

June 25, 1929.

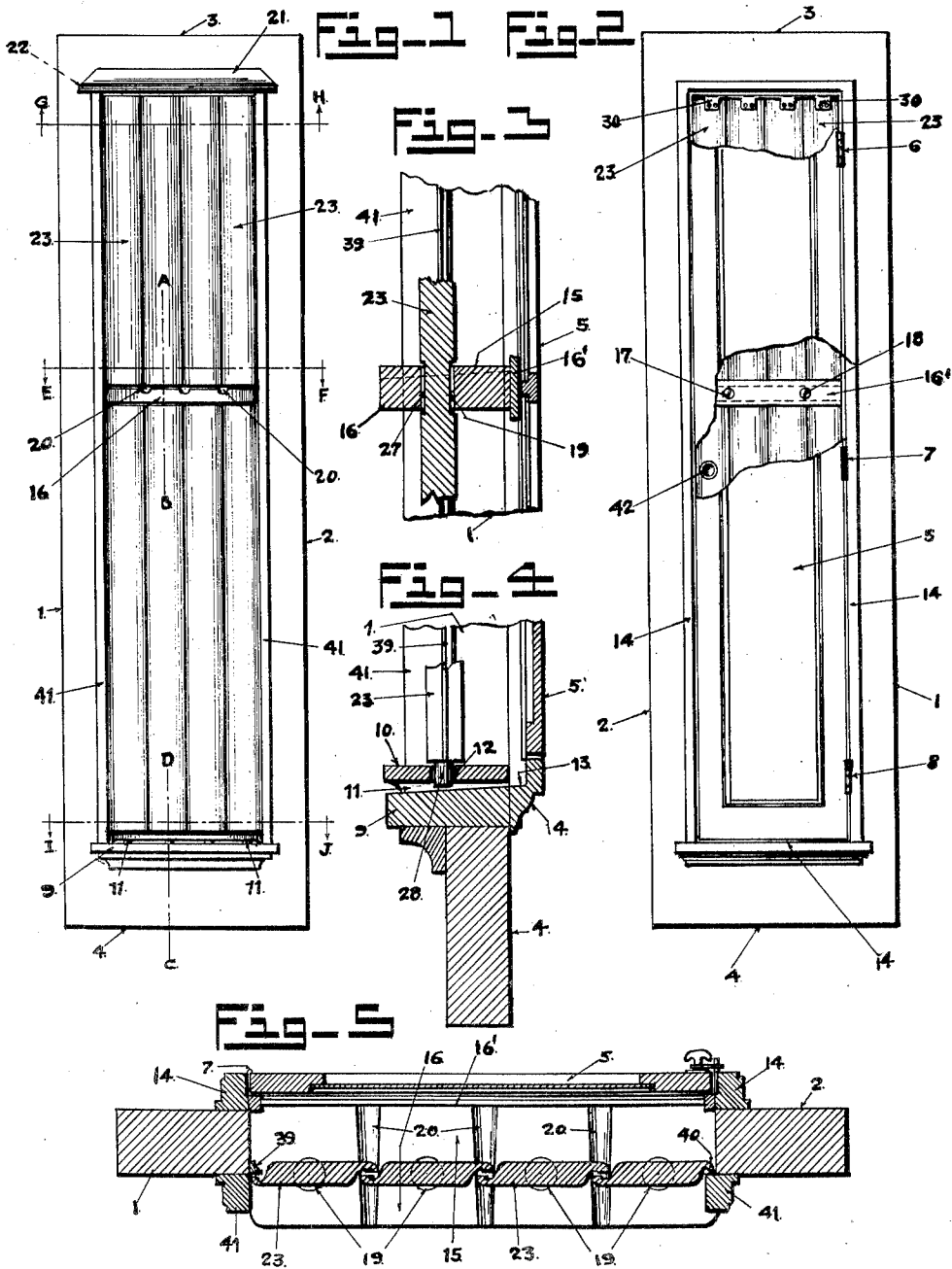
J. STUART Y MOLINA

1,718,754

BLIND

Filed June 17, 1927

3 Sheets-Sheet 1



Inventor
Julian Stuart y Molina,
By *Geo. Kimmel* atty.

