

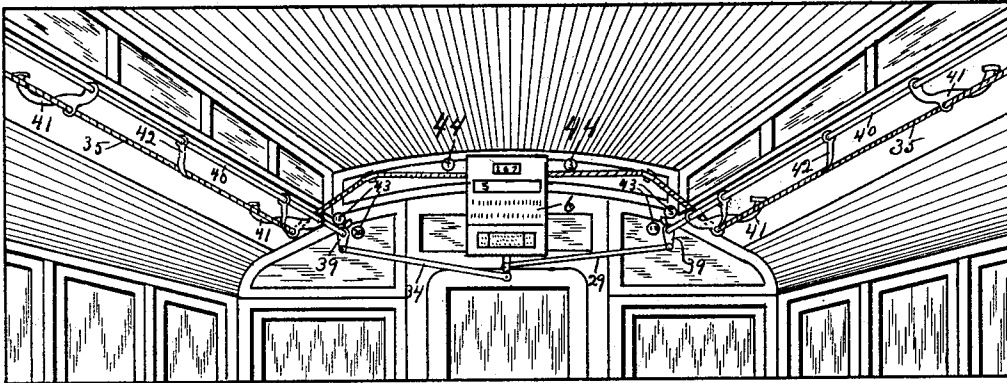
J. F. OHMER.

MEANS FOR OPERATING FARE REGISTERS.

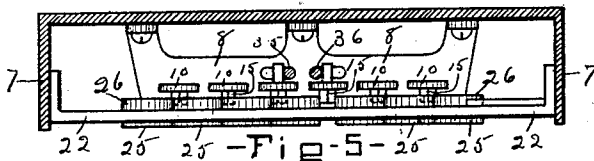
APPLICATION FILED JULY 31, 1902.

NO MODEL.

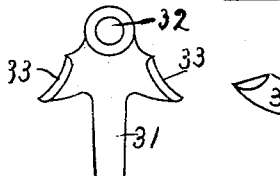
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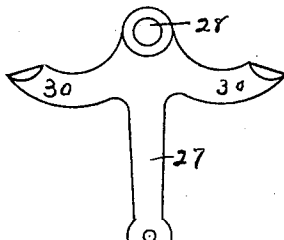
-Fig-1-



