

No. 631,269.

Patented Aug. 22, 1899.

W. BECKERLE.
WINDOW STOP AND LOCK.

(Application filed Oct. 25, 1898.)

(No Model.)

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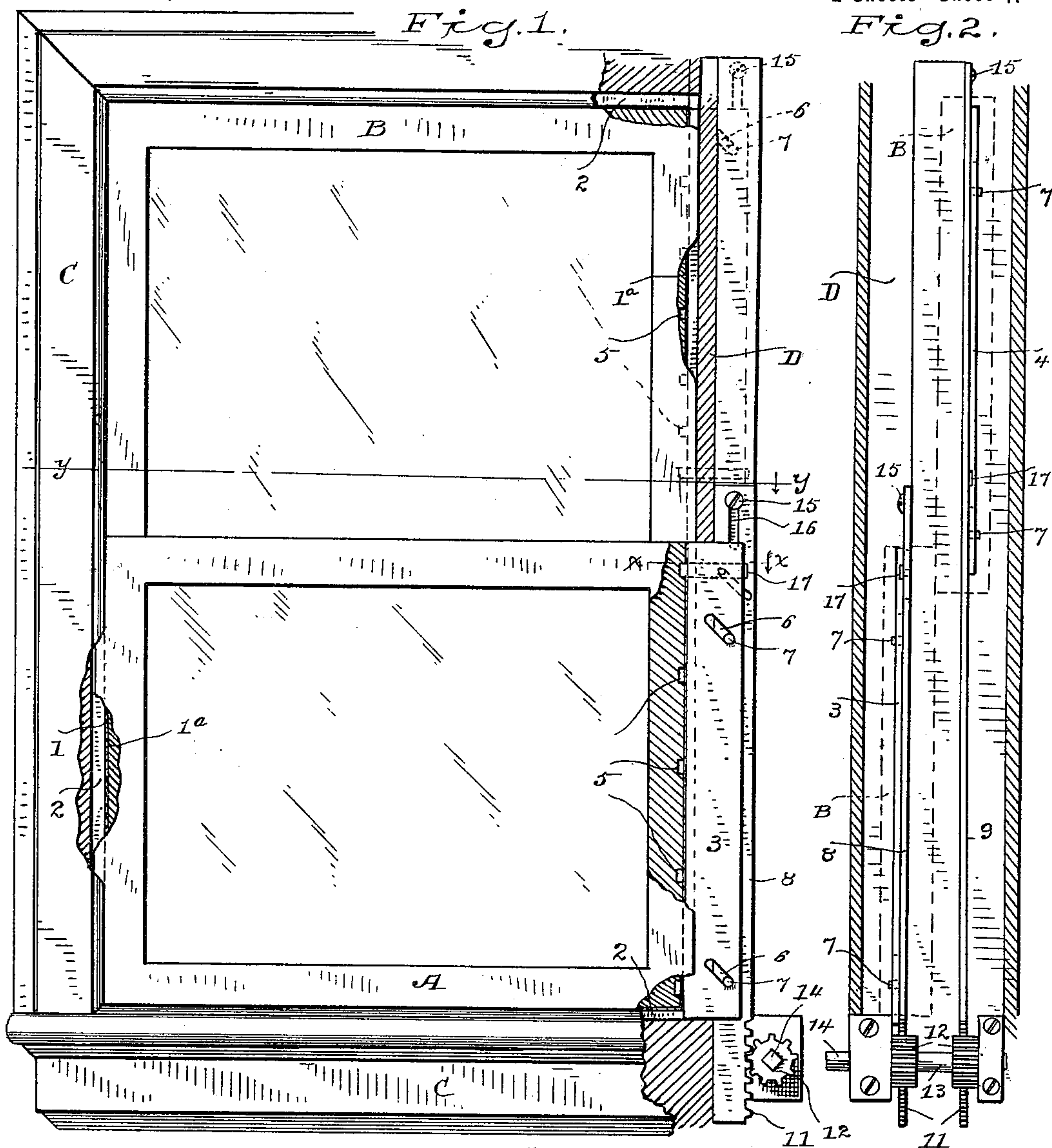
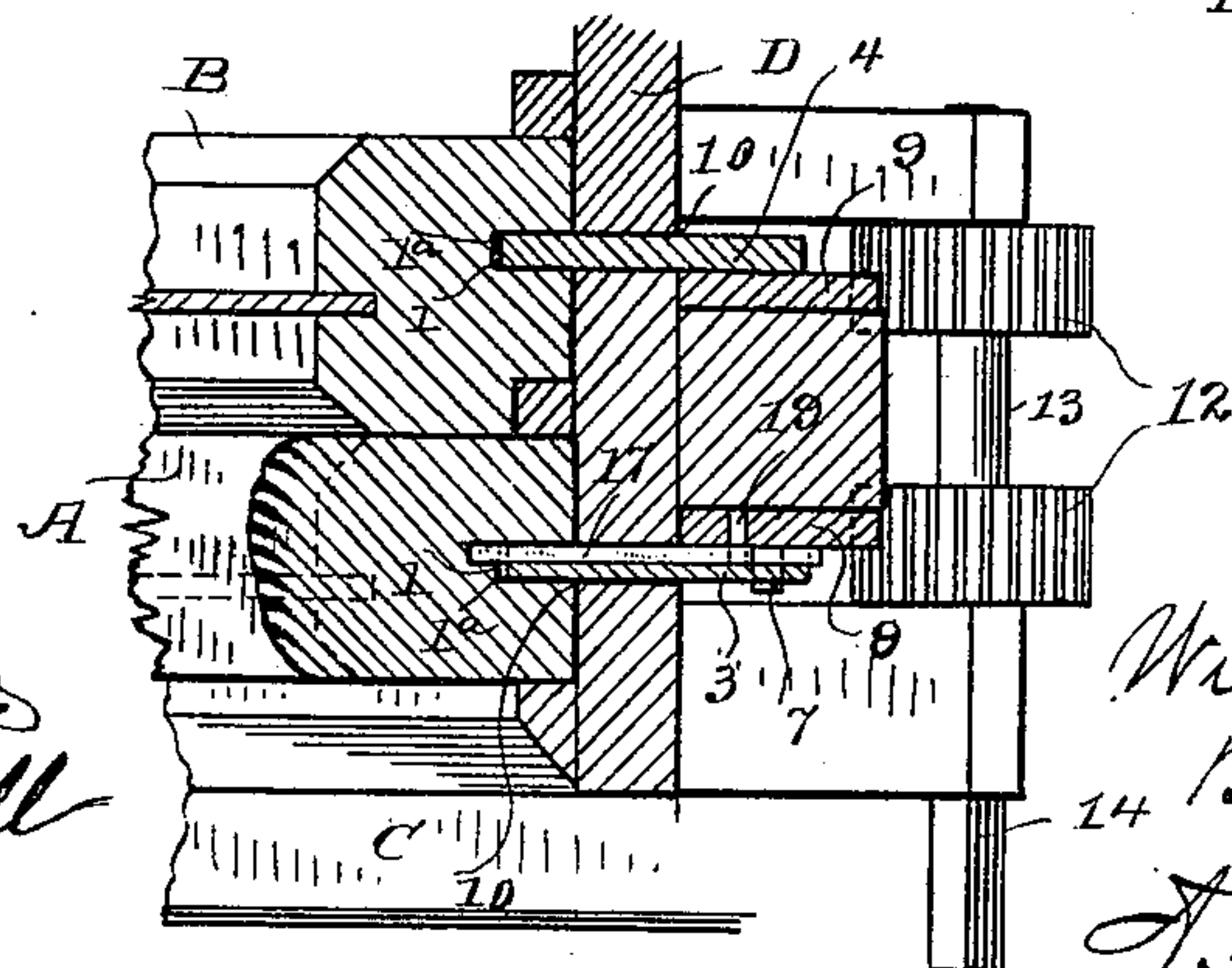


