United States Patent

[11] **3,567,087**

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[54] **PLASTIC CUTTER BLADE FOR WRAPPING FILM CUTTER BOX**
7 Claims, 6 Drawing Figs.

[52] **U.S. Cl.** **225/43,** 225/91
[51] **Int. Cl.** **B26f 3/02**
[50] **Field of Search** 225/39, 43, 48, 91

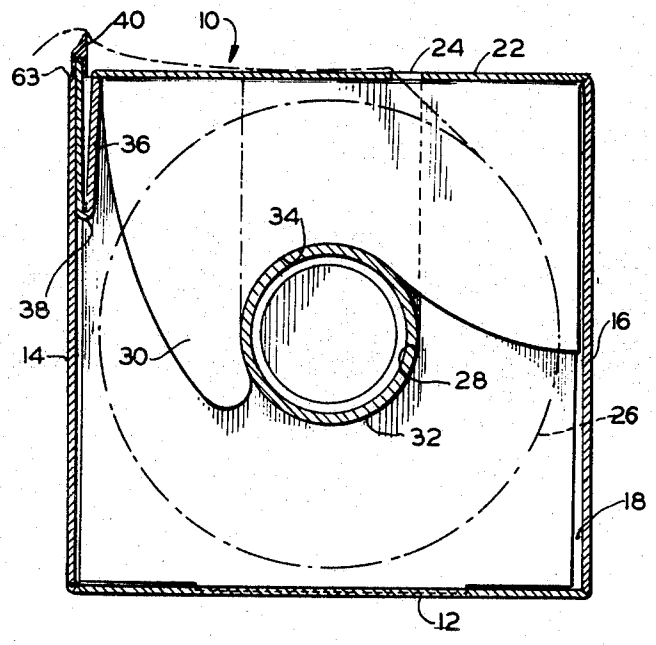
[56] **References Cited**

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2,878,980	3/1959	Waltz	225/39
3,144,970	8/1964	Beschmann	225/39
3,327,915	6/1967	Lubin	225/91X

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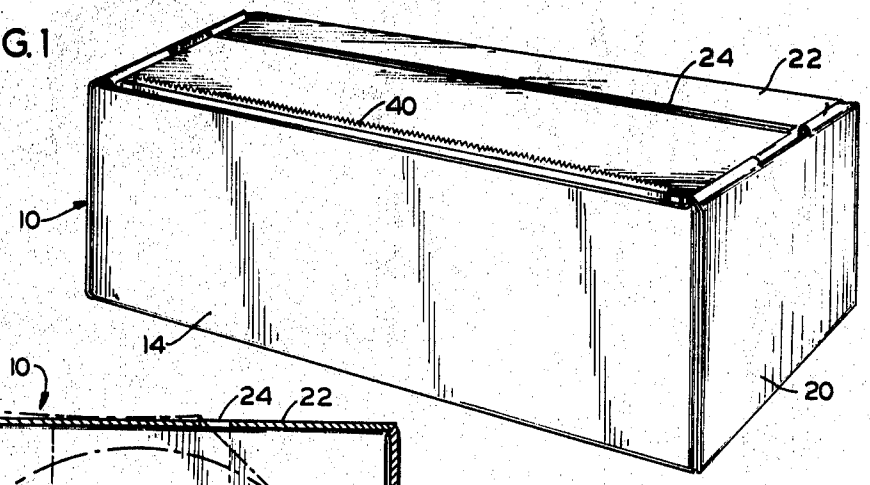
ABSTRACT: A plastic cutter blade for a dispenser box for dispensing sheet materials from a roll of flexible film, aluminum foil, and the like. The box receives a roll of sheet material with the web extensible over the cutter blade. The cutter blade is specially formed of plastic and is supported upon a foldable front tab of the box top, which is hinged behind the front wall of the box with the cutter blade extending slightly above the box. The plastic cutter blade has specially formed shoulders, one shoulder being formed by a slot with a shoulder between two legs, said shoulder resting upon the tab extension of the box top in squared relation for a firm adhesion and support thereto, while a second shoulder defined by a squared edge of one of the legs rests upon the top edge of the front of the box in bearing relation to relieve strain upon the tab extension member of the box top supporting the cutter blade. The blade is formed of serrated teeth and is adapted to be simply molded or cast.



