

No. 855,293.

PATENTED MAY 28, 1907.

W. H. ETTER.
COMBINED WEATHER STRIP AND GUIDE.
APPLICATION FILED JAN. 17, 1906.

Fig. 1.

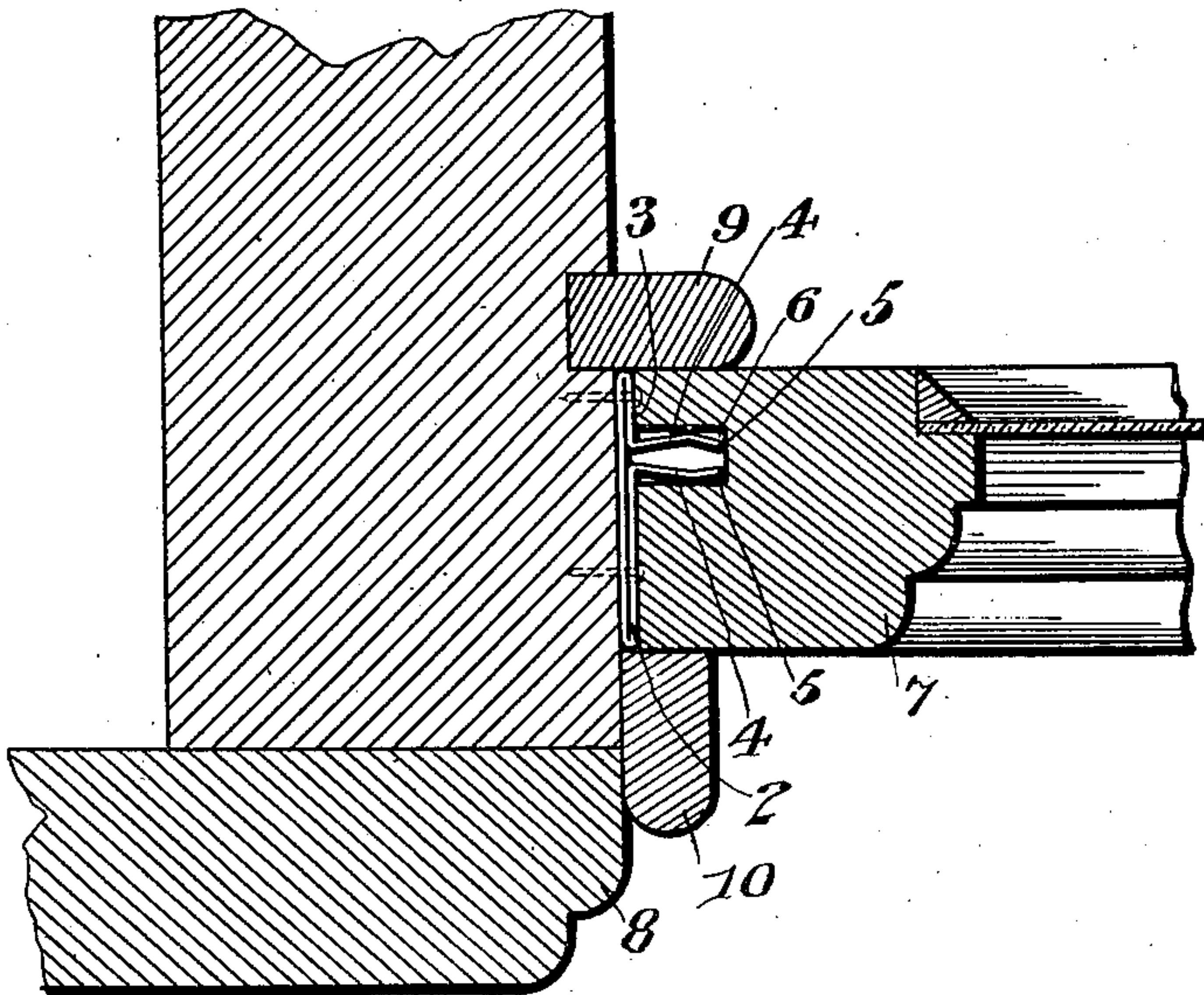


Fig. 2.

