Oct. 28, 1952 R. W. HYDE 2,615,516

WINDOW SHADE CUTTER

Filed April 29, 1949 2 SHEETS—SHEET 1

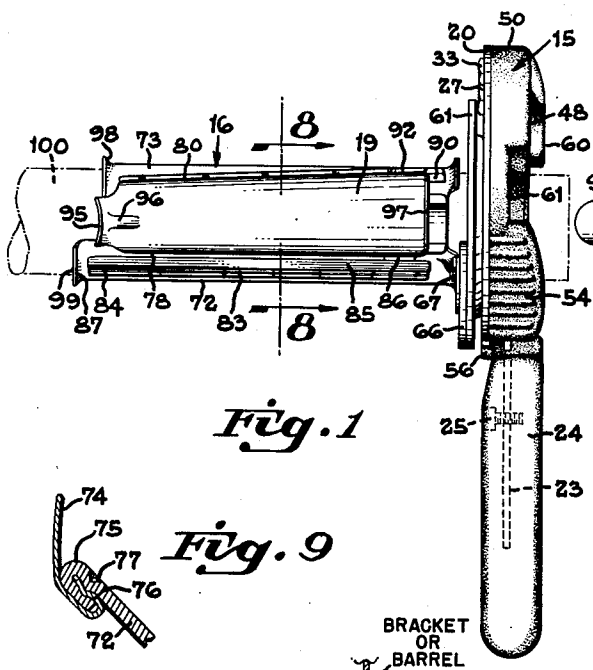


Fig. 1

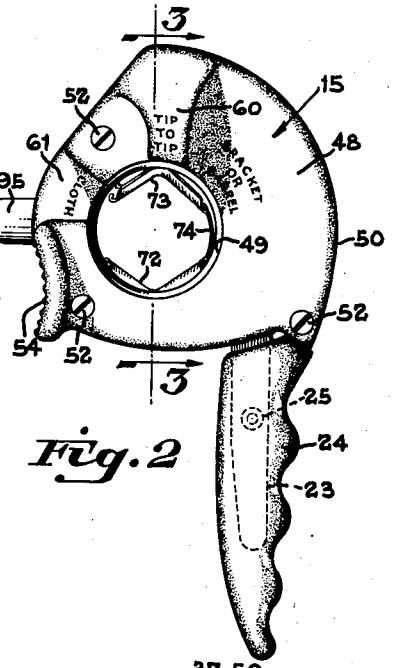


Fig. 2

Fig. 9

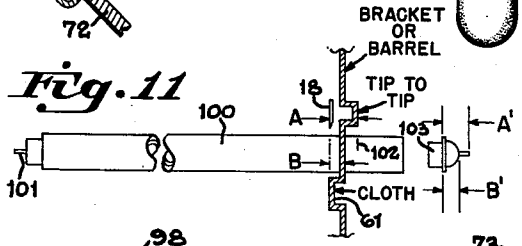


Fig. 11

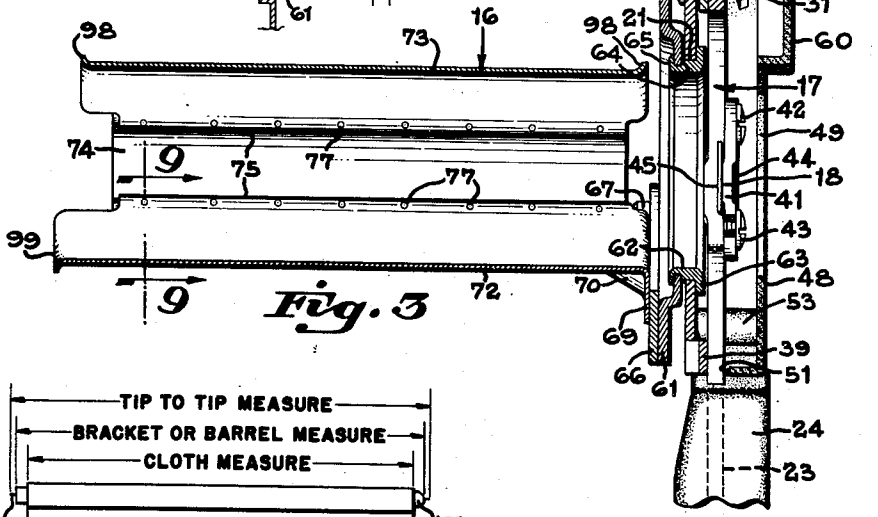


Fig. 3

Fig. 12

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Oct. 28, 1952 R. W. HYDE 2,615,516

