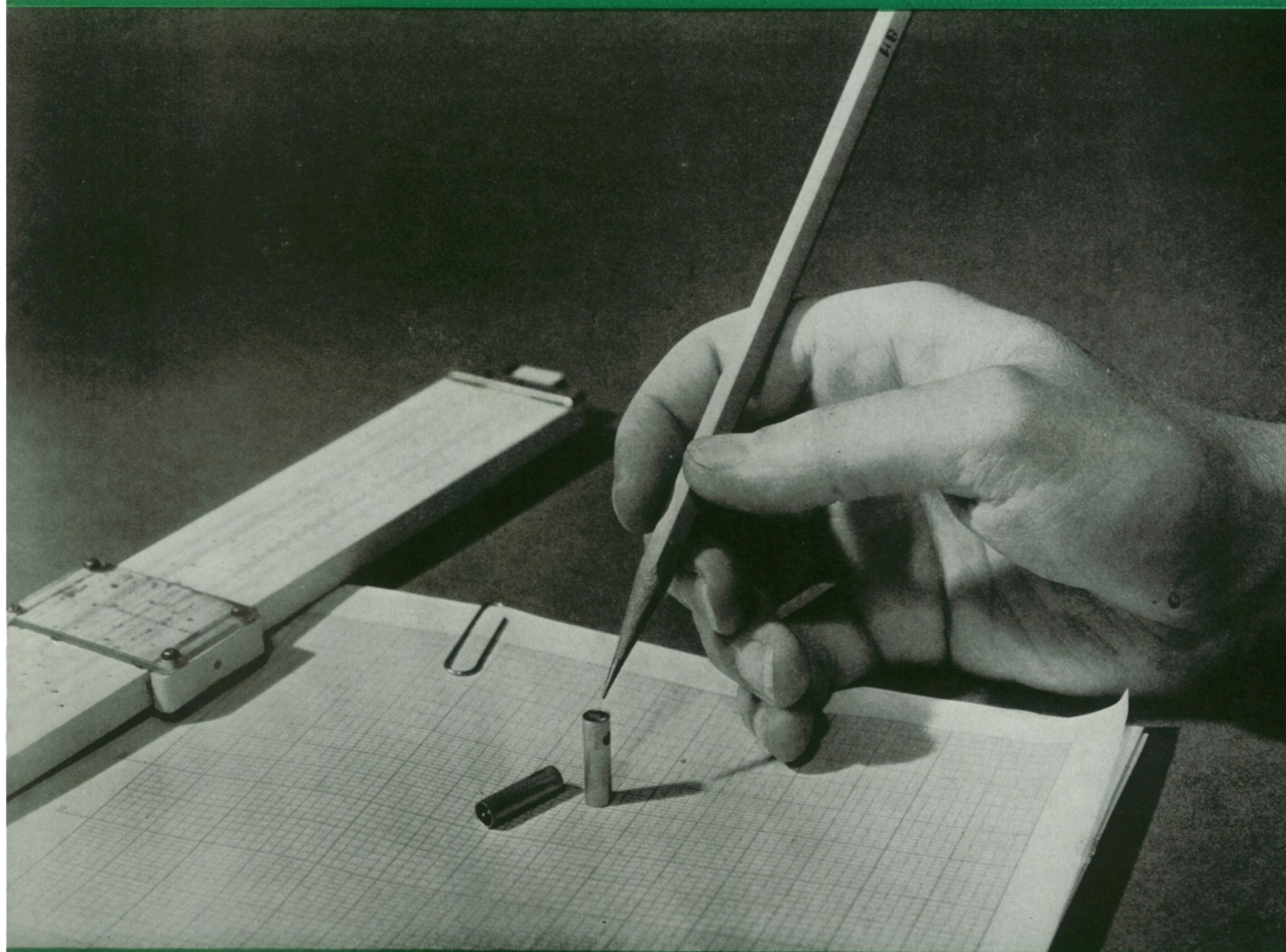


15¢

JULY 10, 1948

SCIENCE NEWS LETTER

THE WEEKLY SUMMARY OF CURRENT SCIENCE



New Electronic Amplifier

See Page 19

A SCIENCE SERVICE PUBLICATION

\$5.50 A YEAR

VOL. 54 NO. 2.

