

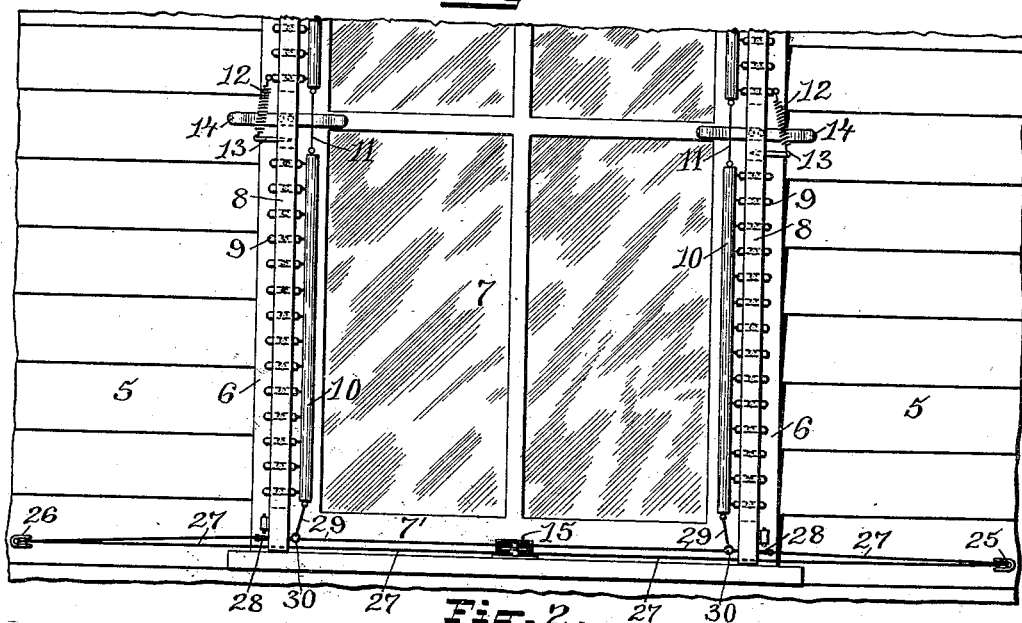
(No Model.)

C. W. ENQVIST.  
SHUTTER OPERATING DEVICE.

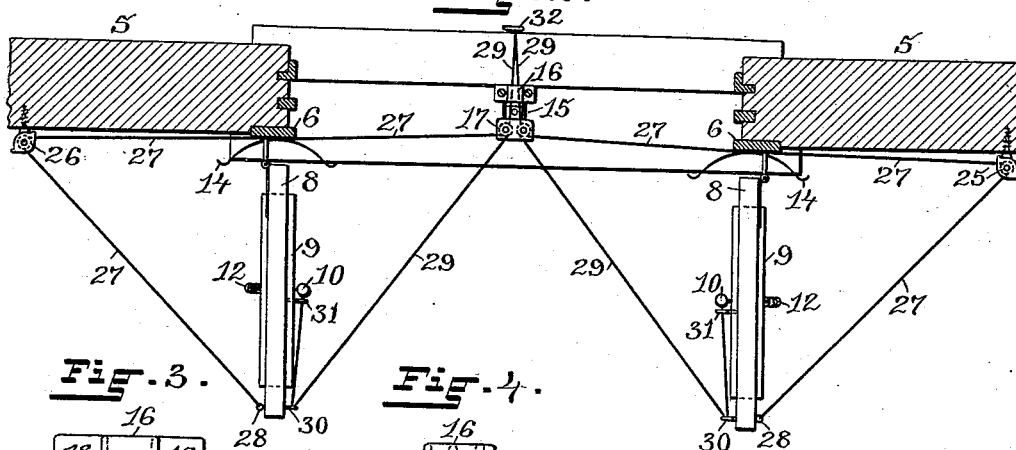
No. 523,201.

Patented July 17, 1894.

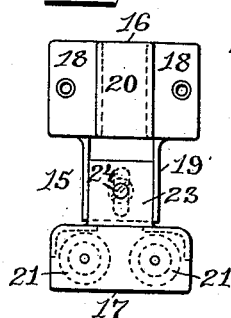
**Fig. 1.**



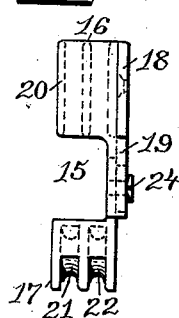
**Fig. 2.**



**Fig. 3.**



**Fig. 4.**



**WITNESSES:**

*Henry J. Miller*  
*Chas. H. Luther Jr.*

**INVENTOR:**

*Carl W. Engvist*  
*by Joseph A. Miller & Co. Attys.*

# UNITED STATES PATENT OFFICE.

CARL W. ENQVIST, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR OF ONE-HALF  
TO GUSTAF HERMAN ANDERSON, OF ATTLEBOROUGH, MASSACHUSETTS.

## SHUTTER-OPERATING DEVICE.

SPECIFICATION forming part of Letters Patent No. 523,201, dated July 17, 1894.

