

No. 695,453.

Patented Mar. 18, 1902.

R. FRANK.

HINGE.

(Application filed Jan. 2, 1901.)

(No Model.)

Fig. 1

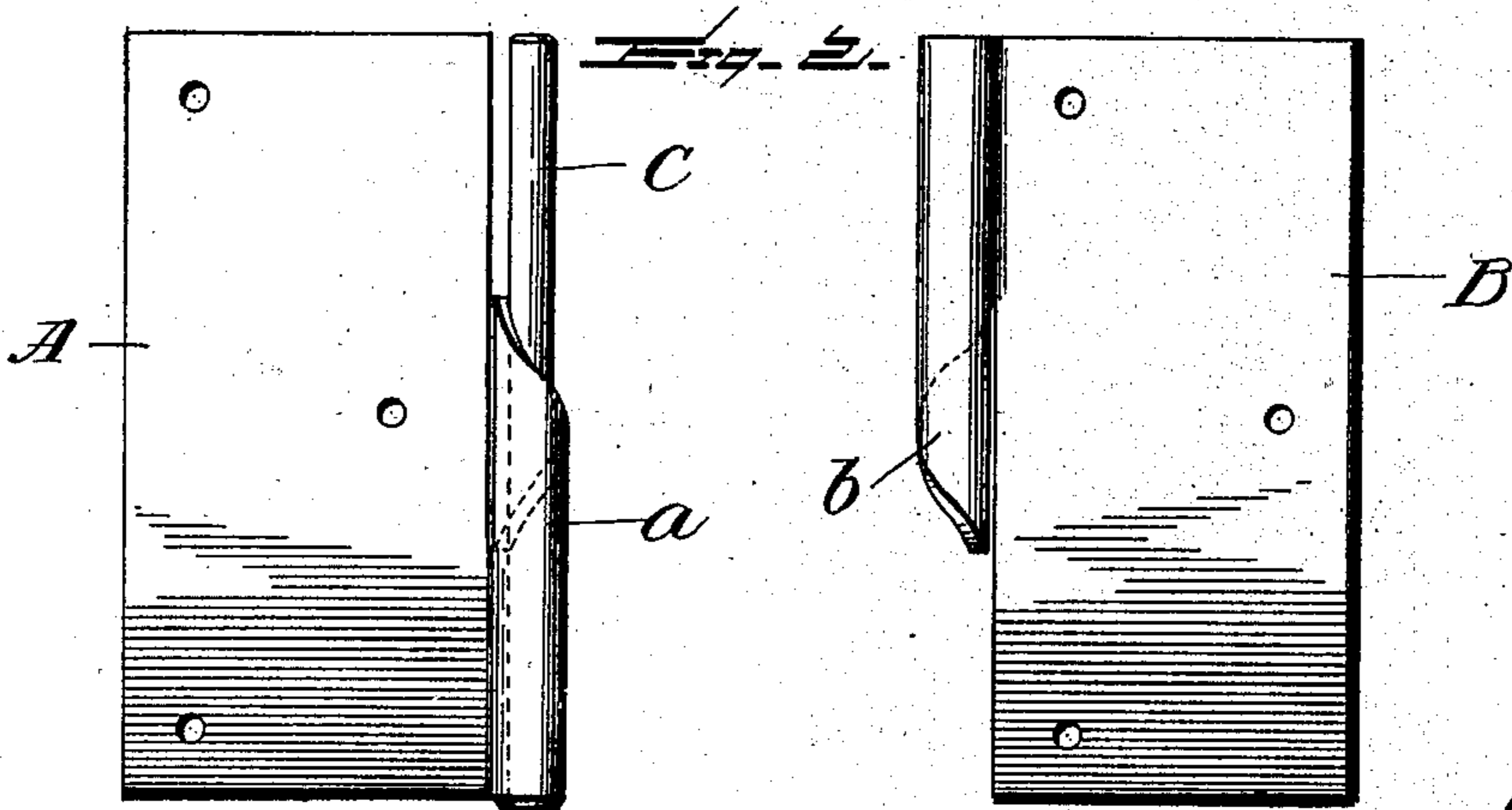
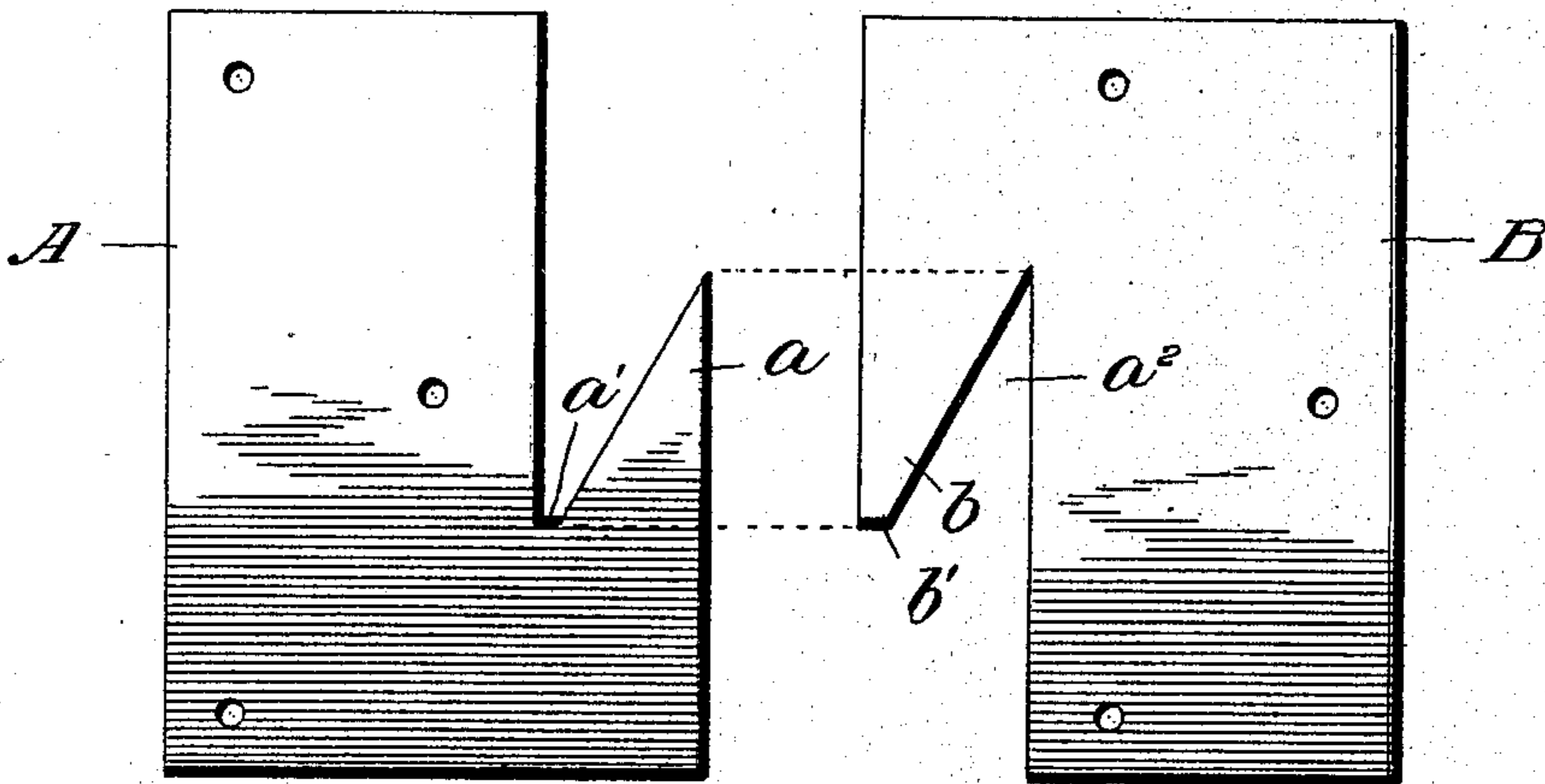


