

Sept. 1, 1925.

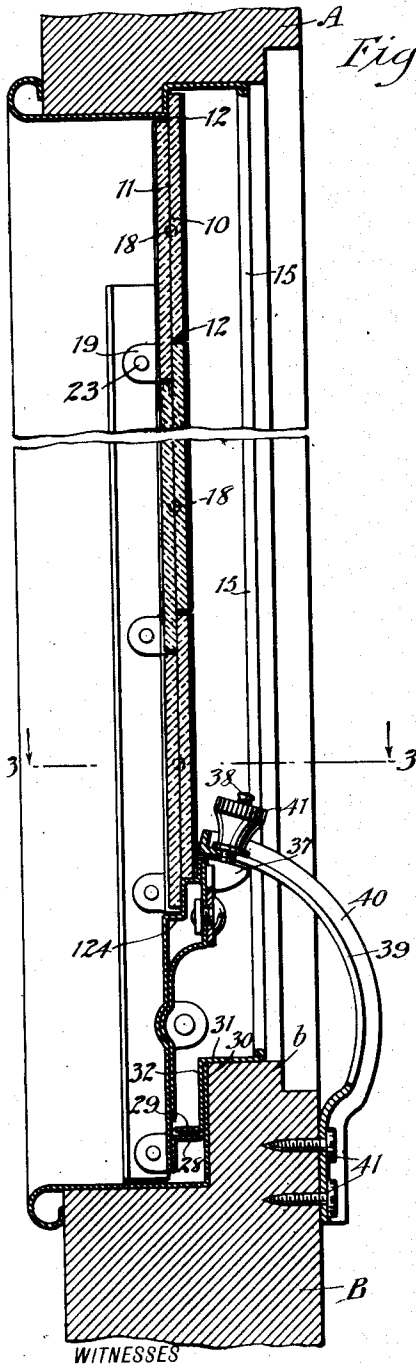
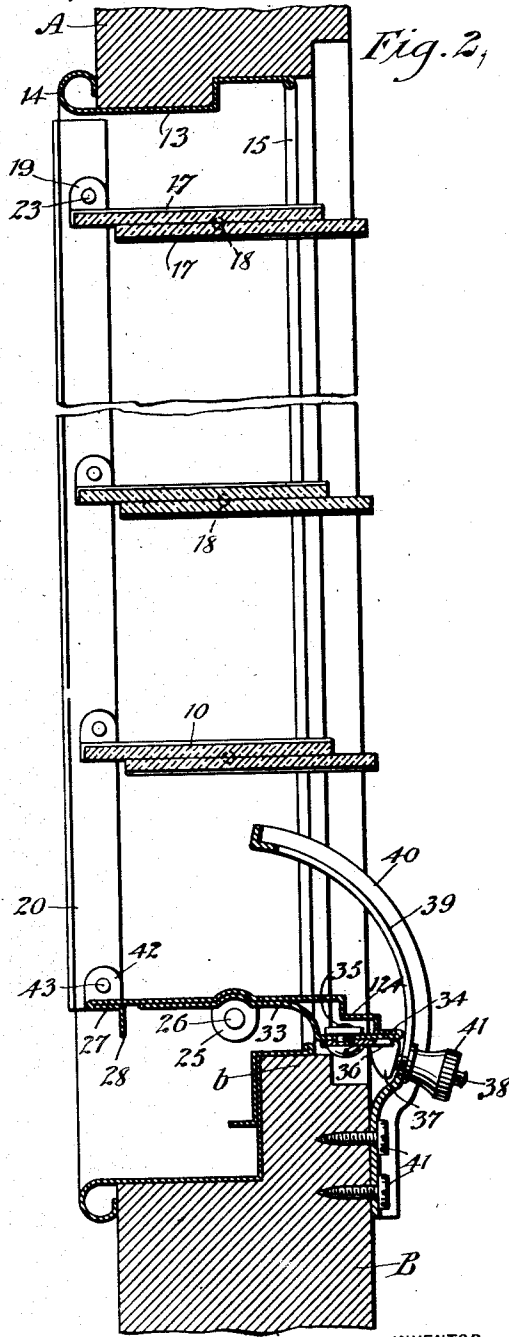
1,551,753

