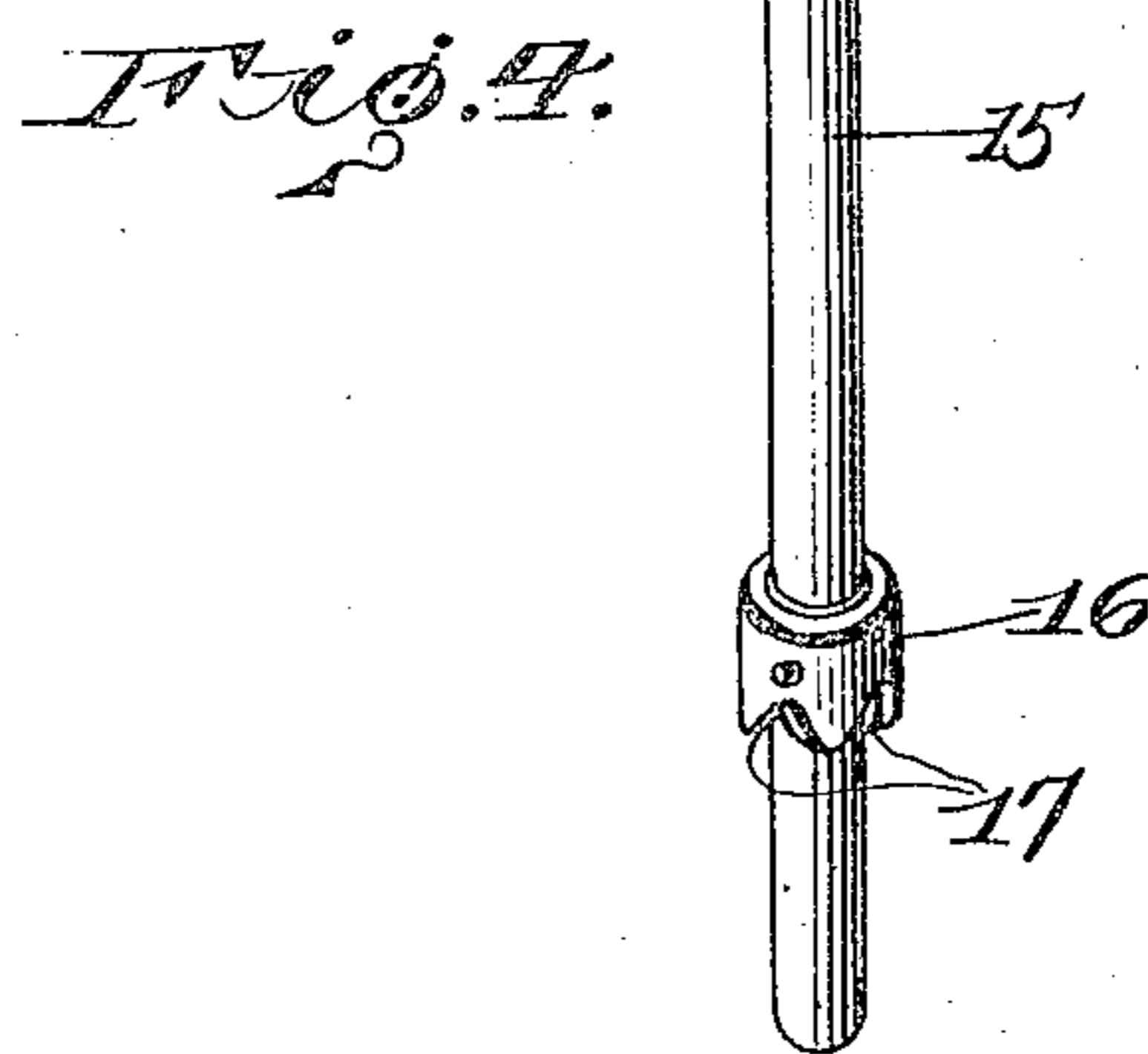
