

L. J. MASTERSON.

Conductors' Alarm and Registering Hand-Stamp.

No. 159,765.

Patented Feb. 16, 1875.

Fig. 1.

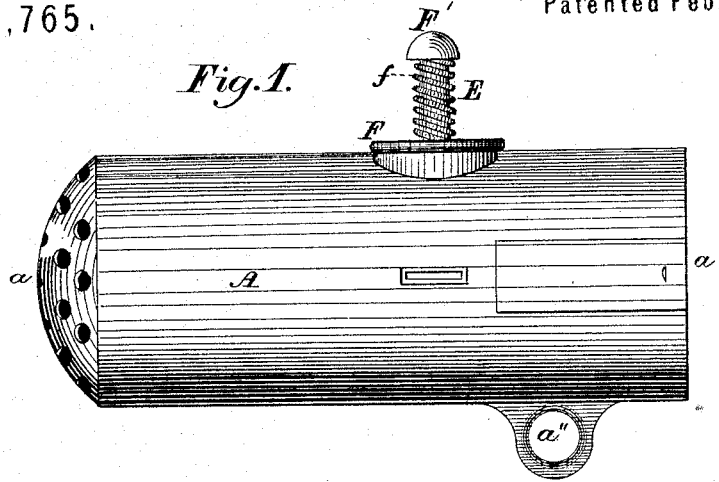


Fig. 2.

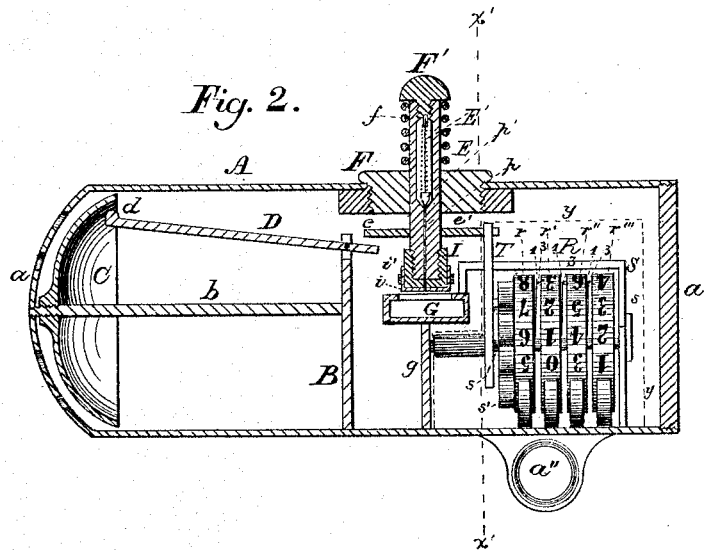


Fig. 3.

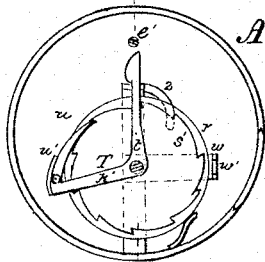


Fig. 4.

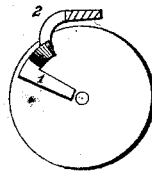
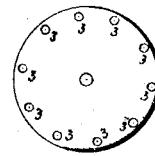


Fig. 5.



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IMPROVEMENT IN CONDUCTORS' ALARM AND REGISTERING HAND-STAMPS.

Specification forming part of Letters Patent No. **159,765**, dated February 16, 1875; application filed January 23, 1875.

To all whom it may concern:

Be it known that I, LEVI J. MASTERSON, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Alarm Ticket Canceler and Register; and do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention consists in an improved combination of devices in an instrument for registering and canceling tickets, and for sounding an alarm simultaneously with the registration and cancelation of each ticket.

The details of construction involved in my invention I will now proceed to describe, referring to the accompanying drawings, in the several figures of which like parts are indicated by similar letters.

Figure 1 is a side elevation of my invention. Fig. 2 is a central longitudinal section, taken on the dotted line *x x* in Fig. 3, the parts inclosed by dotted line *y y y* being shown in full. Fig. 3 is a cross-section, taken on dotted line *x' x'* in Fig. 2; and Figs. 4 and 5 are details of the register.

A is a cylindrical hollow case, of convenient size to hold in the hand, closed at one end by a solid disk, *a'*, and at the other end by a convex perforated plate, *a*. Upon one side of the cylinder, which I will designate the bottom, is a handle, *a''*. At about the middle of the bottom, inside the cylinder, is arranged a standard, B, about three-fourths the height of the diameter of the cylinder. A rod, *b*, extends from this standard to the center of the perforated plate *a*, joining them, and passing through and supporting a gong, C, just inside of the perforated plate *a*. The top of standard B is bifurcated to receive the lever D, which is fulcrumed on a pivot passing through it and the bifurcated end of the standard. The long arm of lever D extends within the gong C, and is provided with a knob or hammer, *d*. The short arm extends rearward in the path of an arm, *e*, projecting from a plunger, E. From

