

(No Model.)

W. W. DWIGANS.
SASH SUPPORT AND LOCK.

No. 541,810.

Patented June 25, 1895.

Fig. 1

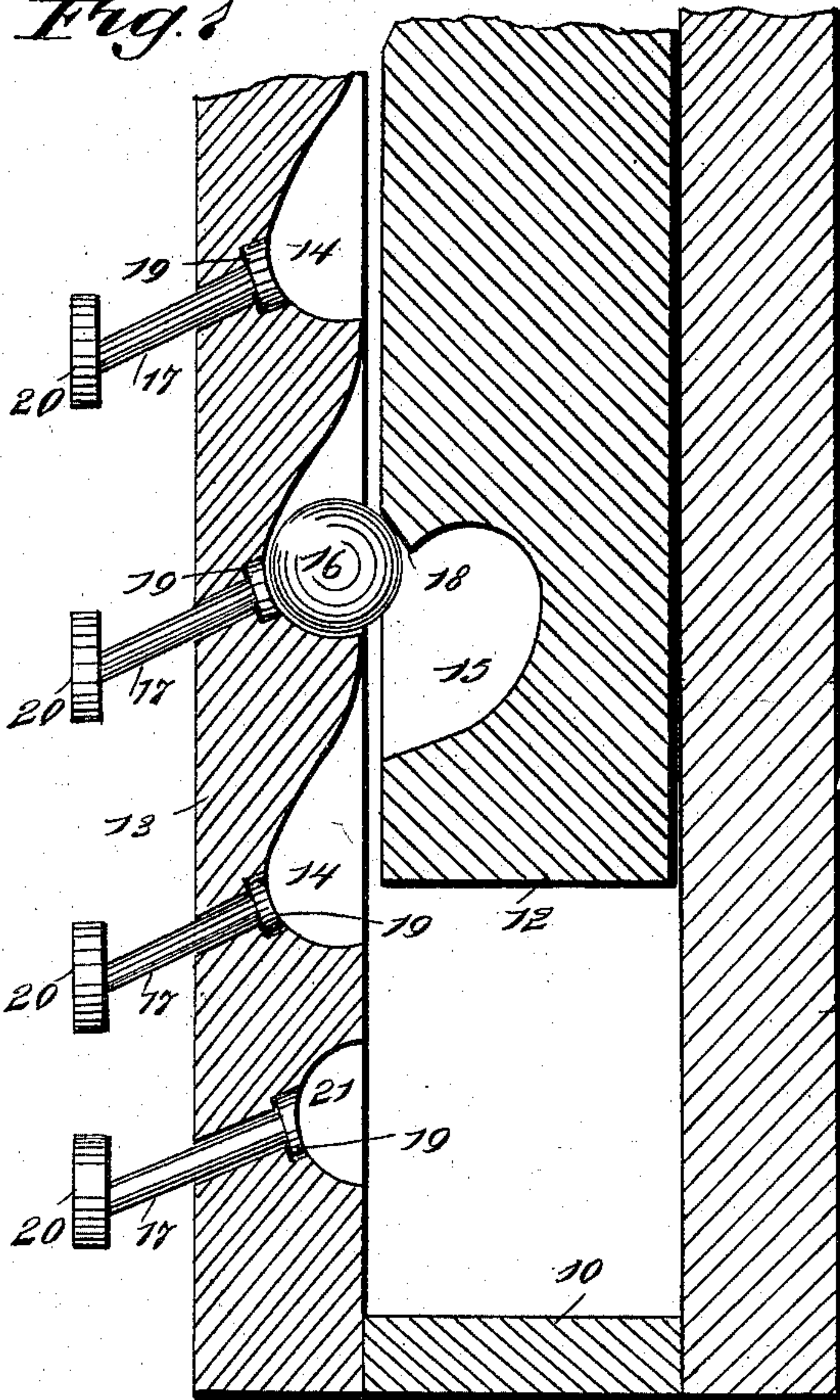


