June 22, 1954 O. L. BLACK 2,681,502

SAFETY BOX OPENER

Filed Oct. 9, 1953

Fig. 1.

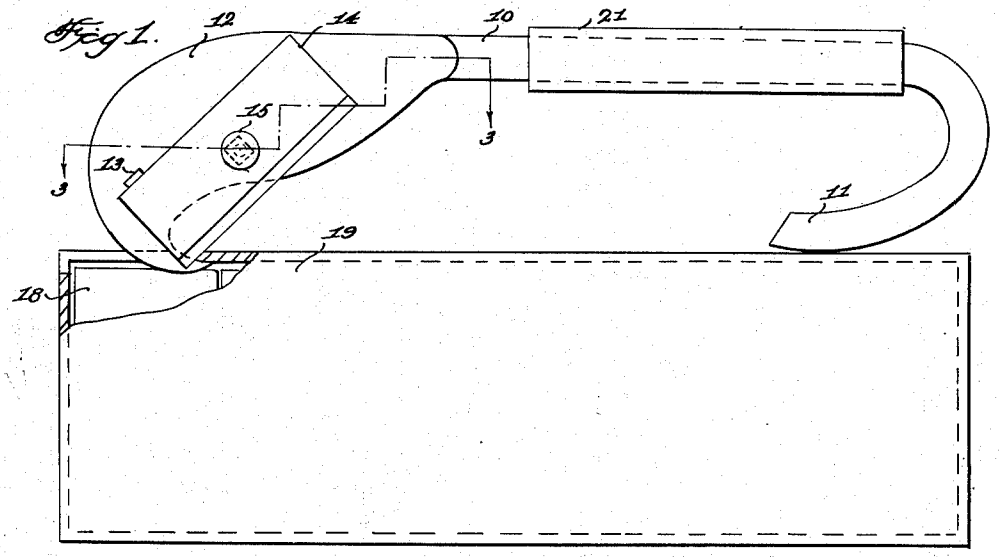
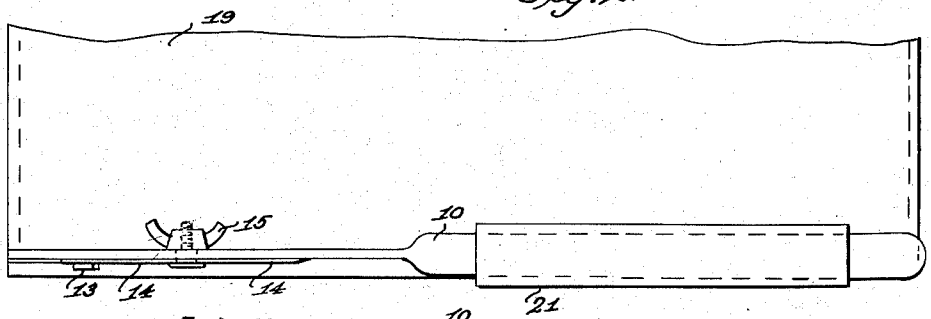


Fig. 2.



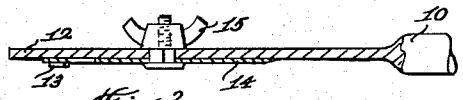


Fig. 3

Fig. 4.

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SAFETY BOX OPENER

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7 Claims. (Cl. 30—2)

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The present invention relates to knives and in particular to a knife for opening cardboard or corrugated paper boxes such as are used for containing packaged foods and the like.

Many types of knives are presently in use and generally the blades are exposed to such an extent that the package is penetrated to a depth at which the contents are exposed to the knife edge. In the instance where the outer carton contains small packages of foods, such as cornflakes, it has frequently happened that an inexperienced store clerk has slit open all of the small packages that are next to the side being cut. Damage to foods and merchandise amounts to a serious loss to the store owner or jobber.

The present invention has for its principal object to provide a knife which in the hands of an inexperienced clerk is so constructed as to make it virtually impossible to damage a carton's contents.

Another object of the invention is to provide such a knife which penetrates the carton a calculated depth only.

