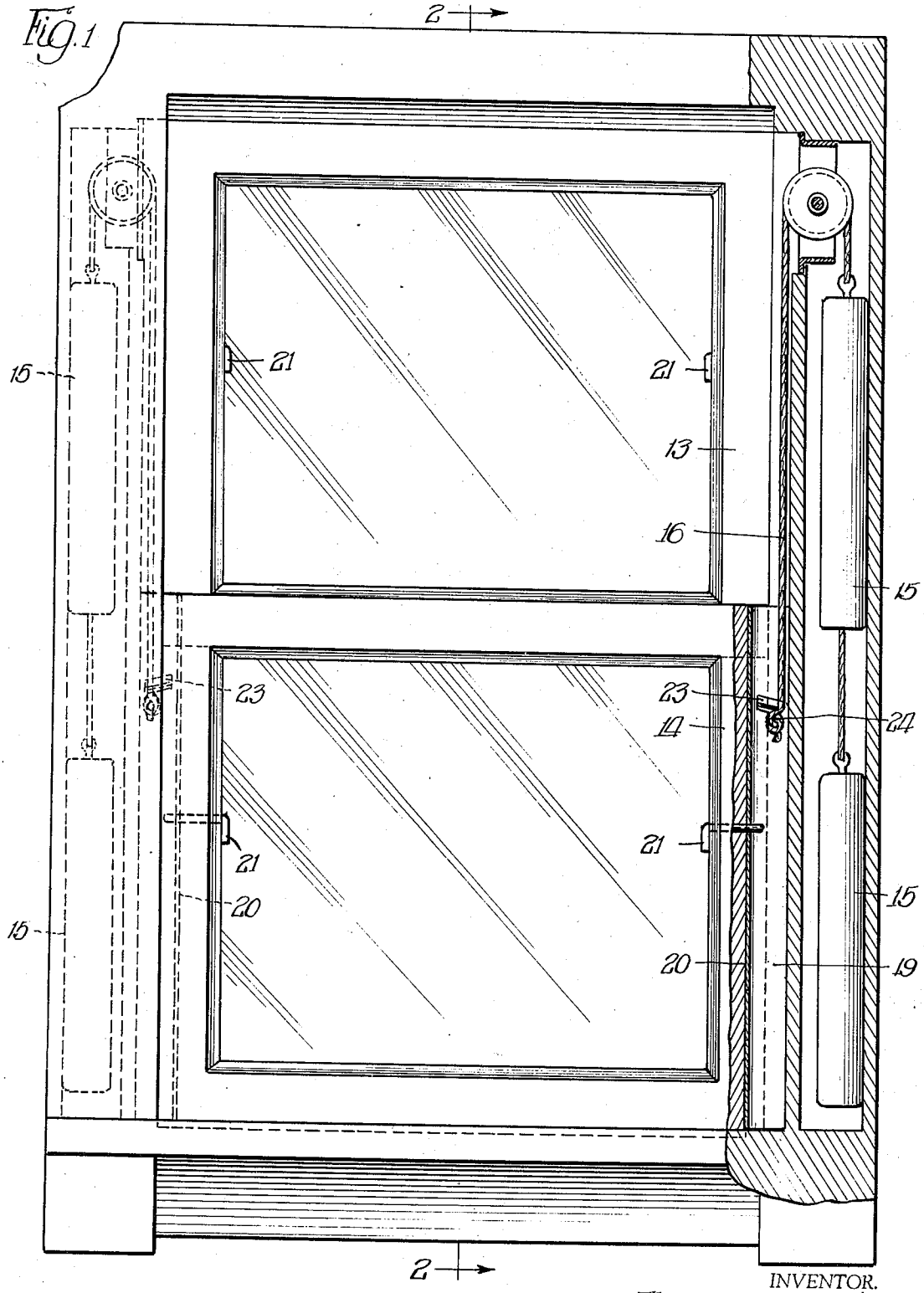
May 8, 1945. T. SPACIE 2,375,257

WINDOW

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Fig. 1



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Fig. 2.

