

No. 772,300.

PATENTED OCT. 11, 1904.

F. J. WATKINSON.
BALANCED ROLLER BLIND.
APPLICATION FILED NOV. 20, 1903.

NO MODEL.

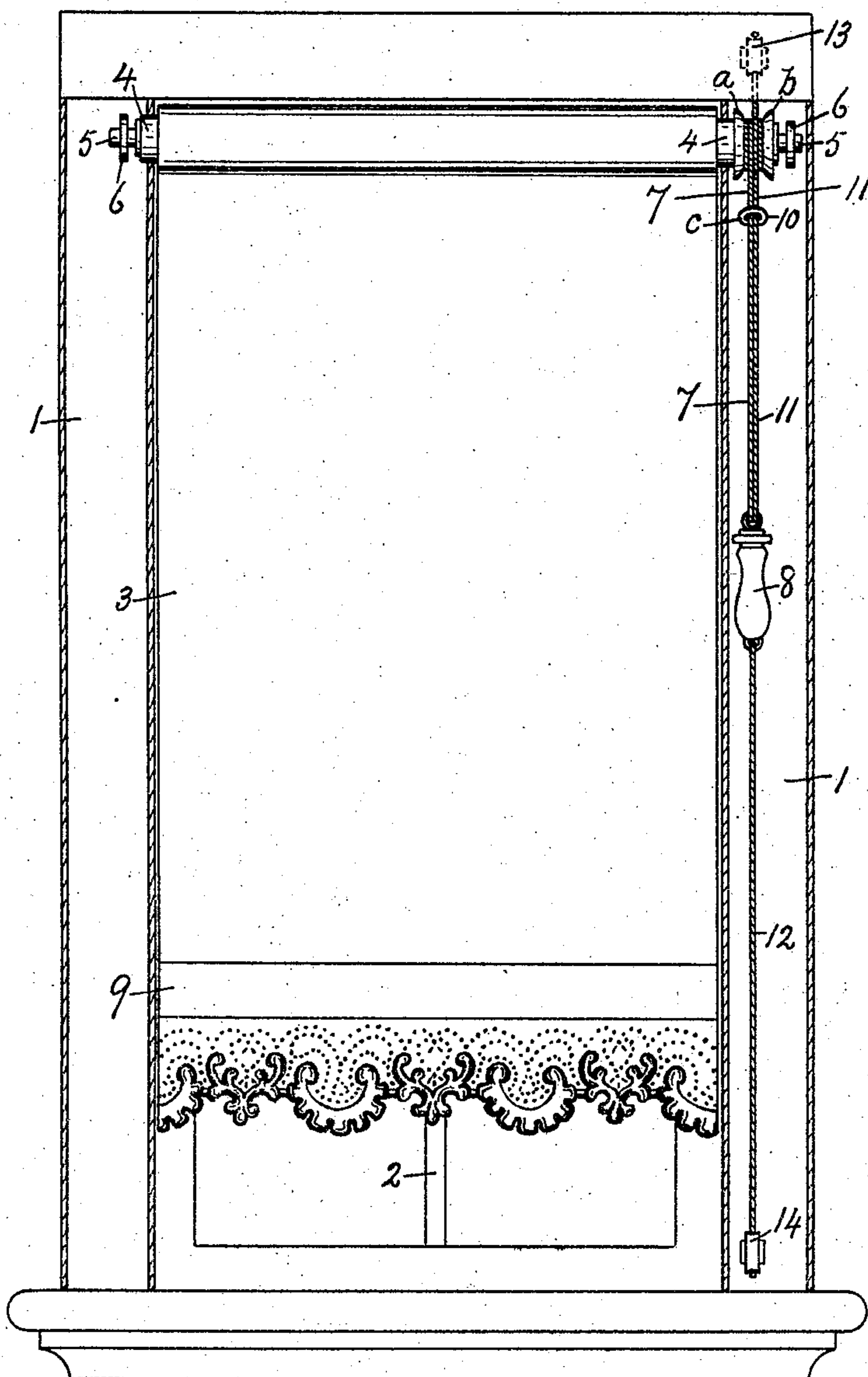


Fig. 1.

