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WINDOW ASSEMBLY

Filed June 9, 1966

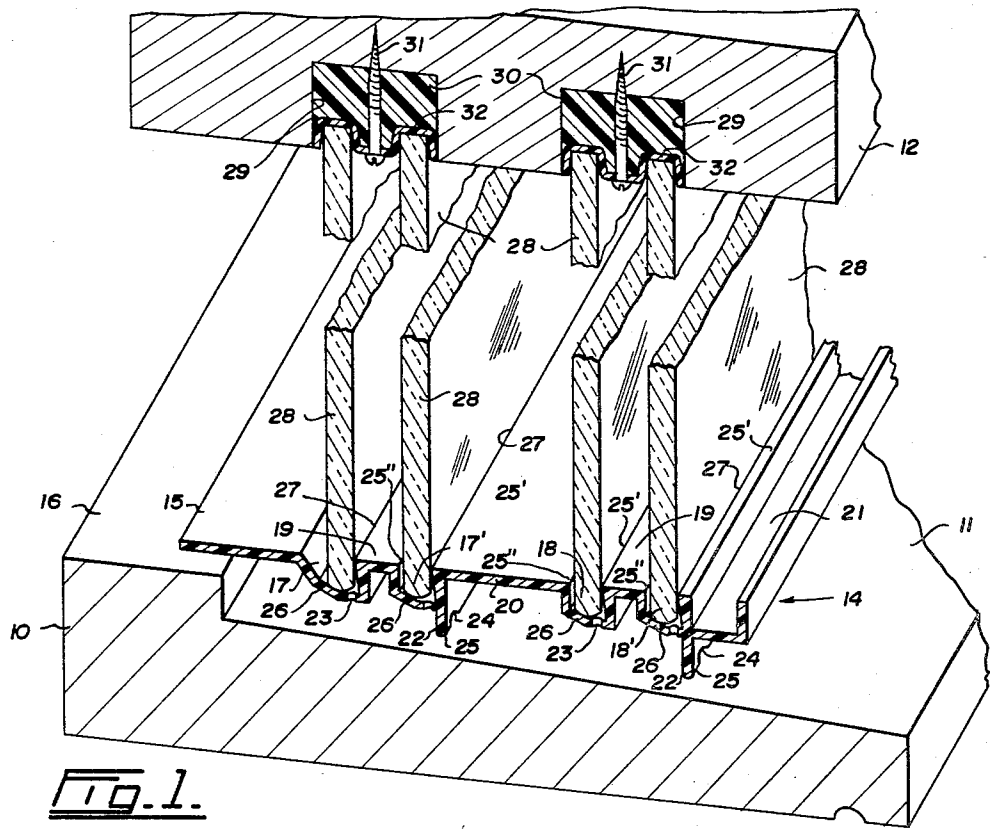


FIG. 1.

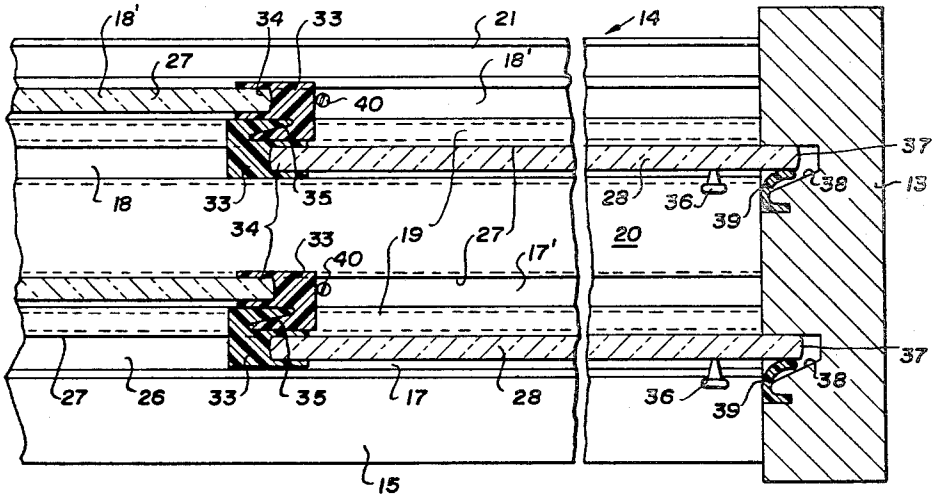


FIG. 2.

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WINDOW ASSEMBLY

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ABSTRACT OF THE DISCLOSURE

A window frame having a header strip, side jamb strips and a sill strip, all grooves for reception of slidable panes. The sill strip groove for each pane has an inner wall, an outer wall and a bottom wall sloping downwardly from the inner wall to the outer wall, and the outer wall is slanted upwardly and inwardly to a sharp edge at the top surface of the sill strip. The header strip resiliently urges the pane downwardly against the sloping bottom wall and the lower edge portion of the pane is thus wedgingly urged outwardly into sealing engagement with the sharp edge at the top surface of the sill strip.

My invention relates to new and useful improvement in window assemblies, particularly window assemblies which might be classified as semi-sashless.

Normally patents on sashless windows are restricted to hardware and locking mechanisms and sealing such sashes against the transfer of air becomes difficult.

We have overcome these disadvantages by providing a combination track and sill strip which is so designed so that the weight of the glass lights forms a wedging effect which still provides sliding action of the lights, but gives a positive seal.

The principal object and essence of the invention is therefore to provide a window assembly which includes a novel track and sill strip in which the lights engage and are sealed against the transfer of air.

Another object of the invention, in conjunction with the foregoing object, is to provide a resilient header within which the upper edges of the glass lights run, said resilient header urging the lights downwardly into the tracks thus improving the sealing aspect thereof.

