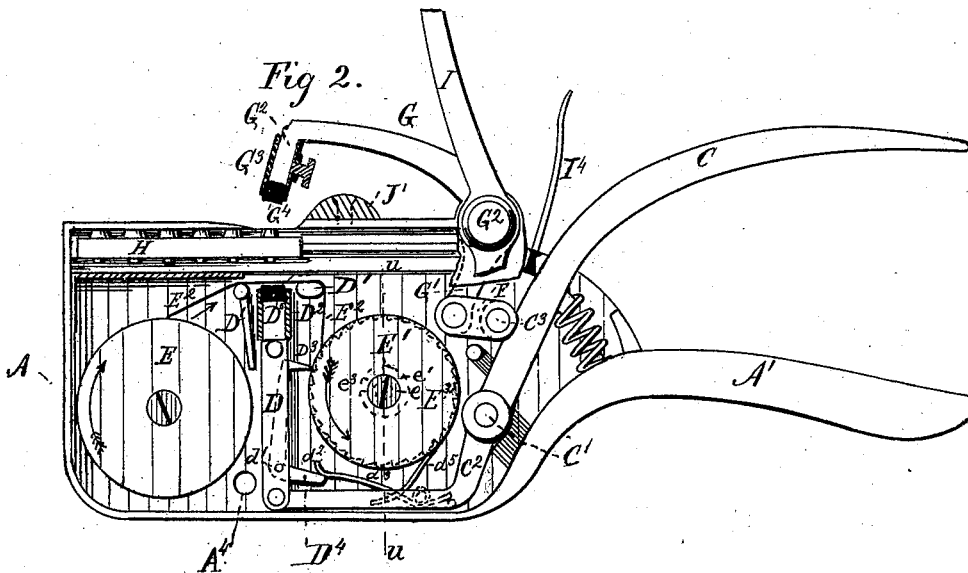
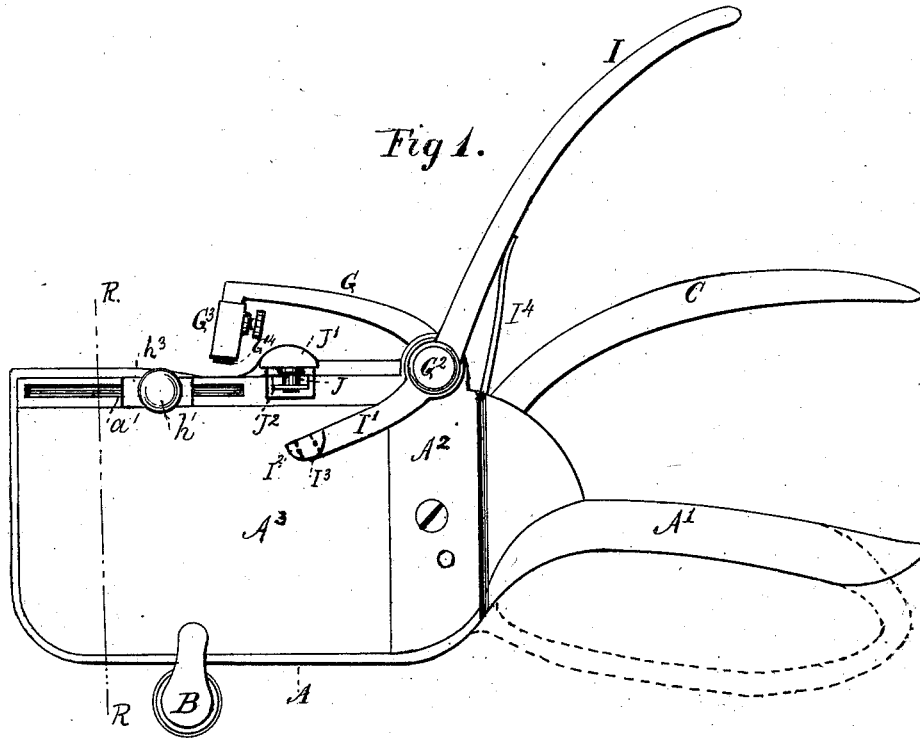


B. C. POLE.  
Devices for Printing Tickets and Recording Cash Receipts.

No. 198,855.

