(No Model.)

M. T. GRAF.

OPERATING DEVICE FOR FARE REGISTERS.

No. 527,018. Patented Oct. 2, 1894.

Fig. 1.

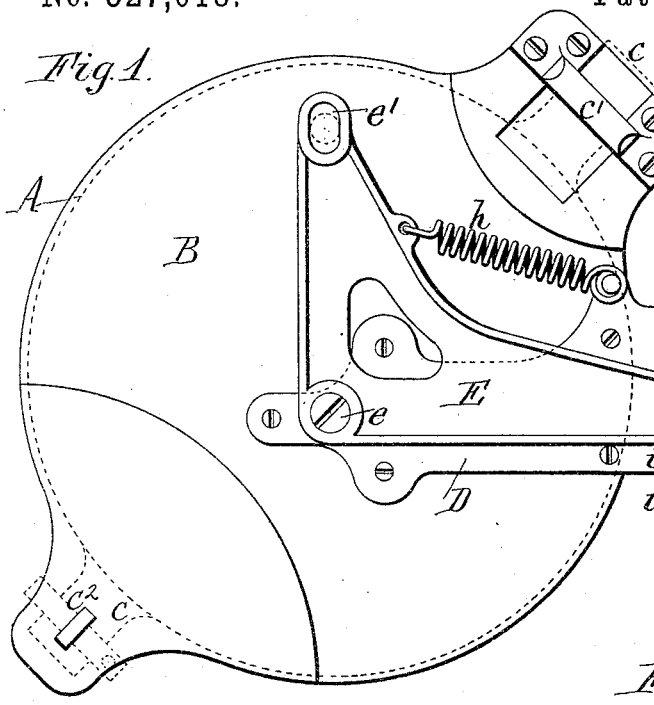


Fig. 2.

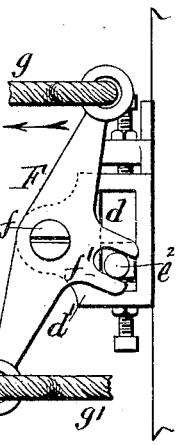


Fig. 3.

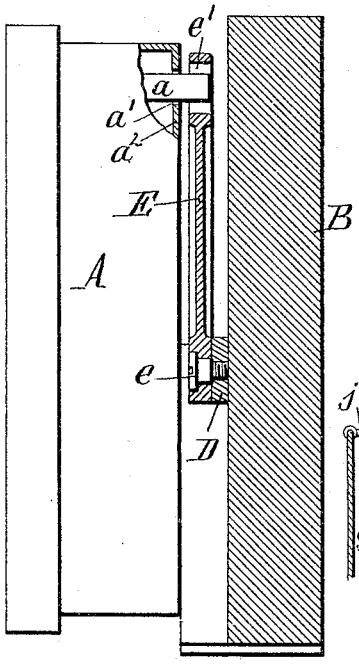


Fig. 5.

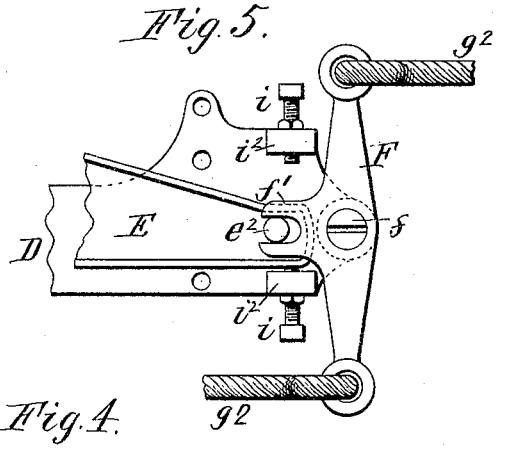
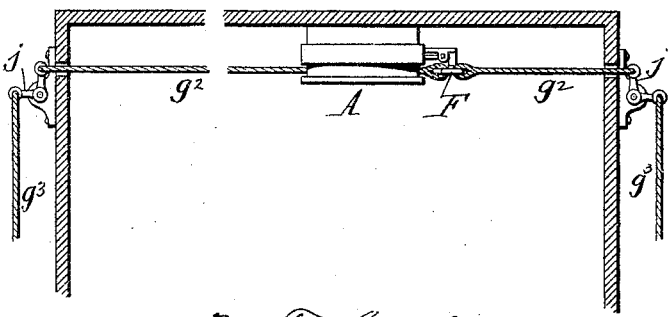


Fig. 4.



