

Water from Archimedean screw would hit paddles, turn screw and be lifted to top.

tiny bits of mass can seem a great deal like a violation of the law of conservation of energy, the first law. Physicists respond by saying that mass and energy are fundamentally the same thing. In the perpetual-motion subculture, nonetheless, " $E=mc^2$ " has become a sort of magical incantation. Today's more articulate enthusiasts describe their efforts in high-flying prose that's part *Marvel Comics*, and part Einstein-à-go-go: "a dynamic energy source entering our physical world through a location we call a magnet," "ions . . . stressed in a curved time and space relationship" or—Joe Newman's phrase—"a mechanical unification of the gravitational, electromagnetic, and nuclear fields."

"Many of these people are always saying they've discovered a principle that's 'outside of science,'" says physicist Al Seckel, "but they only say that because when scientists test their machines, they fail the test. They rationalize this failure away by saying that science, rather than their machine, is wrong and the device obviously must operate outside of science, right?" He snorts in indignation.

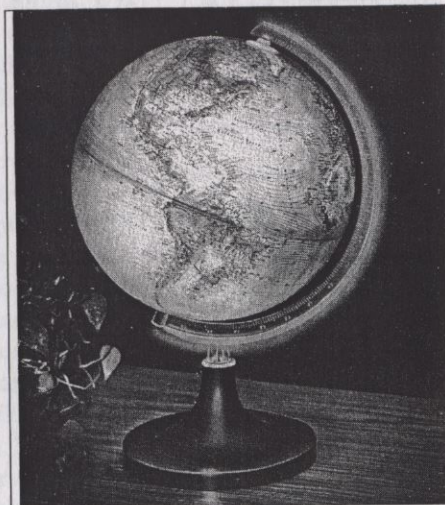
Seckel is the founder and executive director of the Southern California Skeptics, a group of scientists who investigate claims of the paranormal,

It lights up in the dark!

Let The Mercury Globe Light Up Your Home

A globe is like an encyclopedia or Bible—no educated home is complete without one. Maps are all very well and good, but only the three-dimensionality of a globe can accurately represent the shape and proportions of our planet—it's a "hands-on" geographical learning aid the whole family can use.

And now your family can enjoy discovering a new world with the Mercury Illuminated Globe. This impeccably detailed, completely up-to-date 18" tall model of our planet is available for the earthshakingly low price of \$29.95. Never before—and probably never again—will a globe of such high quality be offered at such a low price.



The Mercury is also an ideal night light with 24 watt bulb, UL-approved parts, and a high-gloss finish for easy cleaning.

An Earthshaking Bargain at Only \$29.95

The Mercury Illuminated Globe offers features you just won't find on a conventional globe. It's made of attractive, durable polystyrene and shows the earth's topography, elevations, vegetation patterns, ocean currents, international date line and much more. The Mercury contains 3,600 place names, from the tallest peaks (complete with height in feet) to the tiniest islands! As if all that weren't enough, the Mercury **GLOWS IN THE DARK!** Switch it on and it reveals the physical world in all its colorful detail—from ocean depths to national boundaries—all depicted in crisp, contrasting colors. And here's the added bonus: the Mercury is a handsome night light that will teach your child about geography as it lights up his room!

The Free Globe Handbook Gives You a World of Information

To ensure that you get the full enjoyment out of your Mercury Illuminated Globe, we're including a free, full-color handbook that tells how to use the globe and explains earth-space relationships, the planets, and more. It's all part of our policy of giving you the most for your money.

**PRICE
BREAKTHROUGH!**

Suggested List **\$48.95**
NOW ONLY \$29.95

Barnes & Noble

Booksellers Since 1873

DEPT. G230,
126 FIFTH AVENUE, N.Y., N.Y. 10011

30-Day Money-Back Guarantee

1430917. Please send me _____ Mercury Illuminated Globe(s) at your special sale price of only \$29.95 (plus \$3.00 each shipping and insurance). N.Y., N.J., PA., MASS., res. add sales tax.

Name _____

Address _____ Apt. _____

City _____

State _____ Zip _____

Charge to: ☐ MASTERCARD ☐ VISA ☐ DINERS CLUB ☐ AMEX

Account # _____ Exp. _____ Signature _____

For Faster Service, Credit Card Customers Call Toll Free
24 Hours-7 Days a week In Nebraska 1-800-642-9606

1-800-228-3535

MAKE IT A VIDEO CHRISTMAS!



"...with the
2,000 entertain-
ing and instruc-
tional special
interest videos

I've hand-picked for this catalog!"

