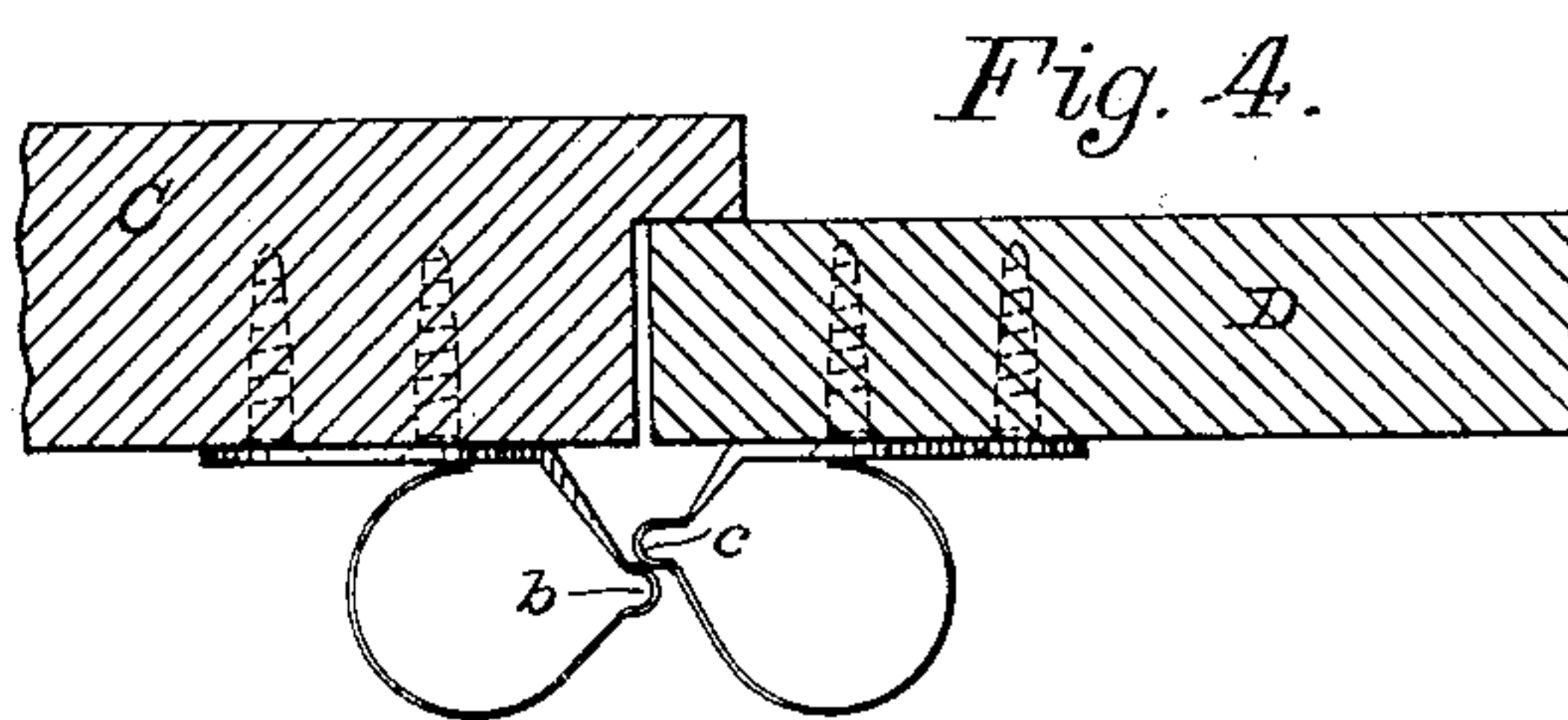
