

G. B. KOHLER.  
FARE BOX.

APPLICATION FILED APR. 14, 1911.

Patented June 17, 1913.

3 SHEETS—SHEET 1.

1,065,146.

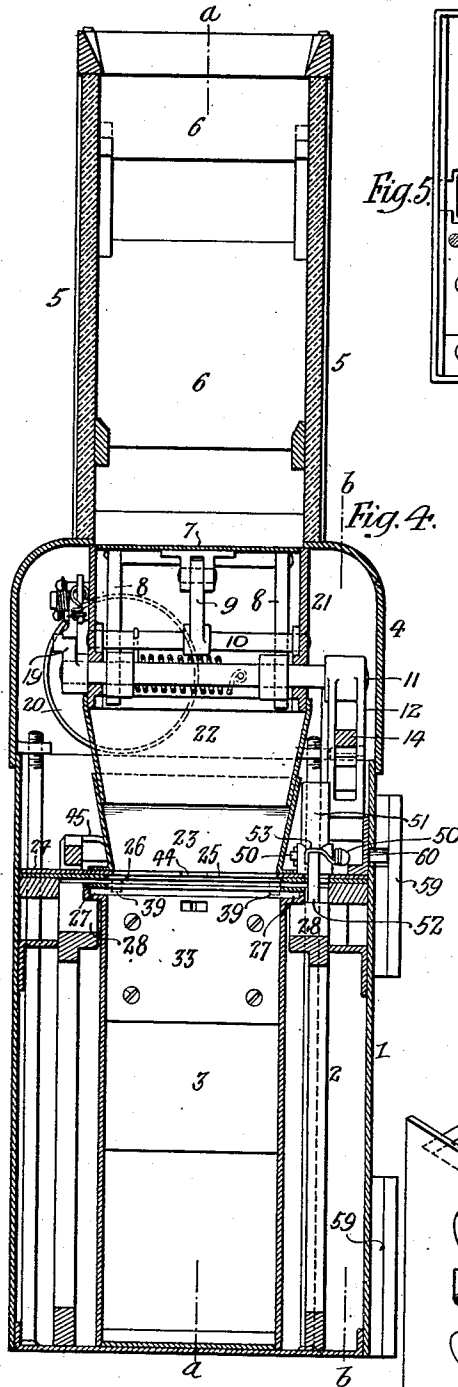


Fig. 4.

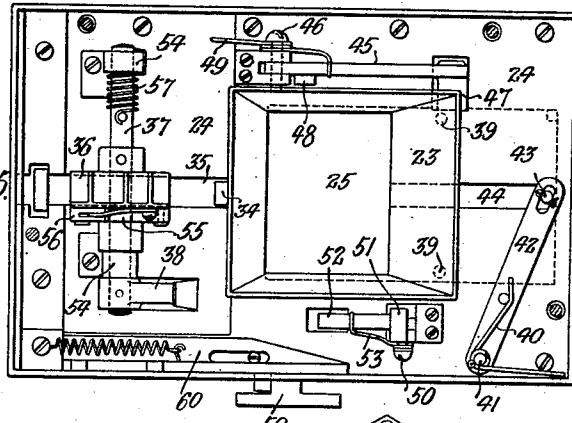


Fig. 5.

