

P. O. HOLMQUIST.
CURTAIN STRETCHER.
APPLICATION FILED NOV. 20, 1909.

991,781.

Patented May 9, 1911.

Fig. 1

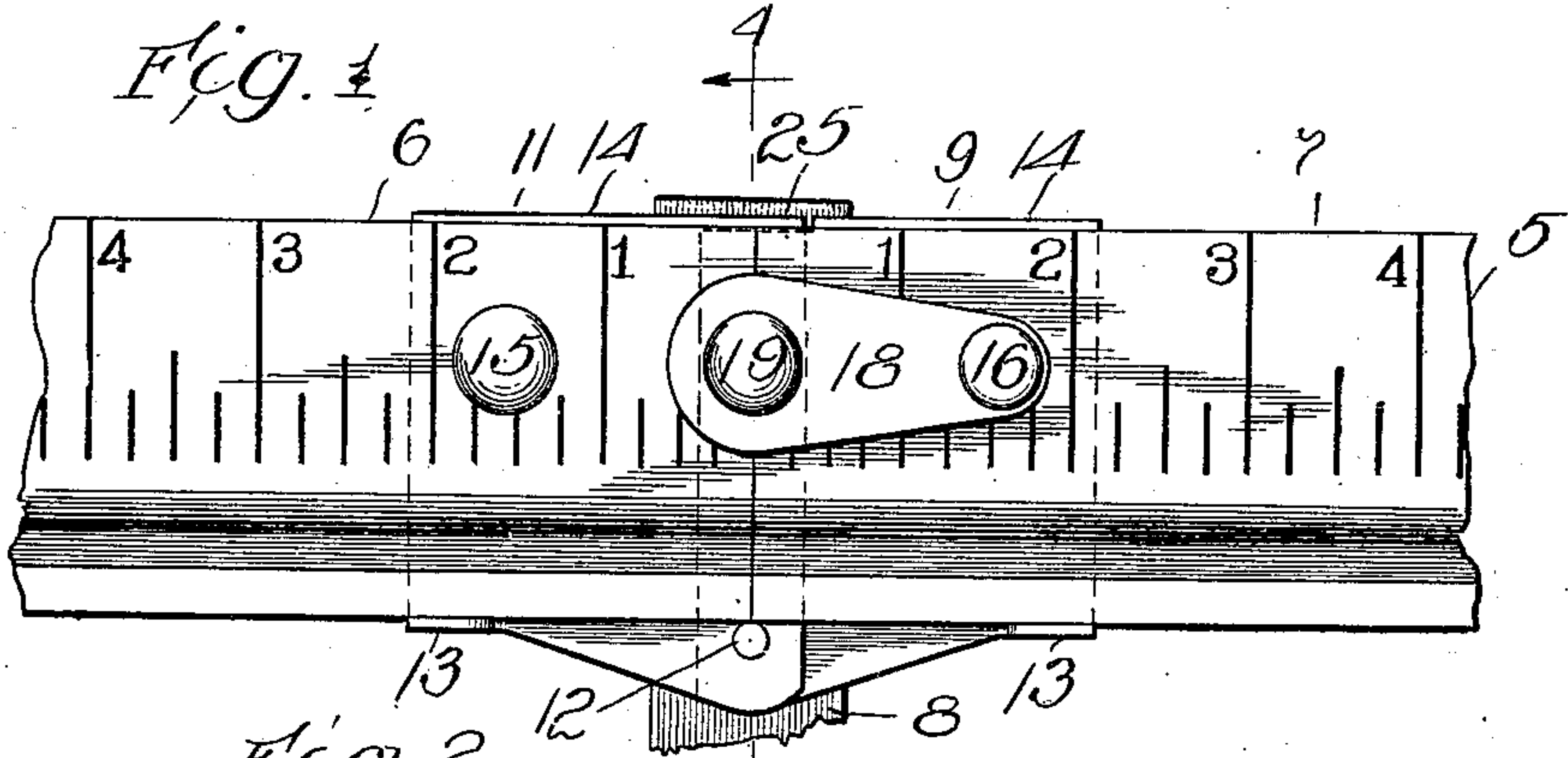


Fig. 2

