

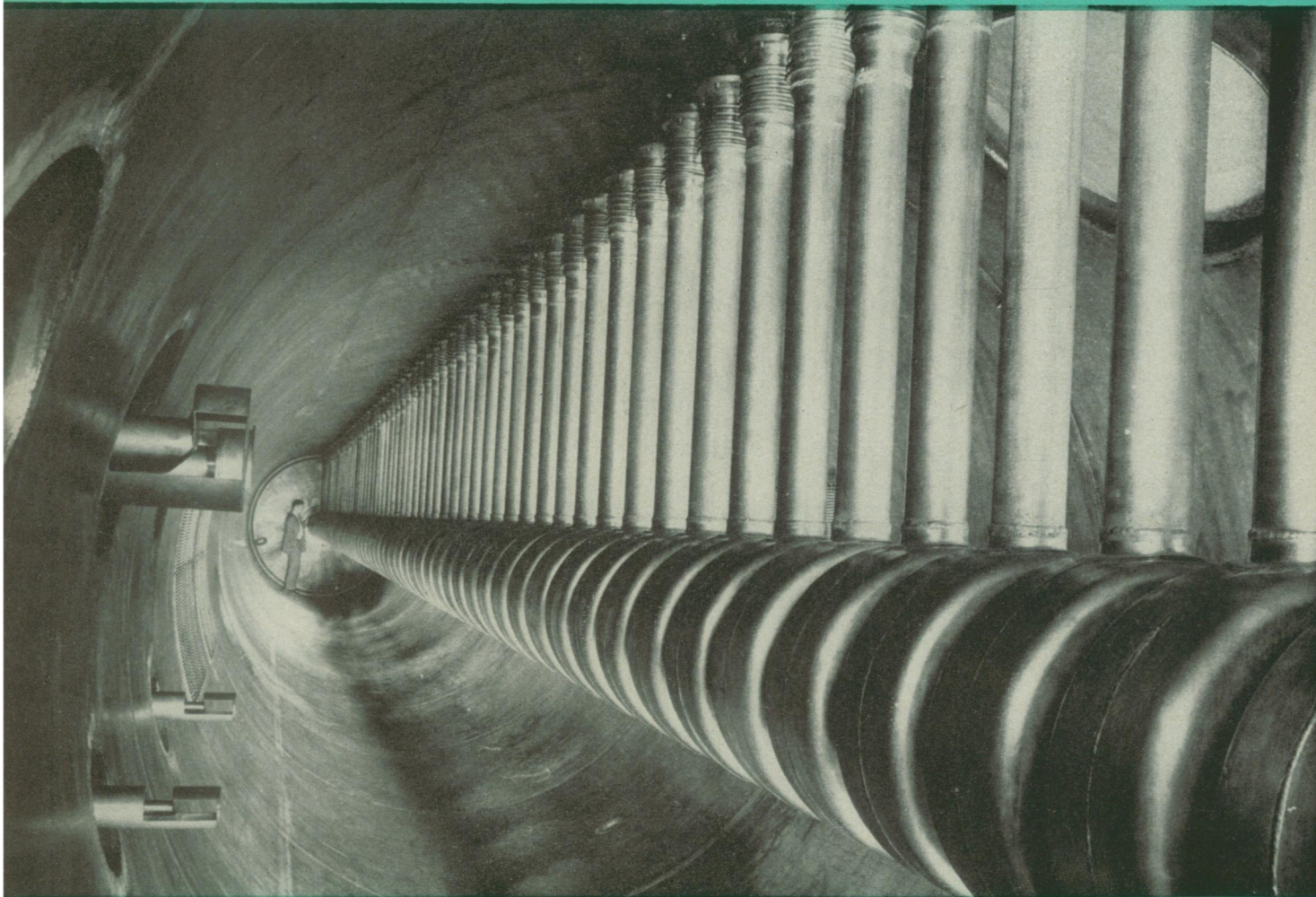
15¢  
\$5.50 A YEAR

May 17, 1958

VOL. 73 NO. 20 PAGES 305-320

# SCIENCE NEWS LETTER

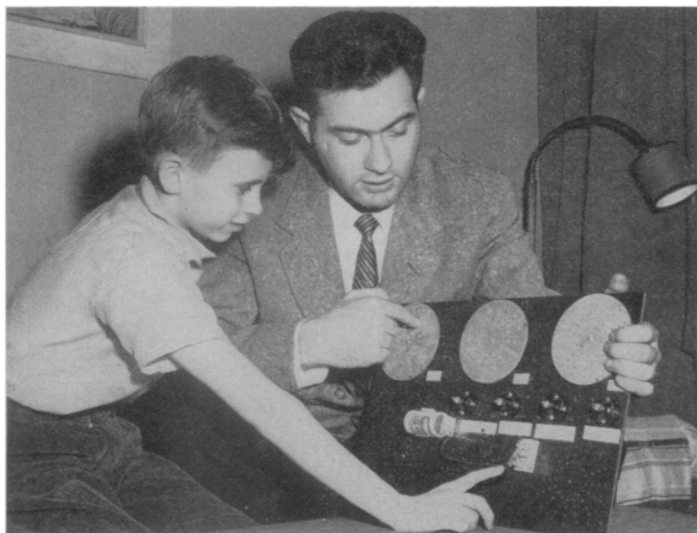
THE WEEKLY SUMMARY OF CURRENT SCIENCE



**Element Maker**

See Page 309

A SCIENCE SERVICE PUBLICATION



**Why have  
hundreds of Schools  
bought GENIAC®—**

**The ELECTRIC BRAIN  
Construction Kit?**

**Because GENIAC is the only kit and text combination that presents the basic ideas of cybernetics, boolean algebra, symbolic logic and computer circuitry so simply that a twelve year old can construct what will still fascinate advanced students!**

The partial list of our institutional purchasers below indicates a cross section of our customers. GENIAC is not only an excellent classroom demonstrator but it provides hours of fun abuilding. As such it makes a perfect present for the science minded teen-ager. As a father-son project it can't be beaten.

GENIAC is sold to all customers on a one-week return guarantee. You may actually use it in that time, returning it as is if you decide not to keep it.

**Order yours now—only \$19.95**

Some of the 125 GENIACS you can build from the completely detailed instruction manual are:

- LOGIC MACHINES: Comparing; Reasoning; Syllogism Machine; Intelligence Tester.
- GAME PLAYING MACHINES: Tic-Tac-Toe; Nim (Think you can beat the machine?).
- ARITHMETICAL MACHINES (Binary and Decimal): Adder; Subtractor; Multiplier; Divider; Arithmetical Carrying.