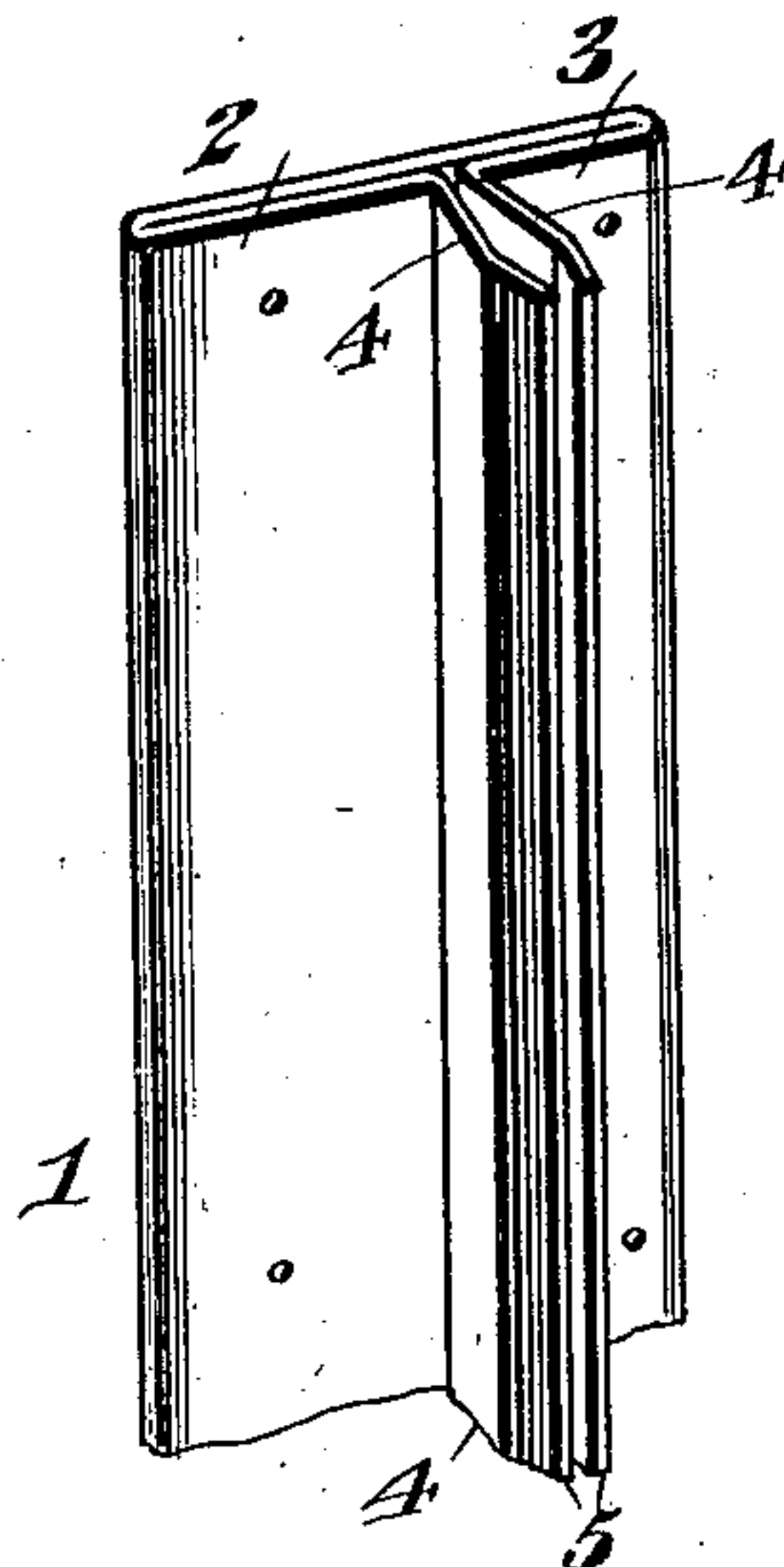


Fig. 3.