Fig. 3.



WITNESSES

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Fig. 4.

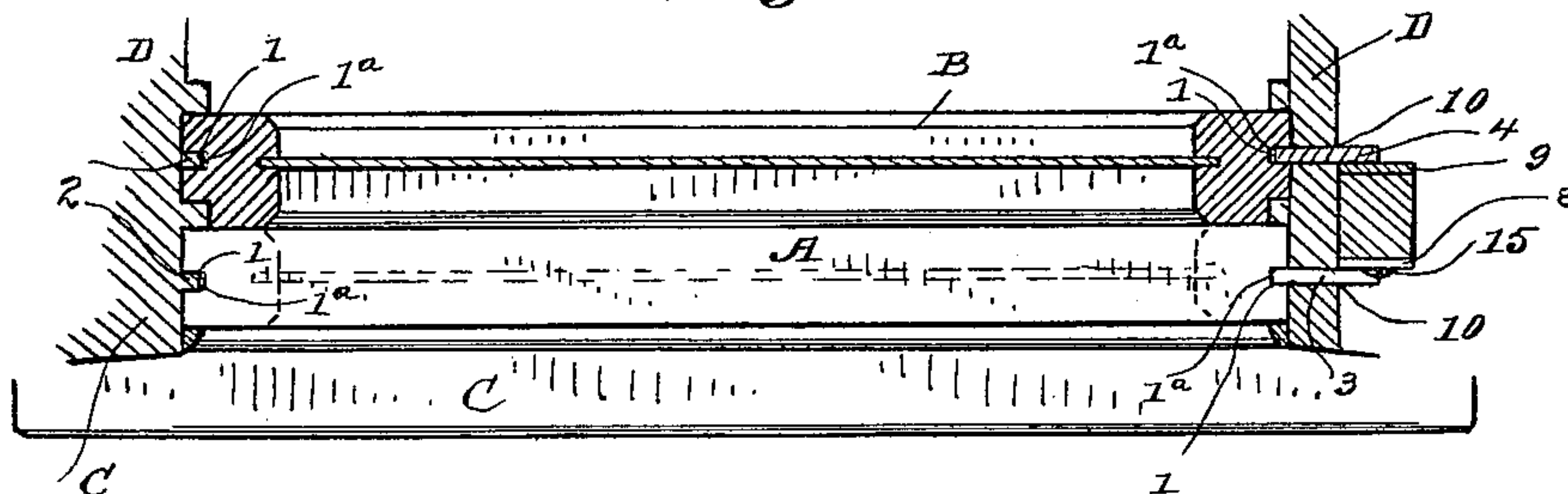


Fig. 5.