WINDOW SHADE CUTTER

Filed April 29, 1949 2 SHEETS—SHEET 2

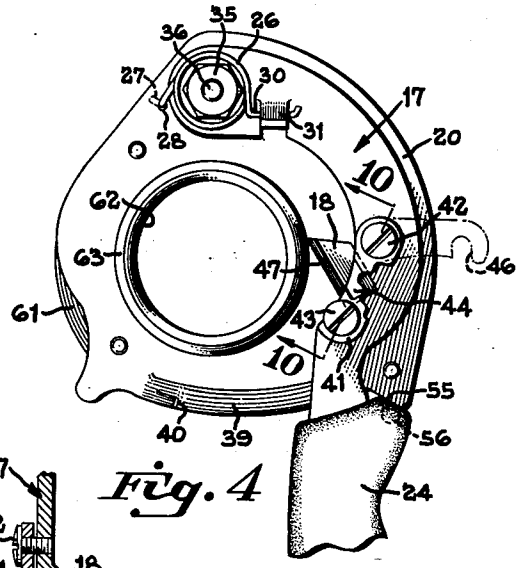


Fig. 4

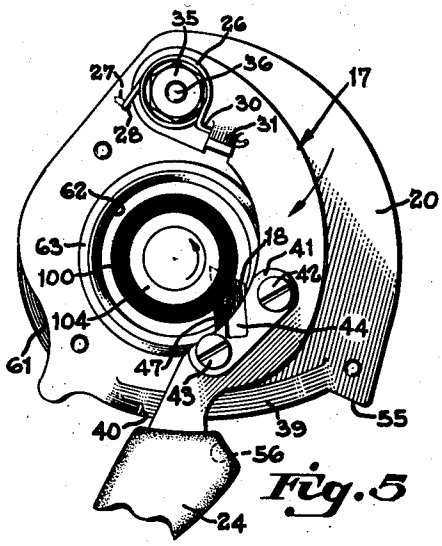


Fig. 5

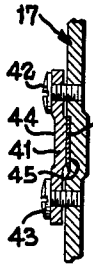


Fig. 10

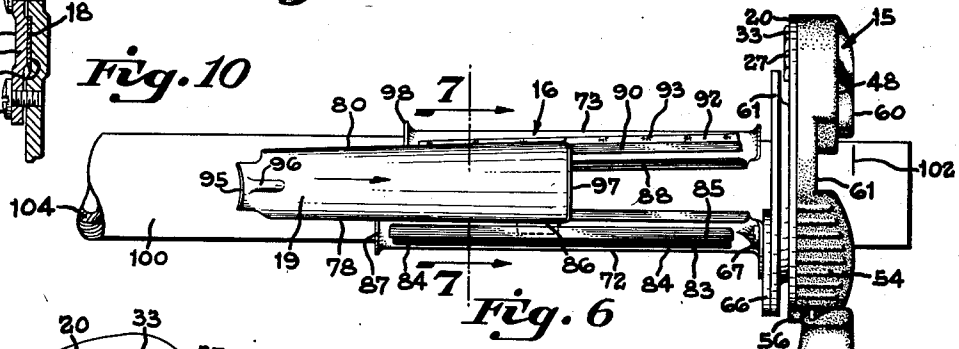


Fig. 6

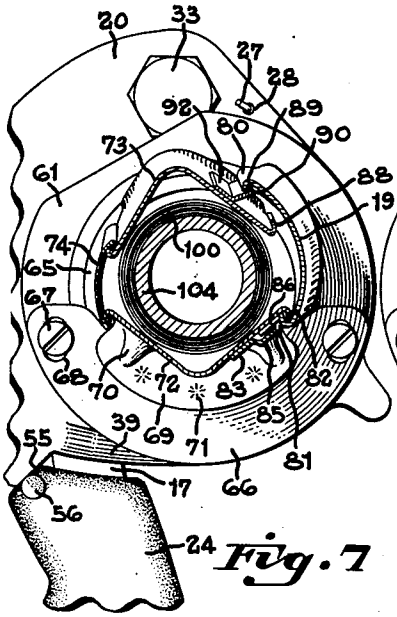


Fig. 7

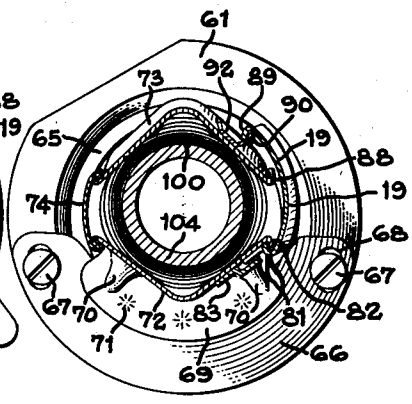


Fig. 8

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2,615,516

WINDOW SHADE CUTTER

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Application April 29, 1949, Serial No. 90,361

11 Claims. (Cl. 164—34)

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This invention relates to a portable hand tool for cutting window shades, particularly paper shades wound upon tubular rollers, by severing both the shade and its roller in a single operation. The device may be used without change for cutting paper or cloth shades wound upon wooden rollers in which case the shade material only is severed, or for cutting shade material without rollers by placing a dowel in the rolled shade for internal support.

