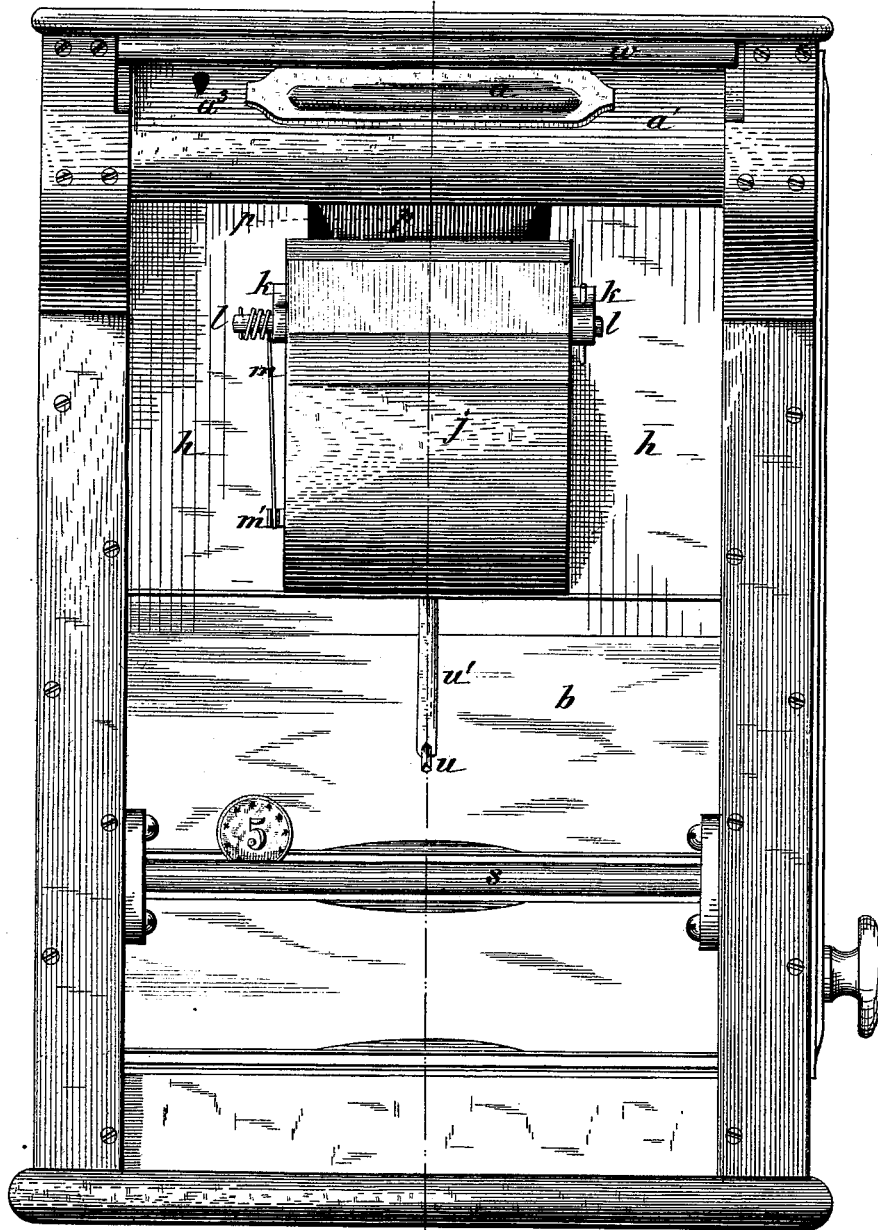


G. BEADLE.  
Fare-Box.

No. 221,496.

Patented Nov. 11, 1879.

*Fig. 1.*



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*W. H. N. Knight*  
*Floyd Harris*

