

30°-60°-90° PRISM \$4.00 each
2 for \$6.00

A beautiful water-white crystal prism is offered here, which produces a brilliant spectrum (rainbow) with white light.

Prism is polished on all 3 sides to allow maximum optical benefit for use in building the following devices: SPECTROSCOPES, SPECTROMETERS, MONOCHROMATORS, PULFRICH OR ABBE REFRACTOMETERS AND 8 mm. or 16 mm. WIDE-ANGLE ANAMORPHIC PROJECTION SYSTEMS.

Expect (and get) closest tolerance of both angles and spectra transmitting surfaces. Angles accurate to better than 5 minutes of arc.

Prism is made of light-flint optical glass 22 x 28 x 29 mm size; free from strain, striae and bubbles. The optical surfaces are flat (scratch free and perfect) to a fraction of a wave-length of Sodium Light. Made in Rochester, N. Y.

Each \$4.00 p.p. 2 for \$6.00 P.P.

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

The Battery That's Used in Guided Missiles Now Released as Government Surplus

For Photography, Aircraft, Models, Searchlights, Radios, etc. \$1.95 ea. Postpaid



Sintered-plate Nickel-Cadmium alkaline storage batteries designed for "NIKE" Missile and now surplus due to design change. A lifetime battery with no known limit of service (over 5000 recharges on test without loss of capacity). Other features: Virtually indestructible, compact & lightweight, withstands heavy shock and vibration. Flat voltage curve during discharge retains charge year or more, high discharge rate up to 50 amps. for this cell, no corrosion fumes to harm clothing or equipment, spill-proof construction, discharge in any position, indefinite storage without deterioration, operates in temperatures — 60°F to +200°F. Each cell is approx.

4 ampere hour capacity. Nominal voltage per cell is 1.2 volts. (A 6 V. battery requires 5 cells.) Cell size 6" H. x 2" W. x 1/2" T. Wt. 6 oz. ea. Uses Potassium-Hydroxide (30%) electrolyte. Negligible loss during lifetime service. Add only distilled water once a year. A fraction of Government cost. **Used Test Cells**... \$1.95 ea. Postpaid **Brand New Cells**... \$2.95 ea. Postpaid **30 A.H. Motor Starting Cells**—Nickel-Cad. steel cased with 3/4" screw terminals for nom. current drains to 1000 amps. Size 8 1/2" H. x 3" W. x 1 3/16" T. Wt. approx. 3 1/2 lb. Need no filling. **New cells**... \$5.95 ea. (not shipped prepaid) **Used cells**... \$2.95 ea. (not shipped prepaid) *All cells guaranteed to your satisfaction or money refunded (less postage).*

ESSE RADIO COMPANY, Dept. SNL
42 W. South St. Indianapolis 25, Indiana

INVENTION

Patents of the Week

A method of reducing sound transmitted from a ship by surrounding the hull with a layer of fine bubbles of mixed air and water earned a patent.

► A METHOD of reducing sound transmitted from a ship, by surrounding the hull with air-bubbled water, earned patent 3,084,651 for Richard Parmenter, Ithaca, N.Y., from the U.S. Patent Office.

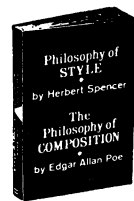
His invention provides an effective layer of aerated water next to the hull by mixing air and water to form fine bubbles. This air-bubbled water is then forced through an opening with a large number of very small holes below the waterline.

Because of their low buoyancy, the bubbles do not join together but rise slowly to the surface, so that the ship is continuously shielded.

Previous attempts to make bubbles act as sound shields were unsuccessful due to use of perforated pipes fastened to the outside of the hull. The bubbles formed this way were large and rose immediately to the surface.

Airplane Liquid-Spraying Unit

A way for crop-dusting airplanes to spray crops evenly and more economically by attaching the spraying apparatus to the lower edge of the lower wing gained



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patent 3,084,890 for Richard E. Hyde, Dos Palos, Calif.

The spray droplets are evenly applied from below the propeller blast.

Device for Scuba Diving

A non-magnetic device for propelling scuba divers underwater, without magnetic or visual detection from the surface, earned patent 3,084,654 for Edgar N. Rosenberg and Stephen F. Moran, both of San Diego, Calif.

Propelling devices up to now have included electric motors requiring connecting cables and storage batteries needing frequent recharging. Electrical propulsion also requires separate air pressure tanks for blowing ballast.

The patented device, called a seacycle, is a pressure-volume gas engine with diving vanes attached. The diver steers the seacycle by a control on the front fins.

Bubbles from the exhaust are broken up so that they are too far apart to reunite, thus allowing the diver to swim undetected.

Safety-Insured Airplane

Construction of an airplane so that a large parachute is automatically released in the event of an accident and all passengers, who are automatically attached to the parachute, are brought safely to the ground earned patent 3,084,891 for Russell K. Lamm, Berkeley, Calif.

The seat frames are tied together by a cable that is in turn connected to the parachute. Each passenger is in turn connected to the parachute by his seat belt.

The inventor notes that his system is particularly applicable when airplanes suffer in-flight disasters like bomb blasts or mid-air collisions.

Other Patents

Other patents include:

An underwater breathing-viewing apparatus, which gained patent 3,084,687 for Alvin R. Kallmeyer, Detroit, Mich., and Walter J. Kingsley, Royal Oak, Mich.

A "boat" composed of a rotating hull with a semi-spherical design, which earned patent 3,084,655 for James L. Becker, Cincinnati, Ohio.

A surface mine launched underwater that earned patent 3,084,627 for Carl H. Holm, Dobbs Ferry, N.Y.

An indicator of pressure in aircraft cabins, for which Fidel Cordero, Washington, D.C., and Richard W. Armstrong, Rockville, Md., were awarded patent 3,084,549.

A pair of "water walkers," ski-like boards, which earned patent 3,084,356 for Ira N. Wheat, Grand Prairie, Texas.

• Science News Letter, 83:270 April 27, 1963

First with science news!

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