

No. 662,739.

Patented Nov. 27, 1900.

E. RASCHLÉ.
KNOCKDOWN BOX.

(Application filed Jan. 10, 1900.)

(No Model.)

Fig. 1

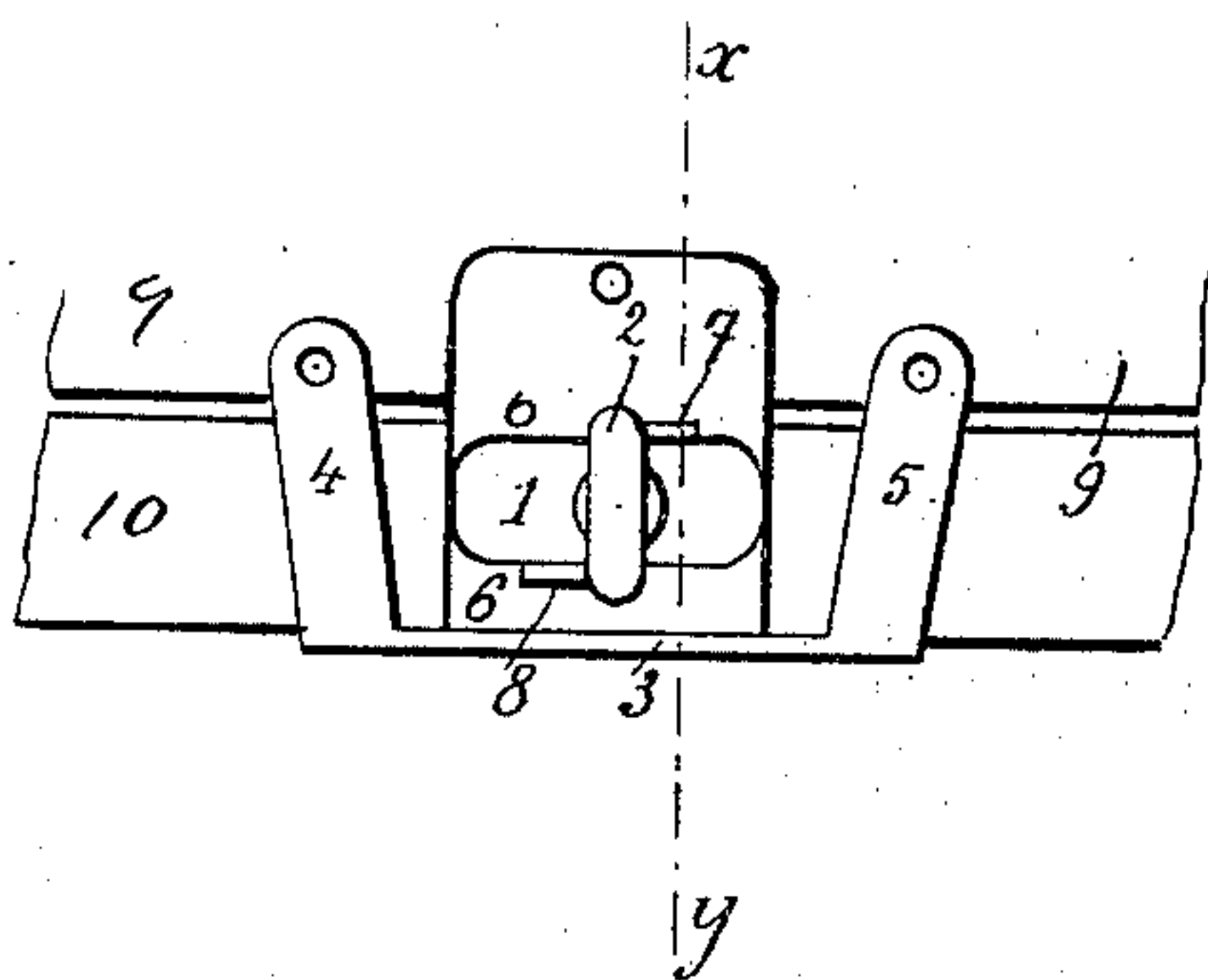


Fig. 2

