UNITED STATES PATENT OFFICE.

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DISPENSING ATTACHMENT FOR CARTONS.

1,043,236.


Application filed March 30, 1912. Serial No. 667,419.

To all whom it may concern:

Be it known that I, JOHN A. HAGERSTROM, a citizen of the United States, and resident of the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Dispensing Attachments for Cartons, of which the following is a specification.

This invention relates to an opener and closure for cartons.

One of the objects of the invention is the production of a device which will neatly open the side of a carton, and provide an effective closure for the opening produced.

A further object is to provide an opening and closing device which may be detachably secured to a carton.

Another object is to provide a simple and durable device which can be manufactured at low cost.

With these objects in view the invention consists in the improvements and combinations hereinafter described and claimed, reference being had to the accompanying drawing which forms a part of this specification, and in which like elements are designated by the same reference numerals throughout the several views.

In the said drawing, Figure 1 is a top plan view of the invention, the cover thereof being shown in its outward position, a portion of the carton being indicated by dash and dot lines. Fig. 2 is a partial section on the line 2—2 of Fig. 1. Fig. 3 is a front view of Fig. 1 with the cover shown in its inward position, and Fig. 4 is a right hand side view of Fig. 3.

In these views the numeral 10 indicates a guide adapted to follow the outside of a carton. It is here shown of right angular form, to be applied at one corner of the carton, but it may be of other forms if it is to be otherwise applied. It is preferably formed of a single sheet of metal. Punching knives 11 and 12 are spaced from the inner faces of the guide at a suitable distance to receive the carton wall between them. These knives are connected with the portions of the guide by top parts 21; and preferably the knives are formed from the same sheet of metal as the guide, being bent into parallelism therewith. The blades are preferably triangular, and have cutting edges shown at 11° and 12°. The side edge of the knife 12, into proximity with one of the walls 10, as indicated at 13, so as to cooperate therewith to clamp the wall of the carton. Irrespective of this provision, however, the guide 10 and the blades 60 11 and 12 hold the walls of the carton between their parallel faces. The knives 11 and 12 operate to cut out a triangular flap B from the top of the carton A.

A guard 16 is mounted on the body of the device in position to extend across the base of the flap, so that the latter may be bent backward over the guard, as indicated in Fig. 1. In the form shown this guard consists of a wire having its end portions 30 received between the blades 11, 12 and the guide 10 and immediately beneath the top connecting portions 21, where they may be soldered or otherwise secured. The central portion (16) of the wire is straight, and the intermediate portions 17, 18 are curved or looped so as to afford resilient yielding support for said guard 16.

A cover 20, here shown of triangular form, is pivoted on an axis perpendicular to its plane so that it swings in its own plane over and away from the opening left by the flap. In so doing it swings over the top part 21 and over the guard 16, the flap B being interposed between the latter and the cover, so as to effect a tight joint. The parts 17, 18 yield to compensate for the thickness of the cover and press upwardly resiliently so as to keep the point perfectly tight. The cover preferably has a tight sliding fit with the top parts 21 of the body of the device, and further to guard against leakage it has depending flanges 26 which close against the outer faces of the guide wall 10 when the cover is swung shut. These flanges also limit the movement of the cover. The edge of the cover which slides over the top of the device is curved or deflected upward, as shown at 22 so as to ride easily over the flap.

One of the side edges of the guide 10 is rolled over to form a hinge member 27. In this is rotatably received a pivot pin 28, the upper portion of which is bent horizontally and secured to the cover, as by soldering, its end being further bent to form a finger grip 24. The pivot pin has a flattened or enlarged portion 29 which is received in a recess 28 cut out of the guide 10 and hinge 27, so as to hold the pivot pin against endwise movement in the hinge-member.
The operation of the device has been given with the description of structure.

Having described my invention what I desire to secure by Letters Patent and claim is:

1. A dispensing attachment for cartons, comprising means for cutting a pouring opening into the top of the carton, said means including a knife having the axis of its broad side following the wall of the carton, and a guide connected with said means parallel with said side of the knife and spaced therefrom at an appropriate distance to receive the wall of the carton between them.

2. A dispensing attachment for cartons, comprising means adapted to be forced down into the top of the carton to cut out a flap therefrom, a guide connected with and spaced from said cutting means so as to receive the wall of the carton between them, and a cover pivoted on the attachment adapted to form a tight joint against the flap.

3. A dispensing attachment for cartons, comprising an angular guide adapted to follow the outer sides of a carton at one corner thereof, and knives parallel to the portions of said guide and spaced therefrom at appropriate distances to receive the carton walls.

4. In a device of the character described, the combination of means adapted to be forced down into the top of a carton to cut out a flap therefrom, a guide spaced from the cutting means at an appropriate distance to receive the wall of the carton between them, a guard arranged to extend across the top of the carton at the base of the flap, and a cover pivoted to swing in its plane over the opening left by the flap and over said guard with the flap between them.

5. In a device of the character described, the combination of a guide adapted to follow the outside of a carton, means connected therewith for cutting out a portion of the cover of the carton when the device is forced downward, said guide having one side edge rolled over to form a hinge member, a cover adapted to slide over the top of the device, and a pivot pin rotatable in said hinge member and having its upper portion bent horizontally and secured to the top of said cover.

6. In a device of the character described, the combination of a guide adapted to follow the outside of the carton, means connected therewith for cutting out a portion of the cover of the carton when the device is forced downward, and a cover pivoted to slide over the top of the device and having a depending flange arranged to close against the outer face of said guide when the cover is shut.

7. A dispensing attachment for cartons, comprising means for cutting out a portion of the top of a carton, a guide continuous at its top with the top of said cutting means and spaced from the face thereof at a distance approximately the thickness of a carton wall, said guide extending down below the lower end of the cutting means, and a cover pivoted to said guide at one side of the latter on an axis perpendicular to the cover.

8. A dispensing attachment for cartons, comprising an angular guide adapted to follow the side of a carton at one corner thereof, and knives parallel to the portions of said guide and spaced therefrom at an appropriate distance to receive the carton wall, the edge of one of the knives being in clamping relation with respect to the inner face of the guide portion at an angle to this knife.

9. In a device of the character described, the combination of a body portion comprising punching knives and a guide connected at its top to the top of said knives and adapted to follow the outside of the carton, a member having its ends received between said knives and said guide, its central portion constituting a guard arranged to extend across the base of the flap cut out by said knives, and its intermediate portions formed to permit said guard to yield resiliently, and a cover pivoted to slide over said guard with the flap between them.

Signed at the borough of Manhattan in the county of New York and State of New York this 29th day of March A. D. 1912.

JOHN A. HAGERSTROM.

Witnesses:

H. C. KARLSON,
W. H. GEE.

Copies of this patent may be obtained for five cents each, by addressing the “Commissioner of Patents, Washington, D. C.”