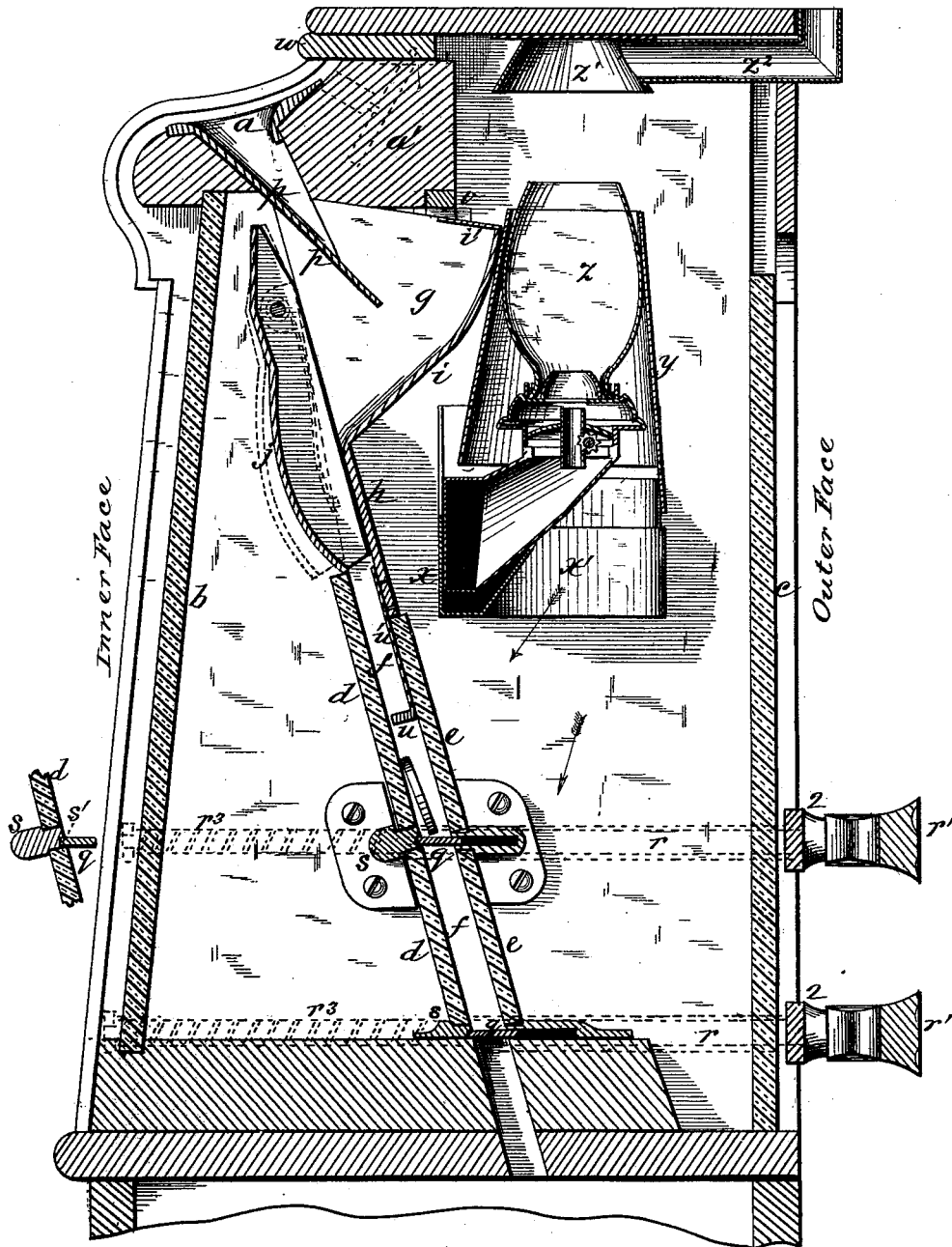
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Fig. 2.



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Fig. 9.

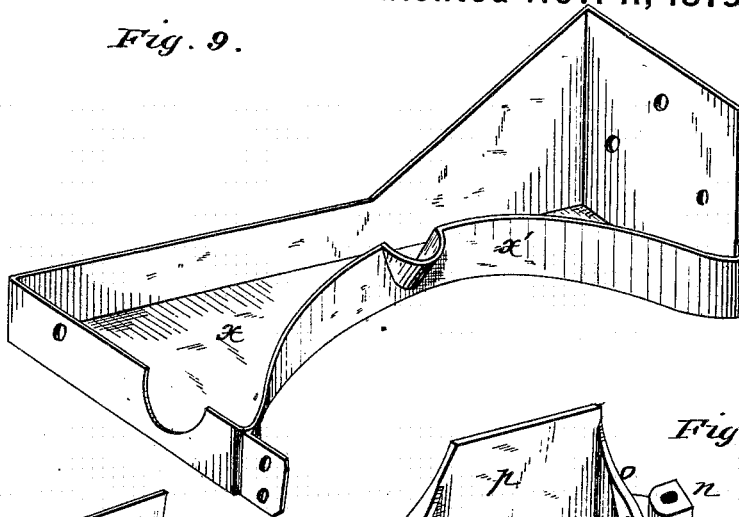


Fig. 4.

