Nov. 11, 1941. J. HJORT 2,262,000

BOX SEAL CUTTER

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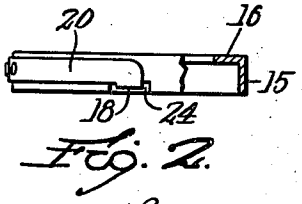


Fig. 2.

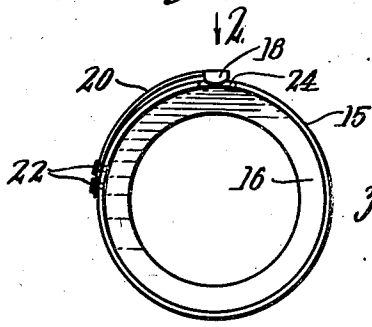


Fig. 1.

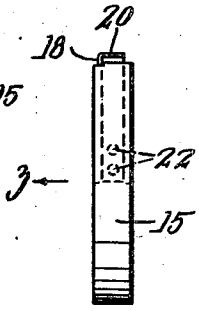


Fig. 3.

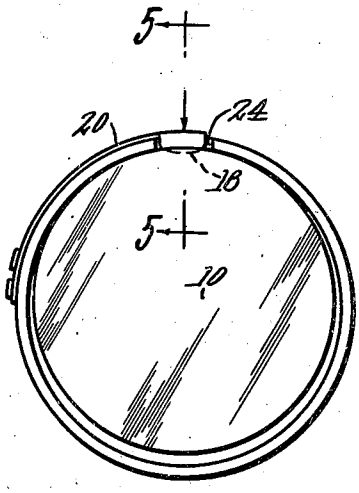


Fig. 4.

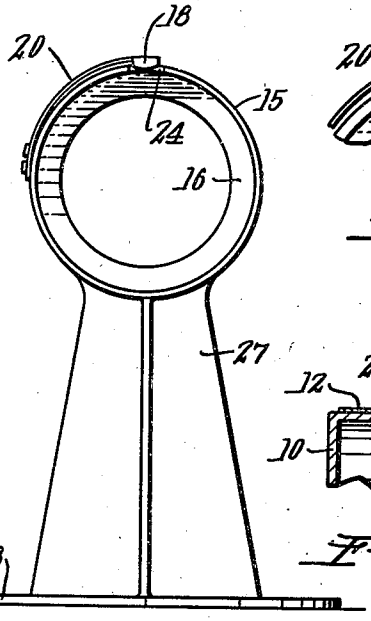


Fig. 9.

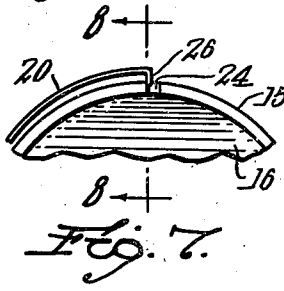


Fig. 7.

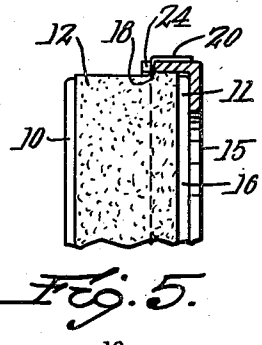


Fig. 5.

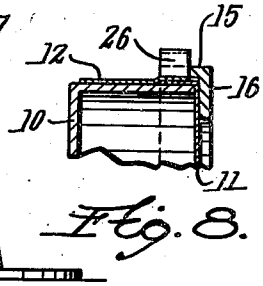


Fig. 8.

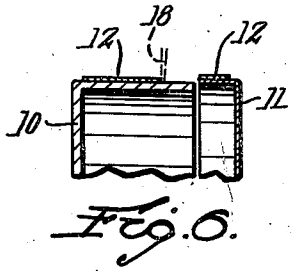


Fig. 6.

