

No. 685,679.

Patented Oct. 29, 1901.

A. L. FUSS.

HINGE.

(Application filed June 1, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

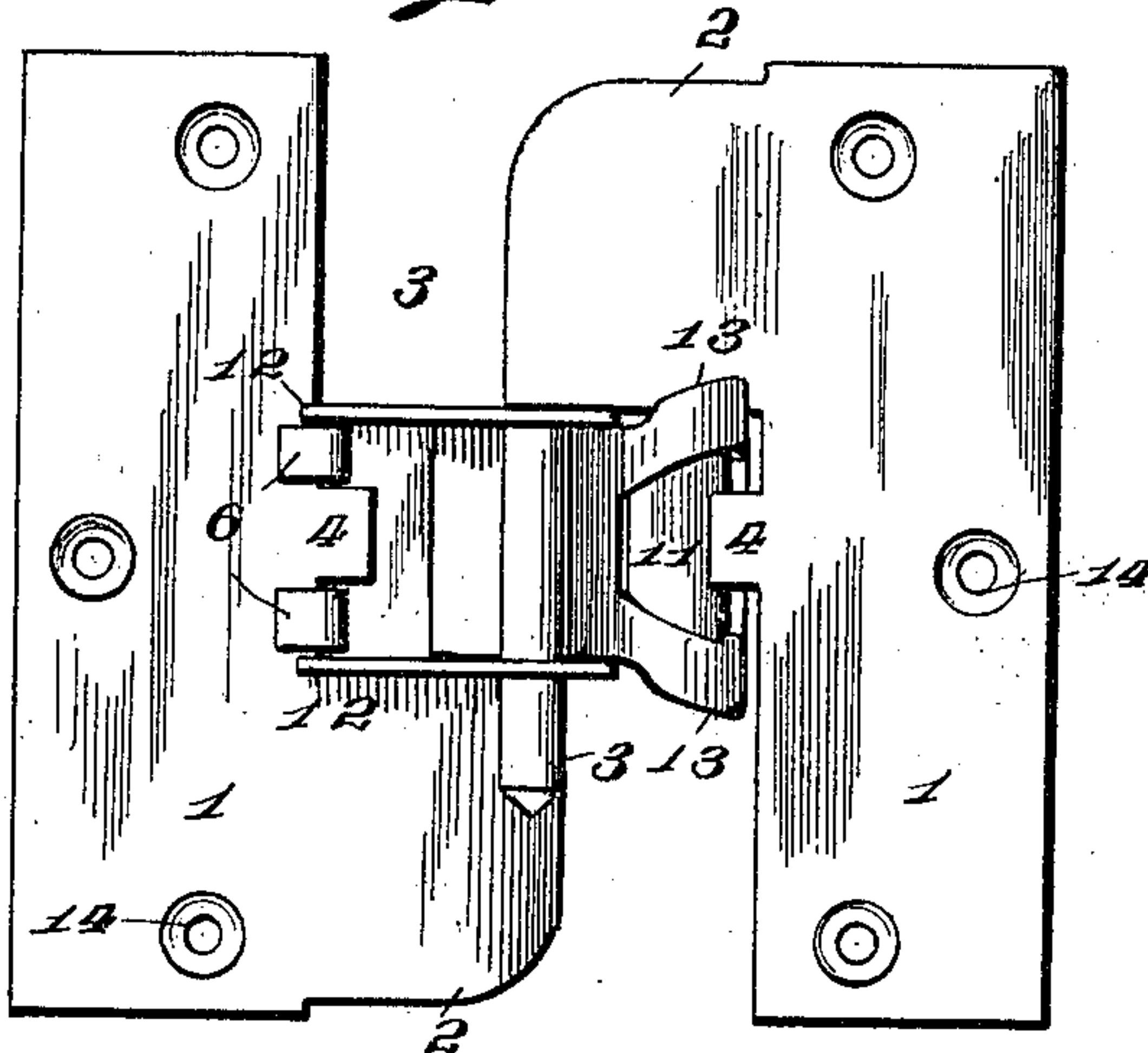


Fig. 2.