Another object of the invention is to provide a device of the character herewithin described which incorporates interlocking meeting rails which once again facilitate the sealing of the spaced and parallel glass lights.

A further object of the invention is to provide a device of the character herewithin described in which the combination track and sill strip is preferably manufactured from vinyl plastic which facilitates construction, provides the necessary accuracy in dimensions, and is easy to secure to conventional wooden sills.

With the foregoing objects in view, and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawings in which:

FIGURE 1 is a fragmentary isometric view showing my device in use.

FIGURE 2 is a top plan view of FIGURE 1 with the header assembly removed.

In the drawings like characters of reference indicate corresponding parts in the different figures.

Proceeding therefore to describe the invention in detail the window assembly is designed to be used with a conventional wooden sill **10** having a sloping surface **11**. A conventional upper header **12** is provided together with conventional side jambs **13** (only one of which is shown).

My combination track and sill strip is collectively designated **14** and in the accompanying drawings is shown for use with two sets of window lights thus forming the conventional storm window construction.

However, it will be appreciated that it can be utilized with single pairs of lights if desired.

The sill strip **14** comprises an edge flange **15** which overlaps the raised portion **16** of the sill **10**.

Light receiving channels or tracks are provided and are numbered **17**, **17'**, **18** and **18'**.

The tracks **17** and **17'** and **18** and **18'** are separated by the relatively narrow spacer **19** and the two pairs of tracks are separated by the relatively wider spacer portion **20** as clearly shown in FIGURE 1.

Outboard of the tracks **18** and **18'**, a further channel **21** is provided to receive a conventional screen for summer use.

Downwardly projecting flanges **22** are provided so that the track **14** is maintained in spaced relationship from the sloping surface **11** of the sill and moisture drain holes **23** are provided in the base of the tracks **17**, **17'**, **18** and **18'**, to permit moisture from condensation to drain from the tracks to the area therebelow.

By the same token, recesses **24** are provided in the lower edge **25** of the flanges **22** so that this moisture can drain down the sloping surface **11** to the exterior of the building.

The entire combination track and sill strip hereinbefore defined is preferably extruded from vinyl plastic which gives accurate dimensioning and yet at the same time gives sufficient rigidity to permit the construction hereinabove described.

Each of the tracks **17**, **17'**, and **18** and **18'**, include pairs of side walls **25'** and **25''** and a base **26**.

The inner surfaces of the walls **25** incline inwardly at an acute angle from the vertical thus forming a relatively sharp edge **27** which bears against the glass lights or panes **28** in the form of a knife edge thus giving a positive seal at this point.

The glass lights **28** are urged into contact with this knife edge by the fact that the bases **26** slope downwardly from walls **25''** towards walls **25** so that the weight of the lights **28** urges them downwardly in the form of a wedging action.

This wedging action is facilitated by the method of mounting the lights in the header **12**.

Recesses **29** are provided in the header and elongated strips of resilient material such as vinyl foam **30** are secured within the recesses by means of screws **31** which also hold extruded double track elements **32** within which the upper edges of the lights engage.

The compressibility or resiliency of the material **30** together with the weight of the glass combine to urge the lights downwardly into the lower channels thus maintaining an effective positive seal between the lights **28** and the lower channels or tracks.

In the present embodiment, the lights **28** engaging tracks **18** and **18'** act as the storm sashes, one of which is detachably fixed and the other which is movable in the conventional manner.

Lights **28** engaging tracks **17** and **17'** comprise the prime lights, one of which is detachably fixed and the other of which is slidable in the conventional manner.

Vinyl plastic meeting rails **33** are secured to the adjacent vertical edges **34** of the pairs of lights, said meeting rails having interlocking flange portions **35** as clearly shown in FIGURE 2 so that when the lights are in the closed position, these meeting rails interlock as shown thus sealing the vertical junction between adjacent lights.

The sliding lights are provided with actuating knobs **36** secured thereto in the conventional manner. The outer vertical edges **37** of these slidable lights are adapted to engage recesses **38** within the side jambs **13** and in order

to seal these vertical edges within the recesses, a strip of flexible plastic **39** is secured to the side jambs and is engaged by the vertical edges **37** as the lights are moved into engagement with the recesses **38**.

In conclusion, is should be stressed that the weight of the glass lights **28** together with the resiliency of the material **30** forces the lights into a wedging engagement with the tracks, the configuration of which gives an effective and positive seal whether the lights are fixed or sliding.

The normally fixed window lights **28** are prevented from sliding by means of screws **40** situated within the channels but if it is desired to obtain cross ventilation then these fixed lights may be lifted slightly so that they ride over the head of the screws **40** whereupon these window lights may be moved along the tracks as desired.

Since various modifications can be made in my invention as hereinabove described, and many apparently widely different embodiments of same made within the spirit and scope of the claim without departing from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

What is claimed to be the present invention is:

1. In a window assembly, the combination of a sill strip formed from extruded plastic material, said strip having a top surface provided with an upwardly open pane-receiving groove-like track defined by inner and outer mutually spaced side walls and a bottom wall sloping from the inner side wall downwardly to the outer side wall, said outer side wall being slanted upwardly and inwardly from said bottom wall to the top surface of the strip and providing a sharp edge at the junction of the outer side wall with said top surface, a slidable window pane having its lower edge portion received in said groove-like track of the sill strip, and resilient means reacting against the upper edge of said pane to urge its lower edge downwardly against said sloping bottom wall, whereby to wedgingly urge the lower edge portion of the pane into a sealing engagement with said sharp edge of the sill strip.

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