Dec. 11, 1934. G. A. TIMKO 1,983,583

WINDOW SHADE OPERATING MECHANISM

Filed Feb. 13, 1934 4 Sheets-Sheet 1

Fig. 1.

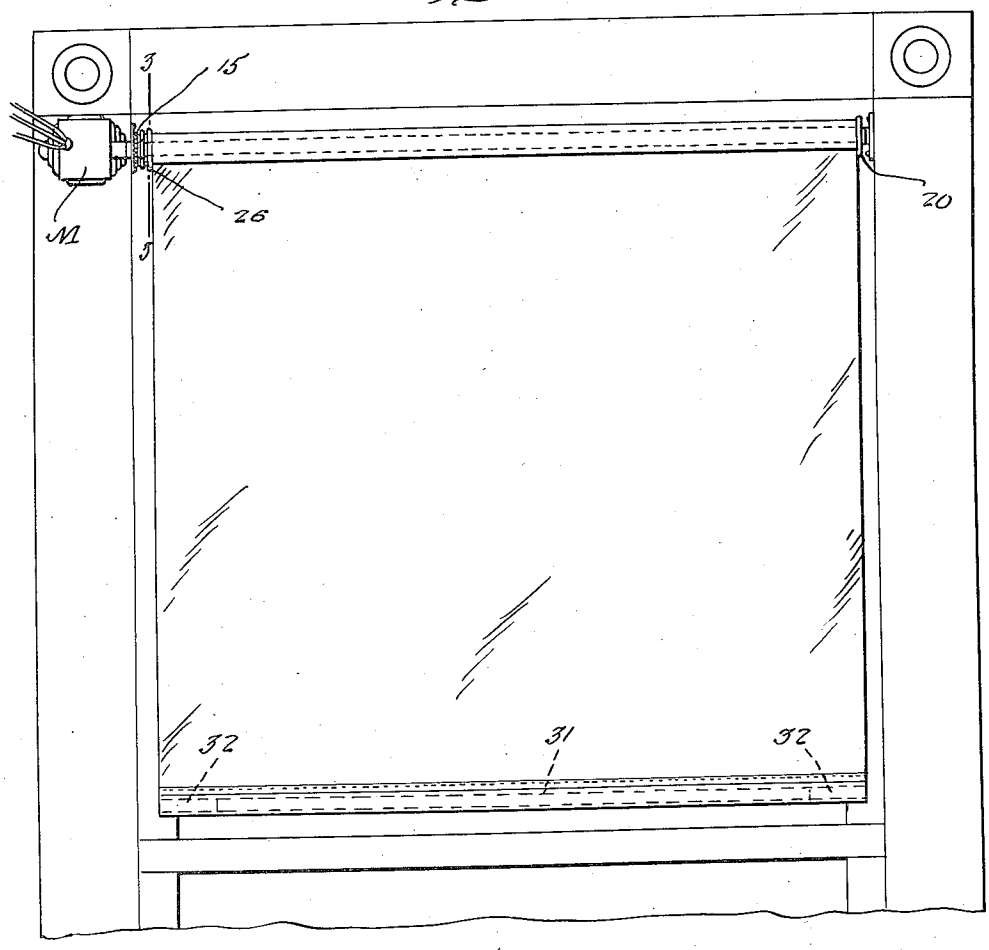
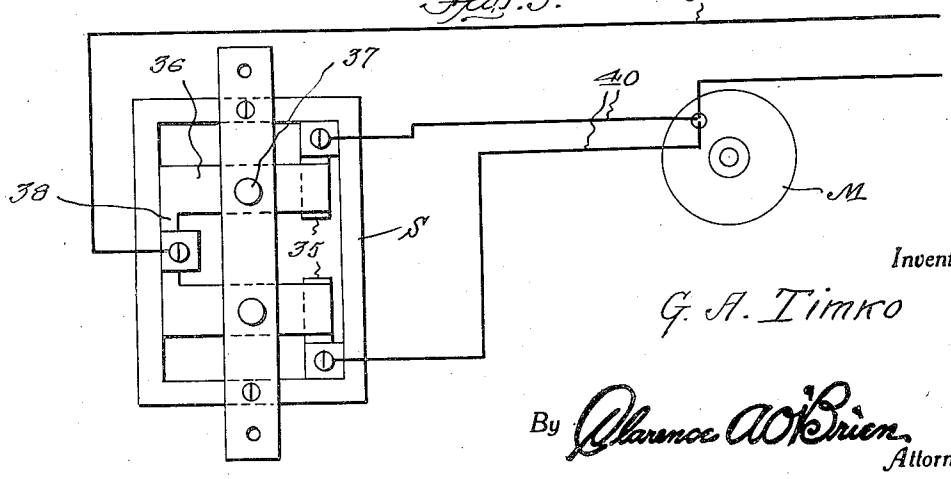


Fig. 5.



