

H. SIMMONS.

BOX OPENER.

APPLICATION FILED MAR. 29, 1911.

1,005,755.

Patented Oct. 10, 1911.

Fig. 1.

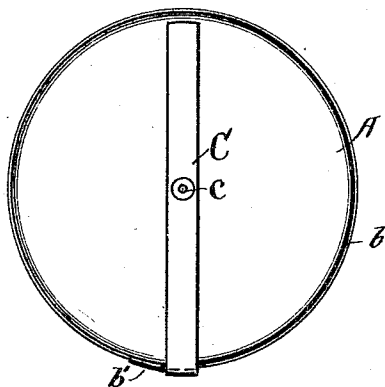


Fig. 2.

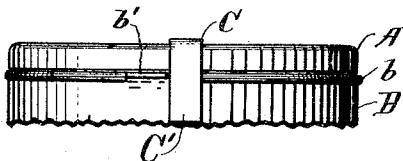


Fig. 3.

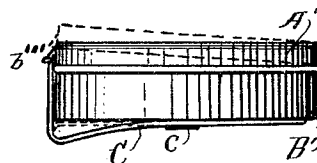
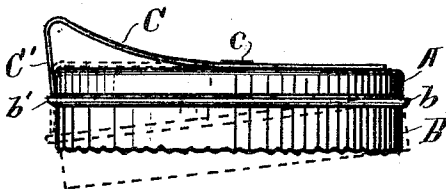


Fig. 6.

Fig. 4.

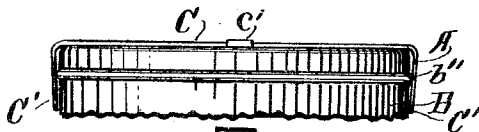
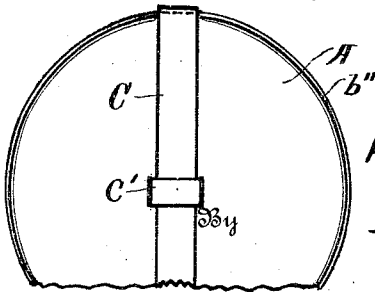


Fig. 5.



Witnesses

Wm. S. Willey  
R. S. Williams

Inventor

Harry Simmons

Wm. S. Willey  
Attorney

# UNITED STATES PATENT OFFICE.

HARRY SIMMONS, OF FOREST LAKE, MINNESOTA, ASSIGNOR OF ONE-HALF TO PETER SIMMONS, OF FOREST LAKE, MINNESOTA.

## BOX-OPENER.

1,005,755.

Specification of Letters Patent.

Patented Oct. 10, 1911.

Application filed March 29, 1911. Serial No. 617,796.

To all whom it may concern:

Be it known that I, HARRY SIMMONS, a citizen of the United States, residing at Forest Lake, in the county of Washington and State of Minnesota, have invented certain new and useful Improvements in Box-Openers, of which the following is a specification.

My invention relates to improvements in appliances for removing the tops of boxes, such as baking powder, shoe blacking and kindred boxes, and its objects are: first, to provide a means whereby the cover and box will be separated without great effort on the part of the operator, and, second, to provide a means whereby the opening-device may be adjusted to operate upon the box without the necessity of placing the cover upon the box in any particular relative position. I attain these objects by the mechanism illustrated in the accompanying drawing, in which—

Figure 1 is a plan of a box showing the position of the opening device. Fig. 2 is an elevation of the top of a box with the opening device in normal position and a single offset in the bead around the box upon which the opening element may act. Fig. 3 is the same showing the bead flattened on the upper surface and the opening element in position to force the box open. Fig. 4 shows the opening element made to act upon opposite sides of the box. Fig. 5 is a plan of the same with the box partly cut away, and, Fig. 6 shows the opener as applied to shallow boxes.

Similar letters refer to similar parts throughout the several views.

This opening device is designed for use upon all ordinary tin boxes such as are used for packing shoe blacking, baking powder, cocoa, and many other articles for culinary and other uses, and I have shown it applied to the top of the box for tall boxes, and to the bottom of the box for shallow boxes to fully illustrate its various uses above mentioned.

A and A' represent the cover, B and B', the box, and *b* represents the bead formed in the box below the cover, common in all tin boxes.

The opening element that I have invented for use upon this class of boxes consists of a spring C that is pivotally secured to the radial center of the box, as at *c*, so that it

may be readily turned upon said pivot to any desired radial position upon the cover of the box as it is practical to only form one short lug, as *b'*, on the box unless it is made purposely for use with this device, and great pains would be necessary to place this lug in proper position to be readily acted upon by the spring. This spring has the end bent down at right angles, as at C', to pass down well below the bead *b* so that when it is desired to open the box the spring may be raised upward, as in Fig. 3, until the end of the part C' will rest on the upper surface of the ledge *b'*, and its tension will force the box and cover apart, as indicated by the dotted lines in this figure.

In Figs. 4 and 5 I have shown the box formed with a bead *b''* made so that the upper surface will stand practically at right angles with the body of the box at all points so that the spring may be made to act upon any point on the bead. When made this way the spring may be securely fastened to the top of the box by a metal strip, as *c'*, passing over it and through openings in the top of the box, and the spring may be so extended that both ends may be made to form the angled projection C' to be made to act upon the bead on opposite sides of the box, though the last named construction is not an actual necessity to the proper and satisfactory working of the device. It will be readily understood that the portions C' of the springs should press firmly toward the box so that when raised up to the position indicated in Fig. 3 they will drop back upon the bead and will retain their position there until the box has been forced open.

When manufacturing boxes expressly for use with these openers I prefer that the bead be made flat on the upper surface, as shown at *b''* in Fig. 4, as this can be done as readily when forming the box as can a round bead, and it does away with the necessity of further expense upon the box than to simply place the spring C upon the cover by either of the means shown in the drawing, or otherwise.

The description hereinbefore given has borne more especially to opening devices for use upon tall boxes, as baking powder cans, &c., where it is preferable to secure the opener to the cap or top of the box, but when applying it to shoe blacking boxes, and other very shallow boxes I find it more con-

venient to secure the opening device or spring C to the bottom of the box B', as in Fig. 6, with the resistance lug b' placed upon the edge of the cover A', as at b''' in Fig. 6. With this manner of applying the spring C it is only necessary to form a short lug, b''', though this lug may be made longer if deemed desirable.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In combination with a box and its cover, a spring secured to the radial center of one part with the end bent down at right angles, parallel with the side of the box, and a lug formed on the other part of the box in position so that the spring may be forced back and the end thereof be made to engage

the lug and press thereon to force the box and cover apart.

2. In combination with the body and cover of a metal box, a spring pivotally secured to the body of the box and having the end bent at a right angle to lie parallel with the side of the box, a lug formed on the cover of the box in position so that the spring may be forced back and the end made to engage the lug and force the cover off of the body of the box.

Signed at Forest Lake, Minnesota, March 11, 1911.

HARRY SIMMONS.

In presence of—

A. F. WALKER,

NADA T. WALKER.

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