No. 652,938. Patented July 3, 1900.

W. VOGEL.

CAN OPENER.

(Application filed Sept. 5, 1899.)

(No Model.)

Fig: 1.

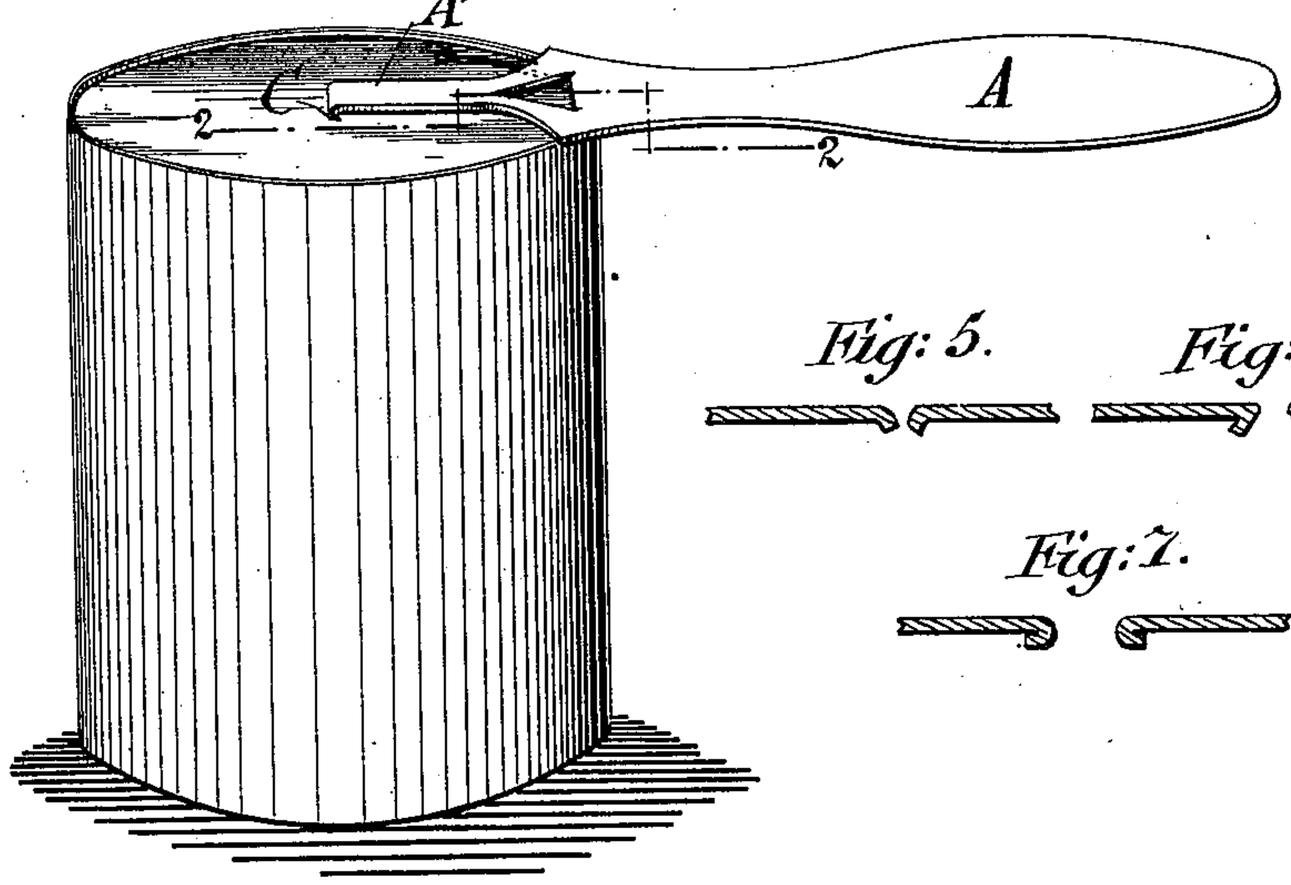


Fig: 5.

Fig: 6.

Fig: 7.

