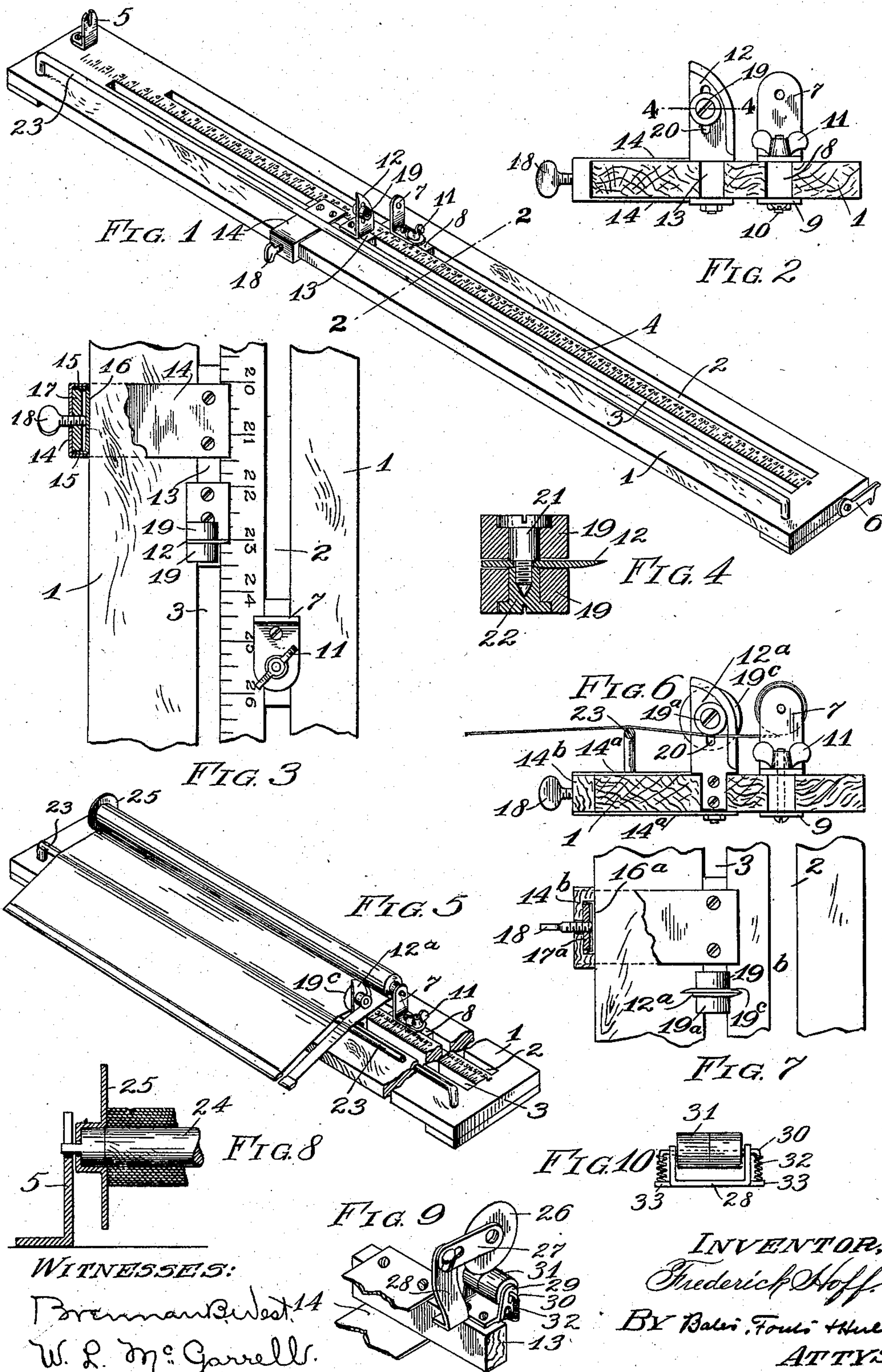


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SHADE TRIMMER.
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WITNESSES:

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SHADE-TRIMMER.

No. 915,859.

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To all whom it may concern:

Be it known that I, FREDERICK HOFF, residing at Canal Dover, in the county of Tuscarawas and State of Ohio, have invented a certain new and useful Improvement in Shade-Trimmers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to devices for trimming window shades, and it has for its object the production of a device of that character that is simple and economical in construction and that is capable of accurate adjustment of the knife whereby the desired width of shade may be secured.

Other objects of the invention will appear from the following specification and will be more especially set forth in the claims hereto.