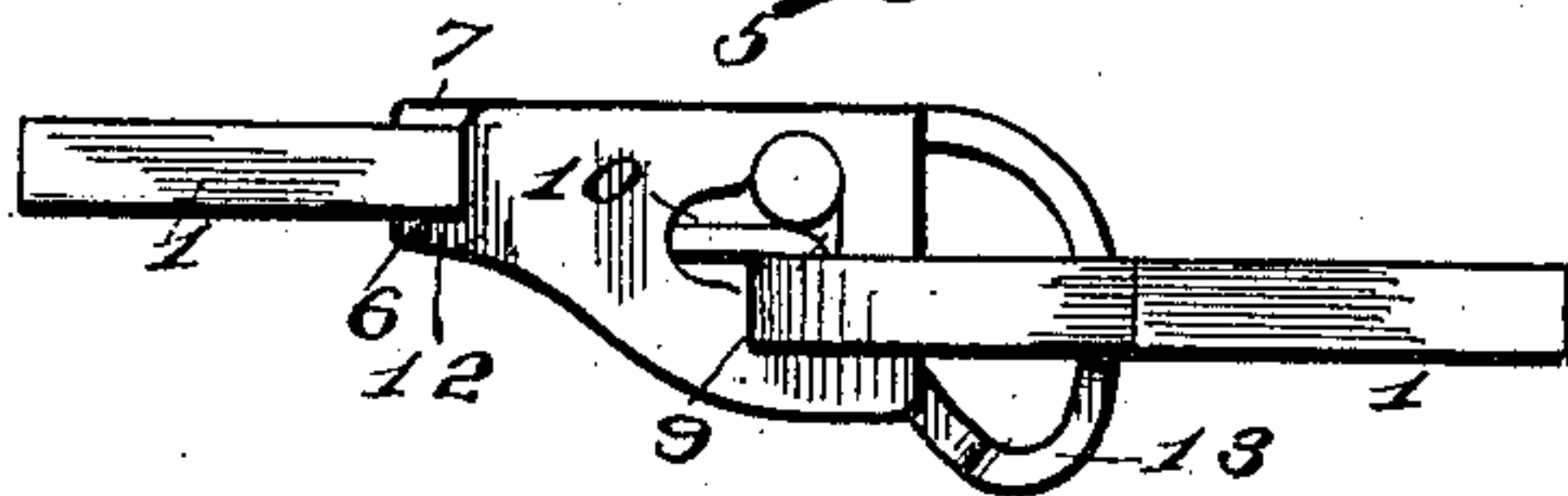
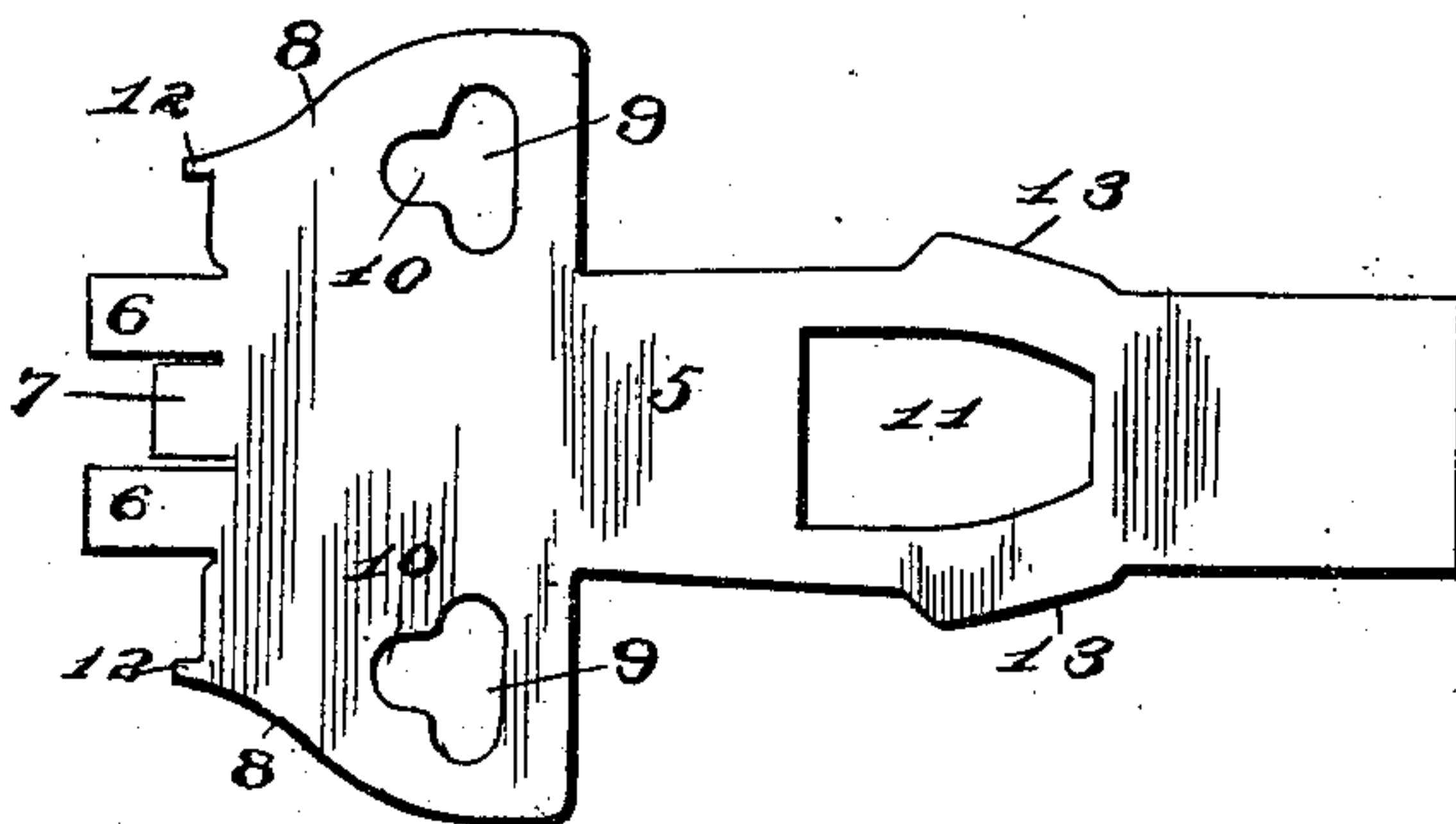


