W. DANIELS.

Fare-Registers.

No. 150,539. Patented May 5, 1874.

Fig. 1.

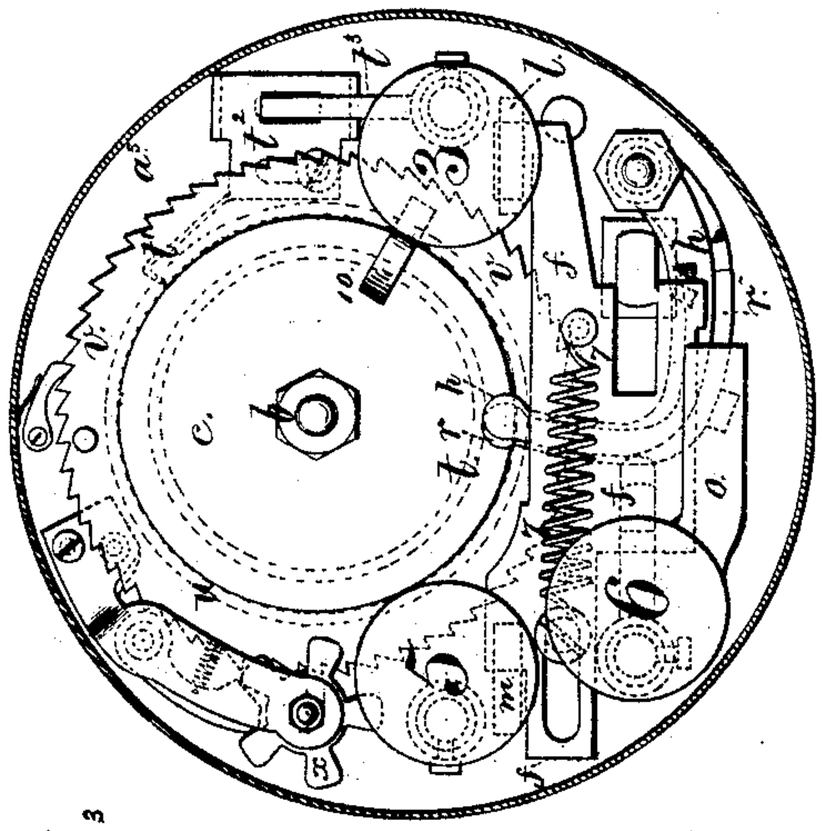


Fig. 4.

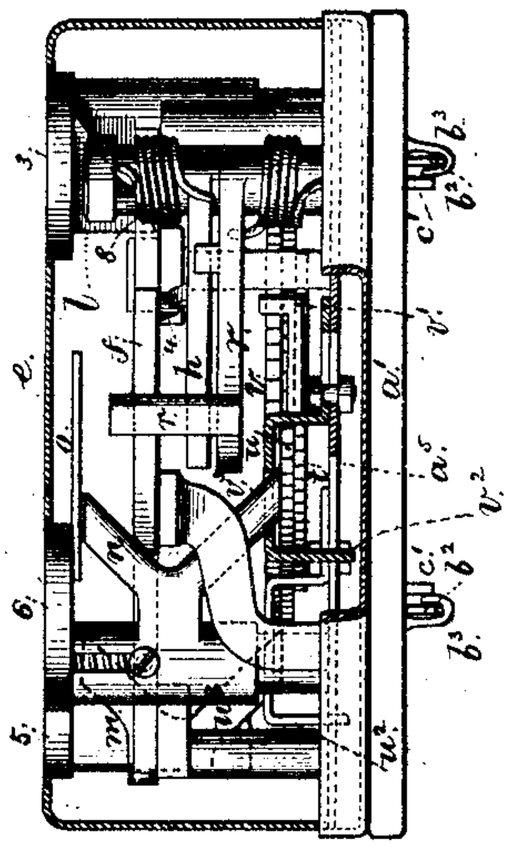


Fig. 8.

