

PSYCHIATRY

Long Hospitalization Hit

► **LARGE NUMBERS** of mental patients who should have been returned to society are deteriorating in hospitals, an authority said in Washington, D. C.

Roughly 30% to 50% of the chronically ill patients now hospitalized could be rehabilitated, said Dr. Fritz Freyhan, director of clinical studies for the National Institute of Mental Health research center, based at St. Elizabeths Hospital.

There is no doubt that long-term confinement damages mental patients, Dr. Freyhan told *SCIENCE SERVICE*. Harmful effects begin to show after six months or a year in the hospital.

Dr. Freyhan's group inherited 330 chronic patients when it began operations at St. Elizabeths. More than half were put back into the community where they did very well, he said. Those who stayed in the hospital deteriorated.

Schizophrenia is the primary issue. People afflicted with this most common mental illness now occupy 25% of the world's hospital beds, though the incidence of schizophrenia runs about one percent per nation.

Dr. Freyhan listed three reasons for low hospital discharge rates. Society has been too "security minded."

Hospital staffs are inadequate. Two of the nation's large mental hospitals have 15,000 patients each. A single doctor may have 300 to 400.

Furthermore, Dr. Freyhan said, once doctors label a patient as chronic, he is stuck. The tag is accepted as a sign of his inability to function outside the hospital.

Dr. Freyhan is not alone in his concern over the harmful effects of long hospitaliza-

tion. In a survey with 2,926 schizophrenic patients at the Los Angeles County General Hospital, Dr. Werner H. Mendel, University of Southern California, found that the longer the hospital stay, the less able the patient was to function socially and at work, as compared to his performance before hospitalization.

Moreover, no connection was found between the length of the first confinement and the rate of return. It has been commonly accepted that long-term hospital therapy reduces the chances that a patient will return.

Dr. Mendel proposed that many facilities for schizophrenics be converted to treatment centers for outpatient and day care. Several hospitals have begun to move in this direction. New Jersey's Overbrook Hospital recently announced the opening of a "half-way house" for mental patients. Fifteen women, some confined for five years, will live at the hospital but work outside.

• *Science News Letter*, 89:14 January 1, 1966

INVENTION

Current U.S. Patents

► **A DEVICE** that quickly and easily tells the level of a liquid in any kind of container earned a patent.

The ultrasonic gauge would be useful in measuring levels of liquid oxygen in rockets being fueled, oil in tankers or milk in trucks, among its many possible applications. The device is the first known to make such measurements independent of temperature and humidity.

This is achieved by sending the high-frequency sound waves through wires that are twisted into a helix shape, rather than through straight wires as in most known liquid level gauges based on acoustic methods. Because of the helix shape, energy transfer occurs chiefly between adjacent parts of the helices. The time the sound-waves take to travel down one wire and up the adjacent one tells the level of the liquid.

The new ultrasonic gauge earned patent 3,222,929 for Dr. Henry B. Kalmus of Washington and Max L. Libman of Fairfax County, Va. Dr. Kalmus, who is chief scientist at the U.S. Army's Harry Diamond Laboratories, Washington, D.C., holds some 40 patents, including patent 3,222,980 for an instrument that accurately measures small amounts of visible light.

Automated Card Maker

An automated cutting and collating method that can produce more than 3,000 packs of cards an hour was covered by patent 3,224,306, issued to George F. Hawley and Jean E. Moulder of Automation Engineering Laboratory, Inc., Stamford, Conn.

The inventors say that the method can be applied to a wide range of preprinted paper, plastic and cardboard sheets to be cut up and assembled into packs or decks, such as playing cards or educational flash cards. Complete systems can be designed to ac-

commodate a wide range of card sizes and shapes, the inventors say.

In operation, the sheet to be cut up is passed through a set of cutters to form strips. Then the strips are moved at right angles through another set of cutters to produce individual cards. Finally the units are flipped up vertically and pushed along converging channels to produce a pack.

Other Interesting Patents

An invention covering the use of a pure fluid binary stage for counting fluid input signals without any moving mechanical parts earned patent 3,223,101 for Dr. Romald E. Bowles of Silver Spring, Md., who assigned rights to the Government through the Secretary of the Army.

A buoyant radar reflector that permits radar detection of its location on the surface of the sea from great distances was granted patent 3,224,001. Inventors Matthew I. Radnofsky and Glenn A. Shewmake, both of Houston, Texas, assigned patent rights to the Government through the National Aeronautics and Space Administration.

An electronic apparatus for use in language teaching, speech therapy, remedial reading, student tutoring or voice training earned patent 3,223,956 for William R. Dufendach and Merlin J. Applegate, both of Grand Rapids, Mich., who assigned rights to American Seating Company, also of Grand Rapids.

To help in exploration for deposits of oil and other materials, either below ground or on the surface, two inventors devised a detector that counts the light flashes caused by fast neutrons. Philip W. Martin of Whittier, Calif., and Robert W. Pringle of Winnipeg, Manitoba, Canada, were awarded patent 3,223,839 for the apparatus.

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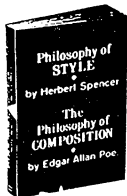
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