

(No Model.)

H. C. SHIVLER.
ANNUNCIATOR DROP.

No. 452,585.

Patented May 19, 1891.

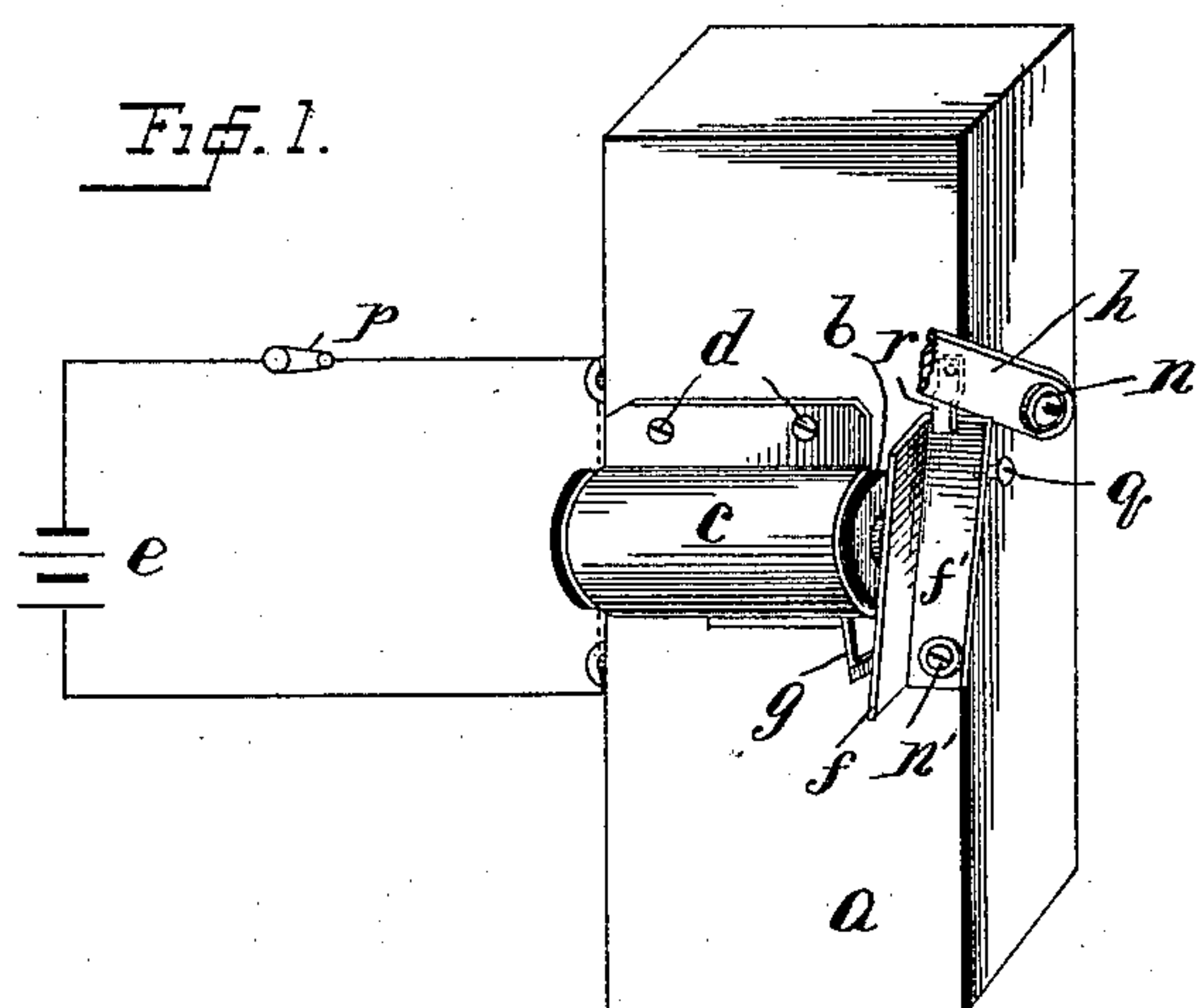


Fig. 5.

Fig. 6.

