

(No Model.)

E. F. SMITH.

TICKET HOLDER.

No. 370,214.

Patented Sept. 20, 1887.

Fig. 1

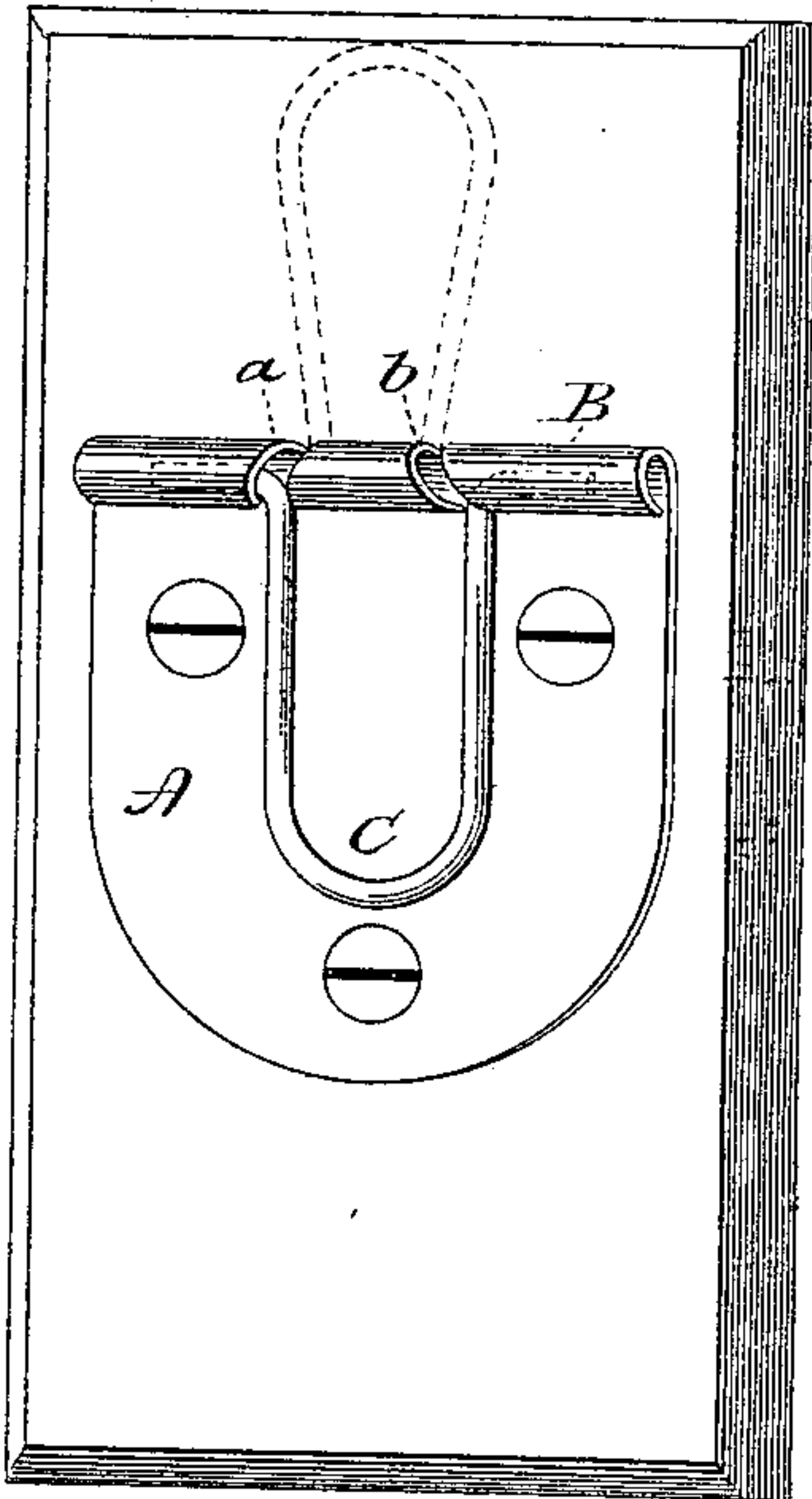


Fig. 2

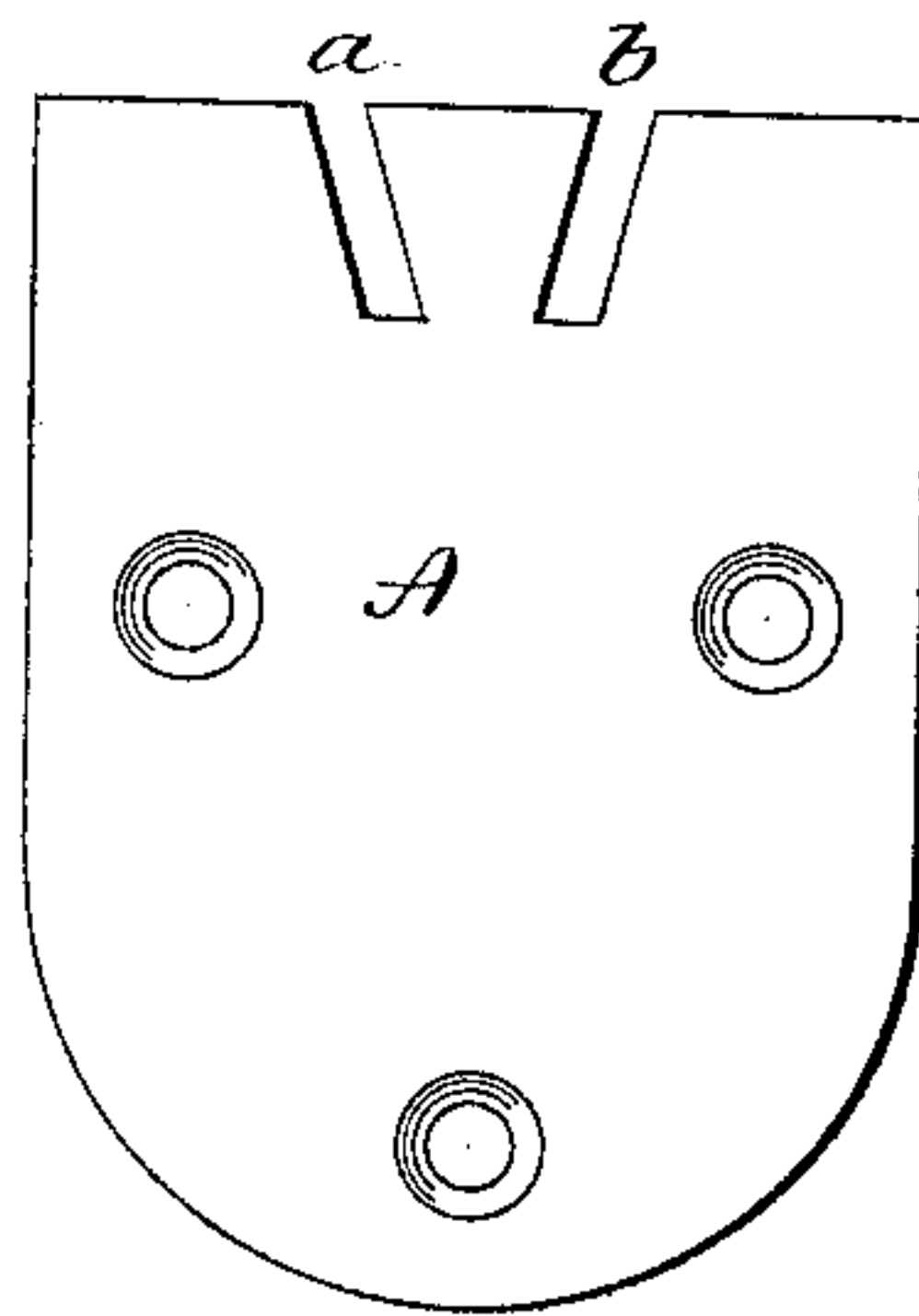


Fig. 3

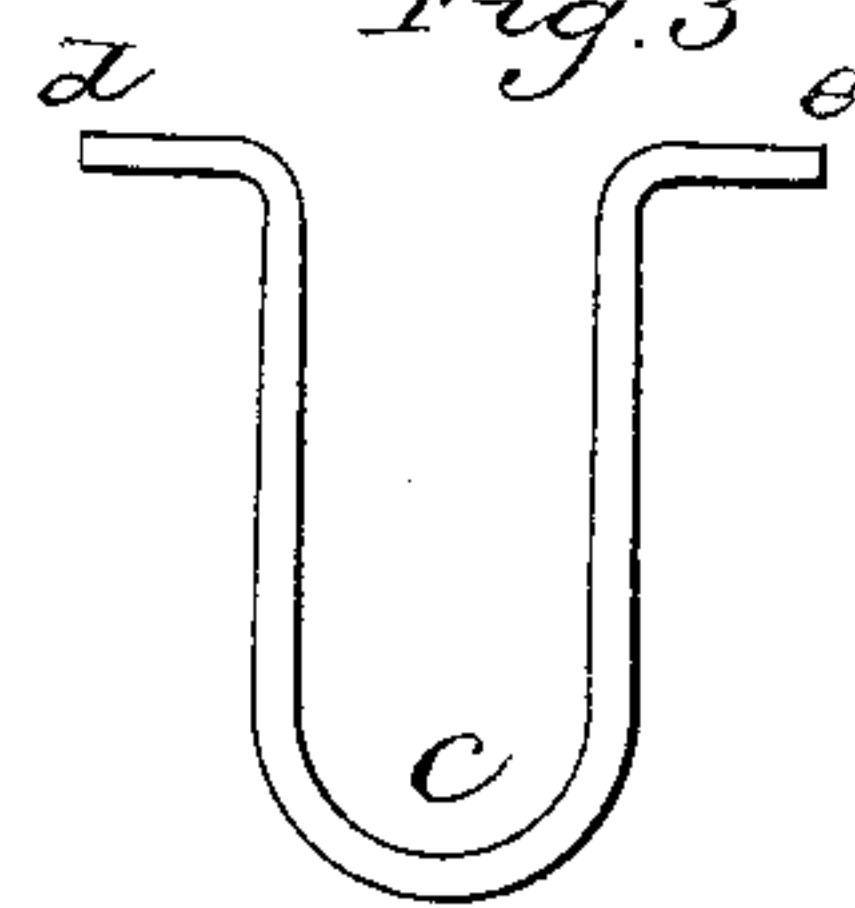


Fig. 4

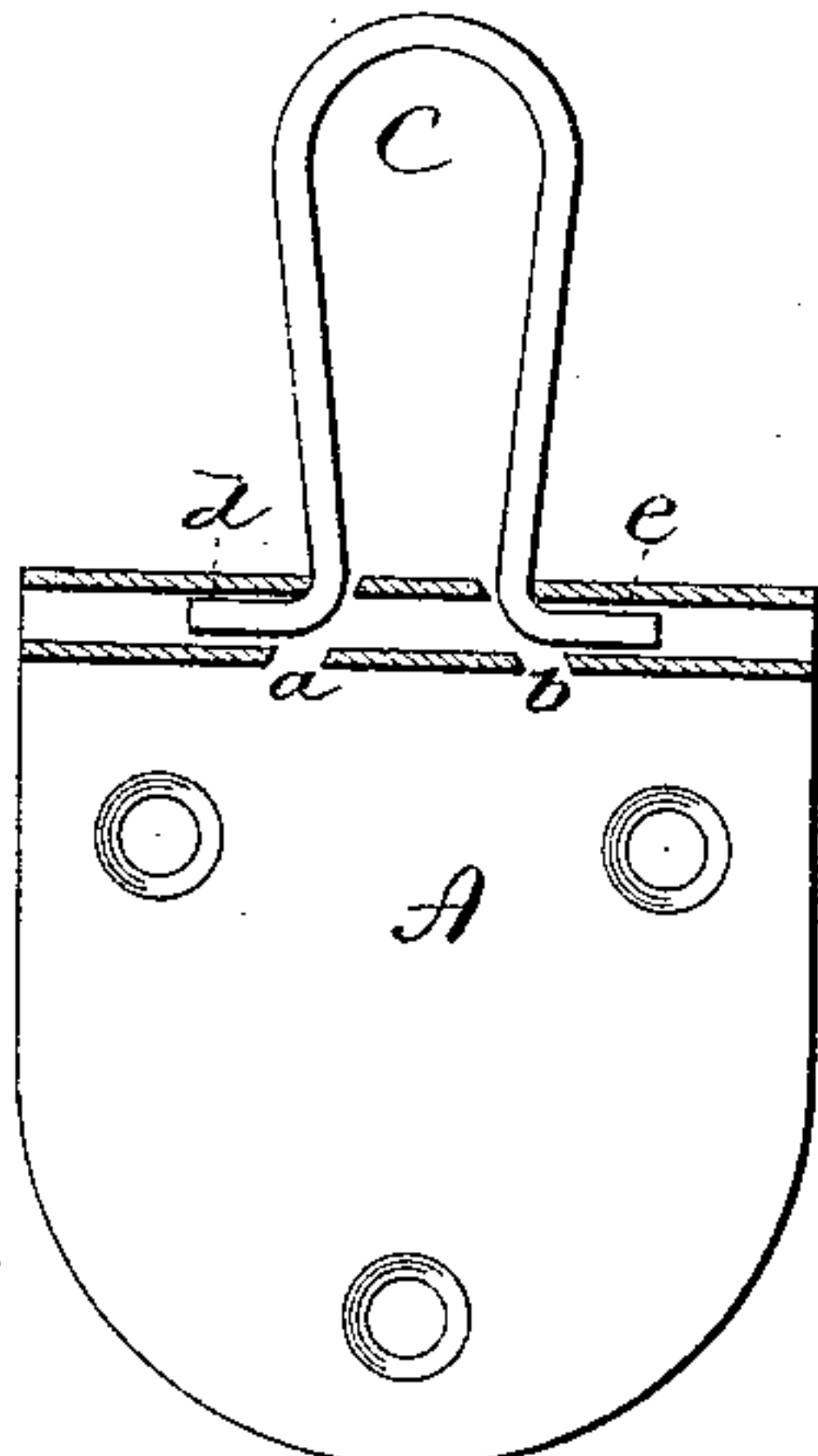


Fig. 5

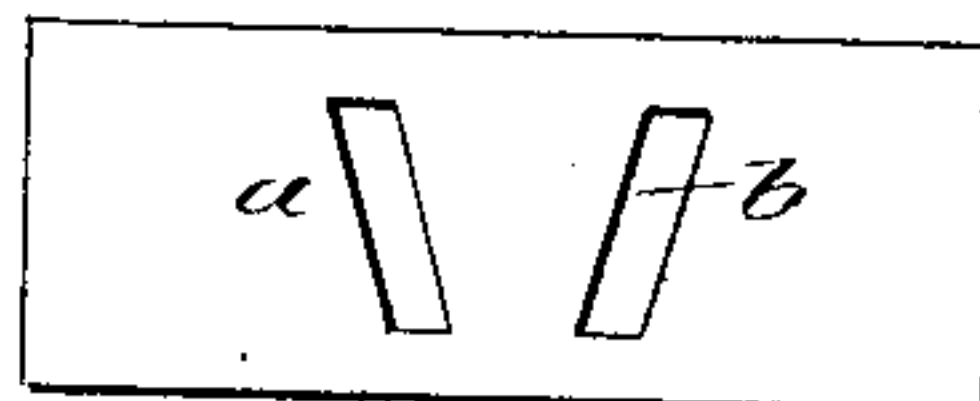