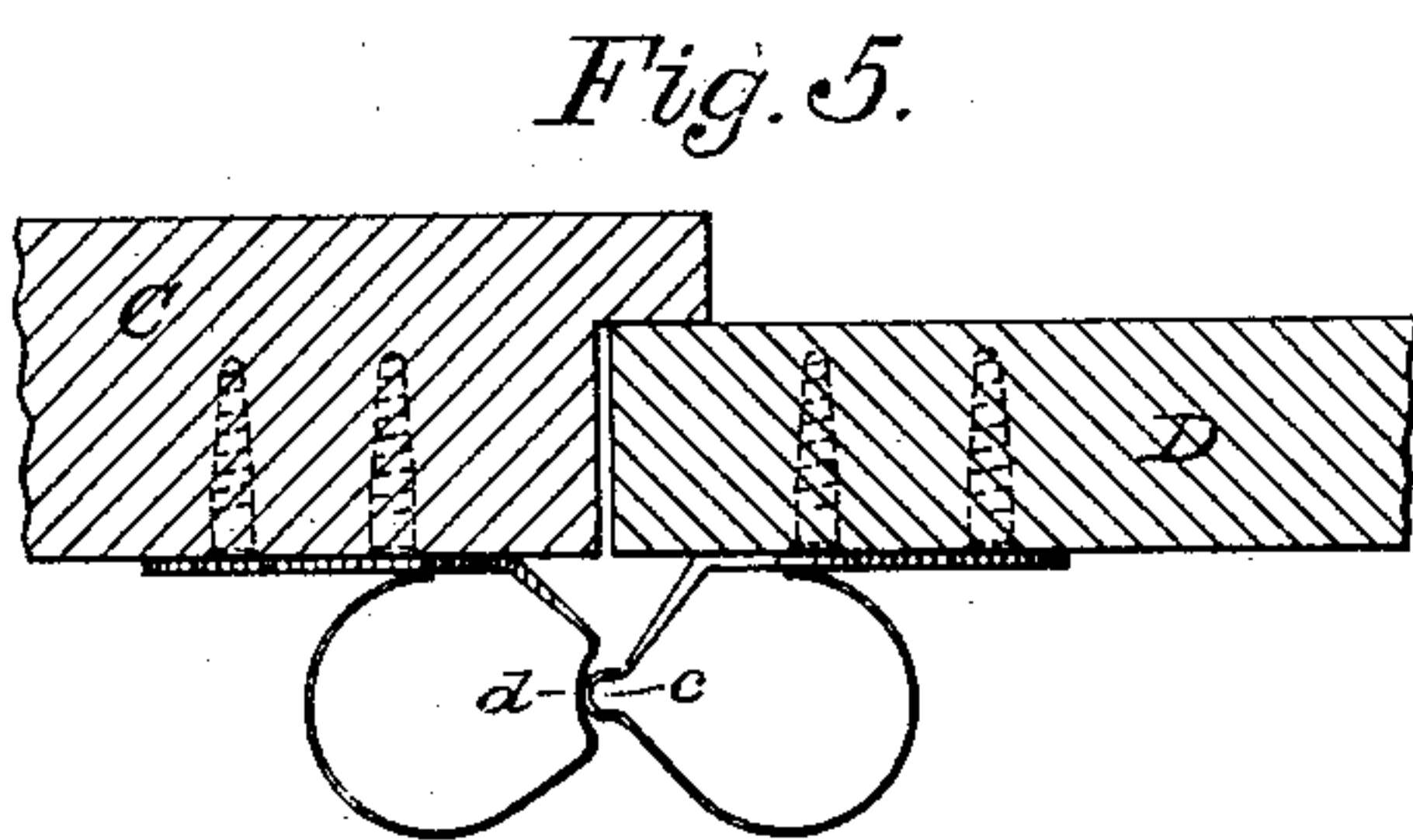
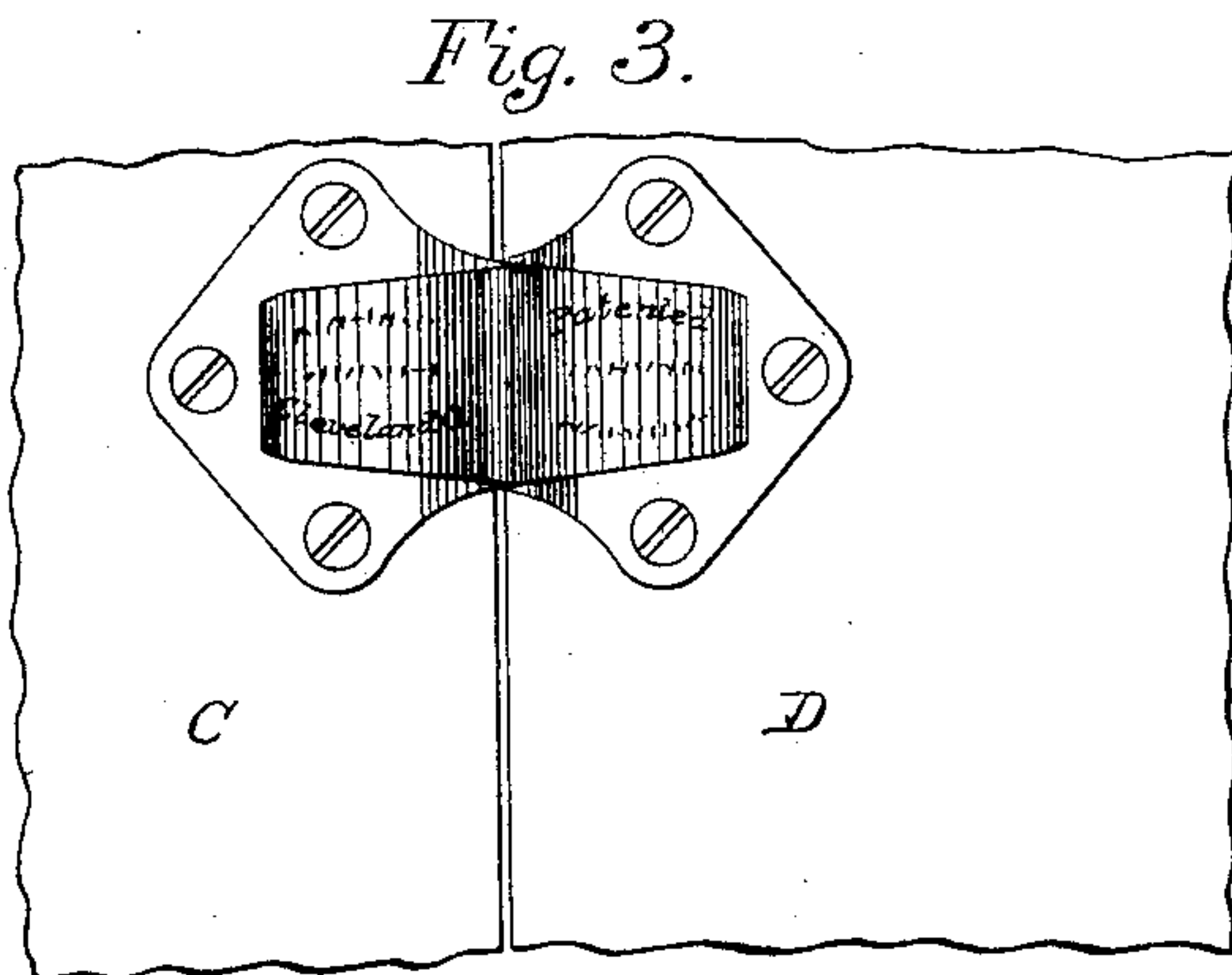
