J. HOLLAND.

CLOSURE FOR TRANSOMS, DOORS, WINDOWS, PANELS, &c.

APPLICATION FILED JUNE 14, 1913.

1,091,844. Patented Mar. 31, 1914.

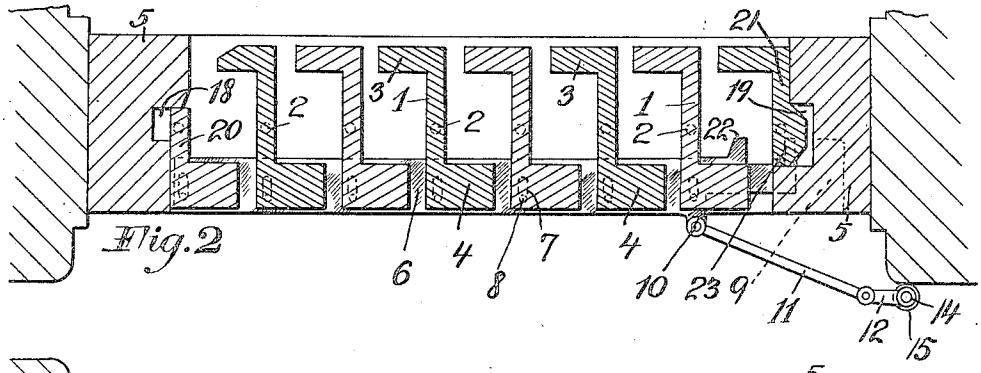


Fig. 2

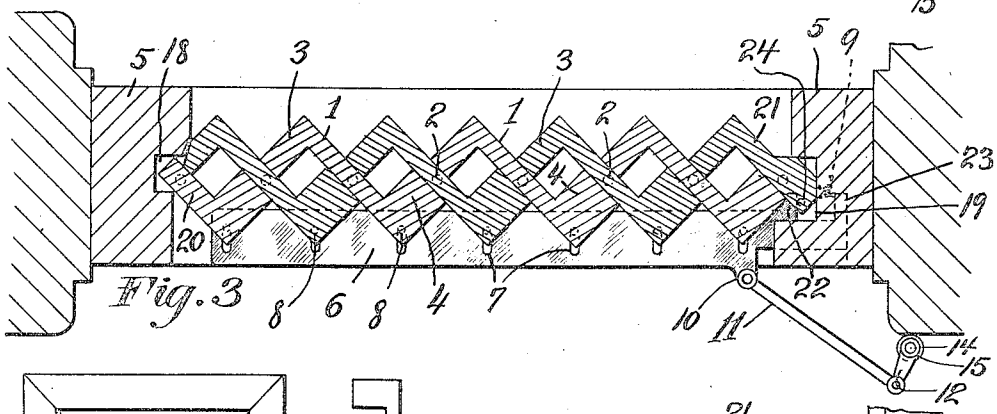


Fig. 3

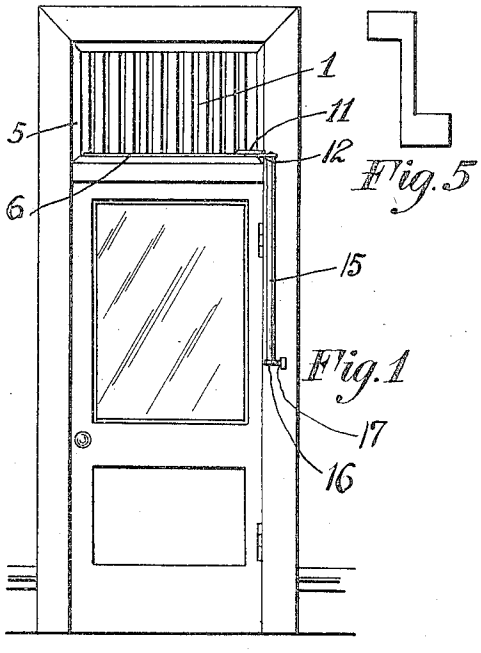


Fig. 1

Fig. 5

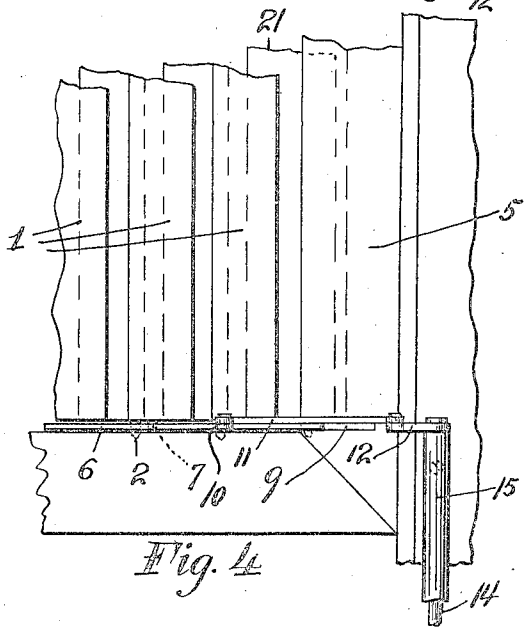


Fig. 4

Witnesses:
Margaret Davis
Chas. M. Wells

Inventor
Julian Holland,
By his Attorney H. G. Morsell

UNITED STATES PATENT OFFICE.

JULIAN HOLLAND, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO CHARLES MACDONALD WILLS, OF NEW YORK, N. Y.

CLOSURE FOR TRANSOMS, DOORS, WINDOWS, PANELS, &c.

1,091,844. Specification of Letters Patent. Patented Mar. 31, 1914.

Application filed June 14, 1913. Serial No. 773,589.

To all whom it may concern:

Be it known that I, JULIAN HOLLAND, a citizen of the United States of America, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Closures for Transoms, Doors, Windows, Panels, &c., of which the following is a specification.

My invention relates to closures for transoms, doorways, windows or panels, and it consists in a plurality of louvers, pivoted to turn on their axes and provided with extensions on each side of their pivots so proportioned and arranged that when swung in one direction they will actually and completely close the space within the frame and when swung in the other direction, they will leave passage ways between the respective members, but preferably without opening any direct line of vision through the frame.

Figure 1 represents a door and, above it, a transom window frame provided with a closure embodying my invention. Fig. 2 is a cross sectional view of the louvers of Fig. 1, and of their supporting frame, the extended door frame being also indicated. Fig. 3 is a similar view, but showing the louvers as they appear when closed. Fig. 4 is a view, on a larger scale of a broken portion of several louvers, the frame and the operating lever and rods. Fig. 5 is a plan view of a single louver of slightly modified form.

A transom closure should possess at least three features, though those with which I am acquainted lack at least one of the three. It should be capable of being opened so as to provide ventilation, of being closed to prevent the passage of air or other gases and it should be so contrived as to prevent any one on one side of it from looking through it, when open, so as to view what is on the other side. The last feature is wanting in previous devices with which I am acquainted. It is also desirable that they may be securely fastened against unauthorized operation and that the means for operating them and those for fastening them should be so placed as to be conveniently in reach and at the same time so inconspicuous as not to mar the artistic appearance of the trim.

