

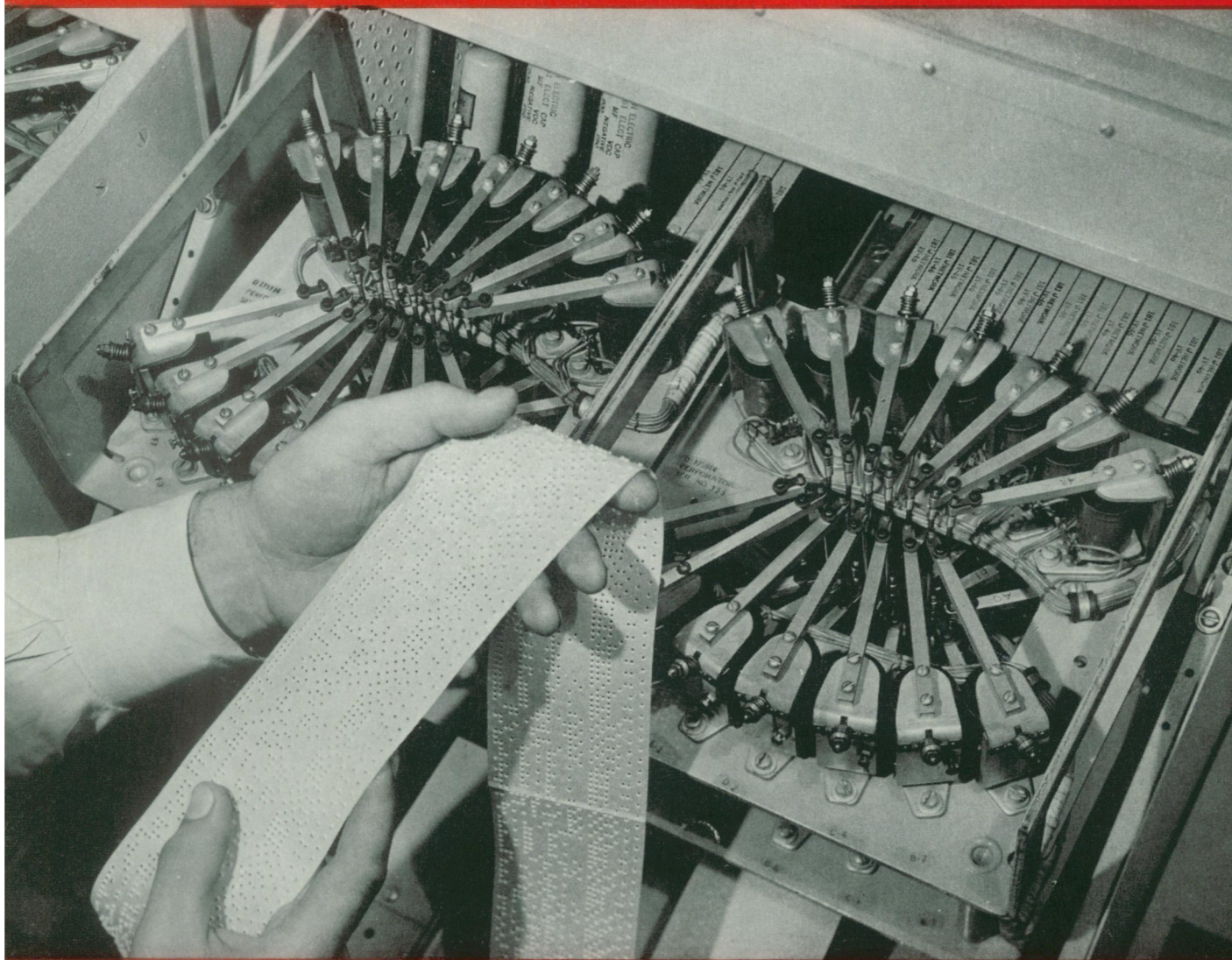
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December 18, 1948

