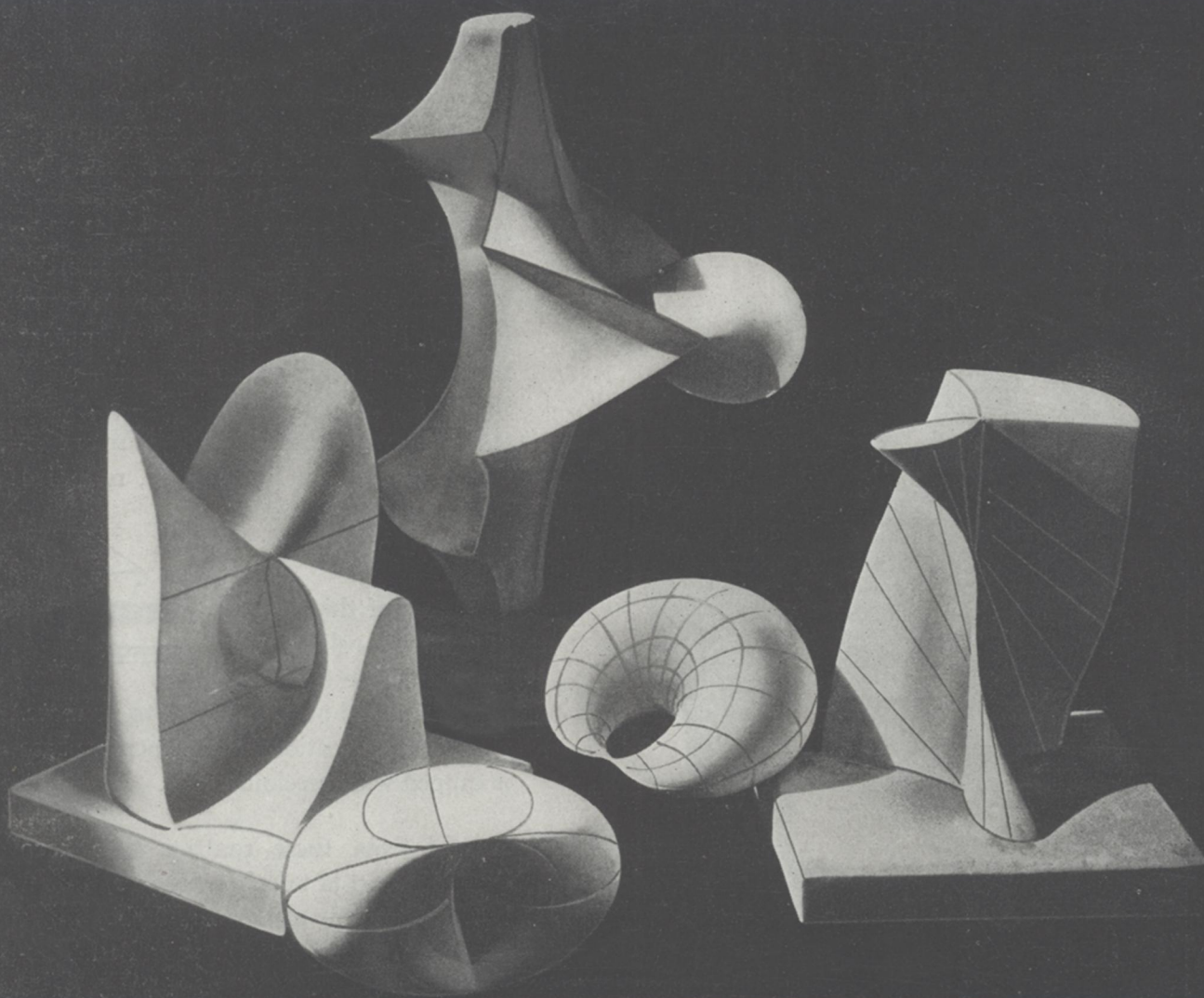


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# SCIENCE NEWS LETTER

Vol. 52, No. 6

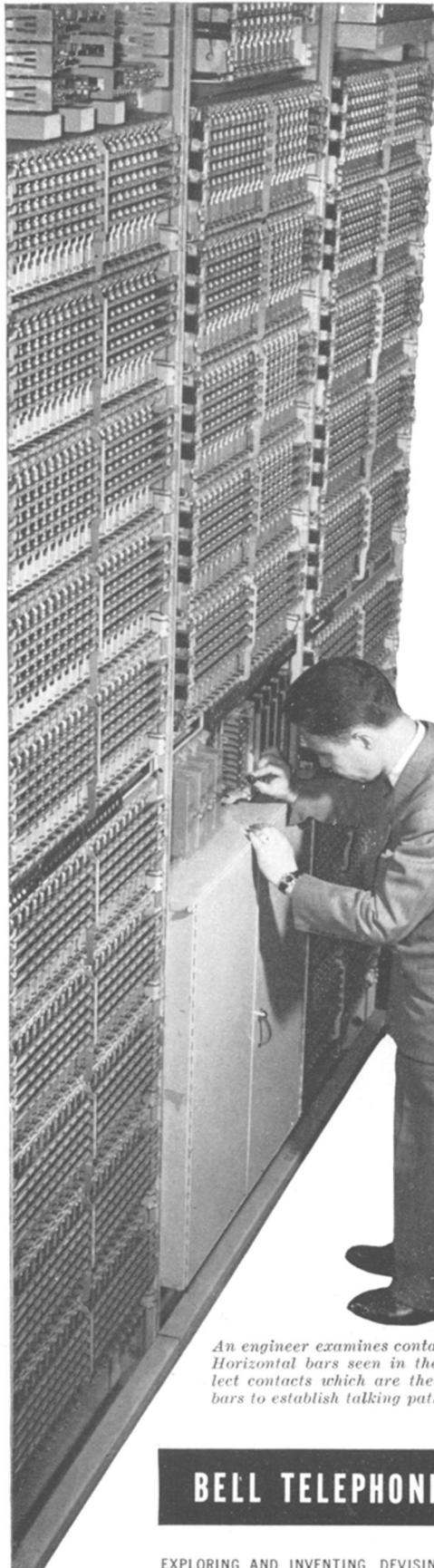
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**Mathematical Models**

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A SCIENCE SERVICE PUBLICATION

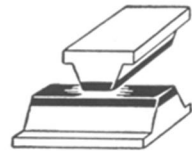


*An engineer examines contacts in a crossbar office. Horizontal bars seen in the crossbar switches select contacts which are then operated by vertical bars to establish talking paths between subscribers.*

## A BILLION ORDERS A DAY

In a large modern telephone office 2,000,000 switch contacts await the orders of your dial to clear a path for your voice. They open and close a billion times a day.

At first, contacts were of platinum—highly resistant to heat and corrosion but costly. Years ago, Bell Laboratories scientists began looking elsewhere, explored the contact properties of other precious metals—gold, silver, palladium and their alloys—and with the Western Electric Company, manufacturing unit of the Bell System, restudied shape, size and method of attachment.



