No. 674,193. Patented May 14, 1901.

S. P. BRICKER.

WEATHER STRIP.

(Application filed Feb. 25, 1901.)

(No Model.)

Fig. 1.

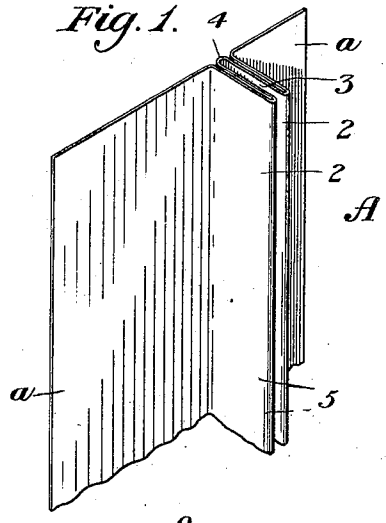


Fig. 2.

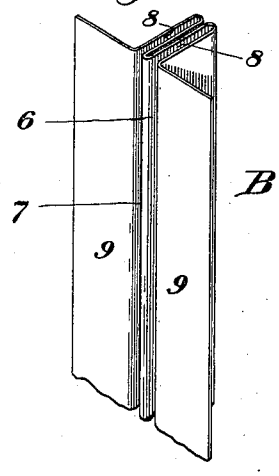


Fig. 3.

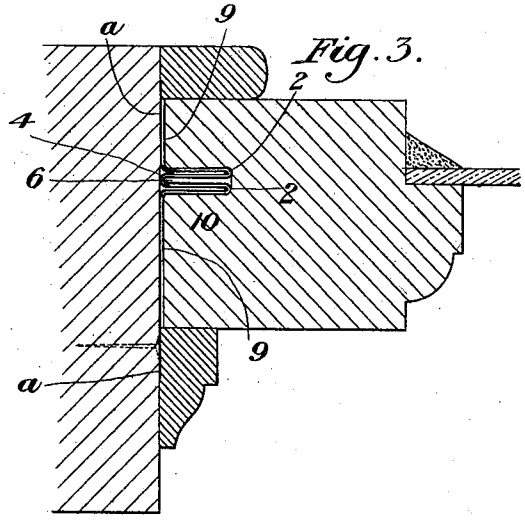


Fig. 4.

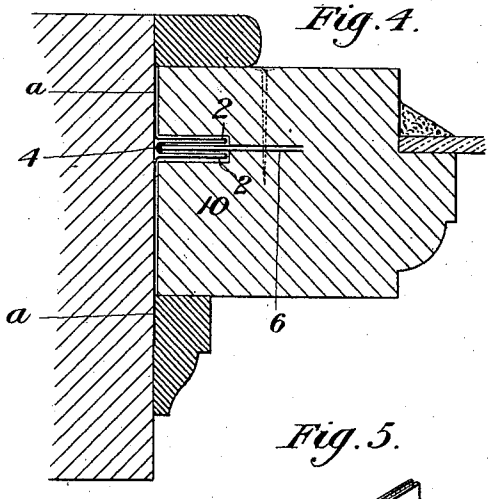


Fig. 5.

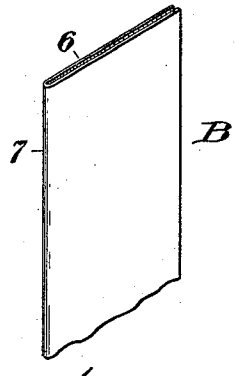
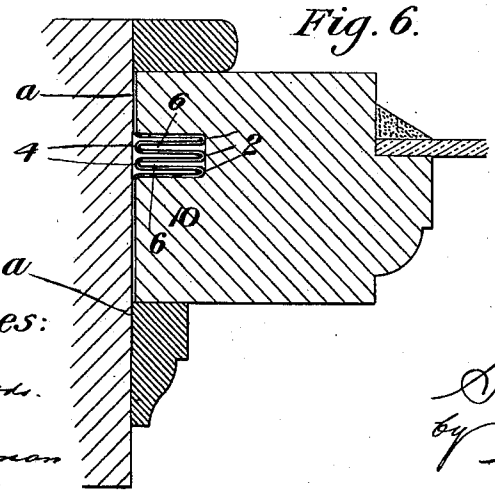


Fig. 6.



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UNITED STATES PATENT OFFICE.

SAMUEL P. BRICKER, OF ALLEGHENY, PENNSYLVANIA.

WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 674,193, dated May 14, 1901.

Application filed February 25, 1901. Serial No. 48,780. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL P. BRICKER, a citizen of the United States of America, and a resident of Allegheny, county of Allegheny, State of Pennsylvania, have invented certain new and useful Improvements in Weather-Strips, of which the following is a specification, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a perspective detail view of a portion of the "plow" member of my improved weather-strip. Fig. 2 is a similar view of a portion of the "tongue" member. Fig. 3 is a cross-sectional view of a portion of a window frame and sash provided with the interfitting plow and tongue members. Fig. 4 is a similar view showing a modified form of the tongue member. Fig. 5 is a perspective detail view of such modified form of tongue member. Fig. 6 is a view similar to Fig. 3, but showing an amplification of the invention wherein a greater number of interfitting walls are employed.