Fig. 2

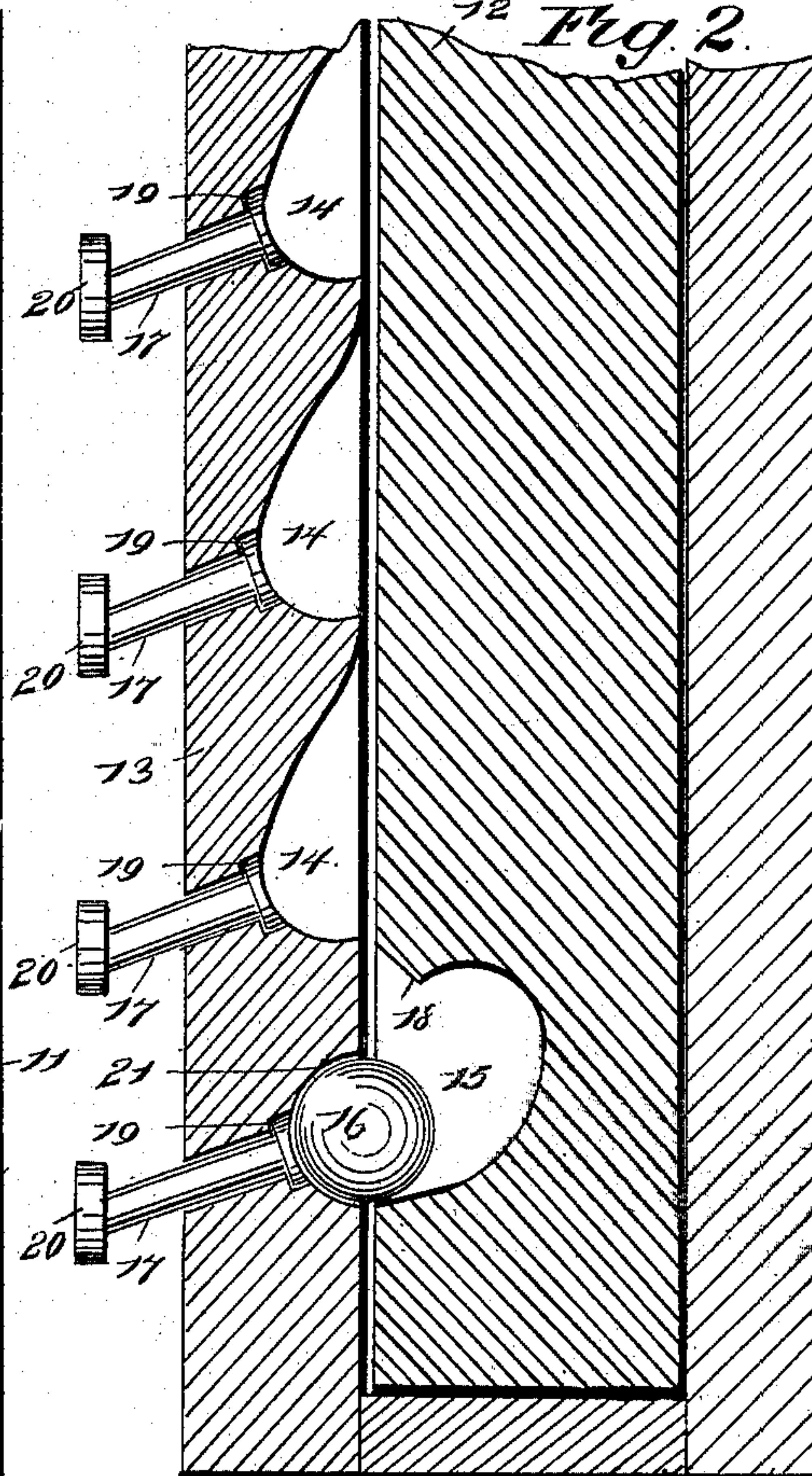


Fig. 4

