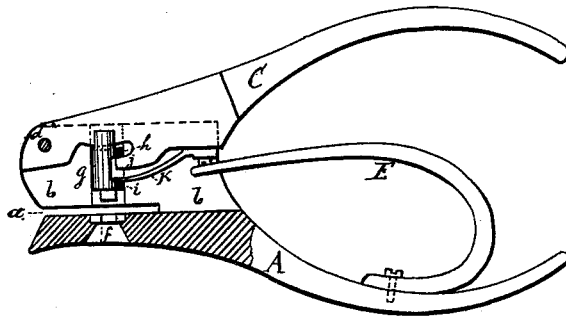


H. SCHILBACH.  
Conductor's Ticket-Punch.

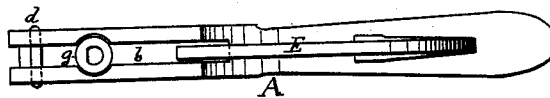
No. 218,780.

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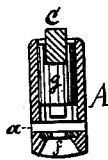
*Fig: 1.*



*Fig: 2.*



*Fig: 3.*



*Witnesses.*  
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# UNITED STATES PATENT OFFICE.

HERMAN SCHILBACH, OF HOBART, INDIANA.

## IMPROVEMENT IN CONDUCTORS' TICKET-PUNCHES.

Specification forming part of Letters Patent No. **218,780**, dated August 19, 1879; application filed July 11, 1879.

*To all whom it may concern:*

Be it known that I, HERMAN SCHILBACH, of Hobart, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Conductors' Ticket-Punches; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to a punch for the use of railway and street car conductors for perforating tickets; and it is my object so to construct such a punch that it will discharge the cut-out portion of the ticket simultaneously with the punching of the same, whereby the die-hole will remain unobstructed for the conductor to observe the marks on the ticket which he is to punch.

My invention consists in providing for the punch proper a certain amount of longitudinal play, which is taken up by a spring to be compressed by the resistance from the ticket to the punch while being cut, and to act as a reinforcement for projecting the punch with great velocity after such resistance is overcome, and thereby shooting out the punched-out portion of the ticket.

In the accompanying drawings, Figure 1 represents a sectional side elevation of the punch complete. Fig. 2 represents a top view of the stationary jaw with the punch inserted and the movable jaw removed; and Fig. 3 represents a transverse section through both jaws on the line of the punch and die-plate.

Like letters in the several figures of the drawings designate like parts.

A is the stationary jaw, having slot *a*, into which the ticket is inserted, and at right angles to this a slot, *b*, in which the movable jaw C is guided, and in which, at *d*, it is pivoted. E is a spring for holding both jaws apart. *f* is the female die-plate, which is inserted in a recess over a conical hole of jaw A. *g* is the cylindrical punch-plug, to the lower end of which the punch proper is formed, to be given any desired shape—as a circle, half-moon, heart, cross, star, or pentagon.

This punch-plug *g* is guided in circular grooves in the slot *b* of jaw A, and its upper end is slotted for forming side and end shoulders with the movable jaw C, so as to prevent its rotating; and one side of punch-plug *g* is cut out for forming an upper flange, *h*, and a lower flange, *i*.

The movable jaw C has a hook-projection, *j*, at its lower edge, which extends under the flange *h* of the punch-plug *g*, and forms a shoulder therewith for redrawing the punch after each operation, with a sufficient longitudinal play for said punch-plug between the pushing and redrawing shoulders; and K is a leaf-spring secured with one end against the under edge of jaw C, and pressing with its other end upon the lower flange, *i*, of punch-plug *g*, so as to take up the lost motion of the same.

A ticket being inserted into slot *a* of stationary jaw A, and jaw C being compressed, the punch *g* is brought to bear upon the ticket, which will resist said punch sufficient for the spring K to be compressed as much as the play of the upper flange, *h*, of the punch-plug *g* will permit; but as soon as the punch end has pierced the ticket the resistance to the punch is reduced, when the punch proper, by the action of the spring K, will continue its motion as far as provided for with such a velocity that it will throw out the punched-out portion of the ticket through the die-hole, leaving the latter clear for observing the marks on the ticket to be punched.

As will be noticed, the above-described device, without complicating the construction of the punch, gives great advantage for the use of the same, and adds a very desirable feature much sought for by conductors and others who have to use such an instrument.

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

1. In a conductor's punch, the combination of the jaws, the punch-plug having longitudinal movement in one of the jaws, and a spring for forcing such punch-plug forward to eject the punched-out portion of the ticket after the plug has pierced the ticket, substantially as described and shown.

2. In combination with jaw A, having die-

plate *f*, and punch-plug *g*, having flanges *h* and *i*, the jaw *C*, having hook-projection *j* and re-enforce-spring *K*, the same being constructed and arranged to operate substantially as set forth.

3. A conductor's punch composed of the following elements, viz: the jaw *A*, having slots *a* and *b*, die-plate *f*, and spring *E*, jaw *C*, having hook-projection *j* and re-enforce-spring *K*,

and punch-plug *g*, having flanges *h* and *i*, the whole of which being constructed and arranged to operate substantially as described, for the purpose specified.

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