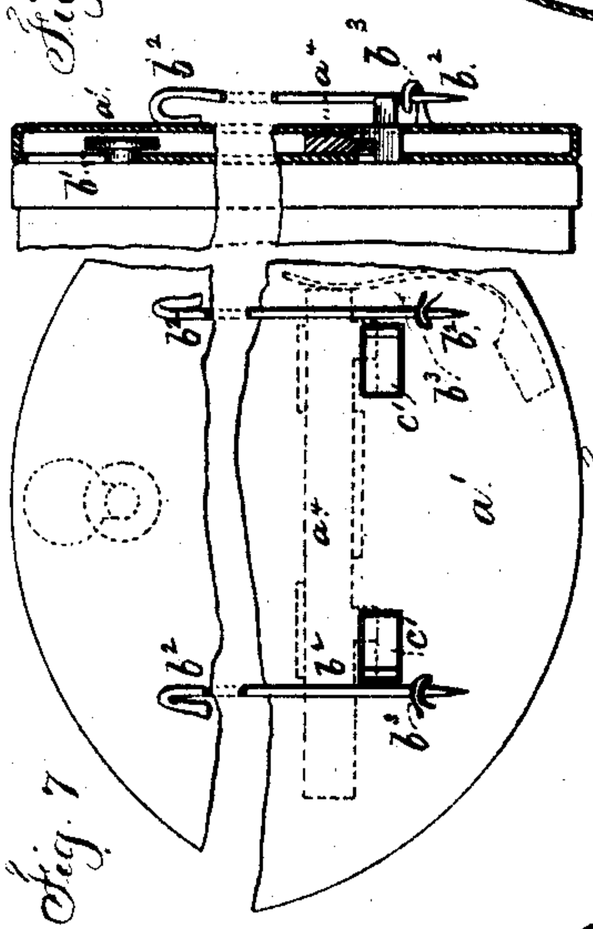


Fig. 5.

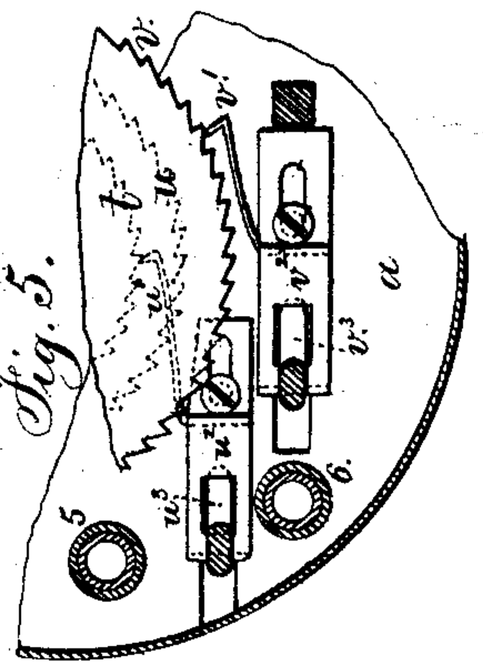


Fig. 6.

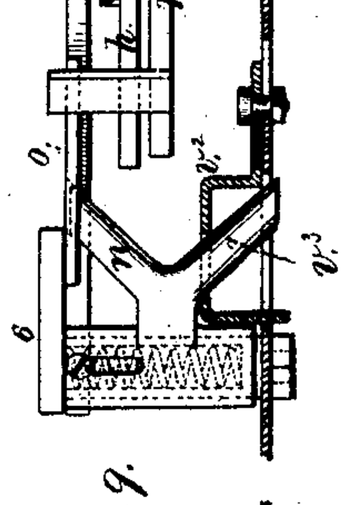


Fig. 9.

Fig. 7

Fig. 2.

