

No. 673,333.

Patented Apr. 30, 1901.

J. M. BYRENS.  
WEATHER STRIP.

(Application filed Dec. 30, 1899.)

(No Model.)

Fig. 1.

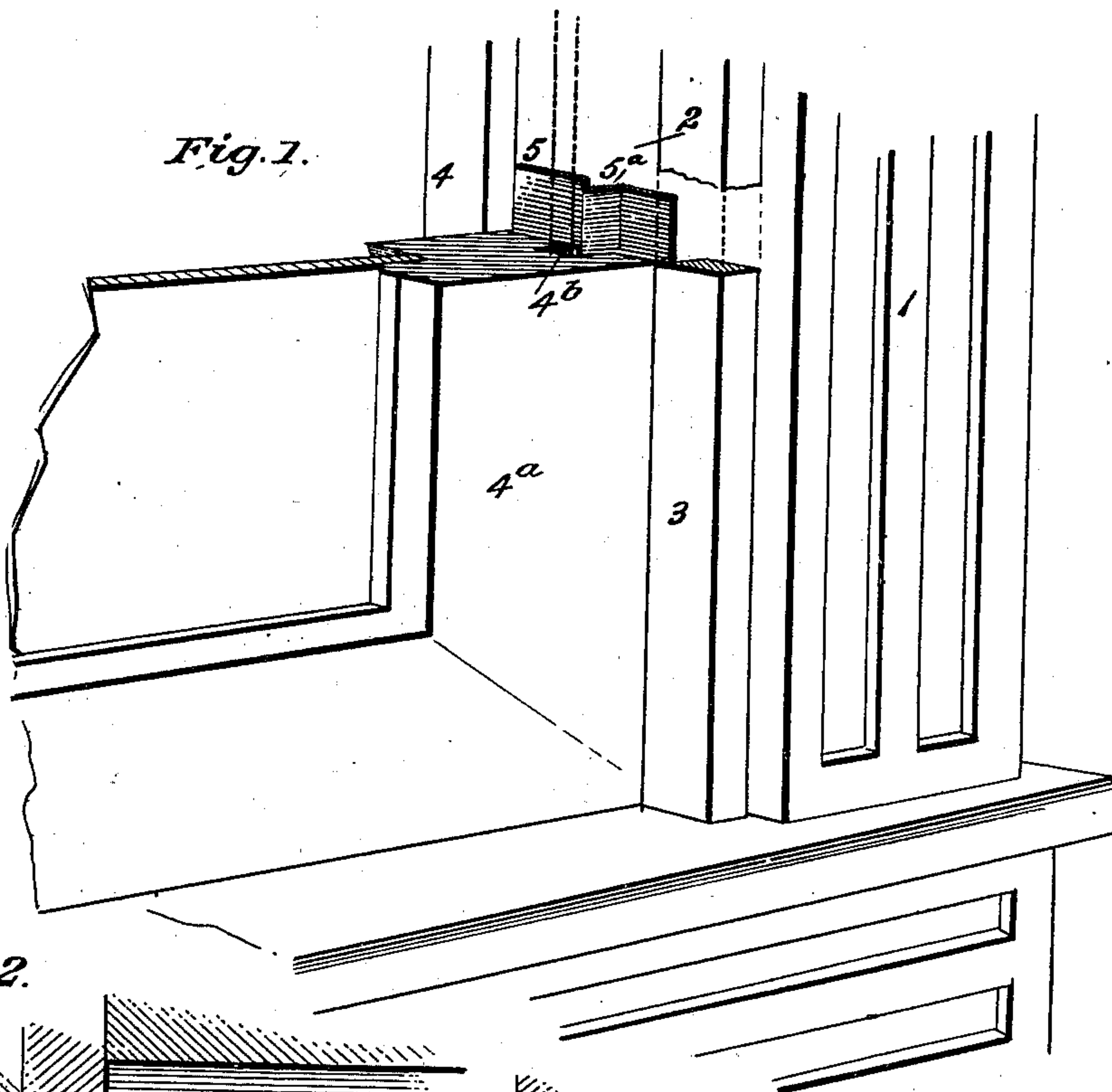


Fig. 2.