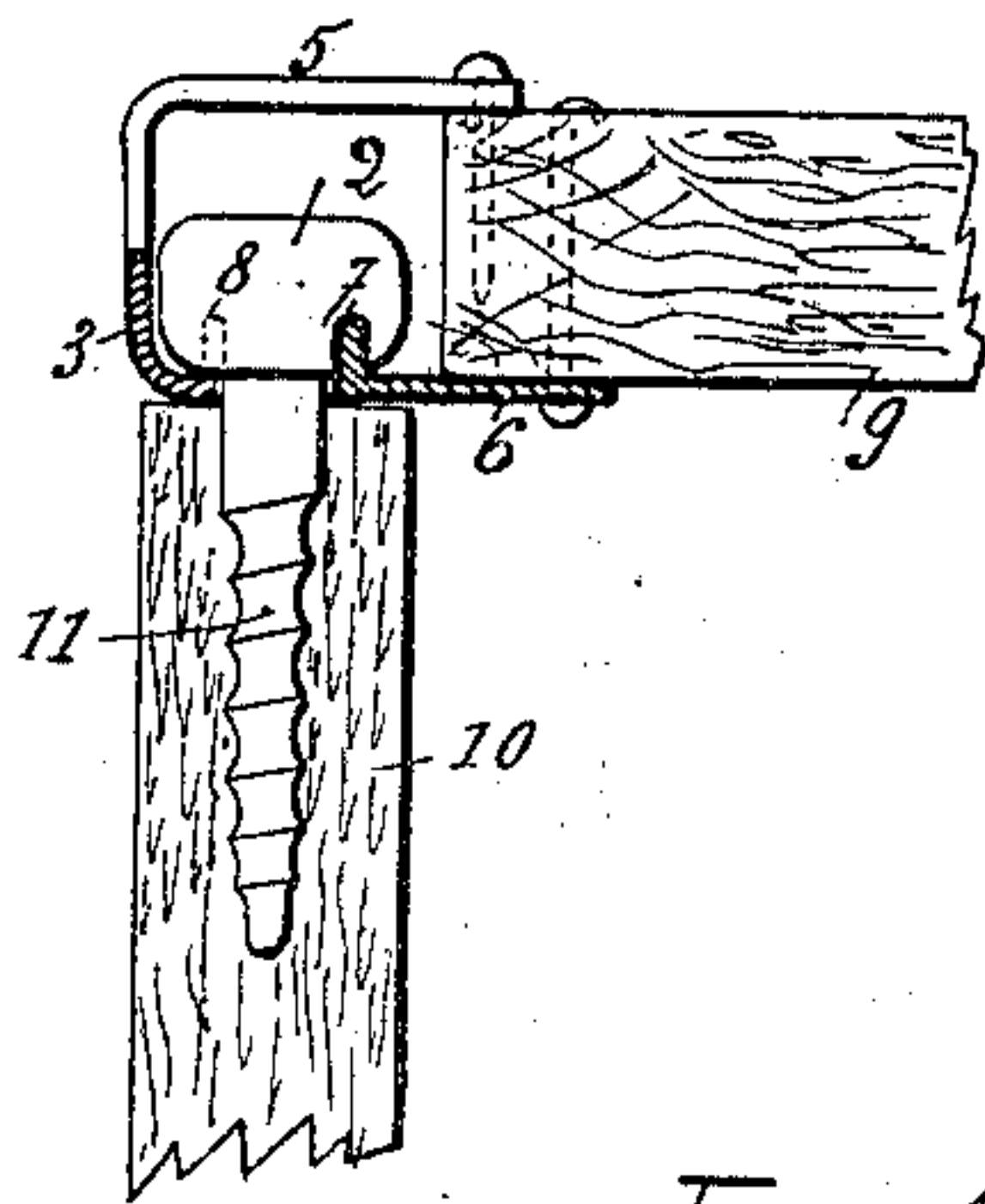


Fig. 3

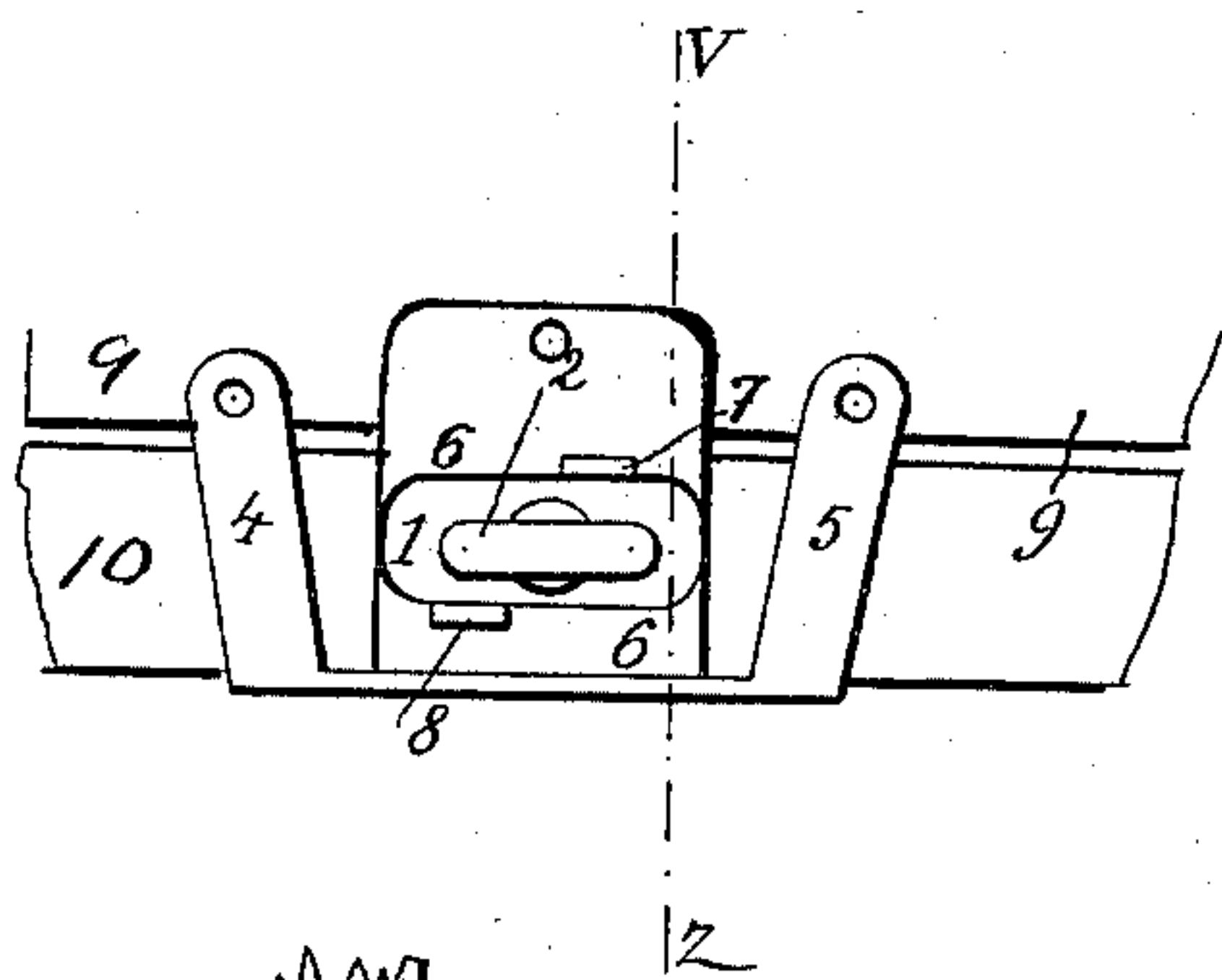


Fig. 4

