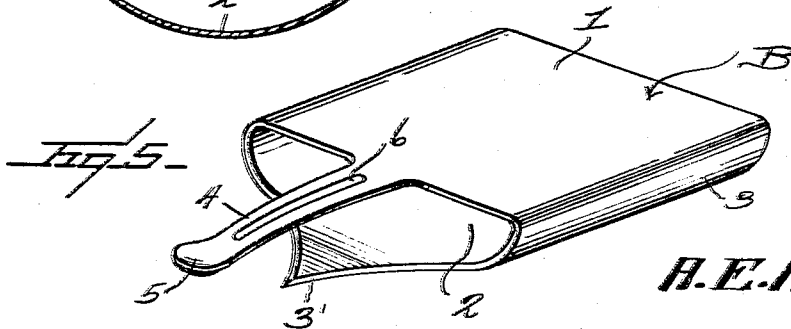
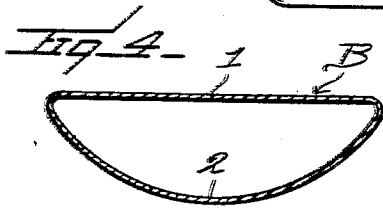
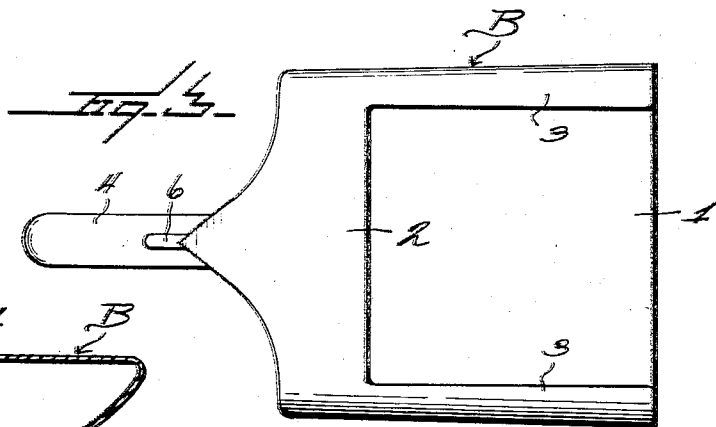
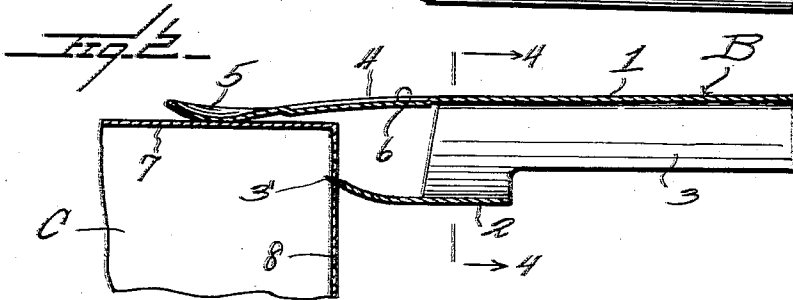
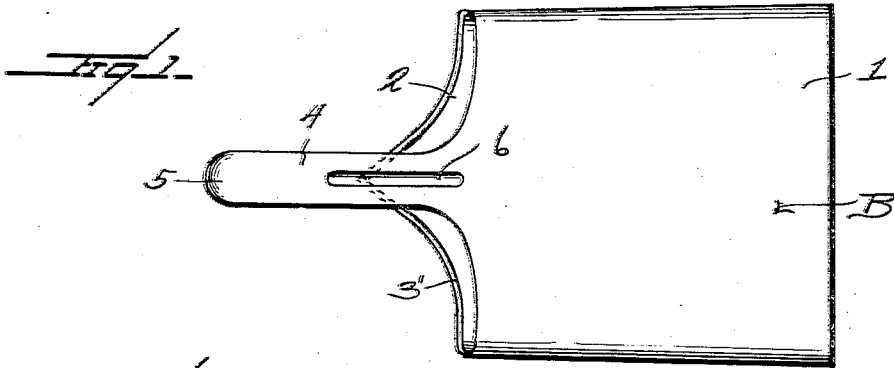


Nov. 7, 1939.

A. E. HENRY  
CUTTING IMPLEMENT  
Filed May 7, 1938

2,178,790



Inventor

**A. E. Henry**

By *Watson E. Coleman*  
Attorney

# UNITED STATES PATENT OFFICE

2,178,790

## CUTTING IMPLEMENT

Abner E. Henry, Greensburg, Pa.

Application May 7, 1938, Serial No. 206,656

### 1 Claim. (Cl. 30—2)

This invention relates to a cutting implement and has relation more particularly to a device of this kind of a push or punch type and which is particularly adapted for use in the opening of household cartons such as used in connection with the sale of various foodstuffs as for example breakfast foods and the like.

The invention has for an object to provide a knife of this kind constructed in a manner to permit its use in connection with cartons of varying sizes and which may be employed to cut a corner or end of a carton or, if desired, to remove an entire end portion.

It is also an object of the invention to provide a device of this kind which can be readily grasped by a hand and conveniently operated after the fashion of a plane.

