

No. 697,938.

Patented Apr. 15, 1902.

C. B. FOOTE, JR.
LOCKING DEVICE.

(Application filed Oct. 2, 1901.)

(No Model.)

Fig. 1.

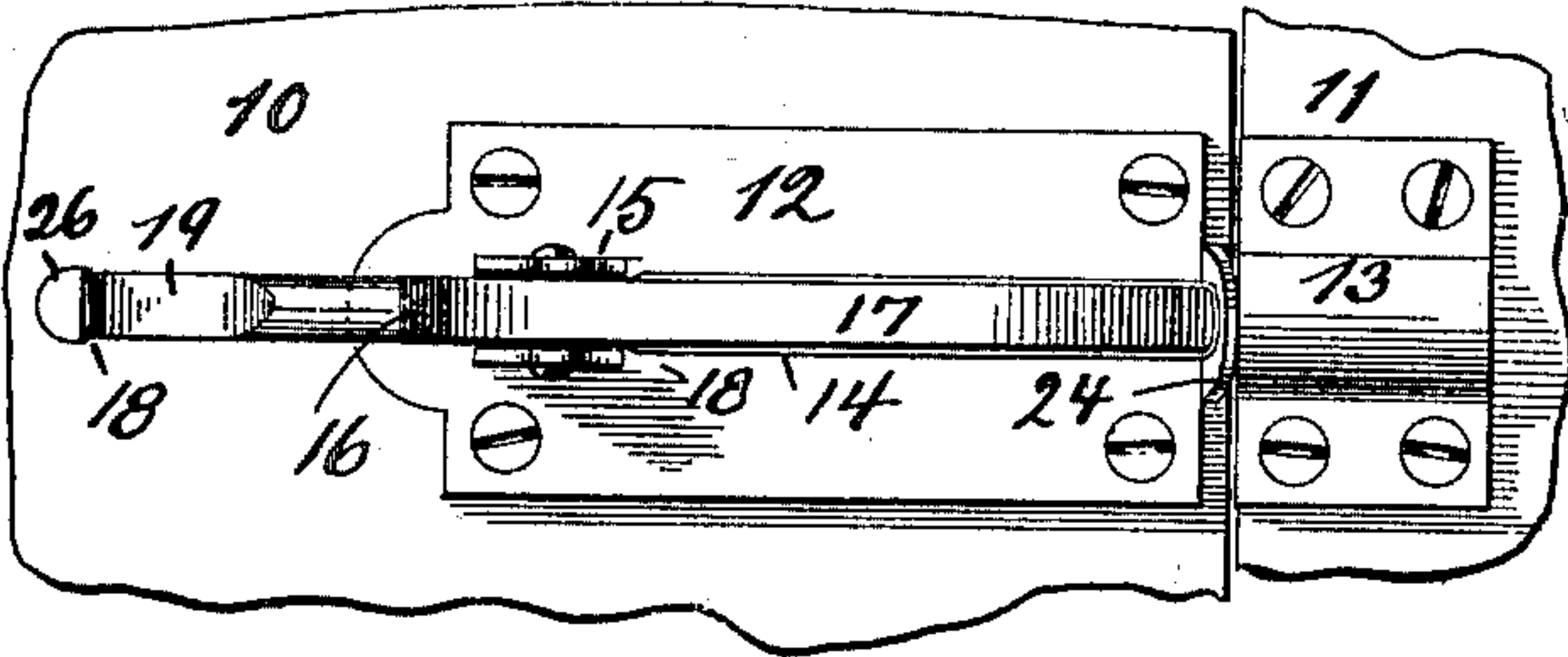


Fig. 2.