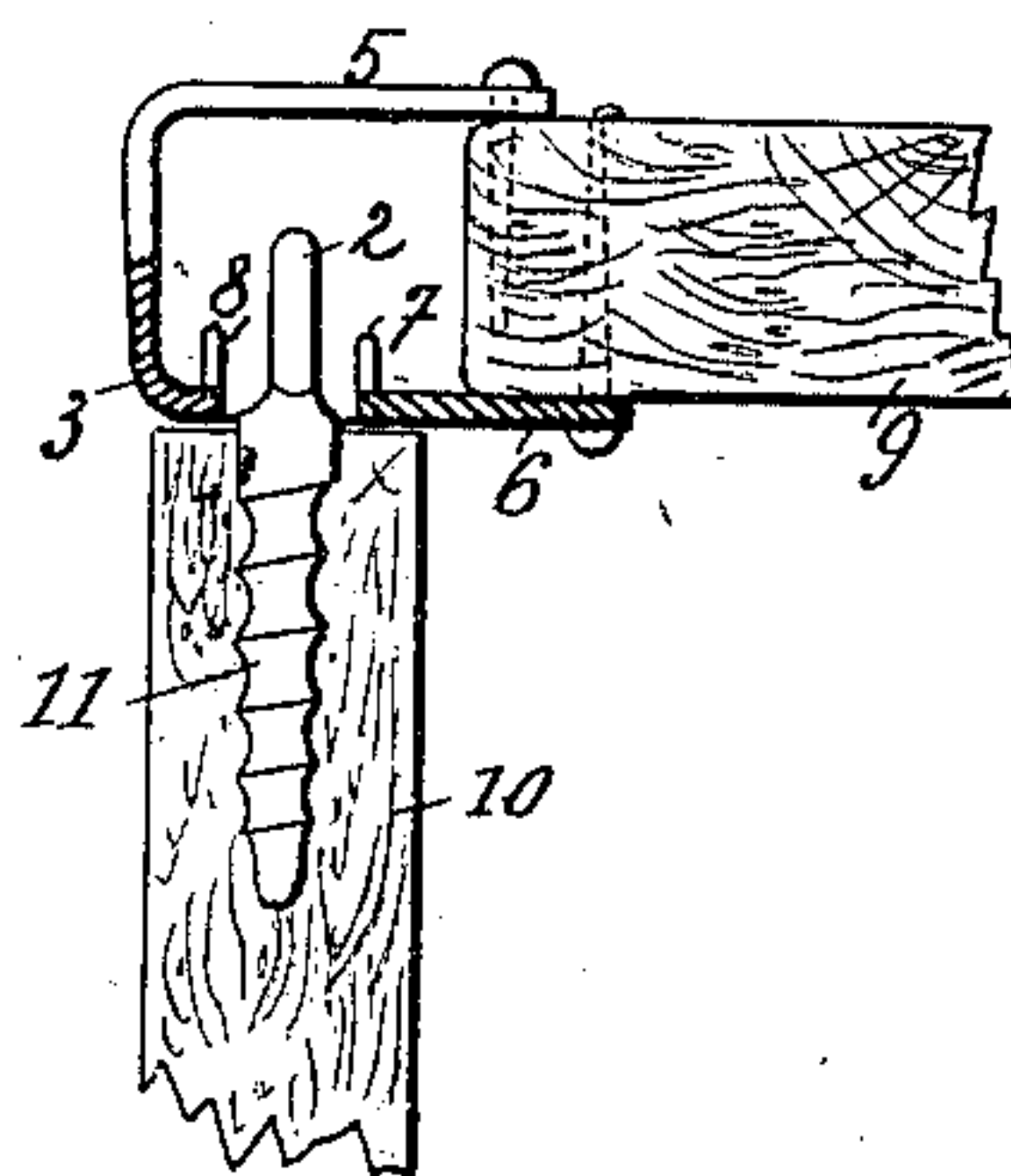


Fig. 5

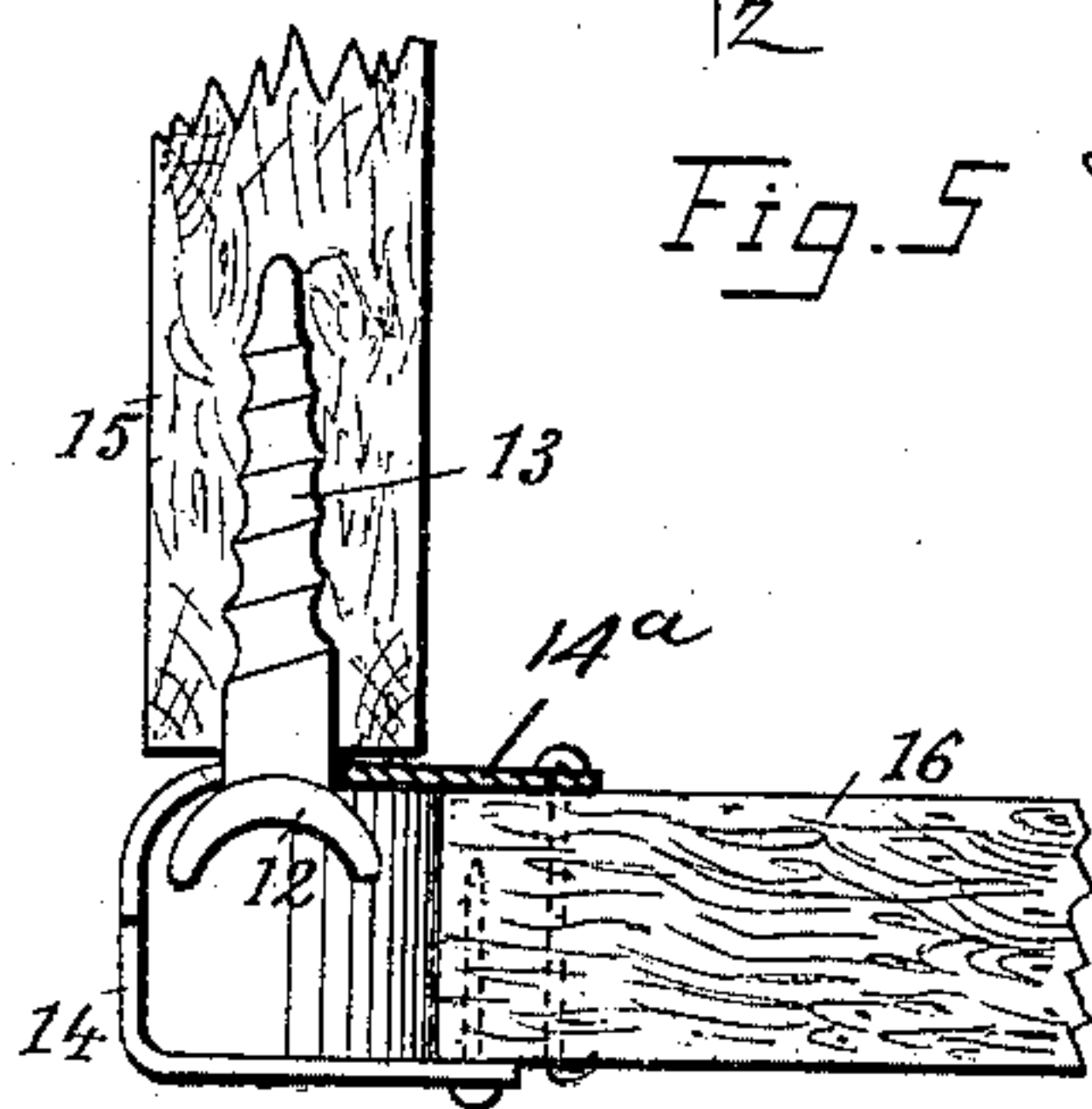


Fig. 6

