

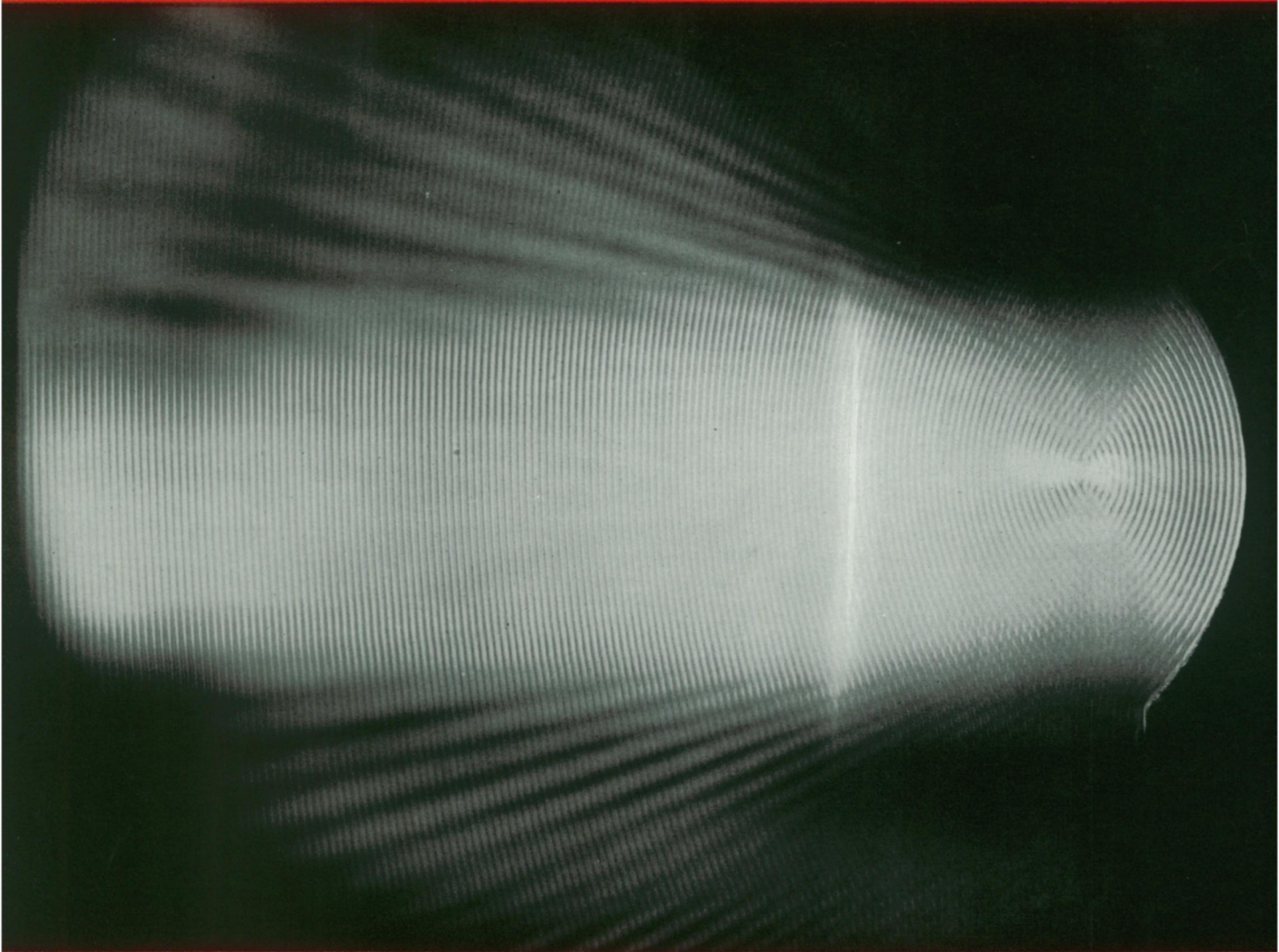
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JUNE 11, 1949