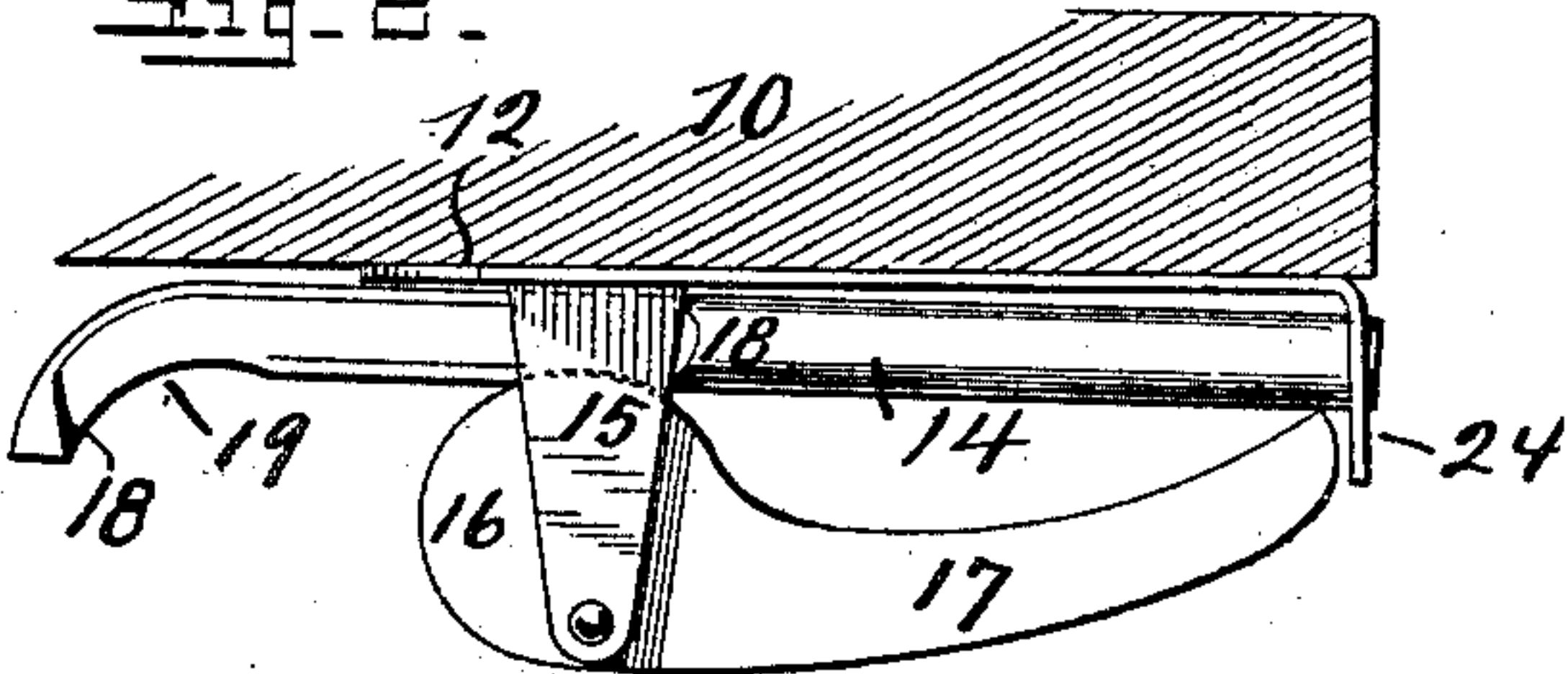


Fig. 3.

