No. 752,729. PATENTED FEB. 23, 1904.

C. VOSE.

WEATHER STRIP.

APPLICATION FILED FEB. 11, 1903.

NO MODEL.

Fig. 1.

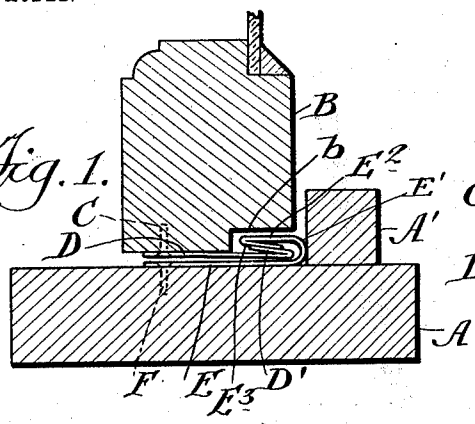


Fig. 2.

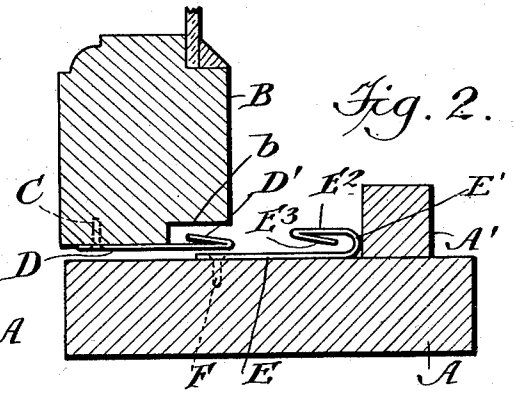


Fig. 3.

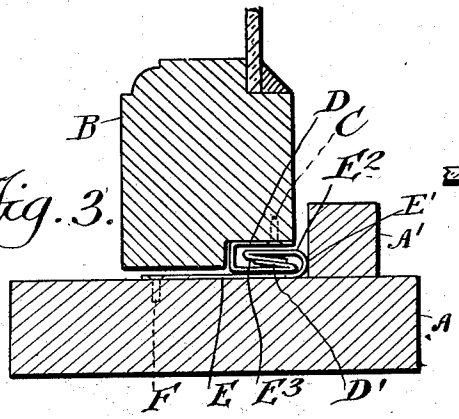


Fig. 4.

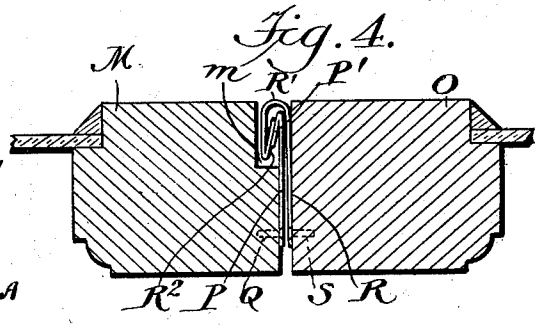


Fig. 5.

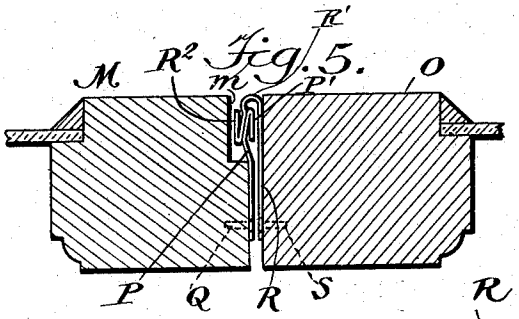


Fig. 6.

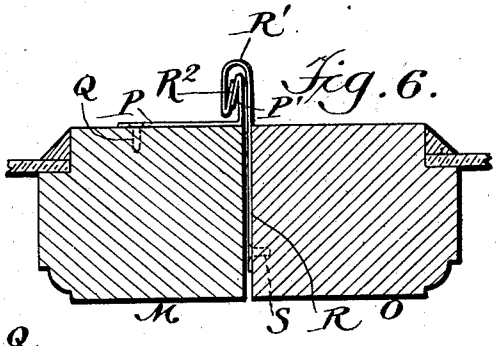
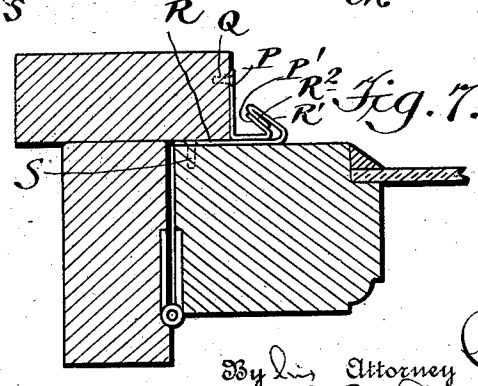


Fig. 7.



Witnesses

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Inventor

Vose

By his Attorney

Thomas Drew Watson

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 752,729. Patented February 23, 1904.

UNITED STATES PATENT OFFICE.

CLIFTON VOSE, OF NEW YORK, N. Y.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 752,729, dated February 23, 1904.

Application filed February 11, 1903. Serial No. 142,848. (No model.)