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



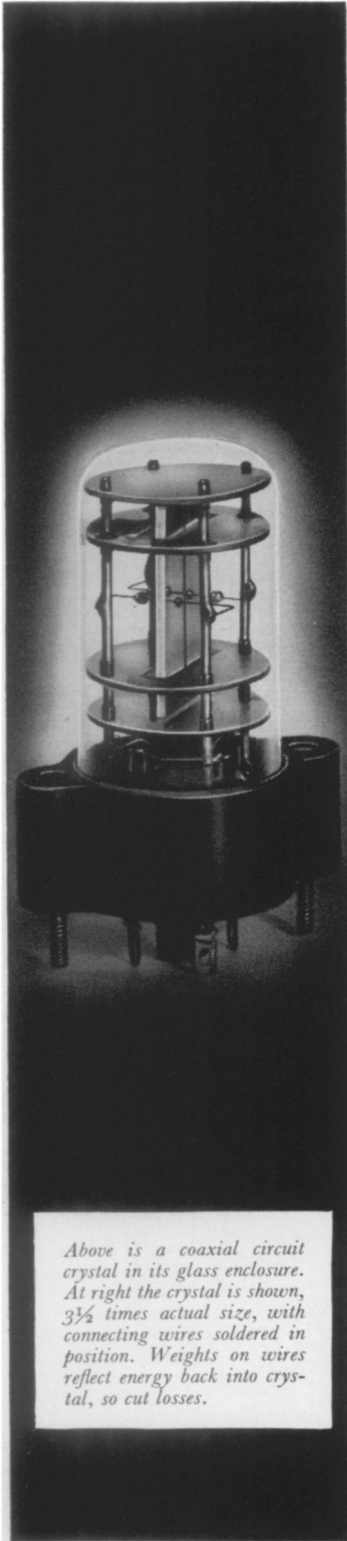
Sound Seen

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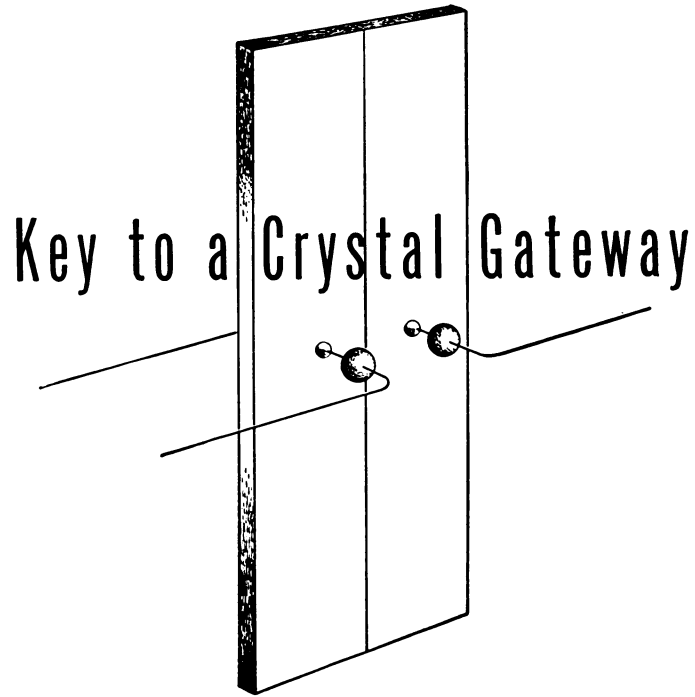
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Above is a coaxial circuit crystal in its glass enclosure. At right the crystal is shown, 3½ times actual size, with connecting wires soldered in position. Weights on wires reflect energy back into crystal, so cut losses.



How would you solder a wire to a crystal? This must be done for most of those wafer-thin plates of quartz used in electrical circuits. They play a big part in the myriad-channel telephone system that utilizes coaxial cables.

This is how Bell Laboratories scientists solved the problem: A spot of paste containing silver is deposited on the crystal and bonded to it by oven heat. The crystal is then vapor-plated with a thin layer of silver. Then a fine wire is soldered to the spot by a concentrated blast of hot air. The result is a rugged electrical connection to the surface of the crystal which does not interfere with its vibrations.

Sealed in glass tubes, the crystals are precise and reliable performers in the telephone system. Each is a crystal gate to a voiceway, separating *your* conversation from the hundreds of others which may be using a pair of coaxial conductors, at the same time.

This spot of paste, this tiny wire, this puff of air are among the tremendous trifles which concern Bell Telephone Laboratories in finding new ways to improve your telephone service.

BELL TELEPHONE LABORATORIES
Exploring and Inventing, Devising and Perfecting, for Continued Improvements and Economies in Telephone Service



WAR SURPLUS OPTICAL BARGAINS

ASSEMBLE YOUR OWN BINOCULARS



Complete Optics!
Complete Metal Parts
SAVE More Than 1/2 Regular Cost

GOVERNMENT'S 7 x 50 BINOCULARS

(American Made—not Jap, French or German)

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. Full instructions supplied. **METAL PARTS**—Set includes all Metal Parts—completely finished—for assembly of 7 x 50 Binoculars. No machining required. A sturdy Binocular Carrying Case is optional with each set of Metal Parts.

