

15¢

\$5.50 A YEAR



September 12, 1959

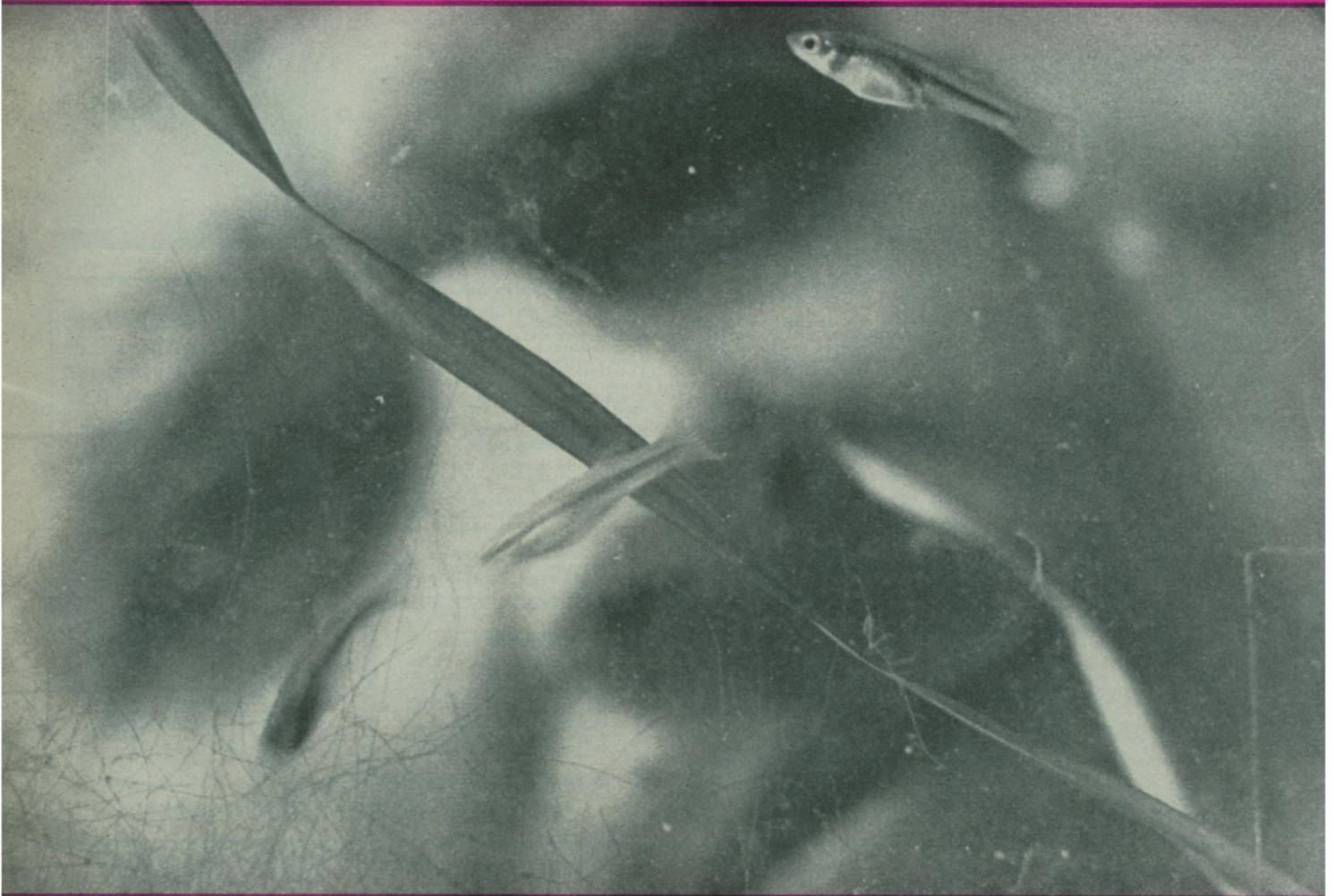
VOL. 76 NO. 11

PAGES 161-176

SCIENCE NEWS LETTER

®

THE WEEKLY SUMMARY OF CURRENT SCIENCE



All-Female Females

See Page 166

A SCIENCE SERVICE PUBLICATION

**JUST IMPORTED
FROM ITALY!**

WORLD'S FIRST PERSONAL SIZE DESK ADDING MACHINE!

