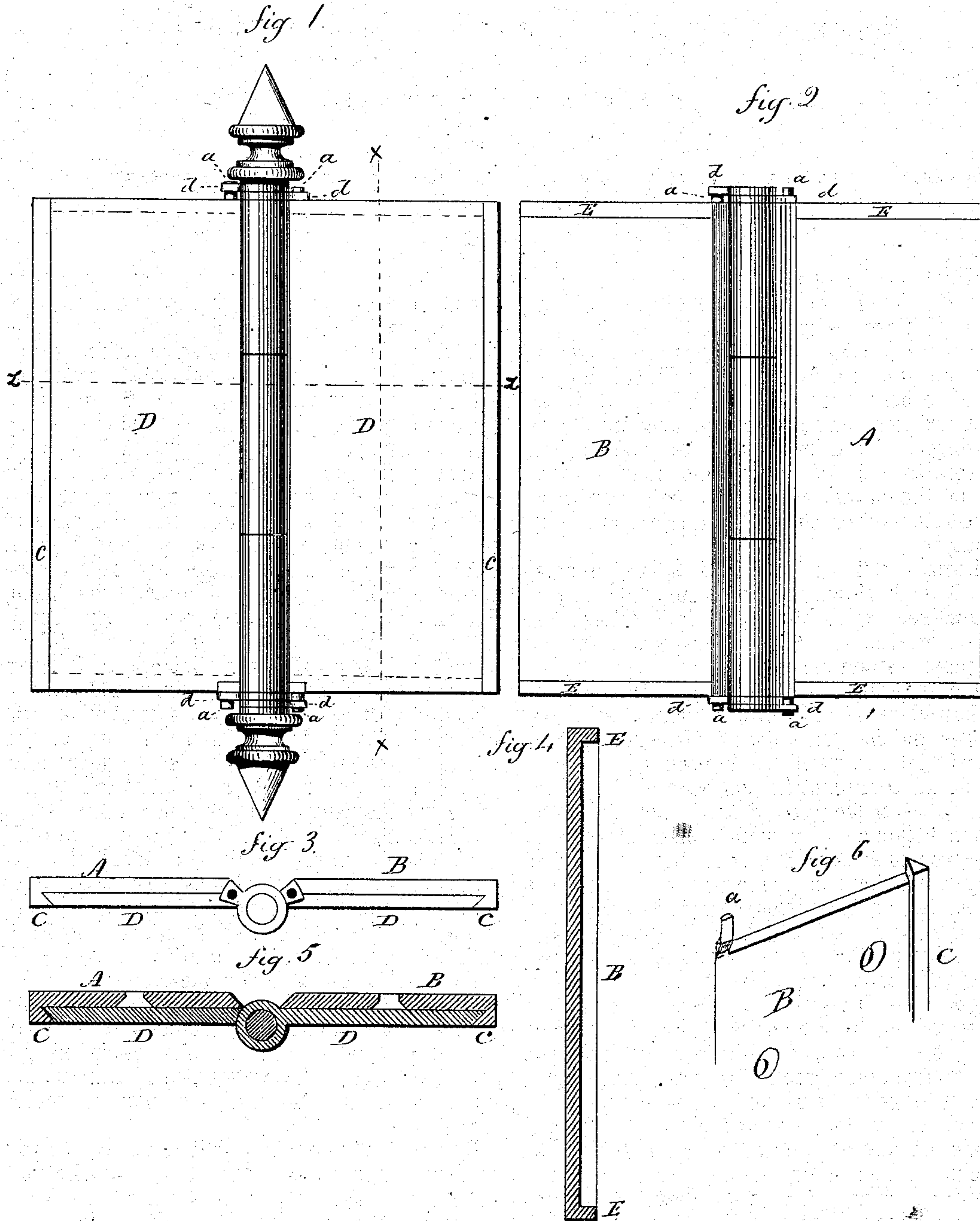


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Hinges.

No. 158,489.

Patented Jan. 5, 1875.



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## IMPROVEMENT IN HINGES.

Specification forming part of Letters Patent No. **158,489**, dated January 5, 1875; application filed December 5, 1874.

*To all whom it may concern:*

Be it known that I, FREDERICK J. HATTORF, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Butt-Hinges; and I do hereby declare the following, when taken in connection with the 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 front view; Fig. 2, the reverse; Fig. 3, end view, the top removed; Fig. 4, vertical section on line *x x*; Fig. 5, transverse section on line *z z*; Fig. 6, perspective view of one plate detached.

This invention relates to an improvement in that class of butt-hinges which are constructed so that the head of the screws which secure the butts will be hidden or covered. The usual construction has been to provide a plate to cover the face of the leaves after the butt is attached. In such construction, if it is desired to remove the door, the plate's covering must first be removed, and then the screws taken out. The object of this invention is to construct the butt so that the part of the hinge through which the screws are inserted is each detachable from the folding plates. The invention consists in a pair of plates to be permanently attached, respectively, to the door and jamb, each constructed with a trunnion at each end and a flange upon their outer edge, combined with a corresponding pair of jointed covering plates, connected to said permanent plates by links, which engage the pintle of the jointed plates and the trunnions of the permanent plates, as more fully hereinafter described.

A B are the jamb and door plates, one of which is shown in perspective in Fig. 6. These plates are constructed with a flange, C, upon their outer edge. This flange is inclined upon its inside, or made to project back over the plate, as seen in Figs. 3 and 5, and also to project at each end, as seen in Fig. 6; and at each end, near the inner edge, a trunnion, *a*, is formed. These plates are perforated for

the insertion of screws to secure them in place, substantially as the leaves of a common butt, as seen in Fig. 6. D D are the covering-plates, jointed together in the usual manner of butt-hinges, each plate fitted to set onto its stationary part A or B, and take a bearing under the flange C. These covering-plates are constructed with a flange, E, across each end, upon the back side, as seen in Figs. 2 and 4, so that the ends of the covering-plate will come flush with the ends of the flange C, the trunnion *a* projecting beyond the covering-plates. At each end of the center or knuckle part of the plates D two links, *d d*, are placed, one end of each corresponding in diameter to the center joint, and so that the pintle will pass through and secure them in that position. The other end of each of these links is set over its trunnion on the end of plates A or B. Therefore, when the plates D are set onto the plates A and B, and the links *d* in place, the pintle through all the links and the joint, the parts are inseparable.

To attach the butts, set the plates A and B, respectively, in the jamb and door, substantially as for common hinges; but they must be set to the depth of the flange C; then withdraw the pintle from the joint until the links can pass over the trunnion; pass one of the plates D into its permanent plate A or B, and the link over its trunnion; then place the other in like manner, and replace the pintle, and the whole is secure, the heads of the screws hidden, and the surface of butt which appears shows nothing of the means of securing it.

To remove the door, withdraw the pintle and remove the links; then the plate D will be free.

I claim—

The permanent plates A B, each constructed with the flange C upon its outer edge, and with a trunnion, *a*, at each end, combined with the jointed covering-plate D and links *d*, substantially as described.

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