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MARTIN T. GRAF, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-HALF TO FRANK W. BARKER, OF SAME PLACE.

OPERATING DEVICE FOR FARE-REGISTERS.

SPECIFICATION forming part of Letters Patent No. 527,018, dated October 2, 1894.

Application filed November 13, 1893. Serial No. 490,764. (No model.)

To all whom it may concern:

Be it known that I, MARTIN T. GRAF, a citizen of the United States, residing at the city of Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Operating Devices for Fare-Registers, of which the following is a specification.

This invention relates to an operating device for that class of fare registers which are used principally in street cars and which consist of a case having on its front side a dial traversed by a pointer and containing registering mechanism which is operated by a cord or rod extending through the car.

The object of my invention is to simplify the construction of such operating devices and to render their operation easy and reliable, so as to insure a correct register of the fares.

In the accompanying drawings:—Figure 1 is a front view of the operating device of the register, the latter being outlined by broken lines. Fig. 2 is a side elevation of the same. Fig. 3 is a vertical section through the pivot of the elbow lever, showing the register in elevation with a portion thereof broken away to expose its actuating pin. Fig. 4 is a fragmentary horizontal section of a street car, showing a modification of my invention. Fig. 5 is a fragmentary front view, on an enlarged scale, of the operating device of said modified construction.

The same letters of reference refer to the same or like parts in the several figures.

A represents the fare register which may be of the type in which the registering mechanism is operated by a reciprocating pin or projection a, extending through a slot a' in the rear wall a^2 of the case.

B is a block or support to which the register may be secured by any suitable means. In the construction shown in the drawings, the register case is provided on opposite sides with projecting lugs c c, one of which is arranged in a loop c' secured to the block B while the other has a slot engaging with a staple c^2 upon which the lug is retained by a padlock or other fastening.

D represents a metallic base plate secured to the front side of the block or support, and E is an upright elbow lever mounted upon a horizontal pivot e secured to the base plate D so as to swing in a parallel plane with the latter. The vertical arm of this elbow lever is formed with an upright slot e' in which the actuating pin a of the fare register engages, as shown in Fig. 3. The horizontal arm of the elbow lever terminates in a pin or reduced portion e^2 which is arranged in the plane of said arm and which projects through an upright guide slot d formed in a forwardly extending lug d' arranged at the outer end of the base plate D.

F represents an actuating lever whereby the elbow lever is operated and which is mounted upon a horizontal pivot f secured to the slotted lug d' of the base plate. This pivot is arranged at right angles to the pivot of the elbow lever, so that the actuating lever swings in a plane at right angles to that of the elbow lever. This actuating lever is provided with a slotted or bifurcated arm f' which extends laterally from its central portion and straddles the pin e^2 of the adjacent arm of the elbow lever, so that the movement of the actuating lever is imparted to the elbow lever.

g g' are pulling cords attached to the arms of the actuating lever for operating the same. One of these cords extends through the interior of the car, while the other passes outward through its end wall, so that the register may also be operated from the platform. The cord within the car is attached to the upper arm of the actuating lever and the platform cord to its lower arm.

h is a spring whereby the elbow lever E is returned to its normal position after registering a fare. This spring is secured at its ends to the base plate D and the upper arm of the elbow lever, respectively.

