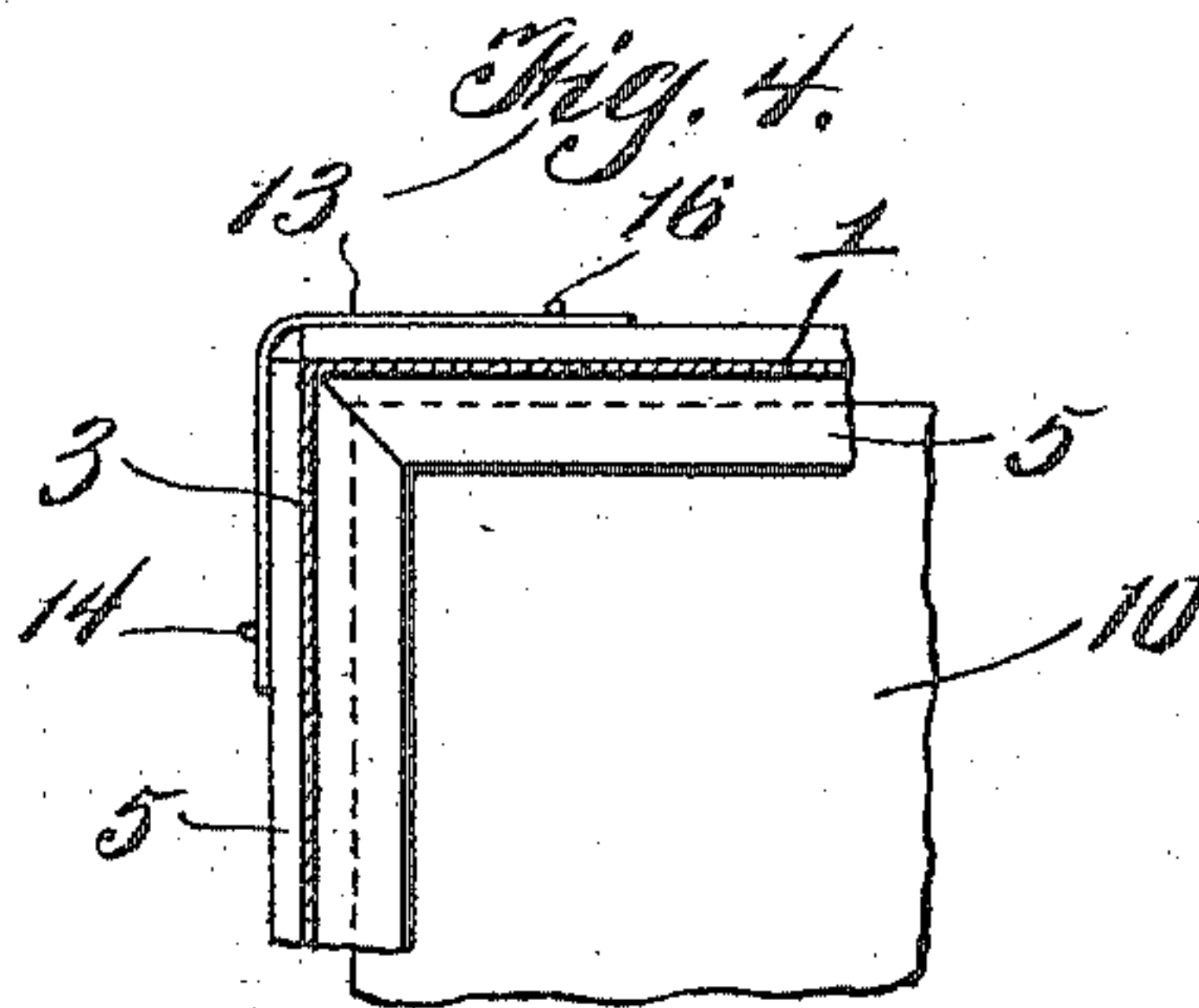