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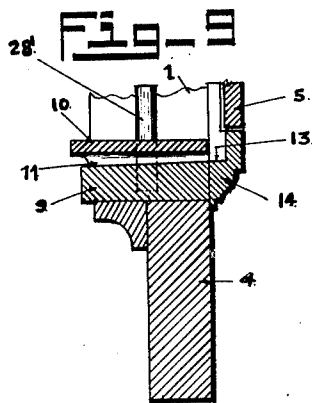
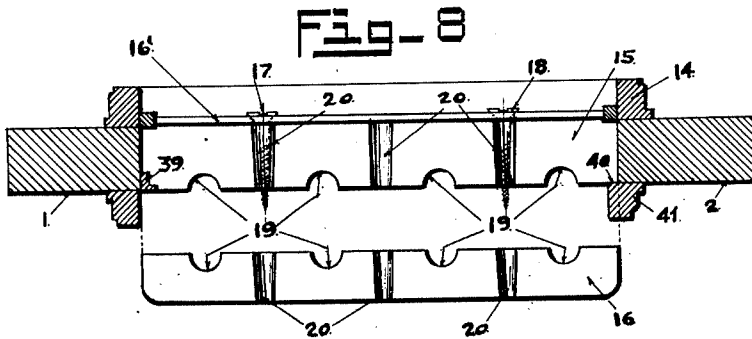
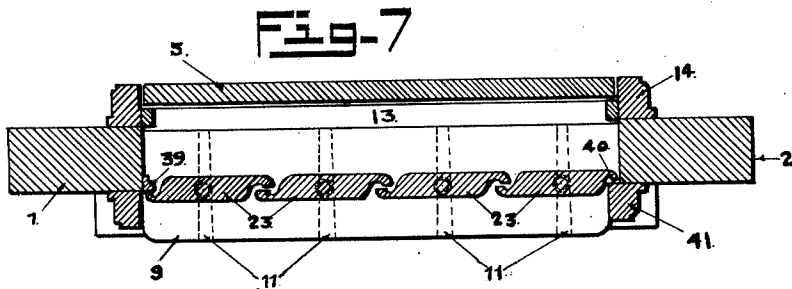
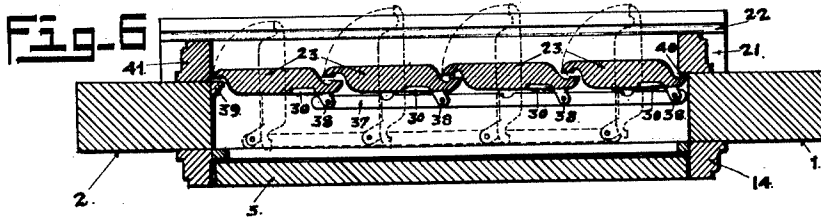
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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

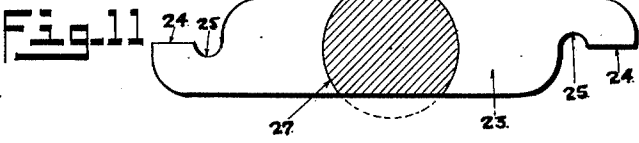
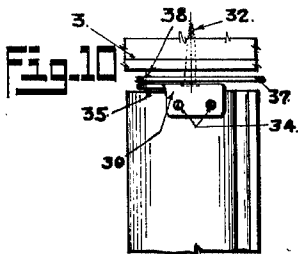


