D. H. GRAZIER.

BOX OPENER.

APPLICATION FILED JULY 18, 1917.

1,291,841. Patented Jan. 21, 1919.

Fig. 1.

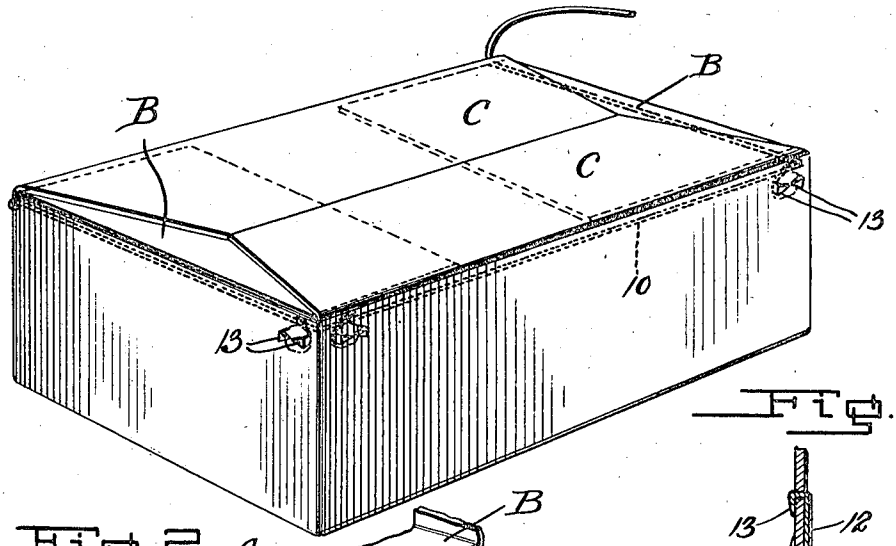


Fig. 4.

Fig. 2.

Fig. 5.

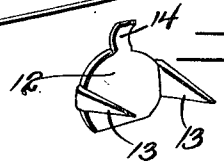
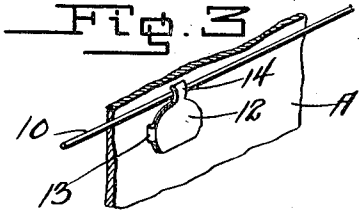


Fig. 3.



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BOX-OPENER.

1,291,841. Specification of Letters Patent. Patented Jan. 21, 1919.

Application filed July 18, 1917. Serial No. 181,379.

To all whom it may concern:

Be it known that I, DURBIN H. GRAZIER, a citizen of the United States, and a resident of Johnstown, in the county of Cambria and State of Pennsylvania, have invented a certain new and useful Improvement in Box-Openers, of which the following is a specification.

The present invention relates to openers for boxes, and more particularly to openers of the ripping type.

An object of the present invention is to provide an improved and simple means for opening boxes of fiber, thin metal, compositions, and any other suitable material capable of being torn or cut by a ripping wire or cord.

Another object of the present invention is to provide a box opener of this character with means for supporting the wire or cord at the top of the box and in such position as to open the upper end of the box for disclosing the contents thereof without spilling the contents or damaging the sides and ends of the box.

The above, and various other objects and advantages of this invention will be in part described, and in part understood, from the following detailed description of the present preferred embodiment, the same being illustrated in the accompanying drawings wherein:

Figure 1 is a perspective view of a box having an opener of the ripping type applied thereto.

Fig. 2 is a similar view disclosing the box opened, and having the top portion thereof swung into open position.

Fig. 3 is a detail perspective view of a corner portion of the box showing one of the retainers for the ripping wire or cord.

Fig. 4 is a horizontal sectional view through the same.

Fig. 5 is a detail perspective view of one of the retainers.

Referring to these drawings, and first to the form of the invention disclosed in Figs. 1 to 5 inclusive, A designates the body of a box provided with a suitable top, the same in the present instance comprising the end flaps B and the side flaps C. The end flaps B are folded inwardly and the side flaps C are folded inwardly over the flaps B, the flaps being secured by an adhesive or the like in the usual manner.

The opener of this invention comprises a length of relatively thin flexible wire or cord 10 which is arranged within the body of the box A in the upper end thereof and in the angles between the top and the sides and ends of the box.

One end 11 of the ripping member 10 is looped through a corner of the box A at its upper portion to anchor the member 10 thereto. The wire or cord 10 is carried along the upper edge of the box to the next adjacent corner thereof, and is held in close proximity to the adjacent end and top portion of the box by a pair of retaining members 12. Each retaining member 12 is in the form of a flat plate having a pair of prongs 13 extending through and overturned against the adjacent side or end wall of the box A, the plates 12 lying flat against the inner side of the box and having upon its upper edge an upstanding hook 14 which is slightly curved with its concavity facing outwardly. The wire or cord 10 passes through the hook 14 of the retaining members 12, and the latter are preferably arranged in closely spaced apart pairs at the outer corners of the box, as shown in Figs. 1 and 2. The wire or cord 10 is trained over the hook 14 and thus extends beneath the front upper edge of the box, and along the inner sides of the upper edges of the box. The free end of the wire or cord 10 is carried through the rear wall of the box A and in position to be grasped by the fingers, as shown in Fig. 1. This free end of the wire 10 may be held closely against the outer side of the box by a covering, a strip of paper, or the like secured in any suitable manner against the side of the box by an adhesive, and over the free end of the wire.

