

New Robot for Artificial Breathing

Medicine

Operates for Long Periods Without Injuring Patients

IN case you should be overcome by gas, or for some other reason should cease to breathe in the natural manner, it would now not be necessary for a physician or attendant to work for hours inducing artificial respiration by the old-fashioned hand pressure on the lungs.

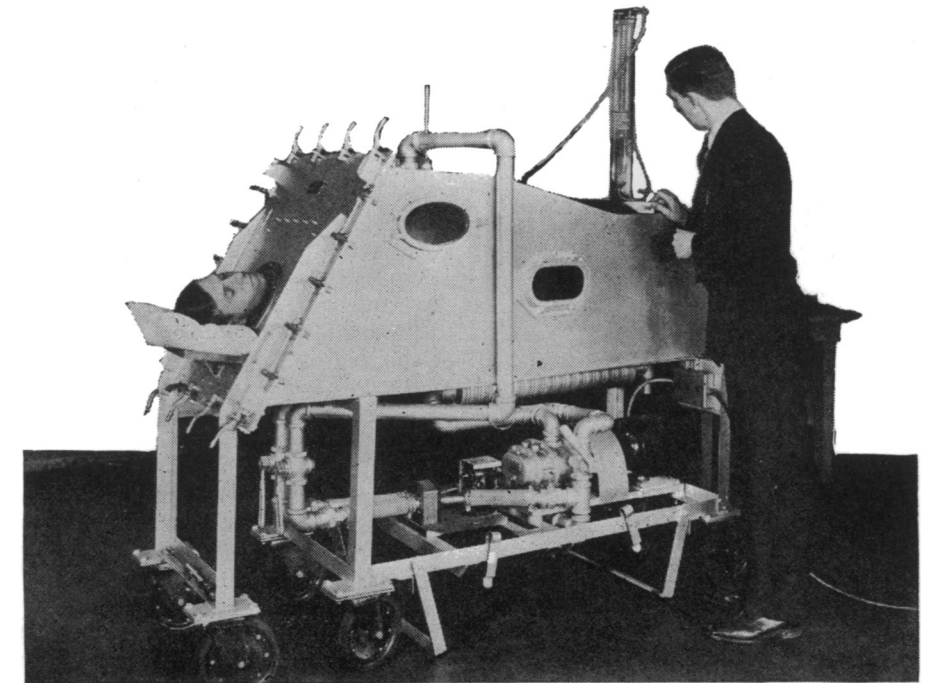
A tireless mechanical breathing apparatus, which will operate for days to keep oxygen in the lungs of the person who has been overcome by water or gas, was exhibited at the recent meeting of the American Medical Association.

The apparatus was designed by Philip Drinker and L. A. Shaw of the Harvard School of Public Health. In emergencies the old prone-pressure method of starting breathing in a patient who has been suffocated or rescued from drowning will still be used. The new apparatus is intended for those cases in which artificial respiration must be kept up for days at a time.

The patient lies on a comfortable bed which is rolled into a large metal tank. His head protrudes outside the tank, resting on a pillow. A soft rubber collar fits around his neck. By means of electrically driven pump and valves a very slight negative pressure is created within the tank, causing the air to rush in the patient's mouth and nose. The valves are turned over and air from the room passes into the tank. The change in pressure forces the air out of the lungs. This is kept up at the normal rate of breathing until the patient breathes by himself. It may also be used for a child, a special sized machine having been made. With the former method, when artificial respiration had been carried on for a few days, the skin would be all rubbed off the patient's back and he would be in bad shape from the manipulation which was keeping breath in his lungs.

With the new device, the patient can sleep, eat, and drink without any interruption to respiration.

AN electric thermometer which can show the temperature of a vein, an organ or any cavity of the body was exhibited by Drs. Charles Sheard and R. P. Halstead, of the Mayo Foundation. This device consists of a very fine electro-thermocouple. It represents a distinct advance in the



development of scientific medicine, Dr. Morris Fishbein, editor of the American Medical Association, said. The science of medicine has progressed so far that very fine physical measurements of a patient may be made. Where formerly the doctor put his hand on the patient's forehead and compared his temperature with the doctor's own, he now has not only the clinical thermometer but also this new device that will tell the temperature of any part of the body. When an inflammation starts in one organ it may be possible to detect a rise in temperature of that organ before a general rise in the temperature of the whole body could be determined.

WORK with substances that will spread the alarm when a leak of poisonous, non-odorous gas occurs was demonstrated by the U. S. Bureau of Mines. One of the substances developed, ethyl mercaptan, has been used successfully in city gas distributing systems. One of the first calls after its installation was from the proprietor of a movie theater. He called the city gas company to complain of a bad odor that was driving all his patrons out of his theater. The odorous substance was warning him that one of his gas connections was leaking, he was told. A few grains of ionone, another gas detector exhibited,

would produce an odor throughout an enormous office building.

AMONG the many factors which are now seen to cause rheumatism, or arthritis as it is termed scientifically, is the factor of heredity, Dr. Ralph Pemberton of Philadelphia said.

Certain types of persons are most frequently attacked by this complex disease. Focal infection, at one time popularly believed to be an important cause, is now considered only one of many factors. Disturbances of the circulation or of the nervous system and derangements of the digestive system have also been found to produce arthritis.

Because of the many factors causing it, no one drug or vaccine and no one method of treatment can be expected to cure the condition.

Knowledge of arthritis is growing, Dr. Pemberton said. Today there are clinics for the study of this disease in nearly every medical center while ten years ago there were only two or three in the entire United States. This development is partly the result of general progress in medicine and partly the result of pressure from the industrial world to reduce disability pensions, as arthritis is one of the most frequent causes of disability in middle life.

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