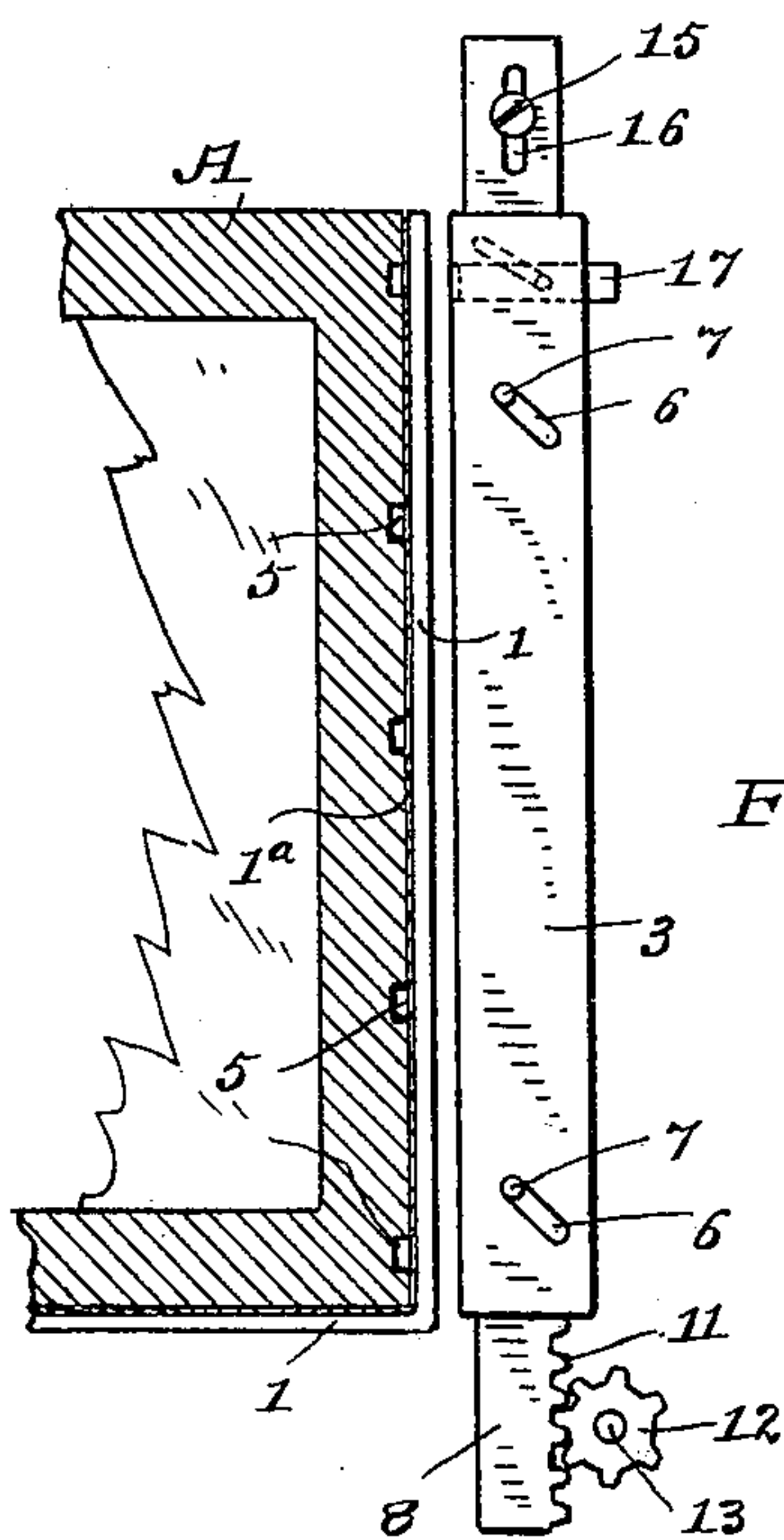


Fig. 6.

