Nov. 10, 1942. F. J. MOSS 2,301,568

WINDOW SHUTTER

Filed Dec. 22, 1939 2 Sheets-Sheet 1

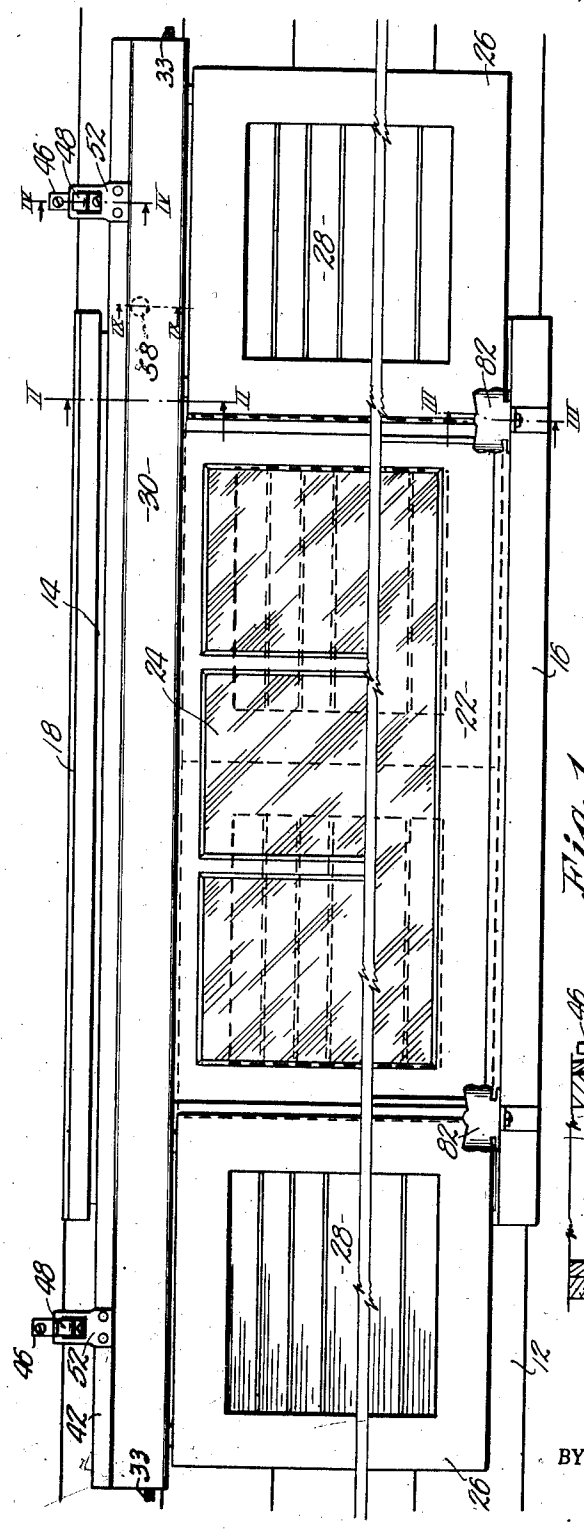


Fig. 4.

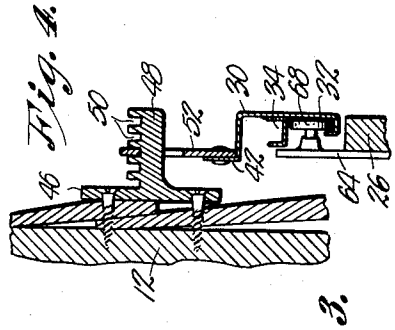


Fig. 3.

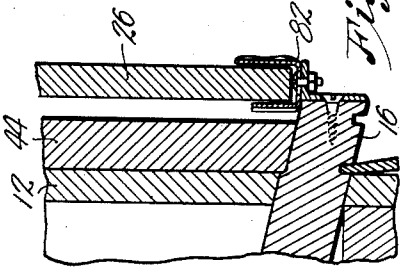


Fig. 1.