In the drawings forming a part of this application, Figure 1 is a perspective view showing my invention; Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1 and looking in the direction of the arrow; Fig. 3 is a plan view of a portion of the invention showing the movable bracket for the curtain roller and the knife with the means for holding the latter in its adjusted position, a portion of the latter means being broken away in order to more clearly illustrate the details thereof; Fig. 4 is a horizontal section through the knife, said section being taken on the line 4—4 of Fig. 2; Fig. 5 is a perspective view of my invention showing a shade in position for trimming, and also showing a modified form of knife; Fig. 6 is a view similar to Fig. 2 showing the modified construction of Fig. 5; Fig. 7 is a plan view of the structure shown in Fig. 6; Fig. 8 is a sectional view through the left-hand end of the roller shade showing the means for guiding the shade; Fig. 9 is a perspective view of a modified form of cutter; and Fig. 10 is a detail view of one of the cutting rollers shown in Fig. 9.

Taking up a more specific description of the invention by reference to the drawings, in which the same reference characters designate the same parts throughout the several views, 1 is the main frame of my shade trimmer, the same being provided with a longitudinal slot 2 at the rear of its median line and with a similar slot 3 near the median line, the upper surface of the frame 1 being provided between said slots with a scale 4 which extends from a short distance to the

tially the right-hand end of the slots 2 and 3. At its end, the frame 1 is provided with pivoted hooks 6, but one being shown, which are adapted to engage with the edge of the table or bench supporting the trimmer and thereby hold the latter from forward movement while the shade is being trimmed.

The bracket 7 for the right-hand end of the shade roller is mounted upon a block 8 that is adapted to slide back and forth in the slot 2, the bracket being wider than the slot and overlapping the upper edges of the latter. Below the block 8 is a plate or washer 9 which is also wider than the slot 2, and, through said plate, block and bracket, extends a bolt 10 having on its upper end a wing-nut 11, by turning which the frame 1 may be clamped between said plate and bracket so as to hold the latter in any position to which it may be moved. As will be seen, the bracket 7 is provided with an opening for the reception of the non-rotatable journal pin of the shade-roller, whereas the bracket 5 is provided with a slot into which the flattened end of the rotatable journal pin may be inserted. By moving the bracket 7 in the slot 2 the trimmer may be adapted for any length of shade roller.

The knife 12 is secured to a member or block 13 which is adapted to slide in the slot 3, said knife projecting upwardly from the block and having a cutting edge extending toward the rear of the frame. To the upper and lower sides of the block 13 I attach the ends of a U-shaped plate 14, which plate extends forwardly both above and below the frame 1, said plate being preferably integral throughout its length and projecting a slight distance beyond the forward edge of the frame 1. At the edges of the said projecting portion, the plate is turned rearwardly so as to form flanges 15 that project substantially to the front edge of the said plate, the flanges and the forward part of the plate forming, with the front edge of the frame, a small chamber in which I place a U-shaped friction plate 16, the up-turned portions of which bear against the inner faces of the flanges 15, as shown in Fig. 3, forming a small chamber between the friction plate and the front portion of the plate 14. Within said latter chamber I place a plate or nut 17, and through a threaded opening in the plate 14 and nut 17 I insert a thumb-screw 18, which screw is adapted to engage the friction plate 16 and press the

same against the front edge of the frame 1 so as to clamp the plate 14 and the bracket 13 in any position along the scale 4.

In Figs. 1, 2 and 3, the knife is shown as secured to the upper surface of the block 13, and as having its edges projecting over the edges of the slot 3, so that the knife is brought directly over the scale 4, whereby it may be accurately adjusted along said scale.

From this description it will be understood that, the shade roller having been mounted in the brackets 5 and 7 and the knife 12 adjusted along the scale so as to trim the shade to the desired width, the free end of the shade is drawn forward against the edge of the knife which slits the shade, leaving on the left-hand side of the knife the desired width of the shade.

In order to hold the shade in proper position with respect to the knife, I journal rollers 19 on the knife, the latter being slotted at 20 so as to permit of vertical adjustment of the rollers. To hold the rollers in position, I employ a shoulder screw 21 and a shouldered-nut 22, the screw being passed through the slot 20 and the nut being screwed thereon and clamped against the sides of the knife. In trimming the shade, the same is drawn forwardly beneath the rollers 19 which hold the shade downwardly and prevent it from rising above the knife.

