No. 770,262. PATENTED SEPT. 20, 1904.

B. F. CHILDRESS.

ADJUSTABLE WINDOW SHADE.

APPLICATION FILED DEC. 23, 1903.

NO MODEL.

Fig. 1.

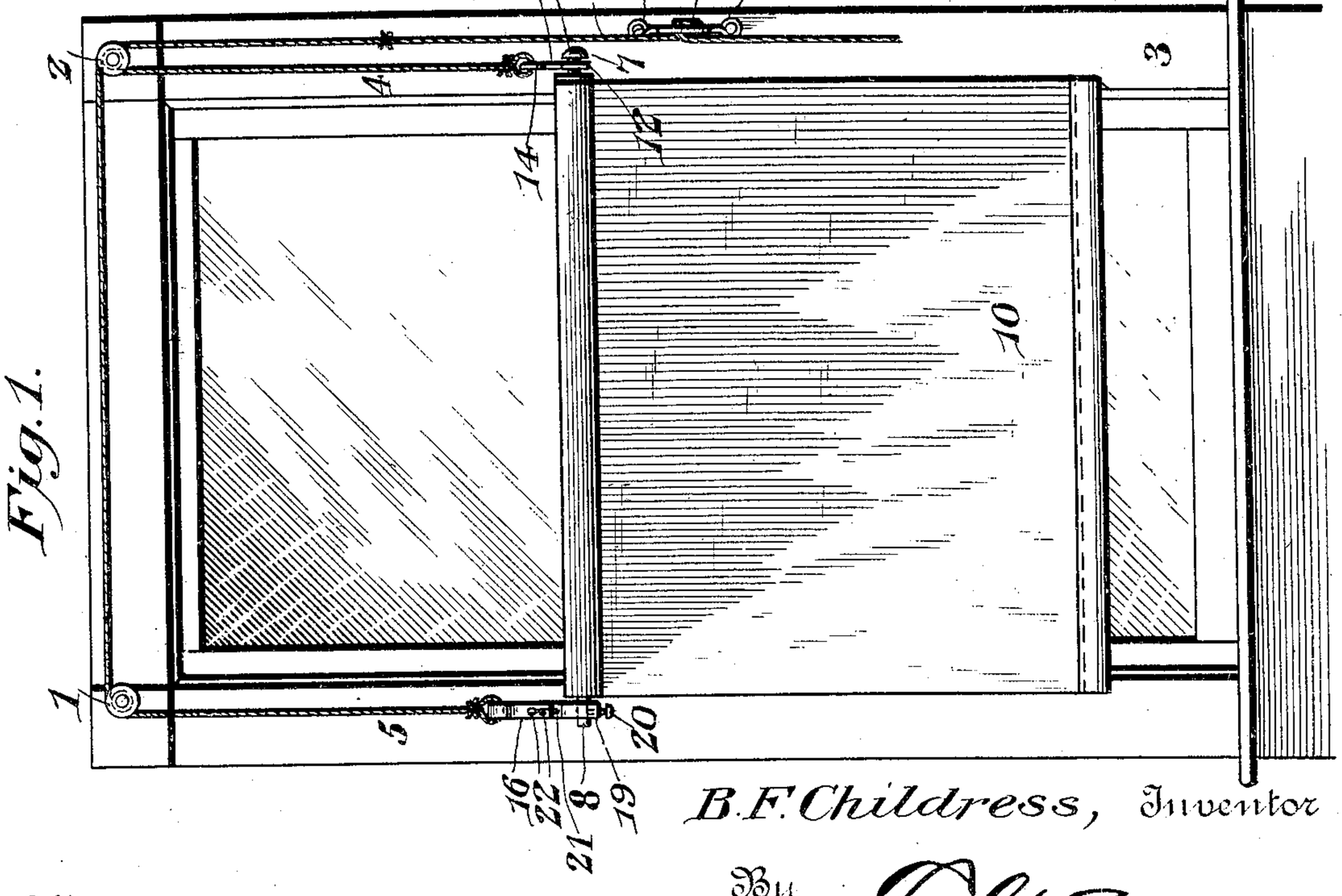

Fig. 2.

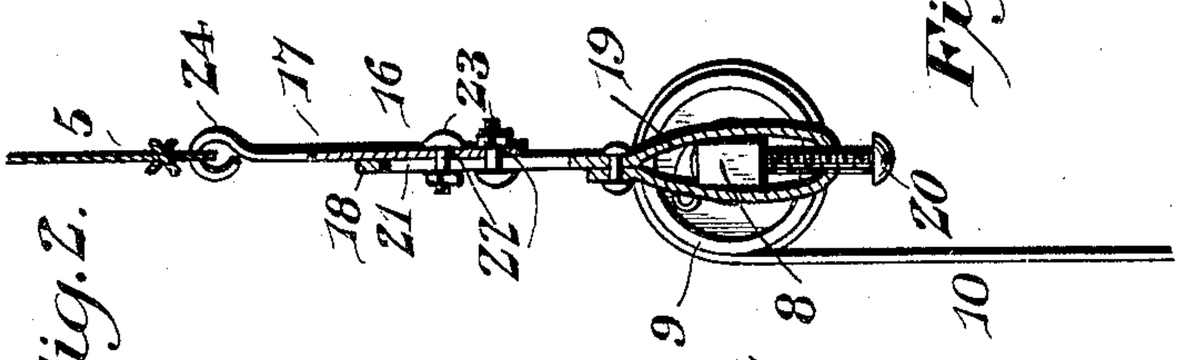

Fig. 3.

