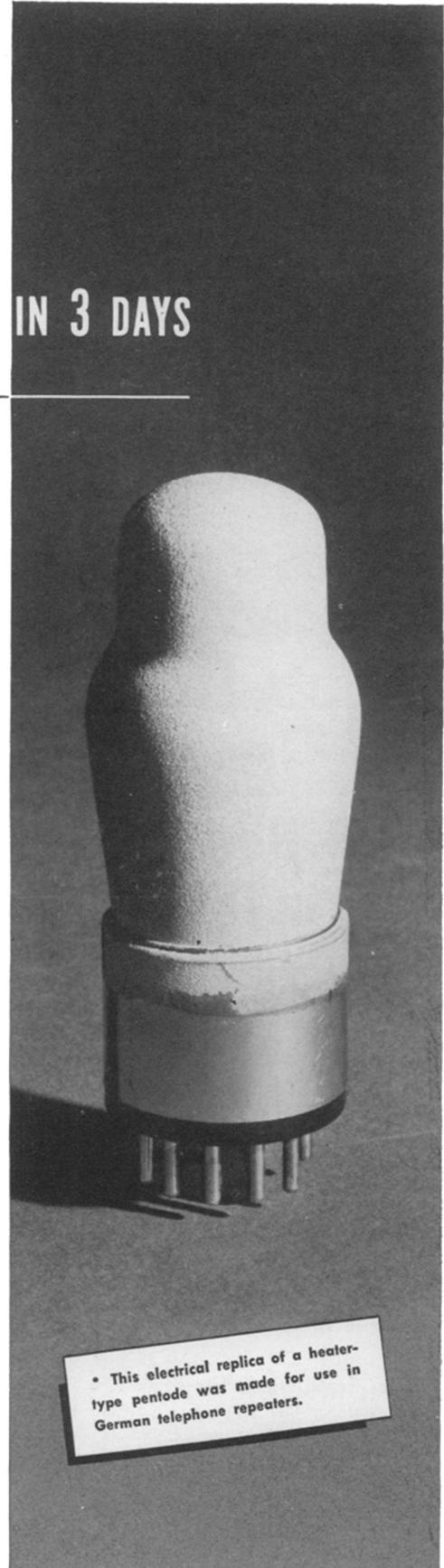
Vacuum tubes are an old story for Bell Laboratories scientists. Back in 1912 they made the first effective high vacuum tube. Three years later, they demonstrated the practical possibilities of tubes by making the first radio talk across the Atlantic, pointing the way to radio broadcasting. Since then, they have developed and utilized the vacuum tube wherever it promises better telephone communication — there are more than a million in your Bell Telephone System.

Today, Bell Telephone Laboratories is solving many of the toughest tube problems faced by the Armed Forces. When the war is over, it goes back to its regular job—keeping American telephone service the best in the world.



**BELL TELEPHONE LABORATORIES**

Exploring and inventing, devising and perfecting for our Armed Forces at war, and for continued improvements and economies in telephone service.



• This electrical replica of a heater-type pentode was made for use in German telephone repeaters.