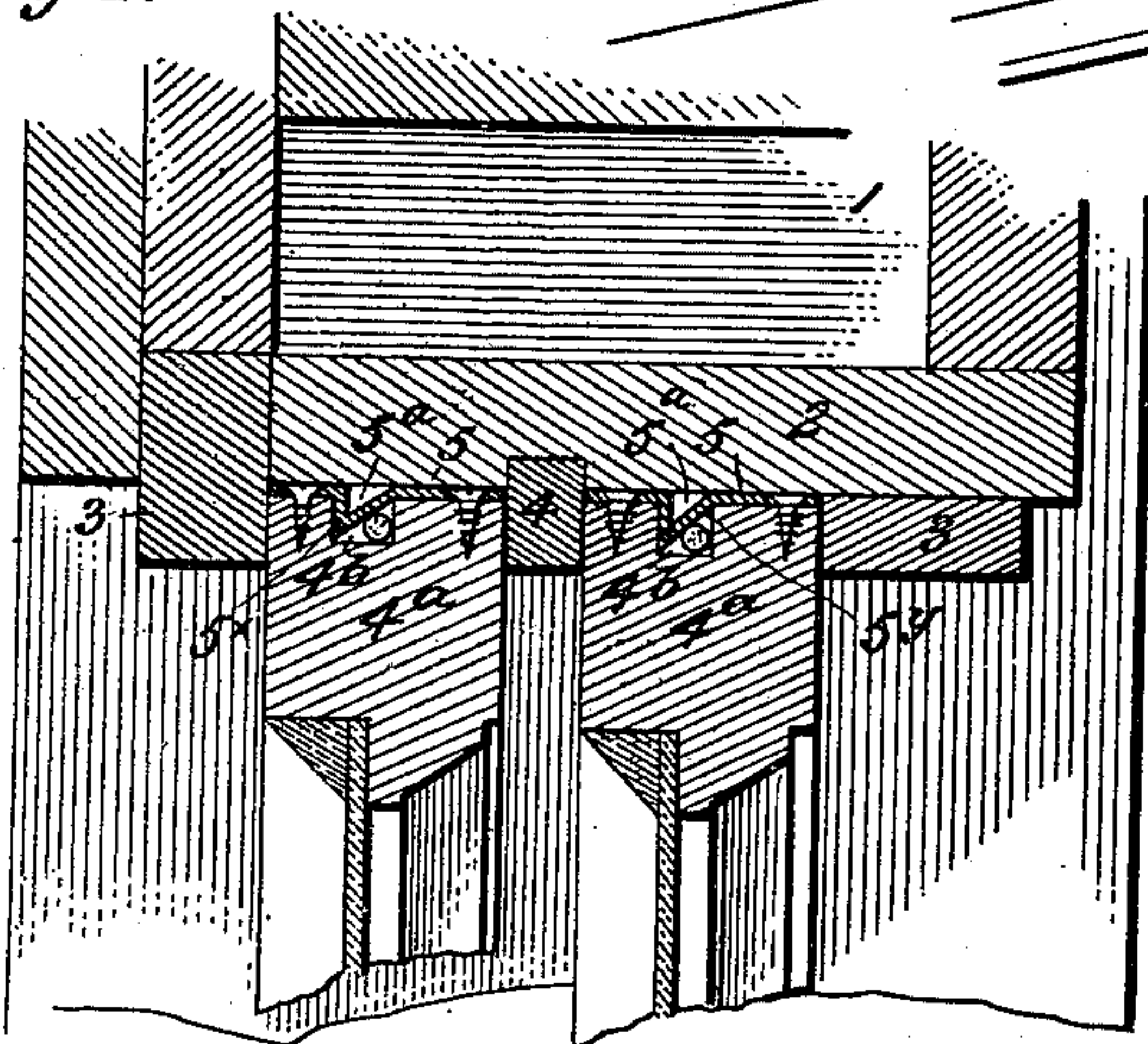


Fig. 3.