L. LANE

WINDOW SHUTTER AND SLATS THEREFOR

Filed Feb. 8, 1923

2 Sheets-Sheet 1



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Fig. 3,

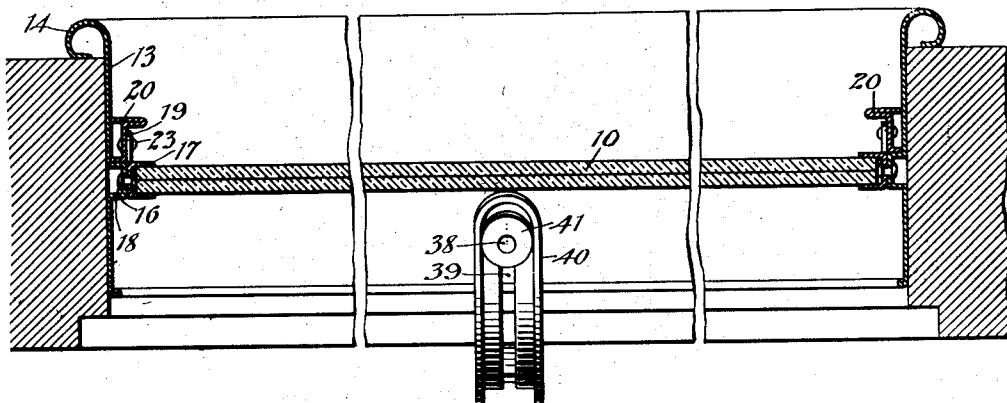
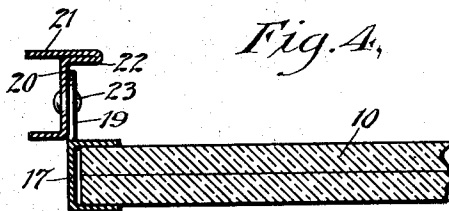


Fig. 4,



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UNITED STATES PATENT OFFICE.

LOUIS LANE, OF HABANA, CUBA.

WINDOW SHUTTER AND SLATS THEREFOR.

Application filed February 8, 1923. Serial No. 617,825.

To all whom it may concern:

Be it known that I, LOUIS LANE, a citizen of the United States, and a resident of Habana, Cuba, have invented a new and Improved Window Shutter and Slats Therefor, of which the following is a description.

My invention relates to a window shutter and more particularly to a shutter having transparent slats.

The general object of my invention is to provide a practical transparent slat having desirable strength and durability as well as to provide slats of the indicated character and of such form as to "weather" the joints between adjacent slats.

A further object is to provide an improved frame in which the slats are mounted and which may be applied to an ordinary wood window frame.

A further object is to provide novel actuating means for the slat opening and closing means.

The manner and means whereby the above and other objects are attained will clearly appear as the description proceeds.

Reference is to be had to the accompanying drawings forming a part of this specification, it being understood that the drawings are merely illustrative of practical examples of the invention.

Figure 1 is a transverse vertical section through a shutter and its appurtenances embodying my invention showing the same installed in a window frame, the view showing the slats closed;

Figure 2 is a view similar to Figure 1 but with the slats open;

Figure 3 is a horizontal section as indicated by the line 3—3, Figure 1;

Figure 4 is an enlarged detail in horizontal section on the same plane as Figure 3;

My improved slat 10 in its preferred form as shown in Figures 1 to 4 is made of glass, each slat being composed of two strips of glass having the opposed faces suitably cemented or otherwise joined as indicated by the numeral 11. The glass strips of each slat 10 are so laid upon each other that one strip lies at one edge offset or extending beyond the adjacent edge of the other strip of the slat to thereby produce rabbets 12

along the top and bottom edges of the slat. Thus, the rabbet of one slat will conform to the opposed rabbetted edge of an adjacent slat.

My improved installation constitutes what is known in the trade as a "Persiana" insertable in the frame A of an ordinary wood casement type of window. The assemblage includes a sheet metal frame 13 extending about the window to lie against the same at the jambs and at the head and sill. The frame 13 at the outside has a rolled or bead-shaped flange 14 which lies against the wood frame A at the outside and said metal frame 13 may advantageously have a bead 15 at the inner edge for strength. The jambs of the frame 13 are formed with hollow ribs or members 16 at the center, said ribs being pressed inwardly from the general planes of the jamb members of the frame 13. Each slat has a U-shaped sheet metal end housing 17 at each end. Said housing is laid against the adjacent jamb member 16 of the jamb and is pivoted by a rivet or eyelet as at 18. When the slats 10 are in closed position the housing 17 will lie flush with the inner and outer side surfaces of the jamb members 16 and in close contact with members 16 so that the jamb "reveal" on the outside is practically flush with the outer surface of the slat housing 17. Each housing 17 at each end of a slat has preferably an integral ear 19 within the plane of or flush with the end surface of said housing 17. The ear 19 serves to connect the housings 17 with vertical operating bars 20 at the outside of the window adjacent to the jambs. Operating bars 20 are of general channel form with the flanges parallel with the general plane of the window and directed laterally outward. The one flange 21 of each channel bar 20 is preferably formed by bending it to project on both sides of the web of the channel bar and returned on itself as at 22 to form a strengthening flange. The webs of the operating bars 20 are pivotally secured to the ears 19 by rivets 23 or equivalent pivot means. When the slats are in the closed position the operating bars 20 will lie close against the vertical jamb members 16 and with the flanges of said operating bars 20

disposed edgewise to the jamb portions of the frame 13, the arrangement serving to "weather" the joints between the slat ends and the members 16 of the frame 13.