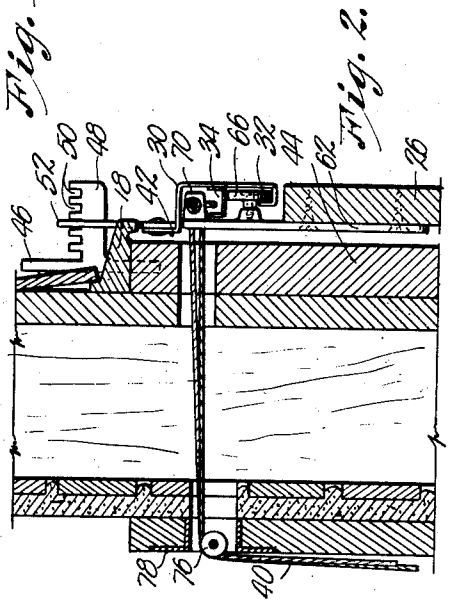


Fig. 2.

INVENTOR.
Frank J. Moss

BY Howey & Hamilton
ATTORNEYS

Nov. 10, 1942. F. J. MOSS 2,301,568

WINDOW SHUTTER

Filed Dec. 22, 1939 2 Sheets-Sheet 2

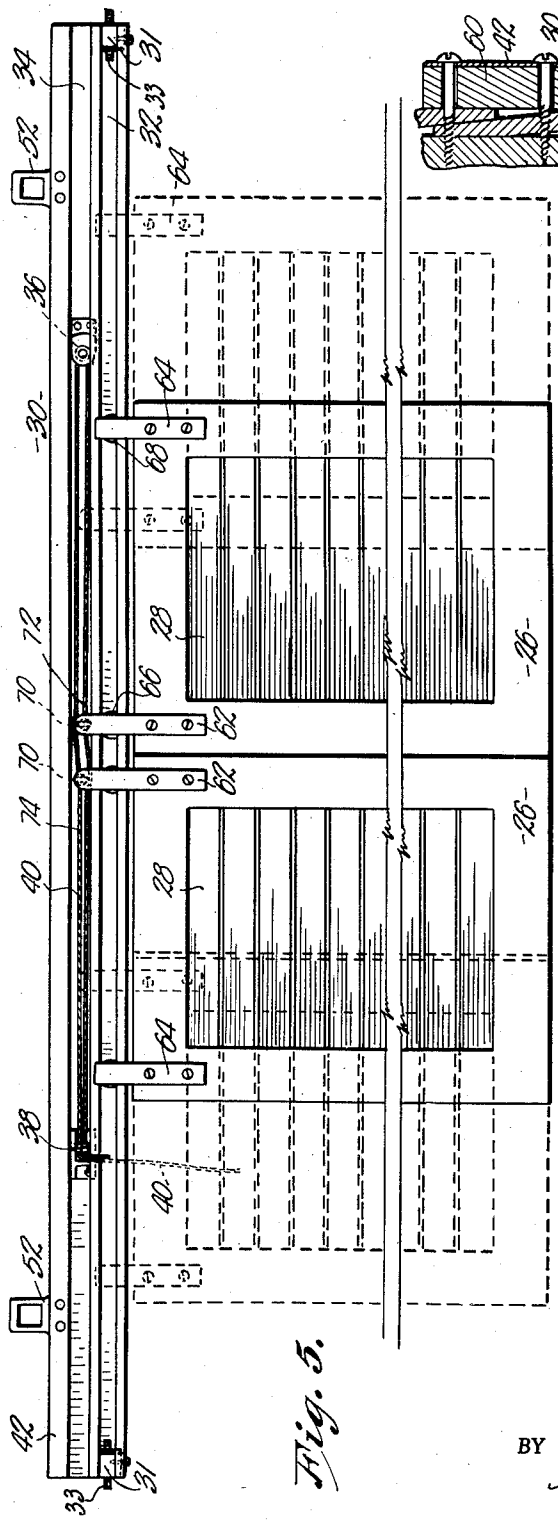


Fig. 5.

