No. 804,845. PATENTED NOV. 21, 1905.

J. G. HODGSON.

METHOD OF FORMING WEAKENED LINES FOR TEARING STRIPS OF KEY OPENING CANS.

APPLICATION FILED NOV. 21, 1904.

Fig. 1

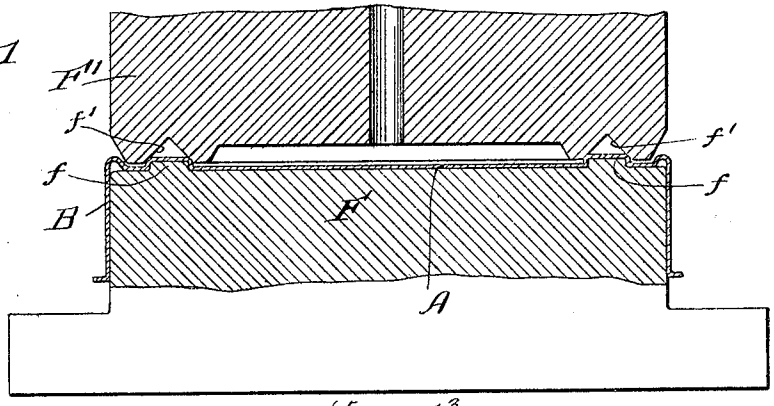


Fig. 2

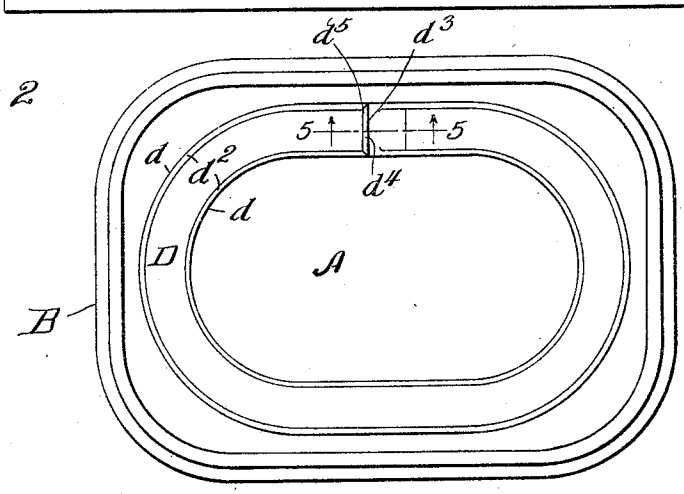


Fig. 3

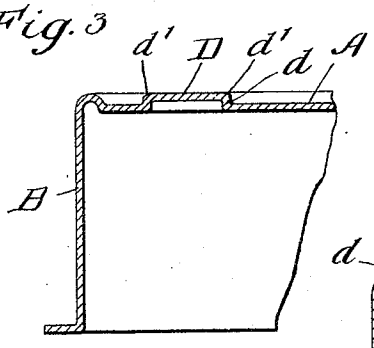


Fig. 5

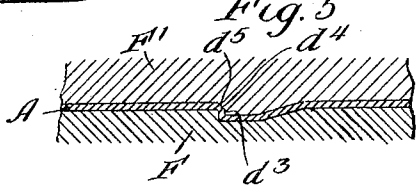
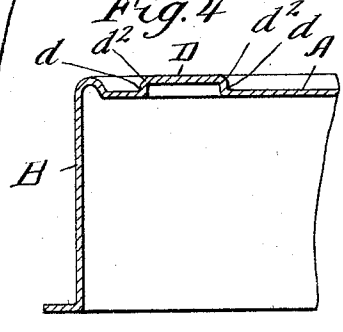


Fig. 4



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UNITED STATES PATENT OFFICE.

JOHN G. HODGSON, OF MAYWOOD, ILLINOIS, ASSIGNOR TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

METHOD OF FORMING WEAKENED LINES FOR TEARING-STRIPS OF KEY-OPENING CANS.

No. 804,845. Specification of Letters Patent. Patented Nov. 21, 1905.

Application filed November 21, 1904. Serial No. 233,560.

