

New Devices Aid Disabled Toward Normal Life

➤ NEW DEVICES that enable disabled persons to work and care for themselves better were reported at the Third International Congress of Physical Medicine in Washington, D. C.

Dr. Leonard F. Bender, associate professor of physical medicine and rehabilitation at the University of Michigan Medical School, told delegates to the congress from 40 countries that a modified shoulder saddle "harness" is gradually replacing the old "figure eight" type among patients at the University's amputee clinic.

This new type of harness makes it easier for persons with amputated arms to do heavy work such as lifting weights. A new cable suspension device on the harness permits much freer motion at the shoulder and eliminates the former difficulty of the harness slipping around the chest because of the lack of free motion between the leather suspension straps and the rings, Dr. Bender said.

Col. H. F. Pierce, an experimental psychologist from Toronto, Canada, demonstrated in an exhibit plastic splints he has invented and patented. These splints, molded to fit about weakened parts of the body, will give the hands of a crippled person support so he can type again.

Dr. Roy H. Nyquist, chief of the physical medicine and rehabilitation section of the Veterans Administration hospital in Long Beach, Calif., described an arm brace, now in use at his hospital, that has special attachments for eating, writing, shaving and brushing teeth. The brace's feeding spoon is fashioned on the principle of a scoop shovel and is fastened to the brace with a swivel joint that allows gravity to keep the spoon level on the way from the plate to the mouth. A stop-bar is arranged so that pressure can be brought against the bar, thus holding the spoon so it is more rigid when food is scooped from the plate.

A sliding bar and pencil holder are also provided on the same brace for writing, and a metal holder is incorporated for an electric razor. The holder can be swiveled to allow for good positioning of the razor.

• Science News Letter, 78:173 September 10, 1960

Paralyzed Given Surgery

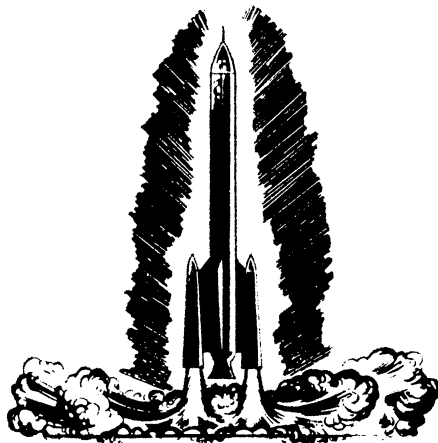
➤ SURGICAL RECONSTRUCTION of the arms and hands of persons paralyzed in all four extremities can sometimes provide as much functional activity as mechanical devices, Dr. Earl C. Elkins of the Mayo Clinic told the Third International Congress of Physical Medicine in Washington, D. C.

Dr. Elkins and his associates have a number of patients who have sustained injuries to the spinal cord. He described procedures undertaken in each case to allow for partial function of the arms and hands.

The first essentials in planning such restoration are tests of muscle strength to determine the section of the spinal cord most involved and which muscles may function adequately after full reconditioning.

Simple devices can develop some degree of independence in patients with such

GUIDES for MODERNIZING SCIENCE INSTRUCTION



A new series of concise guides for science teachers—course-of-study outlines and discussions of recent developments, by members of the Science Manpower Project, Teachers College, Columbia University.
 Frederick L. Fitzpatrick,
 Director; Hubert M. Evans
 & Willard J. Jacobson,
 Associate Directors

COURSE-OF-STUDY GUIDES

These course-of-study manuals provide a coordinated sequence, one that is modernized in terms of recent advances, and one that directs special attention to the formation of sound scientific concepts and to the comprehension of scientific principles and their applications. Each volume presents course outlines and clear, readable discussion of significant concepts and developments. Throughout the sequence, emphasis is given to problem-solving techniques. The courses of study may be used in part or in their entirety, and the discussions are invaluable guides to modernizing existing courses.

Modern High School Physics	<i>Paper 70 pp. \$1.50</i>
Modern High School Chemistry	<i>Paper 109 pp. \$1.50</i>
Modern High School Biology	<i>Paper 96 pp. \$1.50</i>
Modern Elementary Science	<i>In preparation</i>
Modern General Science	<i>In preparation</i>

OTHER SCIENCE MANPOWER PROJECT PUBLICATIONS

Policies for Science Education

This broad survey of science education today predicts future directions and recommends programs for the various levels and areas of science education and for teacher education, in terms of present practices, policies, needs, and goals.

