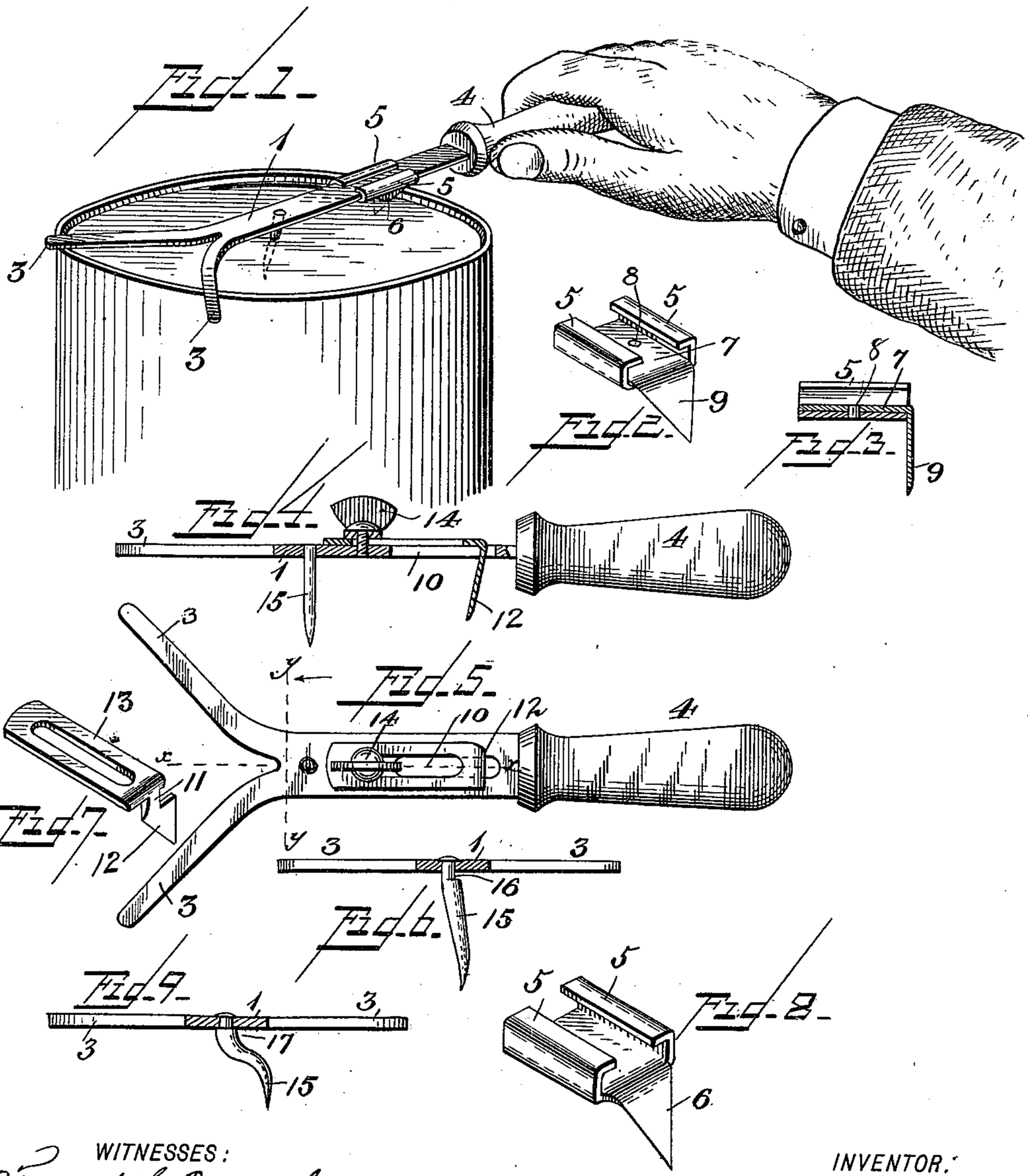
No. 667,084. Patented Jan. 29, 1901.

G. W. GOMBER.

CAN OPENER.

(Application filed Oct. 4, 1899.)