Patented Jan. 1, 1878.



WITNESSES:  
*Colborn Brooks*  
*Jno. J. Bonner*

INVENTOR.  
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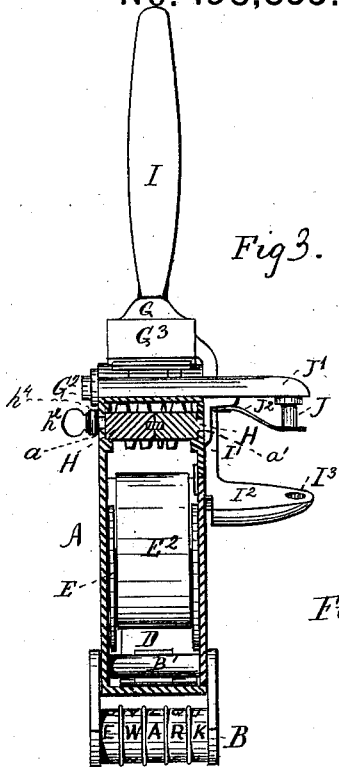


Fig. 3.

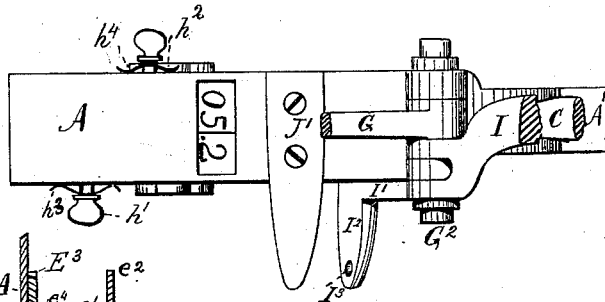


Fig. 4.

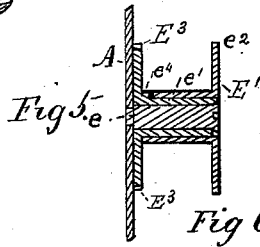


Fig. 5.

Fig. 6.

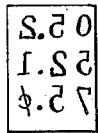


Fig. 7.

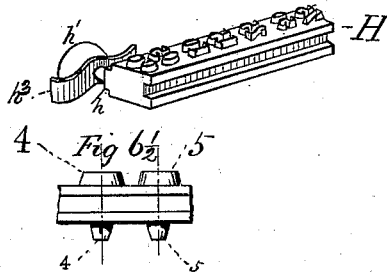


Fig. 8.

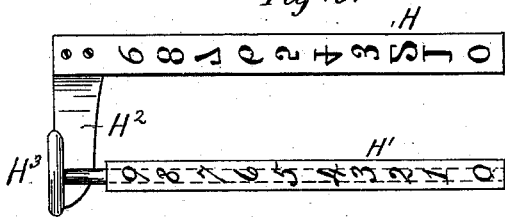
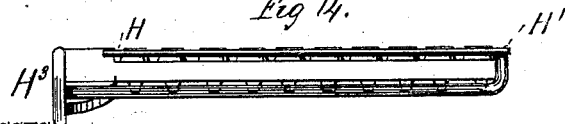


Fig. 9.



WITNESSES:

Colborne Brooks.

J. J. Bonner.

INVENTOR.

Benjamin C. Pole.



# UNITED STATES PATENT OFFICE.

BENJAMIN C. POLE, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN DEVICES FOR PRINTING TICKETS AND RECORDING CASH RECEIPTS.

Specification forming part of Letters Patent No. **198,855**, dated January 1, 1878; application filed May 11, 1876.

*To all whom it may concern:*

Be it known that I, BENJAMIN C. POLE, of Washington, in the District of Columbia, have invented certain new and useful Improvements in Printing and Recording Registers for Conductors or Collectors; and I do hereby declare that the following is a full, clear, and exact description of my invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in means or apparatus for stamping or canceling tickets, coupons, &c., and at the same time printing or recording on a slip or slips the amount, number, or designating mark or marks printed or stamped upon said tickets.