RUBBER RECIPE

Rubber compounds to the tune of some 35 million pounds a year go into the Bell System plant. Each compound must meet many requirements for resistance to humidity, oxygen, ozone, light and abrasion. The right properties depend on skillful selection and compounding of ingredients; this is one of the jobs of Bell Laboratories.

Sulphur, one essential ingredient of rubber, can also be corrosive. That seemed to rule out rubber on telephone cords. But Bell chemists found that if they held sulphur to the bare minimum, corrosion ceased. Now your handset cord has long life, is less susceptible to moisture as, for example, from a wet umbrella.

Connecting your home to the telephone wire on the street is a "drop"—one hundred feet or more of rubber-insulated wire. Once this wire was protected from ozone, light and abrasion by an impregnated cotton braid; but water leached the impregnant, and the braid rotted. Bell chemists tested scores of synthetics, and selected neoprene as an exterior covering with many times the life of braid.

Rubber is only one of many types of insulation developed by the Laboratories for the Bell System; insulation is only one of the Laboratories' problems in providing a quick, economical path for your voice.



BELL TELEPHONE LABORATORIES

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



BINOCULARS

ASSEMBLE YOUR OWN BINOCULARS!



Complete
Optics!
Complete
Metal Parts!
SAVE
More Than
1/4
Regular Cost

GOVERNMENT'S 7 x 50 BINOCULARS

Here's an unusual opportunity to secure a fine set of Binoculars at a substantial saving of money. Offered here are complete sets of Optics and Metal Parts for the 7 x 50 Binoculars. These components are new and all ready for assembly. We supply full instructions. Limit—1 set of Metal Parts and 1 set of Optics to a customer.

METAL PARTS—Set includes all Metal Parts—completely finished—for assembly of 7 x 50 Binoculars. No machining required. Bodies factory hinged and covered. A sturdy Binocular Carrying Case is optional with each set of Metal Parts.

Stock #842-Q.....\$39.40 Postpaid
plus \$4.80 for Case.....Total \$44.20

OPTICS—Set includes all Lenses and Prisms you need for assembling 7 x 50 Binoculars. These optics are in excellent condition—perfect or near perfect and have new low reflection coating.

Stock #5102-Q—7 x 50 Optics.....\$25.00 Postpaid

NOTICE: Add 20 percent Federal Excise Tax to your remittance if you buy both the Binocular Optics and the Binocular Metal Parts.

ARMY'S 6 x 30 BINOCULARS

COMPLETE OPTICS & METAL PARTS—Model M-13A1, 6 x 30 Binoculars (Waterproof Model). Everything you need—ready for assembly. When finished will look like a regular factory job costing \$102 to \$120. The Optics are new, in perfect or near-perfect condition. Have new low reflection coating. Metal parts are new and perfect, all completely finished. No machining required. Bodies factory hinged and covered. Complete assembly instructions included.

Stock #830-Q.....\$40.00 Postpaid
plus \$8.00 tax—Total—\$48.00

METAL PARTS ONLY—Model M-13A1, 6 x 30 Binoculars. No Optics. Same Metal Parts as described for Stock #830-Q.

Stock #832-Q—6 x 30.....\$25.00 Postpaid

OPTICS FOR 6 x 30 BINOCULARS (No Metal Parts.) Perfect and low reflection coated.

Stock #5130-Q.....\$15.00 Postpaid

SAME OPTICS AS ABOVE—Coated—but slight seconds.

