(No Model.)

J. F. OHMER.

FARE REGISTER.

No. 560,529. Patented May 19, 1896.

Fig. 3.

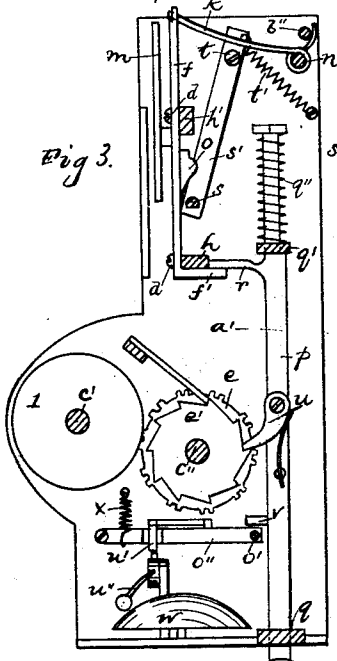


Fig. 2.

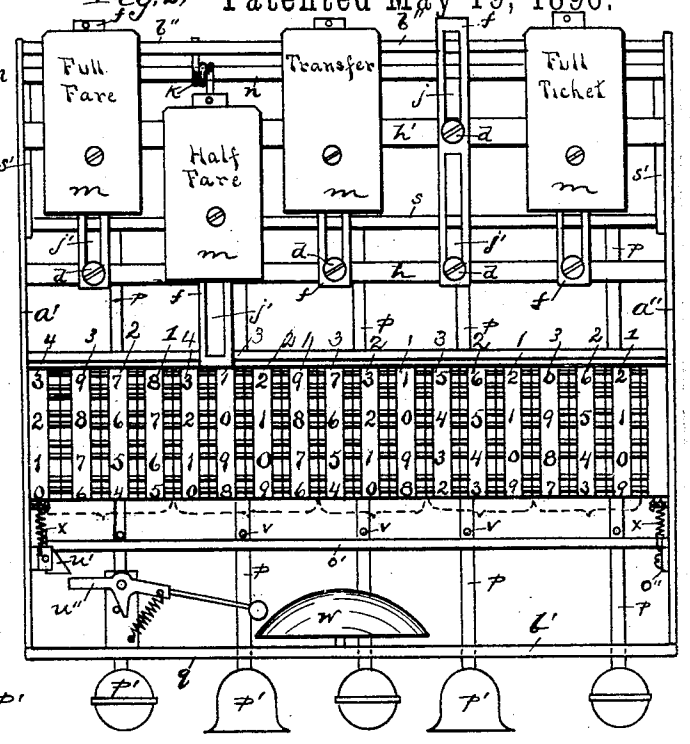


Fig 1.

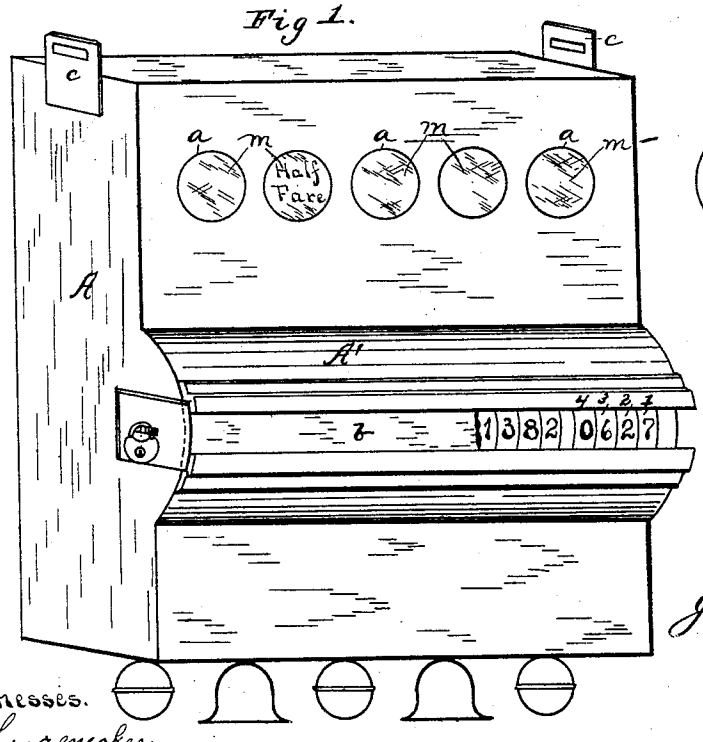
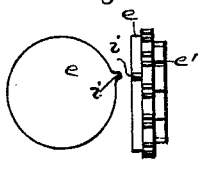


Fig 4.



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UNITED STATES PATENT OFFICE.

