April 28, 1964 A. H. ANDERSON 3,130,457

SASH BALANCE

Filed Sept. 24, 1962

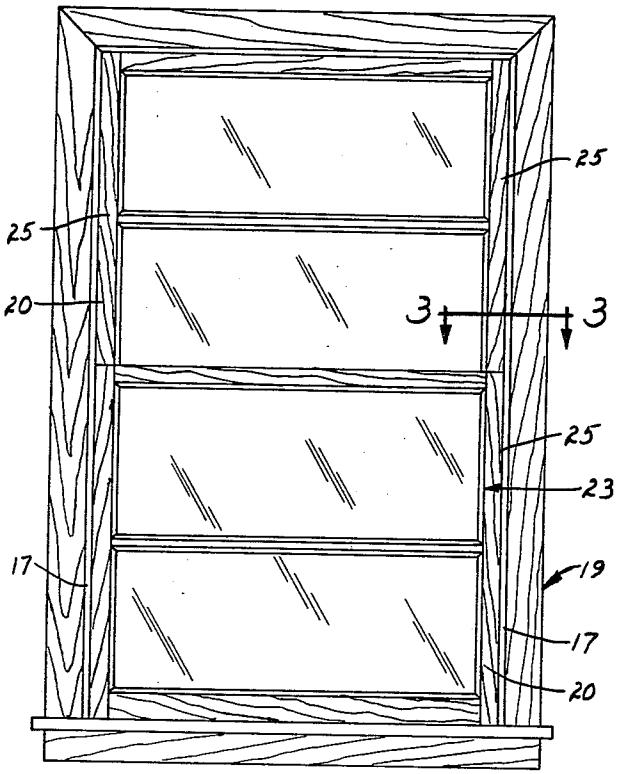


FIG. 1

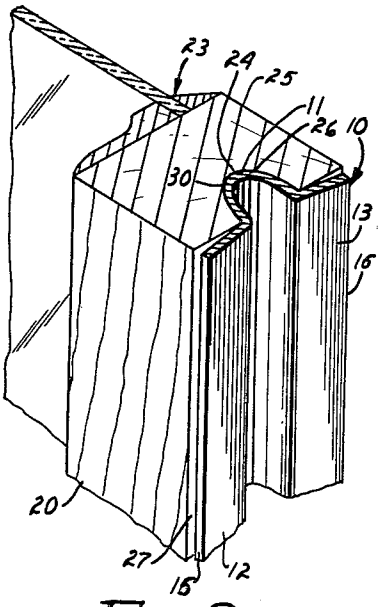


FIG. 2

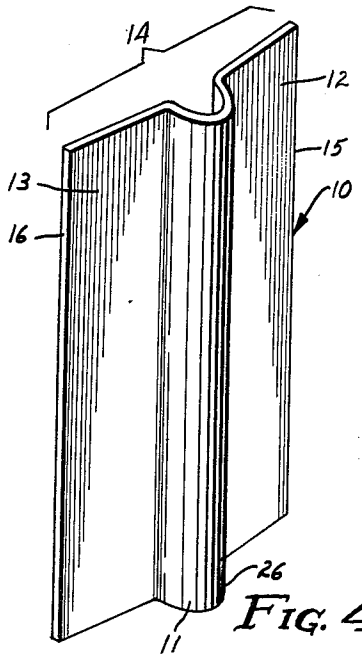


FIG. 4

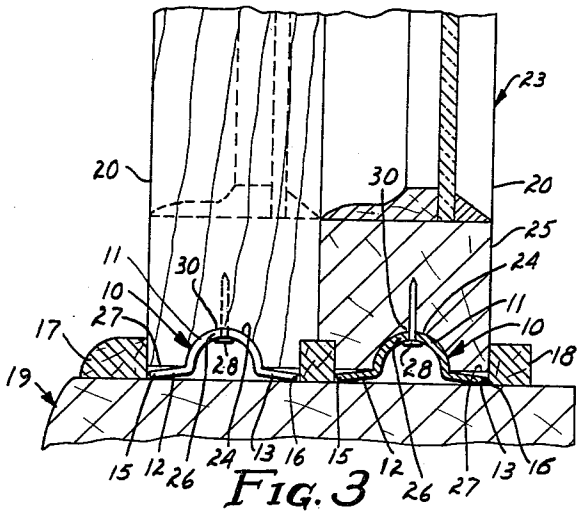


FIG. 3

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SASH BALANCE

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1 Claim. (Cl. 20—52)

This invention relates to sash balances. More particularly, this invention relates to a new and very useful sash-arresting insert for a conventional double-hung window.

It is an object of this invention to provide a window arrester for a conventional double-hung window which acts as a functional brake during raising and lowering movements of the sashes.

It is another object of this invention to provide for a conventional double-hung window sash an outwardly opening, longitudinally extended rib whose side edges frictionally engage the opposed faces of the channel in which the sash slides.

It is a further object of this invention to provide a window-arresting insert whose side edges are adapted to engage the side stop members of a window casing when such insert is secured to a side edge of a cooperating window sash in a conventional double-hung window assembly.

