

T. P. SHEAN.
METAL WINDOW FRAME.
APPLICATION FILED MAR. 23, 1911.

996,946.

Patented July 4, 1911.

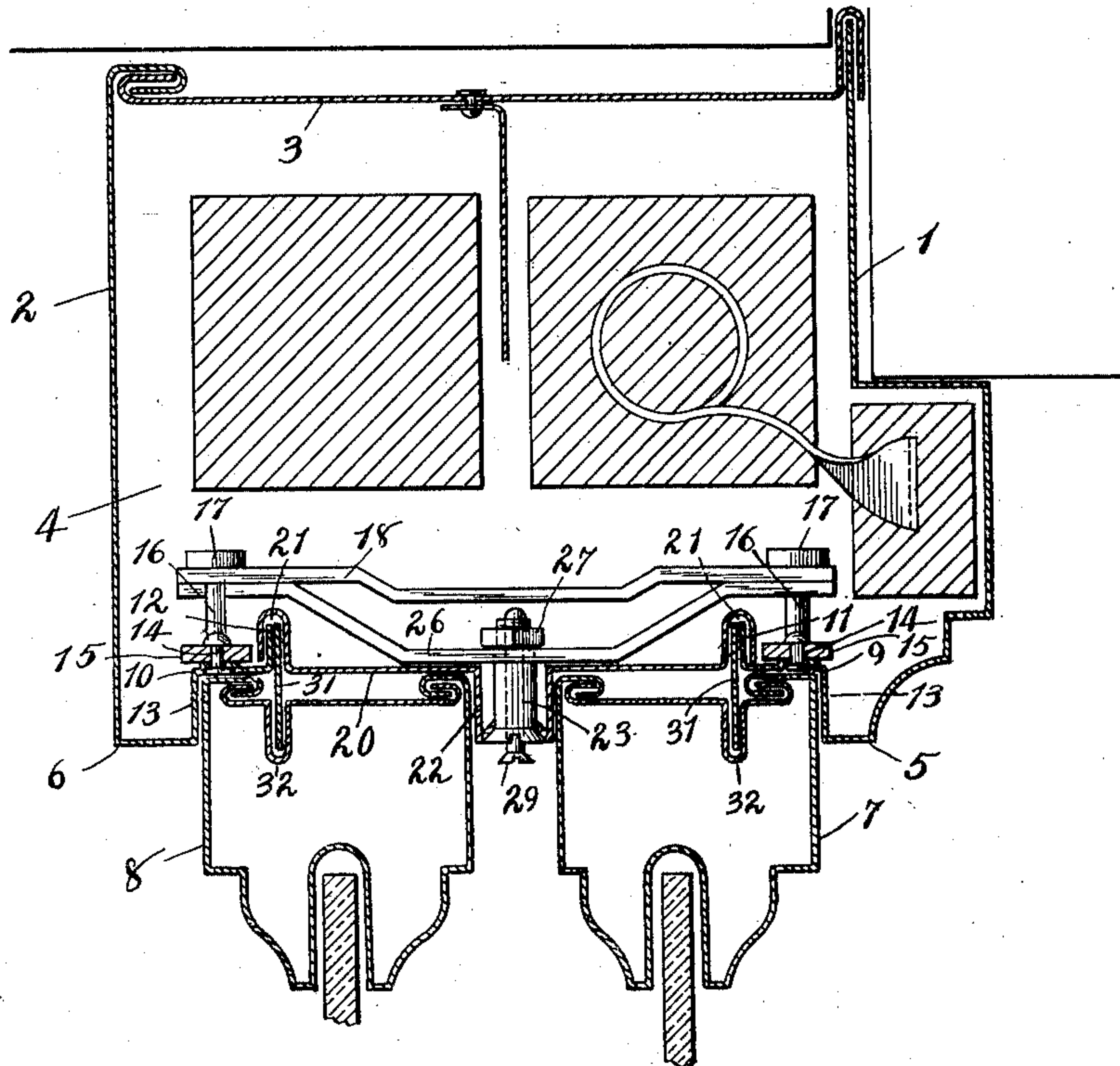


Fig. 1.