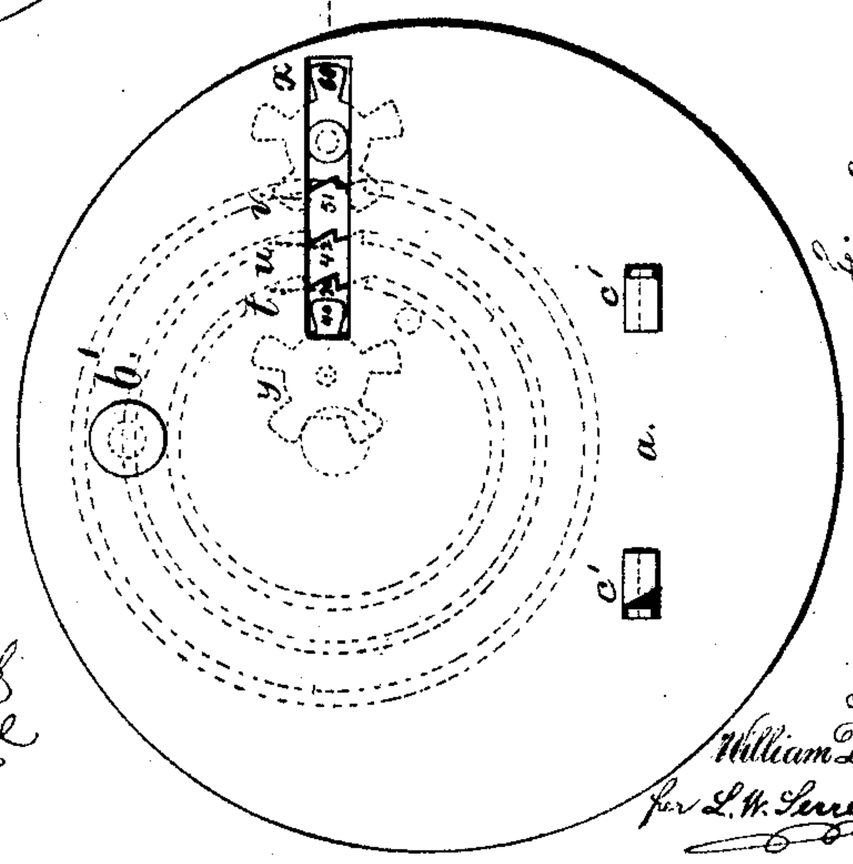
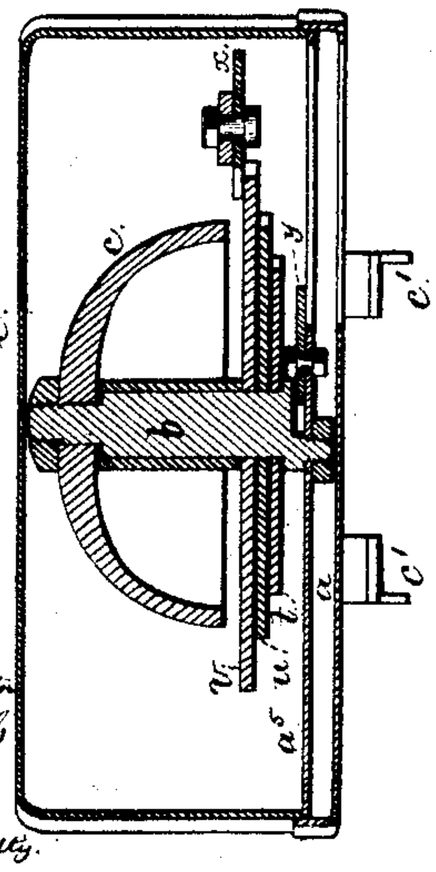


Fig. 3.



Witnesses,
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UNITED STATES PATENT OFFICE.

WILLIAM DANIELS, OF HOBOKEN, NEW JERSEY.

IMPROVEMENT IN FARE-REGISTERS.

Specification forming part of Letters Patent No. **150,529**, dated May 5, 1874; application filed April 27, 1874.

To all whom it may concern:

Be it known that I, WILLIAM DANIELS, of Hoboken, in the county of Hudson and State of New Jersey, have invented an Improvement in Fare-Registers for Conductors on Street-Cars, &c., of which the following is a specification:

This invention is for keeping tally of the fares received by the conductor; and as generally there are two or three rates of fares, I provide separate counting-dials and push-buttons, one for each rate of fare, and arrange them to act upon one hammer-slide that moves the hammer for striking the bell, but the parts are made to indicate different sounds on the bell. I also employ a peculiar locking mechanism for attaching the instrument to the coat or garment of the conductor.

In the drawing, Figure 1 is a view of the register with the cap removed. Fig. 2 is a rear view. Fig. 3 is a section of the bell and of the registering mechanism. Fig. 4 is an elevation of the actuating mechanism. Fig. 5 shows the slides and spring-pawls acting on the counting-wheels. Fig. 6 shows the construction of the push-button and slides. Fig. 7 represents the attaching-plate. Fig. 8 is a section of the same, and Fig. 9 shows part of one of the slides.

