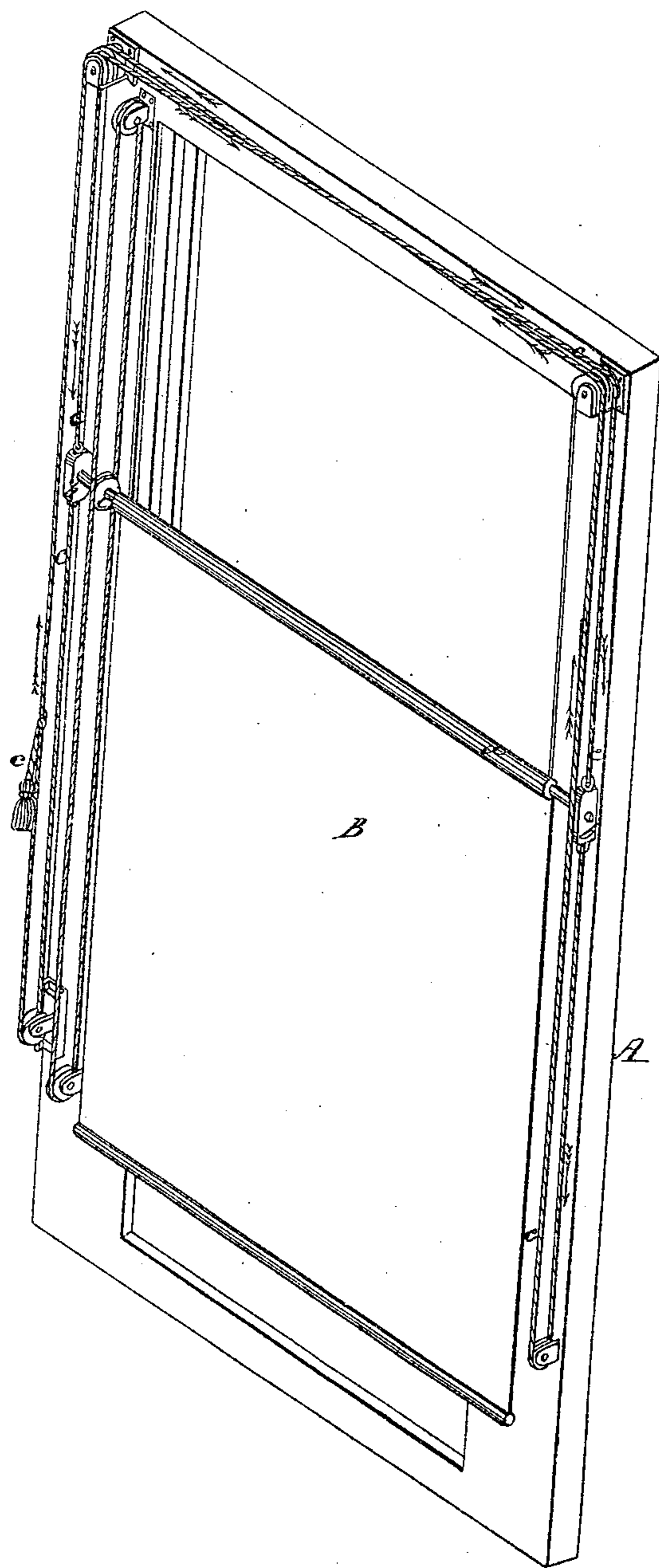


J. J. CROOKE.
WINDOW SHADE.

No. 13,482.

Patented Aug. 21, 1855.



UNITED STATES PATENT OFFICE.

JNO. J. CROOKE, OF NEW YORK, N. Y.

WINDOW-SHADE.

Specification of Letters Patent No. 13,482, dated August 21, 1855.

To all whom it may concern:

Be it known that I, JOHN J. CROOKE, of the city, county, and State of New York, have invented certain new and useful Improvements in Window-Shades; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawing, making a part of this specification, which is a perspective view of a window with my shade affixed, and similar letters refer to similar parts throughout.

My improvement consists in so hanging the roller as that it shall be capable of being moved up and down along the window pane, and still have the ordinary winding-up-cords to roll the curtain from the bottom.

The object of all this is to allow of the introduction of light from the top of the window, as well as from the bottom, at will, and there is also this advantage, that in case of opening a window from the top the curtains may also be rolled downward, and be out of the way of the current of air.

