No. 622,881. Patented Apr. 11, 1899.

W. N. BREWER.

FARE REGISTER.

(Application filed Mar. 8, 1898.)

(No Model.) 2 Sheets—Sheet 1.

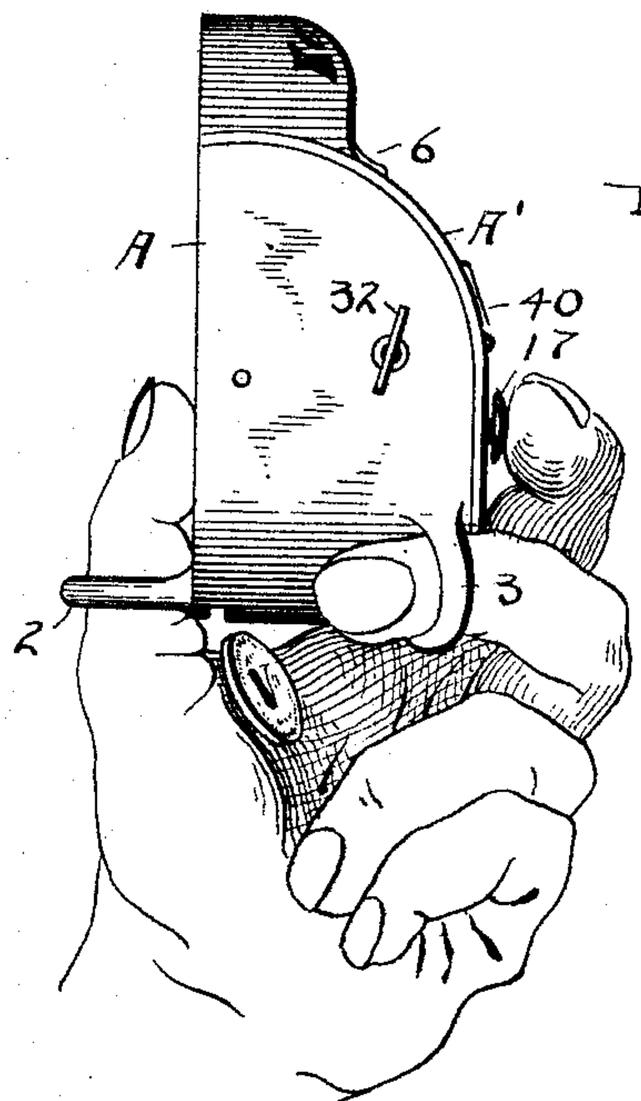


Fig. 1.

Fig. 5.

