

E. H. LUNKEN.
WINDOW CONSTRUCTION.
APPLICATION FILED SEPT. 17, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

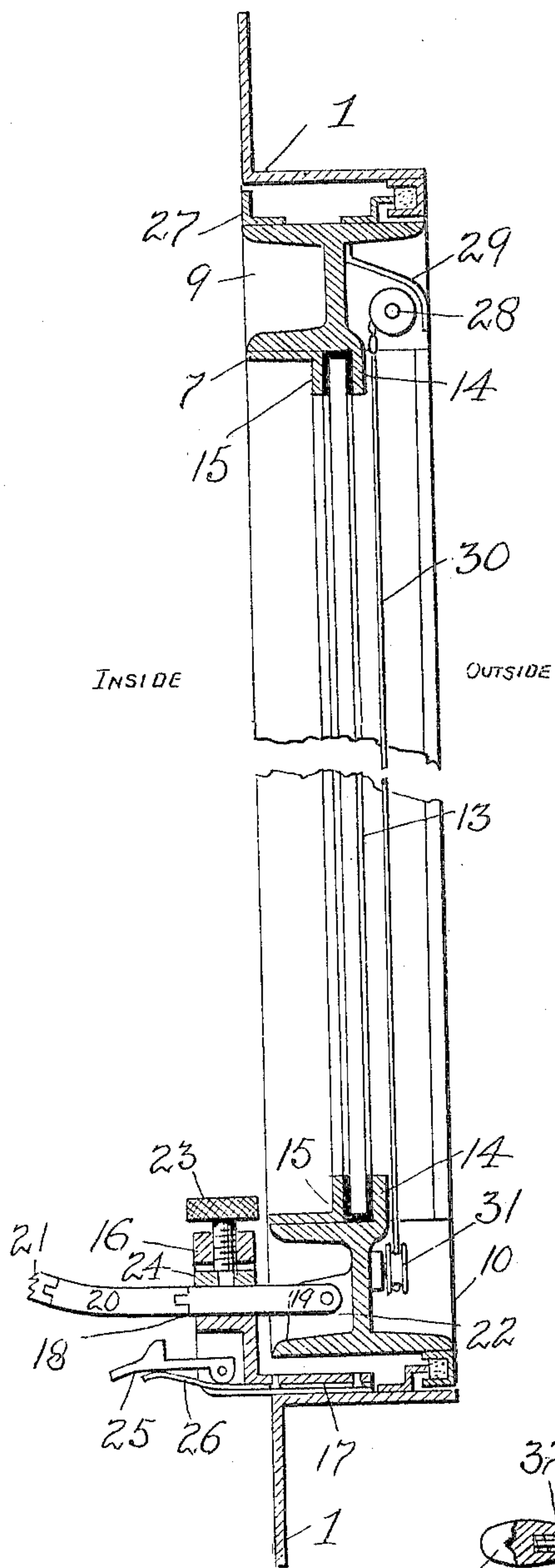


Fig. 2.

