(No Model.)

W. H. DONOVAN.

TICKET PUNCH.

No. 451,180. Patented Apr. 28, 1891.

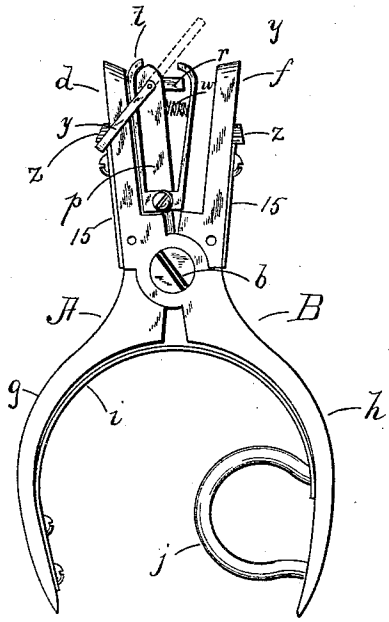


Fig. 1.

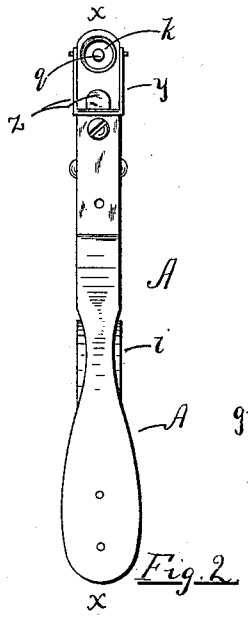


Fig. 2.

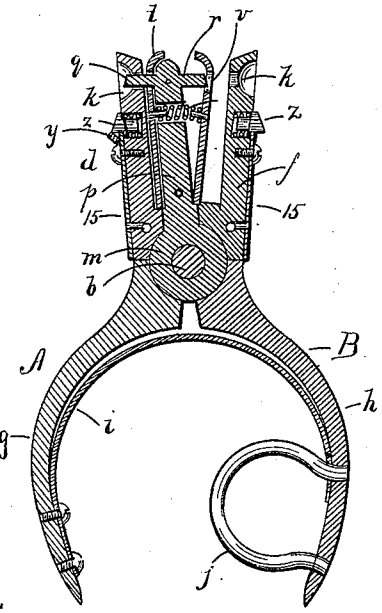


Fig. 3.

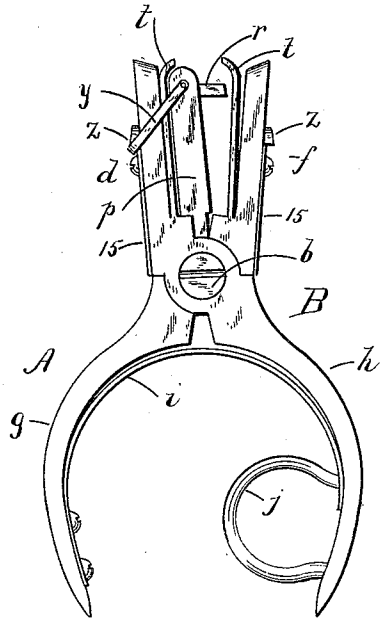


Fig. 4.

WITNESSES
Irving W. Fay.
H. Durfee

INVENTOR
William H. Donovan,
By C. A. Shawkey,
ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM H. DONOVAN, OF BOSTON, MASSACHUSETTS.

TICKET-PUNCH.

SPECIFICATION forming part of Letters Patent No. 451,180, dated April 28, 1891.

Application filed February 3, 1891. Serial No. 379,999. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DONOVAN, of Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Ticket-Punches, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved ticket-punch; Fig. 2, an edge elevation of same; Fig. 3, a vertical transverse section taken on line *x x* in Fig. 2, and Fig. 4 a side elevation illustrating a modification of the improvement.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to a reversible ticket-punch which is particularly adapted for use by railway-conductors and persons in similar occupation; and it consists in certain novel features hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A B represents the punch-arms, which are pivoted together at *b*, one end of said arms forming the jaws *d f* in the opposite ends of the handles *g h* in the ordinary manner. The handles are spread by a spring *i*, and one of said handles is provided with a finger-loop *j* in the usual way. Each jaw *d f* is provided with a socket *k* of different shape. The arms A B are recessed centrally at the pivot-point, and a bushing *m* is disposed on said pivot, said bushing being extended. The arms A B are recessed centrally, and a sleeve or bushing *m* is disposed on the pivot *b* in said recesses, said bushing being extended to form a cutter-block *p*. Said block is provided at its outer or free end with cutting arms or punches *q r*, adapted to be respectively projected into opposite sockets *k*. On each side of the block *p* a stripping-plate *t* is pivoted, their free ends having openings *v*, which register with the respective sockets *k*, and through which the punches *q r* respectively project. A coiled spring *w*, passing through the block onto pins on said strippers, acts expansively to force them away from the cutters *q r*. A U-shaped lever or loop *y* is pivoted to the block and is adapted to encircle either jaw *d* or *f*. A spring-pushed plug *z* is chambered in the outer face of each jaw and is adapted to lock the loop *y* in position thereon. Said plugs are held in their chambers by locking-plates 15.

Conductors are frequently required to use two punches cutting different forms to indicate that the ticket was canceled on an inward or outward trip.

My improvement combines these two punches in one. When the form punched by the cutter *r*, for example, is required, the loop *y* is turned downward over the jaw *d* and locked by plug *z*. This confines the block *p* and intermediate stripper *t* to said jaw, the cutter *q* being projected into the socket *k*, as best shown in Fig. 3. The punch is now operated in the ordinary manner of punches of this class, the ticket being inserted between the opposite stripper *t* and adjacent jaw *f*, and perforated by the cutter *r* when said jaws are closed. Said stripper, being spring-pushed, frees the ticket from the cutter when the handles A B are released and spread by their spring *i*. By forcing the plug *z* inward the loop *y* may readily be passed over the jaw *f*, confining the cutter-block thereto and enabling the opposite cutter *q* to be used in like manner.

In the form shown in Fig. 4 the strippers *t* are secured to the jaws *d f*, instead of to the cutter-block, avoiding thereby the necessity of using the spring *w*.

Having thus explained my invention, what I claim is—

1. In a ticket-punch, two pivoted jaws provided, respectively, with cutter-openings, in combination with a block mounted on the

jaw-pivot and provided with cutters, spring-pushed stripping-plates on said block, and a loop pivoted to said block for locking it to either of said jaws, substantially as set forth.

2. In a ticket-punch, the jaws *d f*, having sockets *k*, in combination with the block *p*, having cutters *q r*, the strippers *t*, loop *y*, and catches *z*, arranged to operate substantially as described.

WILLIAM H. DONOVAN.

Witnesses:
O. M. SHAW,
K. DURFEE.