the opposite side of this plunger projects another arm, *e'*. The plunger E plays through an opening in the center of a screw-tap, F, in the top of the cylinder, extending to a convenient height for operation by the thumb, and extending inward to a point immediately over the ticket-bed G, which is supported by a pillar, *g*. The upper half of plunger E is hollow, forming a chamber, E', and from this chamber a passage, *e''*, of small diameter, is open to the foot of the plunger. A screw-head, F', closes the upper end of the plunger; and between the projecting edge of this screw-head and the screw-tap F is arranged a helical spring, *f*. A ferrule, I, is screwed onto the foot of plunger E, and in the center of this ferrule is a small opening, coinciding with the passage *e''* in the plunger. The bottom face of the ferrule I is engraved in relief with the design which it is desired to imprint upon tickets for the purpose of cancelation. Beneath the ferrule passes an ink-ribbon, *i*, supported by a ring, *i'*, fitting upon the plunger, and holding the ends of the ribbon. Within the passage *e''* in the lower half of the plunger E is a pin, *p*, somewhat longer than the passage, and terminating in a conical valve-head, *p'*, which accurately fits the conical bottom of chamber E', but is of less diameter than said chamber. Immediately to the rear of the ticket-guide G' is arranged the register R, consisting of a suitable number of register-wheels, *r r' r'' r'''*, four being shown in the drawing. These wheels are mounted on a common shaft, *s*, loosely, said shaft having its bearings in a frame, S, arranged upon the bottom of the cylinder A. The initial-wheel *r* has upon its outer face a ratchet, *s'*. Upon the end of the shaft *s*, which projects beyond the ratchet *s'*, is fulcrumed a bent lever, T, one arm, *t*, extending upward, and provided at its top with a curved face, *t'*, which is in the path of arm *e'* projecting from plunger E. The other arm, *t''*, forms an obtuse angle with the first, and extends slightly beyond the periphery of the ratchet *s'*, having pivoted at its end a pawl, *u*, which is pressed against the periphery of ratchet *s'* by a spring, *u'*. The peripheries of the wheels have the numerals 1 to 0 engraved upon each, and when the first wheel is caused to make a

complete revolution a spring-arm, 1, attached to the inner face of said wheel, is pressed over toward the next wheel by a stationary finger, 2, and strikes a pin, 3, on the face of the next wheel, causing said wheel to move the space of one numeral. Each wheel except the last is provided with a spring-arm like that on the inner face of the first. When the spring-arm passes the stationary finger it (the arm) flies back out of the way of the pins 3, of which there is an annular series upon each wheel except the first. Each wheel, on completing a revolution, tips the next wheel to the left one space. The numbers show through a slot, *w'*, in a bar or plate, *w*, supported in front of the wheels by arms *w'' w'''* projecting from the supporting-frame. Before commencing to register the wheels show 0 0 0 0 at the slot. The first movement of the first wheel shows 0 0 0 1 at the slot. The next movement shows 0 0 0 2, and so on, to 0 0 0 9, the next movement after which tips the adjacent wheel in the manner before described, and shows 0 0 1 0, and so on to 9 9 9 9.

The operation of my invention is as follows: The chamber *E'* is filled with ink of such consistency that the head of the pin *p* will readily pass through it by pressure of a spring, *p''*, surrounding the rod *p'* extending upward from valve-head *p'* into a socket in screw *F'*, and that it may readily be absorbed by, and spread over, the ribbon *i* on coming in contact therewith. When the ticket collector or conductor receives a ticket he inserts it in the ticket-guide *G'* through the opening *X* in the cylinder, so that its end rests upon the ticket-bed and under the plunger *E*, and having the apparatus firmly grasped by its rear portion, the perforated end being the front, and the middle finger passed through the handle, he depresses the plunger *E* with his thumb, caus-

ing the design upon the ferrule to be imprinted upon the ticket. Simultaneously with this operation the arm *e*, projecting from the plunger, strikes the short arm of lever *D*, throwing the hammer *d* against the gong and sounding an alarm, while the arm *e'*, projecting from the opposite side of the plunger, strikes the curved face of the vertical arm of bent lever *T*, forcing it to one side, and thereby causing the pawl on the short arm of said lever to rotate ratchet *s'* one tooth, and the first registering-wheel one numeral space, in which position it is held by spring-pawl *Z*. When the thumb is removed, or its pressure removed from the plunger, the helical spring *f* returns it to its normal position, and the rising of arms *e* and *e'* allows the lever *T* to be returned to its original position by a spring, *y*, and the gong-lever *D* to fall away from the gong by its own weight. The apparatus is then ready, after the canceled ticket is removed, for another operation.

Having now described the construction and operation of my invention, I claim and desire to secure by Letters Patent—

1. The conductors' hand-stamp herein shown, consisting of the self-inking die and an alarm and a registering device, substantially as shown and described.

2. The combination of case *A*, plunger *E*, having ink-chamber *E'*, pin *p*, having valve-head *p'*, ribbon *i*, and ticket-guide bed *G*, substantially as described.

In testimony that I claim the foregoing as my own invention I affix hereto my signature in presence of two witnesses.

LEVI J. MASTERSON.

Witnesses:

WM. BEALE HALE,
CHAS. H. FISHER.