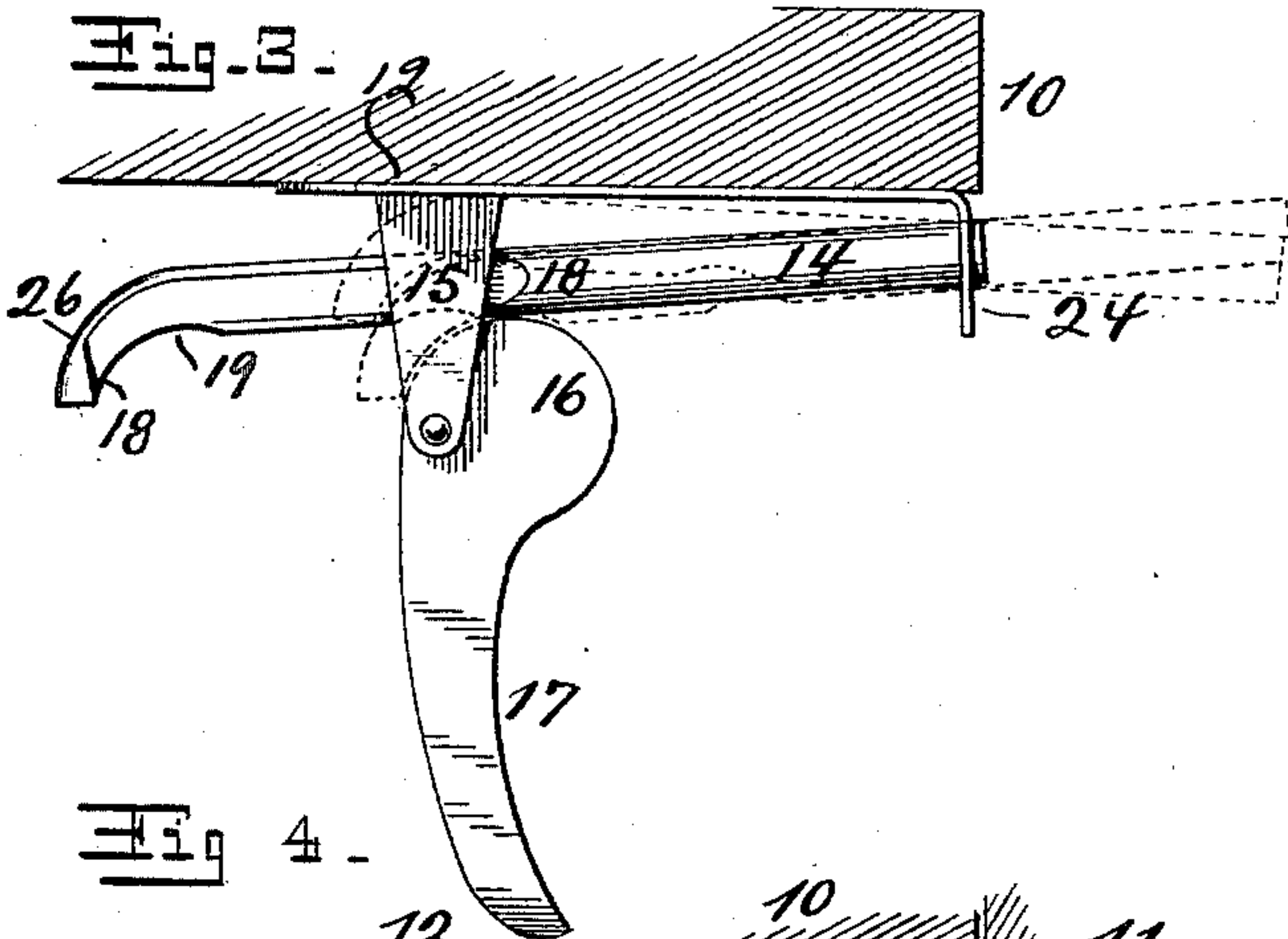


Fig. 4.