Barbara Greenleaf

Give every VCR owner on your list a video: exercise, classic films and TV shows, great concerts, sports, travel, cooking, children's tapes and more. First-run movies, too, now as low as \$19.95. You won't find a selection like this in any store. Greenleaf Video's Christmas Catalog—a gift-giver's dream!

Order your Greenleaf "Video by Mail" catalog today and get \$2.00 off your first purchase. Send \$2.00 plus \$1.00 for postage and handling to: Greenleaf Video Catalog, 3230 Nebraska Ave., Santa Monica, CA 90404.
(Offer expires 12/31/86)

Name _____ Apt. _____
Street _____
City _____ State _____ Zip _____

Greenleaf Videos Make Great Holiday Gifts!

The maple syrup
that nature makes.
Clark Hill Sugary.



"Old-fashioned goodness from
the maples of New Hampshire."

ORDER YOURS NOW FOR THE HOLIDAYS.

Item	Zone A	Zone B	Zone C
1 Pt. Syrup	\$11.40	\$11.90	\$12.20
1 Qt. Syrup	\$18.30	\$19.10	\$19.70
1 Half Gal. Syrup	\$30.25	\$31.45	\$32.45

Zone A—All New England states plus New York, New Jersey, Pennsylvania. Zone B—All states East of the Mississippi River not found in Zone A. Zone C—All states West of Mississippi River, except Hawaii and Alaska.

Call toll-free 8am to 5pm E.S.T.

1-800-225-3125



Or Write:

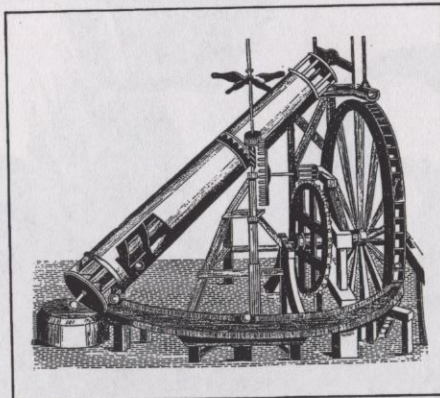
Clark Hill Sugary, Dept. SMN 86
P.O. Box 20, Clark Hill Rd.
Canaan, NH 03741-0020
(603) 523-4838



from astrology and ESP to machines that run by themselves. (JPL's Al Hibbs is the group's chairman this year.) A row of books written by skeptical people stretches across one wall of Seckel's Pasadena study, just below his cuckoo clock: *The Loch Ness Mystery Solved*, *The Truth About Uri Geller*, *Miracle Mongers and Their Methods*, among others. He is a boyish 28-year-old who himself has a considerable flair for publicity.

"We keep running across people who claim their experiments won't work if there are negative vibes around—you know, skepticism," Seckel says. "Now, I happen to know that the laws of the Universe work *even if you don't believe in them!*" For a hard-core rationalist, Seckel's manner of speaking is strangely like that of a Bible-slapping evangelist. To emphasize a point, he'll lean forward in his chair and slowly shout the last few words, then pause dramatically to let them sink in.

Seckel, Hibbs and several of their colleagues were recently called in by would-be inventors to test two different perpetual-motion devices. One was an electrical generator that multiplied whatever power it took in, according to its inventors, a trio of seemingly sincere men in their 20s. "Ever see the lab equipment in one of those old Frankenstein movies?" Seckel asks. "That's what this thing looked like. It had all sorts of wires coming out of it and rows of light



Geared-up waterwheel and screw would have been powered by large metal balls.

Plains Indian art, artifacts and



Colorful, educational, shows over 100 beautiful mounted buffalo skulls, robes, shields, axes, lances, sticks, dolls, ceremonial pipes, shirts, coyote fang necklace, oth, bone jewelry, silver jewelry and m, unique gifts, stunning decorations and collector's items from exclusive source. All are hand made with authentic materials.

Catalog tells the fascinating story of each item's place in Cheyenne, Sioux, and Blackfoot heritage.



PRAIRIE EDGE DEALER INQUIRIES INVITED

PHONE SALES CATALOG REQUEST OFFICE

P.O. Box 8303, Dept. SM

Rapid City, S.D. 57709-8308 (605) 341-4525

VISIT OUR STORES IN SANTA FE, N.M. AND DEADWOOD, S.D.



