

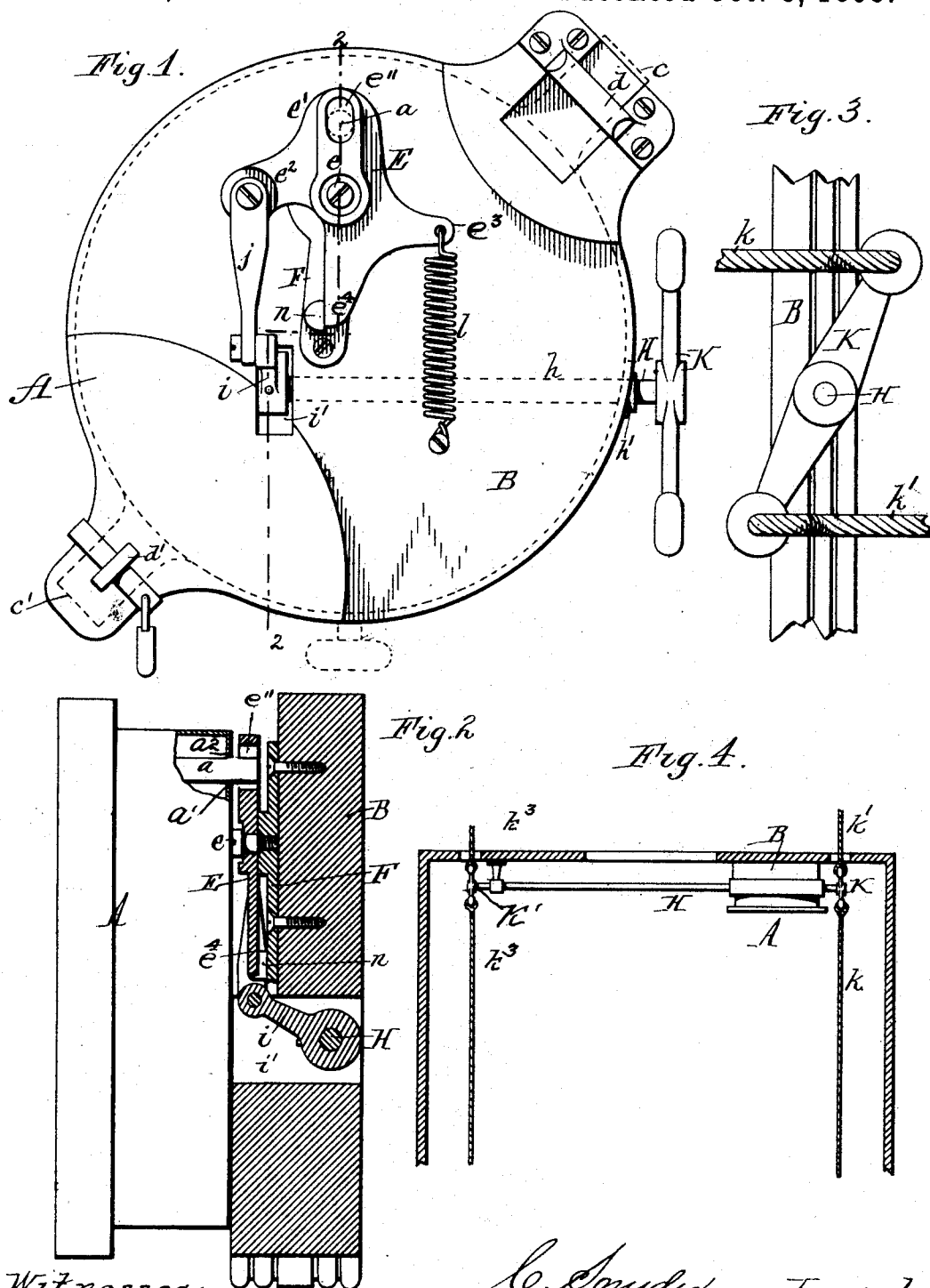
(No Model.)

C. SNYDER.

OPERATING DEVICE FOR FARE REGISTERS.

No. 506,188.

Patented Oct. 3, 1893.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHRISTOPHER SNYDER, OF BUFFALO, NEW YORK, ASSIGNOR OF ONE-THIRD
TO WILLIAM F. EBBS, OF SAME PLACE.

OPERATING DEVICE FOR FARE-REGISTERS.

SPECIFICATION forming part of Letters Patent No. 506,188, dated October 3, 1893.

Application filed April 20, 1893. Serial No. 471,079. (No model.)

To all whom it may concern:

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

This invention relates to operating devices for fare or passenger registers which are employed more especially in street cars, and which consist of a circular case having in its front side a dial traversed by a pointer and containing registering mechanism operated by a cord or rod extending through the car.

My invention has the object to so construct the devices for transmitting the movements of the cord or rod to the registering mechanism, that the register can be easily operated, and so that the parts are not liable to bind and thus cause the fares to be registered inaccurately.

In the accompanying drawings:—Figure 1 is a front view of the actuating mechanism of the register, with the register indicated by dotted lines. Fig. 2 is a vertical section thereof in line 2—2, Fig. 1, with the fare register shown in elevation. Fig. 3 is a fragmentary edge view of the base plate showing the actuating lever of the rock shaft. Fig. 4 is a fragmentary horizontal section of a street car, showing a modification of my improvement.