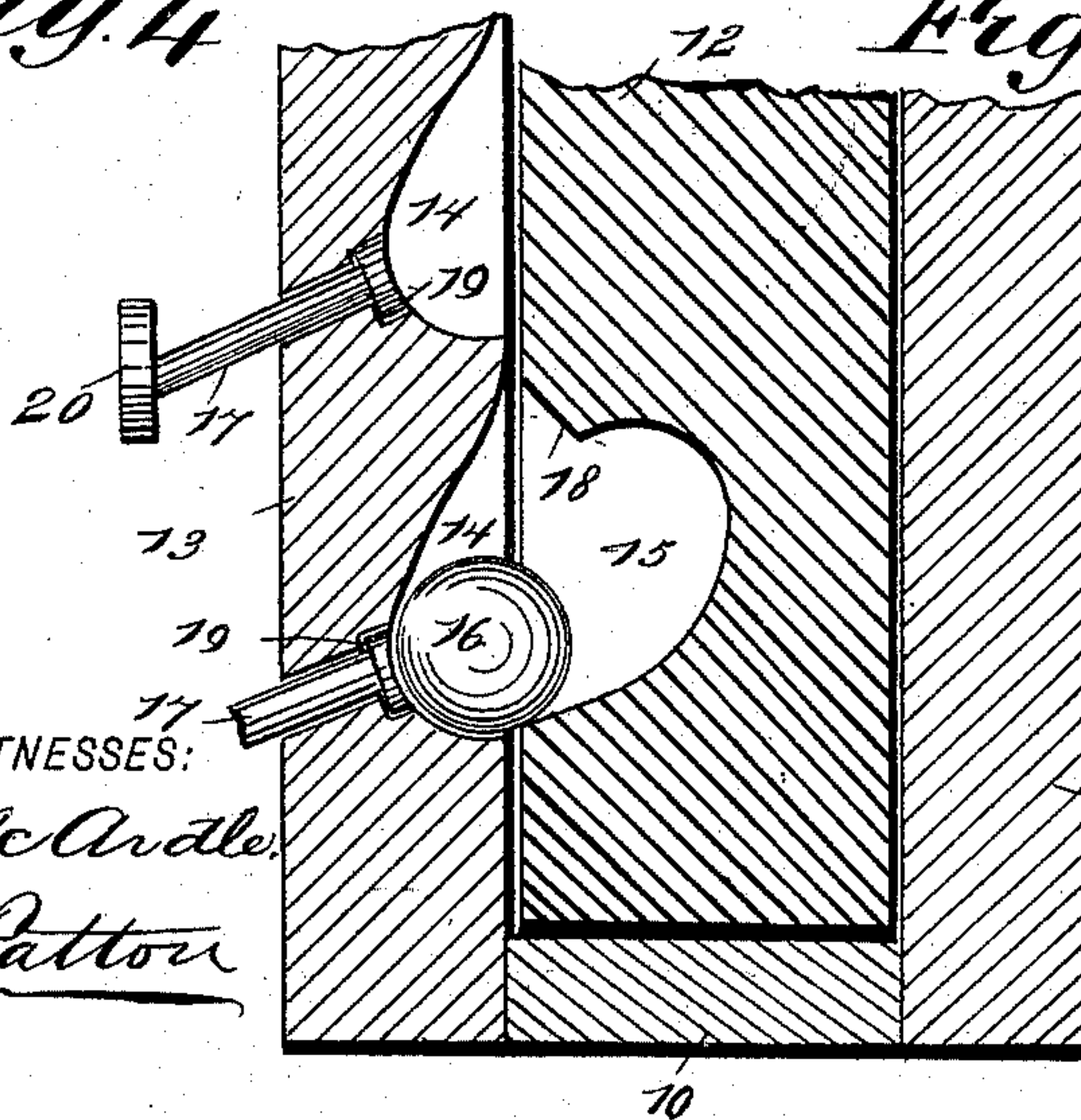
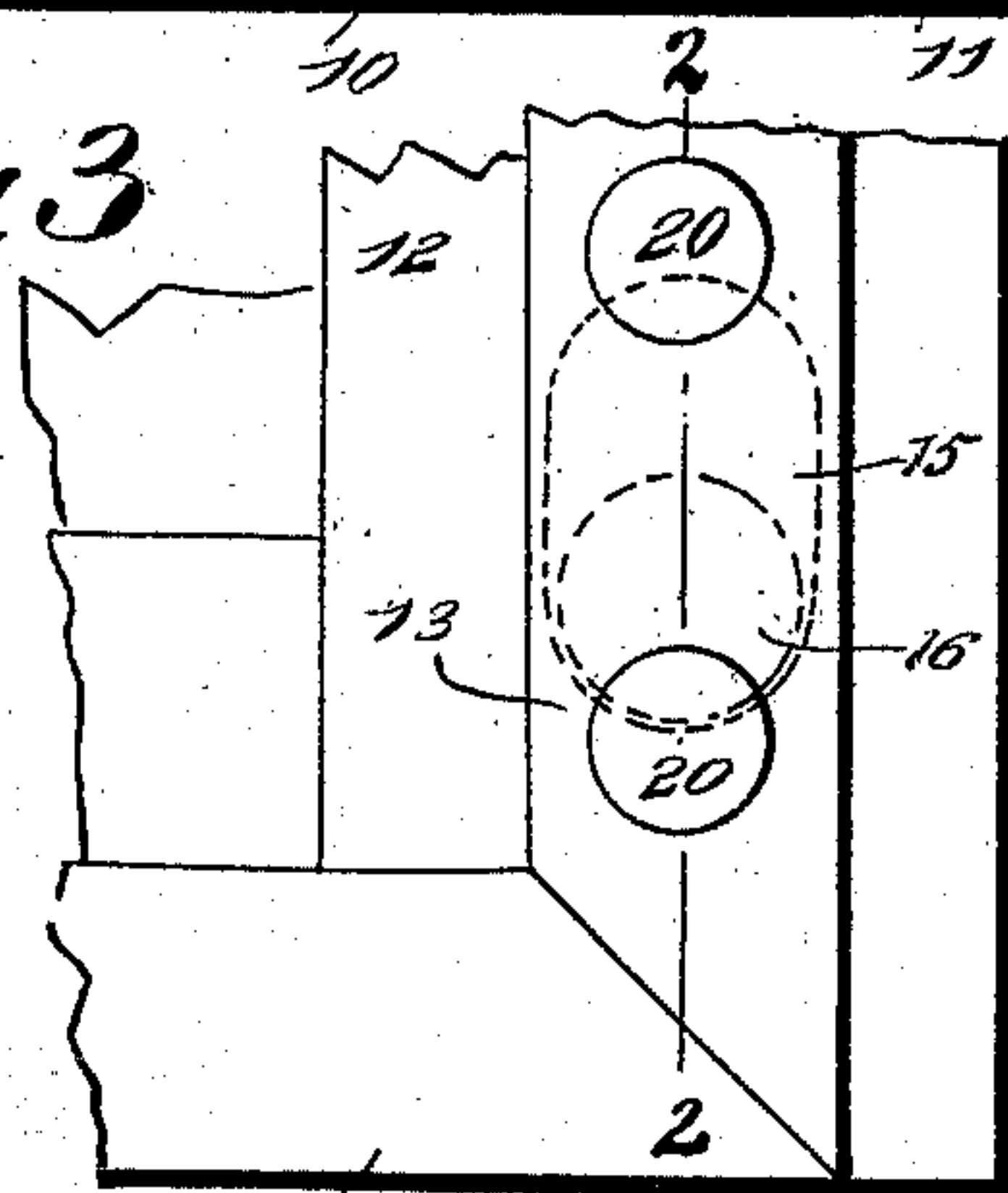


