

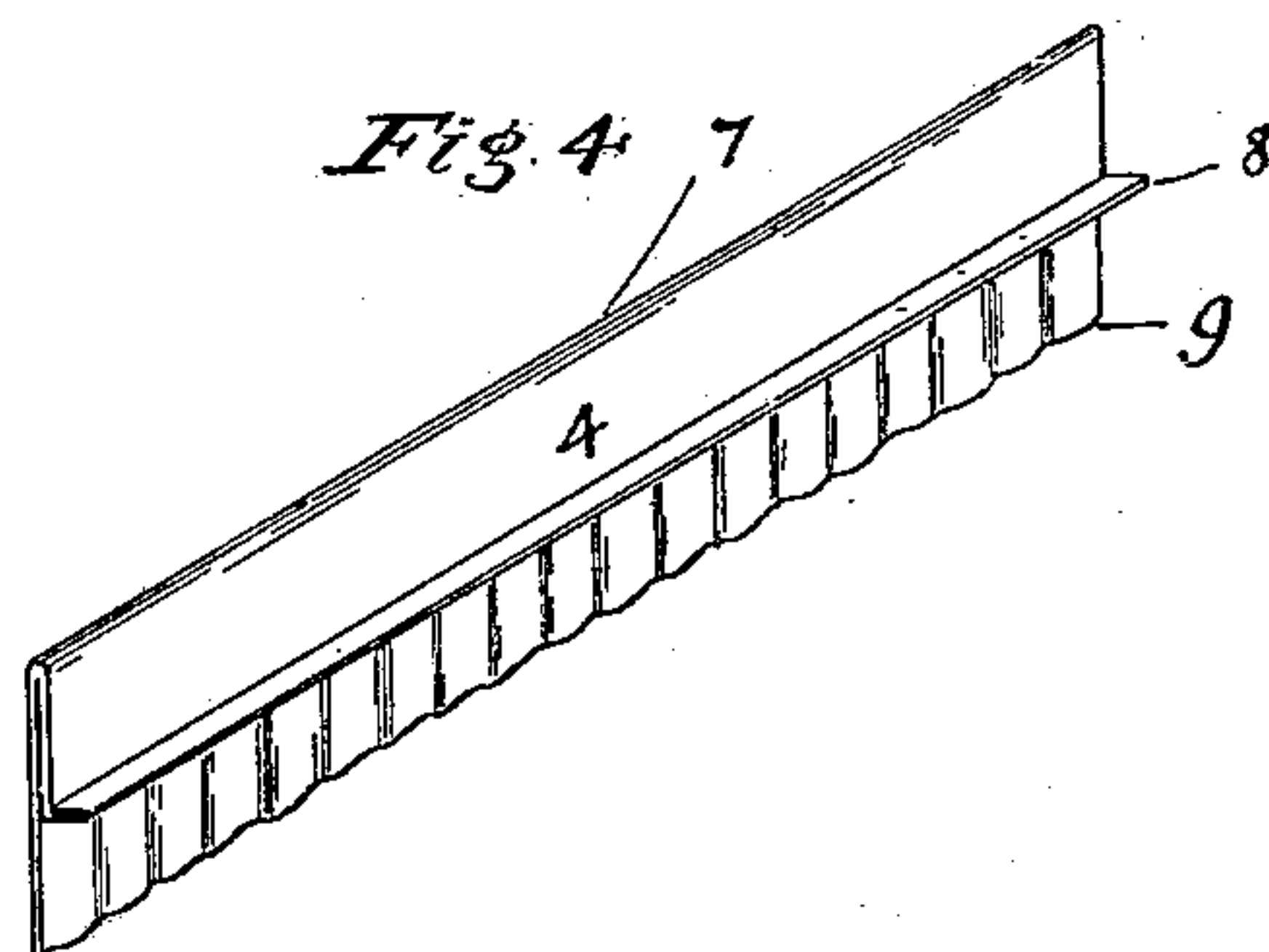