To all whom it may concern:

Be it known that I, CLIFTON VOSE, a citizen of the United States, residing in the borough of Brooklyn, in the city and State of New York, have invented a certain new and useful Improvement Relating to Weather-Strips, of which the following is a specification.

My weather-strip is of the class in which metal is fastened to each of the parts which are to be associated and separated by the closing and opening of the window-sash or door and constitutes when the door is closed an efficient barrier against the entrance of water or any strong current of air. It is an important branch of manufacture and peculiar difficulties are involved. It is important that the metal be elastic, so as to yield when through imperfect workmanship or subsequent settling the parts come together more or less incorrectly. Economy and durability are of course important elements.

I have discovered that a light, cheap, and sufficiently elastic construction may be made by a proper arrangement and combination of the parts employing sheet metal having a sufficient breadth of the contact edges doubly folded. The folds are wider, with thick and smoothly-rounded edges, and the parts are efficiently guided in closing. The elasticity is that due to the thin metal, while the barrier is that due to the increased thickness.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a vertical section of the base of a window having a swinging sash in the closed condition. Fig. 2 shows the same in the slightly-opened condition. Fig. 3 is a corresponding vertical section showing a modification. Figs. 4, 5, and 6 are horizontal sections showing the junction of two swinging sashes. Figs. 4 and 5 show modifications in which the meeting portions of the metal are protected in a rabbet. Fig. 6 shows the metal more exposed. Fig. 7 is a corresponding section showing a good form of my invention as applied to a swinging sash. The portion shown is at the butt, the edge of the swinging sash which is hinged.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

Referring to Figs. 1 and 2, A is the fixed sill, A′ the ordinary stop adjacent to the inner face of the sash when closed, and B the sash formed with a rabbet *b* along the inner side of the lower edge.

D is a strip of sheet metal, preferably zinc, having one edge folded, as indicated by D′. It is secured to the sash B in the position represented by screws C. The fold lies within the rabbet. The fold is upward. E is a wider strip of corresponding metal, preferably a little thicker, secured to the window-sill A by screws.

E′ is an upright smoothly-rounded portion, and E^2 a portion in a plane about parallel to the body. The remaining fold, the one first formed, is downward, as shown. The opening between the body E and the doubly-folded portion E′ E^2 E^3 should be open only a little more than enough to receive the folded edge D′ of the portion attached to the sash, the fold E^3 being inclined.

The sash is rarely swung open so wide as to separate the entire length of these metal parts. The end adjacent to the body, which remains engaged, guides the remainder as the thick and smoothly-rounded edges are pressed together. In case the sash is swung open wider, so as to entirely disengage the metal, it will be rare that the ends of the metal adjacent to the butts shall have become deformed, and they will engage smoothly and correctly when the sash is again swung inward toward the closed position. The double folding of the part E E′ E^2 E^3 and the thickness and roundness of the fold E′ aid to insure that the parts come together correctly and also give strength. The thin bodies allow them to spring.

Figs. 4 and 5 show a recess *m* in the sash M and the sheet metal P, with its edge P′ folded, extending up and down, secured by screws Q, with the folded portion P′ adjacent to and lying partially within the rabbet *m*.

The opposite sash O—that on the right in the figures—carries a sheet-metal strip R R′ R^2, secured by screws S. The action is the same as with the metal parts attached to A and B in the form of the invention first described, except that the joint is vertical and the parts are certain from the relation and motion of the two swinging sashes to be entirely separated when the window is opened. Fig. 4 shows both the pieces of metal folded toward each other. Fig. 5 shows the metal of the two parts folded away from each other, the part P′ folded to the right and the double-folded part R R′ R^2 folded to the left.

In Fig. 6 the parts are similiarly related to Fig. 4, except that the rabbet is omitted and the metal is more exposed. In Fig. 7 there is also no rabbet. The arrangement of the metal and the engagement and disengagement as the sash is swung will be apparent from the figure.

I attach importance to the fact that the fold E^3 in the stationary part is downward, both because it presents the metal favorably to contact yieldingly with the inclined fold D′ on the moving part and because it presents a smoothly-rounded fold and leaves the raw edge shielded and protected between the body E and the first fold E^2.

Further modifications may be made without departing from the principle or sacrificing the advantages of the invention. It may be preferable in all the forms to fold the two metals in the directions shown in Fig. 5 to avoid the possibility of the folds ever becoming wrongly interlocked, from being imperfectly made, or from any other cause.

I claim as my invention—

1. A weather-strip of sheet metal having a portion E^3 of its width at the working edge partially folded so as to stand inclined relatively to the main body, the strip being also again bent with the curve so as to present a smoothly-rounded junction E′ of the intermediate part E^2 with the main part or body E, adapted to serve substantially as herein specified.

2. A stationary weather-strip of sheet metal having a portion of its width at the working side doubly folded so as to stiffen and to present a smoothy-rounded edge, in combination with a strip D D′ held in a rabbeted support *b* in the moving part B adapted to serve therewith, substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

CLIFTON VOSE.

Witnesses:
J. B. CLAUTICE,
M. F. BOYLE.