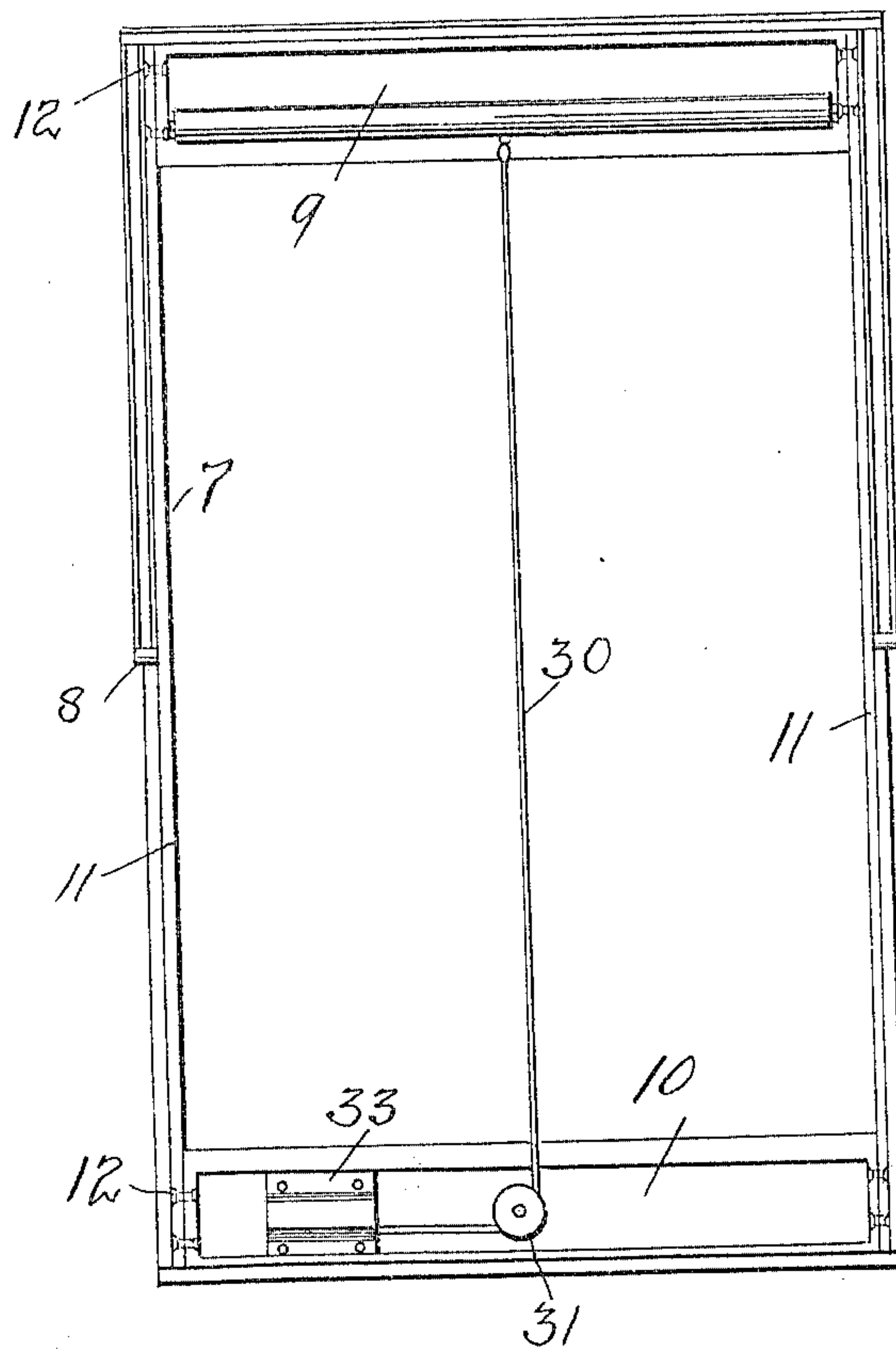