**Amazing Little Machine With Spinning Wheels and Trip
Mechanism Adds Up To 9,999,999... Automatically!**

Not a flat, vest pocket adder—not a gadget—no bewildering instructions to follow. Here for the first time is a real desk-type adding machine that works on the same scientific principle as electric office computing machines... but without electricity! It adds up bank statements, sales slips, inventories, expense accounts, super-market tapes, budgets, any adding jobs you have... within seconds of even \$200.00 office adding machines! And then, this amazing machine clears itself with just a flick of your finger on the clearing bar. Yes! Instantly all the wheels inside spin back to normal—7 zeros flash into the easy-to-read answer windows—and it is ready for the next time saving, money saving adding job!

**END MENTAL ADDING—
FOREVER**

No more adding figures in your head... scribbling numbers on paper... making mistakes that cost you time... and cost you money! Simply press the numbers down on this wonder-working little machine. The automatic trip wheel mechanism never makes a mistake. The total appears in big, clear, easy to read numbers in the answer windows—INSTANTLY and AUTOMATICALLY! It keeps you within your budget... keeps you from overspending... protects you from the mistakes companies—even banks... often make... adds all the figures for your income tax... adds up stock dividends... checks expense accounts... plus a thousand other adding chores... and pays for itself a hundred times over in the money you save.

AN ITALIAN INVENTION

An eminent inventor in Italy discovered the secret of the fool-proof, non-electric, spinningwheel adding mechanism inside this machine. He had been trying for years to develop a real adding machine at a price for everyone... even in war-poor Europe. NOT another flat pocket adder that requires you to read long instructions before you can begin to operate it. Instead... he wanted a real, desk type adding machine... that anyone could operate, even a child... that would be automatic... fool proof... and, above all, within the pocket-book of everyone! He found the answer after studying the spinning wheels inside electric computing machines. He came upon a way to let a person's hand supply the 'power' to the wheels... instead of electricity! Just imagine! He invented an adding machine designed so that the gentlest touch makes the wheels inside turn! After one complete turn... the first

wheel automatically trips the next wheel... just like \$200.00 electric machines! Nothing to remember. Nothing to do but press down the numbers to be added. Everything else automatic! When the Italians... famous for smaller automobiles and smaller motorcycles... started manufacturing this revolutionary new smaller, non-electric adding machine, offices and individuals in Rome, Venice, Florence tried it. WHAT ACCLAIM IT MET WITH! Everywhere it added the longest columns of figures within seconds of the speed of electric machines. Giant companies gave it to secretaries... officers, salesmen. Efficiency of entire companies improved. Mistakes were cut down. And from individuals came even more glowing stories. Instantly adding became a pleasure instead of an aggravating chore. Households became better managed... budgets stuck to bills checked... mountains of figures added in no time... mistakes a thing of the past! And when this remarkable adding machine was imported to this country, the acclaim was just as great! For here at last was what every home... every office... every store has been waiting for. The perfect, small, easy to use, automatic, desk model adding machine in beautiful silver tone and blue finish, with big, easy to read numbers... and at a price so incredibly low that not a family or store or office can afford to be without it!

FREE TRIAL OFFER

How would you like to try this amazing new gleaming metal adding machine in your home, your office or your store entirely without risking a penny? We want you to actually test it against automatic, electric adding machines. Compare it for speed, ease of use and accuracy. You must agree that it is almost as fast, easy to use as easy to use... you must agree that it will save you endless time, trouble, mistakes and money every week... or it won't cost you a penny. Just push the numbers down. See how the most gentle pressure of your hand turns the wheels inside. See how it adds up to 9,999,999 automatically. And see how just a flick of the clearing bar on the side makes the numbers inside the answer window all whirl back to seven zeros... instantly! Put this amazing adding machine on your desk. See how instead of being too busy to add... or in too much of a hurry to be bothered with a complicated pocket adder... from now on you will check every calculation... check all your bills, statements, estimates, inven-

ories, budgets, reports... each in seconds... and never make costly mistakes again! If you are in business, see how this precision adding machine will save you its unbelievable low price a hundred times over. Give one to every secretary, every clerk, every person who ever adds. See how it cuts out trips to your bookkeeper, saves time, improves the efficiency of your entire company. You must be convinced that ADDIPRESTO is one of the most valuable and useful inventions you ever used or it won't cost you a penny.

**Supply Still Very Limited
Mail Free Trial Coupon
TODAY**

Yes, it is impossible for you to appreciate the beauty, speed and efficiency of ADDIPRESTO until you actually see it and use it. Let us send it to you for one week's completely free trial.