Fig. 12

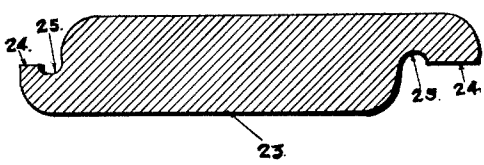


Fig. 13

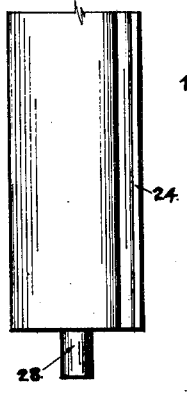
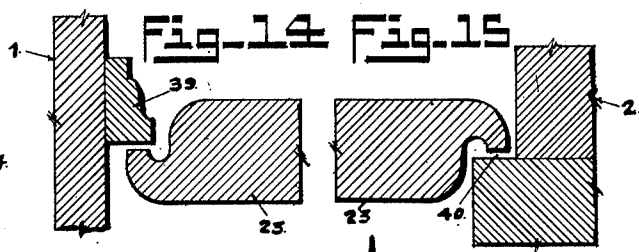
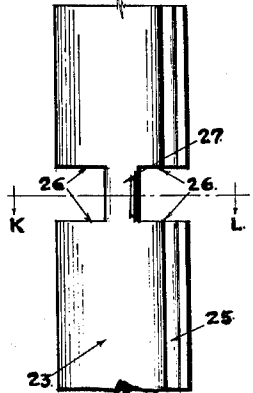
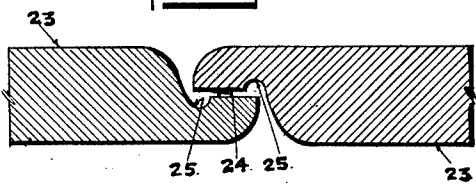
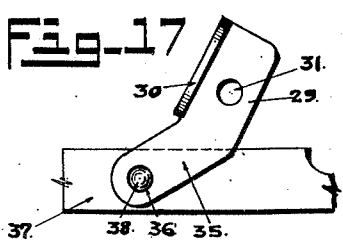
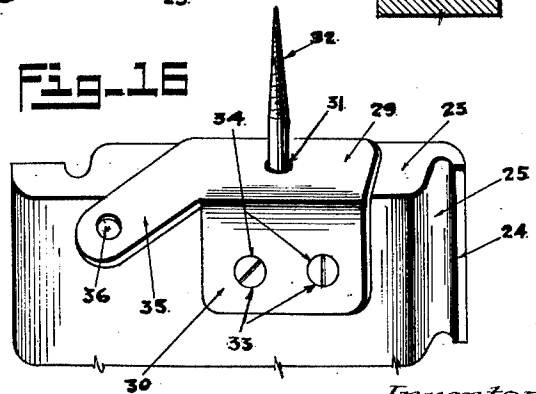


Fig. 16



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UNITED STATES PATENT OFFICE.

JULIAN STUART v MOLINA, OF HABANA, CUBA.

BLIND.

Application filed June 17, 1927, Serial No. 199,573, and in Cuba June 7, 1927.

Although my improvements are intended for use in blinds they may, nevertheless, prove useful and convenient for other purposes and applications within the spirit of my invention.

My invention has for its object to provide a door or sash, equipped with blinds, which will allow the passage of a greater amount of air and light, thus proving more sanitary.

It has the advantage of low cost of manufacture, compared with the cost of existing types, this lower cost being due to the economy in use of material and reduction in labor required for their manufacture.

Another advantage of great importance is the ease with which any break or damage may be repaired, as in order to take out any of the blind slats making up the sash proper it is only necessary to remove four screws.

Still another advantage, likewise of great importance, is the small effort required to move it, due to the fact that in a sash made up of the ordinary type of Venetian blind there are more than one hundred pivots, whereas in blinds constructed according to my invention there are only six.

All of the objects mentioned and certain additional advantages I obtain by means of the novel combination of the parts making up the blinds of my invention, as shown in the accompanying drawings and hereinafter amply described, the characteristic points of novelty being subsequently pointed out in detail in the appended claims.

In the accompanying drawings:

Fig. 1 is a front elevation of a window sash provided with Venetian blinds built according to the improvements by me invented;

Fig. 2 is a rear view of Fig. 1;

Fig. 3 is an enlarged section taken on the line A—B of Fig. 1;

Fig. 4 is an enlarged section taken on the line C—D of Fig. 1;

Fig. 5 is an enlarged section taken on the line E—F of Fig. 1;

Fig. 6 is an enlarged section of the line G—H of Fig. 1;

Fig. 7 is an enlarged section taken on the line I—J of Fig. 1;

Fig. 8 is a detail of the combined bearing and retaining center rail showing the two pieces which make it up and showing, in addition thereto, the screws that hold them in working position when used.

Fig. 9 is a section, in detail, showing the

method of uniting the lower portions of the blind slats by means of a short pin provided in the false staff-bead of lower rail, and the gutter grooves which collect the water and return it to the exterior.

Fig. 10 shows a detail of one of the centre blind slats, showing at the upper part the method of joining to supporting members, recessed in the centre thereof to allow rotation within the bearings provided in the lock-rails and, at the lower end, having a pivot extending into the bearings mounted in the false staff-bead of the lower rail.

Fig. 11 shows a section, on an enlarged scale, taken on the line K—L of Fig. 10.

Figure 12 is a cross sectional view of an end slat.

Figure 13 is a sectional detail illustrating the position of a pair of adjacent slats relative to each other.

Figures 14 and 15 are sectional details illustrating the stops for the end slats.

Figure 16 is the perspective view of the upper pivotal sustaining or supporting bracket.

Fig. 17 is a detail view showing the connection between the bracket and operating lever.

