

F. RUDOLPHI & S. TEVANDER.
KEY OPENING CAN.
APPLICATION FILED MAR. 30, 1907.

1,022,050.

Patented Apr. 2, 1912.

Fig. 1.

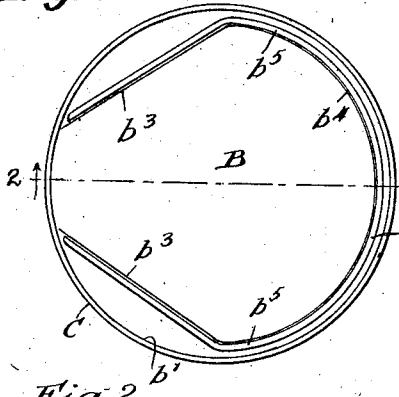


Fig. 2.

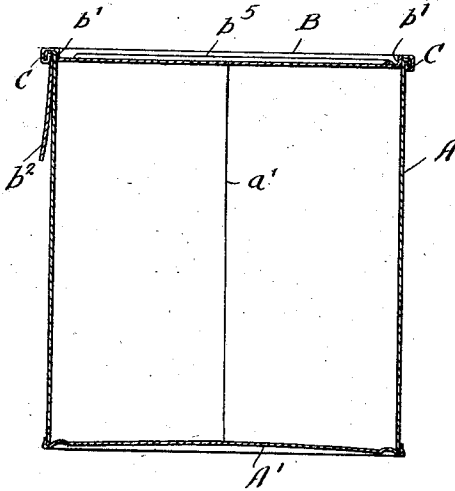


Fig. 3.

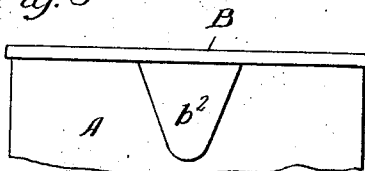


Fig. 7.

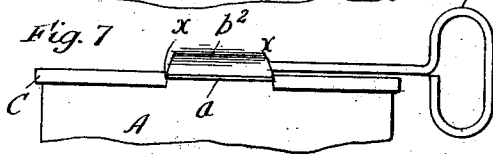


Fig. 4.

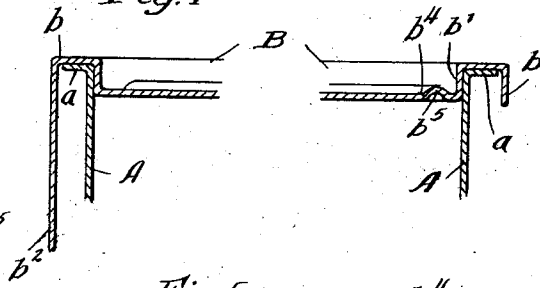


Fig. 5.

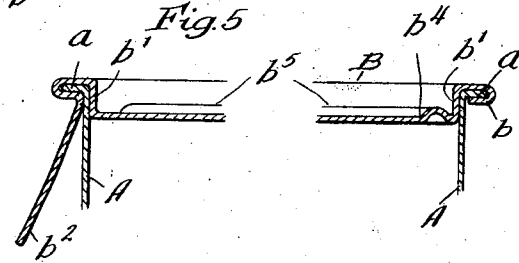


Fig. 6.

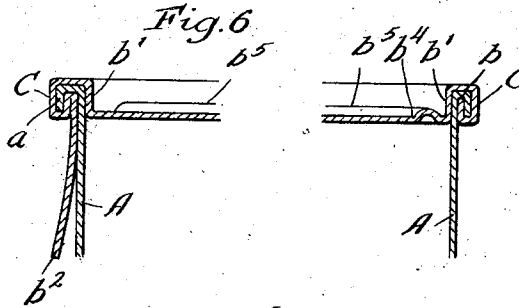
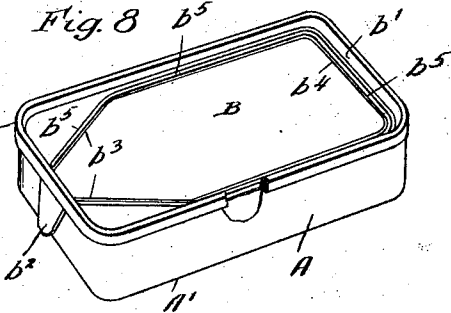


Fig. 8.



Witnesses:

Wm. Geiger
A. W. Munday

Inventors:

Frank Rudolphi
Swan Tevander

By Munday, Grant, Adcock & Clarke

Attorneys:

UNITED STATES PATENT OFFICE.

FRANK RUDOLPHI, OF CHICAGO, AND SWAN TEVANDER, OF MAYWOOD, ILLINOIS,
ASSIGNORS TO AMERICAN CAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF
NEW JERSEY.

KEY-OPENING CAN.

1,022,050.

Specification of Letters Patent.

Patented Apr. 2, 1912.

