

(No Model.)

G. H. PERKINS.
CAN OPENER.

No. 406,951.

Patented July 16, 1889.

Fig. 1.

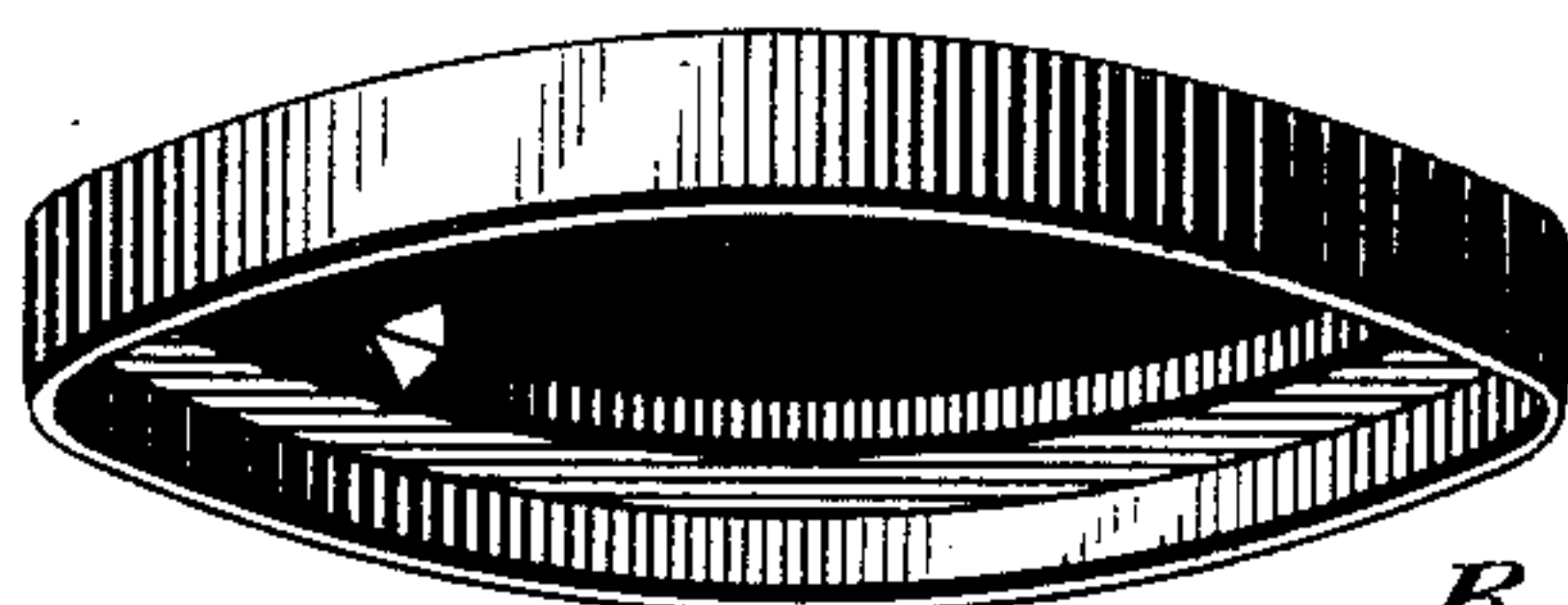


Fig. 2.

