

April 27, 1926.

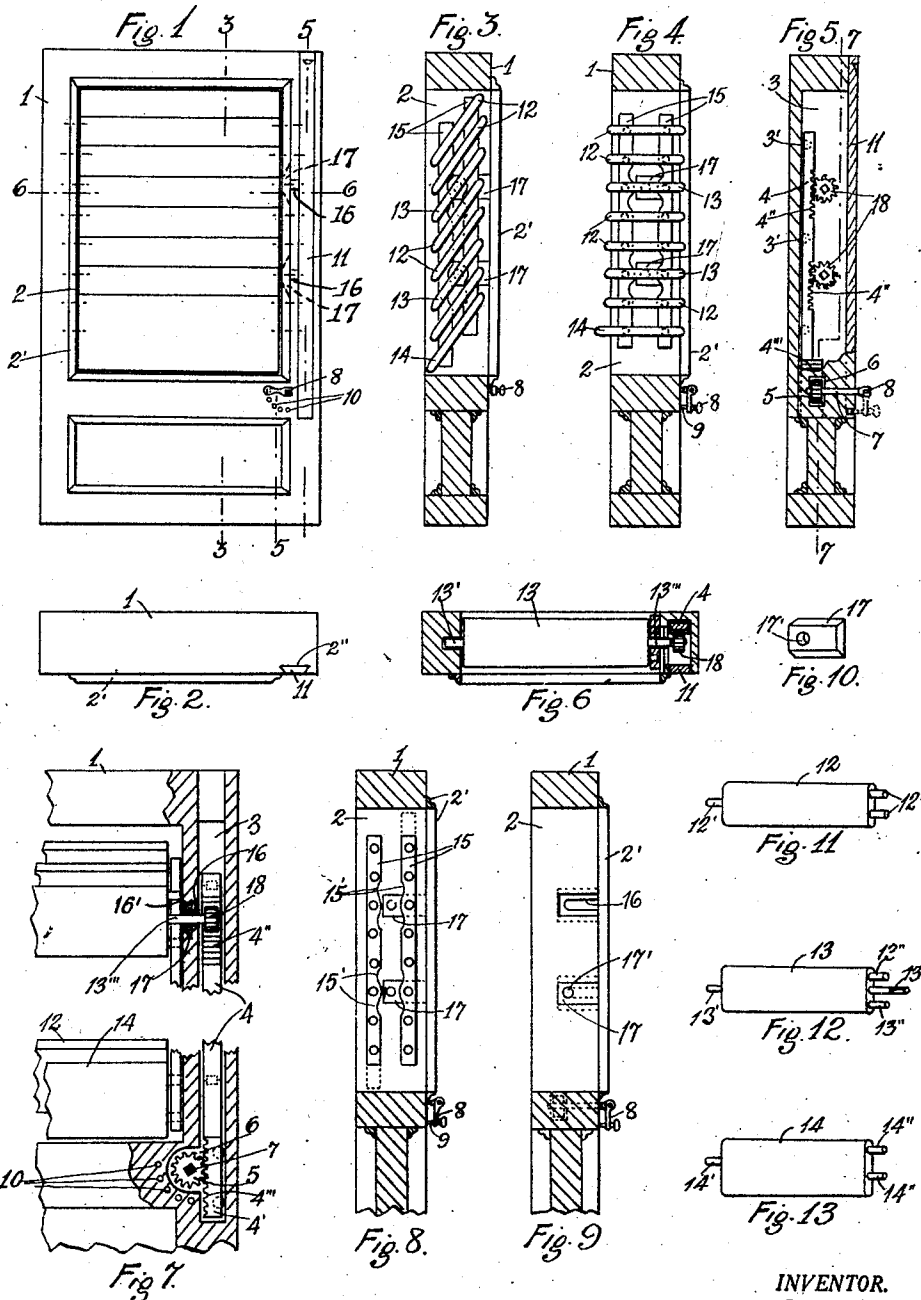
M. Q. CORNIDE

1,582,129

WINDOW BLIND

Filed Feb. 3, 1923

2 Sheets-Sheet 1



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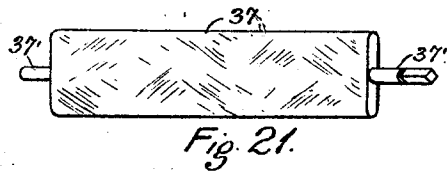
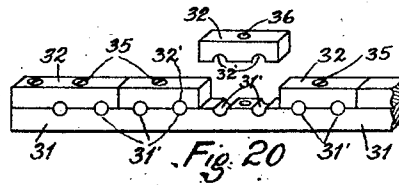
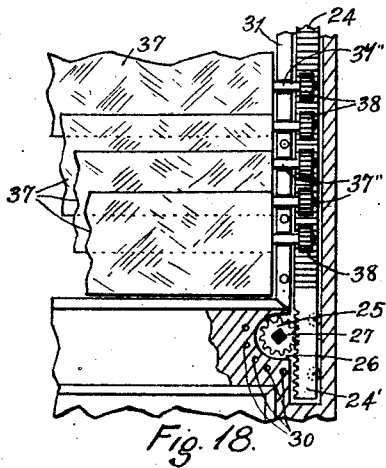
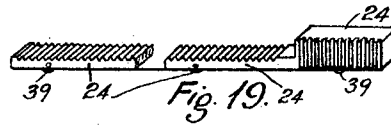
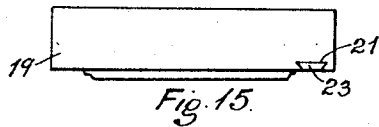
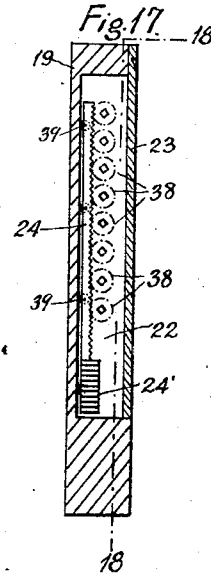
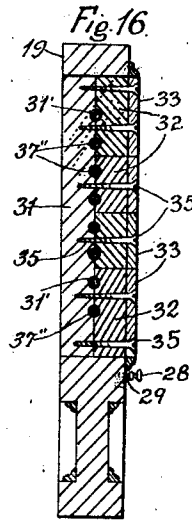
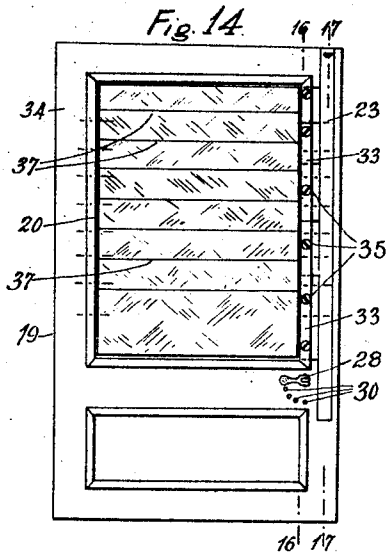
M. Q. CORNIDE

1,582,129

WINDOW BLIND

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

MANUEL QUESADA CORNIDE, OF HABANA, CUBA.

WINDOW BLIND.

Application filed February 3, 1923. Serial No. 616,776.

To all whom it may concern:

Be it known that I, MANUEL QUESADA CORNIDE, citizen of the Republic of Cuba, residing at Habana, Habana No. 7, Cuba, have invented a new and useful Improvement in Window Blinds; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention relates to window-blinds and its principal object is to provide a window-blind the construction of which permits of making its slats of glass, or a transparent material similar to glass, or a translucent material.

One object of the invention is to provide a window-blind whose slats, being made of glass or other transparent material, do not have the defects of wooden slats, which due to continual exposure to weather, rot rapidly, require frequent painting and repairs, and are easily forced out or broken.

Another object of the invention is to provide a new construction of window-blind, including a new device by means of which the window-blind slats need not be touched directly with the hand to open it, shut it, or maintain it partly closed, and, at the same time, holds the slats in open, closed, or partly closed position, as desired.