- CODE MACHINES: Secret Coder; Secret Decoder; Combination Locks.
- SIMPLE MACHINES: Burglar Alarm; Automatic Oil Furnace Circuit.
- PUZZLE SOLVERS: The Space Ship Airlock; The Fox, the Hen, the Hired Man and the Corn; The Uranium Shipment and the Space Pirates.
- ACTUARIAL: Douglas MacDonald's Will.

SPECIAL: Machine to Compose Music, Machine to Forecast the Weather.  
GENIAC parts are specially manufactured to high tolerance; they include a special six-deck switch of unique design and over 400 components plus a book "GENIACS: SIMPLE ELECTRICAL BRAIN MACHINES AND HOW TO MAKE THEM", plus six other books and manuals, parts tray and rack, shown in picture above. GENIAC is a remarkable buy for

**only \$19.95**

Kit and instructions are returnable for full refund in seven days. This is a perfect father-and-son project; your whole family and your friends will enjoy the finished machines. You can design new computers from the adaptable parts.

----- MAIL THIS COUPON -----

SCIENCE KITS, Dept. SL-58-C

Oliver Garfield Co., Inc., 108 E. 16th St., New York 3, N. Y.

Please send me:

1 GENIAC Electric Brain Construction Kit and Manual.

\$19.95 (East of Mississippi) .....

\$20.95 (Elsewhere in United States) .....

\$21.95 (Outside the United States) .....

Returnable in seven days for full refund if not satisfied. I enclose \$.....in full payment. (For delivery in N. Y. City please add 3% for city sales tax.)

My name and address are attached.