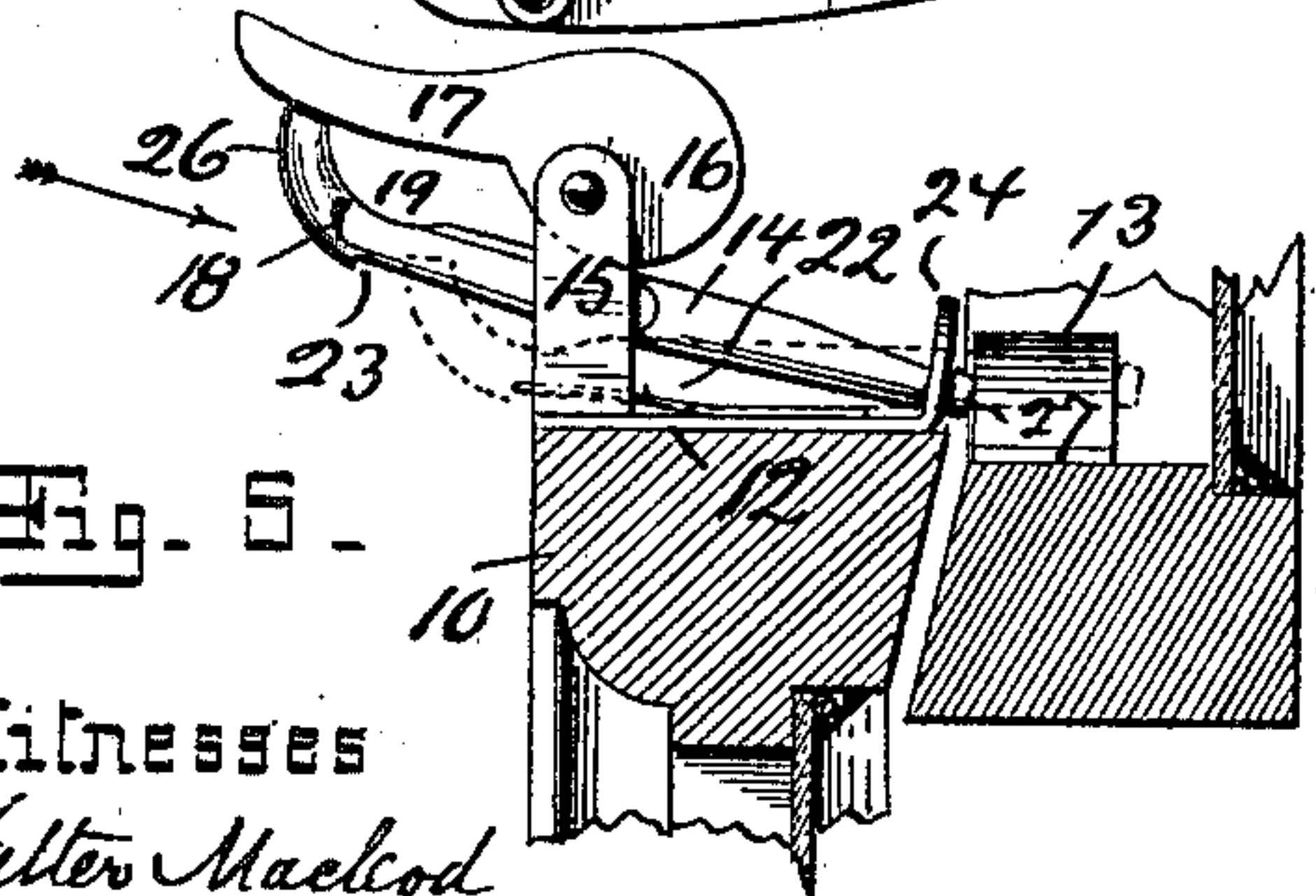
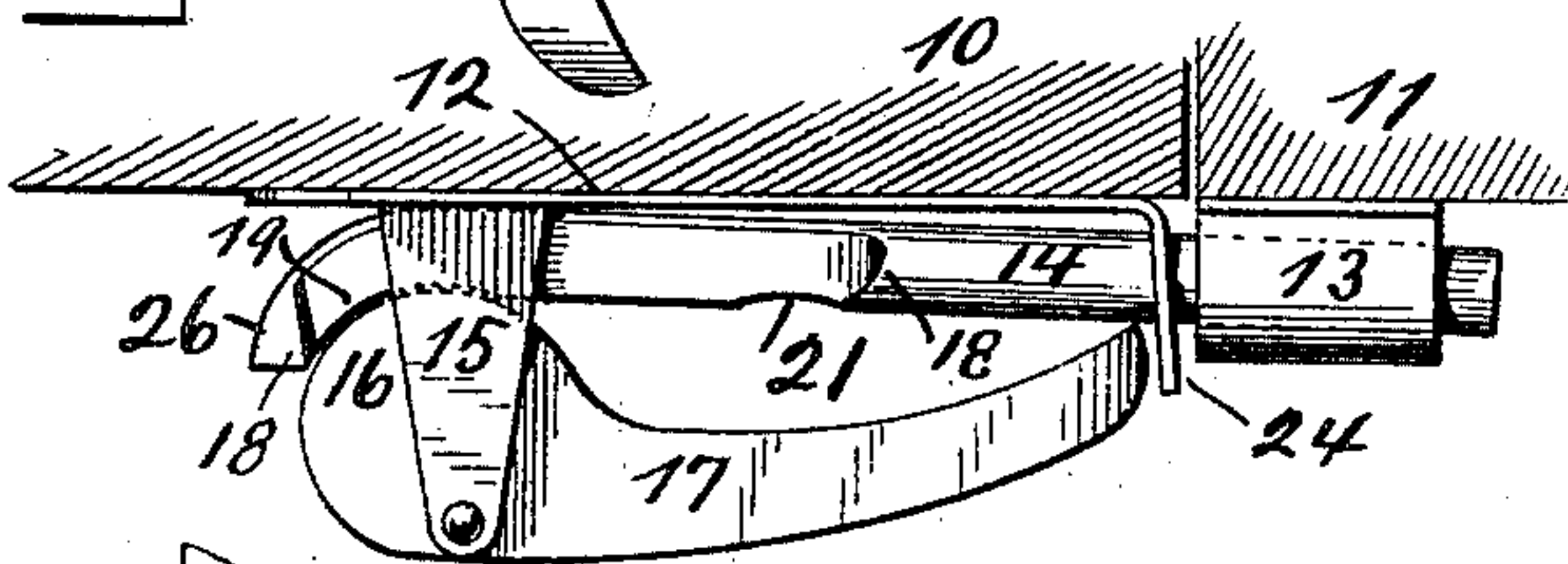
