

Oct. 29, 1929.

W. T. PRICE

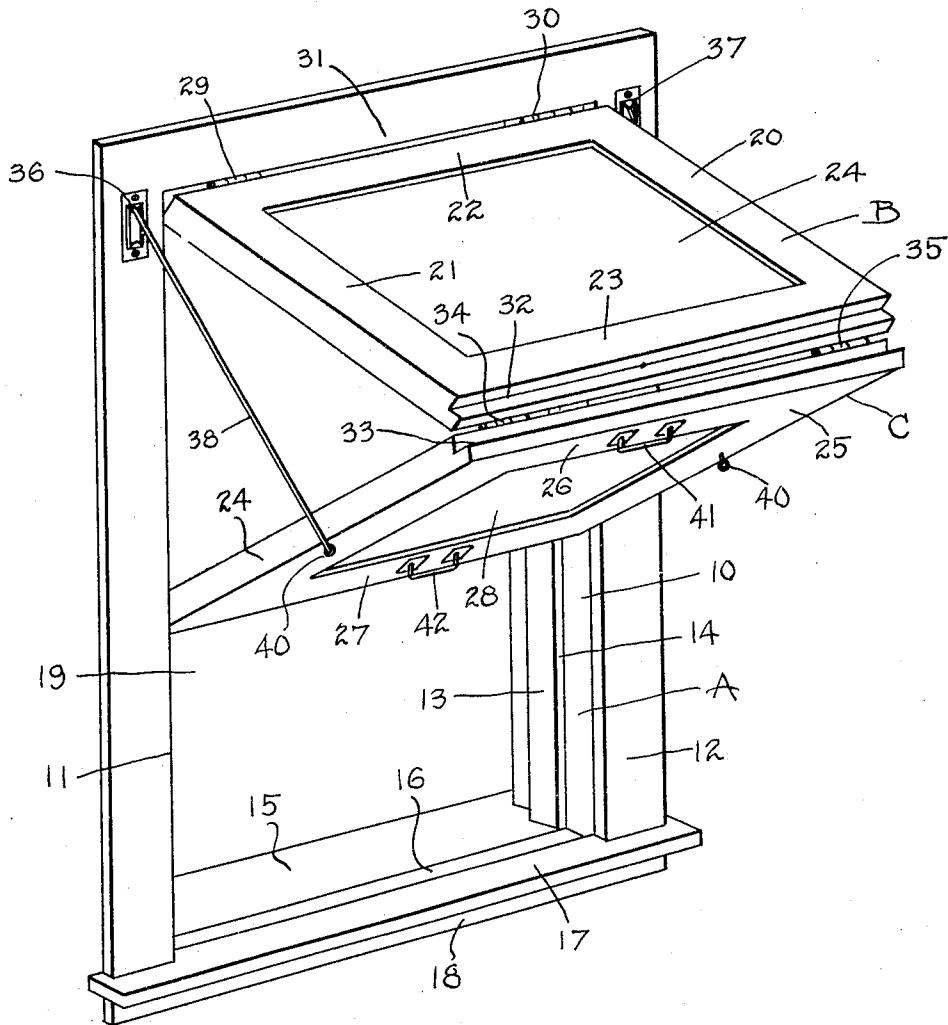
1,733,694

WINDOW

Filed Sept. 20, 1926

2 Sheets-Sheet 1

Fig. 1.



