

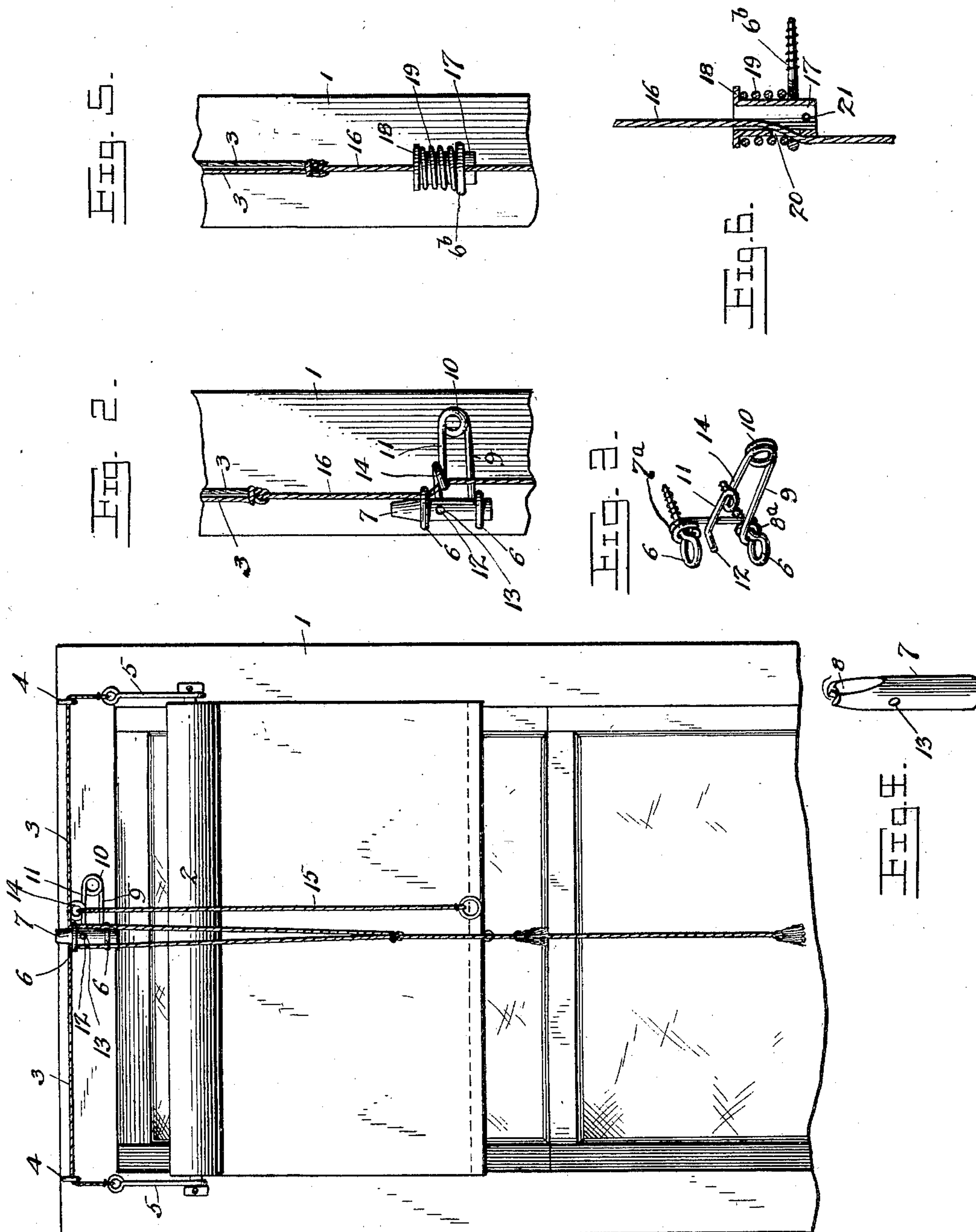
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Patented June 3, 1902.