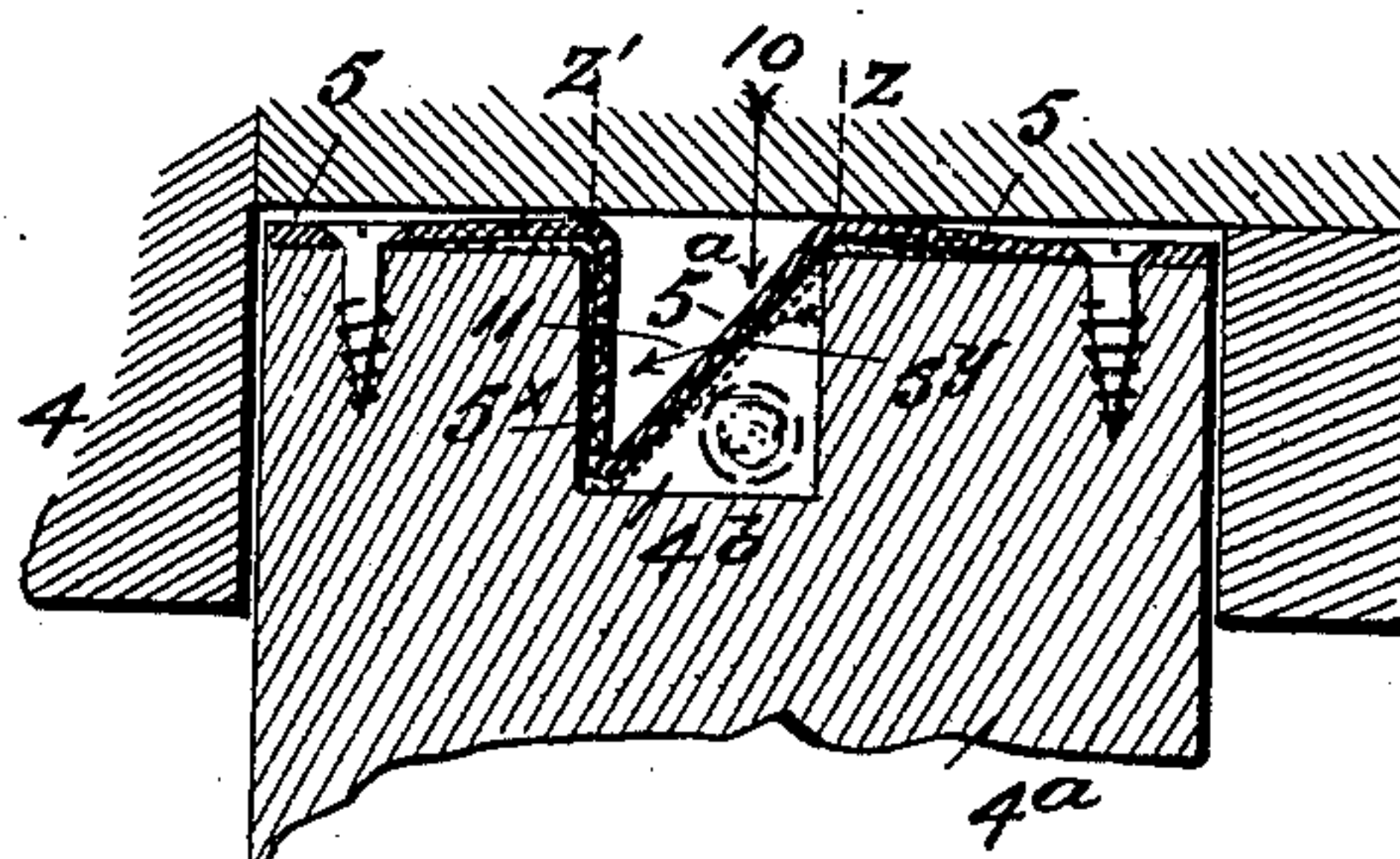
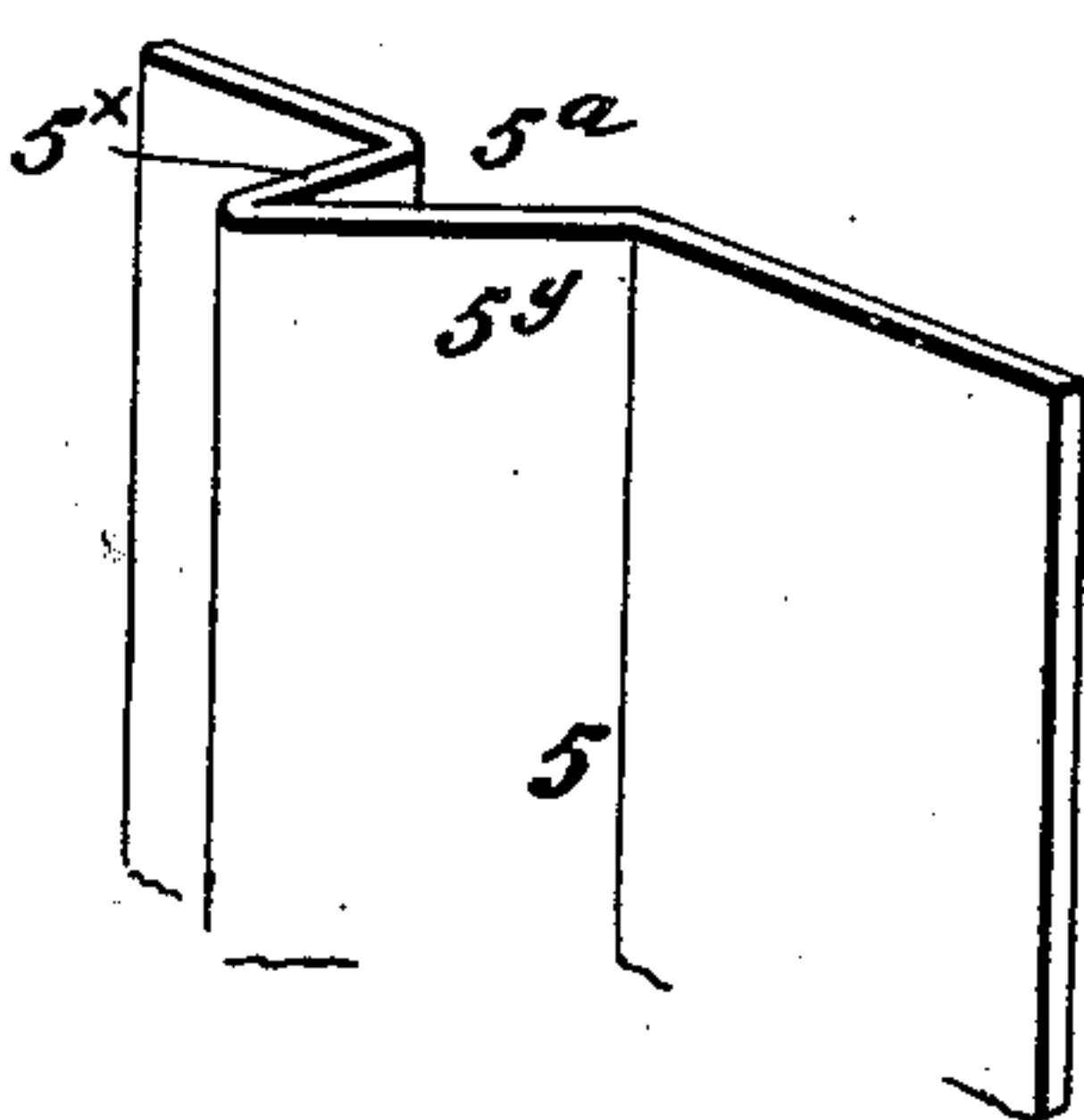