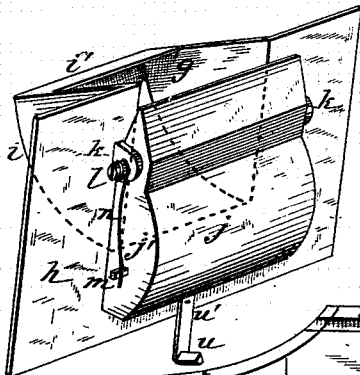


Fig. 3.

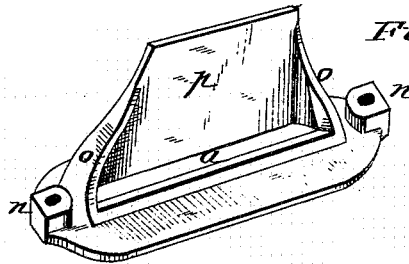


Fig. 6.

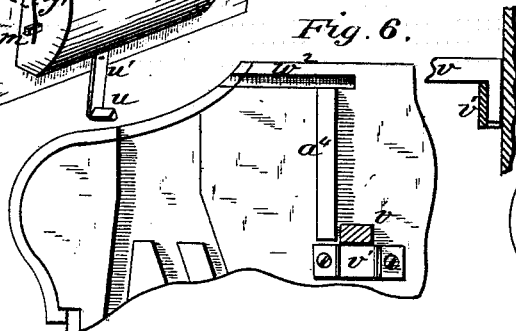


Fig. 5.

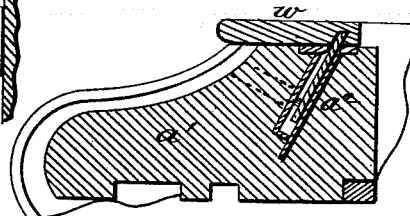


Fig. 7.

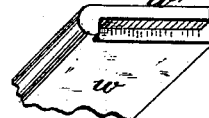
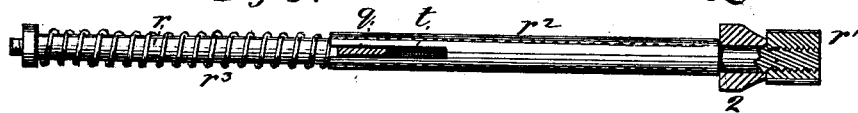


Fig. 8.



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# UNITED STATES PATENT OFFICE.

GEORGE BEADLE, OF SYRACUSE, NEW YORK.

## IMPROVEMENT IN FARE-BOXES.

Specification forming part of Letters Patent No. **221,496**, dated November 11, 1879; application filed September 29, 1879.

*To all whom it may concern:*

Be it known that I, GEORGE BEADLE, of Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Fare-Boxes, of which the following is a specification.

In improving fare-boxes for street-railways, cars, and like purposes, my object is to prevent the fraudulent abstraction of money or tickets from the fare-conduit, and before being dropped into the drawer or receiver; to increase the general security of the box; to cause the money in its descent within a conduit formed by and between glass plates to be so distributed as to prevent banking or dropping always upon the same spot, that it may be displayed and readily counted, and to obtain a strong and direct reflection of light upon the fare.

An important part of my invention consists in combining, with the fare-conduit, means, which, while constituting the upper portion of one side of the fare-conduit, will, upon the entrance of an instrument into said conduit to abstract money, be caused thereby to sever the continuity of one side of the conduit whereby to divert the course of the instrument to the outside of said conduit, and thereby prevent the possibility of its reaching the money. Two or more slides for arresting and maintaining the fares within the conduit are arranged at different intervals therein for displaying the fare and dropping it finally into the receiver; and, for the purpose of effecting a covered joining of such slides with the inside wall of said conduit, and thereby prevent the accidental forming of a space or crack through which the fare might pass said slide, I combine with said conduit-wall and the slide or slides, rabbeted ribs, within the groove or rabbet of which the slides enter to close such joint.

