

J. B. BENTON.
Fare Register.

No. 230,169.

Patented July 20, 1880.

Fig. 1.

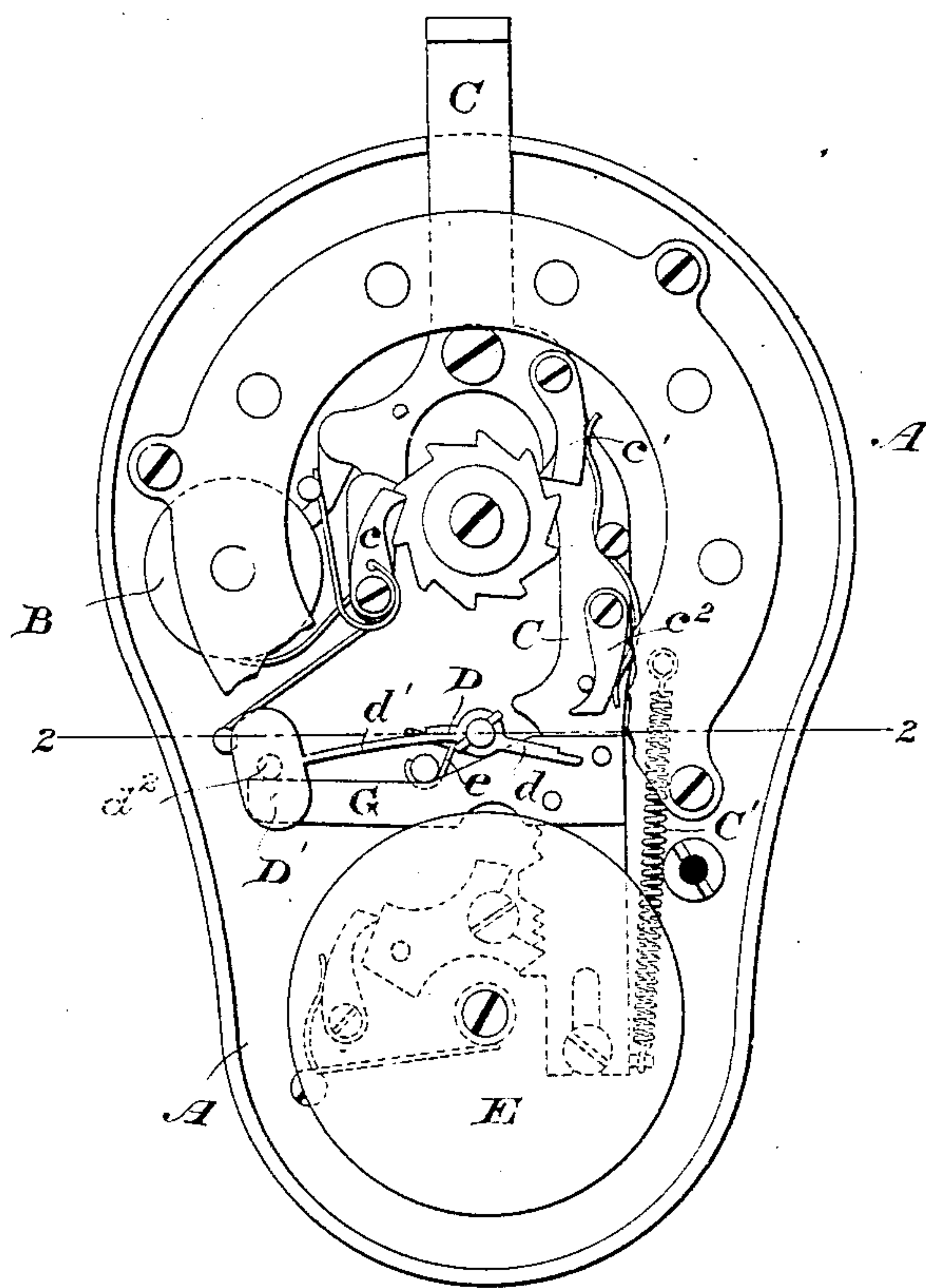
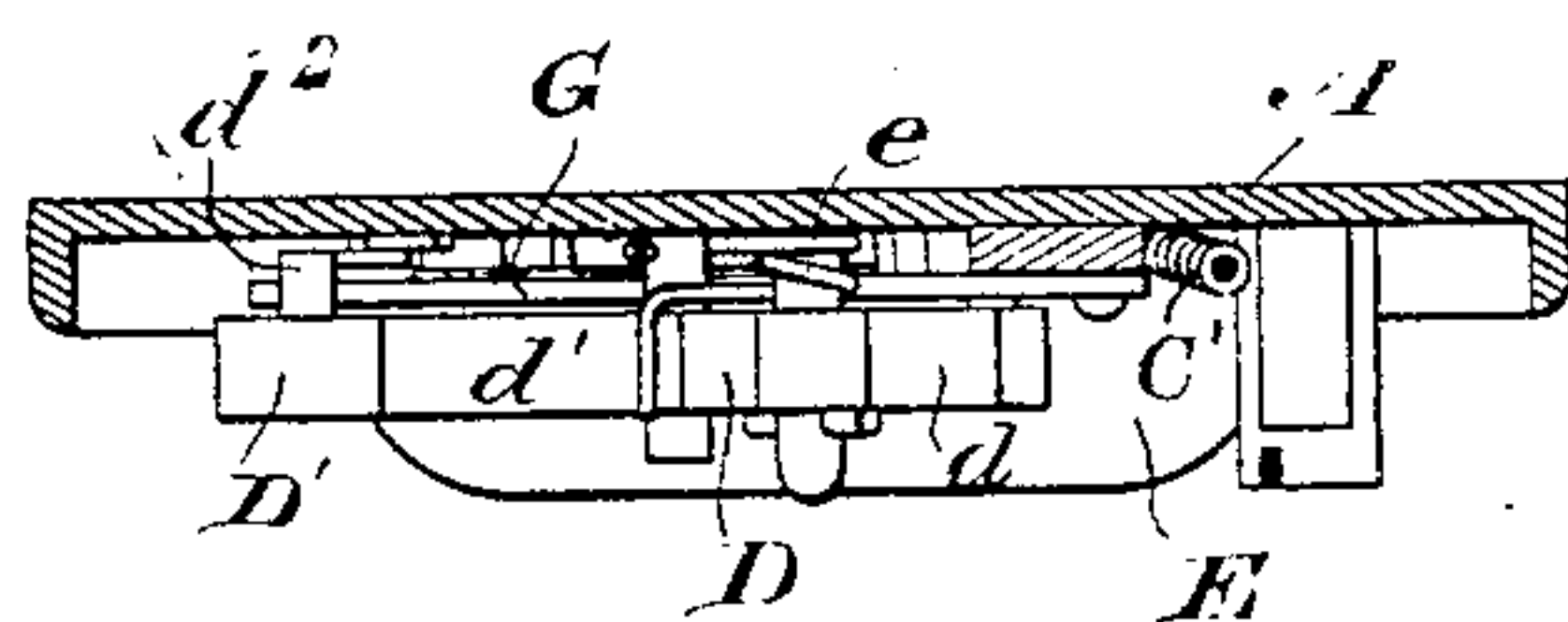