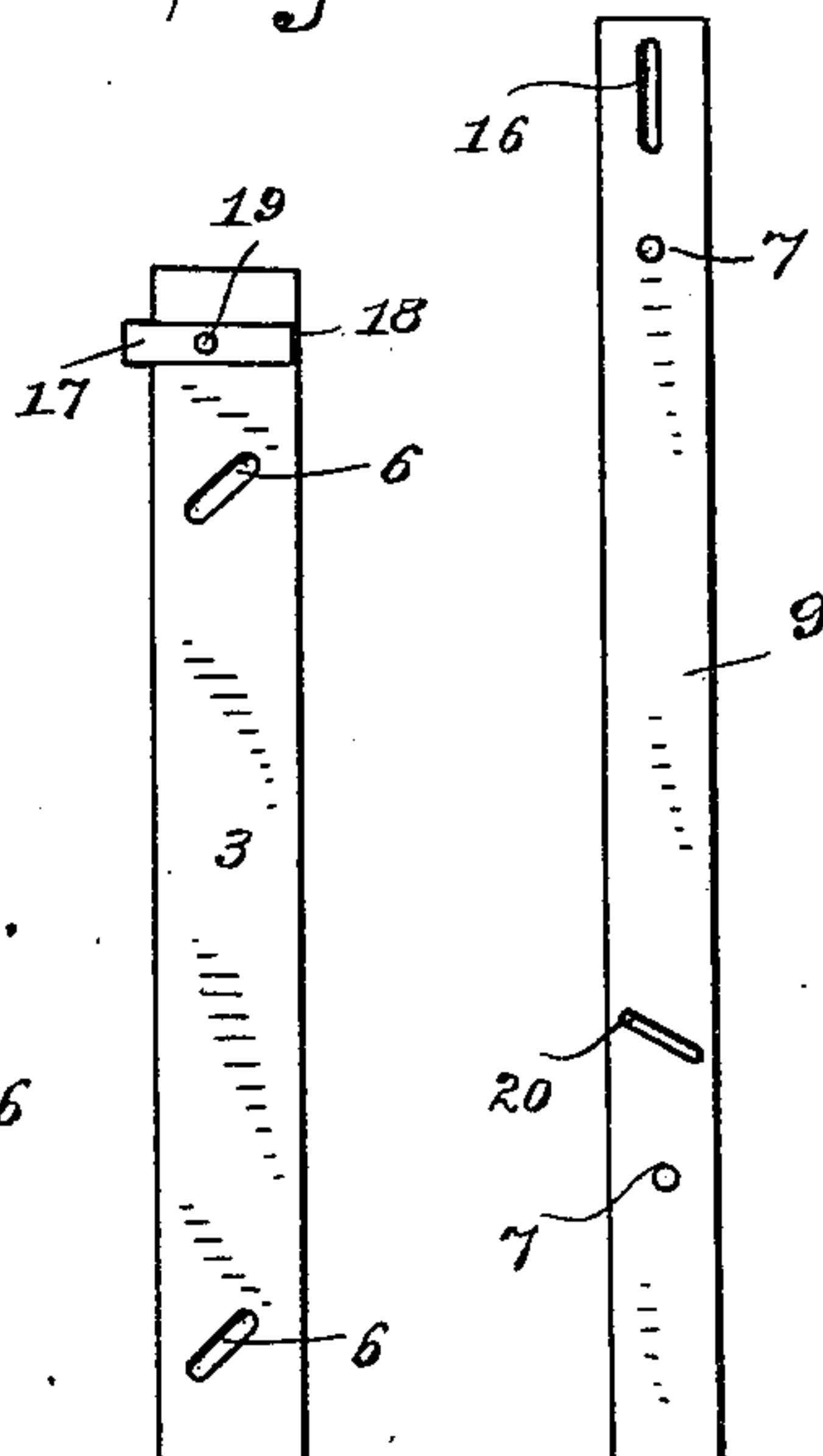


Fig. 7.

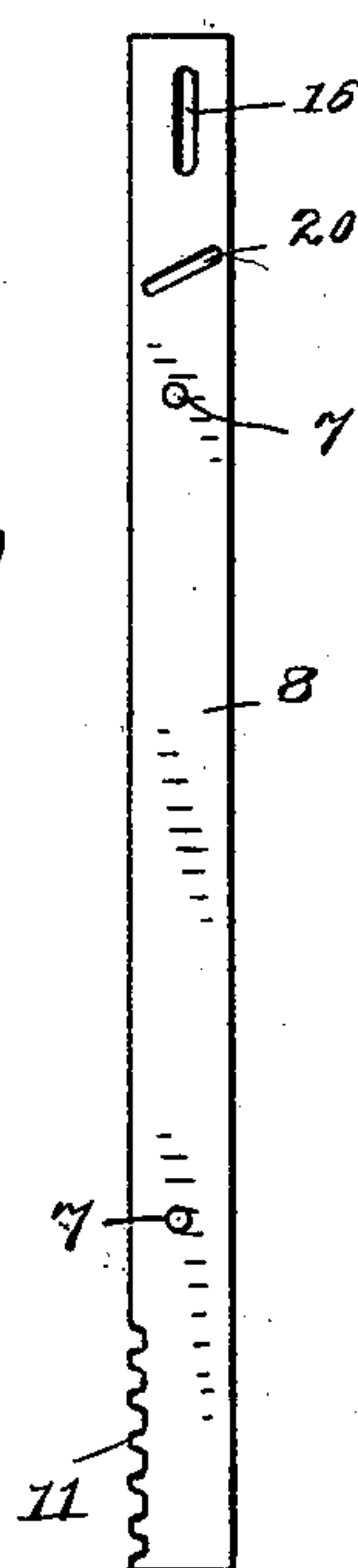


Fig. 8.