Fig. 3



WITNESSES:

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SASH SUPPORT AND LOCK.

SPECIFICATION forming part of Letters Patent No. 541,810, dated June 25, 1895.

Application filed October 8, 1894. Serial No. 525,267. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WESLEY DWIGANS, of Arkadelphia, in the county of Clark and State of Arkansas, have invented a new and Improved Sash Support and Lock, of which the following is a full, clear, and exact description.

My invention relates to an improved device for supporting and locking window sashes, and has for its objects to provide a novel device of the type indicated, which will be exceedingly simple and inexpensive, be adapted for ready location on any window having vertically movable sashes, and afford convenient means to support the sashes at any point of sliding adjustment, and lock the same in a completely closed condition.

To these ends my invention consists in the construction and combination of parts, as is hereinafter described and indicated in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views shown.

Figure 1 is a transverse sectional view of a window casement in part, the lower portion of a sash, and the improvement applied and adjusted to support the sash in a partly elevated condition. Fig. 2 is a transverse sectional view on the line 2 2 in Fig. 3, showing the lower portion of a sash, a casement in part at one corner of the same, and the improved sash support and lock, adjusted to lock the sash in closed adjustment. Fig. 3 is an inner side view of a lower corner portion of a window casement, the lower part of a sash in closed adjustment, and the improvement shown partly by dotted lines, and adjusted to lock the sash in a closed condition; and Fig. 4 is an enlarged transverse sectional view of the lower part of a window casement at one corner, a lower portion of a sash therein in closed condition, and the improved sash support modified in construction so as to adapt it for sustaining the sash at any point of sliding adjustment and avoid locking it.

The casement portion 10, may be part of a window having an upper and a lower sash, or be a portion of a car window casement. The strip 11, representing the outer bead strip of a car window sash, or of an upper sash for a window having two sashes, may also indicate the parting strip that separates the upper and

lower sashes of a window having two vertically sliding sashes.

For the purpose of illustrating the construction and operation of the improved sash support and lock, the device is shown in connection with a single sash window.

The window sash 12, is designed to be vertically slid to open the casement and is retained in the latter free to slide, by a pair of the strips 11, that have a loose contact with the outer surface of the upright side bars of the sash, and also by two inner bead strips 13, that are adapted to loosely impinge the inner side surface of the side bars, one of said bead strips being shown in the drawings.

The improved sash support and locking device, comprises a series of spaced pockets 14, that are formed in the bead strip 13, penetrating the side of said strip that has a loose contact with the sash, a single recess or pocket 15 in the side bar of the sash, located near the lower end of said bar, a spherical ball 16, that occupies the pocket 15, and may enter either pocket 14, and push pieces 17, which have a loose engagement with the bead strip 13, one opposite each pocket therein.

The pocket 15, that is formed in the side of the sash side bar, is shaped as shown in cross section in Figs. 1, 2, and 4, it being an excavation of suitable depth and width, proportioned to suit the diameter of the ball 16, having its lower wall sloped upwardly in a curve that terminates in a semi-circular cavity above the incline mentioned, the semi-circular portion of the pocket, which is its deepest part, being adapted to loosely receive the ball 16, that when located therein is completely embedded, and avoids contact with the bead strip when the sash is elevated. The pockets 14, which are formed in the bead strip 13, are provided in sufficient number to suit the different heights at which the sash is to be sustained by the improvement.

As shown, the pockets 14, that co-act with the other features of the improvement to support the sash, are of a like form, each consisting of a cavity that is curved in its defining wall at the lower part of the same, and from the curved portion is upwardly and outwardly sloped toward the inner face of the bead strip, or surface that is penetrated by the pockets.

The relative depth of the lower part of each pocket 14, is such with regard to the dimension of the ball 16, that the latter when in-

troduced in either of said pockets, will be embedded over half of its diameter, and thus be adapted to remain seated in the same until it is designedly removed.

5 Referring to the pocket 15, that is produced in the sash 12, it will be seen that a slope 18, is formed on its upper corner, by removing the material, this inclined wall being provided to impinge the ball 16, for the support of the
10 sash, as will be further explained.

The push pieces 17, are alike and one is provided for each pocket 14, each piece consisting of a rod having a suitable length that will allow it to be loosely inserted in a perforation formed to receive it in the bead strip
15 13, these perforations that penetrate the lower portions of the pockets, being similarly inclined downwardly, as shown in Figs. 1 and 2.