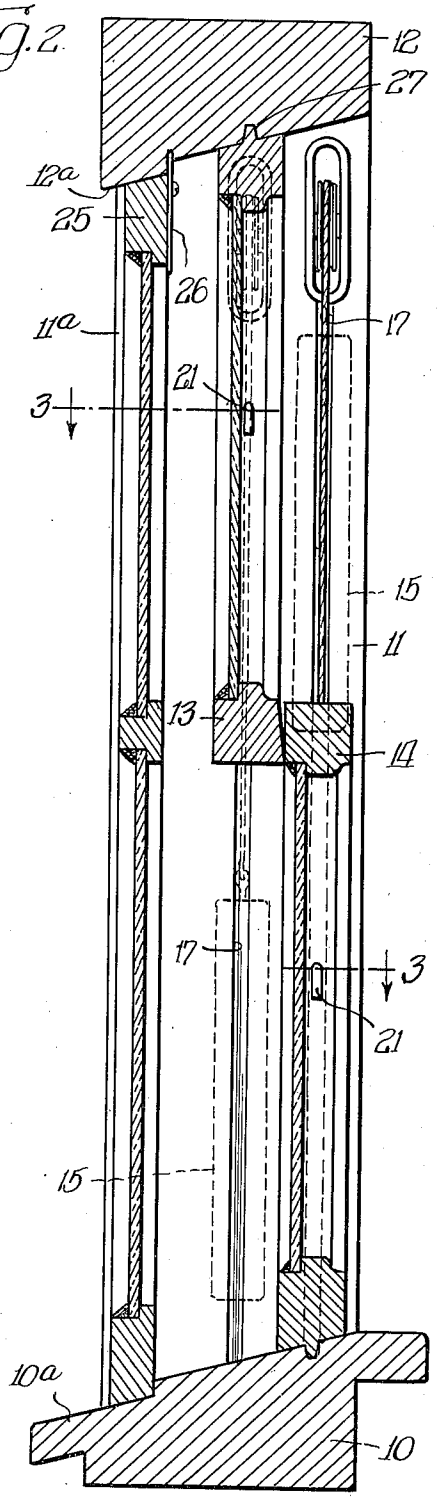


Fig. 3.

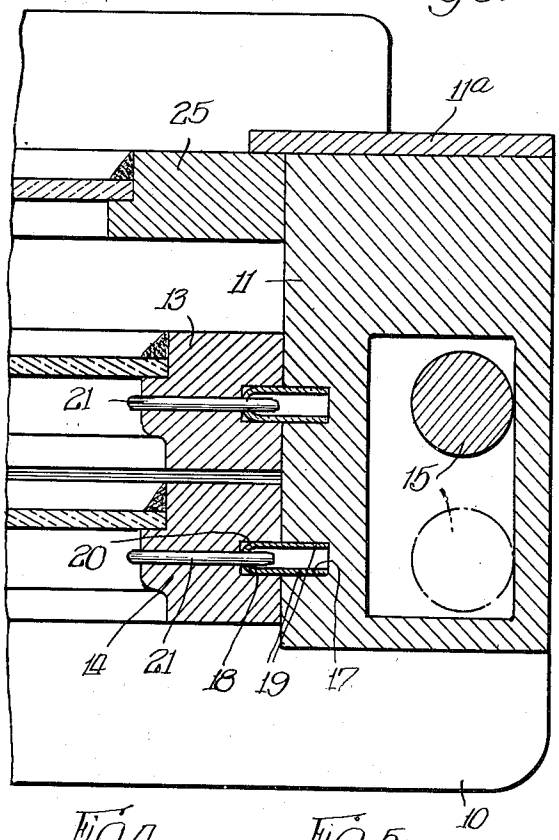


Fig. 4

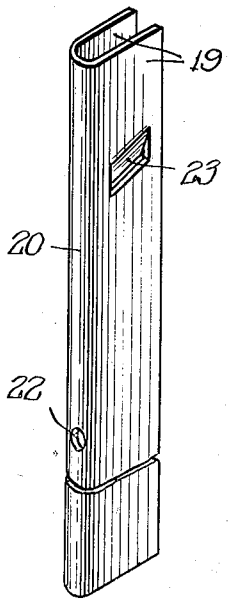
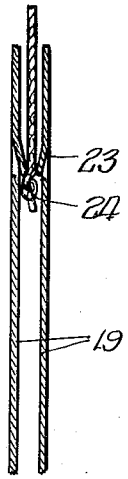


Fig. 5



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UNITED STATES PATENT OFFICE

2,375,257

WINDOW

Thomas Spacie, De Kalb, Ill.

