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H. GARRISON

CAN OPENER

Filed July 19, 1927

Fig. 1.

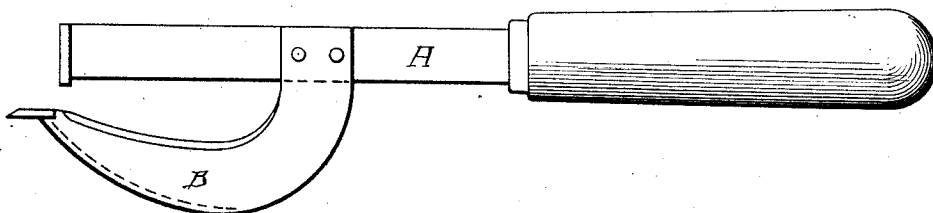


Fig. 2.

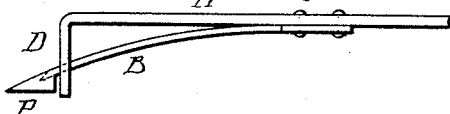


Fig. 3.



Fig. 4.

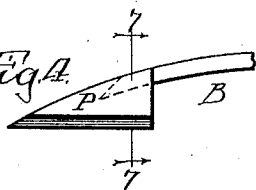


Fig. 6.

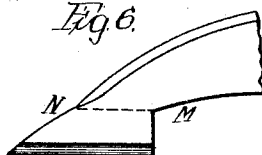


Fig. 5.

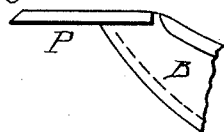


Fig. 7.

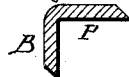


Fig. 8.

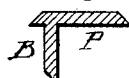


Fig. 9.

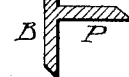


Fig. 11.

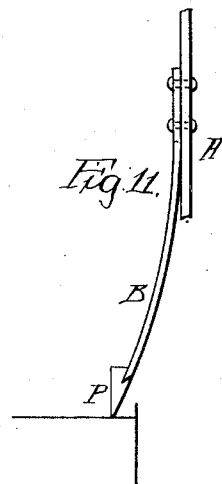
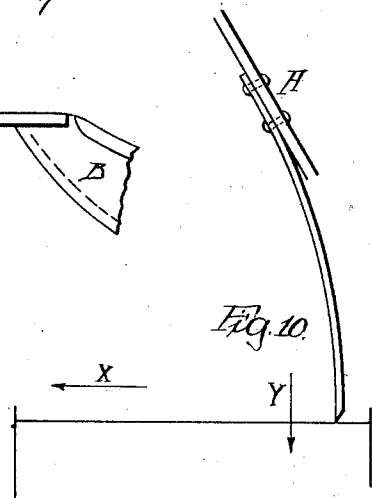


Fig. 10.



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UNITED STATES PATENT OFFICE.

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CAN OPENER.

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The object of this invention is to establish the practicability of using a longer knife than is at present manufactured on a can opener of the ordinary type, which comprises a handle, a stock fitted thereto, and terminating with a guiding fulcrum adapted to engage the crimp of a can, and a downwardly offset uppercut knife extending forward past the fulcrum.

10 If the knife is to be lengthened, it must be sharpened on the lower margin to assist in insertion; it must be curved to conform to the circular contour of the can; and it should have a blunt upper margin on that part which projects beyond the guiding fulcrum, so as to afford a fulcrum for prying the blade backward and downward into the can after penetration has been effected.

20 Fig. 1 is a side view, showing the stock A fitted to a handle and knife B riveted to the stock. The upper and lower cutting edges are indicated by double lines.

25 Fig. 2 is a partial top plan view, showing the stock A bent aside to form the fulcrum member D, and the lateral curvature of the knife B; also the wing P, which affords the fulcrum above referred to for prying the blade into the can, and which also performs another very important function to be explained later.

30 Fig. 3 is a front end view of the stock showing the face of the fulcrum member D, and the notch E, which forms the guiding fulcrum.

35 Figs. 4, 5, 6, 7, 8 and 9 will be used in explaining the structure and use of the wing or plate P, and are enlarged views of the same, being on a scale of 3 to 1 with reference to Figs. 1 and 2.

40 Figs. 10 and 11 are introduced to illustrate a certain difficulty encountered in consequence of the lateral curvature of the knife.

45 The essential feature of this invention is the transverse plate P, whose structure and function will now be explained.

Fig. 4 is a top plan view of the plate P, and Fig. 5 a side view of the same.

50 The terminal part of the knife can be formed by taking a sheet of metal shown in Fig. 6, and bending it at a right angle on the line M—N. The part that lies below that line will form the plate P.