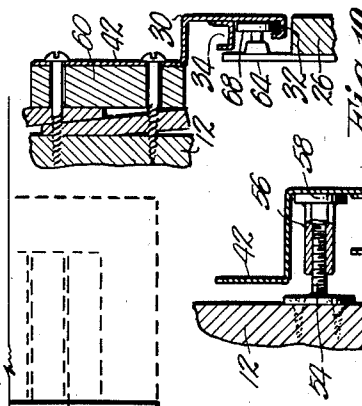


Fig. 10.

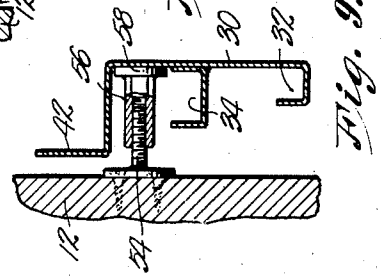


Fig. 9.

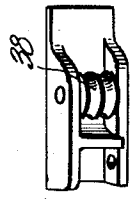


Fig. 8.

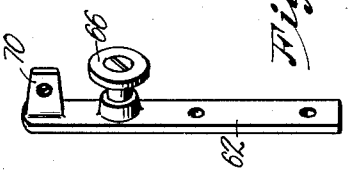


Fig. 7.

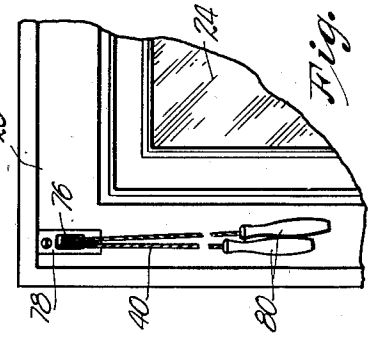


Fig. 6.

INVENTOR.
Frank J. Moss
BY Howey & Hamilton
ATTORNEYS

Patented Nov. 10, 1942 2,301,568

UNITED STATES PATENT OFFICE

2,301,568

WINDOW SHUTTER

Frank J. Moss, Kansas City, Mo.

Application December 22, 1939, Serial No. 310,486

6 Claims. (Cl. 268—48)

This invention relates to window shutter structures in the nature of those particularly adaptable for attachment to a building on the outside thereof, so that the window may be opened and closed by the panels of the shutter from a point within the building.

The primary object of this invention is to provide window shutters for the outside of buildings, which shutters are specially hung and provided with actuating parts operable from a point within the building, to the end that objectionable blinds, shades and other means for controlling the passage of light through the window and which are conventionally hung inside the room, may be dispensed with.

It is well-known in the building industry that glazing in windows transmits a large amount of heat because the sun strikes the glass on the outside thereof and regardless of the character of the inside window shade, heat enters the room and raises the temperature thereof even when double glazing is employed. It is an advantage therefore, to use outside shutters, providing convenient, novel and satisfactory means is available for operably mounting the shutters for movement to and from the closed position from a point at the inside of the building. This invention, therefore, contemplates simple, durable and effective structure, combinable with a pair of panels so that the same may be held in place on the building and moved as desired from a point at the inside.

One of the important aims of the invention is to provide a window shutter having a specially formed track, a portion of which accommodates the rollers of hangers on the shutter panels, while another part thereof constitutes a compartment for the housing of the operating cable and pulleys over which the latter is strung.

A still further object of the invention is to provide a window shutter having means for movably supporting the panels of the shutter assembly and specially arranged pulleys over which a single cable may be strung to present stretches, each of which stretch is attached to one of the said panels so that the same may be simultaneously operated by manipulating the ends of the cable at a point within the building upon which the window shutter is mounted.

Other objects of the invention will appear during the course of the following specification, referring to the accompanying drawings wherein:

Figure 1 is a condensed side elevational view of a window shutter showing the same on a building adjacent to a window thereof.

Fig. 2 is an enlarged fragmentary detailed sectional view through the window structure taken on line II—II of Fig. 1.

Fig. 3 is a similar sectional view taken on line III—III of Fig. 1.

