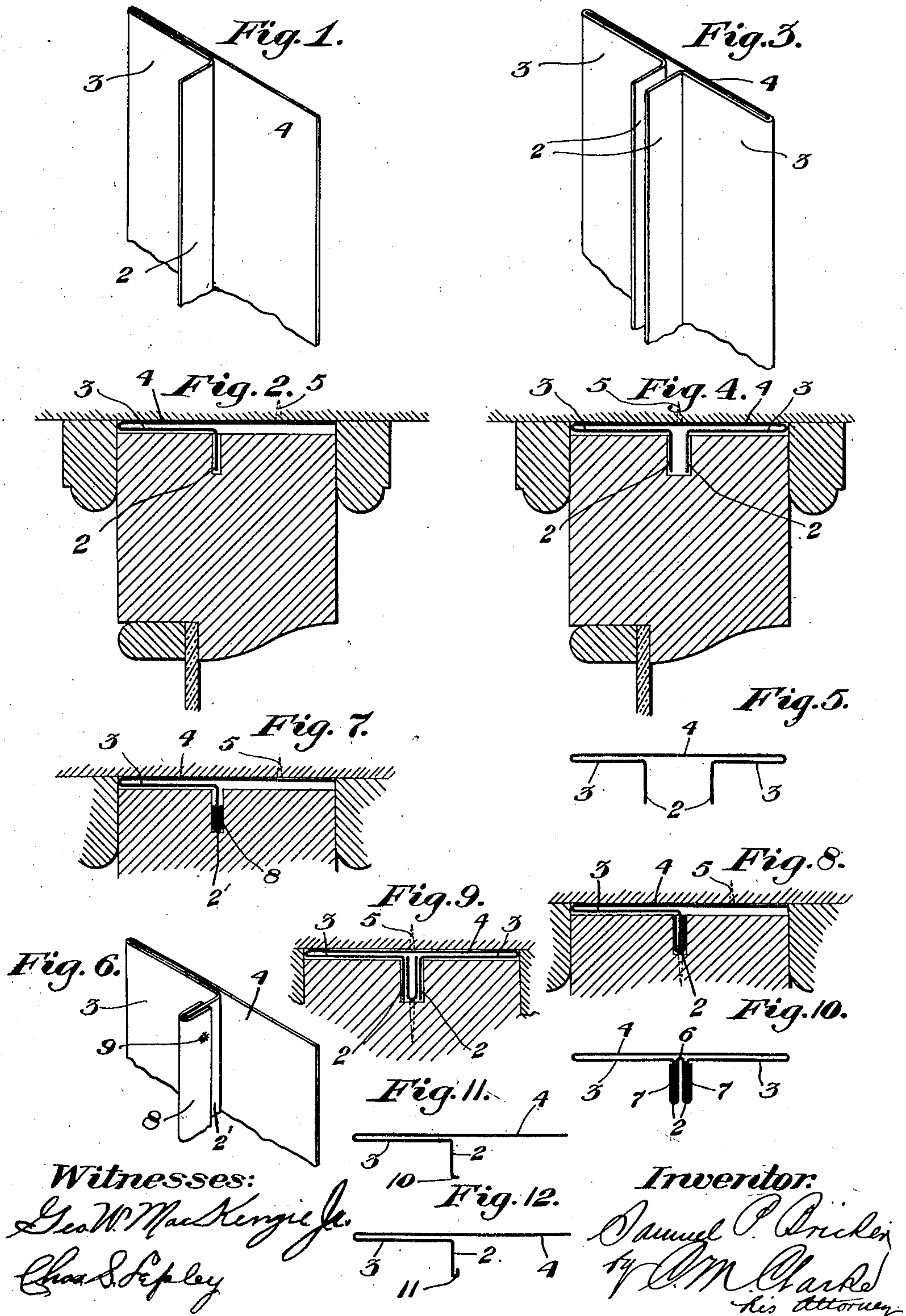


No. 849,365.

PATENTED APR. 9, 1907.

S. P. BRICKER.  
METAL WEATHER STRIP.

APPLICATION FILED SEPT. 3, 1904. RENEWED FEB. 16, 1907.





# UNITED STATES PATENT OFFICE.

SAMUEL P. BRICKER, OF ALLEGHENY, PENNSYLVANIA.

## METAL WEATHER-STRIP.

No. 849,365.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed September 3, 1904. Renewed February 16, 1907. Serial No. 357,755.

*To all whom it may concern:*

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

Figure 1 is a perspective view of one end of my improved strip. Fig. 2 is a cross-section through a window-frame and casing, showing the device in position. Fig. 3 is a view similar to Fig. 1, showing a double-tongue strip. Fig. 4 is a view similar to Fig. 2, showing the application of the double-tongue strip. Fig. 5 is a sectional view showing the tongues somewhat wider apart. Fig. 6 is a perspective view showing a reinforced tongue. Fig. 7 is a sectional view showing the reinforced tongue engaging the groove of the sash. Fig. 8 is a similar view showing the single rib engaging an inserted plow member set in the sash. Fig. 9 is a sectional detail view showing a similar interfitting member located between the tongues. Fig. 10 is a similar view showing a redoubled plow member engaging the double tongues. Figs. 11 and 12 are detail views showing tongues having turned and rounded edges, respectively.

My invention relates to improvements in metallic weather-strips of the class wherein a projecting tongue or rib is arranged to interfit and make sliding engagement with a corresponding receiving groove or plow member so as to provide a sealing-joint for the purpose of preventing the passage of air, dust, moisture, &c., in whatever position the window or other element to which the device is applied may assume in the frame.