In the form of my invention shown in Figs. 5, 6 and 7, the knife 12^a is secured to the end of its block rather than to the upper surface thereof, as in the form first described, and the plates 14^a are attached at their front ends to a block 14^b, which may be of wood or any other suitable material. This block has on its rear surface a chamber in which I mount a friction plate 16^a and a nut 17^a, having substantially the same form and function as the plate and nut 16 and 17 previously described. The knife 12^a has journaled thereto a roller 19^a, like the rollers 19, and, on the opposite side, a roller 19^b, which latter roller has secured to it, adjacent the knife, a rotary cutter 19^c. This roller cutter coöperates with the knife 12^a to more effectually and more easily slit the shade. In order to assist in guiding the shade, I provide in front of the slot 3 a rod 23, said rod having down-turned ends which are secured in the frame 1 near the ends of the latter. This rod projects upwardly from the frame a slight distance above the lower surface of the rollers 19^a and 19^b so that the shade is held against said rollers during the trimming operation, even if the shade should be pulled downwardly in front of the rod. By this construction, the presence of the shade against the roller 19^b is sufficient to rotate the cutter 19^c.

In Fig. 8 I have shown a means for guiding the shade so as to cause the latter to wind upon the roller 24 a slight distance from its

end, which means consists of a circular disk 25 of metal or other suitable material having a cylindrically shaped recess at its center for the reception of the end of the roller 24, the said disk holding the shade back from the end of the roller. This disk is perforated at the center of the said recess through which perforations project the rotatable journal for the roller.

In Figs. 9 and 10 I have shown a modified form of cutter for this shade, which consists of a rotatable knife-edge disk 26 that is journaled in the rearward end of an arm 27, said arm being jointedly secured to a bracket 28, the latter being secured to the upper surface of the sliding block 13. The bracket 28 is provided with ears 29 at its ends, through elongated slots in which projects a rod 30 upon which a roller 31 is journaled. This roller coöperates with the disk 26 so as to slit the shade when it is drawn therebetween; and in order that the edge of the disk may not be dulled by contact with the roller, I make the latter of some softer material, preferably zinc. The roller is held in contact with the disk by springs 32 which bear upwardly against the rod 30, the ends of the latter being preferably bent downwardly so as to project within the springs, the latter resting upon ears 33 which project from the bracket 28.

As will be seen by reference to Figs. 1 or 5, there is nothing to prevent the use of a saw between the brackets 5 and 7, so that the shade rollers may be held between said brackets while they are being sawed to the desired length.

I claim:

1. In a shade trimmer, a frame having a pair of slots extending longitudinally therein, a stationary bracket at one end of the frame, a movable bracket mounted for adjustment in one of said slots, a cutter mounted for adjustment along the other of said slots, a scale on the frame by means of which the said cutter may be set in position for trimming the shade to the desired width, and hooks on the frame adapted to engage with the table or bench supporting the frame to hold the frame against movement during the trimming operation.

2. In a shade trimmer, brackets for holding the shade roller, a knife adjustable with respect to said brackets, and means on said knife for holding the shade in proper position with respect to the knife during the cutting operation.

3. In a shade trimmer, a pair of brackets for supporting the shade roller, a knife adjustably mounted with respect to said brackets, and a roller journaled on said knife beneath which the shade is adapted to be drawn during the trimming operation whereby the shade is held in proper relation to the knife.

4. In a shade trimmer, a pair of brackets for supporting the shade roller, a knife adjustably mounted with respect to said brackets, and a roller journaled on each side of said knife beneath which the shade is adapted to be drawn during the trimming operation whereby the shade is held in proper position with respect to the knife.

5. In a shade trimmer, a pair of brackets for supporting the shade roller, a knife adjustably mounted with respect to said brackets, a scale by reference to which the knife may be adjusted, a roller journaled on each side of the knife, and means for adjusting the position of said roller with respect to the knife whereby the shade will be properly guided during the trimming operation.

6. In a shade trimmer, a frame having a pair of slots extending longitudinally therein, a stationary bracket at one end of the frame, a movable bracket guided in one of said slots, means for securing said bracket in its adjusted position, a movable member mounted in the other slot, a knife carried by said member, a scale with which said knife coöperates so that it may be set in position to trim a shade of the desired width, means for securing said member and knife in their adjusted positions, and means carried by said knife for guiding the shade relatively to the knife during the cutting operation.

7. In a shade trimmer, a frame having a pair of slots extending longitudinally therein, a stationary bracket, a movable bracket mounted in one of said slots, said bracket forming a support for the shade roller, a movable member in the other of said slots, a cutting member carried by the first member, a scale coöperating with the cutting member and by means of which it may be set in position to trim the shade to any desired width, and a guide rod on said frame for guiding the shade during the trimming operation.

8. In a shade trimmer, a frame having a pair of slots extending longitudinally therein, a stationary bracket, a movable bracket mounted for adjustment in one of said slots, a movable member in the other slot, a knife carried by said movable member, a scale with which said knife coöperates and by which it may be set to the position for trimming the shade to the desired width, a pair of guide rollers journaled on said knife, and a rod on the frame, said rod and rollers guiding the shade with respect to the knife during the trimming operation.

