April 17, 1934. W. S. HAMM 1,955,124

SASH CONSTRUCTION

Filed March 5, 1930

Fig. 1.

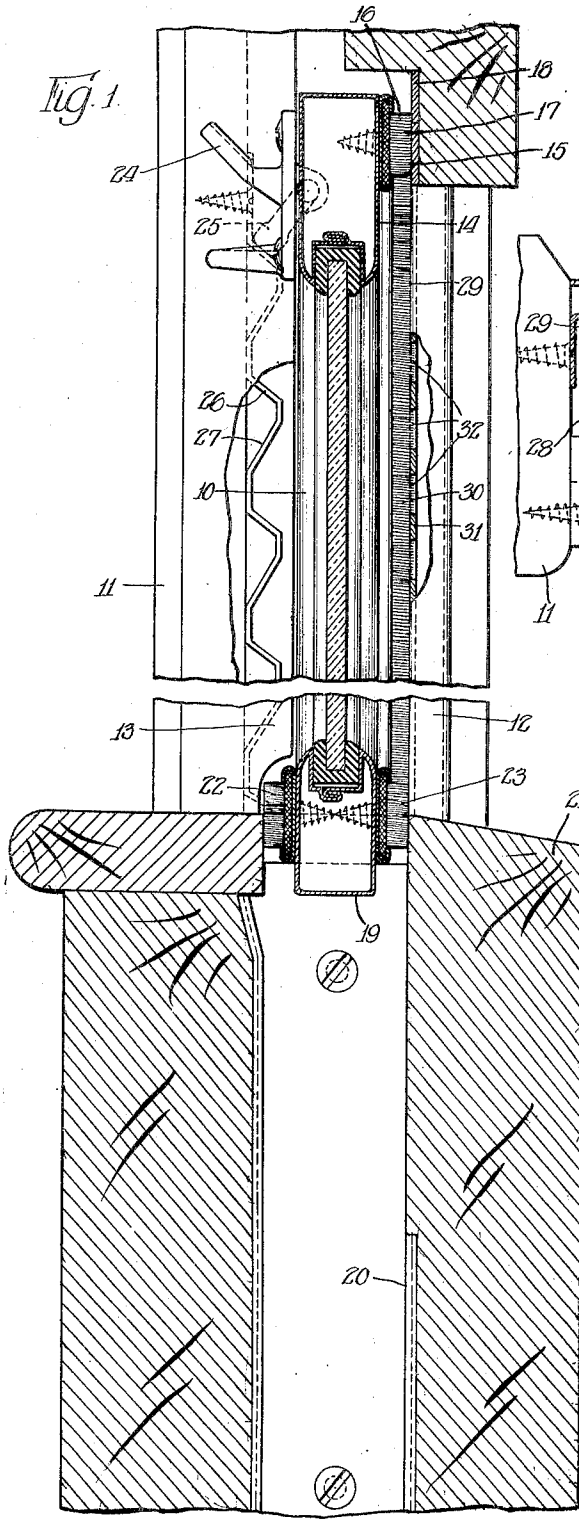


Fig. 2.

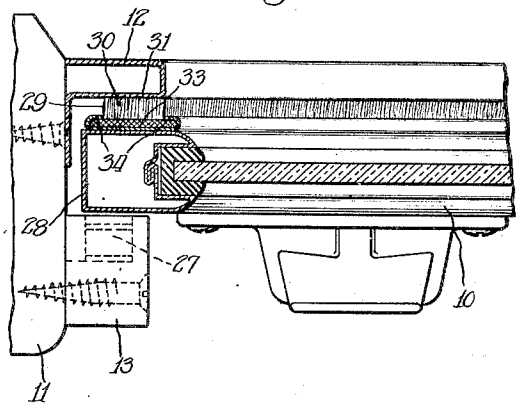
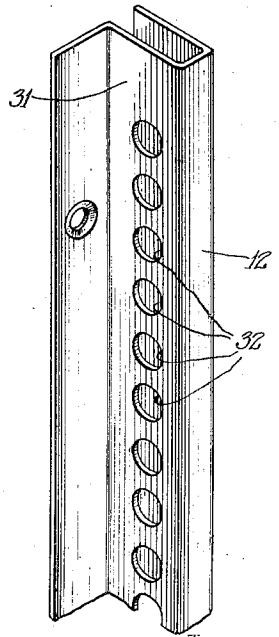


Fig. 3.



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SASH CONSTRUCTION

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5 Claims. (Cl. 189—65)

The present invention relates to sash construction, and has to do particularly with an improvement in the weatherproofing of street car and motor bus windows.

The primary object of the invention is to provide novel pile fabric weather strips on the sides of the sash for sliding coaction with the sides of the guides.

Another important object of the invention is to provide guides having novel side faces for coaction with soft, readily conformable weather strips on the sides of the sash.

While the foregoing statements are indicative in a general way of the nature of the invention, other objects and advantages will be recognized upon a full understanding of the construction, arrangement and operation of the improved weather strips and guides.