A¹ Fig: 2. A

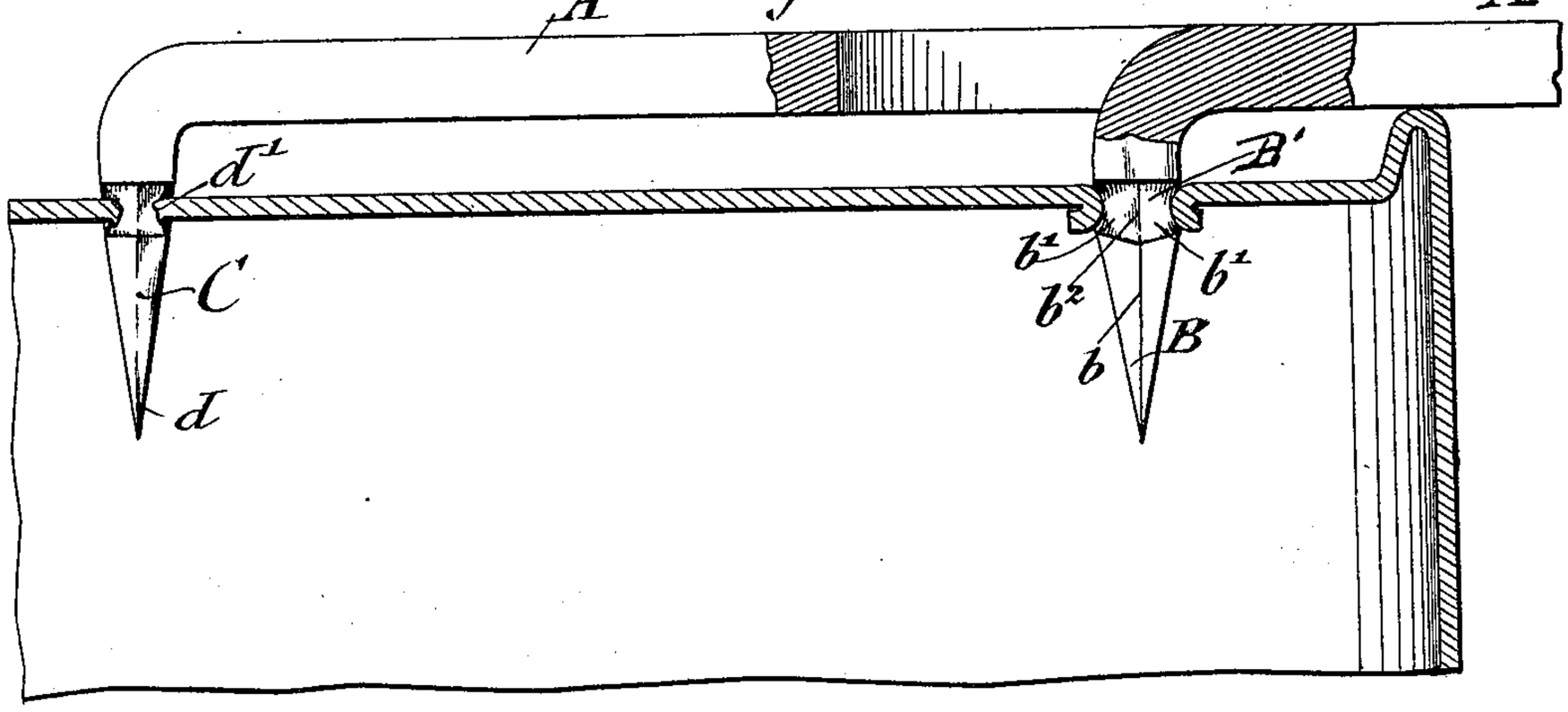


Fig: 3.

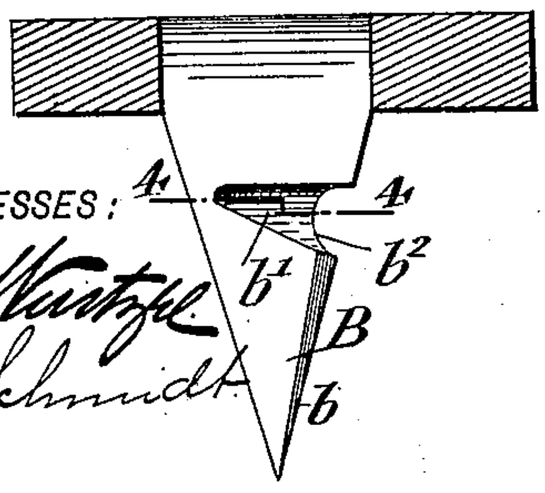
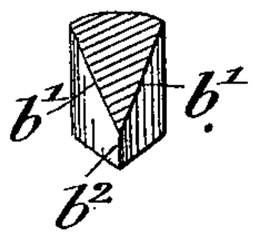


Fig: 4.



WITNESSES:

M. S. C. Mentzel.

M. C. Schmidt.

INVENTOR

William Vogel

BY Goepel & Lageman

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM VOGEL, OF NEW YORK, N. Y., ASSIGNOR TO JOHANN C. C. HACKE, OF HAMBURG, AND ALICE B. S. P. FOERSTER, OF GROSS FLOTTBEK, GERMANY, AND THE FISCHER MANUFACTURING COMPANY, OF PATERSON, NEW JERSEY.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 652,938, dated July 3, 1900.

Application filed September 5, 1899. Serial No. 729,546. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM VOGEL, a citizen of the Empire of Germany, residing in the city of New York, borough of Manhattan, and State of New York, have invented certain new and useful Improvements in Can-Openers, of which the following is a specification.

