

No. 758,626.

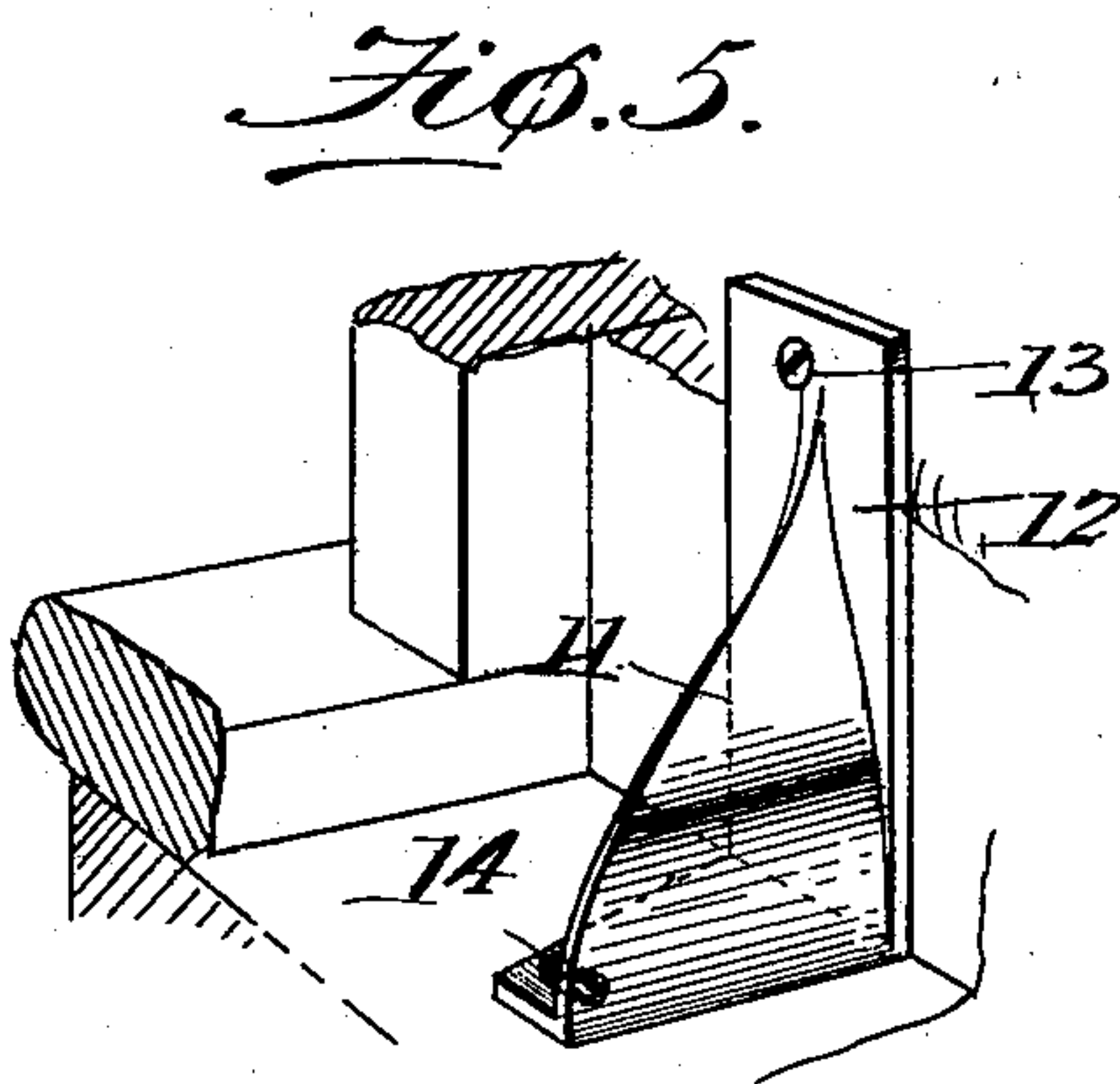
