All complete medical induction coils should possess terminals from which the interrupted primary current may be drawn. Fig. 27 illustrates such an arrangement, and shows the two

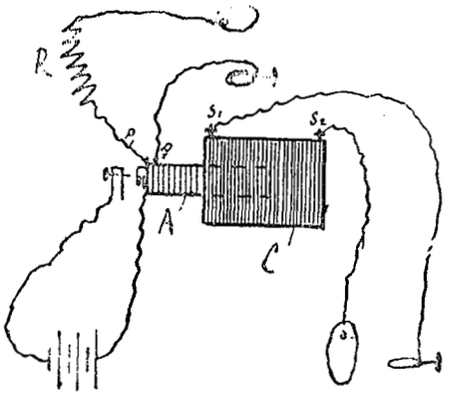

FIG. 27.

distinct circuits ready for work. The parts of the coil are as before, but in addition terminals P_1 P_2 allow of the attachment of electrodes to the primary circuit. R is an adjustable resistance placed in series with the patient for the purpose of regulating the Cs administered.

The induction coil enables us to completely change the form of the continuous current supplied by a battery. Two or three cells are generally enough to work a medical coil. The current put in to the coil is therefore continuous in direction, and has low E.M.F., with comparatively large Cs; but as it leaves the secondary coil it is alternating in direction, and has high E.M.F., with very small Cs.

The diagram (Fig. 28) illustrates this. On

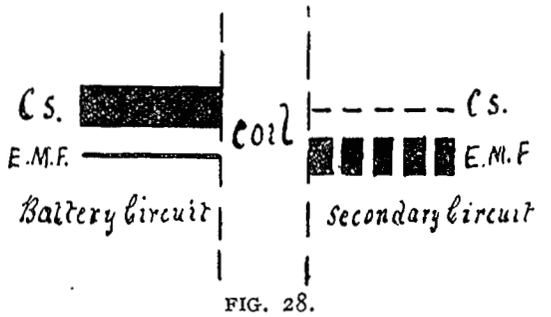

FIG. 28.

the left side the factors Cs and E.M.F. are represented by two straight lines, the Cs being very broad as compared with the E.M.F., and this is the condition of things as the continuous current is put into the coil. On the right side the size of the lines is entirely changed, and they are also interrupted, thus representing the change, especially in the relative value of Cs and E.M.F., which is accomplished by the coil. It is manifest that this figure does not illustrate all the changes wrought by the coil, but it shows the most important of them. We will mention, as an example, the result obtained with a fair-sized medical coil at the Institute of Medical Electricity. The current was supplied to the primary coil at an E.M.F. of *seven volts* and Cs of *five hundred ma* passed; from the secondary coil we obtained *twelve ma* only at *two hundred and sixteen volts* E.M.F.

When it is remembered, as shown in Lesson III., that the factor of current-flow which overcomes R is the E.M.F., it is easy to see what an important change in the character of the current is brought about by use of the induction coil.

Before leaving this part of the subject, it is necessary to point out the incorrectness of using one term only to express the two forms of current obtainable from an induction coil. The terms Faradic and Interrupted, so commonly used for coil currents, are not sufficiently discriminating. The primary current is *interrupted*, and so is the secondary; but the latter is also *alternating*. These two forms of current are so different, and so differently affect the body (as we hope to show in a future lesson), that to apply the same term to both is *incorrect, confusing, and often distinctly mischievous*. Medical men should, therefore, be careful when giving directions for treatment by induction coil to state clearly which form of current they wish applied; and a Nurse on being directed by a Medical man "to *Faradise*" a patient, or to apply "the *Faradic* current," "the *Interrupted* current," or "the coil," should at once ask which current is really meant—whether the Interrupted Primary or the Alternating Secondary? *(To be continued.)*

ON THE DIVISION OF LABOUR IN NURSING.

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IT has become the fashion in the practice of medicine and surgery to divide these two chief branches of the art, and for many practitioners to occupy themselves almost solely with the one or the other; and further than this, there are not a few Physicians and Surgeons who confine their attention, or at least their practice, to the diseases of one organ or set of organs, in the treatment of which they are thus supposed to acquire a special skill and experience.

And it is by some thought, and advised, that it would be for the advantage of the art of

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