The perforations for the push pieces are
20 each diametrically enlarged at their inner terminals to receive the heads 19, that are formed on the push pieces 17, at their inner ends, push buttons 20, being affixed to the outer ends of the same, the weight of which causes
25 the push pieces to slide into the positions shown, so as to enter their heads in the countersunk enlargements of the perforations, and project their push buttons away from the bead strip when free to do so.

30 The operation of the sash support is as follows: Assuming that the sash is completely closed as shown in Fig. 4, and that the entire series of pockets 14, are of a similar formation, it will be seen that the elevation of the sash
35 will cause the ball 16, to roll up the inclined side of the lowermost pocket 14 it has entered from the pocket 15. The continuation of upward movement of the sash, will push the ball into the pocket 15, so that when the lower
40 pocket 14 has been passed, the ball will be loosely retained free from the bead strip 13, until another pocket 14 is reached, when the ball by its gravity will be caused to enter said pocket from the pocket 15. After a sufficient
45 number of pockets 14 have been passed by the expulsion of the ball 16 from them successively, to attain a desired height for the sash, it may be retained in position by its adjustment so as to impinge the sloped wall 18 of
50 the pocket 15, on the ball, that is then seated in one of the pockets 14, as is shown in Fig. 1, it being evident that such an adjustment of parts will maintain the sash and prevent it from sliding downwardly.

55 To release the sash that is supported as has been explained, it is necessary that the sash be elevated, and the push piece 17 that is opposite the pocket 14 occupied by the ball, be pushed inwardly so as to expel the ball from
60 said pocket, which will permit the sash to be slid to close the window if there are no intervening pockets 14, and if there are one or more pockets below the one from which the ball has been dislodged, the push pieces of these pockets
65 must be manipulated to prevent an entrance of the ball.

When the improvement is to be used as a sash lock as well as a sash support, a pocket 21 of a semi-circular shape is formed in the bead strip 13, at such a point as will locate
70 its lower edge about level with the nearest edge of the lower surface of the pocket 15 in the sash, when the latter is closed, as shown in Fig. 2. After the pockets 15 and 21 are oppositely positioned as has been explained, the ball 16 will by its gravity be
75 caused to enter the pocket 21, and as the slight looseness of the sash will adapt the lower edge of the pocket 15 to bear on the ball so as to retain the latter seated in the
80 pocket 21, if an attempt is made to raise the sash, it will be evident that the latter will be locked from elevation until the ball is removed from the pocket 21 by a manipulation of the push piece that is opposite said pocket.
85

It is claimed for the improved sash support and lock that it is exceedingly simple and inexpensive, that it can be applied to any window having vertically movable sashes, that it will reliably sustain the sashes at different
90 points of elevation, and also automatically lock the window in closed adjustment.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

95 1. A sash support, comprising an inwardly and upwardly curved pocket in the side bar of the sash near its lower end said pocket having a sloped wall at the top edge, a plurality of downwardly and inwardly curved
100 pockets in the bead strip that covers the pocket in the sash, push pieces adapted to enter the pockets and projecting out through the bead strip, and a spherical ball intervening the sash and bead strip and adapted to enter the
105 pockets therein the pocket of the sash being of a depth greater than the diameter of the ball, substantially as described.

2. A sash support and lock, comprising a pocket in the sash at one side near its lower edge, the said pocket having a sloped upper edge, a series of pockets in the bead strip that covers the pocket in the sash said pockets being upwardly and outwardly sloped, a semi-circular locking pocket in the bead strip below the series of pockets therein, push pieces in the pockets in the bead strip and projecting out through the said bead strip, and a ball adapted to traverse the upper series of pockets in the bead strip when the sash is elevated and interlock with one of said pockets and the sloped edge of the sash pocket to support said sash, and interlock with the lowermost pocket in the strip and the pocket in the sash to hold the sash completely lowered the pocket of the sash being of a depth greater than the diameter of the ball, substantially as described.
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Witnesses:

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