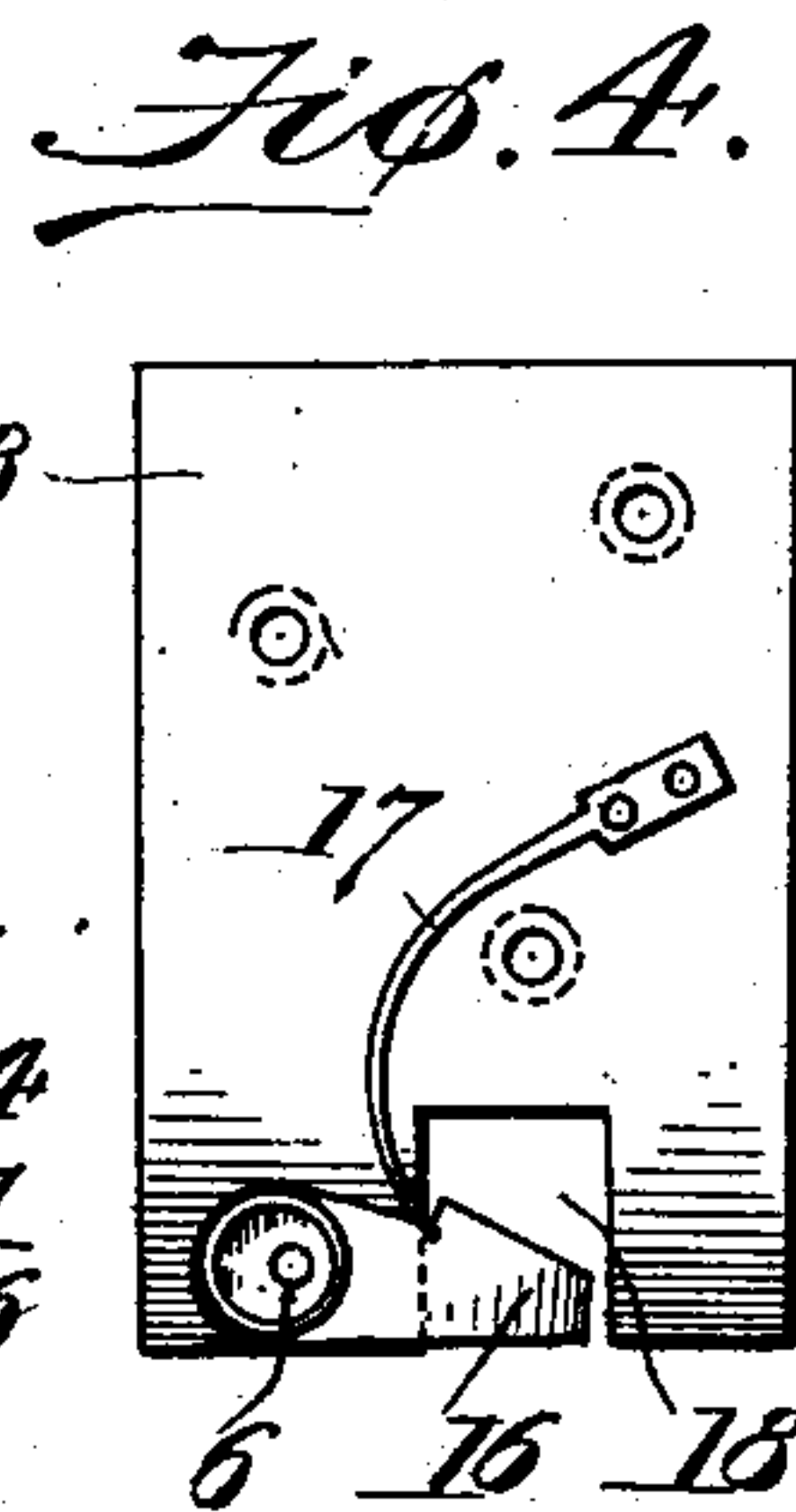
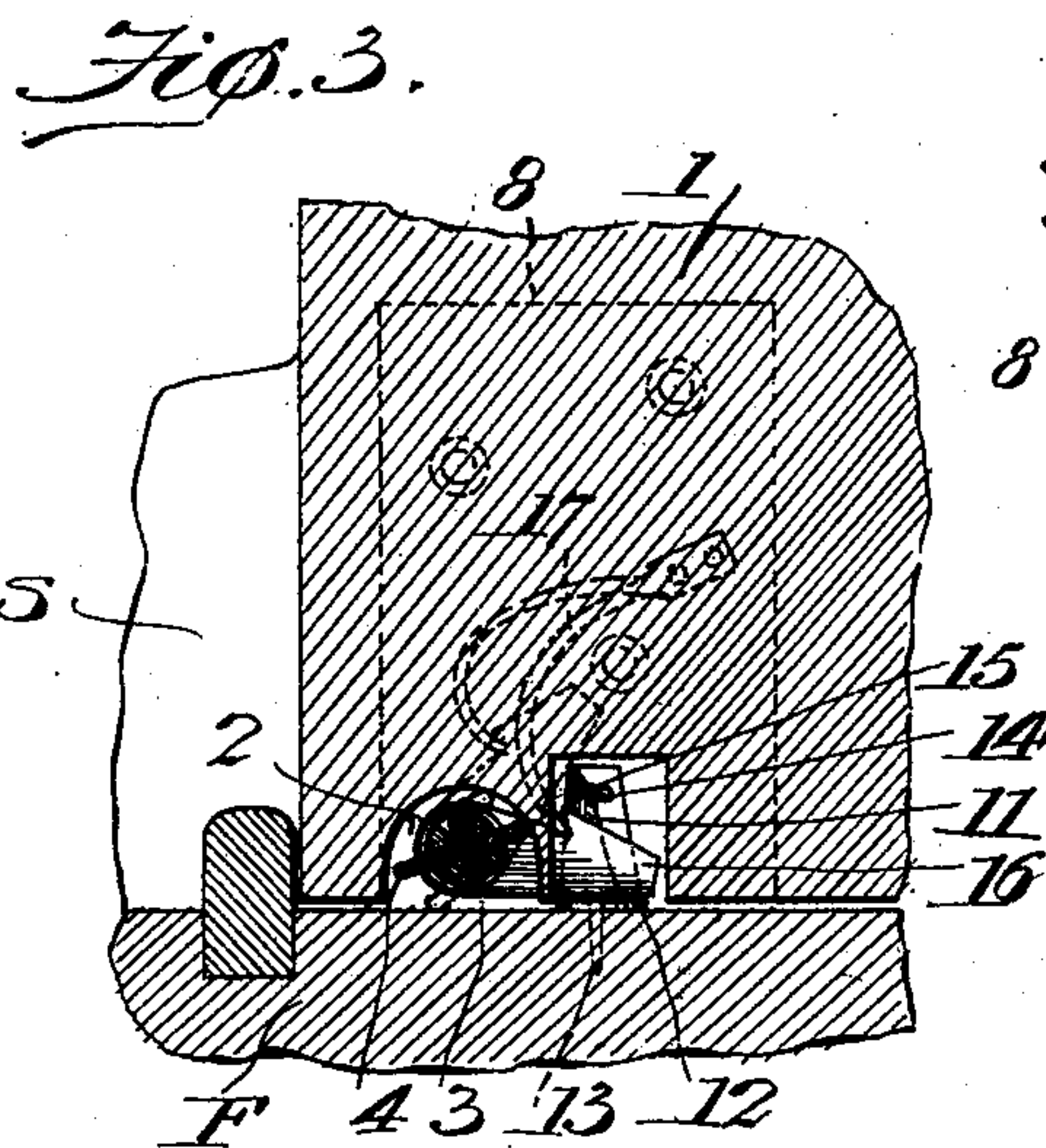
