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PATENTED JUNE 11, 1907.

F. W. HUBBARD & T. A. MORTON.

SHADE CUTTING DEVICE.

APPLICATION FILED DEC. 28, 1906.

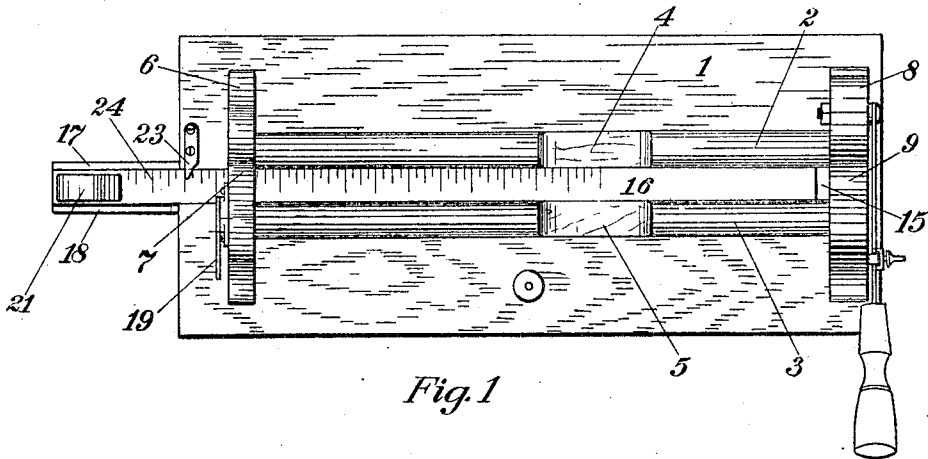


Fig. 1

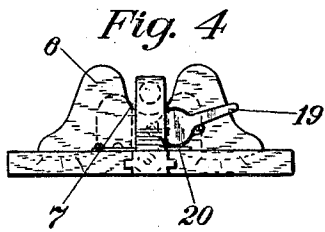


Fig. 4

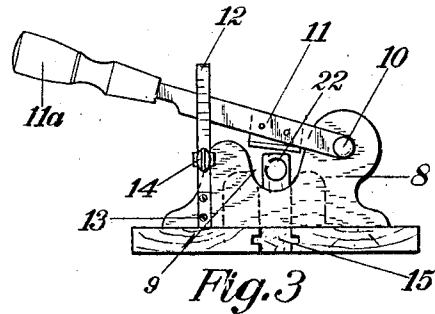


Fig. 3

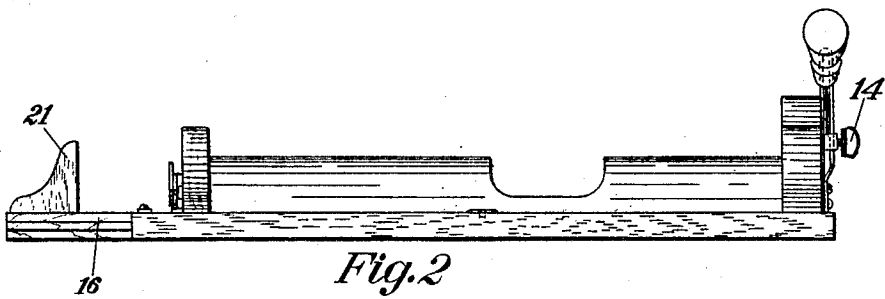


Fig. 2

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FRED W. HUBBARD AND THOMAS A. MORTON, OF COLUMBUS, OHIO.

SHADE-CUTTING DEVICE.

No. 856,403.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed December 28, 1906. Serial No. 349,789.

To all whom it may concern:

Be it known that we, FRED W. HUBBARD and THOMAS A. MORTON, citizens of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Shade-Cutting Devices, of which the following is a specification.

Our invention relates to a shade cutting device to be used in cutting rolled window shades and the like to a desired length, and differs essentially from similar devices now in use in that we dispense with roller supports for the shade, and provide a construction which is effective and satisfactory in use.

