

(No Model.)

2 Sheets—Sheet 1.

E. H. MURDOCK.
CANCELING PUNCH.

No. 571,881.

Patented Nov. 24, 1896.

FIG. 1.

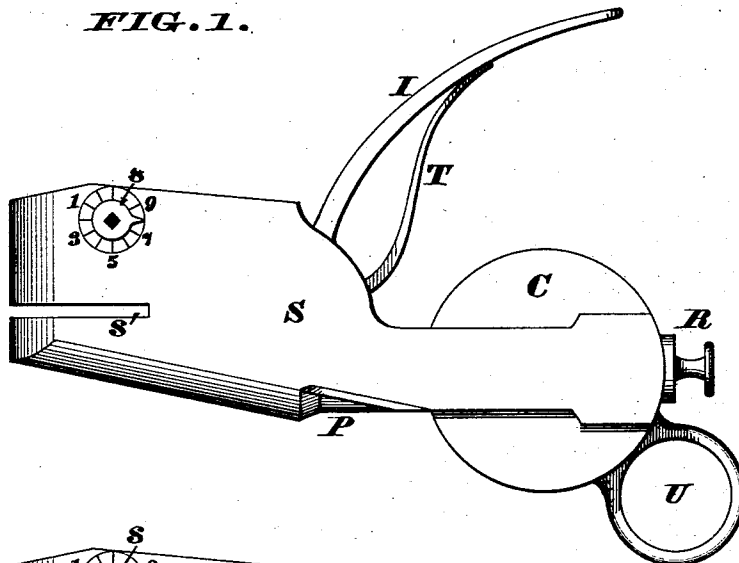


FIG. 2.

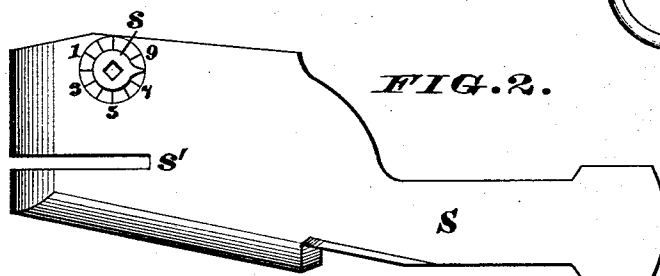
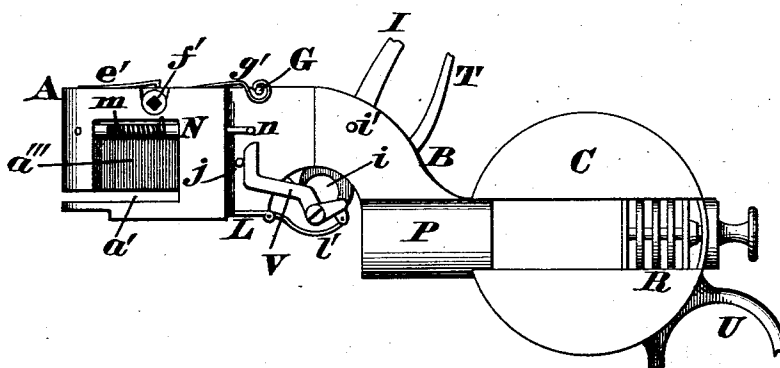


FIG. 3.



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(No Model.)

2 Sheets—Sheet 2.

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FIG. 4.

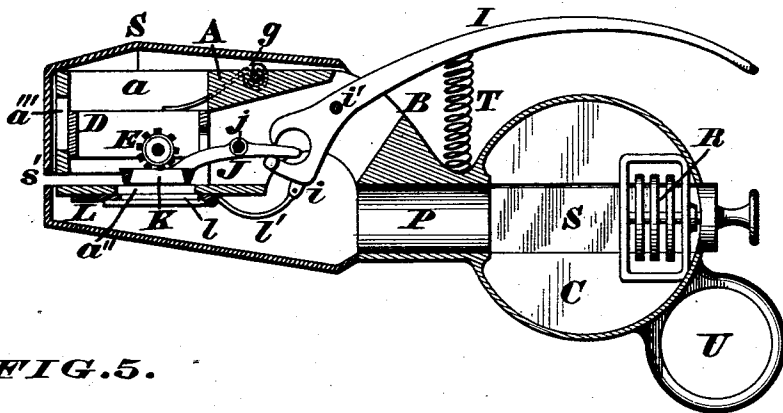


FIG. 5.