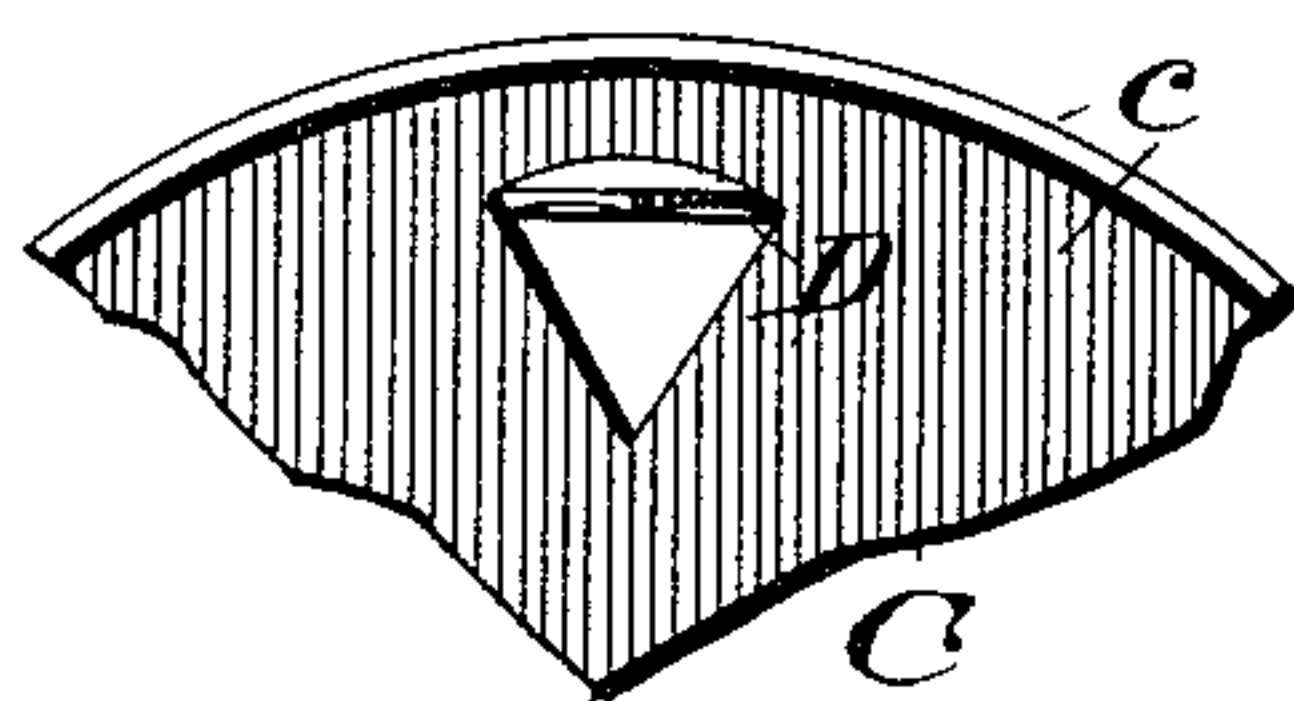


Fig. 3.

