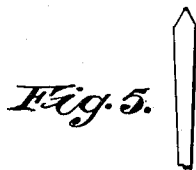
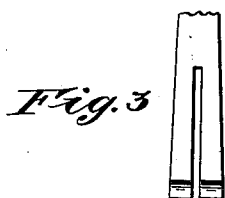
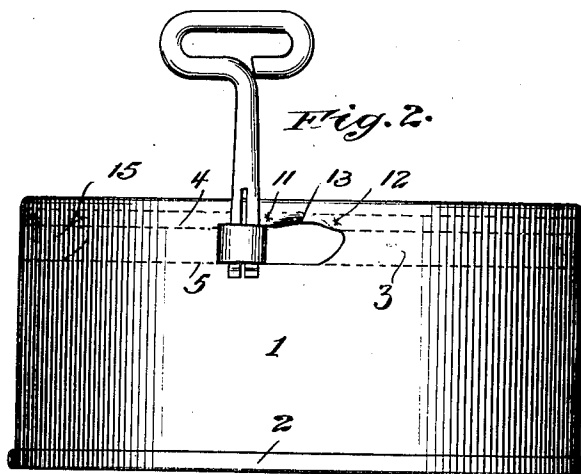
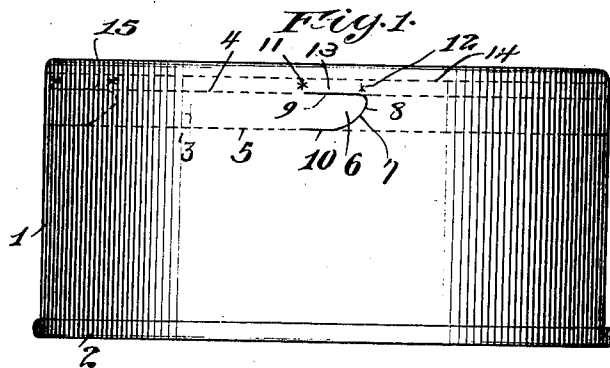


No. 838,204.

PATENTED DEC. 11, 1906.

J. W. NICHOLS.  
KEY OPENING CAN.  
APPLICATION FILED MAY 11, 1903.



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# UNITED STATES PATENT OFFICE.

JESSE W. NICHOLS, OF CHICAGO, ILLINOIS.

## KEY-OPENING CAN.

No. 838,204.

Specification of Letters Patent.

Patented Dec. 11, 1906.

Application filed May 11, 1903. Serial No. 156,625.

*To all whom it may concern:*

Be it known that I, JESSE W. NICHOLS, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Key-Opening Cans, of which the following is a specification.

This invention relates to key-opening cans; and it has for its salient objects the production of an improved construction in a can or analogous receptacle provided with an integral tearing-strip bounded by weakened lines and the starting portion of which tearing-strip is integral with the can-blank wholly within the margins of the latter and so shaped and constructed as to enable it to be started without being provided with any special weakened puncture-spot, recesses, or the like.

To the above ends the invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims, and the invention will be readily understood from the following description by reference to the accompanying drawings, forming a part thereof, and in which—

Figure 1 is a side elevation of a seamless can-body embodying the invention. Fig. 2 is a view similar to Fig. 1, showing the tearing-strip started. Fig. 3 is a detail side elevation of the engaging end of a specially formed key adapted for use in conjunction with the tearing-strip embodying the present invention, and Fig. 4 is an end view of the same; Fig. 5, an edge elevation of the part of the key shown in Fig. 3; and Fig. 6 a fragmentary cross-sectional view taken through the tongue and adjacent parts transversely after the portion 13 has been punched in and before the tongue has been torn out.

Referring to the drawings, 1 designates as a whole the can-body, which in the present instance is a seamless or drawn can-body, but might within the broader scope of the invention be an ordinary side-seamed or other form of can.

2 designates as a whole the applied cap or cover, and 3 designates a tearing-strip, which in the embodiment of the invention herein shown is arranged to extend circumferentially around the side of the can, desirably near one end thereof. The tearing-strip is outlined by two parallel or substantially parallel weakened lines 4 and 5, and that portion of the tearing-strip which constitutes the starting point or tongue 6 is outlined or de-

fined by a weakened line 7, extending transversely from the line 4 to the line 5. In the best form thus far devised the line 7 is so shaped as to provide a tongue having a rounded end 8 and parallel side portions 9 and 10, coincident with the weakened lines 4 and 5, respectively, the apex of the rounded end 8 being, however, located near that side of the tongue which is first started, as will be hereinafter described, and which in the present instance is the side designated 9. The lines 4 and 5 are formed by means of scoring-dies or in any other suitable or usual manner, while the lines outlining the tongue are formed by means of suitable dies and are preferably weakened to a somewhat greater extent than are the lines 4 and 5. Usually, however, the outline of the tongue will not be sufficiently distinct or visible after the can is finished and japanned or painted to enable the operator to determine easily the opening-point. Accordingly I provide two indicating-points 11 and 12, preferably taking the form of embossed stars, which are located contiguous to each end of the line 9, forming the starting side of the tongue, and the instructions to the operator will be to apply the pointed end of the key to the can on a direct line extending between said stars.