Fig. 6



Fig. 7

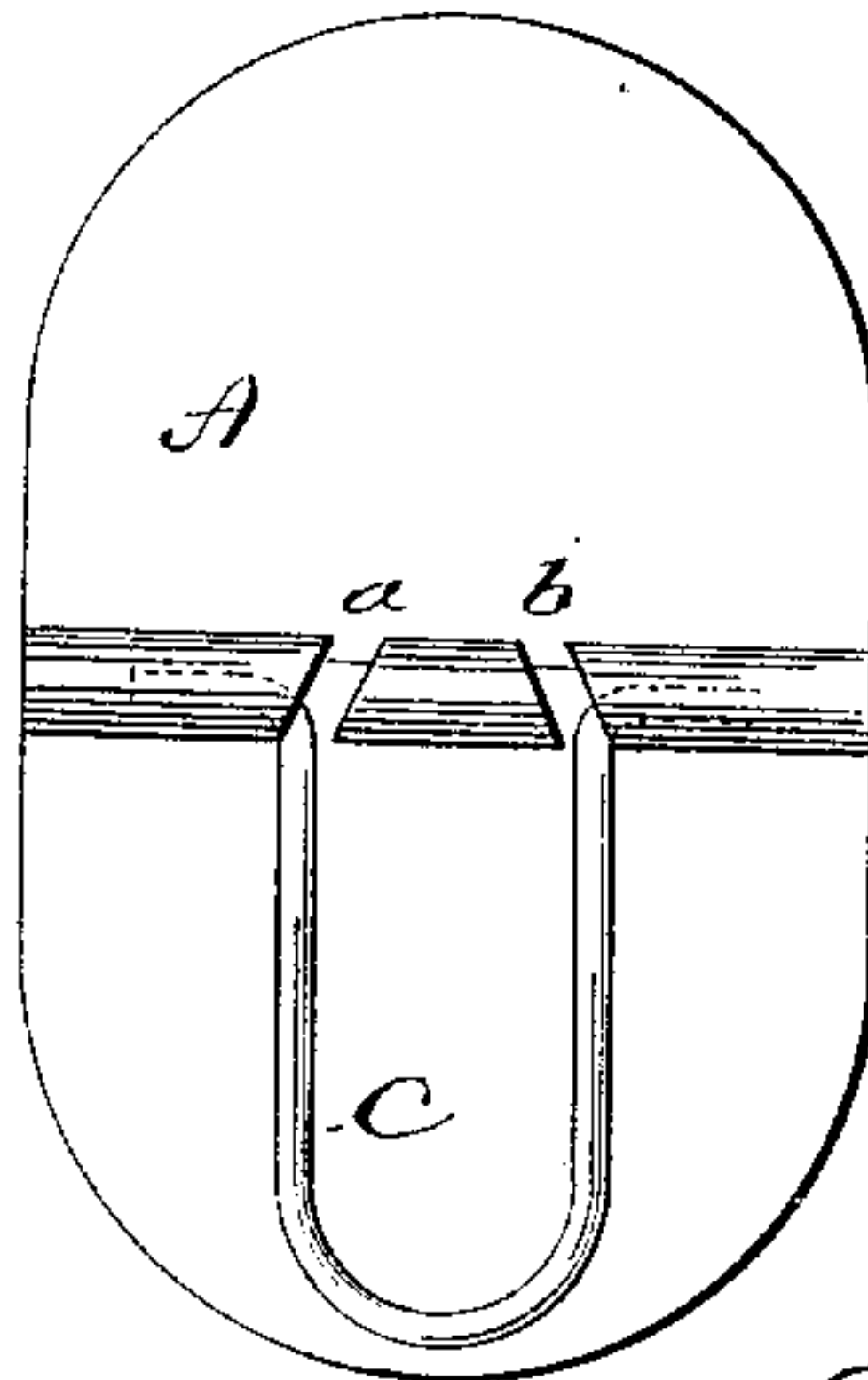


Fig. 8

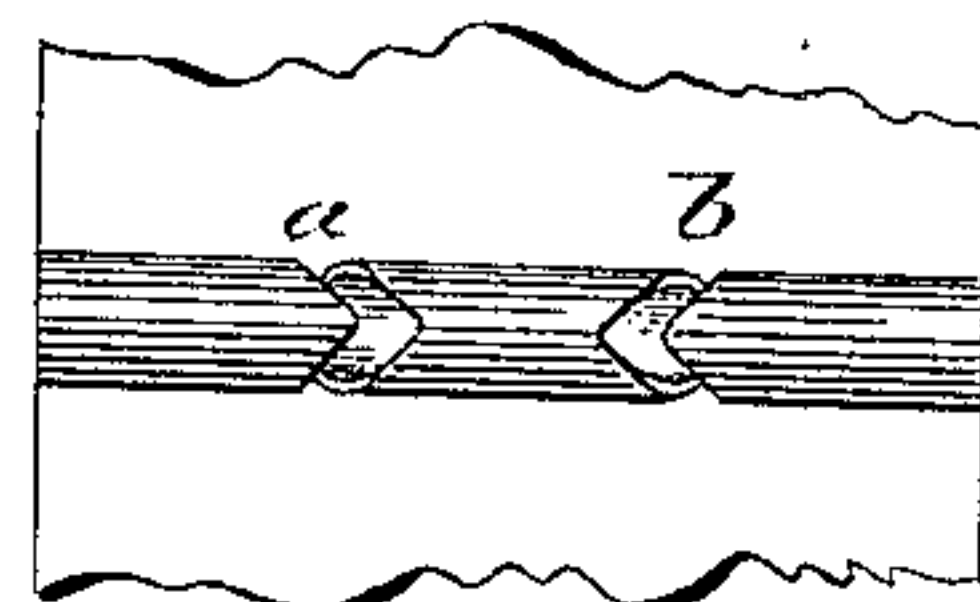


Fig. 10

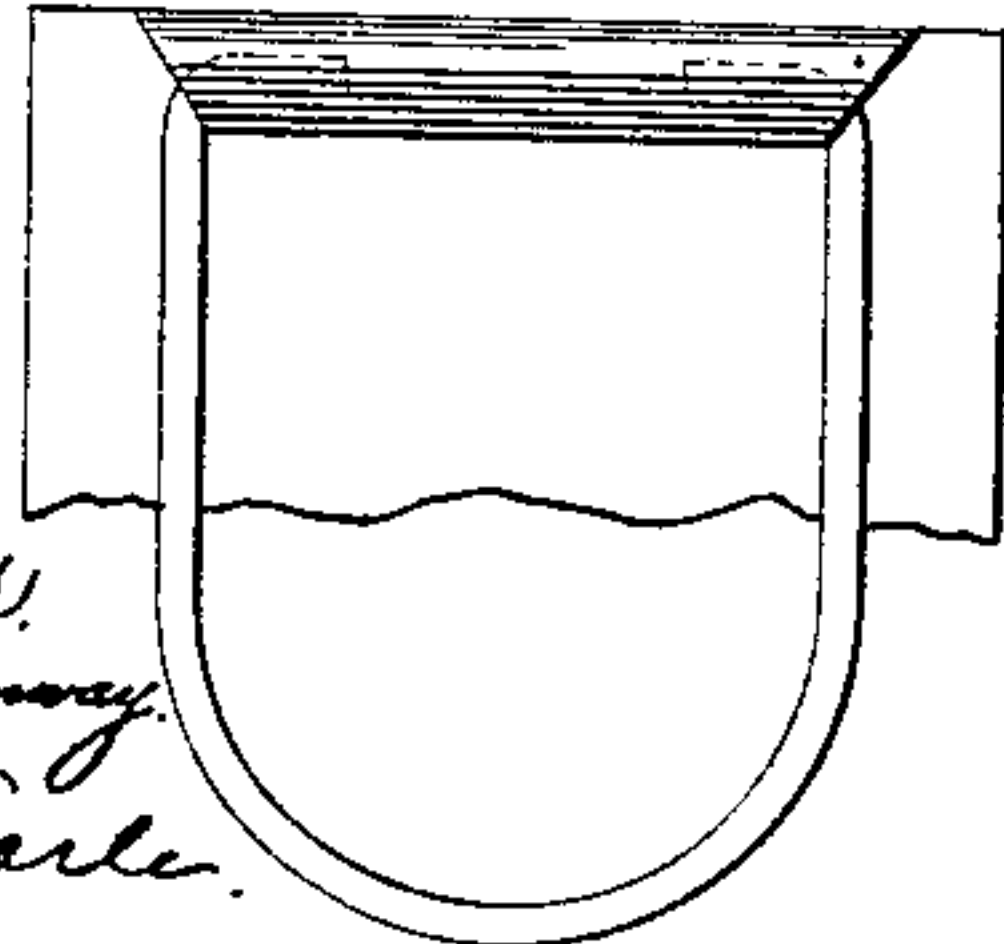
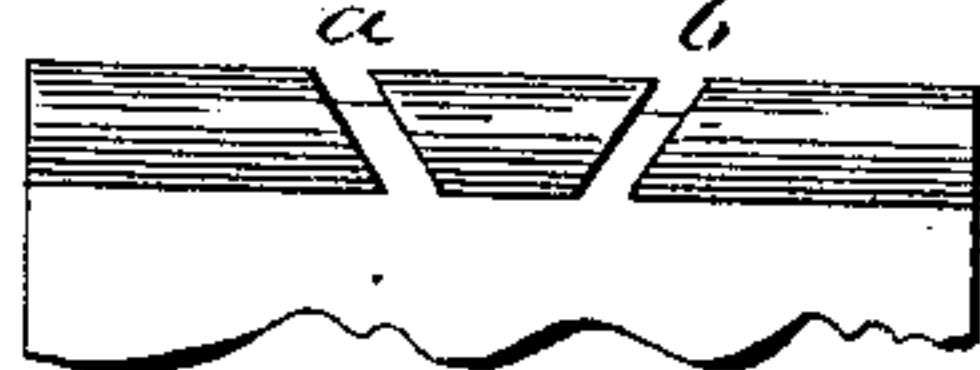


Fig. 9



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UNITED STATES PATENT OFFICE.