Fig. 3

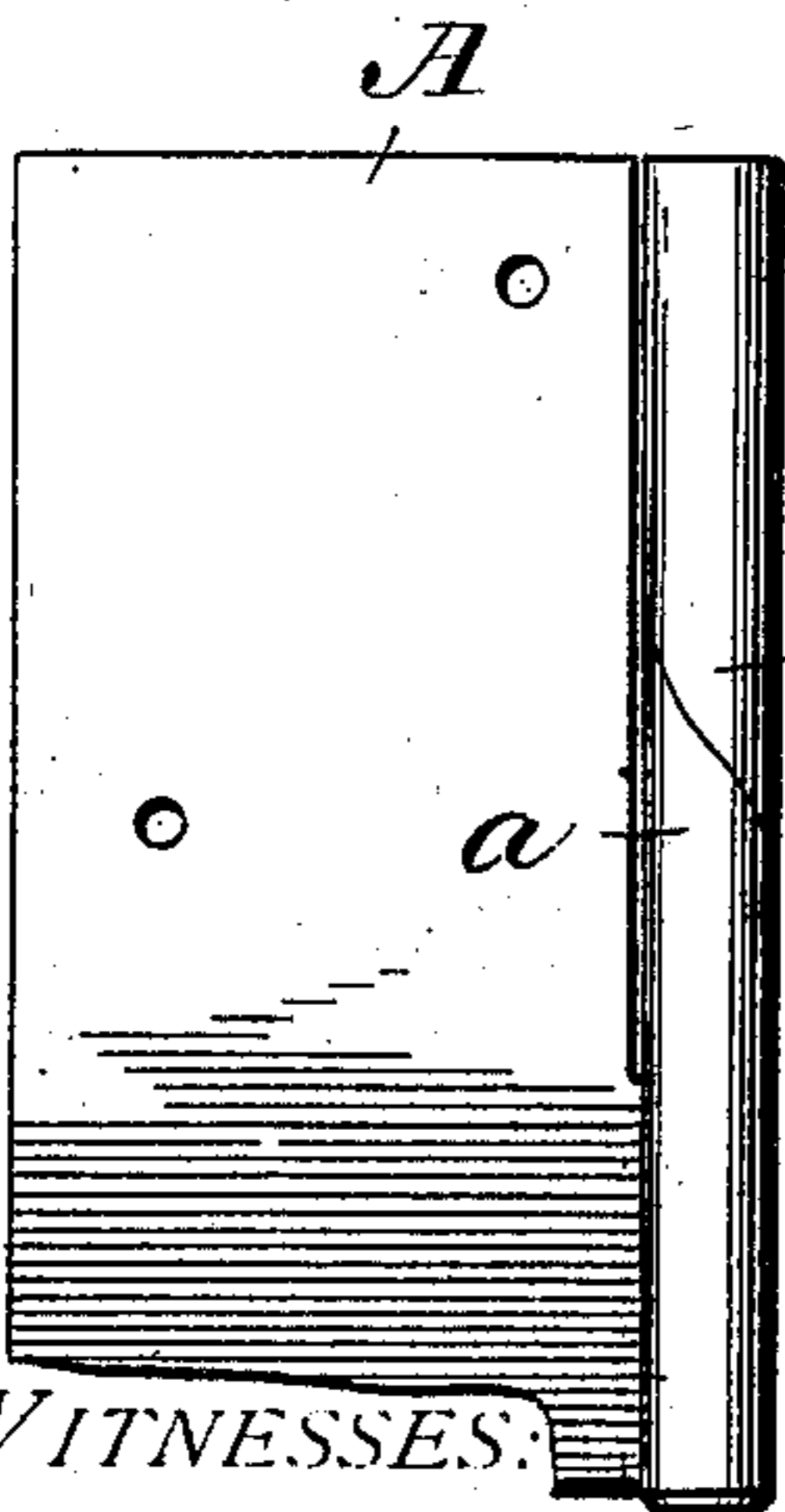


Fig. 4