In my device, 1 designates one of the louvers I prefer to employ. It may be a frame carrying a pane of glass or not as may be desired. It is pivoted, as at 2 to swing on an axis so as to assume different positions. They may be pivoted in any convenient way, but I usually employ a frame 5, carrying a plurality of them, linked together. At or near each side and usually at the limits of the sides I so form them as to present extensions 3 and 4, one extending in one direction and the other in another direction, each, preferably, at right angles to a central line through the greater cross sectional length of the louver, thus presenting a substantially ogee figure in cross section, though when I say ogee, I do not necessarily mean a figure with right angled extensions. Obtuse, spherical or acute angled extensions might be used. I do not limit myself to making one extension wider than the other, as shown in Figs. 2 and 3, but that is the preferable form. The effect of these extensions is manifest. When the louvers are swung open, the ends of one naturally separate from the respectively adjacent louvers and currents of air may enter or pass out through the passages thus left between them, but the projections will still remain so close to the adjacent louvers that no one straight line can be drawn through any one passage, consequently no one can see through those passages from one side of the transom window, door or panel, as the case may be, to the other, though the passages furnish ample means for ventilation. Then too, since there is no one straight line through them, the air passing through is not only divided by reason of the plurality of the passages, but is also deflected, in its course, by these projections and does not create the objectionable drafts that direct passages often permit. Of course the louvers, if unconfined, might be swung so far on their pivots as to present straight passages between, but this is prevented by stops which are preferably so arranged as to prevent their swinging farther than a position at right angles to the plane of the main frame. When the louvers are reversely swung, one makes contact with the next and the end ones with the sides of the frame, as shown in Figs. 2 and 3, thus gradually decreasing and finally cutting off all opening for the passage of air. These louvers may be operated independently and by hand, but I prefer to connect them and

to provide a lever by means of which all may be operated at once and from a convenient point. As the first step in that direction, I link them all together. This may be done by means of a movable bar or plate, such as that shown at 6, Figs. 2 and 3, arranged to reciprocate in straight lines and provided with slots 7, into which pins 8, project from the louvers 1, but plain links or cords or any other form of yielding connection would answer the purpose. If the connections are made at one side of the louver pivots and suitable provision for play is made, a synchronous and similar movement is readily secured.