Briefly, the device constitutes a cutting head having a rotatable clamping sleeve or chuck adapted to clamp the rolled shade and roller in longitudinally adjusted position relative to the cutting head which includes a knife arranged to swing in a fixed plane at right angles to the shade to sever its end during rotation.

It has been customary to furnish shades and rollers somewhat oversize for standard window sizes so that they may be trimmed to fit individual windows, which usually vary somewhat from standard size. In the instance of shades wound upon wooden rollers, the shades usually have been trimmed by rolling them in straight condition upon their rollers, removing the round trunnion at the solid end of the roller and sawing or cutting the shade and its roller to a measured length in one operation, then replacing the pin in the trimmed end. This method also may be followed in fitting paper shades wound upon rollers formed of rolled paper or fibrous tubing. However, it is difficult for the average householder or store clerk to perform this operation satisfactorily and with accuracy.

The shade and its roller can be trimmed accurately and quickly with the improved cutter by reason of the clamping sleeve which centers and aligns the shade accurately for rotation relative to the movable knife in a manner similar to the cutting action of a lathe. A fixture of this general nature is disclosed in the patent to Edward Kearney, No. 2,279,046 to which attention is invited. However, the Kearney structure is not designed to sever both the shade and its roller but instead is designed for use in cutting shades wound upon wooden rollers so as to trim the shade cloth only, leaving the roller to be trimmed by other means.

The principal objects of the invention have been to provide a shade cutter of simplified design which is readily understood and operated by the average householder or clerk, to provide means for feeding the knife into the shade manually so that feed pressure may be varied as required to produce a clean sharp severed edge free of

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waviness or irregularity and to improve the structure and function of the clamping sleeve for more convenient operation and more accurate centering and alignment of the shade with the knife.

The present structure constitutes a cutting head upon which is pivoted a swinging cutting arm carrying the cutting blade. A handle is secured upon the swinging end of the arm to be grasped in one hand to feed in the knife, while the rotatable clamping sleeve is grasped in the other hand and rotated. The clamping sleeve is journalled in a very simple manner from the cutting head to maintain the shade securely centered and aligned with the knife, during the cutting operation.

In order to avoid mistakes in cutting, the cutting head includes a cover plate which provides a series of measuring surfaces or steps which vary in distance from the plane of the knife to compensate automatically for several methods of measuring shades. Prior to cutting, the shade is measured from one of several points as disclosed in detail in the specification, marked, and slipped into the clamping sleeve with the mark lined up with one of the measuring surfaces depending upon which method of measurement was used. This arrangement thus provides a more accurate means for measuring, and avoids possible mistakes which sometimes occur by reason of failure to take into account various factors involved in preparing the shade for cutting.

Further objects and features of the invention are more fully disclosed in the description with reference to the accompanying drawings disclosing a preferred embodiment of the invention so that those skilled in the art will comprehend readily the various modifications to which the invention is susceptible.

In the drawings:

Figure 1 is a general side elevation of the shade cutter with the clamping sleeve in clamped position.

Figure 2 is an end view projected from Figure 1 further illustrating the tool.

Figure 3 is an enlarged longitudinal sectional view taken on line 3—3, Figure 2, detailing the structural details of the tool.

Figure 4 is an enlarged end view similar to Figure 2, with the housing removed to illustrate more completely the structure and function of the cutter.

Figure 5 is a view similar to Figure 4, with a shade roller in position, illustrating the cutting operation.

Figure 6 is a side elevation similar to Figure 1 showing the clamping sleeve in unclamped position with a rolled shade positioned in the sleeve preparatory to clamping and trimming it.

Figure 7 is an enlarged cross sectional view taken on line 7—7, Figure 6, illustrating the relationship of the clamping sleeve jaws in unclamped position.

Figure 8 is a view similar to Figure 7 taken on line 8—8, Figure 1, showing the jaws in clamped position.

Figure 9 is an enlarged cross sectional view taken on line 9—9, Figure 3, detailing the crimped attachment of the sleeve jaws to the spring strip.

Figure 10 is a sectional view taken on line 10—10, Figure 4, detailing the hasp for clamping the knife to the cutter arm.

Figure 11 is a diagrammatic view showing a profile development of the reference face of the cutter housing in conjunction with the shade and knife to illustrate the method of measuring and cutting the shades.

Figure 12 is a diagrammatic view illustrating the several methods of measuring the shades in accordance with the reference face shown in Figure 11.