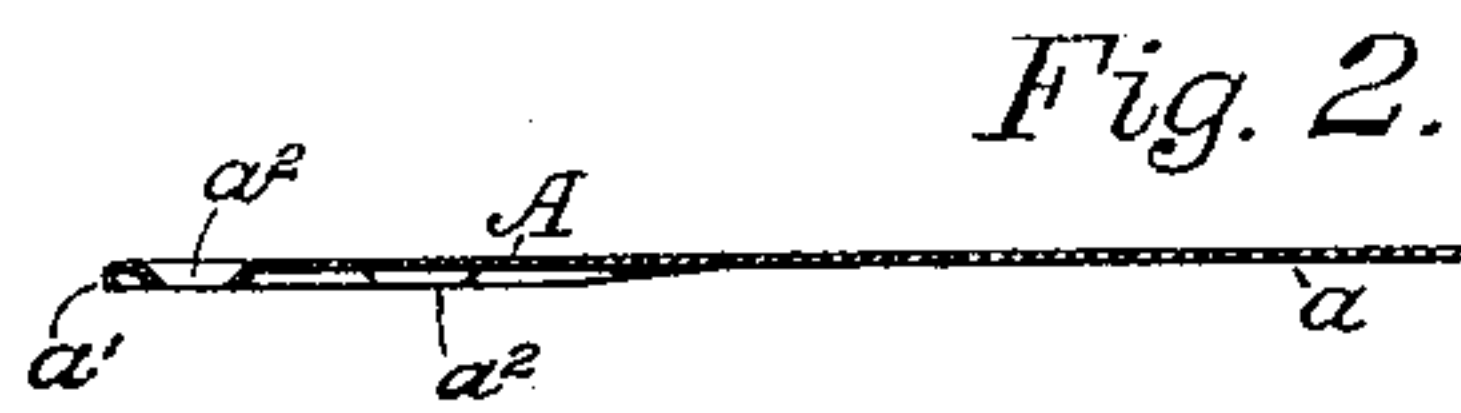
