Jan. 2, 1923. 1,440,368

E. H. BERG.
WEATHER STRIPPING.
FILED SEPT. 12, 1921.

Fig. 1.

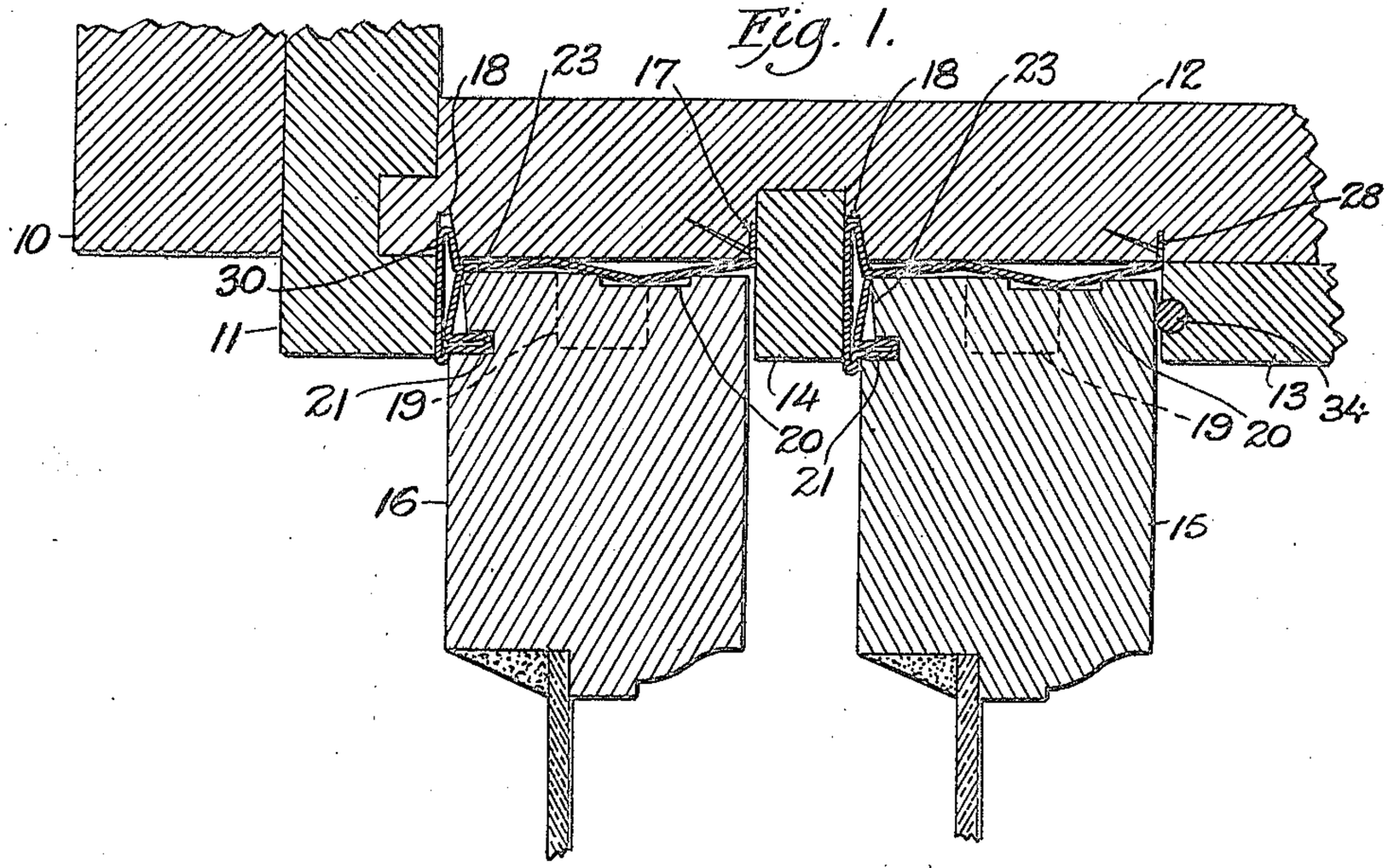


Fig. 2.

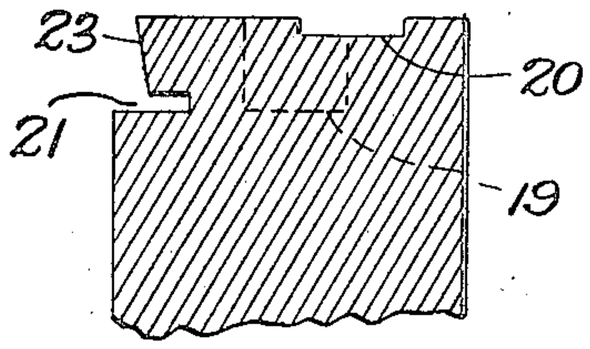


Fig. 3.