Stock #5124-Q.....\$12.75 Postpaid

If you buy both the Binocular Optics and the Binocular Metal Parts, your purchase becomes subject to 20% Federal Excise Tax. Be sure to add amount covering tax to your remittance or your order cannot be filled. Optics and Metal Parts are Available for Monoculars (1/2 a Binocular). For Complete Details, Write for Bulletin #14-Q.

POLARIZING VARIABLE DENSITY ATTACHMENT FOR BINOCULARS

An amazingly effective unit for controlling amount of light reaching your eyes. Cuts down glare in sky, and overwater observations. Easily snapped on and off over the eye cups of American made 7 x 50 Binoculars. Govt. cost, \$8.30 each.

Stock #20,000-Q.....\$2.00 Postpaid

Above Polarizing Attachment also adaptable to Govt. 6 x 30 Binoculars with substitution of special Eyecups.

Stock #20,010-Q.....75c pr. Postpaid

POLARIZING OPTICAL RING SIGHT

(Unmounted) Used in gun sights—especially for shotguns. As you look through, you see a series of rings that superimpose on your target. No front sight required. Increases degree of accuracy.

Stock #2067-Q.....\$4.00 Postpaid



YOU CAN EASILY MAKE
Telescopes, Magnifiers, Photographic Gadgets
and Hundreds of Experiments with these Low
Cost Optics.
To Translate Millimeter measurements: 25:4
mm. equals one inch.

TELESCOPES

6 POWER GALILEAN TELESCOPE

(Commercial Surplus) 28mm dia. Achromatic Objective Lens Sturdily constructed of Aluminum. 7" long. extends to 9". Complete with carrying case.

Stock #941-Q.....\$3.00 Postpaid

8 POWER ELBOW TELESCOPE

Gov't Cost \$200.0
Our Price \$17.50

Big 2" diameter objective.

All lenses Achromatic. Amici-prism erects the image. 4 built-in filters—clear, amber, neutral and red. Slightly used condition but all guaranteed for perfect working order. Weight 5 lbs. Can be carried but a trifle bulky. Excellent for finder on Astronomical Telescope.

Stock No. 943-Q—\$17.50 Postpaid



SENSATIONAL BARGAINS IN WAR SURPLUS OPTICS

ORDERING INFORMATION

Read entire page carefully each month. There are often new items of interest. Be sure to specify "stock numbers" and enclose payment with your order. Buy with complete confidence that merchandise will be exactly as represented.

SATISFACTION GUARANTEED
Write for FREE CATALOG Q

GOVT'S FIRE STARTING LENSES

(Gov. cost 60c. Our Price 25c ea.)

Issued during war for emergency use to start fires if lost without matches. Double convex lens—51 mms dia. . . . F.L. 89 mms. Edges may have slight chips as perfect edges were not required by Gov. specifications. May be used as magnifying lens. Also can be used as condensing lenses in 35 mm projectors.

Stock #1093-Q.....25c ea. Postpaid

SPECIAL OFFER—50 for \$11.25 or 100 for \$20.00

RAW OPTICAL GLASS . . . An exceptional opportunity to secure a large variety of Optical Pieces both Crown and Flint glass (seconds) in varying stages of processing. Many prism blanks.

Stock #703-Q—8 lbs. (min. wt.).....\$5.00 Postpaid

Stock #702-Q—1 1/2 lbs.....\$1.00 Postpaid

\$200.00 DRIFT METER for \$5.60

These were used for determination of drift and true air speed. You can adapt to other uses or take apart to get 2 mounted Achromatic Lenses—Mirrors—Field Lens—Pantograph—Engraved Scales—Sponge Rubber Discs—metal parts and other components. Instrument weighs 4 lbs.