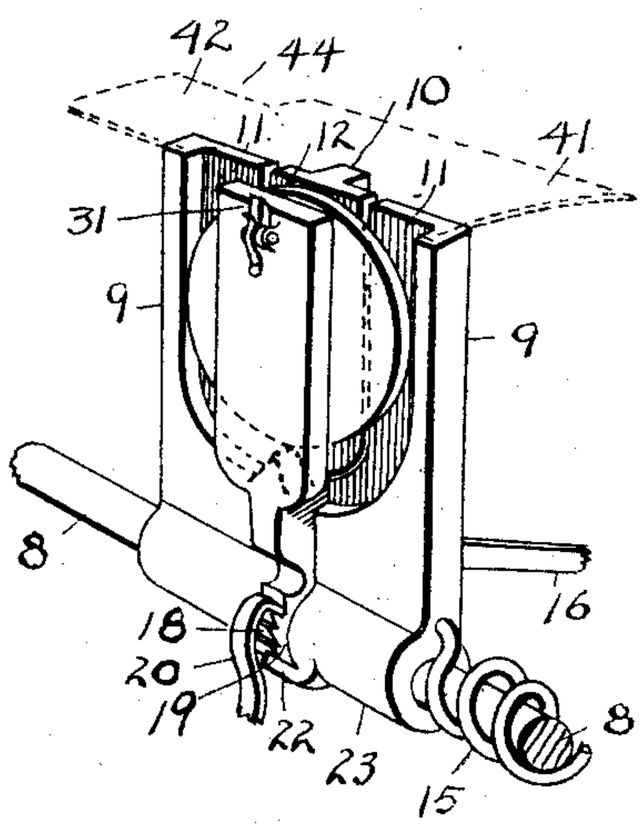
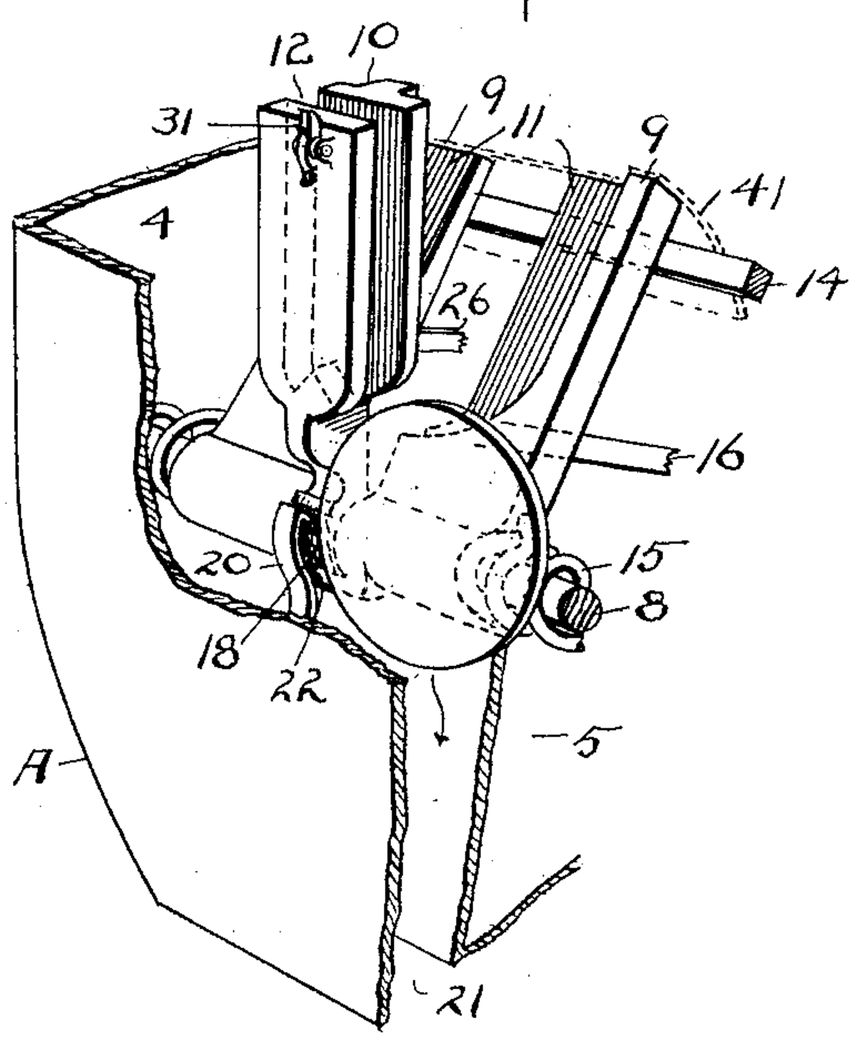


Fig. 6.



