A. J. CHMURSKI.

FARE BOX.

APPLICATION FILED APR. 5, 1920.

1,373,798.

Patented Apr. 5, 1921.

2 SHEETS—SHEET 1.

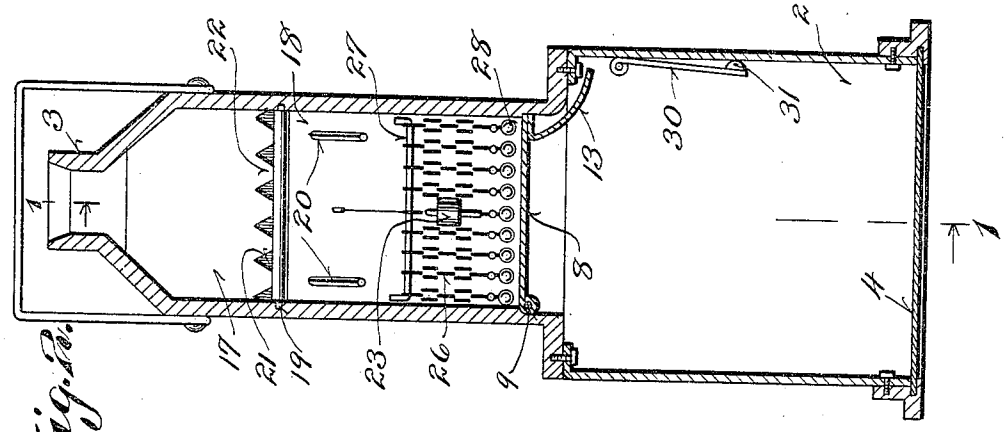


Fig. 2.

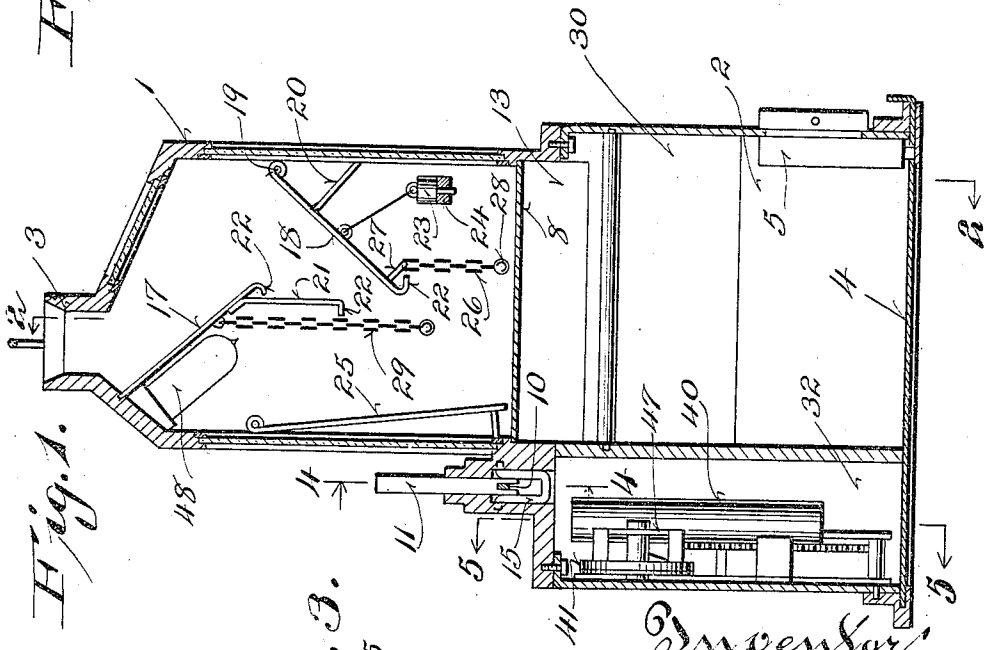


Fig. 1.

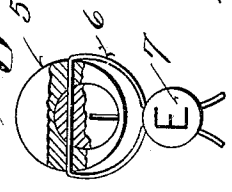


Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 5.