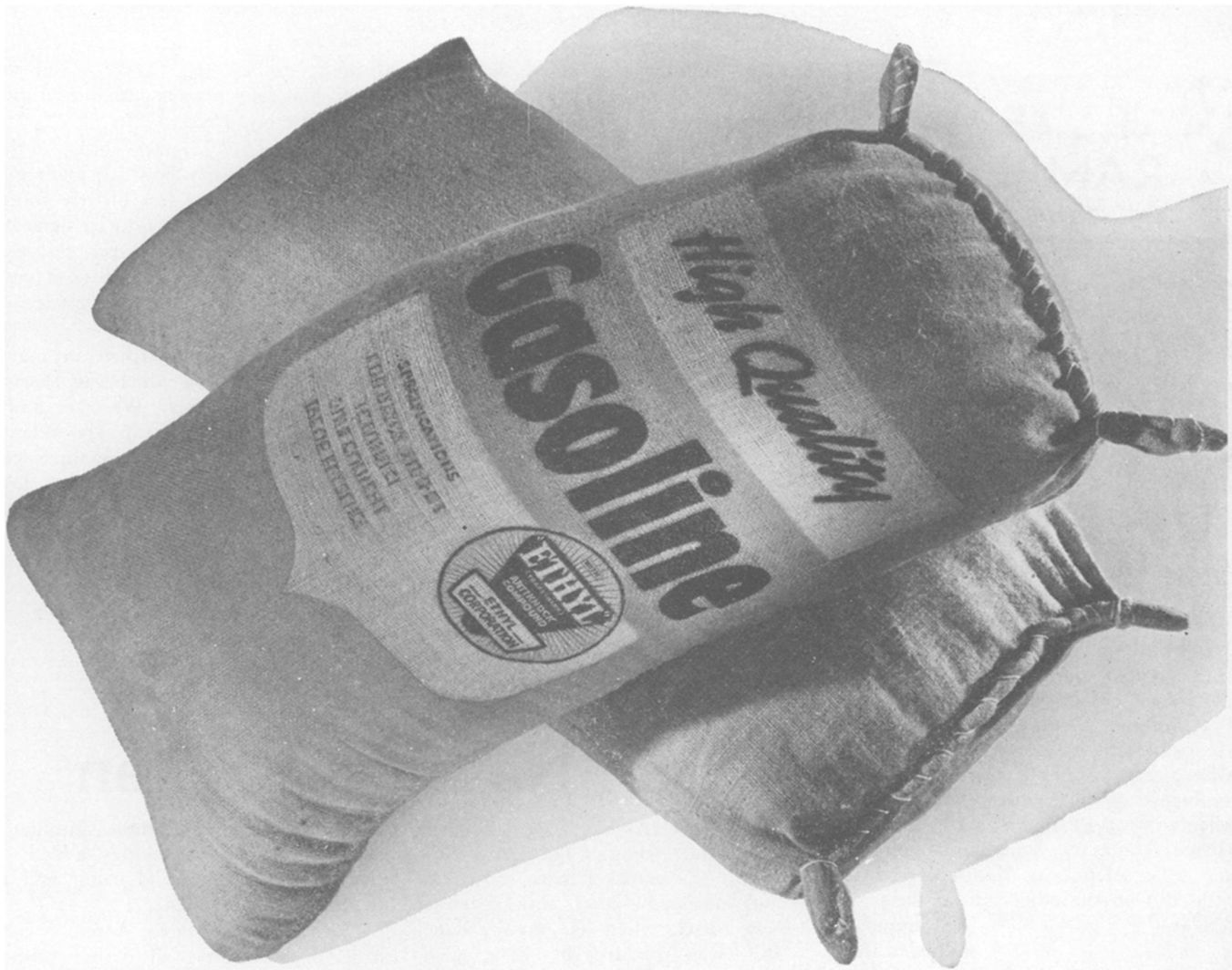
Outcome of this long research is a bar-shaped contact welded to the switch and positioned at right angles to its mate. For most applications, an inexpensive base is capped with precious metal.

Savings from these contacts help keep down the cost of telephone service. This is but one example of how Bell Laboratories serve the public through your Bell Telephone Company.

**BELL TELEPHONE LABORATORIES**



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



if gasoline were sold in sacks...

it would be easy to stencil everything you'd like to know about the ingredients it contained right on the sack. However, gasoline is generally delivered direct to your gas tank, sight unseen. Oil companies can't label each gallon. That's why they put the familiar yellow-and-black "Ethyl" emblem on their pumps to show that they have improved their best gasoline with "Ethyl" antiknock compound. This famous ingredient, which improves engine power and performance, is made by the Ethyl Corporation, Chrysler Building, New York 17, New York.

look for the **ETHYL** trade-mark

