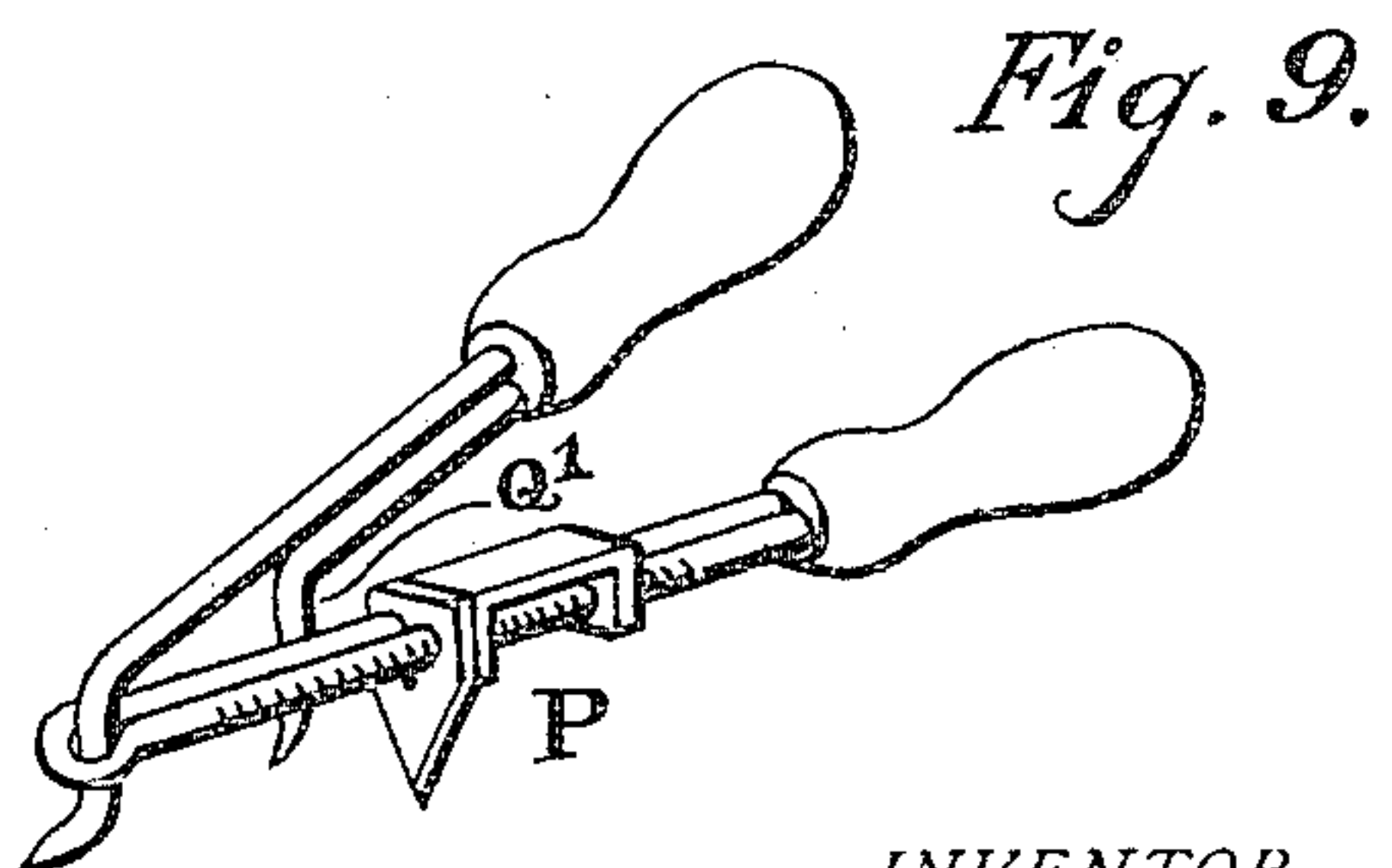
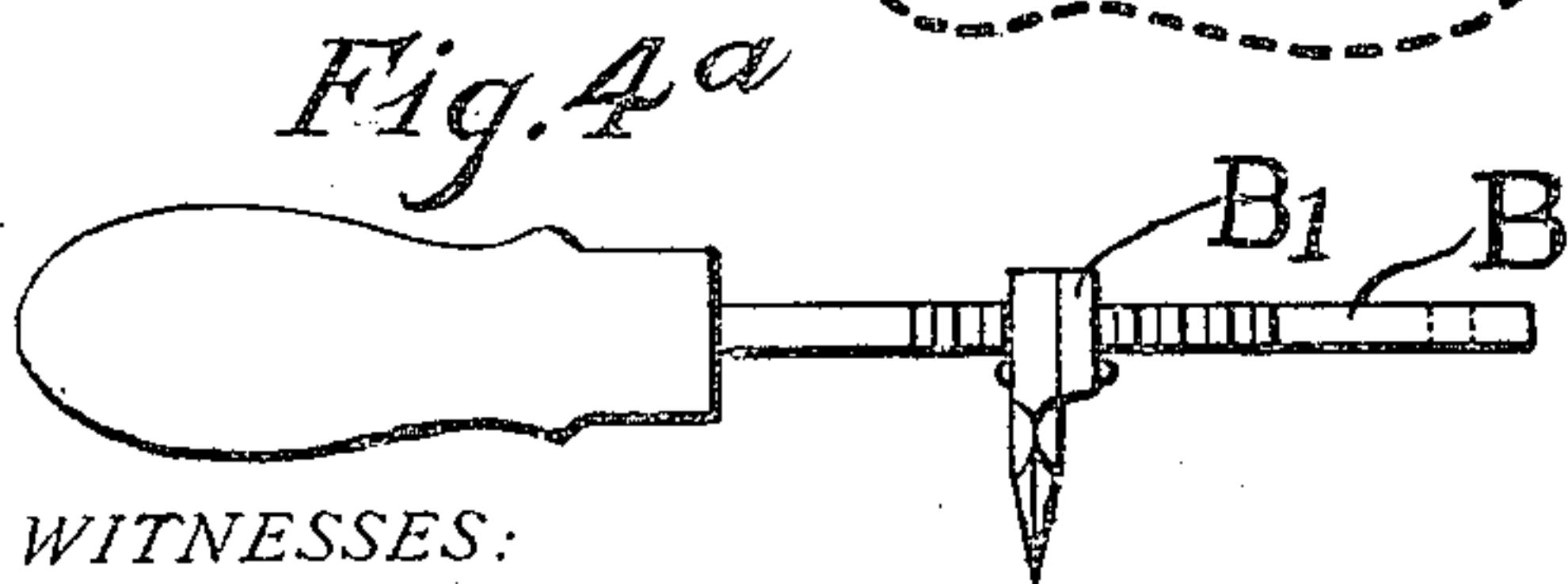
