

T. B. DOOLITTLE.
Alarm Fare-Register.

No. 163,164.

Patented May 11, 1875.

Fig. 1.

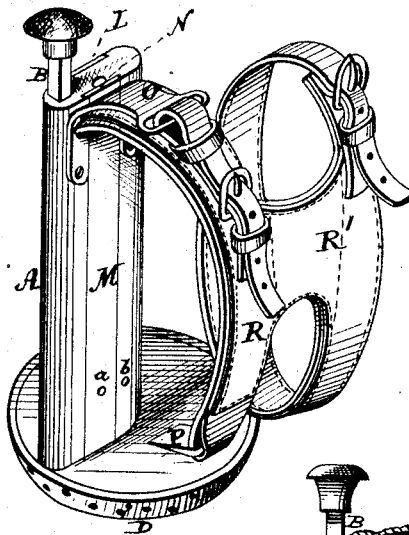


Fig. 2.

Fig. 3.

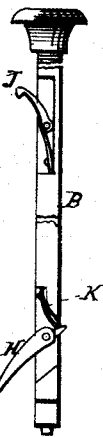
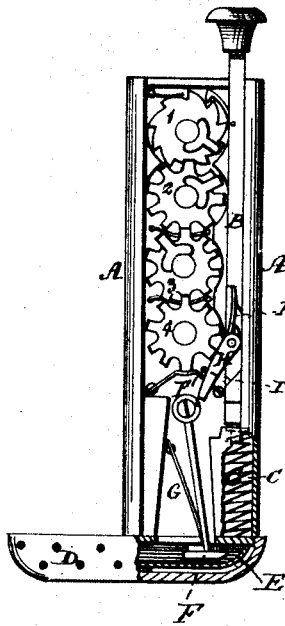
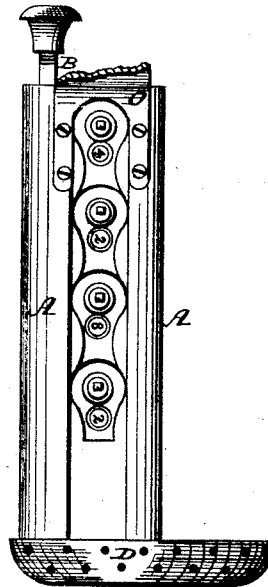


Fig. 4.



Witnesses:
Colborne Brooks
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Inventor:
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UNITED STATES PATENT OFFICE.

THOMAS B. DOOLITTLE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE DOOLITTLE MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN ALARM FARE-REGISTERS.

Specification forming part of Letters Patent No. **163,164**, dated May 11, 1875; application filed March 18, 1875.

To all whom it may concern:

Be it known that I, THOMAS B. DOOLITTLE, of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Conductors' Hand Alarm and Register; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this application.

My invention relates to that class of inventions designed for use by conductors of railroad-cars to denote automatically the number of fares collected by them, and which shall at the same time ring an alarm, indicating the performance of that duty by the conductor, which shall induce to the successful operation of the instrument.

My invention has for its object to produce an instrument which shall simply give the alarm and make a register each time a fare is collected, that shall be compact in form, and adapted to securement to the hand, (preferably the left,) so that the fingers of the conductor, when not using the punch, shall be unincumbered, as will be hereinafter more fully set forth.

My invention consists of a flat cylindrical or semi-cylindrical barrel, within which is arranged a series of ratchets or train of gear-wheels, similar to the ordinary train of registering-gear, having numbers on their rear faces, and a vertically-moving spring bar or rod, having at or near its upper end a spring hook or catch, which shall take hold of and turn, one point at each stroke, the first gear in the train, and having at or near its lower end another spring catch or arm, to operate a small striking-hammer, which vibrates, so as to strike a bell arranged within a cap at the lower extremity of the containing-case, as will be hereinafter more fully set forth; and my invention further consists in the combination, with the instrument described, of suitable securing-straps, for conveniently attaching the instrument to the hand, as will be hereinafter more fully set forth.

To enable those skilled to fully understand

my invention, I will proceed to describe its construction and operation, referring by letters to the accompanying drawings, in which—

Figure 1 is a perspective view of an instrument embodying the features of my invention. Fig. 2 is a front view with the covering-plate removed, and the bell-cap and part of the barrel cut away, showing the striking-hammer, and the coil-spring for returning the vertical operating-bar. Fig. 3 is a detail view of the operating-bar, removed from the barrel; and Fig. 4 is a rear view of the instrument, with the straps broken away, and the register-covering plate removed.