Application July 9, 1941, Serial No. 401,605

7 Claims. (Cl. 20—52.3)

My invention relates to windows and particularly to windows of a type adapting them for ready removal inwardly.

A fundamental objection to windows of the sliding type as used in dwellings and apartments is that they are fixed for sliding movement in a single plane and cannot be removed without extensive labor. Such removal is highly desirable for washing the exterior glass surfaces and for placing storm windows and full length screens, and the apparatus here disclosed is designed to permit ready removal of the window sash without the use of tools and without requiring any substantial strength or skill. Another object is to provide a frame in which a storm sash or a screen frame may be readily placed and removed from the inside of the building; also for so arranging the structure that a storm sash may be tilted so as to provide for top ventilation.

The invention will be more readily understood by reference to the accompanying drawings; in which,

Fig. 1 is a front elevation of a window constructed in accordance with my invention, one side being broken away to show the details of construction;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is an enlarged cross-sectional view on the irregular line 3—3 of Fig. 2;

Fig. 4 is an enlarged perspective view of the guiding strip employed; and,

Fig. 5 is a vertical sectional view through the strip with the sash cord in place.

In the drawings I have shown the frame comprising an inclined sill 10, the usual hollow jambs 11 and an inclined lintel 12. The sill has a depressed area 10*a*, the inclination of which is the same as that of the remainder of the upper surface of the sill. The lintel 12 has a downwardly extended area 12*a*, corresponding in depth to the depressed area 10*a*. Thus the window opening is the same at the outside as at the inside. One of the advantages of a construction such as shown is that with a storm window tilted backward at the top even to an extent equal to the thickness of the storm window frame, a relatively large ventilation opening is provided. A double-hung window is shown including upper and lower sashes 13—14. Sash weights 15 and cords 16 are provided in the usual manner for counterbalancing the sashes. At the meeting edges between the sashes and the jambs, I provide grooves 17—18 and a guiding strip is used for sealing the sash and guiding its vertical sliding movement. The strips are preferably in the form of U-shaped sheet metal elements, the legs 19 of which project into the groove 17 while the crown 20 is seated in the groove 18 in the sash. Pins 21 are projected laterally through the sash and parallel to the glass and through openings 22 in the strip, for the purpose of retaining the strip in fixed relation to the sash, except when the sash is to be removed. If desired spring means, not shown, may be used for retaining the pins in seated relation.

As a means for removably connecting the cord 16 to the guide strip, I provide tongues 23 punched in from the sides 19, these tongues co-operating with a knot 24 formed in the end of the cord.

The operation is as follows:

With the parts in the position shown in the drawings, it is necessary only to retract the pins 21, whereupon the guides will be raised by the counterweights and at the point where the cord passes over the pulley the strip may be turned in such a way as to prevent the cord from escaping into the weight space. Of course, other means may be used for retaining the cord. Thereupon the sashes may be removed with ease for washing or for the placing of a storm window, such as indicated at 25, or a window screen, as the case may be. The sash or screen may be held by a button 26. Strips or plates 11*a*, plain or decorated as desired, may be attached to the outside of the jambs to serve as means for retaining the frames 25 against outward movement.

It will be noted that both the upper and lower frame members are inclined downwardly and outwardly to prevent the entrance of water and to facilitate the swinging movement necessary to install the storm sash. This swinging movement is facilitated by the offset upper and lower surfaces 12*a*—10*a* that co-operate with the frame 25. At the top a tongue 27, or similar device, may be used for sealing the upper sash. A similar provision may be used for sealing the lower side of the bottom sash.

