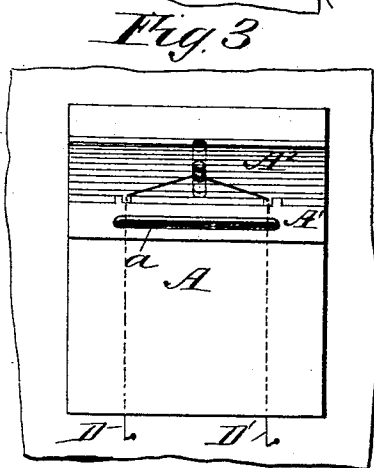
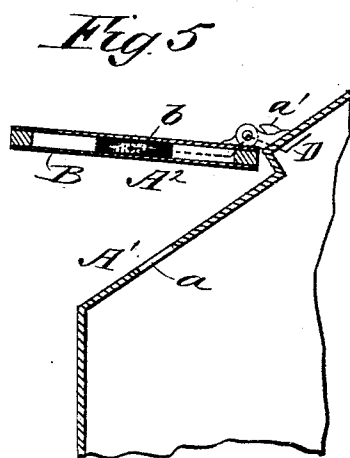
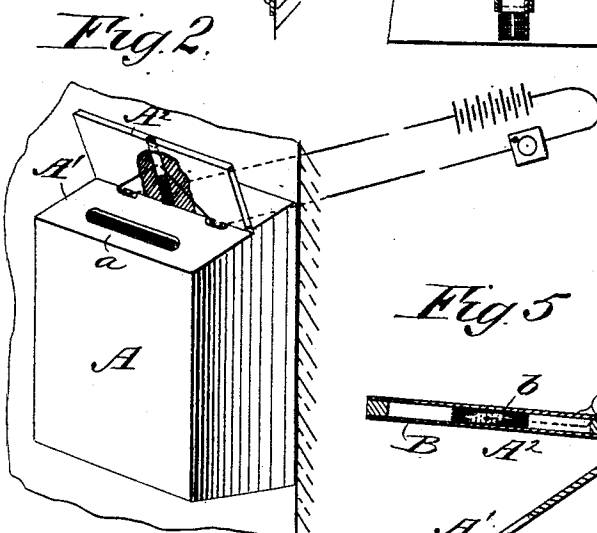
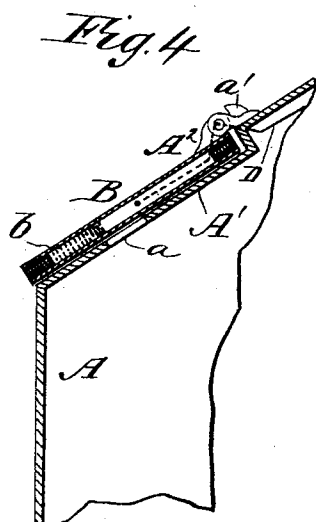
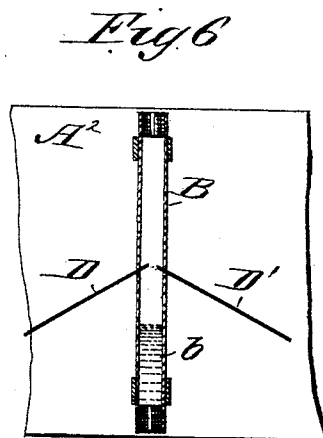
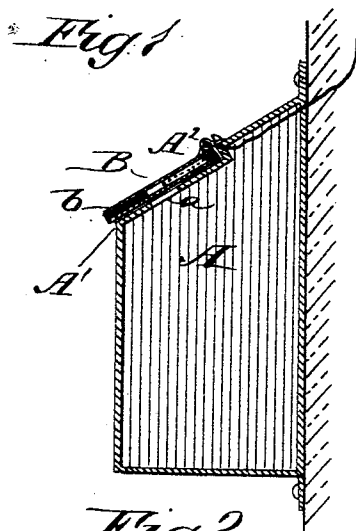


(No Model.)

C. F. HARMS.
ELECTRIC LETTER BOX.

No. 393,558.