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FIG. 1



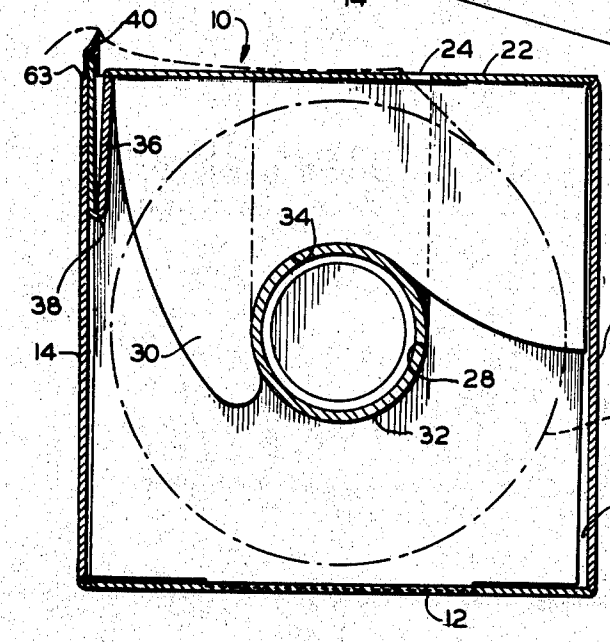
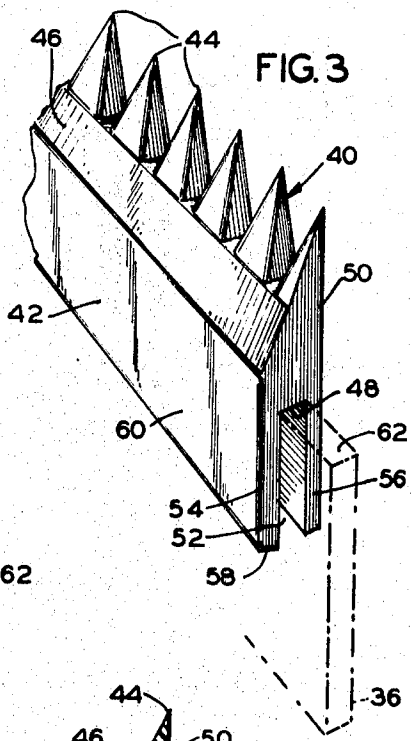


FIG. 2

FIG. 3



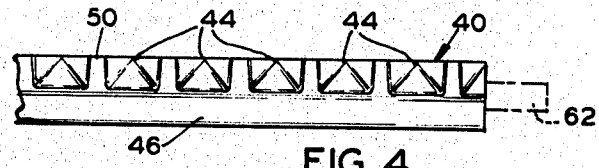


FIG. 4

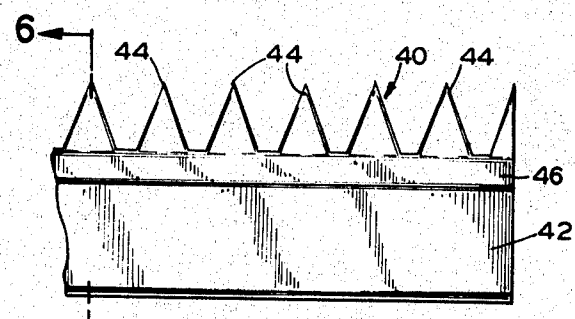


FIG. 5

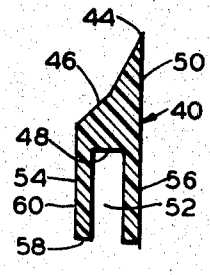


FIG. 6

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PLASTIC CUTTER BLADE FOR WRAPPING FILM CUTTER BOX

SUMMARY OF THE INVENTION

In the past, various types of cutter boxes formed from cardboard and similar materials have been provided for rolls of flexible sheet material. Such boxes have presented problems in proper tearing of the sheet material as it is presented over the cutter blade due to imperfection in the cutter blade, weakening or dislodgment of the cutter blade supporting structure, and similar problems. Further, metallic cutter blades conventionally used in the past have been dangerous in use to personnel and deformation and bending has caused further difficulties.

