

(No Model.)

E. BARRATH.
KEY OPENING CAN.

No. 540,624.

Patented June 11, 1895.

Fig. 1.

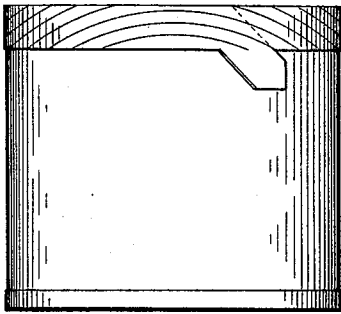


Fig. 2.

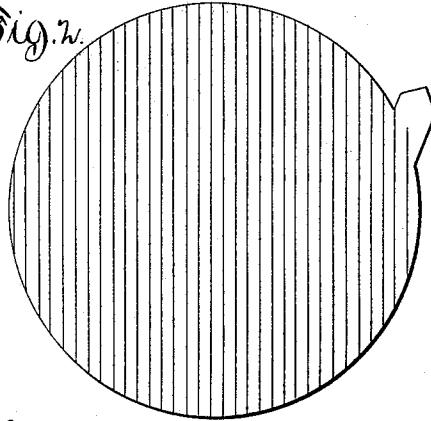


Fig. 3.

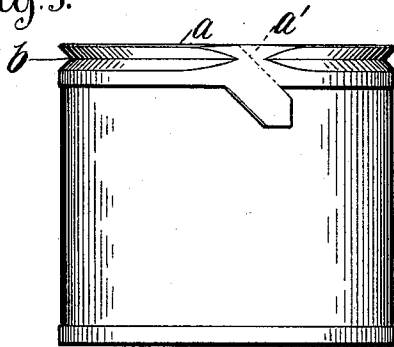


Fig. 4.

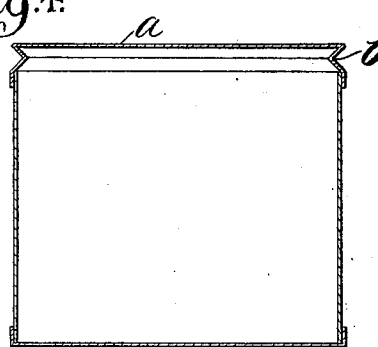


Fig. 5.

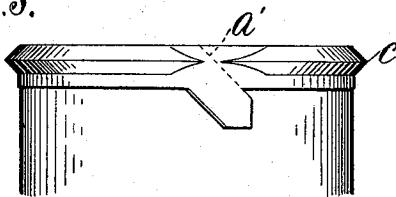


Fig. 6.

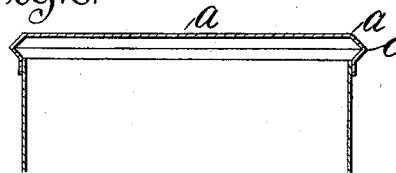


Fig. 7.

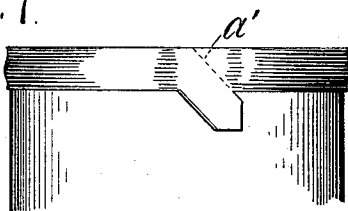
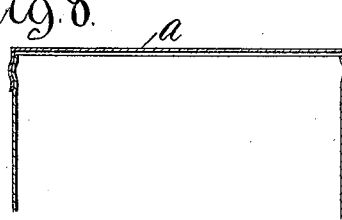


Fig. 8.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD BARRATH, OF CHICAGO, ILLINOIS.

KEY-OPENING CAN.

SPECIFICATION forming part of Letters Patent No. 540,624, dated June 11, 1895.

Application filed September 10, 1894. Serial No. 522,663. (No model.)

To all whom it may concern:

Be it known that I, EDWARD BARRATH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Key-Opening Cans, (Case No. 7,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to key opening cans, and its object is to afford means for effectively removing a portion of the material of a can to permit access to the interior thereof.