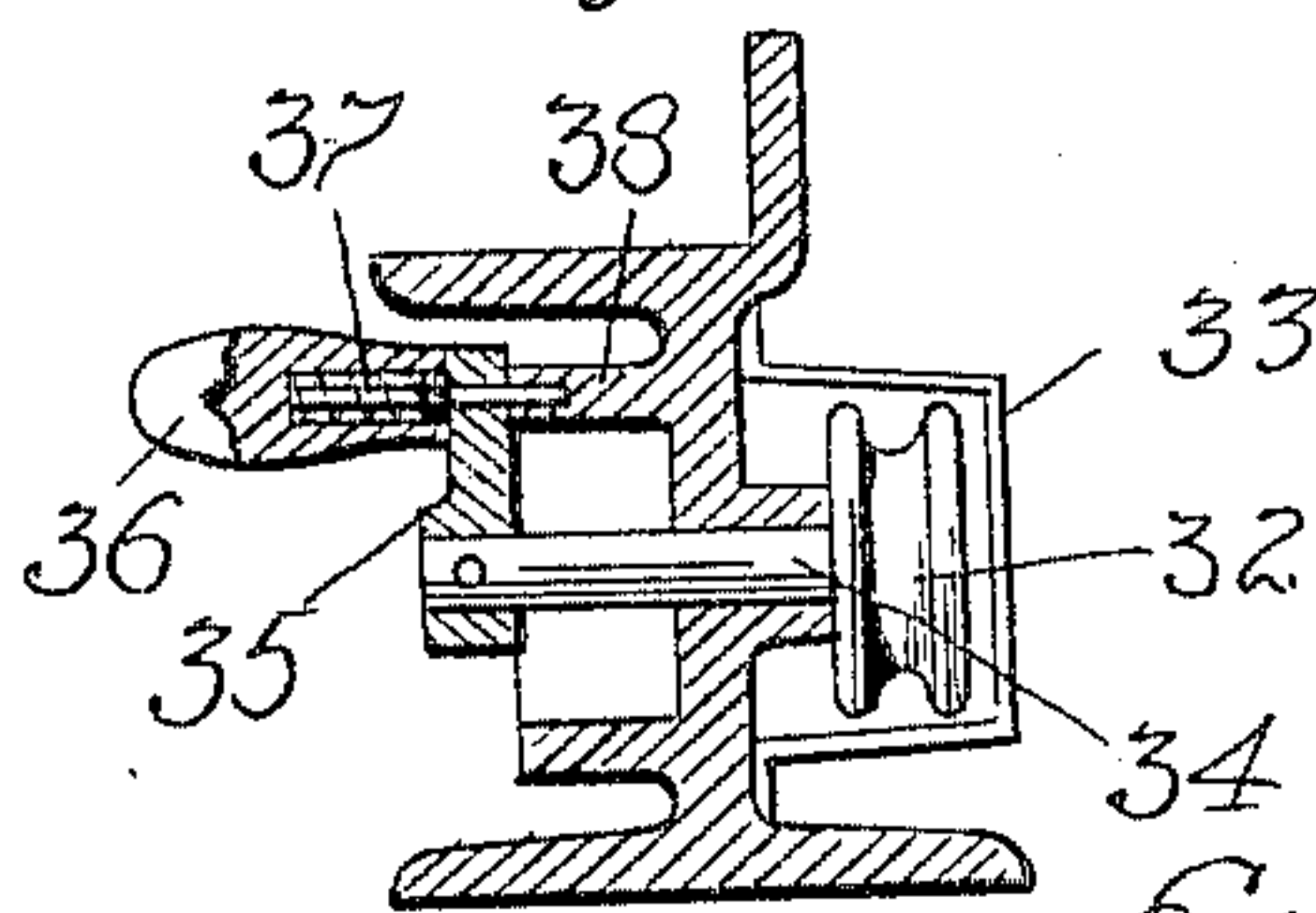