The price of ADDIPRESTO is only \$14.95. Remember, it is a real adding machine with spinning wheels and automatic mechanism... the same type as \$200.00 office computing machines. But ADDIPRESTO works from the pressure of your hand without electricity! It will save you its remarkable low cost many times over. Because you will USE it over and over... day after day. Don't confuse it with flat, hard to use, complicated pocket adders.

However, the supply of genuine ADDIPRESTO machines is strictly limited. The factory in Europe cannot meet the demand. You must mail the free trial coupon below at once. ADDIPRESTO is not yet sold in stores. Act now and get yours by mail.

**ADDIPRESTO is shipped with
protective plastic cover and
GUARANTEE CERTIFICATE.**

GUARANTEE
This original ADDIPRESTO is precision-made from the finest quality materials, and will give you a lifetime of accurate, effective performance. Unconditionally Guaranteed against defects in material or workmanship.



**FOR THE FIRST TIME
—Your Own Personal
Desk Model Automatic
Adding Machine!**

Now you can keep ADDIPRESTO on your desk at home or office and never add anything in your head again. In SECONDS... perform almost any adding chore. No more costly mistakes. ADDIPRESTO's spinning wheels and computer type mechanism do the 'figuring' automatically!

PROVEN IN USE
Don't confuse this desk-model real adding machine with flat pocket adders. ADDIPRESTO is used by offices, stores, institutions, for adding jobs that demand true speed and accuracy. Used by giant corporations. Saves time, saves mental work, saves money. A real adding machine.

MAIL THIS NO-RISK TRIAL COUPON

**OLIVER GARFIELD CO., INC., Dept. SL 99-B
108 E. 16th St.
New York 3, N. Y.**

Yes, I want to try ADDIPRESTO, the new Italian Office Type Adding Machine. I will use the machine for one week without risk to me. It must be everything you say it is or I may return it and you will refund my money at once, no questions asked, and I will have used the machine entirely free.

- I enclose only \$2.00. You may bill me for the balance (\$12.95 plus postage) after my 7-day FREE trial period.
- I enclose \$14.95 (check or money order) as payment in full. This way I save over \$1.00 in postage and handling charges. Same guarantee... same 7-day FREE trial!

NAME

ADDRESS

CITY ZONE STATE

QUANTITY BUYERS SAVE! 2 Machines only \$13.95 each.
3 to 5 Machines only \$12.95 each.

AGENTS! SALESMEN!



**THE BIGGEST MONEY-
MAKER YOU HAVE
EVER KNOWN!**

ADDIPRESTO is the greatest goldmine you ever saw. Simply show this beautiful, gleaming metal adding machine with spinning wheels and automatic trip mechanism... the same type as \$200.00 electric computers. Then make this eye opening demonstration: add a 6-INCH LONG COLUMN OF FIGURES in 30 SECONDS! After that there's no selling... no arguing. You can't keep people from buying! It's true. 8 out of 8 sales is nothing. Every home, every office, every store needs it. Send for yours today and get started to the biggest money you have ever known. There is no competition. There is no other machine like ADDIPRESTO.

MAIL COUPON NOW!

Special Tool Bargains-Save Up to 50%

Bigger Drills at LOW, LOW PRICES!

4 pc. HIGH CHROME SPEED SET

Another of Scott Mitchell's famous tool bargains! The original \$42.50 price is right on the package, but you pay only \$9.95! The reason? A large tool wholesaler needed warehouse room badly, so he closed out a large quantity of these high quality drill sets to us! A wonderful buy for advanced hobbyists, carpenters, construction workers, factories, machine shops! Made of high quality, specially hardened steel, with turned down shanks to fit all 1/2" electric drills. Zips through hardwoods, aluminum, iron, plastics, even the toughest steel! Sizes 5/8", 3/4", 7/8", 1". Come in numbered pocket, snap closure tool roll.

Extra Special! 11 Pc. Set ONLY \$29.95 plus \$1 pp., handling

A verified \$49.50 value. Same features as 4 pc. set. Sizes 9/16", 5/8", 11/16", 3/4", 13/16", 7/8", 15/16", 1", 1 1/8", 1 3/16", 1 1/4".



A \$29.95 VALUE

NOW \$9.95

plus 50c pp. hdlg.

One of our BEST Values!
2.9 AMP HEAVY DUTY
1/4" RAM DRILL
with Jacobs Geared
Chuck & Key
Reg. \$29.95
Our Price



\$14.95

plus 50c pp. & hdlg.