The object of my invention is to produce an instrument adapted to be used by conductors of railroad-cars, ticket-collectors, and others, whereby the tickets issued or collected by such persons may be punched, if desired, and also stamped by them with the amount or amounts received, and at the same time a complete record of such collections shall be retained within the instrument, beyond the control of the person using the same, in order that the company or individual or individuals on whose behalf the said fares or tickets are sold or collected may have a perfect record of the same, for the purpose of preventing fraud by the said collectors.

But, that my invention may be fully understood, I will describe the same in detail by reference to the accompanying drawings, in which—

Figure 1 shows a side elevation; Fig. 2, a similar view, partly in section, with the side plate removed. Fig. 3 is a sectional front view. Fig. 4 is a top view; and Figs. 5, 6, 6<sup>1</sup>, and 7 are detail views of parts separately.

In each of the views similar letters of reference are employed to indicate corresponding parts wherever they occur.

A represents the main case, which is provided with a holding or retaining handle, A<sup>1</sup>, and a removable plate, A<sup>3</sup>, adapted to be locked in position by means of a combination or other suitable lock, B.

The lock B in the arrangement shown is known in the market as a "combination-letter padlock," the tube B', containing the bolt, being placed through apertures A<sup>4</sup> in the case A and plate A<sup>3</sup>, for the purpose of locking the plate A<sup>3</sup> in position.

C represents a bent-lever handle, pivoted at C<sup>1</sup> to the frame or case A. The lever C, at its lower end, is provided with an extension, C<sup>2</sup>, to the extremity of which is pivoted a vertical rod, D, controlled in position by suitable guides D<sup>1</sup>, and provided with a removable holding-piece, D<sup>2</sup>, adapted to receive and hold an elastic or other suitable pressure-pad, as hereinafter more fully explained. The rod D is also provided with a pair or series of operating levers or pawls, D<sup>3</sup> D<sup>4</sup>, adapted to operate and control the revolution of rollers E<sup>1</sup>, carrying a tape, E<sup>2</sup>, in position to receive impressions, as hereinafter described.

The roller E<sup>1</sup> is provided with a ratchet-wheel (shown in dotted lines) adapted to engage with the end of the lever or pawl D<sup>3</sup>, which is pivoted to the rod D at d<sup>1</sup>, which is provided with an arm, d<sup>2</sup>, adapted to be controlled by a spring, d<sup>3</sup>, in such manner as to cause the end of the pawl D<sup>3</sup> to be constantly in contact with the teeth of the wheel or surface E<sup>3</sup>.

The ratchet-wheel E<sup>3</sup> is mounted on a shaft, e, affixed to the frame or case A, and is provided with a hollow shaft, e<sup>1</sup>, which forms a bearing for the roller E<sup>1</sup>, which is provided with a flange, e<sup>2</sup>, for guiding one side of the tape E<sup>2</sup>. A notch in roller E<sup>1</sup> is adapted to receive and be held by a knob or projection, e<sup>4</sup>, on the hollow shaft e<sup>1</sup>.

The tape E<sup>2</sup> is, by preference, formed of paper, and wound off the roller E, which is provided with flanges on each side.

A roller, E, filled with tape, having been placed in position, the end of the tape E<sup>2</sup> is then attached sufficiently on the roller E<sup>1</sup>. The apparatus will then automatically unwind the tape E<sup>2</sup> off the roller E onto the roller E<sup>1</sup>. To prevent the ratchet-wheel E<sup>3</sup> turning backward the spring d<sup>3</sup> is provided.

When it is desired to remove the tape E<sup>2</sup> after being printed or marked and wound onto the roller E<sup>1</sup>, it is simply necessary to remove the front plate A<sup>3</sup> and remove the roller E<sup>1</sup>,

and break the tape after the last mark or print. The roller E<sup>1</sup> can then again be placed in position, and the end of the remaining tape on the roller E wound again onto the roller E<sup>1</sup>.