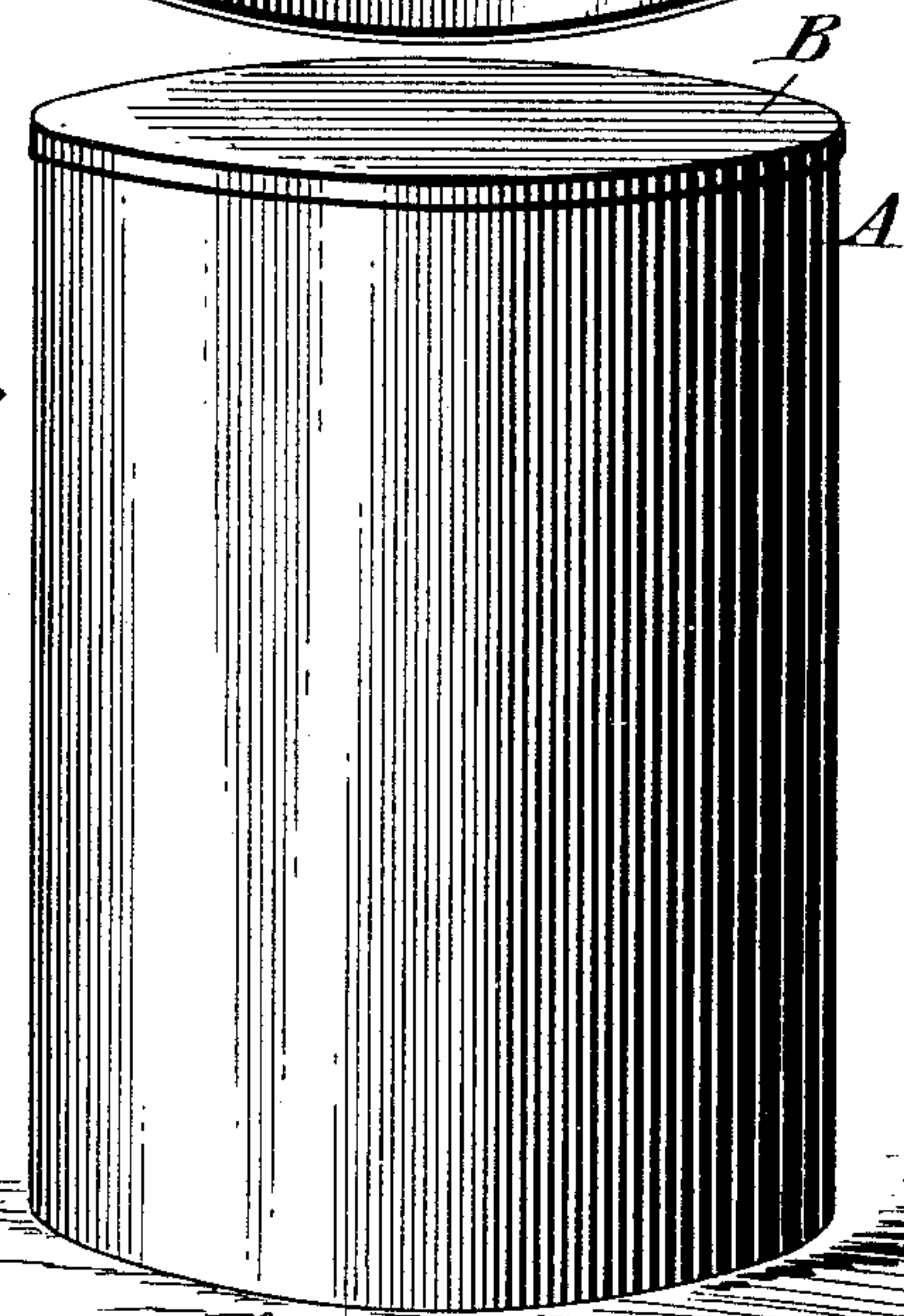
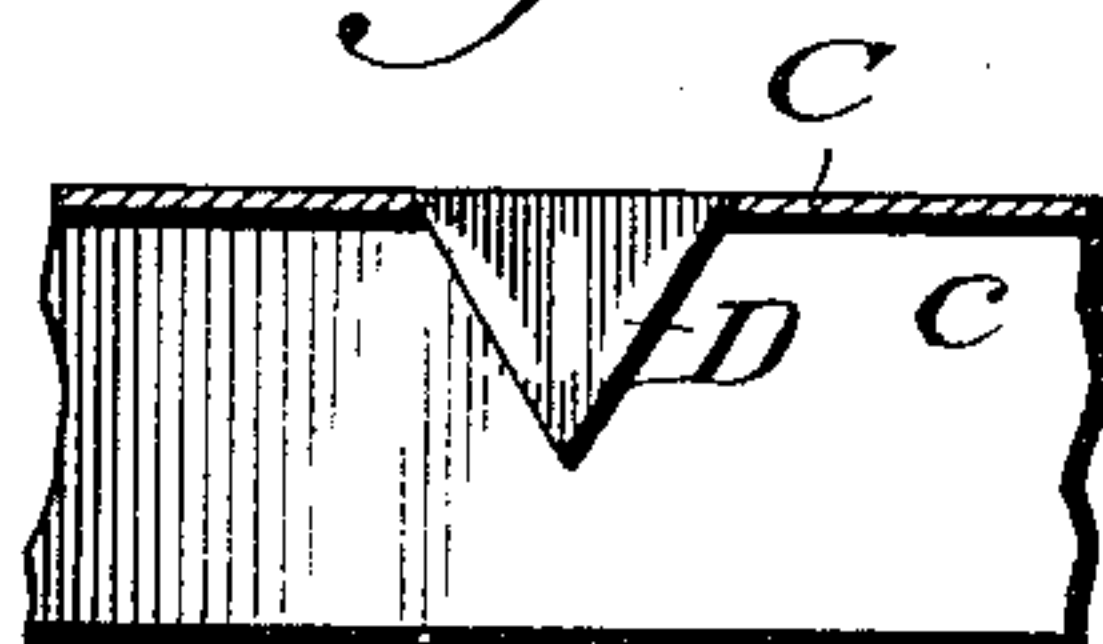