(No Model.)



WITNESSES:
Franck L. Durand.
Albert Ford

INVENTOR:
George W. Gomber.
BY
W. J. Fitzgerald & Co.,
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE W. GOMBER, OF CONYNGHAM, PENNSYLVANIA.

CAN-OPENER.

SPECIFICATION forming part of Letters Patent No. 667,084, dated January 29, 1901.

Application filed October 4, 1899. Serial No. 732,523. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GOMBER, a citizen of the United States, residing at Conyngham, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Can-Openers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to can-openers; and it consists in certain novel features of combination and construction of parts, the preferred materialization of which will be set forth in the following specification and illustrated in the accompanying drawings.

The object of my invention is to provide a device of the character specified which may be relied upon to efficiently perform its office of cutting open a can in such a way that the entire end thereof may be removed or a smaller section of the end cleanly cut out, both operations being very expeditiously performed at the expense of a minimum amount of labor.

In the accompanying drawings, Figure 1 is a perspective view showing my invention as applied to use. Fig. 2 is a perspective detail of one form of cutting-blade and means to hold the same in place. Fig. 3 is a central longitudinal section of Fig. 2. Fig. 4 is a central section of my can-opener, showing a varied form of cutting-blade and means to adjust the same. Fig. 5 is a plan view of the complete device shown in Fig. 4. Figs. 6 and 9 illustrate a varied form of construction in providing the anchoring-stem, each of said stems being different from that shown in Fig. 4. Fig. 7 is a perspective view of the cutting-blade shown in Figs. 4 and 5, separated from the holder. Fig. 8 is another form of cutting-blade from that illustrated in Figs. 2, 3, and 7.

Numerals will be employed to designate the several parts of my invention and the elements employed to coöperate therewith.

1 indicates the body portion of my improved can-opener, which is provided with the bifurcated end comprising the members or branches 3 3, preferably formed integral with the body portion, while upon the opposite end of said body I secure in any preferred way the handle 4. To the body portion I adjustably secure in any preferred manner a suitable cutting-blade, various forms of construction thereof being illustrated in the several views of the drawings.

In Fig. 1 I have illustrated a simple form of cutting device consisting of a movable member comprising the overlapping lips 5, by means of which the device is adjustably held upon the body portion 1, and may be provided with an integral depending blade 6, or said blade may consist of a separate piece of knife-steel, as illustrated in Figs. 2 and 3, wherein I have shown a separate piece of metal bent near its middle, and thereby disposing the anchoring-section 7 so that it may be secured within the movable member having the lips 5, as by the rivet 8, while the section 9 may be sharpened and pointed to form a cutting-blade corresponding to the cutting-blade 6.

In Figs. 4, 5, and 7 I have illustrated a different form of cutting-blade, and in order to use the same to the best advantage I provide in the body-section 1 a longitudinally-disposed slot 10, designed to receive the neck portion 11 of the cutting-blade 12, said neck portion being an integral part of the slotted portion 13, as shown in Fig. 7. The neck portion 11 is designed to play within the slot 10 in order to afford adjustment to the cutting-blade 12.

To insure that the cutting-blade 12 may be locked in an adjusted position, I provide the thumb-screw 14, which is seated in a threaded aperture provided in the body 1, near one end of the slot 10, and since the stem of the thumb-screw is of sufficient length to permit the slotted body 13 to be interposed between it and the body 1 it is obvious that the force of said screw may be easily applied to hold said slotted body at any desired point to which it may be adjusted. Inasmuch as the neck portion 11 is of proper width to fit snugly within the slot 10, it is clear that the cutting-blade 12 will be reliably held to its work when the said screw is turned home in its seat.

It is obvious that it will be necessary to provide means to hold the body portion in an adjusted position upon the top of the can which it is desired to open, and with this end in view I provide the anchoring-stem 15, varied forms of which are illustrated in Figs. 4, 6, and 9.

In Fig. 4 I have illustrated a straight depending stem designed, in common with the

other forms, to take into the end of a can, thereby forming its own aperture, and thus provide a fulcrum-point by means of which the cutting-blade may be readily applied by swinging the handle 4 in the proper direction.