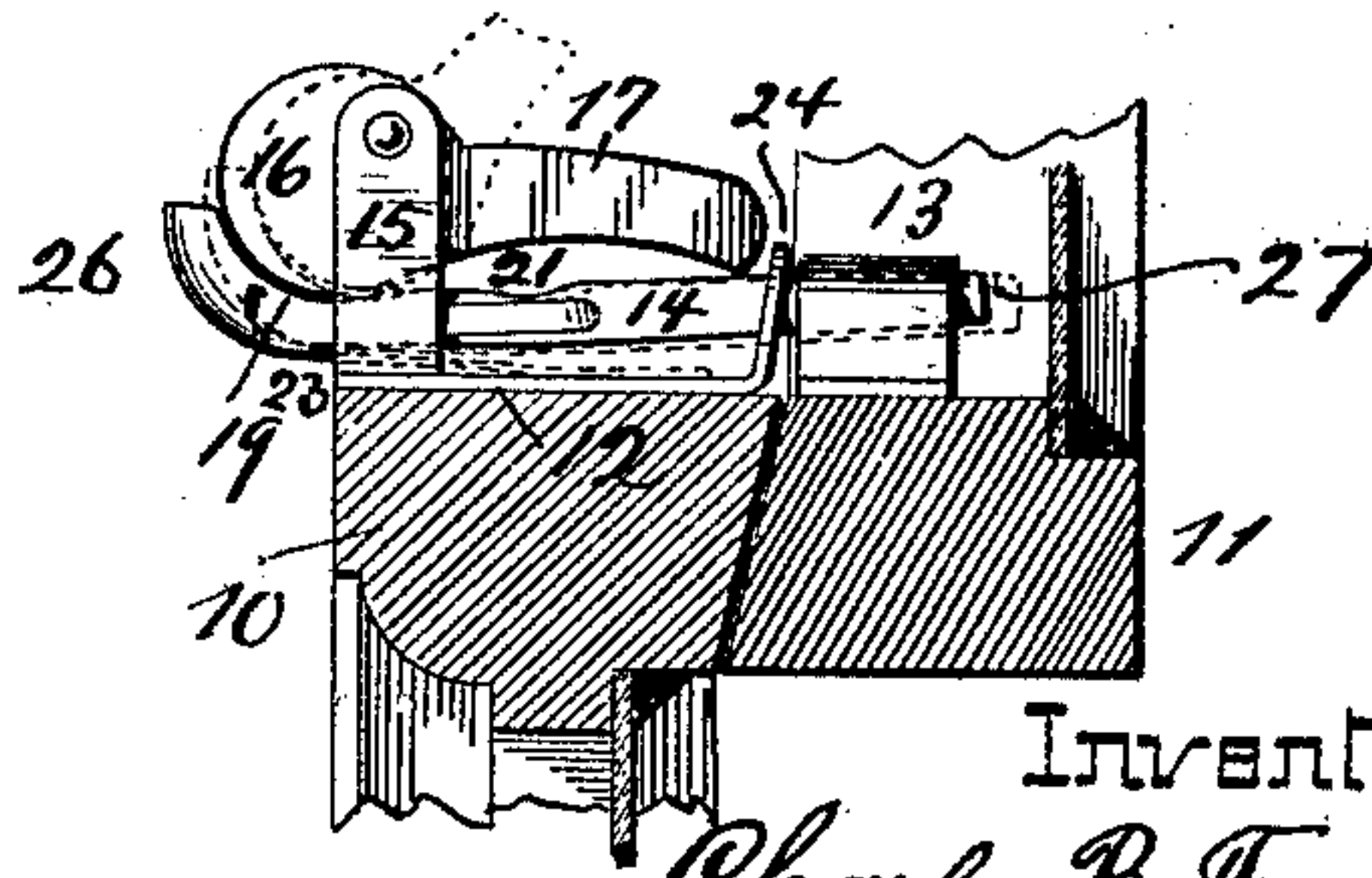