Ask any expert and he'll always say "RAM for Heavy Duty Work." Not just an ordinary 2, 2 1/4 or 2 1/2 amp unit, but a powerful full 2.9 AMP, drill to do every heavy duty job in home, shop or industry. Built to take years of rough-tough use. Newer, more rugged motor, gives 1/2" capacity in hard wood and 1/4" capacity in steel with a full speed of 1200 R.P.M. Durable, mirror finished, lightweight aluminum housing. Features Universal, series wound AC-DC motor; heavy duty multiple Thrust ball bearings; automatic release trigger switch with locking pin; 6 conductor, UL approved cord and plug. Standard 1 1/2 length x 1/2 weights only 3 1/2 lbs. If you've ever needed a drill or find that your present 1 1/2" job just won't do the things you expect of it, ORDER THIS 2.9 AMP 1/4" RAM DRILL TODAY! Limited quantities.

FORD PROFESSIONAL STETHOSCOPE



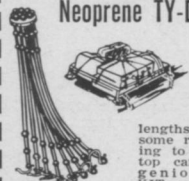
Brand new famous Ford Professional sensitive. Stethoscope designed for physicians. Ideal, too, for use by electronics workers, engineers, etc. to check trouble spots in motors, check liquid flow, pulsations, etc. Reg. \$5.00.

NOW

\$2.49

plus 25c pp. & hdlg.

Safe & Secure Car Top Carry! Neoprene TY-DOWN KIT

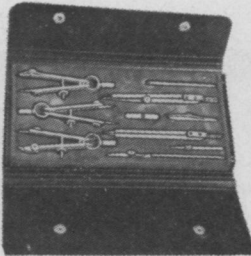


Storing and untying stubborn knots, cutting your hands, snarling yourself up in long lengths of cumbersome rope while trying to load your car top carrier. The ingenious TY-DOWN KIT, consists of 8-3/4" 15" strong, resilient Neoprene Elastic Strips which stretch out to safely and securely tie down any size load regardless of shape or size. Elastic strips spread out from aluminum center ring and have steel "S" hooks at end for attaching to carrier. Strip lengths can be adjusted from 9" to 15".

\$2.25

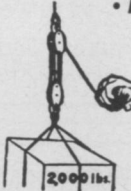
Ideal for holding down Luggage, Fishing Poles, Boats, Trunk covers, Hold-Down plus 25c Tarpaulins, etc. pp. & hdlg.

11-Piece Drafting Set \$3.00



Entire set has high luster chrome plated instruments of high quality that compares with much higher priced drafting sets. You get plain and ring head bow dividers, compasses for use with ink or pencil. Ruling pens and all necessary parts. Precision made instruments packed in an attractive simulated leather, velvet lined case, 11 pieces, case and all, only \$3.00 plus 30c for handling and postage or C. O. D. plus fees.

AMAZING BLOCK & TACKLE



• PORTABLE... weighs only 13 ozs., fits in pocket!
• ONE HAND OPERATION...
• POWERFUL... lifts up to 1000 lbs.!

Amazing Work Saver for

- Hunters
- Farmers
- Yachtmen
- Handymen
- Truck drivers
- Meteorists

Here's an unusual tool, even for us! It's the tiny Midget Babe Block and Tackle. It weighs only 13 oz., yet is so powerful it lifts up to 1000 lbs. easily! Because of its great strength, small size, complete portability—this block and tackle has many uses. In your car for emergencies, for home, factory, farm or for loading heavy articles. For sportsmen: loading, deer, boats, etc. For anyone who has to do heavy lifting! Fine engineered throughout, best grade aluminum, steel axles, pre-lubricated for life. Hoists have two lifting slings, at top and bottom, with heavy welded steel rings. Slings can be doubled for extra strength. Complete with 70 ft. nylon cord, 5 to 1 ratio—1000 lb. test. Carrying bag. Instructions. \$9.95

ALSO AVAILABLE—Tiny Babe—Lifts up to 2000 lbs.!

With 100 ft. nylon cord, 7-1 ratio—2000 lb. test—15 oz. wt. Twice as powerful as \$9.95 model—only \$12.95 ppd.

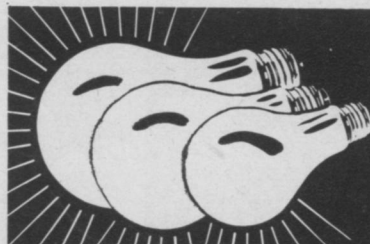
1 yr. guarantee on both models.