Stock #942-Q.....\$5.60 Postpaid



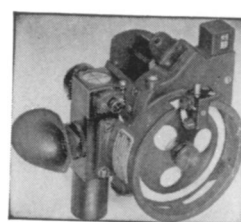
SEXTANTS

UNUSUAL BARGAIN BUBBLE SEXTANTS

These Army Air Forces Bubble Sextants cost the Govt. about \$125.00 each. A real bargain at our price of \$12.50! Included with Bubble Sextant ship—ment is wooden Carrying Case, 5 spare waxed paper discs, flashlight with rheostat for night use (uses ordinary flashlight cells—not furnished) aux. 2-power Galilean Telescope, Allen wrench, 1 spare marking point. Wartime used, BUT COMPLETELY REPAIRED, COLLIMATED AND PUT IN GOOD WORKING ORDER. Light bulb has been tested—Bubble is in working condition. Because of wartime use, we make this guarantee: If not satisfied that Sextant is exactly as represented, return within 10 days and money will be refunded. Full directions for use accompany each shipment.

Stock #924-Q.....\$12.50 Postpaid
Same Sextant as above but BRAND NEW and with Automatic Electric Averaging Device and Illuminated Averaging Disc for nighttime use. Govt. cost \$217. Though brand new we have rechecked Bubble and Collimation and GUARANTEE perfect working order.

Stock #933-Q.....\$22.50 Postpaid



LENSES

SIMPLE LENS KIT

Some gov't surplus, some commercial surplus, some chipped rejects, some perfect, few coated . . . in any event an excellent bargain. Containing Plano Convex, Double Convex, Concave, Miniscus Lenses. Dia. range 5mm to 4mm. Assorted focal lengths.

Stock #5-Q—45 lenses.....\$5.00 Postpaid

Stock #10-Q—80 lenses.....\$10.00 Postpaid

Set #1-Q—"Our Advertising Special"—15 lenses for \$1.60 Postpaid, plus 10-page idea booklet. For copying, ULTRA CLOSE-UP SHOTS, macrophotography, experimental optics, magnifying and for making a two power f/16 Telephoto Lens, "Dummy Camera," Kodachrome Viewer, DETACHABLE REFLEX VIEWFINDER for 35 mm camera, stereoscopic viewer, ground glass and enlarging focusing aids, TELESCOPES, low power Microscopes and for many other uses.

LENS CLEANING TISSUE—1st quality sheet size 11" x 7 1/2". Made to Gov. spec. High wet strength. Free of abrasives.

Stock #721-Q—500 sheets.....\$1.00 Postpaid

CONDENSING LENS SET—Consists of 2 Condensing Lenses with diameter of 2". Used for making 35mm projector or many other purposes.

Stock #4034-Q.....75c Postpaid

CONDENSING LENSES—Seconds, but suitable for Enlargers and Spotlights.

Stock #1061-Q—6 1/2" dia., 9" F.L.,.....\$2.50 Postpaid

Stock #1080-Q—5" dia., 7" F.L.,.....\$1.00 Postpaid

We Have a Limited Quantity of Condensing Lenses—seconds—ranging from 4 1/2" to 8 1/2" in dia. with various focal lengths. Send for Free Bulletin titled "MISCELLANEOUS CONDENSING LENSES—Q."

MOUNTED PROJECTING LENS SYSTEM—F.L. 91.44

mm. (just right for 35 mm. Projectors). Speed of F 1.9. Outside dia. of mount at one end 60 mm. Length of mount 64 mm.

Stock #4033-Q.....\$3.00 Postpaid

**THREADED OUTSIDE
MOUNT FOR FOCUSING
ABOVE SYSTEM** (Not Included.)

Stock #715-Q.....\$1.00 Postpaid

35 MM KODACHROME PROJECTING LENS SET—Consists of 2 Achromatic Lenses for projecting, plus 2 Condensing Lenses and a piece of Heat Absorbing Glass with directions.

Stock #4029-Q.....\$3.10 Postpaid

**NEW 50-PAGE IDEA BOOK "FUN WITH
CHIPPED EDGE LENSES"**

Contains wide variety of projects and fully covers the fascinating uses of all lenses in set listed above . . . only \$1.00 Postpaid.



IF YOU'RE INTERESTED IN OPTICAL BARGAINS
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