

MEDICINE

# New TB Treatment

Patients actually stop breathing for hours at a time in the new iron lung which is being tried in the treatment of tuberculosis.

► A NEW KIND of iron lung, which actually stops the breathing for hours at a time, has restored health to six out of 12 patients with advanced tuberculosis of both lungs, Dr. Alvan L. Barach of Columbia University College of Physicians and Surgeons reported to the American College of Physicians.

The patients stop breathing for the eight to eleven hours they spend daily in the new apparatus. No movement of the ribs or diaphragm can be detected even by X-ray pictures. The patients lie relaxed without moving and for the most part are not even bored though some use the radio for amusement.

Air is wafted in and out of their sick lungs by the apparatus which, through a special device involving a collar around the neck, equalizes the pressure on both sides of the chest wall as well as the upper and lower surface of the diaphragm. This pressure-equalizing feature is the chief difference between the new apparatus and the iron lung used for polio victims. Because the pressure is equalized, the lungs are completely at rest and cavities in them heal.

Patients who were not helped by other methods of treatment recovered after one to three courses of the non-breathing treatment. Two of the recovered patients have been well and at work for four years. A single course of treatment takes three to four months during which the patient spends eight to eleven hours every day in the apparatus.

The patients have to learn how not to breathe. They may learn this in a few hours but some take two or three days. At first their sinuses and ears bother them. The effect of the oscillating pressure on the ear drum is like that of swift ascent and descent from high altitude. A sponge rubber cover over the ears or a radio microphone lessens this feeling and in all cases the patients become oblivious to it. Vasoconstricting nasal spray helps relieve the sinus congestion.

The effect of stopping breathing on the central nervous system is of considerable interest, Dr. Barach pointed out. The patients lie for hours without mov-

ing their hands or changing position. The desire to smoke disappears even in those used to smoking two packs of cigarettes daily.

Dr. Barach has been working on this method of putting the lungs at complete rest for nine years and says the ideal has not been achieved. He hopes that other investigators will try the method so that further improvement and appraisal of its value will be made. Latest improvement in the equalizing pressure chamber has been air conditioning. Patients apparently do not get claustrophobia and after they have learned to stop breathing they either do not object to the treatment or actually like it.

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MEDICINE

## Emotional Disturbances Create Aches and Pains

► UNCONSCIOUS, smoldering resentment, frequently aroused by marital difficulties, is the cause of many of the nagging backaches and other muscular aches and pains, fatigue and lack of energy which are often diagnosed as fibrositis, Dr. Edward Weiss of Philadelphia told members of the American Society for Research in Psychosomatic Problems.

Of the 40 patients he reported, all but five were women and only four of the women were unmarried.

These unconsciously resentful patients have pain in their muscles because muscles serve as a means of defense and attack, Dr. Weiss explained. Internal tension is relieved by muscular action, but when there is no action the patient feels that her muscles are hurting and she cannot use them.

Their lack of energy is sometimes wrongly put to lack of vitamins. Actually they are lacking not vitamins but emotional satisfaction in their lives, Dr. Weiss said. Instead of prescribing more rest, the doctor should get them active and teach them to carry on in spite of the aches and pains.

The roots of their trouble usually lie in difficulty with growing up emotion-



**BLAST RECORDER**—Shown in the Westinghouse Research Laboratories, where equipment for test procedures for "Operation Crossroads" was coordinated, is this maze of intricate instruments that will record for scientists the force of the atomic bomb blasts near Bikini Atoll this summer. Small electrical signals from the target ship will be amplified and fed into a transmitter, which will send out high-frequency radio signals corresponding in intensity to the force of the blasts. High-speed cameras many miles away will make on film a permanent record of the tests.

ally. They are, in a sense, having growing pains, and when these come later in life, they are apt to be more painful than in childhood. Instead of braces and supports for their aching backs these patients need inner braces—braces for their emotional development.

Some of these patients may have an organic disease such as brucellosis, or undulant fever. This germ disease makes a person peepless and gives him muscular aches and pains, too. There may be other diseases present along with the emotional trouble. Sometimes organic disease breaks down a person's psychological defenses and he regresses unconsciously to a childish emotional state. The form this takes is determined by his previous personality development.

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A nylon plant is planned for Australia with the help of Canadian technical resources and skilled manpower.