Fig. 3.



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Fig. 4.

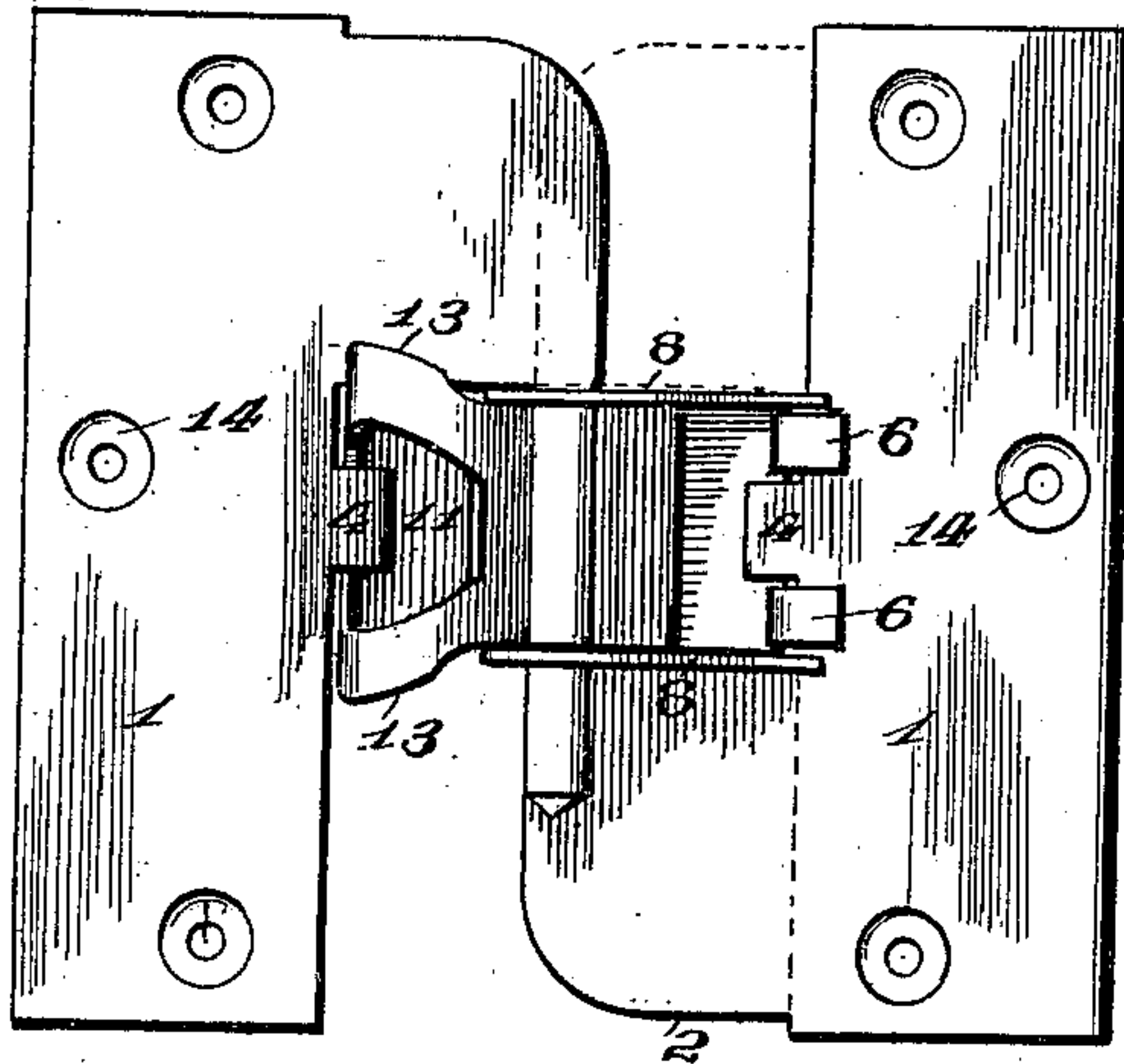


Fig. 5.

