T. A. EDISON.

District Telegraph Signal-Boxes.

No. 154,788. Patented Sept. 8, 1874.

Fig. 1.

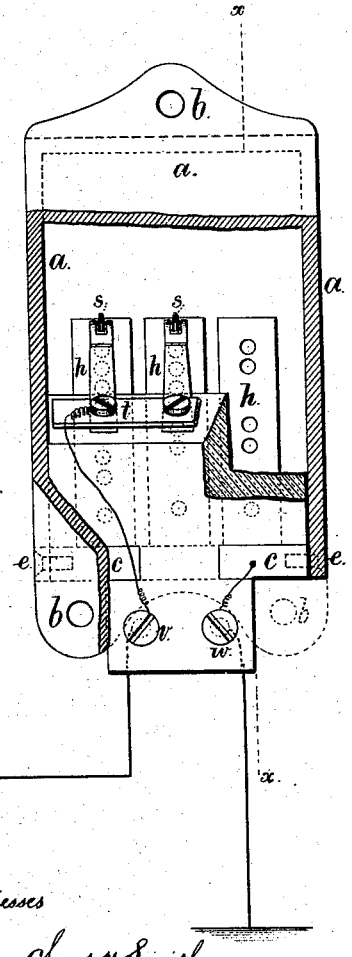
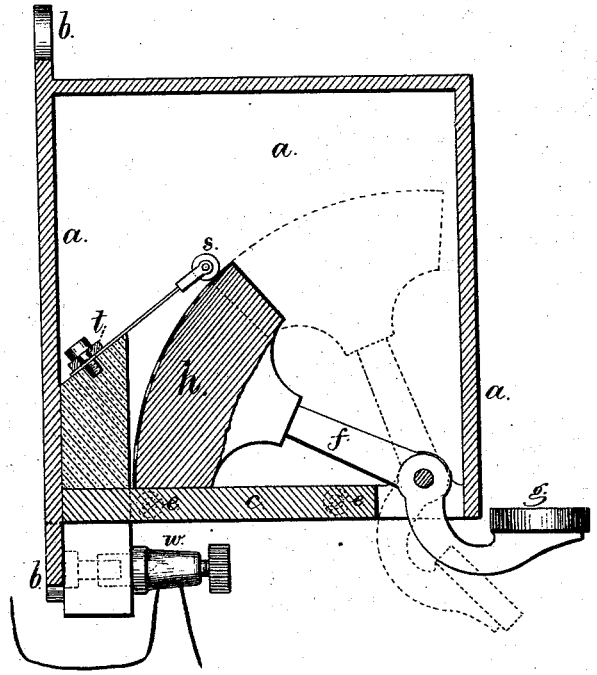


Fig. 2.



Witnesses

Chas. H. Smith

Geo. D. Walker.

INVENTOR

Thomas A. Edison.

per Lemuel W. Serrell

atty.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN DISTRICT TELEGRAPH SIGNAL-BOXES.

Specification forming part of Letters Patent No. **154,788**, dated September 8, 1874; application filed May 11, 1874.

CASE 86.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Newark, in the county of Essex and State of New Jersey, havented an Improvement in District Telegraphic Alarm and Signal Apparatus, of which the following is a specification:

Devices have heretofore been made in which a lever is depressed to send a telegraphic signal to a central office, and indicate a number that is allotted to the building sending the signal, and understood as a call for a "messenger," or another number by another lever for a call for "police" or for "fire." These devices are generally provided with electro-magnets, and are costly in construction and slow in operation, and contain a means for indicating whether the line is free. My improvement is made to simplify the construction of the signaling apparatus and render it very rapid in operation, so that a number of instruments can be safely connected in one circuit without risk of interfering with each other. The signals are received upon chemical paper.

I make use of an instrument which I term a "domestic telegraph;" it is in a branch circuit from the main line, and it contains two or more levers with circuit-closing segments, with alternate conducting and non-conducting material, so as to make and break the circuit in the branch and thereby give a signal at the central office, either by numbers or letters, the meaning of which is pre-arranged, so as to know the location from which the signal is sent and the meaning of that signal.

In the drawing, Figure 1 is a rear view of the instrument, with the case broken open to represent the interior parts; and Fig. 2 is a section at the line *x x*.

The case *a*, containing the operative parts, is, by preference, made of metal, and adapted to being screwed at *b* against a wall. The operative portions of the machine are upon the removable bottom *c*, hence they will be protected from injury or dust by the case, and can be taken out by removing the pins or screws that pass into the edges of the bottom, as seen at *e e*. Each lever *f* is made with a finger-piece, *g*, projecting outside the case, and a segment-head, *h*, that acts both as a weight to return the lever to place and a circuit-closer. The convex surface of the lever-segment is made with alternating conducting and non-conducting surfaces, to give the required pulsations. A convenient device for this purpose is a strip of paper, perforated at the required places, and attached to the surface of the metal. The contact-rollers *s* are at the ends of spring-arms and bear upon the circuit-segments *h*, and these spring-arms are connected together by the plate *t*, that is in metallic connection to the insulated binding-screw *v*, and the wire from this leads to the line, and the binding-screw *w* is in metallic connection with the plate *c* and levers *f*, and its wire leads to ground. The rollers *s s*, resting on insulating material in a normal position, the branch to the earth from the main line will remain broken, but as one of the levers is depressed and the segment thrown up into the position shown by dotted lines in Fig. 2, the circuit through the branch will be closed and pulsations sent, of the length and relative distance apart, according to the character of the conducting surface on the segment. These pulsations will be repeated in reverse as the lever falls, thus insuring accuracy by the repetition of the signal, and the entire signaling occupying such a small time—not more than two or three seconds—the risk of a simultaneous signal from some other instrument is so small as to require no attention.

I claim as my invention—

1. A signal apparatus, composed of a lever with a segmental circuit-closing surface, a contact-roller, a finger-key and connections, substantially as set forth.

2. A circuit-closing segment and a weight at the end of a lever, in combination with a circuit-closer and connections, substantially as set forth.

3. A telegraphic alarm and signaling apparatus, formed of two or more levers with circuit-closing surfaces contained within a box, with finger-pieces outside said box, substantially as specified.

Signed by me this 2d day of April, A. D. 1874.

THOMAS A. EDISON.

Witnesses:

GEO. T. PINCKNEY,

GEO. D. WALKER.