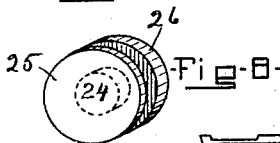
-Fig-5-



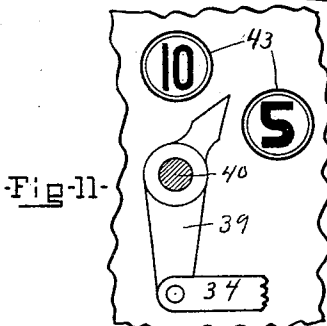
-Fig-6-



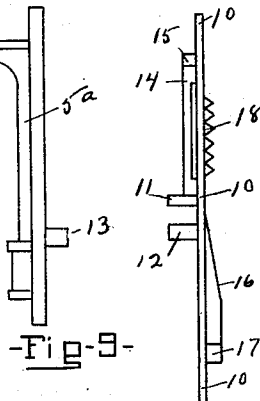
-Fig-7-



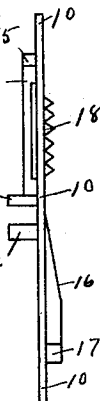
-Fig-8-



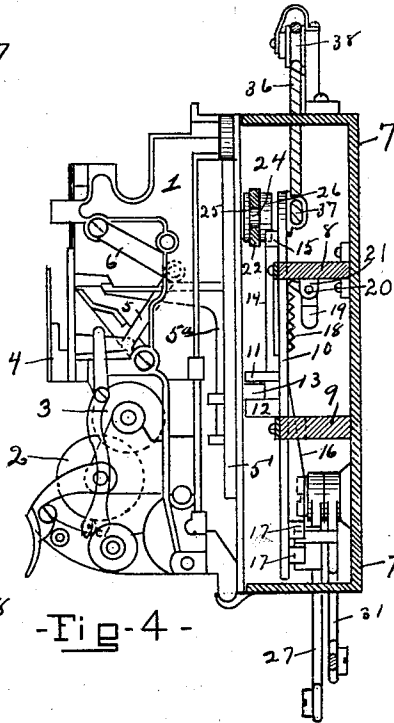
-Fig-11-



-Fig-9-



-Fig-10-



-Fig-4-

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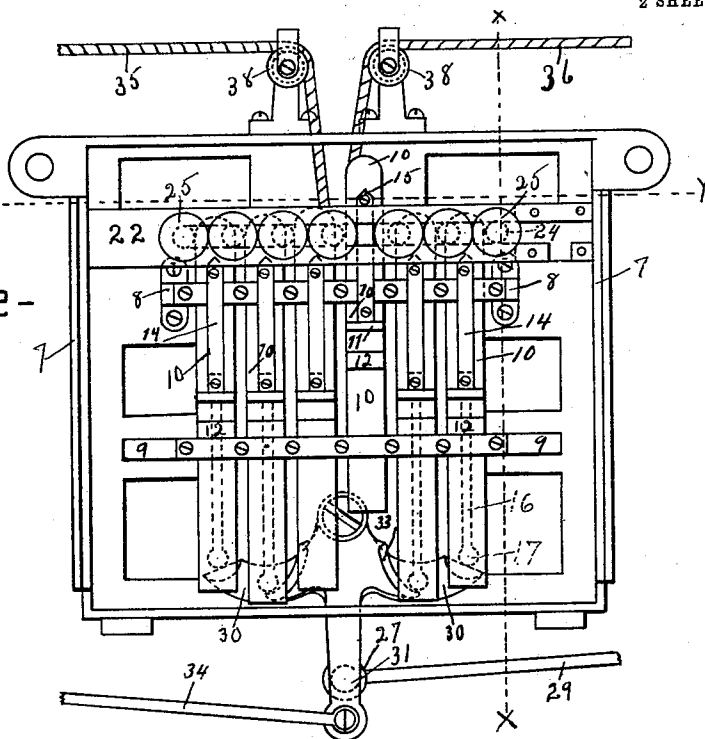
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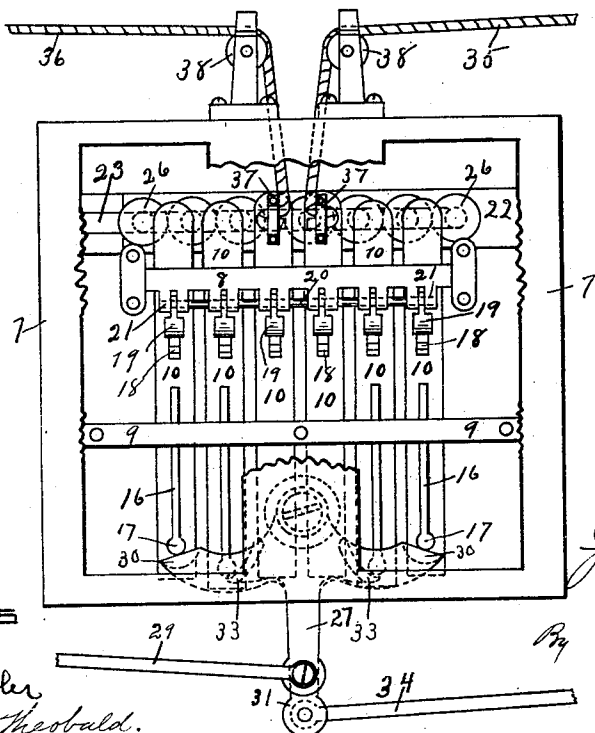
NO MODEL.

2 SHEETS—SHEET 2.

-Fig-2-



-Fig-3-



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UNITED STATES PATENT OFFICE.

JOHN F. OHMER, OF DAYTON, OHIO.

MEANS FOR OPERATING FARE-REGISTERS.

SPECIFICATION forming part of Letters Patent No. 718,868, dated January 20, 1903.

Application filed July 31, 1902. Serial No. 117,753. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. OHMER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Means for Operating Fare-Registers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in means for operating fare-registers from different points of a car or other public conveyance in which the registers are located. The class of registers for which this operating mechanism is adapted is that in which the various denominations of fares are registered and indicated separately—that is, each classification or denomination of fare (such, for example, as five-cent fares) has a distinct bank of recording-wheels upon which this specific class of fares is recorded—and an indicator card or tablet which indicates such fares each time such fare is collected by the conductor. These records and indications of fares may be made from various points of the car.

Preceding a detail description of my invention, reference is made to the accompanying drawings, of which—

Figure 1 is a perspective view of a portion of the front interior of a car, showing a fare-register in position therein and the operating mechanism also in position. Fig. 2 is a rear view of the operating mechanism detached from the register. Fig. 3 is a front view of said mechanism detached from the register, portions of the supporting-frame being broken away. Fig. 4 is a combined side elevation of a register and a sectional elevation of the operating mechanism on the line *xx* of Fig. 2. This figure shows the register mechanism and the operating mechanism assembled or associated in operative relation. Fig. 5 is a horizontal sectional view through the upper portion of the operating mechanism on the line *yy* of Fig. 2. Figs. 6 and 7 are detached views of the lifting-levers. Fig.