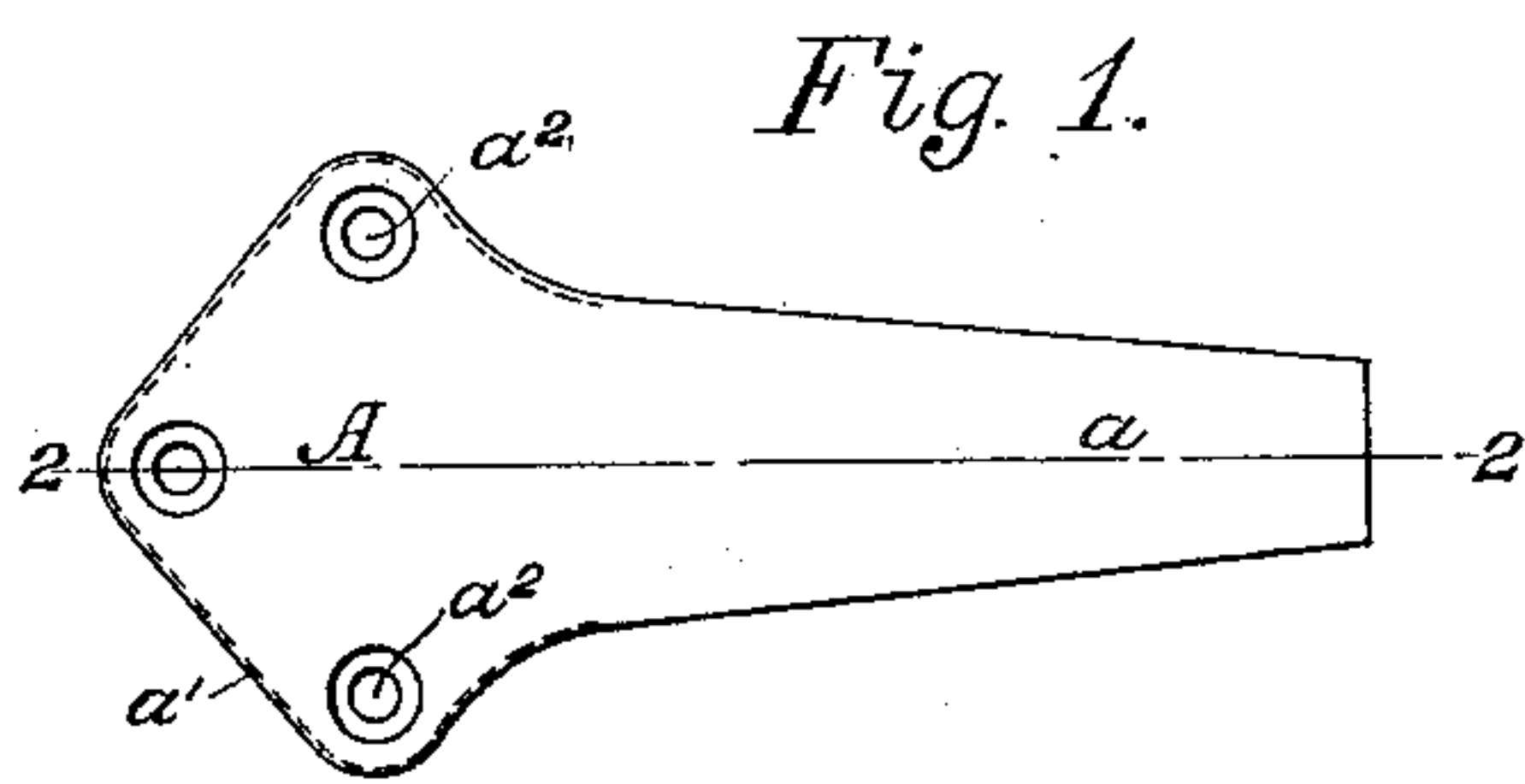