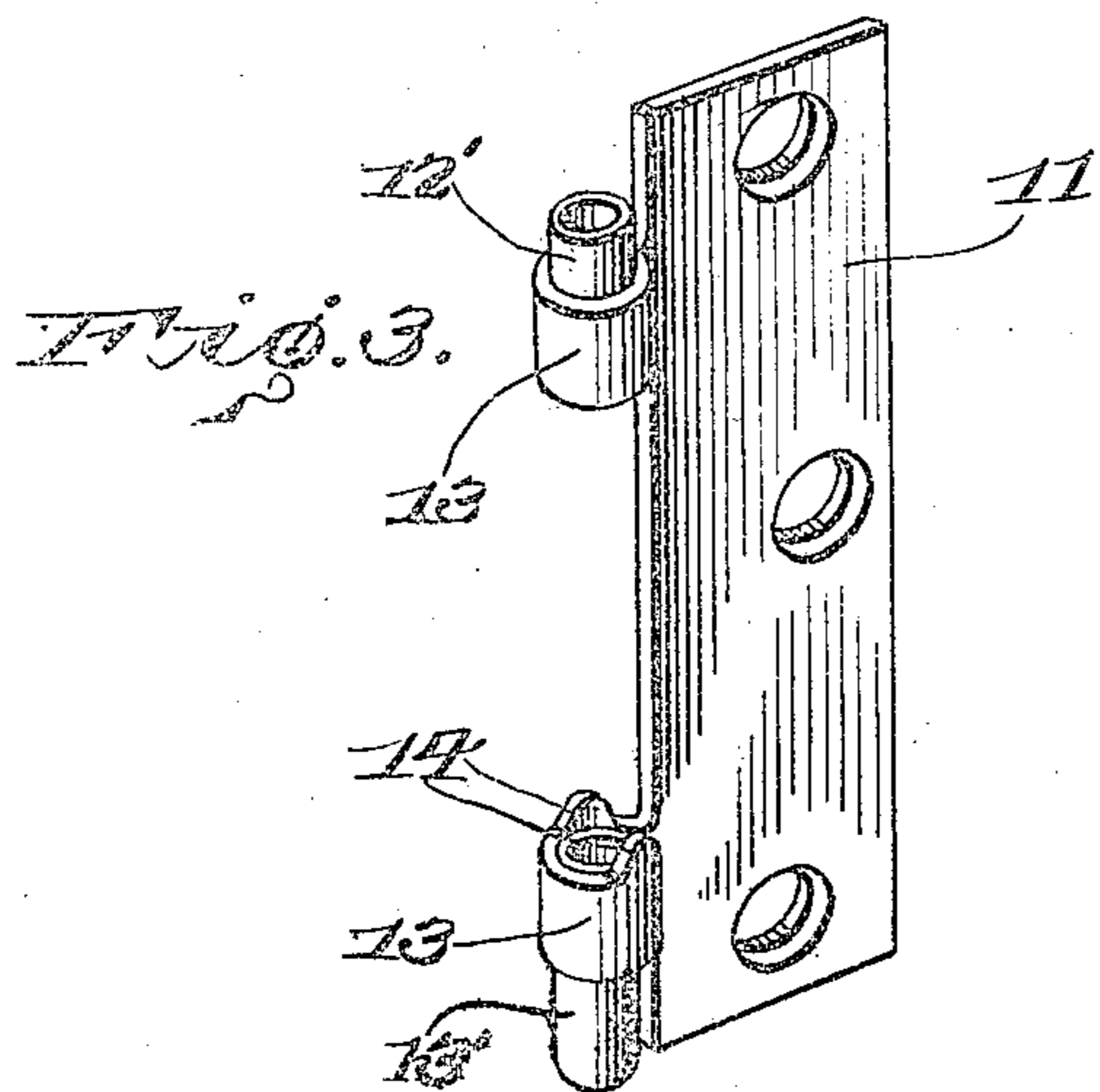
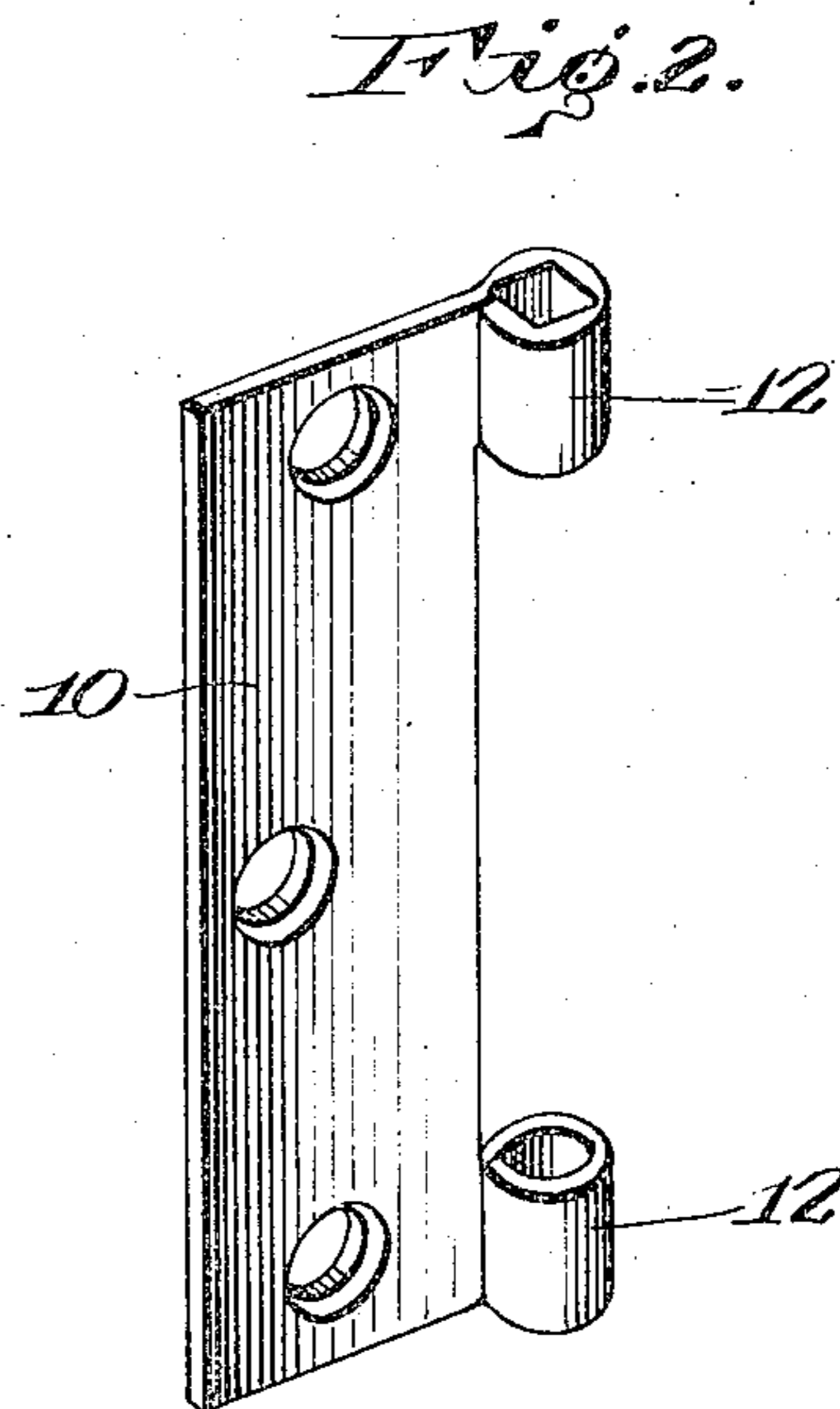