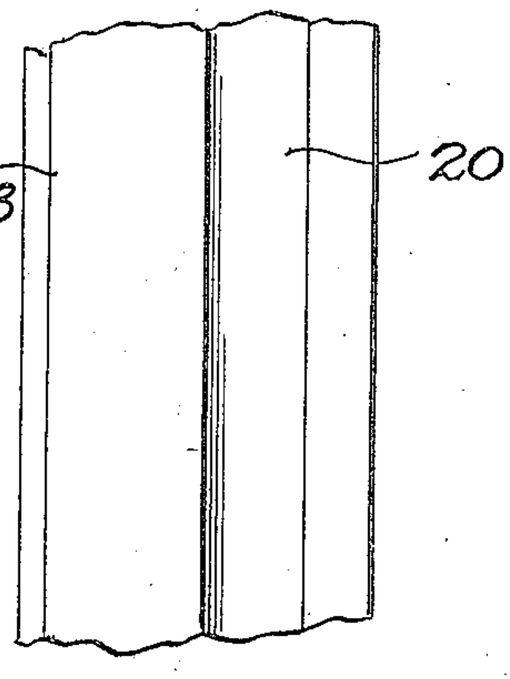


Fig. 4.

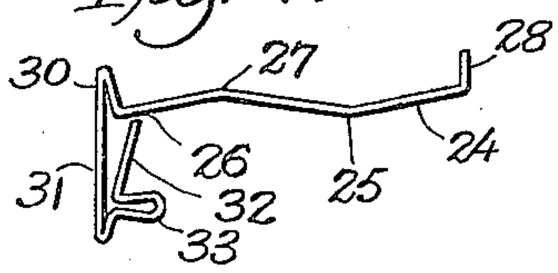
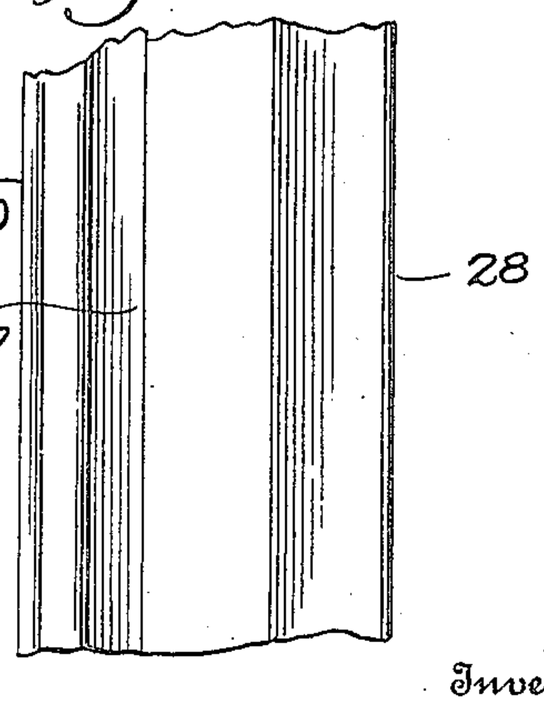


Fig. 5.



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UNITED STATES PATENT OFFICE.

ELWIN H. BERG, OF EVERLETH, MINNESOTA.

WEATHER STRIPPING.

Application filed September 12, 1921. Serial No. 500,124.

To all whom it may concern:

Be it known that I, ELWIN H. BERG, a citizen of the United States of America, residing at Everleth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Weather Stripping, of which the following is a specification.

My present invention relates generally to weather stripping and more particularly to a metal weather stripping of the type described and claimed in my application No. 428,029 which was filed December 3, 1920, and patented December 13, 1921, Patent No. 1,400,206.

The primary object of my present invention is the provision of certain improvements by which to provide for the exclusion of weather, allow for a maximum range of expansion and warping of sashes, permit of ready removal of the sash without disturbing the stripping, and provide for ready sliding movement of the sash when in place.

As a whole my present invention provides for certain improvements upon the device of my application above referred to as will be seen by reference to the following description and the accompanying drawing in the latter of which,

Figure 1 is a cross section through one side of a window casing and the sashes therein showing the practical application of my invention,

Figure 2 is a cross section through a portion of one side of one of the sashes showing the same cut to receive my improved weather stripping,

Figure 3 is an outer side view of a portion of the sash shown in Figure 2,

Figure 4 is an end view of the weather strip removed, and

Figure 5 is a side view of a portion of Figure 4.

Referring now to these figures I have shown portions of a window casing in Figure 1 of which the outside casing appears at 10, the blind stop at 11, the pulley stile at 12, the inside stop at 13 and the parting strip at 14, the latter of which forms a stop for the inner lower sash 15 in the same way that the blind stop 11 functions for the outer upper sash 16.

The sides of the sashes 15 and 16 move vertically in slideways respectively between the inner stop 13 and parting strip 14 and between the latter and the blind stop 11, and the pulley stile 12 is provided adjacent to the inner and the outer sides of each of these slideways with a vertical slit 17 and a vertical V-shaped slot 18 for a purpose to be presently described.