The operation of opening the can is to apply the key in the manner described and by striking the handle end thereof with the hand break through the can along the line 9 and depress the portion 13 lying contiguous thereto, so that the end of the key may pass into the can and underneath the tongue crosswise of the latter. Having thus inserted the key, a partial rotation will by reason of its flattened shape pry up and loosen the tongue in readiness to be engaged by the slot of the key and wrapped up and torn off in the usual manner.

As a further feature of improvement I provide a weakened line 14, extending parallel with the line 4 and at a distance therefrom slightly greater than the thickness of the flattened key, the purpose of this latter weakened line being to permit the portion 13 to bend down more easily under the punching action of the key when applied, as hereinbefore described. The line 14 obviously, therefore, need not be of a length greater than the straight side portion 9 of the tongue; but in practice it is proposed to provide a plurality of starting-tongues located at intervals apart around the can in the same tearing-strip, as

indicated in dotted lines at 15. This is merely as a matter of convenience to the operator in finding a starting-point, which might be difficult in case one only were provided and that covered by a label. It will be obvious that the existence of such additional starting-tongues in the tearing-strip will not at all interfere with the proper removal of the tearing-strip as a whole.

By means of the present invention I am enabled to entirely dispense with the soldered tongue heretofore employed, I avoid the expense of an additional operation for forming a guide-groove for the purpose of directing a cutting-tool, such as shown and described in patent to Wells, No. 725,384, or the expense of an additional operation in forming a weakened puncture-spot, such as shown and described in my prior application Serial No. 153,514, and I avoid the possibility of making the can defective by overweakening the puncture-spot.

While I have found that in practice a flattened key operates most expeditiously and conveniently for opening a can embodying my present invention, yet it is not to be understood that the use of such key is imperative. On the contrary, any ordinary key provided with the usual tongue-engaging slot may be used, provided the end thereof is not so blunt or broad as to prevent it from being used to break through and depress the portion 13 along the line 9 of the tongue. The form of key shown herein, however, possesses special utility when used in combination with the present invention by reason of the fact that the flattened end thereof operates to pry up and loosen the tongue when the key is simply rotated on its longitudinal axis, one edge of the key forming the fulcrum and the other edge the pry which starts the tongue.

While I have herein shown and described the preferred embodiment of the invention, yet it will be understood that the details may be modified without departing from the spirit of the invention.

I claim as my invention—

1. A can or analogous metal packing-receptacle having a tearing-strip defined therein by weakened lines, said tearing-strip having an integral tongue defined by a weakened line, which latter line is weakened to an extent greater than that of the lines of the tearing-strip and sufficient to provide for easy rupture of the can by applying a blunt instrument to the can-wall alongside said weakened tongue portion and applying pres-

sure in a direction substantially perpendicular to the wall, whereby a portion of the wall of the can is forced in and separated from the tongue for starting the latter.

2. As a new article of manufacture, a key-opening can having a tearing-strip bounded by two generally parallel weakened lines, and a tongue formed between said weakened lines and defined by the weakened line weakened to an extent greater than that of the lines of the tearing-strip and sufficient to provide for easy rupture by applying a blunt instrument to the can-wall alongside said weakened tongue portion and applying pressure in a direction perpendicular to the wall.

3. As a new article of manufacture, a key-opening can having a tearing-strip bounded by two generally parallel weakened lines, and a tongue formed between said weakened lines and defined by a weakened line the ends whereof merge into said parallel weakened lines, said tongue-defining line being weakened to a greater extent than the remainder of the tearing-strip and sufficient to enable the wall of the can to be easily ruptured without cutting by applying a blunt instrument to the can-wall alongside said weakened tongue and forcing the tool-engaged portion of the wall inwardly.

4. As a new article of manufacture, a key-opening can having a tearing-strip bounded by two generally parallel weakened lines, a tongue formed between said weakened lines by a defining weakened line merging into the parallel lines and weakened to an extent sufficient to afford easy rupture of the wall of the can along said line without cutting, and an auxiliary weakened line extending along one side of the tongue but spaced at a slight distance therefrom, substantially as described.

5. As a new article of manufacture, a key-opening can having a tearing-strip bounded by two generally parallel weakened lines, a tongue defined by a weakened line extending between said parallel lines, said tongue-defining line being weakened to an extent greater than the parallel lines and sufficient to insure easy rupture of the wall of the can along said line by the use of a blunt punch, and one or more indicating-marks formed in the wall of the can, contiguous to the tongue for indicating the point of application of the punch.

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