

How, then, can the electric light circuit be utilized in the production of X rays? The best apparatus for transforming electric energy of low voltage and high amperes (*e.g.*, the electric light current) into a current of very high voltage and low amperes is an induction coil.

A word regarding the choice and care of an induction coil. Personal experience is essential, but a few practical suggestions may not be out of place here.

Nothing less than a 6 inch-spark coil should be selected by the physician, an 8 inch is to be preferred.

Many experiments can, however, be performed with smaller coils. A coil giving a 2-inch spark is quite capable of photographing a hand, a forearm or the metatarsal bones in about two minutes.

One objection to the smaller coils, and one that must be considered, is the fact that many of them are apparently made to *sell*, their insulation is insufficient, and when subjected to the rather severe strain demanded of them in X ray work, the insulation breaks down and your coil—the most expensive part of your entire outfit—is useless. For the same reason never buy a coil made before the days of X ray experiments.

The insulation of the larger and more expensive coils is better. These for the most part are made by experienced workmen, and are thoroughly tested before leaving the manufacturer's hands. It is better never to work any coil at its full sparking capacity for prolonged periods. If absolutely necessary to do so, the operator should occasionally "rest" the coil, especially if its temperature approaches 120 F.—the melting point of the insulating medium. It will be apparent, then, that the coil should not be kept, much less operated, in too warm a room.

A Ruhmkorff coil, with storage battery, is used in the hospital, and we believe this combination best adapted to the needs of the physician.

The manufacturers of storage batteries supply with each battery all necessary information regarding voltage, current, &c.

It is, of course, possible to operate a Ruhmkorff coil direct from the electric light circuit without batteries of any kind. In this case the quantity and potential of the current to the coil are