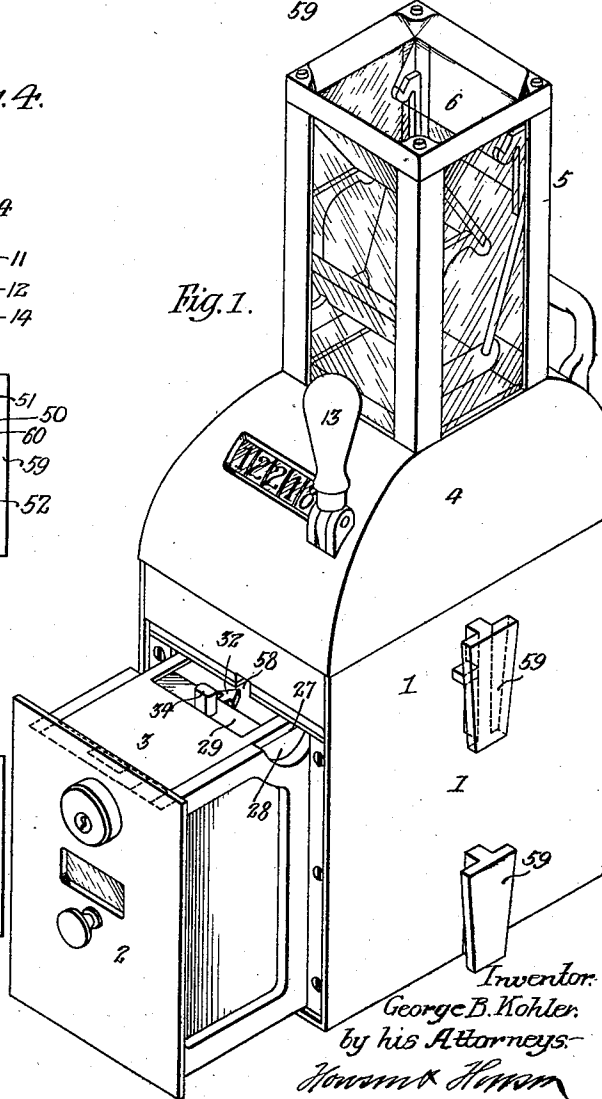


Fig. 1.

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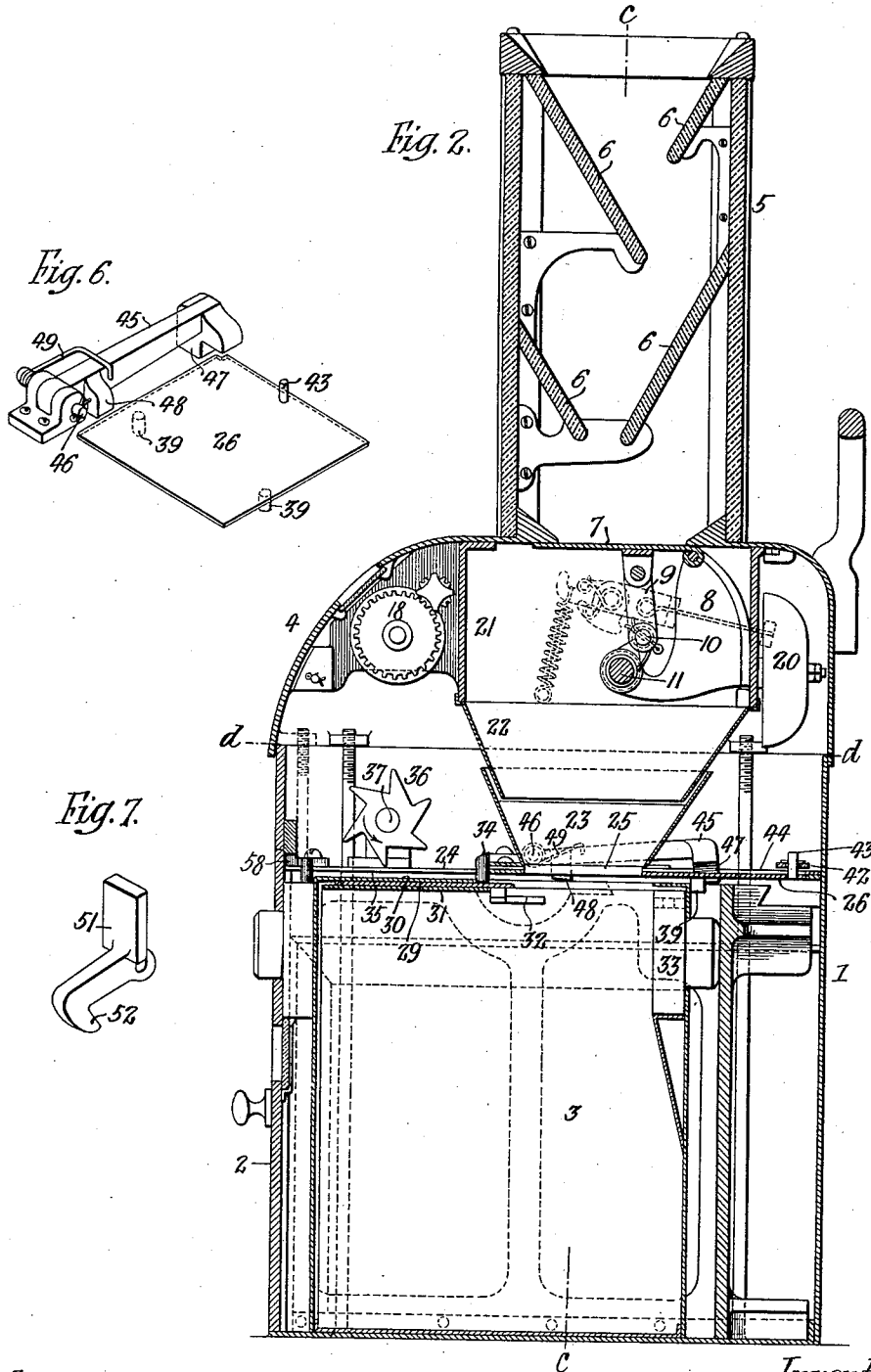
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3 SHEETS-SHEET 2.