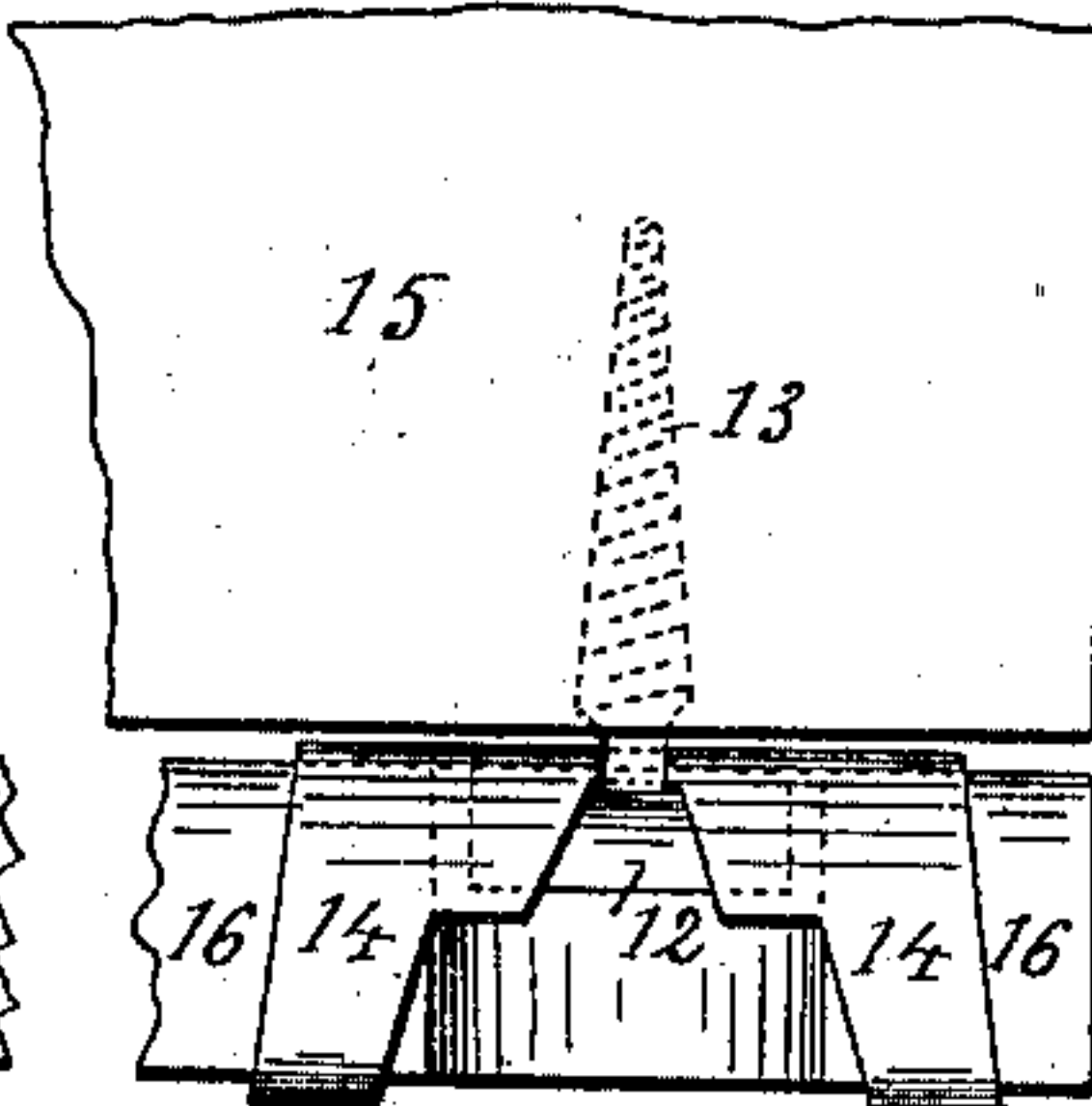


Fig. 7

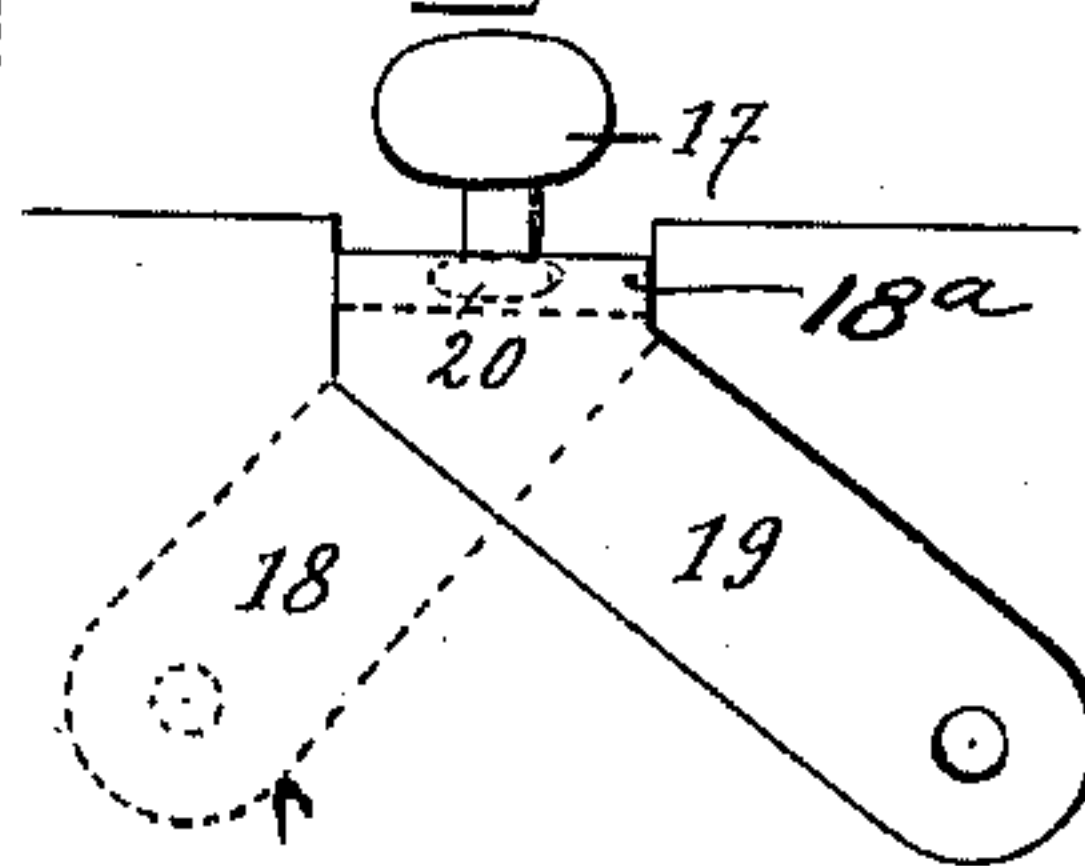


