June 27, 1944. A. ANFINSON 2,352,171

WINDOW

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Fig 1

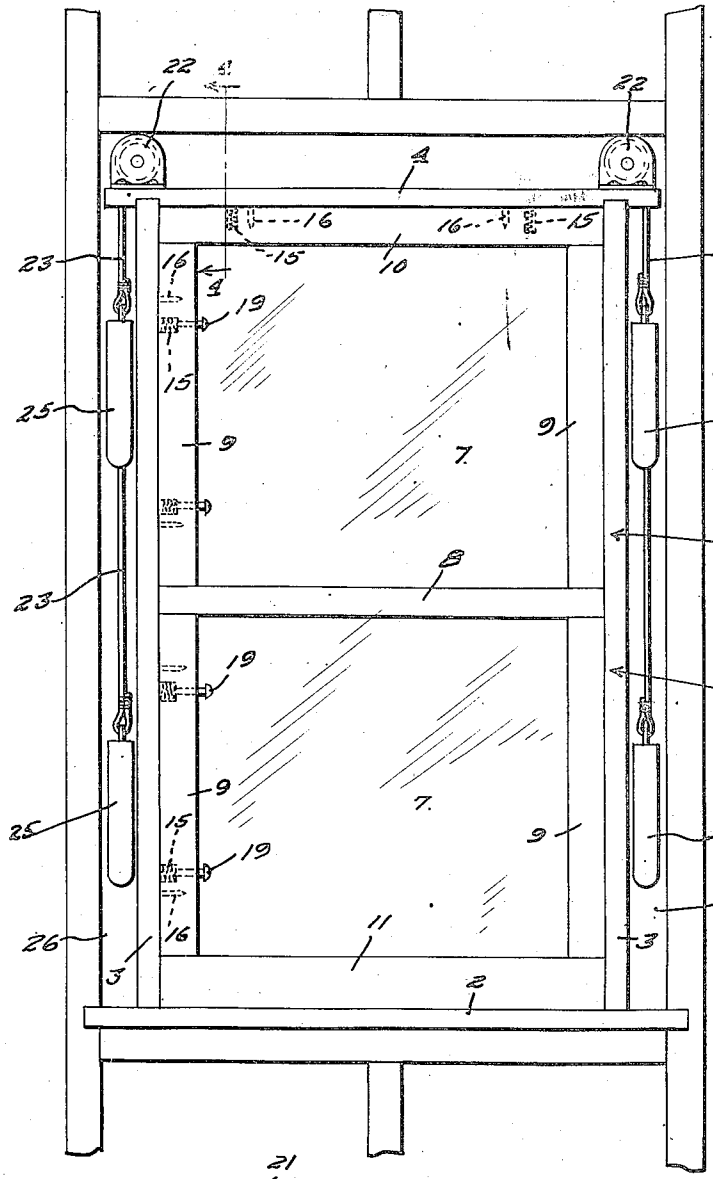


Fig 6

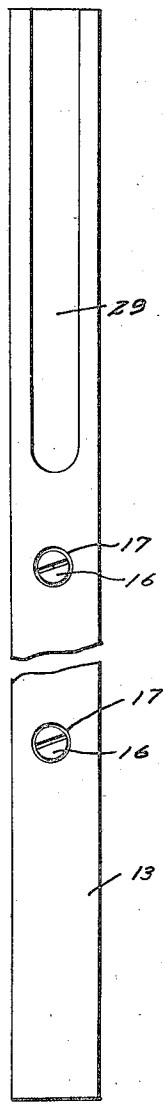
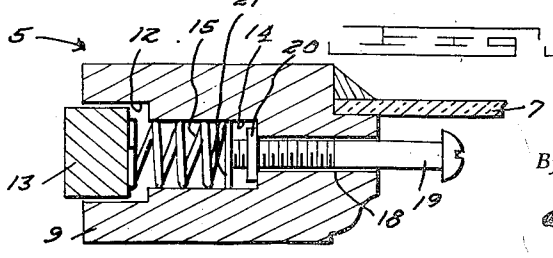