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3 SHEETS-SHEET 3.

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Fig. 3.

Fig. 8.

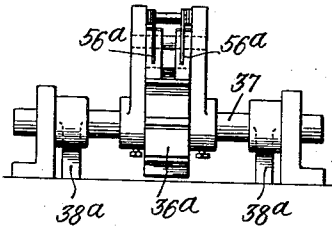
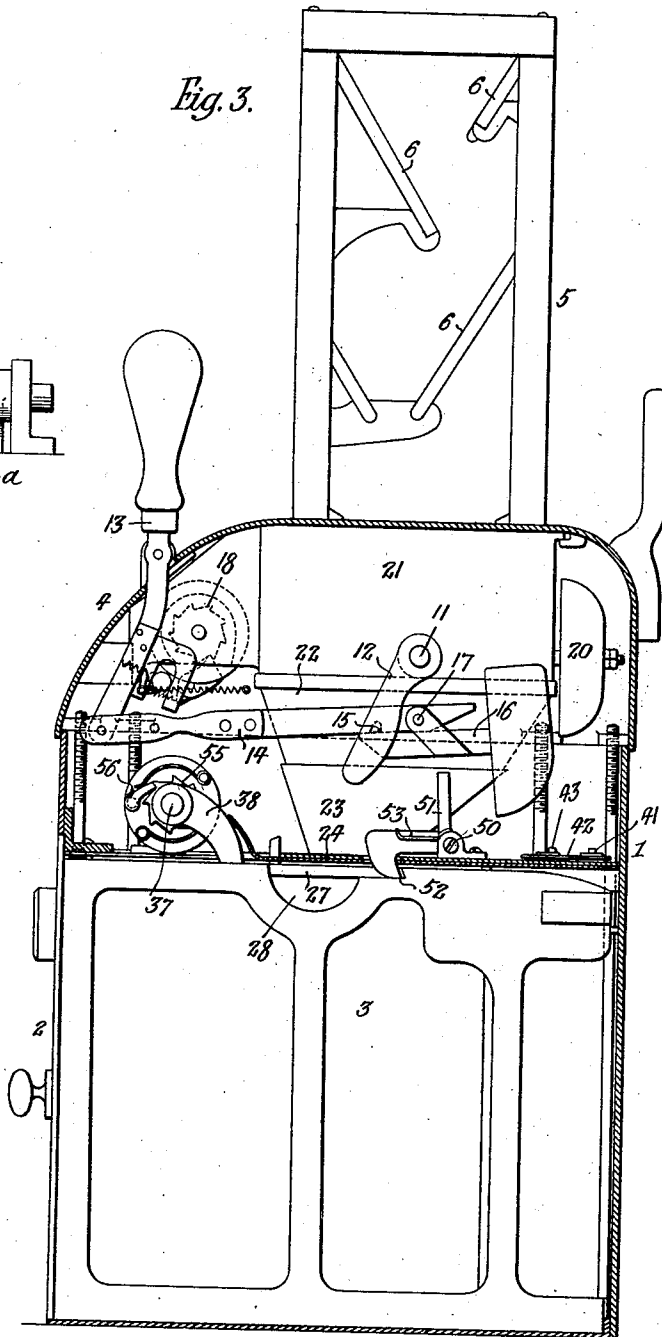
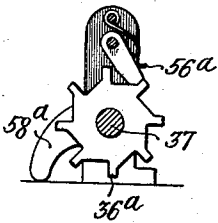