GENUINE PYSANKY EGGS

Lovingly hand painted by old world/Ukrainian craftsmen. Brilliant colors. Reversed Easter symbols. Only \$7.95 plus \$1.95 handling. SPECIAL 6 eggs \$39.00; 12 eggs \$74.00 prepaid. ALSO hand etched tinted Polish goose eggs with farm scenes, animals, religious figures. Autographed. All different. \$19.95 each plus \$1.95 handling. Two or more \$17.95 each prepaid. Stands \$2.50. Same day priority shipment. Satisfaction guaranteed.

Kidder-Styphout: P.O. Box 41446 S11, Cinn., Ohio 45241



THE SAILOR'S GAME

BY SPARKMAN & STEPHENS
(Yacht designers of 8 America's Cup winners)

An exciting boardgame where advanced sailors tackle questions on seamanship and navigation. Beginners learn the ropes. Everyone becomes more familiar with the nighttime sky, safety, history, oceanography and traditions of the sea.

With 2,160 questions no one sits on deck with empty sails. Players command pewter yachts modeled on great S&S designs.

\$40 plus \$2 postage. Visa/MC order Tollfree 1-800-835-2246 ext. 61 or send check to THE SAILOR'S GAME, Box 20382-L, Cherokee Sta., NY 10028



The Traditional Nightcap



The red cotton flannel classic in luxurious double layers to really keep you warm in bed. (Physiologists have measured that 30% of body heat is lost through the scalp!) Home-made and hand-finished; adjustable for snug fit. \$7.95 ppd.

Putnam Antiques
6 Pond Rd., Middlefield, Mass. 01243

BILL HUNT—WILDLIFE BRONZE



"MARSH STALKER" Great Blue Heron—18" Edition of 75

Write for free illustrated brochure to:
Bill Hunt—(408) 663-5514
7177 Langley Court
Salinas, California 93907



A gift that won't be worn out, broken, outgrown, lost or forgotten six weeks after Christmas

The name of this unique gift is HIGHLIGHTS FOR CHILDREN—the most honored, and possibly the most beloved, monthly children's magazine in the world. Throughout the year, children 2 to 12 can look forward to fun with a purpose . . . stories, articles, crafts, puzzles and games . . . all created to be a part of the learning adventure of a child you love.

Only \$1.79 per issue (1 year—11 issues is \$19.69). (Postage and handling outside U.S.A. is \$5/yr.) Gift rate valid only to 12/25/86.

Please send my gift of Highlights as indicated below:

your name

your address

apt. no.

your city

state

zip

• • BX-K

01 • NDZ

child name(s)

address

apt. no.

city

state

zip

11 • NSZN

\$ _____ enclosed ☐ Bill me (no need to pay till Jan. 1)

Satisfaction guaranteed or money refunded.

Highlights® for Children

2300 W. 5th Ave./P.O. Box 269
Columbus, Ohio 43272-0002

"The only smoke was from the inventor's tires as he sped out of there," says Seckel. "Afterwards, I said to the main investor, 'How long did you see this thing run?' 'Twenty minutes.' 'What was its power source?' 'It was plugged into a wall.' 'Well, if there was really more energy out than energy in, why didn't he just plug it into itself?' He said, 'You know, I never thought of that.'"

Seckel jumps to his feet and concludes from a gleeful crouch: "For \$2.5 million, I would have thought of that!"

Seckel keeps a thick file on the various perpetual-motion schemes that have made headlines in recent years, a disproportionate number of them in the Los Angeles area. One local inventor, after being acquitted of 51 counts of fraud and conspiracy two years ago for selling shares in a gravity generator, announced he was going right back into business. "I'm sure the next 12 investors in that machine will be the jurors," a police investigator was quoted as saying.

Perpetual-motion inventors themselves, in fact, often seem as gullible as their backers. The beauty of an overbalancing wheel, or a sealed box

containing a 15-watt light bulb surrounded by solar collectors, or a motor that keeps itself going by boiling water with its own exhaust pipe, is its almost breathtaking simplicity. On paper, it's obvious the scheme will work. Over and over, inventors told me they had decided not to build a working model because anyone who so much as glanced at it could go home and copy it. As often as not, the inventor's chief concern is how to keep all that multiplying energy under control once the machine takes off. "I'm messing around with something no one's ever done before," a worried-sounding man in Kentucky told me one night. "There's just a chance I could set off a small nuclear explosion."

Nothing—not patent regulations, not history books and certainly not the laws of physics—discourages the hard-core perpetual-motion inventor. "Some professors are so smart, they can't figure these things out," summed up an auto mechanic in New England who's planning to market a permanent-magnet motor as soon as he finishes connecting all the parts. "It's too simple for them."

Skeptics Al Hibbs (left) and Al Seckel know that friction is on their side when overbalanced wheel refuses to run by itself.

