

G. PAGANO.
WINDOW SHADE.
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1,402,176.

Patented Jan. 3, 1922.

Fig. 1.

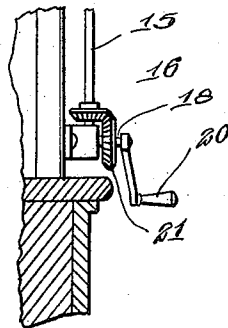
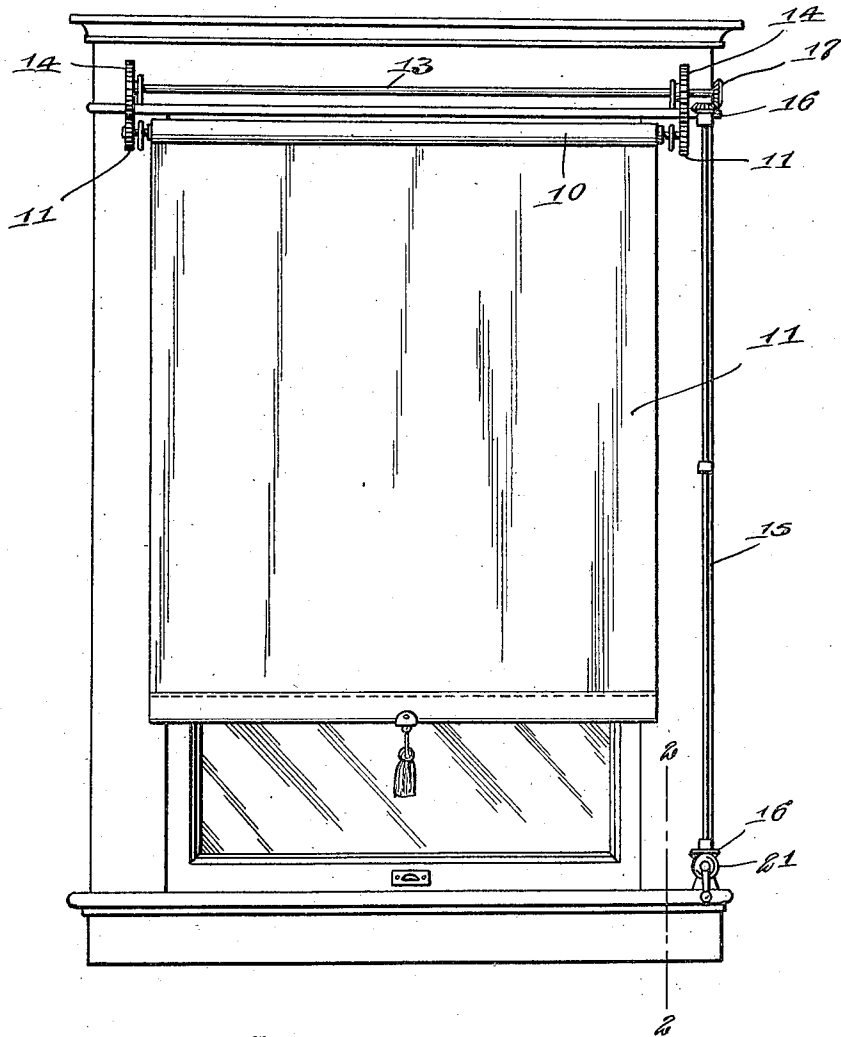


Fig. 2.

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WITNESSES!

UNITED STATES PATENT OFFICE.

GAETANO PAGANO, OF BROOKLYN, NEW YORK.

WINDOW SHADE.

1,402,176.

Specification of Letters Patent.

Patented Jan. 3, 1922.

Application filed April 10, 1920. Serial No. 372,901.

To all whom it may concern:

Be it known that I, GAETANO PAGANO, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Window Shades, of which the following is a specification.

This invention relates to window shades, and more particularly to a normal construction of means for rolling and unrolling the shade upon and from its support.

More specifically stated, the invention contemplates providing the shade roller with gears which are adapted to mesh with the gearing on a rotatable shaft, so that when the latter is rotated the shade roller is actuated to roll the shade thereon or unrolling the shade therefrom depending upon the direction of rotation of the shaft.

The nature and advantages of the invention will be better understood when the following detailed description is read in connection with the accompanying drawings. The invention resides in the construction, combination and arrangement of the parts as claimed.

In the drawings forming part of this application like numbers of reference indicate similar parts in the several views wherein:

Figure 1 is a front elevation of the window shade showing its operating means.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Referring to the drawings in detail 10 indicates a shade roller and 11 the shade carried thereby. At each end of the shade roller I provide the same with a gear 12. Arranged in parallelism with the shade roller 10 is a shaft 13 supported for rotation, each end of this shaft being equipped with a large gear 14 which meshes with the adjacent gear 11' of the shade roller 10. By reason of this construction, it is manifest that when the shaft 13 is rotated, similar motion is imparted to the shade roller 10 so that the shade can be wound upon or unwound therefrom depending upon the direction of rotation of the shaft 13.

For the purpose of rotating the shaft 13

with a minimum of effort, I provide a vertically disposed rod 15 equipped at each end with a bevel gear 16. The gear 16 at the upper end of the rod 15 meshes with a similar gear 17 carried by one end of the shaft 13. A shaft 18 is mounted for rotation and provided with a crank handle 20 for rotation of the same. The shaft 18 is equipped with a beveled gear 21 which meshes with the adjacent beveled gear 16 of the rod 15. In practice, the shaft 18 is rotated through the instrumentality of a crank handle 20. Rotation is imparted to the rod 15 through the gearing connection 16 and 21. As the rod 15 continues to rotate, rotary movement is transmitted to the shaft 13, which in turn imparts similar motion to the shade roller 10 through the gearing 12 and 14. Consequently, the shade 11 can be easily wound upon and unwound from the shade roller 10.

While it is believed that from the foregoing description the nature and advantages of the invention will be readily apparent I desire to have it understood that I do not limit myself in this connection and such changes may be resorted to when desired as properly fall within the scope of what is claimed.

What I claim is:—

The combination with a window shade roller having a gear at each end thereof, of a rod arranged above and parallel with said roller and mounted upon the window casing for rotation, gears carried by said rod and meshing with the gears carried by the shade roller, said rod projecting at one extremity an appreciable distance beyond the adjacent end of the roller, a beveled gear carried by the projecting extremity of said rod, a vertically disposed operating shaft, a beveled gear carried by the upper end of the shaft and meshing with the first mentioned beveled gear between the latter and the adjacent gear carried by said rod, and means for rotating said shaft whereby said roller is rotated through the instrumentality of said rod.

In testimony whereof I affix my signature.
GAETANO PAGANO.