Inventor

G. A. Timko

By Clarence A. O'Brien

Attorney

Dec. 11, 1934. G. A. TIMKO 1,983,583

WINDOW SHADE OPERATING MECHANISM

Filed Feb. 13, 1934 4 Sheets-Sheet 2

Fig. 2.

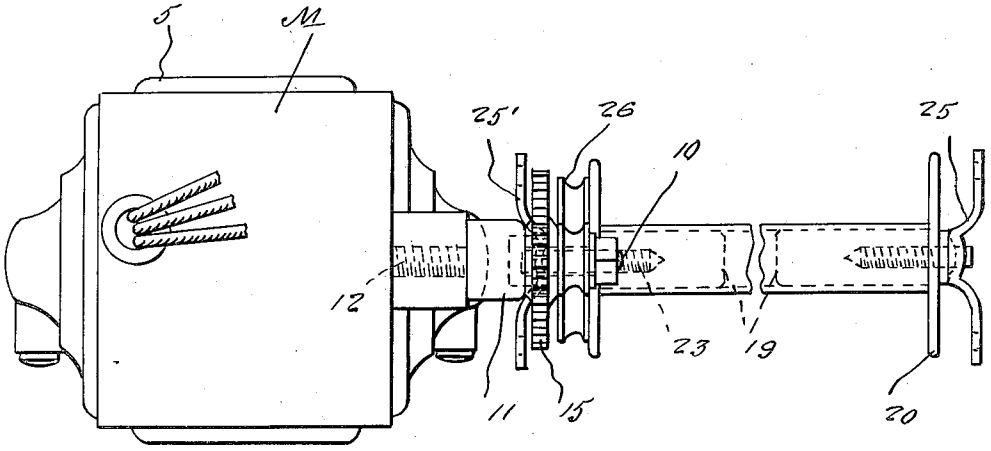


Fig. 10.

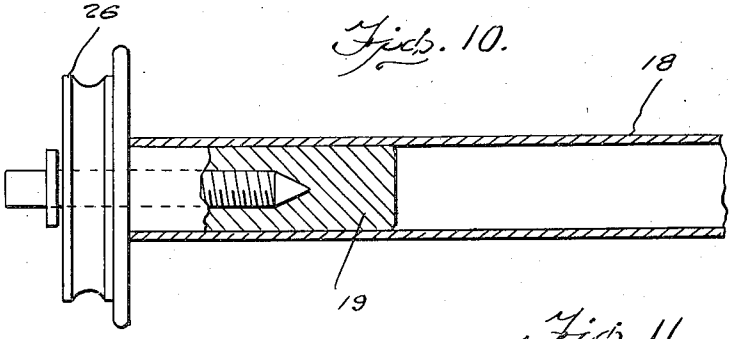


Fig. 11.

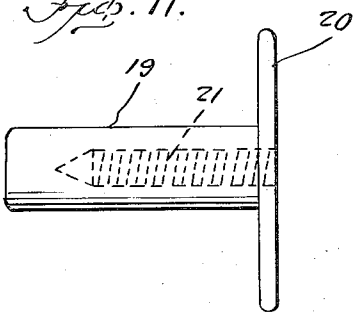
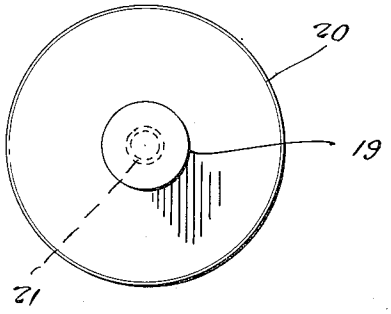


Fig. 12.