An additional object of the invention is to provide a device of this kind including a substantially V-shaped cutting edge together with an elongated arm extending beyond the outermost portion of the cutting edge and spaced therefrom, said arm providing means to facilitate the operation of the knife and also to provide the desired leverage to facilitate the cutting action.

A further object of the invention is to provide a knife of this kind with a forwardly disposed elongated arm which serves as a guide to determine the type of cut.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved cutting implement whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:

Figure 1 is a view in top plan of a knife constructed in accordance with an embodiment of my invention;

Figure 2 is a sectional view taken longitudinally through the knife as illustrated in Figure 1 showing the same as initially engaged with a carton, the carton being fragmentarily indicated in section;

Figure 3 is a bottom plan view of the device as herein disclosed;

Figure 4 is a transverse sectional view taken substantially on the line 4—4 of Figure 2;

Figure 5 is a view in perspective of the knife as herein embodied.

As herein disclosed, my improved knife comprises a body B of suitable material and which is of a hollow structure open at opposite ends and being reduced in width from its rear end toward its front end. This reduction in width is to permit one device to be nested within another to facilitate shipment and also to allow a ready and effective gripping of the body B by the hand.

The body B, as herein disclosed, comprises a substantially flat back wall 1 and a forward bottom wall 2 disposed on a downward curvature from end to end. This wall 2 is spaced from but in relatively close proximity to the back wall 1 and preferably extends a slight distance in advance thereof. This wall 2 is relatively short and has its end portions formed with the downwardly and inwardly curved marginal flanges 3 defining the side or longitudinal edges of the back plate 1. These flanges 3 serve to give desired rigidity and strength to the tool as a whole and the flanges 3 are employed instead of having the bottom plate 2 substantially co-extensive in length with the back plate 1 in order to lighten the tool with, of course, resultant saving in material. It is to be noted that the back plate 1 and the bottom plate 2 result in the body B being of a hollow or tubular structure open at both ends.

The bottom plate 2 is preferably of a width at least equal to the largest sizes of cartons used for household distribution of foodstuffs and kindred materials so that a single device may be employed with equal advantage in connection with cartons of various sizes.

The forward marginal portion of the bottom plate 2 is of a V-shaped formation with the apex forwardly disposed and positioned at substantially the transverse center of the back plate 1. This forward marginal portion of the bottom wall 2 also projects forwardly a material distance of the forward edge or margin proper of the plate 1. This V-shaped extension of the bottom plate 2 has its marginal portions formed into the knife or cutting edges 3'. As disclosed in the accompanying drawing, the cutting edges 3' are formed on the material constituting the bottom plate 2. It is to be stated, however, that if preferred these cutting edges may comprise separate plates suitably secured to the bottom wall 2 but as this is believed to be an obvious expedient a detailed illustration and description is thought to be unnecessary.

The forward end of the back plate 1 at its transverse center is continued by an elongated and forwardly directed guide arm 4 of a length to terminate at a point considerably in advance of the apex of the forward end of the bottom plate 2. The outer end portion of this arm 4 is formed to provide a cup-like portion or pocket 5 to receive the tip portion of the forefinger of the hand grasping the body B when the knife is in use. By this means the knife may be effectively maintained steady during a cutting operation. It is also to be noted that this outer end portion of the arm 4 provides a rounded portion to allow rolling contact upon a wall of the carton C during a cutting operation whereby such cutting operation is materially facilitated. The rear portion of the arm 4 has disposed therealong a reinforcing or strengthening rib 6 preferably pressed therefrom.

In Figure 2 is illustrated my improved knife in an initial position in cutting open a carton C. The closer to the horizontal the arm 4 is positioned when initially contacted with the end wall 7 of the carton C the greater the distance from said wall 7 the cutting edge 3' will penetrate a side wall 8 of the carton and vice versa.

The device as a whole is adapted to be pushed toward the wall to be cut to effect the desired penetration and in accordance with the extent of penetration of the knife will depend the width of the cut. If desired, the knife may be pushed entirely across the carton to effect an entire removal of an end portion of the carton.

By having the body of a hollow or tubular structure no hindrance or obstruction will be offered by contact of any portion of the device with the carton unless, of course, the carton should be of an abnormal width or of a width greater than the width of the forward end of the device.

It is believed to be obvious that when desired the device can be employed with convenience in cutting off a corner portion or punching a wall of

a carton as desired to best provide an opening for the removal of the contents of the carton.

It is also to be emphasized that the efficiency of the implement is materially increased by having the forward portion of the bottom plate 2 disposed on an upward curvature as is particularly illustrated in Figure 2 of the drawing. As a result of this curvature, when the implement is in place for the raising of the implement with the outer end of the arm 4 serving as a fulcrum, a corner portion or end portion of a container can be effectively removed.

From the foregoing description it is thought to be obvious that a cutting implement constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

A cutting implement for opening cartons comprising a tubular body structure open at its opposite ends and having a cross sectional configuration providing a substantially flat back wall and a bottom wall disposed on a downward curvature, the bottom wall having a V-shaped cutting edge extending in advance of the back wall, the apex of said cutting edge being outwardly disposed and at substantially the transverse center of the back wall, said back wall at substantially its transverse center being provided with a forwardly directed arm terminating beyond the apex of the cutting edge of the bottom wall for contact with a wall of the carton to be opened whereby said arm serves as a lever guide.

ABNER E. HENRY.