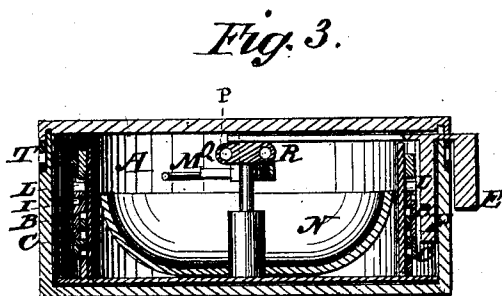
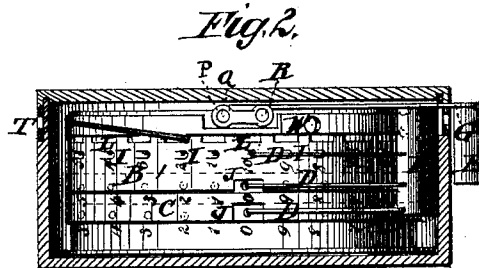
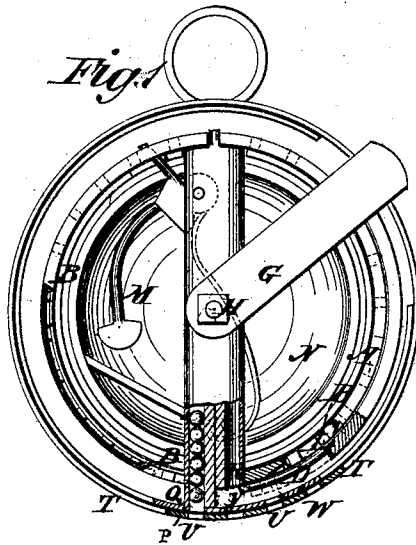


M. D. WILLIAMS.

REGISTER.

No. 178,575.

Patented June 13, 1876.



Morris D. Williams.

WITNESSES:

Charles Mc Ardle.
David D. Anthony.

INVENTOR:

UNITED STATES PATENT OFFICE.

MORRIS D. WILLIAMS, OF CONQUEST, NEW YORK.

IMPROVEMENT IN REGISTERS.

Specification forming part of Letters Patent No. **178,575**, dated June 13, 1876; application filed October 18, 1875.

To all whom it may concern:

Be it known that I, MORRIS D. WILLIAMS, of Conquest, in the county of Cayuga and State of New York, have invented a new and Improved Fare-Register, of which the following is a specification:

My invention consists of a series of recording-rings numbered on their faces, and actuated by pawls which are attached to a portion of a ring attached to a lever which is worked by hand.

The rings have a notch to receive the pawl for each number; but in order that the rings for tens, hundreds, &c., shall only be engaged once for every revolution of the preceding ring, the rings of lower denominations overlap one edge of the rings of higher denominations, and cover the notches, except in one place, where they allow the pawls to drop once for every revolution, and turn the rings of higher denomination one degree.

The bell and the bell-hammer are arranged within the rings in a manner to economize space, and for half-fares there is a contrivance of pockets for containing shot to be shifted from one pocket to the other, with means for opening and closing the pockets properly.

Figure 1 is a sectional elevation of my improved fare-register. Fig. 2 is a horizontal section of the case and top view of the apparatus, and Fig. 3 is a horizontal section of the register.

Similar letters of reference indicate corresponding parts.

A is a circular drum or case, on which are the recording-rings B C, &c., to be turned by hook-pawls D, which are worked forward and backward by the thumb-piece E, to which they are connected by an arm, F, and the thumb-piece is mounted on an arm, G, which vibrates on the center H of the apparatus.

The rings have notches I, corresponding to the numbers in which the pawls engage to turn them; but the notches of the rings of higher denomination are covered by an overlapping margin of the rings of lower denomination, except for a short space opposite the highest number, where a notch, J, lets the pawl through

to turn the ring to which it belongs one notch; but instead of this contrivance, a little plate may be contrived to rest under the pawls and keep them out of the notches, except when pushed one side at each revolution of the preceding ring by a cam on it, the cam being contrived at the right point for letting the pawl engage when the ring is required to register. Ring B also has a series of notches, L, for throwing the hammer M of a bell, N, located in the hollow space of drum A, within the recording-rings, so that the same operation by which recording-rings are worked works the bell.

By the location of the bell within the rings, a considerable economy of space is effected. P is a tubular pocket fixed within the case for containing shot Q, and R is another tube for receiving them to record the number of half-fares for which deduction is to be made from the record shown by the rings. The pocket P is closed by a ring, T, which turns on the outside of the case, and has holes U to open and let out a shot, and also to open a passage at V into a carrier, W, which is to receive the shot, and carry it forward when the pawls are pushed forward, and drop it into the receiving-pocket R.

The object of conveying the shot to the receiving-pocket by the carrier is, that the conductor can only add a shot when the rings record, thus preventing him from counting in his favor without also counting the other way.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of a series of hook-pawls with a series of notched registering-rings, constructed and arranged to operate substantially in the manner described.

2. The signal-bell located within the recording-rings, and having the hammer operated by one of the rings, substantially as specified.

MORRIS D. WILLIAMS.

Witnesses:

J. H. MOSHER,
D. D. ANTHONY.