F is a link-piece, pivoted at one end to a lug, C<sup>3</sup>, on the lever C, the opposite end of which is pivoted to an arm, G<sup>1</sup>, formed on or affixed to a lever, G, which turns freely on a bolt or bearing, G<sup>2</sup>, carried by the frame A.

The lever G extends forward over the upper surface of the frame A, and at its front end is provided with an extension, G<sup>2</sup>, upon which is mounted a holding-piece, G<sup>3</sup>, capable of holding an elastic or other suitable pressing-surface, G<sup>4</sup>.

H H are a pair of slides, (there may, however, be any other number,) the upper surfaces of which are provided, in the arrangement shown in the drawings, with a series of figures and signs, adapted to print upon a ticket the amount of money received by a collector, which ticket is to be delivered to the person paying. The under sides of said slides are each provided with corresponding figures or signs, adapted to print, by preference in smaller type, corresponding figures or signs on the tape E<sup>2</sup>. By the use of this smaller type in printing the register-strip E<sup>2</sup> there is a saving of length of tape, for while a large figure is printed upon the passenger ticket or coupon, a smaller like figure is made upon the tape E<sup>2</sup>, enabling the apparatus to take up and register a greater number of fares in a given length of the tape E<sup>2</sup>.

I is a lever-arm, mounted, by preference, on the axis or bearing G<sup>2</sup>, the shorter arm I<sup>1</sup> of which is provided with an extension, I<sup>2</sup>, having a hole or aperture, I<sup>3</sup>, in its extremity, adapted to receive a punch, J, formed on or affixed to an arm, J<sup>1</sup>, extending from the case or frame A.

J<sup>2</sup> is a spring, affixed at one end to the arm J<sup>1</sup>, and at the opposite end extending downward, and provided with a hole adapted to receive the end of the punch J, and clear a ticket, coupon, &c., therefrom after being punched.

In using my improved apparatus, when it is desired to collect a ticket, coupon, &c., which has been already stamped, marked, or canceled, it is simply necessary to hold such ticket or coupon in position, so that by grasping the arms or levers A<sup>1</sup> and I, the punch J may be forced through the said ticket or coupon, and finally cancel or destroy the same, as a second or final check on the conductor or collector; or any one or more of a series of numbers, figures, or signs on a monthly, yearly, commutation, or other ticket, coupon, &c., may be punched or cut out; or in the case of tickets or coupons available over a series of lines, at exhibitions, or like places, these may be checked by cutting out, by means of the punch I, any shaped hole or mark desired, to be used as a check on intermediate collectors and persons other than the one issuing or first

marking or canceling the ticket or coupon, &c.

When it is desired to stamp or mark a ticket, coupon, &c., with the amount received for such ticket, it is simply necessary to move the slides H H into such position that their upper surfaces shall indicate to the operator the amount he wishes to collect, and this is effected by means of guides or projections h<sup>1</sup> h<sup>2</sup>, extending outward through slots a a' in the sides of the framing A, the slot a' being formed in a portion, A<sup>2</sup>, of the frame A, which is capable of removal when required, for the purpose of facilitating the insertion or removal of parts of the apparatus.

The guides or projections h<sup>1</sup> h<sup>2</sup> are provided with knobs or handles, and also with friction-springs h<sup>3</sup> h<sup>4</sup>, for the purpose of retaining the slides H H in the position desired from time to time.

The slides H H in the drawings are shown capable of producing any combination of amounts from \$0.01 to \$6.75, inclusive, by simply sliding the same into the desired position.

When the figures have been thus arranged in the position required, it is simply necessary to place the ticket or coupon to be stamped or marked (with its surface to be marked on the under side) beneath the surface G<sup>4</sup>, when, by pressing on or drawing the levers A<sup>1</sup> and C together, the surface D<sup>5</sup> and G<sup>4</sup> will simultaneously bring the ticket in contact with the upper surface and the tape E<sup>2</sup> with the lower surface of the slides H H, thereby at the same time printing the ticket, coupon, &c., and recording the amount so printed on the tape E<sup>2</sup>. I<sup>4</sup> is a spring for raising the arm I.

