(No Model.) 2 Sheets—Sheet 1.

J. L. KAIL.

FARE BOX.

No. 455,881. Patented July 14, 1891.

Fig. 1.

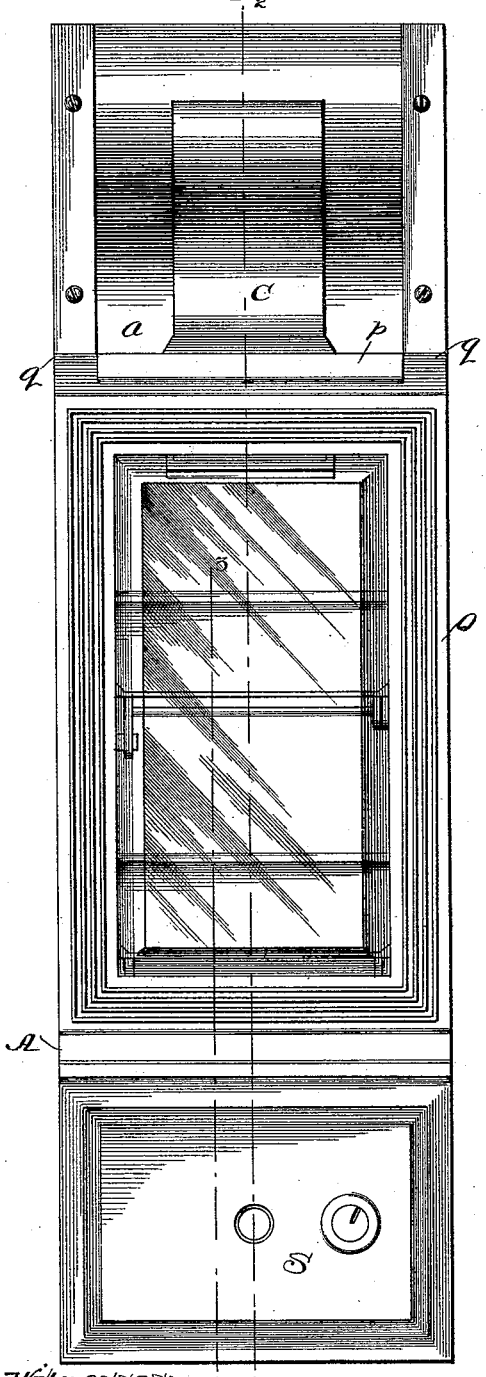
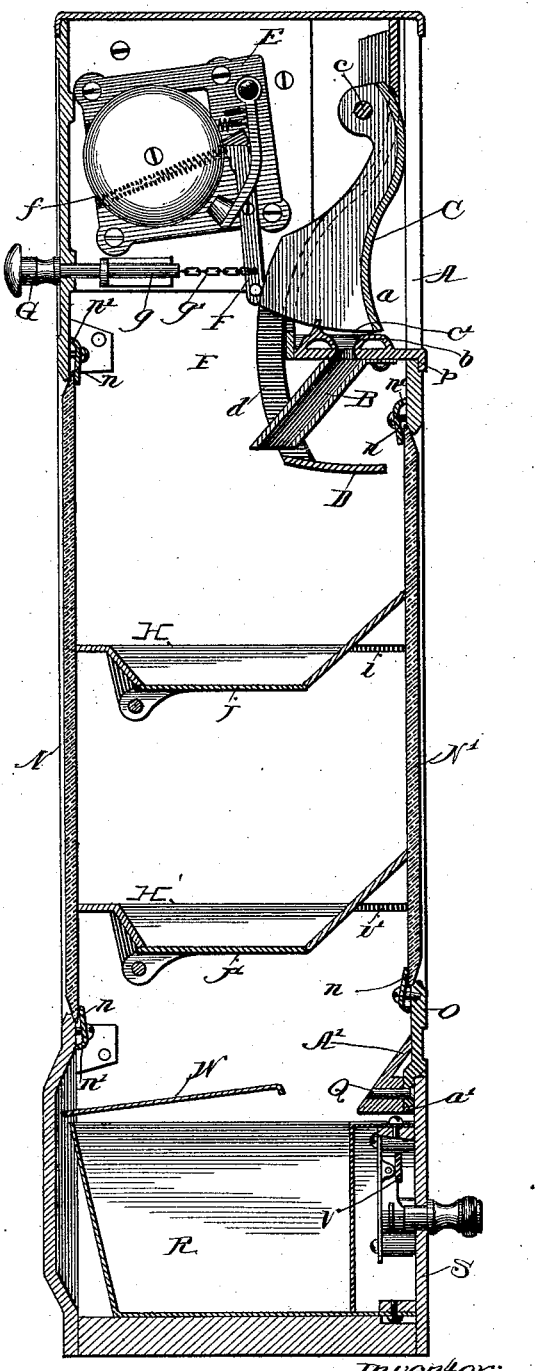


Fig. 2.