Ever-Glo Light Bulbs UNCONDITIONALLY GUARANTEED TO BURN FOR 5 YEARS!

Outlasts 13 ordinary Bulbs—Like Paying less than 5 1/2¢ per bulb!

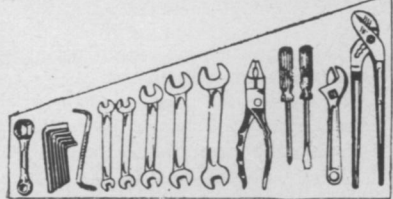
Imagine! One single bulb, UNCONDITIONALLY GUARANTEED by Scott Mitchell and the manufacturer, to burn for 5 FULL YEARS under normal use, outlasting 13 ordinary bulbs! We will replace any Ever-Glo bulbs that burn out within 5 years of purchase ABSOLUTELY FREE OF CHARGE! Does away with bulb snatching, bulb buying. Put Ever-Glo's in hard-to-get-at kitchen fixtures, closets, hallways, high ceiling sockets. Available in sets of 3, 60-75 or 100 watts.

3 of any one size—\$2.00 ppd.
18 assorted—\$10



Everything in its place... and a place for everything

Professional Quality 20-Pc. HOME & CAR TOOL KIT



Outfit of 1001 uses—will help you do a competent job by putting the right tool into your hands! Contains 10-way wrench; 7-piece hex wrench set; off-set screw drivers, (Slotted and Phillips head) to get into hard-to-reach places; 5 forged steel open-end wrenches; 7 slip-joint pliers with cutter, has insulated handle for electrical work; Phillips screw driver with shockproof handle; regular slotted screw driver; adjustable wrench; and pump plier—all quality tools in handy, space-saving roll pack! Repair doors, faucets, wiring, washing machines, bicycles, bridge tables, light switches, typewriters—almost everything around house, car and garage! Cut out long waits and aggravation with repair men—save hundreds of dollars in repair bills!

\$6.95 ppd.

Tremendous Do-It-Yourself Ideal

EYELET PLIER with 300 Eyelets



New EYELET PLIER does a neat-looking professional job. Saves you big money on new articles and repairs. Works on fabric, leather, plastic, cardboard, shoes, oilcloth. Great for: Belts—Shoes & Sneakers—Binders—Deck Chairs—Sun Shades—Shower Curtains—Luggage Straps—Sports Equipment—Tents & Tarpaulins—Air Conditioner Covers—Sails—Duffel Bags—Camping Equipment—Wall Maps, Charts & Placecards—Campaign & Promotion Material—Banners & Bunting. Complete with 300 eyelets in assorted colors. \$1.98, plus 25c for postage, ppd. & handling. 300 extra eyelets 75c.

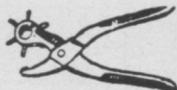
Revolving Leather Punches

\$1.59

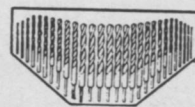
plus 25c pp. hdlg.

- Housewives
- School Children
- Hobbyists
- Leather Workers

Makes clean, sharp holes—6 different sizes—in all qualities, thicknesses of leather. Use in the home for punching holes in belts, shoes, bag straps to tighten them. Repair baseball gloves. The kids will use it to make wallets, belts at home, in arts and crafts classes. At this low price, an ideal buy; long, with polished knurled handles, strong spring, 6 standard tubes, brass anvil. New German import!



Chrome Vanadium 29 Pc. Drill Set



Specially made for speed drilling. In sturdy plastic tool roll. Finest all-steel drills hardened and precision ground to the sharpest, longest lasting cutting edge obtainable; will easily and cleanly bite through hardwoods, plastics, aluminum, iron and the toughest steels.

Full jobber length. Sizes by 64th inch from 1/16" to 1/2". Also available with Turned Down Shanks to fit all 1/2" drills. In individual pocket roll.

\$6.49 ppd.

\$8.95 ppd.

60 Pc. Set Wire Gauge Chrome Vanadium Drills

Top quality high test Chrome Vanadium Drills designed for speed drilling through toughest steels, woods, plastic, iron and aluminum. Precision ground, long-lasting cutting edges.

Nos. 1 through 60. A \$14.95 value—NOW, \$5.40. Same set above available with marked pocket for each drill—Only \$2.50. All above drill sets plus 35c pp. & hdlg.

Saws Metal Into Any Shape



New! Supreme

\$1.49 ppd.

METAL HOLESAW

Now you can cut circles, zig-zags, triangles, any shape you wish, in any metal with a minimum of effort.

