A. H. ISHAM.

Hinge.

No. 167,537. Patented Sept. 7, 1875.

Fig 1

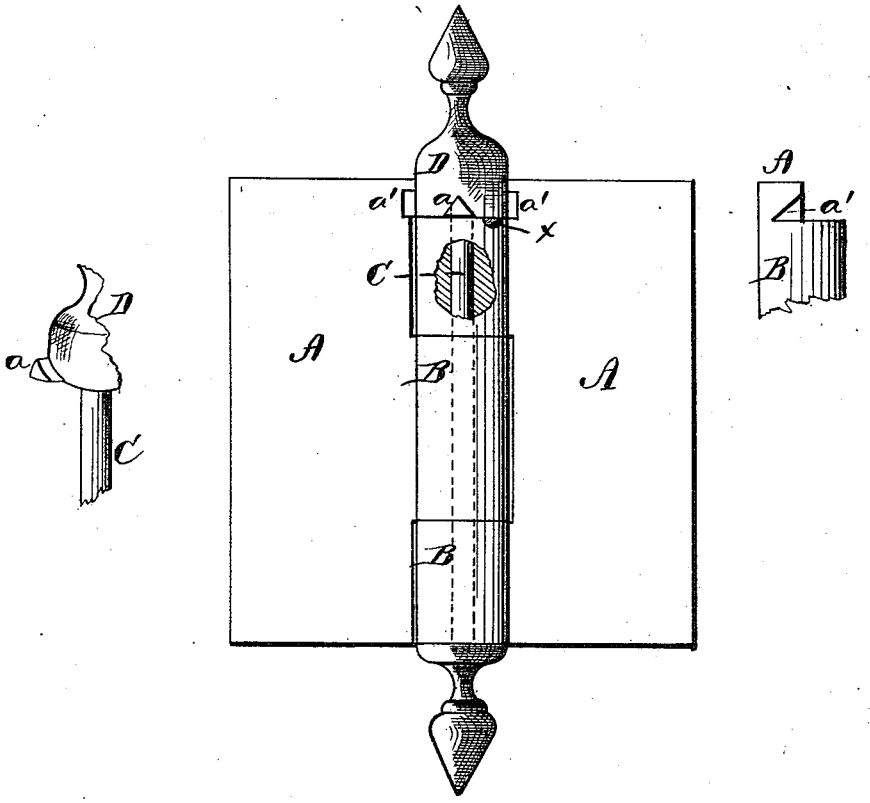


Fig 2

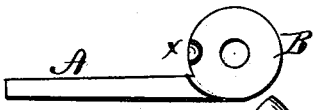
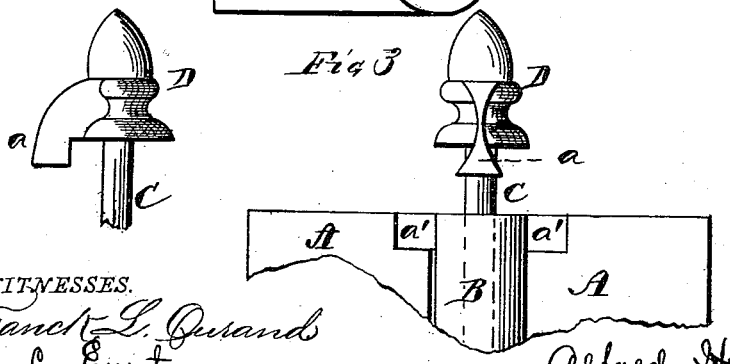


Fig 3



WITNESSES.

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ALFRED H. ISHAM, OF LAWRENCE, KANSAS.

IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. **167,537**, dated September 7, 1875; application filed March 23, 1874.

To all whom it may concern:

Be it known that I, ALFRED H. ISHAM, of Lawrence, in the county of Douglass and in the State of Kansas, have invented certain new and useful Improvements in Hinges; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

My invention relates to that class of butts or hinges which have a removable spindle, having a head or cap at its upper end; and the nature of my invention consists in providing the head or cap of the spindle with a triangular projection inclined on both sides, and forming correspondingly-shaped recesses in the leaves of the hinge, in which recesses said projection will fit when the hinge is closed.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation referring to the annexed drawing, in which—

Figure 1 is a view of an open hinge embodying my invention. Fig. 2 is an end view of one of the leaves thereof. Fig. 3 shows a modification of my invention.

A A represent the leaves of a butt or hinge, with alternate barrels or tubes B B. C is the spindle passing through the tube B, and provided on its upper end with a head or cap, D.

In Fig. 1 I have shown the upper end of the hinge-barrel or tube B cut off, and the head D is let down into the hinge the same distance as the tube is cut off. On the side of the head D, at or near the lower edge, is formed a triangular projection, *a*, the base of the triangle being downward, and both sides inclined at the same angle, and in each leaf A is a correspondingly-shaped recess, *a'*, into which the projection *a* fits when the hinge is closed. This prevents the withdrawal of the spindle C from the outside.

In opening and closing hinges of this class it often happens that the spindle works up for a short distance; then, in closing my hinge, it will readily be seen that the inclined sides of the projection *a* and the inclined sides of the recesses *a'*, coming in contact with each other, will draw the spindle down to its place again. Hence every time the hinge is closed the spindle is brought down in proper place.

The hinge-barrel B need not necessarily be cut off at the upper end, but may remain the full length of the hinge, in which case the head D is provided with an enlargement or arm upon one side, from which the projection *a* depends, as shown in Fig. 3, the recesses *a'* being formed in the leaves in the same manner as before described, and answer exactly the same purpose. In this case the projection *a* may be strengthened by a piece of metal under the head and a notch cut in the end of the hinge-barrel for the same to work in.

In hinges of this class the spindle often sticks in the barrel, so that it is difficult to get them out, and sometimes it happens that the spindle gets broken in attempting to remove it. To obviate this difficulty I make a notch, *x*, in the upper end of the hinge-barrel for the insertion of any instrument under the head when the spindle can easily be raised up. When the triangular projection *a* is used, it will be seen that though it may be stuck in one of the recesses *a'*, it can easily be removed by pressing on the under side of said projection, or on the under side of the head through the notch *x*, and the upward pressure will cause said projection to turn out of the recess.

I am aware that a projection formed on the side of a spindle for a butt-hinge, and entering recesses in the leaves thereof, is not new, and I do therefore not claim such broadly as being my invention.

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

The combination, with a butt-hinge, A B, having a spindle, C, with head D, of the triangular projection *a*. having both sides inclined, formed on or with the head D, and the recesses *a' a'*, formed in the leaves of the hinge, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, 1874.

ALFRED H. ISHAM.

Witnesses:

JAS. M. MASON,

C. L. EVERT.