

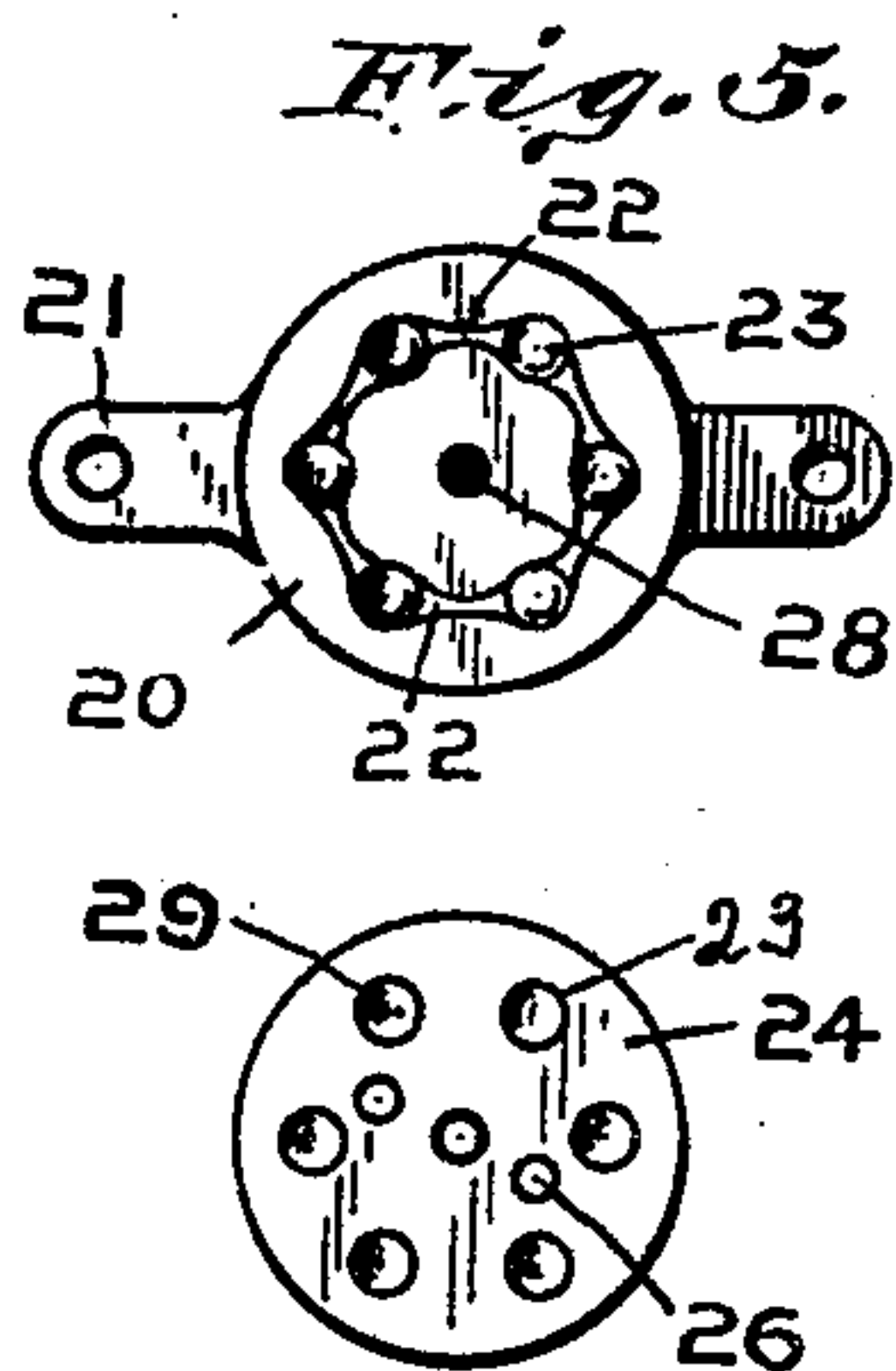