Fig. 4.

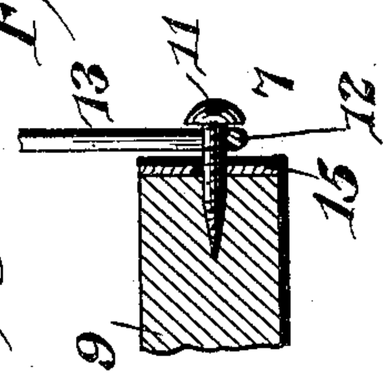

Fig. 5.

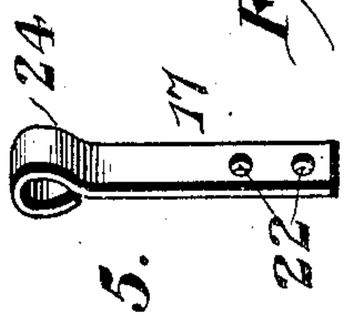

Fig. 6.

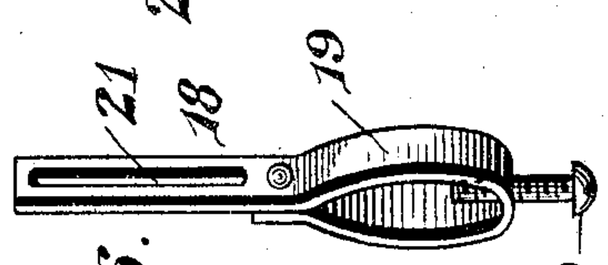

Fig. 7.

Fig. 8.

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No. 770,262. Patented September 20, 1904.

UNITED STATES PATENT OFFICE.

BENJAMIN F. CHILDRESS, OF LYNCHBURG, VIRGINIA.

ADJUSTABLE WINDOW-SHADE.

SPECIFICATION forming part of Letters Patent No. 770,262, dated September 20, 1904.

Application filed December 23, 1903. Serial No. 186,333. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN F. CHILDRESS, a citizen of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Adjustable Window-Shade, of which the following is a specification.

The invention relates to adjustable window-shades.

The object of the present invention is to improve the construction of devices for hanging window-shades and to provide a simple and comparatively inexpensive one of great strength and durability adapted to be quickly attached to any window-shade, whether large or small, and capable of being securely fastened to the same.

A further object of the invention is to provide a device of this character having means for securely fastening the operating-cord or connection whereby the window-shades will be effectually prevented from being released should the free end of the operating-cord or connection be pulled.

Another object of the invention is to provide a window-shade hanger adapted to accommodate itself to any variations in size of the journal, which is connected with the spring of a curtain or shade, whereby such journal will be firmly clamped in the device.

The invention also has for its object to provide a curtain-shade fixture having an extensible hanger adapted to be varied in length to suit the character of the spring of a window-shade, and thereby prevent a heavy or strong spring from rotating the hanger instead of the roller.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is an elevation of a window provided with a shade-fixture constructed in accordance with this invention. Fig. 2 is a detail view, partly in section, illustrating the manner of clamping one of the journals of the shade-roller. Fig. 3 is an elevation illustrating the manner of mounting the other end of the shade-roller. Fig. 4 is a sectional view of the same. Fig. 5 is a detail view of one of the sections of the extensible hanger. Fig. 6 is a similar view of the other section of the hanger. Fig. 7 is a detail view of the link. Fig. 8 is a detail view of the cord-holder.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 and 2 designate pulleys located at opposite sides of the top of a window-frame 3 and receiving branches 4 and 5 of an operating-cord or connection 6. The pulleys 1 and 2, which may be of any desired construction, are arranged in the usual manner. The branches 4 and 5 of the operating-cord or connection depend from the pulleys and are provided at their lower ends with means for receiving the journals 7 and 8 of a shade-roller 9. The shade-roller 9 of the window-shade 10 is provided at one end with a round journal, and it has at its other end a polygonal journal, which is connected with a spring of the roller in the usual manner. The journal 9 preferably consists of a screw having a head 11 and extending through the lower eye 12 of a wire link 13, which is provided at its upper end with a similar eye 14 for connection with the branch 4 of the operating-cord. The screw 11 is embedded in the end of the shade-roller 9, and the latter is preferably reinforced by a circular end plate 15, secured to the roller by screws or other fastening devices, and provided with a central opening for the passage of screws 11. The link 13 is constructed of a single piece of material and consists of a straight body portion and the end eyes 12 and 14. The end portions of the wire of the link 13 are coiled or bent to form eyes 12 and 14, as clearly shown in Fig. 7 of the drawings. The upper eye permits the branch 4 of the operating-cord to be readily secured to the link, and the lower eye forms a bearing in which the journal-screw 11 freely rotates.