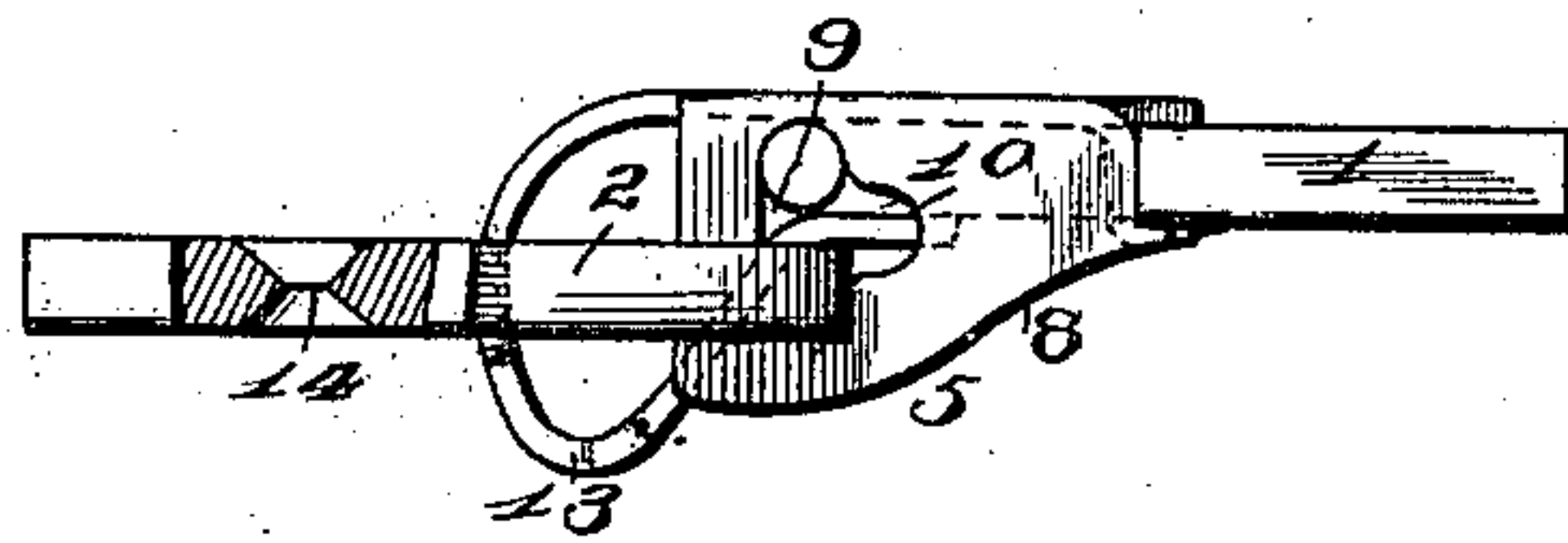


Fig. 6.

