

B. ROE.
 DISAPPEARING WINDOW BLIND.
 APPLICATION FILED OCT. 30, 1916.

1,279,590.

Patented Sept. 24, 1918.

Fig. 1.

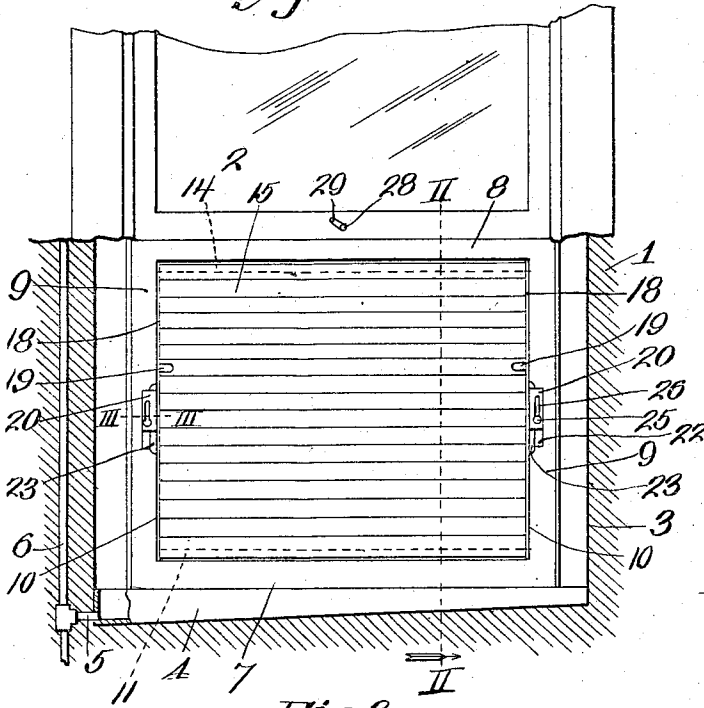


Fig. 2.

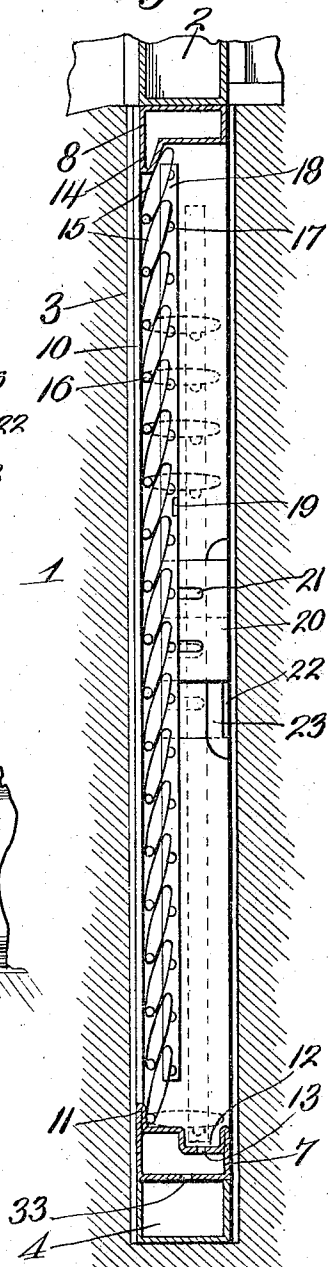


Fig. 3.

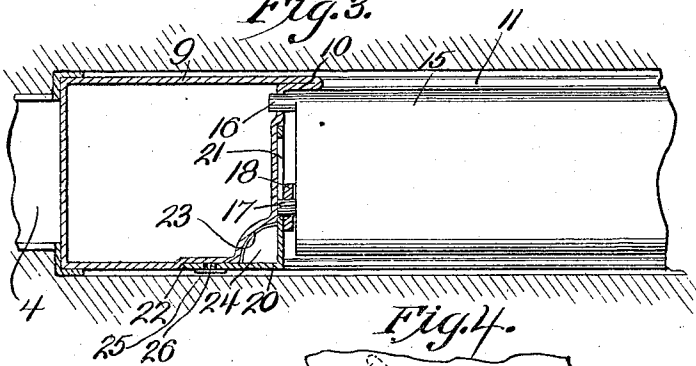
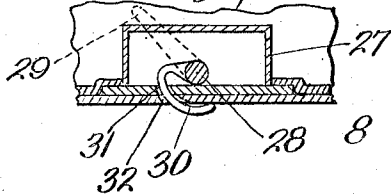


Fig. 4.