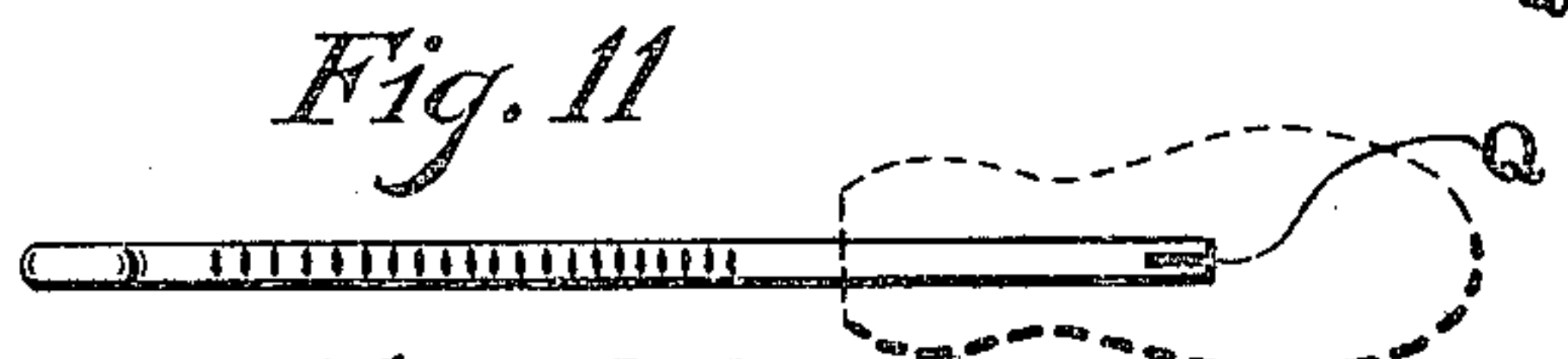
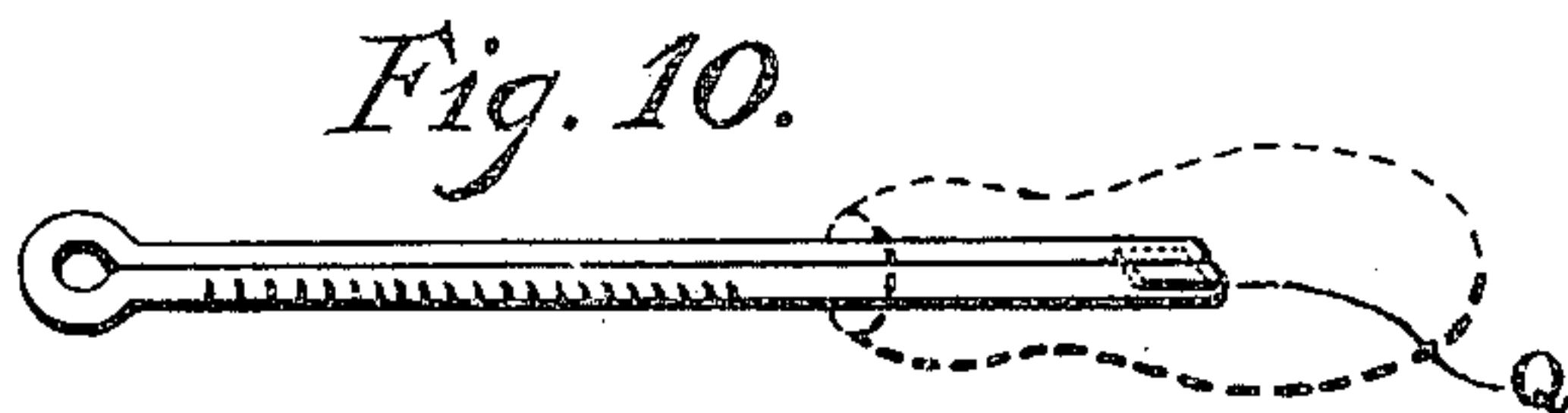