Fig. 8

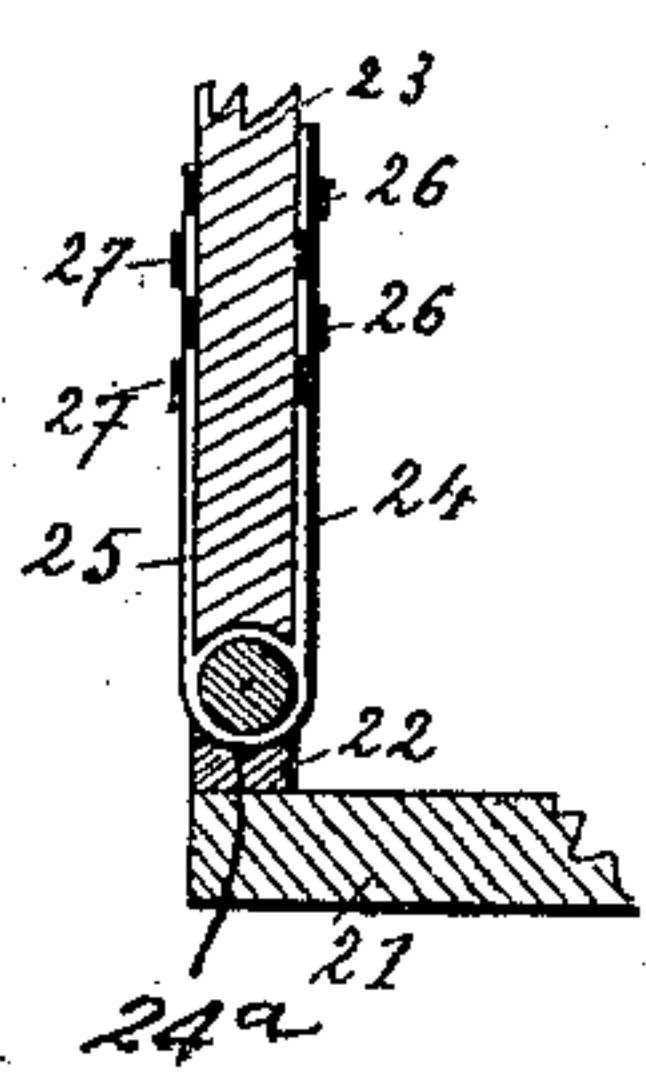
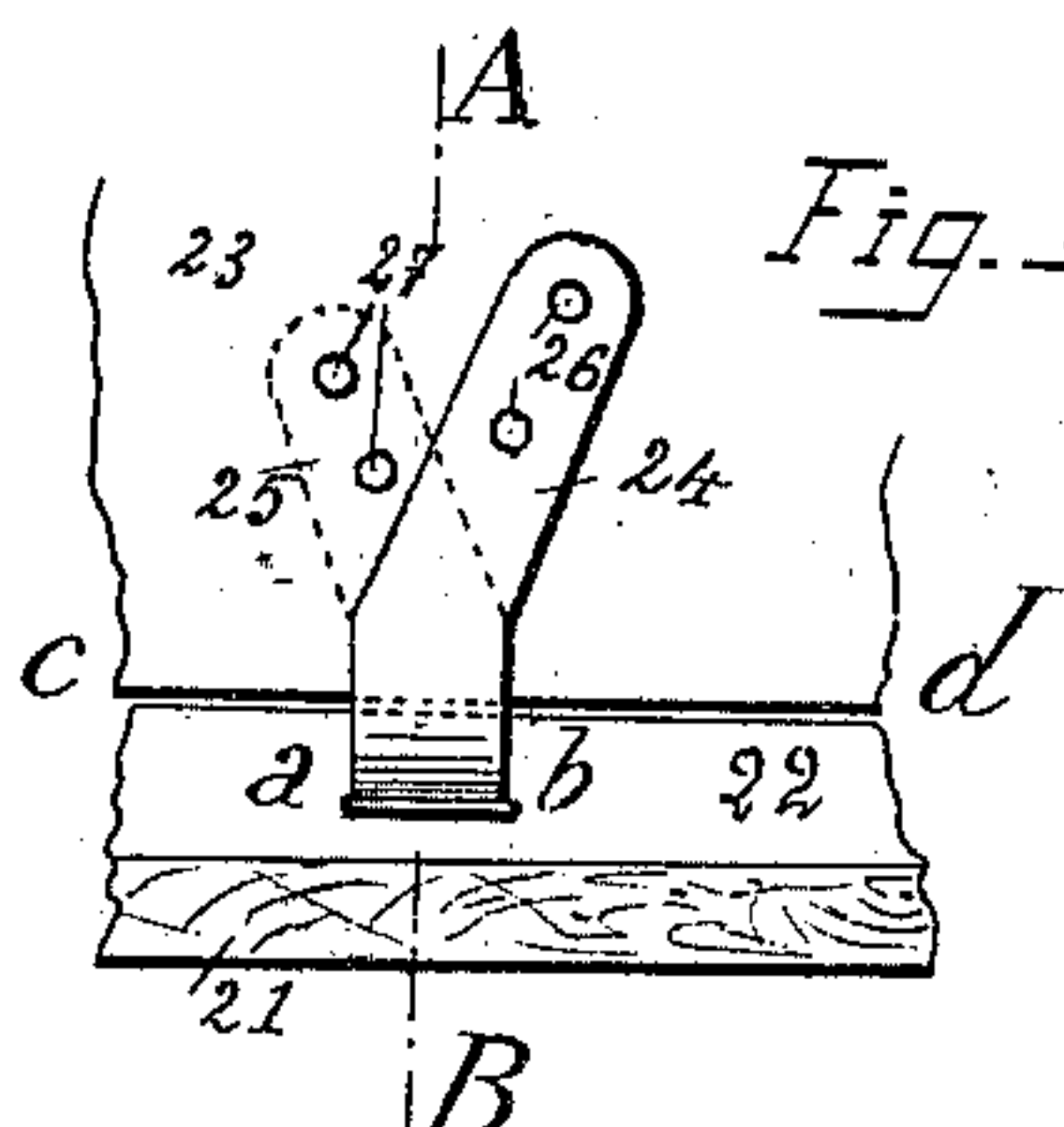