It has been found by experience that the spring-journals 8 of shade-rollers vary in size, and in order to enable the fixture to be applied to any size window-shade, whether large or small, an adjustable hanger 16 is provided. This hanger, which is composed of upper and lower sections 17 and 18, is provided at the lower end of the lower section with a substantially oval loop 19, having upwardly-converging sides between which the spring-journal is tightly clamped by a set-screw 20. The set-screw 20 is mounted in a threaded perforation of the bottom of the oval loop, and it is adapted to engage the lower edge of the spring-journal 8, whereby the said journal is forced tightly into the crotch or tapered portion at the top of the loop. By this construction the spring-journal is securely fastened in the hanger and the latter is adapted to receive spring-journals of different sizes. The lower section 18 is provided with a straight upper portion extending from the top of the loop and provided with a longitudinal slot 21 and adapted to overlap the body portion of the upper section 17, which is provided with perforations 22 for the reception of bolts 23 or other suitable fastening devices. These bolts operate in the slot 21 and adjustably connect the upper and lower sections, which are adapted to be moved longitudinally on each other to vary the length of the hanger to adapt the same for holding shade-rollers having springs of different sizes. It has also been found by experience that a heavy or strong spring requires a relatively long hanger in order to prevent the spring from rotating the hanger instead of the curtain or shade. The adjustable connection between the upper and lower sections will enable the parts to be adjusted to counteract any tendency of the spring of the roller to rotate the hanger. Each section of the hanger is constructed of a ribbon or strip of metal, the lower section being bent upon itself to form the oval loop and the upper end of the upper section being bent upon itself to form an eye 24 to receive the end of the branch 5 of the operating-cord or connection.

The operating-cord or connection is adjustably secured to the window-frame by means of a cord-holder 25, constructed of a single piece of wire, which is bent to form a longitudinal loop and upper and lower arms 26. The outer side of the loop, which is resilient, is preferably straight, as clearly shown in Fig. 8, and the inner side is composed of angularly-disposed portions 27, connected with the inner ends of the arms 26 and converging toward the same to form opposite tapered portions or crotches. When the operating-cord or connection is wound around the cord-holder in the tapered portions or crotches thereof, it is securely held, and should a child pull upon the free end of the cord the latter will be more tightly clamped by the cord-holder, whereby the operating-cord is effectually prevented from becoming accidentally unfastened by pulling upon its free end. The arms 26 are provided at their terminals with eyes 28 for the resception of screws or other suitable fastening devices for mounting the cord-holder on the window-frame.

It will be seen that the window-shade or curtain-fixture is exceedingly simple and inexpensive in construction, that it is adapted to be readily applied to any window, whether the same be large or small, and that it is capable of securely holding such shade. Also it will be clear that the spring-journal is securely clamped between the tapered sides of the opening of the loop of the hanger and that the latter is adapted to accommodate itself to any variation in the size of spring-journals. Furthermore, it will be apparent that the apparatus will enable a curtain or shade to be readily raised or lowered and that it will enable the same to be quickly secured at any desired adjustment, whereby the shade may be arranged in the desired position at a window to afford the proper light and to prevent it from interfering with the ventilation.

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

1. The combination of a pair of hangers, flexible connections supporting the same, and a curtain or shade having a spring-roller forming the sole connection between the hangers, one of the hangers being extensible to counteract the tendency of the spring to rotate it, substantially as described.

2. The combination of hangers, flexible connections supporting the hangers, and a curtain or shade provided with a spring-actuated roller having its journals mounted in the hangers and forming means for connecting the same, the hanger which receives the spring-journal being composed of adjustable sections adapted to vary the length of the hanger to counteract any tendency of the spring to rotate the same, substantially as described.

3. The combination of hangers, flexible connections supporting the same, and a shade-roller forming the sole means for connecting the hanger and having its journals mounted thereon, one of the hangers being provided at the bottom with means for clamping the spring-journal of the roller, and being composed of two overlapped adjustably-connected sections capable of varying the length of the hanger to counteract any tendency of the spring to rotate the same, substantially as described.

4. A curtain or shade fixture provided with a hanger having a loop arranged to receive the spring-journal of a curtain or shade roller, and having a tapered end or portion forming a crotch, and adjustable means located opposite the crotch for forcing the spring-journal into the same, substantially as described.

5. A curtain or shade fixture provided with a hanger having a substantially oval loop arranged to receive the spring-journal of a curtain or shade roller, and a screw mounted on the loop and located opposite the crotch of the same, and adapted to force the spring-journal into the crotch, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

BENJAMIN F. CHILDRESS.

Witnesses:

L. M. PERRY,

L. H. PRICE.