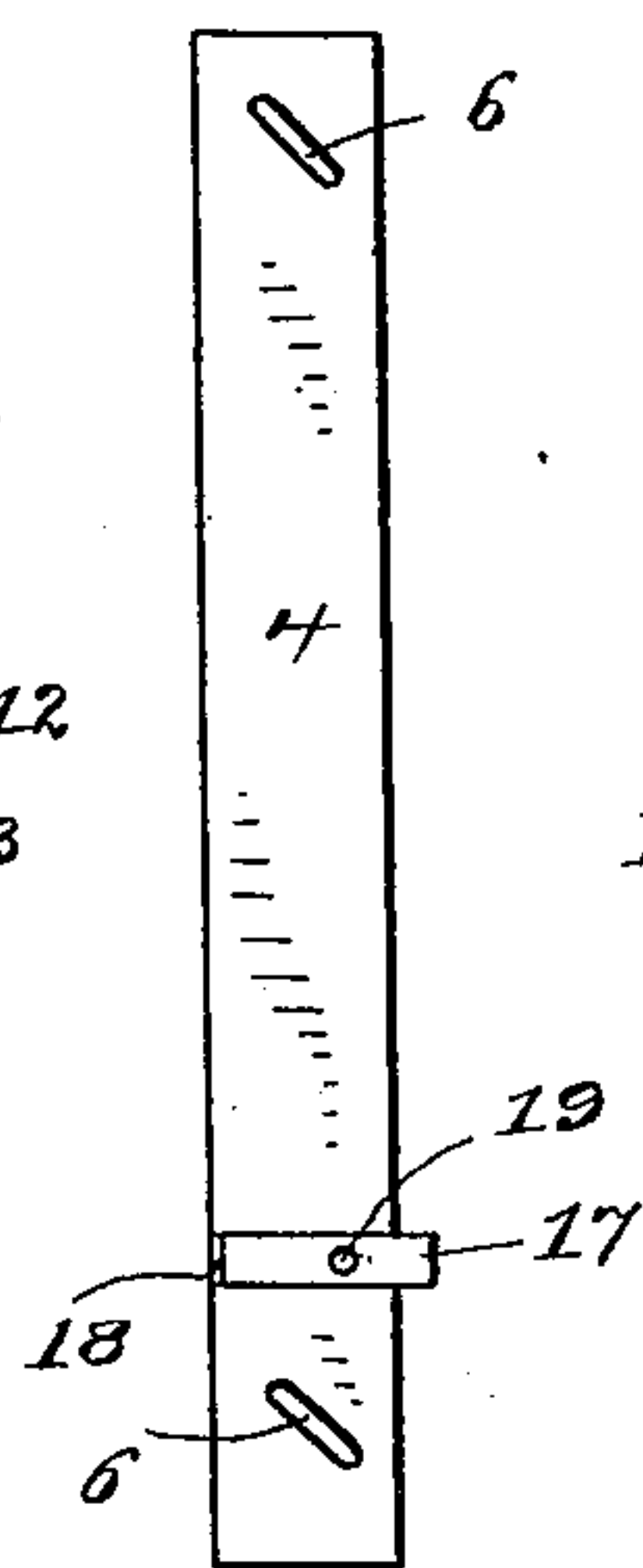
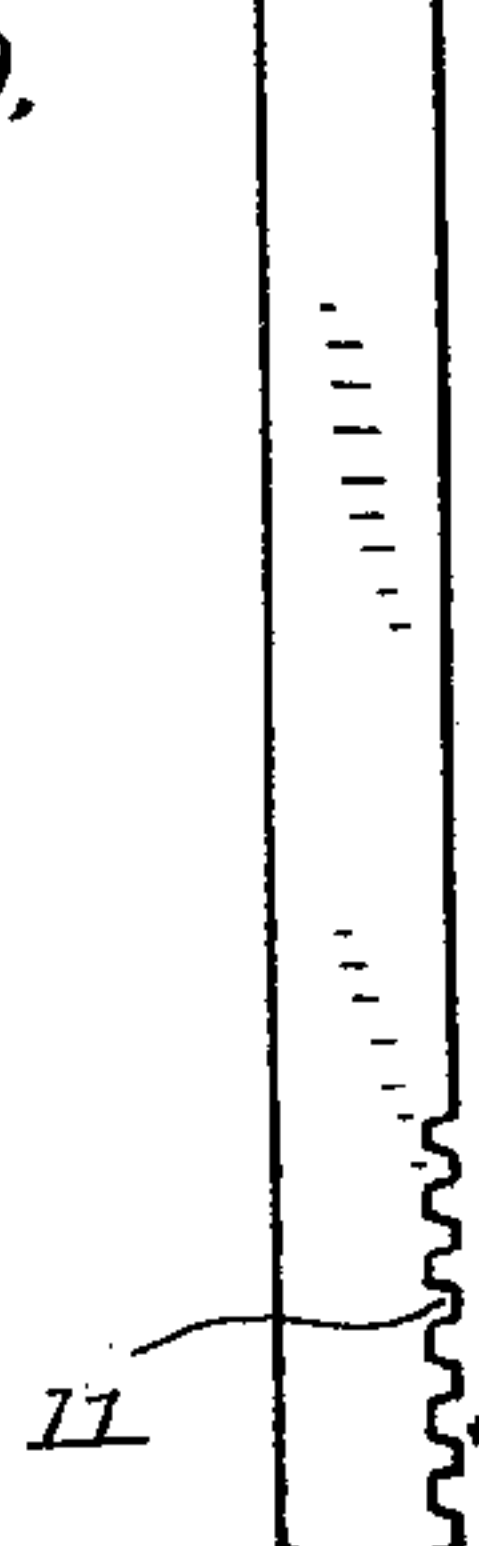


Fig. 9.



WITNESSES

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UNITED STATES PATENT OFFICE.

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WINDOW STOP AND LOCK.

SPECIFICATION forming part of Letters Patent No. 631,269, dated August 22, 1899.