In the present instance, I recess the frame as at 9 and construct the bar of such a length that it will play in this recess 9, thereby insuring even reciprocation. Then I pivot a rod or pitman 11, in an eye 10, on the bar 6, and also in the end of a crank arm 12, which is mounted on the upper end of the operating rod 14. This rod 14 is supported in a tube or sleeve 15, secured to the trim of the door. It projects through the lower end of tube 15, and is there provided with a hand piece 16, notched to engage a click 17. Any convenient form of lock may be readily substituted for the click 17. To more completely carry out the ideas advanced, I have extended the ends of the supporting frame 5, farther on one side than the other and have recessed each side at 18 and 19, so that short louvers 20, 21, might lie behind the extensions and project into the recesses and render the closure absolute.

To operate the louver 21, I prefer to construct stops 22, 23, on the bar 6, and locate a pin 24, in said louver at such point that it will be engaged by stop 22 when the bar 6 is operated to close the louvers and by 23, when bar 6, is oppositely moved. These stops answer the same purpose as the slots 7.

If preferred I may use a louver with its extensions of equal dimensions, such as that shown in Fig. 5.

The operation of the device is manifest. Release the click or lock 17, turn the hand piece 16, in a clockwise direction, and the crank 12 will swing in a similar direction, from the position shown in Fig. 2 to that shown in Fig. 3, thus drawing pitman 11 and the connected bar 6 to the right. That movement brought the walls of slots 7 against pins 8 and then forced the connected ends 4, of the louvers to the right, necessarily swinging the ends 3 to the left until all made close contact as shown in Fig. 3, the end ones simultaneously turning in and closing the recesses 18 and 19, to further which I have beveled the corners of the adjacent extensions. During this movement the stop 22, and pin 24, as already described, performed a function similar to that of the wall of slot 7 and the pin 8 in operating their appropriate louver. Having closed the louvers, the click or lock 17, holds them securely against any unauthorized operation from without and it may be here noted that my arrangement of the louvers in question would bend itself most readily to operation by means of a rod located in the door frame and thus wholly out of sight, as this might be accomplished by merely shifting rod 14, sleeve 15 and crank 12, within the frame and leading pitman 11 to a connection at the end of bar 6. It will also be noticed that when closed, the louvers provide an air space between one and the next. This aids materially in preventing the transmission of sound from one side to the other of the device. Again, release the click 17 and reverse the movement of hand piece 16 and the louvers will be brought back to the positions shown in Fig. 2, when air may readily pass, but light is shut off from passing between one member and the next, unless the extensions are translucent. I can thus arrange to secure ventilation without permitting the entrance of any direct rays of light, if I so choose.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a closure of the class mentioned, the combination of a plurality of pivoted louvers provided with extensions on opposite sides and ends, set at an angle to the body of the louver, the united length of adjacent extensions on adjacent louvers, being greater than the distance between their pivots less the thickness of the main body of the louver.

2. In a closure of the class mentioned, the combination of a plurality of pivoted louvers provided with extensions on opposite sides and ends, at an angle to the body of the louver, the united length of adjacent extensions on adjacent louvers being greater than the distance between their pivots less the thickness of the main body of the louver, and the width of one of the extensions being proportioned to their distance from the pivot.

3. In a closure of the class mentioned, the combination of a plurality of pivoted ogee louvers with a frame provided with a recess registering with the end louver.

4. In a closure of the class mentioned, the combination of a plurality of louvers provided with extensions on opposite sides and a frame whose innermost lines toward the louvers, extend to a line beyond the line intended to be occupied by the extreme edges of the louvers when fully opened.

5. In a closure of the class mentioned, the combination of a plurality of louvers, provided with extensions on opposite sides, and a frame with projections located adjacent to opposite ends of the series of louvers, which projections extend toward the louvers and to lines beyond the lines intended to be oc-

cupied by the extreme edges of the end louvers when fully opened.

6. In a closure of the class mentioned, the combination of a plurality of louvers, provided with extensions on opposite sides, and a frame with projections located adjacent to opposite ends of the series of louvers and on opposite sides of a line through their pivots, which projections extend toward the louvers and to lines beyond the lines intended to be occupied by the extreme edges of the end louvers when fully opened.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 11th day of June, 1913.

JULIAN HOLLAND.

Witnesses:
CHAS. M. WILLS,
A. G. N. VERMILYA.