Fig. 3.

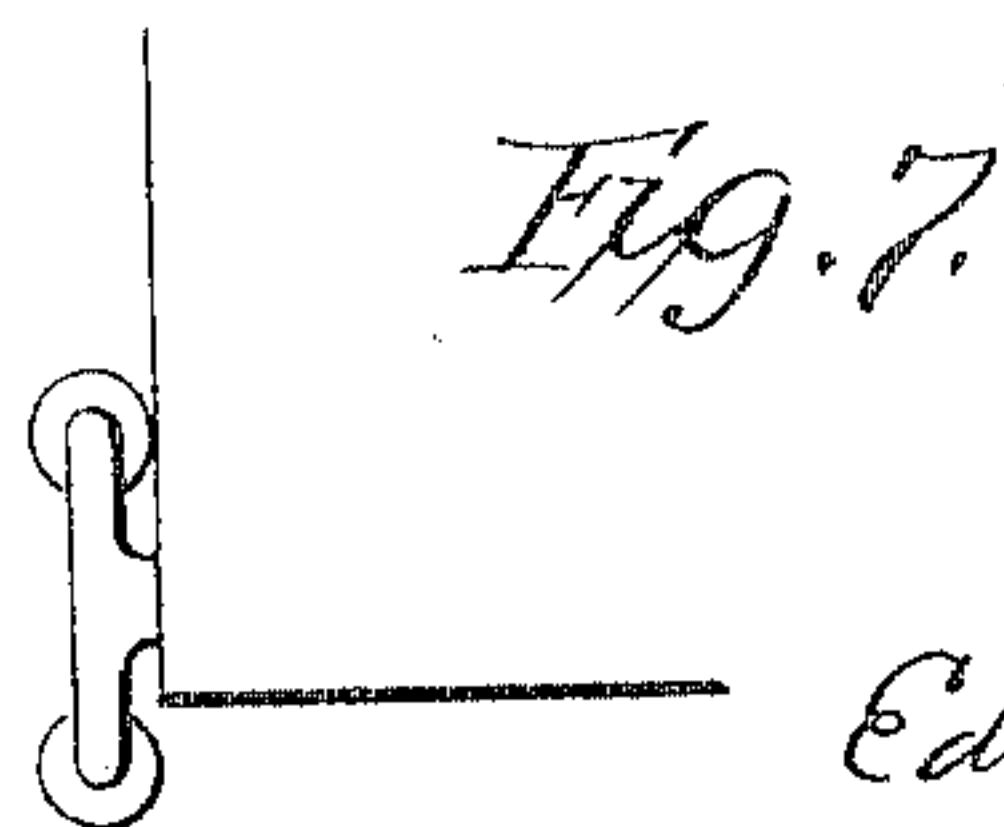