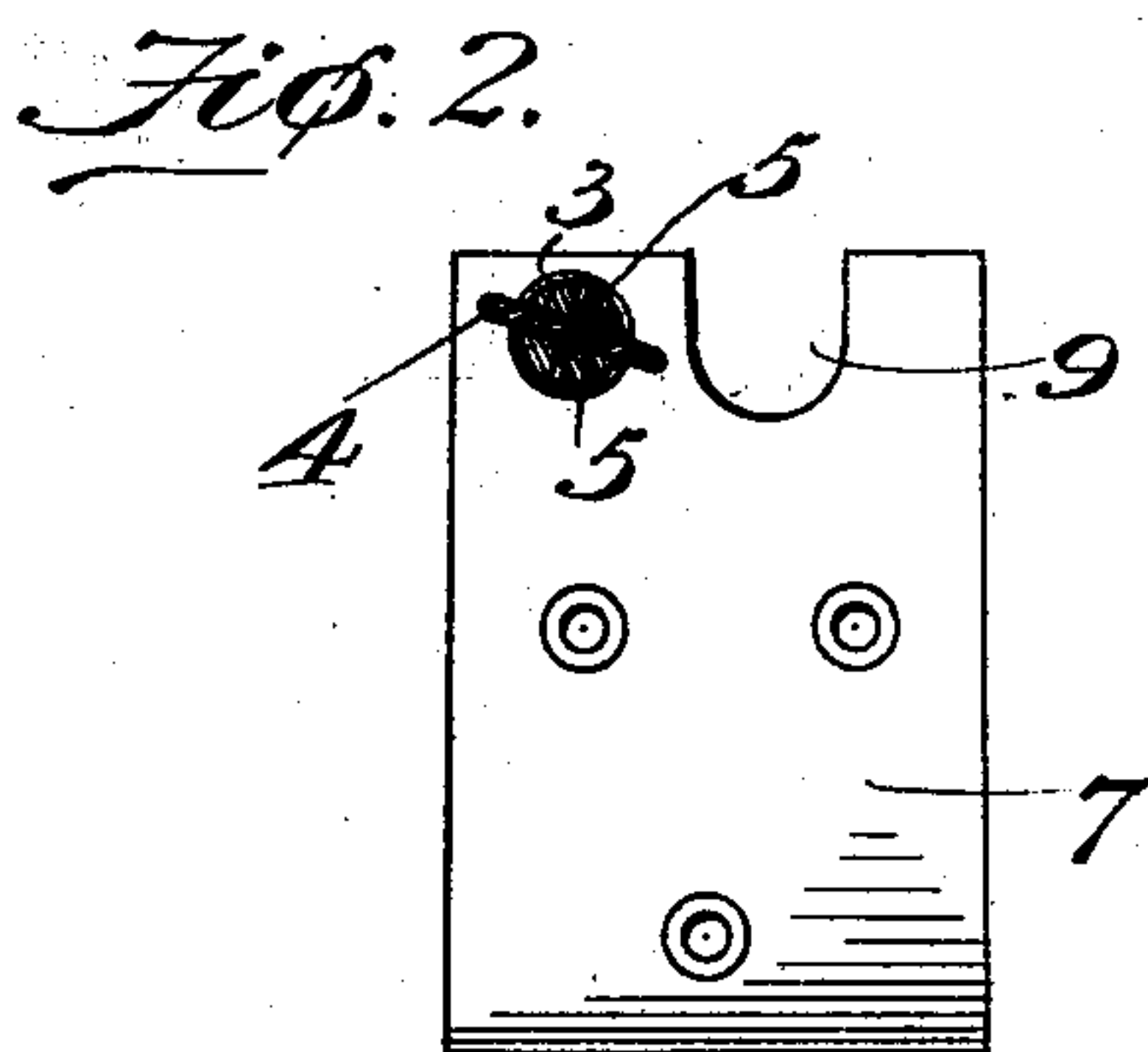