A construction such as shown will provide ample sealing for the sash and will facilitate the removal of the sash from the frame with a minimum of effort. Except for the separation of the guide strip as indicated, the windows will operate in the usual manner and there will be none of the customary sticking of the sash. Operation will be free because of the spring guiding strip which serves to exclude air and moisture, but will offer little resistance to the vertical sliding movement of the sash.

Many variations and modifications may be

made in the construction shown without departure from the spirit of my invention.

I claim:

1. In a window, a frame including a sill and lintel, the inner or facing surfaces of which provide for the reception of shiftable sash, said sill having a depressed area at its outer edge and spaced from a sash in the frame, and said lintel having a corresponding downwardly projected area, said areas being downwardly and outwardly inclined and vertically aligned and adapted to receive a stormsash tiltable rearwardly at its upper end therebetween, the downward and outward inclination of said areas serving to provide an enlarged opening on the rearward tilting of the storm sash.

2. In a window, a frame including a sill and lintel, the inner or facing surfaces of which provide for the reception of shiftable sash, said sill having a depressed area at its outer edge and spaced from a sash in the frame, and said lintel having a corresponding downwardly projected area, said areas being downwardly and outwardly inclined and vertically aligned and adapted to receive a storm-sash tiltable rearwardly at its upper end therebetween, and means exterior of the frame for preventing outward movement of the storm-sash, the downward and outward inclination of said areas serving to provide an enlarged opening on the rearward tilting of the storm sash.

3. In a window, a frame including a sill and lintel, the facing surfaces of said sill and lintel being relatively parallelly disposed and being outwardly and downwardly inclined with respect to the window structure, shiftable sash arranged between the sill and lintel adjacent the inner ends thereof, storm sash arranged between the sill and lintel adjacent the outer ends thereof, stop means on the frame for limiting the outward movement of the storm sash, and said storm sash being tiltable inwardly with respect to said stop means at the upper end of the storm sash, the adjacent inclined lintel surface providing an enlarged opening between the lintel and the storm sash on such pivotal movement.

4. A window as defined in claim 3, wherein said shiftable sash is bodily removable from the frame, and wherein said storm sash is insertable into the frame from the inner side thereof.

5. In a window, a frame including a sill and lintel, the facing surfaces of said sill and lintel being relatively parallelly disposed and being outwardly and downwardly inclined with respect to the window structure, sliding sash arranged between the sill and lintel adjacent the inner ends thereof, means for guiding the sliding sash in its movements, said means comprising cooperative grooves in the sash and frame, and a strip member fixed in one of said grooves and vertically slidable in the other thereof, said strip member being removable from the groove to which it is fixed whereby to permit the bodily removal of the sliding sash from the frame, storm sash comprising a single unit arranged between the sill and lintel adjacent the outer ends thereof, said storm sash being insertable into the frame from the inner side thereof upon removal of the sliding sash, and stop means on the frame for limiting the outward movement of the storm sash.

6. In a window, a frame including a sill and lintel, the facing surfaces of said sill and lintel being relatively parallelly disposed, sliding sash arranged between the sill and lintel adjacent the inner ends thereof, means for guiding the sliding sash in its movements, said means comprising cooperative grooves in the sash and frame, and a strip member fixed in one of said grooves and vertically slidable in the other thereof, said strip member being removable from the groove to which it is fixed whereby to permit the bodily removal of the sliding sash from the frame, storm sash comprising a single unit arranged between the sill and lintel adjacent the outer ends thereof, said storm sash being insertable into the frame from the inner side thereof upon removal of the sliding sash, and stop means on the frame for limiting the outward movement of the storm sash.

7. In a window, a frame including a sill and lintel, window sash arranged between the sill and lintel adjacent the inner ends thereof and storm sash adapted to be arranged between the sill and lintel adjacent the outer ends thereof, stop means on the frame for limiting the outward movement of the storm sash, said storm sash being tiltable inwardly with respect to said stop means at the upper end of the storm sash, and the lintel being provided with a cut away portion rearwardly of the stop means whereby to provide an enlarged opening between the lintel and the storm sash upon the tilting of the storm sash.

THOMAS SPACIE.