

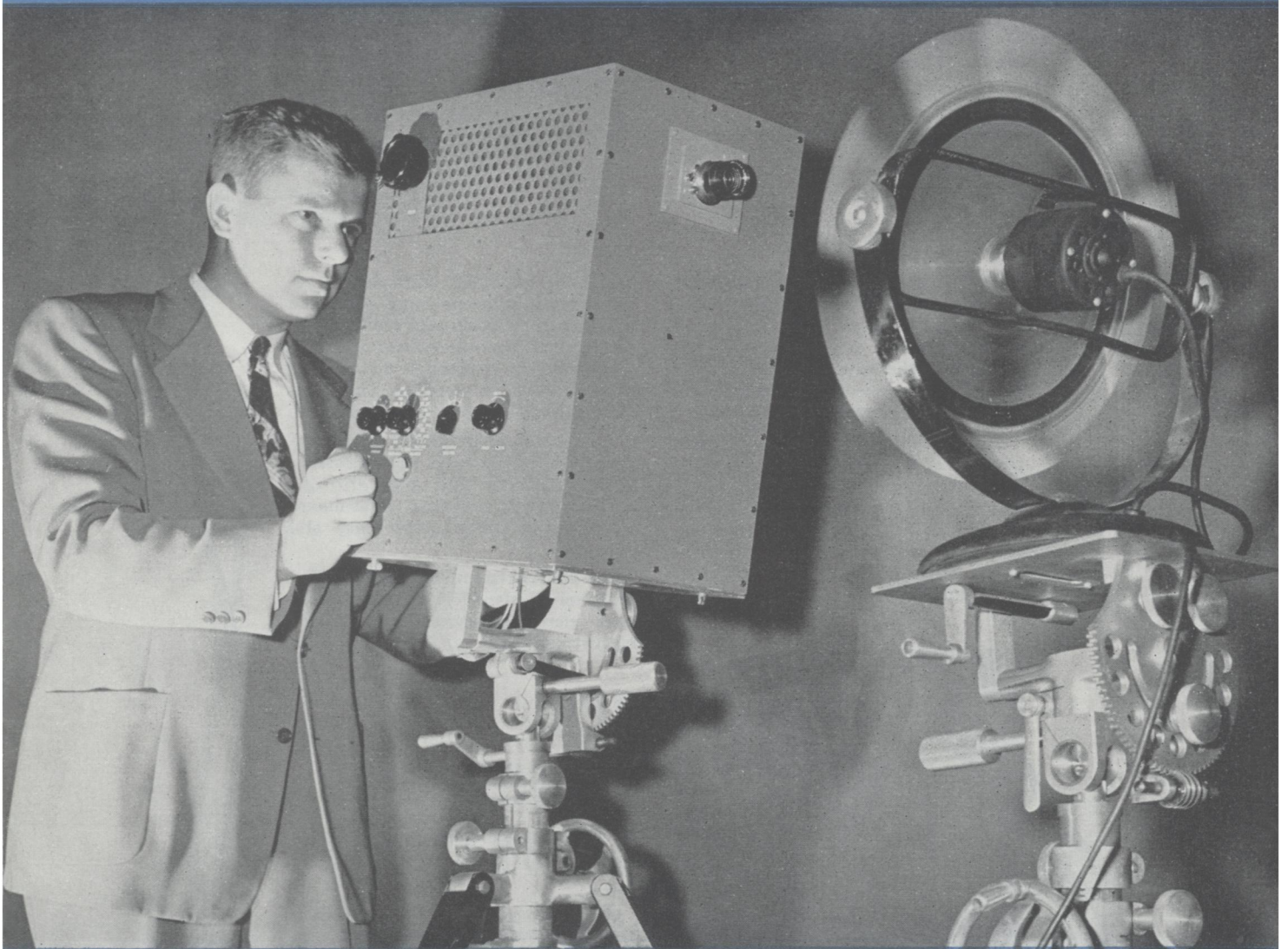
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December 9, 1950

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



Freezes Motion

See Page 374

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Testing for sound lost between telephone receiver and ear. Many subjects were used in these tests.