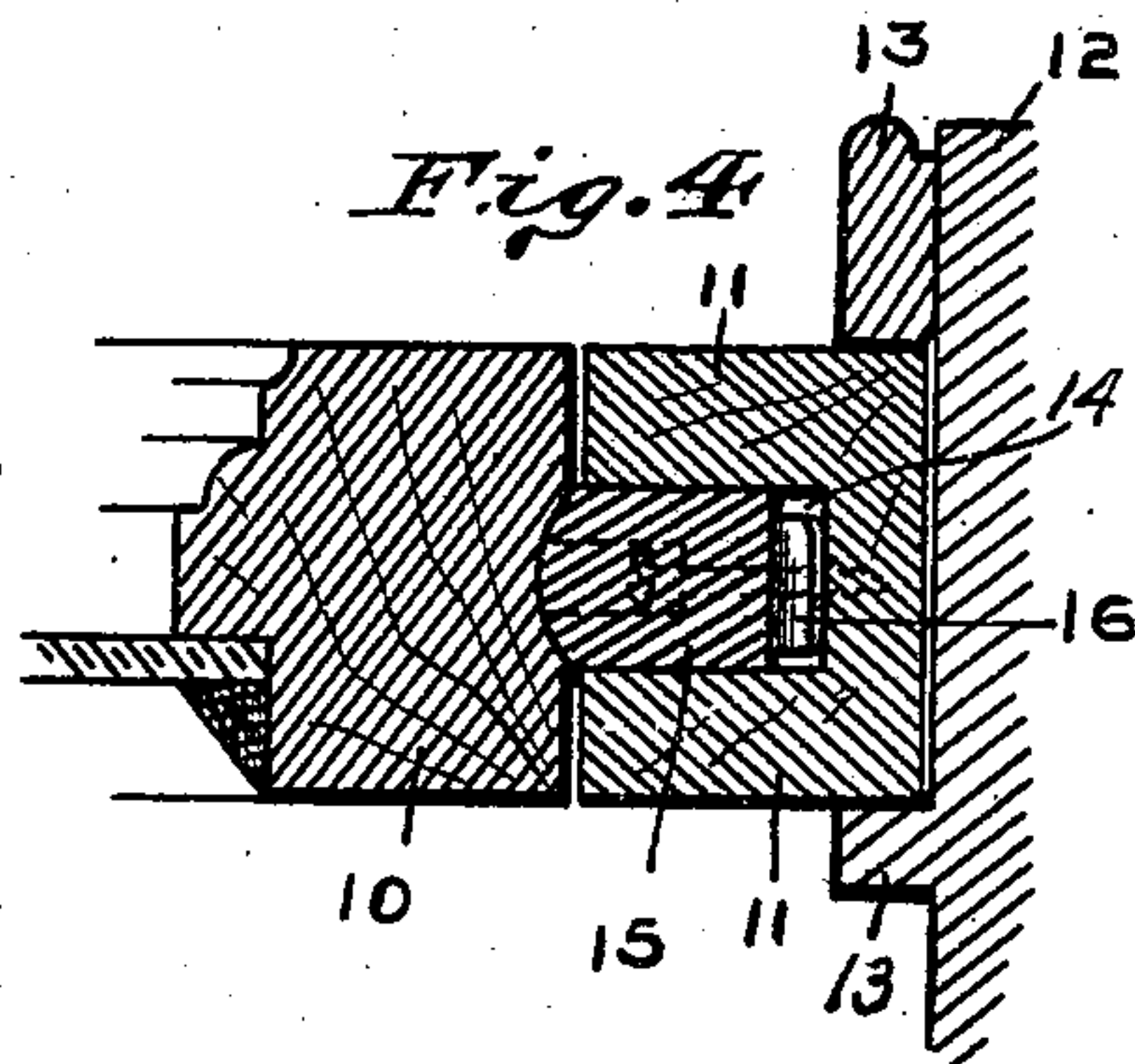
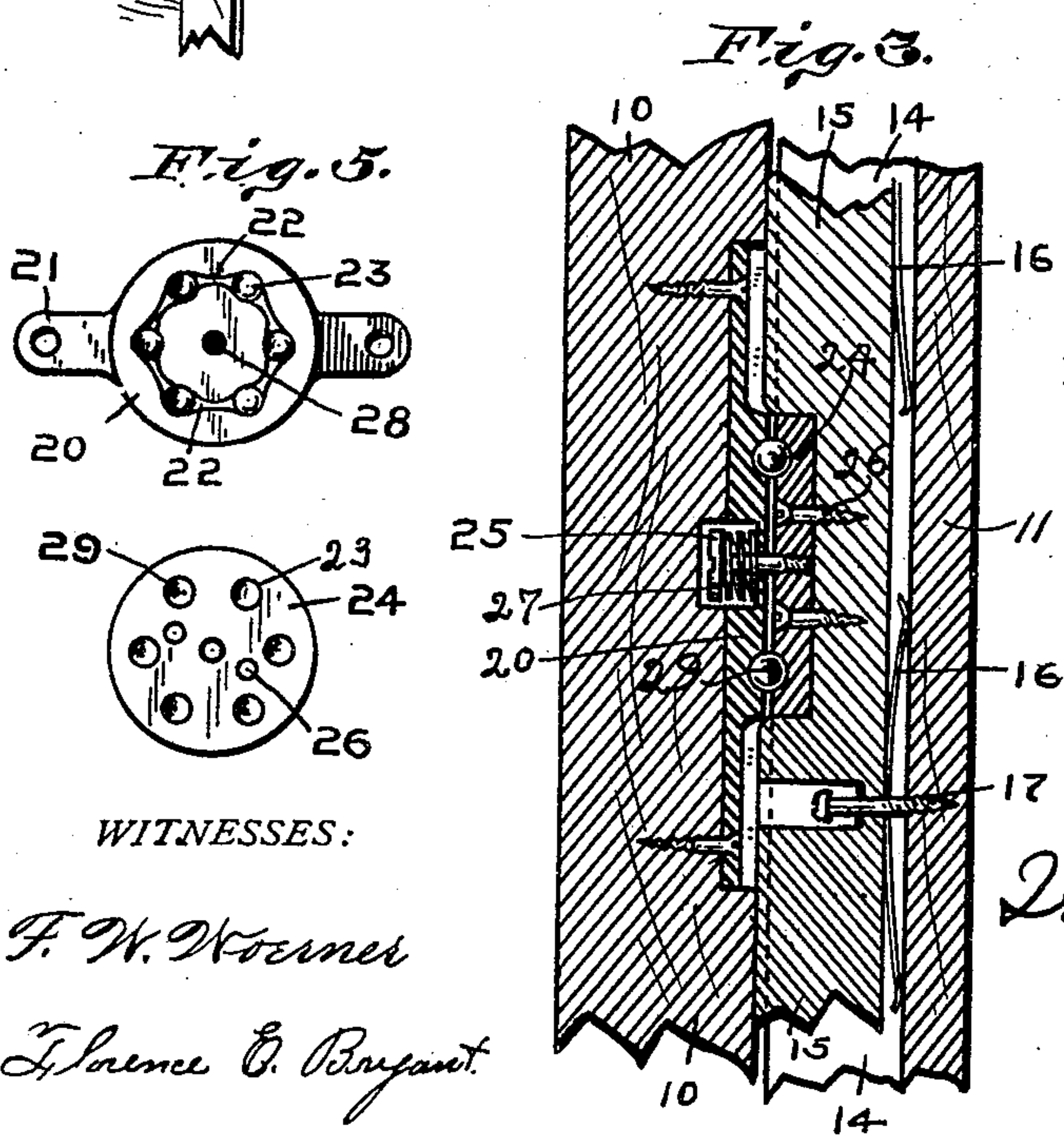
