

United States Patent

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[54] **VERTICALLY MOUNTED DISPENSER WITH SLIDABLE COVER**

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[51] Int. Cl. B65d 83/08
[58] Field of Search 221/65, 279, 283, 287; 312/61, 312/249; 229/20

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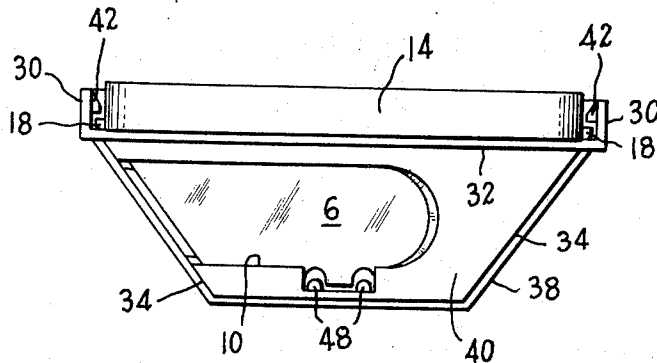
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[57] **ABSTRACT**

A dispenser for replaceable knife blades has a support member with a shelf portion providing a shelf surface extending generally horizontally and a cover member which is slidable over the shelf portion. The cover member is secured in engagement with the support member and has apertures therein for effecting movement of the uppermost blade outwardly through the side thereof. As the blades are dispensed, the cover member slidably descends relative to the shelf portion.