EDWIN F. SMITH, OF UNION CITY, CONNECTICUT.

TICKET-HOLDER.

SPECIFICATION forming part of Letters Patent No. 370,214, dated September 20, 1887.

Application filed January 13, 1887. Serial No. 224,197. (No model.)

To all whom it may concern:

Be it known that I, EDWIN F. SMITH, of Union City, in the county of New Haven and State of Connecticut, have invented new Improvements in Ticket-Holders; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of the holder or clip complete and as attached; Fig. 2, a blank for the base, showing the diagonal slots cut therein preparatory to forming the portion of the hinge; Fig. 3, the jaw detached; Fig. 4, a longitudinal section showing the jaw in the raised and contracted position; Figs. 5, 6, 7, 8, 9, and 10, modifications in the construction of the tube portion of the hinge.

This invention relates to an improvement in holders or clips adapted to be fixed to railroad-car seats to hold the ticket, and particularly to that class in which a spring-jaw is hinged to the base, so as to be turned away from the base for the introduction of the thing to be held and then released, the spring returning the clamp upon the article, so that it will be held grasped between the jaw and base, and while specially adapted for ticket-holders in railway-cars, it may be employed as a spring-clip for various purposes.

The object of this invention is a peculiar construction of the hinge between the jaw and base, which peculiar construction of hinge will cause the jaw to be its own spring, thereby avoiding the construction or use of an independent spring.

