(No Model.)

J. F. GOODRIDGE.

FARE BOX.

No. 305,917. Patented Sept. 30, 1884.

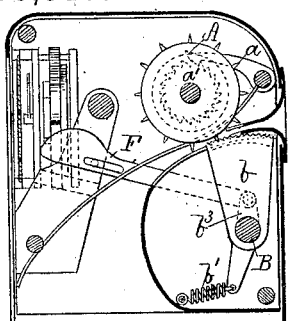

Fig. 1.

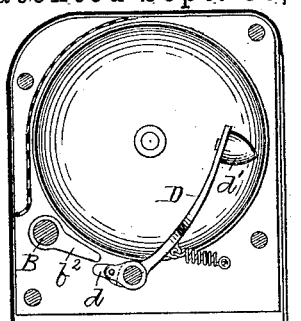

Fig. 2.

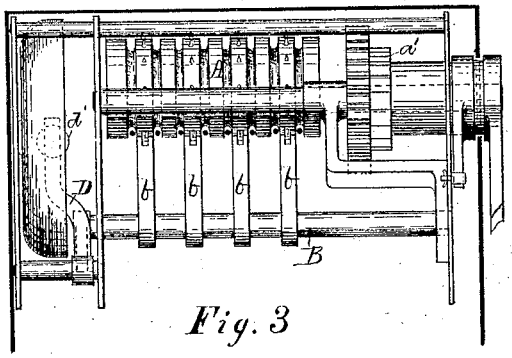

Fig. 3

Witnesses,

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JAMES F. GOODRIDGE, OF BOSTON, MASSACHUSETTS.

FARE-BOX.

SPECIFICATION forming part of Letters Patent No. 305,917, dated September 30, 1884.

Application filed January 30, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES F. GOODRIDGE, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Fare-Boxes, of which the following is a specification.

This invention relates to improvements in the fare-box for which I obtained Letters Patent No. 272,952, dated February 27, 1883, and in which the passage of a ticket was requisite to cause the alarm-actuating roll to revolve and sound an alarm.

My present invention consists in a rock-shaft provided with an arm to take the place of the alarm-actuating roll, and means for raising the bell-hammer or actuating a registering mechanism, or both, the object of my improvement being to so arrange the parts of a fare-box that but one alarm can be sounded however the tickets or strips may vary in length, and also so that an alarm cannot be sounded without recording a number on the register.

In the accompanying drawings, Figure 1 shows the arrangement of the feed-roll and rock-shaft with the registering mechanism connected. Fig. 2 shows the rock-shaft and the arm for raising the bell-hammer, and Fig. 3 shows the rock-shaft with four arms or sectors instead of one solid sector from a roll.

The feed-roll A, the same as that described in my patent above mentioned, can be turned only in the direction to draw in a ticket or strip. The pawl *a* and ratchet-wheel *a'* prevent its being turned in the other direction.

Instead of a lower roll adapted to revolve I employ a shaft, B, provided with an arm, *b*, which may be considered as a sector of the former lower roll, and is similarly actuated by a ticket or strip drawn in by the feed-roll A, with the exception that its movement is now limited to a rocking motion, the backward motion being imparted when the arm *b* is left free by means of a spring, *b'*. The limit of the forward rocking motion may be such as to allow the largest ticket generally used to be drawn in clear of the upper surface of the arm *b* with a rolling motion, and consequently this upper surface is preferably so proportioned. It has been found, however, in practice that this precaution is not necessary, since a strip of any length can be drawn in over the upper surface of the arm *b* after the limit of its rocking motion has been reached, the arm *b* being held stationary against the force of the spring *b'* by the friction of the strip. It is essential, however, that the alarm and register be operated by the shortest or narrowest ticket that can be used. To this end I have so arranged these parts that the motion imparted to the shaft B by moving the upper surface of the arm *b* as little as one-eighth of an inch will sound an alarm or register a number. The alarm is sounded by means of an arm, b^2, fast to the shaft B, and which comes in contact with the short arm *d* of a lever, D, having a bell-hammer, *d'*, on its long arm, at the first movement of the shaft B. The short arm *d* of the lever D is not rigidly secured, but so attached as to allow the arm b^2 to be retracted without sounding an alarm. The registering mechanism is operated by means of a wedge-pointed arm, F, actuated at the first movement of the shaft B by means of an arm, b^3. The point of the arm F is so shaped as to give the requisite movement to the register-hand by a very slight movement on its part, and at the same time to admit of being moved to the full extent of the motion of the rock-shaft without causing further movement of the register-hand. The arm F is retracted by the arm b^3 on its backward motion.

In operation, a ticket or strip of any length is inserted between the feed-roll and the upper surface of the rock-shaft arm. The feed-roll is revolved and draws in the strip, the first motion of which, by its friction on the upper surface of the rock-shaft arm, turns the rock-shaft sufficiently to cause an alarm to be sounded and a number to be registered when a register is attached. The limit of the rocking motion is soon reached; but the same strip may be continuously drawn in without sounding an alarm or registering by operating the feed-roll, which turns only in one direction, while the friction of the strip prevents the rock-shaft from being turned by its spring.

From this it will be seen that it is impossible to ring more than once for the same ticket, whatever its dimensions may be, and that when a register is attached every ring of the bell will be recorded as a fare or a ballot, for obviously the devices hereinbefore described are equally applicable for recording the number of votes put into a ballot-box.

I claim as my invention—

1. The combination, with a feed-roll for drawing a ticket or strip into a box, of a shaft adapted to be rocked in one direction when a ticket or strip is drawn in, and means, substantially as described, for rocking the shaft in the other direction and for utilizing the movements of the shaft, for the purposes set forth.

2. The combination, substantially as hereinbefore set forth, of a box for receiving tickets, feed-roll A, shaft B, arm b, arms b^2 b^3, spring b', bell-lever D, and wedge-pointed arm F, all arranged and operating as and for the purposes specified.

JAMES F. GOODRIDGE.

Witnesses:

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