13 Claims, 7 Drawing Figures



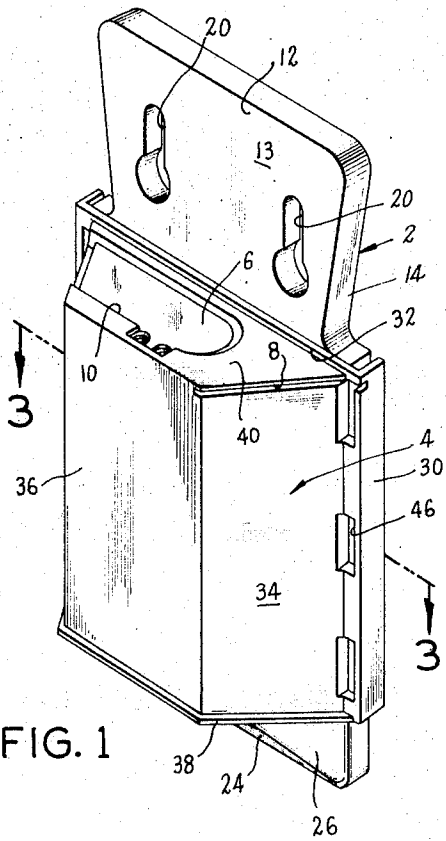


FIG. 1

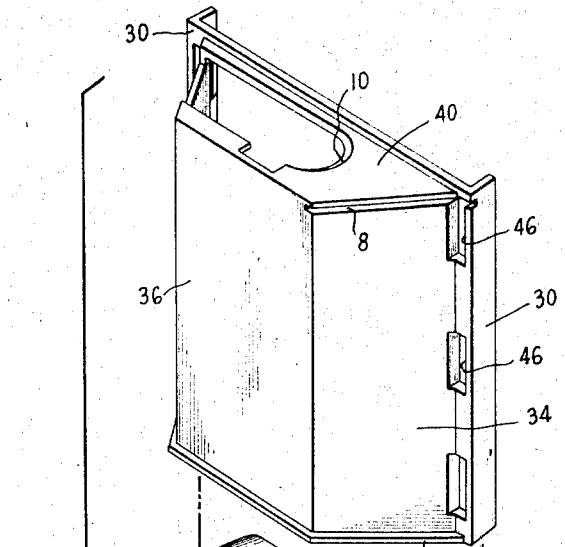


FIG. 4

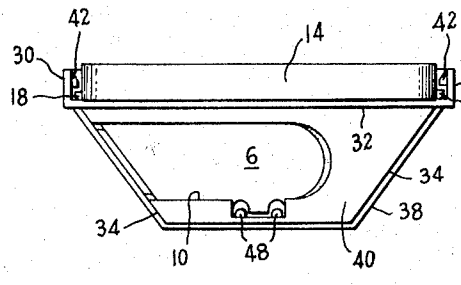


FIG. 2

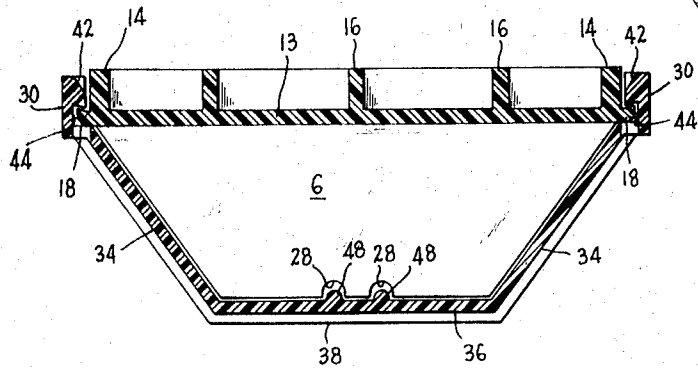
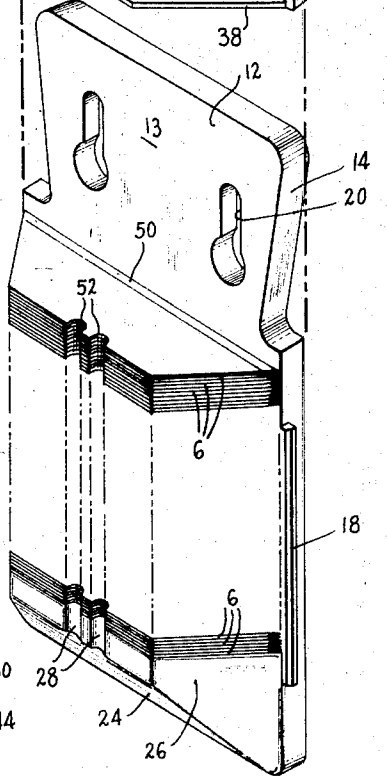
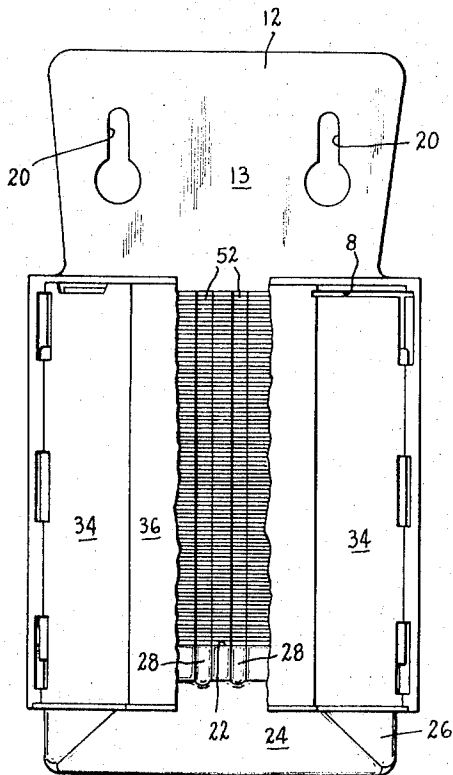
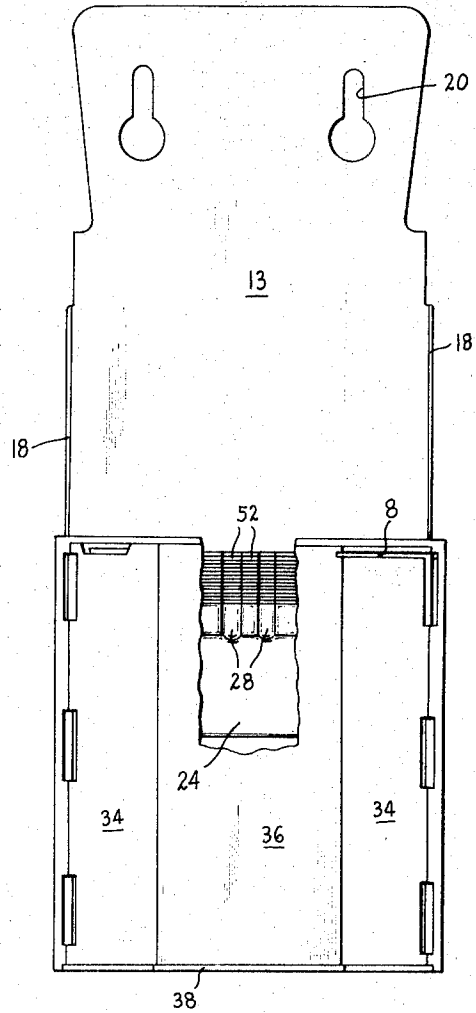
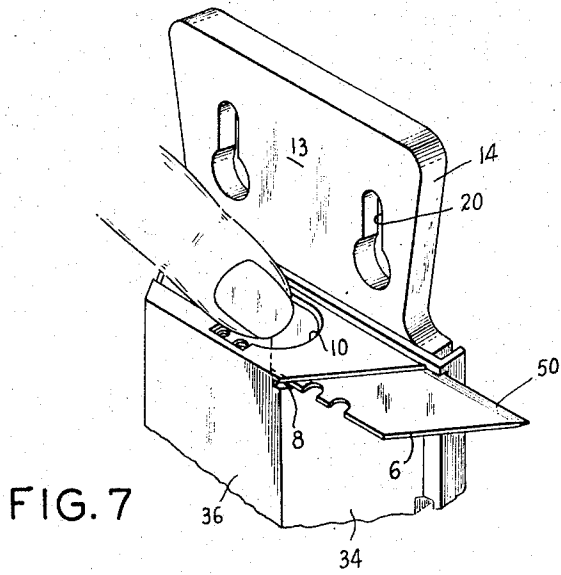


