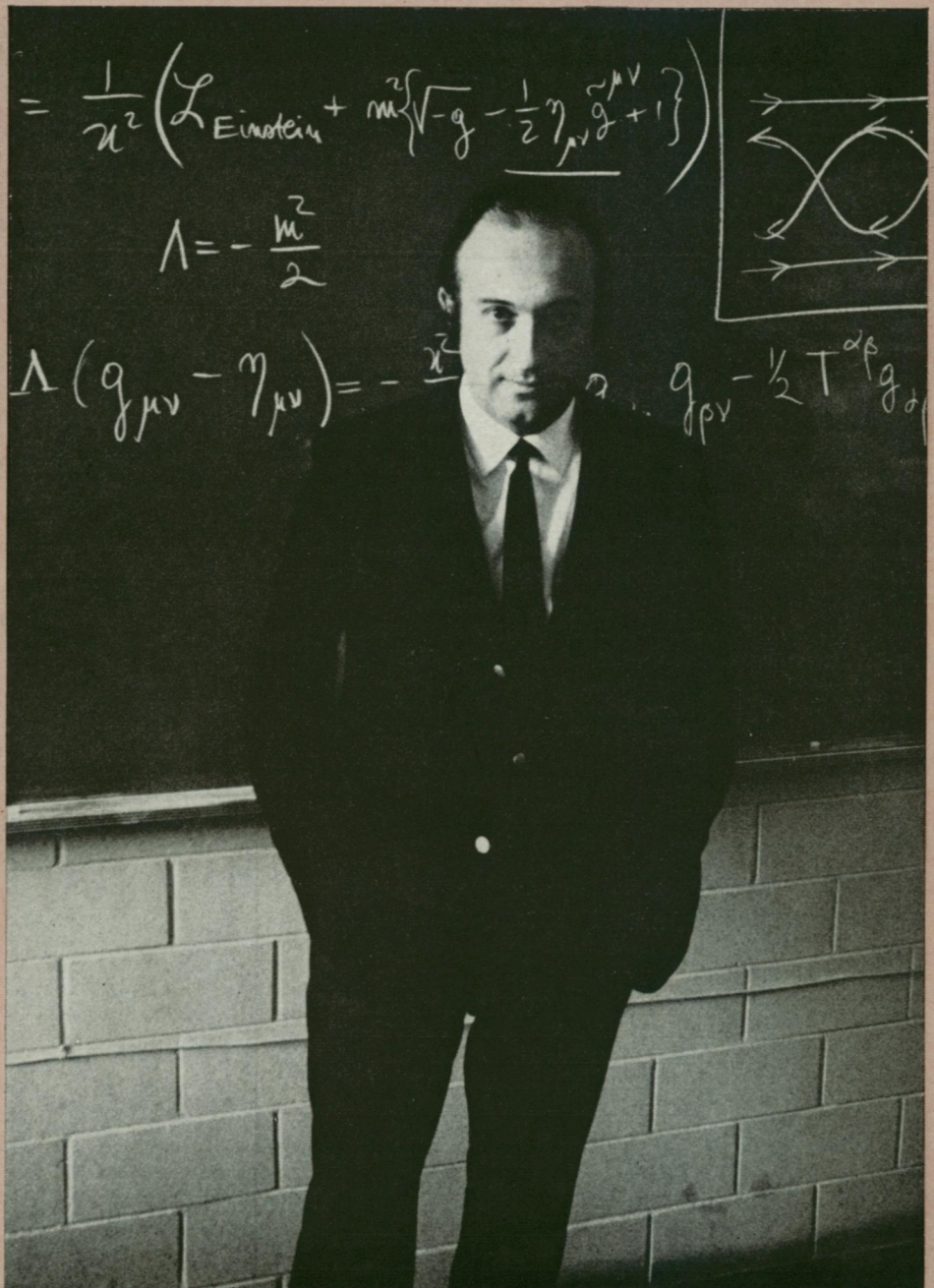


science news

May 24, 1969 **25c**
vol. 95, no. 21, pp. 493-516

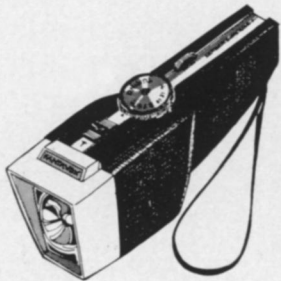
Government testing:
a hard-to-find treasure trove
The stars in June
Letter from Bombay
brand-new iron mine



Dr. Peter Freund:
EQUATIONS OF
A FINITE
GRAVITY



Haverhill's



FLASHLIGHT RADIO

is great for evening walks, or back in your cabin or tent. (Great anyplace where light music and musical light are called for.) Two penlights and one transistor battery power this useful unit.

\$19.95



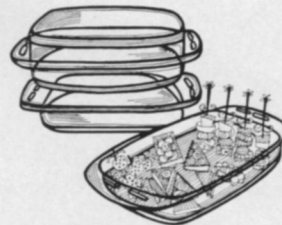
KNAUTSCHI

is made of leather and "full of beans!" Cuddle him, squeeze him, worry him. He won't mind—and he'll make you laugh, no matter what shape he's in (or you're in!) Assorted colors. **\$5.95** MUSIC-KNAUTSCHI (with Swiss music box inside) turns his head as the music plays. **\$9.95**



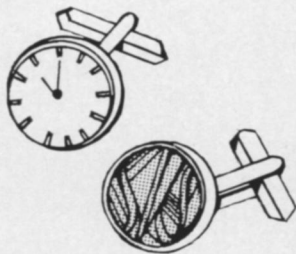
MANPO/METER

your way to fitness with this reliable pedometer—the *sine qua non* of a systematic walking (or jogging) program. Tells you how many steps you've walked—so precisely it's used in engineering for measuring long distances. Lick those cobwebs and middle-age-spread. Manpo won't let you cheat or overdo it either. Black or red hi-impact plastic case. **\$8.95**