Fig. 9.



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# UNITED STATES PATENT OFFICE.

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## FARE-BOX.

1,065,146.

Specification of Letters Patent.

Patented June 17, 1913.

Original application filed February 28, 1910, Serial No. 546,371. Divided and this application filed April 14, 1911. Serial No. 621,003.

*To all whom it may concern:*

Be it known that I, GEORGE B. KOHLER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Fare-Boxes, (being a division of application filed February 28, 1910, under Serial No. 546,371,) of which the following is a specification.

My invention relates to certain improvements in fare boxes, particularly adapted for use on passenger cars where the fares are collected from the passengers as they enter the car, but it will be understood that the invention can be used for collecting money or tickets of admission in general.

The main object of my invention is to construct a fare box in such a manner that the receptacle will be closed as it is removed from the box and at the same time the opening in the bottom of the box, which normally communicates with the receptacle, will also be closed.

The invention also relates to certain details of construction which will be fully described hereafter.

In the accompanying drawings:—Figure 1, is a perspective view of my improved fare box, with the drawer partly removed; Fig. 2, is a sectional elevation on the line *a—**a*, Fig. 4; Fig. 3, is a sectional elevation on the line *b—b*, Fig. 4; Fig. 4, is a transverse sectional view on the line *c—c*, Fig. 2; Fig. 5, is a sectional plan view on the line *d—d*, Fig. 2; Fig. 6, is a perspective view of the plate valve at the lower end of the hopper, which directs the fares into the fare receptacle; Fig. 7, is a detached perspective view of the drawer retaining lever, and Figs. 8 and 9, are views illustrating modifications of the means for closing the cover of the fare receptacle.

1 is the body of the fare box.

2 is the drawer, containing the fare receptacle 3, which can be detached from the drawer when the drawer is pulled out to its full extent.

4 is a cap section for the fare box.

5 is the fare receiving section, which is mounted on the cap section; the cap section being, in turn, secured to the body 1. The fare receiving section 5 is glazed, as shown in Fig. 1, and is provided with a series of deflecting plates 6.

7 is a plate which closes the opening form-

ing communication between the fare receiving section and the body of the fare box. This plate is pivotally connected to a curved plate 8 and is also connected to a fixed pin 10 by a link 9. The plate 8 is mounted on a shaft 11, having an arm 12, which is actuated by a hand operated lever 13 through the medium of a rod 14. I preferably use a particular construction of mechanism for connecting the rod 14 with the arm 12 so that when the box is inverted, the connection between the operating lever 13 and the shaft 11 is disconnected. On the arm 12 is a pin 15, which is held in a catch on the rod 14 by a weighted arm 16, pivoted to the outer end of the rod 17, so that, when the box is inverted, the weighted arm will turn on its pivot, and will release the pin 15 from the control of the rod 14, and while the operating lever can be moved, it will not impart movement to the shaft 11.