Fig. 4.

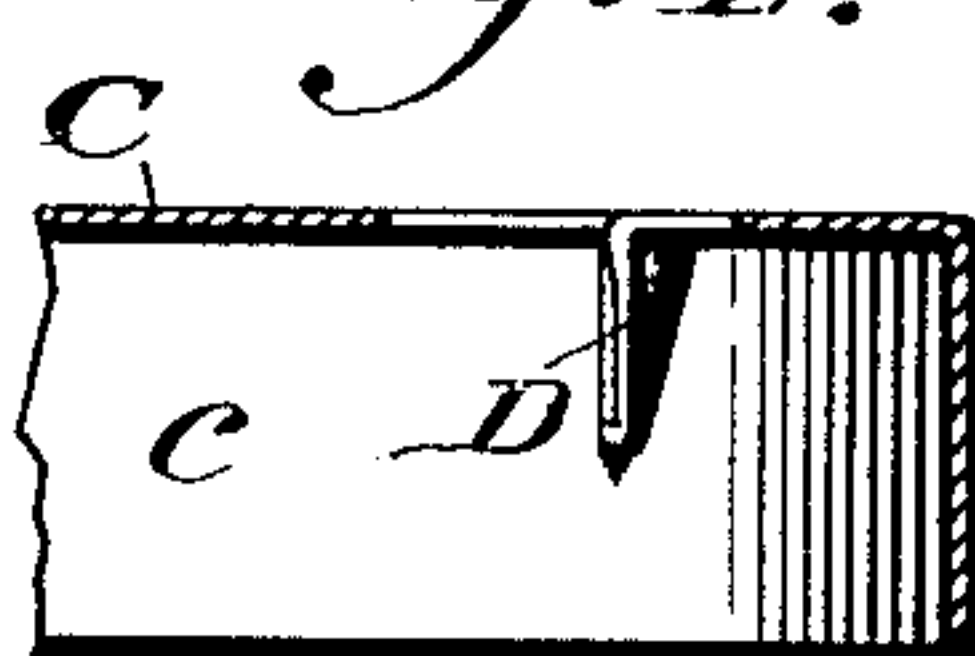


Fig. 5.