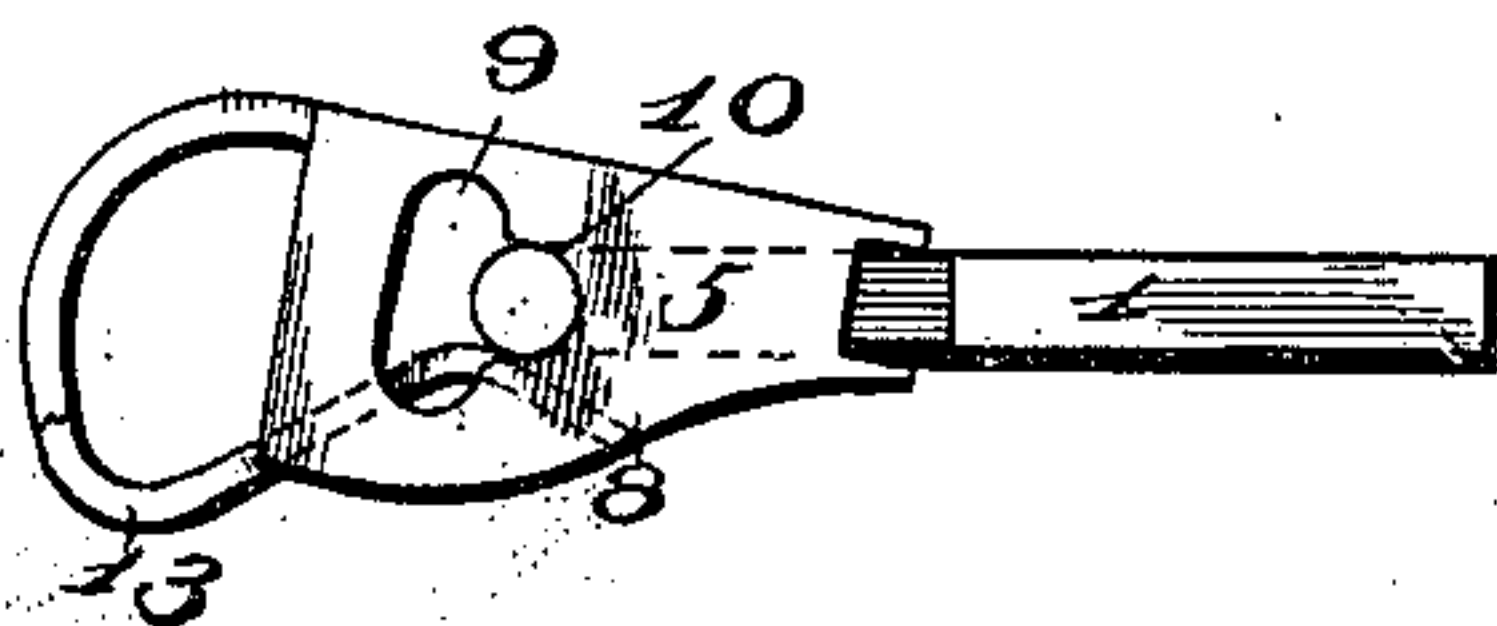
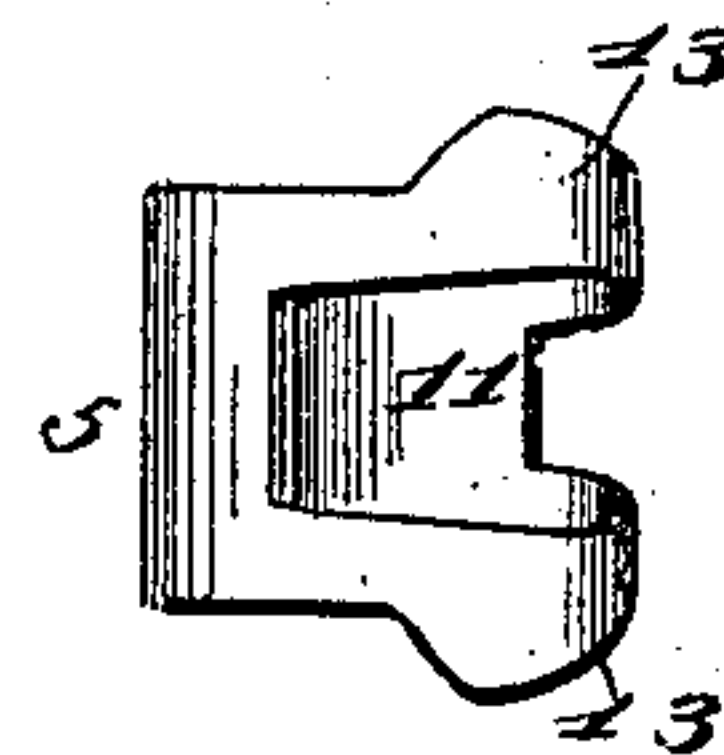