i i' represent adjustable stops arranged on the base plate on opposite sides of one of the arms of the elbow lever for limiting the movement of this lever, the stops being shown in connection with the lower arm in the drawings. These stops preferably consist of screws or bolts arranged in ears i^2 projecting forwardly from the base plate and having jam nuts i^3 for locking them in place. By screwing these bolts inwardly or outwardly in the ears of the

base plate, the stroke of the elbow lever may be diminished or increased in accordance with the reciprocating range of the actuating pin of the fare register. Upon pulling either of the cords g g' the actuating lever is swung in the direction of the arrow in Fig. 2, which causes its birufcated arm to move upward and swing the lower arm of the elbow lever in the same direction, thereby swinging the upper arm of the elbow lever laterally in the proper direction to shift the actuating pin of the fare register forwardly, operating the registering mechanism and turning the pointer of the register forwardly the distance of one graduation of the dial. Upon releasing the cord, the spring, which has been strained by this movement of the elbow lever, reacts and returns the latter and the parts connected therewith to their former position, thus permitting the actuating pin of the fare register to assume its former position.

In my improved operating device, a compound leverage is obtained which enables the fare register to be operated with great ease. The device is composed of few parts and can therefore be manufactured at small cost.

In the modified construction of the operating device shown in Figs. 4 and 5 the same is adapted to an open or summer car in which it is desirable that the operating cords should be accessible from the outside of the car and from either side thereof. To accomplish this, the actuating lever F is arranged to swing in a plane parallel with that of the elbow lever E, and the pin of the latter with which the bifurcated arm of the actuating lever engages, is arranged at right angles to the plane of the lever, as shown in Fig. 5. On each side of the car is pivoted a horizontal bell crank lever j—, one arm of which is connected with one of the arms of the actuating lever by a branch cord g^2, while to its other arm the main operating cord g^3 is attached. Upon pulling either of the main cords, the actuating pin of the fare register is shifted in an obvious manner through the medium of the bell crank lever, the actuating lever and the elbow lever.

I claim as my invention—

1. In an operating device for fare registers, the combination with a base plate or support, of an elbow lever pivoted to said base plate, swinging in a plane parallel therewith, and having one of its arms constructed to engage with the actuating device of the fare register, and an actuating lever, adapted to be operated by a cord or rod and having a laterally projecting arm which engages with the other arm of said elbow lever, whereby the latter is swung on its pivot by the movement of the actuating lever, substantially as set forth.

2. In an operating device for fare registers, the combination with a base plate or support, of an elbow lever pivoted to said base plate, swinging in a plane parallel therewith, and having one of its arms constructed to engage with the actuating device of the fare registers, and its other arm provided with a pin or projection,—an actuating lever adapted to be operated by a cord or rod and having a slotted or bifurcated arm projecting laterally therefrom and engaging with the pin of the elbow lever and a spring for returning the parts to their normal position, substantially as set forth.

3. In an operating device for fare registers, the combination with a base plate or support, of an elbow lever pivoted to said base plate, swinging in a plane parallel therewith and having its upper arm provided with a slot adapted to engage with the actuating pin of the fare register and its lower arm provided with a pin arranged in the plane of the arm and an actuating lever adapted to be connected with an operating cord, swinging in a plane at right angles to that of the elbow lever and having a laterally projecting bifurcated arm which engages with the pin of the elbow lever, substantially as set forth.

4. In an operating device for fare registers, the combination with a base plate or support having a slotted angular guide lug, of an elbow lever pivoted to said base plate, swinging in a plane parallel therewith and having its upper arm provided with a slot adapted to engage with the actuating pin of the fare register and its lower arm provided with a pin arranged in the plane of the arm and guided in said slotted lug, and an actuating lever pivoted to said slotted lug and having a bifurcated arm engaging with the pin of the elbow lever, substantially as set forth.

5. In an operating device for fare registers, the combination with a base plate or support, of an elbow lever pivoted to said base plate,—swinging in a plane parallel therewith, and having one of its arms constructed to engage with the actuating device of the fare register, an actuating lever engaging with said elbow lever and adjustable stops arranged on opposite sides of one of the arms of the elbow lever, substantially as set forth.

Witness my hand this 7th day of November, 1893.

MARTIN T. GRAF.

Witnesses:
CARL F. GEYER,
JNO. J. BONNER.