Cloth 219 pp. \$3.95

Problem-Solving Methods in Science Teaching

Problem-solving as a way of learning is discussed in terms of method, motivation, and evaluation. Specific problem situations and ways teachers and students use them are described in chapters on earth sciences, biological sciences, and physical sciences.

Paper 88 pp. \$1.50

Dimensions, Units, and Numbers in the Teaching of Physical Sciences

The methods of dimensional analysis and unit analysis, and certain number concepts and notations, are discussed to show how they can clarify physical science learnings in the modern high school course.

Paper 49 pp. \$1.00

A Guide to Engineering Education

Criteria for identifying potential engineers, descriptions of the major branches of engineering, outlines of typical programs of study, and a comprehensive annotated list of engineering colleges.

Paper 45 pp. \$1.00

Attitudes of Certain High School Seniors Toward Science and Scientific Careers

The images young people hold of science and the scientist were sought in this study, and the authors give specific suggestions for building more constructive attitudes. Reaction Inventory included.

Paper 53 pp. \$1.25

Write for discounts on quantity orders.

BUREAU OF PUBLICATIONS

Teachers College, Columbia University, New York 27, N. Y.

PROTECT YOUR CHECKS AGAINST FRAUD

NEW PERSONAL AUTOMATIC CHECKWRITER

\$9.95
Postpaid



Prints indelibly, perforates amount of check . . .
Complete with supplies and carrying case.

Now you can have low cost absolute check protection. This check-writer does the same job as office type machines which cost many times more. A necessity for any one who has a check account. Protect your personal account as well as your business account. Ideal for home use. Precision construction, weighs but 10 ounces, can be carried in pocket or purse.

★★ THE SUM \$ 9 DOLS & 95 CTS ★★
Imprints Any Amount

John Surrey, Ltd., 11 West 32nd St., Dept. SN-86, New York 1, N. Y.

DAZZLE YOUR OPPONENTS WITH CHESS COMBINATIONS!

"Art of Chess Combination" by Znosko-Borovsky, only work teaching principles; acclaimed by champions and beginners alike. Basic ideas, how to interlock pieces, force occasions, etc. 223pp. \$1.45, 10¢ postage. Money-back guarantee. Dept. SNL. DOVER, 180 Varick St., N. Y. 14, N. Y.

BOOK OF 15 PARADOXES in Math and Logic

Here's a wonderful way to sharpen your mind. 15 great paradoxes in math and logic. 2 equals 1; a+b does not equal b+a, the distance between two points inside a square inch is longer than the distance from Earth to Sun! 12 more stumpers, compiled by noted Prof. Aubrey Kempner. Paper bound, over 40 pages, pocket size. Only 25¢—no further obligation, nothing more to buy. To get your copy of "Paradoxes and Common Sense" mail this ad with 25¢ and your name and address TODAY to:

Only 25¢

D. Van Nostrand Company, Dept. 269A, 120 Alexander St., Princeton, N. J. (Est. 1848)

Study live insects and whole specimens!



with TESTA WIDE FIELD MICROSCOPE

Rugged, full-size American-made microscope features large working distance and 15x, 45x, and 75x magnification. Unusual versatility. Arm can be inclined in any direction of a 360° circle. Tube removable for field trips.

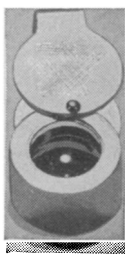
Kellner-type eyepiece. Triple divisible objective. Dual control rack & pinion focusing. Large reversible black and white stage. **\$54.85**

No slides to prepare!

Write for details!

TESTA MANUFACTURING CO.

Dept. SN-9 • 10126 East Rush St., El Monte, Calif.
Dept. SN-7 • 10126 East Rush St., El Monte, Calif.



\$2.00 P.P.

15X POCKET MAGNIFIER

Excellent when higher magnification is needed. Shows greatest detail. American made, for geologists, botanists, zoologists, other scientists, mechanics and engineers. Aluminum mounting with fold-over safety cover. 15 power, only \$2.00 postpaid. Worth 3 times this. Remit with order. No C.O.D. Harry Ross, 61-L Reade St., New York 7, N. Y.

Looking for a PUBLISHER?