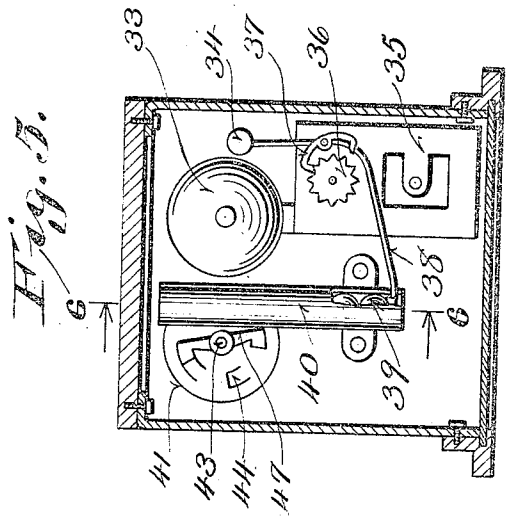


Fig. 6.

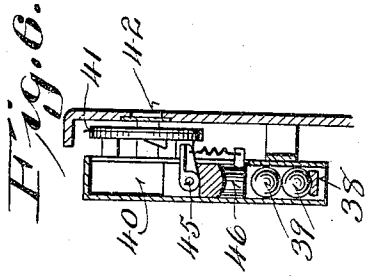
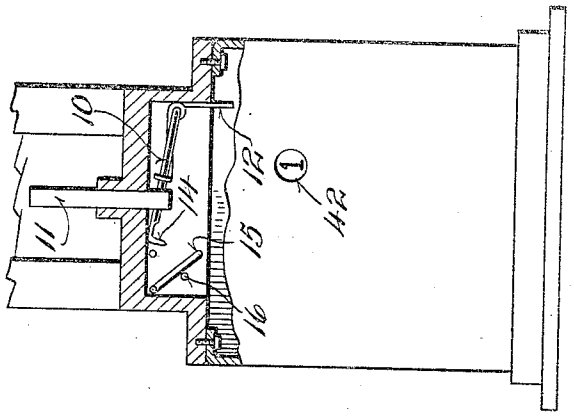


Fig. 4.



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UNITED STATES PATENT OFFICE.

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FARE-BOX.

1,373,798. Specification of Letters Patent. Patented Apr. 5, 1921.

Application filed April 5, 1920. Serial No. 371,405.

To all whom it may concern:

Be it known that I, ANTON J. CHMURSKI, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Fare-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to new and useful improvements in fare boxes for use upon street railway cars and other vehicles, and elsewhere where money or tickets are collected.

It is the primary object of this invention to provide a fare receptacle from which it is impossible for either money or tickets to be removed by unauthorized persons without mutilation of the box. Heretofore it has been possible for money and tickets to be shaken from the fare boxes at present in use when the same are inverted. This is obviated in the present invention.

It is an object of the invention to provide a two compartment fare box separated by a movable partition which carries a means for compressing tickets or other fares in the storage compartment or for moving the same out of the path of the partition so as to permit additional fares to pass into the said storage compartment from the receiving compartment.

It is likewise an object of the invention to provide a means for preventing tickets from adhering to the upper baffle plate adjacent the inlet into the box to thus eliminate the possibility of clogging.

With these and other objects in view which will become apparent as the description proceeds, the invention resides in the novel features of construction, combination and arrangement of parts which will be hereinafter more particularly described and claimed.

In the accompanying drawings:

Figure 1 represents a vertical sectional view taken on the plane of the line 1—1 of Fig. 2.

Fig. 2 is a similar section taken at right angles to the section of Fig. 1 and upon the plane of the line 2—2 of said figure.

Fig. 3 is a detail elevational view, partly in section, of the lock which is used to retain the fare box closure in normal position.

Fig. 4 is a part elevational and part sectional view, the section being indicated by the line 4—4 of Fig. 1.

Fig. 5 is a vertical section on the plane of the line 5—5 of Fig. 1, and

Fig. 6 is a detail sectional view upon the plane of the line 6—6 of Fig. 5.

Referring more particularly to the accompanying drawings, it will be seen that the present fare box, following the custom of the ordinary fare receiving receptacle at present in use, includes an upper receiving compartment 1 and a lower storage compartment 2, the former having a plurality of transparent sides so that the fare collector can see whether or not the proper fare has been deposited; the lower storage compartment is entirely closed and is adapted to provide a receptacle to receive a large number of fares. Entrance into the upper receiving compartment is obtained through the usual inlet 3, while the fares can be readily removed from the lower storage compartment by sliding out a bottom plate 4. Such bottom is normally retained in closed position by means of a lock 5, the different parts of which are adapted to receive a seal-wire 6 and retain the lock against unauthorized opening. A seal 7 secures the ends of the wire 6 together as shown in Fig. 3.

