

TRANSPORTATION

Airbuses to Compete With Highway Buses

➤ AIRBUSES that take off and land vertically will be hauling passengers between cities in all sorts of weather in the northeastern United States by 1980, Dr. Rene H. Miller, Massachusetts Institute of Technology, predicted.

No technology not already under development would be needed to achieve a high-speed airbus system for mass transportation in the Boston-Washington Corridor within 15 years. The airbus system would have to operate directly from downtown centers and suburban stations and the VTOL airbuses would require minimum land for terminals instead of conventional airports with long runways.

The airbuses would charge fares close to those of the present intercity highway buses. A trip between New York and Boston would cost about \$8.80 one way. They would use turbine engines which have put long-haul operations of conventional planes on a practical, self-supporting, profit basis. Turbines would also make it possible for airbuses to operate economically.

Dr. Miller and his associates visualize VTOL craft capable of carrying 80 passengers. Speeds would be 400 to 450 miles an hour.

The network visualized by the study would require 50 terminals in 38 population centers between Boston and Washington.

Dr. Miller made his report to the Society of Automotive Engineers in New York.

• Science News, 89:381 May 14, 1966

MEDICINE

New Non-Narcotic Drug Relieves Pain and Fever

➤ A NEW PRESCRIPTION drug recommended for persons sensitive to aspirin, called Dialog, has been developed by the Ciba Pharmaceutical Company, Summit, N.J., to relieve the pain of simple headache and neuralgia, and other pain, as well as to reduce fever caused by respiratory infections and influenza.

Dialog combines the sedative action of allobarbitol with pain-killing and fever-reducing effects of acetaminophen. It contains no salicylates or phenacetin.

• Science News, 89:381 May 14, 1966



Cutler-Hammer

STAGEHANDS TELEVISION — Stagehands at the Met will use a television monitor to guide them in opening and closing curtains. An engineer at Cutler-Hammer, Inc., Milwaukee, Wis., where the stage system was designed, is shown testing a prototype with an oscilloscope. The white area shows the curtain opening.

TECHNOLOGY

Stagehands at Met Will Be Aided by TV

➤ STAGEHANDS will be television viewers in the new Metropolitan Opera House, opening this September in New York.

Television screens will be used to tell how far curtains are open on a dark stage. The television sets, which use no cameras, simulate curtain openings from feedback voltage obtained from curtain position potentiometers. The potentiometers are connected to direct current motors which open the curtains.

The television monitors are part of an electronic stage control system specially designed for the Met by Cutler-Hammer, Inc., Milwaukee, Wis.

The \$45.7 million opera house, in the Lincoln Center for the Performing Arts, will also have one of the world's most automated stages. The large movable stages, weighing between 15 and 30 tons will be set offstage, then wheeled on automatically.

An automatic system in the loft above the stage will replace the usual counterweight method of raising and lowering scenery.

Speeds for raising and lowering scenery range from 1.8 feet to 180 feet a minute.

• Science News, 89:381 May 14, 1966



SEE MIRACLE OF BIRTH

\$4.98 POST PAID WITH SIX QUAIL EGGS (\$3.25 Without Eggs.)

You get the new clear plastic dome CHICK-BATOR with 6 Bobwhite Quail Eggs (available year-round) and Egg Hatcher's Guide Book. Complete — nothing else to buy. Send check or Money Order today.

G.Q.F. MFG. CO., DEPT. CL, BOX 152, SAVANNAH, GA.

LIVE SEAHORSES

Order LIVE MATED SEAHORSES sent Air Mail postpaid from Fla. All orders receive a kit with FREE food, our catalog and simple instructions for raising these aquatic little pets in a jar, fish bowl or aquarium. The Father (male) Seahorse gives birth to the young alive. The Educational, Relaxing, and Enjoyable hobby with hours of fun for all the family.

GUARANTEED LIVE DELIVERY. ONE PAIR \$2.25—THREE PAIR SPECIAL \$4.00—Order TWO PAIR and receive (6) ONE PAIR FREE. (One address please)

F. F. MARINE LIFE
P.O. Box 626-SL-66, Dania, Fla. 33004



UNUSUAL SCIENCE BARGAINS

Games of Logic For Thinkers!

WFF'N PROOF



Exciting as poker, complex as chess. Gives practice in abstract thinking and math logic. Developed by contemporary Yale professor. If you think learning should be fun, try WFF'N PROOF brain-to-brain combat! 21 games of progressive difficulty. Starts with simple games mastered by some 6-year-olds, ends with subtle logic to challenge professional logicians. 8 1/2" x 5 1/2" case contains logic cubes, playing mats, timer and 224 page Inst. book.