In general, the shade cutter constitutes a cutting head 15 and a clamping sleeve or chuck 16, rotatably mounted on the head and arranged to clamp the shade securely in longitudinal adjustment to be rotated relative to the cutting head during the cutting operation. The shade cutter is designed primarily for cutting to length paper window shades which are rolled upon tubular shade rollers made from fiber or rolled paper stock. These shade and roller units are supplied to the consumer with metal caps pressed into the opposite ends of the roller tube, one of which mounts a round trunnion pin and the other of which includes a flat spear forming a part of the usual spring motor assembly for winding the shade. Prior to the cutting operation, the round pin and plug unit is pulled from the roller tube, and the rolled shade is measured and marked as hereinafter disclosed. With the shade rolled in straight condition upon its roller, the unit is slipped into the clamping sleeve 16 as shown in Figure 6, with the end to be trimmed off projecting beyond the cutting head 15. The sleeve is grasped in one hand and the cutting head in the other and the sleeve is rotated slowly while a cutting blade mounted in the head is swung in an arc manually to sever the end of the shade.

The tool can be used also in cutting shades without rollers by inserting a wooden dowel in the rolled shade to hold it in shape, then clamping the shade in the sleeve and performing the cutting operation in the above manner. Cloth or paper shades mounted on wooden rollers also can be trimmed in this manner, in which case the cutting operation is discontinued when the cutting tool encounters the roller. In each of these instances, the cut is sharp and accurate so that the trimmed edge of the shade presents a straight, clean edge.

Described particularly with reference to Figures 3 and 4, the cutting head 15 is provided with a pivotally mounted arm 17 which carries a knife 18. Rotatably mounted upon one side of the head is the compressible clamping sleeve 16 which is clamped and unclamped by means of a slide plate 19 to hold the shade firmly in adjusted position during rotation. The cutting head 15 constitutes a base plate 20, preferably

formed from a sheet metal stamping having a central aperture 21 for journalling the clamping sleeve 16. As shown, the cutting arm 17 also is formed from a sheet metal stamping, generally arcuate in shape, having its upper end pivotally mounted upon the base plate by means of a shoulder screw 22. The lower end of the arm extends downwardly beyond the cutting head as at 23 to constitute a handle member arranged to receive the hand grip 24. In the present structure, the grip member is formed from a suitable plastic material which is molded as a unit, slipped upon the extension 23 and secured by a screw 25 threaded into the extension. To provide a comfortable hand hold, one side of the grip, as viewed in Figure 2, is corrugated to form depressions for the fingers. The swinging arm is maintained normally in the retracted position shown, by a torsion spring constituting a coil 26, having one end bent to form a hook 27 anchored in an aperture 28 in the base plate. The opposite end of the spring includes a limb 30 engaged behind a tang 31 struck outwardly from the edge of arm 17. During the cutting operation the operator swings the arm manually in a direction counter to the spring torque into the rotating shade.

As shown in Figure 3, the shoulder screw 22, upon which the arm 17 is pivoted, includes a head 33 located to the outside of plate 20 and having a large diameter shank 34 rotatably journalled in a bearing aperture formed in the base plate. A nut 35 is threaded upon the small diameter shank 36 at the opposite end of the screw and there is provided a washer 37 and one or more relatively thin washer shims 38, located between the end of shank 34 and washer 37. The shims control clearance so that nut 35 may be tightened securely against the arm to draw the entire assembly rigidly against shoulder of shank 34, with a slight running clearance between base plate 20 and washer 37 to prevent binding. As shown in Figure 4, the swinging end of arm 17 is guided in its path of swing by an arcuate guide strip 39 pressed outwardly from the inner face of base plate 20. This takes up looseness and causes the knife to travel in an accurate straight path, at right angles to the axis of the shade. Strip 39 includes a tang 40 at its left end, serving as a stop to engage arm 17 at its inward limit of travel.

The knife 18 is mounted upon the arm 17 by a hasp 41 (Figures 4 and 10), secured by screws 42 and 43 threaded into the arm. The hasp includes a depression 44 in its intermediate portion and the arm includes a depression 45, conforming in shape to the outline of the knife. Depression 45 provides a seat for the knife which is clamped securely therein by the depressed area 44 of the hasp, when the screws are tightened. As shown in broken lines in Figure 4, the lower end of the hasp is provided with a slot 46 arranged to hook upon the shank of screw 43. This permits replacement of blades by removing the housing, hereinafter described, and loosening the screws and swinging the hasp out of engagement with the knife. When the new blade is installed, the hasp is swung back to the position shown and the screws are tightened. As viewed from the side (Figure 4) the exposed cutting edge of knife 18 is disposed on an angle generally tangent to the shade and terminating in a point to facilitate the cutting operation. The knife is sharpened on the outside only, similar to a chisel as indicated at 47 to produce a clean sharp cut.