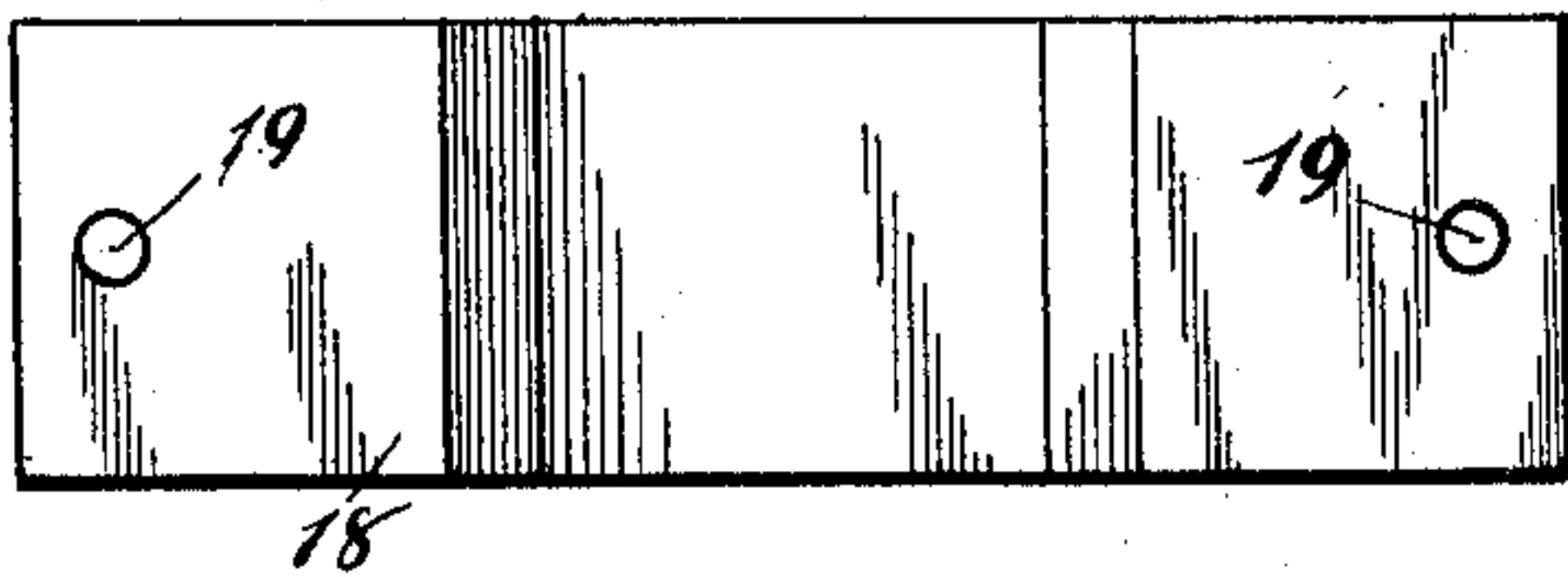


Fig. 2.