**SOME FIRMS AND INSTITUTIONS  
THAT HAVE ORDERED GENIAC:**

- Allis-Chalmers
- Remington-Rand
- International Business Machines
- Whealdex Mfg. Co.
- Manuel Missionary College
- Walter V. Clarke Associates
- Barnard College
- Westinghouse Electric
- Phillips Laboratories
- General Insurance Co. of America
- Lafayette Radio
- Rohr Aircraft Co.
- Southwest Missouri State College
- Fibreglas Corp.
- Stamford Research Institute
- The Hecht Co.
- American Management Assoc.
- De Pauw University Hydro Electric Tower
- Adams State Teachers College
- Abercrombie and Fitch
- Kleinschmidt Laboratories
- Kansas State Teachers College
- Albert Einstein Medical College
- Naval Research Laboratories
- Board of Education, Tecumseh, Nebraska
- Marshfield Public Schools
- Los Angeles Public Schools
- Jefferson Union High School
- Oklahoma A&M
- Kansas City University
- Duke University
- Coral Gables Senior High School
- Courtland Jr. High School
- Bell Telephone Laboratories
- Lovell Public Schools
- Clearwater High School
- St. John's Seminary
- Orange County Community College
- Morningside College
- New Hampshire Public School
- Kentucky Wesleyan College
- University of Ottawa
- ... and hundreds of other individuals  
and institutions

# Special Tool Bargains-Save Up to 50%

A "Must" for Every Home & Shop  
Sensational, New, Improved  
**"LITTLE GIANT"**  
**FIRE EXTINGUISHER**



40% GREATER CONTENT!  
Lightweight! Lifetime Guaranteed!  
Foolproof! Features Revolutionary  
new super-efficient DUPONT Chem-  
icals!  
only **\$4.95** ppd.  
(2 for \$8.95)

If fire breaks out in home, shop, office, boat, car or store, the "Little Giant" improved FIRE EXTINGUISHER can snuff it out completely in as little as 2 seconds. Just a slight turn of the precision made brass valve and the job is done! The lightweight "Little Giant" is constructed of highly polished brass and is guaranteed for life! The potent Dupont Chemicals do thorough job yet are completely harmless to persons, animals, birds—will not damage any materials. The "Little Giant" requires no inspection or re-charging. The pressure remains constant for years—It is always ready for immediate use. Complete with brass bracket & screws. Play safe—buy several! When contents are exhausted return empty cartridge with \$1.85 and we'll send you a completely new "Little Giant" Extinguisher.

constant for years—It is always ready for immediate use. Complete with brass bracket & screws. Play safe—buy several! When contents are exhausted return empty cartridge with \$1.85 and we'll send you a completely new "Little Giant" Extinguisher.

1958 Model Improved, Foolproof  
**JIFFY Electric SPRAY GUN**

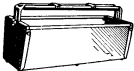
at a new **LOW PRICE!**  
Just Plug In—  
Start Spraying!



No compressor, extractors, hoses, filters! Anyone can spray like a pro! Just plug in! Sprays anything that pours: paint, varnish, lacquer, insecticides, liquid fertilizer, polishes, etc. Has new feature you've never seen in a sprayer! Super adjustable nozzle—adjust spray from a stream to a fog spray by turning nozzle cap. Push and Piston plunger type pump! Mystery nozzle to spray around corners! No pressure "sag." Easy to clean—60-80 lb. nozzle pressure. Nuts, bolts cadmium plated. Metal parts brass or bronze to resist corrosion. New motor, 2.5 oz. glass jar with measuring scale, 8 ft. U.L. approved cord coated to resist chemicals. U.S. only.

**SINGLE TUBE MODEL—only \$7.95 ppd.**  
Available with **DOUBLE TUBES** for even greater efficiency and power—only **\$8.95 ppd.**

All Purpose, Heavy Steel  
**TOTE-ABOUT**

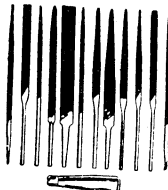


**\$1.98**

plus 35¢ PP. & Hdg.

This attractively styled Tote-About, measuring 16"x5 1/2"x7", is ideally suited for household or garden tools, hobby craft and art supplies, children's toys and many other indoor & outdoor applications! Constructed of heavy-duty steel with plated or metallic finish. No sharp or rough ends. Adjustable handles with slot for saw, 2 dividers on tray handle holds nails, screws, bolts, etc. Easily assembled in just 5 minutes.