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BOX SEAL CUTTER

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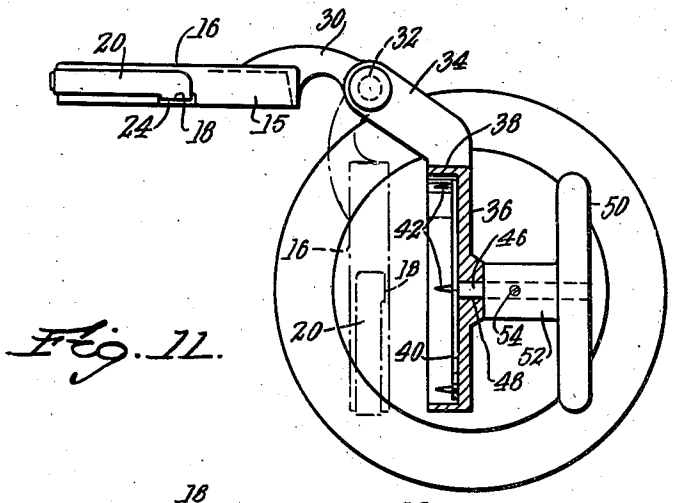


Fig. 11.

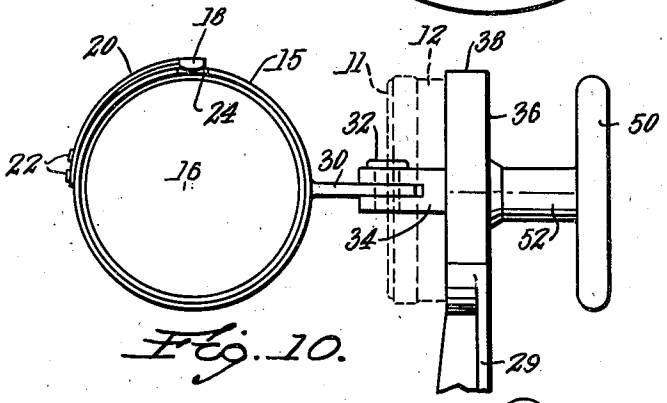


Fig. 10.

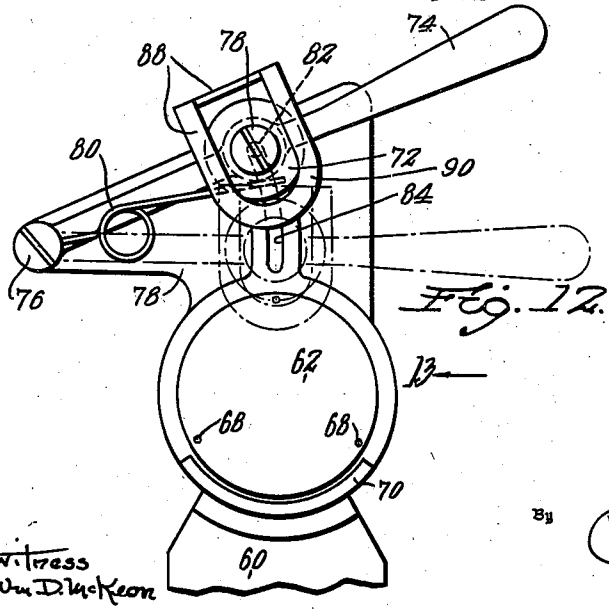


Fig. 12.

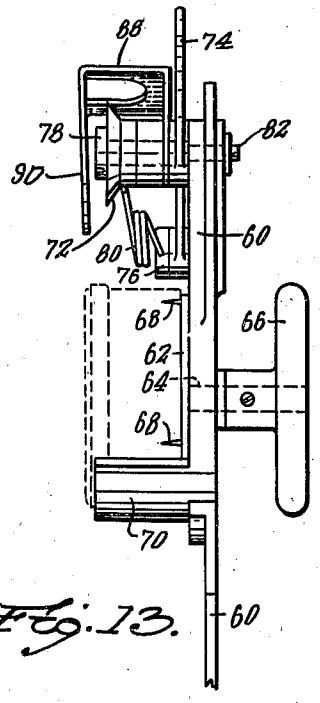


Fig. 13.

