A. BRADFORD.

ELECTRIC ALARM.

No. 181,905. Patented Sept. 5, 1876.

Fig. 1.

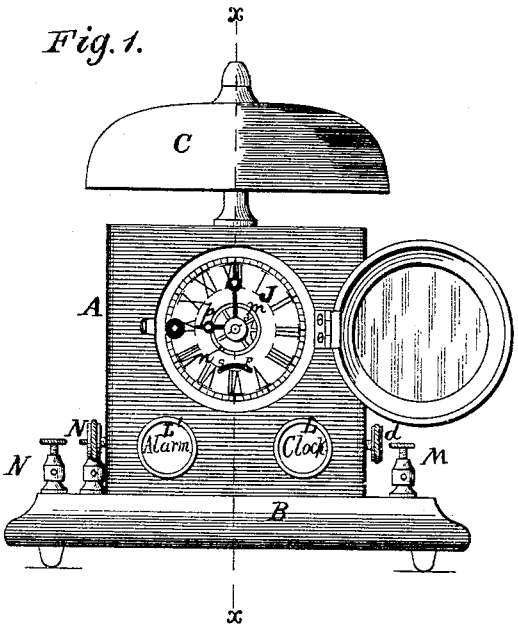
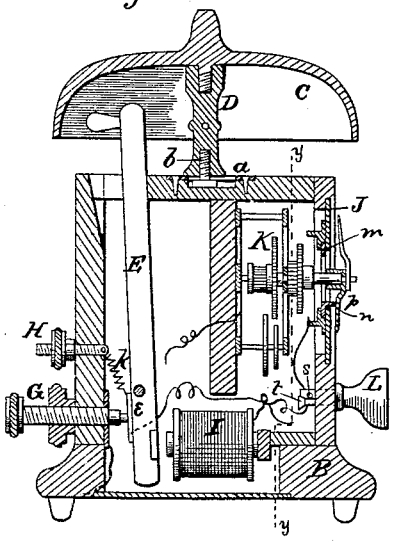


Fig. 2.



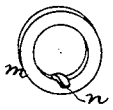


Fig. 3.

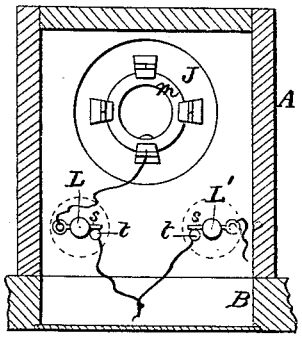
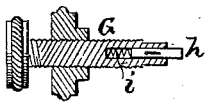


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

ADDISON BRADFORD, OF AMSTERDAM, NEW YORK.

IMPROVEMENT IN ELECTRIC ALARMS.

Specification forming part of Letters Patent No. **181,905**, dated September 5, 1876; application filed July 12, 1876.

To all whom it may concern:

Be it known that I, ADDISON BRADFORD, of Amsterdam, in the county of Montgomery, and in the State of New York, have invented certain new and useful Improvements in Electric Alarms; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of an electric alarm, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front elevation of my invention. Figs. 2 and 3 are vertical sections of the same, and Fig. 4 is a section of a regulating-screw used therein.

A represents a box, secured upon the base B, and having the gong C standing upon it. The gong is screwed on the upper end of a post or standard, D, the lower end of which is adjustable in a slotted plate, *a*, secured on the top of the box A. Through the slotted plate *a* passes screw *b*, which runs up into the standard, the head of the screw being held from turning, so as to unscrew the standard and move it, as required, for the purpose of regulating the stroke of the lever E. This lever stands in an upright position, and is hung upon pivot-screws *d d*, passing through the sides of the alarm. On the back of the alarm there is an adjustable set-screw, G, running through and connecting with a small plate, *e*, on the lever. This screw has a movable slotted pin or plunger, *h*, in the end, said pin or plunger being prevented from coming out of the screw by means of a rivet passing through the slot therein. In the screw, back of the pin *h*, is a spiral spring, *i*, that holds the pin out to its full extent, except when the lever pushes it in, for the purpose of regulating the stroke.

Just above the screw G is a spring, *k*, to draw the lever E back from the bell. This spring is adjustable by means of the screw H, so as to regulate the tension of the spring. The shaft or journal upon which the armature-lever is hung is from the armature toward the bell, so as to allow of placing the bell directly over the magnets I, and strikes the bell with the lever by the force given it by attraction of the electro-magnets, giving a stroke opposite to the magnets instead of toward them.

With the alarm is connected a time-piece for constant use, and so connected with the alarm as to be used for a time-alarm. To the dial J of the time-piece is fixed a rim, *m*, that may be easily turned by means of the projecting point *n*, so as to set the alarm at any desired moment.

One wire is connected with the works K of the time-piece, the dial J coming in contact with the other. When the hour-hand *p* comes in contact with said point *n* it completes the circuit, causing the alarm to sound, and will continue to alarm until the hand has passed over the point of connection, or the switch or stop L, designating clock, is turned.

The stops or switches L L′ are for the purpose of connecting and disconnecting the alarm and time-alarm, both acting separate, so that one may be turned off without affecting the other. Through the inner ends of these stops are passed pins *s s*, each of which has a wire attached to one end, and the other end turns against a screw-plate or point, *t*, to connect the two wires.

Upon the base B of the alarm are three binding-posts, M and N N, for the purpose of applying the battery. The connection is made by connecting one pole of the battery to the post M, and two wires running from the other pole of the battery, are connected to the other two posts, N N.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The adjustable screw G, provided with the movable pin *h* and spring *i*, substantially as and for the purposes herein set forth.

2. The combination, in an electric alarm, of the box A, having the clock mechanism K, and a dial-face, J, the adjustable ring *m*, with stud *n*, magnets I, armature-lever E, gong C, and switches L L′, with the necessary electric connecting-wires, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 8th day of June, 1876.

ADDISON BRADFORD. [L. S.]

Witnesses:

W. H. JACKSON,

S. H. FRENCH.