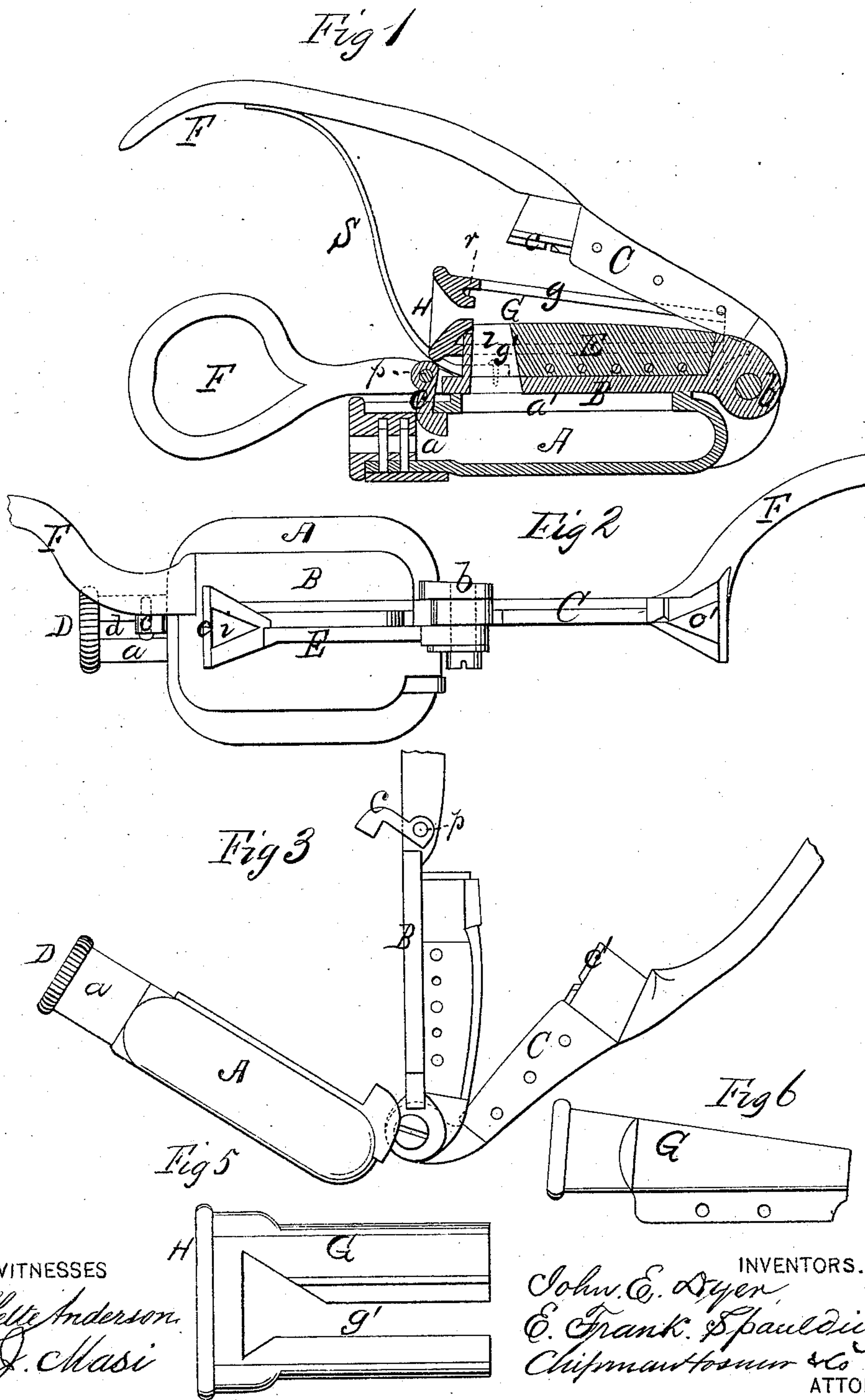


E. F. SPAULDING & J. E. DYER.  
Railroad Ticket-Punches.

No. 157,770.

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WITNESSES  
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# UNITED STATES PATENT OFFICE.

E. FRANK SPAULDING AND JOHN E. DYER, OF CAMBRIDGEPORT, MASS.

## IMPROVEMENT IN RAILROAD-TICKET PUNCHES.

Specification forming part of Letters Patent No. 157,770, dated December 15, 1874; application filed November 14, 1874.

*To all whom it may concern:*

Be it known that we, E. FRANK SPAULDING and JOHN E. DYER, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and valuable Improvement in Railroad-Punches; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal section of our punch. Fig. 2 is a top view of the same; and Fig. 3 is a plan view of the same thrown open. Figs. 5 and 6 are detail views.