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FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 560,529, dated May 19, 1896.

Application filed November 4, 1895. Serial No. 567,810. (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 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 letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in fare-registers for street-cars.

The object of the invention is to provide novel and convenient means for registering and indicating separately and distinctly the various fares. For example, the means contemplates registering and indicating each class of fares separately—the full fares in cash, half-fares in cash, full tickets, half-tickets, transfers, and if desired a separate registration and indication of the number of complimentary or free rides may be had.

To these ends the invention consists of parts and their arrangement that will be fully described in the specification, taken in connection with the accompanying drawings, upon which similar letters and figures of reference indicate corresponding parts.

Figure 1 is a view in perspective of the cabinet. Part of the slide that conceals the registering-wheels is broken away to afford a view of said wheels. Fig. 2 is a front elevation of the mechanism removed from the cabinet. Fig. 3 is an end elevation of the mechanism shown in Fig. 2. Fig. 4 is a detached detail view of one of the wheels that moves a register-wheel.

A designates the inclosing case or cabinet, having a series of sight-openings *a* across its upper front in the outwardly-projecting portion A'. This part A' is adapted to receive a slide *b*, that closes a horizontal opening therein. This slide *b* may be made secure when pushed in. In the drawings there is shown an end of said slide turned at a right angle and provided with an opening through which a staple that projects from the end of the cabinet may enter, and said slide may be secured by means of an ordinary padlock.

c c designate ears projecting from the ends of the cabinet and to which a strap may be secured, by which the device may be suspended from the conductor's belt.

Referring to the internal mechanism, *a' a''* and *b' b''* designate the supporting parts or inner frame.

c' designates a transverse shaft in fixed bearings in the end pieces *a'* and *a''*. Upon this shaft there are loosely mounted several series of register-wheels 1, 2, 3, and 4. Each series or set of said wheels is separated or designated by the broken lines shown in Fig. 2, from which it will be seen that some of said series or sets contain three while others have four wheels. This, however, may be varied at pleasure, and the series may be uniform. These register-wheels are mounted adjacent to the horizontal sight-opening in the front of the cabinet and are visible therethrough. The said wheels are of well-known construction and bear upon their peripheries numerals from "0" to "9," each wheel represen ing a progressive numerical order—to wit, units, tens, hundreds, &c.—the first or right-hand wheel 1 of each series being the units-wheel.

c'' designates a second fixed shaft lying in the rear of and parallel with the shaft *c'* and upon which are loosely mounted several series of wheels corresponding in number to the series of register-wheels. The wheels on shaft *c''* consist of toothed wheels *e*, which have each one tooth *i* out of a line with the rest of the teeth thereon.

e' designates a ratchet-wheel, which is fixed to the first one of the wheels *e*, so that they make a revolution together. This ratchet-wheel in each series is in the rear of the units-register wheel, and the said units-register wheel is rotated by the wheel *e*, that moves with the ratchet-wheel. The tooth *i* on the wheel *e*, when the latter makes one rotation, will actuate the tens-wheel on shaft *c* to register the tens. Each of the wheels *e* is provided with one tooth *i*, that actuates the next higher order of register-wheels in a way that will be readily understood.

f designates a series of uniform slides, the lower ends *f'* of which are turned at right

angles and lie below a transverse bar h, that has a rigid attachment to the ends a' and a'' of the frame. These slides are provided with upper and lower slots j and j', through which screws d penetrate to slidingly support said slides. The said screws enter bars h and h', similarly mounted in the ends of the frame.

k designates a series of helical springs inclosing a round bar n and preserved under tension by one end thereof being passed behind an upper parallel bar b'', both of said bars n and b'' being rigidly mounted in the end pieces a' and a''. The inner ends of these springs project into the upper slots j' in said slides and exert a normal upward pressure thereon.

m designates a series of fare-indicators carried by the slides f. There is one of these indicators for each series of register-wheels, and each one of said indicators bears its respective inscription. For example, that one operating in connection with the full-fare series of wheels will bear that inscription; that operating in connection with the transfer series of wheels will bear the corresponding inscription, and so on throughout the entire series. It is preferable to have the indicators lettered in different or contrasting colors in order that they may be readily distinguished through the sight-openings a.

o designates a cam-lug on the rear of each of the slides f.

p designates a series of sliding rods having finger-pieces p' on the lower ends, by which they are operated. These rods are each inclosed in slots in bars q and q' and have their upper ends surrounded with helical springs q'', that maintain said rods in an elevated position with the integral arm r thereof in contact with the inwardly-projecting ends f' of the slides f and by means of which the said slides f are drawn downwardly to present the indicators to their respective sight-openings.