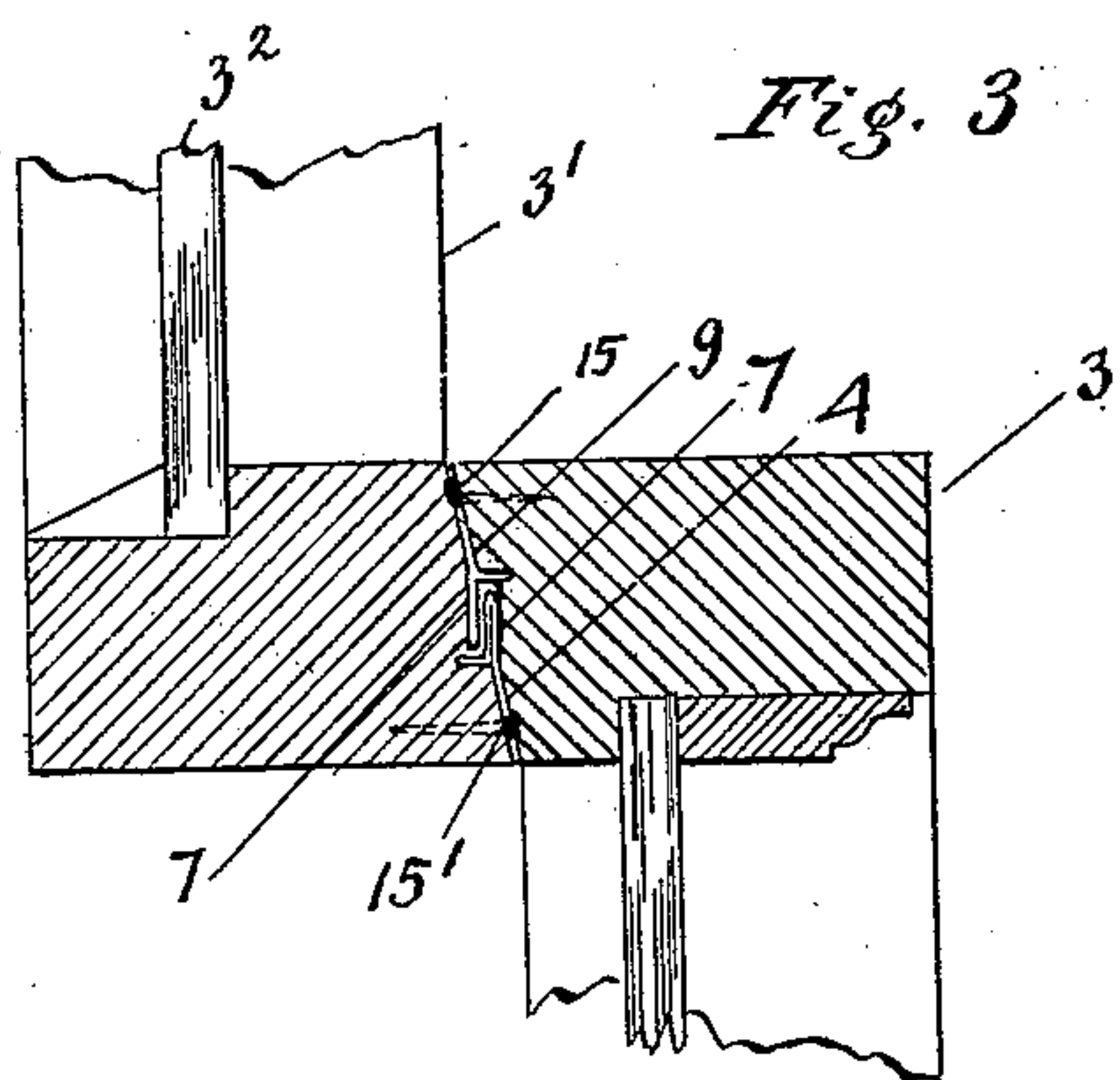
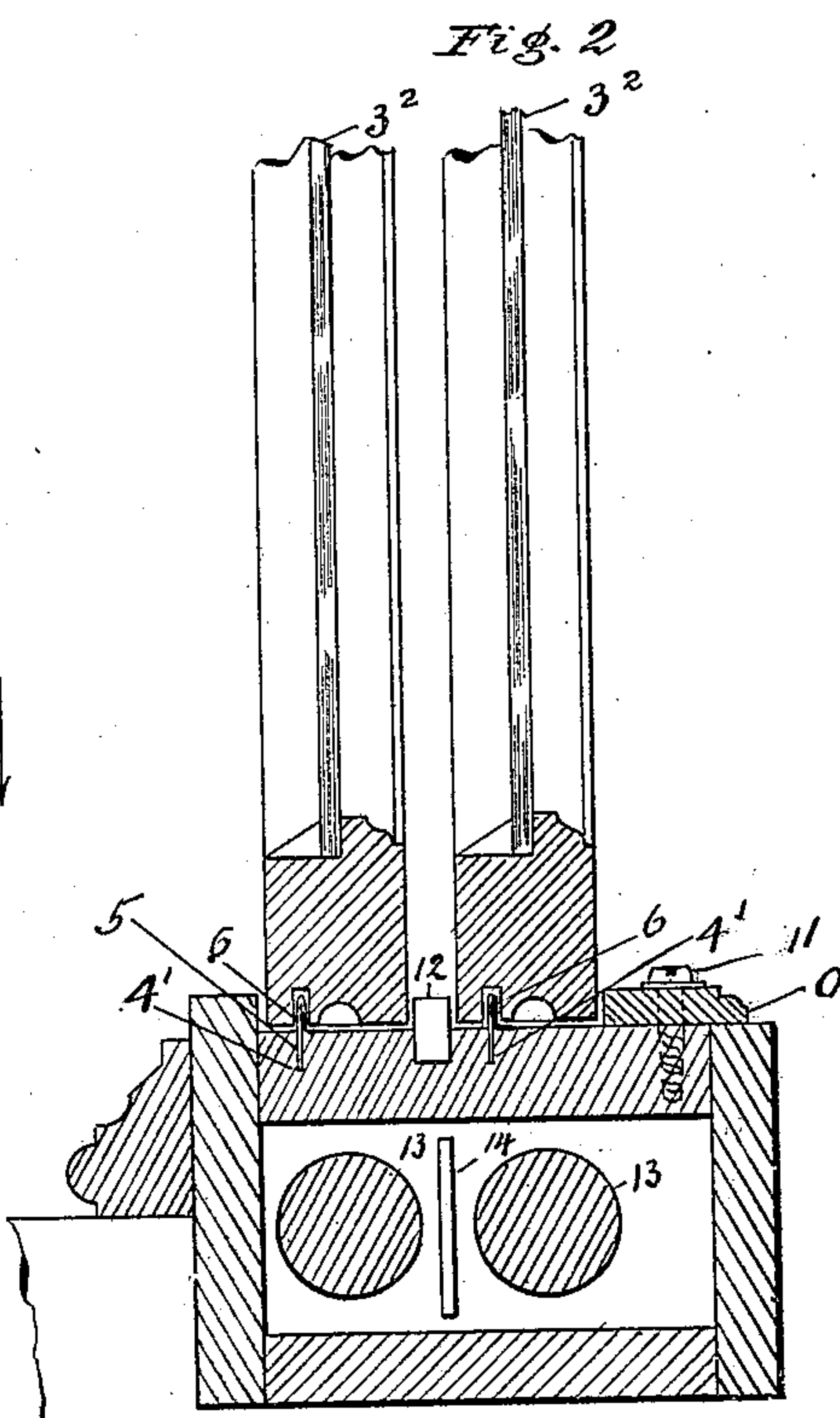
