

## FREE CATALOGUES OF SCIENCE BOOKS

State your interest! Mathematics, physics, history of science, general science, biology, social sciences, earth sciences, chemistry, languages, philosophy, engineering. Dover publishes over 100 books per year, quality production standards, priced for your budget. Dept. SNL, DOVER, 180 Varick St., N. Y. 14, N. Y.

# GIANT

## 10 \$1.00

### Ft.



Largest Distributors of U.S. Govt. Surplus Balloons in the USA. Inflate up to Giant 30 ft. diameter with air or gas. Fun at the Beach, Water Sports, etc., Flying Advt. visible for miles. Terrific for attracting crowds at Openings, Fairs, Roadside Stands, Gas Stations, Sports Events. Made of Durable Neoprene Rubber. New, never used. No C. O. D.'s.

2 ft. Beach Ball Size	2 for 50c, 5 for \$1.00
6 ft. size	59c ea., 2 for \$1.00
10 ft. size	\$1.00 ea., 6 for \$5.00
30 ft. size	\$2.00 ea. plus 50c postage & handling
30 ft. size illus.	10 for \$20.00 Exp. collect

NOVEL MFG. CORP. 31 SECOND AVE., Dept. G-3636  
NEW YORK 3, NEW YORK

### ALCOHOL BURNER

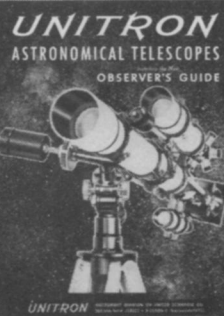
Heavy glass alcohol lamp, 1 oz. capacity with metal screw-on cap and cotton wick. Gets heat to the spot you want it. Leaves no carbon smudge. Worth several times price we ask.

Each 25¢ plus 10¢ pp.  
6 for \$1.25 plus 25¢ pp.  
12 for \$2.40 plus 60¢ pp.

HARRY ROSS Scientific & Lab Apparatus  
61-L Rodeo St., N.Y. 7, N.Y.



FREE  
50  
PAGE  
OBSERVER'S  
GUIDE



With artificial satellites already launched and space travel almost a reality, astronomy has become today's fastest growing hobby. Exploring the skies with a telescope is a relaxing diversion for father and son alike. UNITRON's handbook contains full-page illustrated articles on astronomy, observing, telescopes and accessories. It is of interest to both beginners and advanced amateurs.

#### CONTENTS INCLUDE:

Observing the sun, moon, planets and wonders of the sky • Constellation map • Hints for observers • Glossary of telescope terms • How to choose a telescope • Astrophotography

## UNITRON

INSTRUMENT COMPANY • TELESCOPE SALES DIV.  
66 NEEDHAM ST., NEWTON HIGHLANDS 61, MASS.

Please rush to me, FREE of charge,  
UNITRON'S OBSERVER'S GUIDE and TELESCOPE  
CATALOG # 5-R-2

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

### INVENTIONS

# Patents of the Week

A blood pressure recorder used in studies on pressure suits for space flights has been patented. A hypodermic needle and a submarine device were other inventions.

➤ MAN'S FIRST journey into space received a big boost by a medical instrument just patented.

Three former U.S. Air Force doctors patented a blood pressure recorder that was used in the first studies on pressure suits for space flights. The doctors are George D. Zuidema, University Hospital surgeon, Ann Arbor, Mich.; Robert E. Edenberg, Baylor University College of Medicine professor, Houston, Texas; and Edwin W. Salzman, surgeon, Massachusetts General Hospital, Boston, Mass.

"The recorder (patent No. 2,989,051) was used in human tolerance studies for prolonged rocket acceleration," Dr. Zuidema told SCIENCE SERVICE. "It was developed to meet the need of measuring and maintaining records of the blood circulation of humans confined to pressure suits up to hours at a time."

The men in pressure suits, forerunners of the budding generation of astronauts, were subjected to various atmospheric and temperature changes in human centrifuges and high altitude pressure chambers at Wright-Patterson Air Force Base, Dayton,

Ohio. Their blood pressure and pulse rates were continually taken by the instrument and recorded on tape for a permanent record.

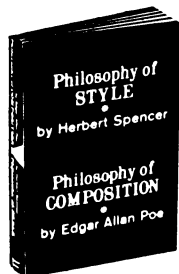
"The device was the prototype of the sophisticated recording devices that were probably used to record the reactions of astronaut Alan B. Shepard Jr. on his hop into space," Dr. Zuidema said.

A disposable hypodermic needle that makes a clean puncture as it enters the skin won patent No. 2,989,053 for Donald A. Hamilton, Burbank, Calif. Rights were assigned to Don Baxter, Inc., Glendale, Calif. A pointed needle with sharp triangular cutting edges does away with the chances of tissue damage and other irritations normally occurring when ordinary hypodermic needles with beveled points are used, the patent stated.

An SOS signal in the form of a ball popping up to the surface from a submarine in trouble was patented by Sebastian J. Tralongo, Rockville, Md., who assigned rights of patent No. 2,989,024 to Vitro Corporation of America, New York. A pressurized container filled with gas bursts open as it reaches the surface, releasing a dye or smoke bombs.

Dr. Vladimir K. Zworykin, radio-television pioneer, and two other scientists have refined the picture on colored television by controlling the light output of phosphors, which are substances that light up when excited by radiation. Dr. Zworykin and Jan A. Rajchman, Princeton, N.J., and Edward G. Ramberg, Huntingdon Valley, Pa., received patent No. 2,989,582 for the invention and assigned the rights to Radio Corporation of America (RCA). A color-image producer is controlled by "signal strips" that distribute the time a radiating or electron beam rests on colored phosphors.

• Science News Letter, 80:30 July 8, 1961



### IF YOU WRITE FOR MONEY!

Enrich your writing by applying Herbert Spencer's and Edgar Allan Poe's classic principles that have inspired many of the world's greatest authors. Indispensable if you want to get published! Send \$1.00 to

PAGEANT PRESS  
Dept. SN  
101 5th Ave., N.Y.C. 3

## 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.

BEAUTIFUL MAP OF FLORIDA INDUSTRY AND Science. Locates research labs, technical schools, missile and satellite stations, fossils, shells. 4 colors. 22x28. Rocket charts on back. \$1.00. Florida Space Publications, P.O. 11324-N, St. Petersburg 33, Florida.

BURNING MATCH IONIZES AIR MOLECULES! Observe with 14" Self-Charging Electro-scope. This plus Centigrade-Fahrenheit bi-metallic thermometer (you calibrate) \$1.00. Monee Instrument Works, Monee, Illinois.

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

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

## Questions

DENTISTRY—Which bacteria normally found in the mouth caused tooth decay? p. 26.

MEDICINE—What are some advantages of a new anesthetic G-29? p. 20.

OCEANOGRAPHY—How many feet has the ocean level dropped due to a rift in the ocean bottom? p. 23.

Photographs: Cover, Radiation Dynamics, Inc.; p. 19, Mrs. Frederick E. Lederer; p. 21, United States Steel Corporation; p. 23, Fremont Davis; p. 26, National Institute of Dental Research; p. 32, David O. Alber Associates, Inc.