s designates a releasing and retaining rod, the lower longitudinal side of which is flat, as shown in Fig. 3. This rod lies adjacent to the rear side of the slides f and is rigidly mounted, with its flat surface down, in two oscillating arms s', that are pivoted to the ends of the frame at t.

t' designates a helical spring, of which there is one attached to the extreme upper end of each of said arms and to a convenient place on the ends of the frame. Under the tension of these springs the releasing and retaining rod s is normally kept in the path of the cam-lugs o. As each respective slide f is lowered by its actuating-rod p the inclined part of the cam-lug that is actuated is brought in contact with the upper or rounded surface of the rod s, which has the effect of pushing said rod inward until the slide carrying said cam-lug is lowered. The rod s immediately returns to its normal position after said cam-lug has passed it. The flat side of the rod is then above the cam-lug, and therefore locks the respective slide and its indicator in a lowered or exposed position until another rod p is actuated. This affects the retaining and releasing rod s in the same manner, and as the said rod s is pressed inward by the next downwardly-moving cam-lug the slide f that was previously being held down is simultaneously released. For example, it will be noted in Fig. 2 that an indicator showing a half-fare is being exposed. Should a transfer-ticket be next received by the conductor, he will draw down the rod p of the transfer series. This act releases the half-fare indicator and permits it to ascend under the tension of its respective spring k.

u designates a spring-pressed ratchet-pawl pivoted to each of the rods p and engaging with the ratchet-wheels e'. It will be noted that the downward movement of each rod p simultaneously actuates an indicator and the register-wheels of each respective series. The bell w in the bottom of the frame is also sounded by the movement of any of the rods p by means of pins v, that project from said rods. These pins v are brought in contact with a horizontal bar o', mounted in pivoted arms o'' on the ends of the frame. The said arms and bar are pressed downward against the tension of springs x x. One of these arms o'' carries a pivotal spring-controlled trip u', which is moved in contact with the bell-hammer u''.

It will be noted from the foregoing description that each series of register-wheels and its respective slide, fare-indicator, and sliding rod is a system of itself. Therefore a record of each class of fares is kept separate and can be ascertained by those having authority simply by removing the slide b, over which the conductor has no control. It will be readily seen that the fare in each particular class is observed by the passenger or passengers. A registration, for example, of a half-fare or a transfer cannot be made without withdrawing from the sight-opening the particular fare that was previously exposed. The conductor therefore knowing that the passenger is aware of the fare that has been paid will not venture to omit the registration and indication thereof, and will not fail to realize the probability of the passenger observing the operation.

It will be understood that each rod p, after it is drawn down and released, returns to its upper normal position under the action of the spring q'', leaving the indicator exposed. In the event the same fare is registered twice in succession or more than twice the same indicator remains exposed for them all, while each downward movement of the same rod p actuates the register-wheels of that series.

Having fully described my invention, I claim—

1. In a fare-register, the combination with two or more series of register-wheels and their actuating-wheels, of a slotted slide bearing a fare-indicator for each series of wheels and having its lower end terminated at a right

angle, a sliding rod for each of said slotted slides having an arm projecting over the lower end of said slotted slide, a pawl carried on each of said sliding rods and engaging with a respective series of register-wheels, and a retaining and releasing rod adapted to retain each of said slotted slides in a lowered position when the latter are moved downward, and to concurrently release a slide that it previously held in a lowered position, substantially as and for the purposes specified.

2. In a fare-register, the combination with two or more series of register-wheels and their actuating-wheels, of a series of slotted slides *f* bearing fare-indicators and having their lower ends terminating at right angles, a series of sliding rods *p* having arms *r* adapted to be brought in contact with the lower ends of the slotted slides when said sliding rods are drawn downwardly, a pawl on each of said sliding rods adapted to actuate a respective series of register-wheels, a releasing and retaining rod in the rear of said slotted slides and actuated by the downward movement of said slides, a rod *o'* actuated by the downward movement of said sliding rods, and alarm-sounding mechanism operated by said rod *o'*, all arranged substantially as and for the purposes specified.

3. In a fare-register adapted to be carried on the person, the combination with two or more series of fare-register wheels and their actuating-wheels, of a series of slides having indicators denoting various fares, a vertical sliding rod for each of said indicator-slides adapted to be moved downwardly and to engage with said indicator-slide during said downward movement to lower said slide, a pawl carried on each of said vertical sliding rods adapted to engage with a respective series of register-wheels during the downward movement of said rods, and a retaining and releasing bar in the rear of said indicator-slides adapted to retain each of said indicator-slides in a lowered position, and to concurrently release the one that was previously held thereby in a lowered position, substantially as described.

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

JOHN F. OHMER.

Witnesses:
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