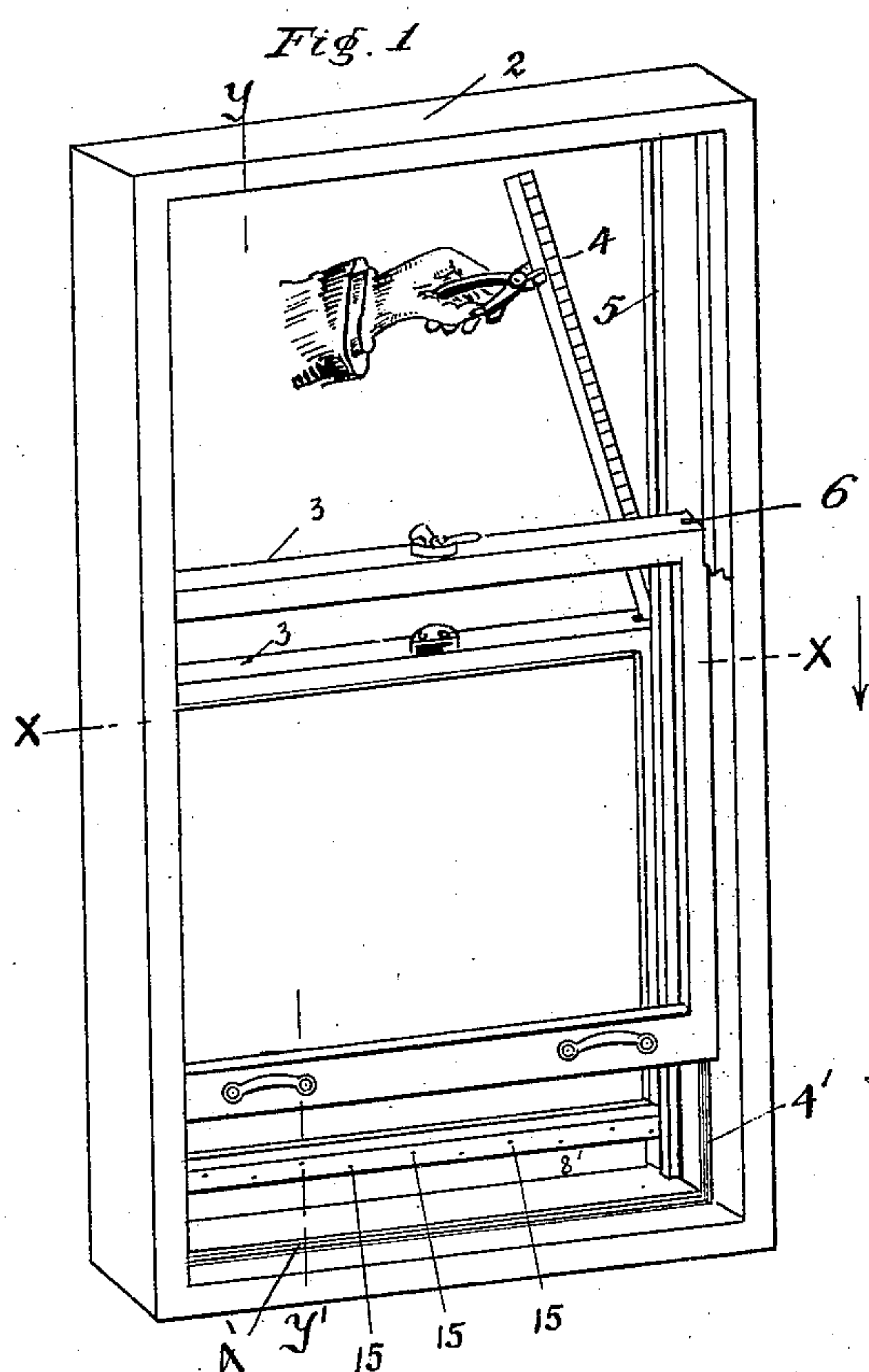
No. 713,175.

