April 11, 1944. M. A. McDONOUGH 2,346,137

WEATHER STRIPPING

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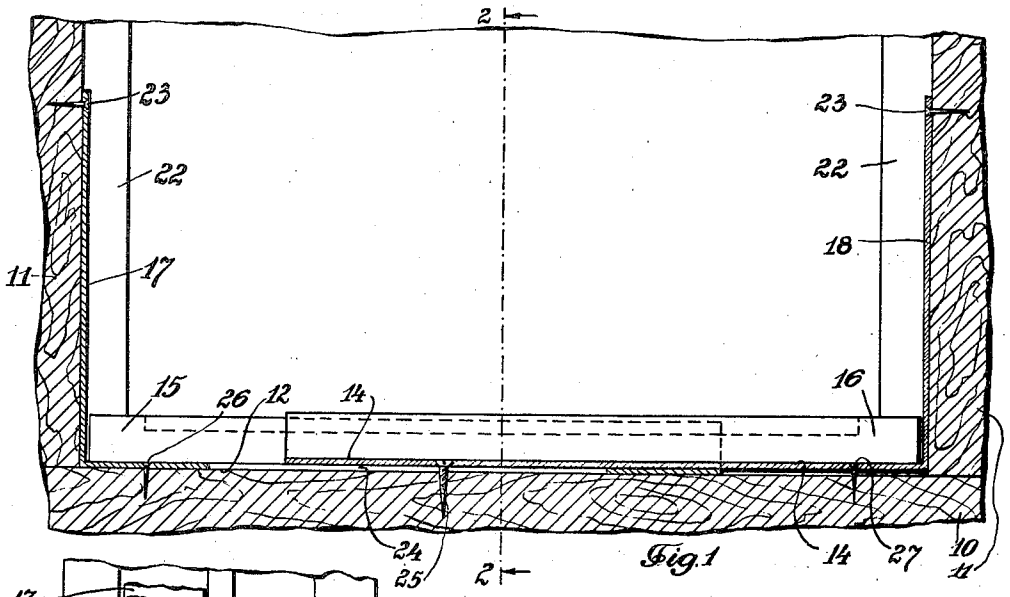


Fig. 1

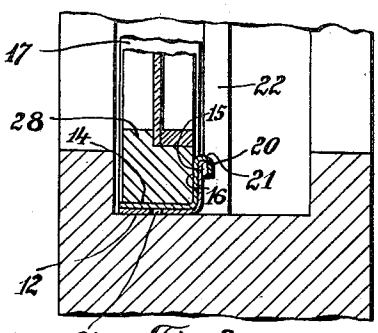


Fig. 2

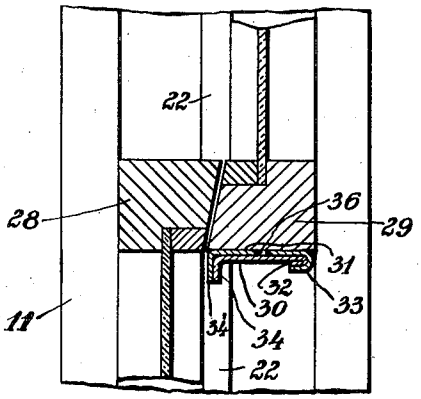


Fig. 3

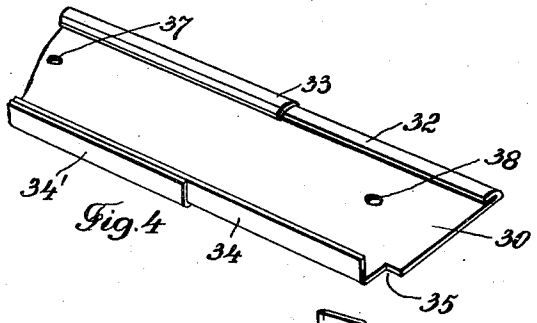


Fig. 4

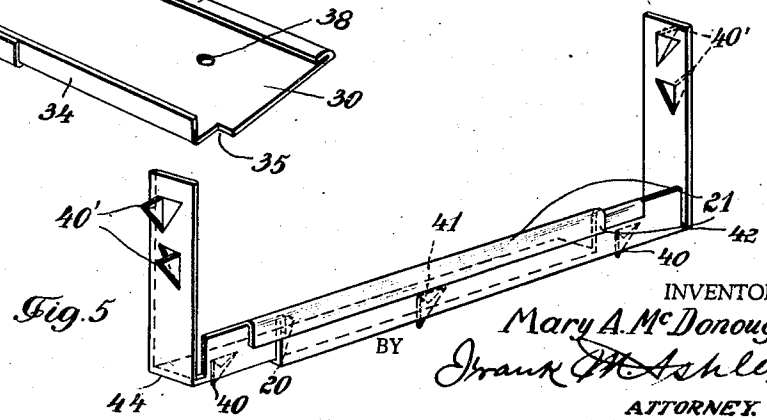


Fig. 5

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WEATHER STRIPPING

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Application February 3, 1941, Serial No. 377,217

3 Claims. (Cl. 20—69)

This invention relates to weather stripping.

