

No. 893,043.

PATENTED JULY 14, 1908.

H. W. WESTERBERG.
PACKAGE OPENER.
APPLICATION FILED APR. 2, 1908.

Fig. 1

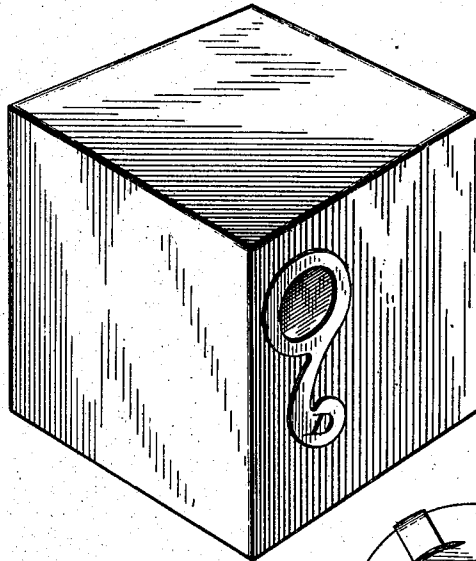


Fig. 6

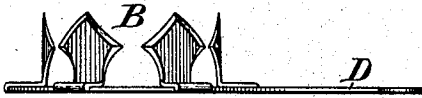


Fig. 7

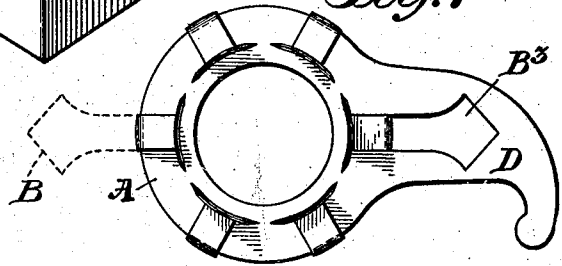


Fig. 2

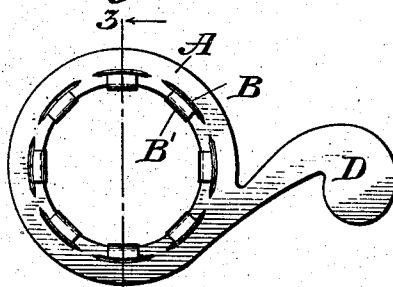


Fig. 4

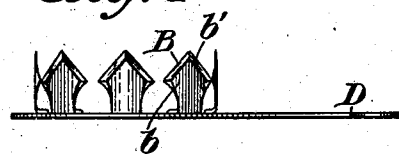


Fig. 3

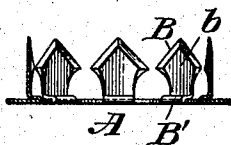
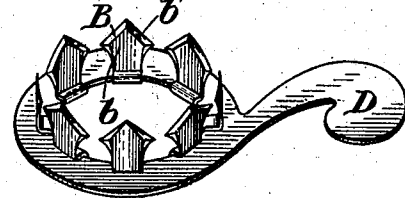


Fig. 5



Witnesses:
Chas. Clagett
Anta Burke.

Inventor
Harry W. Westerberg,
By his Attorney, *J. J. Johnson.*

UNITED STATES PATENT OFFICE.

HARRY W. WESTERBERG, OF NEW YORK, N. Y., ASSIGNOR TO J. HERBERT WATSON, TRUSTEE,
OF BROOKLYN, NEW YORK.

PACKAGE-OPENER.

No. 893,043.

Specification of Letters Patent.

Patented July 14, 1908.

Application filed April 2, 1908. Serial No. 424,750.

To all whom it may concern:

Be it known that I, HARRY W. WESTERBERG, a citizen of the United States, and a resident of the borough of Brooklyn, whose post-office address is 306 Prospect Place, in the borough of Brooklyn, in the city and State of New York, have invented certain new and useful Improvements in Package-Openers, of which the following is a specification.

My present invention relates to opening devices for card-board packages of various kinds and has especial reference to sealed packages, such as those which contain the cereal products now so well-known and extensively advertised.

It has for its object to provide a device which can be applied at the factory after the package is otherwise completely made up, by means of which the package may be opened without leaving the usual unsightly and unsanitary flap, and may be conveniently closed again so as to be at all times practically airtight; and yet is without projecting parts, so that the ordinary methods of packing for shipment may be employed without change.