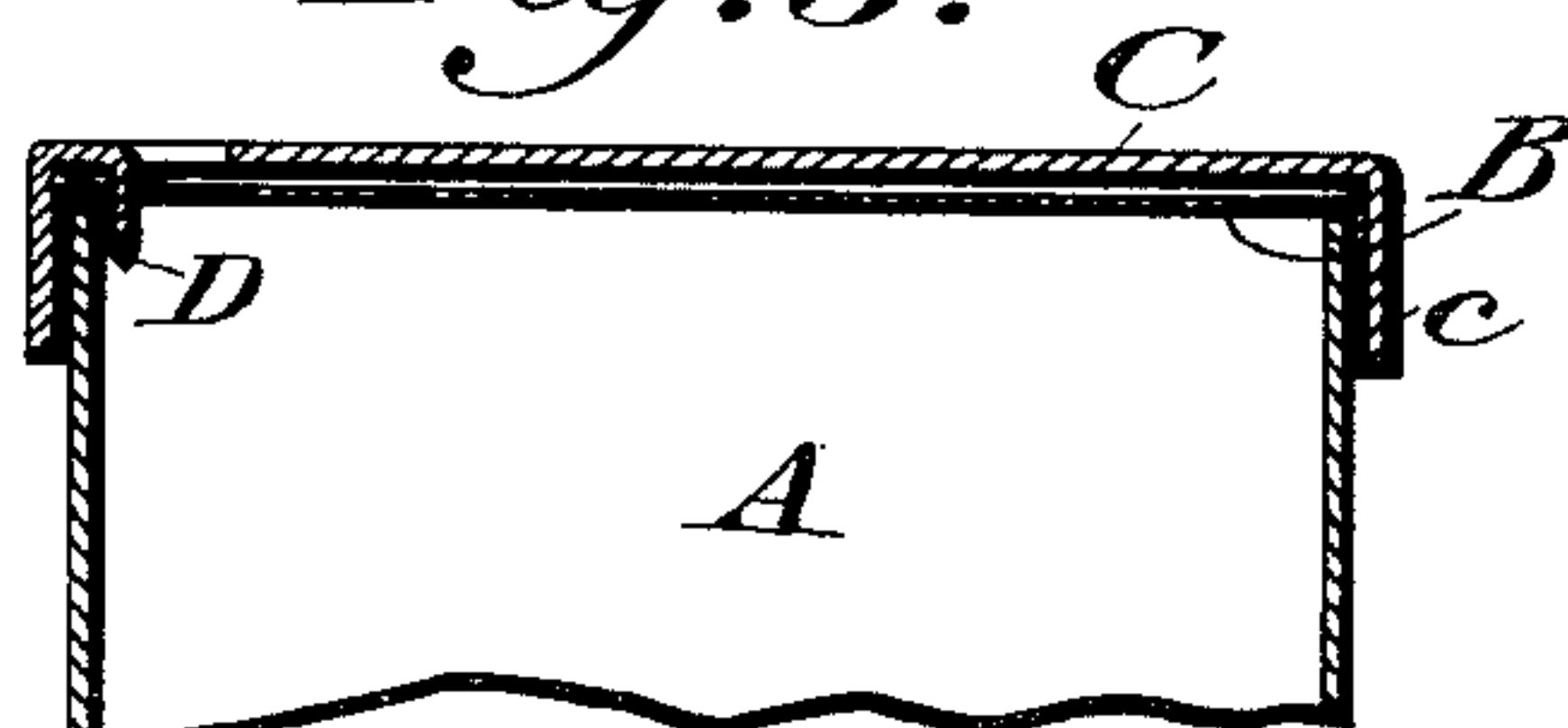


Fig. 6.