Fig. 9



Witnesses

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KNOCKDOWN BOX.

SPECIFICATION forming part of Letters Patent No. 662,739, dated November 27, 1900.

Application filed January 10, 1900. Serial No. 978. (No model.)

To all whom it may concern:

Be it known that I, ERNEST RASCHLÉ, a citizen of the Swiss Republic, and a resident of Paris, France, have invented a new and useful Improvement in Knockdown Boxes, of which the following is a full, clear, and exact specification.

The object of the present invention is a system of metal mountings or fasteners for use in the manufacture of chests, trunks, boxes, furniture, and other objects which can be instantaneously entirely or partly fixed and taken to pieces.

The attached drawings represent, as an example, the different parts for making a packing-case.

Figure 1 is a plan of the improved fastener in the closed or locked position. Fig. 3 shows the same in the open or free position. Figs. 2 and 4 are sectional elevations on lines $x y$ and $v z$, respectively, of Figs. 1 and 3. Figs. 5 and 6 are a sectional elevation and a face view of another form of construction in accordance with my invention. Fig. 7 is an elevation of another form; and Figs. 8 and 9 are a sectional elevation on line A B of Fig. 9 and a face view, respectively, of still another form of joint or connection.

Fig. 1 gives a plan view of a fastener when fixed for joining two sides of the case together, or one side and the lid. 1 is a rectangular slot with rounded edges in a piece of sheet metal 6, forming the fastener, the slot 1 corresponding with a rectangular mortise made in the wood. Two lugs or end members 4 and 5, converging from their free ends to their inner ends, which are spaced, projecting from the piece of sheet metal 6, are permanently nailed or otherwise fastened to the other side of top 9. A central member 3 extends from the inner end of one lug or end member 4 to the inner end of the other end member 5 and is located in a plane at a right angle to that of the end members. The piece of sheet metal 6 is bent down and fixed to the underneath part of the said other side or top 9, as shown in Fig. 2. The fastener body thus comprises two end members, converging toward their inner ends and adapted for connection with the top 9, and a central member 3 6, constructed for connection with the box side 10.