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2 Sheets-Sheet 2

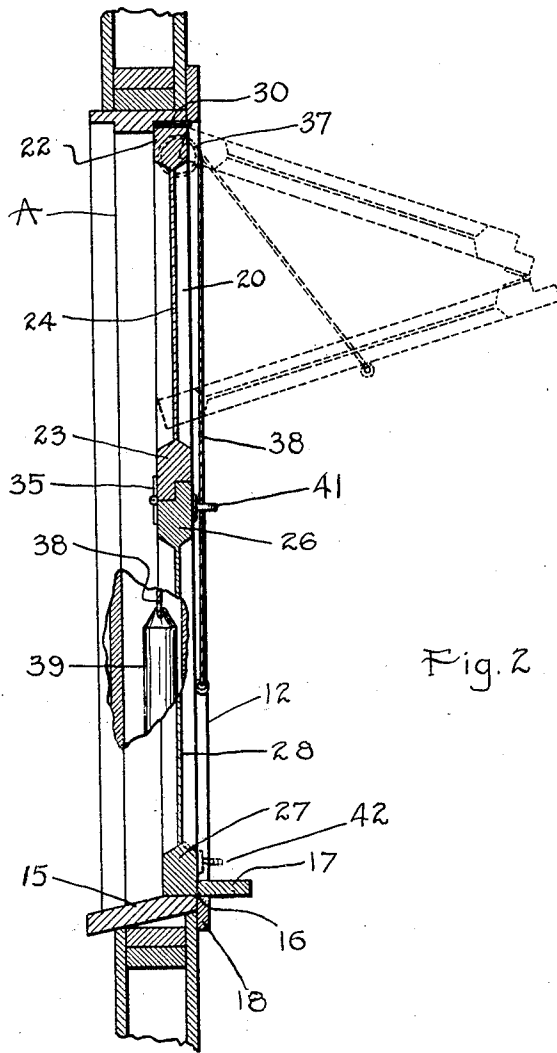


Fig. 2

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UNITED STATES PATENT OFFICE

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WINDOW

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My invention relates to windows and has for its object to provide a window employing a pair of hinged sashes adapted to be raised so as to completely uncover the opening through the window frame.

Another object of the invention resides in so arranging said sashes as to permit of swinging the same into the room, and in such a position as to bring the same out of the way of the objects and occupants within the room.

A still further object of the invention resides in forming said window frame with a rabbet along each side member thereof, extending into the room and to hingedly connect one of said sashes to the upper portion of the frame in such a manner as to allow the same to swing into said rabbets and to hingedly connect said second sash to said first named sash at the lower edge thereof in such a manner as to permit said second sash to also swing into said rabbets to fully close said opening through said frame.

A still further object of the invention resides in mounting sash pulleys along the interior casings at the upper ends of the frame and of passing sash cords thereover, said sash cords being attached at one end to the stiles of said lower sash intermediate the ends thereof, and of securing to the other ends of said sash cord within the frame window weights adapted to counter-balance said sashes and to hold the lower end of said lower sash within said rabbets.

With the foregoing and other objects in view, which will appear in the following description, the invention resides in the novel combination and arrangement of parts and in the details of construction hereinafter described and claimed.

In the drawings illustrating my invention:

Fig. 1 is a perspective view of a window showing an embodiment of my invention, and illustrating the sash partly raised.

Fig. 2 is a vertical sectional view of a window constructed in accordance with my invention, illustrating the sash closed.

With the windows now in use ordinarily designated as double-hung windows, consid-

erable disadvantage is encountered in that the opening through the window frame may be only partly uncovered not to exceed half of the area of the same. Where considerable circulation of air is desired, such windows are highly undesirable. At the same time where the ordinary casement windows are employed, although the entire opening through the frame may be uncovered, yet the sashes project into the room to such an extent as to interfere with the objects and occupants of the room, thereby rendering it difficult to arrange the furniture and making it inconvenient for the occupants. With my invention, the window may be fully opened so that any desired amount of ventilation may be had and at the same time the sashes are caused to swing inwardly into the room at a position above the ordinary height of the occupants and the furniture within the room so that the same are entirely out of the way.

The invention proper may be mounted in a window frame designated in its entirety at A, which consists of side members 10 and 11 constructed in the usual manner and connected together by means of a header 31. A casing 12 extends around the frame along the interior thereof and a similar casing around the exterior which has not been shown in the drawings. A stop 13 similarly extends around the interior of the frame proper in such a position as to provide a rabbet 14 facing inwardly to the room and extending around the two sides and the header of the frame. The bottom of frame A is provided with a window sill 15 constructed with a rabbet 16 facing outwardly formed by means of a stool 17 attached to said sill and projecting into the interior of the room. An apron 18 may be used in conjunction with said stool 17 to give the window the usual appearance. Except for the formation of the rabbet 14, the window frame A is in all respects identical with such structures as are now common in the art.