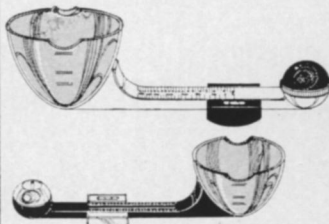
STACK & SNACK

are refrigerator-to-table dishes that store food in a practical manner. Get rid of that aluminum mine in the refrigerator and see what you have left over—at a glance! Odors can't penetrate. Prepare hors d'oeuvres ahead, store and serve in these useful dishes. May be used as bottoms or lids interchangeably. Set of 5. **\$6.95**



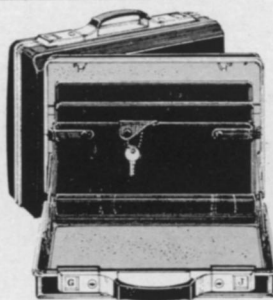
WATCH LINKS

are the "dernier cri" of gent's accessories, replacing wristwatches for evening wear. Striking links—one with a 17-jewel Incabloc watch, the other with mother-of-pearl. Gold or rhodium plate. (Please specify.) **\$29.95**



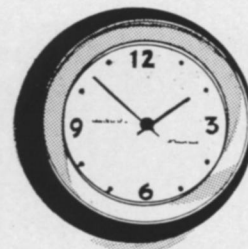
MAXI/BALANCE & MINI/BALANCE

are extremely accurate scales for all purposes. They come with transparent measuring cup, water level, and adjustment system for accuracy. Weighs liquids & solids. Great for craftsmen and for those who have to keep special diets. MAXI/BALANCE (1 pint capacity) with a wall holder. **\$6.50** MINI/BALANCE (4 ounce capacity) **\$4.50**