(No Model.)

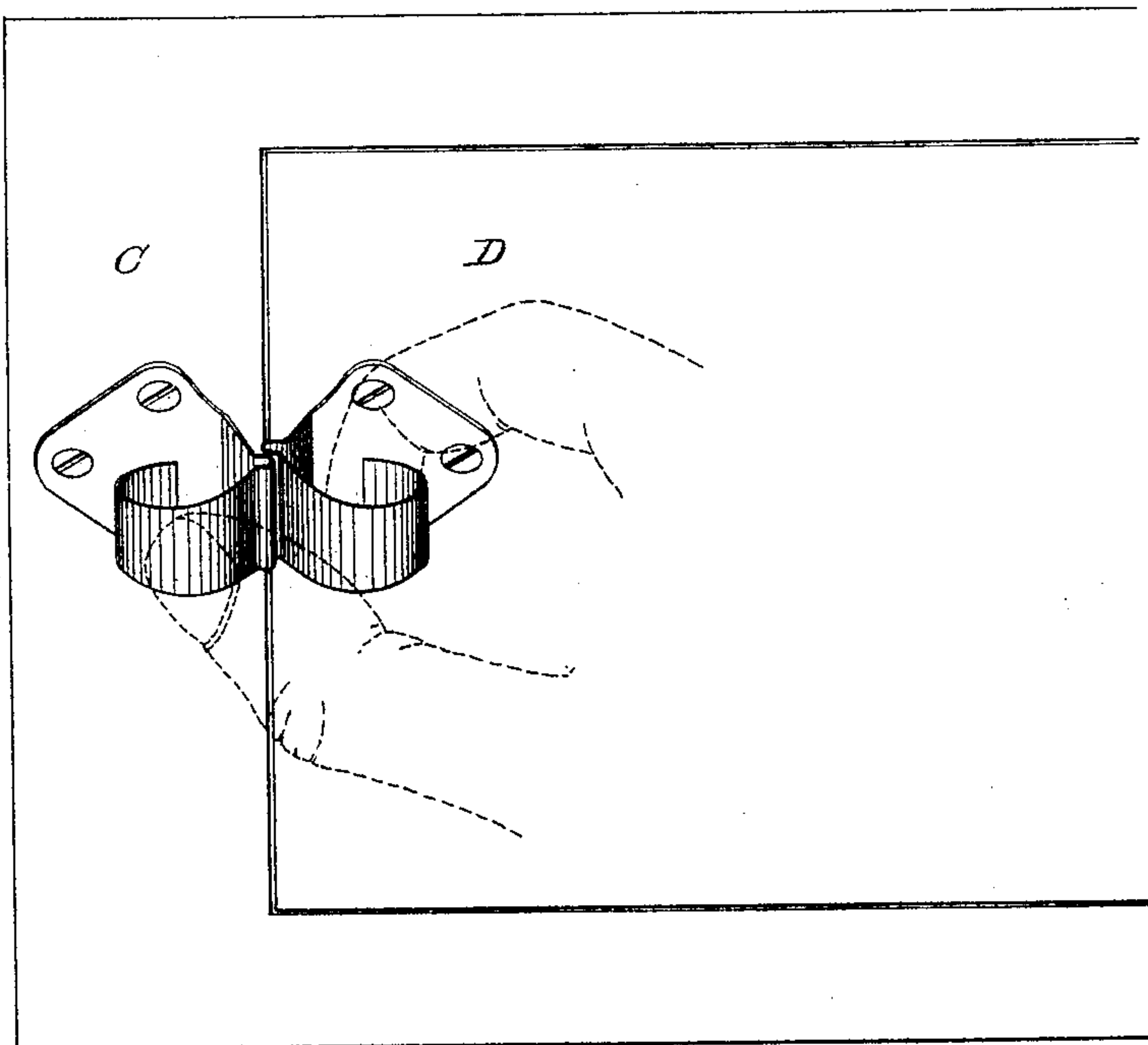
W. I. LUDLOW.  
DOOR CATCH.