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

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LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 697,938, dated April 15, 1902.

Application filed October 2, 1901. Serial No. 77,278. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. FOOTE, Jr., a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Locking Device; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawings, with the reference-numerals marked thereon, which form also a part of this specification.

This invention relates to improvements in locking devices of the kind which consist of two complementary parts, the first being a bolt to be secured to one of two parts to be locked together and the second is a socket or keeper being attached to the other of the parts to be so locked together, the socket or keeper receiving for such purpose the free or locking end of the bolt. The parts to be so locked to each other may be a door and the adjacent jamb or the sashes of a window, and in each of which cases the bolt is to be attached to one of these parts and the keeper to the other.

It frequently occurs that by reason of shrinkage, wear, warping, or from other causes the bolt and its keeper lose their proper position with reference to each other, after which the former is unable to enter the latter, thereby interfering with and defeating the intended locking.

The object of my invention is therefore to provide means of a certain construction, as shown and hereinafter explained, whereby the bolt is supported in a manner to enable its free or locking end to find within certain limits the keeper to effect engagement therewith, even if the two are not quite in proper position with reference to each other.

In the following specification, and particularly pointed out in the claims following, is found a full description of the invention, together with its operation, parts, and construction, which latter is also illustrated in the accompanying drawings, in which—

Figure 1 is a front view of the two complementary parts of my locking device used for locking a door and shown before their engagement with each other. Fig. 2 is a top view of one of these parts—to wit, the lock-

ing-bolt—as it appears in Fig. 1, it being held in its open or inoperative position. Fig. 3 shows in a similar view the same released and free for manipulation to effect engagement with and entrance into its keeper, the range of manipulation for the purpose of finding this latter being indicated in dotted lines. Fig. 4 shows in a similar view the complementary parts—that is, bolt and its keeper—in engagement with each other for the purpose of locking a door, the bolt being positively held in its locking position. Figs. 5 and 6, in side views, with adjacent parts in section, show how my locking device may also be used for the purpose of locking two window-sashes to each other. The first view shows the parts of the lock before locking engagement. The other figure shows them after engagement, illustrating also how by reason of the peculiar manner of supporting the locking-bolt this latter is capable of finding its keeper on the other sash when the same is sunk out of its proper position, as shown in Fig. 5, raising the same to its proper height and also drawing the sashes closely to each other and locking them tightly, excluding cold air and dust, and preventing rattling, thus satisfying all requirements of a first-class sash-lock.

10 and 11 indicate in all the figures wherever shown the parts to be locked to each other, it being a door and its adjacent jamb in Figs. 1, 2, 3, and 4 and lower and respectively upper sash in the rest of the figures.

12 is the base-plate, which carries the locking-bolt, being attached to the door in Figs. 1 to 4 and to the lower sash in the rest of the figures.

13 is the keeper, being attached to the jamb in Figs. 1 to 4 and to the upper sash in the rest of the figures.