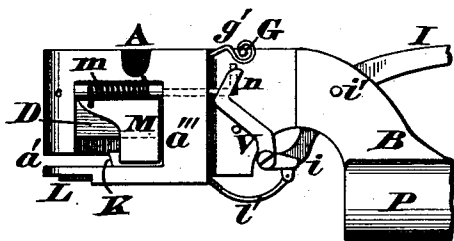


FIG. 6.

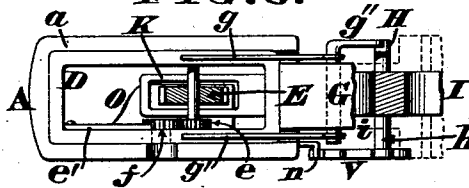


FIG. 7.

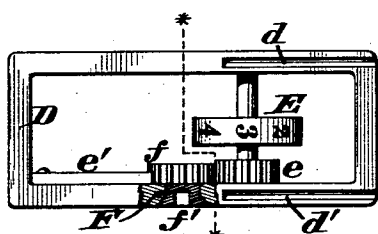


FIG. 9.

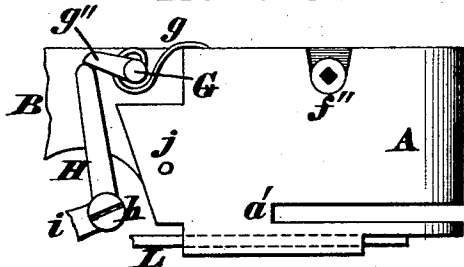


FIG. 8.

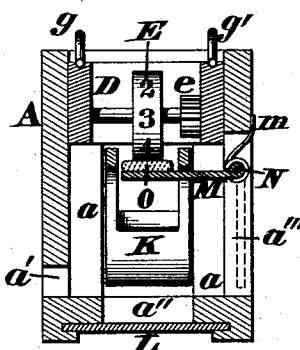
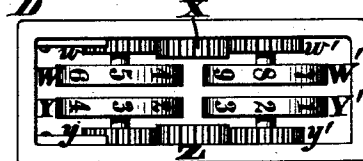


FIG. 10.



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UNITED STATES PATENT OFFICE.

EDWIN H. MURDOCK, OF CINCINNATI, OHIO.

CANCELING-PUNCH.

SPECIFICATION forming part of Letters Patent No. 571,881, dated November 24, 1896.

Application filed October 20, 1892. Serial No. 449,463. (No model.)

To all whom it may concern:

Be it known that I, EDWIN H. MURDOCK, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Canceling-Punches; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

My invention comprises a hand-punch that first prints or embosses or punctures numbers on a ticket or check or other similar article of value and then mutilates it by severing this canceled piece therefrom, which canceled cutting is deposited within a sealed chamber of the implement, so as to show how often and for what purpose it has been used; as hereinafter more fully described.

In the annexed drawings, Figure 1 is a side elevation of a punch embodying my improvements, the operating-lever thereof being in its normal or elevated position. Fig. 2 is a similar view of the detachable case separated from the punch. Fig. 3 is a side elevation of the latter after said case has been detached from it, the lever being in the same position as in Fig. 1. Fig. 4 is a longitudinal section through the complete punch, the lever being forced down to operate the cutter. Fig. 5 is side elevation of the front portion of the implement, its lever being in the same position as in the preceding illustration. Fig. 6 is an enlarged plan of the head of the punch, the type-wheel of the same and a portion of the main lever being sectioned horizontally. Fig. 7 is a greater enlarged plan of the type-wheel carrier detached from said head. Fig. 8 is an enlarged transverse section of the head, taken at the line * * of the preceding illustration. Fig. 9 is an elevation of the opposite side of head seen in Figs. 3 and 5. Fig. 10 is a modification of my invention.