Your book can be published, promoted, distributed by successful, reliable company noted for prompt, personal service. All subjects. Free Editorial Report. Inquiries also invited from businesses, churches, etc. Send for Free Booklet. Vantage Press, Dept. T-8, 120 W. 31, New York 1

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.

BINDERS FOR SALE—BUFF-COLORED BUCKRAM. Snap-in metal strips hold 52 copies. \$4.00 pp. Send orders with remittance to Science News Letter, 1719 N Street, N. W., Washington 6, D. C.

GOVERNMENT SURPLUS RADIOS, RECEIVERS, transmitters, gadgets, parabolic reflectors, infra-red snooper scopes, aircraft, camera lenses. Amazing catalog 10¢. John Meshna, Malden 48, Mass.

JAPAN—54 DIFFERENT FOR 25¢ WITH GUARANTEED stamps on approval. M. G. Snyder, Post Office Box 7657A, Baltimore 7, Maryland.

NATIONAL GEOGRAPHIC MAGAZINES 1888-1960, any issue, Periodical Service, Box 465-SN. Wilmington, Delaware.

NEW LIQUID CASTING PLASTIC, CLEAR COLORS. Embed real flowers, minerals, biological specimens, delicate instruments, electronic parts. Also gold setting resin and fiberglass for laminating, casting, molding, coating. Manual 25¢. Castolite Company, Dept. K-30, Woodstock, Illinois.

RECHARGEABLE FLASHLIGHT—LIGHT THAT lasts indefinitely. No more expensive, annoying battery replacements! This battery lasts for years. Just recharge by plugging in home electric socket . . . as often as necessary. The magic is in a non-corrosive cadmium cell. 3 1/2" plastic case in bright assorted colors. Compact enough for pocket or purse. Postpaid \$3.25. Howard V. Hansen, P.O. Box 51, Hasbrouck Heights, New Jersey.

THE STRUCTURE OF THE ATOM—23 PAGES with many diagrams. A completely new system of atomic structure comprising structural center, but no nucleus. Price 25 cents ppd. C. F. Kraft, 218 Columbia Road, Annandale, Virginia.

severe neurologic involvement that surgical reconstruction is impossible.
• Science News Letter, 78:173 September 10, 1960

Baths for Blood Pressure

➤ **PARTIAL BATHING** helps patients with high blood pressure, Dr. Takashi Sugiyama, Tohoku University Institute of Balneology, Japan, reported at the Third International Congress of Physical Medicine in Washington, D. C.

Dr. Sugiyama said a simple partial-bathing apparatus he devised had a normalizing action on blood pressure, which continues to fall with its use for two to three weeks.

Water bathing of the whole body or partial bathing of the extremities is a popular form of therapy for high blood pressure in Japan and other oriental countries.
• Science News Letter, 78:174 September 10, 1960

Three Ounces of Whisky Raises Cholesterol

➤ **THREE OUNCES** of whisky will increase the cholesterol in the drinker's blood, four Minnesota researchers have reported.

The finding conflicts with an older theory that heavy drinking protects against hardening of the arteries. Cholesterol is a fatty substance many physicians have linked with artery disease, heart attacks and strokes.

In the tests, 30 volunteers in the Minnesota State Prison were given three ounces of 100-proof whisky a day, while 30 others received only a syrup of the same caloric content as the alcohol.

The alcohol caused a "small but significant" increase in serum cholesterol in the men. Similar tests in dogs showed a much greater rise in cholesterol blood levels.

Earlier studies had indicated chronic alcoholics might have a lower incidence of artery thickening than other persons. But the researchers say the new work made clear that alcohol cannot be considered a cholesterol decreasing agent.

The study is reported in *Circulation Research*, a journal of the American Heart Association, by Drs. Francisco Grande, Lyle J. Hay, H. William Heupel and Donald S. Amatusio of Mount Sinai Hospital and the University of Minnesota in Minneapolis.

• Science News Letter, 78:174 September 10, 1960

Questions

BIOLOGY—What do the cords in a resting yeast cell resemble? p. 163.

PHYSICS—When were pi-mesons first suggested as a separate class of nuclear particles? p. 165.

SOCIOLOGY—What are the legal ages for marriage in Communist China? p. 167.

Photographs: Cover, Fremont Davis; p. 163, Esso Research and Engineering Company; p. 165, Bell Telephone Laboratories; p. 167, U. S. Air Force; p. 170, Bureau of Prisons; p. 176, Tire-Aid Sales.