

G. B. HICKS.
Fire-Alarm Telegraph.

No. 93,993.

Patented Aug. 24, 1869.

Fig. 1.

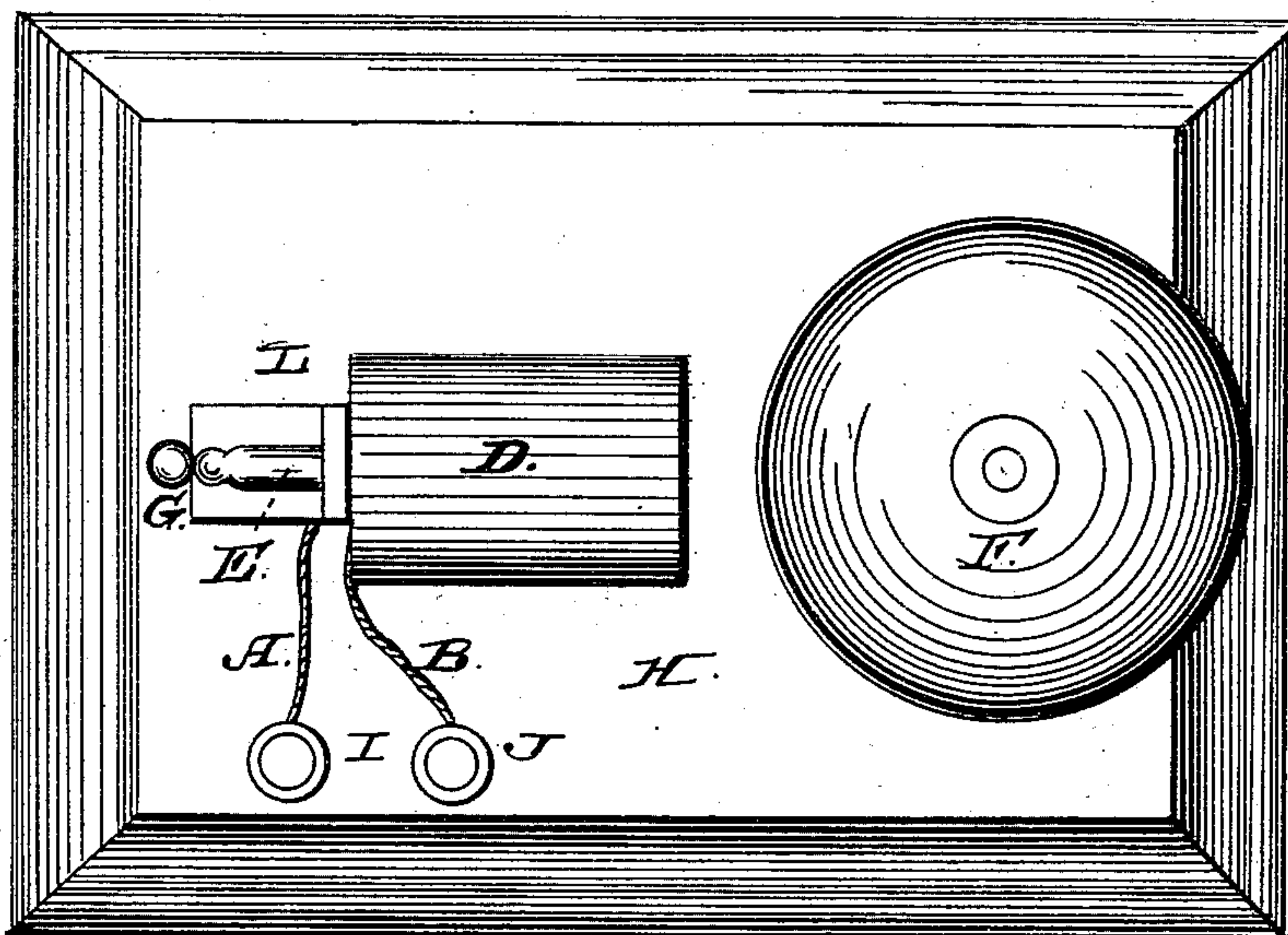
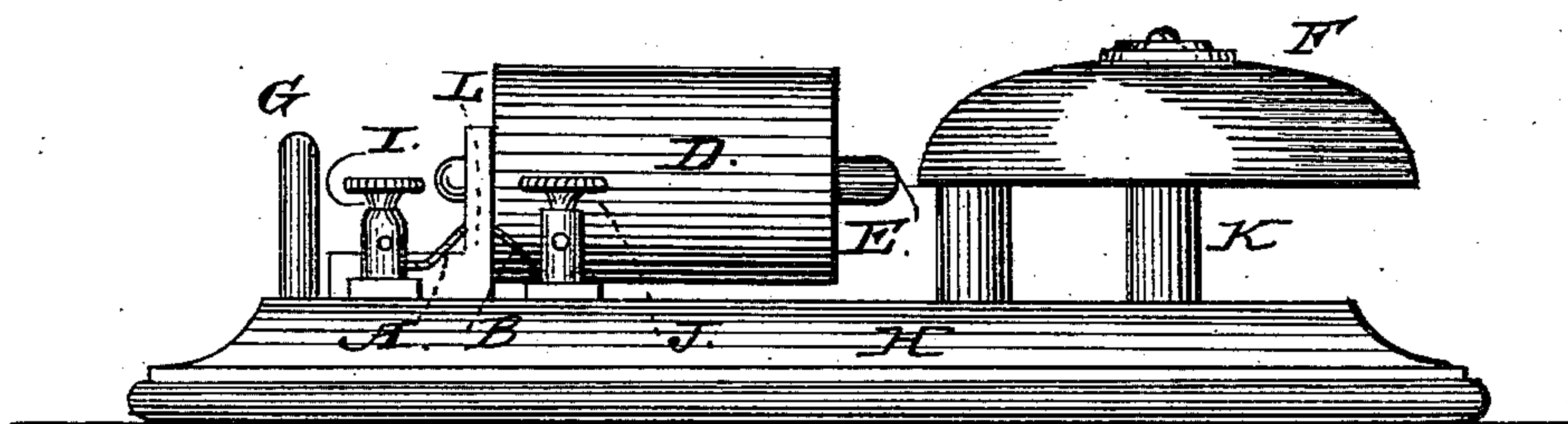