Fig. 4 is a fragmentary detailed sectional view taken on line IV—IV of Fig. 1.

Fig. 5 is a condensed plan view of the entire assembly showing the same removed from the operative position.

Fig. 6 is a fragmentary elevational view of a portion of a window frame showing the point at which the cable forming a part of the shutter structure, enters the building.

Fig. 7 is a perspective view of one of the hangers showing the same entirely removed from association with the panel.

Fig. 8 is a perspective view of one of the pulleys for the cable.

Fig. 9 is a cross sectional view through the track illustrating the adjustable spacer; and,

Fig. 10 is a fragmentary sectional view through the track and supporting block therefor, illustrating a modified form of the invention.

The building 12 having the conventional type window frame 14, provided with sill 16 and drip plate 18, has window trim 20 on the inside thereof in the nature of that illustrated in Fig. 6. Window frame 14 carries the usual window sash 22 having sheets of glass 24 therein, through which the light is permitted to pass when the hereinafter more fully described panels 26 of the shutter structure are in the position shown in Fig. 1.

Shutter panels 26 may have slats 28 therein that are disposed at angles suitable to the builder so that light may pass to the window in suitable amounts. The angularity of these slats 28 will also have a bearing upon the amount of air that passes through the panels and likewise will determine whether or not small spaces between the slats 28 will permit a view through the window when the panels are closed.

When these panels 26 are open, they should be positioned with their inner proximal edges slightly spaced from the edge of the frame so that no part of the sash is overlapped, and further, so that the opening defined by the window frame may be unrestricted when the sash 22 is open.

The track which is generally designated by the numeral 30, has a channel shaped run-way 32 at the lowermost edge thereof and a compartment 34 above said run-way 32 for the reception of pulleys 36 and 38 as well as to receive

the major portion of cable 40. Track 30 has an upturned flange 42 which is used as a means for attaching the track to building 12. This means of attachment may be as shown in Figs. 1, 2 and 4, or as illustrated in Fig. 10.

In some instances, panels 26 must be held far enough away from the side of the building 12 to clear projections around the window or forming a part of the window frame, such as the drip plate 18 or outside trim 44.

A fixture which may be used with track 30 is in the nature of that shown in Figs. 2 and 4. This fixture has a foot 46 and a laterally projecting arm 48, the upper surface of which is notched as at 50, any one of which may receive bracket 52 mounted directly on flange 42. After bracket 52 has been introduced to the selected notch 50, an adjustable spacer such as illustrated in Fig. 9, may be tightened to preclude accidental displacement.

This spacer has a screw-threaded stem 54 mounted on the side of building 12 and a sleeve 56 in screw-threaded, telescoping engagement with stem 54. The head 58 of sleeve 56 bears against the inner face of track 30 and any amount of outside pressure may be exerted so as to assist the aforesaid fixture in holding bracket 52 and the track in operative position. Fig. 10 illustrates the preferred manner of mounting track 30, however, and block 60 is merely secured to the side of building 12 and thereafter flange 42 fastened directly to the face of this block 60.

With track 30 in horizontal position above window frame 14, panels 26 are moved to place so that hangers 62 and 64 of each panel 26 respectively, have their rollers 66 and 68 respectively, in run-way 32.

Each panel 26 has a pair of hangers, and one hanger, i. e. 62, projects above run-way 32 and to a place where perforated ear 70 thereof may enter the longitudinal slot in the side of compartment 34. When ear 70 is so projected into compartment 34, roller 66 on hanger 62 will rest in run-way 32. The other hanger 64, having roller 68 thereon, is relatively short, as seen in Fig. 5. The comparatively long hanger 62 on each panel 26 is at the inner edges of these panels.

Pulley 36 is housed within compartment 34 as is double pulley 38 and when cable 40 is threaded as contemplated by this invention, the two stretches thereof are housed within compartment 34. One stretch 72 is secured to one of hangers 62, while the other stretch 74 is secured to the similar hanger 62 of the other panel.