To accomplish the ends pointed out I construct a ring of metal having projecting teeth which may be forced through the card-board of the package, leaving a circular piece which is separated from the rest of the surrounding card-board by perforations closed by the teeth. By preference a small projection from the circumference is made to serve as a handle so that when it is desired to open the package the ring may be revolved and the teeth will act as cutters to separate the portions of the card-board between the perforations. The shape of the teeth is such as to leave a slight lost motion after the ring is seated in place, as will be more fully explained hereinafter. Where the device is made of sheet metal, the teeth are slightly bent back at the root, so as to form a narrow shoulder around the inner circumference of the ring against which the portion of the card-board which is cut out seats itself, the friction against the teeth holding it in place and the ring itself closing the joint between this circular opening and the rest of the package. When cast, the teeth may be set back to attain the same result.

The accompanying drawings show embodiments of my invention.

Figure 1 is a perspective of a completed

package with the device applied thereto. Fig. 2 is a plan, Fig. 3 is a cross section on the line 3, 3 of Fig. 2; Fig. 4 is a side elevation and Fig. 5 a perspective of a completed device. Figs. 6 and 7 are respectively a side elevation and plan of a modification.

In Fig. 1 I show the device applied to a package. It will be seen that it is seated flat against the exterior surface and as the metal of which it is composed is quite thin, present methods of packing are unmodified. The device may be made of thin sheet steel or cast metal, and in practice it is not imperative to sharpen the teeth after they are struck out by the die, since that operation leaves the edges roughened and sharpened sufficiently for the purposes of the invention. If a heavier grade of metal be used, however, the sharpening of the cutting edges of the teeth will be found desirable. In practice the device forms an air-tight and consequently dust-tight opening and closing device, efficacious for the purpose in view.

In Figs. 2 to 5, A indicates the flat metal ring and B the teeth; B¹ is a portion of the tooth inset from the inner periphery of the ring so as to form a shoulder; b indicates the portion of the tooth which is wider than the root thereof and b¹ shows that the tooth is sharpened. Where the device is made of thin enough material this would be unnecessary. D is the handle. The effect of this spear-head formation of the teeth is to cut a series of slots around the circumference of the circle, leaving the card-board within the ring attached to the wall of the package by narrow strips of material and giving the ring a circumferential lost motion, so that it is more readily turned when it is desired to open the package. The slots are closed not only by the teeth but by the flat surface of the ring which presses up against them so that practically speaking the package remains air-tight and dust-proof, or at least substantially so.

In the form of device indicated in these figures the material for the teeth is taken from the inside of the ring, but in Figs. 6 and 7, I indicate that the stock for the teeth may be taken from the outside, as shown by the dotted line in Fig. 7. In this case the handle D is made wider and as indicated at B³, the material for one of the teeth may be taken from the handle.

All of the forms of the device shown in

these drawings are well adapted to be struck up with dies from sheet metal, preferably from thin sheet steel, the device being afterwards nickel-plated or not as may be desired.

5 I may, however, form the article of thin cast metal and this is an efficacious method. It is obvious that in this case the root of the tooth need not be folded back upon the ring since the tooth will project directly from the
10 body of the ring. This form has the advantage of seating the metal of the ring directly against the package so that the slots cut by the teeth are securely sealed. If desired, the device may be covered by thin
15 paper which will serve to secure it firmly in place and make the package damp-proof; but in general this will not be necessary.

Having thus described my invention what I claim and wish to protect by Letters-
20 Patent of the United States is:

1. In a device for opening packages which are composed of card-board or the like, a flat ring adapted to be seated against the package, provided with teeth projecting through
25 the wall; the teeth spaced apart so as to leave the portion of the package-wall within the ring attached to the remainder of the wall until rotation of the ring cuts the attachment, as described and for the purposes
30 set forth.

2. In a device for opening packages which are composed of cardboard or the like, a flat ring seated against the package and provided with the teeth projecting through the pack-
35 age-wall; the teeth displaced from the inner

periphery of the ring so as to leave a shoulder against which the portion of the wall within the ring may seat itself.

3. In a device for opening packages which are composed of cardboard or the like, a flat
40 ring seated against the package and provided with teeth projecting through the package-wall, the teeth wider in the middle than at the root, so that the device has a little circumferential lost motion when seated
45 in place.

4. In a device for opening packages which are composed of card-board or the like, a flat ring seated against the package and provided with teeth projecting through the wall
50 thereof; the teeth wider at the middle than at the root, and being set back from the inner periphery of the ring to form a shoulder.

5. In a device for opening packages which are composed of cardboard or the like, the
55 combination with the flat ring and the teeth arranged to cut through the wall of the package, of a handle for the ring.

6. In a device for opening card-board packages, the combination with the flat ring
60 and the teeth arranged to give a circumferential lost motion, of a handle projecting from the outer periphery of the ring.

In witness whereof, I have hereunto set my name in the presence of two witnesses.

HARRY W. WESTERBERG

Witnesses:

T. J. JOHNSTON,
IRVING M. OBRIEGHT.