By means of this invention there has been provided a cutter blade made of plastic or similar cast materials for dispensing sheet material such as plastic wrapping film, aluminum foil, and the like, for use with cutter boxes. The cutter blade is formed of a plurality of serrated teeth of pyramidal configuration projecting above a base having upper and lower shoulders. The upper shoulder, which may be formed between two downwardly depending legs, is adapted to be positioned upon the edge of a corrugated cardboard member of similar material having a thickness to provide a degree of rigidity. The lower shoulder is adapted for a particular supporting use when the blade is used in a box of the type shown in Beschmann U.S. Pat. No. 3,144,970. The box structure shown in this patent has a top panel member with an extensible and hingeable tab or tuck flap, which is adapted to be folded over and nested inside the front cover of the box. When so folded over, the cutter blade of this invention extends above the front panel member of the box to provide an exposed cutting blade.

In the structure of the instant invention, the bottom shoulder, which is of a squared or perpendicular relationship to the supporting extensible tab member of the top panel, is adapted to rest upon the top edge of the front panel in supporting relation. In this manner the cutter blade is supported both by the hinged relation with the top panel and the additional squared and supporting relation upon the top edge of the front panel of the box to resist weakening, bending, and deformation and loss in the proper cutting relationship as the dispenser box is used.

The above features are objects of this invention and further objects will appear in the detailed description which follows and will be otherwise apparent to those skilled in the art.

For the purpose of illustration of this invention, there is shown a preferred embodiment of the drawings attached hereto. It is to be understood that these drawings are for the purpose of example only and that the invention is not limited thereto.

In the drawings:

FIG. **1** is a pictorial view of the cutter box equipped with the cutter blade of this invention;

FIG. **2** is an enlarged view in vertical transverse section taken through the box;

FIG. **3** is an enlarged fragmentary pictorial view showing the affixation of the cutter blade to the box;

FIG. **4** is a fragmentary top plan view showing the positioning of the cutter blade on the box;

FIG. **5** is a fragmentary view in elevation of the cutter blade; and

FIG. **6** is a view in section taken on the line **6–6** of FIG. **5**.

DESCRIPTION OF THE INVENTION

Referring now to the drawings, FIG. **1** shows a box of the type shown in Beschmann U.S. Pat. No. 3,144,970, generally indicated by the reference numeral **10**. The box is formed of a bottom section **12**, a front section **14**, a rear section **16**, a left-end section **18**, and right-end section **20**, with a top **22**. The top is provided with a slot **24** for the reception of the end of the web of flexible material. A roll of film **26** is supported within cutout journal portions **28** formed in the left- and right-

end sections **18** and **20**, while end flaps **30** projecting from the end of the top panel member **22** serve to guide and hold the roll in place by close fitting relationship with the core **32** of the roll of film. This close fitting relationship is provided by hemispherical slot **34** formed within the end flaps **30**, as best shown in FIG. **2**.

The top **22** is provided with an extensible tab member **36** as best shown in FIG. **2**. The tab member is hinged at point **38** so that it may be tucked behind the front **14** of the box.

The cutter blade of this invention is generally designated by the reference numeral **40** and is best shown in FIGS. **3—6**. It is comprised of an elongated base **42** having a plurality of pyramidal configured teeth **44** projecting from the base. A sloping shoulder **46** merges into the back of the pyramidal teeth so that there are no sharp surface changes that might facilitate breaking and this configuration also facilitates handling of the cutter blade in obviating any sharp corners and the like. The base of the cutter blade is provided with a first support shoulder or upper shoulder **48**, which is formed at right angles to the back **50** of the cutter blade, defining the upper portion of a slot **52** between legs **54** and **56**. The bottom of the cutter blade leg **54** serves to define a second shoulder **58**, which is formed by a right-angle surface to the back **50** of the cutter blade and the front portion **60**.