The entrance for the fare is formed of a mouth-piece having an inwardly-inclined chute, the position of which is such as to extend over and substantially close the lower conducting-chute, and in connection therewith a flaring upper termination of said conducting-chute forms a deflecting basin or funnel-mouth to the entrance-chute, whereby the fare is received from said entrance-chute into said fan-

nel or basin, and from which it is caused to pass directly against the inner wall of the conducting-chute through which it descends, so that the entrance mouth-piece forms a cover for a receiving-basin, which latter forms a novel guarded entrance to the fare-conduit.

The light is reflected directly upon the conduit-slides by a hood-reflector placed directly over the chimney, so that the base of such reflector will open into a space formed by the lamp-reservoir to cast the light upon the points of support for the fare.

In a patent granted to me November 20, 1877, No. 197,315, I have shown and described a fare-box having a fare-conduit formed by and between glass plates, and in which said conduit is interrupted by one or more slides forming separate and distinct sections of a continuous chute through which the fares pass from one section to the other, and my present invention is an improvement upon my said patent for the purpose of rendering my fare-box more perfect in certain important particulars.

Referring to the accompanying drawings, Figure 1 represents a view of that side of my improved fare-box which stands inside of the car; Fig. 2, a vertical section of the box; Fig. 3, an inverted view of the entrance mouth-piece; Fig. 4, the flaring mouth of the conduit, showing the pivoted attachment which forms one of its sides and part of one side of the fare-conduit; Fig. 5, a section, showing the manner of locking the top of the box; Fig. 6, a sectional view, showing the tie-bar for securing the sides of the box; Fig. 7, a detail of the top locking-bar; Fig. 8, a detail of one of the pull-rods, and Fig. 9 the lamp-support.

The box is of any suitable form and construction, having the fare-entrance *a* at the top and on the inside of the car, and the usual money drawer or receptacle (not shown) at the bottom secured by lock. A fare-conduit leads from the entrance mouth-piece to the drawer. The relation of the box to the passengers and to the driver I shall indicate by inner face and outer face, the latter being next the driver. These sides or faces are of glass, *b c*, fitted into grooves in the sides of the box.

The fare-conduit I prefer to extend in an

inclined direction to the money-drawer, and so that it will present an inclined face to the driver. It is formed by two glass plates, *d e*, making a narrow chute, *f*, which I prefer shall slightly increase in width to its lower end to facilitate the free passage of the fare, said glass plates being secured in grooves in the sides of the box. The upper end of this conduit terminates in a flaring mouth or funnel, *g*, formed upon a casting, *h*, the lower edge of which joins the upper edge of the outer glass, *e*, and is secured between the box sides in the same grooves which receive the coincident glass. This flaring mouth extends from one side only of the plate *h*, and has only three sides, one of which, *i*, is curved, slightly concave, and forms the bottom and the back, and the upper edge of which overlaps the mouth and covers that portion, *i'*, farthest from the entrance-chute to close that part of the back which opens into the lamp-compartment. The sides of this flaring mouth or funnel are straight, and the open side is closed by an attachment, *j*, hinged or pivoted at or near its top to the casting *h* by lugs *k* projecting therefrom, said pivot being formed by a rod, *l*, passing through sides *j'* of said attachment and the lugs. A spring, *m*, connected by one end to said rod and by the other to a pin, *m'*, on the lower end of said attachment, serves to maintain the latter in its closed relation with the inner face of the casting. This attachment is slightly concave, and joins at its lower edge the upper edge of the inner glass, *d*, in such manner that the bottom termination, *i*, of the flaring mouth *g* will stand about opposite the middle part of the attachment, and in this way forms a continuation of the inner glass of the fare-conduit, and closes the open side of the flaring-mouth casting. The purpose of the yielding capacity of this hinged attachment will be presently stated.

The fare-entrance consists of a single device, preferably a flanged casting, Fig. 3, set in a solid part of the top and secured by screws thereto from the under side of said top part to prevent access to said screws. For this purpose said mouth-piece has lugs *n* into which the screws are fastened. This mouth-piece forms a chute, and has sides *o* and a bottom, *p*, which latter extends inward toward the outer side at a point about the middle of the curved back of the flaring or funnel mouth *g* of the fare-conduit; but does not join said back so as to leave an open way to the fare-conduit, yet substantially closes said conduit by extending over it at about right angles to the bottom *i* of the flaring mouth. The purpose of this construction is to render very difficult the entrance of an instrument for fraudulently abstracting the fare temporarily arrested by the slides in the fare-conduit. This entrance mouth-piece not only co-operates with the flaring mouth of the fare-conduit, but with the hinged attachment in a manner which will be stated hereinafter.