The base plate 20 is provided with a cover or housing 48, which in the preferred embodiment is molded from plastic material to present an attractive appearance. The cover includes a central aperture 49, in registry with the aperture 21 of the base plate to provide an opening for the protruding end of the shade. The cover or housing corresponds in shape to the base plate 20 and is provided with a marginal wall 50 to enclose the cutting arm 17 and associated parts and to protect the operator from being injured by the knife 18. A slot 51 is formed in the wall to provide clearance for the swinging end of arm 17. The cover is secured by means of screws 52, passing through spacer collars 53 integral with wall 50 and the ends of the screws are threaded into holes tapped in the base plate. A corrugated or ribbed pad 54 is molded as part of the cover to the left of handle as viewed in Figure 2. The arrangement is such that the handle 24 can be gripped in the hand, with the thumb upon the pad to develop and control cutting pressure between fingers and thumb counter to the torque of spring 26.

The base plate is provided with a stop 55 arranged to engage a stud 56 protruding laterally from the side of handle grip to maintain the handle in a normal retracted position counter to the force exerted by spring 26 (Figures 5 and 7). The cutting arm 17 can be swung to an open position by removing cover 48, then removing screw 25 and slipping the handle grip 24 from the arm. Removal of the handle permits the arm to swing outwardly beyond its normal position under influence of the spring 26. In assembling the head, the spring can be anchored in relaxed condition and loaded by swinging the arm to its normal range of travel and installing handle grip 24.

The face of the cover 48 constitutes a reference or measuring surface for adjusting automatically the severing line with reference to a mark placed on the shade, following various methods of measuring. In practice, the shade is measured and marked, then positioned in the clamping sleeve 16 with the mark in line with one of the measuring surfaces on the face of the cover. As shown in Figures 2 and 12, the major surface area of the cover is labeled "Bracket or barrel" and there is provided also a raised lug 60 labeled "Tip to tip" and a depressed area 61 labeled "Cloth." A developed profile of these three planes is shown diagrammatically in Figure 11 and the corresponding methods of measuring are indicated diagrammatically in Figure 12. The procedure of measuring and cutting the shade with reference to these planes or measuring surfaces is more fully disclosed hereinafter.

As shown in Figure 3, the clamping sleeve 16 is mounted upon a disk 61 which is rotatably mounted in the aperture 21 of the base plate so as to sustain the sleeve in axial alignment with the aperture. Disk 61 is mounted by means of a spun ring 62, having a flange 63 engaged against the inner surface of base plate 20. In its condition before assembly, ring 62 includes a counterturned portion to receive disk 61 and to provide a shoulder 64 against which the disk is seated, with running clearance between the disk and base plate. The ring and disk are assembled permanently by spinning the counterturned portion over upon the disk as shown, forming the curl 65 which clinches the disk to the ring.

The sleeve assembly 16 is rigidly secured to disk 61 by means of a crescent shaped plate 66 (Figures 7 and 8) which is secured to the disk

by means of screws 67 passing through slots 68 in plate 66, the screws being threaded into holes tapped into disk 61. The sleeve assembly is secured permanently to plate 66 by means of a flange 69 which is spot welded as at 71 to plate 66. Flange 69 is an integral part of the sheet metal lower jaw 72 of clamping sleeve 16 and reinforcing ribs 70 extend angularly between the flange and jaw. It will be observed that jaw 72 is fixed relative to the aperture 21 while the upper jaw 73 is movable relative to the lower jaw. The two jaws are joined together by a spring strip 74, the edges of the jaws being doubled over as at 75 (Figure 9) upon the lapped edge 76 of the spring strip. The lapped joint thus formed is clinched into permanent union by pressing a series of dents 77 into the edge of the jaws to squeeze and deform the lapped edge 76 into rigid engagement with the spring strip. This practice is followed because it has no effect upon the resilient quality of spring strip 74, such as would follow were the jaws welded to the strip. The spring strip yieldably urges the jaws into open position when the slide plate 19 is retracted.

As shown in Figures 7 and 8, each jaw 72 and 73 is substantially in duplicate, each constituting generally a V-shaped trough member, cooperating to provide a four point clamping engagement with the rolled shade. By virtue of this arrangement, the shade is deformed slightly under clamping pressure to prevent rotation during the cutting operation. The shade is clamped in the sleeve in the manner shown in Figure 6, the free edges of the jaws 72 and 73 being engaged by the slide plate 19 to wedge the jaws toward each other when the slide plate is shifted to the right as indicated by the arrow. The slide plate 19 has a straight edge 78 joined to the lower jaw 72 and a longitudinally inclined edge 80, joined to the upper jaw 73 such that the upper jaw is drawn downwardly toward the lower by wedging action.

The lower edge 78 of the slide plate 19 constitutes a runner 81 (Figure 7), formed by bending the edge of the slide plate inwardly at an angle. Runner 81 mates with a similar runner 82, formed in the lower jaw by bending the edge of the jaw outwardly to establish a sliding connection between the plate and jaw. The plate is locked permanently to the lower jaw by a rail 83, spot welded as at 84 to the jaw, having a spaced flange 85 arranged to slidably engage a lug 86 formed at the inner end of slide plate 19. This lug is locked between the jaw 72 and flange 85 to prevent removal of the slide from the jaw and permit the slide plate to shift longitudinally relative to the jaw. In order to prevent endwise withdrawal of the slide from the jaw, the outer end of jaw 72 is bent angularly as at 87 (Figure 6), to engage the lug 86 at its outermost limit of travel.

