

July 12, 1949.

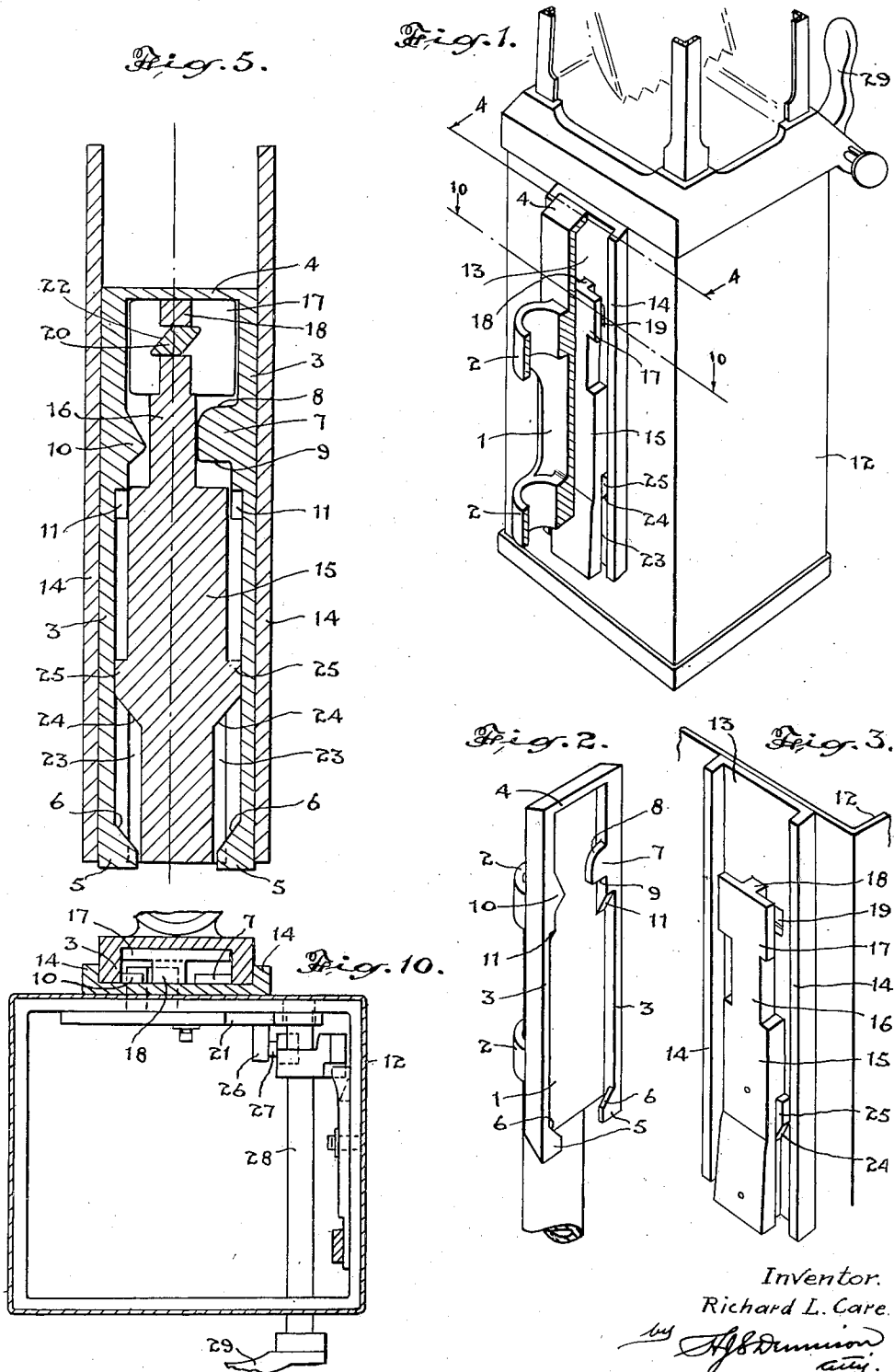
R. L. CARE

2,476,134

FARE BOX SUPPORTING AND LOCKING MEANS

Filed Jan. 26, 1945

2 Sheets-Sheet 1



July 12, 1949.

