March 19, 1946. W. L. GOULD 2,396,648

DOOR OR WINDOW CONSTRUCTION

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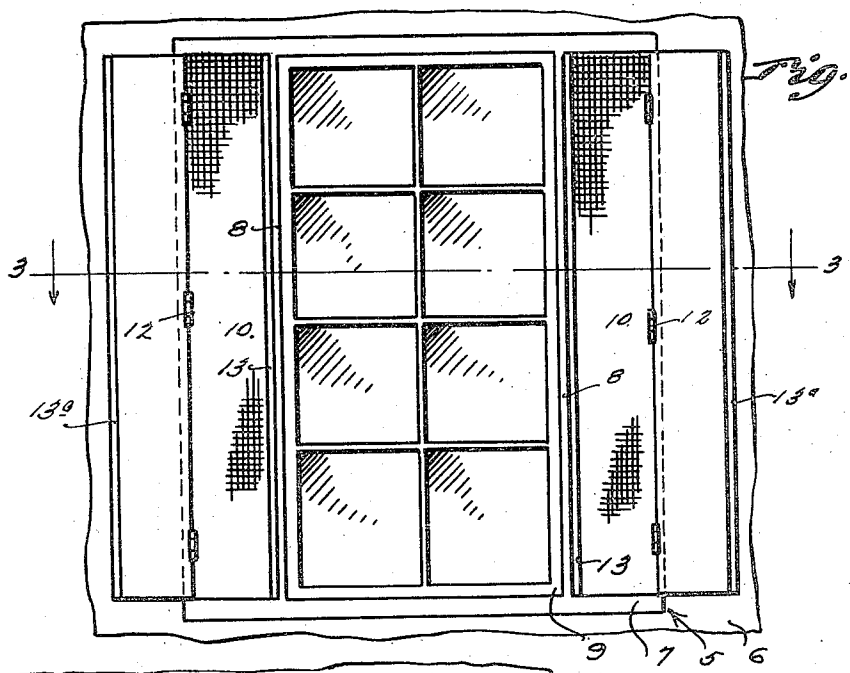


Fig. 1.

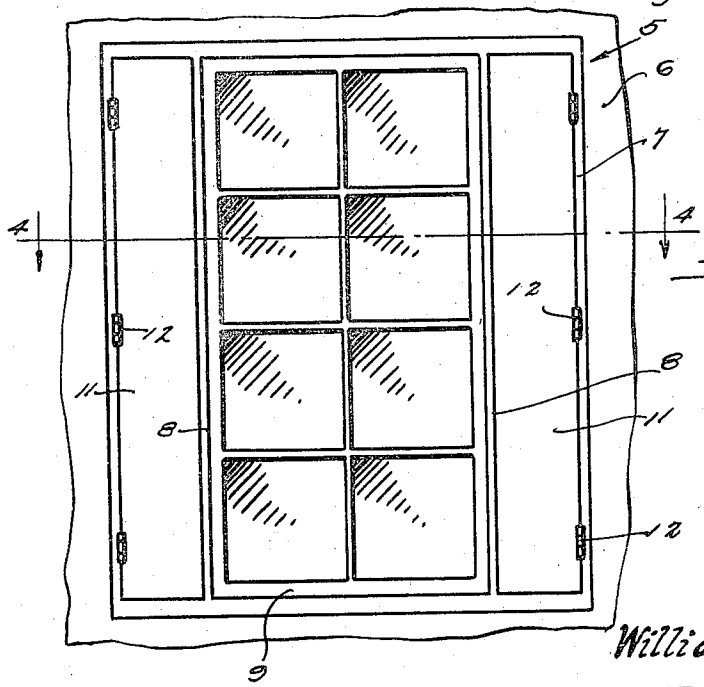


Fig. 2.

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Fig. 3.

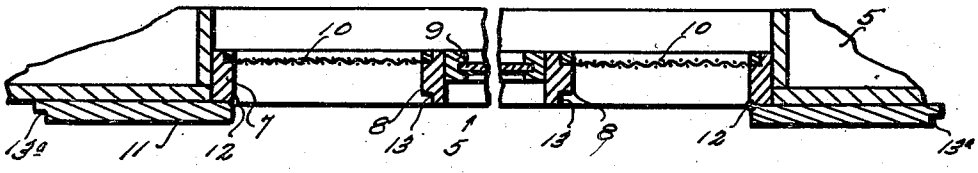


Fig. 4.