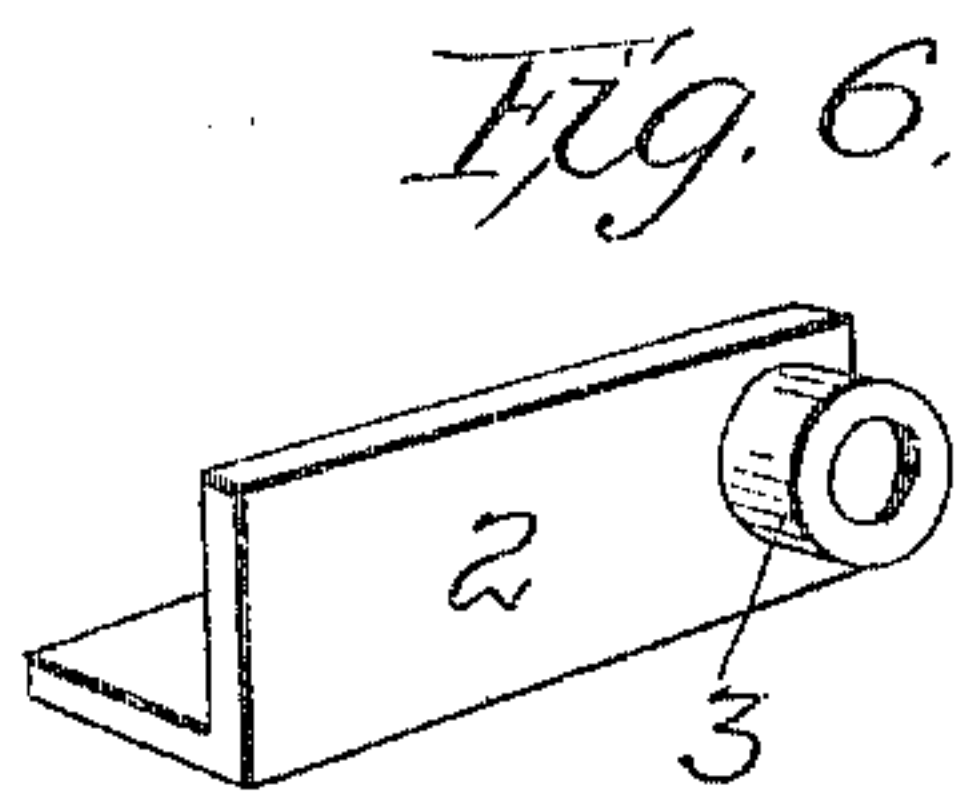
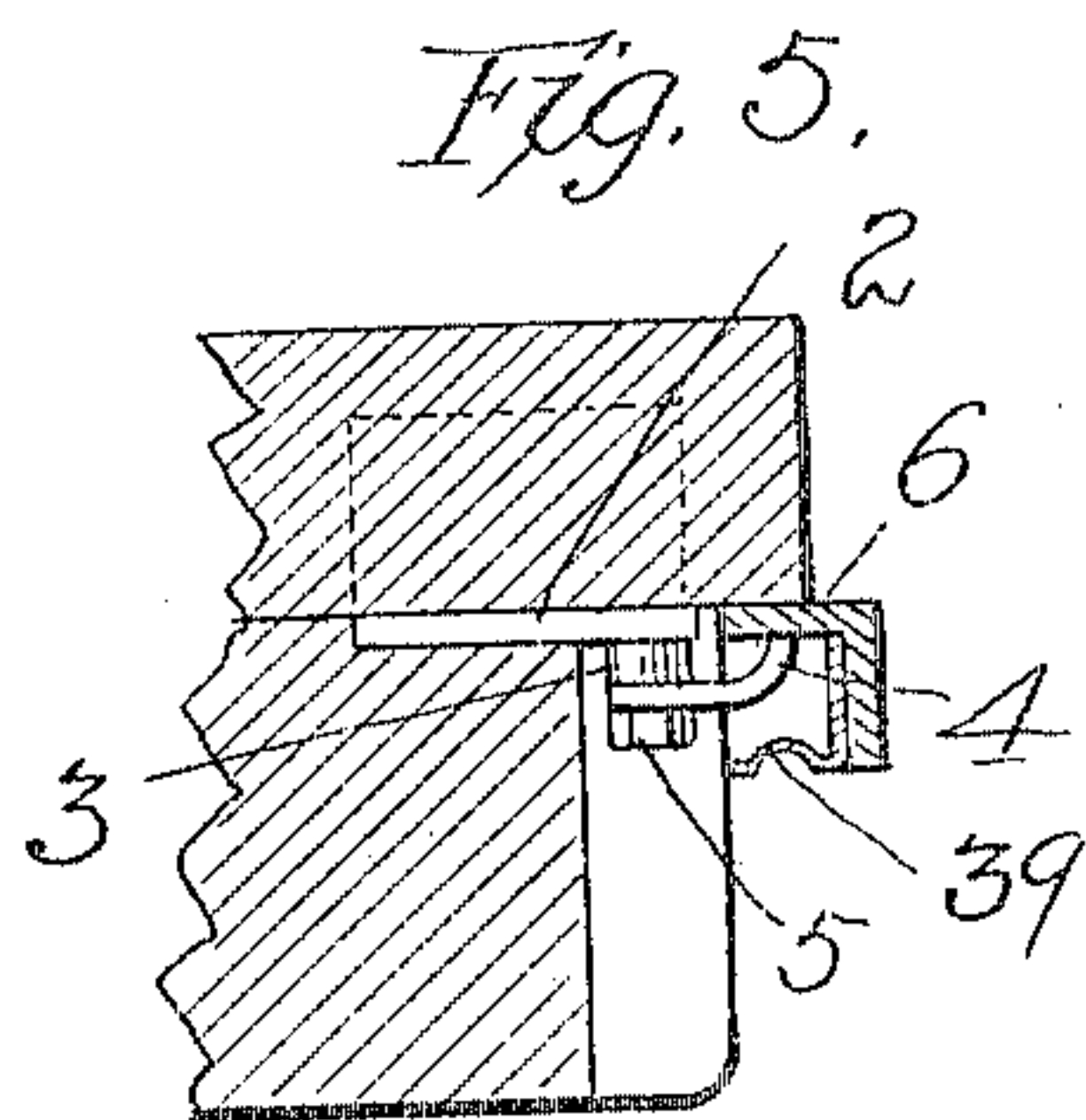