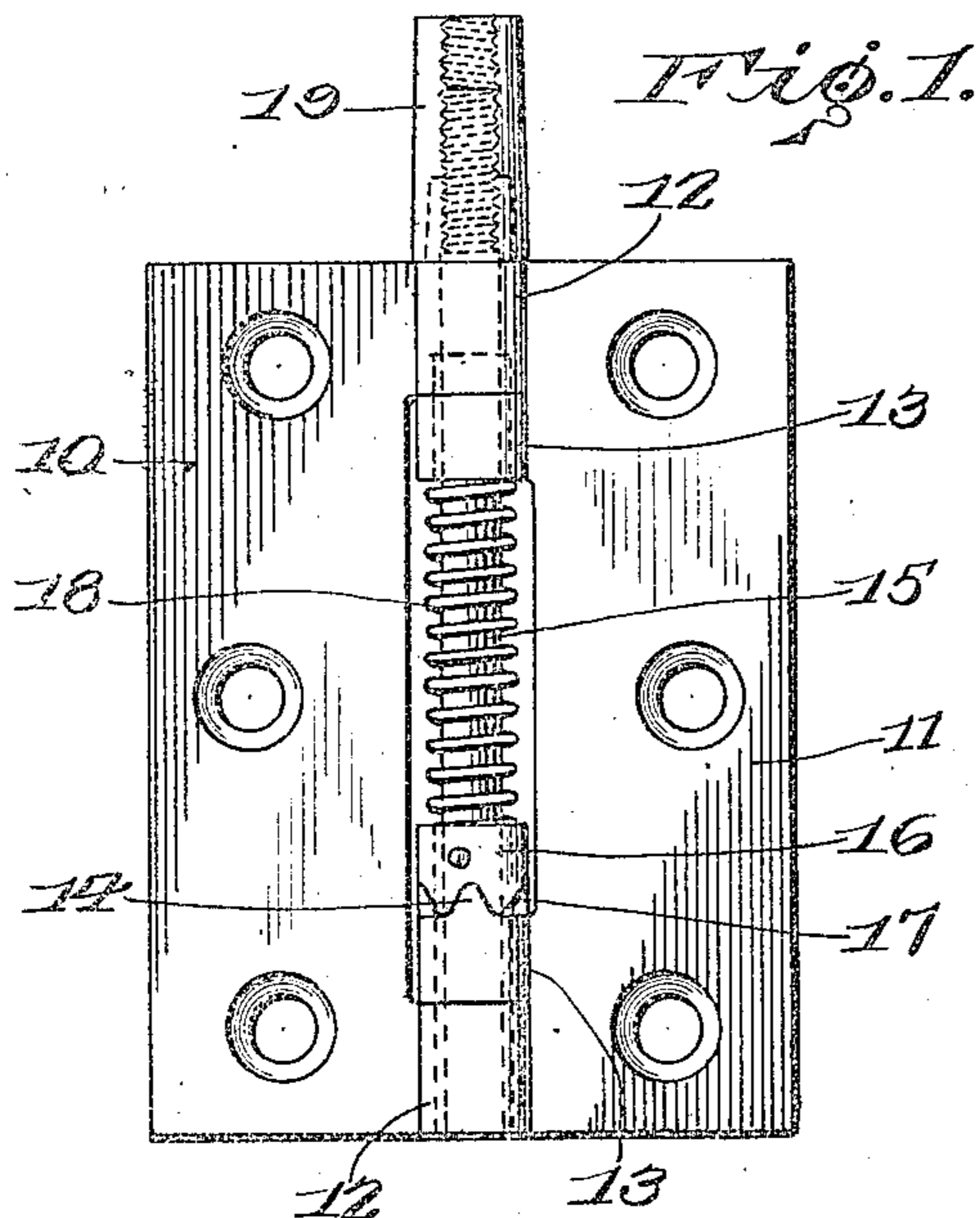