55 Fig. 7 is a vertical section of the knife through the line 7—7 of Fig. 4.

If it be deemed desirable to afford a cut-

ting edge on the outer or convex side of the plate, the section shown in Fig. 7 will appear as in Fig. 8. This might add somewhat to the facility of inserting the knife, but would detract from simplicity in manufacture, as illustrated by Fig. 6.

60 Still another possible variation in the manner of attaching the plate consists in extending it horizontally from the concave wall of the blade below the summit, in which case the section exhibited in Fig. 7 will appear as represented by Fig. 9. This would give no advantage, but would attain the result sought, which is to present a transverse terminal cutting edge.

70 In order to use a lengthened knife on a circular can, it is absolutely necessary to give it a lateral curvature, at least to the extent of deflecting the tip toward the center of the can. This done, we meet with a serious obstacle in the process of inserting the point of the knife into the can. In using openers of this type, the handle is thrust vertically downward to effect penetration. This can not be done with the curved knife. The point must be perpendicular to the surface of the can, and the knife must assume the position of Fig. 10, which is a diagrammatic representation of a can in axial section, and of the knife and part of the stock A. Since the pressure applied through the handle will be exerted in the direction of the stock, it is evident that a large component of it will be neutralized. But this loss is not the only disadvantage. If the operator were in the position indicated by the arrow X, facing the concave side of the blade, the process of inserting the point would occasion no inconvenience beyond the loss of power referred to, but as a matter of fact he will be in the position indicated by the arrow Y, and will be obliged to push sideways instead of forward. A decidedly awkward twist of the hand will be required to produce penetration.

100 The specific object of this invention is to remove the difficulty thus described.

105 This object is accomplished by constructing the plate P, as a result of which the cutting edge or edges at the tip of the knife will be transverse to those on the body of the blade. The blade being constructed of material having sufficient strength to resist bending, the point may be driven into the can by thrusting the instrument vertically downward, as illustrated by Fig. 11, the

process being the same as with the openers of this type which are now in use.

I claim:

1. A can opener in the form of a lever of the second class, having a guiding fulcrum formed by a recess at the end of a handled stock, and a downwardly offset uppercut knife secured to said stock and extending forward past the guiding fulcrum; said knife being laterally curved in the direction of its length and provided with an additional cutting edge on its lower margin; and the tip of said knife being surmounted by a transverse plate, said plate being provided with a piercing point, and said piercing point being identical with the terminal point of the knife.

2. A can opener in the form of a lever of the second class, having a guiding fulcrum formed by a recess at the end of a handled stock, and a downwardly offset uppercut knife secured to said stock and extending forward past the guiding fulcrum; said knife being laterally curved in the direction of its length and provided with an additional cutting edge on its lower margin; and the terminal part of said knife, which projects beyond the guiding fulcrum, being provided with a wing extending laterally from the inner face of the knife and terminating forwardly in a piercing point coincident with the pointed end of the knife.

3. A can opener in the form of a lever of the second class, having a guiding fulcrum formed by a recess at the end of a handled stock, and a downwardly offset uppercut knife secured to said stock and extending forward past the guiding fulcrum; said knife being laterally curved in the direction of its length and provided with an additional cutting edge on its lower margin; and the upper cutting edge being terminated at a location remote from the point of the knife, and being thence succeeded by a blunt upper

wall formed in part by a wing extending from the anterior part of the body of the knife on the inner side of the directional curve thereof, said wing being provided with a lateral and terminal cutting edge.

4. A can opener in the form of a lever of the second class, having a guiding fulcrum formed by a recess at the end of a handled stock, and a downwardly offset uppercut knife secured to said stock and extending forward past the guiding fulcrum; said knife being laterally curved in the direction of its length and provided with an additional cutting edge on its lower margin; the upright part of the knife, constituting the body thereof, being terminated at a point located beyond the guiding fulcrum, but remote from the terminal point of the knife, and being thence succeeded by a flattened prod having a lateral dimension exceeding that of the body of the knife; and the said prod being attached to the upright portion of the knife on that side which faces the center of curvature of the directional curve of the knife.

5. A can opener in the form of a lever of the second class, having a guiding fulcrum formed by a recess at the end of a handled stock, and a downwardly offset uppercut knife secured to said stock and extending forward past the guiding fulcrum; said knife being laterally curved in the direction of its length and provided with an additional cutting edge on its lower margin; and the terminal part of the knife being provided with a lateral cutting edge distinct from the upper and lower cutting edges, said lateral cutting edge being continuous with the cutting edge at the extreme point of the knife and being formed on the margin of a transverse plate having a width of greater magnitude than the thickness of the knife.

HERMAN GARRISON.