Fig 3



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Fig 2

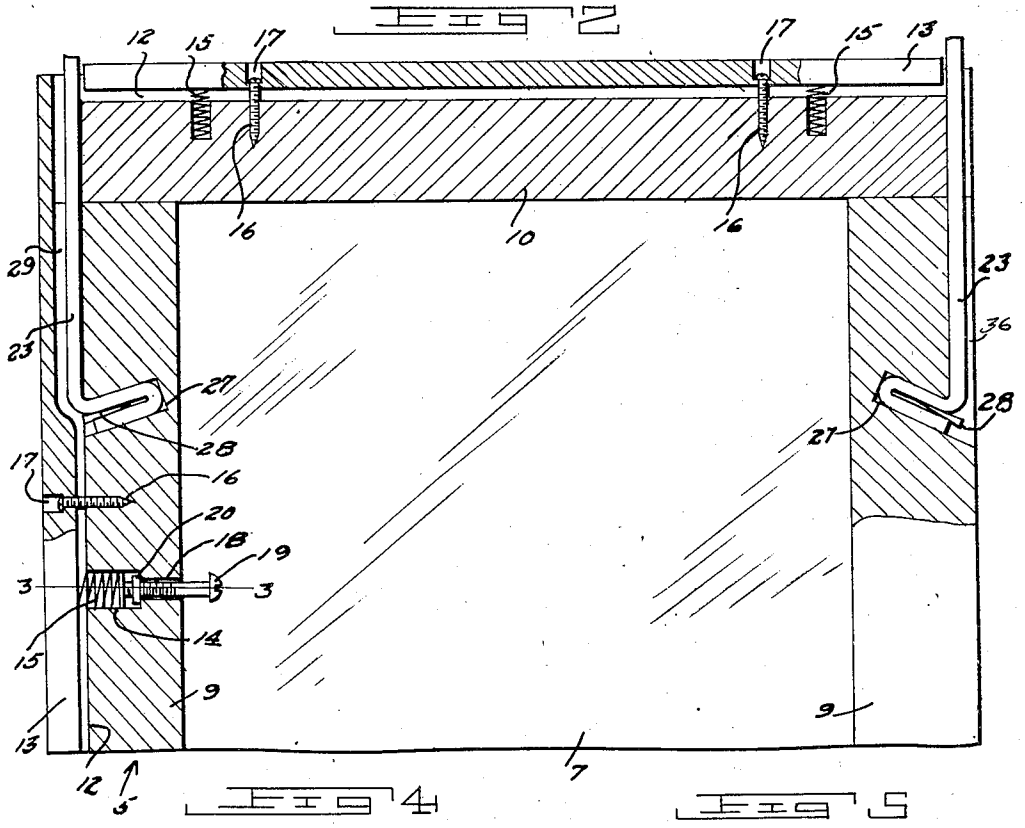


Fig 4

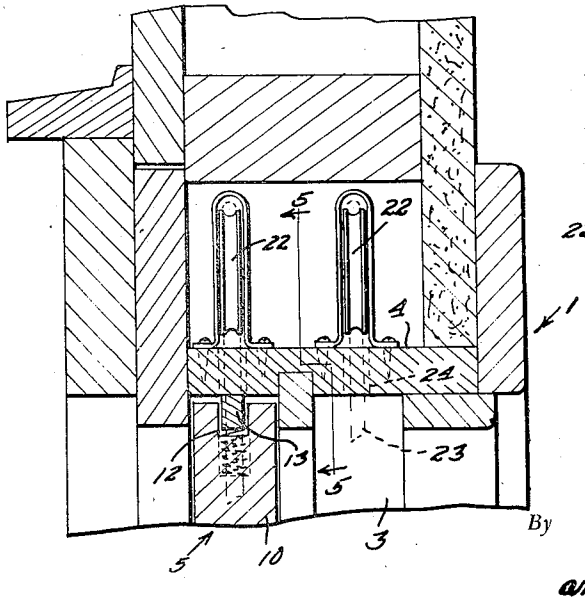
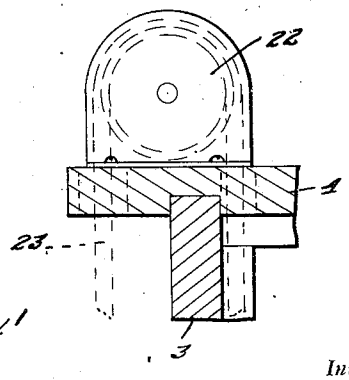