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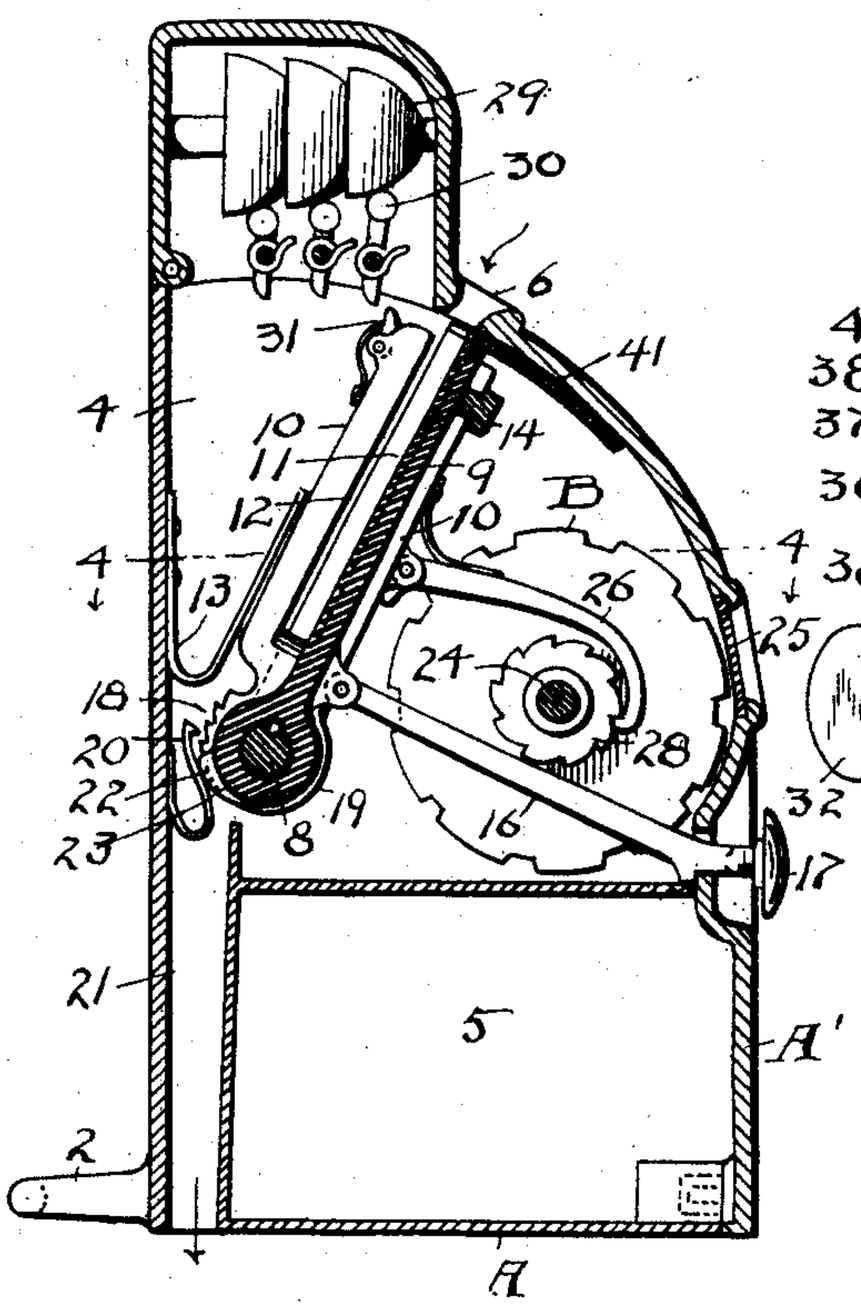

Fig. 2.