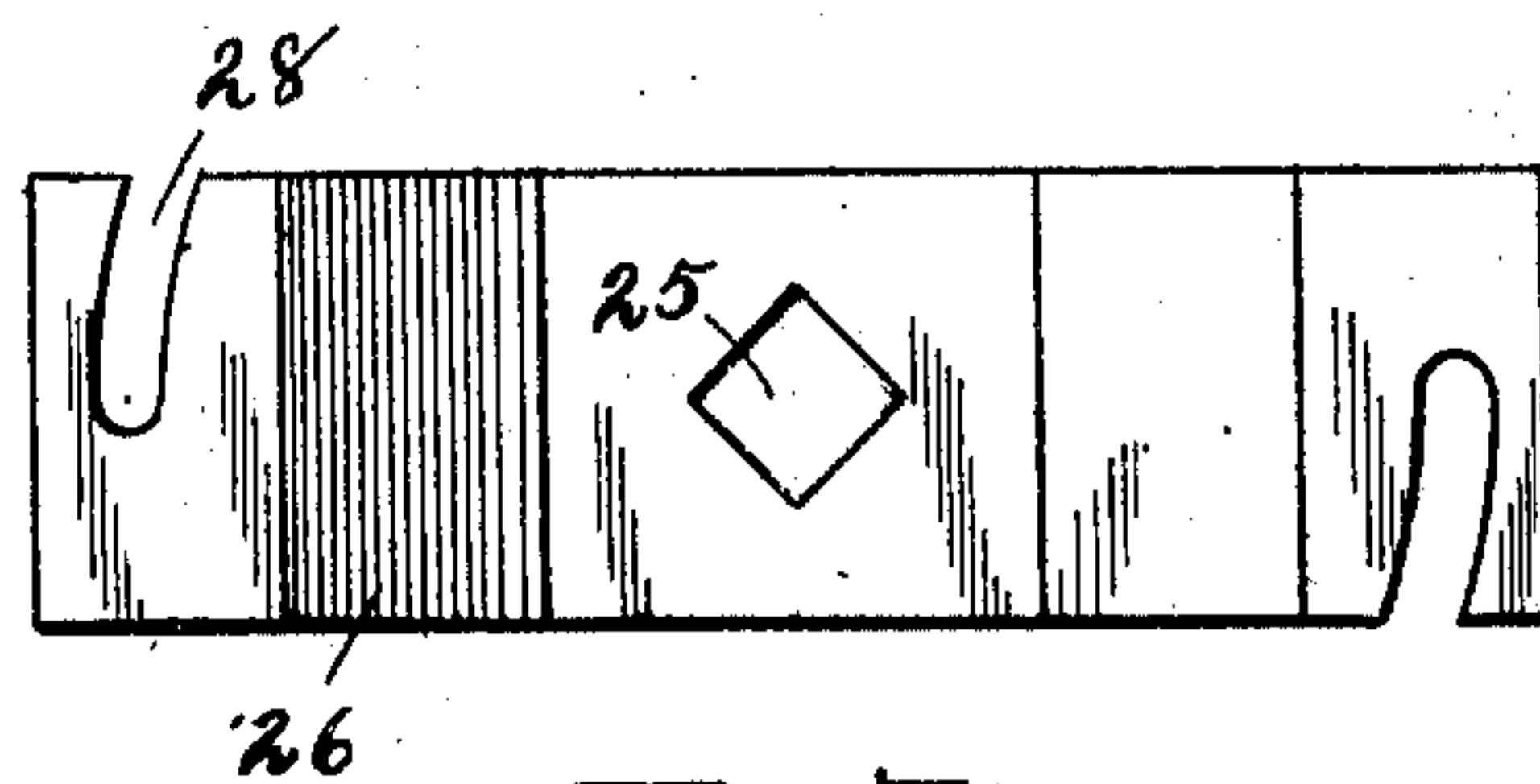


Fig. 3.

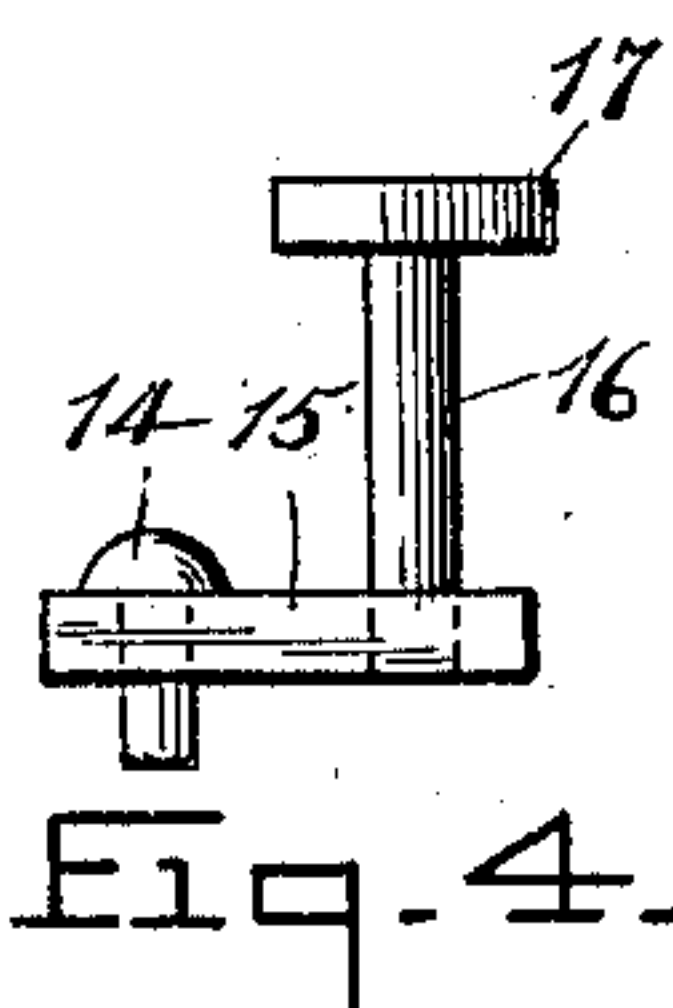


Fig. 4.