Inventor

G. A. Timko

By Clarence A. O'Brien

Attorney

Dec. 11, 1934. G. A. TIMKO 1,983,583

WINDOW SHADE OPERATING MECHANISM

Filed Feb. 13, 1934 4 Sheets-Sheet 3

Fig. 3.

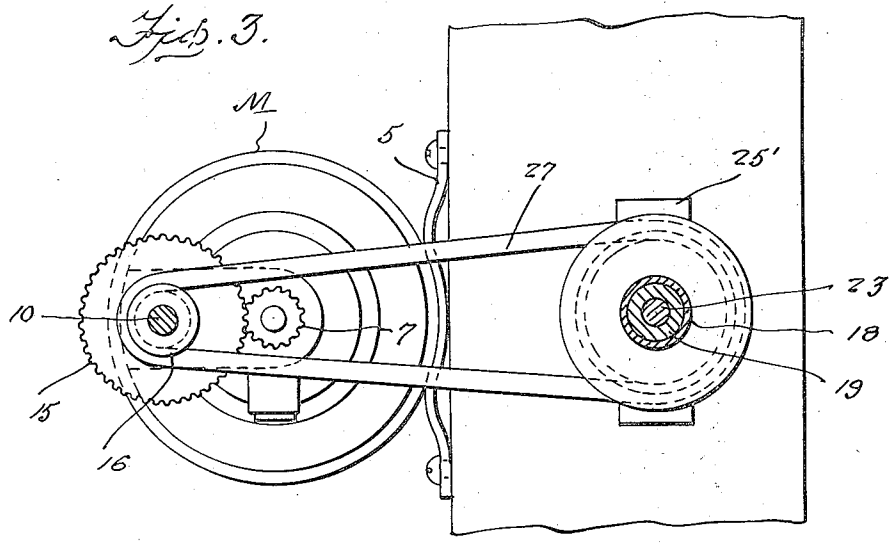


Fig. 13.

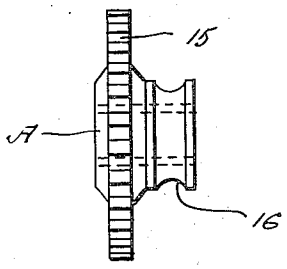


Fig. 15.

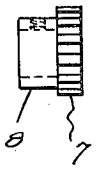


Fig. 14.

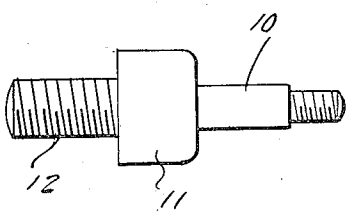


Fig. 16.

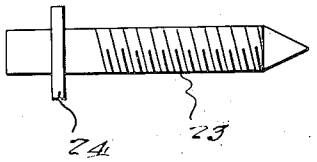
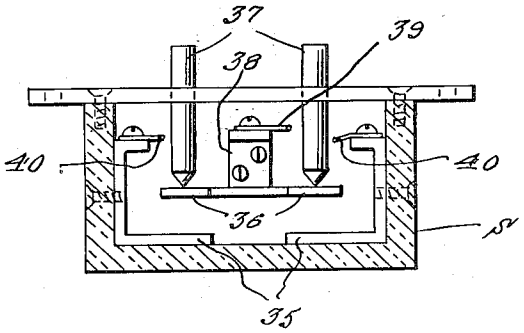


Fig. 6.



Inventor

G. A. Timko

By Clarence O'Brien

Attorney

Dec. 11, 1934. G. A. TIMKO 1,983,583

WINDOW SHADE OPERATING MECHANISM

Filed Feb. 13, 1934 4 Sheets-Sheet 4

Fig. 4.