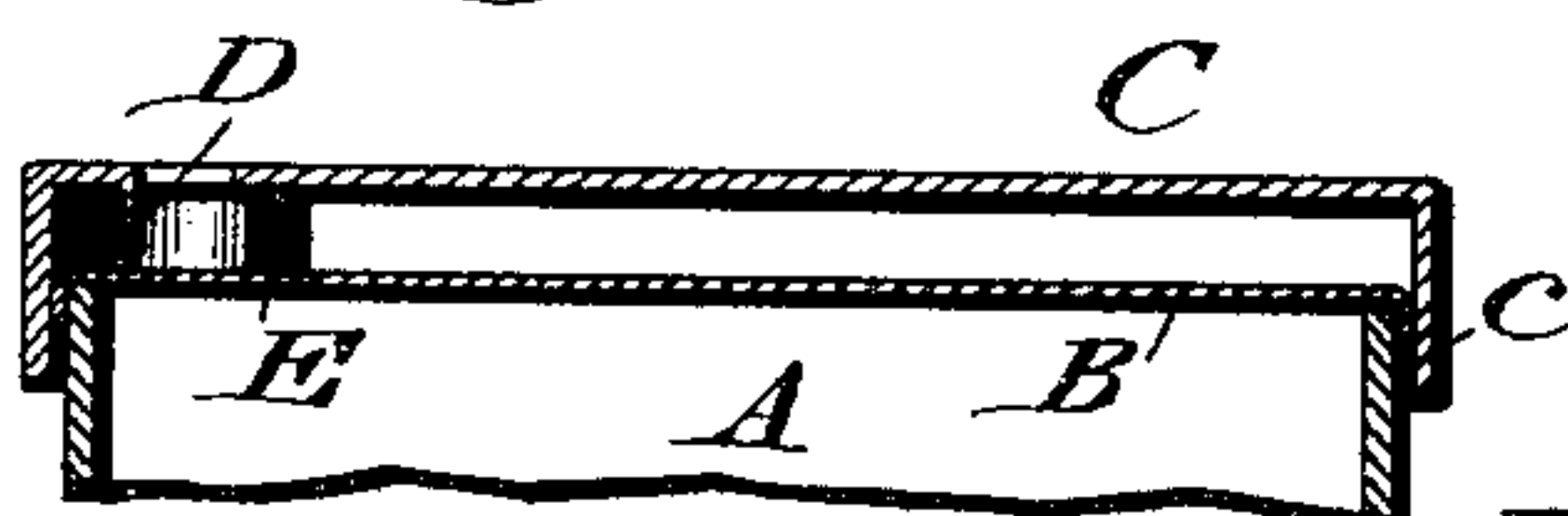


Fig. 7.

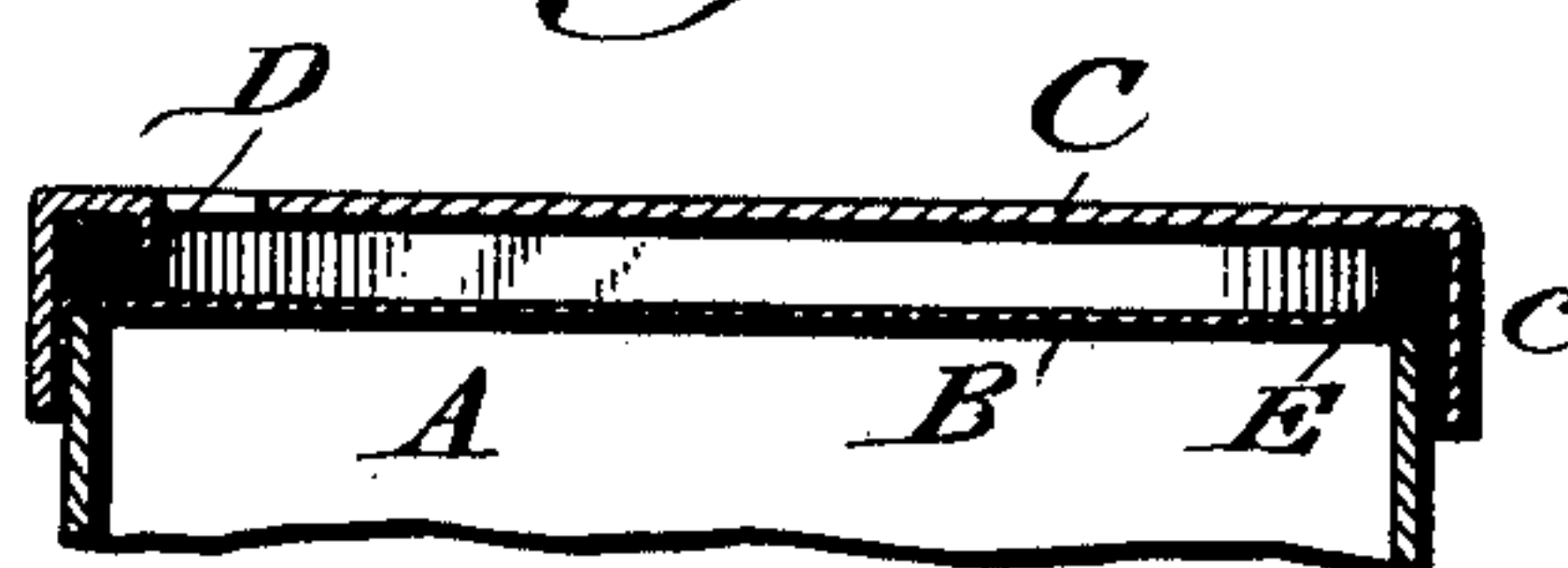


Fig. 8.