The cutter blade is best shown in FIGS. **2** and **3** in its assembled position upon the front tab extension or tuck flap of the top member of the box. As shown in FIGS. **2** and **3**, the upper shoulder **48** rests upon the top edge **62** of the front edge of the extensible tab member **36**. This squared relationship serves to corner the cutter blade upon the extensible tab member **36**, and by suitable cement or glue, the legs of the blade are securely attached thereto. The lower shoulder **58** of the blade is adapted to rest upon the top edge **63** of the front panel member **14** of the box, as best shown in FIG. **2**. This provides an abutting and squared relationship such that the load of the cutter blade is rested securely upon the front panel member. The hinged tab member **36** connected by the hinge **38** to the box top **22** also serves to support the cutter blade above the top of the box in the relationship shown in FIG. **2**. Between the two types of aforementioned support for the cutter blade, a rigid and secure cutting relationship for the cutter blade in stable relationship with the box is provided, which resists wear and tear and the forces attendant in the usage of the box over long periods of time.

USE

The cutter box equipped with the cutter blade of this invention is very simply used by unskilled personnel without the requirement of any special training. The empty box is simply filled with a roll of plastic film material, or other type of flexible material, such as aluminum foil or the like, by loading a roll into the box with the core **32** fitted over the journal support opening **28** at the opposite ends of the box. The top is then closed and it will be understood that when the box is not used the cutter blade and extensible portion of the top tuck flap is pointed downwardly from the position shown in FIG. **2** for shipment, storage, and the like.

When the cutter box is desired for use, the end of the film is threaded through the slotted opening **24** in the top of the box. The cutter blade and the end of the extensible portion of the top tuck flap is then folded upwardly with the box top raised and then lowered to the position shown in FIG. **2**. The box is then ready for operation. In this position the cutter blade shoulder **58** rests upon the top edge **63** of the front of the box in load-bearing relationship. Further support for the cutter blade appears through the resting of the top of the box **22** upon the core **32** through the end flaps **30** and the cutout journal portions **34**.

The web of material is now ready for cutting or tearing to any desired length by simply pulling it out from the roll through the slot **24** and tearing at the desired position over the cutter blade **40**, with the serrated teeth **44** performing a piercing and efficient tearing operation.

Various changes and modifications may be made within this invention as will be readily apparent to those skilled in the art. Such changes and modifications are within the scope and teaching of this invention as defined by the claims appended hereto.

I claim:

1. A cutter box for dispensing a web of flexible sheet material from a roll of said material receivable within said box, said box comprising front, rear, top, bottom and end members, a first slotlike opening in the top of said box contiguous with the top edge of the front of said box and a second slotlike opening to the rear thereof receiving the web of material from said roll, and a plastic cutter blade assembly for tearing said web receivable within said first opening, said assembly comprising an elongated base, a series of toothed elements projecting from one end of said base and a shoulder formed in the base, said cutter blade being secured to a supporting panel with said shoulder abutting against the edge of said panel and a lower portion of the rear of said base abutting against the face of said panel, the base having a perpendicular flat section forming the shoulder abutting against and supported by the top edge of the front panel member at the front of the box.

2. The cutter box of claim 1 in which the base is comprised of a pair of downwardly depending bifurcated legs with said shoulder defining an upper boundary of a slot separating said legs.

3. The cutter box of claim 1 in which the teeth have a pyramidal configuration and have a vertical rear surface merging in the same vertical plane with the rear of said base.

4. The cutter box of claim 1 in which the teeth are formed with a sloping shoulder connecting the front of the base to the base of said teeth.

5. The cutter box of claim 1 in which said supporting panel comprises a hinged panel member connected to the front of the box top, said box top being hinged to the rear of said box whereby the hinged panel member may be folded upon itself and positioned flush against the inside of the front of said box.

6. The cutter box of claim 5 in which means are provided to support said box top against a downward force.

7. The cutter box of claim 1 in which the teeth have a pyramidal configuration and have a vertical rear surface merging in the same vertical plane with the rear of said base, the teeth are formed with a sloping shoulder connecting the front of the base to the base of said teeth.