14 indicates the locking-bolt in all the figures, carried on base-plate 12 and between two guides 15, projecting therefrom. The space between these guides near their outer ends is closed to confine the bolt between them, there being sufficient open space left, however, between this closed end and the base-plate 12 to permit the bolt to assume a number of angular positions, as more particularly shown in Figs. 3 and 5, to permit its outer or locking end to readily find the keeper

in case the same is not in proper position opposite the end of the bolt. This latter is further capable of longitudinal movement in any of these angular positions, so that it may
 5 be shot into the keeper whenever its outer end is in proper position opposite the same. After this the bolt is positively held in this locking position by locking means in shape of a cam 16, pivotally supported between
 10 guides 15 and provided with an operating-handle 17 for its manipulation. It will be observed that these locking means serve at the same time as the means before referred to and used for the purpose of closing the
 15 space between the outer ends of guides 15 to prevent the locking-bolt from leaving its position therethrough. To confine it longitudinally, projecting stops 18 may be provided on it, or, as shown, its thickness to the
 20 extent of its longitudinal movement between the guides may be reduced, whereby the thicker portions near both ends of the bolt serve as such stops and prevent the same from leaving its position on the base-plate longitudinally. To indicate the proper locking
 25 position of the bolt and to increase the engagement between it and cam 16 for holding it in its locking position, I provide a locking-notch 19 in the surface of the bolt opposite
 30 the edge of the cam, into which this latter drops. The bolt may also be locked in its disengaged position, as shown in Fig. 2, which is particularly desirable when used as a sash-lock to prevent the bolt from accidentally sliding
 35 out and projecting into the path of the other sash. For such purpose an additional notch 21 is provided. The holding engagement of the bolt in its locked position may be still further intensified by a spring 22, engaging
 40 a notch 23 on the under side of the bolt, as is shown in Figs. 5 and 6. Near its outer or locking end the bolt passes through a guiding-lug 24, which holds it to base-plate 12 thereat, without, however, interfering with
 45 the movements and adjustments of its rear part between guides 15 to and from the base-plate. The rear or inner end of the bolt is curled up to form a suitable handle or knob 26 for its manipulation. While passing in
 50 its locking position cam 16 comes in contact with this knob and displaces the same, causing thereby a limited longitudinal movement of bolt 14 in reverse direction, which tends to draw the same again out of its keeper. In
 55 case of use as a sash-lock this motion is a very

important one, inasmuch as by reason of the hooked end 27 of the bolt engaging the rear edge of the keeper the two complementary parts of the lock, and with them the sashes connected thereto, are tightly drawn together. 60
 (See dotted lines in Fig. 6.)

It is evident that a circular locking-plate eccentrically supported would be the equivalent of the pivotally-supported cam shown.

Having described my invention, I claim as 65 new—

1. A locking device consisting of two complementary parts, one being a keeper and the other a bolt carried on a base-plate, a guiding-lug 24 projecting from one of the edges of the 70 base-plate, the one nearest the keeper when the parts are in position, guides 15 projecting from near the other edge of the base-plate, a bolt supported between these three projecting parts in a manner to be free for manual 75 movements in two directions, one being between guides 15 near its rear or inner end to and from the base-plate to bring the outer end of the bolt opposite the keeper, the other movement being in a direction lengthwise of 80 the base-plate for the purpose of entering the keeper from the position found by the first movement and when the bolt is aligned therewith, and a cam pivotally supported between the outer ends of guides 15 closing the space 85 thereat between them, and serving in its operative position to hold the bolt on the base-plate in any of its positions in which it has found and engaged the keeper.

2. A locking device consisting of a bolt and 90 a complementary keeper, a base-plate, guides between which this bolt is confined to the base-plate in a manner to have a limited movement to and from this latter and also one in a longitudinal direction to engage the keeper 95 out of any position due to its first movement, a lip 27 at the front end of the bolt, a projection at the rear end thereof and a pivotally-supported cam adapted to act upon this latter projection on the bolt after the same 100 has engaged its keeper, thereby causing a reverse longitudinal movement of the bolt for the purpose of drawing the complementary parts of the lock together.

In testimony whereof I hereunto set my 105 hand in the presence of two witnesses.

CHARLES B. FOOTE, JR.

Witnesses:

WALTER MACLEOD,
 ARTHUR KLINE.