Fig. 7.



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# UNITED STATES PATENT OFFICE.

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## HINGE.

SPECIFICATION forming part of Letters Patent No. 685,679, dated October 29, 1901.

Application filed June 1, 1901. Serial No. 62,772. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED L. FUSS, a citizen of the United States, residing at Washington, in the District of Columbia, 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.

This invention relates to improvements in hinges, and more particularly to a reversible lock-hinge adapted for use on window-shutters.

The object in view is the production of an improved hinge of that class in which the leaves are duplicates of each other, whereby they are reversible and the hinge is relieved of the objectionable feature of being either right or left hand.

With this object in view the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 represents in side elevation a hinge embodying the features of the present invention, the leaves being adjusted to constitute a left-hand hinge. Fig. 2 represents a top plan view of the same. Fig. 3 represents an extended plan of the interposed connecting member. Fig. 4 represents a front elevation of the parts shown in Fig. 1, the leaves being adjusted to form a right-hand hinge, the left-hand hinge adjustment being illustrated in dotted lines. Fig. 5 represents a top plan view of the same. Fig. 6 represents in side elevation the intermediate connecting member in the act of adjustment upon the pintle of one of the leaves. Fig. 7 represents an end view of the intermediate connecting member.

Referring to the drawings by numerals, 1 1 represent the leaves of my improved hinge, each of which is provided with a suitable shoulder 2, from which extends a pintle, as 3, spaced from and parallel with the inner edge of said leaf. At a suitable point intermediate the length of the inner edge of each leaf is provided a lug, as 4.