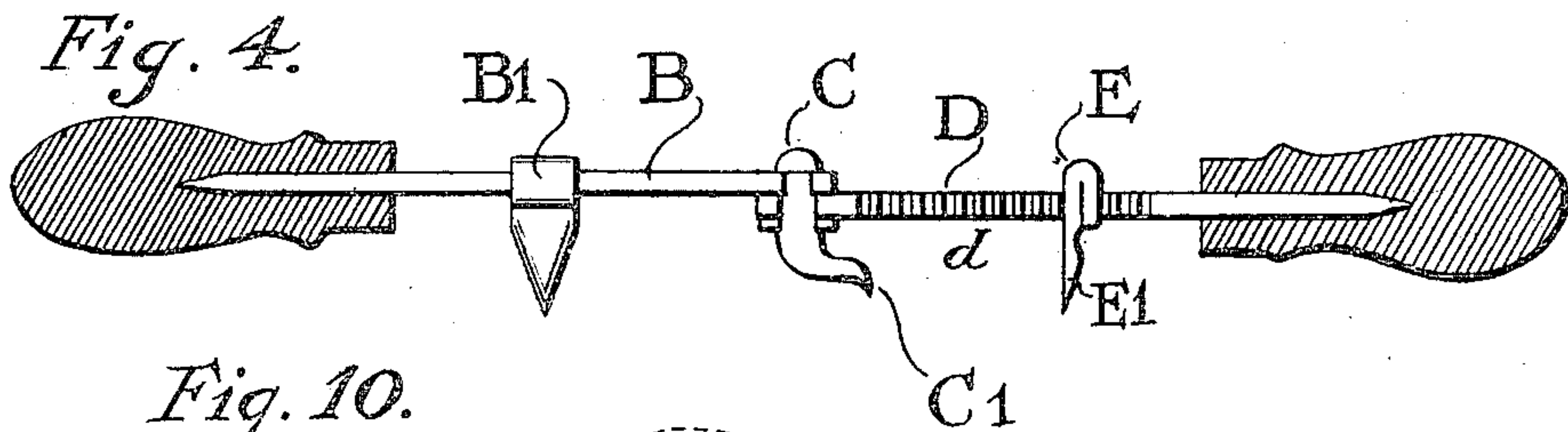