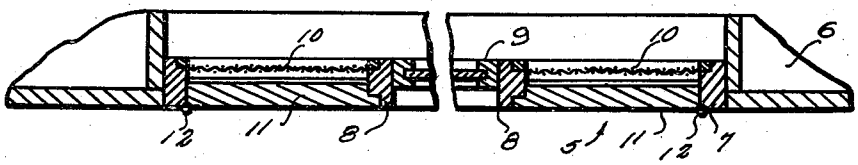


Fig. 6.

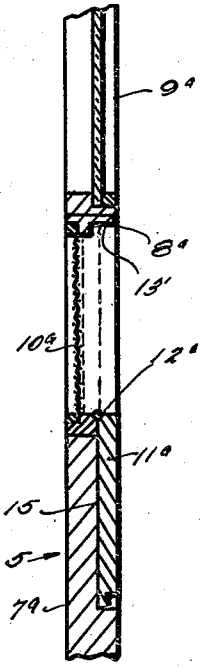


Fig. 8.

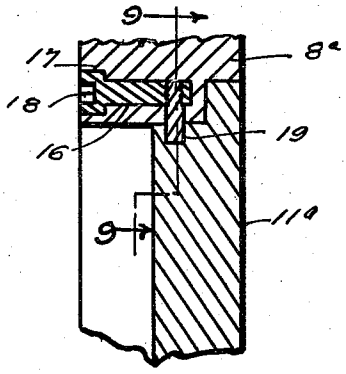
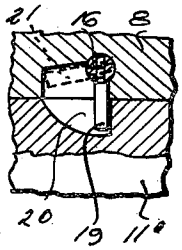


Fig. 9.



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DOOR OR WINDOW CONSTRUCTION

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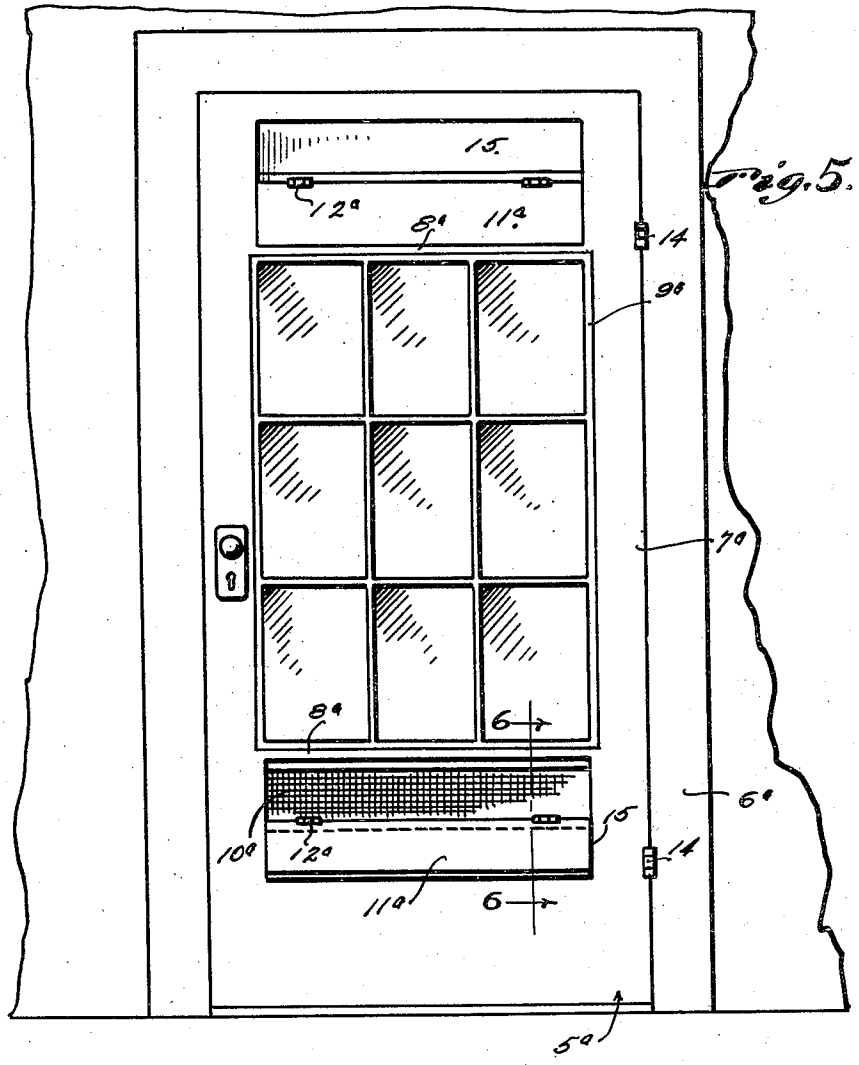


Fig. 5.