Similar letters indicate like parts in the several views.

A is the barrel, cast or otherwise formed to receive a train of register-wheels, 1 2 3 4, pivoted within the said barrel, each provided with suitable springs, to hold them against return movements. A channel is formed in the barrel, to the right of the register-wheels, to receive a vertical push bar or rod, B, which is kept in an elevated position, as seen at Figs. 1, 2, and 4, by a returning coil-spring, C, arranged in a slot in the lower end of barrel, immediately under the lower extremity of the push-rod B. The barrel A terminates in, or has secured to the lower end thereof, a disk, with its edge threaded, to which is secured a cap, D, to which is attached a bell, E. F is a striker or hammer, protruding below the disk sufficiently to insure its striking the bell. This striker is pivoted at F', and has a driving-spring, G, arranged so as to force the striker against the bell when suddenly compressed and relieved; and a suitable recoil-spring is provided, to catch the striker and hold it off from the bell after it has been struck.

This bell is struck in the following manner: The push-rod B being forced down, the lower end of a spring-arm, H, (pivoted to the said rod, and held against a guide-pin, I, by a spring, K,) comes in contact with a nick in the circular first end of the striker, forcing its lower end back, and, passing the center of the pivot, slips off, when the driving-spring forces

the striker against the bell. It then returns to its position away from the bell, and is there held by a suitable counter-spring.

The push-rod B is provided, at or near its upper end, with another spring arm or catch, J, which engages with the spurs of the register-wheel No. 1, so that the downward movement of the push-rod to cause the bell to strike also induces to the rotation of this register-wheel just one point; and the wheels are all so constructed and arranged that complete revolution induces to the movement of the succeeding wheel one point. The register-wheels are covered and the push-rod held in place by a sliding plate, which may be securely fastened when in position, as seen at L, Fig. 1; and another similar sliding plate, M, covers the exposed numbers on the rear of the register-wheels, and also the squared pivots, which are adapted to receive a key for readjusting the registering-wheels. (See Fig. 4.) The top edge of this plate and the top of the barrel A are slightly countersunk, as seen at N, Fig. 1, to receive a wax seal, so that the plate can only be removed by breaking the seal, which would at once expose the effort. The top of the push-rod is formed with, or has secured to its upper end, a suitable knob for operating it. To the rear side of the barrel and top of bell-disk are secured suitable metallic strap-holds O P, to which are secured a strap or straps, R R', as seen at Fig. 1, by which the instrument is secured to the hand.

The form of strap shown is considered the best; but this may be varied without departing from the spirit of my invention.

The instrument, as shown at Fig. 1, is applied to the hand as follows: The barrel A is grasped in the left hand, when the portion R of the strap lies against the back of the hand just behind the knuckles, and the other portion R' of the strap is buckled around the wrist, thus securing the instrument in the proper position to enable the wearer to force down the push-rod with his thumb.

a b, Fig. 1, are slight holes, in which a suitable key or lever may be inserted to slip the

plate M and break the seal, when it is desired to inspect the register-figures and readjust the wheels.

In using the instrument, the conductor is expected to strike the bell twice each time he collects a full-fare, and only once when he collects a half-fare. In doing this he necessarily causes the register to denote two or one accordingly, and thus keeps a faithful record of the fares he has collected.

It will be seen that the instrument may be used in crowded cars, requiring only one hand to manipulate it, and that one free to perform at other times any other duty.

What I claim as new, and desire to secure by Letters Patent, is—

1. The case for an alarm-register, consisting of a round, oval, or equivalent formed barrel, A, adapted to be held on or in the hand, and containing the registering mechanism, and the perforated case D for the bell, substantially as described.

2. In a case for an alarm-register, the barrel A, provided with the sliding plates L M and seal-cavity N, substantially as and for the purpose described.

3. The combination, with the registering devices and with the alarm mechanism, arranged in relation to each other, as shown, of the straight push-rod B, passing down one side of the barrel, and provided with spring-arms J K, operating the register and the alarm, substantially as set forth.

4. An alarm-register embodying in its construction an oval, round, or equivalent formed barrel, carrying the registering mechanism, and adapted to be carried on or in the hand, a gong-containing case attached to such barrel, a series of registering-wheels, an alarm apparatus, and a straight push-rod, provided with spring-arms, and actuating the register and alarm, substantially as set forth.

T. B. DOOLITTLE.

Witnesses:

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