rode is very large, and is constructed with a view to a lapting itself accurately to the unevenness of the surface. The large electrode distributes the current over a large surface, and permits the passage of very strong currents without pain or vesication, and moreover so reduces the resistance of the circuit that currents may be used of a strength far beyond any current-strength attainable with ordinary electrodes. The abdominal electrode now on the table is one devised by Dr. Martin, of Chicago. It is a metal disc about nine inches in diameter, concavo-convex, and covered with animal parch-The space between the concavity of the ment. metal and the parchment is filled with a solution of salt.

This communication will perhaps be less incomplete if it includes some reference to the batteries now in use. For stationary or cabinet batteries there are two forms of cells in use: viz., the gravity or telegraph battery, and the Leclanche or telephone transmitter battery. Of these the Leclanche is to be preferred, as there is no local action in the cell when the battery is not in use, and it is moreover much more clean'y than the gravity or Daniel cell (of which it is a modification).

The stationary batteries are placed in a closet or in the cellar, from which wires are conveyed to the consulting room. The cells of the cabinet battery are placed in a cabinet or office desk, on top of which stands the milli-ampère meter, rheostat, &c.

Among the portable batteries are the following: namely,-1. The small Leclanchè cell; 2. The chloride of silver cell; and 3. The zinccarbon cell; one of each being now on the table for your inspection. All these batteries are in use for ordinary electro therapeutic purposes, and, so far as the electric current is concerned, one battery answers the purpose as well as another. There is this difference, however: the gravity cell and the chloride of silver cell have a comparatively low electro-motive force, and when either of these batteries is used it is necessary to use a larger number of cells than when either the Leclanche or zinc-carbon batteries The electro-motive force of the are used. gravity and the silver cell is about 1 volt per cell, that of the Leclanche about 11, and that of

the zinc-carbon about 13 volts. Hence, if, in a given case, we require an electro-motive force of say 30 volts, 17 cells of the zinc-carbon battery would be used, 20 cells of the Leclanche. and 30 cells of the gravity or of the chloride of silver battery would be used. Large cells will maintain their strength longer than small cells, but the electro-motive force is no greater. That is, if we take two cells of the same kind, say a large Leclanche, such as is used with the telephone transmitter, and a small Leclanchè, such as is used in portable batteries, the electromotive force of the latter is exactly the same as that of the former, and, while it lasts, is quite as efficient.

When, however, the battery is for electrolytic purposes, the case is very different; in this case we require a battery with large cells, or, what is practically the same thing, a battery with low internal resistance. Either the zinccarbon or the large Leclanchè cells may be used for this purpose. The zinc-carbon battery has the advantage of being portable, and moreover it maintains its strength much longer than the Leclanche; nor does it become polarized when in use as readily as the latter. This may be demonstrated in the following manner :-- Connect a large Leclanchè cell with a faradic coil, the vibrator will act vigorously possibly for five minutes, when its strength will be perceptibly weakened, and in about ten minutes it will fail to operate the vibrator. Whereas a small zinc-carbon cell will operate the vibrator for several hours. When unusually strong currents are required, as, for instance, from 250 to 1,000 milli ampères, this is the battery I would use, although I believe that, in treating uterine fibroids Apostoli uses large Leclanchè cells.

There are several forms of portable zinccarbon batteries in the market. They all belong to the variety known as the "plunge battery," the plates being immersed or plunged in the exciting solution to set the battery in action. My preference is in favour of a recent modification of the McIntosh battery. It is simple in construction, easily managed, and does not readily get out of order. This is the battery, *par excellence*, for elecbrolysis and may be used for all other purposes as well. For purely