Fig. 2.



Witnesses.

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GEORGE B. HICKS, OF CLEVELAND, OHIO.

Letters Patent No. 93,993, dated August 24, 1869.

IMPROVEMENT IN ELECTRO-MAGNETIC SIGNAL-APPARATUS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, GEORGE B. HICKS, of Cleveland, in the county of Cuyahoga, and State of Ohio, have invented certain new and useful Improvements in Electro-Magnetic Signal-Apparatus; and I do hereby declare that the following is a full and complete description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view.

Figure 2 is a side view.

The nature of my improvement relates to the manner or means employed for striking the bell, whereby I am enabled to obtain a longer and quicker stroke—hence a louder sound of the bell—than in the ordinary way, without any additional cost of battery.

It is intensity, and not quantity, that is required in working this instrument.

The expense of this instrument is very much less, as only one spool or coil is used in place of the number usually employed.

The two wires A B, for the spool in the case D, are connected with the battery by any of the ordinary means, and, when so connected, by opening and closing the circuit, the magnet E will be so operated as to strike the bell F in quick and rapid succession. A key of the usual kind used in telegraphing may be employed for this purpose.

The alarm is so placed that the magnet E will be in a vertical position with the bell above; and as soon as the connection is made, and the circuit is opened, the magnet is thrown up, and strikes the bell; then falls back to the stop G by its own gravity.

By this axial attraction, a longer, quicker, and more energetic stroke is obtained than from the ordinary

magnetic action, as in the usual way a long, forcible stroke cannot practically be obtained.

In case the alarm is situated horizontally, a spring may then be used to throw the magnet back from the bell when in operation.

The key is connected with the instrument in any proper manner so as to operate it.

The long and quick stroke of the magnet will give more force in striking the bell; hence loud sounds, and in rapid succession, are readily obtained by the movement of the key.

From the peculiar nature and principle of operation of the ordinary fire-alarms, the stroke upon the bell is short, and of little force; and in case the stroke is lengthened, it becomes feeble and slow, compared with the action of the magnet E. The energy of the latter is not diminished in force or rapidity by the length of stroke, which is not the case with other instruments.

H is the table or bed of the instrument.

I J, the posts, for connecting the wires.

K is a standard, for supporting the bell.

L, a bracket, for holding the spool and its case in place.

What I claim as my improvement, and desire to secure by Letters Patent, is—

1. The arrangement of the magnet E and spool, in combination with the bell F, and operated substantially as and for the purpose set forth.

2. The application of the magnet E and single spool, in connection with a battery, for giving signals upon a bell, as set forth.

GEO. B. HICKS.

Witnesses:

W. H. BURRIDGE,

H. A. ROBISON.