One of the principal objects of the invention is to provide a weather stripping for a window having vertically sliding sashes, which shall be adjustable to windows of different widths.

Another object is to provide weather stripping adapted for both upper and lower sashes of windows, and which may also be used if desired for doors or for windows of types other than double-hung.

Another object is to provide a weather stripping construction which shall be effective in excluding drafts, cold air, and dust, from the room.

Another object is to provide a stripping which shall reduce rattling of the window or door.

Another object is to provide a stripping which can be simply and easily installed.

Further objects and advantages of the invention will be in part set forth in the following specification, and in part will be obvious therefrom without being specifically pointed out.

With the above and other objects of the invention in view, the invention consists in the novel construction, arrangement and combination of various devices, elements and parts, as set forth in the claims hereof, certain embodiments of the same being illustrated in the accompanying drawing and described in this specification.

Referring to the drawing which forms a part of this specification:

Fig. 1 is an elevational view, partly in section, of the lower part of a window casing, looking from within the room, showing one embodiment of my invention installed, the window sash not being shown;

Fig. 2 is a vertical section taken along the line 2—2 of Fig. 1, but also showing the full depth of the casing and showing the lower sash closed against the weather stripping;

Fig. 3 is a sectional view, looking toward the right relatively to Fig. 1, but showing a vertically central portion of the side casing and showing in section adjacent portions of an upper and a lower sash in closed position and the portion of an embodiment of my invention constructed for use in this location;

Fig. 4 is a perspective view, on an enlarged scale and partly broken away, of the portion of the device shown in section in Fig. 3, in an inverted position to better illustrate the construction; and

Fig. 5 is a perspective view on a reduced scale of a modification of the device shown in Fig. 1, showing integral attaching means therefor.

Referring first to Figs. 1 and 2, 10 and 11 indicate the bottom and side members of a window casing of a double-hung window, and 12 and 14 indicate relatively slidable members of my weather stripping. These members are formed of thin sheet metal, and comprise base portions which lie upon the sill under the sash, longitudinal vertical portions 15 and 16 respectively, and vertically extending leaf portions 17 and 18 for attachment to the sides of the casing.

The vertical portion 16 of the member 14 has an overturned flange 20, forming a channel within which slides an overturned edge 21 of the vertical portion 15 of member 12, thus interlocking the strips in slidable relation until secured in place. The flange 20 and edge 21 may be cut away at their outer ends to avoid interference with the vertical members 22 of the casing which guide the window sash (see also Fig. 5), or lie against the same as shown.

Vertical leaf-members 17 and 18 extend at right angles to the base portions of strips 12 and 14, and serve for attachment at the sides, and also to increase the closeness of the fit of the sash in the casing and reduce the space thru which air might pass. As shown in Fig. 1, their upper ends are secured to the casing by short nails 23.

The base portion of member 12 is provided with a longitudinal slot 24, thru which screw 25 may pass, and a perforation for a nail 26. The base portion of member 14 has a perforation for a nail 27, and has a perforation only for the screw 25.

In installing this portion of the device, the members 12 and 14 are interlocked by means of the flange 20, thus holding the same in parallel but slidable position. The resulting unitary device is then placed in position and extended as far as possible, to fit closely against the sides of the casing, the angles between the bases and the leaves 17 and 18 fitting closely into the runway of the sash. The screw 25 is placed thru the perforation in member 14 and passes thru the slot 24 into the sill 10 of the casing, the nails 26 and 27 securing the side poritons of said base. The leaves 17 and 18 are fastened closely to the side casing by nails 23.

It will thus be seen that the strip is adjustable closely to any size of casing, even to fractions of an inch, as the interlocking members may be adjusted to any length, the nails 26 and 27 will hold the same in extended position, and the screw 25, providing a heavier hold for the double portion of the strip, may pass thru any point in the slot 24 in the lower member 12, as may be required. Obviously, such installation can be done by anyone, without difficulty and without the ne-

cessity of making holes, using any special tools, etc., etc.

As shown, the strip just described is installed at the bottom of the lower sash **28** of a double-hung window, and with the flanged edges outside (see particularly Fig. 2). If desired, the same may be used in other locations, such as the top of a window or door, or in any other place in which it will fit, and the same may be installed with the flanged edges inward rather than outward as shown. The same strip, without change, can be used in any of said positions.

The same should be installed so that the flanged edge will lie closely against the face, inner or outer, of the sash or door, as the case may be, and will serve not only to check drafts and the passage of cold air, but to keep out dust, and, by reason of its resiliency, to check rattling of the window or door.

The strip above described may be formed from either flexible or relatively inflexible metal, and more or less resilient as desired; this is also true of the embodiment shown in Figs. 3 and 4, about to be described. The form shown in Fig. 5, below described, is preferably somewhat flexible, as will be evident, to permit installation by means of the integral attaching means there shown and described.