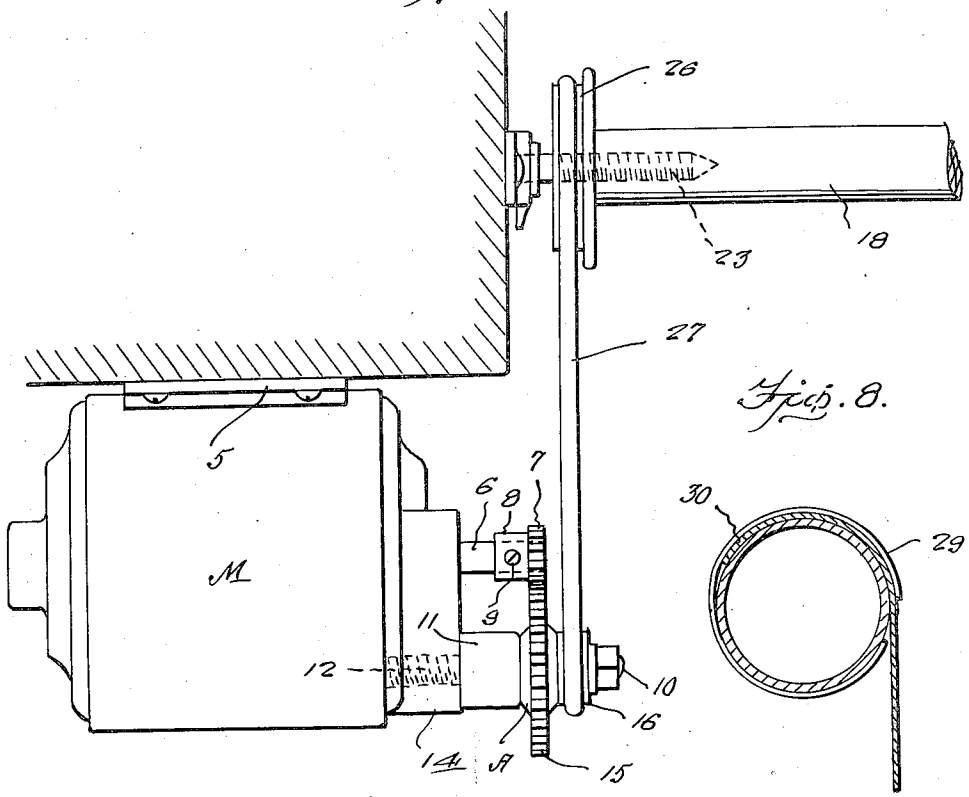


Fig. 8.

Fig. 7.

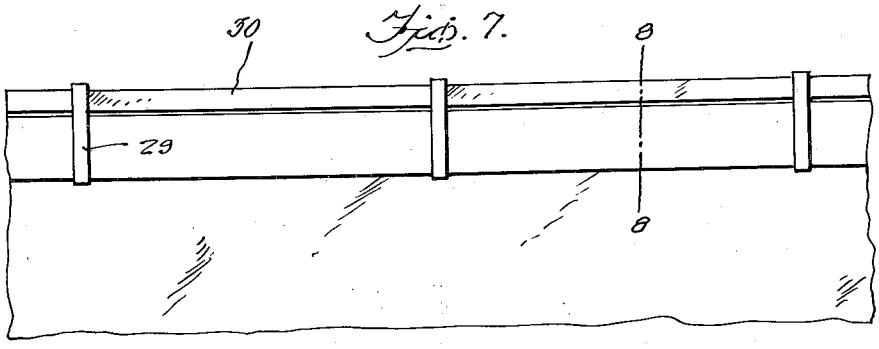
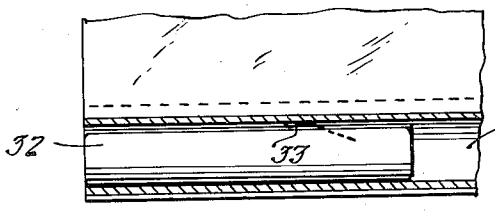


Fig. 9.



Inventor

G. A. Timko

By Clarence O'Brien

Attorney

Patented Dec. 11, 1934 1,983,583

UNITED STATES PATENT OFFICE

1,983,583

WINDOW SHADE OPERATING MECHANISM

George A. Timko, Chicago, Ill.

Application February 13, 1934, Serial No. 711,078

1 Claim. (Cl. 74—421)

The present invention relates to a mechanism for operating a window shade and has for its prime object to provide an electric motor operatively associated with a window shade and a double push button switch mechanism so that by proper manipulation of the switch the motor may be energized to raise or lower the window shade as may be desired.

Another very important object of the invention resides in the provision of a mechanism of this nature which is comparatively simple in its construction, easy to install, thoroughly efficient and reliable in use and operation, and otherwise well adapted to the purpose for which it is designed.

