

of the Heads of Departments, but no gas fittings have as yet been provided for either the Eastern or Western Blocks.

As already stated the pipes for supplying gas to the entrance lamps lead directly off the mains outside, and have no connection with those in the interior of the different Buildings. The gas thus consumed, is therefore only registered by the main meter, and its cost should be apportioned to the respective branches of the Legislature, and the two blocks of Departmental Buildings.

BELLS.

The system of bells originally contemplated, was that in ordinary use, rung by means of pulls, cranks, and wires. This, although advantageously applied to houses of moderate size, constructed in the usual manner, was, after mature consideration, believed to be wholly unsuitable for structures of the magnitude and character of the Public Buildings.

The chief objections being the great distances the rooms were apart between which communication had necessarily to be established; the circuitous route the wires would in many cases have to be carried, and the difficulty of making passages for them, through the floors and walls, together with the numerous cranks required. It therefore appeared evident, that bell wires from 200 to 300 feet long (which they must frequently have been), would stretch so much by an ordinary pull as to render cranks of the usual size, wholly inefficient. It was therefore recommended, that a system of Electric Bells should be adopted, as they had been extensively used in large buildings elsewhere. This was approved, and subsequently carried out.

This system is operated in two ways, viz.: on the Indicatory principle simply, and on the Indicatory and Repeating principles combined.

In either case a galvanic battery, of the necessary strength for the service which it has to perform, is employed, with wires connecting the various apartments, and leading to indicating boxes and bells, placed in the different messengers' rooms.

The complexity of the Indicatory and Repeating system, as well as the great expense of carrying it out, led to the adoption of the simple Indicatory system for all the Buildings.

The latter may be briefly described as follows:—

The electric fluid is supplied by what is termed the Daniell Battery.

This consists of a glass vase, or jar, a cylinder of zinc, a porous cell, and an inverted glass globe, filled with sulphate of copper and water. In the neck of this is placed a cork, with a gutta serena tube, that dips into the porous cell, and serves to keep up the strength of the solution by which it is filled.

The cells are joined together in such numbers by strips of copper, as to produce the strength required.

From the positive pole of the Battery, a wire connects with the "call buttons" in the various rooms; from each of these a wire is carried to the "Indicating Box," which is an apparatus employed to render one bell available for a number of rooms. When the current is sent through this, an armature is attracted, the Indicator is released, and falling forward, projects out of the box, immediately alongside of a number corresponding to that of the room from which the signal is given.

The "call buttons" are used for the purpose of completing the electric current. When the button is pressed upon by the finger a spiral spring is forced down and comes in contact with a metal plate fixed upon its under portion. The conducting wires are screwed to two points which serve to fix the spring and the metal plate. This action at once connects the two conducting wires, and the current passes onward to the indicating box.

When the indicator falls forward, as above described, it connects with a wire, by which the current is continued to the bell, which rings as long as the finger is pressing