The upper jaw 73 includes a runner 88 similar to runner 82 of the lower jaw and the inclined edge 80 of slide 19 includes a mating runner 89. The upper jaw further is provided with a secondary rail or runner 90 adapted to slidably engage the slide runner 89 for smaller diameter shade units. Runner 88 and rail 90, as shown in Figure 6, are inclined longitudinally corresponding to the inclined runner 89 of slide 19 so as to develop the clamping action upon the shade when the slide plate is shifted to the right. Runner 90 includes a flange 92, secured to the upper jaw 73 by means of spot welding, indicated

at 93 (Figure 6). The inclined runner 89 of the slide plate 19 may be disengaged from runner 88 and engaged upon the secondary runner 90 if the diameter of the shade so requires, simply depressing the upper jaw 73 sufficiently to hook slide plate runner 89 to runner 90.

The outer end of the slide plate 19 is bent outwardly at right angles to provide a finger hold 95 for convenience in manipulating the slide and a rib 96 is pressed outwardly at the juncture of the plate and finger hold for stiffening purposes. It will be observed that the inner end of slide 19 is flared upwardly as at 97, and the inner and outer ends of jaws 72 and 73 likewise are flared as at 98 to protect the shade from damage as it is slipped into and out of the clamping sleeve. For convenience in placing the shade in the clamping sleeve, the outer end of lower jaw 72 extends somewhat beyond the end of the upper jaw as at 99 to serve as a guide when the shade is inserted in the sleeve.

The shade cutter is intended for use in retail stores in cutting the shades to required size and also for use in the home by the householder. In either event, the arrangement of the measuring surfaces on the cutting head cover, as above noted, simplifies the operation and prevents mistakes in cutting. The procedure is best disclosed with reference to the profile development of Figure 11, showing the measuring surfaces, the relationship of the cutting blade to the surfaces, and a shade 100 in position for cutting.

There are three general methods of measuring the shade as illustrated in Figure 12, which are corelated to the three measuring surfaces. In replacing shades, the measurements may be taken either from tip to tip, from bracket to bracket, the width of the shade cloth itself may be measured, or alternatively, the old shades may be duplicated. The measuring surfaces compensate automatically for the difference in length as required by these methods. By way of example, the diagram in Figure 11 illustrates a shade which is to be cut according to a tip to tip measurement. In this instance, a rolled shade nearest to that length is selected, measured from the tip of the spear 101 and marked as at 102 according to the tip to tip dimension of the old shade. The round pin and plug unit 103 is withdrawn from the marked end and the shade is slipped into the clamping sleeve and adjusted longitudinally until the mark 102 is in alignment with the "tip to tip" lug 60. The knife 18 is located inwardly a fixed distance from the outer surface of the lug 60 such that the distance A, from mark 102 to knife 18, corresponds to the overall length of the pin and plug unit 103 as indicated at A'. Thus, the rolled shade is cut somewhat shorter than the actual measurement by the distance A so that the new shade will correspond in length to the old one when the pin and plug unit is replaced since the unit measurement A' is equal to A.

The "bracket or barrel" plane of the cover likewise compensates for the pin and plug assembly so that the shade is cut shorter than the actual measurement, a distance corresponding to the distance B between the cover surface 48 and cutting blade 18, corresponding to the distance B' of the pin and plug unit. When the plug unit is replaced in the shade after cutting, the bracket or barrel measurement will correspond to that of the old shade. The "cloth" surface or plane lies substantially in the same plane of the knife so that the width of the shade cloth corresponds to actual measurement.

For cutting shades at home, the most convenient method is to place the motor end of the shade (spear 101) in its bracket, then to mark the shade by rubbing it against the front of the opposite bracket. The shade is then slipped into the clamping sleeve with the pin and plug unit 103 removed, adjusted longitudinally to align the mark with the "bracket or barrel" surface and severed. When the pin and plug unit is replaced, the shade will fit accurately between its brackets.

In the cutting operation, the clamping sleeve is opened by shifting the slide plate 19 to the left as viewed in Figure 6 and the shade then is slipped into the sleeve with the hem down and slat removed. The shade is adjusted to line up the mark 102 with the proper measuring surface as above noted, and the sleeve is clamped by shifting the slide plate 19 to the left as far as it will go. If the first runner 88 does not draw the clamp securely, the slide is retracted and engaged over the secondary runner 90 and shifted to clamping position. The handle grip 24 is grasped in the right hand with the thumb resting upon the pad 54 and the sleeve is turned with the left hand in a direction toward the operator, that is, in the shade wind-up direction as shown in Figure 5. While turning the clamping sleeve, the thumb is squeezed toward the handle gently to swing the knife 18 into cutting engagement with the shade.