The plate a^5 has a stud, *b*, that carries a bell, *c*, and the other operative portions of the register. There are also two or more push-buttons. I have shown three, marked 3, 5, and 6, as illustrative of the value of the fares they are intended to compute. These push-buttons are each mounted upon a sleeve that surrounds a hollow stud projecting from the plate a^5, and in which hollow stud is a helical spring to project the button to the level of the cap-plate *e*, or nearly so. A screw in a slot acts as a guide, and limits the extent of movement. This cap-plate *e* is provided with openings for the push-buttons, and, by preference, a number is upon such cap-plate to indicate the number of the instrument, or the car with which it is used. The hammer-slide *f* is provided with a tooth, 4, that acts upon the hammer-tail *h* to throw back the latter, and when liberated the spring 8, Fig. 4, causes the hammer to strike the bell, after which the spring 7, Fig. 1, returns the slide and parts to a normal position. This slide *f* is moved by the inclined arm *l* of the push-button 3, or the inclined arm *m* of the push-button 5, or by the inclined arm *n* of the push-button 6, so that the hammer will be operated to strike the bell one blow, when either push-button is operated by the finger of the conductor pressed upon it. In order that different sounds may be produced, I connect with the push-button 3 a slight spring, 10, which, coming into contact with the bell as such button 3 is presssed in, deadens the sound. When the button 6 is pressed down the arm *n* thereof moves the bell-hammer slide *f* and hammers, as before, and brings the finger *o* into the path of the secondary hammer-arm *r*, as illustrated in Fig. 6, so that the hammer will strike as usual; but the secondary arm *r* will be held back by the finger *o* until the push-button 6 is allowed to rise, when the finger *o*, moving from behind the secondary hammer *r*, allows the spring of that secondary hammer to project the same and give a second blow. By these means the hammer will strike one distinct blow when the push-button 5 is depressed; there will be two blows when the push-button 6 is operated, and a deadened sound of the bell when the button 3 is depressed. The computation of the fares is made upon the disks *t u v*, that are made with ratchet-teeth, and numbered on their surfaces, to indicate either the number of the fares or the accumulated value in cents. The disk *u* is operated by the spring-pawl t^1 on the slide t^2, that is moved by the inclined arm t^3 of the push-button 3. The disk *t* is operated by the spring-pawl u^1 on the slide u^2, that is moved by the inclined arm u^3 of the push-button 5, and the disk *v* is operated by the spring-pawl v^1 and slide v^2, and the inclined arm v^3 on the push-pin 6. Retaining-pawls should be applied to each disk to prevent them turning the wrong way, and the disks *t* and *v* have applied to them star-wheels *x* and *y* to turn one tooth each revolution of the respective disk, and thereby enumerate the accumulation of fares by more than one revolution of the respective disks. The numbers on the disks and star-wheels are observed through an opening in the back plate *a*, as seen in Figs. 2 and 3, and this opening is covered by a movable attaching-plate, a^1, that is made double and provided with an opening in the portion that is next to

the plate a, and into this the button-headed stud b^1 slips, and there are locking projections c' c' attached to the plate a, and passing into holes in the attaching-plate a^1, and a suitable locking-bolt is inserted between the two plates of the movable back a^1, as seen at a^4, which, passing into grooves in the side of the projections c', retain the back a^1 to the plate a. This bolt a^4 is operated by a key of suitable construction introduced, by preference, through a key-hole at the edge of a^1, and this key and locking-bolt, with its tumblers or safety appliances, are to be of any usual character, so that the back a^1 can only be removed, for access to the computing-disks, by a properly-authorized person. To secure the register to the coat or other part of the conductor's garments, I provide the pins b^2, that are fastened to the back a^1, and hook beneath the catches b^3, and these are contiguous to the ends of c' c' that project through the back plate a^1; hence, by securing the back a^1 to the garment by the pins b^2 before the back a^1 is pressed against the plate a, the projections c' will close the hooks or catches b^3, so that the pins cannot be unhooked or the instrument removed.

I do not herein claim, broadly, the combination of a single slide and hammer, a bell, and a series of push-buttons; but

I claim as my invention—

1. The combination of push-buttons having inclined arms, actuating the registering mechanism and operating the slide controlling the hammers, to denote different sounds upon the bell, with the hammers, a bell, and a slide, substantially as set forth.

2. A push-button provided with the inclined arms, which move therewith, in combination with the main hammer, bell, and registering mechanism, substantially as described, for the purpose specified.

3. The push-button made with a tube sliding on a hollow stud, and provided with a spring and two inclined arms, one to actuate the hammer and the other to move the computing wheels or mechanism, as set forth.

4. The spring 10 upon the push-button 3, to pass upon the bell when said push-button is moved, for the purposes specified.

5. A movable back connected to the plate a of the instrument, and secured in place by a lock, and serving to cover the opening through which the computing-disks are examined, as set forth.

6. The pins b^2 and hooks b^3, for attaching the back a^1 to the garment, in combination with the projections c' on the plate a, and the mechanism for locking the back a^1 to the plate a, substantially as set forth.

Signed by me this 25th day of April, A. D. 1874.

WILLIAM DANIELS.

Witnesses:

GEO. D. WALKER,

CHAS. H. SMITH.