R. L. CARE

2,476,134

FARE BOX SUPPORTING AND LOCKING MEANS

Filed Jan. 26, 1945

2 Sheets-Sheet 2

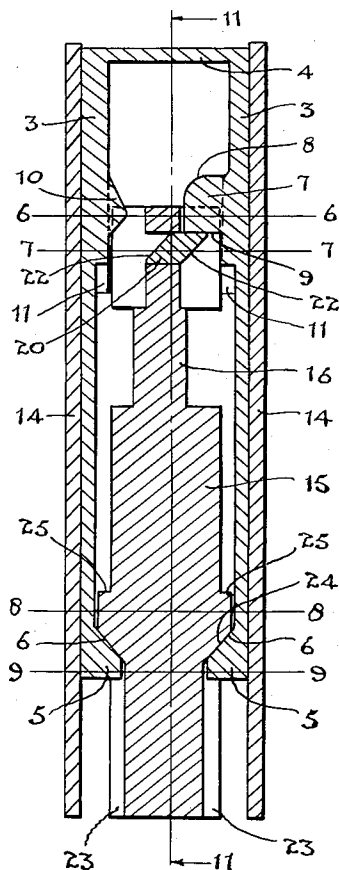


Fig. 4.

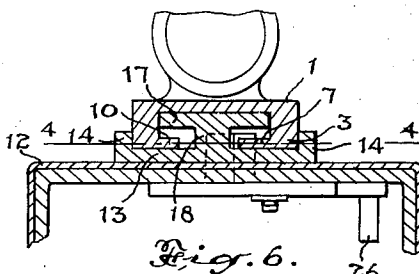


Fig. 6.

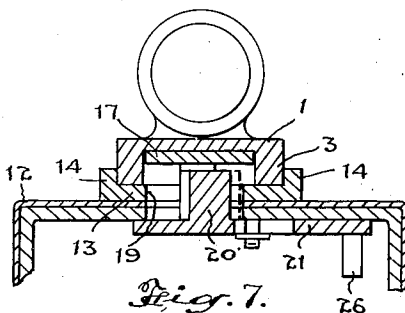


Fig. 7.

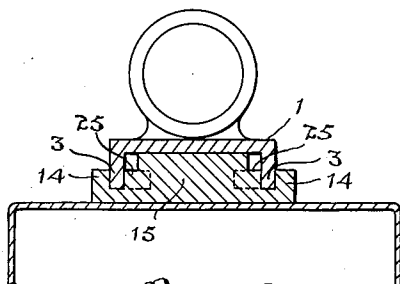


Fig. 8.

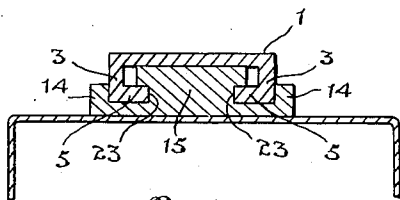


Fig. 9.

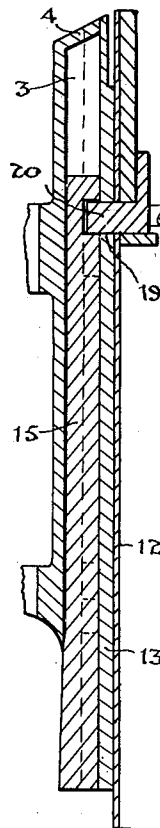


Fig. 11.

Inventor:
Richard L. Care.

by *Alb. D. Dunnington*
att'y.

UNITED STATES PATENT OFFICE

2,476,134

FARE BOX SUPPORTING AND LOCKING
MEANS

Richard L. Care, Toronto, Ontario, Canada

Application January 26, 1945, Serial No. 574,672

6 Claims. (Cl. 232—7)

1

The invention relates to improvements in fare boxes for use in public conveyances which are detachably mounted on a fixed stanchion in the vehicle and are adapted for removal for checking and emptying the contents at the end of a run and the principal object of the invention is to ensure the locking of the box upon the supporting stanchion, thereby protecting both the operator and the owner against the box or its contents being removed by unauthorized persons.