The operating lever 13 is connected to a registering mechanism 18, of any suitable type, and the shaft 11 has an arm 19, at one end, which actuates the mechanism for striking the gong 20, when the shaft is turned.

The plates 7 and 8 are mounted in a frame 21, within the cap section 4, and depending from this frame is a hopper 22, which extends into a hopper 23, carried by a transverse partition 24 in the body 1 of the box. There is an opening 25 in this plate through which the fares pass from the hopper 23 into the fare receptacle 3 contained within the drawer 2. This opening is closed by a plate valve 26, as shown in Fig. 6, so as to retain in the hopper all of the fares which pass from the fare receiving section into the box when the fare receptacle is not in position. The fare receptacle is flanged at 27 and the drawer is notched at 28 so that the fare receptacle can be grasped at the flange by any one wishing to remove it from the drawer. The fare receptacle has a sliding cover 29 arranged to slide between the top plate 30 and the bottom plate 31. The fare receptacle also has an arrow pointed tongue 32 which engages the bolt of a lock 33 on the body of the fare receptacle. A lug 34 projects from the sliding cover plate 29 and, when the receptacle is placed in the drawer, and the drawer closed, this lug 34 travels in a slot 35, in the partition 24 and comes in contact

with the rear wall of the slot, causing the cover plate 29 to stop. When the drawer is pushed in to its full extent, the opening in the fare receptacle 3 will be directly under the opening 25 in the hopper 23. Mechanism is provided to retard the movement of the cover plate 29 when the drawer is pulled out so that the cover plate will be locked to the receptacle before the receptacle can be removed from the fare box.

A shaft 37 is mounted in bearings 54 on the frame and loosely mounted on this shaft is a toothed wheel 36. While this wheel is free to turn in the direction of the arrow, Fig. 2, it is prevented from rotating in the opposite direction independently of the shaft by the pawl and ratchet mechanism illustrated in Figs. 3 and 5. Secured to the shaft is a ratchet wheel 55 and on the wheel 36 are spring pawls 56, which engage the teeth of the ratchet wheel 55. An arm 38 is secured to one end of the shaft 37 and passes through an opening in the partition 24. It also projects into the path of the fare receptacle and rests upon the fare receptacle when the said receptacle is in position within the drawer. Mounted on the opposite end of the shaft 37 is a spring 57. One end of this spring is attached to the bearing 54 and the other end is attached to the shaft 37. The tendency of this spring is to hold the arm 38 down upon the fare receptacle.

When it is desired to remove the fare receptacle from the fare box, the drawer is pulled out. The cover plate 29 will travel with the receptacle until its lug 34 comes in contact with the toothed wheel 36. This wheel holds the cover plate and as the movement is continued, the tongue 32 on the cover plate will engage the bolt of the lock 33 of the receptacle; thus locking the cover plate in the closed position. On the continued movement of the drawer, the dog 38 will drop back of the receptacle and will allow the toothed wheel 36 to turn the distance of one tooth to release the lug 34 of the cover 29 so that the drawer can be pulled out to its full extent and the receptacle removed. The receptacle, after being removed, can be opened by the use of the proper key. As the drawer is pulled open the plate valve 26, which closes the hopper 23, is moved to the position to close the opening 25 due to the action of the spring 40. Depending from the under side of the plate valve 26 are pins 39; two, in the present instance, which extend into the path of the receptacle 3 so that, when the drawer is closed, the rear end of the receptacle contacts with the pins 39; holding the valve in the open position, as shown in Fig. 2. The spring 40 in the present instance is mounted on a pin 41 to which is pivoted an arm 42 having a pin which is engaged by the spring. This arm is slotted at its outer end and extending from the

valve 26 through a slot 44 in the partition 25 is a pin 43, which also enters the slot in the end of the arm 42.