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BOX SEAL CUTTER

John Hjort, Auburn, Mass.

Application January 23, 1939, Serial No. 252,265

2 Claims. (Cl. 30—2)

This invention relates to a box seal cutter, and more particularly to a cutting device which will serve to cut the paper seal that holds a telescoping cover on a box.

Such materials as snuff are ordinarily packaged in a pasteboard box having a metal cover slidably fitted over the box and sealed in place by means of a band of paper pasted around the periphery of the box. In order to remove the cover, it is necessary to cut the paper band near the edge of the cover and thus free the cover from the body of the box. This usually requires the use of a knife or other sharp edged tool, and in the absence of such a cutting tool, the user finds it difficult to open the box. It is, therefore, desirable that the user of snuff have a device readily available for opening the box and that in stores where boxes of snuff are sold provision be made for the same purpose.

It is accordingly the primary object of my invention to provide a readily transported box opening device of this type which will serve efficiently for cutting the paper band or seal on a box and which is so constructed and arranged that the user cannot be injured by contact with the cutting tool.

A further object is to provide a box opening device which is mounted permanently on a substantially stationary support and so is available for cutting the box seal.

A further object is to provide such devices which are simple in construction and readily and economically manufactured. Further objects will be apparent in the following disclosure.

In accordance with my invention, I provide a cup shaped device having a cutting tool so arranged thereon that it will be normally concealed from contact with the user of the device but may be pressed into position against the box seal to be cut, and the box and cutting device rotated relative to each other to accomplish the desired purpose.

Various embodiments of this invention are shown in the drawings in which:

Fig. 1 is a plan view of one simple form of device;

Fig. 2 is an end view, partly in section, looking in the direction of the arrow 2 on Fig. 1;

Fig. 3 is another end view taken at right angles to Fig. 2;

Fig. 4 is a plan view with a box of snuff assembled in position for cutting the same;

Fig. 5 is a fragmentary section of the cutter on the line 5—5 of Fig. 4, the box being shown in elevation;

Fig. 6 is a detail showing the box with the cover removed;

Fig. 7 is a fragmentary section showing a scraping device for removing the paper label;

Fig. 8 is a fragmentary section on the line 8—8 of Fig. 7;

Fig. 9 is a modified form showing the box of Fig. 1 mounted permanently on a stand;

Fig. 10 is a further modification showing the cutting tool pivotally mounted on a stand;

Fig. 11 is a top plan view, partly in section, showing the operation of the device of Fig. 10;

Fig. 12 is a further modification showing the cutting tool mounted on a swinging arm; and

Fig. 13 is an end elevation of the device looking in the direction of the arrow 13 of Fig. 12.

Referring first to Fig. 6, a box to be opened may comprise a cylindrical container 10, made of paper, metal, a synthetic resinoid or other suitable material and a cover 11 made also of suitable material. A band or label 12 of paper or other material that may be readily cut is pasted around the box and cover when in their assembled positions so as to seal the cover and hold it in place.

One simple form of device suitable for cutting the paper band or seal 12 of a snuff box is shown in Figs. 1 to 5 inclusive, which comprises a cup shaped body having a rim or peripheral wall 15 and a reinforcing plane wall 16 which may be continuous or cut away, as shown in the drawings, in order to provide a lighter and more economical object. These parts may be made of a molded resinoid, wood, metal or other suitable materials. The cutting tool comprises a sharpened knife edge 18 which is mounted on the spring arm 20 suitably secured to the peripheral wall 15 at a remote point as by means of the rivets 22 or any other fastening device. The peripheral wall 15 is provided with a slot 24 arranged beneath the cutting tool 18 and of such size and location that the cutting tool may be pressed through the slot into contact with a box of snuff or other article to be cut. The cutting tool 18 is long enough so that it may be projected through the inner periphery of the wall 15 into contact with the paper seal so as to cut the same. The spring arm 20 is so arranged relative to the tool that the sharp edge is normally concealed within the wall 15, as shown particularly in Fig. 1, so that the user of the device cannot readily contact with that sharp edge and thus be injured thereby.