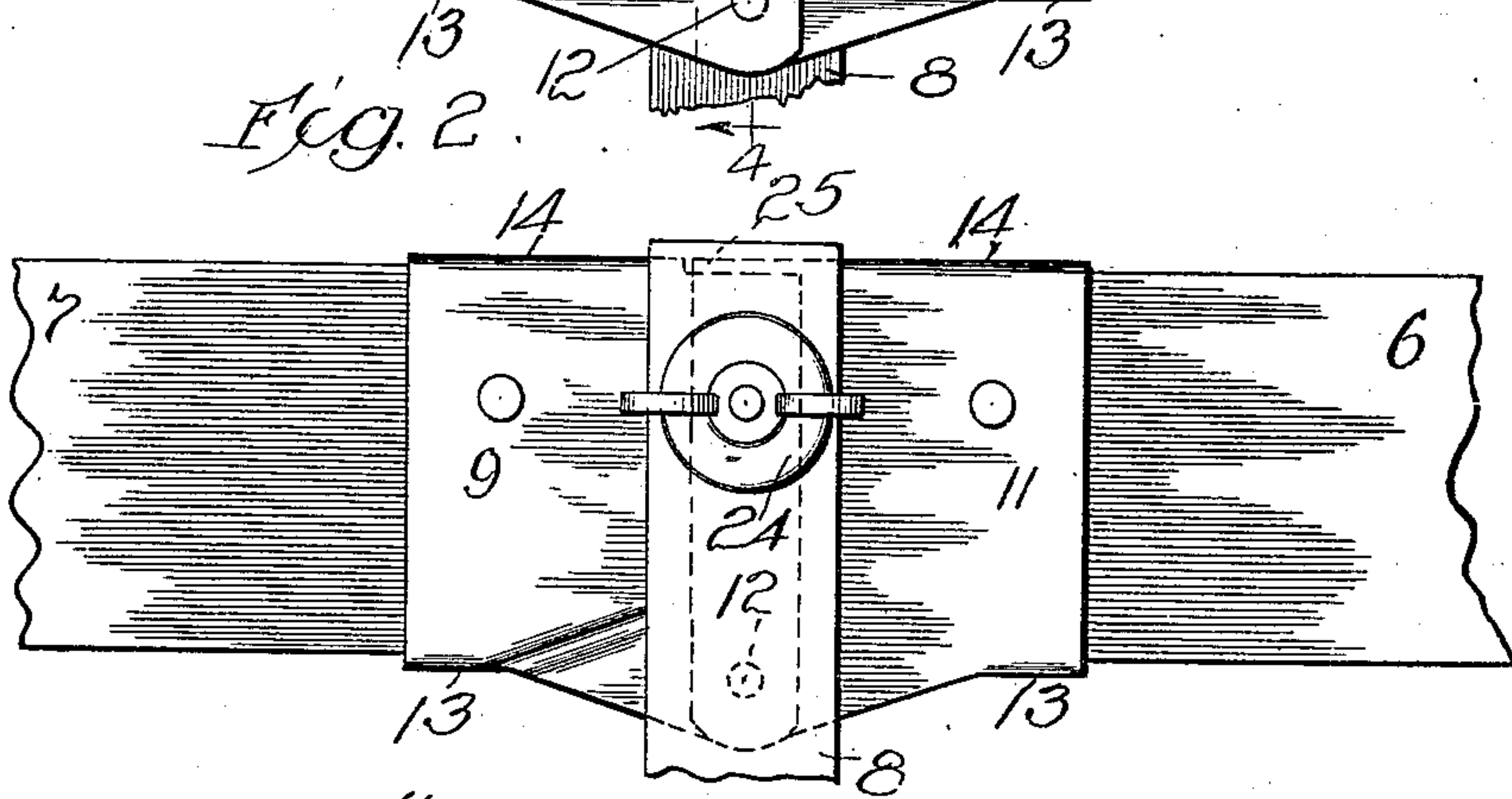


Fig. 3

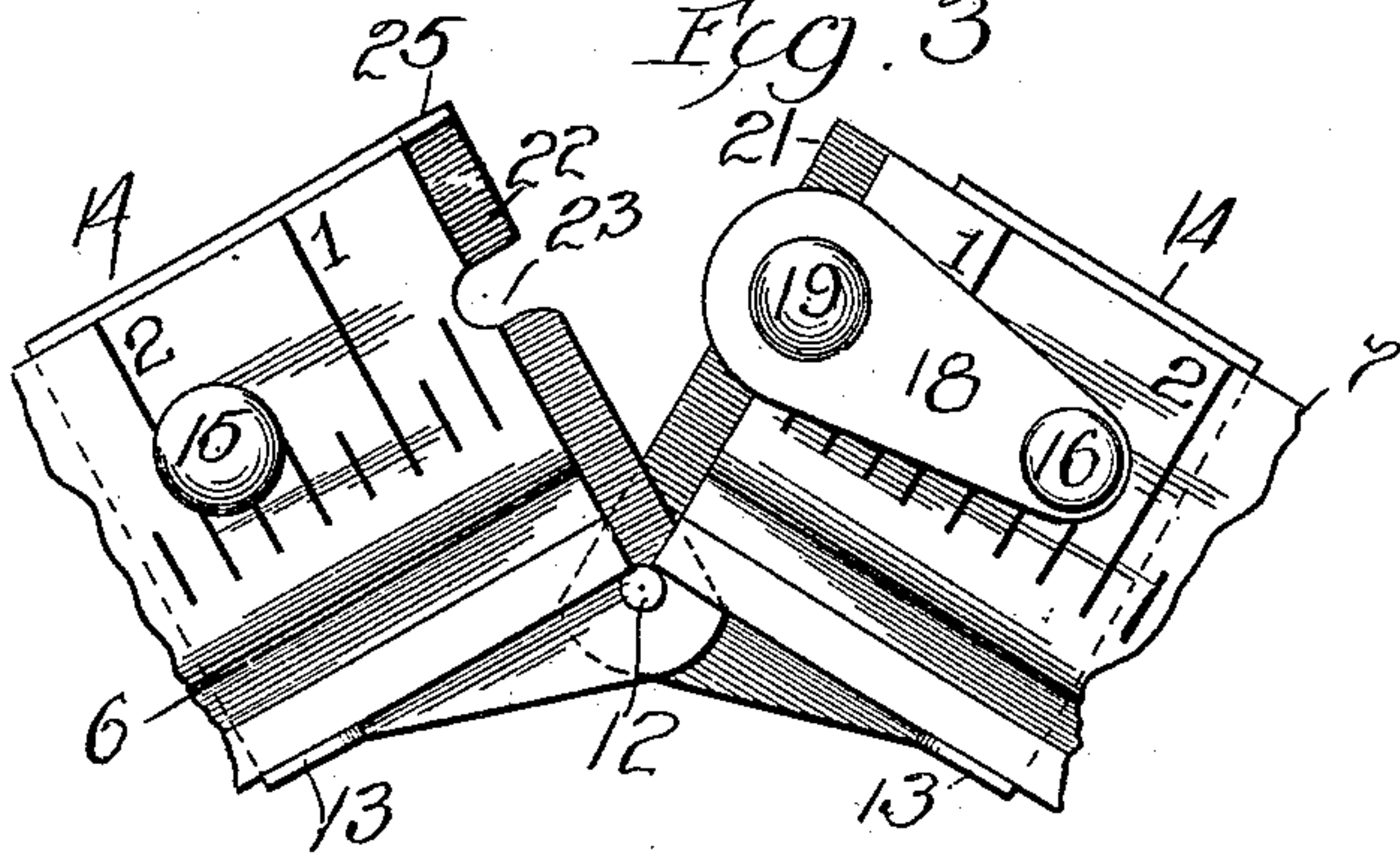


Fig. 4