The principal feature of the invention consists in the novel construction of the mating members on the box and its supporting stanchion and the construction and arrangement of the locking mechanism whereby the box cannot be supported in an operative position on the stanchion without being securely locked.

In the accompanying drawings Figure 1 is a perspective view of the lower fare-receiving portion of a fare box constructed in accordance with this invention showing a portion of the box-supporting stanchion bracket in longitudinal mid-section.

Figure 2 is a perspective view of the socket face of the supporting stanchion bracket.

Figure 3 is a perspective view of the mating member for the socket arranged in juxtaposition to said socket.

Figure 4 is an enlarged vertical sectional view of the interlocking box-supporting members taken on the line 4—4 of Figure 1 and Figure 6.

Figure 5 is a view similar to Figure 4 showing the relative position of the interlocking box-supporting members when the mating member of the box is first inserted into the socket member on the stanchion.

Figure 6 is a cross section taken through the line 6—6 of Figure 4.

Figure 7 is a cross section taken through the line 7—7 of Figure 4.

Figure 8 is a cross section taken through the line 8—8 of Figure 4.

Figure 9 is a cross section taken through the line 9—9 of Figure 4.

Figure 10 is an enlarged sectional detail of a portion of the lock mechanism of the fare box taken on the line 10—10 of Figure 1.

Figure 11 is a vertical sectional view taken on the line 11—11 of Figure 4.

In the use of detachable fare boxes where the box is mounted on a stanchion in the street car, bus or other vehicle it is customary for the operator when he reaches the end of his run to unlock the box from its supporting stanchion and take it in to the office where he reports.

2

In removing the box by operating an unlocking lever a mechanism within the box automatically closes the fare-receiving chambers so that fares therein are protected against unauthorized removal.

The person to whom the operator reports may with special keys seal the fares within an inner compartment or the fares may be removed and the box is then taken by another operator and replaced in its stanchion.

It is important that the box, when replaced in its stanchion, shall be securely locked until that operator's run is completed for the protection of the operator and owner so that somewhere during the run the box may not be removed and the contents stolen, and the present invention has been particularly devised to ensure the proper locking of the box in its place in the vehicle. Then when it is unlocked the contents will be again sealed until the box is in the custody of the person authorized to open it.

In the accomplishment of this result I have devised the construction shown in the drawings.

A suitable stanchion is arranged in the vehicle and on this is rigidly and permanently mounted a socket plate 1 which is shown in Figure 1 provided with a pair of rings 2 for mounting upon the stanchion. The plate 1 is formed with longitudinal edge flanges 3 and a top flange 4, the edges of which are flush.

The edge flanges 3 are each formed with an inwardly projecting lug 5 at the lower end, the upper edges 6 of which are beveled downwardly and said lugs are spaced from the inner face of the plate 1.

A locking lug 7, formed with a rounded or beveled upper edge 8 and a right angular bottom edge 9, extends inwardly from one of the longitudinal side flanges 3 at a point adjacent to but spaced from the top end flange 4. This lug is also spaced from the inner face of the plate 1.

A lug 10 having beveled angularly disposed edges extends inwardly from the other edge flange at a point opposite to the lug 9 and it is likewise spaced from the inner face of the plate.

The portions of the longitudinal edge flanges below the lugs 7 and 10 are preferably thinner than the upper portions and beveled offsets 11 slope from the edge faces of the flanges in a downward direction.

The bottom section 12 of the fare box has secured to one of its sides and extending longitudinally thereof a plate 13 which is formed with a pair of longitudinal parallel side flanges 14 which extend from end-to-end thereof and these

3

are spaced apart to permit the easy entry of the flanged socket plate 1 therebetween.

Arranged centrally between the side flanges 14 and spaced therefrom is a block 15 forming an integral part of the plate 1 which extends from the bottom end of the plate upwardly to a point spaced from the top thereof a distance substantially equal to the distance between the end flange 4 and the bottom of the locking lug 7, the said block projecting from the inner face of the plate 13 a distance slightly less than the depth of the edge flanges of the plate 1, so that when the plate 13 is placed in position to engage the plate 1 the face of the center block 15 will fit close to the inner face of the socket plate while the flush longitudinal faces of the flanges 3 and 4, which fit between the side flanges 14, engage the inner face of the plate 13.

