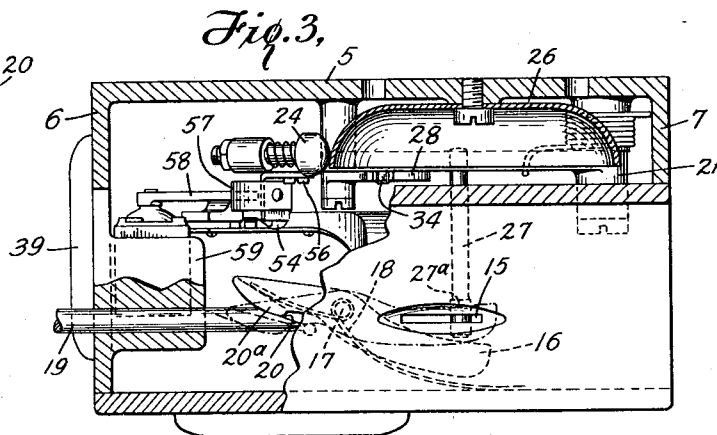


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2 Sheets-Sheet 1



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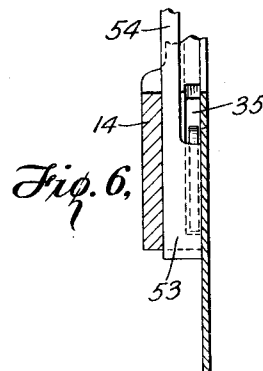
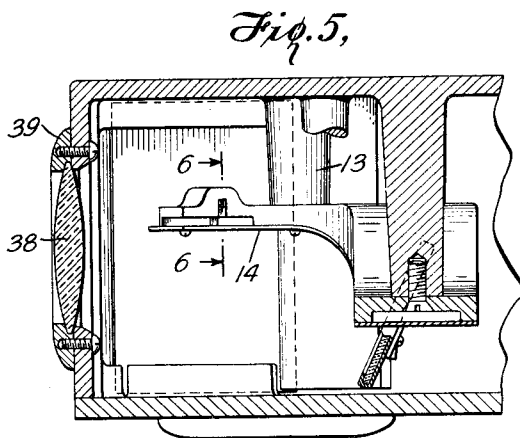
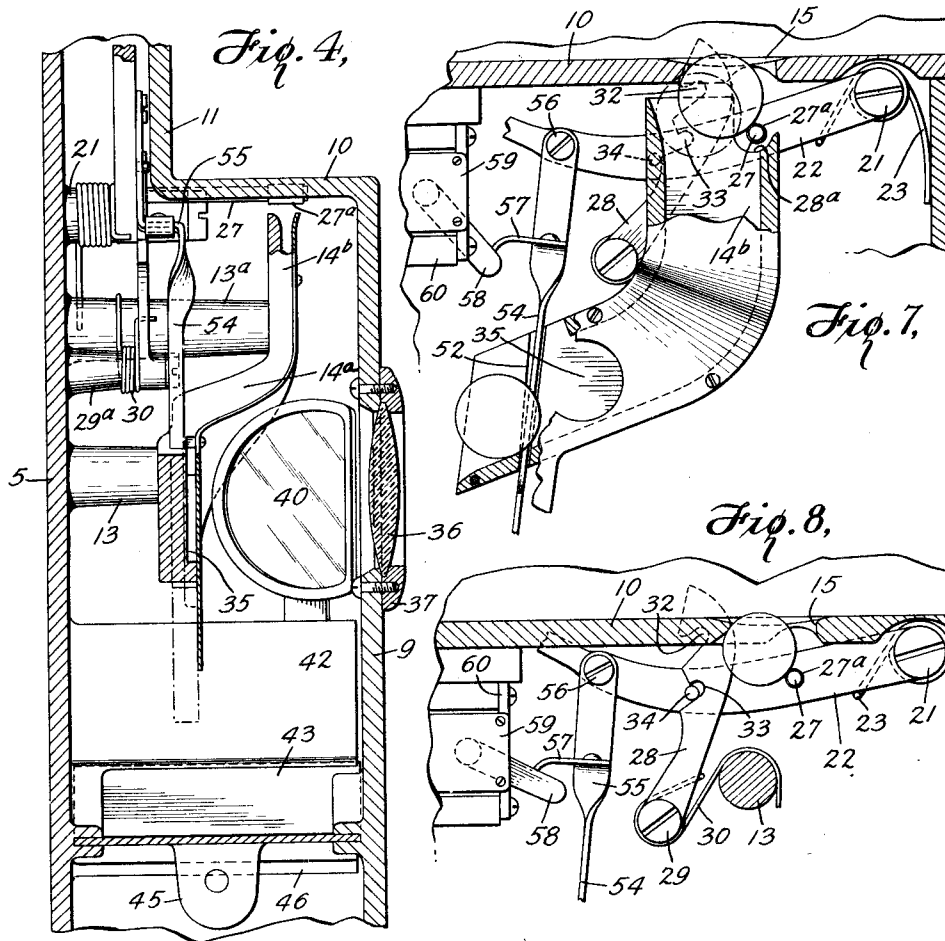
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CASH FARE REGISTER

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2 Sheets-Sheet 2



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CASH-FARE REGISTER

Application filed February 5, 1927. Serial No. 166 111.