Application filed March 30, 1907. Serial No. 365,492.

To all whom it may concern:

Be it known that we, FRANK RUDOLPHI, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, and SWAN TEVANDER, 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 Key-Opening Cans, of which the following is a specification.

Our invention relates to key opening cans.

Our invention consists in a key opening can comprising a sheet metal body having a seaming flange at its upper end and a cover having a seaming flange at its periphery or rim united by a double, or other folded seam without solder, to the seaming flange of the body, and provided with an integral wide tongue, the flat or disk portion of the cover inside the seaming flange having divergent weakened lines, so that the portion of the cover between the weakened lines may be torn off or separated by the winding of the integral tongue around a key, such action tearing or breaking through the folds of the seam so that a short section of the seam fold of the cover will wind around the key along with the tongue and that portion of the cover between the divergent weakened lines; as we have discovered and demonstrated by our experiments. The divergent weakened lines at the ends thereof adjacent to the tongue, should be somewhat narrower apart than the base portion of the tongue, so that when the tearing breaks through the seam folds such lines of tearing will run into the weakened lines and follow the same. The weakened lines are not extended across the seaming flange or seam fold portion of the cover, as the same would interfere with the integrity of the folded seam and its hermetic tightness.

Our invention further consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described.

In the accompanying drawing, forming a part of this specification, Figure 1 is a top or plan view of a double seam key opening can embodying our invention; Fig. 2 is a vertical section on line 2—2 of Fig. 1; Fig. 3 is a front elevation; Figs. 4, 5 and 6 are enlarged sectional views in which the thickness of the tin plate is greatly exaggerated, and showing the double seam uniting the

cover and can body in successive stages; Fig. 7 is an illustrative view showing the operation of opening the can, and Fig. 8 is a perspective view, partly in section, illustrating the application of our invention to a drawn can of rectangular form, such as is commonly used for putting up sardines.

In the drawing A represents the can body, having a seaming flange *a* at its upper end. The body A may have a side seam *a'* and separate bottom head *A'*, as indicated in Fig. 2, or it may be a drawn or seamless body, as indicated in Fig. 8, in which case the bottom head *A'* is of course integral with the body.

B is the cover, the same having a seaming flange *b*, which is interfolded with the seaming flange *a* of the cover into a double seam or other folded seam C, capable of being made hermetically tight without solder. The flat or disk portion of the cover B is preferably countersunk, the countersunk wall *b'* fitting snugly in the mouth or upper end of the can body A.

The seaming flange *b* of the cover is provided with a wide integral tongue *b'*, preferably somewhat tapering, and preferably about an inch wide at its base portion where it unites with and extends continuously from the seaming flange *b* of the cover. The flat or disk portion of the cover is also furnished with two divergent weakened lines *b'' b'''* extending across the cover and united at their wider ends by a marginal weakened line *b''''*. The weakened lines *b'' b'''* may be formed in any suitable way as customarily employed in forming weakened lines for key opening cans, as by scoring or compressing the tin plate along such lines.

Preferably a raised stiffening rib *b''''* is provided adjacent to and outside of the weakened lines *b'' b'''*. The weakened lines *b'' b'''* do not extend across the seam or the seaming flange of the cover, but preferably stop near the lower edge of the countersink wall *b'* of the cover. The ends of the weakened lines *b'' b'''* adjacent to the base of the tongue *b'*, are preferably somewhat narrower apart than the base of the tongue, as indicated in the drawing, so that when the winding of the tongue about the key causes the tin plate to tear or break through the seam folds of the cover, as indicated in Fig. 7 at *x, x*, the lines of the tear or break through the seam folds will run into or fall within the di-

vergent weakened lines b^3 b^3 and the further tear thus follow along such lines.

We have demonstrated by our experiments that a wide integral tongue on the seam flange of the cover will, in practice, effectually and successfully cooperate with the other parts in all necessary respects and that it not only does not interfere with the formation of a perfect and hermetically tight folded seam, but that it also enables the can to be readily and successfully opened by tearing or breaking the stock across the seam folds of the cover in winding the tongue about the key F, in the usual manner of key opening cans.

We claim:

In a key opening can, the combination with a can body having a seaming flange, of a can cover having a seaming flange and provided with an integral tongue having a wide base where the same joins the cover flange, said body and cover flanges being in-

terfolded to form a double seam and extending across the base portion of the tongue, said cover having a central flat portion located within the seaming flange and provided with weakened or scored lines extending across said flat portion and located entirely within the double seam and ending in divergent lines, the terminals of said end portions being located opposite the base of the tongue and spaced apart a distance less than the width of the base of the tongue, said cover having also a raised stiffening rib outside of and closely adjacent to said weakened or scored lines and terminating at the ends of said lines, substantially as specified.

FRANK RUDOLPHI.
SWAN TEVANDER.

Witnesses:

EDMUND ADCOCK,
H. M. MUNDAY.

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