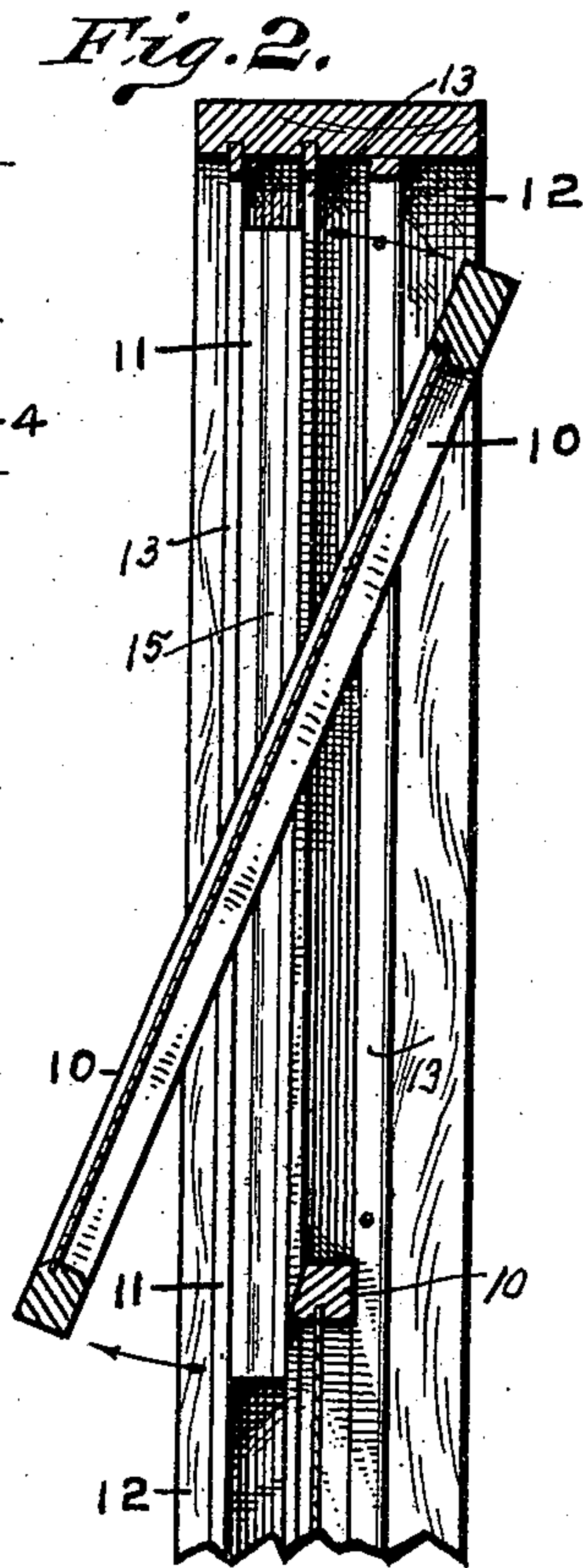