How to compensate for a curl . . . and add to your telephone value



Bell scientists know that the telephone is not used under ideal laboratory conditions. There is never a perfect seal between receiver and user's ear. A curl may get in the way, or the hand relax a trifle. And ears come in many shapes and sizes. So some sound escapes.

Now, sound costs money. To deliver more of it to your ear means bigger wires, more amplifiers. So Bell Laboratories engineers, intent on a thrifty telephone plant, must know how much sound reaches the ear, how much leaks away. They mounted a narrow "sampling tube" on an ordinary handset.



Automatic recorder plots sound pressures developed in the ear canal at different frequencies.

The tube extended through the receiver cap into the ear canal. As sounds of many frequencies were sent through the receiver, the tube picked up a portion, and sent it through a condenser microphone to an amplifier. That sampling showed what the ear received.

As a result, Bell scientists can compensate in advance for sound losses—build receivers that give *enough* sound, yet with no waste. That makes telephone listening always easy and pleasant.

It's another example of the way Bell Telephone Laboratories work to keep your telephone service one of today's biggest bargains.

BELL TELEPHONE LABORATORIES



Working continually to keep your telephone service big in value and low in cost.

How to extend Christmas THE WHOLE YEAR THROUGH

**FOR THE MOST UNUSUAL PERSON
ON YOUR CHRISTMAS
LIST**



Wouldn't he (or she) like a gift of twelve packages, one to arrive each month in 1951?

**Twelve
Surprises
plus
another
we'll add**

IN EACH 1951 gift package, there will be several objects of science, and with each object, a museum-style legend card, which will tell at a glance what these THINGS of science are. Included will be the sheets of explanation, that give the interesting details of discovery, of development, of manufacture, and that tell how to perform unusual experiments with the contents of the package.

Since late in 1940, packages like these have been going forward to members of the THINGS of science group. Glance over this list, then decide whether a membership which brings monthly packages on subjects as widely varied as these, isn't just the thing for that most unusual person on your Christmas Gift list.

- | | | |
|------------------------|------------------------|----------------------|
| Transparent Packaging | Rubber Plants | Straight Line |
| Wood and Cloth | Spices | Corn Byproducts |
| Sulfur | Ramie | Lecithin |
| Textile Identification | Petrified Wood | Vegetable Dyes |
| Glass Fibers | Steel | Housing Materials |
| Mineral Optics | Coal Byproducts | Iron Ore |
| Cotton Boll | Lightweight Aggregates | New Seeds |
| Unusual Fabrics | Nylon | Cement |
| Rubber | Color | Taste Enhancers |
| Lignin | Home & Office | Soybean |
| Lodestone | Magnetic | Coffee Byproducts |
| Rayon | Stainless Steel | New Fabrics |
| Lithium | Cold Rubber | Wetter Water |
| Plastic Printing | Sponge | Fungicides |
| Casein | Oil Shale | Diazo Paper Printing |

You know the one who would thank you again and again for such a gift. And if you are not yourself a member, you could hint to someone that you'd like it as a gift yourself.

The 1951 THINGS of science will be unusual; every month's package will be a surprise. A Christmas Membership to THINGS of science will bring the 12 units of 1951, plus an extra unit which we will select and add to your gift with our compliments, to arrive in time for Christmas. We will make out and mail a Christmas card with your name as donor, announcing your gift. Each membership is \$4 a year, postpaid. You will find a handy order coupon below.

T-627

Gift from

MY NAME.....

STREET ADDRESS.....

CITY & STATE.....

Mail this order to THINGS of science, 1719 N St., N. W., Washington 6, D. C. for the 12 units of 1951 plus the extra Christmas unit.

- I enclose \$4.00 for the following
 Please bill me after Christmas

Gift to

PLEASE PRINT

STREET ADDRESS.....

CITY & STATE.....

MAKE OUT Christmas Card
TO READ from.....