Patented Nov. 11, 1902.

J. A. THAIN.
WEATHER STRIP.

(Application filed June 20, 1902.)

(No Model.)



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UNITED STATES PATENT OFFICE.

JOSEPH ANDREW THAIN, OF CHICAGO, ILLINOIS.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 713,175, dated November 11, 1902.

Application filed June 20, 1902. Serial No. 112,537. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ANDREW THAIN, of the city of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification.

My invention relates to weather-strips for windows, shutters, and the like. Its object is to provide a weather-strip that shall afford absolute protection against air-currents, dust, rain, &c., and which may be secured in position without the employment of screws and nails, which shall give better protection against the elements and generally serve its purpose better than the devices of this class now upon the market, and which shall have a neater appearance.

A further object of the invention is to effect a saving in the amount of material required for manufacturing metal weather-strips, to the end of lowering their cost and facilitate their availability for general use, to obtain an article which is neat in appearance, which presents to view but a fraction of the wearing-surface; which entirely dispenses with a wider rib-base filled with nail and screw holes unsightly in appearance, rough as to wearing-surface, which interferes with the free movement of the window-sash and which work loose in their nail-fastenings.

By dispensing entirely with nail and screw means of fastening weather-strips, which in relation to the cost of the weather-strips themselves constitute a very considerable percentage of their cost, I not only effect a further considerable economy in this direction, but I save a great deal in the item of time and labor, which frequently is the most important item of expense.

My invention cannot work loose, being held in place by the window-sash itself, is absolutely weather-proof, is easily inserted and removed, and costs practically nothing for such labor. It can be stored within a small amount of space, is always ready for instant use, and can be used over and over again, being always practically as good as new.

My invention also presents a small and perfectly smooth friction-surface to the window-sash, the engaging surface with the latter being merely the narrow rib inserted in the window-sash slot.

The invention will be more readily under-

stood by reference to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is an elevation of a window-frame and the sashes therein, the hand illustrating the operation of inserting or removing a weather-strip embodying my invention. Fig. 2 is a cross-section on the line $x x$ of Fig. 1 looking down or in the direction of the arrow. Fig. 3 is a sectional view on the line $y y$ of Fig. 1 with the window-sashes in their closed positions, and Fig. 4 is a full-size perspective view of a piece of weather-strip embodying the preferred form and size of my invention.

In the drawings, 2 is the window-frame; 3, the window-sashes; 3², the window-panes, and 4 4' the weather-strips embodying my invention.

5 represents narrow slots or recesses cut in the window-sash frame for the reception of strips 4, shown in their inserted position at 4'. Corresponding slots or recesses are cut in the window-sash, as at 6. Slots 6 are made slightly wider than the slot 5 to permit the free movement therein of flange or wing 7 of strip 4.

