Sept. 27, 1949. S. E. SMITH 2,483,068

SASH BALANCE

Filed July 12, 1944 2 Sheets-Sheet 1

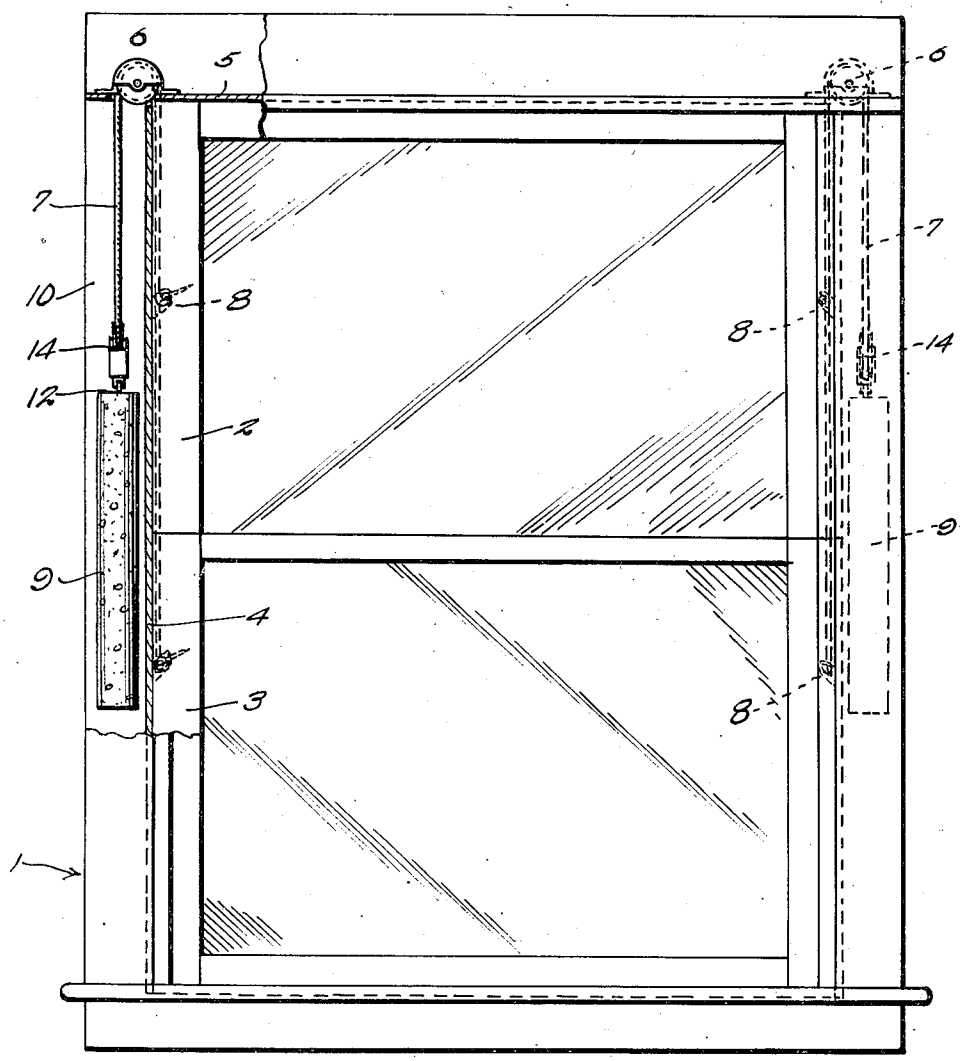


Fig. 1.

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Fig. 2.