Stock No. 60,525-Q \$6.00 Ppd.
WFF'N PROOF EQUATIONS. 5 games for grades 1-12
Stock No. 60,526-Q \$2.50 Ppd.

Fascinating Toy Adaptation of Binary Digital Computer
BEAT "DR. NIM" IN ANCIENT GAME!



Not easy, but fun for all! Thrilling for youngsters. Challenging for adults. Teaches computer fundamentals, without need for mathematical ability. To play, release 1 to 3 marbles for roll down plastic game board through series of flip-flop channels. How you SET flip-flops to begin and path of travel

for each marble, determines path of succeeding marbles. All plays predictable. Now DR. NIM automatically plays 1, 2 or 3 marbles. If you can make him take the last marble you win! Game great for playroom and parties, year-round fun. Durable red & white plastic 11 3/4" x 12 1/2" x 1 1/2". 24-p. Instruction Booklet.

Stock No. 70,816-Q \$2.98 Ppd.

Power Experiments, Models, Displays with

NEW SOLAR DRIVE MOTOR



Sunlight can now be used as power source for precision miniature motor by International Rectifier. Attach to our Silicon Solar Cell or use 2 standard "D" flashlight batteries, or our

Nickel Cadmium Cell No. 40,798 (Catalog page 147). Motor operates on 0.35 V to 1.5 V. Antifriction sleeve bearings. .078 diam. shaft extends 7/16" from housing, has V-groove pulley. Copper brushes, metal and plastic housing. 1 1/2" diam. 15/16" high, wt. 2 oz.

Stock No. 40,872-Q (Motor) \$3.95 Ppd.
Stock No. 30,538-Q (Solar Cell) \$7.50 Ppd.

WAR SURPLUS ELECTRIC GENERATOR

Brand-new Signal Corps Generator for endless experiments, electrical uses, demonstrations. Generates up to 90 volts by turning crank. Use in high impedance relays. Charge ground and bring up night crawlers for fishing bait. Has 2 Alnico Magnets. Wt. 2 lbs. Cost Govt. \$15.



Stock No. 50,225-Q \$6.95 Ppd.
Same type generator, mounted with light, as electricity demonstrator. Stock No. 50,365-Q \$11.95 Ppd.

Make Your Own Astronomical Telescope

GRIND YOUR OWN MIRROR



Kits contain mirror blank, tool, abrasives, diagonal mirror and eyepiece lenses. You build instruments ranging in value from \$75.00 to hundreds of dollars.

Stock No.	Diam.	Mirror Thickness	Price
70,003-Q	4 1/4"	3/4"	\$ 7.50 Ppd.
70,004-Q	4"	3/4"	11.95 Ppd.
70,005-Q	6"	1 3/8"	19.50 Ppd.
70,006-Q	10"	1 3/4"	30.75 f.o.b.
70,007-Q	12 1/2"	2 1/8"	59.95 Barrington

War Surplus American-Made

6 x 30 BINOCULARS

Big savings—brand new. Crystal clear viewing—6 power. Optics fully coated. Individual focus. Exit pupil 5mm. Approx. field—445 ft. at 1000 yds. Excellent for spectator sports, races, hunting, etc. Normally costs \$100 up. Complete with carrying case and strap.

Stock No. 963-Q \$40.00 Ppd.
7x35 American Made Binoculars \$55.00 Ppd.
Stock No. 964-Q \$74.80 Ppd.
7x50 Binoculars—Terrific Buy!
Stock No. 1544-Q \$74.80 Ppd.

WOODEN SOLID PUZZLES



12 Different puzzles that will stimulate your ability to think and reason. Here is a fascinating assortment of wood puzzles that will provide hours of pleasure. Twelve different puzzles, animals, and geometric forms to take apart and reassemble, give skill chance for all the family, young and old to test skill, patience and

best of all, to stimulate ability to think and reason.
Stock No. 70,205-Q \$3.00 Ppd.

Order by Stock No.—Send Check or M.O. Shipment same day received—Satisfaction or money back.

TEACHERS: Write for Educational Catalog Q-2
Edmund Scientific Co., Barrington, N.J.

MAIL COUPON for FREE CATALOG "Q"

EDMUND SCIENTIFIC CO.
Barrington, New Jersey 08007
Completely new 1966 Edition. 148 pages. Nearly 4500 BARGAINS.
Please Rush Free Catalog "Q"



Name.....
Address.....
City.....State.....Zip.....