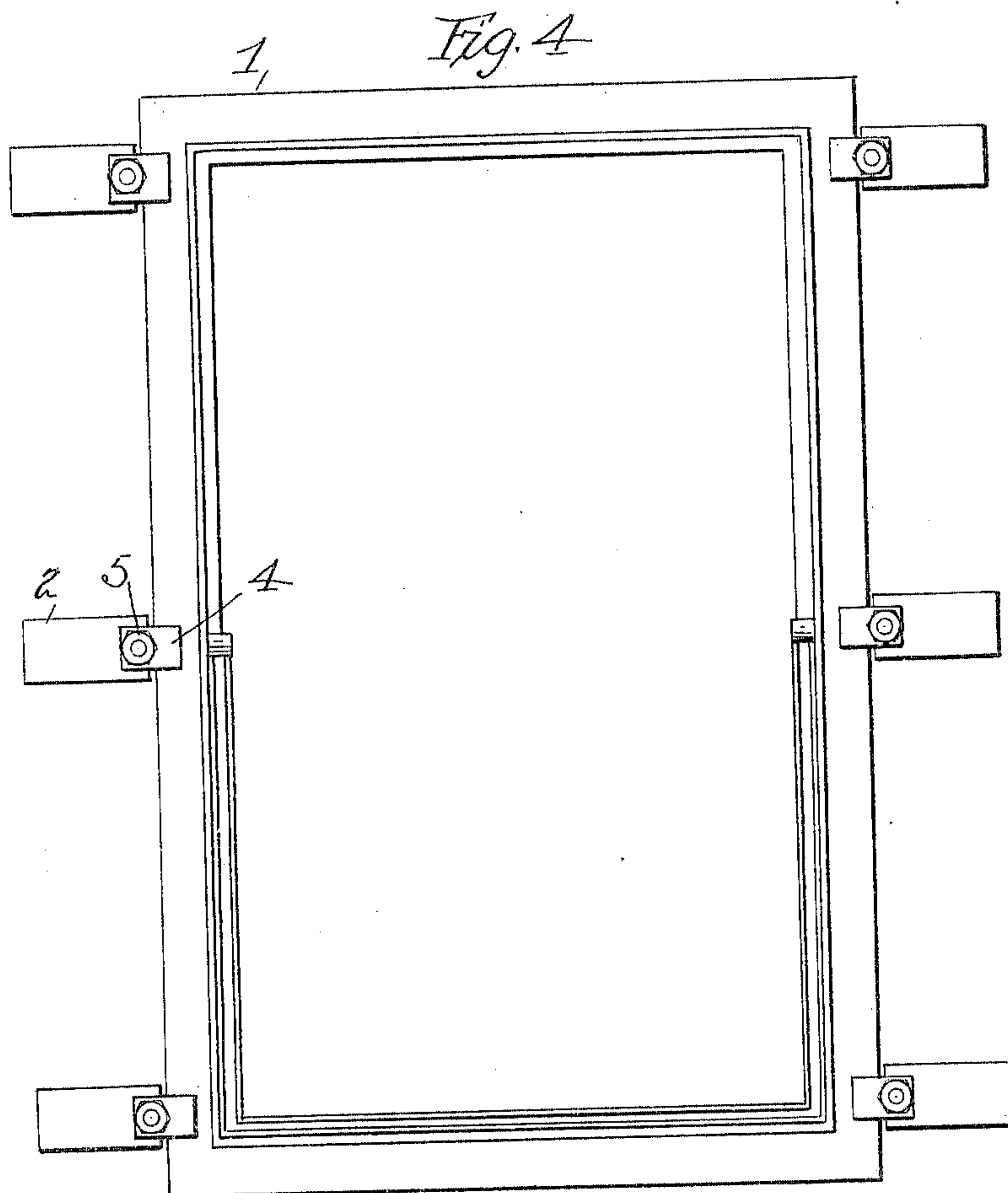