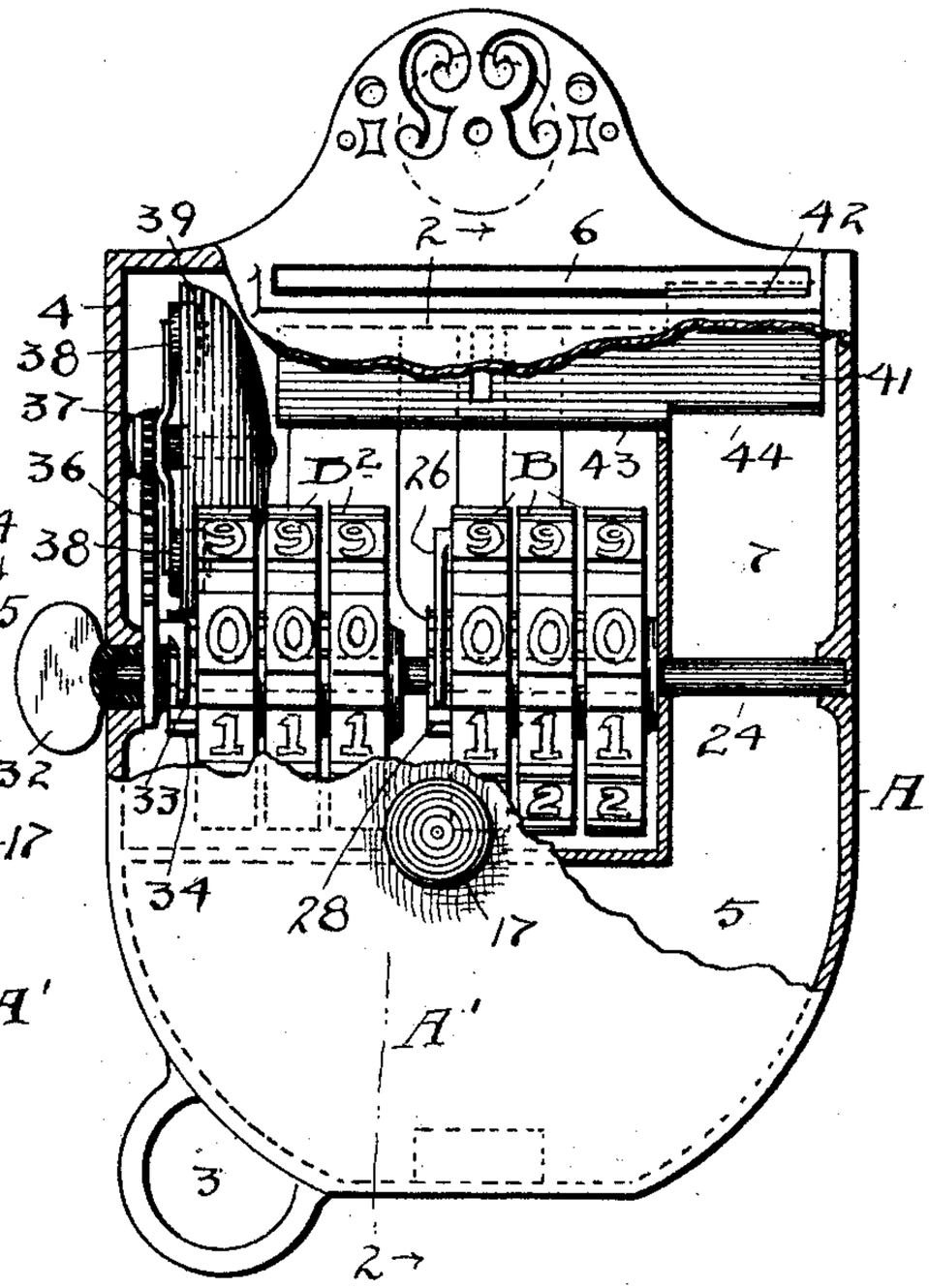

Fig. 3.