Fig 5



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FIG 7

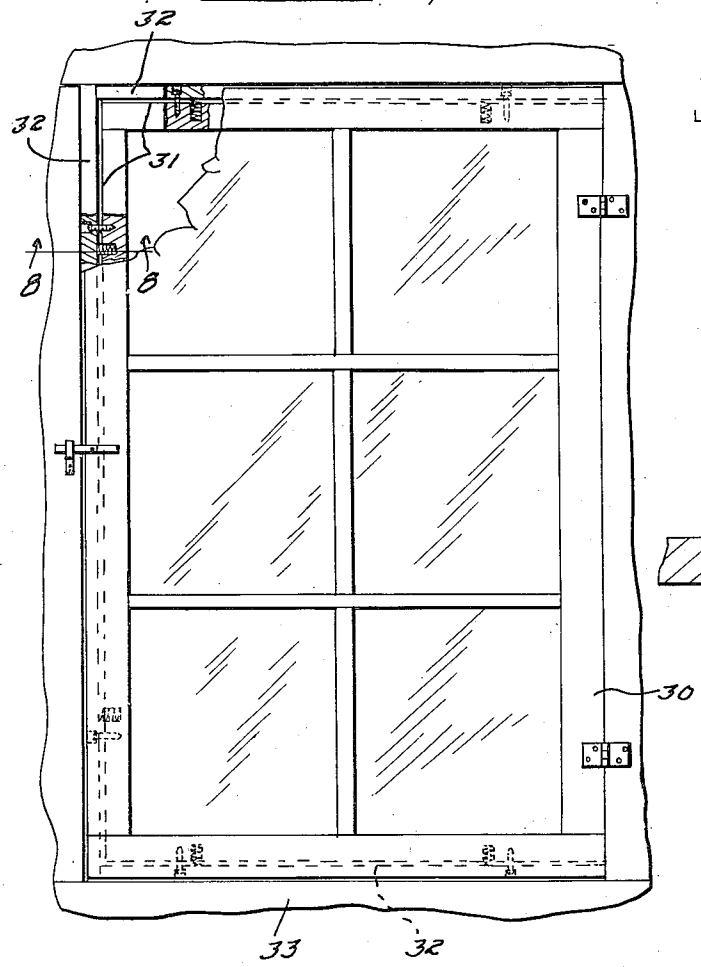


FIG 8

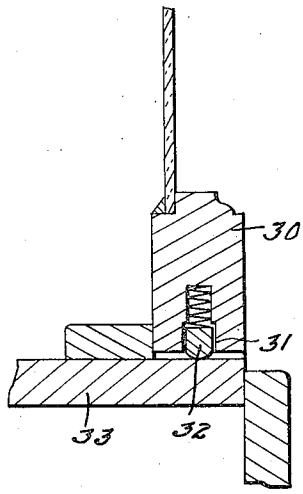
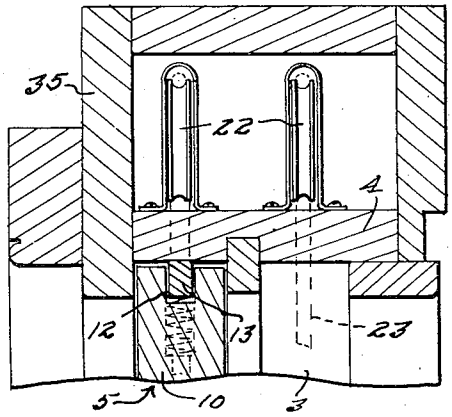