Pulley 36 at the bight of cable 40 is remote from double pulley 38 and both stretches 72 and 74 pass around the grooved wheels of double pulley 38. From double pulley 38, cable 40 passes through the window frame and over small sheaves 76, held in a member 78 mounted directly on the interior trim 20 of the window frame. The ends of cable 40 are each provided with a handle 80 for convenience of the operator, and when one handle is pulled the panels will move to the open position shown in Fig. 1, while a pulling of the other handle will move the panels to the closed position shown in Fig. 5.

While the upper edges of panels 26 are supported as above set down, the lower edges thereof are slidably engaged by a guide which is U-shaped in cross sectional contour and that is fastened directly to the building 12 or some portion thereof, such as sill 16 (Fig. 3). These guides 82 embrace the lower edges of panels 26 in such fashion as to not present objectionable friction and yet overcome any tendency on the part of panels 26 to move laterally.

An adjustable stop 31 located at each end respectively of track 30, within run-way 32, has a screw-threaded member 33 that may be moved to vary the position of its inner end with respect to rollers 66.

These members 33 limit the travel of panels 26 from each other and fix the place where the panels stop when drawn open by the operator's pull on one of handles 80.

It is conceivable that window shutters different than those illustrated and described might be made without departing from the invention, and accordingly, it is desired to be limited only by the scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In an outside window shutter of the character described having a pair of panels at one side of the window, comprising unitary track disposed above the window; hangers on each panel having rollers arranged to travel in the track; and a cable secured to certain of the hangers and extending to a point at the other side of the window, said track having a run-way for the rollers and a compartment partitioned from the run-way for a portion of the cable.

2. In an outside window shutter of the character described having a pair of panels at one side of the window, comprising a unitary track disposed above the window; hangers on each panel at the top thereof having rollers arranged to travel in the track; a cable secured to certain of the hangers and extending to a point at the other side of the window; and pulleys for the cable, said track having a run-way for the rollers and a compartment partitioned from the run-way for a portion of the cable and said pulleys.

3. In an outside window shutter of the character described having a pair of panels at one side of the window, comprising a unitary track disposed above the window; hangers on each panel having rollers arranged to travel in the track; a cable secured to certain of said hangers; and pulleys for the cable housed within the track, said track having a run-way for the rollers and a compartment partitioned from the run-way for a portion of the cable and said pulleys, said cable extending to a point at the other side of the window, said cable being lapped upon itself to form two stretches in said track, a hanger on one of the panels being attached to one of the stretches of the cable, and a hanger on the other panel being attached to the other stretch of the cable.

4. In an outside window shutter of the character described having a pair of panels at one side of the window, comprising a unitary track disposed above the window; hangers on each panel having rollers arranged to travel in the track; a cable secured to certain of said hangers; and pulleys for the cable housed within the track, said track having a run-way for the rollers and a compartment partitioned from the run-way for a portion of the cable and said pulleys, said cable extending to a point at the other side of the window, said cable being lapped upon itself to form two stretches in said track, a hanger on one of the panels being attached to one of the stretches of the cable, and a hanger on the other panel being attached to the other stretch of the cable, one of the pulleys being at one end of said stretches at the bight in the cable between the

stretches, and the other of said pulleys being at the other end of said stretches.

5. In an outside window shutter of the character described having panels, rollers for mounting the panels and cables for moving the same, the combination of a unitary track disposed above the window having therein a runway for said rollers and a separate compartment for cables partitioned from the said run-way, and hangers for the said panels carrying the rollers and having portions thereof projecting into the compartment and secured to the cable.

6. In an outside window shutter of the character described having a pair of panels, means for mounting the said panels on one side of the window comprising brackets at the upper ends of the panels; a roller on each bracket respectively; a track above the panels; and cables joined to certain of the brackets and extending to a place at the opposite side of the window, said track having a pair of horizontally disposed channels, one of the channels forming a compartment for the cables, the other channel creating a run-way for the rollers, said channels being arranged one above the other and spaced outwardly from the window to provide clearance for the brackets.

FRANK J. MOSS.