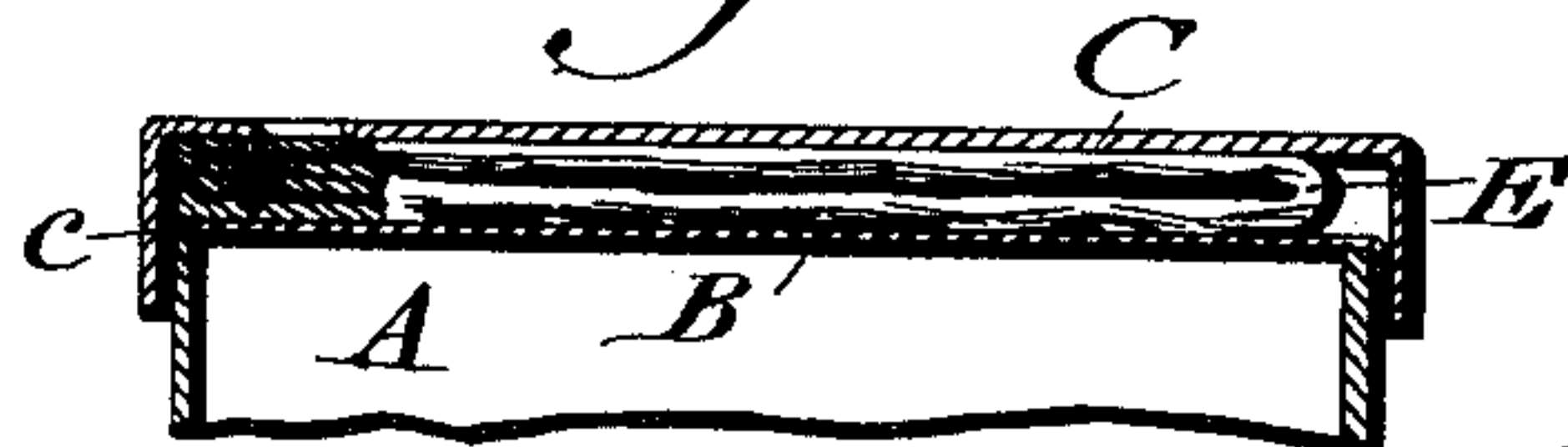


Fig. 9.



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CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 406,951, dated July 16, 1889.

Application filed November 12, 1888. Serial No. 290,561. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PERKINS, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Sheet Metal Cans, of which the following is a specification.

Heretofore, as is known, sheet metal cans, adapted, after being filled, to be hermetically sealed, have been, as to one of their heads or ends, made of metal of such slight thickness as to be readily cut through by the consumer in the act of opening. Heretofore also, this permanently applied thin head of the can, has been protected by an exterior slip cover adapted to be removed to expose the thin metal before the latter is cut.

My invention relates to such thin-headed cans, and to their removable exterior covers,—and its object is to provide the removable cover with a permanent rigid inwardly and downwardly projecting barb or cutting point of the character hereinafter set forth, and also to provide a suitable protecting packing interposed between the cover and the thin top of the can.