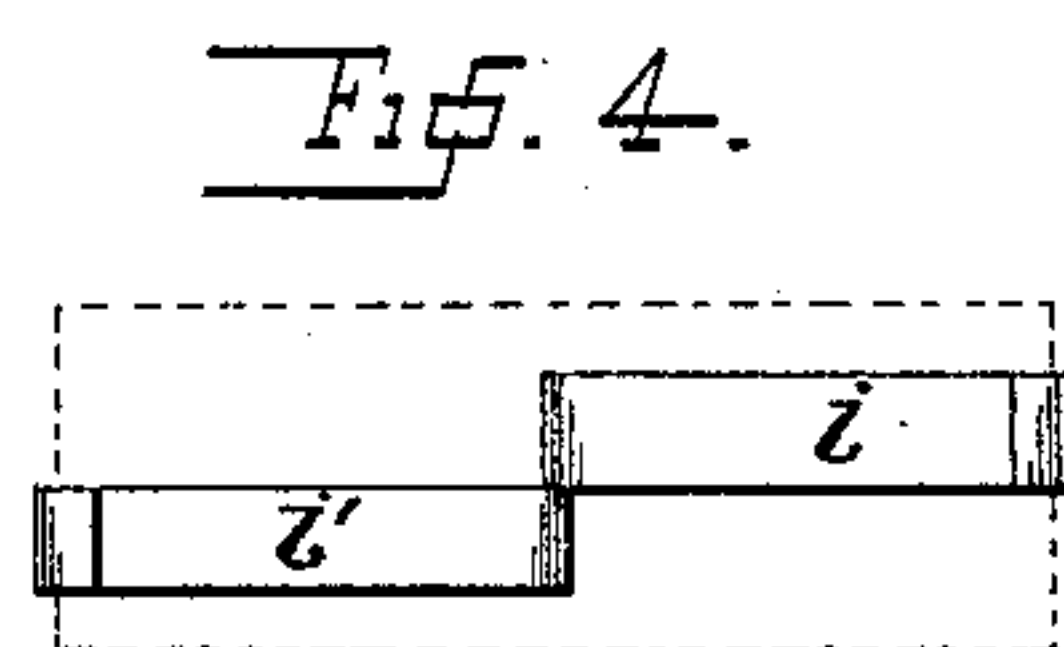
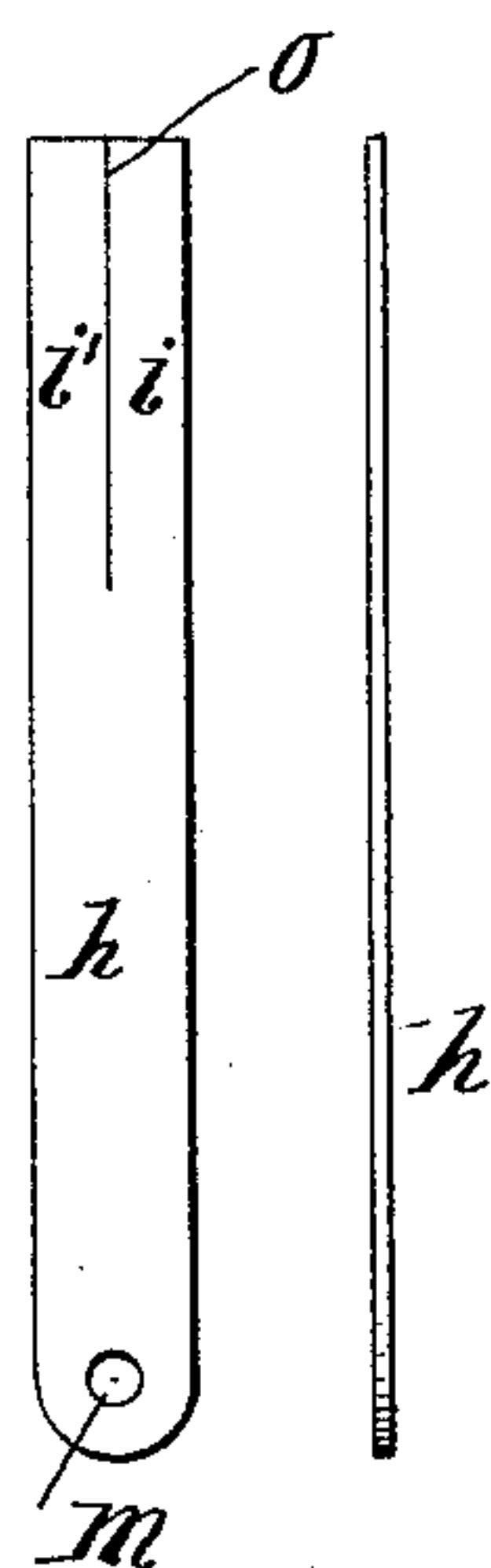