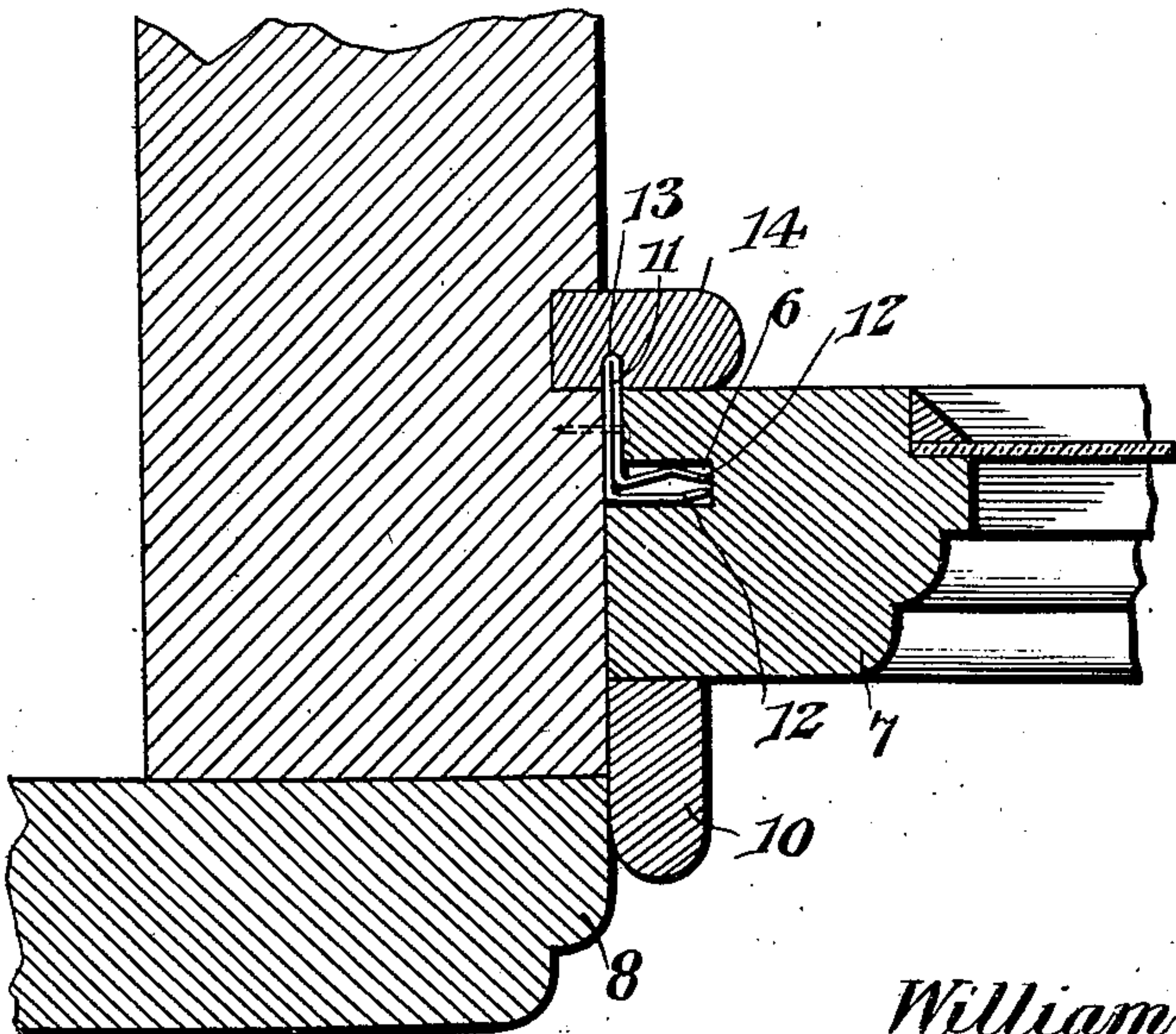
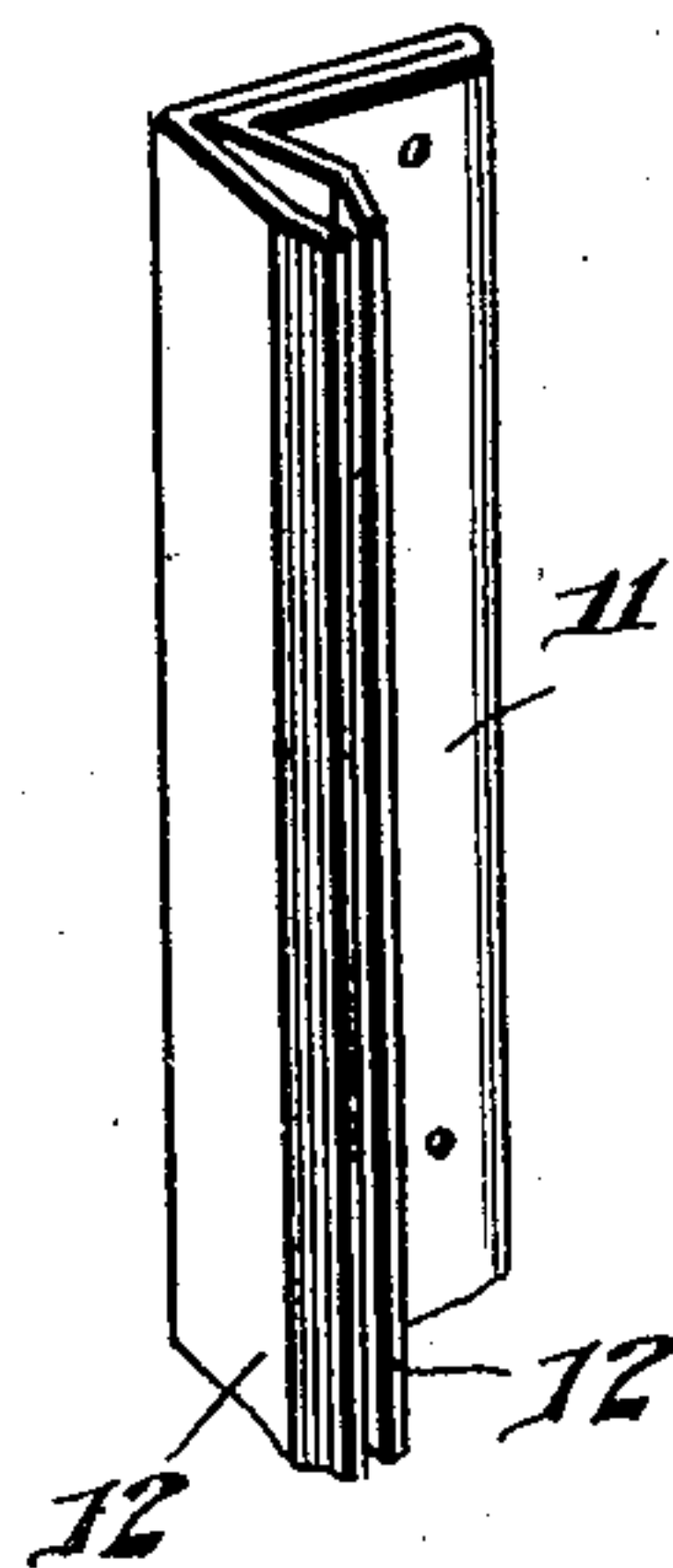