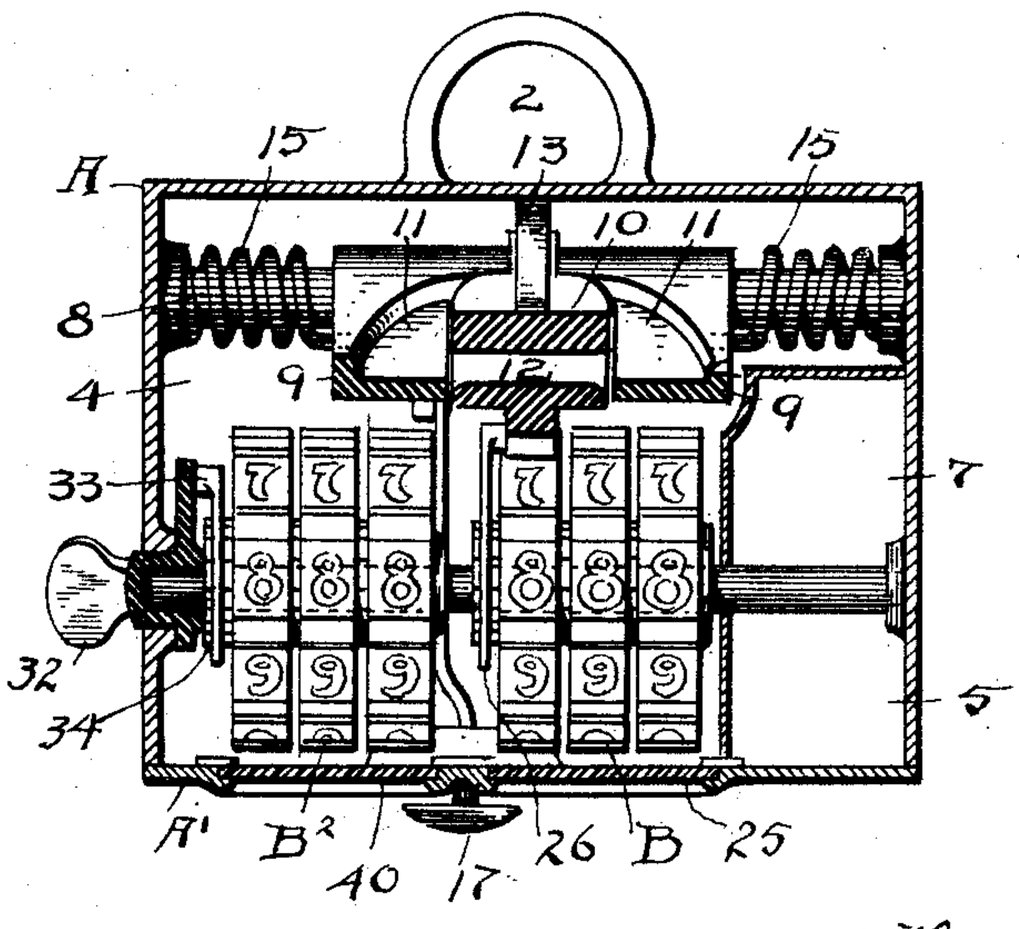

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM N. BREWER, OF CLEVELAND, OHIO.

FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 622,881, dated April 11, 1899.

Application filed March 8, 1898. Serial No. 673,022. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. BREWER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Fare-Registers; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to fare-registers of the kind intended to be held in the hand of the conductor and into which the fares are deposited by the passenger, and said register being provided with means for retaining the tickets deposited therein and discharging the coin-fares into the hand of the conductor, the coin as it passes through the register serving as a medium to register one or more fares, according to its value, before it is discharged, all substantially as shown and described, and more particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved fare-register, showing the same as held in the hand and with a coin dropping into the palm, where it will be caught and retained by the third and fourth fingers. Fig. 2 is a central vertical sectional elevation of the register looking to the right and taken on line 2 2, Fig. 3. Fig. 3 is a front elevation, partly broken away to more clearly disclose the registering-dials. Fig. 4 is a cross-section in plan looking down from line 4 4, Fig. 2. Fig. 5 is a rear perspective view of the coin-receiving fingers alone and showing a coin held therein in position to be released and discharged. Fig. 6 is a similar view to Fig. 5, but showing the coin released and dropping to one side into the slot in the back of the casing.

A represents the casing of the register, which is of such reduced size as to be conveniently held within the fingers, substantially as shown in Fig. 1. The finger-grips 2 and 3, however, serve to give a more secure hold of the casing than a mere exterior grip would afford, and one or more of these can be used, if desired. The casing is divided into two compartments 4 and 5. The upper compartment 4 contains the registering mechanism and the lower compartment 5 is a mere receptacle for tickets taken in as fares. Through the top of the hinged cover A′ of the casing A there is a transverse slot 6, and all the tickets are inserted at the right-hand side of this slot and dropped into the passage 7, right of Fig. 3, which leads to compartment 5. The tickets remain in this compartment until the conductor turns in his report for the trip or the day, when they can be removed by unlocking the hinged cover A′ and throwing the same open at the front.

It is intended that all fares taken by the conductor shall be registered and that all shall pass into or through the register, according to their character, and be deposited by the passenger himself as the register is held before him; but the construction is such, as hereinbefore stated, that the tickets alone are retained in the register, and the cash fares after registering themselves pass on through into the hand of the conductor. The ticket fares and cash fares are separately registered, and this registration is done immediately before the passenger and is disclosed to him on the registering-dials, as hereinafter described.