As far as its general appearance is concerned my implement resembles an ordinary conductor's punch, inasmuch as it includes a head A, stock B, and receptacle C for containing the cuttings, the head being mortised vertically at *a* to receive the type-wheel carrier and having a horizontal mouth or slot *a'*, within which latter the tickets or checks

are inserted in the usual manner. This type-wheel carrier is a small box or frame D, adapted to move freely up and down within the mortise *a*, and has one or more type-wheels journaled in it, depending on the use to which the punch is to be put. In the present case, however, one wheel E is shown, the periphery of which is furnished with type for printing numbers on tickets, checks, &c., the numbers being usually made on an india-rubber strip secured around said wheel. Wheel E is fastened to a shaft having a pinion *e* attached to it, the latter being in gear with another pinion *f*, whose hub F is journaled in the carrier, as seen in Fig. 7, and has a socket *f'* to admit a wrench or key wherewith the type-wheel may be turned as desired.

e' is a spring or pawl bearing upon either of these pinions in such a manner as to prevent any accidental or retrograde turning of them. Furthermore, this carrier has a pair of longitudinal grooves *d d'* to admit the free ends of springs *g g'*, which springs at the proper moment exert some pressure upon said carrier. The fixed ends of these springs are coiled and connected to a shaft G, journaled transversely of the stock B, a lug *g''* (seen in Figs. 6 and 9) being attached to the shaft and adapted to be operated by a lifter H, attached to one end of a rod or screw *h*, projecting from the toe *i* of lever I, the latter being hung upon a pivot *i'*. This toe is forked, as more clearly seen in Fig. 4, and admits one end of a lever J, that turns on a pivot *j* and has at its front end a knife or cutter K of any desired size and shape. The knife here shown is adapted to make an oblong cut and is slotted lengthwise to enable the type-wheel to operate within it, said knife, when completely depressed, entering a slot *a''* in the bottom of the head.

L is a cut-off slotted at *l* and coupled by a link *l'* to the lever-toe *i*. *a'''* is an opening in one side of head A, and having a flap M fitted within it, the flap being hung upon a shaft N and normally swung up to the position seen in Fig. 8 by means of a spring *m*, the free end of said flap being provided on its inner side with an inking-pad O. *a''''* is a slot in the end of the head to facilitate the application of ink to said pad.

P is a tube connecting the stock B with the receptacle C, the latter having at its rear end any suitable form of combination-lock R, wherewith a detachable case S is secured around the greater portion of the punch. Case S has a dial and pointer *s* to indicate how to set the type-wheel E. Said case also has a slot *s'* in line with the slot *a'* of the punch-head. T is a spring that maintains the lever I in its normal position.

U is a ring to receive one of the operator's fingers.

My punch is operated in the following manner: The combination of lock R is first restored to enable the ready detachment of case S in order that the pad O may be properly inked, and then said case is reapplied and securely fastened, thereby leaving the implement in a normal position and ready to be operated at any time. In this normal position the spring T elevates the lever I and retracts its toe *i*, as seen in Fig. 3, the result being to render the lifter H and bent lever V inoperative for the time being. Furthermore, in this normal position the spring *m* swings the flap M up, as seen in Fig. 8, and thus causes the pad O to apply ink to the lower types of wheel E, the lateral projection *n* at the end of shaft N of said flap being presented outwardly, as more clearly seen in Fig. 6. Again, in this position of the punch the carrier D is raised about to the top of mortise *a*, and is supported upon the pad O, there being now but very little tension imparted to the springs *g g'*. The cutter K is also elevated now and the cut-off L retracted, so as to bring its solid portion under the opening *a''* at the bottom of the head. The punch is set to print a proper cancellation number or numbers by inserting a key within the socket *f'* and then turning said key until the index *s* points to the desired number. A ticket, check, or other article to be canceled is then inserted within the mouth *a'* and lever I forced down to the position seen in Fig. 4, which act causes the following movements of the operative parts, to wit: As the toe *i* of said lever is thus thrown forward the bent lever V comes in contact with the projection *n* at the end of shaft N and by forcing said projection upwardly the flap M is swung down to the position seen in Fig. 5 and indicated by dotted lines in Fig. 8, thereby permitting the free descent of carrier D. This carrier is pressed down with some slight degree of force, because the lifter H is now pushing upwardly against the lug *g''*, which act turns the shaft G sufficiently to impart the desired tension to the springs *g g'*. This pressure is sufficient to cause the inked type of wheel E to make a very clear impression on the upper surface of the ticket, and immediately thereafter the knife K descends a little farther and severs this printed portion from said ticket, which cutting is forced through the holes *a'' l*, traverses the inclined part of case S, enters tube P, and is finally deposited