Since the operator sensitively controls knife feed and shade rotation, feeding pressure may be increased or decreased according to turning resistance to produce a clean cut. As the knife approaches the inside diameter of the tubular roller 104 (Figure 5), feeding pressure should be reduced so that the knife does not break through the tube and cause a ragged edge. When the roller is severed, the clamp slide is retracted to release the shade and the pin and plug unit 103 is pressed into the severed end.

By virtue of the chisel type cutting edge 47, the severed shade is progressively fed outwardly during the cutting operation. Also, this deflects the knife and arm laterally toward the guide surface 39, and draws the clamping sleeve toward the knife to take up any looseness between sleeve and arm to produce a clean straight cut.

Having described my invention, I claim:

1. A hand tool for cutting a rolled window shade and tubular roller comprising, a cutting head having means for clamping a shade for rotation with the shade centered and fixed longitudinally relative to the head, a cutting knife movably mounted on the cutting head adapted to be fed manually through the shade during rotation thereof to sever the same, spring means for urging the cutting knife normally in a retracted position, and cooperating hand gripping means on the knife and cutting head respectively arranged to feed the knife toward the shade with one hand during the cutting operation counter to the force of the spring means.

2. A hand tool for cutting a rolled window shade and roller comprising, a cutting head having a shade clamping sleeve rotatably mounted thereon arranged to clamp a shade for rotation with the shade centered and fixed longitudinally relative to the head, a cutting arm pivotally mounted on the cutting head including a knife adapted to be fed manually through the shade

during rotation thereof to sever the same, spring means for urging the cutting arm and knife normally in a retracted position, and cooperating hand gripping means on the cutting knife and cutting head respectively arranged to feed the arm and knife toward the shade during the cutting operation with one hand, the clamping sleeve being constructed and arranged to provide a rotatable handle adapted to be rotated with the other hand with the shade clamped therein.

3. A hand tool for cutting an end from a rolled window shade and tubular roller comprising; a cutting head having a shade clamping sleeve rotatably mounted thereon the sleeve constituting a hand grip unit arranged to clamp a shade and roller for manual rotation with the shade centered and fixed longitudinally relative to the cutting head, a cutting arm including a knife pivotally mounted relative to the head and arranged to swing in an arc relative to the shade to sever the same during rotation thereof, spring means for urging the knife normally to a retracted position, the knife having a cutting edge disposed substantially at a tangent to the circumference of the shade when the knife is withdrawn from the shade to said retracted position, the said cutting edge terminating in a point, and cooperating hand gripping elements on the cutting head and cutting arm respectively for swinging the knife into the shade during rotation thereof to control the feed of the knife through the shade and tubular roller.

4. A hand tool for cutting an end from a rolled window shade and tubular roller comprising; a cutting head having a shade clamping sleeve rotatably mounted thereon the sleeve constituting a hand grip unit arranged to clamp a shade and roller for manual rotation with the shade centered and fixed longitudinally relative to the cutting head, a cutting arm including a knife pivotally mounted relative to the head and arranged to swing in an arc relative to the shade to sever the same during rotation thereof, spring means for urging the knife normally to a retracted position, the knife having a cutting edge disposed substantially at a tangent to the circumference of the shade when the knife is withdrawn from the shade to said retracted position, the cutting edge of the knife being ground on one side only to provide a cutting action at right angles to the axis of the shade to develop a straight cut, and cooperating gripping elements respectively on the cutting head and cutting arm respectively for swinging the knife into the shade with one hand during rotation thereof to control the feed of the knife through the shade and tubular roller.

5. A hand tool for cutting an end from a rolled window shade and roller in a single operation comprising; a cutting head having a shade clamping sleeve mounted thereon for manual rotation and arranged to clamp a shade for rotation with the shade centered and fixed longitudinally relative to the cutting head, a cutting knife pivotally mounted on the cutting head and arranged to swing in an arc relative to the shade to sever the end thereof during rotation of the shade, spring means for urging the cutting knife normally to a retracted position, the sleeve constituting a pair of elongated jaws, one of said jaws being rotatably mounted relative to the cutting head and a second jaw secured to the first and movable relative thereto, a spring strip connecting the said jaws along their adjacent longitudinal edges, an inclined slide plate slidably connected to the opposite adjacent edges of the respective jaws and adapted to wedge the movable jaw relative to the fixed jaw for clamping the shade therebetween the said clamping sleeve thereby forming a hand grip unit surrounding the shade and providing an irregular gripping surface, the cutting head and knife having cooperating gripping means arranged to feed the knife into the shade with one hand while the clamping sleeve is rotated with the other hand during the cutting operation.