8 is a detached perspective view of one of the locking-rollers. Fig. 9 is a detail view of one of the sliding members of the register mechanism. Fig. 10 is a detail view of one of the slides of the operating mechanism. Fig. 11 is an enlarged detail view of the indicators which indicate the extent of movement of the operating-rods and the fare registered.

In a detail description of the invention similar reference characters indicate corresponding parts.

I will first briefly describe the main parts of a fare-register such as is hereinbefore referred to in order that a more intelligent understanding of the invention may be had.

1 designates the supporting-frame of a register, upon which are mounted recording-wheels 2, that are moved step by step upon each operation of the machine through transmission-wheels 3.

4 designates an indicator tablet or card bearing an inscription or figure denoting the denomination of fare which is recorded upon said wheels.

5 and 6 designate link-levers which transmit movement to the trip-wheels, such trip-wheels being in the upper portion of the register, but which do not appear in the present drawings.

I have thus referred to the recording-wheels upon which are recorded details of all fares registered, the tablets or indicators by means of which such fares are indicated, and the trip or totalizing wheels upon which all the fares are recorded. These various mechanisms are actuated through a series of sliding members 5^a, which are suitably mounted in guideways 5' in the rear of the register. Through sliding members 5^a the banks of detail-recording wheels are operated, also each fare-indicator card or tablet. All of the said sliding members 5^a operate in a similar manner the totalizing or trip wheels of the register. The register mechanism thus briefly outlined is inclosed in a suitable casing 6, which is mounted in a suitable position on the interior of a car, as shown in Fig. 1.

The fare-register mechanism briefly outlined above is more fully described in Letters Patent No. 11,681, granted to Hiram Tyler and myself July 19, 1898.

Referring now particularly to the mechanism comprised in the present invention, 7 designates a casing, in which the operating mechanism is supported and which is secured
5 in position in the rear of and in proximity to the fare-register, as in Fig. 4.

8 and 9 designate two horizontal guides, which are rigidly secured in said casing 7. These guides consist of bars which have openings therein to receive a series of vertical
10 slides 10. Each of these slides 10 has two lugs 11 and 12 projecting from the rear side thereof, which inclose a lug 13, that projects from each side of the sliding members 5^a of
15 the register mechanism and whereby movement is imparted to said sliding members to actuate the mechanism of the register. On the upper portions of the same side of the slides 10 upon which the lugs 11 and 12 are
20 located there are secured bars 14, which have their upper ends tapered, as at 15. (See Fig. 2.) On the lower portions of the opposite side of each of said slides 10 there is an elongated lug 16, which projects from the lower
25 portion of each of said slides and terminates at its lower end in an enlargement or head 17. Above these elongated lugs 16 and on the same side of said slides there is a ratchet 18, which engages a ratchet-pawl 19. The
30 ratchet-pawls 19 (there being one of such pawls coöperating with each of the slides 10) are loosely mounted on an arbor 20, which is journaled in a series of lugs 21, that extend from the upper guide-bar 8. (See Fig. 3.)
35 These ratchet devices are instrumental in compelling a complete operative movement of each of the slides 10. The said pawls are controlled by gravity, and as long as the slides 10 are being elevated they ride in and
40 out of the ratchets 18; but if the movements imparted to said slides are not sufficient to elevate them to their full limit these pawls will lock said slides to prevent them from falling to their lower positions.
45 22 designates a transverse bar mounted in the upper portion of the casing 7 and having a longitudinal slot 23, which receives a series of rollers 24. These rollers 24 have on the sides thereof disks 25 and 26, the last-named
50 disks being thicker than the disks 25. These disks inclose the opposite sides of the transverse bar 22 and maintain the rollers 24 in position. The rollers 24, together with the bar 22, provide locking means which prevent
55 more than one of the slides 10 from being operated at a time. In the upper movement of a slide the tapered end 15 of the lug 14 on said slide comes in contact with the lower sides of the flanges 26 on two adjacent rollers
60 24 and causes said two adjacent rollers to separate and provide an opening or passage for that particular slide. The rollers on each side of said separated rollers will be moved together, thus closing up the intervening
65 spaces, and thereby locking the remainder of the slides 10 against movement until the slide which has been actuated has returned to its