In the accompanying drawings I have illustrated several forms of the invention, which consists, generally, of a primary base 4 of substantially the width of the runway, a reflexed secondary base 3, and a projecting tongue or rib 2, bent outwardly at about a right angle from the secondary base 3, all of such parts being made of one sheet folded or bent, as clearly shown. In Fig. 3 the device is shown as provided with double separated ribs 2 2, such construction being merely a duplication of that already described and as shown in Fig. 1. In both constructions the strip is secured against the base of the runway of the sash-frame by means of tacks or

nails 5, driven through the base 4 at intervals, and, as shown in the drawings, these attaching devices are located either to one side of the single rib, as in Fig. 2, or between the separate double ribs, as in Fig. 4. In both such attachments it will be observed that the base 4, the secondary base 3, and the rib 2 require no other securing attachment except such tacks or nails, and that these portions are therefore somewhat free to move outwardly or inwardly, or that the rib may be deflected laterally to a considerable degree without disturbing the attachment to the frame. This flexibility is of considerable advantage in allowing the rib or ribs to make a tight binding fit with the groove in the sash-frame, and particularly with the double-rib construction they may be originally fitted somewhat tightly in the groove and will bear outwardly at each side, retaining their elasticity, and thus insuring a tight weather-proof closure at all times.

The ribs 2 2 may be located at any desired distance apart, and in Fig. 5 I have shown them separated sufficiently far to provide for clearance of the sash-cord, in which construction the ribs may engage a single wide groove or may each enter its own appropriate single groove in the sash.

In Fig. 10 I have shown the form of strip illustrated in Figs. 3 and 4, but with an interfitting tongue member formed of a separate strip of metal bent in W form, so as to provide a central rib 6 and sides 7 7, arranged to fit between and embrace the tongues 2, as will be readily understood. This supplemental tongue member is similar in construction to the tongue member shown in my prior patent, dated November 4, 1902, No. 712,761.

In Figs. 8 and 9 are shown supplemental interfitting U-shaped strips formed of doubled sides secured to the edge of the sash by nails and adapted to embrace the tongue 2, as in Fig. 8, or to be embraced by them, as in Fig. 9. In either construction a tight interfitting engagement is secured.

In Figs. 6 and 7 I have shown a further modification, wherein the rib 2' is provided with a supplemental attached reinforced edge 8 consisting of a separate strip of metal bent in U form embracing the projecting rib and secured to it in any suitable manner, as by pressing it tightly together to clamp it there to or by partial riveting operation, as by a series of indentations 9. The strip 8 might



also be soldered or actually riveted to the rib. The object of this construction is to thicken the projecting rib or tongue, increasing its body portion, and also providing a rounded edge, giving a more finished smooth exterior projecting portion.

In Figs. 11 and 12 the tongues are shown turned over, either at right angles, as at 10, or reflexed upon itself, as at 11, so as to form a finishing or thickening bead. This construction not only strengthens the tongues, but also gives them a rounded smooth edge.

The advantages of my improved weather-strip will be fully appreciated by all those familiar with this art, as it provides a very simple, inexpensive device, well adapted to the objects in view, providing considerable elasticity to compensate for any inequalities due to warpage or shrinkage, while requiring no especial skill to install. The preferred material of which my strip is made is sheet-zinc, although I may employ other non-corrosive material. Sheet-zinc, while possessing a limited degree of elasticity is preferable on account of its flexibility, ease of working, and non-corrosive qualities, while the terminal tongue or rib will maintain sliding engagement with the groove of the sash independent of variations in alinement due to warpage or shrinkage, and it will be understood that in making the strips the secondary base-flange 3 may be extended outwardly somewhat at an angle to the base 4, so that when pressed back against such base it will bear outwardly against the edge of the sash with considerable binding force, thus increasing its efficiency.

It will be understood that the strip may be made in various sizes or widths and that changes or modifications may be made in its specific details by the skilled mechanic without departing from the scope of the following claims.

What I claim is—

1. A metallic weather-strip composed of a primary flat base of suitable metal bent inwardly upon itself at each side to form secondary bases, the terminal edge portions of said secondary bases being bent outwardly at right angles and adapted to engage a

groove in the edge of a window-sash, substantially as set forth.

2. In a weather-strip, the combination of a primary base of sheet metal and similar secondary bases attached thereto having their terminal edge portions bent outwardly at right angles and adapted to engage a groove in the edge of a window-sash, substantially as set forth.

3. The combination with a window-frame provided with a runway, of a metal weather-strip composed of a primary base secured in the runway and a reflexed secondary base having a flange extending angularly therefrom, said secondary base and its flange being capable of movement relatively to the primary base and a window-sash provided with a groove in its edge with which said flange slidably engages; substantially as described.

4. The combination with a sash provided with a receiving-groove, of a stationary frame member composed of a primary base of suitable metal bent inwardly upon itself at each side to form secondary bases, the terminal edge portions of said secondary bases being bent outwardly at right angles and extending into the groove of the window-sash, substantially as set forth.

5. The combination with a weather-strip formed of sheet metal bent or folded inwardly at each edge and extending outwardly to form terminal projecting ribs; of a movable member secured to the sash and in interfitting engagement with said ribs, substantially as set forth.

6. The combination with a weather-strip formed of sheet metal bent or folded inwardly at each edge to provide secondary bases terminating in outwardly-extended ribs, of an independent resilient tongue member formed of a U-shaped strip secured to the sash and embraced by said ribs, substantially as set forth.

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

SAMUEL P. BRICKER.

Witnesses:

C. M. CLARKE,  
THOS. M. BROWN.