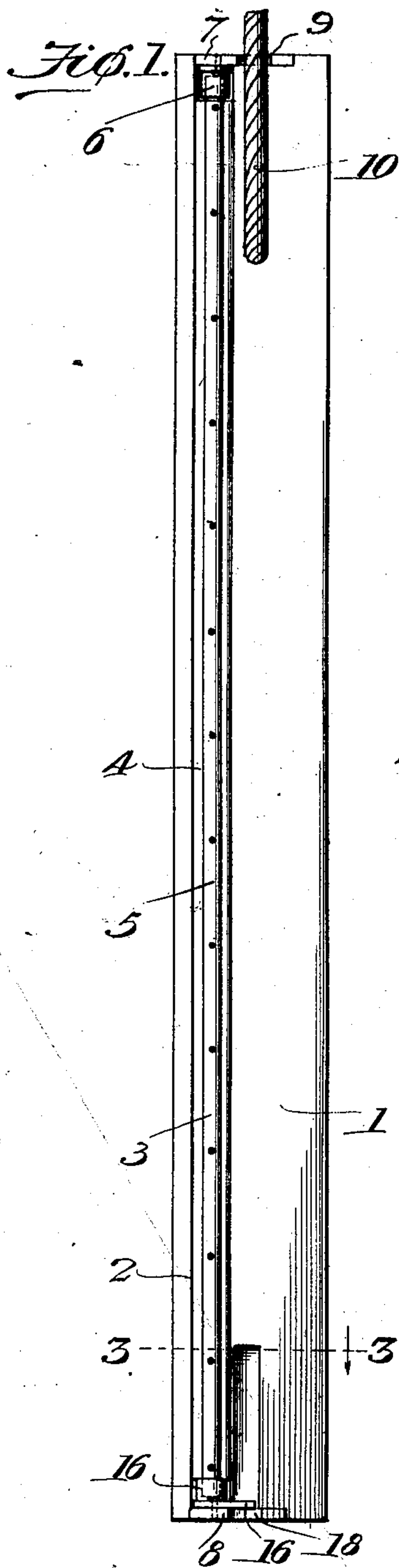
PATENTED MAY 3, 1904.

