Oct. 30, 1923. 1,472,269

W. G. GRIMMER

CARTON OPENER

Filed Oct. 3, 1921

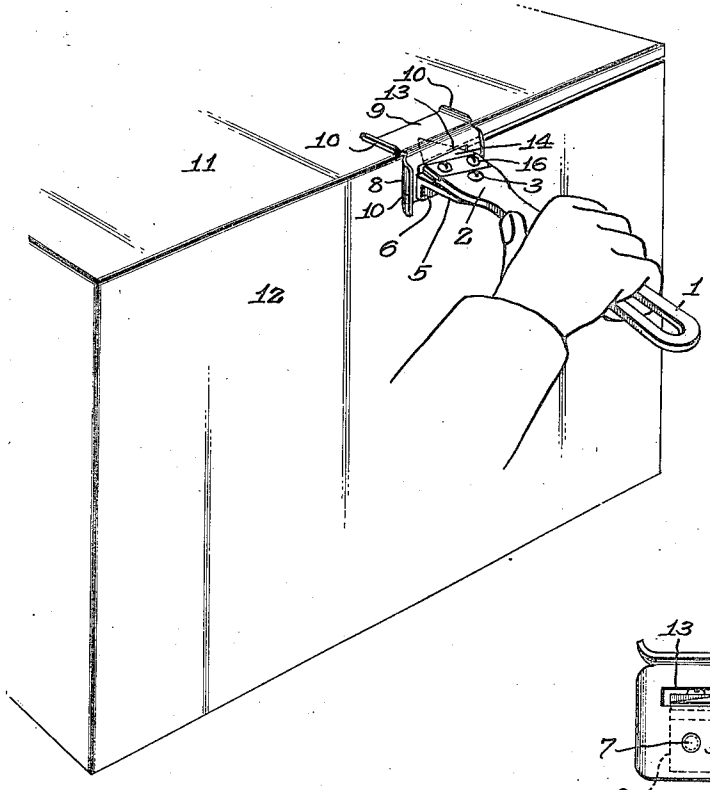


Fig. 4.

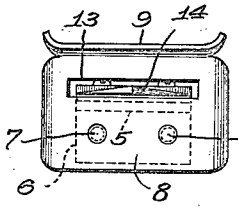


Fig. 3.

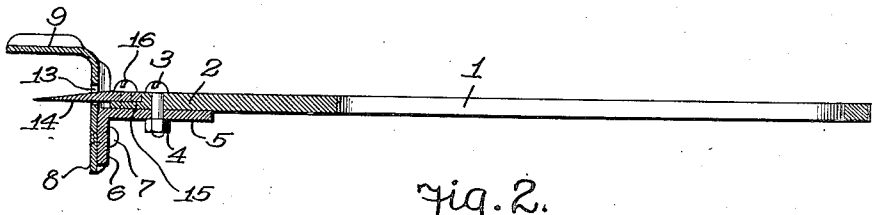


Fig. 2.

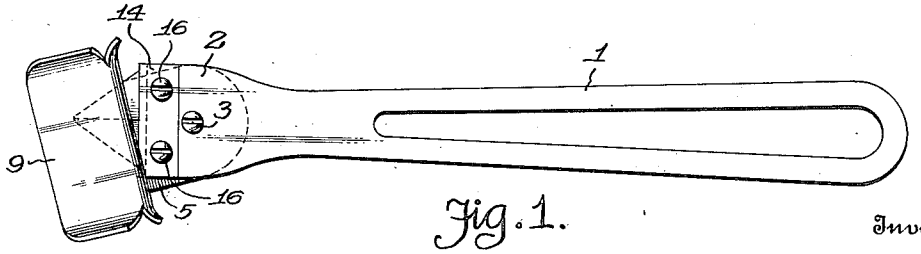


Fig. 1.

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UNITED STATES PATENT OFFICE.

WALTER G. GRIMMER, OF DETROIT, MICHIGAN.

CARTON OPENER.

Application filed October 3, 1921. Serial No. 504,986.

To all whom it may concern:

Be it known that I, WALTER G. GRIMMER, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Carton Openers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a carton opening implement or device which may be advantageously used for opening cardboard, pasteboard or fiber containers used for shipment of various kinds of merchandise. The cartons are ordinarily sealed and being made of a tough and indurate material an ordinary knife cannot be conveniently used for opening such carton, especially if the carton is to be severed so that a wall thereof may be hingedly retained in engagement with the carton or safely removed to be used as a lid. In such instances it is necessary to sever the carton parallel to edges thereof and in proximity to a wall, and there is danger of an ordinary knife slipping and spoiling the lid or that portion of the carton to be saved. Then again, there is that danger of the slipping knife cutting the operator, and it is a well known fact that when cutting through corrugated board or the like that the board will gather or curl at the knife edge and prevent further cutting, unless the knife blade is shifted to a different angle or sawed back and forth.