CONTOUR ATTACHE CASE

is spacious and sharp looking. Fully compartmentalized, it will hold all your business needs and double as an overnighter too. Of light, extra tough, black "Cyrolac" (just over 4 lbs.—18" x 13" x 4"). Cylinder lock. Aluminum hardware. With two initials (specify). **\$29.95**



APPLE CLOCK

is a completely transistorized precision battery chronometer of uncommon elegance. Smooth black housing. 4" diameter. Gold trim. **\$50**

A FREE GIFT FOR YOU: our **POCKET TOOL KIT** (in shirt-pocket vinyl case) if your order (exclusive of post. & tax) is \$30 or more. **OUR GUARANTEE:** has no "ifs," "ands" or "buts." Simply return any item within 10 days if you are not delighted. All parts and workmanship are guaranteed one year.

FREE GIFT



haverhill's

584 Washington St., San Francisco, 94111

(415) 981-5688

Quantity	Item	Amount

Calif. residents add 5% tax
Postage and Insurance **\$1.00**

My check for this Total is enclosed _____

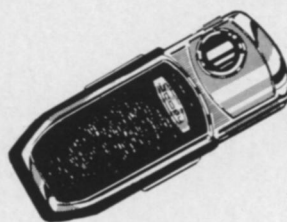
NAME _____

ADDRESS _____

ZIP _____

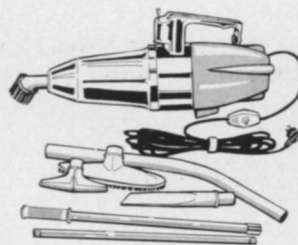
I am entitled to receive a FREE TOOL KIT.

SN-0524



SCOPY

is a tiny zoom instrument that springs into action at the press of your thumb. It can be used as a 4X telescope, 8X magnifier, and for all intermediate distances, through continuous focusing. May also be used as a 4X reduction photographic viewfinder. Surface mirrors provide amplified luminosity. Black vinyl with vinyl case. **\$39.95** DELUXE SCOPY (alligator trim) **\$50.00**

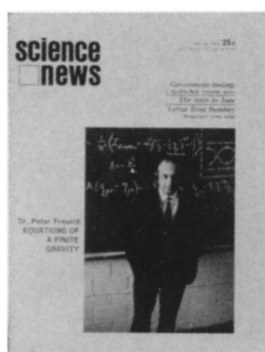


PORT-O-VAC

vacuum cleaner weighs just 5 lbs., but has suction and strength of full-sized units. Extender reaches the most inaccessible spots! Powered by a turbine motor with permanent filter and 9 attachments. Heavily chromed. 110v. **\$39.95**

OF THE WEEK

- 497 The great Medicaid panic
- 498 Cheyenne's troubled promise
- 499 Gas bomb disposal delayed
- 501 International science fair
Meningitis vaccine
- 502 The draft lottery
- 503 **Engineering Sciences:** Low lead content in plants; British fight poor TV sound; Gas mining test delayed; Cornstarch reinforces plastic; Slow motion sound; Quick-curing method for concrete; Cheap chlorine process
- 504 **Behavioral Sciences:** Transplant psychoses; Self-help in psychiatry; Psychoses and enzyme activity; Cyclazocine therapy; Mental health program for children
- 505 **Aerospace Medicine:** Aerial call system for nurses; Truth serum probes accident; Pilot capsule for SST; Self-inflating life raft; Fireproofing beards
- 506 **Physical Sciences:** Colored spots on the moon; New baryon resonance; Big bang and steady state again; Magnetic field of the Milky Way; Double storage ring in Germany



In recent years a number of gravitational theories have been put forward to challenge Einstein. Chicago's Prof. Peter Freund presents the latest. p. 512 (Photo: University of Chicago)

FROM ABROAD

- 514 **Letter from Bombay:** Giant iron mine

IN SCIENCE FIELDS

- 508 **Product Testing:** Not for the consumer
- 511 **Astronomy:** Mars comes closest in June
- 512 **Theoretical Physics:** Gravity and infinity

A Science Service Publication
Vol. 95/May 24, 1969/No. 21
Science News Letter ©

Watson Davis, 1896-1967
Publisher: E. G. Sherburne Jr.