In order to connect leaves 1 1 for producing a hinge, I provide a suitable pintle-receiving member, as 5. The member 5 is preferably

formed from a single sheet of material, as best seen in Fig. 3, which is stamped or cut so as to provide one end thereof with a plurality of lugs 6 6 and an intermediate lug 7 and the sides thereof preferably with ears 8 8, having elongated slots 9, with side extensions 10 at right angles thereto, and having projecting lugs 12 parallel with the lugs 6 and 7 on the body of the blank. The blank is preferably cut away, as at 11, for a purpose hereinafter fully set forth. From this blank the intermediate connecting member 5 is formed ready for application to the leaves 1 1 by folding the ears 8 at a right angle to the body of the blank, whereby apertures 9 9 are brought into registering relation with each other, as best seen in Fig. 6. Lugs 12 12 are adapted to engage one of the faces of leaf 1. Lugs 6 are bent at right angles to the main body of the sheet and then bent upon themselves at a right angle, whereby they form a squared abutting surface and overhanging lips, the abutting surfaces, together with the end edges of ears 8, being adapted to bear against the inner edge of one of the leaves 1, while their outer ends or lips engage one of the faces of said leaf. Lug 7 is left in its original straight condition and is adapted in operation to engage the opposite face of leaf 1 to that engaged by the lips of lugs 6. The opposite end of the blank 5 is folded upon itself, as best seen in Fig. 6, and passes between ears 8 8, whereby the aperture 11 is positioned at the end of member 5, whereby in operation space is left for the free passage of lug 4, at the same time locking the leaf whose lug extends through said aperture 11 against longitudinal disconnection from its companion leaf.

In operation I preferably insert pintle 3 of one of leaves 1 1 through registering slots 9 9, to the rear of the folded-in end of the plate comprising member 5, and then force the same against the spring-pressure of said end into extension 10, whereby the member 5 is free to be swung upon said pintle until the end thereof registers with the inner edge of the leaf and may then be forced to a position in which the pintle 3 is again in slots 9, and lugs 6 6 and 12 12 will be upon one side of the leaf, while lug 7 will engage the other face thereof, the lug 4 extending between



lugs 6 6 and locking member 5 against longitudinal removal from said leaf. In this position the said pintle 3 is held by contact with the folded-in end of the plate comprising member 5 in the rear end of slot 9. The leaf forming the remaining portion of the hinge is next applied by passing its pintle 3 through the front end of slot 9 9 in front of the folded-in end of the plate comprising member 5, and the said pintle will be held in said front end of slot 9 by the spring-pressure of said plate, the said plate extending between and separating said pintles 3. It will be seen by reference to Fig. 3 that the opposite edges of said plate are formed with lugs 13 13, which in operation are adapted to engage the lower edge of shoulder 2 of the last-mentioned leaf, and thereby lock the same in its opened position, the same being held by the weight of the shutter or door, as is common. The parts having been assembled to form a right-hand hinge, as seen in Fig. 4, if a left-hand hinge is desired all that will be necessary will be to remove the last-applied leaf 1 from engagement with member 5 and reverse the same, the pintle 3 assuming a relative position to member 5 similar to that previously had, as illustrated in dotted lines in said Fig. 4. Another means for changing a right-hand to a left-hand hinge and that preferred is the removal of member 5 from engagement with its leaf 1 by a reverse operation from that described in adjusting the member and then placing said member 5 in the manner hereinbefore set forth upon the opposite leaf 1. Of course it will be apparent that member 5 may be reversed with relation to the leaf 1, upon which it was formerly secured, with the same facility as obtained in applying it to the opposite leaf, the said member 5, when reapplied to the said leaf for changing the hinge from a right to a left hand one, having only to be inverted.

It will be seen, of course, that I prefer to provide any suitable number of apertures, as 14 14, in leaves 1 1 for securing the same in the common manner; but I differ from said common form in providing beveled or reamed-out apertures, the said bevel being formed on both sides of leaf 1, as best seen in Fig. 5, whereby said leaf is interchangeable and may be used for forming a part of either a left or right hand hinge, and thereby obviating all possibility of confusion or inconvenience resulting from the necessity of two forms of hinges.