Application filed January 22, 1894. Serial No. 497,620. (No model.)

*To all whom it may concern:*

Be it known that I, CARL W. ENQVIST, of Providence, in the county of Providence and State of Rhode Island, have invented certain  
5 new and useful Improvements in Shutter-Operating Devices; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of  
10 this specification.

This invention has reference to improvements in devices for operating window-shutters.

The object of the invention is to provide  
15 means for operating the outside shutters of a window without opening the same.

The further object of the invention is to so construct a shutter-opening device that the slats may be adjusted when the shutters are  
20 partially or wholly closed.

Still another object of the invention is to provide means for preventing the rattling of the shutters when open or closed.

The invention consists in certain peculiar  
25 features of construction and novel combination of parts which will hereinafter be more fully described and pointed out in the claims.

Figure 1 represents an elevation of part of a window and the shutters thereof showing  
30 the improved operating-device. Fig. 2 represents a plan view of the same, the window-sash being removed. Fig. 3 represents a top view of the improved cable-guide. Fig. 4 representing a side view thereof.

35 Similar numbers of reference designate corresponding parts throughout.

In the drawings 5 indicates a portion of a building which is furnished with a window-frame 6 in which the usual sash 7 is vertically  
40 movable. Hinged to the sides of the frame 6 are the shutters 8—8 which are herein shown as provided with horizontally pivoted-slats 9—9, these are connected in upper and lower series by the rods 10—10 pivotally secured to  
45 the inner edges of the slats, the rods of the lower series being connected to those of the upper series by the wires 11—11. To the outer edge of the lowest slat of the upper series are secured the ends of the coiled-springs  
50 12—12 the lower ends of which are secured to the arms 13—13 extending from the cen-

tral cross-bars of the shutters, these springs tend to close the slats of the upper series and this action is conveyed to those of the lower series by the wires connecting the rods 10—10. 55 To each of the side-members of the window-frame are secured one or more curved-springs 14—14 the arms of which bear against the shutters when they are wholly closed or open and prevent the rattling of the same. 60

Secured to the center of the window-sill is a cable-guide 15, this guide is formed in two parts, the base 16 and extension 17, the base is furnished with securing-plates 18—18, a shank 19 and a central conduit-member 20 55 which is longitudinally perforated to allow the cables to freely move therethrough, the base is generally secured to the window-sill immediately below the lower sash 7 the cross-bar 7' of which is cut away sufficiently to allow the conduit-member 20 to enter the same. 70 The extension-member 17 is furnished with pulley-wheels 21 and 22 journaled therein and has a slotted-shank 23 which is secured between the raised-edges of the shank 19 of the base by a set-screw 24. The screw-pulleys 25 and 26 are secured to the side of the building on each side of the window. 75

The opening-cables 27—27 are passed through the conduit-member of the cable- 80 guide, thence through between the pulley-wheels 22—22 and separating are passed through the pulleys 25 and 26 and secured to the screw-eyes 28—28 in the lower outer edges of the shutters. The closing-cables 29—29 85 are in like manner passed through the cable-guide 15, then through the screw-eyes 30—30 and 31—31 on the inner faces of the shutters and are secured to the lower ends of the rods 10—10, the cables 27 and 29 are brought to- 90 gether and are secured on the cleat or clip 32.

By drawing on the inner ends of the cables 27—27 the shutters may be opened when the cables 29—29 are released, and by the judicious management of both sets of cables, the 95 shutters may be secured in any position,—when the slats 9—9 are to be opened against the pressure of the springs 12—12, the shutters are held in the required position by the cables 27—27 and an extra power is exerted on those 100 marked 29—29, the rods 10—10 will thereby be drawn downward and the slats opened

more or less at the pleasure of the operator,—  
of course, when the shutters are closed, no  
tension will be required on the cables 27  
while the slats are being opened.

5 Having thus described my invention, I  
claim as new and desire to secure by Letters  
Patent—

1. In a shutter-operating device, the combi-  
nation with a window-sill, and a window-sash  
10 having an opening at the lower portion, of  
the extensible cable-guide 15 secured to the  
sill and adapted to register with the opening  
in the sash, and a series of cables extending  
through said guide as described.

15 2. The combination with the window-frame  
6, the shutters 8—8 hinged thereto and hav-  
ing the pivoted-slats 9—9 furnished with the

rods 10—10 which are connected by the wires  
11—11 and closed by the springs 12, and the  
springs 14—14 secured to the window-frame, 20  
of the cable-guide 15, the pulleys 25 and 26  
secured to the sides of the building, the ca-  
bles 27 passing through the cable-guide and  
said pulley and connected to the outer edges  
of the shutters, and the cables 29 passing 25  
through the cable-guide, the screw-eyes 30  
and 31 and secured to the slat-rods, as and  
for the purpose described.

In witness whereof I have hereunto set my  
hand.

CARL W. ENQVIST.

Witnesses:

HENRY J. MILLER,

M. F. BLIGH.