Just snap this amazing Metal Holesaw into the chuck of your 1/4" power drill, bore starting hole like any other drill, then enlarge hole and start shape by moving Metal Holesaw in desired direction. Metal cutting edges cleanly and easily bite thru even the toughest of steels as well as Masonry, Plaster, Plyboard, Plastic and hardwoods. WOOD HOLESAW—Same as above but designed specifically for wood cutting—\$1.00 ppd. BOTH HOLESAWS—METAL AND WOOD—\$2.25 ppd.

Polished Aluminum, UTILITY CLAMP-ON LAMP

Perfect for workshop, office, plant, home, garage, photography 4 1/2" highly polished heavy aluminum deep reflector set in gleaming nickel socket. Heavy duty spring clamp with rubber grips that securely fasten to any projection, no matter how smooth, to give you steady, vibration-free lighting. Four-way adjustable ball and socket swivel permits setting of light in any direction. Six feet of rubber covered UL Approved wire and molded plug. A sensational value!

\$2.49 ppd.
3 for \$7.00 ppd.

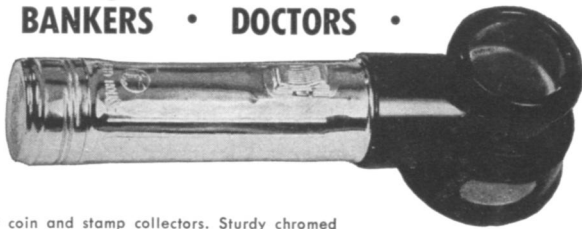
ORDER BY MAIL
SAVE MONEY!

IMPORTANT Order Today and Save. Minimum order \$1.00. Send Check or M.O. C.O.D. orders plus fee. Money Back Guarantee. Protects you against risk.

SCOTT-MITCHELL HOUSE, Inc.
Dept. 2409—415 South Broadway, Yonkers, N. Y.

Self Illuminating 5x POCKET MAGNIFIER

SCIENTISTS • BANKERS • DOCTORS • COLLECTORS



Powerful magnifier carries its own illumination. It has hundreds of uses: for examining textiles, fibers, etc.; inspecting tools and machine parts; for Lab study of insects, etc.; photo retouching; for coin and stamp collectors. Sturdy chromed steel and bakelite construction. Uses standard flashlight batteries.

- STUDY SPECIMENS
- CHECK SIGNATURES
- EXAMINE STAMPS, COINS
- INSPECT DETAILS

5X—2.95
7X—3.45
10X—3.95
Postpaid
Less Batteries

John Surrey, Ltd. 11 West 32nd St., Dept. SN-34, New York 1, N. Y.



"8-10" Graduated Tubes

Flat bottom glass tubes Graduated to 8 ml. (in one ml.) Also graduated into 10 equal portions. Exceedingly useful for blending and for any work requiring measurement up to 8 ml.

Dozen \$1.50; gross \$15.00
Write for leaflet SNL-840

R. P. Cargille Laboratories, Inc.
117 Liberty St., New York 6, N. Y.

FREE FILMS

The Free Films you need to enrich, vitalize, and enliven textbook teaching are listed in the New, 1959

EDUCATORS GUIDE TO FREE FILMS

Authoritative — Comprehensive
Easy-to-Use

Available for \$7.00
on 30-day approval

Educators Progress Service
Dept. ST Randolph, Wisconsin

MATCHED MAPS

50-STATE USA MAP

\$1.00 POST PAID

34" x 52"
EIGHT COLORS

Handy information chart

BOTH MAPS
for \$1.95

- EDUCATIONAL
- INFORMATIVE
- DECORATIVE

Heavy map paper guarantees lifetime use

NEWER THAN THE
50-STAR FLAG!

FLAT GLOBE MAP

\$1.00 POST PAID

34" x 52"
EIGHT COLORS

Mural world map

School, Den, Library, Office,
Lab, Store.

Shop, Public Building, Play-
room.

Used by TV newscasters and
in the Pentagon!

Chart travel fun and world
adventures!

Follow fast breaking head-
lines! For yourself, or as a
remembered gift.

SAVE \$3.00

One map \$1; Both maps,
\$1.95. Please specify.

Cash, check, M.O.

(Dealer inquiries invited)

DICK KENT

Trader

P.O. Box 264

Camp Hill, Penna.

SAVE \$3.00

50 STATE MAP OF THE UNITED STATES

\$500 Value

2 Full Color

Rand McNally Maps

\$1.95

Questions

ASTRONAUTICS—Why do scientists think "Lunik" was aimed to hit the moon? p. 167.

