

Jan. 24, 1956

H. REISS

2,731,715

PAPER CARTON CUTTER

Filed April 5, 1955

Fig. 1.

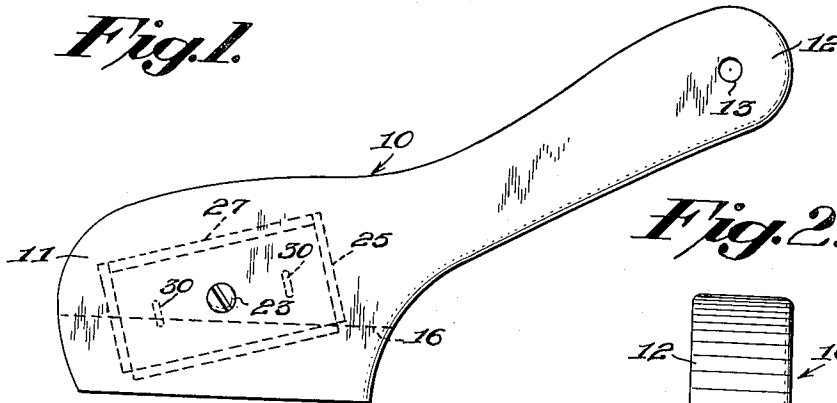


Fig. 2.

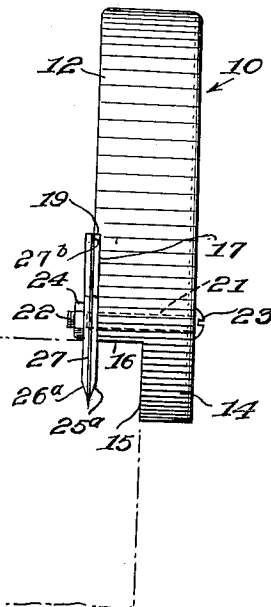


Fig. 4.

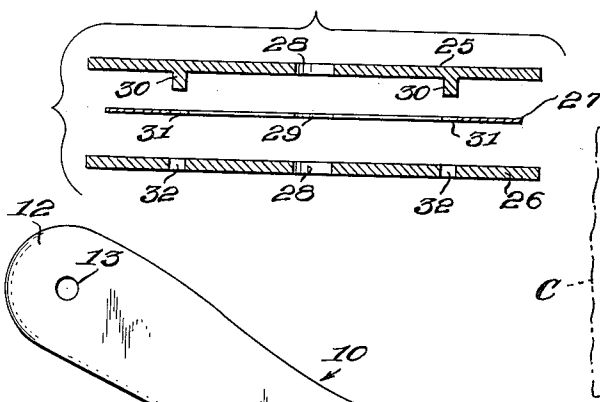
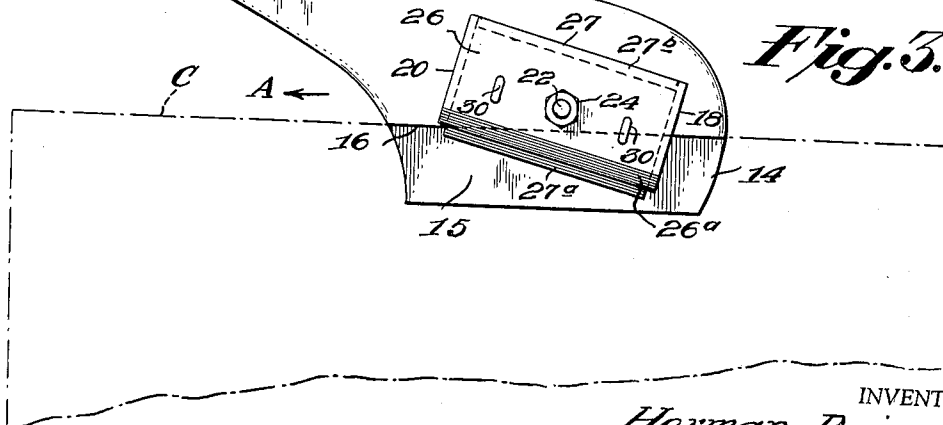


Fig. 3.



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PAPER CARTON CUTTER

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Application April 5, 1955, Serial No. 499,311

2 Claims. (Cl. 30—2)

This invention relates to a paper carton cutter.

The invention is more particularly concerned with a hand manipulatable device for providing rectilinear cuts in cardboard cartons, and is particularly adapted for severing one rectangular wall of a carton from the body thereof and along three edges thereof, whereby such wall is capable of being swung away from the carton body about the fourth edge thereof with a resulting exposure of the interior of the carton.

It is generally known that the larger stores receive large quantities of commodities which, for the most part, are packed in cardboard cartons, and in many stores, as for example, the large grocery stores, drug stores, and package liquor stores, it is necessary to open a large number of cartons every day.

It is further generally known that the texture of the cardboard used in most cartons is such that a wall or panel of the cartons cannot be expeditiously released by hand and an effort to do so would result in a clumsy result and possible injury to a workman's hand or hands.

It has heretofore been realized that such cardboard cartons can be opened neatly, expeditiously, and without injury to a workman, only by the use of a knife or a cutting device adapted particularly for such purpose.

Cardboard carton cutting devices now in use comprise a hand engageable handle having provision for the operative association therewith of special knives or single edge razor blades. Both of the above noted forms of cutting devices have proven efficient in the cutting of cardboard cartons so long as the blade remained sufficiently sharp or did not become damaged through cracking or breaking thereof.

With the special knife form, it has been found that the knife cutting edge, in common with any cutting edge under such carton cutting operations, becomes dull in a relatively short time and the only remedy is to order new knives. With the second mentioned form, the single edge razor blade, while being substantially thicker than a double edge razor blade is so held by the handle that a substantial portion of the blade is unsupported laterally, and at a result same often becomes cracked or broken and is not serviceable for further use.