Witnesses:
John L. Jackson.
Charles Shervey.

Inventor:
John L. Kail
by Bond, Adams & Jones
attys

(No Model.) 2 Sheets—Sheet 2.

J. L. KAIL.

FARE BOX.

No. 455,881. Patented July 14, 1891.

Fig. 3.

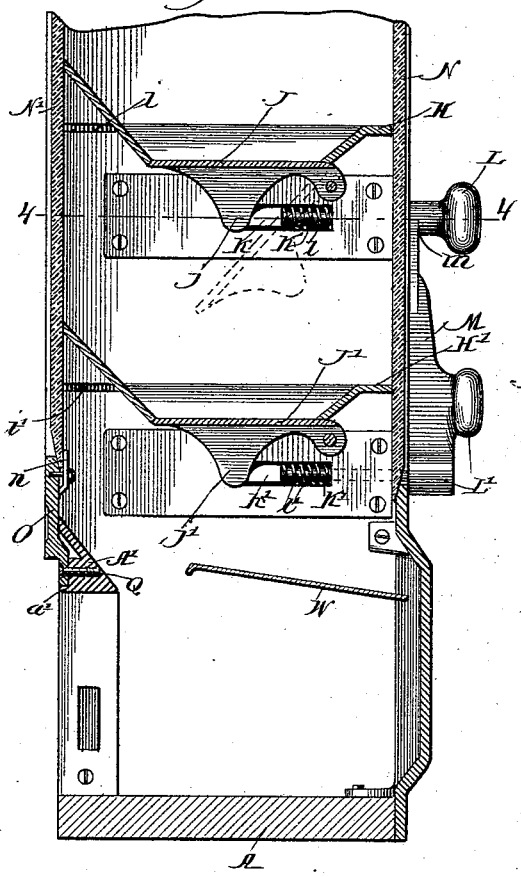


Fig. 4.

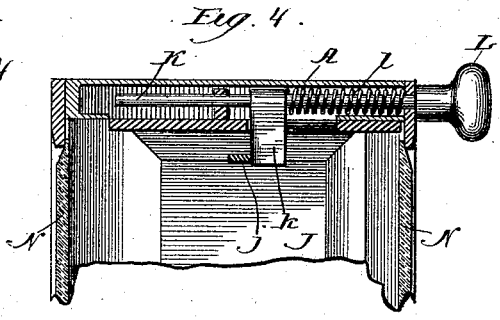


Fig. 5.

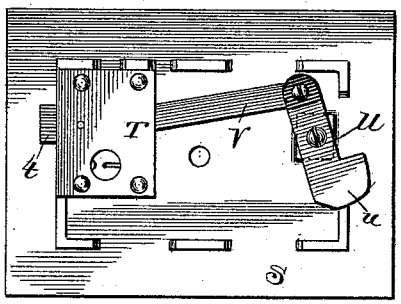
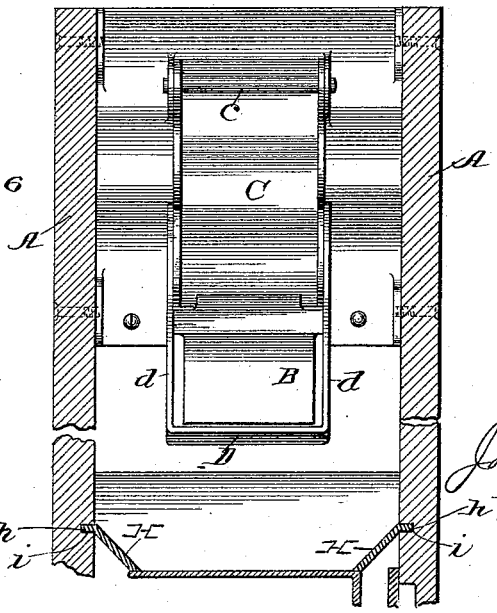


Fig. 6



Witnesses:
John L. Jackson.
Charles Sherwyn

Inventor:
John L. Kail
by Bond, Adams & Jones
Attys.