BOTANY—What is vernalization and can plants do without it? p. 165.

MEDICINE—To what order do bees, wasps, hornets, yellow jackets and ants belong? p. 164.

Photographs: Cover and p. 163, University of Michigan; p. 165, The Budd Company; p. 167, Ryan Aeronautical Company; p. 170, Westinghouse Electric Corporation; p. 176, E. I. du Pont de Nemours & Co. (Inc.).

Do You Know

Margarine and solid vegetable shortenings raise the *cholesterol level* and are no better than butter or lard in this respect.

The green and yellow summer vegetables are rich in *vitamin A* and important for normal eyesight and protection against respiratory infections.

The Atlas, the U. S.'s first *intercontinental ballistic missile*, was the first missile to lift itself into orbit without extra rocket stages.

Iodine-131, used primarily in medical research, has a radioactive half-life of approximately eight days and decays to stable Xenon-131.

Mountain ranges, ocean basins, unevenly distributed masses in the earth's crust, and the slightly flattened character of the earth at the poles all change the *earth's attraction* for neighboring bodies, including satellites.

MICRO-ADS

Equipment, supplies and services of special interest to scientists, science teachers and students, science-minded laymen and hobbyists. 25¢ per word, payable in advance. Closing date 3 weeks prior to publication (Saturday).

SNL, 1719 N St., N.W., Washington 6, D. C.

BOOKS

NEW—INTERESTING—SCIENCE BOOKS FOR YOUNG PEOPLE. Catalog 25¢. Arne Company, Box 61, Brooklyn 29, N. Y.

BOOKS 10¢—ALL SUBJECTS—CATALOG FREE. Cosmic Bookshop, Clayton, Ga.

MICROSLIDES

MICROSLIDES: INSECTS, MARINE LIFE, ZOOLOGICAL, Botanical, British, Fresh Water Algae. Send for Complete list. Free. Esbe Laboratory Supplies, 459 Bloor St., W., Toronto, Ontario, Canada.

MINIATURE STEAM TURBINE

MINIATURE STEAM TURBINE. ACCURATELY machined. Efficient (2,500 rpm). Runs on heat from bunsen burner or solar reflector. \$2.00 post paid. Negravco, Box 414, Redwood City, Calif.

PRODUCTS MANAGEMENT

INTERNATIONAL PRODUCT SERVICE, EST. 1954. Licenses found for overseas manufacturers. Quality U. S. Patents for industry. Patent research, Inc., 6 Gaywood Circle, Birmingham, Alabama, U.S.A.

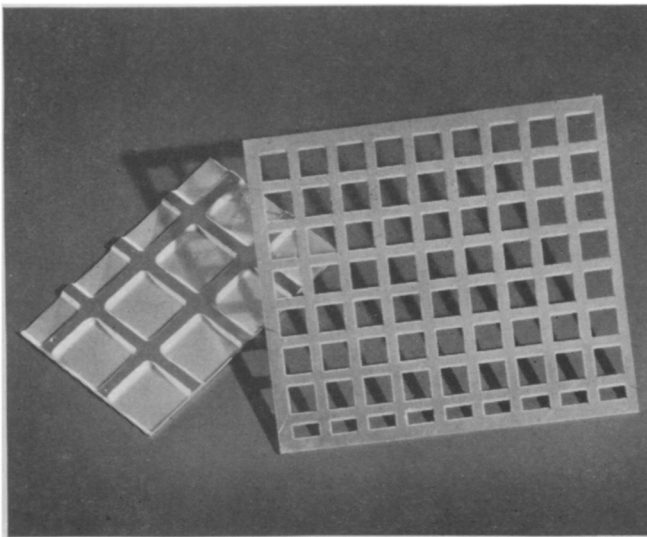
SEE THRU MAPS

"SEE THRU" STAR MAPS THAT GLOW IN dark for easy star identification. 12 Map Sets—\$4.95. Broder Maps, 1368 McAllister St., San Francisco 15, California.

Kodak reports on:

a new method of metal working . . . lower cost for a machinable photographic plate . . . why it pays to be patient with the scientific mind . . . before and after yogurt

Photo-milling



New methods of metalworking do not come along often enough to be ignored. Here are two examples of what we call "photo-milling." The one on the right could, of course, have been done on a punch press if die cost had been justifiable. No die was used, nor were the openings cut individually. The one on the left looks like a milling machine job, for sure. It isn't.