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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

EDMUND H. LUNKEN, OF CINCINNATI, OHIO.

WINDOW CONSTRUCTION.

No. 804,486.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed September 17, 1904. Serial No. 224,916.

To all whom it may concern:

Be it known that I, EDMUND H. LUNKEN, a citizen of the United States, residing at Cincinnati, Ohio, have invented certain new and useful Improvements in Window Construction, of which the following is a specification.

My invention relates to window constructions, and more particularly of a class in which a swinging portion is pivotally supported within a main portion.

The invention consists in the features and combination and arrangement of parts hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a central vertical sectional view through a window embodying my invention. Fig. 2 is a front view of the swinging frame, taken from the outside of the window. Fig. 3 is a detail sectional view of means for controlling the shade or curtain. Fig. 4 is an elevation of the main frame, the view being taken from the outside of the building. Fig. 5 is a sectional plan view through the main frame of Fig. 4. Fig. 6 is a perspective view of a cast-iron brick forming part of the means for securing the main frame in place. Fig. 7 is a detail view of means for controlling the movement of the curtain.

The main frame 1 is composed of angle-iron, and it is secured to the wall of the building by the aid of cast-iron bricks 2, which are of angular form, as shown in Fig. 6, and are embedded in the wall of the building, as indicated in Fig. 5. These cast-iron bricks have bosses 3 formed thereon, and retaining-pieces 4 are held to these bosses by bolts 5, which pass through the retaining-pieces and into the bosses. The retaining-pieces have their inner ends bent, and these bear upon the flange 6 of the main frame and hold the same in place against the wall adjacent the window-opening. There are about three of these iron bricks, with the retaining-pieces, on each side of the main frame.

In effect, the cast-iron bricks, with the retaining-pieces, form parts of the main frame as they provide extensions from the said main frame which secure the same to the wall of the building.

Within the frame member 1 a secondary member 7 is arranged, being supported by its pivots 8, Fig. 2, resting in sockets on a member 1. The secondary member is preferably made up of upper and lower panels 9 10, of cast-iron or any other material, extending

transversely across the secondary frame, and side pieces 11, which are riveted to the panels at 12. This forms a strong construction and one which is simple to manufacture and effective in use, no bends being required and the work being thereby facilitated and cheapened. This secondary frame carries the glass 13, which is retained at its upper and lower edges of its outer side by the flanges or projections 14 on the cast-iron panels. The glass is also confined by angle-irons, such as are indicated at 15, riveted to the secondary frame. The glass is set in putty. In order to control the positions of the swinging frame when adjusted to an inclination in respect to the main frame, I provide a lock-post 16 on the inner side of the window and supported by a foot portion 17 from the main frame 1, said foot portion entering the space between the lower panel of the swinging frame and the main frame. This locking-post has its foot riveted to the main frame and is provided with a passage-way 18 for a jointed arm made up of a plurality of sections—such, for instance, as at 19 20 21. The inner section 19 is removably pivoted between lugs 22, cast with the panel 10, and hinged to this part, so as to permit movement in a horizontal plane, is the section 20, and the section 21 is also pivotally supported on the section 20, so as to permit of horizontal motion. A clamp or locking screw 23 passes through a part of the post and operates a block 24, which bears on the holding or retaining arm.

Fig. 1 represents the swinging frame in closed position and held by the lock or clamp screw 23, pressing the block 24 into engagement with the jointed arm. When the swinging frame is closed, by moving the section 20 in a horizontal position it tends to draw up tightly the swinging frame, the said section acting as a wedge on the post 16. The outer section 21 is hinged to move in a horizontal plane, so as to permit it to be thrown aside when the swinging frame is partly open, thereby removing liability of damage to the arm.