My invention relates to weather-strips, and refers more particularly to interfitting (preferably metallic) devices for such purpose; and it consists in the form of construction and manner of operation as I shall now proceed to describe.

Heretofore metallic strips have been used in the form of tongues secured on the side of the frame and adapted to project into a corresponding plow or groove in the side of the sash-frame; but such devices are only partially efficient, do not provide a tight fit, are not reliable in continued operation by reason of swelling or shrinkage of the wood, causing the parts to bind, and other causes, and only imperfectly secure the objects in view. My invention has in view the use of both stationary and movable interfitting members, so formed with relation to each other that they will provide a practically tight embracing sliding joint which will be maintained under all conditions.

In the practice of my invention each member is formed of thin sheet metal bent into form to provide the interfitting members, which by reason of their double walls have sufficient elasticity to insure the tight engagement which is desired.

Referring to the drawings, A represents the plow member, which is secured upon the inner sides of the frame by nails or screws, the member being made of a continuous piece of thin sheet metal of proper length, having the securing edges or flanges *a a*, and at the middle bent outwardly and back, forming the double walls or ribs 2 2, having between them the intervening space 3, constituting the plow, the bottom 4 of which is formed by the metal in substantial alinement with the securing-flanges *a*. The outer edges 5 of the walls 2 are rounded by bending of the metal, and while both sides of the walls are bent down close to each other and are practically together there still remain considerable flexibility and elasticity, which is of great advantage when the interfitting members are together. The tongue member may be made by simply doubling the metal over upon itself, as shown in Figs. 4 and 5, wherein the member is referred to by letter B, providing a double wall or tongue 6, having a rounded outer edge 7, adapted to be secured by nails in a suitable groove in the sash with proper clearance, as shown, and to interfit between the walls 2 of the plow member.

In the form shown in Figs. 2 and 3 the tongue member B is made in the same manner as to the middle wall 6; but the metal is bent outwardly again at the base of such middle wall or tongue, brought out to its edge with intervening spaces 8, which in turn embrace the double walls 2 of the plow member, and the metal is then flanged laterally, as at 9 9, providing means for attachment to the sash. This form of tongue member is gained into the sides 10 of the sash flush with the outer edge and when so mounted will interfit with the plow member, as shown, and form with it a tight sliding weatherproof fit.

By reason of the elastic nature of the interfitting members a sufficient compression or expansion will occur to insure such binding fit, and care should be taken in making the strips that they shall be proportioned to each other, so as to secure these results.

It will be understood that as thus constructed the interfitting plow and tongue members will embrace each other and form a tight interfitting joint and that the results obtained are due to such interfitting engagement. It follows also that the position of

the members may be transposed with relation to each other, as by placing the plow member in the side of the sash and the tongue member in the frame, or that the number of the walls may be increased, as suggested by the arrangement shown in Fig. 6, without departing from my invention, since I do not desire to be limited to the form shown.

By my improved weather-strips all danger of warpage, shrinkage, or expansion of the wood is obviated, the objections noted are overcome, and a perfect, durable, and weatherproof strip is provided, which may be installed and left in during all seasons without interfering with the operation of the sashes. A further advantage of great importance is that all rattling or lateral movement of the sashes is entirely prevented by reason of the engagement of the stationary and movable members with each other. These advantages will be appreciated by those accustomed to the use of weather-strips, and it will be understood that I do not desire to be confined to the exact construction shown and described, but that variations therefrom may be made by the skilled mechanic without departing therefrom.

Having described my invention, what I claim is—

1. In a weather-strip, the combination of a plow member provided with extended double sides formed of a continuous metallic sheet, and an interfitting doubled-tongue member.

2. In a weather-strip, the combination of a plow member made of a continuous metallic sheet formed into double side walls with an intervening space and a tongue member formed of a doubled strip, interfitting between the side walls.

3. In a weather-strip the combination of a plow member having a plurality of extended doubled sides formed by bending the metal upon itself, with an intervening space between the sides; and a tongue member having one or more double tongues adapted to interfit between such doubled sides.

4. As an improved article of manufacture, a weather-strip consisting of a metallic plate provided with a plurality of extended double-sided longitudinal ribs with an intervening space between the ribs.

5. As an improved article of manufacture, a weather-strip consisting of a metallic plate provided with a plurality of extended double-sided longitudinal ribs, with an intervening space between the ribs, and means for securing the strip in position.

6. As an improved article of manufacture, a weather-strip consisting of a metallic plate bent into a double-sided central longitudinal tongue, with redoubled sides and intervening spaces, and means for securing the strip in position.

Signed at Pittsburg, Pennsylvania, this 21st day of February, 1901.

SAMUEL P. BRICKER.

Witnesses:
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