A further object of this invention is to provide a construction of window-blind having a mechanism to control and fix the position of the slats, and eliminating, at the same time, the swing-bar used in the usual window-blind and furthermore to make repairs easy, by permitting separate removal of one or more of the slats without necessitating removing the entire window-blind and thus necessitating mounting it again. This saves labor and time and decreases upkeep very materially.

Another object of the invention is to provide a window-blind the slats of which, being made of glass or transparent material, do not necessitate the use of the lateral openings being covered with glass, proportions a broad window-blind on said openings being eliminated, and furthermore allows suppression of the glass windows used for permitting light to enter the interior of rooms, and lastly permits of artistic drawings and engravings on the glass slats, giving them a

pleasing appearance very desirable in luxurious settings.

Further advantages and other pertinent considerations to the invention, will be deduced in the course of the description following, and particularly to those skilled in the art to which this invention appertains, and taken in connection with the figures of the accompanying drawings, in which like characters of reference designate like parts, and wherein,—

Fig. 1 is an elevation of the inner side of a door and its blind, constructed in accordance with this invention.

Fig. 2 is a top plan view of the same.

Fig. 3 is a transverse vertical section on line 3—3 of Fig. 1 showing the slats closed.

Fig. 4 is a transverse vertical section on line 3—3 of Fig. 1, but showing the slats in open position.

Fig. 5 is a transverse vertical section on line 5—5 of Fig. 1.

Fig. 6 is a horizontal section on line 6—6 of Fig. 1.

Fig. 7 is a partial vertical section in detail, on line 7—7 of Fig. 5.

Fig. 8 is a partial vertical section in detail, on line 5—5 of Fig. 1, showing the slats removed.

Fig. 9 is a section similar to Fig. 8, but with the edge of the door visible, and not provided with the swing-bar and slats.

Fig. 10 is a perspective view, in detail, of an element for fixing and connecting certain slats of the blind.

Fig. 11 and Figs. 12 and 13 are perspective views of different forms of slats used in connection with this invention.

Fig. 14 is an elevation of the interior part of a construction of blind, which constitutes a modified form.

Fig. 15 is a top view of Fig. 14.

Fig. 16 is a transverse vertical section on line 16—16 of Fig. 14.

Fig. 17 is a transverse vertical section on line 17—17 of Fig. 14.

Fig. 18 is a partial vertical section, in detail, on line 18—18 of Fig. 17.

Fig. 19 is a perspective view, in detail, of an element that forms part of the mechanism used in this form of invention to open and close the slats of the blind.

Fig. 20 is a perspective view of a constructive detail of this type of blind, and

Fig. 21 is a perspective view, in detail, of blind slats used in the modified form of the invention.

In Figs. 1 to 13 inclusive, is represented a door 1 with an aperture 2 provided with a removable frame 2', and closed with a blind constructed in accordance with this invention.

On one of the sides of the opening 2 of the door 1, and at its interior, is a vertical groove 2'' running from the top edge of the door to beyond the lower part of opening 2, the edges of this groove being undercut, in horizontal section, so as to adjustably receive the correspondingly shaped edges of a lath 11 which entirely fills the groove 2''. This groove gives access to an opening 3 which has bores therein and runs from above, to below, the opening 2. In the opening 3 is lodged a bar 4 of rectangular horizontal section, terminating at the bottom in a widened part 4', having two toothed portions 4'' on its inner face, and having a like toothed portion on the inner face 4''' of its end 4'. This last part meshes with a gear 5 mounted to revolve in a recess 6 at the lower end of the opening 2, which gear is fixed to a short horizontal axle 7 which projects outwardly beyond the inner face of the door 1, and has fixed at its free end, a handle 8, provided with a stop pin 9, to engage in any one of a series of holes 10, positioned around it in the inner face of the door.