Fig. 2.



WITNESSES

Wm a. Skunk.
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INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN B. BENTON, OF NEW YORK, ASSIGNOR TO THE RAILWAY REGISTER MANUFACTURING COMPANY, OF BUFFALO, N. Y.

FARE-REGISTER.

SPECIFICATION forming part of Letters Patent No. 230,169, dated July 20, 1880.

Application filed January 21, 1880.

To all whom it may concern :

Be it known that I, JOHN B. BENTON, of the city, county, and State of New York, have invented a certain new and useful Improvement in Fare-Registers, of which the following is a specification.

My invention relates to fare-registers of the class employing an alarm apparatus to be sounded each time the registering mechanism is actuated in the process of counting or tallying the fares collected, whereby the passenger is notified of the proper registry of his fare.

My invention constitutes an improvement upon the register shown in the Letters Patent granted to Wm. H. Hornum, April 29, 1879, as No. 214,777, in which a guard is interposed between the hammer or striking portion of the alarm apparatus and the bell or sounding portion thereof, in order to prevent contact of said hammer or striker with said bell or sounding portion until the actuation of the registering or tallying portion of the machine is insured.

My object is to provide simple and effective means in the nature of a guard to the bell, which render it impossible to sound the alarm by the actuation of the handle or prime mover of the machine without an accompanying operation of the registering portion of the apparatus.

The subject-matter claimed is recited at the end of the specification.

In the accompanying drawings, Figure 1 is a face view of so much of a registering-machine, with its cover or face-plate removed, as is necessary to illustrate the subject-matter claimed; and Fig. 2 is a transverse section therethrough on the line 2 2 of Fig. 1, showing a top or edge view of the bell-hammer, the bell, and the guard which prevents contact of said hammer and bell until a point is reached which insures the proper actuation of the register.

The parts of the register shown in the drawings as provided with my present improvements are similar to the corresponding parts of the register shown in Letters Patent granted to the Railway Register Manufacturing Company as my assignee, August 12, 1879, as No. 218,421,

the application for which was filed by me on the 20th day of March, 1879.