Fig. 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN MURRAY BYRENS, OF VANCOUVER, CANADA, ASSIGNOR OF TWO-THIRDS TO GEORGE E. DREW AND THOMAS R. PEARSON, OF NEW WESTMINSTER, CANADA.

## WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 673,333, dated April 30, 1901.

Application filed December 30, 1899. Serial No. 742,147. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN MURRAY BYRENS, a subject of Her Majesty the Queen of Great Britain, residing at the city of Vancouver, in the Province of British Columbia, in the Dominion of Canada, have invented certain new and useful Improvements in Weather-Strips, (for which I have obtained a patent in the Dominion of Canada, No. 65,010, bearing date November 20, A. D. 1899,) of which the following is a specification.

This invention relates to improvements in metallic window-strips designed for preventing drafts, dust, and moisture entering between the sashes and the window-casing; and it primarily seeks to provide a very simple and inexpensive strip of the character stated which can be conveniently secured to the edges of the sashes without requiring any special shaping of the same and which will not interfere with the ordinary adjustment of the sash-cords or the use thereof.

My invention comprehends in its make-up a metal strip, preferably sheet-zinc, of a shape and size to lie flat against the edges of the sash to form slide-surfaces and having a specially-formed longitudinally-extending and inwardly-projecting flange or rib having, primarily, for its purpose to produce a cut-off for preventing ingress of air, dust, or moisture between the sash-edges and the metal strip, and, secondarily, for providing means whereby the strip can readily give or buckle inwardly in case of swelling of the sash or the casing-stiles to overcome binding or excessive friction between the several parts.