8 is a narrow longitudinal rib extending the entire length of the strip 4 along substantially its middle portion.

In my preferred form of construction the part or half 9 of the strip which is inserted in the window-frame is corrugated or indented, as shown, to afford better frictional engagement with the sides of slot or recess 5, this construction affording a somewhat yielding or flexible surface to the part 9 and facilitates the insertion of said part 9 in a slot or recess 5, that is narrower than the extreme thickness of said part 9, thus effecting a very secure hold in contradistinction to the smooth surface 7 of strip 4, which has a free sliding engagement with slot 6 in the window-sash.

10 is the retaining-strip, commonly employed for holding the lower sash in place against the strip 12, mortised into the frame and constituting the dividing rib or line between the channels wherein the upper and lower sash slide.

13 13 are the usual sash-weights, (shown in cross-section,) and 14 the partition-strip separating them.

As shown in perspective on two sides of casement or frame, Fig. 1, the strip is insert-

ed in all four sides of the casement and sash, if desired, or it may be employed only in the sides and at the top of the casement or frame.

Fig. 3 illustrates a modified use to which my invention may be put to form a perfectly weather-proof joint between the upper and lower sash when in their closed position. When thus employed, a small recess of a depth equaling the thickness of part 9 is cut into the sash to hold said part 9 snug, which is then secured in place by screws or nails 15, or the strip may be employed in any other suitable manner to form a close junction between the upper and lower sashes. In Fig. 1 is shown a front view of the strip nailed into position to the upper sash 3, same being in nearly its lowest position to better illustrate this feature or possible application of my invention.

Suitable recesses or slots having been provided in the window frame or casement, it requires but a few moments of time to apply my invention. No tools are required to insert the strips, unless it be the use of a light mallet or hammer, and the only tool required for removing the strips just as quickly is a pair of nippers, as illustrated in Fig. 1. No unsightly nail-holes remain to mark the place where the strips have been, and when it is desired to remove them they can be stored within a small amount of space, as previously stated, until again required.

It is evident that my invention is adaptable to numerous other similar uses, and it is also evident that various modifications may be made therein without departing from the spirit of my invention, and I therefore do not confine same to the specific construction herein shown and described.

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

1. A weather-strip consisting of a flat metal strip bent upon itself and at a right angle and forming two slot-engaging wings or flanges and a rib base or stop the direction of said wings or flanges lying in the same plane and said rib base or stop being perpendicular to both of said flanges, one of said ribs or flanges having transverse corrugations or indentations and being adapted to be held or gripped by frictional contact only with the sides of a window-frame slot or recess said contact affording the only fastening means for said strip and the other of said wings or flanges having smooth surfaces adapted for longitudinal sliding engagement with a suitable window-sash slot, substantially as described.

2. A weather-strip having its fastening means integral therewith consisting of two wings or flanges extending at right angles to a projecting rib, one of said wings or flanges having transverse corrugations therein and being adapted to hold said strip in place by frictional contact only with the sides or walls of a suitable window-frame slot, the other wing or flange being adapted for sliding engagement with a window-sash slot, substantially as described.

3. A weather-strip adapted to be applied without the employment of nails, screws or other similar fastening means, and consisting of a pair of wings or flanges extending from a projecting rib at right angles thereto, one of said wings or flanges having transverse corrugations or indentations therein and forming a serrated surface, said flange being adapted for fixed engagement by frictional contact only with the sides or walls of a suitable window-frame slot or recess cut at right angles to the surface of said frame, and the other wing or flange being smooth and adapted for sliding or movable engagement with relation to a suitable window-sash slot, substantially as described.

4. A weather-strip dispensing with nail or screw fastening means consisting of a central rib flanked on each side by a wing or flange, one of said flanges having corrugations or indentations and being adapted for stationary engagement by means of frictional contact only with a window-frame slot, the other of said flanges or wings being adapted for movable engagement in and with relation to a suitable window-sash slot or recess, substantially as described.

5. As a new article of manufacture, a weather-strip consisting of a metal strip bent upon itself longitudinally and having the edge of one of said bent portions bent at right angles to itself to form a longitudinal rib, and two wings, one on either side thereof, one of said wings having a resilient surface adapting it to be forced into a slot narrower than the thickness of said wing and thereby adapting it to be held in a window-jamb slot and the other being corrugated or fluted and adapted for engagement with a window casement or frame, substantially as described.

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

JOSEPH ANDREW THAIN.

Witnesses:

MAX BAUM,
WM. DREYFUSS.