The construction for registering the coin-fares is as follows: At the rear of casing A and supported in the sides thereof is a cross-shaft 8, upon which the pairs of coin-pocketing fingers 9 and 10, respectively, are mounted. The outer fingers 9 are rigidly attached to shaft 8, and the inner fingers 10 are held between fingers 9 and are free to rotate on said shaft. These fingers 10 have a common support on shaft 8, and hence are rigid with each other. When the fingers 9 and 10 are in normal position, as seen in Figs. 2 and 4, they are inclined, and the depression 11 in each finger 9 and the opening 12 between the fingers 10 lie in the same plane and are in position to receive a coin through slot 6. A flat bowed spring 13 keeps the fingers 10 in this their normal position and presses them against the stop or cross-bar 14 at the rear of fingers 9, and coiled springs 15 normally keep fingers 9 back against this same bar.

A slight distance above shaft 8 and pivoted to one of the fingers 9 is a lever 16, which projects forward and out through a slot in the cover A′, and a button 17 on the end of this lever serves to operate the fingers 9 when the said lever is pressed inward. If there be

no coin between or within the fingers 9 and arm 10, no action other than moving the fingers 9 back and forth can occur; but if there be a coin therein, as shown in Fig. 5, a pressure inward of lever 16 will cause the coin to move both the fingers 9 and 10 back to any radial point within the movement of lever 16, which is comparatively slight. Now it will also be seen that if back pressure on lever 16 be released all the parts will return to their normal position again without releasing the coin unless some means be provided to detain the fingers 10 on their return movement. To this end I provide ratchet-teeth 18 upon the hub 19 of fingers 10 and a spring-pawl 20 to engage said teeth as the fingers 10 are pressed back, and then as the pressure against the lever 16 is gradually relaxed the fingers 9 are forced to normal position by their springs 15, and the fingers 10 are retained and hold the coin for the time being alone; but the fingers 10 are only held back momentarily and just long enough for the coin to roll out at the side thereof into the passage 21, which guides it to the hand of the operator. Then to release the pawl 20 and allow the fingers 10 to return to normal position I provide a lug or cam-shaped part 22 on the hub 23 of one of the fingers 9. In the operation this lug 22 strikes spring-pawl 20 and releases the same from engagement with teeth 18, and the bow-shaped spring 13 then presses fingers 10 to normal position, Fig. 5. In the space between the base of the two fingers 10 there is a V-shaped rest for the coin, as seen in dotted lines, Figs. 5 and 6, and the coin resting on the apex of this V is of necessity compelled to roll out the moment its edge supports are removed.

It will be seen that with the above-described construction no coin can pass through the register unless the coin-retaining fingers are operated, and this operation is utilized to register the cash fare received. The cash-registering dials B are located at the front of compartment 4 and are mounted on cross-shaft 24, and the amount added and registered by each is shown on the peripheral face of these dials through a glass-protected opening 25 in the cover A′. A long spring-pressed pawl 26 is pivoted to the inner finger 10 and engages a ratchet-wheel 28, which actuates dials B, Fig. 4. The degree of rotation of a disk B is governed by the movement of the fingers 10, and one or more numerals on the face of the dial B can be consecutively shown up, if desired. Any suitable mechanism for carrying the tens and hundreds may be adopted and is not shown out in the drawings.

Now in order that the passenger, as well as the conductor, shall know without consulting the dials that the fare or fares have been registered I provide bells 29 to announce each fare as recorded. Within the dome-shaped top of the cover A′ three bells of varying tones are each provided with spring-pressed hammers 30, which are consecutively operated when the coin-carrying fingers 10 are pushed back and the dog 31 on said fingers is engaged therewith.

With the construction as shown one, two, or three fares can be registered and announced; but I do not wish to limit myself to any special number. The registration and announcement of the recipt of cash fares is dependent upon the coin itself, it being imperative that the coin be within the fingers 9 and 10 to make them operative. Every passenger deposits his own fare whether coin or ticket, and before the conductor can receive or take the coin from within the register to make change or otherwise he must press button 17 and operate the registering and announcing device.