The use of the device is illustrated particularly in Figs. 4, 5 and 6. The box of snuff is inserted into the cup of the cutter, with its cover 11 located within the annular wall 15 and against the

plane wall 16. The parts are of such dimensions that when the snuff box is pushed fully into place, the cutting tool 18 will be positioned just beyond the edge of the cover 11. The operator will then thrust down on the spring arm 20 and thus force the cutter 18 through the paper 12. Rotation of the cutter and the box relative to each other will serve to run the cutting tool around the entire periphery of the seal and thus cut the same into two parts and permit removal of the box cover, as indicated in Fig. 6.

A modification is shown in Figs. 7 and 8 in which the cutting tool is arranged to cut the seal by scraping off the paper, but this scraper is to be considered as a cutting tool falling within the scope of the claims. This cutter comprises the same spring arm 20, mounted as shown in Fig. 1, which has its free end turned down to form the scraping tool 26. By pressing the scraper 26 through the slot 24 of the peripheral wall 15, this scraper may be forced against the paper 12, as shown in Fig. 8, and caused to tear or to scrape the seal from the cover 11 and thus free the cover from the box 10.

Either of the cutting devices shown in Figs. 1 and 7 may be mounted on a stand. As shown in Fig. 9, the walls 15 and 16, corresponding with similar parts in Figs. 1 and 7, are made integral with a stand comprising vertical walls 27 secured at their lower ends to a flat base 28. This device may be stood on the counter in a store, so that when a box of snuff or other suitable packaged material is sold, the box may be opened for the customer.

A further modification is shown in Figs. 10 and 11, in which a cup shaped cutter device of the type shown in Fig. 1 may be secured upon a stand by means of an arm 30 which is integral with the rim 15 and back plate 16. This arm is pivotally connected through a pin 32 with a further arm 34, which is integral with the stand 29. Also integral with the stand 29 is a cup shaped body comprising a rear wall 36 and a peripheral wall 38 of such size and location that a snuff box may be put into this stationary cup and the swinging cup formed by the parts 15 and 16 will fit thereover. As indicated in Fig. 11, the parts are also constructed and arranged that the swinging cutter wall 16 may be located at the correct distance from the rear fixed wall 36 when a snuff box is put into position therebetween, so that the two walls will be parallel and the cutter 18 will be operated properly.

In order to rotate the snuff box, I provide a device comprising a pivotally mounted plate 40 having sharp pins or prongs 42 thereon adapted to punch through the bottom wall of the snuff box, which is ordinarily made of pasteboard. The plate 40 is mounted on a spindle 46 passing through a bearing hole 48 in the wall 36, and the parts are turned by means of a hand wheel 50 having a sleeve 52 slidably fitting over the pivot pin 46 and secured suitably thereto as by means of a set screw 54. It will now be seen that when the snuff box, indicated in dotted outlines in Fig. 10, is inserted in the stationary cup with its bottom wall against the plate 40 and with the pins 42 punched therethrough, then upon closing the cutting cup 15—16 into place, it will be possible by means of the handle 50 to rotate the snuff box and to press the cutting tool 18 into contact with the seal 12 and cut the same properly.

A further modification is shown in Figs. 12 and 13, which comprises an upright stand 60 having a suitable base plate as shown in Fig. 9. A rotary plate 62 arranged to support the snuff box is pivotally mounted on a shaft 64 passing through a suitable bearing hole in the vertical plate 60, and the snuff box is rotated by a hand wheel 66 arranged similarly to that shown in Fig. 10. The plate 64 has sharpened prongs 68 projecting therefrom which are adapted to punch through the bottom of the pasteboard box and thus hold it securely in position on the rotating support. An arcuate shelf 70 projects laterally from the vertical wall 60 beneath the snuff box so that the box will be readily guided into position.