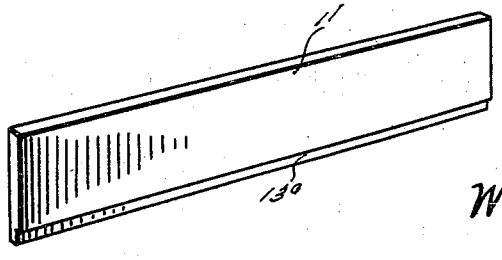


Fig. 7.

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Patented Mar. 19, 1946 2,396,648

UNITED STATES PATENT OFFICE

2,396,648

DOOR OR WINDOW CONSTRUCTION

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Application March 20, 1944, Serial No. 527,272

5 Claims. (Cl. 160—91)

This invention relates to door or window construction, and has more particular reference to a construction wherein the door or window consists of a panel fitted or mounted in the door or window frame, said panel including an outer frame-like panel member having spaced division bars that divide the same so as to provide intermediate and end openings therein, a single glazed sash fitting and mounted in the intermediate opening, screens mounted in the end openings, and openable closure panels for the end openings, whereby the door or window may be conditioned solely for the admission of light, or for the admission of both light and air for ventilation, in a convenient manner without the employment of swinging or sliding sashes or the use of screens in the sash opening.

The present invention accordingly provides a door or window construction wherein the glazed sash and screens remain the same at all times so that no changes thereof are necessary for different seasons, it being simply necessary to open the closure panels for the screen openings when ventilation is desired and to close them when ventilation is not desired.

A more specific object of the present invention is to provide a door or window construction of the above character which is simple, easy to construct and install, convenient to use, and otherwise well adapted to meet with the requirements for a successful commercial use.

More specific objects and features of the present invention will become apparent from the following description when considered in connection with the accompanying drawings, and the invention consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the drawings and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a fragmentary elevational view showing a window construction embodying the present invention, the closure panels for the screen openings being open.

Figure 2 is a view similar to Figure 1 with the closure panels closed.

Figure 3 is an enlarged horizontal section, partly broken away, and taken on the plane of line 3—3 of Figure 1.

Figure 4 is a view similar to Figure 3 taken on line 4—4 of Figure 2.

Figure 5 is a view somewhat similar to Figure 1, of a door construction embodying the present invention, one of the closure panels being closed, and the other being open.

Figure 6 is a fragmentary vertical section taken on the line 6—6 of Figure 5, and drawn on an enlarged scale.

Figure 7 is a perspective view of one of the closure panels.

Figure 8 is a fragmentary vertical section showing one of the closure panels in closed position and illustrating a means for locking the same in such closed position.

Figure 9 is a fragmentary section taken on line 9—9 of Figure 8.

Referring in detail to Figures 1 to 4, inclusive, of the drawings, there is shown a window construction including a panel 5 fitted in the window opening of a window frame 6 and including an outer frame-like panel member 7 having spaced division bars or mullions 8 that provide the frame-like panel member 7 with a relatively large intermediate opening and narrower end openings at opposite sides of the intermediate opening. Fitted and secured in, as well as completely filling, the intermediate opening of panel member 7 is a single glazed sash 9, and secured or mounted in the end or side openings of panel member 7 are ordinary window screen panels 10 that extend the full length and width of said end or side openings of panel member 7. Closure panels 11 are provided for the end or side openings of panel member 7, and these are hinged, as at 12, to swing away from the sash 9 to open position. Preferably, the meeting longitudinal edges of mullions 8 and closure panels 11 are rabbeted, as at 13 and 13a, and the panels 11 are hinged to the frame-like panel member 7 so that when the closure panels 11 are closed, they will be flush with the adjacent surface of the panel member 7, as illustrated in Figure 4.

From the foregoing description, it will be seen that the window construction is such that the sash 9 and screens 10 may remain in place at all times, the closure panels 11 being simply opened when ventilation is desired and being closed when ventilation is not desired. A single sash 9 is provided in the glazed portion of the window so that sliding or swinging sashes are not necessary, and there is no need to provide screens in the sash receiving opening.

Referring to Figures 5 to 7, inclusive, there is shown a door construction in which the door includes a frame-like panel member 7a. The door or panel proper is mounted in the door opening of a frame 6 by means of hinges 14, and is generally indicated by the reference character 5a. The frame-like panel member 7a is provided with spaced division bars or transoms 8a that provide said panel member 7a with a relatively large intermediate opening and narrower end openings

A single glazed sash 9a is fitted and secured in the intermediate opening, and the end openings are provided with full length and full width screens 10a. The end openings of the frame-like panel member 7a are provided with hinged closure panels 11a whose mounting hinges 12a are arranged so that the panels 11a swing away from the sash 9a to open position. Also, the frame-like member 7a may have a recess 15 to receive each closure panel 11a when the latter is fully opened, so that said closure panel may be disposed flush with the adjacent surface of the frame-like panel member 7a, as shown in Figure 6. With this arrangement, the rail to which the closure panel 11a is hinged is of a width narrower than the thickness of the panel member 7a, and the division bar or transom 8a is rabbeted at 13' so that the closure panel 11a may swing wholly within the panel member 7a to closed position, as indicated by dotted lines in Figure 6.