No. 600,155.

Patented Mar. 8, 1898.



*Fig. 6.*



WITNESSES:

*L. G. Hopper.*  
*Geo Williams*

INVENTOR,

*Washington I. Ludlow.*

BY

*Wm A. Srinke*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

WASHINGTON I. LUDLOW, OF CLEVELAND, OHIO.

## DOOR-CATCH.

SPECIFICATION forming part of Letters Patent No. 600,155, dated March 8, 1898.

Application filed March 19, 1897. Serial No. 628,245. (No model.)

*To all whom it may concern:*

Be it known that I, WASHINGTON I. LUDLOW, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Door - Catches, of which the following is a specification that will enable those skilled in the art to which my invention pertains to make and use the same.

My invention relates to catches for doors, drawers, lids, &c., adapted to hold them shut and prevent them from rattling, yet easily opened by the proper application of force. Its object is to produce a catch simple in construction, cheap to manufacture, certain in action, not liable to derangement, and readily adjustable to compensate for shrinkage of the door or its casing such as would tend to separate the engaging members of the catch; and it consists in the novel construction and combination of parts, as hereinafter set forth.

At present I prefer to form the members of my improved door-catch from stamped sheet metal shaped to the desired forms; but obviously they might also be made of cast metal, the size of the catch and other considerations having much to do with the choice between sheet and cast metal.

Figure 1 represents a sheet-metal blank from which I prefer to form the members of my catch. Fig. 2 is a vertical central section therethrough on the line 2 2 of Fig. 1. Fig. 3 represents in elevation the two members of my catch as applied to a door and its casing, respectively. Fig. 4 represents a plan view of the same, the door and casing being shown in section. Fig. 5 is a view similar to Fig. 4, showing a slight modification of the invention. Fig. 6 is a perspective view of the two members of my catch applied to a door and casing, showing in dotted lines the index-finger and thumb of an operator as applied to the catch to open it.

When made of sheet metal, I prefer to start with a blank of the form shown in Figs. 1 and 2. At one end this blank is broadened, as at A, to form what will subsequently be the base of the member of the catch, and from this base extends the narrower portion  $\alpha$ , which will subsequently be bent up to form the ring or spring member of the catch.

