April 2, 1935. R. T. AXE 1,996,635

WEATHER STRIP CONSTRUCTION FOR WINDOWS

Filed Oct. 10, 1931

Fig-1-

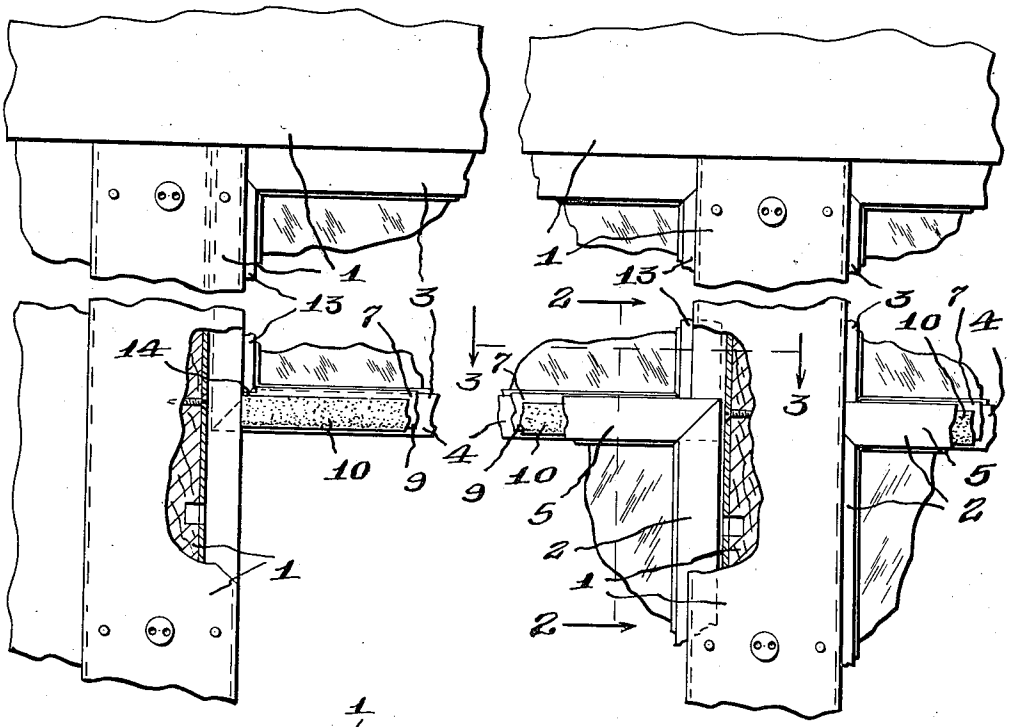


Fig-2-

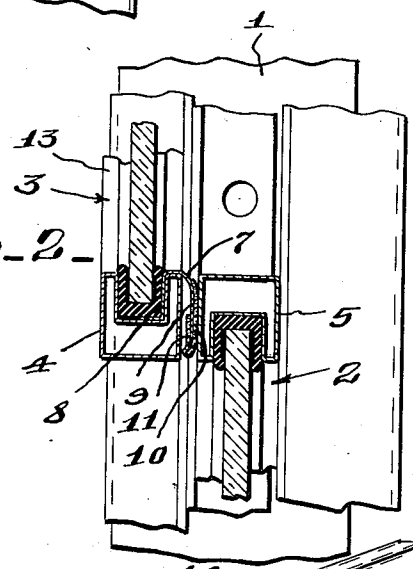


Fig-3-

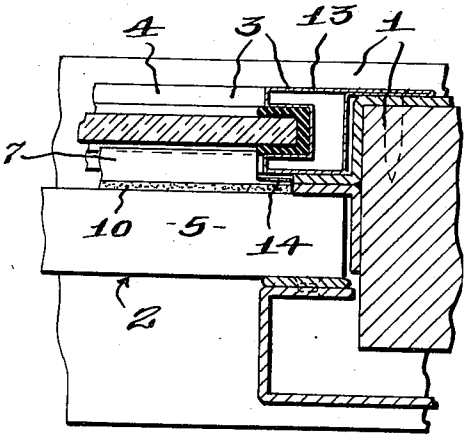
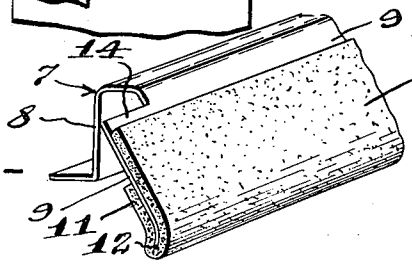


Fig-4-



INVENTOR
Roy T. Axe
BY
Bodell & Thompson
ATTORNEYS

Patented Apr. 2, 1935 1,996,635

UNITED STATES PATENT OFFICE

1,996,635

WEATHER STRIP CONSTRUCTION FOR WINDOWS

Roy T. Axe, Syracuse, N. Y., assignor, by mesne assignments, to The Syracuse Trust Company, Syracuse, N. Y., a corporation of New York, trustee

Application October 10, 1931, Serial No. 568,126

3 Claims. (Cl. 189—65)

This invention relates to weather strip means for windows, such as are used in railway cars and busses, and particularly a weather strip means between the lower rail of an upper sash and the top rail of a bottom sash to seal the joint between the sashes when the movable sash, usually the lower sash is closed, and has for its object, a fibrous or cloth covering for a thin flexible spring leaf which is purposely easily distorted to conform to unevennesses on the contact surface of the sash with which the leaf engages, which covering compensates for distortion and keeps the joint between the sash tight, regardless of the distortions.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawing, in which like characters designate corresponding parts in all the views.