The fare-conduit is intercepted at one or

more points by slides *q* for arresting the fare and holding it for inspection. These slides are drawn out by pull-rods *r*, under the control of the driver, to deliver the fare from one slide to the other and into the money-drawer. To obtain a closed joining of such slides the inner glass of the fare-conduit is divided into two sections, *d d*, such division being at a point coincident with the upper slide. At this junction a horizontal rib, *s*, is inserted between the glass sections *d d*, so as to be flush with the side which forms the fareway, and such rib has a rabbet, *s'*, to receive the edge of the slide *q*, and thereby form a cover to the slide-joining, so that there can be no open crack or space which would let the fare pass down before the slide is drawn out.

The lower slide has a similar cross-rib with covering rabbet or groove for the same purpose. The slides work in horizontal cross-pockets placed on the outer side of the outer glass, as shown.

The pull-rods *r* are connected by handles *r'*, which form stops 2 against cross-bars on the back of the box to limit the inward movement of the slides. The pull-rods are fitted into tubes *r<sup>2</sup>* in the sides of the box, and provided with coiled springs *r<sup>3</sup>*, which constantly exert their force to maintain the slides within the fare-conduit, as shown in Fig. 8. The slides *q* are connected to the pull-rods *r* by fitting into slots formed therein, the tubes having coincident slots *t* to allow of the movements of the slides and rods, as shown in said figure.

It is important to guard against the picking of the box, and it is for this purpose that I combine with the fare-conduit at its flaring termination *g*, and quite close to the entrance mouth-piece, a yielding attachment, for it will be seen by reference to Fig. 2 that if an instrument be inserted in the entrance mouth-piece, it will strike the bottom *i* of the flaring termination of the fare-conduit and be deflected thereby in a reversed direction directly against said attachment, and, forcing it back by turning it upon its pivots, will open it, so as to break its continuity with the inner glass, *d*, of the fare-conduit, as shown by dotted lines in Fig. 2, and cause said instrument to pass outside of said conduit. This safety device, so far as I know, in connection with a fare-box, is broadly new in its capacity for being deflected from the fare-passage by unauthorized interference, and caused to resume its proper relation thereto when relieved from such interference.

To prevent the descent of the fare at one point upon the upper slide, and to effect its separation upon the slide, that it may be seen to better advantage, I arrange a pendent dividing-pin *u* within the fare-conduit and standing across it, and at a suitable distance from the upper slide, whereon the fare, as it descends, strikes and is directed to either side. This dividing-pin is sustained in position by an arm, *u'*, depending from the lower edge of the plate *h* of the flaring mouth.

The sides of the box are secured by a cross-bar, *v*, at a point just beneath the solid cover part of the entrance-mouth, the ends of said bar being bent at right angles and secured into loops *v'* on the inner sides of the box, as shown in Fig. 6.

The top proper for the fare-conduit is formed by the solid piece *a'*, and contains the lock *a<sup>2</sup>*, Fig. 5, the key-hole *a<sup>3</sup>* for which is shown in Fig. 1. This solid piece is secured by vertical tongue *a<sup>4</sup>*, Fig. 6, and grooves, to the box sides, and is fastened in place by a locking-cap, *w*, Fig. 5, extending across the top of the box, and secured by horizontal tongue *w'* and grooves *w<sup>2</sup>*, and into this cross-cap the lock-bolt enters to lock the bar *w*, so that entrance into the box or fare-conduit cannot be had except by unlocking the lock by the key, when the locking-cap and the solid piece of the entrance-mouth may be removed for the purpose of cleaning.

I place the lamp immediately in the rear of the flaring or funnel mouth of the fare-conduit *g*, and sustain it by a base, *x*, shown in Fig. 9, secured to the sides of the box. This base is of the form of the lamp-reservoir, being formed concave at one side, as shown, in order to give a clear space for the direct reflection of the light upon the fare. I use for this purpose a hood-shaped reflector, *y*, sustained in position directly upon the lamp-chimney *z*, so that the reflection is concentrated and cast down from the open base of the reflector.

One side of the box is provided with an opening covered by a slide, through which access is had to the lamp.

The junction of the pivoted attachment with the upper glass fare conduit-section, *d*, may be covered by a suitable shield, so that the relation of these parts cannot be seen through the inner face-glass.