In order to stiffen the base and a portion

of the tongue  $\alpha$  for a short distance from the base, I stamp or turn down its outer edge to form a flange  $\alpha'$ . I prefer to attach the members to the door and casing by means of screws passing through their bases. The holes  $\alpha^2$  in the base for these screws I prefer to counter-sink by stamping at the same time and in the same manner as I stamp the flange  $\alpha'$  around the edges of the base. The narrower end or tongue of the blank, beginning at a point very close to the base, is bent upward and back on itself in such manner as to form a cylindrical ring, the end of the tongue being brought around to a point where it abuts against the base, as shown in the several figures. This ring is somewhat springy or elastic in its nature, and the contact of its extreme or free end with the base, while not decreasing the amount of the elastic movement of the ring at its operative point, adds somewhat to its stiffness.

When the two members of the catch are in place on the door and casing, respectively, it will be observed that the adjacent surfaces of their rings are brought into contact with each other, and these surfaces are so formed that preferably the ring on the door will push back and pass slightly in under or behind the extreme projection of the ring on the casing.

For greater security than would be afforded by mere plain-surfaced rings I prefer to form on the adjacent surfaces of the rings ribs or projections  $b$  and  $c$ , shaped, preferably, as shown in Fig. 4 and so located relatively to each other that when the door is closed the lug  $c$  of the member attached to the door will yieldingly pass and lie behind the lug  $b$  on the member attached to the casing, but in firm spring contact therewith, as shown in Fig. 4. This spring contact of the lugs or ribs prevents the door from opening and also holds it securely against rattling. The spring-rings of the two members of the catch may be so shaped that their adjacent surfaces will lie one under the other and interlock without the lugs  $b$  and  $c$ , (shown in Fig. 4;) but I prefer the lugs, as they give a greater degree of security against unlatching. Then, again, while the lugs as shown have been found to be effective I do not mean to confine myself to the exact formation illustrated, as other shapes might be used with probably as good



results. For instance, in Fig. 5 I show a modification in which one of the rings is provided with a rib or lug *c* and the other with an indentation *d* on its opposing face, into which the lug slides and rests while the door is closed.

In the perspective view in Fig. 6 is shown the two members of my catch as applied to the casing C and door D, respectively, and the preferred manner of opening the same by the operator, who inserts his index-finger into the ring of the member on the door and presses his thumb against the ring of the member on the casing in such manner that the contacting surfaces of the two rings are forced apart, so that the door may be drawn open by the index-finger already inserted in the ring thereon.

Referring to the drawings, it will be seen that my catch consists of two parts, each being integral or made from a single piece of metal. These parts have such form and adaptation to each other that when in position and the door closed they naturally hold each other in frictional embrace in such a way that while the door may be closed by a slight push it cannot readily be opened except by the adaptation of force to both members of the catch in the way heretofore pointed out. It will also be noted that each part of the catch is given such form as to provide means for grasping the same in opening and closing the door, thereby answering the purpose of a knob. It will be noticed that the construction of the rings gives a considerable degree of sidewise spring to the juxtaposed parts, causing them to embrace with considerable force, thereby holding the door in a closed position.

The construction of my catch is such that

it is easily and cheaply made and is not liable to the disorder and improper working of most of the styles of spring door-catches now in common use, which, though they may be properly set at the start, frequently become deranged and inoperative owing to the shrinkage of the doors and frames. In my catch if the doors or frames shrink away from each other to such an extent as to draw the members apart the trouble may be remedied by simply bending one or both of the rings forward to such a point that they will again come into contact when the door is closed. This readily overcomes any displacement caused by the shrinkage or warping of the door.

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

1. A door-catch consisting of two ring-like catch members of spring material having base-plates formed integral therewith, said catch members being bent upon themselves to form a catch and finger-hold, substantially as described.

2. A door-catch consisting of two ring-like members of spring material provided with base-plates made integral therewith, said catch members being bent upon themselves to form finger-holds, and having catches formed on their adjacent surfaces, substantially as described.

In testimony whereof I affix my signature, in the presence of two witnesses, at Cleveland, Ohio, December 4, 1896.

WASHINGTON I. LUDLOW.

Witnesses:

JOSEPH KENDRICK,  
WM. A. SKINKLE.