12 Pc. Needle  
& Warding

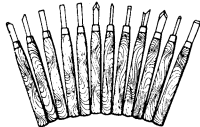


**FILE SET**  
ONLY **\$2.49**

(plus 25¢ hdg.)

Made from the best quality tool steel, to fit the exacting requirements of mechanics, watch and jewelry craftsmen, hobbyists. Attractive kit contains the following: 5 1/2" long needle and warding files with high test cutting qualities: round, flat, knife, square, triangular, in all textures: fine, medium fine, medium, medium coarse, coarse. Comes with polished wood handle and new type steel grip chuck.

Surgical Steel — Hand Ground



**Set of 12 CARVING KNIVES**  
**\$2.00** ppd.

The sharpest, keenest ground, surgical steel blades we have ever seen—sharp enough to split a human hair in two! 12 different shapes and edges can do every job of wood carving, model making, linoleum cutting, sculpting and whittling imaginable. Each blade has a 4 1/2" long hardwood handle for easy gripping. Heavy duty blade is firmly attached by means of a brass ferrule to insure long, continued rugged use. Each surgical steel blade precision hand ground to easily and quickly notch and cut any shape you wish. A sensational all-purpose set, well worth \$5.95.



**Completely Adjustable WORKBENCH LAMP**

For Shop, Inspection Bench, Machine Tool, Laboratories

Swivels and angles in any conceivable direction. Guaranteed to hold your light exactly where you want it because 3 arms (2-12" and 1-10") adjust on 3 ball joints. Easy to mount anywhere. Takes up to 100-watt bulb. Has 8-foot long-wearing neoprene cord and plug. Finished in pale green with reflective white enamel interior reflector. Shade is permanently attached to support arm so it cannot come off or pull bulb socket apart.

**\$4.95** plus 50¢ pp. & hdg.

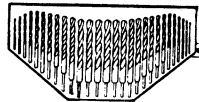
**Permacel Heavy Vinyl Plastic Electrical Tape**

Resists abrasion, water, acids, alkali and corrosion. First quality guaranteed. 3/8" wide, 108 ft. roll—NOW **\$1.69**



ppd.

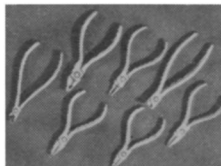
**Chrome Vanadium 29 Pc. DRILL SET**



Specially made for speed drilling. In sturdy plastic tool roll. Finest alloy steel drills hardened and precision ground to the sharpest, longest lasting cutting edge obtainable; will easily and clearly bite through hardwoods, plastics, aluminum, iron and toughest steels. Unconditionally guaranteed for thousands of drillings. Full jobber length. Sizes by 64th from 1/16" to 1/2". There are only a limited quantity of sets available at this low price, so hurry! Also available with Turned Down Shanks to fit all 1/2" drills. In individual pocket roll.

**\$6.49 ppd.**

**\$8.95 ppd.**



**FINEST QUALITY Imported Precision Pliers 75¢ Ea.**

Flat Nose, Round Nose, Diagonal, End Cutting Nippers, 1 Side Flat—1 Side Round, Snipe Combination for Jewelers, Optical Workers, Hobbyists. These European In-Flat Nose, Round Nose, Diagonal, End Cutting Nippers, 1 Side Flat—1 Side Round, Snipe Combination for Jewelers, Optical Workers, Hobbyists. These European instruments are of deep-forged, heat-treated high quality tool steel, fabricated to most exacting specifications. All-over ground, polished to smooth hard surfaces. Smooth working joints with right tension. Jaws meet perfectly to securely hold the most delicate objects in hard-to-reach corners and angles. Each plier is 4" long.

75¢ EACH, ALL 7 FOR \$5.00 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.

Guaranteed to give years of satisfaction. A full 60 pc. set, Nos. 1 through 60. A \$14.95 value **NOW ONLY \$5.40** plus 35¢ pp. & hdg. Same set above with Huot Index Container—Only **\$6.65** plus 35¢ pp. & hdg. Also available 61-80 set of high quality drills in plastic kit with marked pocket for each drill—ONLY **\$2.50** plus 35¢ pp. & hdg.