SCIENCE NEWS LETTER

In This Issue—SCIENCE REVIEW OF THE YEAR

THE WEEKLY SUMMARY OF CURRENT SCIENCE



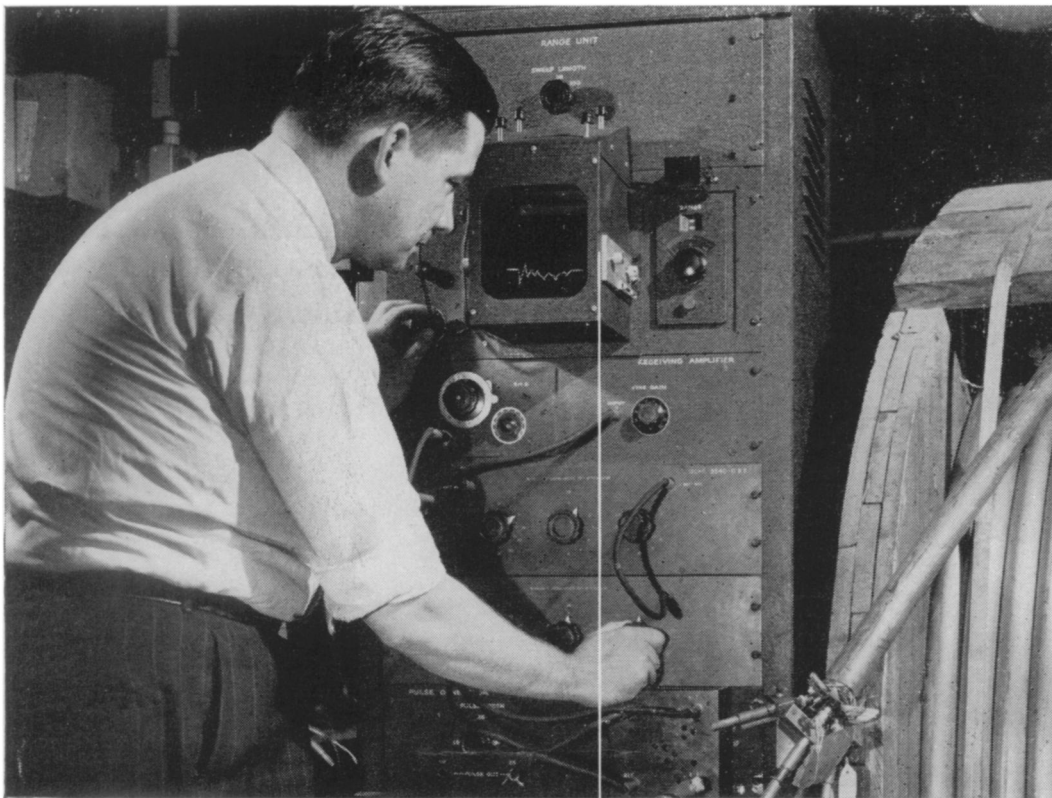
Robot Phone Accountant

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He asks an

echo

Radar sends out pulses of electric waves which, reflected from a target, return to reveal the target's location

Likewise, the apparatus pictured above sends electric waves over a coaxial telephone cable. Minute irregularities reflect the waves back to their origin; the echo makes a trace on an oscilloscope screen and so tells where to look for the trouble.

Telephone messages need smooth "highways" over which to travel across country: circuits able to transmit every talking frequency, without distortion.

Television needs even smoother highways and at many more frequencies. So Bell Laboratories devised this method of spot-testing the cable over the entire frequency band needed for telephone or television. It is so delicate that any possible interference with transmission is detected at once. Its use makes sure that every inch of highway is clear.

This is another important example of how Bell Telephone Laboratories constantly develop finer communications for the nation.



BELL TELEPHONE LABORATORIES

Exploring and inventing, devising and perfecting for continued improvements and economies in telephone service