This invention relates to an improved can-opener of that class in which a puncturing-cutter is moved concentrically with the center of the can, so as to produce a circular slit in the top of the can, the object being to fold the edges of the top, as well as of the rim, downwardly and outwardly by means of the cutter in such a manner that any accidental cutting or other injury to the fingers in handling or opening the can is entirely obviated, and thereby the principal objection to the ordinary style of can-openers heretofore in use removed.

The invention consists of a can-opener provided with a puncturing-cutter having at its top tapering rearwardly-extending side grooves forming a V-shaped neck between them, the lower portions of said grooves being inclined outwardly and said neck having a forward cutting edge, so that the edges of the slit made by the cutter are folded downwardly and outwardly.

In the accompanying drawings, Figure 1 represents a perspective view of my can-opener, showing it in the act of cutting a slit in the top of the can. Fig. 2 is a vertical longitudinal section of the can and can-opener, drawn on a larger scale, on line 2 2, Fig. 1. Fig. 3 is a detail side view of the puncturing-cutter of my improved can-opener, showing the neck at the upper part of the cutter. Fig. 4 is a horizontal section on line 4 4, Fig. 3; and Figs. 5, 6, and 7 are diagrams showing the successive steps for folding over the edges of the slit cut in the can-top by the blade of the puncturing-cutter.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A′ represents the shank of my improved can-opener, which is made integral with the handle A, as shown in Fig. 1, or which may be inserted into a wooden handle or made in any other suitable material. The shank A′ is provided at right angles to the plane of the shank with a wedge-shaped and downwardly-tapering cutter B, which is provided with beveled sides, so as to form a cutting edge *b*. The cutter B has above the cutting edge *b* and near its top, at each side, rearwardly-tapering grooves *b*′, which form a neck B′ of V-shaped cross-section, said neck having a forward cutting edge b^2. In Fig. 2 it will be seen that the lower portions of said grooves *b*′ are inclined outwardly. The tapering cutter is made of suitable steel and made integral with or riveted or otherwise attached to shank A. At some distance from the cutter B, at the end of the shank A, is arranged a centering-pin C, which is either made integral with the shank A or riveted thereto. The distance of the guide-pin from the blade corresponds to the distance of the slit to be cut from the center of the top of the can. The centering-pin C is preferably made with a tapering point *d* and with a contracting neck *d*′ above said point. The tapering centering-pin C is forced into the top of the can at the center thereof. After the centering-pin C is forced through the center of the top the tapering and beveled cutter B is pressed down, so as to form a starting-hole in the top of the can, while the edges of the metal are pressed sidewise, so that it can crowd into the tapering grooves of the neck B′. The cutter B is thus used for puncturing and slitting the top of the can. The cutter B is then moved forward around the centering-pin C, so that the curved cutting edge b^2 of the V-shaped neck B′ cuts or plows through the metal, while the walls of the tapering grooves at both sides of the neck fold the metal over, first downwardly, as shown in Fig. 5, then outwardly as the metal edges enter farther into the side grooves, as shown in Fig. 6, and finally as the metal leaves the smaller ends of the grooves, as shown in Fig. 7, so that the metal is folded downwardly and outwardly, so as to produce perfectly round and beaded edges on the metal at both sides of the slit formed by the puncturing-cutter. The folded-over edges are produced by the V shape of the neck of the blade, in connection with the rearwardly-tapering side grooves, and these

features form the essential improvements in my can-opener, as thereby any accidental injury to the fingers in handling the can is prevented.

The slit that is cut by the V-shaped neck of the blade is equal in width to the larger rear part of the neck, the forward cutting edge of the neck forming the slit, while the V shape of the neck, as well as the gradual rearward taper of the side grooves of the same, gradually produce the downward and outward folding of both edges of the slit, so that perfectly-rounded-off edges are obtained.

The advantages of my improved can-opener are, first, cheapness and reliability of operation, as the cutter is readily swung on the centering-pin of the can for cutting out the top; secondly, the folding over at the edges of the top portion that is cut out and of the rim remaining on the upper part of the can-body, so that the top can be readily bent into open or closed position without any possible injury to the fingers, whereby the annoying scratches and cuts that often happen from the present ragged edges of can-tops are entirely prevented.

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

1. In a can-opener, a puncturing-cutter having at its top tapering rearwardly-extending side grooves, forming between them a neck V-shaped in transverse section, the lower portions of said grooves being inclined outwardly and the said neck having a forward cutting edge, substantially as set forth.

2. In a can-opener, a puncturing-cutter having a beveled point and above the same, near its top, tapering rearwardly-extending side grooves, forming a neck between them which is V-shaped in transverse section, the lower portions of said grooves being outwardly inclined, and said neck being provided with a forward-curved cutting edge, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

WILLIAM VOGEL.

Witnesses:

PAUL GOEPEL,

M. H. WURTZEL.