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1,440,713.

M. W. AUSBOURNE.  
SELF LOCKING HINGE.  
FILED MAR. 14, 1922.



Inventor  
Merritt W. Ausbourne

By *Grace C. [Signature]*  
Attorney

# UNITED STATES PATENT OFFICE

MERRITT W. AUSBOURNE, OF WISCONSIN RAPIDS, WISCONSIN

## SELF-LOCKING HINGE.

Application filed March 14, 1922. Serial No. 542,672.

*To all whom it may concern:*

Be it known that I, MERRITT W. AUSBOURNE, a citizen of United States, residing at Wisconsin Rapids, in the county of Wood, State of Wisconsin, have invented certain new and useful Improvements in Self-Locking 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 new and useful improvements in door hinges.

One object of the invention is to provide a hinge which is self locking to hold the door closed or opened, and at intermediate points.

Another object of the invention is to provide a hinge of this character wherein the locking means can be thrown out of operation when it is not desired to use same.

A further object is to provide a hinge of this character in which the pintle forms a part of the locking means and has means for adjusting the locking means into and out of operative position, and is constructed in such manner that it will not rotate when the door is being opened or closed.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing,

Figure 1 is an elevation of a hinge made in accordance with the invention.

Figure 2 is a perspective view of one leaf of the hinge.

Figure 3 is a perspective view of the other leaf of the hinge.

Figure 4 is a perspective view of the pintle removed from the hinge.