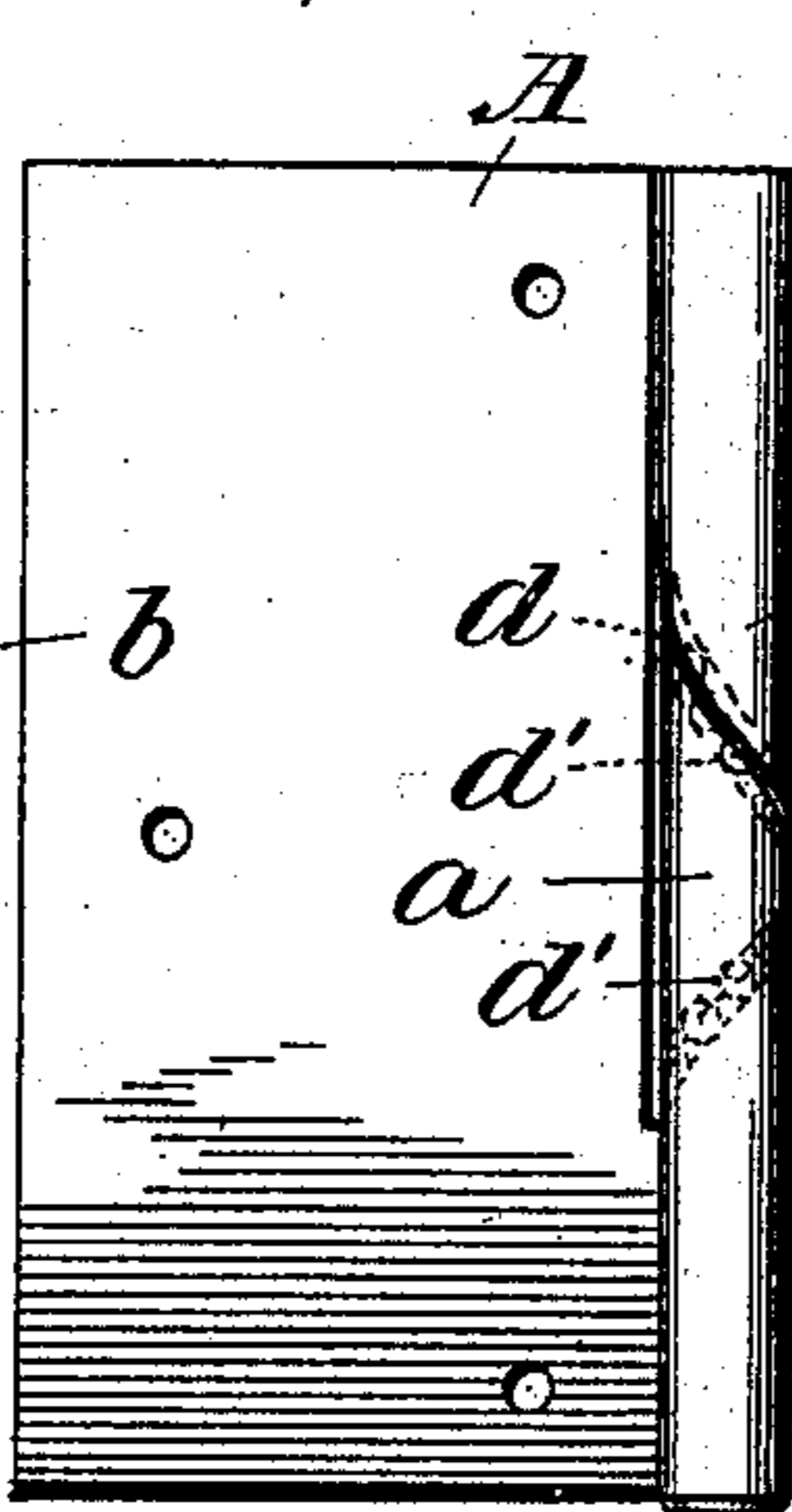
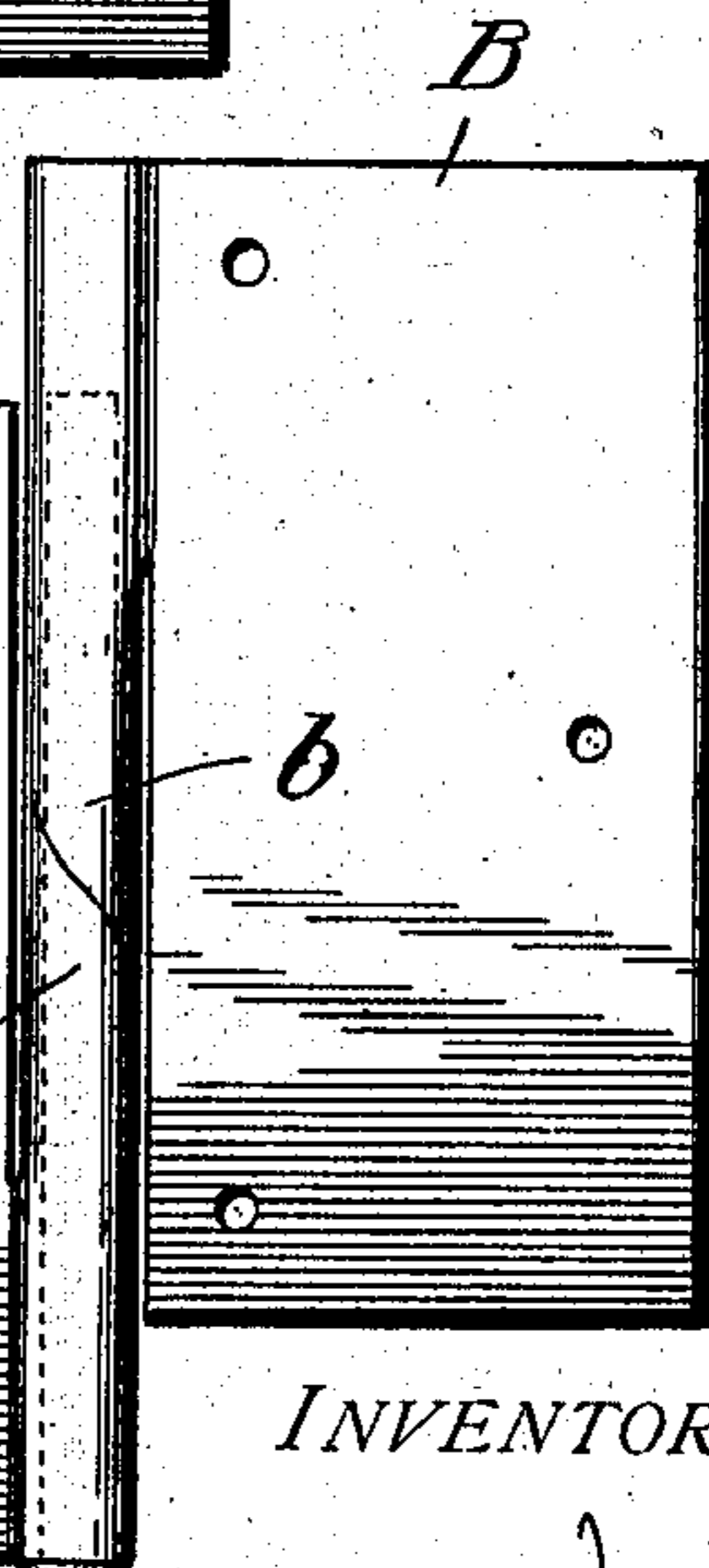