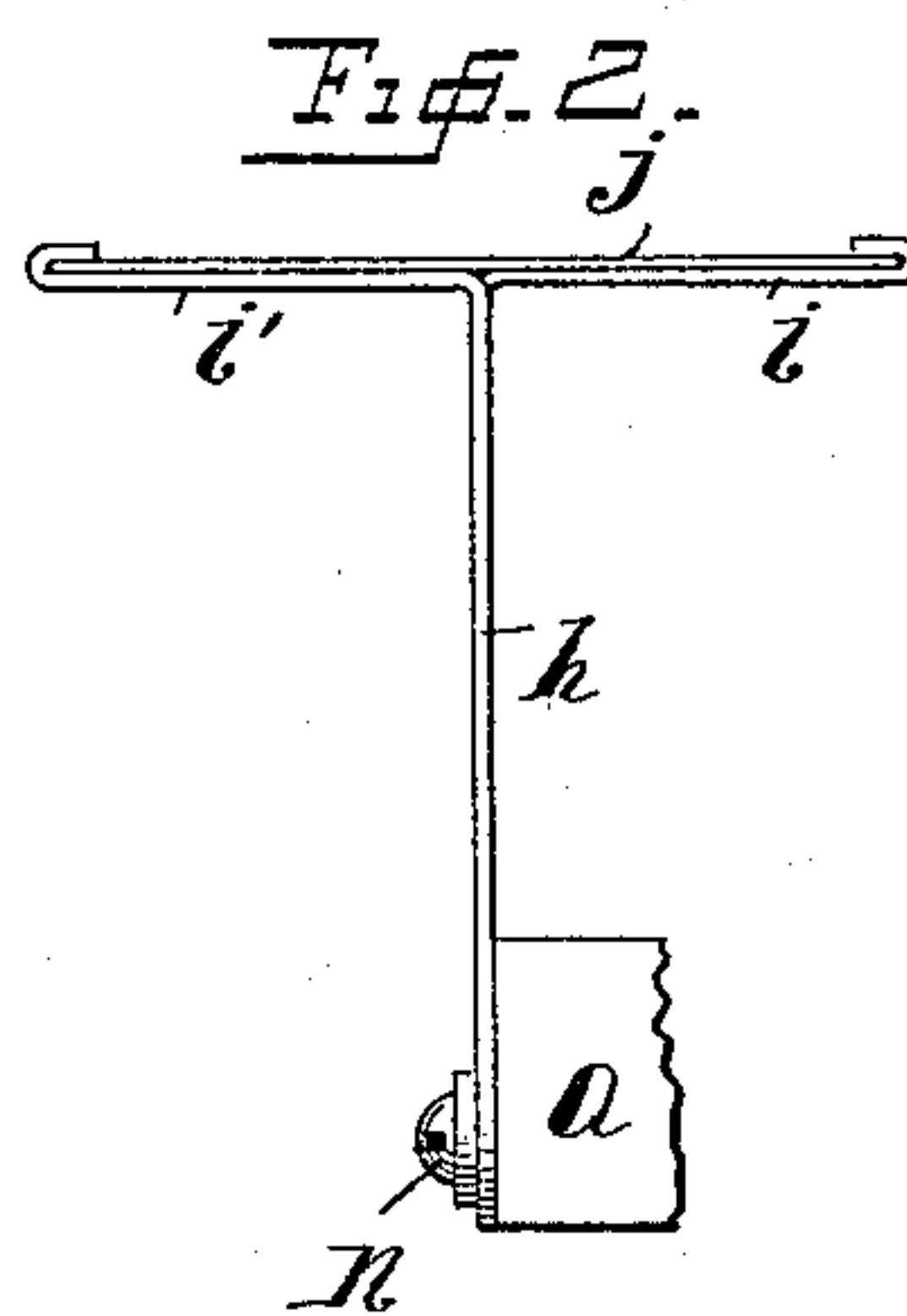
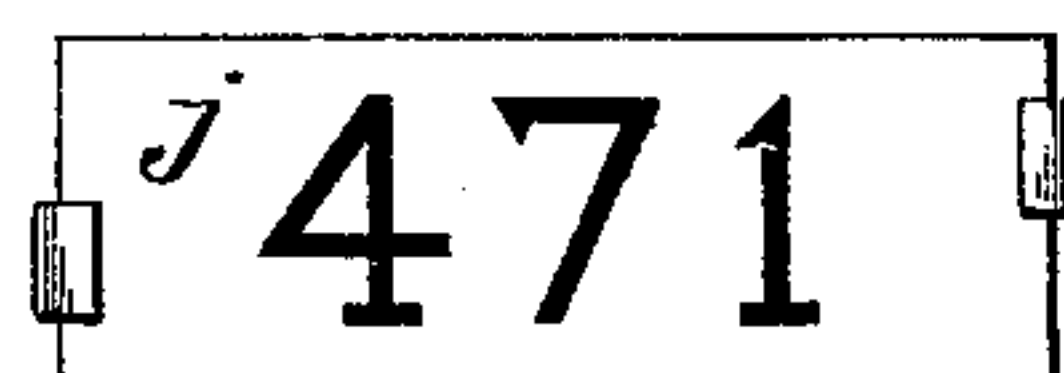