The closure for the opening in the frame A, which I have designated at 19, consists of two sashes B and C. The upper sash B is constructed with two stiles 20 and 21 connected together at their upper ends by rails 22

and 23, which support a pane of glass 24 in the usual manner. The sash C is similarly constructed and comprises stiles 24 and 25 connected together by rails 26 and 27 to support a pane of glass 28. The upper sash B is hingedly connected to frame A by means of hinges 29 and 30, which are attached to the rail 22 and to the header 31. This sash is so mounted as to be adapted to swing outwardly from the frame A into the room proper or to swing into the rabbet 14 to close the upper part of the opening 19 through said frame. The lower edge of the rail 23 is constructed with a rabbet 32 and the upper rail 26 of sash C is similarly constructed with a complementary rabbet 33 which permit the meeting ends of the two sashes to fit together so as to shed water. The rails 23 and 26 of said sash are hingedly connected together by means of hinges 34 and 35 which may be mortised in place or fastened to the surface of the sash if desired. These hinges permit the sash C of being folded back upon sash B so that the same may occupy a minimum space equal to the combined thickness of the two sashes. When the window is closed, the two sashes B and C occupy the positions shown in full lines in Fig. 2, in which it will be noted that both of said sashes lie within the rabbet 14 and that the rail 27 of sash C falls within the rabbet 16. In this manner a water tight closure is effected which gives a neat and attractive appearance to the window when in its closed position.

For counter-balancing the windows, the following device is employed: Along the upper portions of the side members 10 and 11 of frame A are attached two sash pulleys 36 and 37 which are mounted in the casing 12. Two sash cords 38 pass over these pulleys and have attached to their inner ends sash weights 39 which function in the usual manner. The outer ends of sash cords 38 are attached to screw eyes 40 or other suitable fastening devices which are attached to the stiles 24 and 25 of sash B intermediate the ends thereof. The screw eyes 40 are so situated that the same extend outwardly beyond the surfaces of the stiles 24 and 25 so that the cords 38 when the window is closed pull in a direction out of alignment with the hinges of the sash causing the sash to become seated against the stop 13 and to effect a tight closure therewith. In this manner locking means, for the purpose of holding the sashes in closed position, may be entirely dispensed with.

In opening the window the lower sash C is pulled outwardly at the upper end thereof by means of a sash lift 41 secured to the rail 26. This causes the said sash to project outwardly beyond the line of pull of the cords 38 after which the sash may be raised and lowered jointly by means of a second sash lift 42 secured to the rail 27 of said sash. As soon as the sash is raised the cords 38 take an angular

position relative to the frame proper which tend to draw the lower sash C to which they are attached inwardly toward the frame. This has the effect of maintaining the lower rail 27 of said sash seated in the rabbet 14 which forms a guideway for the movement thereof relative to the frame. These sash cords, therefore, at the same time counter-balance the weight of the two sashes B and C and also tend to hold the sashes inwardly in proper position within said rabbets so that rollers or other guide means for controlling the movement of the sashes may be entirely dispensed with. By manipulating the sashes through the agency of the two sash lifts 41 and 42, the window may be easily raised and lowered from the position shown in full lines in Fig. 2 to an intermediate position shown in dotted lines in Fig. 2, or the same may be raised to the top of the frame so as to completely uncover the opening therethrough.

My invention is highly meritorious in that it proves an extremely simple and convenient window construction for use where an entire window opening is desired to be uncovered, so as to secure a maximum amount of ventilation. The window is particularly advantageous in that the sashes swing inwardly into the room permitting of attaching screens to the exterior of the frame without interference with the sashes. At the same time the sashes project into the room in such a position as to be entirely out of the way of the occupants and so as not to interfere with the furniture and other objects in the room, thus permitting all the space within the room to be utilized. When the sashes are in any of their respective positions, either fully or partly closed, the same extend into the room in such a manner as to prevent the occupants from receiving injury from contact therewith, and when fully raised are completely out of the way projecting into space within the room not capable of being utilized for any other purpose. The sash weights and sash cords when attached to the lower sash, as specified, hold the sashes in rigid position both while closed and open, thereby preventing rattling of the sashes and at the same time effecting a water tight closure when the sashes are closed. My improved window can be constructed without additional expense and is simple and easy to install. The invention is particularly advantageous for use in summer homes and on porches, and the like, where the usual casement window would be unsuitable and where the double-hung window would not give sufficient ventilation.