**Wood Working VISE**

For home and shop . . . amateur or pro. A mechanically perfect, solidly constructed vise with full 5 1/2" wide jaws that open to 5". Feature smooth-working polished steel bars that glide easily back and forth yet firmly and securely lock work for even the finest of precision crafting. Attractive red enamel body. **\$2.69** plus 25¢ pp. & hdg.

GOVERNMENT SURPLUS BELOW MFR'S COST  
**DUPONT NYLON CORDS**

Light, strong, durable, quick-drying. Will not rot or mildew. Ideal for indoor or outdoor use. Camping, boating, hunting, clothes line and venetian blinds. Perfect for tent ropes, light anchors, deer cord, trout lines, crabbing, etc. Unused.

**OUTWEARS ORDINARY ROPE 10 TO 1**  
**NYLON BRAIDED CORD**

1 1/8" dia., 100 lb. test, per ft. -----1 1/2¢  
1 1/4" dia., 375 lb. test, per ft. -----2¢  
3/16" dia., 550 lb. test, per ft. -----2 1/2¢  
In 50, 100, 200, 300, 400, 500 ft. & over lengths

**NYLON BRAIDED LINE**

1/4" dia., 1000 lb. test, olive drab, per ft. -----3¢  
in 30, 40 & 50 ft. lengths only -----17¢

**NYLON ROPE**

5/16" dia., 1900 lb. test, per foot -----12¢  
3/8" dia., 2700 lb. test, per foot -----17¢  
7/16" dia., 3800 lb. test, per foot -----20¢  
All in any length up to 1200 feet.

**NYLON FISH LINE**

Proven best by experienced fishermen. Heat stretched. Will not kink, twist or unravel. 25 lb. test. 300 ft. Reg. \$1 per spool -----NOW 50¢

**NYLON WEB STRAPS**

with sturdy steel buckle



Perfect for passenger safety belts, luggage straps, car towlines, car carrying straps, boat trailer straps, etc. Tie heavy equipment and machinery with greater ease and safety at far less cost. Just the thing for the garage or workshop.  
1" wide, 3000 lb. test, per foot -----10¢  
1 3/4" wide, 6000 lb. test, per foot -----16¢  
In 5, 6, 8, 10, 12 foot lengths

Magnification and Eye Protection



**TWIN LOUPE**

For All Precision Workers

Not just a couple of magnifiers in an eye shield, but 2 1/2-power high-quality ground-and-polished optical-quality lenses with prism-components proportional to power . . . mounted at best angle for least distortion. Lenses set in lightweight aluminum frame with adjustable plastic headband. Can be used for long periods of time without fatigue . . . without affecting eyes. If you now use a one-eye magnifier, you'll be amazed at the clarity of the binocular vision Twin Loupe makers, map-makers, lithographers, jewelers, map-dealers, model makers, stamp collectors and everyone else doing detail work. Can be used with and without eyeglasses. **\$9.00 ppd.**

**CONTOUR SCRIBER**



Permits professional fitting of linoleum tile, wood, plastic and sheet metal floors and walls. Obstructions and difficult cutting such as ground pipes, cabinets, door sills, frames, etc., simply and quickly overcome without removing any molding. Sturdy heavy metal construction, adjusts to 12 3/4" . . . perfectly matched. **\$1.00 ppd.**

**Polished Aluminum, UTILITY CLAMP-ON LAMP**



Perfect for workshop, office, plant, home, garage, photography. 4 1/2" high, polished heavy aluminum deep reflector set in gleaming nickel socket. Heavy duty spring clamp with white 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 U.L. Approved wire and molded plug. A sensational value! **\$2.49 ppd.** 3 for \$7.00 ppd.

**Lifetime Grit HANDY SANDER**



Tungsten Carbide Grit Brazen on Steel

New Lifetime abrasive miracle tungsten carbide grits brazen on steel gives a diamond-like cutting hardness. Perfectly finishes wood, plaster, plastic or composition materials. Ideal for dry wall joints, all types of woodwork. Never needs replacing—always stays sharp! Sands twice as fast as sandpaper—does not tear like sandpaper! Easily cleaned. Complete kit includes easy-to-use birch sanding block, one coarse grit shoe and one fine grit shoe. Lifetime guaranteed. **\$2.00** plus 20¢ pp. & hdg.

**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.

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