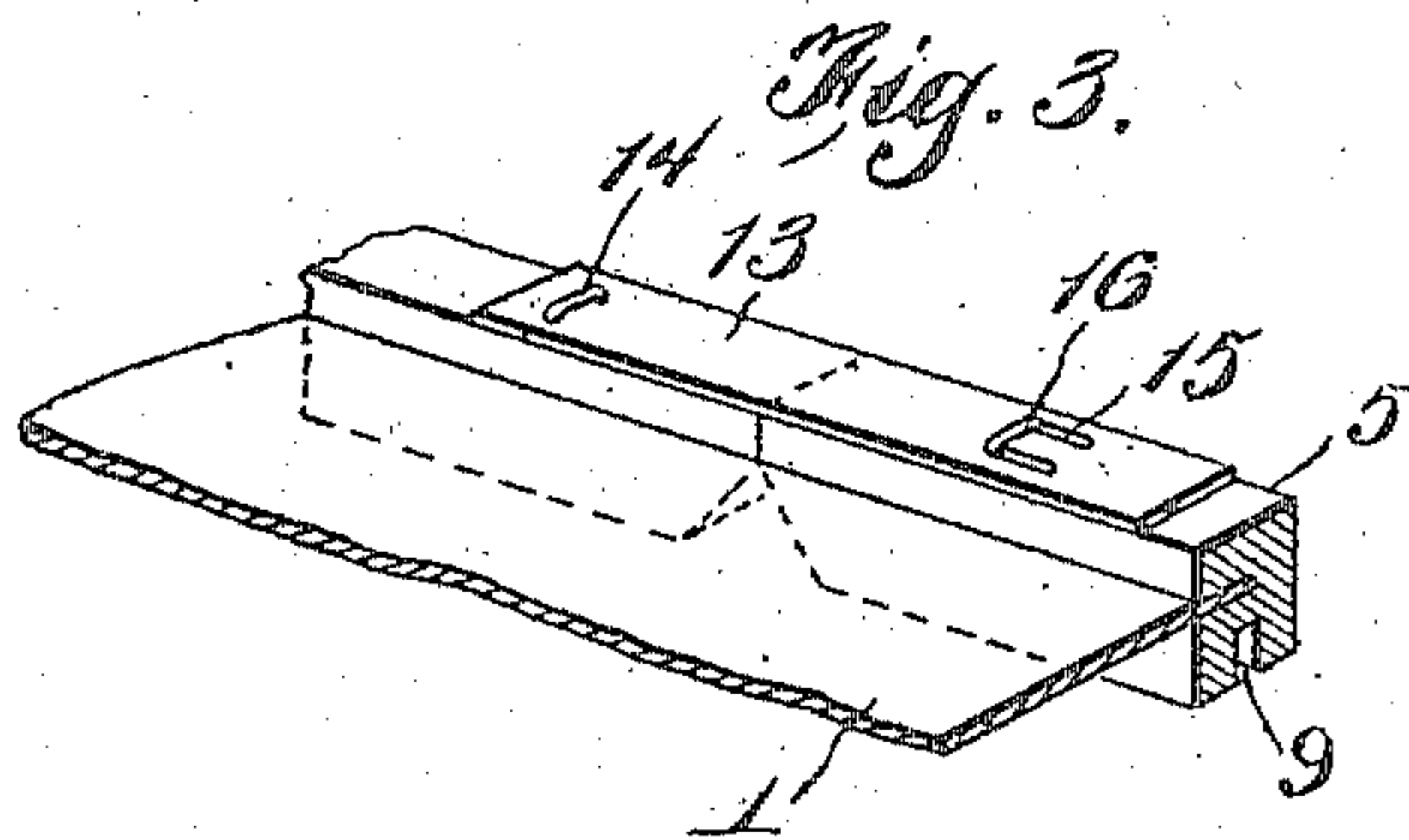
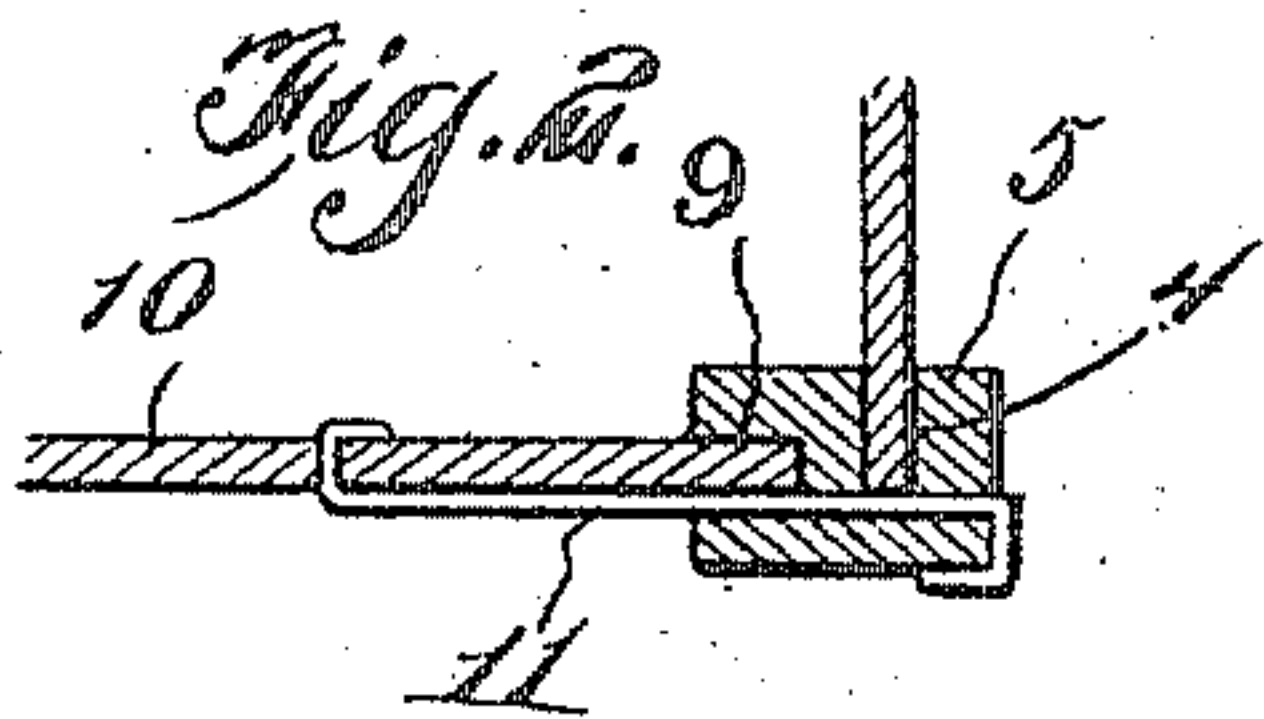