Fig. 3.



Witnesses
W. H. Courtland
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Inventor:
HOWARD C. SHIVLER
BY HIS ATTORNEY

Edward P. Thompson

UNITED STATES PATENT OFFICE.

HOWARD C. SHIVLER, OF BROOKLYN, NEW YORK.

ANNUNCIATOR-DROP.

SPECIFICATION forming part of Letters Patent No. 452,585, dated May 19, 1891.

Application filed February 11, 1891. Serial No. 381,092. (No model.)

To all whom it may concern:

Be it known that I, HOWARD C. SHIVLER, a citizen of the United States, and a resident of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Annunciator-Drops, (Case 1,) of which the following is a specification.

My invention relates to an electric annunciator, and especially to an annunciator-drop.

The object of the invention is to obtain extreme simplicity of construction and cheapness of manufacture.

The invention is represented in detail in the accompanying drawings.

Figure 1 is a perspective view of a single annunciator, certain parts being broken away. An electric generator is shown in circuit with the magnet of the annunciator. Fig. 2 is a full view of the annunciator-drop by itself pivoted to a support. Fig. 3 is a rectangular view of Fig. 2. Fig. 4 is similar to Fig. 3, except that the number-bearing card is represented in outline by dots. Fig. 5 shows the piece of sheet metal from which the annunciator-drop is constructed. Fig. 6 is a rectangular view of Fig. 5.

The device embodying my invention consists of the combination of any support *a*, a magnet *b*, carried thereon by a cylindrical sheathing *c*, fastened by screws *d* to said support, an electric battery *e* in circuit with said magnet, a sheet-iron armature *f*, consisting of a sheet of iron bent upon itself, so as to be in the shape of a right angle and pivoted to said support, an annunciator-drop pivoted at right angles to the pivot of the armature and resting upon said armature, and a spring *g*, normally holding the armature away from said magnet and under said drop and fastened to said support.

The drop consists of a piece of sheet metal having the shank *h*, projections *i* and *i'*, bent in opposite directions from each other and at right angles to said shank and lying substantially in the same plane and bent over at their outer ends upon a number-bearing card *j*, which rests flat against the projections *i* and *i'*. The end of the shank opposite the projections has a hole *m*, which forms a bearing for the pivot *n*, fastened into the support *a*.

In order to construct the drop, take a piece of sheet metal, punch a hole *m* in one end, and make a cut *o* at the other end parallel to

the sides of the sheet metal, and then bend the projections *i* and *i'*, formed by making the cut, so that they lie in opposite directions in the same plane and at right angles to the uncut portion or shank *h*.

The armature consists of a sheet of iron bent so as to form two plates at right angles to each other, the one plate *f* facing the end of the magnet and the other plate *f'* lying flat upon the support *a* and pivoted thereto by the pivot *n'*. When the electric circuit is closed by the circuit-closer *p*, the armature *f* is attracted, so that the shank *h* slips off of the upper end of the plate *f'*, being the end opposite the pivoted end, and falls until it strikes the stop *q*. The drop may be restored to its original position when the circuit-closer *p* is open.

r is a guide lapping over the upper end of the plate *f'*, but without pressing upon the same.

I claim as my invention—

1. A sheet-metal annunciator-drop consisting of a substantially rectangular sheet of metal, having a shank *h* pivoted to a support at one end, and having at the other end projections *i* and *i'* at right angles to said shank, lying in the same plane and extending in the opposite direction from each other, and bent inwardly toward said shank and upon the ends of a number-bearing card which lies flat upon said projection.

2. An annunciator consisting of the combination of an electro-magnet, an armature consisting of two plates at right angles to each other, the one facing the magnet-pole and the other lying flat upon and pivoted to a support, a drop normally resting upon said armature and consisting of a sheet of metal, having a shank *h* pivoted to a support at one end, and having at the other end projections *i* and *i'* at right angles to said shank, lying in the same plane and bent inwardly toward said shank and upon the ends of a number-bearing card which lies flat upon said projection.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 10th day of February, 1891.

HOWARD C. SHIVLER.

Witnesses:

CHARLES S. SHIVLER,

EDWARD P. THOMPSON.