Referring to the drawings it can be seen that the sash which I present in said drawings as an example, consists of a pair of stiles 1 and 2, upper and lower rails 3 and 4, being provided, at the back, with a swinging sash 5 of the type known as "French shutter" hinged at 6, 7 and 8, the construction being in all respects like or similar to those in common use. My improvements consist of the following: Mounted on the rail 4 is a sill 9, and below the upper face 10 thereof, but in proximity thereto, it is formed with spaced transversely extending openings 11, inclining at their bottoms downwardly toward their outer ends. Secured to the outer face of the sash is a frame 14 providing, in connection with the sill 9, a recess 13 with which the openings 11 communicate. The shutter element 5 is carried by the frame 14. The recess 13 and openings 11 provide means for carrying off the water which may pass through the slats to be presently referred to. Mounted in the sill 9 are bearings 12 for the purpose to be referred to, and said bearings are arranged over openings 11. The lock or middle rail is made up of two pieces 15 and 16, (Fig. 8) the former, 15, being perma-

nently fixed to stiles 1 and 2 while the latter 16 is attached thereto by means of screws 17 and 18 (which allow quick and easy separation therefrom), the union of both pieces forming bearings 19 whereof one half corresponds to each. The foregoing arrangement allowing the installation or removal of the blind slats, will be hereinafter explained.

The upper face of the combined bearing and retaining rail (Fig. 5) is formed with spaced semi-circular channels 20, extending transversely and tapering from the inner to the outer edge thereof. The inner ends of the channels abut against the bead 16' to prevent back flow of water.

Attached to the upper rail 3 and extending outwardly therefrom is a flashing strip 21 (Fig. 1) and the bottom face thereof has a semi-circular groove 22 (Fig. 6) near its outer edge extending lengthwise of the strip. The flashing strip prevents water from beating between the rail and the slat while the groove prevents the seepage of water on the underside of the flashing strip.

The slats 23 (Fig. 10) are relatively rectangular in cross section and rotatable. The edges are recessed into the opposite faces of the slat forming a plane surface 24 which terminates in a channel 25. The channel 25 carries off any water that may beat past the two contacting plane surfaces 24. The slat mic way thereof is cut away as at 26 to form a circular shaft 27 which engages the bearings 19 (Fig. 8) formed on the middle or retaining rail. The bottom of slat 23 terminates in a pivot 28 which extends through a bearing 12 mounted in the top face of sill 9, and which provides for rotatably supporting the slat at its lower end.

The top of slat 23 is rotatably attached to the upper rail 3 by means of an angular shaped bracket, and the part 30 thereof conforms to the inner face of slat 23 and is secured by screws 34 thereto. The part 29 of the bracket (Fig. 16) conforms to the top edge of slat 23, and thereby supports the screw pivot 32 in an upright position by reason of part 29 pressing the flange of screw pivot 32 against the top edge of slat 23. The part 29 of the bracket terminates in an angularly disposed lever arm 35, perforated at 36 to engage a bolt 38 (Fig. 17) by which it is secured to an operating lever 37.

An alternate bottom support structure for rotatably mounting slat 23 is shown in Figure 9. The bottom edge of slat 23 is recessed to engage a circular pin 28' fixed in bottom rail 9 and projects through an opening in false bead 10.

To assemble a blind, insert the pivot 28 within bearing 12 of the false-bead on bottom rail 9 and central portion 27 within the half of bearing 19 (provided piece 16 is separated from 15) of the intermediate or lock-rail, then fixing upper part of slat 23 to side 30 of the

bracket (having previously joined levers 35 to the operating lever 37 by means of pivots 38 and fixed to upper rail 3 by screws 32) by means of screws 34. Once all blind slats are in position screws 17 and 18 are inserted, it then being ready for use.

For the purpose of excluding water from entering through the joints between end slats and stiles, I provide stops or beads 39 and 40 on the inside face of stiles 1 and 2 respectively. Of these stops that marked 40 corresponds to frame 41, which is fixed in the general structure for purely ornamental purposes. Whenever it is desired to open or close slats 23 it is only necessary to move handle 42, which rotates slats to which it is fixed communicating the same movement to all the others by means of the operating lever 37 until they occupy the position shown by dashed lines in Fig. 6.

It should be noted that I have invented a blind with a mechanism easy to operate and capable of being manufactured at very low cost, it being entirely free from complicated attachments or accessories which may tend to make it get easily out of order.

It is apparent that the accompanying drawings are illustrative and not restrictive. It is obvious that the blind slats may be cut in any section and that their edges may overlap more or less, as it may be deemed best, as also that may be fixed horizontally in which case supporting bearings would be lodged in bearings provided in one of the stiles, and likewise the brackets with their operating levers would function vertically and have as point of support the other stile or a suitable piece attached thereto, it being thus possible to effect certain changes and modifications without departing from the spirit of my invention, all as substantially set forth in the following claims.