At A is a window frame shown detached from the building, in order to greater clearness of representation, and before the frame is seen the shade with the pulleys and cords for operating it.

At B is the shade attached to a roller in the ordinary way.

The roller is at (a) and shown in a position to leave the upper part of the window open, from which position it can be shifted up or down as may be required, and in the act of doing so either takes up or unrolls the curtain so as to leave the bottom stationary. This is accomplished by the movement of two sets of cords, each of which is an endless belt, and one of which elevates or lowers the roller, while the other imparts rotary motion to it. The eyes which support the ends of the roller (a) are attached to one of those systems of cords, the eyes being as shown at (b b'). This cord is arranged along one side of the window frame, across the top, and down the other side, passing around pulleys at each termination. In order to make the action more distinct I shall indicate this by two letters, as the cord is divided on each side by the eyes which form continuing links. The part (c) commencing at the under side of the eye (b), passes downward and around a pulley situated near the bottom of the window frame, thence upward and over the outermost pul-

ley of a pair at the top corner of said frame, thence across and over the innermost of a pair of like pulleys on the opposite corner, and terminating on the upper side of the eye (b'). At (e) is represented what is in effect a continuation of the same cord, (the eyes (b) and (b') being the link of connection) commencing on the upper side of (b), going up and over the innermost of the first pair of double pulleys, thence across and over the outermost one of the pair on the opposite corner, continuing down to near the bottom of the window frame, and there passing around a pulley as shown, and finally terminating on the lower side of the eye (b'). Thus the cords cross each other in passing over the window head.

The manner of supporting and moving the roller up and down the window frame can now be seen. If the tassels shown on the cord (c) be now carried upward in the direction shown by the arrow, the eye (b) will be pulled downward, while the opposite end, which is attached to the top of the eye (b'), will be slackened, but in order to insure a positive motion this eye should also be drawn down; this is accomplished by the other part of the cord (e) and which, commencing at the top of the eye (b) finally terminates on the under side of the opposite eye (b'). Now by tracing the two parts of the cord, as indicated by the arrow it will be seen that a downward direction of the cord (e) at (b) produces a like downward direction at the opposite side (b'), and vice versa the raising is produced by a reversal of the motions. This is not however all that is to be accomplished by the raising and lowering of the roller; it must at the same time revolve so as either to unroll or roll up the shade, but only at the same rate at which it is raised or lowered, so that the bottom of the shade will remain stationary or nearly so. As an example, suppose the roller (a) is stationed at the top of the window frame, and it is desired to drop it to the position shown in the figure. If the tassel (c) is now raised in the direction of the arrow, the roller will descend, and with it the whole of the shade would be dropped down were there no means to prevent it. To obviate this, as before remarked, the roller is made to revolve at the same time, and with sufficient speed to take up the curtain or shade. This is accomplished by the second set of cords, and this serves a double

purpose for it not only effects the revolving of the roller (*a*) while that is being raised or lowered by the cord (*c*) as just described, but it also serves to raise the shade from the
5 bottom, operating in that respect as a common shade in which the roller is permanently fixed at the window head.

At (*o o'*) is an endless cord passing over two pulleys, one situated at the top of the
10 window frame and the other near the bottom, as shown. Fixed to the roller (*a*) is a small grooved pulley (*i*), around which the part (*o'*) of the cord takes a turn. It will now be seen how the roller is made to turn
15 by a movement of the cord (*c*) for as the roller ascends or descends, (the cord (*o, o'*), remaining stationary) the pulley (*i*) must receive motion by its passage along the cord (*o'*), being the same as if rolling upon it,
20 and the turn taken around the pulley being simply to insure friction. To raise and lower the shade from the bottom it is only necessary to operate the cord (*o*) up or

down which will turn the pulley (*i*). Thus it will be seen that the shade may be raised 25 or lowered from both ends and operated in the several ways described. The cords are kept stretched to the requisite degree by having some one of the pulleys capable of shifting in a rack work in a manner well 30 known.

What I claim as of my invention and desire to secure by Letters Patent of the States is—

So constructing and hanging a window 35 shade that the roller thereof shall be capable of being raised and lowered, and at the same time shall roll or unroll the shade—and this without interfering with the fixtures for raising the bottom of the shade in 40 the ordinary manner, substantially as described.

JOHN J. CROOKE.

Witnesses:

S. H. MAYNARD,
WM. E. WHITE.