FIG. 3



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VERTICALLY MOUNTED DISPENSER WITH SLIDABLE COVER

BACKGROUND OF THE INVENTION

A number of tools utilize replaceable blades for suitably configured handles, thus permitting the user to maintain an effective cutting edge in the tool which he employs at relatively low cost. In many commercial and industrial establishments, such cutting tools are widely employed for opening packages, cutting of paper board, trimming of wood, or the like. As a result, the consumption of blades is relatively high and the blades must be changed quite frequently.

Although various types of dispensing devices or storage devices are available for such replaceable blades, generally there remains a need for a dispenser which may be located readily in any convenient location to provide a large supply of blades wherever needed. Moreover, it is necessary that the blades be readily dispensed from the storage device, and that the device be relatively inexpensive and preferably disposable so that the purchaser or user is not subjected to the requirement for refilling the dispensing device.

It is an object of the present invention to provide a blade dispenser which may be conveniently and readily mounted upon walls, columns or the like, for dispensing a relatively large quantity of blades and which is facile in operation.

It is also an object to provide such a dispenser which is relatively simple and economical to manufacture and which is also attractive in appearance.

Another object is to provide such a dispenser which provides a visual indication of the amount of blades remaining therein so as to indicate approaching exhaustion of the supply of blades.

SUMMARY OF THE INVENTION

It has now been found that the foregoing and related objects may be readily attained in a blade dispenser assembly comprising a support member having a wall portion provided with means for mounting the support member upon a wall or the like and a shelf portion providing a shelf surface extending generally perpendicular to the wall portion. A cover member is dimensioned and configured for sliding movement over the shelf portion for sliding movement of the cover member relative to the support member. The cover member has a front wall extending over the shelf portion, side walls extending from the front wall extending to adjacent the wall portion of the support member and a top wall extending between the front wall and the side walls.

