

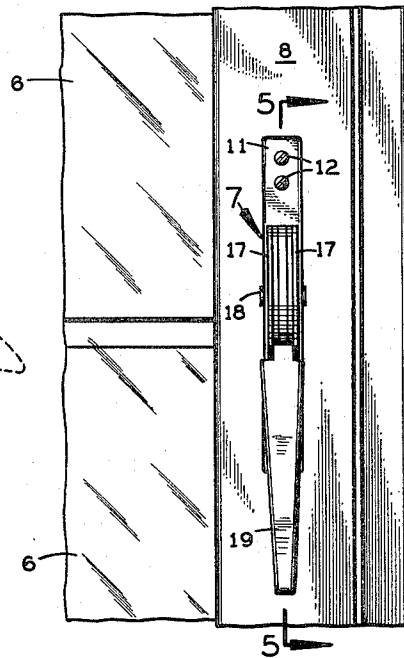
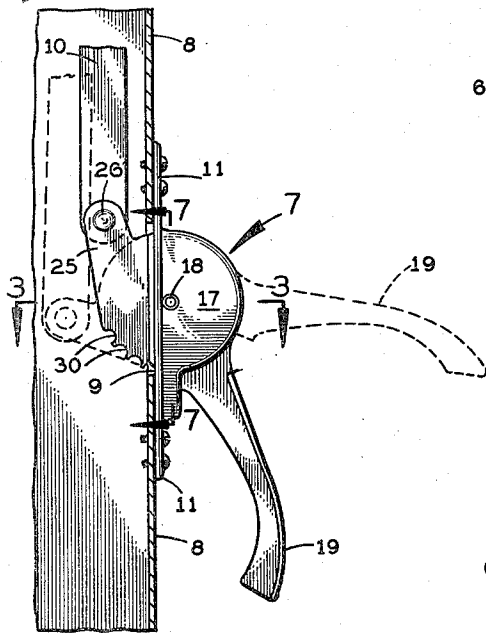
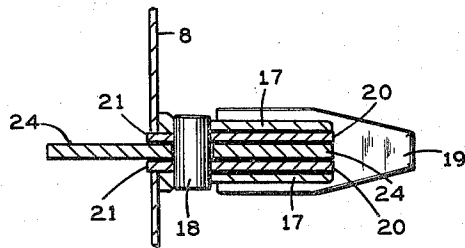
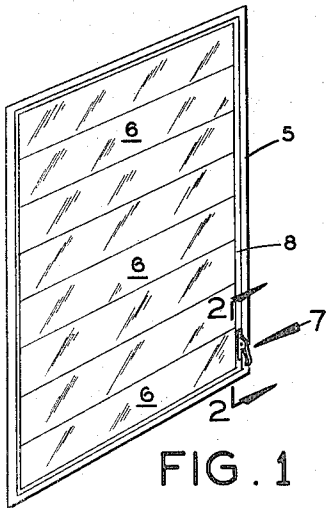
June 15, 1965