Changes in the specific form of my invention, as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A window comprising a frame having an

- opening therethrough and formed with a longitudinal guideway, a sash hingedly connected to the upper portion of said frame, a second sash hingedly connected at its upper end to the lower edge of said first named sash, said second sash having its lower end freely movable within said guideway and means for counter-balancing the weight of said sash and for drawing the free end of said lower sash towards said guideway and laterally thereof.
2. A window comprising a frame having an opening therethrough and formed with a rabbet, a sash hingedly connected to the upper portion of said frame adapted to swing into or out of said rabbet, a second sash hingedly connected at its upper end to the lower edge of said first named sash, said second sash having its lower end freely movable within said rabbet, said entire second sash being adapted to move laterally bodily into or out of said rabbet, pulleys mounted in the casing of said frame, sash cords passing over said pulleys and attached to said lower sash intermediate its upper and lower ends, means for counterbalancing said sash operating upon said sash cords, said sash cords being adapted to extend outwardly beyond the frame upon the raising of the sash so as to draw said lower sash inwardly within said rabbet.
3. A window comprising a frame having an opening therethrough and formed with a rabbet, a sash hingedly connected to the upper portion of said frame adapted to swing into or out of said rabbet, a second sash hingedly connected at its upper end to the lower edge of said first named sash, said second sash having its lower end freely movable within said rabbet, said entire second sash being adapted to move laterally into or out of said rabbet, pulleys mounted in the casing of said frame, sash cords passing over said pulleys and attached to said lower sash substantially half way between its upper and lower ends, means for counterbalancing said sash operating upon said sash cords, said sash cords being adapted to extend outwardly beyond the frame upon the raising of the sash so as to draw said lower sash inwardly within said rabbet.
4. A window comprising a frame having an opening therethrough and formed with a longitudinal guideway open at the inner portion thereof, a sash hingedly connected at its upper end to the upper portion of said frame, a second sash hingedly connected at its upper end to the lower edge of said first named sash, said second sash being freely movable laterally out of said guideway through the open portion thereof, said second sash having a portion thereof moving out of said guideway upon the opening of said sash, a cord attached to the outwardly moving portion of said sash and extending toward said frame, and means for tensioning said cord to draw said window toward said guideway.
5. A window comprising a frame having an opening therethrough, a sash raisable along said opening and movable bodily out of said frame, and means for yieldably forcing said sash towards the frame.
6. A window comprising a frame having an opening therethrough, a sash hingedly connected at its upper end to the upper portion of said frame, a second sash pivoted at its upper end to the lower end of said first sash, said sash being swingable jointly to uncover said opening, said lower sash being movable bodily out of said frame, and means for yieldingly forcing said lower sash toward said frame.
7. A window comprising a frame having an opening therethrough, a sash hingedly connected at its upper end to the upper portion of said frame, a second sash pivoted at its upper end to the lower end of said first sash, said sash being swingable jointly to uncover said opening, said lower sash being movable bodily out of said frame, and tensioned means for drawing said lower sash toward said frame.
8. A window comprising a frame having an opening therethrough, a sash hingedly connected at its upper end to the upper portion of said frame, a second sash pivoted at its upper end to the lower end of said first sash, said sash being swingable jointly to uncover said opening, the lower portion of said lower sash being movable out of or into the frame, and tensioned means for drawing the lower end of said lower sash toward said frame.
9. A window comprising a frame having an opening therethrough and formed with a longitudinal guideway open at the inner portion thereof, a sash hingedly connected at its upper end to the upper portion of said frame, a second sash hingedly connected at its upper end to the lower edge of said first named sash, said second sash being freely movable laterally out of said guideway through the open portion thereof, and tensioned means for drawing the lower end of said sash into said guideway.
10. A window comprising a frame having an opening therethrough and formed with a stop, a sash hingedly connected to the upper portion of said frame, a second sash hingedly connected at its upper end to the lower edge of said first named sash, said second sash being slidable along said stop and having its lower end movable against said stop to retard the sliding thereof, and means for simultaneously counterbalancing said sash and forcing the lower edge of the lower sash against said stop.

In testimony whereof, I have signed my name to this specification.

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