

MUSEUM—James D. Anderson—*The Museum News Series (Newark Mus. Assn)*, 16 p., illus., paper, 75¢. Brief discussion of some of the thousand or more species in the Museum's conchology collection.

SOURCE BOOK OF HEALTH INSURANCE DATA, 1961—*Health Insurance Institute*, 80 p., illus., paper, free upon request direct to publisher, 488 Madison Ave., New York 22, N. Y. Compilation of statistical data on the financing of health care.

## INVENTION

## Patents of the Week

► AN AIRWAY for use in artificial respiration has been patented. The device for blowing air into a patient's lungs was developed by Peter Safar and Martin C. McMahon of Baltimore, Md., who assigned rights to Johnson & Johnson.

Mouth-to-mouth resuscitation is a much more efficient method of getting air into the lungs than methods relying on physical pressure, such as chest or back pressure, since about ten times as much air is moved.

Despite this substantial improvement, however, many persons hesitate to give artificial respiration by the mouth-to-mouth method because of an instinctive aversion to placing their mouths on another person's mouth, especially in the presence of mucus, foam or blood. Since artificial respiration should be started immediately and a physician is usually not present, it must be done by a layman.

The instrument devised by Mr. Safar and Mr. McMahon is designed to make mouth-to-mouth resuscitation more acceptable and easier to perform. It consists of a single curved tube with a flange, so constructed that one end can be used for adults and the other for children.

One end is placed in the patient's mouth and holds the tongue forward while the other end extends from the patient's mouth into a position such that the user can readily blow through the tube while facing the chest and holding the nostrils closed, the neck extended and the lower jaw upward. The flange limits the extent to which the tube is inserted. The airway received patent No. 3,013,554.

An ion rocket engine for use in long space trips won patent No. 3,014,154 for Kenneth W. Ehlers of Lafayette, Calif., and Ferdinand Voelker III, of Concord, Calif., who assigned rights to the U.S. Atomic Energy Commission. Space propulsion by ions requires a very high ion current compared to that produced by most conventional sources.

The scientists therefore provided a "unique ion generating structure characterized by a large surface area nearly all of which emits ions." Accelerating electrodes are placed next to this surface to give a high velocity to the ions to produce thrust. Cesium is suggested as the ion source since it has the lowest ionization potential of all the elements, 3.9 volts.

The heated cesium gas is forced by moderate pressure to pass through porous metal such as tungsten or platinum. This system

STRENGTH OF MATERIALS—J. P. Den Hartog—*Dover*, 323 p., illus., paper, \$1.95. Unabridged reprint of first edition published in 1949.

TEACHING ELEMENTARY SCIENCE: A Sourcebook for Elementary Science—Elizabeth B. Hone, Alexander Joseph and Edward Victor—*Harcourt*, 552 p., illus., \$7.50. Comprehensive collection of tested activities and experiments for the elementary science classroom and field trips.

• Science News Letter, 81:12 January 6, 1962

will provide a comparatively low thrust during a very long time, such as might be needed for prolonged space travel, the scientists said.

Alfred C. Thomas of Kansas City, Mo., has devised a food warmer that can be used with an automobile radiator, for which he received patent No. 3,013,548. The heat removed from the car engine by the water or other fluid in the radiator is circulated in the food warmer, which can be kept in the passenger section, in the trunk or under the hood.

The warmer consists of two sections, each containing a water-tight vessel through which the radiator fluid is circulated. The device can also be used to provide hot water for bathing or shaving. The warmer would be particularly useful during long trips or when it is impossible to stop at a restaurant, Mr. Thomas said.

Variations in a process for producing molecular sieves won patents for three scientists affiliated with the Union Carbide Corporation, which was assigned patent rights. The patents, Nos. 3,013,982 to 3,013,987, were variously distributed among Donald W. Breck of Tonawanda, N.Y., Robert M. Milton of White Plains, N.Y. and Charles R. Castor of Indianapolis, Ind.

The metal-loaded zeolitic molecular sieves are suitable for use as catalysts, scavengers and getters. They consist basically of three-dimensional frameworks of tetrahedra of silicon tetraoxide and aluminum tetraoxide, which are cross-linked by the sharing of atoms.

For bridge players who have trouble remembering the correct bidding procedure after the first round of bids, Ralph D. Cooper of Oklahoma City, Okla., has devised a handy aid. It consists of a slide rule the front side of which contains condensed advice for the first round of bidding. On the reverse are listed short suggestions for continuation of the bidding, depending on what the opening bids were.

The slide rule device for bridge bidding is based on the point count system. It received patent No. 3,013,349.

• Science News Letter, 81:13 January 6, 1962

One-sixth of new active cases of *tuberculosis* found are in people under 25 years of age.

Over 95% of the *fat* ingested is absorbed and utilized in the body.

Bone char is used by sugar refining industries to purify *sugar*.

### GOV'T SURPLUS ELECTRIC GENERATOR

Cost Over \$20.00 New; While They Last, \$3.95

Generates Up to 100 volts. Use to generate electricity, ring bells, light up lights, as a medical battery, shookey, many electrical experiments, classroom uses, etc. Hand Crank or gear wheel drive. Each has permanent zinc (alone worth more than total cost), generating armature, wire leads, gear crank, ready for use. Gov't surplus; like new. **\$3.95**

### Surplus Underwater Electronic Detector

New! Cost \$200.00. Special \$7.95. Use as detector or use parts for other devices such as mike, pickup, etc. Wt. 30 lbs. F.O.B. Detroit. Only **\$7.95**  
JOHNSON SMITH CO., Dept. 122, Detroit 7, Mich.

### COMPRESSED TABLETS

(Non-medical) Made to Order

Very small sizes to the very largest. Experimental work undertaken. If you need tablets made, write us for quotations.

R. P. CARGILLE LABORATORIES, INC.

117 Liberty Street New York 6, N. Y.

### New "Mechanical Educator" to IMPROVE MEMORY

Learn faster than ever with new device effective for learning languages, speech, tables, facts, formulae, etc.

#### DORMIPHONE MEMORY TRAINER

- Speeds up learning processes
- Aids concentration
- Provides entertainment

The Memory Trainer records, instantly plays back, and when clock is set, automatically repeats speech, music, any material at regular intervals through a built-in speaker. No reels of tape to snarl or rewind. Portable. Ideal aid for work, school, child training, entertainment—Used by educators, psychologists, people of all ages.



Self-Contained

Recording Cartridges from 30 seconds to 55 minutes

Easily removed. Can be stored or "erased" instantly and re-used repeatedly.

Write TODAY for FREE folder with complete information. No salesman will call. . .

Modernophone, Inc., 125-012 Radio City, N.Y. 20, N.Y.



Avoid confusion of scraps of paper . . . lost opportunities . . . forgotten duties and appointments. Use the MEMOGENDA. Permits constant survey of work ahead . . . results in working without strain. Checks out completed tasks and builds valuable history of activity. Users say they gain more time for living by making the best use of their working hours.

MEMOGENDA is a 96-page book, wire bound in a flexible leather-like covering. The right hand pages (8 1/2 x 11) have numbered lines, one for each item. Opposite pages are for additional memos . . . includes instructions for use, an annual reminder, 3-year calendar, and active telephone list.

Price \$30 a dozen F.O.B. factory, or send \$3 for sample, postpaid. Full refund if it isn't the best investment you ever made.

### KANO LABORATORIES

1010 Thompson Lane, Nashville 11, Tenn.