Stock No. 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 No. 5102-Q—7x50 Optics—\$25.00 Postpaid. **NOTICE:** Add 20% Federal Excise Tax to your remittance if you buy both Binocular Optics and Metal Parts.

ARMY'S 6 x 30 BINOCULARS

COMPLETE OPTICS & METAL PARTS—Model M-13A1, 6x30 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. Complete assembly instructions included.

Stock No. 830-Q-----\$40.00 Postpaid plus \$8.00 tax-----Total \$48.00

METAL PARTS ONLY—Model M-13A1, 6x30 Binoculars. No Optics. Same Metal Parts as described for Stock No. 830-Q.

Stock No. 832-Q—6 x 30 Metal Parts-----\$25.00 Postpaid

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

Stock No. 5130-Q-----\$15.00 Postpaid
If you buy both the Binocular Optics and the Binocular Metal Parts, add 20% Federal Excise Tax to your remittance.

OPTICS AND METAL PARTS are available for Monoculars (1/2 a Binocular). For complete details, write for Bulletin Q.

MOUNTED TELESCOPE EYE-PIECE—Kellner type. Excellent astronomical and other telescopes. War Surplus. Government cost about \$18.00. Focal length 24 mms. Lens Diameter 23 mms. Unusually wide field.
Stock No. 5189-Q-----Price \$3.25 Postpaid

We have over 200 different sizes and focal lengths of Plano-Convex, Double Convex, Concave and Meniscus Lenses, priced from 6c to 30c each. Write for Catalog Q.

New Bulletin on Microscope Sets, Filters, Reticles, Flat Glass. Write for Catalog Q.

8 POWER ELBOW TELESCOPE

Gov't Cost \$200.00
Our Price \$27.50

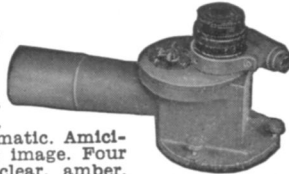


Fig. 2 in. diameter objective. All lenses Achromatic. Amici-prism erects the image. Four built-in filters—clear, amber, neutral and red. Slightly used condition but all guaranteed for perfect working order. Weight 5 lbs. Can be carried but a trifle bulky. Excellent for finder on Astronomical Telescope.
Stock No. 943-Q-----\$27.50 Postpaid

20X PRISM SPOTTING SCOPE SET—Consists of all lenses and prisms (slightly chipped) you need to make a good, standard 20X Spotting Scope. Low reflection coated. 57mm dia. Achromatic objective. Some metal parts included. We furnish directions.
Stock No. 5145-Q-----\$22.00 Postpaid

LOW POWER RIFLESCOPES and ACHROMATIC LENSES to make your own higher power Rifle scope (2 1/2 to 7 1/2 power or over). Write for Bulletin "Q".

TELESCOPE EYE-PIECE—Consists of 2 Achromatic lenses F.L. 28mm, in a metal mount.
Stock No. 5140-Q-----\$4.50 Postpaid

MAKE YOUR OWN ENLARGER MOUNTED ANASTIGMAT LENSES

Use for Projectors, Enlargers, Copying Cameras. Complete with Shutter and Diaphragm. Value about \$20. These were made for a specific camera but had longer or shorter focal length than could be used, and then the camera was discontinued. An excellent buy. **WE WILL INCLUDE FREE ILLUSTRATED BOOKLET on HOW TO MAKE YOUR OWN ENLARGER.**

Stock No. 8004-Q Speed f/7.7, focal length approx. 127 mms. Suitable for pictures, negatives, positives up to 3 1/2 x 4 1/4"-----\$7.50 Postpaid

Stock No. 8006-Q Speed of f/7.7, focal length approx. 100 mms. Suitable for pictures, etc. up to 2 1/4 x 3 1/4"-----\$8.50 Postpaid

Stock #8007-Q—Speed of f/6.3, focal length approx. 100 mms.—\$9.50 Postpaid

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

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

Stock #1080-Q—5 1/2" dia. 7" F.L. \$1.00 ea. Pstpd.

Stock #1084-Q—2 1/2" dia. 4" F.L. \$1.00 ea. Pstpd.

Stock #1077-Q—2 3/8" dia. 3" F.L. \$1.00 ea. Pstpd.