The exact nature of our device will hereinafter be fully set forth.

Referring to the drawings which are filed herewith and made a part of this application, Figure 1 is a top plan view of our improved shade cutting device; Fig. 2 is a side view of the same; Fig. 3 is a view of the end to which the knife is attached; Fig. 4 is a view of the opposite end of the device.

In the accompanying drawings, in which the same numeral indicates the same part throughout, 1 is the base of our device which is preferably constructed in two parts as clearly appears in the end views in Figs. 3 and 4; these parts are separated throughout their length, and each along its inner edge is provided with a longitudinal groove, the separation and the groove being provided for a purpose hereinafter explained. Along the inner edge of each part of the base is secured a shade support, two of which are provided, 2 and 3; each support is permanently attached to its base portion and rises above it to the height desired. These supports are parallel with each other and at their upper sides are rounded to adapt them to the curvature of the rolled shade. They are positioned at sufficient distances from each other to admit longitudinally between their upper curved faces an ordinary shade.

Inasmuch as the shade when being cut must be rotated beneath the knife, fixed shade supports as described herein would not be very satisfactory for the reason that no opportunity is afforded for giving the shade a periodical rotary movement, and to accomplish this purpose we cut out each shade support as indicated at 4 and 5 at a desired point to give access to the hand of the operator. In manipulating the shade after it has been placed upon the supports, the hand of the op-

erator is placed thereon and the shade is pressed downwardly slightly and at the same time is twisted or given an intermittent rotary motion; the cut outs 4 and 5 admit the hand of the operator as he grasps the shade, and thereby render it possible for him to turn the shade as desired. These cut-outs in conjunction with the rounded surfaces of the supports furnish a device upon which the shade may be manipulated as desired in a very satisfactory manner.

At one end of the base is provided the standard 6 having the depression 7 therein formed on the arc of a circle, and as shown in Fig. 4 the degree of curvature of the depression 7 coincides with the curvature of the inner portions of the upper faces of the supports, so that if a rolled shade be laid upon the supports so that it will extend into the depression 7, it will be found that the shade will lie snugly therein, being in contact with the depression 7 throughout the lower half of its circumference, and at the same time being in contact with the supports 2 and 3 throughout its length. At the opposite end of the base is a standard 8 having the depression 9 constructed in a similar manner for the purpose of receiving the shade as just described for the depression 7 of the standard 6; so that when a shade is properly positioned upon the supports and the standards it will be found to be in contact with the depression in each of the standards and also with the supports, and, owing to the curved faces of the supports and the curved depressions in the standards, it will be easy to give the shade a rolling motion as desired.

Secured upon the standard 8 at one side thereof is the knife 11 pivoted at 10 and provided at its other end with the handle 11^a; the knife is adapted to be operated vertically and the extent of its movement is limited by the guide 12, which, as appears in Fig. 2 is preferably constructed of a strip of material secured at its lower end to the standard 8 and bent outwardly and at its upper end doubled back upon itself as appears in Fig. 2 to leave a space between, within which the knife may move freely. The limit of the upward movement of the knife is determined by the bend or fold in the strip 12, and the downward movement is limited by the set screw 14, which is adapted to be adjusted vertically upon the strip 12. This device not only determines the limit of movement of the knife vertically but also prevents the

knife from developing a lateral swing, which would be highly objectionable.

The space 15 left between the two portions of the base 1 is adapted to be occupied by a sliding gage 16, which is provided with the tongues 17 and 18, for the purpose of engaging the grooves described above, which grooves are clearly seen in Figs. 3 and 4; the gage contains a scale 24; near one end of the base is provided the fixed indicator 23. When the gage is positioned at the desired grade of the scale the pivoted clamp 20 having the extension 19 thereon may be forced downwardly into contact with the gage to hold the same wherever positioned. At the outer end of the gage is the standard 21, having the opening 22 therein for the reception of the shade roller; this opening is made large enough to receive the roller upon the ordinary shade, and deep enough to permit the roller to penetrate the same until the end of the rolled shade portion abuts against the standard adjacent the opening 22. As rolled shades are placed on the market, they are wrapped with a covering and when sent out from the factories are usually compactly rolled, and the edges of the different layers of the roll are well alined; in shipment however, the roll loosens perceptibly and the outer layers will be more or less distorted.