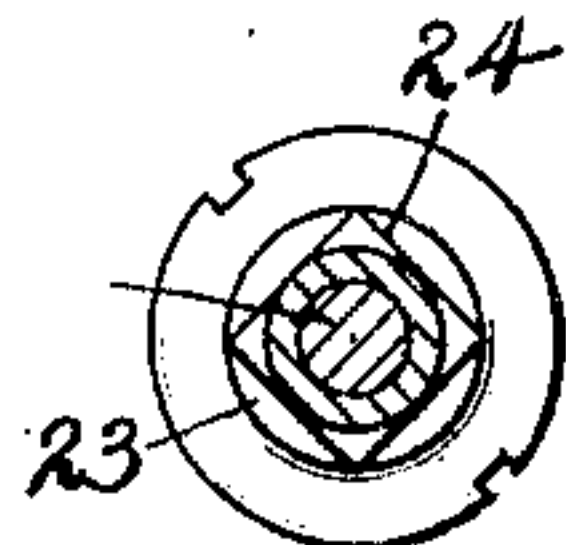


Fig. 5.

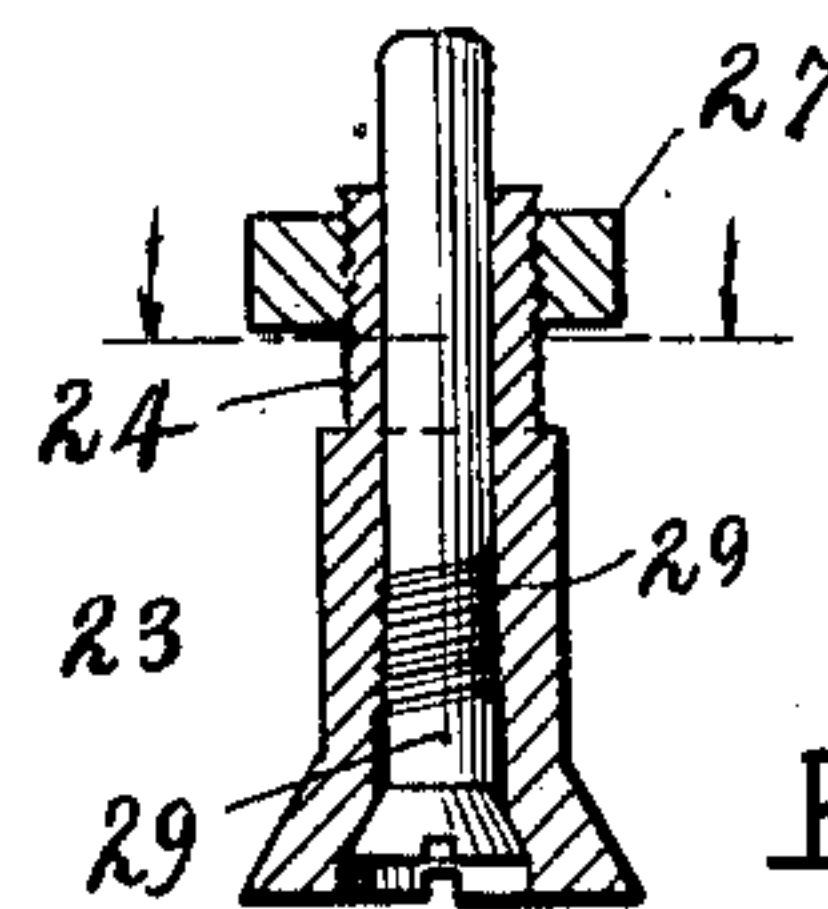


Fig. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS P. SHEAN, OF CHICAGO, ILLINOIS.

METAL WINDOW-FRAME.

996,946.

Specification of Letters Patent.

Patented July 4, 1911.

Application filed March 23, 1911. Serial No. 616,307.

To all whom it may concern:

Be it known that I, THOMAS P. SHEAN, 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 Metal Window-Frames, of which the following is a specification.