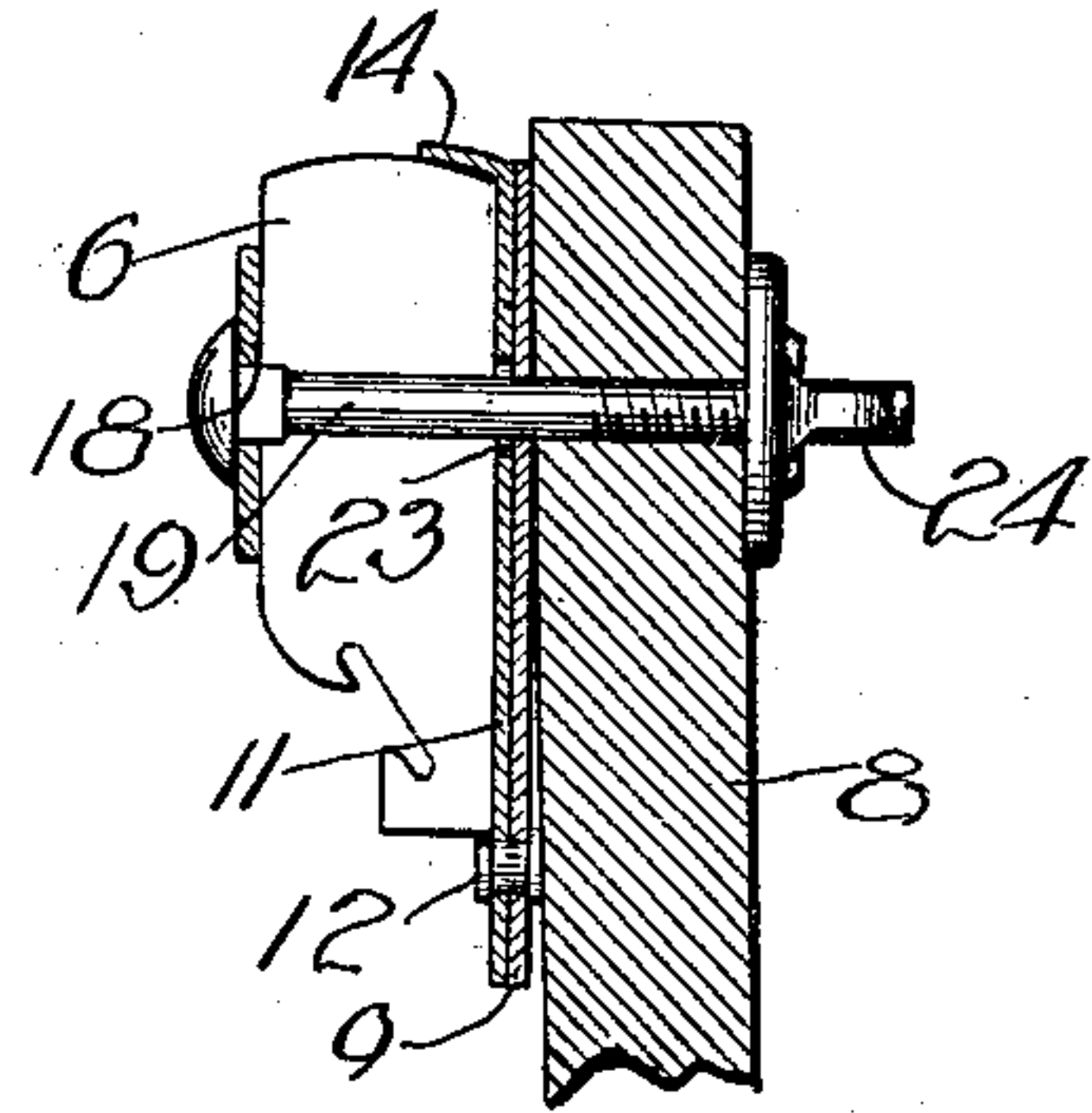
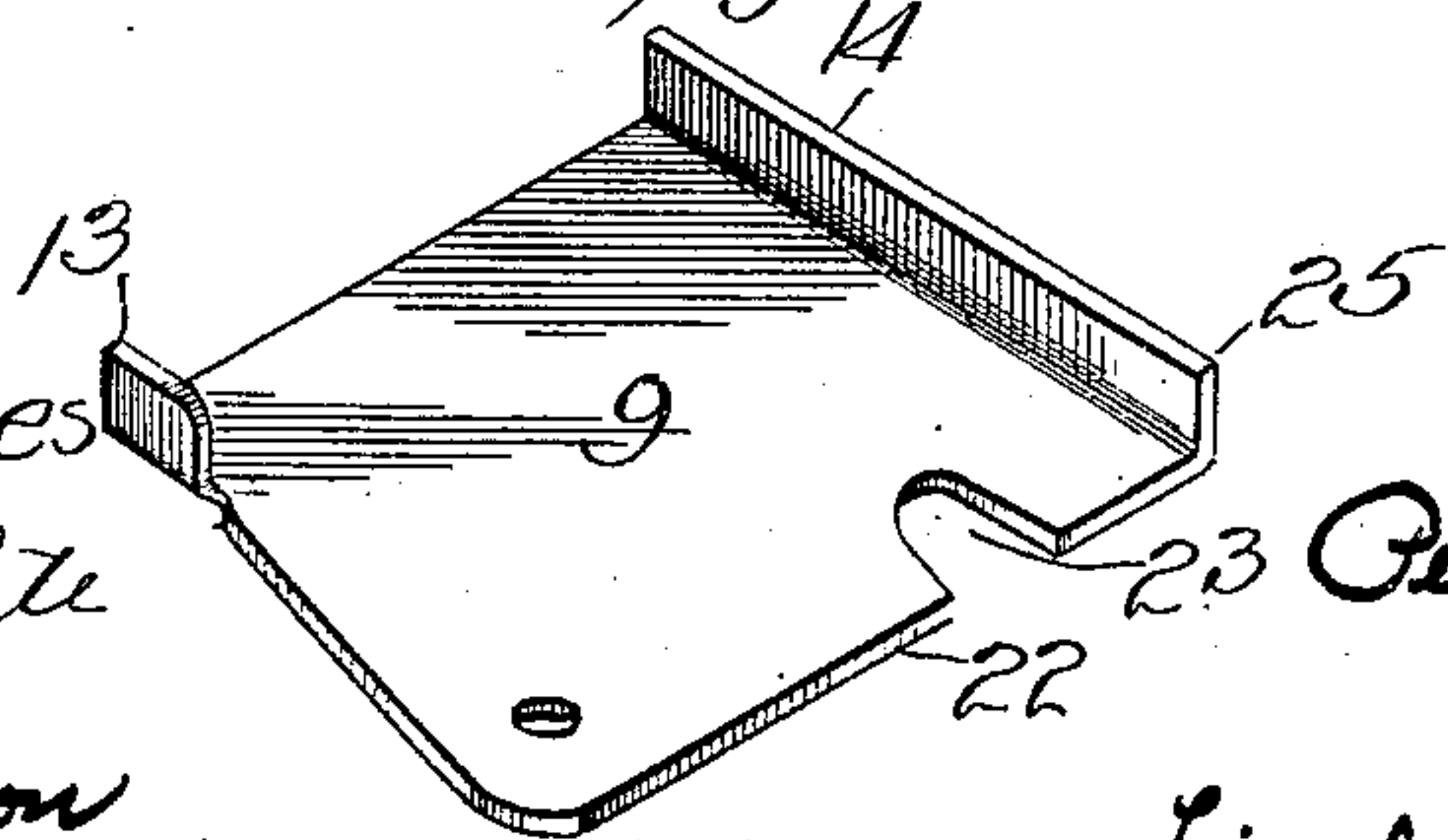