A funnel-cap, *z'*, is secured to the under side of the top over the chimney, and the smoke is carried from the box by a tube, *z<sup>2</sup>*, leading from the funnel-cap.

The usual call-bell to notify the passengers of the required payment of the fare is used in connection with the box.

I claim—

1. The combination, with a fare-conduit and an inclined entrance mouth-piece extending into said conduit, of a pivoted or hinged attachment forming one side of the upper part of the fare-conduit, and the fare-receiving slide, said attachment having such relation to the conduit as to be opened and sever its continuity therewith by the introduction of a fare-abstracting instrument, and thereby prevent such instrument reaching the fare held in the conduit, substantially as herein set forth.

2. The combination, with the basin-casting *g*, the fare-conduit of which it forms the upper part, and the mouth-piece support or solid top part *a'* covering said basin, of the inclined bottom *p* extending from the fare-entrance *a*

into said basin, substantially as and for the purpose herein set forth.

3. The combination, with the basin-casting, the fare-conduit of which it forms a part, and the inclined bottom extending from the fare-entrance into said basin, of a pivoted or hinged attachment or section forming one side of the basin, and of the upper part of the fare-conduit, substantially as herein set forth, whereby, upon the introduction of an instrument to abstract the fare, such instrument will be deflected by contact with the basin against the pivoted conduit side, and pushing it out cause such instrument to pass outside of said conduit.

4. The entrance mouth-piece of a fare-box, consisting of the rimmed mouth *a*, the inclined bottom-plate *p*, and the screw-socket lugs *n*, in combination with the solid top part *a'* of the fare-box, to which said mouth-piece is secured, substantially as herein set forth.

5. The basin or upper flaring mouth termination of the fare-conduit, consisting of the plate *h*, and the curved part extending from one side of said plate and forming the bottom, back, and top cover *i i'*, in combination with the pivoted attachment *j*, the fare-conduit and the box sides into grooves in which the said flaring mouth-casting is secured, substantially as herein set forth.

6. A fare-box in which the fare-conduit *f* is composed of glass plates inclosed by outer and inner face glass plates, the combination, with the slide or slides *g*, and the glass sections *d e*, forming said conduit, of the metallic cross-ribs *s* interposed between the glass sections, and having the rabbet *s'* to receive the slide *g*, whereby to break the continuous wall-joint, for the purpose stated.

7. The pendent cross-pin *u*, in combination with the fare-conduit and the upper slide *g*, substantially as and for the purpose herein set forth.

8. The pivoted attachment *j*, formed with sides and a curved back, in combination with the flaring mouth-plate *h*, to which it is pivoted, substantially as herein set forth, and the spring *m* for maintaining the back of said attachment in line with the inner glass sections *d d*, and the sides *j'* against the plate *h*, substantially as herein set forth.

9. The combination of the top removable locking-bar *w*, the removable top part *a'*, and the inner and outer removable glass sides, with the locking cross-bar *v*, the fastening-loop *v'*, and the fare-box, to the inner grooved sides of which said loops are secured, substantially as and for the purpose herein set forth.

10. The combination, in a fare-box, of the removable cover-part *a'*, having the entrance-mouth, and the removable metallic flaring mouth or basin termination *g* of the fare-conduit, of the locking cross-bar *v*, the loops *v'*, and the sides of the fare-box, to which said loops are secured, substantially in the manner and for the purpose herein set forth.

11. The combination, with the top part  $\alpha'$ , the removable box-glasses and the inclined bottom plate  $p$ , carried by said top part and extending into the basin, substantially as herein set forth, of the locking-bar  $\kappa$ , secured in the horizontal side grooves  $\kappa^2$ , and the locks  $\alpha^2$ , the bolts whereof lock with said bar, substantially as and for the purpose herein set forth.

12. The combination, with the fare-conduit, and the slide or slides  $q$ , of the lamp-support  $x$  formed with a concave side,  $x'$ , and the hood-

reflector  $y$ , supported upon the chimney  $z$ , by which the light is cast down upon the fare from the open base of said hood-reflector, substantially as herein set forth.

In testimony whereof I have hereunto set my hand this 27th day of September, A. D. 1879.

GEORGE BEADLE.

Witnesses:

A. E. H. JOHNSON,

J. W. HAMILTON JOHNSON.