My invention aims to provide an opening implement that has a guide or shoe for supporting a knife relative to a carton so that the angle of the knife blade relative to the carton may be changed, during a cutting operation and thus permit of a portion of a carton being easily and quickly severed, without any danger of the knife blade slipping or injuring the carton or operator.

My carton opening device is particularly characterized by an angular guide or shoe through a wall of which extends the cutting instrumentality, and the guide or shoe will serve somewhat as a guard for the cutting blade when the device is not in use.

My invention further aims to provide, a simple, durable and inexpensive carton opening implement that will be hereinafter described in detail and then claimed, and reference will now be had to the drawing, wherein—

Figure 1 is a plan of the carton opening implement;

Fig. 2 is a longitudinal sectional view of the same;

Fig. 3 is a view of the outer end of the implement, and

Fig. 4 is a perspective view of the implement illustrating one way of using the same.

In the drawing, the reference numeral 1 denotes a suitable handle that is comparatively flat and has its outer end provided with a head 2.

Pivotally connected to the lower face of the head 2 by a screw bolt 3 and a nut 4 or other fastening means is the lateral flange 5 of an angle bracket 6, said angle bracket protruding beyond the head 2 and adapted to swing laterally relative to said head.

Fixed to the angle bracket 6 by rivets 7 or other fastening means is an angle guide 8 having an overhanging implement supporting portion 9 and this angle guide or shoe is made of a single piece of metal bent to a right angle with its ends outturned or rolled, as at 10, so that the angle guard may be smoothly shifted along adjoining walls 11 and 12 of a carton or other container, with the overhanging portion 9 of the angle bracket gliding along the wall 11 to support the depending portion of the angle brackets 8 in parallelism with the wall 12, although the pivoted angle bracket 5 will permit of the angle guide laterally swinging should it be necessary when moving the implement along a curved wall or about a corner.

The angle guide or shoe 8 has a longitudinal slot 13 and extending therethrough is a pointed, sharpened, comparatively flat and triangular shaped cutting blade 14 which has its inner straight edge set in a recess 15 of the head 2 and attached to said head by screws 16 or other fastening means, said screws permitting of the cutting blade being removed when it is necessary to renew or provide a cutting blade of different configuration than that shown. To sharpen the cutting blade it is only necessary to remove the angle bracket 5 from the head 2 and

then the handle 1 will facilitate manipulation of the cutting blade relative to a sharpening device.

The sharp outer end of the cutting blade 14 will easily enter the wall of the carton, for instance, the wall 12 when the angle guide is placed on the wall 11. The angle guide may remain parallel to the walls 11 and 12 while the head 2 is swung on the angle bracket 5 and in this manner the cutting blade can forcibly enter the wall 12 in proximity to the wall 11 and permit of the wall 11 being released relative to the other walls of the carton so that the wall 11 will be either hingedly held by the carton or may be completely removed to serve as a lid. Insomuch that the head 2 is swiveled or pivoted relative to the angle bracket 5 the cutting edge of the blade 14 can be placed at a desired angle relative to the wall 12 and thus prevent crowding or curling of the wall 12 as the kerf or slit is produced for removal of the wall 11. The very fact that the cutting blade 14 can be rocked or placed at different angles during its use permits of the wall 12 being quickly cut without any danger of the blade becoming stuck in the wall. One operator may believe that the cutting blade performs better at one angle than another, so it is optional with the operators of the implement as to the exact manner in which the cutting blade is manipulated when severing a wall of a carton.

I attach considerable importance to the cutting blade extending through one of the walls of the angle guide so as to be at all times parallel to the other wall of the angle guide, thus defining the slit or kerf to be produced by the cutting blade relative to the wall against which the angle guide is placed. It has been assumed that the implement has been used in a horizontal position or approximately so, but it is apparent that the implement may be used in a vertical position with the cutting blade 14 entering the wall 11 and the portion 10 of the angle guide engaging the wall 12. In one instance a portion of the carton is removed corresponding to the area of the carton and in the other instance the removed portion is of less area than the carton.

The cutting blade 14 is made of a high grade of steel and the remainder of the implement may be made of any metal and finish to present a neat appearance.

One embodiment of my invention has been illustrated, but it is to be understood that the structural elements are susceptible to such changes as fall within the scope of the appended claim.

What I claim is:—

A carton opening device comprising an angle bracket having a long flange and a short flange, an angle guide having a flange thereof rigidly held by the short flange of said bracket, said angle guide having an opening adjacent the long flange, said bracket and its ends out-turned to facilitate movement of said guide, and a cutting instrumentality pivotally held by said bracket and having a flat detachable blade extending through the opening of said angle guide.

In testimony whereof I affix my signature in presence of two witnesses.

WALTER G. GRIMMER.

Witnesses:

ANNA M. DORR,

KARL H. BUTLER.