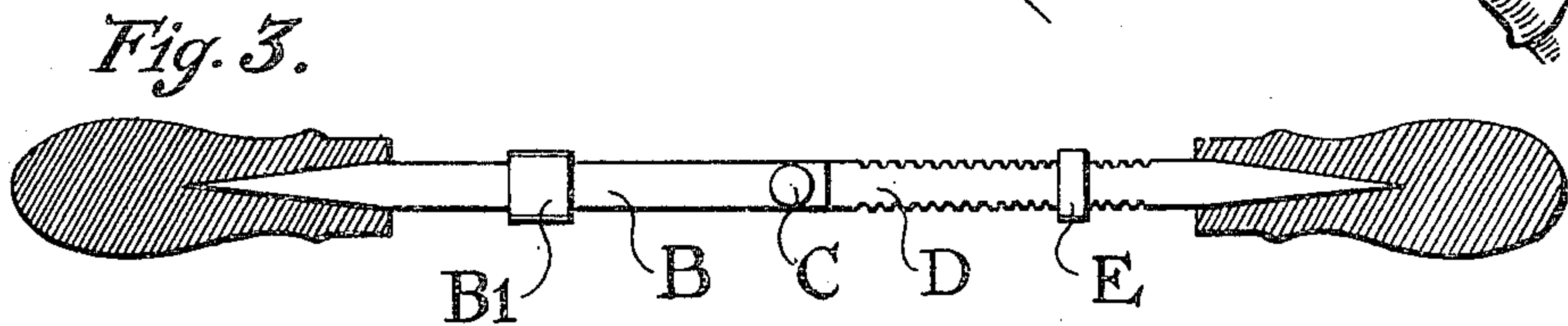
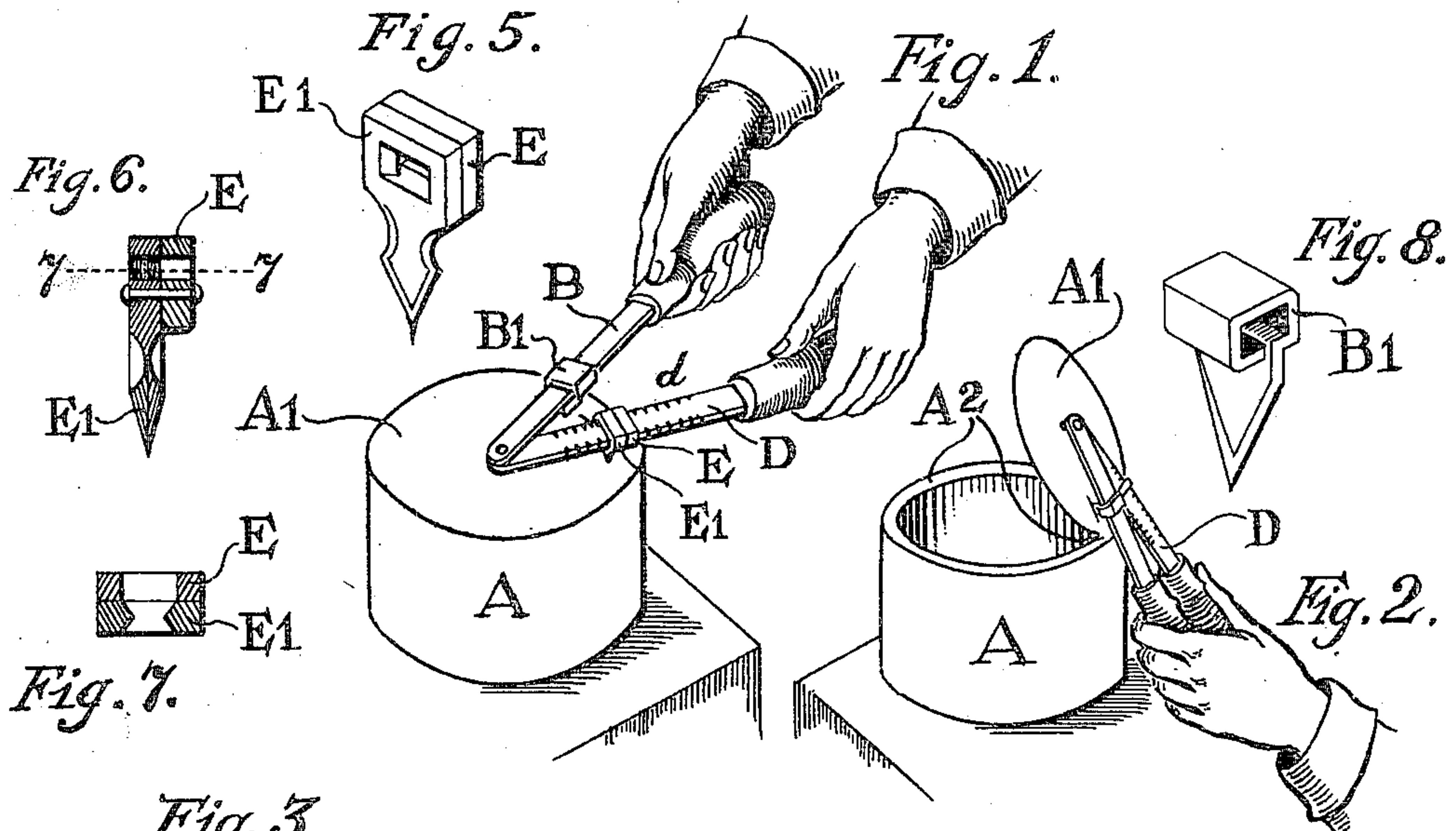