It will be unnecessary, therefore, to describe in detail here the several parts shown, except so far as may be required for a proper and clear understanding of my present invention.

The casing A incloses the registering mechanism, which is of the duplex character—that is, said mechanism consists of two sets, a permanent or general register, consisting of a series of wheels or indexes, B, which are for the purpose of making a continuous consecutive count or tally of the fares received on a large number or series of trips of the car or vehicle, and a trip or adjustable register consisting, preferably, of two disks arranged one above the other, (not necessary to be shown in the drawings,) the said trip-register being for the purpose of registering the fares collected on each trip of the car or vehicle only.

The construction and operation of this duplex registering mechanism is fully described in the aforesaid Patent No. 218,421.

The units-disk of the trip-register and the units-wheel of the permanent or general register are each provided, in the example shown, with ratchet-wheels, with which suitable pawls or tappets c c' , carried by the handle, prime mover, actuator, or slide-bar C, respectively engage to actuate the registers in the process of counting or tallying. The said prime mover C also carries a pawl or tappet, c^2 , to engage the short arm d of a pivoted bell-hammer lever, D, which carries at the end of its long arm d' the hammer D' , so as to raise said hammer against the force or tension of a suitable spring, e , and cause it to strike a bell, E, when the prime mover is moved inwardly to a sufficient extent to allow the pawl or tappet c^2 to slip from contact with the hammer-arm.

The actuator or prime mover C, as above indicated, is, in this instance, a slide or push bar, which is moved inwardly by the fingers to operate the registers and trip the bell-hammer, and is thrown outward quickly and automatically, as soon as released from the pressure of the operator's fingers, by a returning spring, C' , which forces the slide-bar to a position in readiness for the next actuation of the machine.

A well-known shifting-detent pawl-and-ratchet arrangement beneath the bell E is shown in dotted lines in Fig. 1, which is for the purpose of compelling a full stroke of the push-bar in both directions before its movement can be reversed, as in the aforesaid Letters Patent.

In order to render it impossible to sound the alarm without operating the register (should the safety-pawl arrangement fail when such a safety device is employed to compel a full movement of the actuator) by a partial operation only of the slide-bar or actuator, and its sudden release and quick return by the spring which would permit the partially-raised hammer to be brought down quickly by its spring. I interpose between said hammer and the alarm-bell a guard, G, which positively prevents contact of said hammer and bell until the actuation of the register is insured, the guard being moved out of the path of the hammer to permit it to strike the bell as soon as the slide-bar has been moved sufficiently far to cause its actuating devices to move the register, but not before, while said guard is moved into position again automatically to form an obstruction to the hammer as soon as the slide-bar rises to bring its actuating devices into position for a new actuation of the register and alarm. This bell-hammer guard is shown as consisting simply of a fixed arm or bar, G, extending from the slide-bar C across the path of the hammer, the said hammer, upon its under side, being provided with a projection, lug or pin, d^2 , which rests upon the upper edge of the guard while the slide-bar is in its raised or normal position.

When the slide-bar is moved in the direction to actuate the register and sound the alarm (inwardly in this instance) the guard, it will be observed, is carried with it, the organization being such, however, that said guard remains in the path of the hammer until the ratchet-wheels of the registering devices have been actuated. By the time said

registers have been moved the proper distance the guard is carried out of the path of the hammer, affording no obstruction to its striking operation, and as the hammer has been raised during the movement of the slide, and is released from its actuating tappet or pawl c^2 , at the moment the register is operated it is brought down quickly upon the bell to sound the alarm by the action of the spring e .

My invention of an interposed hammer or striker-guard may be used in registers having either a single or a duplex registering mechanism, in registers with or without a device or mechanism to compel a full movement of the slide or prime mover, and in registers having other forms of alarm apparatus than a rocking hammer and a gong or bell.

I wish it to be understood, however, that my invention is limited to a hammer-guard which is carried by the prime mover in its movements backward and forward, Hornum, whose Letters Patent have been before referred to, being the prior inventor of the bell-hammer guard, broadly considered.

I claim as my invention—

The combination, substantially as hereinbefore set forth, of the registering mechanism, the slide-bar or prime mover, the bell-hammer lever, the pawl or tappet to raise said bell-hammer against the force or tension of a spring, the alarm-bell, and the hammer-guard, carried with the prime-mover in its movements backward and forward, and so organized as to prevent said hammer from striking the bell until the prime mover is moved to a position which insures the actuation of the registering mechanism.

In testimony whereof I have hereunto set my hand this 15th day of January, A. D. 1880.

JOHN B. BENTON.

Witnesses:

WM. S. BEAMAN,
ANTHONY GREF, Jr.