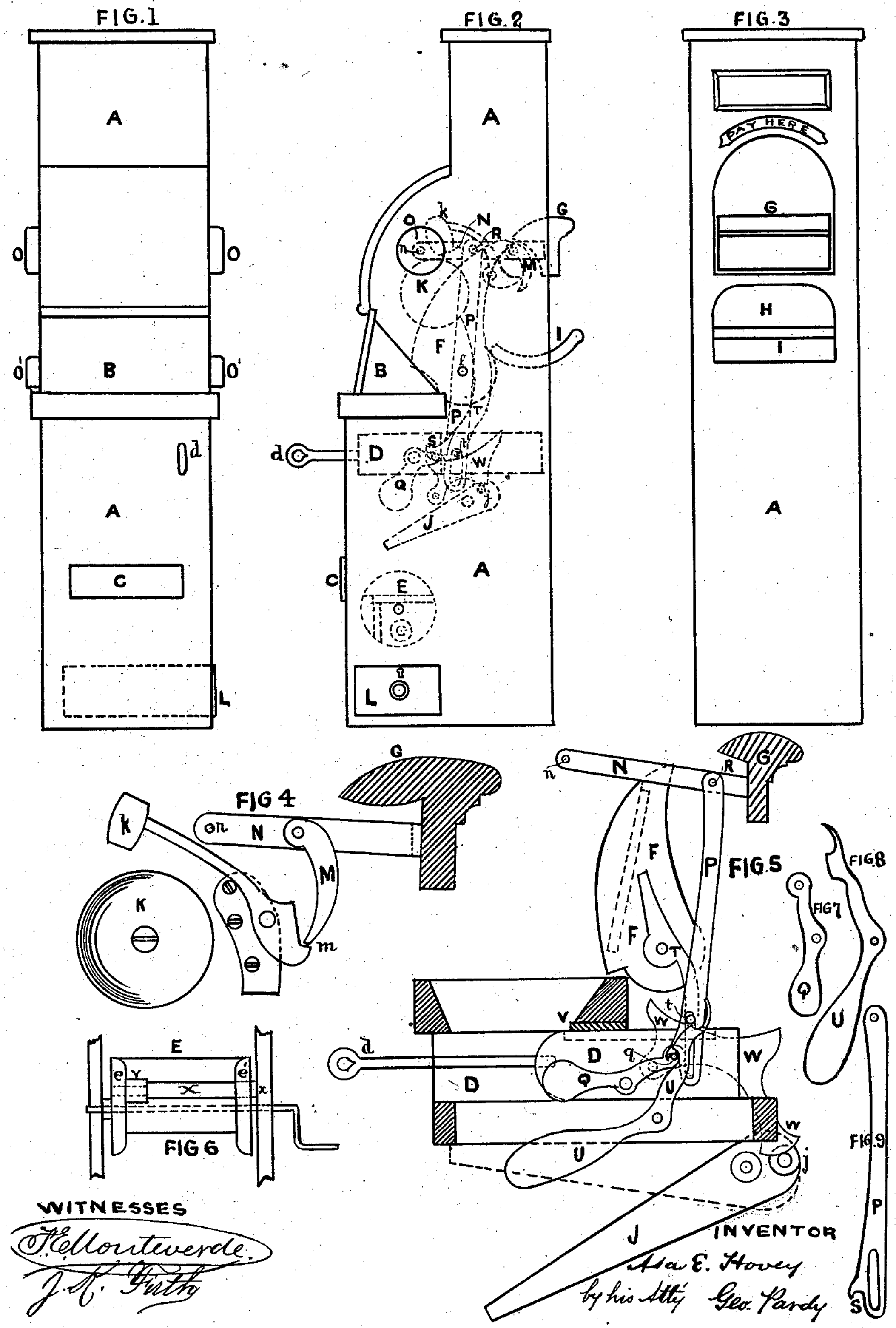
A. E. HOVEY.

Fare-Box.

No. 164,685. Patented June 22, 1875.



UNITED STATES PATENT OFFICE.

ASA E. HOVEY, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN FARE-BOXES.

Specification forming part of Letters Patent No. **164,685**, dated June 22, 1875; application filed March 13, 1875.

To all whom it may concern:

Be it known that I, ASA E. HOVEY, of the city and county of San Francisco, State of California, have invented an Improved Fare-Box for Street-Railroad Cars, of which the following is a specification:

The object of my invention is to provide a means of collecting the fares of passengers and insure the proper returns being made.

My invention consists of a box having a peculiar interior arrangement, which is opened to receive fares by the combined action of passenger and fare-receiver, and closed automatically, so that after a fare is deposited its abstraction cannot be effected except the box be broken into and injured.