The closure panels 11 or 11a may be located either on the exterior or interior side of the window or door, as preferred. When the closure panels are arranged on the exterior side of the window or door, they are preferably provided with suitable operating means whereby the same may be operated from a point in the building equipped with the door or window construction. Such operating means are more or less conventional in connection with exterior window shutters, and illustration thereof herein is not necessary.

Also, when the closure panels are on the exterior side of the door or window, they may be provided with suitable means for locking them in closed position from the interior of the building. One suitable form of such locking means is illustrated in Figures 8 and 9, wherein the division bar 8a has a spindle 16 journaled therein, said spindle being fitted in a socket provided in the inner side of the bar 8a and having a head 17 countersunk in a counterbored inner end portion of said socket, said head 17 being formed with a polygonal socket 18 to receive an actuating wrench or the like. The outer end of spindle 16 is provided with a lateral pin 19 that is positionable to project into a groove 20 of the closure panel 11a to lock the latter closed. The groove 20 is provided in the free longitudinal edge of the closure panel 11a, and pin 19 may be moved from this groove into a recess 21 of the division bar 8a when it is desired to unlock the closure panel 11a. This will be clear from a consideration of Figure 8 in connection with Figure 9. Thus, a person within the building may insert the squared end of a wrench in the socket 18 provided in the head 17 of spindle 16, so as to rotate the latter and swing the pin 19 to either locking or released position.

The closure panels 11 or 11a may be opaque or in the form of solid wooden or like strips, or they may be transparent or glazed panels, depending upon whether or not it is desired to have them transmit light when closed to exclude the admission of air.

In the construction of windows, the screened openings are preferably provided at the sides of the glazed sash, as shown in Figure 1, whereas in door construction, they are preferably provided above and below the glazed sash. Otherwise, the door and window constructions are of essentially similar nature.

From the foregoing description, it is believed that the construction and manner of use, as well as the advantages of the present invention, will be readily understood and appreciated by those skilled in the art. Minor changes in details of construction illustrated and described are contemplated, such as clearly fall within the spirit and scope of the invention as claimed.

What I claim is:

1. In a construction of the character described comprising a frame; a panel mounted in said frame, said panel comprising an outer frame-like panel member having spaced division bars dividing the same into an intermediate and end openings, a single glazed sash fitted in and completely closing the intermediate opening, screens mounted in and completely covering the end openings, and openable closures for said end openings.

2. In a construction of the character described comprising a frame; a panel mounted in said frame, said panel comprising an outer frame-like panel member having spaced division bars dividing the same into an intermediate and end openings, a single glazed sash fitted in and completely closing the intermediate opening, screens mounted in and completely covering the end openings, and openable closures for said end openings, said closures comprising panels hinged to the outer frame-like panel member at the outer sides of said end openings to swing away from the sash to open position.

3. In a construction of the character described comprising a frame; a panel mounted in said frame, said panel comprising an outer frame-like panel member having spaced division bars dividing the same into an intermediate and end openings, a single glazed sash fitted in and completely closing the intermediate opening, screens mounted in and completely covering the end openings, and openable closures for said end openings, said closures comprising panels hinged to the outer frame-like panel member at the outer sides of said end openings to swing away from the sash to open position, said outer frame-like panel member having recesses in a face thereof to receive the closures when the latter are fully opened.

4. In a window construction comprising a frame; a window including a panel fitted in said frame, said panel including an outer frame-like panel member having spaced mullions dividing the same into a relatively wide intermediate opening and narrower side openings, a single glazed sash fitted in and completely closing the intermediate opening, screens mounted in and completely covering the side openings, and horizontally swinging closure panels for said side openings hinged to the frame-like panel member at the outer sides of said side openings to swing away from said sash to open position.

5. In a door construction comprising a frame; a door panel mounted in said frame, said door panel comprising an outer frame-like panel member provided with spaced transoms dividing the same into an intermediate relatively large opening and narrower upper and lower openings, a single glazed sash fitted in and completely closing the intermediate opening, screens mounted in and completely covering the upper and lower openings, and hinged closure panels for said end openings movable away from the sash to open position, said frame-like panel member having recesses to receive said closure panels when opened.

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