In operation, it is only necessary to grasp the free end of the wire 10 and draw the same outwardly along the upper edges of the box to cut or sever the top of the box from the body portion thereof by first tear-

ing the end flaps B from the sides of the box, and tearing the outer side flaps C from the outer side of the box. These flaps B and C are consecutively severed from the sides, the front and the opposite sides of the box during the tearing or ripping of the wire 10.

When the operation is complete, as shown in Fig. 2, the top of the box may be swung back in the manner of a cover to disclose the entire contents of the box, and to prevent the spilling of the contents as the cover portion of the box only is removed. It will be noted that the hooks 14 are arranged in such position as to hold the wire 10 immediately opposite the portions of the box to be severed so that the wire 10 may be freely disengaged from the hooks 14 by the outward pull on the wire 10.

It is an important feature of this invention to provide an opener of the ripping type which is arranged at the upper portion of the box so that the top wall of the box may be opened or severed from the body portion thereof without destroying the sides or ends of the box, and to thus admit of the future use of the box for various purposes, and also to prevent spilling of the contents of the box when opened.

It is of course understood that various changes and modifications may be made in the details of arrangement of the ripping wire and of the fastening and retaining means therefor without departing from the spirit of this invention, such changes being restricted only by the scope of the following claims.

I claim:

1. The combination with a box having a top comprising a plurality of closure flaps formed upon the body of the box and adapted to be sealed to each other to close the top of the box, of a flexible ripping member arranged within the box beneath said closure flaps and having one end anchored to the box and the other end extended outwardly through the box, means for retaining the ripping member in juxtaposed position to the sides of the box whereby certain of said closure flaps may be ripped from the body of the box to permit access to the interior thereof.

2. The combination with a box having a top comprising a plurality of closure flaps formed upon the body of the box and adapted to be sealed to each other to close the top of the box, of a flexible ripping member arranged within the box beneath said closure flaps and having one end anchored to the box and the other end extended outwardly through the box, means for retaining said ripping member in juxtaposed position to the sides of the box, said ripping member extending along three sides of the box whereby certain of said closure flaps may be ripped from the body of the box to permit access to the interior of the box and to form a hinged cover therefor.

3. The combination with a box having a top adapted to be sealed, of a ripping wire arranged within the upper end of the box beneath the cover and having one end anchored to one corner of the box, the free end of the ripping wire being adapted to extend through an opposite corner of the box, and means attached to the sides of the box at the intermediate corners thereof and within the upper end of the box for retaining the wire in juxtaposed position to the side and end walls of the box.

4. The combination with a box having a top adapted to be sealed, of a ripping wire arranged within the upper end of the box beneath the cover, one end of the ripping wire being anchored to the box at one corner thereof, a plurality of hooks secured to the ends and sides of the box and facing toward said sides adapted to engage the ripping wire and hold the same in juxtaposed position to the inner wall of the box, the free end of said ripping wire projecting through an opposite portion of the box and adapted to be grasped for severing the top from the box.

5. The combination with a box provided with a top portion adapted to be sealed, of a ripping wire arranged within the upper portion of the box and having one end anchored to the box and having its opposite end projecting through a remote portion of the box, a plurality of retainers each comprising a plate having prongs projecting through an adjacent side wall of the box and being overturned to secure the plates thereagainst, said plates of the retaining devices having upstanding outwardly facing hooks adapted to engage the ripping wire and hold the same in juxtaposed position to the side and end walls of the box.

6. The combination with a box having a top comprising a plurality of closure flaps formed upon the body of the box and adapted to be sealed to each other to close the top of the box, of a ripping wire arranged within the box beneath the cover and having one end anchored to one corner of the box, the free end of the ripping wire being adapted to extend through an opposite corner of the box, and means attached to the sides of the box at the intermediate corners thereof and within the upper end of the box for retaining the wire in juxtaposed position to the side and end walls of the box whereby certain of said closure flaps may be ripped from the body of the box to permit access to the interior thereof.

7. The combination with a box having a top comprising a plurality of closure flaps formed upon the body of the box and adapt-

ed to be sealed to each other to close the top of the box, of a ripping wire arranged within the upper end of the box beneath the cover and having one end anchored to the box at one corner thereof, the free end of the ripping wire being adapted to extend through an opposite corner of the box, a plurality of hooks secured to the ends and sides of the box and facing toward said sides and adapted to engage said ripping wire and hold it in juxtaposed position to the inner wall of the box whereby certain of said closure flaps may be ripped from the body of the box to permit access to the interior of the box and to form a hinged cover therefor.

DURBIN H. GRAZIER.