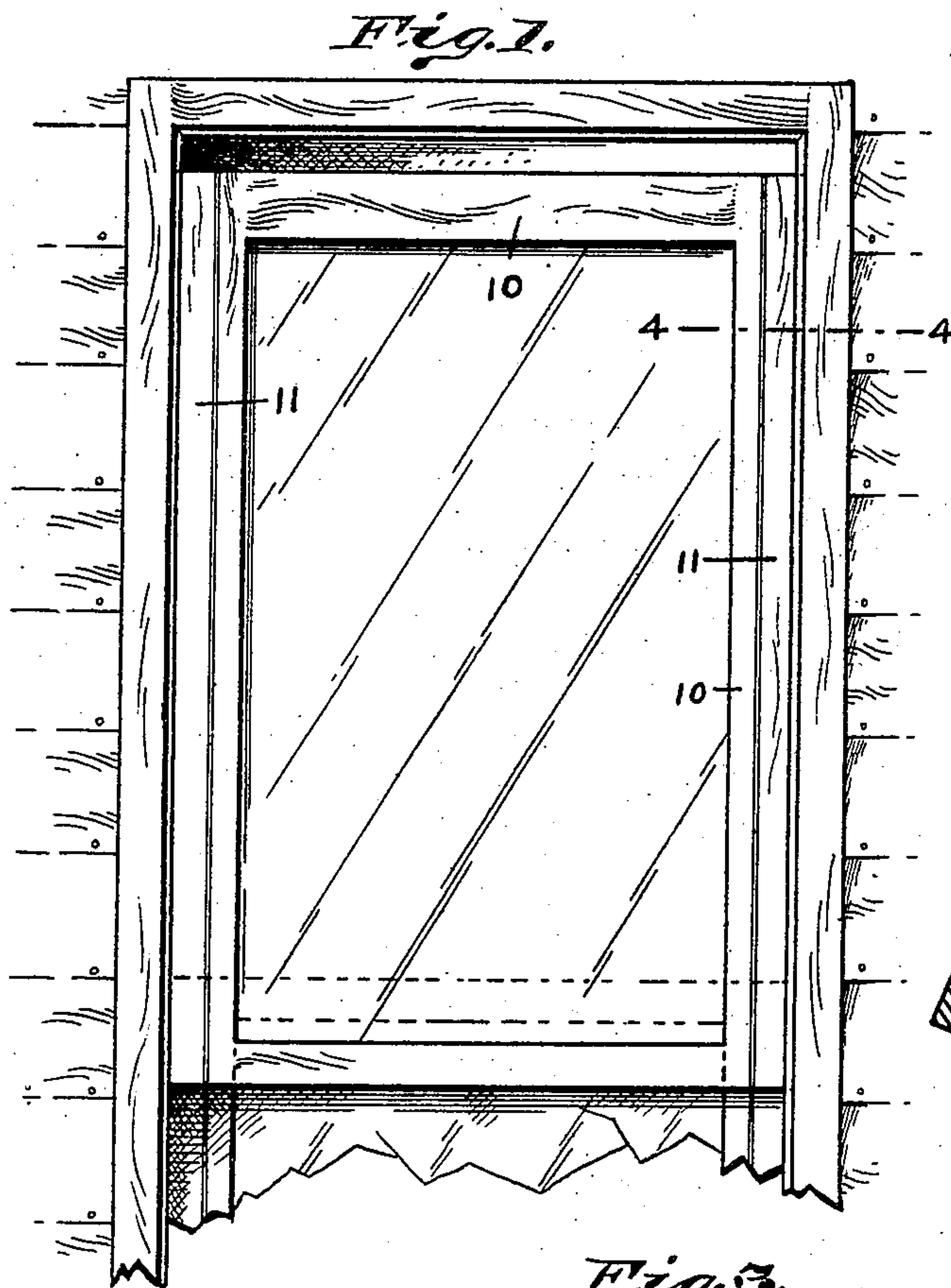
No. 689,249.

