To the under part of the wire frame is fastened a thin piece of sheet iron to secure even distribution of heat and to prevent liquids being spilled on the heating element. About a quarter inch below this is the heating unit. This was made by wrapping about 30 feet of Nichrome ribbon wire 1/32 inch wide around a rectangular sheet of mica of nearly the same dimensions as the support. This is insulated on both top and bottom by similar sheets of mica and the whole mounted on a heavy piece of asbestos board which is fastened to the corners of the support. The wire terminals lead to binding posts which are fastened to the asbestos board. The resistance of the heating circuit is about 80 ohms which requires, on a 110 volt direct current circuit, about 1.4 amperes. This will produce enough heat to steam the slides without danger of burning should the stain evaporate. About ten slides can be stained at once.

Nichrome wire is well adapted for use in heating units on account of its high specific resistance, non-corrosiveness and high melting point. It can be bought in either wire or ribbon, the latter being the more convenient for making a heating unit. The wire is made in various widths and thicknesses.

The heater here described has been used in this laboratory for some time with excellent satisfaction.

A SIMPLE APPARATUS FOR THE ADMINISTRATION OF CHLOROFORM AND ETHER BY THE VAPOR METHOD

O. M. LAYTON, M.D., FOND DU LAC, WIS.

The administration of ether and chloroform by the vapor method has certain advantages over the older methods, of which the most obvious are lessened danger of overdose, greater freedom from bronchial irritations, and its ready adaptability to throat work.

Junker's chloroform inhaler has been on the market for a number of years, and can be bought for about nine dollars, while there are a number of different apparatus for the administration of ether vapor to be had at prices varying from twelve to about two hundred dollars.

I have recently devised a simple and compact little apparatus for the administration of both drugs by the vapor method.

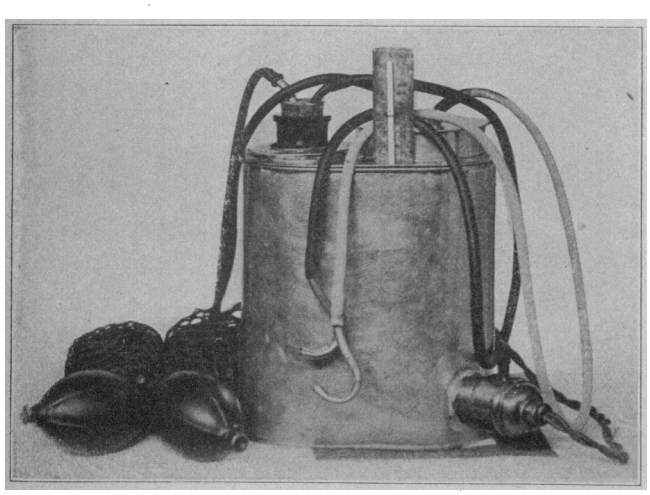

Fig. 1.—Apparatus for administration of chloroform and ether anesthesia.

This apparatus has proved very satisfactory in my hands, and can be constructed by any tinsmith at a cost which need not exceed five dollars, including the cost of bulbs and tubing.

The apparatus consists of an oval tin container 7 inches in length by 7½ in height; a removable top, to the under side of which are soldered two tin tubes 5 inches in length and 2½ and 3½ inches in diameter, perforated at the bottom and open at the top for the reception of the 4 and 8 ounce bottles. A circular tin cover with a central opening passes over the necks of the bottles, dropping to the shoulders of these.

The base for an electric light bulb is soldered in the side of the apparatus near the bottom and fitted with a 15 watt bulb. An ordinary thermometer is secured between the bottle holders.

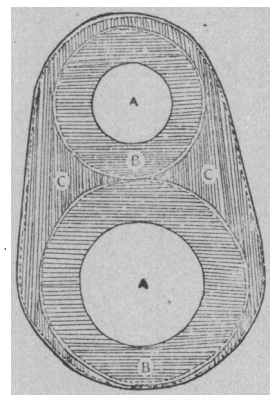

Fig. 2.—Top of apparatus: *A, A,* openings which pass over the necks of the bottles; *B, B,* circular tin cover; *C, C,* removable tin top.

The tubes may be of 3/16 inch brass or glass, and are bent at convenient angles. The inlet tubes to which the rubber bulbs are attached extend to the bottom of the bottles; the outlet tubes just through the corks.

The curved tubes at the end of the rubber delivery tubes are hooked inside of the dome of an ordinary wire inhaler which has been covered with a dozen layers of surgical gauze. In throat work, whichever tube is used may be carried inside the angle of the mouth, or the rubber tubing connected to any of the mouth gags constructed for use with the vapor method.

When in use, the temperature of the interior of the apparatus should be maintained at 85 F.; this may be accomplished with warm water if electricity is not available.

Compression of the bulbs should be timed so as to deliver the vapor to the patient at the beginning of each inspiration.

The strength of ether vapor as delivered I have found to be about right for the average patient for maintenance of satisfactory anesthesia. If for any reason one does not wish to anesthetize his patient with chloroform, he may use the ether drop method and change to the ether vapor method as soon as the patient is properly anesthetized.

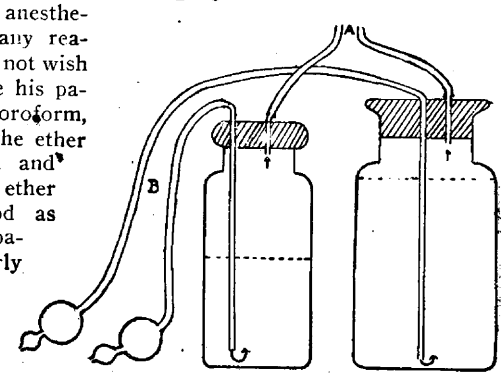

Fig. 3.—Bottles for ether and chloroform: *A,* delivery tubes; *B,* cautery bulbs and tubes.

I have now tried this out in about 300 anesthesias within the past year, the work having been done in St. Agnes Hospital, in the surgical service of J. P. Connell, M.D., to whom I am indebted for the opportunity, as well as for many kindly suggestions.

Sleeping Sickness in Portuguese West Africa.—Consul-General Henry A. McBride, stationed at Boma, Belgian Kongo, West Africa, has made a trip through Angola, a Portuguese colony in West Africa, twice as large as the state of California. He says that in the district of Loanda and east as far as the Kwango River there are many localities in which sleeping sickness is prevalent. The principal region is along the Kuanza River where the tsetse fly abounds. In this district the sleeping sickness has almost caused the disappearance of a population once numerous and flourishing. The mortality from the disease so seriously interfered with the supply of labor on farms and plantations that in 1902 the Portuguese government sent a commission of the most eminent bacteriologists in Portugal to investigate it, with the result that measures were adopted against it, and its prevalence is far less than it was ten years ago. It is proposed to build a large sleeping sickness hospital at Ambaca. Consul McBride also says that several severe epidemics of smallpox have occurred in various parts of the colony.