

PRACTICAL LESSONS IN ELECTROTHERAPEUTICS.

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WE have found the most convenient metal for plate electrodes to be *block tin*, as it is easily bent to any required shape, and does not readily crack when straightened out again. It can also be cut with an ordinary pair of scissors to any special shape that may be desired.

Another form of plate electrode which we have found very convenient to tie upon the limbs is made with broad metal braid—theatrical costumier's braid answers very well—which is cut to the desired length and padded with two or three thicknesses of flannel. A flat terminal screw let into the back completes the arrangement, which may or may not have tapes for tying on attached.

Handle electrodes are those which are supplied with an insulated and insulating handle to facilitate use by the operator, especially when stroking or other labile applications have to be carried out. They are generally circular in shape, and are made of some good conducting material, such as copper, tin, brass or carbon, with handles of wood, vulcanite, porcelain or glass. The portion which comes in contact with the skin of the patient—*i.e.*, the electrode proper—is generally covered with some padding material, similar to that used with the plate electrodes above referred to.

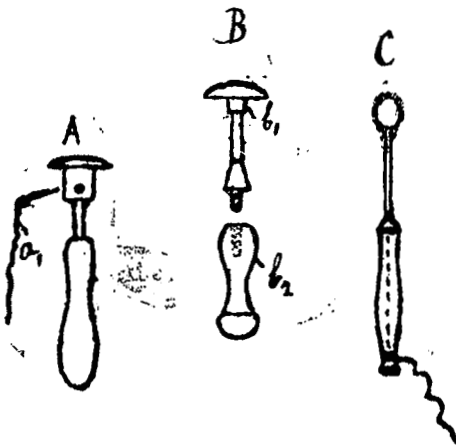


FIG. 35.

Fig. 35 illustrates some forms of handle electrode. A is a solid electrode, with pin-hole attachment for the rheophore a_1 . B is an electrode

with interchangeable handle, b_1 being the metal electrode, covered with flannel or other padding, and having a screw attachment to fit into the handle b_2 , the screw socket of which is shown by dotted lines. A hooked rheophore—such as that shown in Fig. 34—can be fixed in between b_1 and b_2 , as they are screwed together. C is a fine electrode with round head, and having its rheophore connection at the extreme end of the handle.

Some handle electrodes have sponges attached in lieu of the padding, and these form a very useful surface for contact with the skin in some cases, on account of their soft and pliable nature. The common form of sponge-holder is, however, very objectionable, on account of the insufficient hold it has upon the sponge when used for labile applications.

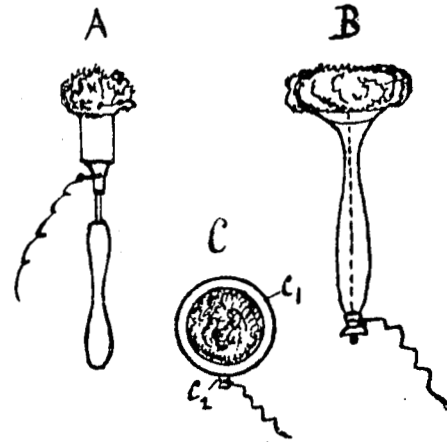


FIG. 36.

Fig. 36 shows three forms of sponge-holder. A is the common form, which, as stated above, we cannot recommend. B is a very useful form, the sponge being held in position by a metal rod, which passes right through the handle, along the dotted lines shown, and which also acts as a conductor for the electricity. C is a cup sponge-holder (Dr. Steavenson's form). The vulcanite cup c_1 , whose edge only is shown in the drawing, is shallow, so as to be easily passed beneath a patient's clothes. The sponge is screwed on to the centre of the cup, and is connected to the rheophore attachment c_2 .

It is advisable to have all electrodes which have to be used with a handle made with a screw attachment, and all handles of whatever size and shape with a screw socket, so that any handle may be used with any electrode, and *vice-versa*. As it is desirable to be as accurate as possible in all medical work, and as the size of the electrodes, or rather their surface area which comes in contact with the skin, has much to do with the quantity

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