I employ between the swinging frame and the main frame stop-strips, such as those disclosed in Letters Patent of the United States, granted to me on the 24th day of May, 1904, Nos. 760,624, 760,625, and 760,626, and which are so arranged as to permit of approximate reversal of the swinging frame. In order to hold the swinging frame in its substantially reversed position, so that the window will be

held steady when desired—as, for instance, when it is being cleaned—I provide a catch 25, pressed upwardly by a spring 26, said catch being pivoted to a cut-out portion of the 5 locking-post 16 and being adapted to engage the top hiding-strip 27, carried by the swinging frame.

The curtain in my present arrangement is located upon the outside of the window and 10 is carried on a spring-roller 28, journaled in suitable bearings in the upper panel 9. This spring-roller is arranged under a hood 29, and the curtain has attached thereto a cord 30, which passes beneath a guide-roller 31, 15 journaled on the outer side of the lower panel-frame, whence the cord extends laterally to a winding-drum, Fig. 3, arranged within a housing 33, secured to the outer face of the lower panel. The winding-drum is on a shaft 20 34, journaled in and extending through the lower panel, and on its inner end the said shaft is provided with an arm 35, having a handle 36, by which the shaft may be turned to wind or unwind the curtain-cord from the drum. The 25 handle is held in any position in which it may be adjusted by a spring-actuated catch 37 within the handle engaging in holes around the circular projection 38. By rotating the crank 35 to the right the curtain is drawn down and 30 may be held in any position by the catch 37. In order to roll up the curtain, the catch is disengaged by pulling outwardly the handle 36, and the spring of the roller 28 is sufficiently strong to roll up the curtain, the cord 35 30 simply unwinding from the reel or drum 32. The housing 33 protects the reel from the elements and prevents snow, rain, or dust from gaining access to the room by way of the bearing of the shaft 34. As shown at 39, 40 Fig. 5, I arrange a molding of flexible sheet material between the angle-iron frame and the wall of the building, this molding being held by the flexibility of its flanges.

It will be noticed that the main frame may 45 be readily placed in position or removed from the wall by means of the retaining-pieces 4. These may readily be removed, and then the frame member 1 is free to be taken from its position in the wall of the building. This 50 frame member is also capable of adjustment in order to compensate for the settlement of the building.

I claim as my invention—

1. In combination, a main frame composed 55 of a plurality of members supported from the wall of the building; and an open frame mem-

ber adjustably supported on the said plurality of members to compensate for settling of the building, and means to close the said opening 60 carried by the said members.

2. In combination, a main frame composed of an open frame member extending continuously about the window-opening, a plurality of iron bricks embedded in the wall of the building, and means for connecting the said plu- 65 rality of iron bricks with the open frame member, substantially as described.

3. In combination, the main open frame member 1 extending continuously about the window-opening, of the window, a plurality 70 of bricks embedded in the wall and retaining-pieces removably secured to the iron bricks and bearing upon the frame member, substantially as described.

4. In combination, in a window construc- 75 tion, a main open frame member extending continuously about the window-opening, a plurality of iron bricks embedded in the wall, and bent retaining-pieces removably secured to the iron bricks, and bearing upon the frame 80 member, substantially as described.

5. In combination, a main frame member, a brick or piece embedded in the wall of the building and having a boss formed thereon, and a retaining-piece bolted to said boss and 85 bearing upon the main frame member, substantially as described.

6. In a window construction, a frame composed of flat bar-iron side pieces, transverse upper and lower flanged cross-pieces to which 90 the flat bar-iron side pieces are secured, and a glass or light within the space bounded by the flat bar-iron side pieces and upper and lower cross-pieces, substantially as described.

7. A window construction composed of up- 95 per and lower cast panels extending transversely of said frame, and flat bar side pieces secured to the said panels, substantially as described.

8. In combination with a main frame, a 100 frame swinging therein, a hiding-strip on the main frame, and a catch to engage the said hiding-strip when the swinging frame is approximately reversed, substantially as described. 105

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

EDMUND H. LUNKEN.

Witnesses:

BERNARD J. HAUSFELD,
HOWARD HOPPLE.