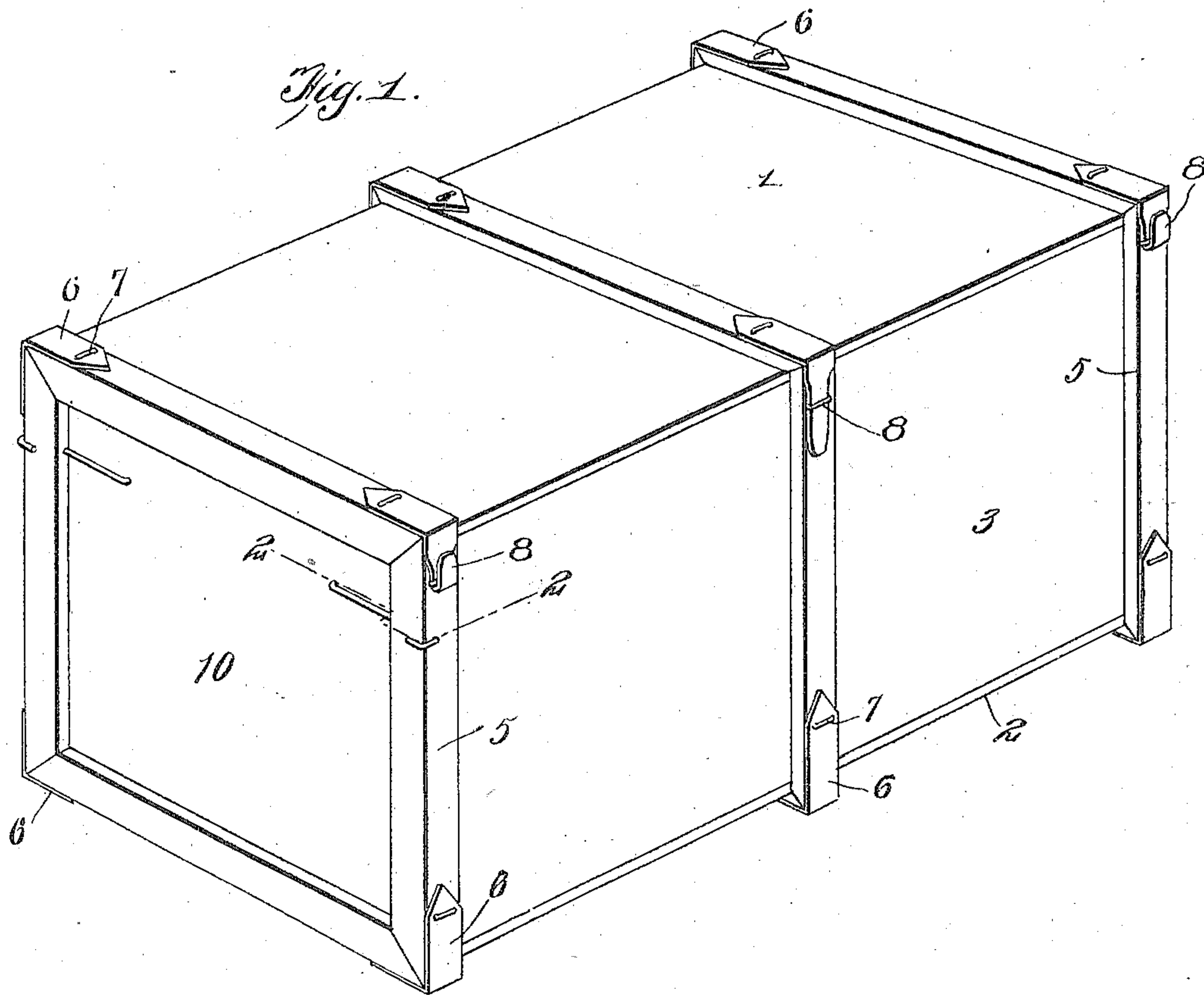