A. A. WEST.
CAN OPENER.

APPLICATION FILED NOV. 1, 1907. RENEWED MAR. 22, 1910.

964,461.

Patented July 12, 1910.



WITNESSES:

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CAN-OPENER.

964,461.

Specification of Letters Patent.

Patented July 12, 1910.

Application filed November 1, 1907, Serial No. 400,201. Renewed March 22, 1910. Serial No. 551,002.

To all whom it may concern:

Be it known that I, AUGUSTUS ALBERT WEST, a citizen of the United States, residing in the borough of Brooklyn, in the city and State of New York, have invented a certain new and useful Improvement in Can-Openers, of which the following is a specification.

The device is of that class in which the can is opened by a smooth circular cut. The considerable twisting force exerted on the can is resisted in my invention by a separate arm pivoted to a point roughly determined near the center of the head of the can, and provided with a cutting blade adapted to be thrust through the metal of the can and to produce a short radial cut in which the blade remains engaged as an anchor. The cutting lever is pivoted to the same central point, and worked by the other hand of the operator. The work is performed rapidly and easily.

I provide special simple means for adjusting both the anchor and the cutting knife outward and inward on their respective levers. Ordinarily, the cut will not be continued quite around. The portion which remains uncut, serves as a hinge on which the portion treated may be turned up out of the way. The operation of turning succeeds easily that of cutting.

When required, my improved opener may serve to make a complete cut quite around, and this may be desired with some material, more particularly condensed milk, but with all ordinary food, it may be convenient and unobjectionable to leave the cut portion attached.

Following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a perspective view showing the opener engaged with the can at an early stage of the operation. Fig. 2 shows the same after the cutter has performed the required sweep, and the instrument tilted to elevate the partially liberated portion. Fig. 3 is on a larger scale. It is a plan view showing the device in an extended condition, that which it assumes when the sweeping motion of the cutter has been half performed. Fig. 4 is a corresponding side elevation. Fig. 4^a shows a modified construction of a part which is on some accounts

preferable. Fig. 5 is a perspective view of the cutter slightly modified. Fig. 6 is an edge view of the same, partly in section. Fig. 7 is a horizontal section on the line 7—7 in Fig. 6. Fig. 8 is a perspective view of the anchor. The remaining figures show a modification. Fig. 9 is a perspective view corresponding in position and in relation of the parts to Fig. 1. Fig. 10 is a perspective view of the metal portion of the cutting lever with the handle indicated in dotted outline. Fig. 11 is a corresponding side elevation.

Similar letters of reference indicate corresponding parts in all the figures where they appear.

A is a cam.

A¹ is the central and main portion of one of the heads, and A² the side which remains uncut and serves as a hinge on which the cut portion A¹ may be lifted by turning the instrument, and therewith, the partially liberated portion of the head into the upright position.

B is a lever which I will designate as the anchor lever, and B¹ a cutter which I will call the anchor carried thereon.

C is a piece made from a short length of steel wire shaped by hand or machinery, the main portion stiffly riveted to the lever B and forming a bearing on which the lever may be easily revolved, and the projecting end C¹ pointed, bent and hardened. In the use of the device, this point C is thrust through the metal of the head of the can and hooks under it to form a center on which the levers may turn. D is the other lever having an eye engaging with the pivot C, and capable of being revolved with the obvious sweeping motion. On each side of the lever D is a series of notches *d* (see Figs. 3 and 4).