Referring particularly to the accompanying drawing 10 and 11 represents the leaves of the hinge, the former having the pintle receiving ears 12 which align with the pintle receiving ears 13 of the other leaf. The upper face of the lower ear of the leaf 11 is formed with a pair of upwardly extending and diametrically opposite triangular lugs 14. The bores for all of the ears are cylindrical with the exception of the upper ear of the leaf 10, which is square in cross section.

Disposed longitudinally through the aligned ears is the pintle 15, the lower portion of which has secured thereon a collar

16, provided with a plurality of notches 17 in its lower face for the reception of the lugs of the lower pintle of the leaf 11. Encircling the pintle between the collar and the upper ear of the leaf 11, is a coil spring 18, the same serving to force the collar into engagement with the power pintle 13. The upper portion of the pintle is square in cross section and fits snugly within the bore of the upper pintle 12, with the result that the pintle is held against rotation when the leaf 11 is swung thereon.

Outwardly of the squared portion, the pintle is threaded and receives thereon an internally threaded sleeve or nut 19. Upon rotation of this sleeve, in one direction, the pintle will be moved longitudinally through the ears to move the collar 16 upwardly out of engagement with the ear 13, whereby the leaves may be readily moved in the manner of an ordinary hinge. Upon rotation of the sleeve in the opposite direction the collar will be permitted to move, under the influence of the spring 18, against said ear, with the result that the lugs of the ear will engage in notches of the collar.

As the door is swung toward open position the lugs of the ear 13 will ride against the inclined faces of the notches of the collar and force the collar and pintle upwardly against the tension of the spring, and when the lugs have reached the next notches the spring will force the collar down to receive the lugs in its notches. The door will thus be held in half open position. Further movement in the same direction will cause the lugs of the ear 13 to engage the next notches of the collar and hold the door in open position. The same thing will happen when the door is in closed position. Each time the lugs ride on the portions between the notches of the collar and lift the collar and pintle, the squared portion of the pintle slides longitudinally in the square bore of the upper ear of the leaf 10. Thus the pintle is permitted to move longitudinally through the ears as the leaves are moved pivotally thereon, without any rotary movement of the pintle.

It will be noted that this squared portion of the pintle is of such length as to remain within the upper ear of the leaf 10 at all times, whether the collar is adjusted into or out of engagement with the ear 13.

In the lower ear 13 of the leaf 11 there is secured a sleeve 13', the same projecting

below the lower end of the ear and into the lower ear 12, of the leaf 10. Disposed in the upper ear 13 is a shorter sleeve 12' which extends above the ear and into the lower portion of the upper ear 12. By this construction the pintle 15 remains stationary while the ears together with the sleeves rotate on the pintle.

What is claimed is—

- 10 1. A hinge comprising a pair of leaves having aligning ears, a spring pressed pintle disposed through the aligning ears and held against rotation by one of said ears, means on the pintle cooperating with means on one of the ears of the other leaf to hold the leaves in different positions, and means on the pintle for adjusting the first-named means and for releasing the pintle from the holding ear.
- 20 2. A hinge comprising a pair of leaves having aligning ears, one of the ears of one leaf having a bore angular in cross section, one of the ears of the other leaf having lugs, a pintle disposed through the aligning ears and having an angular portion fitted into the angular bore of said ear, a notched collar fixed on the pintle for the reception of the lugs of the said ear, a nut on one end of the pintle for moving the pintle

longitudinally through the ears to disengage the collar from the lug carrying ear, and a spring on the pintle bearing against the collar and one of the ears of the hinge to urge the collar into engagement with the lug carrying ear.

3. A hinge comprising a pair of leaves having aligning ears, one of the ears of one of the leaves having an angular bore, a pintle disposed through the ears of the leaves and having an angular portion engaged in the angular bore, interengaging means on the pintle and one of the ears of the other leaf for holding the said other leaf at different pivotal angles with respect to the first leaf, resilient means for simultaneously holding the interengaging means in engaged position and the angular portion of the pintle in the angular bore, and means on the pintle for adjusting the pintle longitudinally through the ears and for releasing the angular portion from the angular bore.

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

MERRITT W. AUSBOURNE.

Witnesses:

LOUIS JOOSTEN,  
ARTHUR PILTZ.