In Figs. 3 and 4, I have shown the strip modified to fit the junction of the upper and lower sashes of a double-hung window. In this case, members **30** and **31** are provided, having interlocking edges **32** and **33** respectively, analogous to the edges **20** and **21** above described, and having also flanges **34** and **34'**, riding against each other and serving to check the passage of air at the crack between the sashes, as well as to hold the members in alignment, in co-operation with **32** and **33**. Both strips are cut out at their corners as indicated at **35** on strip **30** (see Fig. 4) to permit the same to fit around the guiding members **22** of the casing. The member **31** has a slot **36** and a nail-hole (not shown), and the member **30** has a screw-hole **37** and a nail-hole **38** (see Fig. 4), by means of all of which the device may be secured by a single screw and a pair of nails, not shown, in a manner entirely analogous to the base portion of the device above described. The same is shown in place on the lower edge of the upper sash **29**, having the flanges **34** and **34'** extending downward. Obviously the same may if preferred be installed with said flanges extending upward into the crack between the sashes **23** and **29**, in which case the flanges would be somewhat inclined to fit the angle of the abutting surfaces of the sashes, and must be made of sufficiently thin material.

In Fig. 5, I have shown a device similar to that of Figs. 1 and 2, except that instead of providing, for the same being secured in place by nails and a screw, triangular lugs of metal are struck out from the material itself, which may be merely hammered into place in the casing, the thinness of the metal in this construction providing a sufficiently sharp edge for this purpose in a casing of wood such as often used for such purpose.

As shown, lugs **40** struck from the base portions of member **42** and **44**, serve the same purpose as nails **26** and **27**, and lugs **40'** on the vertical leaves take the place of nails **23**. A central lug **41**, struck out from the upper sliding member **44**, passes thru a slot (not shown) in the member **42**, analogous to slot **24**, at any desired point, and secures the double portion of the unitary assembly in place, in lieu of the screw **25**, and in the same manner.

By these means, the device may be secured to the sill by the use of a hammer only, with no loose nails or screws, and after fitting the same closely into the corners of the runway, the upright leaves secured by hammering in the lugs **40'**. Lugs functioning in a similar manner to lugs **40** and **41** may obviously be used also on the upper-sash strip.

The operation and many of the advantages of my invention have been referred to in what is above said, and need not be recapitulated here.

I do not limit myself to the particular details of construction above set forth, as the same refer to and describe only certain embodiments of my invention, and it is obvious that the same may be modified, within the scope of the claims hereof, without departing from the spirit and scope of my invention.

Having thus described my invention, I claim:

1. A longitudinally adjustable weather strip for attachment to a window frame, comprising a pair of members formed of thin sheet metal, each having a base portion, a portion extending longitudinally thereof substantially at a right angle thereto, and a leaf extending substantially at a right angle from one end thereof; said base portions overlapping and being adapted to be secured to a window sill, and said longitudinal angular portions being resilient and extending upward to press against the outside of the window sash when closed and thereby check drafts and rattling of the sash; one of said longitudinal angular portions being overturned to form a flange closely slidably engaging the other of said portions; said leaf portions being adapted to lie and be secured in the sash runways of said frame to hold said strip in extended position and being sufficiently thin to avoid interference with the operation of the window sash in said runways; the lower base portion having a slot therein; and means extending from said upper base portion through said slot for attaching the base portions to said sill in adjusted position.

2. A longitudinally adjustable weather strip for attachment to a window frame, comprising a pair of members formed of thin sheet metal, each having a base portion, a portion extending longitudinally thereof substantially at a right angle thereto, and a leaf extending substantially at a right angle from one end thereof, said base portions overlapping and being adapted to be secured to a window sill, and said longitudinal angular portions being resilient and extending upward to press against the outside of the window sash when closed and thereby check drafts and rattling of the sash, one of said longitudinal angular portions being overturned to form a flange closely slidably engaging the other of said portions, said leaf portions being adapted to lie and be secured in the sash runways of said frame to hold said strip in extended position and being sufficiently thin to avoid interference with the operation of the window sash in said runways; the lower base portion having a slot therein, the upper base portion having a perforation adjustably registering with said slot, and means extending through said perforation and said slot to attach said base portion to said window sill in adjusted position.

3. A longitudinally adjustable weather strip for attachment to a window frame, comprising a pair of members formed of thin sheet metal, each hav-

ing a base portion, a portion extending longitudinally thereof substantially at a right angle thereto, and a leaf extending substantially at a right angle from one end thereof; said base portions overlapping and being adapted to be secured to a window sill, and said longitudinal angular portions being resilient and extending upward to press against the outside of the window sash when closed and thereby check drafts and rattling of the sash, the outer end of said longitudinal angular portions extending substantially to the outer end of said spaced portions and both of said angular portions being provided with overturned flanges closely slidably engaging each other, the outer ends thereof being spaced inwardly from the outer ends of said base portions to clear the sides of the vertical runways of said frame and permit said flanges to lie outside the outer surface of the window sash, said leaf portions being adapted to lie and be secured in the sash runways of said frame to hold said strip in extended position and being sufficiently thin to avoid interference with the operation of the window sash in said runways, the lower base portion having a slot therein, and means extending from said upper base portion through said slot for attaching the base portions to said sill in adjusted position.

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