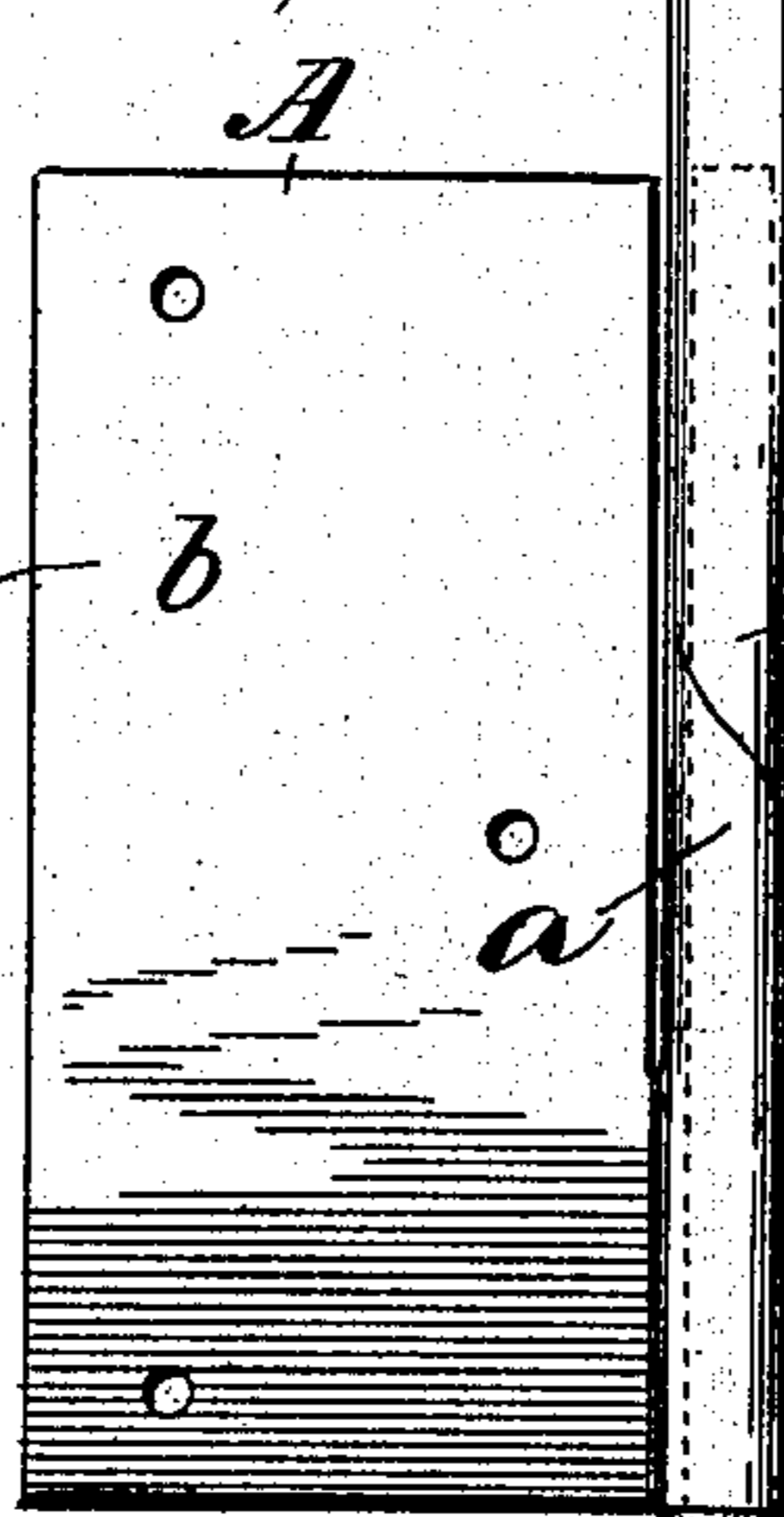


