

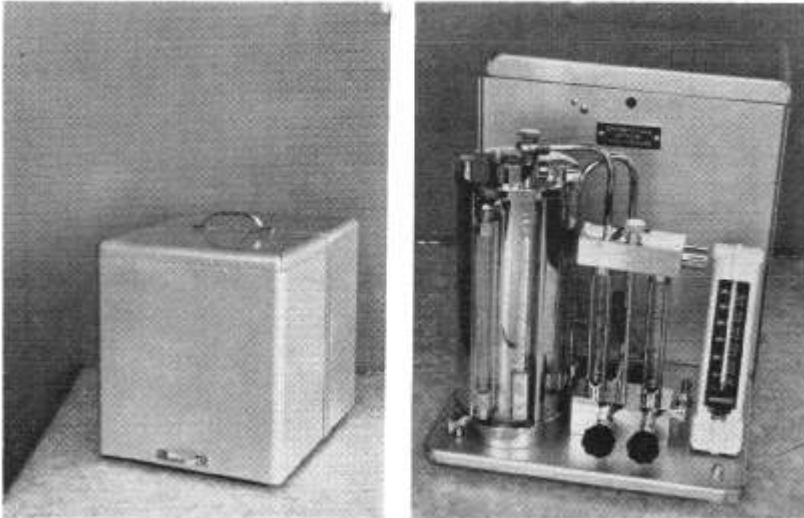
The filter may be arranged so either of these choices can be utilized with the bag assembled for use with either right or left hand. The position of the bag in its relationship to the two posterior openings in the block may also be altered to fit the mechanical convenience of the moment.

Additional flexibility is offered by the adjustable extension bar, in that it may be raised or lowered, or swung either toward or away from the patient. Thus various positions can be obtained for the convenience of the anesthesiologist and safety of the patient. The versatility of this equipment is illustrated.

PORTABLE ANESTHESIA APPARATUS

Dr. Erik Nandrup, Copenhagen, Denmark, with the assistance of Helmuth A. Jensen (who built the apparatus), has designed a portable unit for the administration of ether which eliminates the need for compressed gases.

The air intake of an electrically driven sparkless compressor is connected to a casing around a vaporizer by such an arrangement that an adjustable part of the in-



Portable unit for the administration of ether.

taken air passes through the casing. It is thus possible to keep the temperature of the vaporizer at 15 C., regardless of the amount of ether vaporized within the limits demanded by practical use in analgesia and anesthesia.

The air leaving the compressor is separated into two tubes. The air flows through one, adjustable by a needle valve, is led through the vaporizer constructed in such a way that the air becomes saturated with ether vapor. The amount of this air, saturated with ether vapor at 15 C. is measured by a rotameter especially calibrated to indicate the amount of pure ether vapor, ranging from 25 to 500 cc. per minute at 15 C. and 760 mm. of mercury.

Air flow through the other tube coming from the compressor by-passes the vaporizer. It is adjustable by a needle valve and measured by a rotameter sealed for atmospheric air from 1 to 15 liters per minute at 15 C. and 760 mm. of mercury.

The flows from the two rotameters are combined and are led to a breathing bag via a rubber tube. From this the mixture of ether vapor and air passes through a wide-bore corrugated rubber tube to a nonbreathing valve.

This construction allows the administration of known ether concentrations from

0.5 to 3.3 per cent with a total flow from 5 to 15 liters per minute, or up to 10 per cent ether with a total flow of 5 liters per minute.

The apparatus, under normal conditions, is driven by regular alternating current. It is also possible to operate the apparatus by using a trembler and an automobile battery, or by using a special hand pump. The unit weighs 18 kg., and the dimensions including space for equipment, are 28 × 38 × 30 cm.

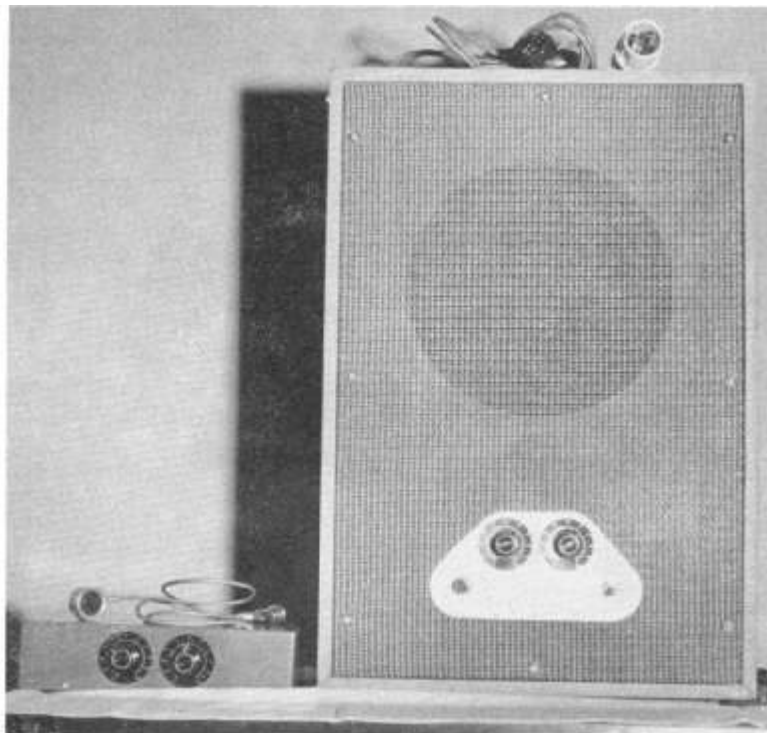
The apparatus has been used at the Finsen Institute, Copenhagen, in the Department of Anesthesia.

LARYNGEAL SPRAY

Dr. Steiner of the University of Chicago has devised a laryngeal spray similar in its essential features to that recently reported in *ANESTHESIOLOGY* (18: 507 (May-June) 1957). His communication arrived in the Journal Office after the report by Severinghaus and DeBacker had been prepared for publication. Dr. Steiner reports that he has used his laryngeal spray since September, 1955, with complete satisfaction.

AMPLIFICATION OF HEART SOUNDS

Dr. Paul Keller, Salt Lake City, Utah, uses a crystal "pick-up" mounted on a firm rubber diaphragm and placed firmly over the heart as a microphone. The heart sounds are amplified by a preamplifier and amplifier and fed to a speaker to the extent that they are audible throughout the operating room. Although the equipment is portable and can be transported from room to room, it is bulky and heavy. They recommend permanent installation of the amplifier and speaker equipment. They hope, however, that a compact portable unit, using transistors, can be developed.



Unit for amplification of heart sounds.