within the receptacle C. The lever I being now released the spring T again restores all the parts to their normal positions, the cut-off L being instantly pulled back to close the hole *a''* and prevent the cuttings falling out of the punch. Furthermore, when the operative devices are restored to their normal positions the carrier D is elevated, in part by the small lever J and in part by the spring *m* of flap M.

The above describes a simple form of my punch; but in some cases it may be desired to apply more than one type-wheel to it, in which event the construction seen in Fig. 10 can be used. Here the carrier D' has one pair of type-wheels W W', whose shafts have pinions *w w'* secured to them, which pinions gear with a common driving-pinion X, adapted to be turned by a key. The carrier has another pair of type-wheels Y Y', whose shafts have pinions *y y'* attached to them, the latter being in gear with a common driving-pinion Z, capable of being turned by a key. But when four type-wheels are thus employed the hub must be duplicated on the opposite side of the head, as shown at *f''* in Fig. 9. By this arrangement of duplicate hubs, pinions, &c., either pair of type-wheels can be set independently of the other pair, thereby rendering the punch especially convenient for carrying out the peculiar method of canceling railroad-tickets described in Letters Patent No. 481,369, issued to me August 23, 1892, although the present invention is not limited to any special ticket, check, or use. Neither is it limited to the use of type for applying numerals to a ticket, as it is evident the same result can be accomplished by embossing these numerals or producing them with a series of perforations, but the printing operation is preferred, because it requires very little power and the rubber type can be readily renewed after becoming worn.

I claim as my invention—

1. A hand-punch provided with a device that cuts a portion from a ticket; a type-wheel that cancels said clipping; a receptacle for holding it; a slide that opens and closes the entrance to said receptacle; and a single lever that successively operates said wheel, cutter and slide, in the manner described, and for the purpose stated.

2. A hand-punch provided with a slotted cutter, a wheel having a numbered periphery, and a common lever that operates said devices and causes said wheel to traverse said slot and imprint a ticket, which printed portion is bodily detached by said cutter, substantially as herein described.

3. A punch provided with a slotted knife, and a canceling device operating through said slot, said canceling device being applied to a carrier reciprocating within the head of the implement, substantially as described.

4. A punch provided with a slotted knife, a type-wheel operating through said slot, a pad that applies ink to said wheel, and a com-

mon lever operating said knife, wheel and pad, substantially as described.

5 5. A hand-punch having a mortised head; a carrier reciprocating therein; a type-wheel journaled in said carrier; a swinging ink-pad applied to said head, and adapted to support said wheel when elevated; and a single lever that operates said carrier and pad, in the manner described, and for the purpose stated.

10 6. The combination, in a canceling-punch, of a reciprocating carrier D, provided with a type-wheel E, the springs *g*, *g'*, having their free ends in contact with said carrier, the shaft G, to which the coiled ends of said
15 springs are fastened, the lug *g''*, applied to said shaft, and the lifter H operating said lever, said lever being rigidly attached to the toe *i* of the main lever I, for the purpose described.

20 7. A hand-punch provided with a device that first cancels a ticket; a device that then severs this canceled part from the ticket proper; and another device that finally per-

mits this clipping to be deposited within a sealed receptacle, which three operations are
25 successively effected by the action of a single lever, substantially in the manner herein described.

8. The combination, in a hand-punch, of the carrier D, reciprocating within the head
30 of the implement, the type-wheel E, journaled in said carrier, devices for operating said carrier, a swinging flap M, hung upon a shaft N, having a lateral projection *n*, a spring *m* that raises said flap, and a bent lever V,
35 adapted to act against said projection *n*, in the manner described, said bent lever being rigidly attached to the toe *i*, of main lever I, all as herein set forth.

In testimony whereof I affix my signature 40 in presence of two witnesses.

EDWIN H. MURDOCK.

Witnesses:

JAMES H. LAYMAN,
ARTHUR MOORE.