The upper and lower compartments are separated by a partition plate 8 hinged as at 9 along one longitudinal edge to one wall of the receiving compartment, the opposite longitudinal edge being in engagement with the adjacent receiving compartment wall when the same is closed or is in horizontal position as indicated in Fig. 2. The fulcrum of the plate 8 is provided with a crank 10 with which a vertically reciprocative handle 11 engages. A spring 12 normally holds the partition plate closed and the handle 11 extended, but the crank 10 and said plate are swung upon the pivot of the latter by downward pressure on said handle.

The free longitudinal edge of the plate 8 which swings into the storage compartment 2 upon downward movement of the handle 11 is liable to be interfered with by the quantity of fares in said compartment. Therefore in order to pack said fares or move them out of the path of the partition plate 8 when the compartment 2 has become nearly filled, I provide an arcuate lip 13, which may be termed a ticket pusher, the same extending obliquely to the under side of the

partition plate and secured thereto adjacent said longitudinal free edge.

It is obviously desirable to prevent the return of fares from the storage compartment to the receiving compartment, and since this can only be accomplished when the fare box is inverted, I provide an arrangement for holding the partition plate 8 against opening movement when the fare receiving receptacle is positioned with the receiving compartment downwardly. One means of accomplishing this result is shown in Figs. 1 and 4, wherein it will be noted that the crank 10 is provided with a latch finger 14 for coöperation with a substantially U-shaped loop or yoke 15. When the fare box is in proper position, the weight of this loop, which is hinged at one end, disposes it against the stop 16 and out of the path of movement of the latch finger 14. When, however, the fare box is inverted, the free end of the latch loop will be swung into engagement with the latch finger 14 to hold the crank against being moved by the handle 11.

Any fares which do not pass into the storage compartment 2, or are held within the receiving compartment on the partition plate 8 cannot be shaken or otherwise removed from the latter in view of the baffle means employed. This includes a stationary baffle plate 17 located directly beneath the inlet 3 and at such an incline as to direct fares onto the pivoted baffle plate 18 which is fulcrumed at its upper edge as at 19. The lower edge of the latter is preferably located substantially directly beneath the lower edge of the stationary baffle plate 17 and is held in this position by spacing legs 20. The baffle plates are thus staggered with respect to each other and the space between the lower edges thereof is partially closed by an apron 21 depended from the under side of the upper or stationary plate 17.

The free edges of the plates 17 and 18 and the apron 21 are all provided with teeth 22 so that if a person inserts an instrument in the receiving compartment 1 through the inlet 3, the same is liable to be caught. An inspector, upon seeing the instrument secured in the receiving compartment, will know that an attempt has been made to tamper with the contents of the fare box. He is further warned that such is the case if a tell-tale 23, which is in the form of a weight carried by the pivoted baffle plate 18, has been displaced from its usual support 24.

By having the lower baffle plate 18 disposed in staggered relation to the stationary upper baffle plate 17 and pivoted in the manner shown, it is obvious that as soon as the fare box is moved out of normal upright position, such plate 18 will swing into engagement with the apron 21, thus closing the lower portion of the receiving compartment from the upper. A further protection is provided by a guard plate 25 which is pivoted at its upper edge and hangs downwardly, as shown in Fig. 1, beneath the stationary baffle plate 17. This plate 25 also coöperates with the other plates 17 and 18 to completely separate the lower portion of the receiving compartment from the upper when the fare box is inverted, placed on its side or otherwise moved from a normal upright position.

As a further precautionary measure the pivoted baffle plate 18 carries a row of flexible baffle members in the form of chains 26, the upper ends of which are loosely disposed for sliding movement on a rod 27 carried by the underside of the plate 18. Weights 28 on the free ends of the chains 26 hold the same vertical and also aid in quickly throwing the chains into engagement with one side or the other of the receiving compartment when the fare box is disposed on either of its sides. In other words these chains lay against the lowermost side of the receiving compartment 1 when the fare box is in the last mentioned position so as to prevent the escape of fares between the walls of the said receiving compartment and the adjacent edges of the plates 17 and 18. The stationary plate 17 also supports a number of baffle chains 29 for substantially the same purpose as the chains 26.