I. SICILIANO
CLOSURE OPERATOR

3,189,339

Filed Dec. 12, 1963

2 Sheets-Sheet 1



INVENTOR.
IGINIO SICILIANO
BY *James D. Cyles*
ATTORNEY

June 15, 1965

I. SICILIANO
CLOSURE OPERATOR

3,189,339

Filed Dec. 12, 1963

2 Sheets-Sheet 2

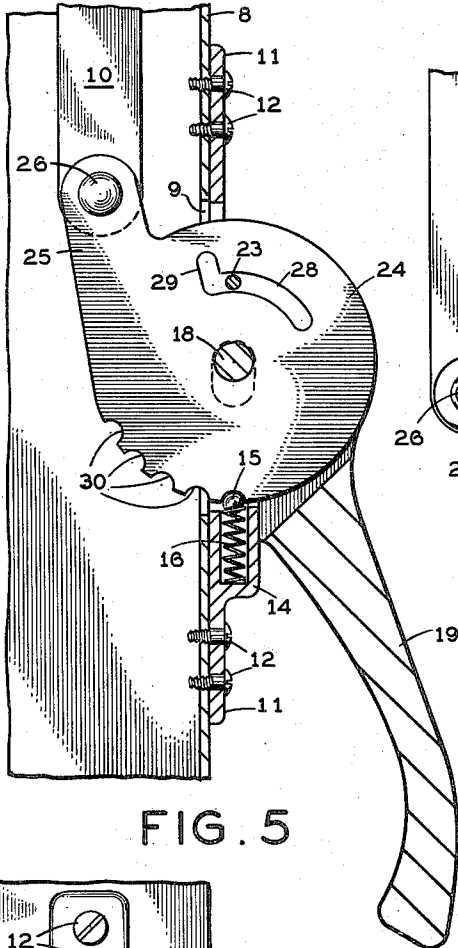


FIG. 5

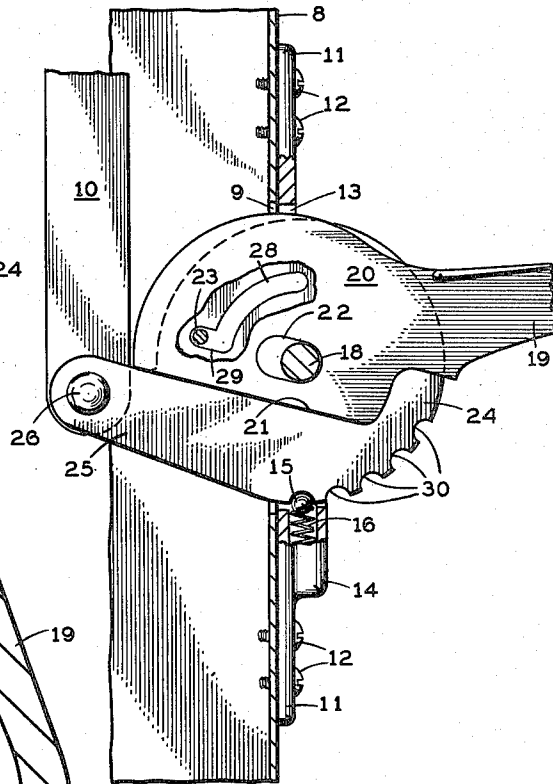


FIG. 6

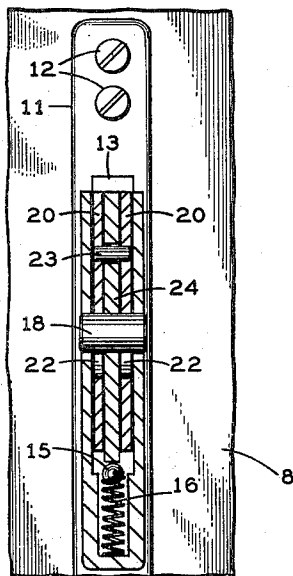


FIG. 7

INVENTOR
IGINIO SICILIANO
BY *James H. Glen*
ATTORNEY.

1

3,189,339

CLOSURE OPERATOR

Iginio Siciliano, 8420 SW. 27th St., Miami, Fla.

Filed Dec. 12, 1963, Ser. No. 330,153

4 Claims. (Cl. 268-111)

This invention relates to operating mechanism for
 jalousie windows or the like having a plurality of glass
 panels that are connected by a link bar and whereby a
 crank arm functions to shift the panels upon their hori-
 zontal pivots to multiple positions.

The invention contemplates a crank mechanism that
 comprises a circular disk having an arm formed thereon
 that is connected to the operator bar for the several panels
 of the window and with an actuating bifurcated crank that
 causes the first disk to rotate and with means to permit
 the crank arm, after the windows have been shifted and
 locked in position, to swing downwardly to lie almost
 completely within the area of a frame in which the win-
 dows are mounted and so that the crank arm will not pro-
 ject outwardly to any material extent beyond the reveal
 of the window opening and to any degree that would offer
 a hazard to persons walking thereby and that might cause
 injury to the body of the person and this invention has
 been designed to avoid any substantial projection beyond
 the window opening.

The invention further contemplates a detent that en-
 gages any selected notch of the marginal edge of the first
 disk and with the first disk also being provided with an
 arcuate slot having offset extension and a pin carried by
 the bifurcations of the crank arm that extends through
 the slot of the first disk and whereby the crank arm may
 be shifted upwardly to engage the offset end of the slot
 so that the pin will establish a driving connection with the
 first disk for moving the first disk upon a cross shaft for
 operating the window devices and with the crank arm and
 its bifurcations being subsequently lowered out of the
 slot extension so that the crank arm may be swung down-
 wardly to a position closely adjacent to the front of the
 window jamb and with the bifurcations being provided
 with an elongated slot that engages the cross shaft so as to
 permit the engagement of the pin in its several positions
 and whereby the bifurcations may be lifted up or down.