A still further object is to provide such a knife which has means for pushing away the contents of a carton ahead of the cutting edge.

Another object of the invention is to provide a guide means on part of the handle for assuring that the knife is drawn at the proper draft for making the cutting edge enter the carton at the proper angle and to the desired depth.

Briefly described, the safety box opener is made of metal or hard plastic and has a handle or shank curved downwardly and back towards the cutting end, which is flattened to a wide portion up against which a sharpened blade, preferably square or rectangular in shape, is secured by a thumb screw and nut. The flattened cutting end of the knife has a hooked portion substantially rounded and the blade is positioned behind the rounded "nose." The "nose" pushes ahead of the sharpened edge to depress any inner carton and material away from the blade.

These objects and advantages of the invention will be apparent upon consideration of the following description when taken in connection with the annexed drawings, in which:

Fig. 1 is a plan view in elevation of the invention showing the blade and rounded portion in cutting position within the carton.

Fig. 2 is a top view of the invention showing its cutting position along the top side of a carton.

Fig. 3 is a partial view in section taken on line 3—3 of Fig. 1, and

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Fig. 4 is a perspective view of the knife without the blade or thumb screw.

Referring in more particular to the drawing, in which like numerals indicate like parts throughout the several views, it will be seen that the invention comprises a round shank or handle 10 having a curved guide portion 11 and a flattened cutting end 12. On the end 12 is a lug 13, either pressed outwardly by an upsetting tool or otherwise formed to provide a stop for the blade 14 which is removably secured by means of the thumb nut and screw 15 through the square hole 16. A projecting hooked portion 17 projects beyond the edge or end of the blade 14, and as seen in Fig. 1 depresses the contents 18 of the carton 19 away from the blade 14. The curved guide portion 11, as seen in Figs. 1 and 2 is in line with the blade 14 and provides the proper draft to the cutting stroke and also provides the proper angle of the blade 14 and hooked portion 17 within the carton.

The handle 10 is preferably smoothly rounded and coated or covered with a resilient rubber hose 21, or other material which provides a comfortable grip. The operation of the tool is fully apparent from the foregoing description, and it will be easily understood that the chief advantage is the way in which the hooked portion pushes the carton's contents sufficiently far enough away so that the blade 14 does not have a chance to damage the contents.

While only a single embodiment of the invention has been illustrated and described, many changes and modifications are contemplated and may be made in the invention without departing from the spirit and scope of the invention, in which is claimed:

1. A carton opening knife comprising a handle portion, a guide portion consisting of an extension of one end of the handle portion bent forwardly towards the opposite end thereof, a cutting portion on said opposite end, means on said cutting portion for removably securing a blade thereon, and a curved portion on said cutting portion projecting rearwardly towards said handle a sufficient distance ahead of a blade secured to said cutting portion to depress objects away from the blade.

2. A carton opening knife comprising a substantially elongated shank, an extension on said handle bent back on itself at one end of said shank, a flattened other end of said shank, a blade, means removably securing said blade to said flattened end of said shank, and a curved portion of said flattened end of said shank posi-

tioned rearwardly and projecting outwardly a little distance beyond the blade fixed therealong.

3. A carton opening knife comprising a handle, an extension on said handle bent back on itself and downwardly toward a carton to be opened, a knife-bearing portion, and a rounded projection in the shape of a hook on said knife-bearing portion positioned to project into a carton being opened a sufficient distance to depress objects within the carton.

4. A carton opening knife comprising a rod-shaped handle portion, a resilient covering on said portion, a flat section forward of said portion, a curved hook on the downmost side of said flat section, a blade removably secured to said

flat section on one side thereof and projecting across the opening defined by said hook, and guide means at the other end of said handle portion for positioning said hook and said blade relative to a surface to be cut.

5. The device of claim 4 in which said blade is secured to said flat section by a thumb screw.

6. The device as set forth in claim 5 in which said thumb screw traverses a square hole in said blade and in said flat section.

7. The device as set forth in claim 6 together with an upwardly projecting lug on the side of said flat section for positioning said blade.

No references cited.