9. In a shade trimmer, a pair of brackets for supporting the shade roller, a non-rotatable knife adjustably mounted with respect to said bracket, and a rotatable knife journaled on the first-mentioned knife, the two knives coöperating for trimming the shade.

10. In a shade trimmer, a pair of brackets for supporting the shade roller, a non-rotatable

cutter adjustably mounted with respect to said brackets, a rotatable cutter, and a pair of guide rollers, said rotatable cutter and guide cutters being journaled on the non-rotatable cutter, the cutters coöperating to trim the shade and the rollers guiding the shade during the cutting operation.

11. In a shade trimmer, a pair of brackets for supporting the shade roller, a non-rotatable cutter adjustably mounted with respect to said brackets, a rotatable cutter, a pair of guide rollers, said rotatable cutter and guide cutters being journaled on the non-rotatable cutter, the cutters coöperating to trim the shade and the rollers guiding the shade during the cutting operation, and a guide rod for causing the shade to bear against the rollers and to thereby rotate the rotatable cutter.

12. In a shade trimmer, a pair of brackets for supporting the shade roller, a knife adjustably mounted with respect to said brackets, a scale coöperating with said knife and by means of which the latter may be set for trimming the desired width of shade, a rotatable cutter, a pair of rollers, said rotatable cutter and rollers being journaled on the knife, and means for adjusting the position of the rotatable cutter and the rollers with respect to the knife.

13. In a shade trimmer, a pair of brackets for supporting the shade roller, a knife adjustably mounted with respect to said brackets, a scale coöperating with said knife and by means of which the latter may be set for trimming the desired width of shade, a rotatable cutter, a pair of rollers, said rotatable cutter and rollers being journaled on the knife, means for adjusting the position of the rotatable cutter and the rollers with respect to the knife, and a guide rod for causing the shade to bear against the rollers and to thereby rotate the rotatable cutter.

14. In a shade trimmer, a frame having a pair of slots extending longitudinally therein, a stationary bracket on the frame, a bracket mounted for movement in one of said slots, said bracket supporting the shade roller, a non-rotatable knife mounted for adjustment along the other slot, a scale by reference to which the said knife may be set for trimming the shade to any desired width, a rotatable knife, a pair of rollers, said rotatable knife and rollers being journaled on the non-rotatable knife, and means for securing the knives in their adjusted position.

15. In a shade trimmer, a frame having a pair of slots extending longitudinally therein, a stationary bracket on the frame, a bracket mounted for movement in one of said slots, said bracket supporting the shade roller, a non-rotatable knife mounted for adjustment along the other slot, a scale by reference to which the said knife may be set for trim-

ming the shade to any desired width, a rotatable knife, a pair of rollers, said rotatable knife and rollers being journaled on the non-rotatable knife, means for securing the knives in their adjusted position, and a guide rod for causing the shade to bear against the rollers and to thereby rotate the rotatable cutter.

16. In a shade trimmer, a frame having a longitudinal slot therein, a pair of brackets for supporting the said rollers, a block movable in said slot, a knife carried by said block, a plate secured to the block above and below the said frame and extending around in front of the latter, and a set-screw passing through said plate for securing the plate to the frame so as to hold the knife in position for trimming the shade to any desired width.

17. In a shade trimmer, a frame having a slot extending longitudinally therein, a pair of brackets for supporting the shade roller, a block slidably mounted in the said slot, a knife carried by said block, a plate secured to the block above and below the frame and extending about the front edge of the latter, a friction plate movable with said plate, and a set screw passing through said plate and engaging with the friction plate whereby, by turning the set-screw, the friction plate may be caused to bind against the frame and

thereby hold the knife in its adjusted position.

18. In a shade trimmer, a frame having a longitudinal slot therein, a pair of brackets on the frame for supporting the shade roller, a block slidably mounted in the said slot, a knife carried by said block, a U-shaped plate secured to said block above and below the frame and extending about the front edge of the latter, inwardly turned flanges on said plate, a friction plate and a nut inclosed between the said plate, the flanges thereon and the frame, and a set-screw passing through the plate and nut and engaging with the friction plate whereby the latter may be forced against the front edge of the frame for holding the knife in position.

19. In a shade trimmer, a pair of brackets within which the shade roller may be journaled, and a disk having a cylindrical recess for receiving one end of the said roller, said disk cooperating with its respective bracket and guiding the shade on the roller.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

FREDERICK HOFF.

Witnesses:

J. D. T. BOLD,
HAROLD BOLD.