Fig. 7 shows a portion of a slide, H, with a series of rows of devices or figures thereon. Fig. 8 shows a plan with handles removed; Fig. 9, a partial side view; Fig. 10, a sectional side view; Fig. 11, a cross-section through line x x; Fig. 12, a cross-section through line Z Z Z Z, Fig. 8. Figs. 13 and 14 are detached views of a printing-slide combined with a reading-slide, being the plan and side elevation thereof.

The end C<sup>2</sup> of the lever C in this case is not pivoted to the rod D, but simply rests in a notch or recess therein, in order that the drawer A<sup>4</sup> may be removed, in order to apply a new tape, E<sup>2</sup>, or for other purposes, and the parts connected therewith may be removed at the same time. Said piece D is held down in position by a spring, D<sup>5</sup>. Said drawer A<sup>4</sup> is held in position, when locked, by tube of lock B. M is an inking or marking tape, which is supported in a chamber, N, upon bearings N' N', from which it is conducted from one to the other over both surfaces of the slides H H, in order that when the levers A<sup>1</sup> and C are operated to mark a ticket or other surface, the characters formed by the surfaces H H may be printed on the ticket or other surface as well as on the tape E<sup>2</sup>.

The slides H H in this arrangement are pro-

vided with additional slides or reading-surfaces  $H^1$ , of equal length with the slides  $H$ , being parallel therewith, and provided with duplicate characters or figures to the characters on the slides  $H$ .

The slides  $H^1$  are connected to the slides  $H$  by a cross-bar,  $H^2$ , and are arranged to work in guides formed in an extension,  $O$ , provided with a slot or opening,  $O'$ , parallel with the row of figures or devices at any time in position at the opening in case  $A$  for printing, in order that the operator may be able to read readily what figures or signs he brings into position beneath the printing-tape  $M$ .

The slides  $H$   $H^1$  in this arrangement are operated by the arms  $H^2$ , which are provided with operating-surfaces  $H^3$ , against which the operator places his fingers, in order to move the slides  $H$  and  $H^1$  into the desired position from time to time. That the said printing-slides may be moved and pass each other's operating-handles, the wire  $H^4$  is provided, which takes hold of the back end of  $H^1$  and permits the said action of passing.

This device is operated similarly to the arrangement previously described, and the parts are marked with similar letters of reference, so that further description is unnecessary.

The essential feature of this application is the printing-slides, and I make no claim to the ink-ribbon and tape-feeding mechanism, and other features herein shown, except as the same are combined with such slides, since such devices are embraced in a separate application filed by me.

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

1. In a conductor's or collector's register, a slide provided with duplicate printing, marking, punching, or stamping devices on its opposite surfaces, substantially as and for the purposes set forth.

2. In a conductor's or collector's register, the combination, with a slide or slides with characters for printing, marking, punching, or stamping on their opposite surfaces, of a tape or band, a compound lever, provided with pressing-surfaces, so arranged as to simultaneously press a ticket, coupon, slip, or card on one surface, and a tape or band upon the reverse printing, marking, punching, or stamping surface of a slide, substantially as set forth.

3. In a conductor's or collector's register, the combination, with a slide provided with printing, marking, punching, or stamping devices on its opposite surfaces, of a recording tape or band, a printing or inking tape or surface, and a compound lever, operating double pressing-surfaces, adapted to be operated to force a ticket, coupon-slip or card, and a recording-tape simultaneously into position to be similarly printed, marked, punched, or stamped, substantially as described.

4. In a conductor's or collector's register, the combination, with a series of slides,  $H$   $H$ , provided with printing or marking surfaces on the opposite sides, of a single inking or marking ribbon or tape,  $M$ , passing over both printing or marking surfaces, and conducted to rollers on the side or under side of the register, substantially as described.

5. In a conductor's or collector's register, the combination, with a slide,  $H$ , having duplicate printing-surfaces, of parallel indicating slide or surface  $H^1$ , adapted to indicate the position of the printing, marking, or punching devices on the slide  $H$ , substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

BENJAMIN C. POLE.

Witnesses:

JOHN W. FRAZEE,  
H. H. HADLEY.