It has been proposed, heretofore, to provide a can with a cover having a rim perpendicular to the face thereof, a line of reduced strength being provided at the juncture of the rim and the face of the cover, the line of reduced strength and the edge of the rim terminating in a free lip, which may be grasped to remove the rim. This construction has been found objectionable, since the metal of the cover possesses a decided grain, which, when the metal is bent to form the rim, runs obliquely across the rim, so that the line of tear, instead of following the line of reduced strength, has a tendency to follow the grain, thereby tearing away a portion only of the rim. My invention herein is designed to overcome this objection, and consists, broadly speaking, of a can provided with a cover having a line of reduced strength extending circumferentially about the same at or near the juncture of the rim and the face of the cover, the line of reduced strength terminating in one edge of a free lip, the cover being provided with a reinforced portion between said line of reduced strength and the edge of the rim to prevent the line of tear from following the grain and passing across the rim.

I will describe my invention by reference to the accompanying drawings, in which—

Figure 1 is a view of a can as heretofore constructed, illustrating the direction of the grain after the rim has been formed. Fig. 2 is a view of a blank from which the cover is made, the direction of the grain of the material being indicated by light lines. Fig. 3 is a view in elevation of a can embodying my invention. Fig. 4 is a sectional view of the

same. Fig. 5 is a partial view in elevation of a modification. Fig. 6 is a sectional view thereof. Fig. 7 is a partial view in elevation of a further modification. Fig. 8 is a sectional view thereof.

Like letters refer to similar parts throughout the different figures.

As illustrated in Fig. 2, the sheet metal possesses a grain, which, when the rim has been pressed into position, as shown in Fig. 1, extends obliquely across the rim. When, therefore, it is attempted to tear away the rim, the line of tear follows the weakened line until it meets one of the oblique lines of grain, and then follows the latter, thus tearing away a portion only of the rim and defeating the operation of removing the cover. To overcome this objection, I reinforce the metal of the rim beneath the weakened line *a* by throwing in a ridge *b* around the cover, as shown in Figs. 3 and 4, or by throwing out a ridge *c*, as shown in Figs. 5 and 6, or, further, by corrugating or otherwise strengthening the metal of the rim, as shown in Figs. 7 and 8. The oblique line of reduced strength *a'* may pass across the corrugated surface of Fig. 7, but where a pronounced ridge is employed, as in Figs. 3 and 5, a portion of the rim is left smooth for the passage of said oblique line of reduced strength *a'*. An advantage arises from the provision of an inwardly extending ridge upon the body of the can, as shown in Fig. 4, as it prevents the upper edge of the can body from resting in contact with the face of the cover, so that no solder can rest between the face of the cover and the body of the can to bind the same together after the rim has been removed, as may sometimes occur when the face of the cover rests in contact with the upper edge of the can body.

While it is preferable to employ the oblique line of reduced strength joining the edge of the lip and the circumferential line of reduced strength, it may be omitted, particularly if the rim be narrow, and I do not wish to limit myself in this particular.

In concurrently filed applications for key opening cans, Serial Nos. 522,664, 522,665, and 522,666, I have described cans of the same general class as that to which the present case relates, but the claims in the present case

are drawn only to the feature of reinforcing the material of the cover between the circumferential line of reduced strength and the edge of the rim.

5 Having described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with the body portion of a can, of a cover provided with a rim and a circumferential line of reduced strength and a free lip, one edge thereof being joined to said circumferential line of reduced strength by a line of reduced strength extending obliquely across said rim, said rim being provided with a ridge between the edge thereof and said circumferential line of reduced strength, said ridge terminating on

either side of said oblique line of reduced strength, substantially as described.

2. The combination with the body portion of a can, of a cover provided with a rim and 20 carrying a circumferential line of reduced strength, a free lip, and a reinforced portion between said line of reduced strength and the edge of the rim, said reinforced portion terminating on either side of the edge of said 25 free lip, substantially as described.

In witness whereof I hereunto subscribe my name this 8th day of September, A. D. 1894.

EDWARD BARRATH.

Witnesses:

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