In the accompanying drawing, Figure 1 is a view of the box as presented to the driver of the car. Fig. 2 is a side view of the box with the interior arrangement of parts indicated by dotted lines. Fig. 3 is a view such as presents itself to the passenger in the car. Fig. 4 is a detail view of the device for ringing the call-bell. Fig. 5 is a view which shows in detail the device which effects the opening and closing of the box. Fig. 6 is a detail drawing of a shelf used for retaining the fares in sight for the purpose of tallying or counting them before finally depositing them in the locked drawer beneath it. Figs. 7, 8, and 9 show detached detail drawings of parts, as indicated by the reference-letters marked upon them.

In the accompanying drawing, similar letters of reference in the different figures refer to similar parts.

A is a box of wood or metal, about nine inches square and thirty inches in height. It has a glass-covered opening at B and C, so that the collector of fares may have an interior view. The opening at B permits the collector of fares to look down upon the tray D, which is slid back and forth by the fare-collector at such times as he is called upon to receive a fare. The opening at C is provided to permit him periodically to look at and keep count of the fares deposited during the trip on the shelf E, so that he may at all times ascertain if any passengers have neglected to deposit their fare. *d* is the handle of the sliding tray D, which, passing through the side of the box, must be pulled forward to throw back the apron F before the passenger can deposit his fare. In Fig. 3, G is the counter, which is held down by the passenger until the fare-collector has thrown back the apron F, which act uncovers the tray D, upon which the fare is dropped by the passenger to be inspected by the collector. H is an opening in the box, with a shelf or tray, I. This part is not considered a necessity to the proper working of the box. The opening and tray are merely provided to receive fares which are prematurely dropped from the hands of the passenger before the fare-collector has thrown back the apron F. Fares so prematurely dropped can be taken from the tray I and deposited properly over the apron onto the tray D. J, Figs. 2 and 5, is a swinging cover, which closes the passage leading from the counter G to the shelf E when the passage is otherwise opened by swinging back the apron F. Both apron F and cover J swing into position simultaneously by means of the device afterward to be explained. The object of the cover J is to prevent access to deposited fares, which could be otherwise obtained by first swinging back the apron F, holding it back by the hand, sliding back the tray D, and then inserting an instrument capable of drawing up the fares, as a long pair of nippers, a stick or wire with some adhesive substance on the end. K is the call-bell, which is sounded when the counter G is pressed down. L is the locked drawer, which receives the fares finally, and is only opened by the person in charge of this duty at the termination of each trip or number of trips.

I will now describe in detail how I operate the call-bell: The device is shown in Fig. 4, and is indicated by dotted lines in Fig. 2. K is a gong or bell. *k* is the hammer, which is pivoted at *l*. M is the trip, swinging loosely on a pivot at about the middle of the arm of the frame N, to which the counter G is attached. The fulcrum of this frame N is on both sides of the box at *n*. The bell, the pivot of the hammer, and pivot of the frame are all attached to one side of the box A. Now, when the counter G is pressed down the trip M engages with the hammer at the notched part at *m*. The hammer swings up till the trip slides out of the notch, when the hammer falls on

the bell, giving the call to the fare-collector. There is a stout spring, O, applied upon the pivot *n*, something like a clock-spring, so that when the counter is relieved from pressure it will fly upward, ready for another operation.

I will next describe the device for throwing the apron F: P is a lever depended from the arm of the frame N on the side opposite to that to which the call-bell is attached. It is a flat bar with a slotted hole at its lower end, and swings loosely from a pivot at R. At the proper position, near the lower end, a hook, S, is formed, in which hook the pin *q* of the latch Q engages when the apron is about to be thrown. The apron F swings on its pivot at *f*, and a spring, O′, is wound around this pivot, which extends through the side of the box for the purpose. The arm T extends downward for a proper distance to terminate in a pin, *t*, which inserts itself in the slotted hole of the lever P. Now, when the counter G is pressed down the lever P is lowered to a point which places the hook S exactly in line with the pin of the latch Q. The apron so far is not disturbed, for the pin *t* has plenty of room to play in the slotted hole. Now, when the counter is pressed down, as before described, the bell rings. The fare-collector must now slide back the tray D, when the latch Q will, at the end of its stroke, engage with the hook S. It will now be seen that, when the tray is again drawn forward, the lever P must be drawn forward also; and as the pin *t* on the arm of the apron passes through the lever, it must also pass forward, and, of course, as the arm of the apron is drawn forward, the apron itself swings back on its pivot.

There is shown another latch or prop, U, Fig. 5, which is an important piece. Its purpose is to prevent the apron F from being pulled back by inserting the hand through the opening at the counter G, for, if it could be that the apron could be pulled back in this way, it would be an easy matter to abstract any fares that might be left on the tray D—a matter which it is important to avoid. This latch U is pivoted at *u*, and, when not pushed back by the pin *q* of the latch Q, rests in such a position as to act as a prop under the pin *t* of the arm T, so that, as long as it is in this position, the apron is held immovable. Now, when the tray D is moved back, the last sixteenth of an inch of its travel brings the pin *q* against the latch U, and pushes it from under the pin *t;* and, as there can be no fares on the tray D at this time, for the strip of rubber V will have swept them off as it scrapes over the tray in its passage back and forth, the apron may be drawn back.