When the shade is cut the greatest care must be taken to have the freshly cut edge straight, and it is apparent that this could not be accomplished unless the edges of the folds of the shade are first properly alined. This can be done in our device by inserting the roller into the opening 22, which will bring the edges of one end of the rolled shade squarely against the face of the standard 21; now if the operator grasps the shade and with a reciprocating motion forces the same several times against the face of the standard the edges of the shade will be properly alined, whereupon the cutting may proceed with assurance of leaving the freshly cut edge perfectly straight.

The shade is not at all supported by the standard 21, its entire weight and the pressure exerted thereon by the operator in manipulating the same beneath the knife being carried by the supports 2 and 3 and the standards 6 and 8. The opening 22 in the standard 21 is located centrally with respect to the circular depressions 7 and 9 and the lines of contact of the shade with the supports 2 and 3, and when the shade roller is positioned in the opening 22 it is rendered more easy to retain the shade in proper position for cutting. The gage having been moved to the desired point for cutting the shade at the proper length and having been fixed at that point by the pivoted clamp device 20, the operator will, in manipulating the shade, maintain a constant stress thereon downwardly and in the direction of the stand-

ard 21 to maintain a close engagement of the edge of the rolled shade with the face of the standard surrounding the opening 22 therein, whereby it is assured that the cut will be uniformly made at the desired point. It is readily seen that if no stop were provided for the shade at one end, it would be difficult to maintain the proper point of the shade beneath the knife, as there would be a constant tendency to slip either backwardly or forwardly in the supports.

From the foregoing description it will appear that we provide a shade cutting device which dispenses with the use of rollers, and is therefore more easily constructed; we further provide supports for said shade at the sides thereof and also adjacent the ends, said supporting faces being curved so that the shade rotates very readily thereon; we further provide the cut-outs in the lateral supports as indicated at 4 and 5 for the reception of the hand of the operator when holding the shade in proper position and turning the same beneath the knife.

In our device the friction between the shade and its support is reduced to a minimum by providing that the shade throughout almost its entire length is in contact with the lateral supports 2 and 3 along the lines formed by the contact of the curves formed by the upper faces of the supports and the circular shade, and near the ends thereof the shade rests in the narrow troughs 7 and 9 through very small portions of its length.

Our device is much more easily constructed than those involving the use of rollers, and does not contain parts which are likely to get out of order in use.

Having described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A shade cutting device having a base, parallel supports fixed rigidly thereon for supporting a shade upon their upper faces, and having depressions therein to receive the hand of the operator when grasping the shade to manipulate the same, the upper faces of said rigid supports being curved oppositely from the curve of the shade, standards adjacent the ends of the supports having depressions therein to fit the curve of the shade, a gage, a pivoted knife adjacent one end of said supports, and adjustable means for limiting the vertical swing of said knife.

2. A shade cutting device having a base, non-rotatable supports mounted thereon to receive a shade upon their upper faces, and having depressions therein to receive the hand of the operator for grasping the shade in manipulating the same, the upper faces of said supports being curved oppositely from the curve of the shade, standards adjacent the ends of the supports having depressions therein to receive the shade and being curved to fit the same, an adjustable gage, a stand-

ard thereon having an opening therein to receive an end of the shade roller, to permit the adjacent edges of the rolled shade to abut against said standard adjacent said opening whereby the folds of said edge may be properly alined, and a knife pivoted adjacent one end of said supports for cutting said shade.

In testimony whereof we affix our signatures in the presence of two witnesses.

FRED W. HUBBARD.
THOMAS A. MORTON.

Witnesses.

A. RAGER,
HORACE S. KERR.