FIG 9



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Patented June 27, 1944 2,352,171

UNITED STATES PATENT OFFICE

2,352,171

WINDOW

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Application June 20, 1942, Serial No. 447,795

1 Claim. (Cl. 20—52)

The present invention relates to new and useful improvements in windows, and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character comprising novel sealing means whereby the structure will be weatherproof even though the sashes do not fit properly or if the frame is out of true.

Another very important object of the invention is to provide a window of the aforementioned character comprising sealing means adapted to frictionally secure the sashes in adjusted position without the necessity of using weights.

Still another very important object of the invention is to provide a window of the character described embodying unique means for anchoring the cords to the sashes when weights are used.

A still further important object of the invention is to provide a window of the character set forth which comprises a novel arrangement of pulleys for the weight cords.

Other objects of the invention are to provide a substantially weatherproof window which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, and which may be manufactured 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 window constructed in accordance with the present invention with portions of the frame omitted.

Figure 2 is a view principally in vertical section through the upper portion of the vertically slidable upper sash.

Figure 3 is a view in horizontal section, taken substantially on the line 3—3 of Figure 2.

Figure 4 is a vertical sectional view, taken substantially on the line 4—4 of Figure 1.

Figure 5 is a vertical sectional view, taken substantially on the line 5—5 of Figure 4, with parts omitted.

Figure 6 is an elevational view of one of the side, spring pressed weatherstrips, looking at the inner face thereof.

Figure 7 is a view in front elevation of a casement window embodying the present invention, portions being broken away in section.

Figure 8 is a view in horizontal section, taken substantially on the line 8—8 of Figure 7.

Figure 9 is a vertical sectional view through a slightly modified form of the sliding sash embodiment of the invention.

Referring now to the drawings in detail, it will be seen that reference numeral 1 designates generally a frame, which frame may be of any suitable dimensions and material. The frame 1 includes a sill 2, jambs 3 and a cap piece 4, the end portions of which, it will be noted, project beyond said jambs.

Upper and lower sashes 5 and 6, respectively, are mounted for vertical sliding movement in the frame 1. Window glasses 7 are mounted in the sashes 5 and 6. The sashes 5 and 6 further include meeting rails 8 and stiles 9. The upper sash 5 still further comprises a top rail 10 and the lower sash 6 further includes a bottom rail 11.

The members 9 on one side of the sashes 5 and 6 and the member 10 have formed therein grooves or channels 12. The channels 12 are for the reception of slidable weatherstrips 13 which are engageable with the adjacent members 3 and 4 of the frame 1.

These sash members 9 and 10 are further provided with sockets 14 which communicate with the channels 12. The sockets 14 are for the reception of coil springs 15 which yieldingly press the weatherstrips 13 outwardly in the channels 12.

Headed screws 16 are mounted in the sashes 5 and 6 and project into the channels 12. The screws 16 constitute guides on which the weatherstrips 13 are slidably mounted and secured against longitudinal movement in the channels 12. Toward this end, the weatherstrips 13 have formed therein countersunk openings 17 which accommodate the headed projecting end portions of the screws 16. Thus, outward sliding movement of the weatherstrips 13 under the influence of the coil springs 15 is positively and adjustably limited.

The stiles 9 on one side of the sashes 5 and 6 are still further provided with openings 18 which communicate with the sockets 14 and in which bolts 19 are rotatably mounted. The bolts 19 are threaded through nuts 20 which seat on the inner ends of the sockets 14, as illustrated to advantage in Figure 3 of the drawings. By threading the bolts 19 inwardly or outwardly through the nuts 20, the tension of the coil springs 15 in the stiles 9 may be regulated as desired. Thus, adjustment of the frictional contact of the vertical weatherstrips 13 with the opposed jamb 3 may be conveniently had. Washers or discs 21 are provided between the springs 15 and the bolts 19.