The method of joining the cover to the

sides, or one side to another, is as follows: In order to join the two parts 9 and 10, Fig. 2, they are placed at a right angle to each other, and the flat rectangular head 2 of a screw 11 is put in open position—that is to say, in a line parallel to the direction of length of the side 10, Figs. 3 and 4, this screw having been first placed in the edge of the said side with its head penetrating into the slot 1. The head of the screw is then turned for ninety degrees—that is to say, it is given a quarter of a turn until it abuts against two stops 7 and 8, arranged at the side of the slot 1. The fastening together of the two sides or top and side of the case is thus more secure than by ordinary nails. A suitable number of these fasteners, corresponding to an equal number of screws, may be placed along the edges of the sides of the chest. The head 2 of screw 11 is turned by means of a key with a corresponding slot. In turning the screw 11 ninety degrees in the reverse direction its head is again brought parallel with the edge of the panel, Figs. 3 and 4, so that the metal plate no longer holds the head of the screw, which may freely pass through the slot 1. When all the heads have been placed in this position, the panel or slide can be freely removed.

For the junction of the bottom with the sides these could be joined together by the same fastening and screw arrangement as before described; but this would not be easily practicable, as the chest would have to be lifted in order to turn the screw-heads. Consequently a modified arrangement, as shown in Fig. 5 (sectional side view) and Fig. 6, (front view,) is used. The method is as follows: In the edge of the side of the chest is fixed a pivotal screw 13, which should not turn, and the head of which, 12, has a convex channel-like form. Fig. 6 gives a side view of this screw-head 12. The fastening comprises converging lugs or end members 14 and a central member 14^a, connecting the spaced inner ends of said end members and located at an angle thereto. This fastening is fixed to the bottom of the case and has a slot corresponding to a slot in the wood through which the screw-head 12 may pass. The said fastening 14 is rounded for a suitable distance, and the rear part of the screw-

head 12 fits exactly into this rounded part of the fastening, thus preventing the screw being turned by unauthorized persons. The fastening 14 14^a is fixed to the bottom of the case 16 by riveted nails or other suitable means.

For fitting up the case the four sides are attached to the bottom by giving them a certain inclination which allows of introducing the screw-heads 12 into the corresponding slots of the fastenings or mountings 14 14^a. Then each side is brought into a vertical position, and in this movement the heads of the screws are brought under the edges of the correspondingslots in the fasteners. In placing the sides thus in position care must be taken that the screw-heads 2 of the screws 11 enter into the corresponding slots 1 of the fastenings of the preceding system. The screws are then turned ninety degrees, and the junction is complete. The four side panels being thus fitted up and joined with the bottom, the cover is put on in the manner indicated in Figs. 1 and 2. Instead of the screws 11 and 13, which may be long screws, as used for wood, a simple turn-button riveted on a plate-mounting 18 and 19 may be used, Fig. 7. Here the fastener comprises the converging end members 18 19 and the central member 18^a, connecting their inner ends and located in a plane at a right angle to that of the said members. The head 17 of this turn-button is attached to a short rod ending in a riveted stud 20. The head may be prevented from turning, and it may also be used as a swivel-head. The lugs or projections 18 and 19 of this fastener for attaching it to the chest may be oblique, thus allowing of fixing it onto wooden panels in which screws cannot be introduced, because the panels are too thin or for some other reason.

Figs. 8 and 9 represent another form of fastening for joining the bottom to the sides of the case, so as to allow of swinging the sides down. The construction is as follows: On the border of the panel 21, forming the bottom of the case, a wooden rail 22 is fixed. In this rail is made a slot *a b*, Fig. 9, into which is placed a metal plate bent into the form of cheeks and provided with two oblique lugs or projections 24 and 25, which are fastened solidly onto the lower part of the side panel 23 by means of the nails 26 and 27 or otherwise. These nails are riveted to the oppo-

site side, as shown in Fig. 8, which represents a section of Fig. 9 from A to B. A sort of hinge-joint is thus obtained, and the side panel 23 may be turned down to the bottom of the box about the edge *c d*. In this construction also the fastener comprises converging end members 24 25 and a central member 24^a, located in a different plane from those of the end members. A series of slots, similar to *a b*, arranged in the edge of the box at intervals receive similar cheeks or fasteners.

In order to fit up the box the four side panels are brought to a vertical position as in connecting them by the system of turning-screws hereinbefore mentioned, Figs. 1, 2, 3, and 4. Then the cover is put on and fixed by the same system.

These two systems may be combined in flexible and dismountable boxes by using, for instance, three flexible sides and one dismountable side. The cover can be fastened on one side by the pivotal fastenings and screws described for fastening the bottom and on the three other sides by turning-screws. The form of screws, turn-buttons, and fastenings may be modified as occasion may require.

I claim—

1. A fastener for boxes and the like, comprising two end members or legs converging from their free ends inwardly and both adapted for attachment to the same part of the box, the inner ends of said end members being spaced, and a central member extending from the inner end of one end member to the inner end of the other and constructed for attachment to another part of the box, the central member and the end members being located in different planes.

2. A fastener for boxes and the like, comprising a central member having a slot and stops adjacent thereto, and spaced end members permanently connected with the central member at opposite sides thereof and located in a different plane from the central member, in combination with a locking-head constructed to pass through said slot and to turn into engagement with said stops.

In witness whereof I have hereunto signed my name in presence of two subscribing witnesses.

ERNEST RASCHLÉ.

Witnesses:

EDWARD P. MACLEAN,
ARTHUR GOOD.