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BOX.
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947,767.

Patented Jan. 25, 1910.



Witnesses

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BOX.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARRISON B. WALTER, a citizen of the United States of America, residing at Danville, in the county of Vermilion and State of Illinois, have invented new and useful Improvements in Boxes, of which the following is a specification.

This invention relates to boxes, and one of the principal objects of the same is to provide a box or shipping case which can be readily knocked down and packed flat and the parts of which can be quickly assembled to make a strong, durable and efficient packing case for various articles or materials.

Another object of the invention is to provide flexible corner stays and hinges for a knock down box which can be quickly applied and which will serve to render the box strong and durable.

Still another object of the invention is to provide a collapsible or knock down box in which the use of nails will be entirely obviated.

With these and other objects in view the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a box or case constructed in accordance with the present invention. Fig. 2 is a detail sectional view upon the line 2—2 of Fig. 1 illustrating the manner of bracing the ends and corner. Fig. 3 is a detail perspective view of one of the flexible hinges employed in the construction of card board boxes, showing a corner of the box laid out flat. Fig. 4 is a detail sectional view of the form illustrated in Fig. 3, showing one of the corner braces and the manner of securing it to the box.

The body of the improved box may be constructed of a single strip of card board or thin wood having its corners scored to provide for the easy bending of the same, or the body may be constructed of separate pieces as illustrated in Fig. 1 of the drawings. The body of the box is substantially rectangular in formation, though other shape may be employed with equal efficiency, and as illustrated in the drawings comprises a top 1, bottom 2 and sides 3. The bottom, sides and top may, as before stated be composed of separate members or may be scored and bent to form the body of the receptacle, and the ends of the receptacle thus formed

are adapted to be received in grooves 4 provided upon end frames 5. These frames 5 are composed of a plurality of members having their edges or ends beveled and connected with each other through the medium of flexible metallic straps 6. The straps 6 have their ends secured to the members comprising the frame through the medium of suitable staples 7. The frames 5 have one of their beveled corners provided with one of the flexible straps 6 secured rigidly thereto through the medium of the staples 7, while the opposite end of the strap is tapered or beveled to provide a tongue 8, and the staple provided upon the adjacent member of the frame is allowed to project a sufficient distance to provide an engaging loop for the tapered tongue of the strap. This tongue 8 is adapted to be bent over the projecting loop, as clearly illustrated in Fig. 1 of the drawings and is thus adapted to provide a means for securely locking the box in closed position.