6. A hand tool for trimming an end from a tubular shade roller and shade rolled thereon comprising, a cutting head formed from a sheet metal plate having an aperture therein to receive the end to be cut from the shade, a cutting arm pivotally mounted on said plate and including a knife adapted to swing in an arc relative to the aperture to sever the end of the shade extended therethrough, spring means for urging the cutting knife normally to a retracted position, a clamping sleeve adapted to clamp the shade centered and fixed longitudinally relative to the knife, the sleeve constituting a hand grip unit having fixed jaw and a movable jaw connected to the fixed jaw for clamping the shade, said fixed jaw being secured upon a disk having an aperture therein matching the aperture in said cutting head plate, said disk being rotatably mounted upon the cutting head plate by means of a deformable ring journalled in the aperture of the cutting head plate, extending through the aperture in the disk and clinched upon said disk to establish a rotatable connection between the disk and cutting head plate, the cutting head having thumb engaging means cooperating with the cutting arm arranged to feed the knife toward the shade roller with one hand while the clamping sleeve is rotated with the other hand during the trimming operation.

7. A hand tool for trimming an end from a rolled window shade by rotating the shade relative to a cutting tool comprising; a cutting head, a sleeve adapted to clamp an end of the shade for rotating the shade centered and fixed longitudinally relative to the cutting head, a cutting arm pivotally mounted on the cutting head and arranged to swing in an arc during the cutting operation, a knife mounted upon the cutting arm, a torsion spring disposed upon the pivotal end of the cutting arm, the spring having an end anchored upon the cutting head with its opposite end engaged with the arm to urge said arm to a retracted position, the cutting arm including an extension at its swinging end, a removable handle grip secured to said extension, a stop element extending laterally from the handle grip, a spur formed on the cutting head adapted to engage said stop element to maintain the cutting arm in retracted position counter to the force exerted by the torsion spring.

8. A hand tool for trimming an end from a rolled window shade by rotating the shade relative to a cutting tool comprising; a cutting head, a sleeve adapted to clamp an end of the shade for rotating the shade centered and fixed longitudinally relative to the cutting head, a cutting arm having its upper end pivotally mounted on the cutting head and arranged to swing in an arc during the cutting operation, a knife mounted upon the cutting arm, spring means connecting the cutting arm to the cutting head and adapted to urge said arm to a retracted position, the cutting arm including a handle extension at its swinging end, a thumb pad on the cutting head arranged to cooperate with the cutting arm to feed the cutting knife toward a shade when

the same is clamped in the sleeve, the clamping sleeve forming a hand grip unit arranged to be rotated with the other hand during the trimming operation and a guide rail formed in the cutting head arranged to contact the swinging end of the cutting arm to guide the arm in a fixed plane of movement at right angles to the axis of the shade.

9. A hand tool for trimming an end from a rolled window shade by rotating the shade relative to a cutting tool comprising; a cutting head, a clamping sleeve adapted to clamp an end of the shade for rotating the shade centered and fixed longitudinally relative to the cutting head, a cutting arm having its upper end pivotally mounted on the cutting head, and arranged to swing in an arc during the cutting operation, a knife mounted upon the cutting arm, a torsion spring disposed upon the pivotal end of the cutting arm and arranged to urge said arm to a retracted position, the cutting arm including an extension at its swinging end having a hand grip secured thereto, stop means adapted to maintain the cutting arm in retracted position, a thumb pad on said cutting head cooperating with the hand grip for feeding the knife into the shade with one hand counter to the force of the torsion spring, said clamping sleeve being arranged to be grasped by the other hand for rotation during the cutting operation.

10. A hand operated tool for cutting the end of a window shade comprising; a cutting head, a cutting arm and knife pivotally mounted upon said head for severing the shade during rotation thereof, a clamping sleeve journalled in the head and adapted to be manually rotated with a shade clamped in fixed longitudinal relationship to the knife, a housing secured upon the opposite side of said plate enclosing said cutting arm and knife, a thumb pad on the housing cooperating with the cutting arm to feed the knife toward the shade with one hand during the cutting operation, the housing having a plurality of measuring surfaces displaced in steps from the

plane of the knife, said measuring surfaces providing reference points for alignment with a measured point along the shade to sever the shade at predetermined distances relative to the measured point.

11. A hand operated tool for cutting the end of a window shade comprising, a cutting head, a cutting arm and knife pivotally mounted upon said head for severing the shade during rotation thereof, a clamping sleeve journalled in the head and adapted to be rotated manually with a shade clamped in fixed longitudinal relationship to the plane of the knife, a housing secured upon the opposite side of said plate enclosing said cutting arm and knife, a thumb pad on the housing cooperating with the cutting arm to feed the knife toward the shade with one hand during the cutting operation, said cover plate having an aperture for receiving the end to be cut from the shade and having a plurality of measuring surfaces disposed around the aperture displaced in steps from the plane of the knife, said measuring surfaces providing reference points for aligning a measured point on the shade therewith, thereby to sever the shade at a predetermined distance from the measured point.

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