As the passenger also deposits his own ticket and as the ticket remains within the casing and cannot be removed by the conductor, it will be seen that it is not so necessary to register the ticket; but to the end that the passenger may be notified that his fare has been received and that the number of tickets shall be known to the conductor when he makes up his report I provide a separate registering and announcing device for tickets which also is located within chamber 4. The registering part of this mechanism consists of dials B^2, mounted at the left of dials B, Fig. 3, and on the same shaft 24, and a key or handle 32, projecting through the left side of the casing A, serves to operate these dials B^2 by means of pawl 33 and ratchet 34. A segmental gear 36, rigid with the hub of key 32, meshes with a pinion 37, which operates the hammers 38 of the bell 39. As each ticket is deposited the conductor is expected to announce the fact on the ticket-bell as well as to register it, so that the total tickets received for the day will appear on the dials B^2, a separate glass-covered opening 40 being arranged at the front of cover A′ to disclose the same.

To avoid confusion and to prevent tickets from being inserted into the coin side, the fingers 9 are provided with an apron 41, fastened to the top of said fingers and arranged to close one side or the other of slot 6. When the parts are in normal position, the coin side is open, as seen in Fig. 3, the apron having the top edge at its right cut away and allowing the lip 42 at the left to close the ticket-opening. When the passenger presents a ticket, the conductor presses button 17, and as no coin is held between fingers 9 and 10 no operative mechanism is actuated, and only fingers 9, which carry the apron 41, are pushed back. When its extreme back position has been reached, lip 43 at the left and lower edge of apron 41 closes the coin side, and the cut-away portion 44 at the right gives access to the ticket-passage 7. This apron could be extended down and slots so arranged in its face as to disclose or hide the face of the dials B or B^2, as might be desired, the disclosure or closure being dependent upon the fare received.

If any one should employ a coin-symbol,

such as a piece of gutta-percha or the like, it can be inserted in the coin-slot or in the ticket-slot, and in either case it is to be understood as covered by the use of the words "coin" or "ticket," as herein set forth both in description and claims.

What I claim as new, and desire to secure by Letters Patent, is—

1. A hand fare-register provided with means to register coin fare and to discharge the coin into the hand of the conductor when registered, and means to register other fare not coin, substantially as described.

2. A hand fare-register having a through passage for the coin deposited as fare, and means to detain and grip the coin, and registering mechanism for the coin actuated when the coin is released, substantially as described.

3. A hand fare-register having a set of fingers to grip and detain coin paid as fare, and means to register the fare so paid and to liberate the coin from the register, substantially as described.

4. A hand fare-register constructed to receive both coin and tickets, and separate registering mechanism for each, substantially as described.

5. A fare-register constructed to receive both cash and ticket fares, means to pass the cash fares through the register and means to retain the ticket fares, substantially as described.

6. A fare-register constructed to receive both cash and ticket fares, means to register and retain the ticket fares, means to record the cash fares and discharge the cash from the register, the registering means for ticket and cash fares being separate, substantially as described.

7. A fare-register constructed to receive cash and ticket fares, means to detain the ticket fares within the register, and to register the same, means to register the cash fares independent of the tickets and to retain the same until registered, and means to announce the registration of both cash and tickets, substantially as described.

8. A fare-register constructed to receive cash and ticket fares separately and separate registering mechanism for each, and separate channels for cash and tickets, substantially as described.

9. A fare-register constructed to be held and operated with one hand and having mechanism for separately registering and announcing cash and ticket fares, the ticket fares to be retained within said register and the cash fares to be discharged therefrom into the hand of the operator, said discharge to be effected by said mechanism when said cash registration and announcement occurs, substantially as described.

10. A fare-register constructed to receive cash and ticket fares, means to register and announce each cash and ticket fare separately, fingers to detain the cash fares, and means to operate said fingers to discharge, register and announce the same simultaneously, substantially as described.

11. The coin holding and discharging mechanism comprising stationary members and a pair of movable members between which the coin is held, substantially as described.

Witness my hand to the foregoing specification this 2d day of March, 1898.

WILLIAM N. BREWER.

Witnesses:
H. T. FISHER,
R. B. MOSER.