Fig. 5



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UNITED STATES PATENT OFFICE.

PETER O. HOLMQUIST, OF CHICAGO, ILLINOIS.

CURTAIN-STRETCHER.

991,781.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PETER O. HOLMQUIST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Curtain-Stretchers, of which the following is a specification.

This invention relates to improvements in stretchers, particularly those adapted for use in stretching and drying curtains, but which may be used for stretching and drying other fabrics or materials, and particularly to that type of a stretcher which is known as a folding stretcher. In this type of stretcher the side pieces are composed of a plurality of sections which are hinged together so that they may be folded for convenient disposition when the stretcher is not in use.

The objects of the invention are: to provide a hinge connection which can be easily and cheaply made; to provide a structure which will protect the side sections at and near their abutting ends; to obviate the splitting thereof which is very apt to occur in the ordinary frame when it is subjected to severe strains or rough usage; to provide a hinge which can be securely locked in closed position, and to provide a locking means therefor, which clamps the sections and holds them securely in the desired position.

In the accompanying drawings which disclose a preferred embodiment of my invention, Figure 1 is a plan view thereof. Fig. 2, a view looking at the bottom of the device. Fig. 3 is a view corresponding to Fig. 1, but showing the hinge partially open. Fig. 4 is a section of the line 4—4 of Fig. 1; and Fig. 5 is a perspective view of one of the hinge plates.

In the drawings, 5 represents one of the side members of a stretching frame which comprises the individual sections 6 and 7, connected together by a hinge joint. A cross-bar or strengthening strip 8, normally extends across the center of the frame for the purpose of strengthening the same, and adding rigidity thereto.