Figure 1 is a fragmentary elevation, partly in section, of a window construction embodying this invention.

Figure 2 is an enlarged, sectional view on line 2—2, Figure 1.

Figure 3 is an enlarged, sectional view on line 3—3, Figure 1.

Figure 4 is an enlarged, fragmentary, isometric view of the weather strip.

1 designates generally, the window frame, which may be of any suitable form, size and construction, it being provided with suitable sash guides.

2 is a hollow sash, which is capable of being raised and lowered.

3 is an upper sash, or any other element, having a lower rail, as 4, for lapping the top rail 5 of the lower sash 2, when the sash 2 is closed.

The weather strip means comprises a thin, flexible, resilient, distortable, sheet metal backing or strip 7 secured to one of the rails 4, 5, usually the rail 4, and extending between the rails, the strip being usually of thin sheet brass with sufficient resiliency to press its free end outwardly against the rail 5. The strip 7 includes a base portion 8 secured to the rail 4, and a leaf portion 9 projecting from the base portion and tensioned outwardly toward the rail 5, the leaf portion being covered with a fibrous material as cloth, or felt 10, extending around the free edge of the leaf portion and on the rear side of the leaf portion, as at 11. This covering is secured to the strip, or the leaf portion, usually by cementing. Also, the margin of the leaf portion is preferably flexed slightly, as at 12, to facilitate the cementing of the covering to the leaf portion at the margin thereof in order that the covering will more securely adhere to the leaf portion at the margin thereof.

The base portion 8 extends between the stiles 13 of the upper sash, and is here shown as secured to the upper sash by seating in the glass receiving groove of the upper sash, so that the strip is secured to the upper sash by the glass pane. In order that the leaf portion strip 9 may extend the full width of the sashes, and not leave air gaps at the ends thereof, the leaf portion is provided with extensions 14 which extend over the stiles of the upper sash and permit the leaf portion to also lap the full width of the lower sash between the stops. Ordinarily fibrous weather strips of carpeting and the like, or material having a nap, compresses very quickly, so that they are loose and inefficient in performing their function as a weather strip. Also, flexible strips are inherently distorted or wavy and become indented, distorted, or wavy at their edges due to unevenness of the top rail of the lower sash formed by dust etc., adhering to the top rail, thus providing passages for air drafts, so that the strip is not efficient.

By my invention, the fibrous or cloth covering for a thin, resilient, distortable, strip compensates for wear of the covering by reason of the resiliency of the strip and also, compensates for distortion etc., of the strip so that the joint between the sashes remains weather tight and efficient practically the entire life of the sash.

What I claim is:

1. In a window construction, the combination with a window frame, and upper and lower sashes mounted in the frame, one of the sashes being movable, and the bottom rail of the upper sash lapping the top rail of the lower sash when the movable sash is closed; of weather strip means comprising a thin, flexible, resilient, and distortable, metal strip having a base portion fixed to the rail of one sash between the stiles of that sash, and a leaf portion extending between the rails and tensioned to press its free end toward the other rail, the leaf portion having extensions at its ends extending over the stiles of the sash to which the strip is secured.

2. In a window construction, the combination with a window frame, and upper and lower sashes mounted in the frame, one of the sashes being movable, and the bottom rail of the upper sash lapping the top rail of the lower sash when the movable sash is closed; of weather strip means

comprising a thin, flexible, resilient, and distortable metal strip having a base portion fixed to the rail of one sash between the stiles of that sash, and a leaf portion extending between the rails and tensioned to press its free end toward the other rail, the leaf portion having extensions at its ends extending over the stiles of the sash to which the strip is secured, and a cloth covering on the leaf portion.

3. In a window construction, the combination with a window frame, and upper and lower sashes mounted in the frame, one of the sashes being movable, and the bottom rail of the upper sash lapping the top rail of the lower sash when the movable sash is closed, a weather strip comprising a thin, flexible, resilient, and distortable metal strip having a base portion fixed to the rail of one sash between the stiles of that sash, and a leaf portion extending between the rails and tensioned to press its free end toward the other rail, the strip having extensions at its ends extending over the stiles of the sash to which the strip is secured, and a cloth covering on the leaf portion, said cloth covering extending from the base portion over the outer face of the leaf portion, around the free edge of the leaf portion and lapping the rear side thereof.

ROY T. AXE.