A primary object of the present invention is to provide a carton cutter which overcomes the above noted objections to carton cutters now in use.

A further and more specific object of the invention is to provide a carton cutter including a body member having a hand engageable handle unitary therewith, and wherein said body member is provided with an angular edged recess in a side wall thereof for the removable reception of a pair of rectangular plates and an interposed double edge razor blade, and wherein means are provided for securing the plate and blade assembly to said side wall with one of said plates seated in said recess, and wherein said means includes a bolt permitting ready removal of the blade and outer plate for adjustment or replacement of the blade.

Other objects and advantages of the invention will become apparent in the course of the following detailed description, taken in connection with the accompanying drawing, wherein:

Fig. 1 is a side elevational view of the cutter as observed from one face thereof.

Fig. 2 is an edge elevational view of the cutter as observed from the left of Fig. 1.

Fig. 3 is a side elevational view as observed from the rear of Fig. 1.

Fig. 4 is a longitudinal central sectional view of the blade supporting plates and the interposed blade with same in separated relation.

Referring now in detail to the drawing, the improved cutter in accordance with a preferred structural embodiment thereof comprises a member 10 which is preferably constructed of wood but may be of any other desired material. The member 10 includes a body portion 11 and a hand engageable handle 12, which may be provided with an aperture 13 for hanging the device on a hook or nail when not in use.

The member 10 is of uniform thickness with the exception of an extension 14 of the body portion 11, and which extension provides right angularly disposed shoulders 15 and 16, and the face of the member opposed to the extension 14 is provided with a recess 17 having right angular edges 18, 19 and 20, and which recess opens through the shoulder 16. The body 11 is provided with an aperture 21 through which is extended a bolt 22 having a head 23 engaging one wall of the body 11, and whose free threaded end extends through the recess 17 and is provided with a nut 24.

A pair of rectangular inner and outer plates 25 and 26 are provided, and the recess 17 is of a depth to receive the inner plate 25, and a double edge razor blade 27 is disposed between the plates. The plates 25 and 26 are provided with alignable apertures 28 through which the bolt 22 extends, and which bolt also extends through the usual central opening 29 in the razor blade 27.

The inner plate 25 is provided with a pair of lugs 30 which extend through the usual outer openings 31 in the razor blade and also through apertures 32 in the outer plate 26.

From the above, it will be seen that when nut 24 is drawn up, the inner plate 25 will be seated in recess 17 and prevented from turning about the axis of the bolt 22 by the angular recess edges 18, 19 and 20. Furthermore, the lugs 30 being received in openings 31 in the blade 27 and apertures 32 in the outer plate 26 will prevent rotation of the blade and outer plate about said axis of the bolt 22. The inner plate in its position in the recess 17 holds the entire assembly against rotation on the bolt 22. Upon removing the nut 24, however, the outer plate and blade may be removed, whereupon the razor blade may be turned to present its opposite edge into cutting position, or, if both edges have become dull, a new blade may be substituted and the outer plate restored and drawn into position by the nut for firmly holding the assembly in working position.

It is to be particularly observed that the razor blade cutting edges 27^a and 27^b and the corresponding edges of the plates are disposed in angular relation to the shoulder 16 so that when the device is moved on a carton C, as indicated by the arrow A in Fig. 3, the blade edge 27^a will gradually move into the carton, which will provide a highly efficient cutting operation.

When the exposed edge 27^a becomes dull, the outer plate is removed and blade 27 is turned so that the next corner is placed into cutting position. When all four corners have been dulled, the blade may be replaced by a discarded razor blade.

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It is to be noted that the cutting edges 27^a, 27^b extend a small distance beyond the corresponding edges of the supporting and reinforcing plates 25 and 26, whereby the thin flexible blade is not liable to become broken, and to facilitate the cutting operation the lowermost edges of the plates 25 and 26 are outwardly bevelled, as indicated at 25^a and 26^a, respectively.

In the use of the device a corner of a carton C, as indicated in Fig. 2, is engaged by shoulders 15 and 16 which provide a guide seat for the device upon moving same along a corner of the carton.

In the opening of a carton C one panel thereof is preferably cut along three edges thereof, and the fourth edge provides a hinge for swinging the panel outwardly to expose the interior of the carton.

While I have disclosed my invention in accordance with a single specific structural embodiment thereof, such is to be considered as illustrative only, and not restrictive, the scope of the invention being defined in the subjoined claims.

What I claim and desire to secure by U. S. Letters Patent is:

1. A paper carton cutting device comprising a member including a flat-sided body portion and a handle unitary therewith, said body portion having an extension from one side thereof providing carton corner engageable right angularly disposed shoulders, said body portion being further provided at the opposite side thereof with a recess having right angularly disposed edge walls, a rectangular

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plate removably supported in said recess with edges thereof engaged with said walls, a second rectangular plate, a rectangular double-edged blade disposed between said plates, said body portion, plates, and blade being provided with axially alined apertures, a bolt projecting through said apertures and being provided with a nut engageable with one of said plates for removably retaining the other plate in said recess, and means rigid with one plate and projecting through alined apertures in said blade and second plate for preventing rotation thereof about the axis of said bolt, and said blade being supported by said plates with its cutting edge projecting below one of said shoulders in angular relation thereto.

2. The structure according to claim 1, wherein said means comprise a pair of lugs projecting laterally from said first plate at opposite sides of said bolt, whereby upon release of said nut and withdrawal of said first plate from said recess, the plates and interposed blade are rotatable as a unit about the axis of the bolt for the purpose set forth.

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