Like the receiving compartment 1, the storage compartment 2 also has a guard plate 30 for preventing the possible discharge of fares. This plate 30, however, is pivoted to one wall of the storage compartment in such a position that it will be thrown over the free edge of the partition plate 8 when the fare box is inverted. This guard plate 30 is provided as a supplemental means to the partition plate locking means including the latch finger 14 and latch loop 15 in case the latter fail to operate. When the fare box is properly positioned, a weight 31 on the free edge of the guard plate 30 disposes the same against one side wall of the storage compartment 2.

In a chamber 32 formed in one end of the storage compartment 2 is located an alarm mechanism, which consists of a bell or other sounding device 33, a clapper 34, and a clock-work 35 for actuating the clapper under certain conditions. An escapement wheel 36 and an escapement 37 which are usual parts of a clock-work mechanism control the movements of the clapper 34 and are in turn held in operative or inoperative position by a release arm 38. So long as the fare box remains in normal upright position, the clapper 34 is held inactive.

As soon, however, as said fare box is inverted, or tilted, the arm 38 is released and the alarm is sounded. The release is pro-

cured by removing one or more weights 39 from the end of the release arm 38 which is disposed within the cylinder 40, said weights being normally in engagement with said arm as the result of gravity action. Thus each time the weights 39 are shifted out of engagement with the arm 38, the clock-work mechanism becomes active and sounds the alarm.

The number of times up to a certain limit, that the fare box has been tampered with is visually indicated by numbers disposed on a dial 41 and visible through sight openings 42 in one wall of the storage compartment 2. This dial 41 which is rotatable on an axis 43 is provided with a plurality of teeth 44 any one of which is designed to be struck by a trip 45. This trip is carried by a plunger 46 non-rotatively and slidably mounted within the cylinder 40. Being normally located adjacent the weights 39, the plunger is shifted each time the fare box is inverted, and on each of said occasions the dial 41 is rotated to expose one of its characters through the sight openings 42. A double acting pawl 47 holds the dial against retrograde movement by engagement with the teeth 44 as shown in Fig. 5. Means is also provided for preventing further operation or rotation of the dial 41 when a predetermined character thereon is exposed through the sight opening. In other words, if the characters run from one to five and if five has been exposed as a result of the fare box having been tampered with five times, the dial will be held against additional movement.

When the weather is cold and the temperature below freezing, tickets are liable to adhere to the baffle plate 17 if they are moistened, for instance by having been held in a person's mouth. Obviously the accumulation of several tickets in the baffle plate 17 will tend to clog the fare box and cause delays in collecting fares. To overcome this diffculty, I have disposed a heating element 48 beneath the plate 17. In the present instance this heating element is in the form of a small incandescent lamp, the current for which may be readily supplied through suitable wires extended through the wall of the fare box.

From the foregoing description taken in connection with the accompanying drawings, it is evident that I have invented a relatively simply constructed fare receptacle which will eliminate the possibility of customers cheating the fare collector, since the amount of the fare deposited can be seen through the receiving compartment walls, which will prevent fare collectors and others from removing fares deposited, and will indicate whether or not an attempt has been made to remove said fares. Various changes may be made in the form and proportion of the different parts of the receptacle and in the manner of locating the various mechanisms without departing from the principles as outlined in the following claims.

I claim:

1. In a receptacle of the class described, a receiving compartment having an article inlet, a storage compartment below the receiving compartment, a partition plate separating the compartments, means for moving the partition to open position when the receptacle is in normal location, and means for preventing the operation of the last mentioned means when the receptacle is inverted.

2. In a receptacle of the class described, a receiving compartment having an article inlet, a storage compartment below the receiving compartment, a partition plate separating the compartments, means for moving the partition to open position when the receptacle is in normal location, and a pusher plate carried by the partition plate for engagement with the articles in the storage compartment to pack the same when the partition plate is moved to open position.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

ANTON J. CHMURSKI.