The top wall of the cover member has an aperture therein for manual movement of the blades received in the dispenser in a direction parallel to the front wall and one of the side walls has an aperture adjacent the top wall for dispensing of blades therethrough. The adjacent surfaces of the support member wall portion and the side walls of the cover member have cooperating means thereon interengaged to retain the cover member in assembly with the support member and to permit descent of the cover member relative to the shelf portion as blades are dispensed therefrom.

In accordance with the preferred embodiment of the present invention, the interengaged cooperating means is comprised of laterally projecting rib elements on one of the adjacent surfaces of the side walls of the cover member and the wall portion of the support member, and channel-defining surface portions on the other of the adjacent surfaces providing a channel which receives the rib elements for sliding movement therein. In its usual aspect, this arrangement is provided by laterally projecting, vertically extending ribs on the side edges of the support member wall portion and flanges on the ends of the cover member side walls providing the U-shaped channel. To facilitate engagement and to minimize the likelihood of inadvertent disengagement, the flanges on the cover member desirably snap over the ribs on the support member.

A particularly desirable and economical structure is provided by a support member wherein the shelf portion is adjacent the lower end of the support member wall portion and is hollow with its top wall providing the shelf surface. A front wall extends outwardly and upwardly from the wall portion to adjacent the outer end of the wall providing the shelf surface and side walls extend between the wall portion, shelf surface wall and front wall to provide firm support for the wall providing the shelf surface and to translate stresses and load to the wall portion. The mounting means may comprise one or more apertures in the wall portion adjacent the upper end thereof adapted to seat fasteners or the like secured on a wall.

To guide the movement of the cover member relative to the support member and to facilitate proper location of the blades within the dispenser, the shelf portion and cover member have cooperating guide means formed therein. Vertical extending rib elements are formed on one of the adjacent surfaces thereof and channel-defining surface portions are formed on the other of the adjacent surfaces to receive the rib elements. The preferred version of this structure employs the vertically extending channels in the outer surfaces of the shelf portion and vertically extending ribs on the inner surface of the cover member front wall. When the blades received within the dispenser have cooperating recesses in the adjacent edge, the ribs on the cover fit thereinto and serve to ensure proper placement.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a blade dispenser assembly embodying the present invention;

FIG. 2 is a top view of the dispenser assembly of FIG. 1;

FIG. 3 is a sectional view along the line 3-3 of FIG. 1 and to an enlarged scale;

FIG. 4 is an exploded view thereof;

FIG. 5 is a front view thereof with a portion of the cover member broken away to reveal internal construction;

FIG. 6 is a front view thereof with the cover member in a lowered position as the result of dispensing of blades therefrom; and

FIG. 7 is a fragmentary perspective view showing the finger of a user (fragmentarily illustrated) dispensing a blade from the dispenser.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS

Turning now in detail to the attached drawings, a blade dispenser assembly embodying the present invention is comprised of a support member generally designated by the numeral 2, a cover member generally designated by the numeral 4 and a multiplicity of knife blades 6 received therein. As will be pointed out in detail hereinafter, the blades 6 are dispensed through the dispensing aperture 8 in the side of the cover member 4 by manual movement thereof through the finger aperture 10 in the cover member.

The support member 2 has a vertically elongated wall portion 12 with a planar portion 13 and a rearwardly extending peripheral flange 14. Vertically extending ribs 16 on the rear surface of the wall portion 12 rigidify the structure and cooperate with the flange 14 to provide a high degree of structural strength. Laterally projecting, vertically extending ribs 18 are provided on the outer surfaces of the flange 14 along the sides of the support member 2, and a pair of mounting apertures 20 are provided in the planar portion 13 adjacent the upper end thereof so that the support member 2 may be suspended by nails or the like on a wall, beam or similar support surface. Adjacent the lower end thereof, the support member 2 has a hollow shelf portion formed by the wall 22 which extends perpendicularly to the wall portion 12 to provide the shelf surface upon which the blades 6 are placed, the front wall 24 which extends outwardly and upwardly from the bottom end of the wall portion 12 to the outer end of the shelf wall 22, and side walls 26 which extend between the periphery

of the wall portion 12 and the shelf wall 22 and side walls 26. As seen in FIGS. 3 and 4, the shelf portion is formed with a pair of arcuate recesses or channels 28 extending vertically at the front edge of the shelf wall 22 and in the forward vertically extending portion of the front wall 24.

