

15¢



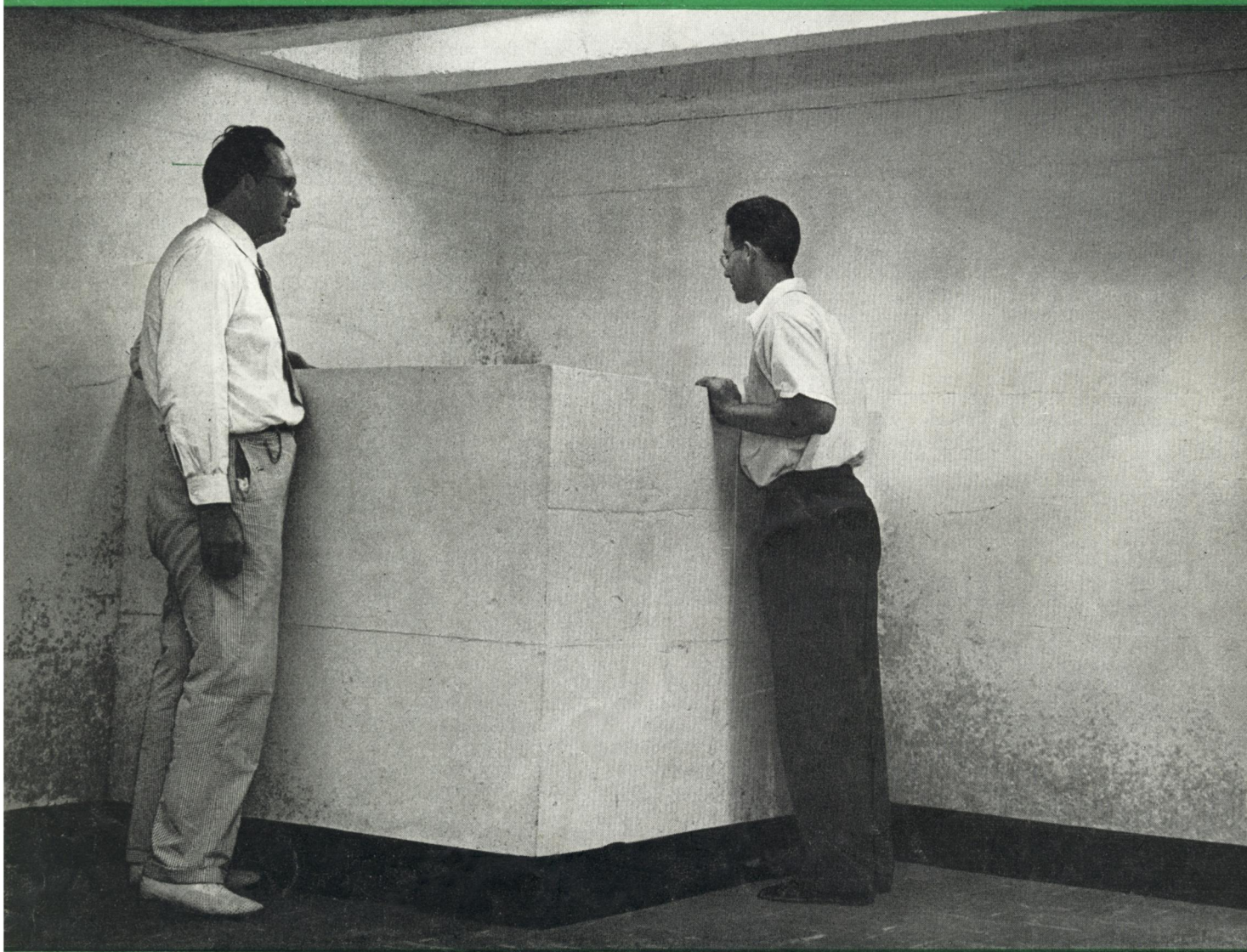
JULY 8, 1950

SCIENCE NEWS LETTER



®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



Radioactive Crypt

See Page 20

A SCIENCE SERVICE PUBLICATION

\$5.50 A YEAR

VOL. 58 NO. 2 PAGES 17-32



Examining specimen on metallographic microscope at Bell Telephone Laboratories

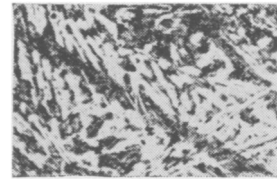
The look that keeps telephone costs **DOWN**

Through his microscope this Bell metallurgist examines a bit of material which is proposed for telephone use. From what he sees of grain structure, he gains insight into performance not provided by spectrum or chemical analysis. He learns how to make telephone parts stand up longer, so that telephone costs can be kept as low as possible.

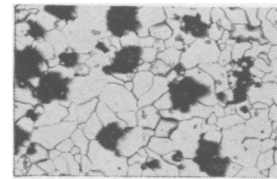
The items which come under scrutiny are many and varied, ranging from manhole covers to hair-thin wires for coils, from linemen's safety buckles to the precious metal on relay contacts.

In joints and connections—soldered or welded, brazed or riveted—photomicrographs reveal flaws which would escape ordinary tests. They show if a batch of steel has the right structure to stand up in service; why a guy wire let go in a high wind or a filament snapped in a vacuum tube; how to make switchboard plugs last longer.

In their exploration of micro-structure, Bell Telephone Laboratories scientists have contributed importantly to the metallographic art. You enjoy the benefits of their work in the value and reliability of your telephone service, and its low cost.



Photomicrograph of white cast iron which is hard and brittle.



Same iron rendered malleable by heat treatment. Shows spots of nodular carbon.

BELL TELEPHONE LABORATORIES



WORKING CONTINUALLY TO KEEP YOUR TELEPHONE SERVICE BIG IN VALUE AND LOW IN COST