The blind includes, slats 12, in the form illustrated in Fig. 11, and provided at one end at its center, with a trunnion 12', and at the opposite end with two trunnions 12'' spaced from each other; slats 13, known as connection slats, illustrated in Fig. 12, each provided at one end with an axial trunnion 13', and at its opposite end with two trunnions 13'' having between them a long trunnion 13''' in alignment with the opposite trunnion 13', the projecting part of this trunnion being of square section, and finally, a slat 14 illustrated in Fig. 13, destined to be the lower of the plurality of slats that forms the blind and provided at one end with a trunnion 14', and at its opposite end with spaced trunnions 14'', this slat being wider than the other slats of the window-blind, for a purpose which will be later explained.

The trunnions 12', 13' and 14' at one end of the slats 12, 13 and 14, are seated to revolve in corresponding bores at the side of the opening 2 opposite to that which has the opening 3, and the trunnions 12'', 13'' and 13''' are mounted in bores in two bars 15 which form the swing bar of this blind, said bars presenting, on their interior sides cut out portions 15', on each side of the connection slats 13, for an object to be later explained.

In order to permit the mounting of the connection slats 13, on the interior sides of opening 3, are horizontal slots 16 which extend from the middle part of the said side, to the upper edge of the same. The central trunnion 13''' of a slat 13, is passed through a hole 17 in a block 17, having the form of a prism of trapezoidal base, and this block is then adjusted in a recess 16' of horizontal undercut section, on the face of the inner side of the opening 3 and over a slot 16. Then the trunnions 13'' of the slats 13, are inserted in the corresponding bores of the swing bars 15 and the extending portions of the square section of the trunnions 13''' project into the opening 3, being fixed to gears 18 which mesh with the teeth 4'' of the bar 4, the movement of which bar is facilitated by small, loose rollers, 3', in contact with the inner walls of the recess 3. Upon insertion or removal of the slats the frame member 2', along the right hand side of opening 2, must be removed.

It is evident that with this construction, the movement of the blind slats is perfectly regulated by operating the handle 8. Assuming the blind to be closed, as illustrated in Fig. 1, and the handle 8 in the position shown therein, on moving the handle the gear 5 meshes with the toothed face 4'', of the bar 4, causing the bar to move upward inside the recess 3, and to revolve the gears 18, fixed to the trunnion 13'', of slats 13. The rollers 3', with which the bar 4 is provided, makes the movement smooth. Rocking the slats 13 causes movement of the swing bars 15, which separate from each other and carry the slats 12 and slat 14, toward a horizontal position. The slat 14, fixed in the lowest position has an overreaching portion, extending outward to serve as a rain guard for any water that washes down from the top to the bottom slat.

It is evident that when the pin 9 of the handle 8, is placed in any of the bores 10, the slats of the blind remain fixed in, open, closed, or partly closed, position, making it impossible to change the position of the slats from the outside.

It should also be observed that the cut out parts 15', with which the swing bars are provided, in case the blind is closed, serve to receive the trunnions 13''' of the slats 13, to prevent obstructing the closing movement of the slats.

Figures 14 to 21 inclusive, illustrate a form of blind included in my invention and includes essential details of the same from which I eliminate the swing bar thus obtaining, by this simplification, among other advantages, prevention of cutting the pins or trunnion of the connection slats, and removing the swing bars together with all the slats and thus giving access to the interior of the room.

I furthermore provide, in this case, a special construction which permits the extraction of each blind slat separately, when it is desired to replace one or more of them, without it being necessary to unmount and remount the whole blind.

In Fig. 14, 19 is a door provided with an opening 20 covered with a blind to be described. On one side of the opening 20, on the inner face of the door 19, is a vertical groove 21 running from the top edge of the door to beyond the lower part of the opening 20, which gives access to an opening 22 opening laterally the entire length of 20, and adjustable the length of the groove 21 is a lath 23 having bevelled edges.

In the opening 22 is vertically positioned a bar 24, terminating at its lower end in a portion 24' toothed on its interior face, and also toothed on the entire length of the bar back face.

With the toothed face of the bar 24, meshes a gear 25, lodged in a cavity 26 at the lower part of the opening 20, said gear being fixed to a short horizontal axle 27, which projects outwardly from the inner face of the door 19, and is fixed at its free end to a small handle 28, provided with a stop pin 29, destined to engage in one of a series of openings 30, placed around it, on the inner face of the door 19.