The ribs 16 on the wall portion 12 extend the full depth of the shelf portion from the rear surface of the wall portion 12 to the front wall 24 to greatly enhance the strength thereof, and the apertures 20 are circumscribed by reinforcing ribs as seen in FIG. 1. In this manner, the wall portion 12 does not have the planar portion 13 extending into the area of the shelf portion and is defined in that area only by the flange 14 and ribs 16. It can be seen that the side walls 25, front wall 24 and ribs 16 provide a firm support for the shelf wall 22 and distribute the stresses to the wall portion 12. Although the support member 2 with the rigidified hollow shelf portion and rigidified planar portion 13 may be molded as a single piece, it provides a strong, stress distributing support for the blades 6 seated on the shelf or upper surface of the wall 22.

The cover member 4 is configured and dimensioned cooperatively with respect to the shelf portion and has a pair of vertically extending, generally L-shaped side flanges 30 extending about the sides of the peripheral flange 14 of the support member 2. The top web 32 extends between the side flanges 30 adjacent the planar portion 13 of the support member 2. The side walls 34 converge towards the front wall 36 and an outwardly projecting flange 38 extends about the lower end of the side walls 34 and front wall 36. The top wall 40 extends between the top web portion 32, side walls 34 and front wall 36; there is no bottom wall. The top wall 32 has the elongated finger aperture 10 therein which extends to one side wall 34, and the dispensing aperture 8 is provided in the other side wall 34 adjacent the top wall 32. The L-shaped side flanges 30 each have three inwardly projecting rib elements 42 spaced along the free ends thereof to define U-shaped channels 44 receiving the guide ribs 18 on the support member flanges 14. The rib elements 42 are formed in line with the apertures 46 in the front legs of the flanges 30 to permit molding of the cover member 4 as an integral unit. A pair of vertical ribs 48 formed in the front wall 36 slide in the arcuate channels 28 of the shelf portion for guiding movement, and terminate below the top wall 40 to provide a spacing for the uppermost blade 6 to slide thereby.

As seen in FIG. 4, the blades 6 have a cutting edge 50 adjacent the wall portion 12 and a pair of arcuate recesses 52 adjacent the front wall 36 of the cover member, 4.

The configuration of the blades 6 will dictate to a large measure at least the internal configuration of the blade dispenser since it is desirable to provide relatively snug support for the blades 6 to prevent shifting. However, economy of construction will normally dictate that the external configuration conform reasonably closely to the internal configuration of the cover member and thus the blades received therein.

In operation of the illustrated dispenser, the user inserts a finger into the aperture 10 as is seen in FIG. 7. Since the only resistance to lateral movement of the top blade 6 is provided by the weight of the cover member 4 which is carried thereby and the frictional resistance between the top blade and the blade adjacent thereto, a relatively minor amount of force will cause the blade 6 to move outwardly of the dispensing aperture 8 in the cover member 4. Inadvertent contact with the cutting edge 50 of the blade 6 during the dispensing operation is minimized since that cutting edge is disposed rearwardly adjacent the wall or support surface.

After the blade 6 has been dispensed, gravity will cause the cover member 4 to slide downwardly on the support member 2 so that the top wall 40 is now resting upon the top blade 6 in the remaining stack. As the blades are dispensed, the cover member 4 continues to descent relative to the support member 2 as indicated in FIG. 6 of the drawing. This provides a visual indication of the number of blades remaining within the dispenser so as to alert the user as to the need for obtaining or requisitioning another dispenser to replace that currently

being employed. If so desired, one or more indicia may be provided on the planar portion 13 to serve as an indication of the supply remaining and a reminder of need for obtaining a new dispenser.