A represents the base, upon which is a transverse tube, B. The base is best formed, as seen in Fig. 2, by cutting a blank from sheet metal, of size and shape to form the base and tube. At the end where the tube is to be formed slots *a b* are cut obliquely inward from the end, converging or approaching each other. The jaw C is best made from wire of suitable length and size and having a considerable degree of elasticity, bent into U shape, with the ends of the legs turned outward, as at *d e*, at right angles to the jaw and into axial line with each other. The width of the slots *a b* should

conform to the diameter of the wire of the jaw, and the width between the two legs at the ends should be somewhat greater than the maximum distance between the two slots *a b*. The slotted end of the base is now turned over the ends *d e* of the jaw, and so as to form the tube B, surrounding these ends, but leaving the legs or sides of the jaws, respectively, within the slots *a b*, and, as seen in Fig. 1, so that the ends *d e* form trunnions or pintles within the tube, upon which the jaw may turn as a hinge.

When the jaw is flat upon the base, as seen in Fig. 1, the legs stand in the slots *a b* at their maximum distance. Now, if the jaw be raised, as indicated in broken lines, Fig. 1, turning upon the pintles *d e*, the two sides or legs will follow through their respective slots *a b*, and, because these slots converge or present an inclined converging surface to the legs, they act upon the two legs as cams, forcing the legs to approach each other according to the obliquity of the slots, as seen in Fig. 4. The wire being elastic, the legs yield to such contraction; but so soon as the jaw is left free then the elasticity of the wire and the cam-like slots coact; and, because the incline of the slots is too great to permit the jaw to stand at rest, the jaw will be forced down upon the base, as seen in Fig. 1, and the ticket or whatever it may be introduced between the base and jaw will be securely held.

The base may be pierced for the introduction of screws to attach it, or any other suitable means may be applied.

Instead of making the slots *a b* in the end of the base and the tube as an integral part of the base, it may be made of a separate piece of metal, as seen in Fig. 5, and then that metal bent into tubular shape, as seen in Fig. 6, and so as to be secured to a base, and instead of making the hinge at the end of the base it may be midway of its length, as seen in Fig. 7, or the hinge may be made so as to force the jaw in both directions, as seen in Fig. 8, the incline of the slots being both ways from the central line. In this case the jaw may clasp in either direction, or one position may be for the wide-open and the other for the closed position of the jaw.

The incline of the slots *a b* may be reversed, as seen in Fig. 9. In that case the elasticity

of the jaw will be in the opposite direction—that is, the legs will be forced apart in opening. Then the reaction of the spring tending to force them together will coact with the cam-like slots and force the jaw upon the base.

5 Instead of forming slots in the tube portion, the cam-like surfaces may be formed at each end of the tube, as seen in Fig. 10, and attain the coaction between the elastic jaw and the
10 cam-surfaces of the tube or hinge. While, therefore, I prefer to construct the tube or hinge by forming a tube on the end of the base, with diagonal slots therein, the said slots converging from the end of the base, I do not wish
15 to be understood as limiting my invention to this construction, it only being essential to my invention that the tube portion of the hinge shall be constructed with inclined or spiral bearing surfaces to coact with the elasticity of
20 the jaw; and while I prefer to make the hinged jaw from wire, it may be made from any suitable material.

What I claim is—

The combination of the base and jaw, the base provided with a transverse tube constructed with inclined or spiral bearing-sur- 25
faces, the said jaw constructed from elastic material of substantially U shape, the ends of the legs turned, respectively, into the same axial line, and the said ends of the legs extended 30
into the tube, the inclination of the said spiral bearing-surface being in a direction opposed to the elasticity of the jaw in its opening movement, substantially as described, and whereby
said spiral bearing-surfaces operate as cams to 35
force the jaw upon the plate, and the said legs adapted to work against the said spiral bearing-surface on the tube, substantially as and for the purpose described.

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Witnesses:

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