E. J. WELLS & J. F. YOUNG.  
WINDOW-SHADE CORD CLAMP.

(Application filed Apr. 4, 1901.)

(No Model.)



Witnesses

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# UNITED STATES PATENT OFFICE.

ELMER J. WELLS AND JOHN F. YOUNG, OF NASHUA, IOWA.

## WINDOW-SHADE-CORD CLAMP.

SPECIFICATION forming part of Letters Patent No. 701,436, dated June 3, 1902.

Application filed April 4, 1901. Serial No. 54,349. (No model.)

*To all whom it may concern:*

Be it known that we, ELMER J. WELLS and JOHN F. YOUNG, citizens of the United States, residing at Nashua, in the county of Chickasaw and State of Iowa, have invented a new and useful Cord-Clamp for Window-Shades, of which the following is a specification.

The invention relates to improvements in cord-clamps for window-shades.

10 The object of the present invention is to improve the construction of cord-clamps for window-shades and to provide a simple and comparatively inexpensive one adapted to engage the cord for suspending a window-shade from the top of a window and capable of being readily operated to enable the window-shade to be raised and lowered bodily to arrange the shade-roller at the top of the window or at a point between the top and bottom  
25 of the same.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a front elevation of the upper portion of a window-frame having a shade-roller supported thereon by means of the present invention. Fig. 2 is a detail elevation of the curtain-supporting-cord clamp applied to one side of the frame. Fig. 3 is a detail perspective view of the cord clamp or holder with the clamping-plug removed. Fig. 4 is a detail perspective view of the clamping-plug. Fig. 5 is an elevation of a modified form of cord-clamp. Fig. 6 is a sectional view thereof.

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

Referring at first to Figs. 1 to 4, inclusive, 1 designates a window-frame, and 2 an ordinary spring-actuated shade-roller that is supported by means of the opposite cord portions 3, passing through the respective guides

4 at opposite sides of the upper portion of the window-frame and hanging therefrom, there being opposite roller-brackets 5, carried by the free ends of the cords and receiving the journals of the shade-roller. What may be termed the "inner" ends of the supporting-cords are mutually connected, so that both cords may be simultaneously adjusted by a single manipulation.

It is the essential object of the present invention to provide for adjustably holding or clamping the supporting-cord portions and is carried out by the provision of a pair of vertically-alined screw-eyes 6, set into the upper middle portion of the window-frame, as shown in Fig. 1, and a spring-actuated plug or clamp member 7, working in the eyes, so as to clamp the cord portions between the plug and the eyes, it being understood that the inner end portions of the cords pass downwardly through the eyes. The upper end portion of the plug is tapered and is also provided with opposite grooves 8, that extend longitudinally of the plug and deepen gradually from the inner to the outer ends thereof, so that the cords are gripped between the inner end portions of the backs of the groove and the adjacent portions of the upper eye, and when the plug is drawn downwardly the cords will be released through the medium of the increasing depth of the grooves.

For holding the clamping-plug elastically yieldable in its normal position there is provided a spring formed from a single length of wire, which has one end twisted about the shank of the upper eye, as at 7<sup>a</sup>, then coiled about the shank of the lower eye, as at 8<sup>a</sup>, thence extended laterally outward into an arm 9, then bent into a terminal spring-coil 10, then extended inwardly to form a spring-tongue 11, lying above the rigid arm, with its free end lying between the screw-eyes and bent laterally outward into a pin or projection 12, which is designed to enter a perforation or opening 13, formed transversely in the intermediate portion of the plug, whereby the latter is normally held elevated, so as to bind the cords against the upper eye. The intermediate portion of the spring-tongue is bent into a coil or eye 14 for the connection of a cord 15, whereby the spring-tongue may be



conveniently drawn downwardly to release the plug from its binding engagement with the shade-supporting cords.

From the foregoing description it will be apparent that the frictional engagement of the plug with the cords is sufficient to overcome the weight of the shade-roller, and thereby support the latter at any adjustable elevation, and by pulling downwardly upon the lower portions of the shade-hanger cords the frictional engagement of the plug may be overcome and the shade elevated. To lower the shade, it is necessary to release the grip of the plug by drawing downwardly upon the cord 15, when the shade may be adjusted to any position.