Editor: Warren Kornberg

Ass't. Managing Editor: Carl Behrens

DEPARTMENTS

Aerospace: Jonathan Eberhart

Behavioral Sciences: Marjory Scarlet

Chemistry and Engineering: Edward Gross

Life Sciences: Barbara J. Culliton,
Jay Chamblin

Medicine: Faye Marley

Physical Sciences and Astronomy:
Dietrick E. Thomsen

Illustrations: Marilyn Raleigh

Production: Marilyn Binn

Books: Margit Friedrich

Assistant to the Editor:
Nadine Clement

Editorial Assistant: Susan Brouwer

Advertising Director: Louis D. Young

Circulation Manager: Marcia Nelson

496 Films of the Week

496 Letters to the Editor

515 Books of the Week

SCIENCE SERVICE

Institution for the Popularization of Science founded 1921; a non-profit corporation

Board of Trustees—Nominated by the American Association for the Advancement of Science: **Athelstan F. Spilhaus**, Franklin Institute; **Wallace R. Brode** (Treasurer), American Chemical Society, Washington, D. C.; **Bowen C. Dees**, University of Arizona. Nominated by the National Academy of Sciences: **Henry Allen Moe**, The Clark Foundation; **Harlow Shapley**, Harvard College Observatory; **Allen V. Astin**, National Bureau of Standards. Nominated by the National Research Council: **Glenn T. Seaborg** (President), U.S. Atomic Energy Commission; **Leonard Carmichael**, National Geographic Society; **John R. Whinnery**, University of California, Berkeley. Nominated by the Journalistic Profession: **O. W. Riegel** (Secretary), Washington and Lee University; **Gordon B. Fister**, Call-Chronicle Newspapers; **Peter Clark**, Evening News Association, Detroit. Nominated by the Edward W. Scripps Trust; **John Troan**, Pittsburgh Press; **Ludwell Denny**, Scripps-Howard Newspapers; **Edward W. Scripps II** (Vice President), Edward W. Scripps Trust.

Director: E. G. Sherburne Jr.; Assistant Director: Dorothy Schriver; Staff: Youth Division, Howard Weisbrod; Things of Science, Ruby Yoshioka.

Newspaper Services: Editor, Warren Kornberg; Managing Editor, Frank Sartwell.

Take this 350-page trade edition of our

UNABRIDGED
**MASTER CATALOG of
BOOKS in PRINT**

FREE

**UNOBTAINABLE OUTSIDE
BOOK TRADE EXCEPT FOR
MEMBERS OF
AMERICAN BOOK CLUB**

Huge 350-page Master Catalog lists full 20,000 books in print. Every title at guaranteed discounts of as much as 81%. All categories, all subjects included—hard cover and paperback, fiction and non-fiction, best sellers and classics, even multi-volume reference works, encyclopedias and college texts. Discount always shown side-by-side with regular retail price so you can compare in every case. No commitment to buy any number of volumes. Order any book you want through club direct from warehouse. No exceptions. No middleman. You never pay list price for any book, ever. Request your Master Catalog now.



Your "no-strings" gift from
the American Book Club.
No obligation to buy
a thing. Keep Cata-
log FREE even if
you decide not
to become a member.

**Save up to 81% on every book in print—no limit on what
you buy—no commitment to take any number of volumes!**

Mail coupon at once to receive your MASTER CATALOG OF BOOKS IN PRINT and begin a trial membership in the American Book Club. Membership does not obligate you to buy a thing. But it does entitle you to...