Fig. 5



WITNESSES:

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UNITED STATES PATENT OFFICE.

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HINGE.

SPECIFICATION forming part of Letters Patent No. 695,453, dated March 18, 1902.

Application filed January 2, 1901. Serial No. 41,842. (No model.)

To all whom it may concern:

Be it known that I, ROSE FRANK, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in hinges; and it consists in the novel features of construction hereinafter described, reference being had to the accompanying drawings, which illustrate one form in which I have contemplated embodying my invention; and said invention is fully disclosed in the following description and claim.

Referring to the drawings, Figure 1 shows the blanks for the two leaves of the hinge which have been stamped out of a single piece of metal. Fig. 2 represents the two leaves of the hinge with the offset portions of the blanks bent around as in the finished hinge. It also represents one of said portions as having the pintle secured within the hollow cylindrical opening formed by said portion. Fig. 3 represents the two members of the hinge placed together in closed position. Fig. 4 shows a modification wherein ball-bearings are applied to the inclined portions of the knuckles, and Fig. 5 shows the hinge in open position.

A and B represent blanks for the two leaves of the hinge. Each blank consists of the main rectangular body provided with an offset portion having an angular extension. The angular extension of blank A is designated by reference-letter *a*, and between the same and the main body of the blank and the extension *a* is a straight surface, forming the shoulder *a'*. The angular extension of the blank B is designated by the reference-letter *b*, and its end is provided with the short straight surface *b'*, corresponding in extent to the shoulder *a'*. The construction of the two blanks is such that they may be stamped or cut out of a single rectangular piece of

sheet metal without any waste of material or which may be cut from a larger piece of sheet metal equally without waste. It will be seen that the angular projection of the blank A will fit between the angular projection *b* of the blank B, and it will also be seen that the offset portion of one leaf corresponds with the cut-away portions of the other leaf. The blank A having the shoulder *a'* is preferably used as the lower leaf of the hinge, and the offset portion of the same is bent around upon the pintle C, so as to hold the same securely in place. The offset portion of the blank B is bent to form a hollow cylindrical part to engage and turn freely upon the pintle C. By this construction the two parts of the hinge are so constructed as to form a complete hinge and at the same time it will be apparent that when the hinge is opened and the part B turned upon the pintle the engaging angular edges will cause the part B to rise on the pintle C, so that when the hinge is applied to a door whenever the door is opened the weight of the same will tend to close it, which it will do as soon as released and the same is free to move.

In the modification shown in Fig. 4 a ball-race *d* is applied to the edge of each of the cams for receiving ball-bearings *d'*, which will decrease the friction at that point.

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

A hinge, the two leaves of which are adapted to be cut from a single piece of metal without any waste of material, each of said leaves being provided with an offset portion and an angular projection on said offset portion, said offset portion and said angular projection being adapted to be bent to form the knuckle, and said offset portion and angular projection of one leaf corresponding to the cut-away portion of the other, substantially as described.

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

ROSE FRANK.

Witnesses:

SAML. I. HEPNER,
CARRIE F. ADLER.