UNITED STATES PATENT OFFICE.

JOHN L. KAIL, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND PETER DE TAMBLE, OF SAME PLACE.

FARE-BOX.

SPECIFICATION forming part of Letters Patent No. 455,881, dated July 14, 1891.

Application filed August 23, 1890. Serial No. 362,908. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. KAIL, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented certain new and useful Improvements in Fare-Boxes, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation. Fig. 2 is a vertical section on line 2 2 of Fig. 1. Fig. 3 is a detail, being a vertical section through the parts shown at line 3 3 of Fig. 1. Fig. 4 is a detail, being a horizontal section through the parts shown at line 4 4 of Fig. 3. Fig. 5 is a detail showing the locking-bolts for the cash-drawer, and Fig. 6 is a detail showing parts hereinafter specifically referred to.

This invention relates to fare-boxes.

The objects of my present invention are to provide improved devices for preventing the removal of a fare after it has once been placed in the box; to provide improved devices for operating the trays; to provide removable trays; to provide a double locking-bolt for the cash-drawer, and to provide other improvements hereinafter set forth. I accomplish these objects as illustrated in the drawings, and as hereinafter described. That which I claim as new will be pointed out in the claims.

Similar letters refer to similar parts throughout the views.

The case A is made of wood and metal and in suitable form to contain the parts hereinafter set forth. The upper portion of the case A is provided with a recess *a*, as shown in Figs. 1 and 2. In the lower portion of this recess is a slot *b*, through which the fare is to be inserted by the passenger. Beneath this slot *b* is a tube B, through which the fare placed in the slot *b* will descend. Above the slot *b* is a guard C, which, as shown in Fig. 2, is pivoted upon a pivot *c* within the case A. Its lower end *c'* is the segment of a circle whose center is the pivot *c*. This guard is so formed and supported that it will close or cover the slot *b* when it is in the position shown in Fig. 2, which is its normal position. To this guard C are rigidly secured two arms *d*, and upon the lower ends of the arms *d* is rigidly secured a second guard D in such position that it will swing across the lower end of the tube B. The guard C and the second guard D are so secured together that when the guard C closes the slot *b* the guard D will be removed from the lower end of the tube B, as shown in Fig. 2, and when the guard C is pushed backwardly away from the slot *b* for the insertion of the fare or other article the guard D will pass across the opening in the lower end of the tube B. The slot *b*, or the lower end of the tube B, is closed at all times, one guard passing over the opening or slot before the other is removed. When a passenger pushes back the guard C and inserts his fare in the slot *b*, the fare drops downwardly in the tube B and rests upon the guard D, which then closes the tube. When the fare enters the slot *b* and releases the guard C, the latter automatically returns to the position shown in Fig. 2 and the fare drops from the tube B. The guards C and D return to the position shown in Fig. 2 by their own gravity; but I prefer to arrange the parts as hereinafter described, so that they will be assisted by a spring; but in either event the guards C and D automatically operate to close the slot *b* or the upper end of the tube B and open the lower end of such tube.

A suitable alarm mechanism E is secured in the upper part of the case A, as shown in Fig. 2. This alarm mechanism is provided with a lever F, adapted to engage with the guard C and be pushed backwardly by the guard C when the guard is pushed backwardly for the insertion of a fare. The lever F is returned to the position shown in Fig. 2 by a spring *f*. This spring *f* also assists in returning the guard C, through the lever F, to its normal position. Any suitable alarm mechanism may be employed which is adapted to be operated by the lever F.

A knob G is provided within reach of the driver of the car, as shown in Fig. 2. To this knob is connected a rod *g*, which is connected with the lever F by a chain *g'*, so that the driver can by pulling upon the knob G operate the alarm mechanism, arrest the attention of the passengers, and remind delinquents to pay their fares.

H represents the upper tray. This tray is provided with two guiding-edges *h*, as shown in Fig. 6. These guiding-edges *h* are adapted

to slide in grooves *i*, one in each side of the case A. The bottom J of this tray H is hinged to the tray upon a horizontal pivot, as shown in Figs. 2 and 3. This bottom J is provided with a depending projection *j* upon one side.