In the drawings, Figure 1 is a perspective view of a can and cover embodying my invention, the cover not being applied. Fig. 2 is a bottom plan view, Fig. 3 a front view, and Fig. 4 a side view, of a barb embodying my invention, and also of a part of the cover a member of which it is. Fig. 5 is a fragmentary vertical sectional view through the can, removable cover, and barb, in the position which the parts occupy when the barb has been forced through the thin metal of the head of the can and into position for making its circular cut, as hereinafter explained. Fig. 6 is a similar view through the can, the cover and the barb, illustrative also of the application of a separating or packing device for maintaining the barb normally clear of the thin metal top. Figs. 7 and 8 are views similar to Fig. 6, illustrating the application of a modified form of separating or packing device. Fig. 9 is a cross-sectional view of the cover, illustrating a modified form of the barb.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a cylindric sheet metal can of any preferred dimensions.

B is the hermetically closed thin metal head or end of the same; and C a removable cover the depending flange of which is designated c.

D is a barb, blade, or cutter, preferably of substantially triangular outline as shown, which is preferably struck from the metal or substance of the head of the removable cover itself, and bent in at right angles to the plane thereof to form a permanent intumed cutting projection. In order to impart to this barb the necessary additional stiffness, I prefer either to strike out upon it a vertical rib running from its base to near its point; or else, with the same result, to make the barb slightly curved in cross section; and, in order to secure its more effectual cutting, I prefer to sharpen or dress off its edges as shown in Figs. 2 and 3, almost as far as its perforating point which it is desirable should not be dressed off.

Such a barb as the foregoing may be formed in any such manner as convenience of manufacture may dictate, and it is obvious that a barb so formed of the substance of the lid will be both strong and cheap. I prefer, however, to form the said barb by means of a die or dies of special construction invented by me and which I expect to protect by patent. As, moreover, the dies for manufacturing the cover itself form no part of this invention, I have not deemed it necessary to describe or illustrate them.

The barb itself is of course to be formed at such radial distance from the center of the cover as in practice is found desirable.

The removable cover provided with its barb is designed to be slipped over the chine of the thin end of the can. In order, therefore, to prevent the barb from piercing the thin metal during transportation or before such piercing is desired, I provide a packing E between the thin metal end of the can and the lid. The packing may both as to form and substance be of any preferred character:—Thus in Fig. 6 it is shown as a small ring of rubber, felt, wood, or any desired substance, which lies between the lid and the thin metal end of the can, surrounding the barb; thus, again, in Fig. 7 it is shown as a ring of diameter equal to that of the can; while in Fig. 8 it is illustrated as a folded fabric or paper, which may advantageously be an advertising circular

relating to the contents of the can and the mode of its opening. It is obvious that many devices in the form of a shield, sheath, or packing, would answer the purpose. It is
5 also obvious that it would be easy and perhaps advantageous to arrange a packing which would also serve to fill or protect the opening left by the formation of the barb.

10 In the practice of my invention it is preferable, in order to compensate for the vertical space filled by the barb and packing, to make the flange of the cover of greater depth than in can lids of the ordinary kind.

15 In Fig. 9 is illustrated a modified form of my invention, in which the barb consists of a suitably shaped small piece of flat metal provided with a bent cutting point, which piece is soldered or otherwise secured to the inner face of the head of the removable cover.

20 In the use of my device in the hands of the consumer, the removable cover is first lifted off, the circular or packing then removed, and the cover then replaced and pressed down until its barb pierces the thin metal, after which
25 the cover is rotated with the result that the

barb makes a circular cut through the thin metal of the can head and thereby effects the opening of the can.

Having thus described my invention, I claim:

1. In combination with a sheet metal can closed by a head of thin metal, an exterior removable cover from the substance of the head of which a barb or cutter is struck and bent in, substantially as set forth. 30

2. In combination with a sheet metal can closed by a head of thin metal, an exterior removable cover the head of which is provided with a fixed inwardly facing barb or cutter, and a packing interposed between the thin
40 head of the can and the inner face of the head of the cover, substantially as and for the purposes set forth. 35

In testimony that I claim the foregoing as my invention I have hereunto signed my name
45 this 10th day of November, A. D. 1888.

GEORGE H. PERKINS.

In presence of—

J. BONNALL TAYLOR,
F. NORMAN DIXON.