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WEATHER STRIP.

APPLICATION FILED AUG. 11, 1903.

NO MODEL.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN DOUDEN AND AARON B. ROBB, OF BROOKLYN, NEW YORK.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 758,626, dated May 3, 1904.

Application filed August 11, 1903. Serial No. 169,100. (No model.)

To all whom it may concern:

Be it known that we, EDWIN DOUDEN and AARON B. ROBB, citizens of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and useful Weather-Strip, of which the following is a specification.

This invention relates to weather-strips, and more especially to weather-strips for use upon window-sashes between the sash and the adjacent surface of the window-frame.

The object of the invention is to provide a weather-strip of the class described which is adapted to be automatically thrown out of contact with the surface of the window-frame when it is desired to raise the sash and which is automatically brought into operative engagement with the surface of the frame when the sash is lowered.

A further object of the invention is to provide, in weather-strips of the class described, an improved form of operating means whereby the weather-strip can be adjusted to correspond to any shrinkage of the window-frame away from the sash, or vice versa, and also to provide an operating mechanism which shall at all times be reliable and positive in its action.

With the objects above mentioned and others in view, as will appear as the invention is more fully disclosed, the same consists in the construction and combination of parts of a weather-strip hereinafter shown and described and having the novel features thereof fully pointed out in the appended claims.

In describing the invention reference will be had to the accompanying drawings, in which corresponding parts are designated by the same characters of reference in the several views, it being understood that various changes in the form, proportions, and exact mode of arrangement of the elements may be resorted to without departing from the spirit of the invention.

In the drawings, Figure 1 is a view in side elevation of a sash-stile with the weather-strip mounted thereon. Fig. 2 is a reverse plan view of the upper strip-supporting plate. Fig. 3 is a sectional view on the line 3-3 of Fig. 1 looking downward. Fig. 4 is a plan

view of the lower strip-supporting plate and the parts associated therewith. Fig. 5 is a detail perspective view of a portion of the window-frame and the cam-plate mounted thereon.

Referring to the drawings by reference characters, F designates one of the vertical jambs of a window-frame, and S designates the window-sill.

The numeral 1 designates one of the sash-stiles, which is grooved upon its outer face, as shown, to form a seat for the weather-strip. In the groove, which is designated 2, there is pivotally mounted the weather-strip 3, which consists, preferably, of a strip 4, of rubber of suitable thickness, and a pair of plates 5, presenting flat inner surfaces and rounded outer surfaces, as best seen in Fig. 2. The plates 5 are somewhat narrower than the strip of rubber, and the strip of rubber is riveted between them, as shown in Fig. 2, leaving the edges of the rubber projecting beyond the edges of the plates 5 at either side thereof. The strip 3 is supported in sockets 6, eccentrically mounted upon pivots fitted in openings in plates 7 and 8. The plate 7, which is secured at the upper end of the sash-stile 1, is notched at 9 for the passage of the sash-cord 10 and is secured in position by means of screws or other suitable fastening means. The plate 8 is attached to the bottom of the sash and is provided at its outer end with a notch for the passage of a rib 11 on a striking-plate 12, which is secured to the window-frame jamb F at its juncture with the sill S. The plate 12 is supported at its upper end on a screw 13, engaging the jamb of the window-frame, and the lower end has a transversely-arranged slot 14, through which passes a screw 15, by which the plate is secured in different positions.