In Fig. 2 the clamp has been shown applied to one side of the window-frame instead of the upper middle portion thereof, so as to accommodate the clamp to the supporting-cords when both of the latter are passed through one of the supporting-guides and run downwardly at one side of the window-frame to a single operating-cord 16, the latter being passed downwardly through the upper eye and thence through the intermediate eye of the spring-tongue, so that a downward pull upon the cord will release the clamping-plug. In this latter application of the clamp the cord 15 is dispensed with, as the eye 14 forms a convenient finger-piece for pressing downwardly the spring-tongue.

The modified form of the device shown in Figs. 5 and 6 has a single screw-eye 6<sup>b</sup>, with a tubular plug 17 slidably mounted therein and provided with an upper outwardly-directed marginal rim or flange 18, there being a coiled spring 19 embracing the tube and bearing in opposite directions against the under side of the flange and the top of the guiding and supporting eye. One side of the tubular plug is provided with a perforation 20, and the cord is passed downwardly through the tube and thence outwardly through the perforation and downwardly between the outside of the tube and the guiding and supporting eye, whereby the cord is clamped between the plug and the eye. By pressing the plug downwardly, so as to bring the perforation below the eye, the cord will be released and may be adjusted as desired.

It will be observed that in both forms of the cord clamp or holder the cord passes through one guide-eye only, the lower guide-eye in the first form being used merely as an additional guide for the plug. The lower end of the tubular plug may be provided with a perforation 21 to enable a cord similar to the cord 15 to be attached to the plug for operating it.

What is claimed is—

1. A clamp for a window-shade-suspending cord comprising a fixed attaching-bracket having an eye for the loose reception of the cord, a clamping-plug slidably arranged in the eye and projecting from the same in opposite directions, and an exterior spring en-

gaging the bracket and the plug and holding the latter normally in its engaging position, substantially as described.

2. A clamp for a window-shade-suspending cord, comprising a screw-eye for the loose reception of the cord, a clamping-plug slidably mounted in the eye, and a spring bearing in opposite directions against the screw-eye and the plug to elastically yieldably hold the plug in its normal clamped position.

3. A clamp for a window-shade-suspending cord, comprising a bracket having an opening therein, a tubular plug slidably mounted in the opening and provided with a lateral opening, and a coiled spring embracing the plug and bearing in opposite directions against the same and the bracket.

4. A clamp for a window-shade-suspending cord, comprising a bracket having an opening therein, a tubular plug slidably mounted in the opening, and provided with a lateral perforation, and an upper external marginal flange, and a coiled spring embracing the plug and bearing in opposite directions against the bracket and the flange.

5. A clamp for a window-shade-suspending cord, comprising a screw-eye, a tubular plug slidably mounted therein, and having a lateral perforation formed in the lower portion and to cooperate with the screw-eye, and an upper external marginal flange, and a coiled spring embracing the plug, with its lower end resting upon the screw-eye and its upper end bearing upwardly against the flange of the plug.

6. A clamp for a window-shade-suspending cord, comprising an attaching-bracket having an opening therein, and a tubular clamping-plug slidably mounted in the opening and also provided with a lateral perforation, one wall of which is adapted to cooperate with the adjacent portion of the bracket to clamp the cord therebetween.

7. The combination with a window-shade-suspending cord, of a clamp therefor, comprising an attaching-bracket having an opening therein, and a spring-pressed tubular clamping-plug slidably mounted in the opening, and provided with a lateral perforation, the cord being passed into one end of the tubular plug and then outwardly through the lateral perforation therein, one wall of the perforation cooperating with the adjacent portion of the bracket to clamp the cord therebetween, and the plug being yieldable to separate said wall and the bracket to release the cord.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ELMER J. WELLS.  
JOHN F. YOUNG.

Witnesses:

LIPMAN LOSER,  
A. E. DYE.