Application filed October 25, 1898. Serial No. 694,522. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BECKERLE, a citizen of the United States, residing at Danbury, county of Fairfield, State of Connecticut, have invented a new and useful Combined Window Stop and Lock, of which the following is a specification.

My invention has for its object to provide a combined window stop and lock which shall perform all the functions of a weather-strip, in that it will effectually prevent the entrance of air and the driving in of rain at the top, bottom, and sides of the casing, will serve effectually as an antirattler, in that it will hold both sashes firmly at all times and prevent them from rattling when the wind blows, and will without any other operation than slight rotary movement of a shaft hold sashes firmly which have become loose from age or from shrinking in dry weather, and which, furthermore, and of great importance, will enable the operator to lock both sashes in a closed position or either or both of the sashes in a more or less open position. With these ends in view I have devised the novel construction of which the following description, in connection with the accompanying drawings, is a specification, reference characters being used to designate the several parts.

Figure 1 is an elevation, partly in section, illustrating the application of my invention to a window, both sashes being closed and locked in the closed position; Fig. 2, an edge view, partly in section, corresponding with Fig. 1; Fig. 3, a section, on an enlarged scale, on line $x x$ in Fig. 1 looking down; Fig. 4, a section on the line $y y$ in Fig. 1 looking down; Fig. 5, a detail view corresponding with the lower portion of Fig. 1, except that the movable stop and the locking-bolt are at the retracted position, as when it is desired to raise or lower the sash. Figs. 6 and 7 are views, respectively, of the movable stop and the operating-slide corresponding with the lower sash, the position of the parts being reversed from that in Fig. 1 in order to show the locking-bolt in full lines; and Figs. 8 and 9 are views, respectively, of the movable stop and the operating-slide corresponding with the upper sash, the parts being in their normal position.

A denotes the lower sash, B the upper sash,

C the casing, and D the jamb, which may be of any ordinary or preferred construction. The lower sash is provided in its edges at the sides and bottom and the upper sash in its edges at the sides and top with grooves 1, the grooves at the top and bottom and upon one side being adapted to receive stops or beads 2, which are rigidly secured to the jamb, the groove in the other side of the lower sash being adapted to receive a movable stop 3 and the groove in the other side of the upper sash being adapted to receive a movable stop 4. At the bottoms of all the grooves I preferably place strips of rubber, which I have indicated by 1^a, and which assist in preventing the passage of air and water between the sashes and the casing, as will be more fully explained. It of course makes no difference in which of the jambs the movable stops are placed. In the present instance I have shown them as placed in the right jamb and have also shown the right edges of both sashes as provided at the bottoms of the grooves 1 with sockets 5, which are adapted to receive locking-bolts carried by the movable stops, as will be more fully explained.

The movable stops are each provided with oblique slots 6, which are engaged by pins 7 on operating-slides 8 and 9, corresponding, respectively, with the lower and the upper sashes. The movable stops lie in slots 10 in the jamb, and the operating-slides are shown as lying on the inner sides of the movable stops. Each of the operating-slides is provided at its lower end with rack-teeth 11, and each set of rack-teeth is engaged by a pinion 12 on a shaft 13, which is journaled in the casing. The end of this shaft preferably extends outward on the inner side of the casing and may be provided with a hand wheel or crank for convenience in operation or may be squared, as at 14, to adapt it to receive a detachable hand wheel or key. The lower ends of the operating-slide are held in position by the pinions and the upper ends by pins or screws 15, which pass through slots 16 at the upper ends of the slides and into any solid portion of the jamb or framework.

17 denotes sliding locking-bolts, which are shown as recessed in transverse grooves 18 in the movable stops and are provided with pins 19, which engage oblique slots 20 in the

operating-slides. It will be noted that the angle of inclination of slots 20 in the operating-slides is much less than the angle of slots 6 in the movable stops—that is to say, the slots in the operating-slides are more nearly horizontal than the slots in the movable stops. It will be apparent, therefore, that the inward and outward movement of the locking-bolts through the engagement of pins 19 with slots 20 will be greater than the inward and outward movement of the movable stops which is caused by the engagement of pins 7 with oblique slots 6, as will be clearly understood from a comparison of Fig. 5, which shows the movable stop and locking-bolt corresponding with the lower sash in the retracted position, with Fig. 1, which shows said parts in the operative position. When the movable stops are retracted, the locking-bolts will be retracted still more, and the ends of the locking-bolts will be drawn backward wholly out of the way of the sashes, and when the movable stops are moved inward into the grooves in the sashes the locking-bolts will be thrown still farther inward and caused to engage the sockets.