To all whom it may concern:

Be it known that I, JOHN G. HODGSON, a citizen of the United States, residing in Maywood, in the county of Cook and State of Illinois, have invented a new and useful Improvement in the Art or Method of Forming Weakened Lines for Tearing-Strips of Key-Opening Cans, of which the following is a specification.

My invention relates to improvements in the art or method of forming tearing-strips for key-opening cans.

My invention consists in first producing in the sheet metal a raised strip having angle flanges or shoulders at each side thereof, the strip being of the width desired for the tearing-strip of the key-opening can, and then thinning and beveling by compression the external corners of the raised strip, and thus producing weakened lines at each side thereof. By this method or means the weakened lines at each side of the tearing-strip may be produced with certainty and uniformity and without danger of cutting or unduly weakening the tin-plate of which the cans are formed and also without cutting through the tin coating of the iron or steel sheet of which the tin-plate is made.

Another important advantage accomplished by my invention is that the dies or tools used in forming the weakened lines have no sharp or rounded embedding edges or faces requiring to be kept in accurately-dressed condition, and this not only results in a great saving, but also in a much greater uniformity of operation.

In my invention the corners of the raised strip are thinned and beveled by contact with a flat inclined operating face of a die or other tool.

To enable my invention to be more readily understood and practiced by those skilled in the art, I have in the accompanying drawings, forming a part of this specification, illustrated at—

Figure 1, a sectional view of a pair of dies which may be used in practicing my invention; at Fig. 2, a plan view of a seamless can with the tearing-strip as produced by my invention; at Fig. 3, a sectional view showing the raised strip before its external corners are beveled and thinned; at Fig. 4, an enlarged partial sectional view of the can after the external shoulders or corners of the raised strip or bead are thinned and beveled, and Fig. 5 is a detail section on line 5 5 of Fig. 2.

In the drawings, A represents the head or portion of a sheet-metal can which is to be furnished with a tearing-strip, and B is a seamless can-body integral with the head A.

D is the raised tearing-strip, having angle-flangles or shoulders d d at each side thereof and offsetting the tearing-strip.

F is the lower die, the same having a raised rib or face f, adapted to fit within the channel formed by the raised strip D in the head or other part A of the can.

F′ is the upper die, the same having raised and smooth or flat inclined operating-faces f' f', adapted to engage the external corners d' d' of the raised strip D and thin and bevel the same by compression, and thus form weakened lines d^2 d^2 where the raised tearing-strip D may separate when it is wound upon the key, as in opening the can. The raised tearing-strip D is also preferably provided with a transverse angle-flange or shoulder d^3, having an external shoulder d^4 thinned and beveled at d^5, thus giving the same a transversely-extending weakened line through which a key or pointed instrument may be inserted to start the winding.

I claim—

1. The improvement in the art or method of forming weakened lines for tearing-strips for key-opening cans, consisting in first forming a raised strip in the sheet metal the width of the tearing-strip having angle flanges or shoulders offsetting the raised strip, and then thinning and beveling the external corners of such raised strip, substantially as specified.

2. The method of forming tearing-strips for key-opening cans, consisting in first producing a raised strip in the sheet metal the width of the tearing-strip, and then thinning by compression the external corners of the raised strip, whereby two parallel weakened lines are produced, one at each edge of the tearing-strip and separated thereby substantially as specified.

3. The method of forming weakened lines at each edge of a tearing-strip for key-opening cans, consisting in beveling and thinning by compression the external corners of a raised strip the width of the tearing-strip, whereby

two parallel weakened lines are produced, one at each edge of the tearing-strip and separated thereby substantially as specified.

4. The method of forming weakened lines at each edge of a tearing-strip for cans, consisting in thinning by compression the apices or corners of deflected shoulders or angle-flanges at the edges of and offsetting the tearing-strips without cutting through the tin coating of the sheet metal, substantially as specified.

5. The method of forming a weakened line for a tearing-strip for a key-opening can, consisting in first forming a deflected shoulder or angle-flange at the edge of the tearing-strip and thereby offsetting the tearing-strip and then subjecting the apex or corner of such shoulder or angle-flange to compression and thereby forming a weakened line without cutting through the thin coating of the sheet metal, substantially as specified.

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