This invention relates to cash fare registers.

The object of our invention is to provide a portable, mechanically operated fare register particularly designed for use in transportation vehicles, such as street cars, motor buses and other conveyances wherein a cash fare is deposited upon entering or leaving the same.

One of the objects of our invention is to provide in a portable cash fare register means whereby the deposited coin may be observed in at least from two positions and by the passenger and operator of the vehicle.

Another object of our invention is to provide in a cash fare register of the above type automatic means for interrupting a signal when an unauthorized coin for instance is deposited and including provision for actuating an automatic counter only when the proper coin is deposited.

A continued object of our invention is to provide in a cash fare register an inclined coin chute means for interrupting the passage of a coin whereby it may be observed by the passenger and operator including provision for automatically actuating a signal and an automatic register only when the proper coin is deposited.

To enable others skilled in the art to fully appreciate and understand the above objects and others that they may embody the same in the practical application and uses to which the invention is directed, drawings depicting a preferred embodiment are annexed hereto as a part of our specification and in which drawings

Fig. 1 is a perspective view of the register.

Fig. 2 is a view, parts being in section, showing the interior mechanism of the register.

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 2.

Fig. 5 is a sectional view taken on the line 5—5 of Fig. 2.

Fig. 6 is a detail view in section showing the coin slot in the coin chute and the coin interrupting means.

Fig. 7 is an enlarged detail view, partly in section showing the coin chute and the clapper arm.

Fig. 8 is an enlarged detail view, partly in section showing the lock or catch lever and its relation to the clapper arm.

Fig. 9 is a detail showing the gate opening pin.

Referring now to the drawings wherein like reference characters designate corresponding parts throughout the several views, there is provided a metal casing preferably constructed of aluminum alloy or other suitable strong and durable metal and comprising a rear wall 5, and end walls 6, 7 which may be cast integral therewith, and a bottom 8 constituting a housing for the interior mechanism. A front cover or closure 9 having an offset top 10 and top wall portion 11 is detachably secured to the housing in any suitable manner, it being noted that the end walls are of reduced width at the upper portion thereof as indicated at 12, thus enclosing the housing and the operating mechanism, permitting access thereto for inspection and replacement or repair of the operating mechanism, now to be described.

The rear wall is cast integral with an inwardly extending bracket 13 and post 13^a which supports an inclined coin chute 14, said chute being offset as at 14^a and rising vertically as at 14^b so that the top of the said chute lies directly beneath and in communication with a coin slot 15 on the offset top 10 of the cover. The coin slot 15 may be closed by a spring controlled gate 16 pivoted as at 17 beneath the offset top 10, said gate being movable to its open position against the resistance of a spring 18 by a removable pin 19 extending through an aperture in the end wall 6, said pin having a beveled end or face 20 which is adapted to bear against an offset flange 20^a of the gate so as to rock the same on its pivot 17. Consequently, when the pin 19 is removed by the operator for instance, the register is inoperative since a coin cannot be deposited in the coin chute.

Referring particularly to Figs. 2, 7 and 8, there is shown a laterally extending post 21 which carries an upwardly curved clapper

arm 22 held under control by a spring 23 and equipped with a striker head 24 extending upwardly within the bell housing 25, said striker head cooperating with a bell 26 secured to the rear wall by a rivet or other fastening means and constituting the signal that a coin has been deposited. The clapper arm carries a rod 27 which extends across the coin chute and beneath the coin slot 15 close to the offset top 10 of the cover so that when a coin is forced through the coin slot, said clapper arm will be depressed, permitting the coin to fall into the top opening of the coin chute. To facilitate the insertion of the coin, the rod is provided with a small friction roller 27^a which is free to revolve and decreases the resistance offered by the operating mechanism being thus actuated. The top portion of the coin chute is also provided with a groove or recess 28^a whereby the rod 27 may be depressed without interference and also limits its downward movement.

