An Apparatus for Administering Warm Ether

By E. H. Williams, M.R.C.S.

I am enclosing photograph of a warm-ether apparatus designed by me some six months ago and used with very satisfactory results in thirty or more major operations. The apparatus consists of two compartments, A and B. A contains a hot-water chamber separated from the outer casing by felt. Into this chamber filled with boiling water dips a copper coil of which the two ends are at D; one of these communicates with the mask C, while the other end is continuous with a tube leading from the anaesthetic chamber in B, on the right of the figure. This chamber, also insulated by felt from its outer casing, is divided into two compartments, either of which can be connected with the incoming stream of air by a two-way cock, E. One of these divisions is for ether and the other for any mixture of ether and chloroform that may be thought desirable. My reason for making provision for a chloroform mixture was that in strong male subjects there is some difficulty in obtaining complete muscular relaxation in the first
few minutes of the operation, after which pure ether is quite satisfactory.

The air is forced by a foot-pump into the base of A by a tube which takes a few turns round the hot-water chamber, between it and the outer casing, passing then to take a few further turns in the insulated space round the anaesthetic chambers, finally appearing at the upper right-hand corner of the apparatus at G. A piece of rubber tubing connects G with the two-way cock E.

The anaesthetic chambers have windows let into their roofs, through which the level of the contained anaesthetic can be seen. My object in making the incoming air take this course was that a warm air should produce quicker evaporation of the anaesthetic.

This apparatus provides a pleasantly-warmed vapour; and, as the mask is covered with several layers of gauze, it combines the advantages of open ether, and lastly, no mean consideration in these times, it is very economical in anaesthetic required.

This apparatus was made for me by a Dunedin firm of brass-founders, and the workmanship and finish are quite equal to that of similar articles made in England.