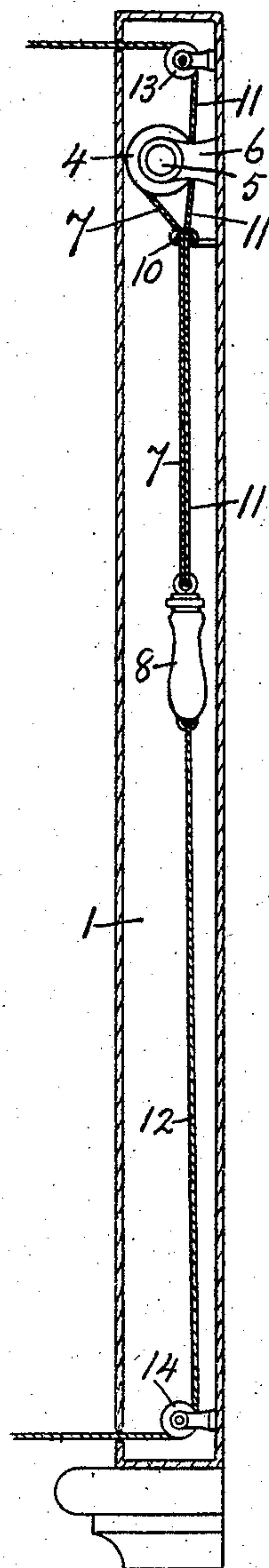


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

FREDERICK J. WATKINSON, OF STRATHROY, CANADA, ASSIGNOR OF ONE-HALF TO CHARLES W. SMITH, OF LONDON, ONTARIO, CANADA.

BALANCED ROLLER-BLIND.

SPECIFICATION forming part of Letters Patent No. 772,300, dated October 11, 1904.

Application filed November 20, 1903. Serial No. 182,044. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK J. WATKINSON, a subject of the King of Great Britain, and a resident of Strathroy, in the county of Middlesex, in the Province of Ontario, Canada, have invented a new and useful Balanced Roller-Blind, of which the following is a specification, reference being had to the accompanying drawings, wherein—

Figure 1 is a front elevation of a window-frame, partly in vertical section, showing my improvements applied thereto with the curtain in position. Fig. 2 is a transverse vertical sectional view of the window-frame, showing the improvements in position.

The object of this invention is to provide a balanced roller curtain or blind that will remain stationary the instant that it is released and at any elevation to which it may be adjusted, and also of providing the cord which operates said curtain with a guide-brake, the friction of the cord on which brake will firmly and instantly hold the cord, as well as the blind, at the position to which it is adjusted, to avoid and completely prevent the slightest accidental movement of said blind as its weight varies when at different elevations, and at the same time provide a substantial and efficient device for this purpose, one in which its simplicity, its ready application to house, veranda, opera, and street and railway car windows, and for firmly holding the lightest house or railway to the heaviest store or opera curtain or blind, and its cheapness of manufacture are material points both as regards its novelty, its efficiency, and its adaptability to the trade.

In the accompanying drawings the numeral 1 designates a window-frame; 2, the sash; 3, the shade, curtain, or blind; 4, the roller, upon which said curtain or blind is supported and on which it may be rolled or unrolled, as desired; 5, trunnions on the ends of said roller, and 6 brackets secured to the window-frame 1, in which brackets said trunnions are supported, held in place, and revolve perfectly free and in opposite directions when required.

7 designates a cord or rope, one end of which is attached to the roller 4, and to the other

end of said cord a weight 8 is secured, so that the curtain can be operated thereby instead of catching hold of said curtain when wishing to raise or lower it, which contact of the hand with said curtain would have a tendency to soil it at this point, all of which is avoided and completely prevented by using the weight to raise or lower the curtain.

9 designates the curtain-stick, which is usually inserted in a loop formed at the lower free end of the curtain. I preferably weight this stick 9, so that the weight of the curtain 3, together with the weight of said stick 9, will balance the weight 8, or instead of weighting the curtain-stick 9 the curtain-pull (not shown, but which is ordinarily employed and attached to the lower free end of the curtain) may be weighted to balance the weight 8, or, if preferred, another weight may be attached by a cord to the opposite end of the roller 4 and so arranged that as one weight was raised the other would lower to balance the blind and hold it at the position to which it may be adjusted.

At the point where the cord is attached to the roller two beads *a b* may be formed or a recess equal to the thickness of the cord or rope may be formed in the roller to prevent said cord or rope 7 when winding on the roller 4 from accidentally running off the end of the latter.