Various other forms of guide means may be employed to interengage the cover member 4 and support member 2 and to guide the cover member 4 in its vertical descent upon the support member. For example, the guide channels can be provided in the peripheral flange 14 and the ribs provided on the side flanges 30 of the cover member 4. The advantages to the illustrated embodiment are rather apparent in providing for simplicity of molding, a reasonable degree of tolerance and snap fit during assembly.

The shelf portion may vary in shape and in construction; as previously indicated, its shape will generally be determined by the shape of the blades since it is desirable to maintain fairly close conformity between the blade receiving recess and the blades themselves to minimize shifting. The illustrated construction for the shelf portion offers significant advantages from the standpoint of stress and load distribution to the vertical wall portion and enables the fabrication of the support member in a single molding operation. The cantilever effect of the front wall combines with the vertical ribs and side walls to provide a very rigid structure with relatively low consumption of material.

The means employed for supporting the dispenser assembly on a wall or the like may vary widely and may include hook elements along the side or upper edges of the support member, suitably configured channels in the rear surface of the support member or apertured bosses on the rear surface of the support member to which a wire or other supporting means may be secured. The pair of apertures utilized in the illustrated embodiment are easily provided during the molding operation and require no separate manufacturing step; in addition, the pair provides positive locating means to prevent shifting of the dispenser on the wall.

As has been indicated above, the cover member and support member may be readily fabricated from the synthetic plastic materials by conventional molding operations. However, it will be appreciated that the elements of the assembly may also be fabricated by stamping from sheet metal, thermoforming of synthetic plastic sheet material, machining from thicknesses of material including wood, etc. Molding offers significant advantages in terms of cost and ease of manufacture. Various plastics may be employed depending upon the nature of the molding operation. For injection molding processes, synthetic thermoplastics are conventionally employed, such as impact polystyrene, ABS, polyethylene, nylon etc.

Although the dispenser of the present invention may be constructed so as to be refillable with a new supply of blades, the economy of construction and the simplicity of mounting favor its use as a disposable dispenser. In this manner, the dispenser serves as the package for shipment of a quantity of blades and protects the cutting edges thereof from injury as well as protects persons from possible injury. The large number of blades received therein may be inserted at the factory in suitable equipment and the possibility of injury is greatly reduced while at the same time ensuring that the blades are properly mounted within the dispenser.

Thus, it can be seen from the foregoing detailed specification and the appended drawings that the present invention provides a novel blade dispenser which may be conveniently and readily mounted upon walls, columns or the like to dispense a relatively large quantity of blades. The dispenser is facile in operation, attractive in appearance and relatively simple and economical to manufacture. In addition, the dispenser provides a visual indication of the amount of blades remaining therein so as to alert the user to a supply of only a few blades and the necessity for obtaining a new dispenser.

Having thus described the invention, I claim:

1. A blade dispenser comprising: a support member having a wall portion with means for mounting said support member

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upon a wall or the like and a shelf portion providing a shelf surface extending generally perpendicular to said wall portion; and a cover member dimensioned and configured for sliding movement over and about said shelf portion, said cover member being of generally U-shaped cross section and having a front wall extending over said shelf portion, side walls extending from said front wall to adjacent said support member wall portion and a top wall extending between said front wall and side walls, said top wall having an aperture therein for manual movement of the blades received in said dispenser in a direction parallel to said front wall, one of said side walls having an aperture adjacent said top wall for dispensing of blades therethrough, the adjacent surfaces of said wall portion and said side walls having cooperating means thereon slidably interengaged to retain said cover member in assembly with said support member and to permit sliding descent of said cover member relative to said shelf portion as blades are dispensed therefrom, said shelf portion and said cover member have cooperating guide means formed therein; said guide means comprising a vertically extending rib element formed on one of the adjacent surfaces and a channel-defining surface portion formed on the other of the adjacent surfaces and receiving said rib element for guiding the movement of the cover member.