In order that the invention may be readily understood, one form of the same is presented herein, but it will of course be appreciated that such form is chosen merely for the purpose of exemplification and that the invention is capable of being embodied in other structurally modified forms coming equally within the scope of the appended claims.

In the accompanying drawing:

Fig. 1 is a vertical section through a window equipped with the weather strips and guides of the invention;

Fig. 2 is a horizontal section through one side of the sash and window frame; and

Fig. 3 is a fragmentary perspective view of one of the guide members.

The weatherproofing feature which constitutes the subject matter of this invention is shown in the drawing as applied to a sash 10 of the so-called drop type. The sash is mounted in a frame 11 and is slidable vertically in upright guides composed of outside strips 12 and inside strips 13 carried by the frame.

When the window is closed, as shown in Fig. 1, the top rail 14 of the sash is sealed outwardly against the header 15 of the frame by a strip 16 of pile fabric, which strip is attached to the top rail with the pile 17 of the fabric projecting outwardly into engagement with a plate 18, and the bottom rail 19 of the sash is sealed both inwardly and outwardly against the edges of the drop slot 20 in the sill 21 of the frame by two similarly mounted strips 22 and 23 of pile fabric. The sash is held in the position shown in Fig. 1 by two locks 24 of the so-called rocker type which are attached to the inner face of the top rail 14 adjacent the ends of the latter. The locks are characterized by pivoted downwardly projecting cams 25 which swing inwardly when released and wedge against inclined steps 26 on two racks 27 which are set into the inner guide strips 13.

When the window is to be opened, the cams 25 of the locks are swung outwardly far enough to clear the steps 26, after which the sash is lowered into the slot 20, where it is held in either a partially lowered or a fully lowered position by engagement of the cams 25 with certain other of the steps 26.

The sash is provided, on the outer faces of the side stiles 28 of the same, with two strips 29 of pile fabric, which strips are arranged with the pile 30 thereof projecting outwardly into engagement with the inner faces 31 of the outer guide strips 12, which guide strips, in the particular form shown, are of hollow double walled construction. The faces 31 of the guide strips are provided with a number of closely arranged apertures 32 into which the pile of the fabric will extend when pressure is brought to bear thereon. The engagement of the pile with the sides of the apertures serves to hold the sash firmly against sidewise movement when locked, and also keeps the pile combed clean of cinders, dirt and other foreign matter, which foreign matter can pass through the apertures into the hollow interiors of the guides. Instead of providing apertures in the faces 31, the latter may be corrugated in either or both directions or provided with small closed or open indentations or projections capable of producing somewhat the same interlocking effect. The plate 18, which is engaged by the pile 17 of the strip attached to the top rail of the sash, may also be apertured or otherwise deformed for the same purpose.

The outwardly wedging action of the cams 25 of the locks serves to press the outwardly projecting pile of the top, bottom and side strips snugly and firmly against the opposed frame and guide surfaces into tight, noiseless weatherproofing association therewith, and such pressure may be supplemented at points below the locks by spring-pressed follower devices (not shown) of well known construction acting outwardly against the sash.

The weatherproofing strips 16, 22, 23 and 29 are of extremely simple yet durable construction. Each of the strips is structurally like the one shown in Fig. 2, and includes a thin flat backing plate 33 of sheet metal having reversely bent marginal flanges 34 which extend about and clamp the side edges of the strip 29. The side edges of the strip 29 are preferably selvaged or

woven free from any of the pile in the course of manufacture. The attachment to the sash is preferably effected by screws which extend through apertures in the strip and are embedded deeply in the pile with their heads substantially flush with the edge flanges 34 of the backing plate.

I claim:

1. In sash construction, a vertically slidable sash, guides for the same, and strips of pile fabric attached to the sides of the sash with the pile projecting outwardly therefrom into engagement with the sides of the guides, said guides being provided at intervals with depressions into which opposed portions of the pile on said strips will extend.

2. In sash construction, a vertically slidable sash, guides for the same, strips of soft yieldable material attached to the sides of the sash for engagement with the sides of the guides, and means for pressing the strip-faced sides of the sash against the sides of the guides, said guides being provided at intervals with depressions into which opposed portions of said strips will extend.

3. In sash construction, a vertically slidable sash member, and a stationary guide member for the same, one of said members being provided with a longitudinally extending strip of soft yieldable material, and the other of said members being provided on its opposed face with recesses into which portions of said strip are adapted to extend.

4. In sash construction, a vertically slidable sash, guides for the same, and vertically extending strips of sealing material attached to the sides of the sash for engagement with the sides of the guides, said guide being of hollow construction and being provided with apertures in the faces thereof hich are engaged by the sealing strips.

5. In sash construction, a vertically slidable sash, guides for the same having interrupted surfaces, vertically extending strips of sealing material attached to the sides of the sash for engagement with the interrupted surfaces of the guides, and means for supporting the sash in an elevated position in the guides, said means serving to force portions of the sealing material into the interruptions in the surfaces of the guides, whereby to prevent sidewise or upward movement of the sash upon the window being subjected to jarring forces.

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