Cooperating with the clapper arm, there is provided a locking or catch lever 28 pivotally mounted as at 29 on a post 29^a, said lever being under the control of a spring 30. The locking or catch lever is equipped with notches 32, 33 to engage a pin or stud 34 carried by the clapper arm when said arm is depressed only partially, as when an unauthorized or improper coin is deposited, in which event the striker head will not make contact with the bell or signal. In other words, assuming that the proper coin is a five cent piece, by reason of the shape of the curved lever 28 and the relative strength of the spring 30 and the spring 23 controlling the action of the arm 22, the return of the pin 34 when depressed occurs before the lever 28 can operatively engage it to arrest its movement so that the said pin 34 will not enter either of the slots 32 and 33 in the return movement of the arm 22 after the nickel has been inserted. If a ten cent piece is deposited, the clapper arm will move downwardly only part way, with the result that the pin 34 will enter the first notch of the locking or catch lever and thus prevent the striker head from engaging the bell. If a penny for instance is deposited, the same movement takes place but the pin will enter and engage the second or lower notch and the signal is inoperative. Consequently, it will be seen that unless the clapper arm is depressed the full distance by the deposit of a proper coin and unless the said arm is actuated to permit the pin 34 to ride below the bottom notch of the locking or catch lever, the alarm will not be sounded and the operator of the vehicle is thus warned of an irregularity in the fare.

To that end there is provided in the coin chute a recess or opening 35 to receive a deposited coin which may be observed by the

passenger through a lens 36 held in a frame 37 and fastened over an opening in the cover or front wall. In the end 6 of the casing, a similar lens and cover 38, 39 is provided whereby the operator may observe the coin in the slot of the coin chute by the reflection of a mirror 40, said mirror being mounted on a bracket 41 and slightly offset as at 41^a and fastened to the bottom of a wall 42 of the coin hopper 42^a. The bottom of the coin hopper consists of a sliding, inclined plate 43 having a wing 44 from which a guide rod 45 extends and is supported by a bracket 46. A helical spring 47 on the guide rod holds the plate normally in its lower position but by pressing the wing inwardly, the plate slides back and the coins thereon drop over its lower edge into the hand of the operator of the vehicle as the hand is inserted into the bottom of the casing through the opening 48. A window 49 in the end wall 6 below the lens also permits the operator to observe the coins deposited and held in the coin hopper. A socket mounting 50 and incandescent lamp 51 may be positioned within the casing in proximity to the mirror 40 so that the coin may be observed in the slot of the coin chute permitting the register to be used under varying conditions.

Below the coin slot 15 in the coin chute, there is provided a vertical recess 52 adapted to receive the end extension 53 of an arm 54 lying in the path of the chute, the upper end of the said arm being offset as at 55 and connected at its upper end 56 to the clapper arm. The extension normally impedes the passage of the coin from the coin slot 15 into the coin hopper but when the clapper arm is depressed by the next coin deposited, the extension is moved through the recess 52, permits the first coin to fall into the coin hopper and returns to engage and retard the passage of the second coin.

The extension 53 controlling the cam slot 35 will retain both an authorized and an unauthorized coin, for instance, a dime or a penny at the observation opening, which coin will be released when the next coin is deposited. With each movement of the arm 54, the extension 53 rides up in the slot 52 to engage the next coin deposited. However, the signal mechanism will function only when the proper authorized coin is deposited. In other words, while the movement of the clapper arm 22 in each instance actuates the arm 54 and its extension, the hammer of the clapper arm will not sound the signal when a dime or penny is deposited. Consequently, when the signal is not sounded, the operator may observe the particular coin deposited and call attention to the mistake.

When an unauthorized coin such as a penny or dime is inserted, the arm 22 will not be depressed completely with the result that the pin 34 will ride into one of the notches 32, 33

of the catch lever 28. In this instance, the coins will not be retained by the extension 53 and will pass through the arm 54. The lever 22 of course does not completely return when a penny or dime is inserted.

Attached to the offset portion of the arm 54 is a trip plate 57 adapted to engage the counter lever 58 of a register or recording instrument 59 suitably held in a bracket 60 on the end wall 6. A front window or observation opening 61 permits the operator to observe the register or recording instrument. The trip plate is so positioned with respect to the counter lever that said lever cannot be actuated unless the clapper arm is depressed the full distance. The said counter lever is therefore inoperative when the pin or stud is engaged by either of the notches of the locking or catch lever.

The above mechanism involves improvements over our copending application, Sr. No. 131,886, filed Aug. 27, 1926, for cash fare register.

Having shown and described our invention what we claim as new and desire to secure by Letters Patent is:

1. A fare register of the class described comprising a casing having a cover provided with a coin slot in the top thereof, a coin chute within the casing in communication with the coin slot, said chute having an opening near its bottom and slidable means for interrupting the passage of a coin therein, a coin hopper below the coin chute, an observation opening in one end of the casing and a second observation opening in the cover whereby the deposited coin may be observed in the opening of the coin chute and means for releasing the coin in said chute when a second coin is deposited in the coin slot of said casing.