Patented Nov. 27, 1888.



WITNESSES:
H. M. Arnold
C. Sedgwick

INVENTOR,
C. F. Harms
BY *Munn & Co*
ATTORNEY.

UNITED STATES PATENT OFFICE.

CHARLES F. HARMS, OF HOBOKEN, NEW JERSEY.

ELECTRIC LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 393,558, dated November 27, 1888.

Application filed June 30, 1888. Serial No. 272,656. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HARMS, of Hoboken, in the county of Hudson and State of New Jersey, have invented a new and Improved Electric Letter-Box, of which the following is a full, clear, and exact description.

My invention relates to an improvement in letter-boxes, and has for its object to provide an electric attachment, whereby the circuit will be closed during the mechanical lifting or removal of the cover necessary in order to insert the mail matter into the box, and the further object of the invention is to provide a simple and thoroughly effective attachment, and one not liable to frequent disarrangement.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a vertical central section through an improved letter-box. Fig. 2 is a perspective view of the same, with the lid open and partially in section. Fig. 3 is a front elevation with the lid in an essentially upright position. Fig. 4 is an enlarged sectional view of a portion of the box, illustrating the circuit as broken and the lid covering the opening in the letter-box. Fig. 5 is a similar section with the lid in a horizontal position, illustrating the circuit as closed; and Fig. 6 is a central vertical section through the circuit-closer, illustrating the same as attached to the outer surface of the lid.

In carrying out the invention, A represents a letter-box, which may be of any approved construction, being preferably provided with an inclined top, A', having the usual slot, a, for the introduction of the letter, and a lid or cover, A², hinged to said top. To the rear of the cover a stop, a', is usually secured, whereby the lid is prevented from assuming a vertical position, or a position strictly at right angles to the box, and compelled, when lifted or relieved, to fall, by reason of gravity, to its normal position.

In the lid A² a transverse bore is usually made, in which bore a casing, B, is inserted,

the said casing being adapted to contain a movable conductor, b, such as mercury.

The mercury having been inserted in the casing B, the end of the casing, and likewise the end of the bore in which the casing is inserted, are closed in any approved manner.

The circuit-wires D D' are made to enter the casing B at opposite sides and at or near the center, as best illustrated in Figs. 2 and 6, which wires are usually conducted along the inner face of the lid or cover to the hinges of the same, and from thence out through the back of the letter-box to a connection with a suitable battery and an alarm, which alarm may be located at any desired point. If, however, it is found desirable in practice, the casing B may be secured directly to the upper side of the lid or cover, as illustrated in Fig. 6, and the wires D and D' may be made to extend downward through the box at the back and out at the bottom.

I desire it to be distinctly understood that I do not confine myself to mercury as a conductor, as any other equivalent movable conductor may be employed—as, for instance, the casing may be made of any non-conducting material, such as rubber—and the conductor consists of a bar or block of metal held to reciprocate in said casing.

In operation it will be observed that when the lid is raised horizontally, as illustrated in Fig. 5, which is necessary for the insertion of the mail in the box, the mercury falling to the center of the casing is brought into contact with the two wires D and D', whereby the circuit is closed. Should the lid be carried farther back, the circuit will be opened as the mercury drops down toward the back of the lid; but the lid is not permitted to remain in this position, as the stop a' will compel the same to fall down in contact with the top of the letter-box over the slot a, as illustrated in Fig. 4, the mercury in this event returning to the forward end of the casing. The lid may be substituted by any other suitable form of obstruction to the mail, and may be placed under the slot through which the mail is passed.

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

1. The combination, with the lid of a letter-box, of a tube carried by the lid, a movable

conductor within said tube, and circuit-wires connected to the tube, substantially as herein shown and described.

2. The combination, with the lid of a letter-
5 box, of a casing attached to said lid, and a movable conductor held to reciprocate in said casing, of a battery and circuit-wires entering

said casing at opposite sides, and an alarm within said circuit, all combined to operate substantially as and for the purposes specified. 10
CHAS. F. HARMS.

Witnesses:

J. F. ACKER, Jr.,
C. SEDGWICK.