E is the carriage for the cutter mounted on the lever D, describing a nearly complete circle when the lever is properly moved.

E¹ is the cutting portion and E the carrying portion of this cutter. The interior of the slot in the cutter is of V-shaped section at each end, thus presenting angles adapted to engage in the notches *d*.

I attach importance to the construction of the carriage in two distinct parts because it allows the parts to be finished separately and afterward strongly and firmly united (see Fig. 7), making it easy to produce the angular or V-shaped internal surface to

engage in the notch *d* to which it is presented when the lever D is strongly moved laterally and also to have a smooth bearing to bear against the adjacent portion of the lever and steady the carriage.

When the cutting lever D is being swept around to produce the required circular cut, the resistance holds the cutter firmly locked on the lever by the engagement of the V-shaped end of the slot with the corresponding notch *d*, but when the device is out of use, the carriage E with its cutter E¹ may be easily shifted to any required extent toward or from the pivot C. The cutter E is arrow-shaped and by swaging and grinding or both, is beveled on the outer face, leaving the inner face plain. This produces the effect of a curved knife. The curvature may be an arc of the circle, which it is most frequently required to cut.

The pivot C and the anchor B¹ and especially the cutter E¹ should be hardened. The latter should be ground to a tolerable sharpness. When fully thrust down, the metal is received in the narrow portion of the cutter, and in being swept around, the form of the wider part of the arrow-head, holds the cutter down to its work.

F is a collar fixed on the pivot C which provides a broad bearing for the eye of the lever D.

Modifications may be made without departing from the principle or sacrificing the advantages of the invention. I have shown the cutter in Figs. 5 6 and 7 as made in two parts, the cutter and a portion of the carriage being made from one piece of steel, and another piece of steel constituting the remainder of the carriage being secured thereto by a rivet. Fig. 4 shows a construction in which the entire cutter and its carriage are made in one piece. This form can be used if it shall be found preferable.

In the modifications shown in Figs. 8, 9 and 10, the carriage is widened. I will use the letter P to indicate this carriage. I have shown it as having the knife or cutter triangular, but the arrow-head form can be used with this construction. In this form both the levers are made of steel wire. The anchor Q' is not flattened. It is adapted to form simply a circular hole. In this form, the portion which is to puncture the head of the can in or near the center, and to form the pivot for the motion for both levers, is formed integral with the anchor lever by bending the lever. The construction is very clearly shown in Fig. 9.

It is important to prevent the handles from twisting or being turned around on the

respective levers. Figs. 10 and 11 show the ends of the wire split a little distance by sawing or otherwise, and a thin locking piece Q slipped in. After this has been placed, this locking piece and the wires are soldered together so as to serve as if integral. With this form of the invention, the handle should be bored with two holes side by side, each adapted to receive one of the parts of the doubled wire, or one of the two wires when two separate wires are used, as in the holding lever in Fig. 9.

When it is required that the smooth circular cut produced by my device, shall be continued to complete the circle and allow the more complete removal of the material therein, all that is required is to complete the proper stroke of the cutting lever, lift the other lever so as to withdraw the anchor B' from its slit, and move it out of the way, the cutting lever remaining pivoted to the center of the can as before, hold the can firmly by some means, and move the cutting lever enough farther to complete the circular cut.

The cutter E may be beveled on each face instead of one face,—such is shown in Figs. 5 and 6.

The anchor may be formed as a cutter exactly like the cutter shown on the other lever. In such case it may be used either as an anchor by aiding it a little to hold the can, or as a cutter by moving it so that it shall divide with the other cutter the work of making the nearly complete circular cut required. Fig. 4^a shows such construction.

I claim as my invention:—

A can opener comprising a pair of levers pivoted together at one end, a member carried by one of the levers and movable along the said lever forming an anchor; the other lever being provided with a series of teeth on opposite sides, and a member comprising a cutter surrounding the said lever and movable therealong, the interior of the said movable cutter being provided on opposite interior faces with integral projections, whereby as the lever is rotated in one direction one projection engages one series of teeth, and when rotated in the opposite direction the other projection engages the other series of teeth, whereby the cutter is held in position.

Signed at New York city in the county of New York and State of New York this 29th day of October A. D. 1907.

AUGUSTUS ALBERT WEST.

Witnesses:

HENRY POLLACK,
S. H. STODDER.