WITNESS

M. B. Shea

Inventor
 BY *Bradley Frie*

George H. Thompson
 ATTORNEY.

UNITED STATES PATENT OFFICE.

BRADLEY ROE, OF KANSAS CITY, MISSOURI.

DISAPPEARING WINDOW-BLIND.

1,279,590.

Specification of Letters Patent. Patented Sept. 24, 1918.

Application filed October 30, 1916. Serial No. 128,640.

To all whom it may concern:

Be it known that I, BRADLEY ROE, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Disappearing Window-Blinds, of which the following is a specification.

This invention relates to window blinds, and has for its object to produce a blind which is normally hidden from view, but which, when the lower sash of the window is raised, can be caused to fill in or occupy the space vacated by such sash. A further object is to produce a blind of the type mentioned provided with hinged slats susceptible of being adjusted to provide for the desired ventilation and light.

Another object is to provide a blind which will prevent rain or snow from entering a room protected by said blinds, and means cooperating with said blind for draining from the building any water which obtains access to the lower sash rail of the blind.

With these general objects in view, the invention consists in certain novel and peculiar features of construction and combinations of parts as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawing, in which,

Figure 1, is an inner face view of a room wall equipped with a blind embodying my invention, the wall being broken away to show the blind in the pocket in said wall.

Fig. 2, is an enlarged vertical section taken on the line II—II of Fig. 1.

Fig. 3, is an enlarged horizontal section taken on the line III—III of Fig. 1, but showing the slats open.

Fig. 4, is a fragmentary vertical section of the lower rail of the inner window sash and the upper rail of the blind sash, to show a lock carried by the window sash and engaging the blind sash to effect lifting and lowering movement of the latter by the former.

Referring to the said drawings in detail, 1 indicates the wall of a building and 2 a window therein, the wall containing a pocket 3, preferably slightly exceeding the depth of the lower sash of the window and at the bottom of said pocket is a drain box 4 having

its bottom sloping toward one end and provided with a drain tube 5 communicating with the drain pipe 6, which pipe may serve as a drain pipe for windows of different floors, if it be desired to equip the windows of the upper floors with blinds of this character.

Corresponding in form, size and contour to the lower sash of the window and directly underlying the same so as to be capable of occupying the pocket 3 or of filling the space normally occupied by the said lower sash when lowered, is a blind embodying the invention. For a bungalow or the first floor of a building, it is preferred that the blind shall be of sheet steel or analogous metal, as for such windows it will serve as a protection against the entrance of unauthorized persons, in the event the lower sash is raised for ventilation by day or night. This blind comprises a rectangular frame consisting of a bottom rail 7, a top rail 8 and two side rails 9 connecting the top and bottom rails, the side rails being provided at the inner edges of their outer faces with flanges 10. The bottom rail is preferably provided at its outer face with an upwardly projecting flange 11, and the upper wall of said bottom rail is depressed to form a longitudinal channel 12 provided with one or more drain holes 13.

The upper rail is provided at its outer edge with a depending rib 14 to overlap the upper end of the topmost of a series of slats 15, when the slats are in closed position, the said slats when in closed position occupying a downwardly and outwardly inclined position, with the lower portion of each overlapping the upper portion of the adjacent slat at the outer side thereof, it being noted that the ends of the slats while spaced slightly from the inner walls of the side rails 9, are substantially overlapped by the flanges 10, so that water or snow cannot readily enter the space between the side walls and the ends of said slats.

The lower ends of the slats are formed with outwardly projecting pivot pins or trunnions 16 which extend through the inner walls of the side rails of the sash and are adapted to operate pivotally therein, and formed at or near the upper ends of the slats and preferably offset therefrom, as

shown, are pivot pins 17, which pins extend pivotally through vertical links 18, arranged between the side walls of the sash and the ends of the slats.