The block 15 is formed with a narrowed waist portion 16 adjacent to its top end, of a width adapted to slip between the points of the lugs 7 and 10 of the plate 1 while the upper rectangular portion 17 enters the portion of the socket of the plate 1 above the said lugs when the plates are being assembled together.

The rectangular portion 17 is spaced from the inner face of the plate 13 being supported by a narrow center rib 18.

A horizontal rectangular slot 19 extends through the plate 13 approximately centrally of the length of the spaced rectangular portion 17 of the center block, through which the locking bolt 20 extends.

A corresponding slot in the wall of the box 12 registers therewith and the lock bolt 20 is secured to a bar 21 slidably mounted transversely inside the box.

The bolt 20 is formed with parallel beveled ends 22, one of which is adapted to engage the beveled upper edge 8 of the lug 7 when the plates 1 and 13 are being assembled and the bolt thus slides horizontally to pass the locking lug as the plate 13 moves downward after being inserted into the socket. Said bolt is spring-operated to snap under the lug 7 as the top edge thereof moves below the bottom edge 9 of the lug.

The opposite beveled lug 10 is adapted to engage the other beveled end of the bolt to ensure its moving into locking engagement with the lug 7 as the box drops into place.

The side edges of the lower end of the block 15 are formed with undercut vertical grooves 23 which terminate in upwardly and outwardly beveled stop surfaces 24 which are carried laterally beyond the side edges of the block by integrally formed lugs 25.

The beveled surfaces 24 are adapted to come into engagement with the beveled upper edges 6 of the stop lugs 5 of the socket plate 1 and form rigid supports for the box when it drops into its final position. These cooperating lugs 5 and 24 support the box so that the bolt 20 moves freely.

It will be particularly noted that the flanges 14 of the box plate 13 extend free of any obstruction from end-to-end and the sole support of the box is the beveled upper edges 6 of the lugs 5 which are spaced from the inner face of the plate 1 and are arranged at the open bottom end of the socket plate.

These narrow beveled surfaces offer no support upon which any object may be placed to hold the box from moving down to its lowermost position and preventing the lock bolt from moving into locking position under the lug 7.

Further, it will be noted that the flanges 3 of the socket plate 1 extend from end-to-end of

4

the plate and the retaining side flanges 14 of the box plate 13 overlap the socket flanges from end-to-end and positively prevent the insertion of any instrument between them to interfere with the normal functioning of the lock bolt or to move it from its locked position.

The lock bolt bar 21 is provided with a pin projection 26 which is engaged by a lever 27 connected with the operating shaft 28 so that upon the turning of the shaft by the hand lever 29 the lever 27 engages the pin 26 to slide the bar 21 and move the lock bolt to clear the locking lug 7. The box may then be lifted clear of the stanchion.

In replacing the box on the stanchion the plate 13 on which the box is secured is manipulated to introduce the lower end of the block 15 between the lugs 5 and the inner face of the plate 1 and the rectangular portion 17 of the center block is inserted into the socket in the member 1 above the locking lug 7. When thus inserted the narrow waist portion 16 of the center block passes between the points of the lugs 7 and 10 and the beveled bolt is above the lug 7.

As the box is lowered the edge flanges of the plate 1 slide in contact with the face of the plate 13 between its side flanges and the center block, the rectangular portion 17 of the block slipping between the lugs 7 and 10 and the inner face of the plate 1. Coincidentally the beveled under surface 22 at one end engages the beveled top edge of the lug 7 and the bolt slides laterally until it passes the lug, and as the top edge of the bolt passes the bottom edge of the lug, the lug 10 engages the other beveled end of the bolt and forces it under the lug 7.

Coincident with the passing of the top edge of the bolt under the locking lug 7, the beveled surfaces 24 of the lugs 25 engage the top beveled edges 6 of the lugs 5 of the plate 1 and the box then comes to rest and is securely locked so that it can only be opened in an authorized manner.