It is to be understood that the straps 6 are constructed of resilient metal, whereby they may efficiently perform the function of a hinge, so that when the tongues 8 of the strap 6 connecting the free edges of the frames are released from the projecting staples the members comprising the body of the box may be bent rearwardly so as to provide free access to the box or so as to fold the members comprising the body and the end frames of the box into small compass for shipment or to straighten the members of the box outright to present a substantially flat surface.

The end frames 5 have their inner faces adjacent the faces provided with the groove 4 formed with similar grooves 9, and these grooves are adapted for the reception of the end members 10 of the box. By this arrangement it will be noted that the end members 10 may be readily positioned upon the frames 5 by simply inserting their edges within the grooves 9, and that the said end members will be readily retained in position upon the frames when the free ends of the frame are locked.

In order to securely retain the ends 10 in position upon the frames 5 while the box is being filled and the top 1 spread open I provide wire hooks 11. These hooks 11 are adapted to be inserted through suitable perforations or openings provided in the

vertical members of the frame and to have their ends bent so as to engage within openings provided within the end sections 10 of the box and to have their opposite ends bent over the vertical members of the frame so as to securely lock the end section 10 upon the frame 5.

It is to be understood that the hook member 11 is constructed of flexible material whereby the same may be readily disengaged when it is desired to fold or knock down the box.

In order to strengthen the box a central frame 12 is secured upon the sections of the body of the box. This central frame section 12 is constructed substantially similar to the end frames 5 and is locked through the medium of a flexible strap engaging a projecting staple as are the end frame members.

In Fig. 3 and Fig. 4 there is illustrated a slightly modified form of the invention. In these figures the body of the box is constructed of a single member of paste board or thin wood, and the members of the end frames while having their sides recessed to provide for the reception of the body and the ends of the box have their free ends beveled or mitered a distance corresponding substantially with the upper wall formed by the grooves, the remainder of the frame members being cut at a substantially right angle to the plane of the outer surface of the frame members. The abutting members of the frame sections are provided with a strap 13, one end of which being secured to one member of the frame through the medium of a staple 14, while the other end is provided with spaced slits or cut away portions 15 extending longitudinally of the strap 13 and projecting above the opposite member of the frame. These spaced slits or cut away portions 15 are adapted for the reception of a staple 16 secured to this section of the frame. By this arrangement

it will be noted that when the box is spread flat the staple 16 will engage the walls of the strap provided by one of the ends of the cut away portions of slits 15, while when the box is bent to form a receptacle the staple will engage the opposite walls formed by the slits, thus allowing the strap 13 to slide upon the staple 16 when in its different positions.

Having thus fully described the invention what is claimed as new is:

1. The combination with a foldable box comprising a body and ends, of end frames having grooves upon two adjacent faces, the grooves on the faces of one side of the frames adapted to receive the body of the box and the other grooves to receive the ends of the box, and hooks passing through the end frames, one end of the hooks being bent down upon the end frames and the other ends passing through the ends of the box and bent thereupon for locking and holding the ends in position.

2. The combination with a foldable box comprising a body and ends, of end frames having grooves upon two adjacent faces, one of said grooves adapted to receive the body of the box and the other the ends, the ends of the end frames being mitered to permit of the folding of the box, flexible straps for the corners of the frames, and hooks passing through the end frames, one end of the hooks being bent upon the end frames and the other ends of the hooks passing through the ends of the box and bent thereupon for locking and holding the ends of the box in position.

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

HARRISON B. WALTER.

Witnesses:

CLARIBEL BULLOCK,
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