

Electronic Lung

Following extensive research and close cooperation between the medical profession and precision engineers, an electronic lung which can replace iron lungs, has been perfected.

Called the Barnet Ventilator, the lung has been a joint venture by several British electronic companies, each of which contributed specialized knowledge and technical facilities.

In the past patients have had to be put in an iron lung, which is essentially an airtight box in which pressure is varied, by means of pumps, between positive and negative values, each cycle causing the lungs to inflate and deflate within correct physiological limits.

The iron lung is an effective machine for sustaining life, but, since only the head of the patient is outside the lung, dependence upon nursing staff is complete. The patient has no liberty whatsoever.

Treatment of such cases by means of the Barnet ventilator gives the patient considerable freedom. Instead of being encased in a box, the patient is linked to the ventilator by two plastic tubes. Breathing is sustained by the alternation of positive and negative pressure, air being pumped into the lungs during the positive phase and extracted during the negative.

The number of respirations per minute, the ratio of inspiratory to expiratory time and the volume of air entering and leaving the lungs are matters of very great importance. By using the Barnet ventilator any or all of these facilities can be instantly and precisely adjusted within physiological limits.

The iron lung is large and heavy, and when it is necessary to move a patient, transport problems arise. The Barnet ventilator, on the other hand, is very portable and weighs only 56 pounds. It has built-in batteries from which its transistorized circuit will run for up to 20 hours without recharging.

In addition to its use in polio, the ventilator is of the utmost value in every case of respiratory insufficiency arising from any cause.