In this modification, the cutter comprises a knife 72 mounted on a swinging arm 74. The arm is pivoted on a pin 76 mounted on a laterally projecting arm 78 which is integral with the upright frame member 60. A spring 80 secured to the pivot pin 76 and engaging the under side of the support for the cutting tool serves to hold the arm in its uppermost position. This upward movement is limited by a pin 82 projecting laterally from the lever arm 74 and riding in an elongated slot 84 in the main wall 60 of the casting. The cutter may be of various shapes, but as here shown it is a disk shaped tool having a sharpened edge projecting downwardly and positioned for cutting the paper seal, and the tool may be rotated into a different position when its edge becomes dulled. The cutter is held in place by the enlarged head 78 of the pin or shaft 82 which passes through a suitable hole in the arm 74 and then through the elongated slot 84. A U-shaped guard 88, also mounted on the shaft 82, covers the top and side of the cutting tool so as to prevent the user from readily contacting with the sharp edge of the cutter. The depending arm 90 of this guard is so positioned that it will just clear the cover of the snuff box when the arm 74 is thrust downwardly and thus hold the snuff box properly in position on the prongs 68 of the rotating plate 62. Hence, with this construction, it is merely necessary to impale the snuff box on the prongs and then force the lever arm 64 down, whereupon the cutter 72 will cut the paper band as the box is rotated by means of the handle 66.

It will now be appreciated that each of these constructions comprises a cutting tool which is resiliently mounted relative to a positioning support for a cylindrical box, and its sharp edge is protected by a guard comprising either the peripheral rim 15 of the cup shaped device above described or by the special guard 88 of Figs. 12 and 13. In each of the modifications, the box and the cutter are manually rotated relative to each other while the cutting tool is forced from its hidden position into contact with the paper seal. It will also be appreciated that the device described as a cup may be made in various forms, since it is merely necessary to provide a guiding surface which positions the box properly and so locates the cutting tool that it will cut the seal. For example, the rim 15 need not be continuous but may be made of spaced lugs adapted to position the cutter and the box relative to each other. Hence, the slot 24 in the wall 15 through which the cutter passes may comprise a large opening between such locating lugs. The rear wall 16 of the cup may be omitted or be replaced by one or more locating members arranged to hold the box in such a position that the cutter blade 18 will operate properly. That portion of the rim 15 which is opposite the cutter 18, therefore, serves as a shelf for supporting and lo-

cating the box; although it may be observed that the box is not necessarily in contact with the shelf when it is held against the cutter blade 18. Many other modifications may be made in this construction and equivalent features substituted for those herein illustrated and described. Hence, the above description is to be considered as illustrating the general principles and certain embodiments of the invention and not as limitations on the claims herein presented.

I claim:

1. A device for cutting a cylindrical box seal comprising a box support having a cylindrical wall provided with a slot therein and forming a shelf for holding a box in position, and a long arcuate spring arm secured directly to and lying close to the outside of said wall and having integral therewith a cutter remote from the supported end of the arm and which projects into the slot in a location where it will cut the box seal, said spring arm being so shaped that the edge of the cutter is normally located between and guarded by the slot walls and the cutter may be manually moved into contact with the box, whereby the seal may be cut by rotating the box relative to the cutter.

2. A device for cutting a cylindrical box seal comprising a cup having cylindrical and end walls, a box support, a hinge connecting the cup and the support and so arranged that a sealed box may be removably held between the cup and support for cutting its seal, the cylindrical wall of the cup having a slot therein, a cutter projecting into the slot and guarded by the wall thereof, a resilient arm secured to the adjacent cylindrical wall and supporting the cutter so that it may be moved through the slot into cutting contact with the box seal, a rotary member on the box support and means associated therewith for rotatably holding the box for cutting the seal.

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