In order to lock the plate valve 26 in its closed position, I provide a lever 45, which is pivoted at 46, Fig. 5. This lever has a projection 47, which is shaped to rest back of the plate valve 26. On the lever 45 is a projection 48, with which the receptacle 3 comes in contact when it is in position in the drawer, raising the lever 45 against the pressure of the spring 49. This movement lifts the projection 47 of the lever clear of the plate valve 26, allowing the said valve to be pushed back by the fare receptacle.

Pivoted in bearings 50 on the partition 24 is a two-armed lever 51. One arm of this lever is hooked and passes through an opening in the partition 24 so as to engage the notch 52 in the rim of the drawer 2, preventing the opening of the drawer until the lever is actuated to lift its arm out of the path of the drawer. The other arm of the lever 51 extends in the path of the arm 12 secured to the shaft 11 so that when the hand lever is operated the arm 12 strikes the lever 51, turning it on its pivot against the pressure of the spring 53 and as the shaft 11 is connected to the discharge plate 7, all fares remaining on the discharge plate, within the fare receiving section, must be discharged into the body of the fare box before the drawer can be opened.

When the drawer is partly closed, the passage of an instrument through the slot 58 will be prevented by the toothed wheel 36, as such instrument would strike one tooth of the wheel, causing the wheel to revolve until stopped by the following tooth coming in contact with the instrument, thus preventing further movement of the instrument.

In some instances, I may use the construction illustrated in Figs. 8 and 9, in which the shaft 37 has two dogs 38<sup>a</sup> and a toothed wheel 36<sup>a</sup>, which is also a ratchet. The pawls 56<sup>a</sup> are carried by arms secured to the shaft. This construction does away with the ratchet wheel and the pawls can be made more substantial than in the construction illustrated in Fig. 3.

The fare box may be mounted in any suitable manner, and in Fig. 1, I have shown T-headed projections on the side of the body portion 1, which may enter sockets in any suitable support.

60 is a bolt for locking the box to its support and this bolt may be actuated by the operating lever 13. This mechanism, as well as the general construction of the fare box, is fully set forth and claimed in an application filed February 28, 1910, Serial Number 546,371, of which this is a division.

I claim:

1. The combination in a fare box, of a drawer mounted in the bottom of the box; a

fare receptacle in the drawer; a sliding cover for the receptacle; said cover having a projection; a toothed wheel mounted in fixed bearings and arranged in the path of the projection; means for preventing the rotation of the wheel in one direction, yet allowing it to turn freely in the opposite direction; and means extending into the path of the receptacle so that upon opening the drawer the wheel will be prevented from moving in one direction and will block the movement of the projection so that the sliding cover will be closed during the first portion of the opening movement of the drawer; the wheel being released from the control of the receptacle during the last movement of the drawer in order to allow the pin to pass the wheel.

2. The combination in a fare box, of a body portion having a transverse partition; a drawer mounted under the partition; a fare receptacle in the drawer; a sliding cover for said receptacle having a lug; a shaft on the body portion; a toothed wheel mounted on the shaft in the path of the said lug; a dog secured to the shaft projecting rearwardly and resting upon the receptacle; a pawl and ratchet mechanism between the shaft and the toothed wheel so as to prevent the wheel

moving independently of the dog in one direction, yet allowing free movement of the wheel in the opposite direction so that on opening the drawer, the cover of the fare receptacle will be automatically closed; the lug being released when the dog drops back of the end of the receptacle so as to allow the drawer to be opened to its full extent for the removal of the fare receptacle.

3. The combination in a fare box, of a body portion having a transverse partition, a drawer mounted under the partition, a fare receptacle in the drawer, a sliding cover for said receptacle having a lug, a toothed wheel arranged to hold the lug until the cover is closed and locked, a shaft on which the wheel is mounted, a dog on the shaft arranged to drop back of the receptacle when the drawer is opened, and pawl and ratchet mechanism between the shaft and the toothed wheel.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE B. KOHLER.

Witnesses:

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- WM. A. BARR.