Other and further objects of this invention will become apparent to those skilled in the art from a reading of the attached specification taken together with the drawings, in which:

FIG. 1 is a view in elevation of a conventional double-hung window including sash and frame therefor;

FIG. 2 is a fragmentary view in perspective of a side rail member of one of the window sashes of FIG. 1;

FIG. 3 is a horizontal sectional view as seen from the line 3—3 of FIG. 1, some parts thereof broken away; and

FIG. 4 is a view in perspective of the window-arresting insert of this invention.

Referring to the figures, there is seen in FIG. 1 a window-arresting insert of the invention, which is herein designated in its entirety by the numeral **10**. Insert **10** is seen to be a strip of thin, resilient material shaped so as to be generally U-shaped in cross-section. The ends of the U-shaped portion **11** are seen to be formed into a pair of out-turned flanges **12** and **13**, each of which projects laterally outwardly from the opposite sides of the U-shaped portion **11**.

The distance **14** across the window-arresting insert **10** is such that the laterally outward edges **15** and **16** of respective flanges **12** and **13** frictionally engage adjacent stop strips **17** and **18** of a cooperating window casing **19**. Hence, edges **15** and **16** are in spaced, generally parallel relationship to one another.

When window-arresting insert **10** is positioned between adjacent side stop members **17** and **18** of window casing **19**, and longitudinally raised or lowered, the frictional engagement of lateral outer edges **15** and **16** of respective flanges **12** and **13** with side stop members **17** and **18** respectively, raising and lowering movements of the window-arresting insert **10** are retarded. The U-shaped portion **11** of window-arresting insert **10** acts as a spring yieldingly urging respective flanges **12** and **13** towards adjacent side stop members **17** and **18** of window casing **19**, so as to frictionally engage the abutting lateral outer

edges **15** and **16** of respective flanges **12** and **13** therewith.

Window-arresting insert **10** can be formed from any conventional material, such as metal, plastic or the like. It is desirable for the material to have resilient characteristics when in sheet form.

Window-arresting insert **10** can be conveniently mounted upon a sash **20** of a conventional double-hung window **23** by rabbeting or grooving, as at **24**, the side rail members **25** of sash **20**. The groove **24** should be adapted to receive in matching engagement the elongated arcuate U-shaped portion **11** of window-arresting insert **10**. Window-arresting insert **10** is conveniently secured to the edge **27** of side rail member **25** by passing a nail or other fastening means **28** through the bottom region **26** of U-shaped portion **11** of window-arresting insert **10** with the bottom region **30** of groove **24**. Any convenient means can be used to fasten the window-arresting insert **10** to an edge **27** of side rail members **25** of a sash **20**, though, of course, in order to achieve the desired braking action, the insert **10** should be secured to the edge **27** by fastening means securing the bottom region **26** of U-shaped portion **11** of window-arresting insert **10** to an edge **27** of a sash.

Variations in the amount of braking action secured using the window-arresting insert **10** of this invention can be achieved by using shorter or longer lengths of insert **10** in any given installation. It is an added feature of this invention that when an insert **10** extends the full length of a side rail member **25** there is achieved weather-stripping action. Such action is achieved because when insert **10** extends the length of side rail member **25**, air cannot pass from one side of the sash to the other around a side rail member **25** between member **25** and side stop members **17** and **18** of the window casing **19**.

It will be observed that the sash balancing action achieved using the window-arresting insert of this invention is obtained without exerting yielding bias between the sides of a sash and the adjacent bottoms of the channels wherein such sash rides.

In summary then, the present invention relates to a window-arresting insert for a conventional double-hung window comprising a cross-sectionally generally U-shaped strip of thin resilient material having out-turned flanges projecting laterally outwardly from the opposite sides thereof, said insert being adapted to be secured to a side edge of a window sash for frictional engagement of the laterally outer edges of said flanges with adjacent side stop members of a cooperating window casing. This insert mounts in a longitudinally extending, central groove on an opposite side rail member of a window sash having opposite rail members adapted for vertical sliding movements in adjacent sides of a cooperating window frame. The width of said U-shaped strip is slightly larger than the width of said opposite side rail member so as to adapt said U-shaped strip for frictional engagement with the side stop members of the cooperating window frame.

My invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects, and while I have shown and described a preferred embodiment, I wish it to be specifically understood that the same is capable of modification without departure from the spirit and scope of the appended claim.

What I claim is:

In a sliding sash window and sash balance structure, the combination comprising a window frame having a channel within which a stile of the window sash is adapted to slide, there being a narrow space between the opposed faces of the frame and stile within said channel, said face of the stile having a central longitudinal U-shaped groove formed therein facing said face of the frame, a one-piece resilient sheet material arrestor strip interposed between the stile and frame within said channel and having a central longitudinal portion which is U-shaped in cross section and engaging bodily within said groove and conforming substantially to the shape of the groove, opposite side longitudinal flanges on said arrestor strip formed integrally with said central portion and projecting laterally outwardly therefrom substantially equidistantly on opposite sides thereof, said flanges lying bodily within said narrow space between said opposed faces and being substantially flat, the longitudinal free edges of said flanges frictionally engaging the inner side faces of said channel, the resiliency and tension of said strip maintaining said frictional engagement, the overall width of said strip between said edges being slightly greater than the width of said channel when the sash is in place, and fastener means to anchor said central portion of the strip within said groove, near the bottom of the groove.

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