5 When the slats are in their closed or overlapping positions, the links 18 occupy the position shown in full lines, Fig. 2, and when the slats are fully opened as indicated by some of them in dotted lines in said
10 figure, the links occupy the position shown by dotted lines in the same figure, it being understood in this connection that when the links occupy the last-named position, their lower extremities enter the channel 12
15 in the base rail of the sash, as without the provision of said channel or its equivalent, the lower ends of said links would come in contact with the lower rail of the sash and prevent the slats being opened to a horizontal position. For convenience in opening
20 and closing the slats, the links 18 will preferably be provided at their inner edges with lugs 19, which can be conveniently grasped for their manipulation, especially when it is
25 desired to swing the slats to open position, as at such time the slats themselves do not provide a convenient gripping surface.

In lieu of the gripping lugs 19, short angle plates 20 may be slidingly secured for
30 vertical movement around the inner corners of the side rails of the sash, their inner arms fitting flatly between the inner walls of the side rails and the links 18, and provided with slots 21 receiving the ends of a
35 pair of pivot pins 17 of the slats, so that when said angle plates are slid upward on the sash they will impart closing movement to the slats, the said pins 17 as they swing
40 upward and outward, traveling toward the outer ends of the slots 21.

In order that the plates 20 shall not project beyond the inner face of the sash, the latter will preferably be provided with recesses 22 accommodating the plates, and in
45 order that the latter may be conveniently moved upward and downward, the inner corners of the side rails of the sash for a distance slightly exceeding the length of the angle plates plus their adjustment, are
50 formed with channels 23, and the angle plates are provided at their corners with inwardly projecting lugs 24, so that the operator in gripping the plates to adjust them and hence open or close the slats, will
55 not encounter any sharp or narrow edges tending to hurt or injure his fingers. Said plates will be secured in position with sufficient friction to hold the slats in fully opened position or in any intermediate position between their fully opened or closed
60 position, by means of guide screws 25 extending into the side rails through slots 26 in said angle plates.

The upper surface of the top rail of the

blind, when occupying the pocket, will preferably constitute a part of the bottom of the window frame and therefore abut against the lower rail of the inner sash of the window when the said sash is lowered.

To raise the blind, the lower rail of the
70 window sash will be provided with a catch for engagement with the upper rail of the blind, any suitable catch may be employed, that shown comprising a casing 27 set in the lower face of the sash of the window and
75 provided with a cross shaft 28 extending beyond the inner face of said sash and provided at its inner end with an operating handle 29, and within the casing with a substantially semi-circular crank arm 30; said
80 crank arm when the handle is turned being projected through an opening 31 in the bottom of the casing and into an opening 32 in the upper rail of the blind, as shown in
85 Fig. 4.

When the parts are thus arranged the raising of the window sash will also raise the blind, the catch being unlocked when it is desired to operate the window sash without raising the blind. The blind will
90 preferably be equipped with counterbalance weights, not shown, of the type commonly used in window sashes, said weights being omitted as being of obvious application.

In the event water collects or runs down
95 upon the lower rail of the blind when the slats are closed or partly closed, it will enter the channel 12 and escape therefrom through the perforation 13, and then pass through similar perforation 33 in the lower
100 wall of said rail, into the drain box 4 and pass thence through tube 5 and pipe 6. It will be apparent that a blind of this character will enable the occupant of a room to properly ventilate such room at night and
105 yet guard against unauthorized entrance more effectually than the sash of the window. In the day time, the slats can be adjusted to provide the necessary ventilation and security as well as insure greater privacy, particularly if the window is on the
110 first floor.

From the above description it will be apparent that I have produced a window blind possessing the features of advantage
115 enumerated as desirable in the statement of the object of the invention, and I wish it to be understood that while I have illustrated and described what now appears to be the preferred form of the invention, I reserve
120 the right to make all changes falling within the spirit and scope of the appended claim.

I claim:—

In a disappearing window blind structure, a frame fitting in a pocket in a wall, the sides of the frame having vertical channels in their inner corners, a series of hori-
125

zontal slats extending across the frame from one side thereof to the other and pivoted at their ends to said sides, said slats having a vertical series of horizontal end pins, links
5 pivotally connecting the said end pins, and right-angle corner plates fitting slidingly on the sides over said channels in the latter, and having vertical play connection with said

sides and horizontal play connection with said series of slats. 10

In testimony whereof, I affix my signature, in the presence of two witnesses.

BRADLEY ROE.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."