Patented Dec. 17, 1901.

I. E. TRANTER.  
WINDOW SASH ATTACHMENT.

(Application filed July 13, 1901.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

IRA E. TRANTER, OF FRANKLIN, INDIANA, ASSIGNOR OF ONE-HALF TO WILLIAM B. JENNINGS AND BENJAMIN P. BROWN, OF FRANKLIN, INDIANA, AND DUPONT AND JOHNSON, OF INDIANAPOLIS, INDIANA.

## WINDOW-SASH ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 689,249, dated December 17, 1901.

Application filed July 13, 1901. Serial No. 68,188. (No model.)

*To all whom it may concern:*

Be it known that I, IRA E. TRANTER, of Franklin, county of Johnson, and State of Indiana, have invented a certain new and useful Window-Sash Attachment; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like figures refer to like parts.

10 The object of this invention is to provide an improved means for enabling a window-sash to be rotated without removal from the frame for washing or cleaning the same or for any purpose, and to hold said sash in the position in which it might be placed.

15 Another object is to provide an improved arrangement of spring-pressed weather-strip for the window-sash.

20 These and the other features of my invention will appear from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is an elevation of the upper portion of a window, the lower part being broken away. Fig. 2 is a central vertical section with the upper sash partially rotated. Fig. 3 is a vertical central section crosswise through one side of the window-sash and the adjacent parts near the middle of the sash, the upper and lower parts being broken away. Fig. 4 is a horizontal cross-section of what is shown on the line 4 4 of Fig. 1, parts being broken away. Fig. 5 is a plan of the adjacent faces of the two plates that form the ball-bearings by which the window-sash is mounted.

35 There are various ways of carrying out this invention and constructing the device. One method is to saw off from each side of a window-sash 10 a guide-bar 11. This is desirable where old window-sashes will be provided with my invention; but where the window is made in view of my invention the guide-bars 11 may be made independent of the window-sash. The guide-bars 11 are in one sense only the side edges of the sash and slide up and down in the window-frame which is made in the ordinary way. My invention does not change any part of the window-frame, but only changes the construction of the sides of the window-sash. The window-frame, as

here shown, consists of a body 12 and the stops 13 on each side of the guide-bars. The guide-bars 11 after being sawed off from each side of the window-sash are channeled out, as shown in Fig. 4, to make the recess 14, that extends longitudinally from the top to the bottom of the guide-bars. In it I place the weather-strip 15, that likewise extends from top to bottom, and between the weather-strip 15 and the guide-bar 14 within the recess I place the springs 16, secured to either member and pressing the two apart—that is, pressing the weather-strip 15 outward from the recess 14 and away from the guide-bar 11. The springs 16 are secured between the guide-bar and weather-strip by the screws 17, with the head movable in a countersunk hole in the weather-strip to hold the spring in place and prevent independent vertical movement of the guide-bar and weather-strip, yet permit lateral movement of the weather-strip.