Associated with the socket 6, which turns upon the plate 8, is an arm 16, which is normally held by means of a spring 17 at right angles to the plate 8 and disposed directly across the opening or notch 18 in the end thereof. The spring 17 is a light leaf-spring and has one end fixed upon the plate 8, while the other is free to engage with a shoulder on the arm 16 to hold it normally extended across the notch in the plate. The arm 16 is so

placed in relation to the strip of rubber forming the central part of the pivoted weather-strip that when the arm 16 is disposed in the position shown in Fig. 4, with one end directed across the notch 18, the weather-strip will be turned so as to lie within the groove 2, formed in the vertical stile of the sash. The arm 16 is held, whenever the window is raised, in the position already described; but when the window is lowered the arm 16 engages with the rib on the striker-plate, and that rib, being formed with a slope inward and downward, forces the arm 16 around with the socket 6 attached thereto until the edge of the weather-strip has been brought into contact with the jamb of the window-frame, so as to be effective in excluding air from the room. If on account of the shrinkage of the window-sash or the separation of the timbers forming the window-frame the sashes hang loose within the frame and allow air to pass around the edges thereof in spite of the action of the arm 16 and rib 11, the effect of the arm upon the strip may be increased by loosening the bolt at the bottom of the striker-plate and shifting it slightly outward toward the arm 16, so that a greater amount of pivotal movement of the arm and the weather-strip will result from the engagement of the arm 16 with the rib on the striker-plate. When the window is raised and the arm 16 is held directly across the notch 18 by the action of the spring engaging said arm, the rubber edge of the weather-strip will be out of contact with the window-frame and the sash will be susceptible of freer movement, while the rubber is completely protected from wear.

While rubber is the preferred material of which to construct the central or body portion of the weather-strip, rubber may be dispensed with and cheaper material—such as leather, heavy felt, or even cloth suitably folded—may be substituted in lieu thereof.

Having thus described the construction and use of our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a window-sash having a groove in the outer surface of one of its sides, of a weather-strip pivotally mounted in said groove and held normally out of contact with the window-frame, and means operative on the descent of the sash to swing the strip into contact with the window-frame.

2. The combination in a device of the class described, of a sash having a groove on the outer surface of a side member thereof, a weather-strip pivotally mounted within the groove and normally held in a plane at an angle to the plane of the sash, and means, operated by lowering the sash, to swing the weather-strip into operative position.

3. The combination in a device of the class described, of a window-sash having a groove extending longitudinally of one side member thereof on the outer face, a weather-strip piv-

otally mounted in said groove, a cam-surface provided on the window-frame at the bottom thereof, and an arm mounted on the weather-strip and adapted to engage with said cam.

4. The combination with a window-sash, of a weather-strip pivotally mounted at one side of the sash, means for normally holding said weather-strip out of contact with the window-frame, an actuating-arm projecting from the weather-strip, and a cam adjustably mounted on the window-frame in position to be engaged by said arm.

5. The combination in a device of the class described, of a window-sash having a longitudinally-disposed groove on one of its side members, a pivotally-mounted strip in said groove and having an arm projecting therefrom, a spring engaging said arm to keep said weather-strip normally in inoperative position, and means on the window-frame to engage said arm as the window is lowered to operate the weather-strip.

6. The combination in a device of the class described, of a window-sash having a longitudinally-disposed groove on the outer face of one of its side members, supporting-plates at the ends of said groove, sockets eccentrically mounted on pivot-pins inserted in said supporting-plates, a weather-strip fitted into said sockets, and means, operated by lowering the sash, to swing the weather-strip into operative position.

7. The combination in a device of the class described, of a window-sash having a longitudinally-disposed groove on the outer face of one of its side members, a weather-strip consisting of a strip of yielding material and a pair of plates between which said strip of yielding material is secured, said weather-strip being pivotally mounted in said groove and normally held in inoperative position, and means, operated by lowering the sash, to throw said strip into operative position.

8. The combination in a device of the class described, of a window-sash having a longitudinally-disposed groove on the outer face of one of its side members, an eccentrically-pivoted weather-strip within said groove, an arm projecting from said strip in the same vertical plane therewith, a spring engaging said arm to hold the weather-strip normally in inoperative position, and a striker-plate adjustably mounted on the window-frame and provided with a rib presenting a downwardly and inwardly inclined cam-surface for engagement with the arm associated with the weather-strip to throw the strip into operative position.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

EDWIN DOUDEN.
AARON B. ROBB.

Witnesses:

GEO. H. YOUNG,
CHARLES NATHAN.