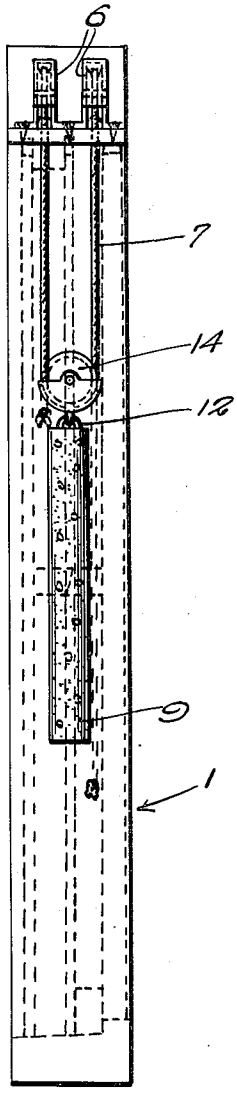
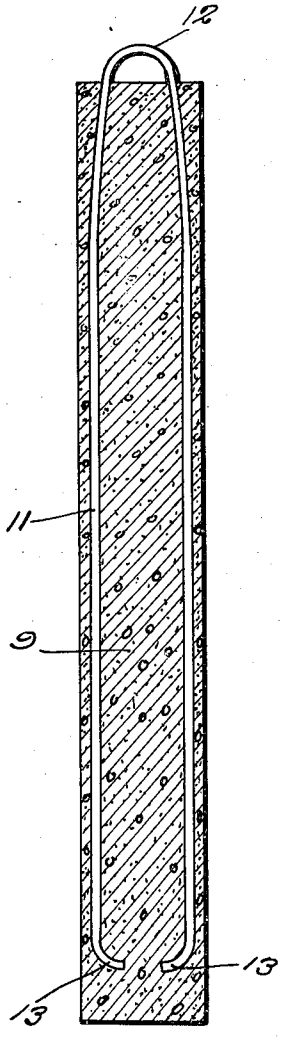


Fig. 3.



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SASH BALANCE

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Application July 12, 1944, Serial No. 544,603

1 Claim. (Cl. 20—52)

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The present invention relates to new and useful improvements in double-hung windows, and has for its primary object to provide, in a manner as hereinafter set forth, a unique construction, combination and arrangement whereby but two weights will suffice to balance the upper and lower sashes instead of four weights, as at present.

Another very important object of the invention is to provide an improved sash balance of the aforementioned character wherein the distance traveled vertically by the weights when either sash is raised or lowered will be substantially reduced.

Other objects of the invention are to provide an improved sash balance of the character described which will be comparatively simple in construction, strong, durable, compact and which may be manufactured and installed at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in front elevation of a double-hung window embodying the present invention, a portion being broken away in section.

Figure 2 is a view in side elevation thereof.

Figure 3 is a view in vertical section through one of the weights.

Referring now to the drawings in detail, it will be seen that reference character 1 designates generally a window frame of suitable material and dimensions, said frame having mounted for vertical sliding movement therein upper and lower sashes 2 and 3, respectively. The frame 1 includes side jambs 4 having mounted thereon a header 5. The end portions of the header 5 project beyond the jambs 4.

Mounted on the header 5 above each jamb 4 is a pair of pulleys 6. Sash cords 7 are trained over the pulleys 6 and have their ends anchored in the side edges of the sashes 2 and 3, as at 8. Vertical grooves in the sides of the sashes 2 and 3 accommodate the sash cords 7. Suspended from intermediate portions of the sash cords 7 are concrete weights 9 which are operable vertically in the wells 10 in the frame 1.

The concrete weights 9 are of suitable dimensions and have molded therein reinforcing wires or rods 11. As illustrated to advantage in Figure 3 of the drawings, the reinforcing wires 11 are substantially U-shaped and comprise exposed bight portions which protrude from the upper ends of the weights 9 in a manner to provide what may be considered bails 12. The reinforcing wires 11 further include inturned end portions 13. Pulleys 14 are connected to the bails 12, beneath

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which pulleys the sash cords 7 are trained for suspending the weights 9 from said sash cords.

It will thus be seen that a construction and arrangement has been provided whereby but two of the concrete weights 9 are necessary to balance the upper and lower sashes 2 and 3, respectively, of the window. Of course, as the sashes are raised and lowered, the weights 9 travel vertically in the wells 10 of the window frame structure. Suitable openings in the header 5 accommodate the sash cords 7 and the usual mortices in the jambs 4 are eliminated. Further, the pulleys 6 may be installed on the header 5 with comparative ease.

It is believed that the many advantages of a sash balance embodying the present invention will be readily understood, and although a preferred form of the device is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A double hung window comprising a frame having vertical wells in the side portions thereof and including side jambs and a header mounted on the upper ends of said jambs, the ends of the header projecting beyond the jambs and having openings outwardly and inwardly of said jambs, a single pair of pulleys rotatably mounted on each end of the header and having mounts integrally connected at their bases, the bases of said mounts being secured on top of said header at the inner and outer sides of said openings, upper and lower sashes slidable in the frame, a sash cord trained over each pair of pulleys and having its ends passed through the openings inwardly of the jambs and anchored to the sashes, further pulleys engaged with the intermediate portions of the sash cords, said sash cords passing through the openings outwardly of the jambs from the pairs of pulleys to said further pulleys, and weights suspended from said further pulleys and operable in the wells.

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