1. Order any and all books in print at discounts up to 81%. Even newest releases. **NO EXCEPTIONS!**
2. Choose from all books of all publishers—Random House, Knopf, Doubleday, Harper & Row, Simon & Schuster, Harvard University Press, etc. Even rare or "specialist" publishers. **NO EXCEPTIONS!**
3. This includes all books of all categories—hard cover and paperback, fiction and non-fiction, best sellers, scientific and technical, religious, art, even multi-volume references, encyclopedias and college texts. All books offered by other clubs are included too. Everything between two covers. **NO EXCEPTIONS!**
4. Most important—you can make these amazing purchases without involving yourself in a single "commitment" of any kind!

What's the catch? There is none!

Unlike other book clubs—no one at American Book Club says you MUST do this or you CAN'T do that. There are NO restrictions. NO quotas to buy. NO OBLIGATIONS WHATSOEVER. And positively NO unwanted books shipped or billed to you because you forgot to return an irritating monthly card. (There are NO cards to return.)

**In fact we ask nothing at all of you,
except this:**

Please request your complimentary Master Catalog at once. Quantities earmarked for trade houses, publishers, schools and libraries are severely limited. Do not miss obtaining a copy of this book-industry "Bible" by delaying too long. As a member you can order

all the books you want—for the rest of your life—at guaranteed discounts up to 81% on any book of any publisher listed in the Master Catalog of Books in Print.

At such savings, the price you formerly paid for just one book may now get you up to five. And get them for you FAST.

Every order "computer-serviced"—at once!

As a member you are immediately "programmed" into our nationwide Computer-Service Network linking us to EVERY publisher in the country! This provides you with efficient direct-to-your-door delivery on ANY and EVERY selection—whether popular best-seller or scholarly reference!

We never foist "club editions" on you

You may not know it but—many selections received by members of other clubs are what the trade calls "club editions". (Look for the "tip-off" phrase, "Book Club Edition", on their flaps.) But we never give you "club editions." Never give you cheaper paper, smaller type, or bindings that stain your hands and fall apart. You receive only the GENUINE PUBLISHER'S EDITION, brand-new and bindery fresh. The same item selling for up to four times the price in the bookshop around the corner.

Even if you want something NOT in the Master Catalog of Books in Print—order it anyway! You still get it at the full Club discount—even if we lose money by giving it to you for less than wholesale!

Monthly newsletter also sent—FREE

For books published after you get your Master Catalog—rely on the fascinating supplement, "Bookmarker" for late-breaking bargains even beyond the normal club discount!

To enjoy full club privileges at once, mail coupon with only \$5. This one-time fee entitles you to lifetime membership. You never

have to renew—and never pay another club fee, ever. You'll probably save many times this small fee on your first order alone.

Money-back guarantee is unconditional

If you don't agree American Book Club is all we said and more, just let us know within 10 days and your membership fee will be refunded at once. But the 350-page trade edition of our unabridged Master Catalog of Books in Print is yours to keep regardless.

Naturally, every book you buy through the club must satisfy you 100%; otherwise feel free to return it within 10 days for a full refund. No questions asked.

Join the growing number of students, teachers, professional men—even schools and libraries—who now buy direct from the Master Catalog. At savings of up to 81%! Mail coupon now to:

American Book Club
Hazleton, Pennsylvania 18201

MAIL FOR FREE CATALOG

American Book Club 118
Hazleton, Pennsylvania 18201

Yes, please rush MASTER CATALOG free and enroll me as a trial member in American Book Club. Membership doesn't obligate me to buy a thing but does entitle me to order every book in print at discounts up to 81%, plus shipping. Enclosed is my one-time membership fee of \$5 (never another club fee for the rest of my life). If not 100% satisfied I may return any book within 10 days for full refund. If not happy with the club itself, I need only let you know within 10 days. My membership will be cancelled and my fee refunded in full. But the Catalog will be mine to keep regardless!

Name _____
Address _____
City _____ State _____ Zip _____