I claim:

1. A blind comprising a stationary frame, a set of opposed simultaneously operable rigid, one piece slats arranged therein and pivotally connected therewith, said slats being cut away transversely intermediate their ends to provide shafts, and a rigid combined bearing and retaining rail for said shafts.
2. A blind comprising a stationary frame, a set of opposed simultaneously operable rigid, one piece slats arranged therein and pivotally connected therewith, said intermediate slats of said set being cut away at their sides to provide channels to carry off water, and oppositely disposed parts to overhang adjacent slats, and said slats being cut away transversely intermediate their ends to provide shafts, and a rigid combined bearing and retaining rail for said shafts.
3. A blind comprising a frame, a flashing strip associated with said frame, a set of opposed simultaneously operable slats arranged in said frame and pivotally connected therewith, said slats being cut away transversely

intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts.

4. A blind comprising a frame, a flashing strip associated with said frame, a set of opposed simultaneously operable slats arranged in said frame and pivotally connected therewith, said slats of said set being cut away at their sides to provide channels to carry off water, and oppositely disposed parts to overhang adjacent slats, and said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts.

5. A blind comprising a frame, a set of opposed simultaneously operable slats arranged therein and pivotally connected therewith, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts, said combined bearing and retaining rail provided with channels to carry off water.

6. A blind comprising a frame, a set of opposed simultaneously operable slats arranged therein and pivotally connected therewith, said slats of said set being cut away at their sides to provide channels to carry off water, and oppositely disposed parts to overhang adjacent slats, and said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts, said combined bearing and retaining rail provided with channels to carry off water.

7. A blind comprising a frame, a flashing strip associated with said frame, a set of opposed simultaneously operable slats arranged in said frame and pivotally connected therewith, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts, said combined bearing and retaining rail provided with channels to carry off water.

8. A blind comprising a frame, a flashing strip associated with said frame, a set of opposed simultaneously operable slats arranged in said frame and pivotally connected therewith, said intermediate slats of said set being cut away at their sides to provide channels to carry off water, and oppositely disposed parts to overhang adjacent slats, and said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts, said combined bearings and retaining rail provided with channels to carry off water.

9. A blind comprising a stationary frame, a set of opposed simultaneously operable rigid one piece slats arranged therein and pivotally connected therewith, said slats of said set being cut away at their sides to provide channels to carry off water, said slats being cut away transversely intermediate

their ends to provide shafts, and a rigid combined bearing and retaining rail for said shafts.

10. A blind comprising a frame, a set of opposed simultaneously operable slats arranged therein and pivotally connected therewith, said slats of said set being cut away at their sides to provide channels to carry off water, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts, said combined bearing and retaining rail provided with channels to carry off water.

11. A blind comprising a frame, a flashing strip associated with said frame, a set of opposed simultaneously operable slats arranged in said frame and pivotally connected therewith, said intermediate slats of said set being cut away at their sides to provide channels, to carry off water, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts.

12. A blind comprising a frame, a flashing strip associated with said frame, a set of opposed simultaneously operable slats arranged in said frame and pivotally connected therewith, said intermediate slats of said set being cut away at their sides to provide channels, to carry off water, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail for said shafts, said combined bearing and retaining rail provided with channels to carry off water.

13. A blind comprising a frame, a set of opposed simultaneously operable slats arranged therein and pivotally connected therewith, a flashing strip positioned over the upper pivoted ends of said slats, the bottom rail of said frame provided with channels to carry off water, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail associated with said shafts, said combined bearing and retaining rail provided with channels to carry off water.

14. A blind comprising a frame, a set of opposed simultaneously operable slats arranged therein and pivotally connected therewith, said slats of said set cut away at their sides to provide channels to carry off water, a flashing strip positioned over the upper pivoted ends of said slats, the bottom rail of said frame provided with channels to carry off water, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and retaining rail associated with said shafts, said combined bearing and retaining rail provided with channels to carry off water.

15. A blind comprising a frame, a set of opposed simultaneously operable slats arranged therein and pivotally connected there-

with, said slats of said set cut away at their sides to provide channels to carry off water, and oppositely disposed parts to overhang adjacent slats, a flashing strip positioned over the upper pivoted ends of said slats, the bottom rail of said frame provided with channels to carry off water, said slats being cut away transversely intermediate their ends to provide shafts, and a combined bearing and

retaining rail associated with said shafts, 10
said combined bearing and retaining rail provided with channels to carry off water.

In witness whereof, I have signed the present description and claims, at Habana on the seventh day of June, one thousand nine hundred and twenty-seven. 15

JULIAN STUART Y MOLINA.