The hinge proper, connecting the sections, comprises the hinge plates 9 and 11, pivotally fastened together at 12 so as to provide a hinge joint. Prior to my invention, the hinge plates in devices of this character, were ordinarily screwed to the side sections, and

after being in use for some time the screws would work loose thereby weakening the side members and eventually rendering the frame useless. Attempts to rivet the hinge plates to the side sections had also been made but it was found that a hole made near the end of the sections caused them to split easily, thereby rendering the frame unserviceable. I have overcome these defects by providing each of my hinge plates with the upwardly extending portions 13 on the inside of the frame and the longer upturned portions 14 on the outside of the frame. These upturned portions are adapted to engage and tightly clamp the sides of the sections, whereby the sections are securely held and splitting thereof is prevented. By obviating the danger of splitting I am enabled to rivet the plates to the sections thereby providing a much more substantial fastening than the ordinary wood screws afforded. The upturned portions are preferably formed by simply bending up the edges of the hinged parts which have been stamped out in the proper form, although other ways of making the lugs within the scope of my invention, will readily suggest themselves to those skilled in the art.

The hinge plate 11 is secured to the section 7 by a rivet 16, which in conjunction with the lugs 13 and 14, securely fastens the said hinge plate and section together. This rivet in addition to holding the hinge plate, also secures to the upper side of the section 7, an oblong plate 18, which projects out beyond the end of the section and is adapted when the hinge is closed, to extend over the edge of the contiguous section 6. The plate 18 is provided with a hole near its outer edge which is preferably centered about on the line on which the two side sections meet, and is adapted to receive a bolt 19 which extends downwardly through a hole in the projecting portion 21 of the hinge plate 11. This projecting portion is preferably bent downwardly so as to overlap, in the closed position of the hinge, the companion portion 22 of the plate 9, which projects beyond the end of the section 6.

The hinge plate 9 is secured to the section 6 by a rivet 15 and is clamped between lugs 13 and 14 similarly to the section 7 and is provided at its outer projecting edge with a slot 23 so positioned as to aline with the hole in the projecting portion 21, and to re-

ceive the bolt 19 when the hinge parts are closed. In order that the side sections may fit closely, it is desirable to make a groove in the ends thereof for the reception of the bolt 19 which extends downwardly between them. It will be understood that the relative position of the bolt 19 along the side piece 5, may be varied; for instance, it may be inserted through the section 7, or the portion 21 and the plate 8 may be extended so that the bolt will lie wholly within the section 6. I have found, however, that the best results are obtained by locating it in the position shown.

15 The strengthening bar 8 is also provided with a hole for the reception of the bolt 19, which has threaded upon its lower end a thumb nut 24. The upturned portion 14 of the plate 11 does not extend outwardly to the end of the section 7, as will be evident from Fig. 3, but the portion 14 of the hinge plate 9, extends to the outer edge of the portion 22, so that when the hinge is closed the outer end 25 of the upturned portion 14 on the plate 9, overlaps the end of the section 7, as best shown in Fig. 1. By this provision the outer corners of both sections are protected and held in alinement when the hinge is closed and the frame is in "set up" position. By turning up the thumb nut 24, the plate 18 and the hinge plates 9 and 11 are drawn together, thereby firmly clamping the sections therebetween and securely locking them to form a substantial and rigid connection, in which the liability of sagging at the joint or of splitting at the ends of the side sections, is reduced to a minimum, and

the hinge plates are securely riveted to the side members.

Details which have not been specified, may be of any approved description and modification such as will be required in adopting my invention for any preferable use; therefore, I do not wish to be limited to the exact construction disclosed, but

What I do claim is:

In a curtain stretcher, the combination of a plurality of side sections, a pair of hinge plates pivotally connected together and secured to the bottoms of the abutting ends of said sections, each of said plates projecting beyond the end of the section to which it is secured to overlap the other section and being provided with upturned flanges closely fitting the sides of said section, the end portion of one of said plates being bent to permit the entrance of the end of the other plate between said bent end and the section to which it is secured, a top plate rigidly secured upon the top face of one of said sections and projecting beyond the end thereof so as to overlie the other of said sections when the sections are in closed position, and a bolt positioned between the abutting ends of said sections and passing through said top plate and the overlapped ends of said hinge plates when the sections are closed, whereby to draw said top and hinge plates together to clamp the sections between them and lock the hinge in closed position.

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Witnesses:

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