It will be observed that the operating bars 20 being at the sides and close to the jambs offer no material obstruction to light.

The operating means for the glass slats 10 include a master slat 24 of sheet metal at the bottom of the shutter. Said slat 24 has ears 25 pivoted as at 26 to the jambs of the frame 13 to turn in unison with the slats 10. One longitudinal edge of the slat 24 is given a stepped form in cross section as at 124 to conform to the lower edge of the adjacent glass slat 10 and therefore to make a close joint with said glass slat. Similarly, the opposite edge of the slat 24 is returned on itself as at 27 and terminates in a longitudinal flange 28 at right angles to the general plane of said slat adapted to close under an outwardly directed flange 29 on the frame 13 at the sill. Said frame 13 presents a member 30 disposed vertically and lying against a vertical outer surface presented by the sill B of the wooden window frame. Said sill B has a raised portion *b* and the flange 29 is formed on the lower edge of a Z-shaped frame piece 31 one flange of which is laid on the raised member *b* and another depending member 32 lies on the outside of the vertical frame member 30, said member 32 terminating at its lower edge in the flange 29. At the terminal edge of the stepped portion 124, the sheet metal material of the slat 24 is returned on itself at the inner side of the slat, thereby forming an additional thickness 33 for the major portion of the surface of the slat. The return portion includes a flat member 34 to which is secured the base plate 36 which is secured by a bolt 35, the base plate 36 having a flange portion 37 on which is a screw stud 38 which projects through a slot 39 in a fixture 40 secured by screws 41 or the like to the sill 40 at the center. The fixture B is formed at its slotted portion with a curve corresponding with the throw of the shutter slats 10 and 24 and the screw stud 38 receives a nut 41. The nut 41 when loose may be held and moved to carry the screw along the slot 39 of fixture 40, thereby moving the slat 24. Said slat 24 has end ears 42 pivoted as at 43 to the operating bars 20. Thus, the slat 24 may be actuated to open the slats or to close them more or less, the nut when tightened serving to hold the shutters in adjusted position. The described construction makes for practicability in manufacture, promotes compactness of assemblage, and facilitates repairs.

I would state in conclusion that while the illustrated examples constitute practical embodiments of my invention, I do not limit

myself strictly to the exact details herein illustrated, since, manifestly, the same can be considerably varied without departure from the spirit of the invention as defined in the appended claims.

Having thus described my invention, I claim:

1. A shutter slat of transpicious material and formed of two flat strips, said strips united at their opposed faces and so arranged as to present rabbets along both the upper and lower edges of the slat.

2. A series of shutter slats each formed of two strips of transpicious material united at their opposed faces and having upper and lower offset edge portions to present rabbets along the upper and lower edges, the slats of the series being pivoted in their own planes at the medial horizontal lines thereof to engage each other at the rabbeted edges when the slats are closed.

3. A shutter comprising a frame, a series of transpicious slats, housing members on the slats at the ends, said housings pivoted in their own planes to said frame for the slats to assume open or closed positions, each slat being rabbeted along the upper and lower edges and the rabbeted edges of adjacent slats engaging one with another at the faces of the rabbets when the slats are closed to form a weather-tight shutter.

4. A shutter including a sheet metal frame adapted to be inserted in a wooden window frame, said metal frame having a rolled outer edge to lie against the outer face of the wooden window frame and having a beaded inner edge, the jamb members of said sheet metal frame having approximately central thereof members projecting laterally inward in the general plane of the window toward the vertical medial plane thereof, a series of shutter slats, and housings on the shutter slats at the ends, said housings being pivoted to said members of the jambs so that said housings lie within the plane of said jamb members when the slats are in the closed position.

5. In a window, a sheet metal frame adapted to be inserted in a wooden window frame forming jambs, said jambs having members projecting laterally inward toward the vertical medial plane of the window, beyond the general vertical planes of the jambs, a series of shutter slats, and housings on the shutter slats pivoted to said jamb members.

6. In a window, a sheet metal frame adapted to be inserted in a wooden window frame forming jambs, said jambs having members projecting laterally inward toward the vertical medial plane of the window, beyond the general vertical planes of the jambs, a series of shutter slats, and housings on the shutter slats pivoted to said

jamb members, said housings and said jamb members being substantially flush when the slats are in the closed position.

5 7. A shutter comprising a plurality of pivotally mounted slats, means connecting said slats, a threaded member on one of the slats, a flange carrying said threaded member, said flange secured to said last-

mentioned slat, an element having means to 10
fixedly secure it to a window adjacent to the
slat having said threaded member, said ele-
ment presenting a slot on a curved line, said
threaded member projecting through said
slot, and a nut on said threaded member.

LOUIS LANE.