With the above and numerous other objects in view as will appear as the description proceeds, the invention consists in certain novel features of construction, and in the combination and arrangement of parts as will herinafter be more fully described and claimed.

In the drawings:

Figure 1 is an elevation of the upper portion of a window frame showing an installation of my mechanism.

Figure 2 is a detail elevation of the mechanism.

Figure 3 is a sectional view taken substantially on the line 3—3 of Figure 1.

Figure 4 is a top plan view.

Figure 5 is a diagrammatic view showing the wiring.

Figure 6 is a sectional view through the switch.

Figure 7 is a fragmentary view of the roller showing the clamp for holding the shade thereon.

Figure 8 is a sectional view therethrough taken substantially on the line 8—8 of Figure 7.

Figure 9 is a sectional view through a portion of the bottom end of the shade.

Figure 10 is a sectional view through one end of the roller.

Figure 11 is a detail view of one of the inserts placed in the ends of the roller.

Figure 12 is an end view thereof.

Figure 13 is a detail view of the combined gear and pulley.

Figure 14 is a detail view of a shaft.

Figure 15 is a detail view of the pinion, and

Figure 16 is a detail view of one of the pins.

Referring to the drawings in detail it will be seen that the letter M denotes a reversible electric motor mounted on one side of the frame by means of a bracket 5. Numeral 6 denotes the armature shaft of the motor projecting from the casing thereof. On the end of this shaft 6 is a pinion 7 having a collar 8 extending over the end of the shaft and a set screw 9 holds the collars and pinions securely on this shaft 6. Numeral 10 denotes a shaft projecting from a body 11 having a threaded stud 12 engaged in a block 14 formed on the casing of the motor. Journalled on the shaft 10 is a combined ear and pulley denoted generally by the letter A and comprising the gear 15 and the pulley 16. The gear 15 meshes with the pinion 7.

Numeral 18 denotes a hollow shade roller having inserts 19 in the ends thereof and the outer ends of these inserts have annular plates 20 formed thereon to abut the ends of the roller. The inserts 19 are formed with threaded sockets 21. Trunnion pins 23 are threaded in these inserts and are provided with flanges 24. The outer end of one of the trunnion pins is journalled in a suitable bracket 25. On the other pin is a pulley 26 and this other pin is journalled in a suitable bracket 25'. An endless belt 27 is trained over the pulleys 16 and 26. Split ring clamps 29 hold one end of the shades 30 on the roller. The other end of the roller has a hem 31 in the ends of which are inserts 32 held against accidental displacement by springs 33.

Letter S denotes a two buttoned controlled switch mechanism including a pair of stationary contacts 35 and a pair of spring contacts 36 to be pushed into engagement with contacts 35 by push buttons 37. The spring contacts 36 are joined together as at 38 and are connected with a source of electrical energy by a wire 39. Wires 40 lead to the motor. Obviously the pushing of one button causes the motor to rotate in one direction to raise the shade whereas the pushing in of the other button causes the motor to operate in a reverse direction and causes the lowering of the shade.

It is thought that the construction, operation, utility and advantages of this invention will now be clearly understood by those skilled in this art without a more detailed description thereof.

The present embodiment of the invention has been described in considerable detail merely for the purposes of exemplification since in actual practice it attains the features of advantage enumerated as desirable in the statement of the invention and the above description.

It will be apparent that changes in the details of construction, and in the combination and arrangement of parts may be resorted to without departing from the spirit or scope of the invention as hereinafter claimed or sacrificing any of its advantages.

Having thus described my invention, what I claim as new is:

In a shade operating mechanism, a reversible motor having an armature shaft, a block attached to the motor and having a threaded hole therein, an elongated body having its central part enlarged and its end parts reduced to provide a pair of shoulders, one at each end of the central portion, one of the reduced parts being threaded and fitting in the hole in the block with one shoulder contacting the block, the other reduced part having its extremities reduced and threaded with the rest of the said part cylindrical to provide a shaft forming part, a combined pulley and gear rotatably arranged on the shaft forming part, a nut threaded on the threaded portion of the cylindrical part for holding the combined pulley and gear on the shaft forming part, a pinion on the armature shaft meshing with the gear, a pulley on the shade roller, and a belt connecting the two pulleys together.

GEORGE A. TIMKO.