The inner side of the opening includes a lath 31, placed against the outer face of the door 19, and provided throughout its full length with half borings 31' running the width of the lath. Interiorly above the same is placed a sectional lath formed of pieces of wood 32 provided on their inner faces with half borings 32', matching with the bearing 31' to form holes therewith. On these parts, are fixed section frames 33 which comprise a narrow lath constituting a side of the molding frame for the opening 20, on the inner face of the door 19. As illustrated in Fig. 16 these parts are united by means of screws 35 passing through holes 36 in the sections of lath 32 and into the lath 31.

The blind, in this case, is formed of slats 37, as illustrated in Fig. 21, provided at either end with a trunnion 37' and 37'' in axial alignment, the trunnion 37'' being longer than the trunnion 37' and terminating in a prolongation of squared section.

The trunnions 37' are rotatably mounted in corresponding bores opening at the side of opening 20 opposite to that wherein is installed the described operating device, and the trunnions 37'' are placed in the bores formed by 31' and 32' and extend within the opening 22 to be fixed to gear 38, that mesh with the toothed face of the bar 24, which bar is provided with loose rollers 39, in contact with the inner walls of the opening 22, to facilitate action therein.

It will be observed that the last slat of the

blind projects further outward in its width, to serve, as in the former case, as a water guard in case of rain.

In order to operate this blind one simply operates the handle 28 which, through gear 25, raises bar 24, whereby to rock gears 38, and the attached slats 37, to move the slats to the desired position.

As may be understood, by this construction, the slats can be removed, when desired, independently of each other, by uncovering the opening 22, by removing the lath 23 that closes the same by running it along the groove 21. Then the screws 35 are removed which fix between them the sections of lath 33, and the blocks that correspond to the slats desired to be removed, and the slats are easily removed.

This construction of blind is especially adapted to the employment of glass or other transparent material, for its slats, and it should be noted that this novelty is an essential part of the invention. The advantages to be gained are many, such as augmenting the artistic value of a room, since the slats, being made of glass, can be painted by any desired process, with drawings of more or less artistic value.

Furthermore, the use of the glass, as said before, makes glass windows unnecessary, to allow the light to enter the rooms, and therefore the window blinds can be made wider. Thus the cost of the glass slats, which is by no means excessive, is fully balanced by the economy due to the suppression of the glass windows, and other glass covered openings.

It is evident that within the construction previously explained, many changes can be made without departing from the spirit of the invention.

I now claim:

1. A blind for closing an opening, comprising, a plurality of slats, a vertical recess adjacent the opening, a bar in the recess, friction rollers on the bar, a toothed edge on the bar, a toothed lower end on the bar, a shaft at the lower end of the recess, a gear on the shaft in mesh with the toothed lower end of the bar, a handle on the shaft, stop means on the handle, a trunnion on one end of each slat mounted rotatably at one side of the opening, a squared trunnion on the other end of each slat, a lath at one edge of the recess, semicircular grooves in the lath, a corresponding separate sectional lath with matching semicircular grooves positioned on the lath, the squared trunnions being rotatably mounted between the lath and the sectional lath whereby slats can be separately removed without disturbing the remaining slats, and gears on the squared trunnions in mesh with the toothed edge of the bar.

2. A blind for closing an opening, com-

prising, a plurality of slats, a vertical recess adjacent the opening, a slat operating means in the recess, a trunnion on one end of each slat mounted rotatably at one side of the opening, a squared trunnion on the other end of each slat, a lath at one edge of the recess, semicircular grooves in the lath, a corresponding separate sectional lath with matching semicircular grooves positioned on the lath, the squared trunnions being rotatably mounted between the lath and the sectional lath whereby slats can be separately removed without distributing the remaining slats, and gears on the squared trunnions in mesh with the slat operating means.

In testimony whereof, I have signed my name to this specification.

MANUEL QUESADA CORNIDE.