The window-sash is pivotally mounted to and between the weather-strips 15 and is in no wise secured to the guide-bars 11. The means for making this pivotal connection is shown in Figs. 3 and 5. In a suitable recess made in the side of the sash I secure the plate 20 by screws through the arms 21. This plate has ball-seats 23, connected by ball-races 22; but the ball-races 22 are not as deep as the ball-seats 23. The companion plate 24 is provided with a series of ball-seats 23, but without any intervening ball-races 22. The flat-headed screw 25 extends loosely through the hole 28 in the plate 20 and is screwed into the plate 24, and plate 24 is secured to the weather-strip by the screws 26. The screw 25 is long enough to permit the partial separation of the two plates 20 and 24, and the spiral spring 27, surrounding the screw 25, tends to press the plate 20 against the plate 24. Balls 29 are placed in the ball-seats 23, which correspond with each other in the two plates, and the balls 29 being of the proper dimensions the two plates 20 and 24 will engage each other while the balls are in place and while the ball-seats correspond with each other, as shown in Fig. 3. When, however, the window-sash is turned into the position shown in Fig. 2, the plate 20 will be



turned also, and in moving will ride over the balls 29 in the other plate until the ball-seats 23 in the two plates again correspond, when by action of the spring 27 the two plates 5 will be brought tightly against each other and the balls will hold the window-sash in the position to which it is moved. If the window-sash be pushed farther, the same change will again occur and the sash will be 10 held in its changed position. The advantage of this ball-bearing arrangement is that the altered position of the window is more easily attained, because balls are used, and less wear of the parts forming the pivot or 15 holding arrangement will take place than if no balls were used, but merely rigid jaws or corrugations. The outer edge of the weather-strip is rounded, as shown in Fig. 4, to permit the rotation of the window-sash past it, 20 and such weather-strip fits in a corresponding vertical groove or seat in the side of the window-sash, as appears in Fig. 4. The springs 16 also act against the weather-strips and press the plates 20 and 24 together, these 25 springs coöperating with the spring 27.

Where the window-sash is originally made in view of my invention, the sash, weather-strip, and guide-bars may be made independently, and then they are finally assembled, as 30 above set forth.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a window-sash, of a guide-bar longitudinally channeled adjacent the window-sash, a spring-pressed weather-strip in said channel between the window-sash and guide-bar and a pivotal connection between the window-sash and weather-strip.

40 2. The combination with a window-sash, of guide-bars longitudinally channeled adjacent

the window-sash, weather-strips in said channels, springs in said channels for pressing the weather-strips against the sash and away from the guide-bars and a pivotal connection 45 between the window-sash and weather-strip.

3. The combination of a window-sash with its side bars grooved longitudinally, guide-bars longitudinally channeled, weather-strips in the channels of said guide-bars and fitting 50 in the grooves in the sash, springs in said channels that press the weather-strips against the sash, and means for pivoting the sash to the weather-strips.

4. The combination with a window-sash, of 55 means for pivotally mounting it consisting of a pair of plates with a series of corresponding ball-seats in each plate, and ball-races connecting the ball-seats in one plate, balls, and means for yieldingly holding the plates 60 against each other.

5. The combination with a window-sash, of guide-bars on each side thereof longitudinally channeled, weather-strips mounted in said channel between the guide-bars and sash, 65 springs for pressing the weather-strips toward the sash, a plate secured to the weather-strips, rotating bodies mounted in said plate, another plate mounted on the sash with a bearing-surface for the rotating bodies that is 70 formed of alternating depressions and elevations, and springs that tend to press the plates on the sash against the plates on the weather-strips.

In witness whereof I have hereunto affixed 75 my signature in the presence of the witnesses herein named.

IRA E. TRANTER.

Witnesses:

HENRY H. DUPONT,  
FLORENCE E. BRYANT.