Novel features of construction and operation of the
 device will be more clearly apparent during the course of
 the following description, reference being had to the ac-
 companying drawings wherein has been illustrated a pre-
 ferred form of the device and wherein like characters of
 reference are employed to denote like parts throughout the
 several figures.

In the drawings:

FIGURE 1 is a perspective view of a conventional
 window having the invention applied thereto,

FIGURE 2 is an enlarged section taken substantially
 on line 2-2 of FIGURE 1,

FIGURE 3 is a horizontal section taken substantially
 on line 3-3 of FIGURE 2,

FIGURE 4 is a fragmentary inner side elevation of a
 window frame showing the invention applied thereto,

FIGURE 5 is a vertical section taken substantially on
 line 5-5 of FIGURE 4,

FIGURE 6 is a similar view to FIGURE 5, with an
 exposed plate of the crank arm being shown with parts
 broken away for purpose of illustration and indicating the
 movement of the device for the fully closed position of the
 window panels, and

FIGURE 7 is a section taken substantially on line 7-7
 of FIGURE 2.

Referring specifically to the drawings, there has been
 illustrated a window frame 5, having a plurality of hori-
 zontally pivoted panels 6. An operator device indicated

2

as a whole by the numeral 7 is disposed adjacent the
 lower corner of the window.

A jamb member 8 of the window device is provided
 with a slot 9 through which the mechanism is installed
 within the window and connected to an operator bar 10.
 The operating mechanism embodies an elongated face
 plate 11 connected to the jamb 8 by screws 12. The face
 plate 11 is also slotted for its major length as indicated
 at 13. The face plate adjacent its lower portion is pro-
 vided with a forwardly extending housing 14 that is open
 at its top and carries a detent ball 15, that is biased up-
 wardly by a spring 16. The face plate 11 is also pro-
 vided with a pair of spaced apart semi-cylindrical flanges
 17 and with the flanges carrying a relatively large cross
 shaft 18.

A crank arm 19 is formed integral with a pair of spaced
 apart plates 20 having one side of the plates 20 formed
 straight as indicated at 21. The plates 20 are provided
 with elongated slots 22 that override the shaft 18 and
 whereby to permit movement of the plates 20 upwardly
 and downwardly with respect to the shaft 18. The plates
 20 also carry a pin 23 constituting the actuating means for
 a window control device to be described.

Rotatably disposed upon the shaft 18 and between the
 plates 20, is an operating disk 24 having an arm extension
 25 that is pivotally connected at 26 to the bar 10. The
 disk 24 is provided with a concentric slot 28, having off-
 set end portion 29 and the slot 28 and offset portion 29
 receive the pin 23 carried by the plate 20. A lower mar-
 ginal edge of the disk 24 is notched at 30 to engage the
 ball detent 15 and the several notches 30 have been so
 spaced as to actuate the window to and from a fully
 closed position and intermediate positions.

In the use of the device, the actuating mechanism is
 assembled and connected to the jamb 8 by the screw 12.
 When the window is to be opened, the crank arm 19 is
 swung upwardly and shifted upwardly to cause the pin
 23 to enter the offset slot 29. In this position, the crank
 arm 9 is projecting outwardly from the window in sub-
 stantially horizontal position and, the crank arm is then
 swung downwardly, rotating the disk 24 to shift the bar
 10 upwardly to any open position, determined by the en-
 gagement of the ball detent 15 into any one of the
 notches 30. When the window has been fully opened,
 the crank arm 19 and its plates 20 are pivoted downwardly
 through the medium of the slot 22, moving the pin 23 out
 of the offset 29, permitting the plates 20 and the crank
 arm to be swung downwardly to the position indicated in
 FIGURE 5. When the window is to be closed, the crank
 arm 19 is swung upwardly, causing the pin 23 to traverse
 the arcuate slot 28 until it reaches the offset 29 so that
 the plates 20 and the crank arm 19 may be moved up-
 wardly to engage the offset 29, permitting the crank 19
 to then shift the disk 24 in a clockwise direction. When
 the window is fully closed, the plates 20, carrying the
 pin 23 are shifted downwardly to move the pin 23 out
 of the offset 29, permitting the pin 23 to again traverse
 the slot 28 and so that the crank may drop downwardly
 to lie closely adjacent to the jamb. The endmost notches
 30 determine the fully closed and fully opening position
 of the window and with the ball detent substantially lock-
 ing the window against movement in either direction.
 The intermediate notches 30 determine the partial open-
 ing or closing of the window. It is contemplated that the
 mechanism shall be formed of light weight metal, such as
 aluminum, having a high resistance to corrosion.