This invention has relation to devices which are especially designed for the prevention of fraudulent returns on the part of car and omnibus conductors, or other like officials whose duty it is to collect fares, wherein a part of a ticket or check is separated from the body thereof, and is deposited in a receptacle therefor by a suitable punch, the official not having access to the said receptacle; and the nature of the invention consists in a knife rigidly secured to the outer surface of a lid hinged to such a receptacle, and terminated by a hollow triangular cutter leading through an aperture through the lid into the said receptacle, whereby the ticket will be divided and a triangular piece cut out of its edge, when a second blade having a triangular die-plate upon its upper end is vibrated inward upon the former cutter, allowing the two parts to fall away from each other, while the portion cut out will be deposited in the receptacle. It also consists in combining, with the cutter-knife of the receptacle-lid, and that vibrating inward upon it, a ticket-holder rigidly secured to the said lid, and receiving into it through longitudinal slots cut therein the two cutters, whereby the ticket, when introduced therein by the passenger from above, will be accurately divided by the shears and a piece deposited in the receptacle. It also consists in a chute for the upper end of the holder, whereby a ticket, when introduced therein, is rendered incapable of being withdrawn for the reception of

that of the next passenger until the first has been divided by the cutters and a registering-strip deposited in the receptacle, as will be fully understood from the following explanations.

In the annexed drawings, A designates the case or receptacle of my improved registering-punch, terminating above in a reduced neck, *a*, slotted from its upper end to its point of union with the body of the case, as shown in Fig. 2, for a purpose hereinafter fully explained. The lower end of this case is provided with an eye, *b*, by means of which a lid, B, and a cutter-blade, C, are rigidly hinged thereto. The lid B, when hinged inward accurately, closes an aperture, *a'*, in the side of case A, through which access is had to the interior thereof, and it is provided with a hook, *c*, pivoted to its upper part at *p*, which is adapted to be engaged within the slot *d* of neck *a*, its disengagement therefrom being prevented by means of a cap, D, which is screwed into the neck *a*, as shown in Fig. 1. Any tampering with this screw-cap will be divulged by a tell-tale, not shown in the drawings, connected in any manner to it. E designates a Y-shaped cutting-blade, which is rigidly secured to the outer surface of the lid B, with its branching arms upward, and closed by a strip of metal, *e*, thus forming a triangular space, *i*, which overhangs and incloses a corresponding opening in the lid B. The cutter-blade C, which is also hinged to the receptacle A at *b*, and is so arranged, with regard to the cutter E, as to come in close contact therewith after the manner of the blades of a pair of shears, is provided at its upper end with a die-plate, *c'*, which will register accurately with the triangular head *i* of the cutter E. The blade C and the lid B are each provided with a handle, F, by means of which the former is conveniently vibrated inward upon the latter, their automatic recoil being insured by means of a spring, S. G designates a tubular ticket-holder having longitudinal slots *g g'*, with angular enlargements at one end corresponding in shape, respectively, to the shank and heads of cutters E C. This holder is also flanged, and is, by means of a corresponding flange on the lid, rigidly secured thereto, as seen in Fig. 1, between the



said lid and the cutting-blade C. When the cutter C is worked inward it passes through the slot *g*, coming in contact with the Y-shaped cutting-blade E; hence, if a ticket of less length than the holder is introduced within it and the cutting-edges be approximated, it will be divided into two parts, and a triangular strip cut out of its upper edge, the two former parts falling through the open bottom end of the holder, while the strip is deposited within the receptacle.

With a view to preventing the casual or intentional withdrawal of the ticket from the holder, I use a tapering chute, H, shown in Fig. 1, the lower ends of which extend a certain distance into the holder into which the ticket is introduced by the passengers. It cannot escape from the opening at the end of the holder, since its exit is barred by the edge of the cutter-blade, and an attempt to withdraw it therefrom through the chute will be rendered abortive by the engagement of its upper edge in the recesses *r*, between the walls of the holder and those of the chute. The only means left is to operate the cutter, which will divide the ticket into two parts, at the same time depositing a registering-piece in the receptacle, which will then fall out of the end of the holder. A strip will thus be deposited for every passenger transported; consequently, if the treasurer will open the receptacle, take out and count the tickets, he will arrive at a certain estimate of the conductor's indebtedness. Where some tickets are more costly than others, as when they allow a passenger to travel farther, he may

arrive at an equally clear decision by making different-colored tickets, each color representing a certain price.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a railroad-punch, the combination, with the hinged lid B of receptacle A, of the slotted ticket-holder G, substantially as specified.

2. The combination, with the slotted ticket-holder G of the Y-shaped cutter E and the hinged cutter C, substantially as specified.

3. The ticket-holder G, provided with the chute H, in combination with the hinged cutter C, substantially as specified.

4. The combination, with the hinged lid B, having the cutter E of the ticket-holder G and cutting-blade C, substantially as specified.

5. The combination, with the receptacle A, provided with hinged lid B of the pivoted hook *r* and screw-cap S, substantially as specified.

6. The receptacle A, provided with hinged lid B, having cutter E, ticket-holder G, and vibrating cutter C, combined and arranged substantially as specified.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

E. FRANK SPAULDING.  
JOHN E. DYER.

Witnesses:

EDWD. BURNHAM,  
S. TOWER.