2. A fare register of the class described comprising a casing having a cover provided with a coin slot in the top thereof, a coin chute within the casing in communication with the coin slot, said chute having an opening near its bottom and slidable means for interrupting the passage of a coin therein, a coin hopper below the coin chute, a window in one end of the casing for the coin hopper, means for releasing the coins from the coin hopper when the hand is inserted through an opening in the bottom of the casing, an observation opening in the end and cover of the casing whereby a deposited coin may be observed in the opening of the coin chute and means for releasing said coin when a second coin is deposited in the slot of said casing.

3. A fare register of the class described comprising a casing having a cover provided with a coin slot in the top thereof, a coin chute within the casing in communication with the coin slot, said chute having an opening and means for interrupting the passage of a coin therein, an observation opening in one end of the casing, a bracket and mirror

supported within said casing whereby the reflection of a coin in said coin chute may be observed through said opening, a second observation opening in the cover in direct line with the opening in the coin chute, and means for automatically releasing the coin in said chute when a second coin is deposited in the coin slot of said casing.

4. A fare register of the class described comprising a casing having a cover provided with a coin slot therein, a coin chute within the casing in communication with the coin slot, a signal, a clapper arm cooperating with said signal when a coin is deposited in said slot, an observation opening in said casing whereby a coin may be observed in an opening in the coin chute, means for interrupting the sounding of the signal when an unauthorized coin is deposited and means for releasing a coin from the opening in the coin chute.

5. A fare register of the class described comprising a casing having a cover provided with a coin slot therein, a coin chute within the casing in communication with the coin slot, a signal, a clapper arm cooperating with said signal when a coin is deposited in said slot, a locking lever cooperating with the clapper arm for interrupting the sounding of the signal when an unauthorized coin is deposited and means for releasing a coin from the coin chute when a second coin is deposited.

6. A fare register of the class described comprising a casing having a cover provided with a coin slot therein, a coin chute within the casing in communication with the coin slot, a signal, a clapper arm cooperating with said signal when a coin is deposited in said slot, a pivoted locking lever cooperating with the clapper arm for interrupting the sounding of the signal when an unauthorized coin is deposited, an observation opening in said casing whereby a coin may be observed in an opening in the coin chute and means for releasing a coin from the opening in the coin chute upon each successive operation of the clapper arm.

7. A fare register of the class described comprising a casing having a cover provided with a coin slot therein, a coin chute within the casing in communication with the coin slot, a signal, a clapper arm cooperating with said signal when a coin is deposited in said slot, a locking lever cooperating with the clapper arm for interrupting the sounding of the signal when an unauthorized coin is deposited, a coin releasing and coin engaging arm operable within a recess in the coin chute connected to the clapper arm, a trip plate carried by said coin releasing and engaging arm for actuating the counter lever of a register only when said signal is operated and an observation opening in said casing whereby a deposited coin may be observed in an opening in the coin chute.

8. A fare register of the class described

comprising a casing having a cover provided with a coin slot therein, a coin chute within the casing in communication with the coin slot, a signal, a curved clapper arm cooperating with the signal, a pin on the clapper arm, a locking lever having a series of notches adapted to cooperate with said pin to engage the clapper arm and interrupt its operation when an unauthorized coin is deposited in the coin slot, an observation opening in the casing whereby a deposited coin may be observed through an opening in the coin chute and means for releasing said coin from the chute.

9. A fare register of the class described comprising a casing having a cover provided with a coin slot therein, a coin chute within the casing in communication with the coin slot, a signal, a clapper arm cooperating with said signal when a coin is deposited in said slot, a rod and friction roller thereon carried by the clapper arm movable relatively to the top of the coin chute when a coin is deposited, means for interrupting the movement of the clapper arm when an unauthorized coin is deposited in the said coin chute, an observation opening in an end wall and in the cover whereby a deposited coin may be observed in an opening in the coin chute and means for releasing a coin from the chute when a second coin is deposited.

10. A fare register of the class described comprising a casing having a removable cover provided with a coin slot therein, a coin chute having an inclined portion and a vertically extending portion in direct communication with the slot in said cover, said vertical portion having a slot in the top thereof, a clapper arm pivoted within the casing, a bell cooperating with the said clapper arm, a rod and friction roller carried by the clapper arm and movable within the slot in the top of the chute, a pivoted locking lever cooperating with a pin on the clapper arm for locking the same when an unauthorized coin is deposited, a coin releasing arm connected to the clapper arm for engaging a coin within an opening in the inclined portion of the chute, a trip plate carried by coin releasing arm for actuating a counter lever only when the signal is operated, said clapper arm being adapted to return the coin releasing arm to engage a second coin upon each successive operation.

In testimony whereof we have affixed our signatures.

WILLIAM THOMPSON.
LESLIE F. BRIGGS.