This invention consists in the detailed construction and novel combination of parts hereinafter first described, and specifically pointed out in the appended claims, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a portion of a window-casing and a sash with my improvement applied. Fig. 2 is a horizontal section of the window-casing and the sashes with my improvement in position. Fig. 3 is an enlarged detail horizontal section illustrating the manner in which the strip bends or buckles back when sash tends to bind tightly

against the casing, and Fig. 4 is a detail view of a portion of one of the strips.

Referring to the accompanying drawings, in which like characters indicate like parts in all the figures, 1 designates the window-casing; 2, the pulley-stiles; 3, the stops, and 4 the parting-strips, which form part of the said casing.

4 4<sup>a</sup> designate the top and bottom sashes, which have the usual rabbets 4<sup>b</sup> 4<sup>b</sup> in their edges, all of said parts being of the conventional construction.

5 designates a strip of sheet metal, preferably zinc, and of a width equal that of the edge of the sash, it being, however, obvious that it may be of less width than the sash edge, if desired.

The rabbets 4<sup>b</sup>, it will be noticed, have parallel opposite edges that extend inwardly at right angles to the running edge of the sash.

Each strip 5 has an inwardly-projecting rib 5<sup>a</sup>, that extends the full length thereof, and the said rib is formed by pressing the strip by stamping-dies or rib-forming mechanism, and the said ribs comprise a straight or right-angle portion 5<sup>x</sup>, which is disposed in such manner as to face toward the outside of the sash, and the terminal of said portion 5<sup>x</sup> merges with an outwardly and forwardly extending angle-face 5<sup>y</sup>, of approximately thirty degrees, which merges with the body part proper of the strip at the point indicated by *z*, which point *z* is, however, spaced from the point *z'*, where the angle portion begins, a distance slightly greater than that between the parallel edges of the rabbets 4<sup>b</sup>, the reason for which will presently appear.

The right-angled portion 5<sup>x</sup> when the strip 5 is fitted in place singly engages the adjacent face of the rabbet, to which position it is practically held air-tight by the external pressure on the strip, which, being in the direction indicated by the arrow 10 in Fig. 3, is deflected in the direction of the arrow 11 by the sloping portion 5<sup>y</sup> engaging the outer edge of the opposite straight side of the rabbet. This provides for a practically air-tight joint.

Metallic strips having -shaped ribs have heretofore been provided; but my form of



strip differentiates therefrom on the following lines: By reason of having the front face of the rib beveled and extended slightly beyond its adjacent rabbet edge pressure against the strip in one direction will be transmitted practically at right angles thereto and cause the flat side of rib to make a more tight closure than is possible by direct pressure only. Again, ample space is provided on the inside of the rabbet back of the metal rib portion for the proper play of the sash-cord. Again, an air-space is provided that extends up the entire length of the sash edge in front of the flat edge of rib, which will effectively break up any draft that might be drawn in from outside, and, furthermore, by reason of the points  $z$   $z'$  of the ribs being separated and the edges of the strip screwed fast, as shown, the central part of the strip will have a slightly-bulged (see Fig. 3) position, and thereby be under sufficient spring to maintain a proper contact with the slideways, and thereby keep sashes from rattling.

While I have not so shown it, it will be understood the top and bottom edges of the sashes may also be provided with the ribbed strips.

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

1. As a new and improved article, a weather-strip, consisting of a sheet-metal strip adapted to be made fast to the sash edge, said strip

having a longitudinally-extending inwardly-projecting rib, said rib having one side projected inwardly at right angles to the body part, whereby to lie flat against the one edge of the sash-rabbet, its other member being on a plane extending from the inner end of the right-angle side to a point beyond the outer edge of the opposing rabbet-surface, all being arranged substantially as shown and described.

2. The combination with the sash having a rabbet  $4^b$ , whose opposite sides extend parallel and inwardly at right angles to the outer edge of the sash of the member 5, consisting of a sheet-metal strip, the edges of which are adapted to lie flat upon and to be made fast to the stile edge of the sash, said strip having a longitudinally-extending and inwardly-projecting rib 5, formed with a right-angle portion  $5^x$ , adapted to seat against one edge of the sash-rabbet and with an angle portion  $5^y$ , beginning at the inner end of the portion  $5^x$ , and merging with the flat part of the strip, said rib at the outermost point being of a width in excess of the width of the sash-rabbet, all being arranged substantially as shown and for the purposes described.

Dated at New Westminster, Canada, this 18th day of December, A. D. 1899.

JOHN MURRAY BYRENS.

Witnesses:

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JOSEPH R. GRANT.