The device I employ for operating the swinging cover J is shown in dotted lines in Fig. 2, and again is outlined in Fig. 5. It consists in a peculiarly-shaped arm, W, which is pivoted at the side of the box at *w*. It has a curved face or bed for a pin on the end of an arm, extending down from the apron, to slide on; not the arm T, as before described, but a similar one placed on the opposite side of the apron. In looking at Fig. 5 it will do for the purpose of description to assume the arm T is the one referred to. The arm W extends down to make contact with a pin, *j*, projecting from the extreme end of the cover J. At a slight distance in from this point the cover has its pivot. Now, when the fare-collector pulls forward the tray D and swings back the apron F he also causes the arm of the apron to sweep along the curved face of the arm W; and, if the curve be properly arranged and proportioned, the effect will be to cause a downward pressure on the pin *j*, so that the cover J will be swung upward to close the opening above the deposited fares on the shelf E. In Fig. 5, dotted lines show the cover J after it has closed the opening. Full lines show the same cover dropped down.

The revolving shelf E is shown in dotted lines in Fig. 2, and in detail in Fig. 6. It is a simple affair, designed to act as a temporary shelf to retain fares upon—say, such as are deposited before the collector has counted the passengers in the car. The fares on this shelf are always in sight, and may be counted through the glass-covered opening at C, as mentioned before. The shelf E has two faces, at nearly right angles to each other, so that it may not be turned in a position which would uncover the locked drawer below it. The shelf or shelves are supported between two cheeks, *e e′*, which have a stout wire run through their centers, which wire passes out through one side of the box, and is shaped to form a crank-handle. It is desirable that this shelf should turn rather stiffly, or at some time, by a sudden jolt of the car, it would tip over and spill the fares upon it into the drawer below. To avoid this I provide a wooden pin, X, recessed in the inside of one cheek, *e*, and passing completely through the other cheek, *e′*, bears against the side of the box at *x*. I slip over the wooden pin a rubber sleeve, Y. (A little piece of rubber pipe, cut about one inch long, will do.) Where this sleeve Y is placed the pin will be of less diameter than the remainder, so that there will be a shoulder formed for the sleeve to bear against. The sleeve should be longer than the distance from the shoulder on the wooden pin to the inside of the cheek *e*, so that it will have to be compressed slightly.

It will be seen that the sleeve Y will act as a spring to push the wooden pin so firmly against the side of the box that the shelf may only be moved by the crank-handle being turned with some little pressure.

From the foregoing the operation of the box may, in a measure, be understood; but, by way of a summary, I will here describe the operation of depositing fares in the box: First, the passenger steps up to the box, and, placing his hand upon the counter G, presses it down till he hears the bell ring. Perhaps he inadvertently drops his fare at this time with-

out waiting for any action of the fare-collector—generally the driver of the car—who may be momentarily engaged managing his horses, throwing a switch in the track, or, being otherwise engaged, cannot immediately attend to receiving a fare. If so, he will find it again just below his hand on the shelf I. He then picks it up again, and waits, with the counter still kept pressed down, till the fare-collector pushes back the tray D and has drawn it forward again, when the apron will be thrown back; then the passenger casts his fare down the inclined apron, and it falls on the tray D. The fare-collector examines it through the glass-covered opening, and it may be he declines to accept it, for it may be insufficient. He then acquaints the passenger with the fact of his declining to accept his deposit, and demands that the matter be corrected. This can easily be accomplished by placing the hand down the opening, which is quite large enough to admit a man's hand, and recovers his deposit. Making the correction demanded, he again deposits his fare. The fare-collector now accepts the fare, the passenger's hand is lifted from the counter G, the apron drops forward, and the transaction is ended. Now, the fare still rests on the tray D, and may remain there till the next passenger goes through the same operation, when, as it is necessary to slide the apron back, it must pass under the rubber strip V, when any fare upon its surface will be swept off.

An advertisement, giving suitable instructions to the passengers, will be placed in front of the box; and at night a lamp will illuminate the box.

The apron F and sliding tray D should both have smooth-polished reflecting-surfaces—heavy plate looking-glass will be best, which can be framed in the wood, and is strong enough not to be broken by coins dropped upon it. The object of this is to insure the box being well lighted in the interior, to permit the examination of the fares.

What I claim as my invention, and desire to secure by Letters Patent, is as follows:

1. The fare-box A, provided with a sliding tray, D, counter G, and apron F, operating together in the manner described, for the purpose of receiving fares.

2. The swinging cover J, with its pin *j*, in combination with the arms T and W, operating together, for the purpose of closing the passage to deposited fares when the apron is thrown back, substantially as described.

3. The combination of the hooked lever P, depended from the frame N of the counter G, latch Q, attached to the side of the sliding tray D, and arm T from side of apron, as a means of opening the box to receive a fare, substantially as described.

ASA EBENEZER HOVEY.

Witnesses:

F. E. MONTEVERDE,

J. K. FIRTH.