Each of the sashes 15 and 16 has at its opposite sides the usual sash cord grooves indicated at 19 and each is provided at its opposite sides in accordance with my invention with a vertical slot 20 shown particularly in Figures 2 and 3 and each also has a slot 21 at each of its opposite sides in its front face and is cut away slightly on a bevel as at 23 between its slot 21 and its outer side.

The weather strip proposed by my invention has a body 24 which is transversely corrugated to provide a pair of humps 25 and 26 for engagement with the outer side of a sash between which and the sash frame or pulley stile 12 the body is disposed, as well as a hump 27 turned in an opposite direction to engage the sash frame or pulley stile between the humps 25 and 26. The body 24 is provided along its inner vertical edge with a laterally and outwardly deflected flange 28 to extend into the vertical sash frame slit 17, this flange having apertures at vertically spaced points therealong to receive nails or other fastening members 29 which are driven into the sash frame or stile.

At its opposite side the body 24 of the weather strip is bent upon itself or doubled to form a laterally outstanding V-shaped tongue 30 to project into the V-shaped slot 18 of the sash frame, the outer wall of which V-shaped tongue has an extension 31 projecting approximately at right angles to the plane of the body 24 and inwardly therebeyond. From an inspection of Figures 1 and 4 in particular it will be noted that the tongue 30 projects approximately at right angles to the body 24 beyond its outer face and that the extension 31 has an inwardly projecting and reverting lip 32 whose inner end extends into close proximity to the body 24 and is provided with a tongue 33 formed by bending this lip upon itself, the said tongue 33 projecting approximately parallel to the body 24.

By referring particularly to Figure 1 it will be noted that the tongue 30 is disposed

in practice within the stile groove 18 so that by virtue of the yielding movement between the two side walls of the tongue, the body 24 can flatten out more or less between the side of the sash and the stile, the latter of which is engaged by the hump 27 of the body with the hump 25 projecting into the groove 20 of the sash.

It will also be noted that the extension 31, projecting at right angles to the body, abuts in flatwise relation the stop forwardly of the sash, namely either the parting strip 14 or the blind stop 11, while the inwardly projecting tongue 33 extends into the forward vertical slot 21 of the sash and the lip 32 lays against the surface of the beveled portion 23.

The strip proposed by my invention is secured only at one point that is where the flange 28 enters the sash frame, leaving the strip otherwise entirely free and flexible in side action as well as free to move as the sash shrinks or swells. Furthermore with the understanding that the weather strip is formed of a flexible elastic material it is obvious that it will, on account of its tongue entering the front slot of the sash, be firmly held at its several points of contact with the sash, regardless of the movement of the latter.

In the case of the upper sash 16 it is ordinarily sufficient that it abut at its inner face the parting strip 14 but in the case of the more frequently moved lower sash it may be desirable to partially embed a steel wire or the like 34 along the adjacent face of the inner stop 13 so that it will be engaged by the inner face of the sash 15, permitting the latter to move more freely and with less friction than if flatwise engaged by the stop itself. This is particularly desirable and an effective protection against binding of the lower sash due to painting, which so frequently renders movement of the sash difficult if not impossible.

I claim:

1. A metal weather strip comprising a transversely corrugated body having oppositely presented sash and window frame engaging humps intermediate its side edges, said body having window frame engaging means along one side edge and having at its opposite side edge an angular V-shaped tongue and an extension integral with the tongue, projecting at right angles to the body and beyond the opposite side of the body with respect to the tongue, said extension having an inwardly projecting sash engaging tongue approximately parallel to the body.

2. A metal weather strip comprising a transversely corrugated body having oppositely presented sash and window frame engaging humps intermediate its side edges, said body having window frame engaging means along one side edge and having at its opposite side edge an angular V-shaped tongue and an extension integral with the tongue, projecting at right angles to the body and beyond the opposite side of the body with respect to the tongue, said extension having an inwardly reverting lip projecting toward and contiguous to the respective side edge of the body and provided with a sash engaging tongue.

3. A metal weather strip including a body having anchoring means along one side edge and having at its opposite side edge an angular extension provided with a sash engaging tongue projecting therefrom parallel to the body and terminating in a free sash engaging lip spaced from the extension and projecting inwardly beyond the said tongue.

4. A metal weather strip comprising a body portion having anchoring means along one side edge and having oppositely presented sash and window frame engaging humps between its side edges, said body having an angular extension at its opposite side edge provided with sash engaging means, and a V-shaped tongue between the body and its said extension the side walls of which are movable toward and away from one another in use and permit lateral yielding of the body with respect to the extension.

5. A metal weather strip comprising a body portion having anchoring means along one side edge and having oppositely presented sash and window frame engaging humps between its side edges, said body having an angular extension at its opposite side edge provided with sash engaging means including a laterally projecting tongue and an inwardly reverting terminal lip, and a V-shaped tongue between the body and its said extension the side walls of which are movable toward and away from one another in use and permit lateral yielding of the body with respect to the extension, said V-shaped tongue projecting beyond the relatively opposite side of the body with respect to the said extension.

In testimony whereof I have affixed my signature.

ELWIN H. BERG.