

R. H. MORGAN.
Conductors' Punches.

No. 198,409.

Patented Dec. 18, 1877.

Fig. 1.

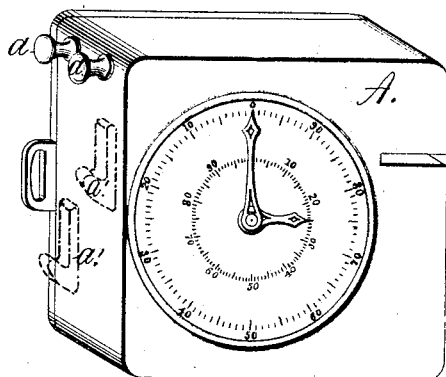


Fig. 2.

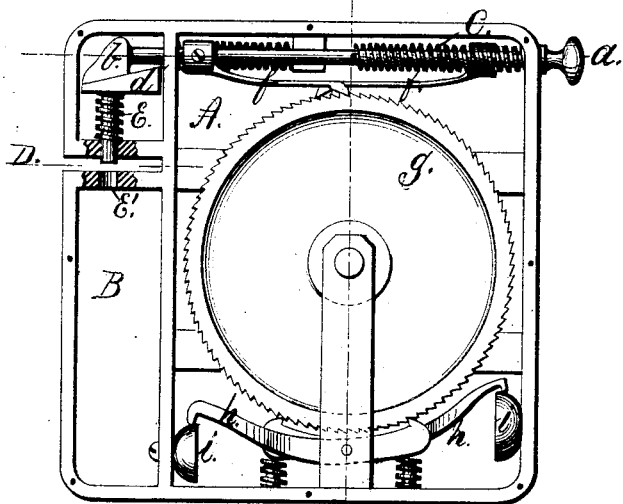


Fig. 3.

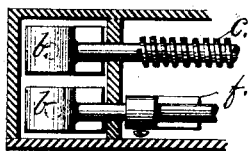
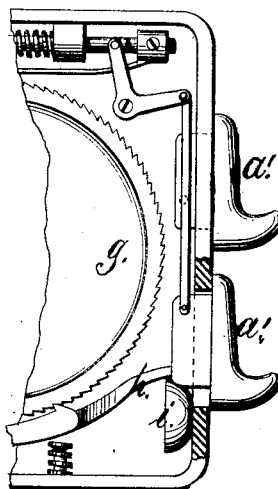


Fig. 5.

WITNESSES.

Henry J. Miller
Joseph A. Miller Jr

Fig. 4.

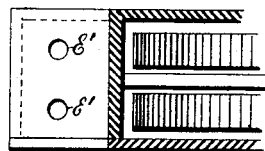
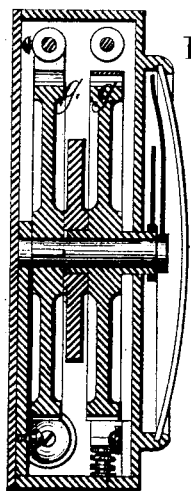


Fig. 6.

INVENTOR.

Richard H. Morgan
by Joseph A. Miller
Attorney

UNITED STATES PATENT OFFICE.

RICHARD H. MORGAN, OF FALL RIVER, MASSACHUSETTS.

IMPROVEMENT IN CONDUCTORS' PUNCHES.

Specification forming part of Letters Patent No. **198,409**, dated December 18, 1877; application filed March 22, 1877.

To all whom it may concern:

Be it known that I, RICHARD H. MORGAN, of the city of Fall River, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Conductors' Punches; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a perspective view of my improved conductor's punch. Fig. 2 is a sectional view of my improved conductor's punch, showing the operating mechanism, the sounding mechanism, and the receptacle for the same. Fig. 3 is a sectional view, showing another method for operating the punches by means of bell-crank connections. Fig. 4 is a vertical section of the same through the central axis. Fig. 5 is a top view of the mechanism for operating the punches, and Fig. 6 is a sectional top view of the punching-holes at D.

The object of the invention is to produce a conductor's punch in which two or more kinds of tickets may be punched by punches designed for each kind of ticket, and each connected with a separate bell, gong, or other sounding device, and also with a registering device to register and record the number of tickets punched.

The invention consists in the combination of two or more punches operated with distinct mechanism with two or more bells, gongs, or other sounding devices, and distinct counting and registering dials, so that the different kinds of tickets, when punched, will sound a different alarm, and also register the number of each kind of tickets punched, as will be more fully set forth hereinafter.

In the drawings, A is the box, made of any convenient form, of metal or other suitable material, arranged to receive the mechanism. B is the receptacle for the punched-out disks, and is provided with a cover, door, or opening, so that the disks or pieces of the tickets may be removed.

a a are two knobs or suitable handles, secured to rods at one end, the other end of the rods being provided with the beveled blocks *b b*. The rods are held in position by the coiled springs *c c*. *d* is a wedge-block secured to the

upper end of the punch E, which is surrounded by a coiled spring, to return the same to its proper position by exerting a strain on the rod. E' is the hole in the jaw through which the punch E passes, and through which the punched-out portion of the ticket falls into the receptacle B.

f f are spring-pawls secured to the operating-rods, and arranged to engage with the ratchet-wheels *g g'*. These ratchet-wheels have a fixed number of teeth, corresponding with the numbers fixed on the dial, and each ratchet-wheel is provided with a hand, arranged so that the same can be readily set at the zero-point, so that, at each pull on the knobs *a a* or the handles *a' a'* to punch a ticket, the corresponding hand moves one point on the dial.

Instead of pulling the operating-rods by the knobs *a a*, they may be connected by the bell-crank and lever with the handles *a' a'*, and be thus operated, as is fully shown in Fig. 3.

h h are spring-pressed hammers, which are raised by the teeth of the ratchet-wheels at each operation of punching, and strike the gong, bell, or other sounding device *i i*, and as the tone of each of the alarms *i i* differs from the other, passengers, detectives, or others can at once judge whether the conductor punches the ticket with the right punch.

On railroads, street-cars, or in other places where different kinds of tickets are used, such as full, half, through, or other proportional tickets, and each class of tickets is to be punched by its special punch, the number of each kind of ticket is not only duly recorded on the dial, but the sound of the alarm will at once indicate whether the ticket is punched by the proper punch, and thus a complete control kept on the collection of fares or admissions.

This compound conductor's punch is easily operated, convenient, and can be carried on a strap ready for use, so that the conductor or collector may freely use both hands to make change and collect tickets. It is simple in construction, and when locked up cannot be tampered with. The dial may be covered by glass or by a metal cap, as seems most desirable.

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

1. The combination, with the punch *E*, of the wedge-shaped blocks *b* and *d*, operated by the knobs *a a* or handles *a' a'*, substantially as and for the purpose set forth.

2. The combination, with the punch-operating mechanism, as shown and described, of the pawl *f*, ratchet-wheel *g*, operating directly upon the spring-pressed hammer *h*, and alarm *i*,

arranged and operating in connection with the dial and hand, substantially as and for the purpose described.

RICHARD H. MORGAN.

Witnesses:

JOSEPH A. MILLER,
AMOS A. WHITE.