In a recess in one side of the case A is mounted a rod K, having a knob L, which is adapted to be grasped by the driver. Upon this rod K is secured an arm *k*, which is adapted to engage with the projection *j*, depending from the bottom J. Between the arm *k* and the end of the recess around the rod K is a spring *l*, which normally holds the rod K and arm *k* in the position shown in Figs. 3 and 4, in which position the arm *k* engages with the projection *j* and holds the bottom J in its closed position. Any fares which fall from the tube B will fall upon the bottom J of the tray H and remain upon such tray until the driver draws outwardly the knob L, rod K, and arm *k*. This withdrawal of the arm *k* from engagement with the projection *j* allows the bottom J to swing downwardly by gravity and the fares to fall therefrom.

Below the tray H is a second or lower tray H′, which is similar in form and is provided with similar guiding-edges *h*′, adapted to slide in the grooves *i*′ in the case A. This tray also has a similar hinged bottom J′, provided with a similar depending projection *j*′. A similar rod K′, provided with a similar arm *k*′, is mounted in a recess in the side of the case A. Its outer end is provided with a knob L′, and a similar spring *l*′ is placed on said rod. The operation of the rod, arm, and hinged bottom is similar to that described for the upper tray.

The knob L′ is provided with an arm M, which enters a notch *m* in the lower side of the knob L, so that whenever the knob L′ is drawn outwardly the arm M will also draw outwardly the knob L, thereby opening both bottoms J J′.

The passengers insert their fares in the slot *b*, as heretofore described, and the fares thus inserted fall into the tray H. The driver, by counting the fares upon the tray H, can tell whether all of a number of passengers entering at a given time have paid their fares. When all have paid their fares, the driver can then open the bottom J and allow the fares to fall upon the tray H, and the fares of passengers entering subsequently can then be counted upon the upper tray H, as above described, and after counting be dropped into the lower tray. At the end of the trip, or at a corresponding time, all the fares collected on that trip are upon the lower tray H′, where they can be counted and reported, as may be necessary. After they have been counted they are delivered into the cash-drawer, hereinafter described, by drawing outwardly the knob L′, which allows all of the fares to fall from the lower tray H′. When the fares are emptied from the lower tray, all fares which have been left upon the upper tray must at the same time be allowed to fall, because the rod K is drawn out by the engagement of the arm M with the knob L. This arrangement prevents the driver from beginning a second trip with any fares collected upon the preceding trip remaining upon the tray H. The front and rear sides of the case A contain sight-openings, through which the driver and the passengers can see the fares paid. The glass N, which forms the sight-opening in the front of the case, or that portion through which the driver looks, is secured to the case A by means of two plates *n*. Each of these plates *n* is provided with a ledge or flange *n*′. The glass N is inserted in place and the plate *n* placed, as shown in Fig. 2, with the ledges *n*′ engaging with the case, and the plates are then secured to the case by screws, so that the inner edges engage with the glass N and firmly hold it against the case A. The glass is thus held so that it will not break or rattle by the jar of the car.

The glass N′, which forms the sight-opening in the interior of the car, is secured by similar plates *n* to a frame O. This frame O at its upper end is adapted to slide under a depending flange *p*, as shown in Figs. 1 and 2. Two extensions *q*, one on each side, as shown in Fig. 1, extend up above the flange *p*. The flange *p* holds the frame O against the case A at the upper end, and the extensions *q* prevent the frame O from moving laterally, so that the upper end of the frame O is securely held in position. The lower end of the frame O is secured to a portion A′ of the case A by a screw Q, the lower edge of the frame O resting upon a lip *a*′, extending out from the portion A, as shown in Fig. 2.

By the means above described the frame O is secured in position by a single screw, so that it can be readily taken off when it is desired to gain admission to the interior of the case A for the purpose of cleaning said case. The screw Q is covered by the cash-drawer, as shown in Fig. 2, so that it cannot be removed, except when the drawer is unlocked and opened.

It is frequently necessary to clean the interior of the case A and the glasses N N′. This can readily be done by removing the frame O, as above set forth, and by drawing out the sliding trays H H′. When these trays are drawn out, the inner surface of the glass N can be readily cleaned. The projections *j j*′ have no positive connection with the arms *k k*′, so that the trays are easily withdrawn from place and when inserted in position are ready for operation.