10 designates a guide-brake secured to the window-frame 1, as shown in Fig. 2, or to any part thereof or to a bracket secured to said window-frame at a different elevation than the curtain-roller, and said guide-brake 10 is provided with a hooked end *c*, or said end *c* may be in the form of a loop or eye, through which the cord or rope 7 passes, and said guide-brake 10 is adapted to be adjusted to or from a vertical line running through the axis of said roller, and I preferably form the other end of said guide-brake with a screw-thread (not shown) and insert it in the window-frame to provide a convenient means for attaching and supporting said guide-brake 10 in place and for adjusting it to or from said line running vertically through the axis of the roller 4. The object of adjusting said guide-

brake to or from a line running vertically through the axis of said roller is to increase or reduce the inclination of the rope or cord from the point where it leaves the roller to said
 5 guide-brake, and thus increase or reduce the frictional contact of said cord or rope thereon, and thus adapt the one guide-brake to hold blinds of different widths or lengths.

As shown in the drawings, the cord 7, the
 10 weight 8, and the end of the roller 4, on which said cord or rope is wound, is inclosed in a hollow window-frame 1, and the blind is operated by the supplemental ropes or cords 11 and 12, passing over the pulleys 13 and 14, re-
 15 spectively, and secured to the opposite ends of the weight 8, so that by means of these supplemental ropes the operator may be at some considerable distance away from the blind and yet readily and instantly adjust the
 20 blind as desired. Again, the portion of the roller on which said cord or rope 7 is wound may be separate from the roller and in the form of a spool and secured to the end of
 25 said roller, if preferred, and the weight 8 may be formed of glass or any other material and of any handsome or ornamental design desired.

The operation of the raising and lowering of this blind is very simple. It is accom-
 30 plished simply by operating the supplemental cords 11 and 12 to move the blind in the desired direction, and by adjusting the guide-brake 10 from a line running vertically through the axis of said roller the portion of
 35 the rope between the roller and guide-brake will be adjusted to a more horizontal position, and thus increase the frictional contact of the rope on said brake, and, vice versa, by
 40 adjusting said guide-brake toward a line running vertically through the axis of said roller the portion of the rope between said roller and said guide-brake will be adjusted to a
 45 more vertical position, and thus reduce the frictional contact of said cord or rope on said guide-brake.

The provision of an adjustable guide-brake and the weighted cord passing therethrough permits the curtain to be instantly and firmly held at any elevation to which it may be ad-
 50 justed. By this arrangement a single brake may positively hold the curtain or blind at different heights and to avoid and completely prevent the slightest accidental raising or
 55 lowering of the curtain under all circum-

The blind being balanced, all springs and holding-pawls or other like devices which are usually employed with roller-blinds and which are so liable to get out of order are dispensed with, and a further advantage of the blind
 60 being balanced is that if the operator should let go of the blind at any place or position it will remain stationary, and consequently all danger of the blind running up to the top of
 65 the window, which would tear or injure it or drag it off the window-blind stick, is avoided and completely prevented.

I have found by experiment that the construction herein shown and described gives the best results. At the same time while I
 70 prefer said construction I do not wish to limit myself to the details thereof, as they may be modified in various ways without departing from the spirit of my invention.

Having thus described my invention, I
 75 claim—

In combination with a rotatably-mounted roller, a rectangular box forming one side of a window-frame, and into which box one end of the roller projects, a curtain attached at its
 80 one end to, and adapted to wind on and unwind from the roller, a weighted stick carried by the curtain near its free end, beads formed on the roller near one end, a cord having its
 85 one end attached to the roller between the beads, a weight attached to the other end of said cord, a guide-brake embodying a loop through which the cord is passed, and which is adjustable to or from a vertical line run-
 90 ning through the axis of said roller for varying the inclination of the cord between the roller and the loop, the said cord, weight, guide-brake and the beads on the roller in-
 95 closed by the rectangular box, pulleys mounted in the box adjacent its upper and lower ends, a supplemental cord attached to the upper end of the weight and running over the
 100 upper pulley and through an opening in the box to raise the weight and adjust the curtain in one direction, and a second supplemental
 105 cord attached to the lower end of the weight and running over the lower of said pulleys and through an opening in the box for adjusting the curtain in the opposite direction.

In testimony whereof I have signed in the
 105 presence of the two undersigned witnesses.

FREDERICK J. WATKINSON.

Witnesses:

P. J. EDMUNDS,

A. BYRICK.