Pairs of pulleys 22 are mounted on the end

portions of the cap piece 4 above the jambs 3. Weight cords 23 are trained over the pulleys 22. Openings 24 are provided in the cap piece 4 for the passage of the cords 23. Weights 25 are suspended from one end of the cords 23 for operation in the wells 26. As best seen in Figure 2 of the drawings, the upper portions of the sash stiles 9 have formed therein upwardly inclined sockets 27 which communicate with the channels 12 and channels 36 in said stiles. The cords 23 extend downwardly into the channels 12 and have their other end portions folded or doubled, pounded and forced into the sockets 27. In this manner said other end portions of the cords 23 are firmly anchored to the sashes 5 and 6. If desired, wedges 28 (see Fig. 2) may be driven into the sockets 27 between the folded portions of the cords 23. The upper portions of the vertical weatherstrips 13 have formed therein grooves 29 which accommodate the cords 23.

It is thought that the operation of the invention will be readily apparent from a consideration of the foregoing. Briefly, the coil springs 15 force the weatherstrips 13 outwardly against the members 3 and 4 of the frame 1 thereby rendering the window substantially weatherproof when the sashes 5 and 6 are in closed position. The construction and arrangement is such that this will be accomplished even though the fit of the sashes in the frame is poor. On comparatively light or small windows the weights 25 may be dispensed with and the sashes 5 and 6 will be frictionally secured in any adjusted position by the engagement of the vertical weatherstrips 13 with the opposed jamb 3 under the pressure of the coil springs 15. As hereinbefore stated, the frictional contact between the vertical members 13 and the opposed jamb 3 may be conveniently regulated as desired through the medium of the bolts 19 which control the tension of the coil springs 15. It will be noted that no regulating or adjusting means is needed or provided for the coil springs in the top rail 10 of the upper sash 5. The guide screws 16 permit limited inward and outward sliding movement of the weatherstrips 13 in the channels 12. By mounting the pulleys 22 on top of the cap piece 4 the sashes 5 and 6 may be moved all the way up in the frame 1 without interfering with the weatherstrips 13.

In the embodiment illustrated in Figures 7 and 8 of the drawings, a casement sash is indicated at 30. The top, bottom and free end of the sash 30 have formed therein channels 31 for the reception of slidable weatherstrips 32. As best seen in Figure 8 of the drawings, the outer edges of the weatherstrips 32 are substantially rounded to facilitate swinging movement of the hinged sash 30 into and out of its frame 33. In other respects, this embodiment of the invention is substantially similar in construction and operation to the top rail 10 of the sash 5 and its respective weatherstrip.

The frame shown in Figures 1 to 6, inclusive, of the drawings is for installation in a frame or wooden building. In Figure 9 of the drawings, a frame for installation in an opening in a brick building is indicated at 34. The frame 34 and the elements mounted thereon are substantially similar to the frame 1, with the exception that said frame 34 comprises a comparatively wide blind stop 35.

It is believed that the many advantages of a window constructed in accordance with the present invention will be readily understood, and although preferred embodiments are as illustrated and described, it is to be understood that further modifications and 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 window of the character described comprising a frame including jambs and a cap piece, said cap piece being mounted on the jambs and having its end portions projecting therebeyond, pulleys mounted on the end portions of the cap piece, sashes slidably mounted in the frame, said sashes including stiles having channels therein and further having upwardly inclined sockets therein communicating with the channels, cords trained over the pulleys, the cap piece having openings therein on opposite sides of the jambs for the passage of the cords, weights on one end of the cords, the other end portions of said cords extending into the channels and anchored in the sockets, weatherstrips slidably mounted in the channels, and coil springs mounted in the stiles for yieldingly urging the weatherstrips outwardly toward the frame, said weatherstrips having grooves in one end portion accommodating said other end portions of the cords.

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