The operation of the device as a whole will be readily understood from the drawings. Supposing the sashes to be in the locked position and that it is desired to raise the lower sash or lower the upper sash, or both, the operator simply rotates shaft 13 sufficiently to withdraw the locking-bolts from sockets 5, at the same time moving stops 3 and 4 outward from the bottoms of grooves 1, so that the sashes will be free to be raised or lowered. If it is desired to lock either sash in a partly-open position, it is placed so that the locking-bolt corresponding with that sash will engage one of the sockets 5, which will lock the sash firmly. Should the sashes rattle at any time, the operator would simply turn the shaft slightly and force the movable stops against the rubber strips at the bottoms of the grooves 1, with which they engage. This would press the sashes against the stops on the opposite side and would effectually stop the rattling of both sashes through the engagement of the rubber strips on that side with the fixed stops. The presence of the stops and rubber strips in the grooves at the top, bottom, and sides of the sashes effectually stops the passage of air and also prevents rain from driving in, thus making of the device an effective weather-strip. Both sashes are locked in the closed position in precisely the same manner that they are locked in a partially-open position, it being understood, of course, that sockets 5 are provided at just the required positions to receive the locking-bolts when the sashes are in the closed position.

Having thus described my invention, I claim—

1. The combination with a window-sash having a groove in its edge and sockets at the bottom of the groove, of a stop fitted in a groove in the jamb and adapted to engage the

groove in the sash, a locking-bolt carried by the stop and adapted to engage either of the sockets and means for positively and simultaneously moving forward and for retracting the stop and the locking-bolt, the said stop being of a length equal to the length of the edge of the sash with which it engages.

2. The combination with a window-sash having a groove in its edge and a stop adapted to engage said groove and provided with oblique slots 6, of an operating-slide carrying pins which engage the slots and means for moving the slide longitudinally whereby the stop is moved in or out of the groove.

3. The combination with a window-sash having a groove in its edge and sockets at the bottom of the groove, a stop adapted to engage the groove and having oblique slots 6, and a sliding locking-bolt carried by the stop, of an operating-slide having pins which engage the oblique slots in the movable stop, connections between the locking-bolt and the operating-slide for reciprocating the former by sliding the latter, and means for moving the slide longitudinally whereby the stop is moved in or out of the groove and the locking-bolt engaged or disengaged with one of the sockets.

4. The combination with a window-sash having grooves in its edges at the sides and end and sockets at the bottom of the groove in one side, of fixed stops engaging the grooves at the end and one side, a positively-movable stop fitted in a groove in the jamb and adapted to engage the sash-groove in the other side, each of said stops being of a length substantially equal to the length of the edge of the sash with which it engages, and a sliding locking-bolt carried by the movable stop whereby the sash may be locked at either an open or closed position and rattling and the passage of air or water may be prevented at all times.

5. The combination with a window-sash having a groove in its edge and sockets at the bottom of the groove, of a stop adapted to engage the groove and having oblique slots 6, a sliding locking-bolt carried by the stop and having a pin 19, an operating-slide having pins which engage the oblique slots in the movable stop and an oblique slot whose angle of inclination is less than the angle of the slots in the movable stop, said slot in the slide being engaged by the pin on the locking-bolt and means for moving the slide longitudinally so that when the stop is moved in or out the locking-bolt will be moved in or out a greater distance than the movable stop, substantially as described, for the purpose specified.

6. The combination with a lower sash having grooves in its edges at the sides and bottom and an upper sash having grooves in its edges at the sides and top, the grooves in both sashes on one side having at their bottoms sockets 5, of fixed stops engaging said grooves at top and bottom and at one side, movable stops adapted to engage the grooves in the other side of the sashes, said movable stops

having oblique slots 6, locking-bolts carried
by the movable stops and having pins 19, op-
erating-slides having pins 7 which engage the
slots in the movable stops and oblique slots
5 which are engaged by the pins on the locking-
bolts and having at their lower ends rack-
teeth and a shaft having pinions engaging
the rack-teeth on the slides so that rotary
movement of said shaft will carry the movable

stops and the locking-bolts into or out of op- 10
erative position.

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

WILLIAM BECKERLE.

Witnesses:

CHARLES H. PEIX, Jr.,
EUGENE M. BULKLEY.