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 any ordinary construction in which the registering mechanism is operated by a reciprocating pin or projection *a* extending through the case. In the register shown in the drawings, this actuating pin projects through a slot *a'* in the rear wall *a''* of the case.

B represents a base plate to which the register is secured, preferably by ears *c* *c'* secured to the case on diametrically opposite sides thereof. One of these ears engages in a loop *d* secured to the base plate, and the other is provided with a slot which fits over a staple *d'* on which the ear is confined by a padlock or other fastening.

E is a bell crank lever arranged on the front side of the base plate, opposite the actuating pin of the register, and turning upon a hori-

zontal pivot *e*, preferably secured to a metallic plate F which is in turn fastened to the base plate. The upper vertical arm *e'* of this bell crank lever is provided with an upright slot *e''* which receives the actuating pin of the register, as shown in Fig. 2.

H is a horizontal rock shaft, arranged transversely below the bell crank lever and journaled in an opening *h* formed in the base plate. This opening is preferably lined with a metallic bushing *h'* to reduce wear.

i is a forwardly projecting arm secured to the inner portion of the rock shaft H, and *j* is a rod or link connecting the outer end of said rock arm with the lower horizontal arm *e''* of the bell crank lever, whereby the rocking motion of said shaft is transmitted to the bell crank lever. The rock arm *i* projects through an upright slot *i'* formed in the base plate which permits the requisite movement of the arm.

K is an actuating arm or lever secured to the projecting outer end of the rock shaft, and *k* *k'* are pulling cords attached to the arms of said lever for operating the same. One of these cords extends through the car, and the other passes outward through the end wall of the car, so that the register may be operated from the car-platform as well as from the interior of the car. The cord within the car is attached to the upper arm of the actuating lever K, while the platform cord is attached to the lower arm thereof. The cord within the car may be supported by the usual loops or hangers depending from the deck of the car.

l is a spring for returning the bell crank lever to its normal position upon releasing the pulling cord. This spring is secured at one end to the base plate B, and at its other end to an arm or lug *e''* projecting outward from the bell crank lever on the side of its pivot opposite to that on which its horizontal arm *e'* is arranged.

e'' is a stop arm extending downward from the pivot of the bell crank lever and engaging against a stop or projection *n* formed on the metallic plate F, whereby the spring is prevented from swinging the lever back beyond its normal position.

Upon pulling either of the cords *k* or *k'*,

the rock shaft H is caused to turn in its bearing and this movement of the shaft is transmitted to the bell crank lever E by the rock arm *i* and connecting rod *j*, causing the lower horizontal arm of the bell crank to swing downward and its upper vertical arm *e'* to swing laterally toward the left, in Fig. 1, thereby moving the actuating pin *a* of the register in the proper direction to operate the registering mechanism, and turning the pointer of the register forward the distance of one graduation of the dial. Upon releasing the operating cord, the strained spring *l*, by its reaction, returns the bell crank lever and connecting parts to their former position, thus allowing the actuating pin of the register to assume its former position, preparatory to registering the next fare.

As the pulling cord or cords are attached directly to the actuating lever K of the rock lever H, no guide pulleys for the cords are required, and binding of the cord, which is liable to occur by the use of such pulleys, especially when the cord is comparatively stiff, is therefore obviated. A correct register of the fares is thus always insured. The use of the rock shaft in connection with the oscillating bell crank lever also affords an advantageous leverage, which enables the register to be operated with little effort by a short pull of the cord. The latter is also relieved from the wear produced by such guide pulleys.

When a fare register is used on an open or summer car, it is desirable that the register should be capable of operation from either side of the car. For this purpose, the rock shaft H of the operating mechanism may be extended to the left hand side of the car and provided with an additional actuating lever K' to which are attached a separate set of pulling cords *k²* *k³*, as shown in Fig. 4. The register can thus be conveniently operated from the side of the car farthest from the register, as well as from the side on which it is located.

I claim as my invention—

1. In an operating device for fare registers, the combination with a base plate or support, of a bell crank lever pivoted to said support and having one of its arms constructed to engage with the actuating device of the fare register, a transverse rock shaft arranged at right angles to the pivot of said bell crank lever and having an actuating lever for the attachment of the operating cord or rod, and an arm secured to said rock shaft and connected with the other arm of said bell crank lever, substantially as set forth.

2. The combination with a base plate or support of a bell crank lever pivoted to said support and having one of its arms provided with a slot or recess adapted to receive the actuating pin of the fare register, a transverse rock shaft arranged below said bell crank lever, journaled in said support and provided with a rock arm and an actuating lever, a rod connecting said rock arm with the other arm of the bell crank lever, and a return spring connected with said bell crank lever, substantially as set forth.

3. The combination with a base plate or support having a stop, of a bell crank lever pivoted to said support and having one of its arms provided with a slot or recess adapted to receive the actuating pin of the fare register, a transverse rock shaft arranged below said bell crank lever, journaled in said support and provided with a rock arm and an actuating lever, a rod connecting said rock arm with the other arm of the bell crank lever, a return spring connected with said bell crank lever, and a stop arm arranged on the bell crank lever and adapted to engage against the stop of the base plate, substantially as set forth.

Witness my hand this 17th day of April, 1893.

CHRISTOPHER SNYDER.

Witnesses:

CARL F. GEYER,
F. C. GEYER.