2. The blade dispenser in accordance with claim 1 wherein said interengaged cooperating means comprise laterally projecting rib elements on one of said adjacent surfaces of said side walls and said wall portion and channel defining surface portions providing a channel receiving said rib elements therein on the other of the adjacent surfaces for sliding movement therein.

3. The blade dispenser in accordance with claim 1 wherein said shelf portion is adjacent the lower end of said support member wall portion and is hollow with a first wall providing said shelf surface, a front wall extending upwardly and outwardly from said wall portion to adjacent the outer end of said first wall and side walls extending between said support member wall portion and said first wall and front wall to provide firm support for said first wall providing said shelf surface.

4. The blade dispenser in accordance with claim 1 wherein said mounting means comprises at least one aperture in said wall portion adjacent the upper end thereof adapted to seat a fastener or the like secured on a wall.

5. The blade dispenser in accordance with claim 1 wherein said interengaged cooperating means comprise laterally projecting, vertically extending ribs on the side edges of said support member wall portion and flanges on the ends of said cover member side walls providing a U-shaped channel receiving said ribs for sliding movement therein.

6. The blade dispenser in accordance with claim 5 wherein said shelf portion has a vertically extending channel formed in the outer surface thereof and wherein said cover member front wall has a vertically extending rib formed thereon and received in said channel for guiding the movement of the cover member.

7. The blade dispenser in accordance with claim 5 wherein said flanges on said cover member snap over said ribs on said support member.

8. A blade dispenser assembly comprising: a support

member having a wall portion with means for mounting said support member upon a wall or the like and a shelf portion providing a shelf surface extending generally perpendicular to said wall portion; a multiplicity of blades supported on said shelf surface; and a cover member dimensioned and configured for sliding movement over and about said shelf portion and blades, said cover member being of generally U-shaped cross section and having a front wall extending over said shelf portion and blades, side walls extending from said front wall to adjacent said support member wall portion and a top wall extending between said front wall and side walls, said top wall having an aperture therein for manual movement of said blades in a direction parallel to said front wall, one of said side walls having an aperture adjacent said top wall for dispensing of the uppermost of said blades therethrough upon said manual movement, the adjacent surfaces of said wall portion and said side walls having cooperating means thereon slidably interengaged to retain said cover member in assembly with said support member and to permit sliding descent of said cover member relative to said shelf portion as said blades are dispensed therefrom, said shelf portion and said cover member have cooperating guide means formed therein, said guide means comprising vertically extending rib elements formed on one of the adjacent surfaces and channel defining surface portions formed on the other of the adjacent surfaces and receiving said rib elements for guiding the movement of the cover member.

9. The blade dispenser assembly in accordance with claim 8 wherein said interengaged cooperating means comprise laterally projecting rib elements on one of said adjacent surfaces of said side walls and said wall portion and channel defining surface portions providing a channel receiving said rib elements therein on the other of the adjacent surfaces for sliding movement therein.

10. The blade dispenser assembly in accordance with claim 8 wherein said shelf portion is adjacent the lower end of said support member wall portion and is hollow with a first wall providing said shelf surface, a front wall extending upwardly and outwardly from said wall portion to adjacent the outer end of said first wall and side walls extending between said support member wall portion and said first wall and front wall to provide firm support for said first wall providing said shelf surface.

11. The blade dispenser assembly in accordance with claim 8 wherein said interengaged cooperating means comprise laterally projecting, vertically extending ribs on the side edges of said support member wall portion and flanges on the ends of said cover member side walls providing a U-shaped channel receiving said ribs for sliding movement therein.

12. The blade dispenser assembly in accordance with claim 11 wherein said cooperating guide means are provided by a vertically extending channel formed in the outer surface of said shelf portion and a vertically extending rib formed on said cover member front wall and received in said channel for guiding the movement of the cover member, and wherein said blades have a recess in the front edge receiving said rib on said cover member front wall.

13. The blade dispenser assembly in accordance with claim 11 wherein said flanges on said cover member snap over said ribs on said support member.

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