Fig. 4.



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UNITED STATES PATENT OFFICE.

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COMBINED WEATHER-STRIP AND GUIDE.

No. 855,293.

Specification of Letters Patent.

Patented May 28, 1907.

Application filed January 17, 1906. Serial No. 296,488.

To all whom it may concern:

Be it known that I, WILLIAM H. ETTER, a citizen of the United States, residing at Marietta, in the county of Washington and State of Ohio, have invented a new and useful Combined Weather-Strip and Guide, of which the following is a specification.

The invention relates to improvements in weather strips.

The object of the present invention is to improve the construction of weather strips, to provide a combined weather strip and guide designed primarily for use on windows at the tops, bottoms and sides thereof, and capable, also, of being advantageously employed as a guide for any two relatively slidable parts.

A further object of the invention is to provide a combined weather strip and guide of this character, which will be simple, inexpensive, strong and durable, and which will be capable of being readily and satisfactorily applied by persons without previous experience, and with the simplest of tools.

Another object of the invention is to provide a combined weather strip and guide having a resilient adjustable tongue, adapted to engage a groove or channel of a sash or other part, and composed of sides or flanges adapted to be either spread or closed to enable it to fit properly a groove or channel of any width.

The invention also has for its object to provide a combined weather strip and guide having a tongue with independently adjustable side flanges or members which will be adapted to create a light friction to form practically an air-tight joint or connection, and which will not bind or become inoperative through any accumulation of dirt or lint.

A further object of the invention is to provide a combined guide and weather strip, in which the projecting engaging tongue will be automatically straightened through the movement of the parts should it become bent from any cause.