Stock #1019-Q—6" dia. 16" F.L. \$2.00 ea. Pstpd.

Stock #1062-Q—6" dia. 9" F.L. \$2.00 ea. Pstpd.

Stock #1086-Q—1-11/16" dia. 3" F.L. \$.25 ea. Pstpd.

Stock #1103-Q—29/32" dia. 1/2" F.L. \$.50 ea. Pstpd.

NEW BULLETIN on our BIG VARIETY OF PRISMS—Over 50 different right angle Prisms, Rhomboidal, Binocular Porro, Leman, Porro-Abbe, Brashear-Hastings, Penta, Dove, Pentagon, Ocular, and Amici Roof Prisms. Also Beam Splitters, Wedges and many others. Request Bulletin Q.

6 POWER PERISCOPE and ADJUSTABLE TRIPOD. 27" long. Focusing eye-piece. Adjustable cover for objective end. Govt. cost \$150. Tripod and mount worth more than purchase price.

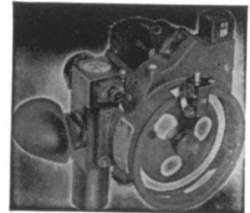
Stock No. 717-Q-----\$20.00 f.o.b. Audubon

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 sets listed above . . . only \$1.00 Postpaid.

UNUSUAL BARGAIN BUBBLE SEXTANTS

These Army Air Forces Bubble Sextants costs the Govt. about \$125.00 each. A real bargain at our price at \$12.50! Wooden carrying case included. Also auxiliary items. Wartime used. **BUT COMPLETELY REPAIRED COL-**



LIMATED AND PUT IN GOOD WORKING ORDER. If not satisfied that Sextant is exactly as represented, return within 10 days for refund. Full directions for use accompany each shipment.

Stock No. 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 No. 933-Q-----\$22.50 Postpaid

BUBBLE SEXTANT—TYPE A-8A. Excellent condition but may be slightly used. Each has been carefully checked and collimated. Averaging device for nighttime use. Carrying Case and instruction booklet included. Gov't cost about \$325.00.
Stock #946-Q-----\$32.50 Postpaid

SIMPLE LENS KIT

Some Govt. surplus, some commercial surplus, some chipped rejects, some perfect, few coated . . . in any event an excellent bargain. Containing Plano Convex, Double Convex, Concave, Meniscus Lenses. Dia. range 6mm to 40mm. Assorted focal lengths.

Stock No. 5-Q—45 lenses-----\$5.00 Postpaid

Stock No. 10-Q—80 lenses-----\$10.00 Postpaid

10 LENS KIT—THE LENS CRAFTERS DELIGHT! Kit includes plainly written, illustrated booklet showing a specific project for every lens. Use these lenses in photography for copying. **ULTRA CLOSE-UP SHOTS,** Microphotography, for "Dummy Camera," Kodachrome Viewer, Detachable Reflex View Finder for 35mm cameras, Stereoscopic Viewer, ground glass and enlarging focusing aids. And for dozens of other uses in experimental optics, building

TELESCOPES, low power Microscopes, etc.

Stock No. 2-Q-----\$1.00 Postpaid

LENS CLEANING TISSUE—1st quality sheet size 11 x 7 1/2 in. Made to Govt. specifications. High wet strength. Free of abrasives.

Stock No. 721-Q—500 sheets-----\$1.00 Postpaid

SLIDE PROJECTOR SETS—Consist of all unmounted lenses you need to make the following size projectors:

Stock No. 4038-Q—2 1/4 x 2 1/4 in., \$3.35 Postpaid

Stock No. 4039-Q—2 1/2 x 3 1/2 in., \$3.85 Postpaid

Stock No. 4029-Q—35mm-----\$2.85 Postpaid

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 60mm. Length of mount 64mm.

Stock No. 4033-Q-----\$3.00 Postpaid

THREADED OUTSIDE MOUNT FOR FOCUSING ABOVE SYSTEM (Not Illus.)

Stock No. 715-Q-----\$1.00 Postpaid

HEAT ABSORBING PLATE GLASS

Stock No. 4009-Q—4" x 5"-----35c Postpaid

Stock No. 4010-Q—2" x 2"-----10c Postpaid



IF YOU'RE INTERESTED IN OPTICAL BARGAINS

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We Have Literally Millions of War Surplus Lenses and Prisms for Sale at Bargain Prices. Numerous Types of Instruments Too!

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