In Fig. 6 the anchoring-stem, it will be seen, is provided with an offset or shoulder 16, the object being to provide a recess at this point by means of which the stem will be held against casually slipping out of place, inasmuch as the shoulder 16 will take under the edge of the sheet metal forming the can and prevent upward movement of the body 1.

In Fig. 9 I have so constructed the anchoring-stem that it will be bent laterally, and thereby extend to one side of the body 1, the disposition of the anchoring-stem in this instance being in the form of a compound curve, thus insuring that the surface of the stem and the body will converge toward each other in the form of an acute angle 17, thus providing that the edge of the metal forming the can will rest in said angle, and thereby prevent the upward movement of the body 1. Inasmuch as this form of anchoring-stem may be very cheaply constructed, it is thought that the same will prove most desirable in practice.

The object in providing the free end of the body with a bifurcated terminal is to insure that the branches 3 will lie upon the edge of the can at substantially equidistant points upon either side of the body portion, thereby insuring that said body portion will be held against rocking, thus rendering it unnecessary for the operator to hold the device in place. To operate the device, therefore, it is only necessary for the operator to introduce the stem in position by simply forcing the same through the end of the can at any desired point, preferably the central portion. The act of forcing the stem into the can will incidentally introduce the cutting-blade, inasmuch as it is also provided with a pointed end, it being understood that the position of said blade should be previously adjusted to the desired point in order to cut a large or small opening in the can, as preferred. After the stem and blade have then been introduced in the desired position the operator has but to move the handle in the direction taken by the cutting edge of the blade, when the edge of the material forming the can will take into the recess formed by the shoulder 16 or into the recess or angle 17, as the case may be, the branches 3 holding the body portion against a rocking movement, thereby providing that by means of said shoulder or angle the body portion will be held against upward movement and insure that the knife may be easily and quickly drawn through the metal.

By reference to the foregoing specification and the accompanying drawings it will be observed that I have provided a can-opening device which may be very cheaply manufactured, inasmuch as all the parts excepting the cutting-blade may be made of a comparatively low grade of metal easily and cheaply shaped into the desired form. I desire, however, to form the cutting-blade proper of well-tempered steel, since very little material is required to form said blade and but little labor is necessary to shape it into the desired form. It is obvious, therefore, that the parts forming the complete device may be cheaply and expeditiously formed in large quantities and readily assembled to provide my complete can-opener.

While I have described the preferred construction which may be adopted in making the various elements of my invention and the features designed to coöperate therewith, it will be understood that the substantial equivalent thereof is comprehended by me in this application.

It is thought that the manner of using my can-opening device will be obvious, though it may be stated that the anchoring-stem is introduced into the end of the can, preferably in the central portion thereof, which will insure the incidental introduction of the cutting-blade, when the handle may be drawn in the proper direction, and thus cause said blade to move in a circle through the material forming the can, while the shoulder 16 or recess 17, as the case may be, will prevent the body portion of the device from rising upward and will also serve the purpose of causing the severed portion of the lid of the can to remain attached to the stem, whereby said severed portion may be lifted out of the way, thereby preventing said severed portion from falling into the can, as would be the case if said shoulder or recess were not provided.

Believing that the advantages and manner of constructing my invention have been fully set forth, I will now state what I claim as new and desire to secure by Letters Patent, viz:

In a can-opener, the body portion, provided with a handle at one end, and the members or branches at its opposite end for catching against the outer sides of the can, a longitudinal slot, and the anchoring-stem secured to the body and provided with a neck or shoulder for catching against the under side of the top of the can, combined with the slotted cutting-blade 13, placed upon the top of the body and provided with the neck portion 11 upon the opposite edge of the blade from the cutting edge, and the thumb-screw by which the blade is held rigidly in position, the end of the cutting-blade being fastened down through the slot in the body, and the neck 11 being made to catch against the under side of the body to prevent the blade from being forced upward when the implement is applied to a can, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. GOMBER.

Witnesses:
SAM. A. DRURY,
E. F. CAVERLY.