No. 733,991. PATENTED JULY 21, 1903.

J. C. McMAHON.

METAL WEATHER STRIP.

APPLICATION FILED JUNE 27, 1902.

NO MODEL.

Fig. 1.

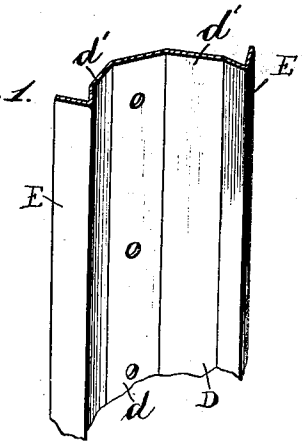


Fig. 2.

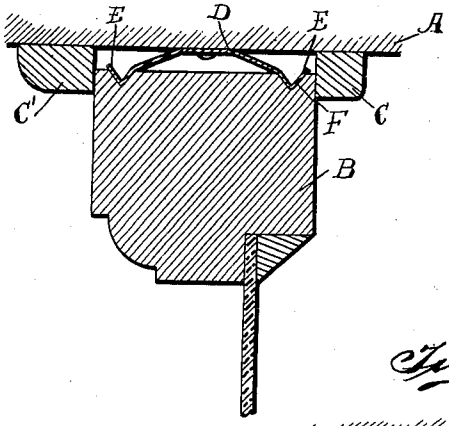


Fig. 3.

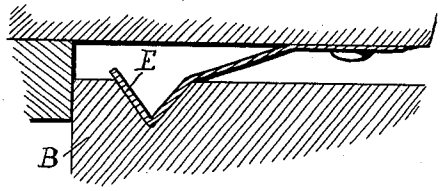


Fig. 4.

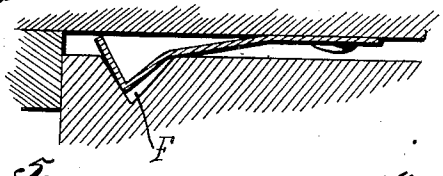


Fig. 5.

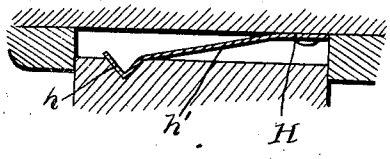
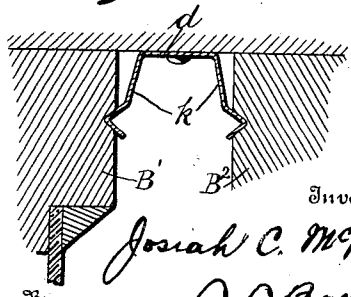


Fig. 6.



Witnesses

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No. 733,991. Patented July 21, 1903.

UNITED STATES PATENT OFFICE.

JOSIAH C. McMAHON, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR TO CHAMBERLIN METAL WEATHER STRIP COMPANY, OF DETROIT, MICHIGAN.

METAL WEATHER-STRIP.

SPECIFICATION forming part of Letters Patent No. 733,991, dated July 21, 1903.

Application filed June 27, 1902. Serial No. 113,445. (No model.)

To all whom it may concern:

Be it known that I, JOSIAH C. McMAHON, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Metal Weather-Strips; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in weather-strips, more particularly to the so-called "metal" type; and it is embodied in the construction and arrangement of parts presently to be described, and defined in the claim.

The object of the invention is to provide a metal strip for windows, especially sliding windows, which will have a spring capacity and character, so that variations in the width of sash or between the bottoms of the opposite guideways of the window-frame may be compensated for in a simple, expeditious, and inexpensive manner.

It is now recognized that the metal weather-strip is one of the most satisfactory types of strips for sliding sashes, and it has been the practice heretofore to form these strips of sheet metal, usually zinc, the strips having a tongue formed of the metal bent into substantially **U** shape and being attached usually on opposite sides of the tongue. My present invention is of this type, but embodies a peculiar formation of tongue associated with a spring or yielding portion, using in connection therewith a recessed sash.

While I have shown in the accompanying drawings the strip as attached to the frame of a window, it is of course obvious that the strip may be attached to the sash or in an order reverse from that shown in the drawings. I also desire it understood that the principle of the invention may be embodied in forms slightly different from those shown in the drawings.

Figure 1 is a perspective view of the section of a metal strip. Fig. 2 is a cross-section through a sash of the adjacent window-frame. Figs. 3 and 4 are enlarged views of one-half of the strip, showing the same in different positions. Fig. 5 is a modified form of strip. Fig. 6 is a modified form of strip adapted to serve as a parting-bead.

In the drawings, A designates the window-casing; B, the sliding sash-frame.

C and C′ designate the beads and D designates the improved strip. This strip is conveniently formed with a flat base portion *d*, having a series of perforations therein through which the same may be attached to the carrying member. At opposite edges of the body portion *d* are obliquely-arranged spring portions *d′*, which are normally deflected at an angle to the base or body portion, terminating at their outer ends in angular or **V**-shaped sealing-flanges E, which are presented outwardly. These flanges or sealing-flanges are arranged so that normally the same will stand or be in a position with the apex directed in a direction parallel with the sides of the sash B, as shown in Fig. 2. In the sash B are formed two **V**-shaped grooves F, located conveniently adjacent the edges of the sash and arranged in direct line with the sealing portions of the strip D. The size or dimensions of the grooves F are substantially those of the outer face of the sealing **V**-shaped portion of the strip, so that normally when in proper position they will fit the grooves, as shown in Fig. 3. Should, however, the space between the sash and the frame A be of less width than that normally required, the sealing portion of the strip will occupy a position eccentric to the grooves F, as shown in Fig. 4, in which position, however, a portion of the sealing part is in direct contact with one of the walls of the groove. This feature of the invention is an important feature in that, irrespective of the relative positions of the sash and frame, there is always a close joint or contact formed between the strip and the sash, and the peculiar construction and arrangement prevents any side rattling of the sash in that the **V**-shaped portion of the strip acts not only as a sealing device, but as a means to prevent any transverse movement of the sash.

In Fig. 5 I have shown a slightly-modified form, the same consisting of but a single sealing portion *h*, the spring portion *h′* between

the body H and the sealing portion being extended.

The invention is also embodied in the structure such as shown in Fig. 6, wherein the spring-arms *k* are bent at more nearly a right angle to the body, and the V-shaped sealing portions are formed on the reverse or opposite side to that shown in the other figures. In that particular construction the metal strip is used not only as a weather-strip, but as a parting-bead between adjacent sashes, the sashes being designated at B' B². The V-shaped projections or sealing portions enter grooves in the respective sashes.

From the foregoing description it will be observed that a very close joint is maintained for the window and one which will effectually prevent rattling. It will also be observed that no separate spring members or other parts or features are needed, the entire device consisting of the metal strip having a sealing portion and a yielding connecting portion between the sealing portion and the base or body, thus constituting a yielding metal strip.

In practice I have found that a strip of this character can be made out of properly-tempered brass, although I do not wish to be limited to that particular material.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

The combination with a frame and a sash member having a groove with diverging walls, of a metal weather and holding strip secured to the frame having a flat securing portion, an inclined spring portion and an outer bent sealing portion shaped to fit the groove in the sash.

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

JOSIAH C. McMAHON.

Witnesses:

CHARLES M. JOHNSTON,

WM. C. BOYD.