It will be readily understood that the support of the box depends upon the engagement of the beveled edges 24 of the lugs 25 and the beveled edges 6 of the lugs 5 thus forming a wedging contact which will hold the box tightly from rattling and any wear that takes place will not impair either the locking feature or the anti-rattling feature, the two members forming a snug fit at all times.

What I claim as my invention is:

1. Means for supporting and locking a fare box on a supporting stanchion, comprising a member mounted on a stanchion having side and top flanges forming a socket open at the bottom, a member mounted on the fare box adapted to engage the inner face of the socket of the stanchion member and close and seal the lower end of said socket and having longitudinal edge flanges adapted to engage the outer side of the side flanges of the stanchion member from end-to-end, downwardly beveled lugs extending inwardly from the bottom ends of the side flanges of the stanchion member adapted to support the box member, slidable means extending from the fare box through the flanged member thereon to engage the stanchion member and lock the fare box member to the stanchion member and beveled lug means for forcing said slidable means into locking engagement with the stanchion member.

2. Means for supporting and locking a fare box on a supporting stanchion, comprising a member mounted on a stanchion having integral top and side flanges forming a socket open at

5

the bottom, beveled lugs extending inwardly from the bottom ends of said side flanges and spaced from the inner face of said socket member, a member mounted on the fare box having integral longitudinal edge flanges adapted to engage the outer edges of the longitudinal edge flanges of the stanchion member throughout their length, a block integral with the box member and spaced between the side flanges thereof adapted to close the space between the side flanges of the stanchion member at the bottom thereof, means between said block and side flanges of the box member adapted to engage and rest upon the beveled bottom lugs of the stanchion member, slidable means for locking the box member on the stanchion member and beveled lug means mounted on said stanchion member to force said slidable locking means into locking engagement with the stanchion member when said box member is positioned to rest on said beveled bottom lugs.

3. A device as claimed in claim 2 in which the block portion of the box member is formed with longitudinal grooves in the lower ends of the sides thereof adapted to receive the beveled lugs at the bottom ends of the side flanges of the stanchion member, the means for engaging the beveled top edges of said lugs being arranged at the top of the grooves in said block and extending to the inner wall of the side flanges.

4. A device as claimed in claim 2 in which the block of the box member is formed with a transverse slot adjacent to the top in which the locking member operates, the stanchion member having a beveled lug extending inwardly from one of the side flanges under which the locking member extends to lock the box in place on the stanchion.

5. A device as claimed in claim 2 in which a beveled lug extending inwardly from one of the side flanges of the stanchion member is spaced from the inner face of the socket of said stanchion member, the block portion of the box member having a rectangular portion spaced from the

6

back face thereof and adapted to extend between the back plate of the stanchion member and the spaced locking lug, the transversely slidable lock member being operatively arranged back of said rectangular plate.

6. Means for supporting and locking a fare box on a supporting stanchion, comprising a member mounted on the stanchion having integral top and side flanges forming a socket open at the bottom, beveled lugs extending inwardly from the bottom ends of said side flanges and spaced from the inner face of said socket member, beveled locking lugs extending inwardly from the side flanges of the stanchion member at points spaced below the top flange and spaced from the inner face of the socket member, a member mounted on the face of the box member having grooved side edges adapted to receive the bottom edge lugs of the stanchion member and grooved side edges to receive the beveled locking lugs, the upper ends of the lower side grooves terminating in beveled surfaces to engage and rest upon the beveled upper edges of said lower lugs, and a transversely operable locking member mounted in the box member adapted upon engagement with one of said locking lugs to be moved into locking contact with the other of said locking lugs of the stanchion member to lock said box member to said stanchion member.

RICHARD L. CARE.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
807,888	Wallace	Dec. 19, 1905
813,537	Townsend	Feb. 27, 1906
918,385	Smith	Apr. 13, 1909
1,512,515	Woods	Oct. 21, 1924
1,594,125	Sibley	July 27, 1926
1,793,466	Cox	Feb. 24, 1931
2,303,985	Carter et al.	Dec. 1, 1942