With these and other objects in view, the invention consists in the construction and novel combination and arrangement of parts, hereinafter fully described and illustrated in the drawing and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size, and details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing Figure 1 is a horizontal sectional view of one side of a window provided with a combined guide and weather strip constructed in accordance with this invention. Fig. 2 is a detail perspective view of a portion of the weather strip. Fig. 3 is a horizontal sectional view of a portion of a window, illustrating a slight modification of the invention. Fig. 4 is a detail perspective view of a portion of the weather strip illustrated in Fig. 3.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a weather strip constituting a stationary frame member and designed to be applied to a window at the top, bottom and sides thereof, and capable of also use as a guide for drawers and various other relatively slidable parts, and constructed of a single piece of resilient sheet metal, which is bent at opposite sides of the center to form a primary flat base, and folded inwardly on itself to provide two laterally projecting attaching flanges or secondary bases 2 and 3, having two plies or thicknesses of the metal. The edges of the sheet metal are then bent outward, substantially at an angle to the attaching flanges, to provide two side flanges or members 4, which have spaced free edges 5, and which constitute a resilient tongue for engaging a groove or channel 6, of a sash 7, or other part. The two side flanges or members approach quite close to each other at the base, and then diverge from the latter to a point in rear of the outer edges, and from that point they converge. The diverging and converging portions are thus arranged at an angle to each other. The flanges engage the opposite walls of the groove or channel at the angle formed by the said diverging and converging portions, and the space between the flanges at their points of connection to the base is materially less than the space between their outer edges. This permits the tongue to be arranged at different angles to the base, without materially changing the relative arrangement of the flanges which form the tongue. The attaching flanges, which may be of any desired width to fit properly the sash-guides or runways of a window frame, are provided at intervals with perforations for the reception of suitable fastening devices for securing the combined guide and weather strip to the part on which it is to be applied. In Fig. 1 of the

drawing, the weather strip is shown applied to the window frame 8, between the parting bead 9 and the guide strip 10, and the groove or channel 6 is provided in the adjacent side edge of the sash 7, but it will be readily apparent that the top sash may be provided in its upper edge, and the bottom sash in its lower edge, with suitable grooves to receive top and bottom weather strips.

10 The sides or flanges 4, which are independently adjustable, are bowed or bent longitudinally in opposite directions to present substantially convex exterior engaging or abutting faces to the side walls of the groove or channel 6, and they are adapted to produce a light friction to provide substantially an air-tight joint or connection, and at the same time to permit the sash or other part to slide freely and prevent the same from binding through any accumulation of dirt or lint.

In Figs. 3 and 4 of the drawing, is illustrated a slight modification of the invention, in which only one attaching flange 11 is employed. In constructing this weather strip 25 the sheet metal is folded or bent to provide the attaching flange 11, and it is then bent outward at right angles to provide the resilient sides or flanges 12, which are constructed and arranged similar to the flanges or members heretofore described. The weather 30 strip shown in Figs. 3 and 4 is substantially L-shaped in cross section, and the attaching flange, which is provided with perforations for the reception of fastening devices, may be partially embedded in a kerf or groove 13, of a parting strip 14, or other part, if desired. By this arrangement the side edges of the base of the weather strip may be anchored, if desired.

40 The combined weather strip is adapted to be readily and satisfactorily applied by persons without previous experience, and it may be employed on windows of any desired size, and can be easily removed without injury 45 either to it or to the window, and only the simplest tools are required for such work. The resilient tongue, which will remain indefinitely in proper contact with the sash or other part at opposite sides of the groove or 50 channel, may be readily spread or closed to fit grooves or channels of different sizes, and, should the resilient tongue become bent through any cause, it will be automatically straightened by the sliding of the sashes or 55 other parts to which the combined guide and

weather strip is applied. The outwardly bowed side flanges or members of the tongue present substantially convex faces to the sash at opposite sides of the groove or channel, and the friction is thereby reduced to a minimum, and at the same time the members are prevented from binding or becoming cramped through any accumulation of dirt or lint. The device prevents all possibility of a window sash sticking in wet weather 65 from the swelling of the wood, and it insures a free movement of the sash so that the latter can be easily raised and lowered at all times. It will also be clear that the weather strip is exceedingly inexpensive in its construction, 70 and at the same time possesses great durability.

When the device is applied to a window, the resilient tongue is located at one side of the center of the sash, or in any other position to clear the sash cords, and the attaching base or back may be varied in form to adapt it to the configuration of the part to which the device is secured. 75

Having thus fully described my invention, 80 what I claim as new and desire to secure by Letters Patent, is:

A combined guide and weather strip comprising a folded base constructed of sheet metal, the edges of which are bent at an angle to the base to provide side flanges or members, forming a resilient tongue, said flanges or members closely approaching at the base, and first diverging from the same, and then converging, the outer ends of the 90 flanges or members being spaced apart, the said flanges being adapted to engage the opposite walls of a groove at the place formed by the said diverging and converging portions, and the space between the flanges or 95 members at their points of connection to the base being materially less than the space between their outer edges, whereby the tongue can be arranged at different angles to the base without materially changing the relative arrangement of the flanges forming the 100 said tongue.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. ETTER.

Witnesses:

GEORGE W. STRECKER,
ALLEN T. WILLIAMSON.