lower position. The two outer slides are actuated by opposite movements of a lever 27,
70 which is fulcrumed at 28 to the inner side of the lower portion of the casing 7. This lever projects below the casing and has pivotally connected to it an operating-bar 29. The
75 said lever has two oppositely-projecting arms 30, which terminate in enlargements that lie immediately below the heads 17 of the elongated lugs 16, which, as before stated, project from the lower portion of the slides 10. It will therefore be seen that in either move-
80 ment of the lever 27—that is, to the right or to the left—one or the other of the two outermost slides will be actuated thereby. The two next adjacent slides are operated through a second lifting-lever 31, which is fulcrumed
85 at 32 in the rear of and in line with the pivot 28 of the lever 27. The lever 31 has two oppositely-projected portions 33, which are enlarged or flattened at their ends and lie immediately below the heads 17 of the two slides
90 adjacent to the two outer slides. Lever 31 has a connecting-link 34 pivoted to it and extending in a direction opposite to that in which the connecting-link 29 extends and whereby movement of said lever is similar to
95 that of the lever 27, and through said movement the slides actuated thereby will be affected according to the direction of movement. The two extreme innermost slides 10
100 are operated through ropes or cables 35 36, which are connected at 37 to the upper ends of said slides and pass outwardly through the upper portion of the casing over rollers 38 and thence to positions along the interior of the sides of the car.

Referring to Fig. 1, the connecting-rods 29
105 and 34, through which the levers 27 and 31 are actuated in opposite directions, are pivoted to arms 39, which have a fixed connection with operating-rods 40, which lie on opposite sides of the car and are loosely sup-
110 ported in brackets 41. These rods 40 have a suitable number of hand-pieces 42 placed at various points, by means of which they are turned in opposite directions to impart the necessary movements to the rods 29 and 34
115 and thence to the levers 27 and 31. Adjacent to the front end of each of the rods 40 there are indications 43, which denote the fares registered and indicated through each of said rods. The fare indications 44, which
120 are arranged on either side of the register, denote the particular fare or class of fares registered through the ropes or cables 35. It will be readily seen that the number of
125 levers 27 and 31 may be multiplied, and thus the capacity of the register increased in proportion.

The operating device, as shown in the accompanying drawings, has a capacity for oper-
130 ating a register which contains mechanism for recording and indicating six distinct denominations or classes of fares, two of such fares being operated through each of the levers 27 and 31 and one of such fares being

operated through each of the ropes or cables. The capacity of said operating device may be increased by adding one or more operating-levers, and the ropes or cables may be dispensed with by the addition of one of such operating-levers. I have found, however, that an employment of a single rope on each side of the car in addition to a single operating-rod on each side of the car is preferable to an additional rod, which would be necessary to operate an additional lever.

This operating mechanism is not alone adapted for use in connection with fare-registers in which the fares are indicated, but it may be used successfully with any fare-register regardless of whether the fares are indicated at the register.

Having described my invention, I claim--

1. In an operating device for fare-registers, the combination with a series of vertically-sliding members each of which actuates a specific set of recording and indicating mechanism, a series of locking devices arranged in the paths of movement of said vertically-sliding members and preventing the operation of more than one of such members at a time, of a series of lifting-levers pivoted below said vertically-sliding members, said lifting-levers having lateral arms upon which rest the said vertically-sliding members, the lateral arms of one of said lifting-levers being of sufficient length to actuate the two outermost vertically-sliding members, and the lateral arms of the other of said lifting-levers being adapted to actuate the next two inner vertically-sliding members, and means

connected with said lifting-levers and extending on the interior of a car and whereby the said lifting-levers are actuated to elevate the vertically-sliding members, substantially as set forth.

2. In an operating device for fare-registers, the combination with a series of vertically-movable slides, said series of slides being arranged side by side in parallel relation and each of which is adapted to actuate the mechanism of a fare-register to record and indicate a specific class of fares, means for preventing the operation of more than one of such members at a time, of a series of lifting-levers mounted upon a common pivot and having laterally-extending arms of different graduated lengths, the arms of one of said levers being adapted to operate the two outermost sliding members, the other of said lifting-levers being adapted to operate the next two inner adjacent sliding members, ropes connected to the two innermost sliding members and by means of which said last-named sliding members are actuated, and means for operating the lifting-levers in opposite directions to impart the necessary movements to the sliding members operating in connection with said lifting-levers, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN F. OHMER.

Witnesses:

R. J. MCCARTY,
CAROLYN M. THEOBALD.