This sort of thing is now best done photographically with a new light-sensitive preparation called *Kodak Metal-Etch Resist*. You spray it on, or dip, and dry. Then you expose to bright light under a film on which you have photographed the pattern. After a simple development, a flush that washes away the resist where the pattern kept the light off, and a bit of baking to remove the developer solvent, the metal is ready for whatever chemical or electrolytic etching works best. The resist protects from etching action vigorous enough to remove a quarter-inch of aluminum and considerable depths of stainless steel, tool steel, magnesium, titanium, and possibly some metals we know nothing about. To get the benefit of our thinking on the subject, write Eastman Kodak Company, Graphic Reproduction Division, Rochester 4, N. Y.

Plates drop; don't shatter

The price of *Kodak Photoplast Plates* has been cut. If you want to photograph a pattern on a shatter-resistant, rigid support that can be conventionally machined and maybe used as a computing element or as a master for printed circuits, you have that much less reason to shy away from these 8" x 10" methacrylate-base plates.

Thickness	New Price
.060"	\$55.20 per package of 12
.130"	31.05 per package of 6
.250"	23.00 per package of 4

To locate a dealer or to ask about other sizes and the possibility of light-diffusing methacrylate for the base, write Eastman Kodak Company, Special Sensitized Products Division, Rochester 4, N. Y.

Color film, fast but good

Has anything big come out of the Kodak Research Laboratories lately? Sure—*Kodak High Speed Ektachrome Film*,

now on sale at thousands of film counters in 20-exposure 135 magazines,

an outcome worth all the soothing of temperaments, all the technical conferences, all the writing and reading of reports,

a film with an Exposure Index of 160 in Daylight Type and 125 in the Type B (for 3200°K),

admitting no impairment of definition in return for speed,

asking little more light than fast black-and-white film in return for full color,

This is another advertisement where Eastman Kodak Company probes at random for mutual interests and occasionally a little revenue from those whose work has something to do with science

in slides that look right even if the photographer has not fussed much about the fridity of his film storage cabinet or the color balance of his illumination,

and awfully near right at twice the official Exposure Index with three minutes more in the first developer.

Your dealer can arrange to have this film processed by Kodak or any other laboratory offering this service. You can also do it yourself with the *Kodak Ektachrome Processing Kit, Process E-2, Improved Type*.

Acido orotico

Around the turn of the century it was brought to the world's attention that the inhabitants of certain Bulgarian villages were a) living to ripe old ages and b) consuming vast quantities of the ripe old fermentation products of the local dairying. Echoes of this coincidence have rumbled forth at intervals since.

In the twenties a certain elderly biochemist who had seen much importance in the correlation was a celebrated figure of Paris. In the thirties American milk wagons were bedizened with signs advertising a certain brand of fermented milk. In the forties the word "yogurt" entered the vocabulary of the American intelligentsia. With the dawn of the fifties, the *Journal of the American Chemical Society* (72, 2312) reported that certain strains of *Lactobacillus bulgaricus* thrive when supplied with 6-carboxyuracil, a substance first synthesized in 1897 for academic exercise and later shown to be identical with orotic acid.

This name was derived from 'ορός, whey, by two Italians who had encountered the substance while making lactose from milk whey liquors.

The flowering of biochemical sophistication in the mid-fifties has excited a deeper curiosity about orotic acid. To some it looks like a significant intermediate in the process by which living organisms fabricate nucleotides for their DNA—the stuff of genes—out of the amino acids at their disposal. This is big talk.

In Italy interest in *acido orotico* has been rekindled to a small-scale frenzy. At the University of Urbino last June a colloquium on pyrimidines (*Acta Vitaminologica*, 12, 195-328) devoted much of its attention to the compound. One man claimed his evidence showed that a dietary deficiency of orotic acid affects pregnancy, lactation, and growth in the rat, that it is a vitamin-like factor essential for the survival of the newborn. One senses the closing of a circle.

If we had not been invited to quote on 100 kilos of Orotic Acid recently, we might not have looked up all this lore. We didn't get the order, but in trying we made enough of it to stock as Eastman 7784 (along with 2-Thioorotic Acid, Eastman 7783) for the convenience of biochemical investigators. Anybody who wants to sell it from milk trucks is strictly on his own.

We have some 3700 Eastman Organic Chemicals to worry about. Catalog on request from Distillation Products Industries, Rochester 3, N. Y. (Division of Eastman Kodak Company).

Prices are list and subject to change without notice.

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