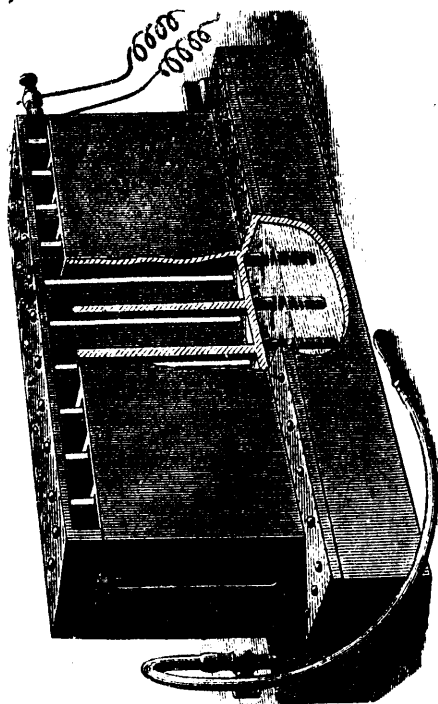


CONSTANT CURRENT ELECTRIC GENERATOR.

NEW PORTABLE BATTERY.

We give an engraving of a very compact and powerful battery recently patented by Mr. Marcus A. Hardy, of Newport, R. I. It is designed for medical and experimental purposes, and is very convenient and portable. The battery comprises twenty elements, and the cells are made in one entire piece of hard



HARDY'S PORTABLE BATTERY.

rubber which is known to be indestructible with proper use. The construction of the battery is such that all the cells can be filled in twenty seconds from the reservoir forming the base, and the exciting fluid remains in contact with the zincs and carbons only during use. Any number of cells, from one to twenty, may be brought into use as may be required. The battery cell forms the top to a hollow base or reservoir, and from each cell a small tube projects into the hollow base nearly to the bottom. To the base at one end is attached a stopcock, to which is connected a rubber tube terminating in a mouthpiece. At the opposite end of the reservoir there is a screw-capped opening for introducing the exciting liquid. The zinc and carbon plates are attached to brass connecting pieces secured to a common support of hard rubber. The connections are arranged so that the zinc of one cell is in electrical communication with the carbon of the next, and so on throughout the series. The opposing ends of the series are connected with binding posts at the end of the battery.

The brass connectors between the elements are drilled so that plug connections may be inserted to cut out any number of cells.

This battery finds an extensive application in torpedo service, and it appears to be extremely well adapted to laboratory use.

A NEW TELEGRAPHIC DEVICE.

A California paper, the Sacramento Chronicle, gives an account of a device for the simplification of telegraphy, by which anyone who knows the alphabet and how to spell can correctly transmit telegraphic despatches. The invention is a substitute for the key, which requires training in order to be used. It consists of a piece of metal in which are inserted conductors of brass and non-conductors of whalebone that correspond with the characters of the Morse Alphabet. Each letter or numeral is divided off and marked. By moving a metallic pencil over anyone of these divisions, the particular letter or figure is reproduced at the other end of the line by means of the insulations and connections. One stroke suffices for a character, while greater precision is obtained than by the key, as on account of the mathematical accuracy of the device, letters or numerals cannot be run together as now too frequently occurs.