R represents the cash-drawer, which is located in the lower portion of the case A, so as to receive the fares from the lower tray H′. The front plate S of this drawer R extends upwardly, so as to cover the screw Q, as above described. Upon the interior of this plate S is a lock T. The bolt *t* of this lock is adapted to engage with the case A on one side. A lever U is pivoted upon the opposite end of the plate S, as shown in Fig. 5, and to one end of this lever U is secured a link V, which is piv-

oted to the bolt *t*. The opposite end *u* of the lever U is adapted to engage with the opposite side of the case A. By this construction the drawer is locked in place by two bolts, one on each side, so that it cannot be twisted in its chamber in the case A.

Above the drawer R is secured a plate W, which is inclined, as shown in Fig. 2. Any water which may gain admission into the case A around the glass N, which is exposed, will descend upon the plate W and will run down back of the drawer R. It is found in practice that it is impossible to keep the glass N so secure that water will not be admitted between it and the case, for the reason that the jar of the car loosens it. The plate W prevents the water from gaining admission into the cash-drawer R, so that the water cannot injure the fares.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a fare-box, the combination, with a case A and a tube B, arranged within the case and having a slot *b*, of the upper swinging guard C, arranged above the tube and having rigidly-attached pendent arms *d*, provided at their lower ends with a rigidly-attached guard D, arranged below the tube, said upper guard being moved inward by the insertion of a fare to disclose the slot and thereby bodily throw the pendent arms and lower guard rearward to place such lower guard directly under the lower end of the tube, substantially as described.

2. In a fare-box, the combination, with a case A and a tube B, arranged within the case and having a slot *b*, of the upper swinging guard C, arranged above the tube and having rigidly-attached pendent arms *d*, provided at their lower ends with a rigidly-attached guard D, arranged below the tube, said upper guard being moved inward by the insertion of a fare to disclose the slot and thereby bodily throw the pendent arms and lower guard rearward to place, the latter directly under the lower end of the tube, an alarm, and a pivoted alarm-actuating lever F, directly acted upon by the inner edge of the upper guard, so that the lever and upper guard move rearward in unison, substantially as described.

3. In a fare-box, the combination, with a swinging guard C and tube B, having a slot *b*, of a swinging lever F, spring *f*, an alarm mechanism operated by said lever F, rod *g*, having a knob G, and chain *g'*, substantially as specified.

4. In a fare-box, the combination, with a case A, having grooves, of a tray H, having guiding-edges sliding in the grooves and provided with a pivoted bottom J, and a device carried by the case at a point below the tray and acting on the pivoted bottom to close the same while permitting the removal of the tray without disturbing the position of said device, substantially as described.

5. In a fare-box, the combination, with a case and means for introducing the fares, of a removable tray having a hinged bottom, and a sliding rod carried by the case and provided with an arm for engaging the hinged bottom, but unattached thereto, for the purpose of permitting the tray to be removed from the case without disturbing the sliding rod or its arm, substantially as described.

6. In a fare-box, the combination, with a case having means for introducing the fares, of a fare-receiving tray removable from the case and having a pivoted bottom, and a sliding rod supported by the case and unattached to but adapted to engage and disengage the bottom for closing and opening the same, whereby the tray can be removed without disturbing the slide-rod, substantially as described.

7. In a fare-box, the combination, with a case, an upper tray H, having a hinged bottom J, and a lower tray H', having a hinged bottom J', of a sliding rod K, unattached to but adapted to engage and disengage the bottom of the upper tray for closing and opening the same, a sliding rod K', unattached to but adapted to engage and disengage the bottom of the lower tray for closing and opening the same, knobs L L' on the respective sliding rods, and an arm M, secured to one of said knobs and adapted to engage the other, substantially as described.

8. In a fare-box, the combination, with a case A, having a flange *p* at its upper portion, of a frame O, adapted to be engaged by said flange, an attaching-screw Q at the lower portion of said frame O, and a drawer adapted to cover said attaching-screw Q when closed, substantially as and for the purpose specified.

9. In a fare-box, the combination, with a case having glass sight-openings and a cash-drawer in the bottom of said case, of a protecting-plate W for the drawer R, substantially as and for the purpose specified.

JOHN L. KAIL.

Witnesses:
HARRY T. JONES,
JOHN L. JACKSON.