It will be apparent from the foregoing that a very novel
 type of window operating mechanism has been provided.
 The structure is simple, is strong, durable and provides a
 device for shifting the panels of a jalousie window to and
 from an open position. In each position of the window,
 the crank arm 19 and its associated plates 20, carrying the

pin 23 may be shifted downwardly so that the crank arm 19 will not project outwardly from the window but is at all times, regardless of the position of the window, able to move the crank arm 19 out of any extending position that would be detrimental to persons who might be injured by an extending crank. The device is a very distinct improvement over prior art devices for shifting jalousie panels.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

I claim:

1. A window operator for use with an extruded metallic frame wherein is disposed a plurality of horizontally pivoted panels, the panels being connected by a common operator bar, the operating device including a face plate fixed to the inner side of one jamb member of the window frame and with the face plate and the jamb being slotted to receive the operating device, the face plate being provided with a pair of spaced apart arcuate flanges integral with the plate, a cross shaft extending between the flanges, an intermediate operating disk rotatably supported upon the shaft, the disk being notched at equidistantly spaced points upon one edge for engagement, a spring actuated detent engaging the edge of the disk, the disk having an arm extension pivotally connected to the operator bar, the disk also being provided with a concentric slot having an offset at one end, a crank arm bifurcated at one end to overlie the disk upon opposite sides, the bifurcations of the crank arm being provided with a cross pin seating within the bifurcations and that extends through the slot of the operating disk and with the pin traversing the slot and the offset, whereby movement of the crank rotates the operating disk for moving the operator bar to various positions for controlling the opening and closing of the panels and the bifurcations being provided with elongated slots that overlie the shaft and whereby the crank arm is movable upon the shaft in a manner to permit the actuation of the operator disk and then to be shifted downwardly in each position of the window whereby the crank arm is disposed closely adjacent to the front of the jamb.

2. The structure according to claim 1 wherein the detent is mounted within an integral housing formed upon the face plate and below the edge of the operating disk.

3. The structure according to claim 1 wherein the slot of the operating disk is concentric with respect to the shaft and with the offset of the slot adapted to receive the cross pin for movement of the operating disk, the

elongated slot of the bifurcations permitting the bifurcations to move upwardly over the shaft for disposing the pin in the offset of the operating disks whereby the operating disk may be manually rotated by the crank arm, the said bifurcations, after the operating disk has been moved a predetermined amount adapted to move downwardly over the shaft 18 to cause the pin to move into the arcuate slot and to permit the crank arm to move downwardly to the position adjacent to the inner face of the window frame, the said pin, when shifted into the offset of the arcuate slot permitting the bifurcations to rotate the operator disk to any degree of opening or closing the panels determined by the notches in the operator disk and the detent, the notches in the edge of the operator disk providing a locking engagement for the disk from either intermediate positions of the panels or into fully open or closed position of the window.

4. An operating device for windows of the jalousie type comprising, an operator bar connected to the pivotal panels of the window for opening and closing said panels, the window including a jamb on which the operating device is mounted, a face plate fixed to the jamb, a disk rotatively mounted in the face plate, a pivot pin mounted in the face plate and on which the disk is pivotally mounted, said disk having an arm pivotally connected to the operator bar, the disk having a notched edge, a spring-biased detent for selectively engaging with any one of the notches in said edge to locate the panels in any desired position, a handle including a pair of plates between which the disk is sandwiched, each of the plates having an elongated slot in which the pivot pin is located, said slots permitting a transverse movement of the plates relative to the disk, the disk having an arcuate slot provided with an offset part at one end, and a pin extending through the plates and entering said slot and caused to enter the offset part thereof upon the transverse shift of the plates permitted by the engagement of the pivot pin with the elongated slots provided in the plates.

References Cited by the Examiner

UNITED STATES PATENTS

2,312,720	3/43	Lang	-----	268—118
2,973,666	3/61	Fuller	-----	268—116 X

FOREIGN PATENTS

217,526	1/10	Germany.
---------	------	----------

HARRISON R. MOSELEY, *Primary Examiner.*

REINALDO P. MACHADO, CHARLES E. O'CONNELL, *Examiners.*