My invention relates to improvements in metal window frames, and has for its object the improvement and simplification of the means for securing the sashes in the frames whereby the securing devices may be readily locked in position and adjusted to properly accommodate the sashes.

I secure the above object by means of the mechanism illustrated in the accompanying drawings, in which:—

Figure 1 is a horizontal section through one of the sides of a frame and the stiles of the sashes adjacent thereto; Fig. 2 is an elevation of a brace bar; Fig. 3 is an elevation of a locking plate; Fig. 4 is an elevation of a locking stud; Fig. 5 is a section through a locking bolt; and Fig. 6 is an end view of a locking bolt.

Similar reference numerals refer to similar parts throughout the several views.

The frame may be advantageously made of sheet metal, and the vertical side elements thereof formed (as shown in Fig. 1) of an outside plate 1, an inside plate, 2, the remote or outer edges of which are connected by an end plate, 3, to form a vertical compartment, 4, in which may be located weights or other mechanism for controlling the sash. The inner ends of the outer and inner plates 1 and 2, are formed into the molding or rails, 5, and 6, between which the sashes, 7 and 8, are located, and, after forming the respective rails, the plates 1 and 2 are bent at substantial right angles toward each other to form shoulders, 9 and 10, respectively and each plate is then bent again at right angles to form the flanges, 11 and 12, which extend into the compartment 4. The shoulders, 9 and 10, are punched and countersunk at intervals, 13, to receive rivets, 14, by means of which are secured to the back of said shoulders, the reinforcing plates 15, which are made sufficiently heavy to securely carry the locking studs, 16, extending farther into the compartment, 4. The locking studs, 16, are provided with the heads, 17, which serve to hold the brace bar, 18, (shown in elevation in Fig. 2)

through holes, 19, in which said studs are passed before they are secured by riveting or in any other suitable method, to the reinforcing plates, 15.

The sashes are introduced into the frame by putting their vertical sides or stiles into the compartment, 4, between the flanges, 11 and 12, until their opposite stiles may be inserted in the channel provided for the stiles of the sash in the opposite side member of the frame.

To extend between the flanges, 11 and 12, and secure the sash in the frame is provided the plate, 20, along the edges of which are provided grooves 21, to receive the flanges 11 and 12, and in the center of which is formed a ridge or stop, 22, to separate the sashes from each other. The stop, 22, is bored and countersunk at intervals opposite the location of the locking studs, 16, to receive the locking bolt, 23. This locking bolt, 23, has a square shoulder, 24, near its end, which fits into a square aperture, 25, in a locking plate, 26, (shown in elevation in Fig. 3) which is secured in assembly with said shoulder by the nut 27. The locking plate, 26, is given the form clearly shown in edge view in Fig. 1, so that it will readily bend inwardly to permit of adjustment, and the slots, 28, are provided near its ends which extend into the plate from opposite sides so that they may engage the locking studs, 16, when the plates are rotated by means of the locking bolt 23. The locking bolt is centrally bored and a portion thereof is interiorly threaded at 29, to receive the jam bolt or screw 30, jams against the brace bar 18 thereby forcing the lock plate, 26, and plate 20, toward the sash. This action results in locking the locking plate in position and adjusting the plate, 20, with respect to the stiles of the sash.

As seen in Fig. 1, I have formed the grooves 21 sufficiently wide to receive a packing plate, 21, as well as the flanges, 11 or 12, and a groove, 32, is provided in the stiles of the sash to receive the other edge of said plate 31.

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

1. A metal window frame having a channel to receive the stiles of the sash, studs adjacent said channel, an end plate extending

across said channel, locking plates pivoted to said end plate and slots in said locking plates for engaging said studs.

2. A metal window frame having a channel to receive the stiles of the sash, projections adjacent said channel, a brace plate extending between said studs, an end plate extending across said channel, locking plates pivoted to said end plate, slots in said locking plates for engaging said studs, and a jam screw carried by said end plate adapted to impinge against brace plate.

3. A metal window frame having a channel to receive the stiles of the sash, projections adjacent said channel, a brace plate ex-

tending between said studs, an end plate extending across said channel, locking plates pivoted to said end plate, slots in said locking plates for engaging said studs, a jam screw carried by said end plate adapted to impinge against brace plate, and means for operating said locking plate from the face of said end plate.

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

THOMAS P. SHEAN.

Witnesses:

H. DE LOS HIGMAN,
M. A. MILORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."