Although I have specifically set forth the details of the present invention, yet I do not desire myself understood as being limited to the exact form or precise structure of the minor details of my improved hinge; but shall feel at liberty to deviate therefrom within the spirit and scope of the present invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is--

1. A hinge comprising two leaves of similar

construction, each provided with a pintle, and an interposed connecting member provided with top and bottom parallel ears or flanges having registering apertures to receive the pintles of said leaves, substantially as described.

2. A hinge, comprising in its construction leaves of similar form, and an interposed engaging member adapted to lock such leaves in hinging relation to each other, the said interposed securing member comprising a main body, means for engaging the inner edge of one of the leaves, parallel top and bottom ears having registering apertures for receiving the pintles of said leaves, and means for locking the said interposed member against longitudinal movement, substantially as described.

3. A hinge, comprising in its construction leaves of similar form, each of said leaves being provided with a shoulder, a pintle extending from said shoulder, and means for engaging said pintles for holding said leaves in hinging relation to each other, comprising an interposed member provided with top and bottom ears, with registering openings to receive the pintles, locking means for preventing the removal of said interposed member from one of said leaves, and means for preventing the removal of the opposite leaf from engagement with said interposed member when in its open position, substantially as described.

4. A hinge, comprising in its construction interchangeable leaves, each of said leaves being formed with a shoulder, a pintle extending at right angles to the shoulder and parallel to the inner edge of the leaf, lugs extending inwardly from the inner edges of said leaves, and an interposed engaging member adapted to receive said pintles and retain the leaves in hinging relation to each other, said interposed member comprising a main body portion, ears extending at right angles thereto and provided with registering apertures, lugs formed upon the said ears and lugs formed upon the said main body portion, and bent at right angles thereto, and again bent upon themselves whereby all of said lugs are adapted to engage one face of one of the leaves, and a lug extending from said main body portion adapted to engage the opposite face of one of the leaves, the said interposed member when in engagement with a leaf having one of its bent lugs above and one below the lug on the inner edge of said leaf, while the pintle of said leaf extends through the registering apertures of the ears of said interposed member, whereby said member is locked against removal, a spring formed of the said main body portion folded upon itself and passed between said ear, and means for locking the opposite leaf against removal when in an open position, comprising an aperture in said main body at the point of its fold, forming opposite walls adapted to engage the inwardly-extending lug upon the inner edge of the said last-mentioned leaf



when the pintle of said leaf is passed through the registering apertures in said ears, substantially as described.

5 5. A hinge, comprising in its construction similarly - formed interchangeable leaves, each provided with a suitable pintle, an interposed connecting member adapted to retain said leaves in hinging relation to each other, said interposed member comprising a  
10 main body portion, means for securing one end thereof to the inner edge of one of said leaves, registering apertures within said main body for receiving the pintle of said leaf, means for retaining the opposite leaf against  
15 longitudinal movement, comprising a lug formed on the inner edge thereof, and adapted to swing within an aperture in said main body portion, the pintle of said last-mentioned leaf operating in the said registering apertures of  
20 the body of said interposed member, the construction and arrangement being such that said hinge may be changed from right to left hand by inverting either the last-mentioned leaf or the said interposed connecting member, substantially as described.  
25

6. A hinge, comprising two leaves of similar construction, a pintle carried by each, and an interposed connecting member having apertures to receive the pintles of both leaves,

and a spring-lock for holding one pintle in position and separating both pintles from each other, substantially as described. 30

7. A hinge, comprising in its construction leaves made alike, pintles carried thereby, a connecting member for joining the leaves together, having irregularly-shaped apertures  
35 formed therein for receiving the pintles, a portion of said connecting member being folded back upon itself and having a spring action for holding one of the pintles in this portion of the said recesses while the other pintle  
40 passes upon the other side of said spring projection and engages another portion of the said recesses, the structure being such that when both pintles are in place they are locked  
45 in their respective portions of the recesses, and the formation of the connecting member being such that the leaves of the hinge may be reversed with respect to each other for forming right and left hand hinges, substantially as described. 50

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

ALFRED L. FUSS.

Witnesses:

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