T A. MONTAPERTO.

MEANS FOR CUTTING BOTTLES AND THE LIKE.

APPLICATION FILED AUG. 29, 1910.

999,668. Patented Aug. 1, 1911.

Fig. 1.

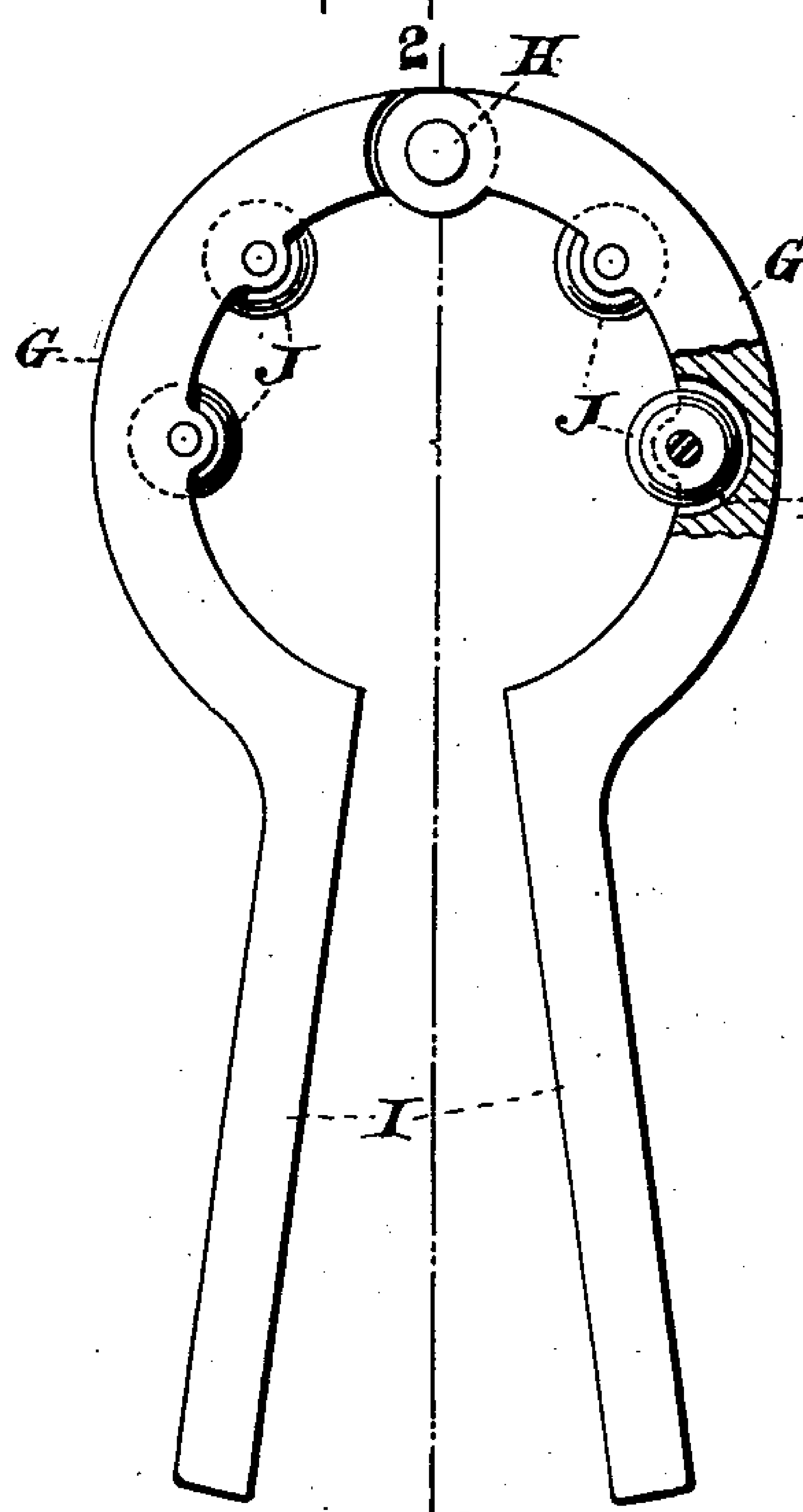


Fig. 2.

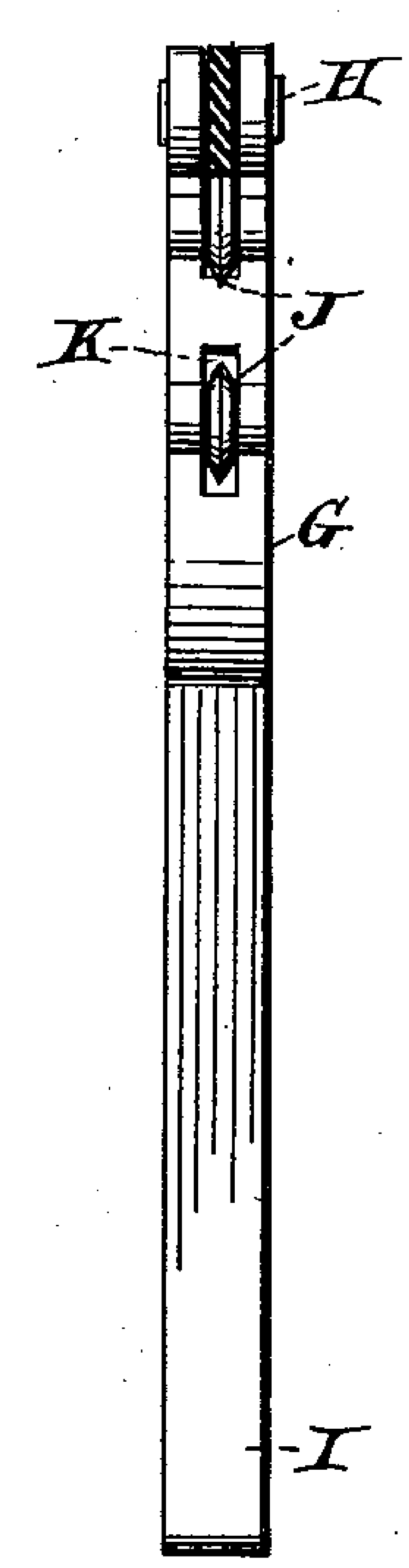


Fig. 3.

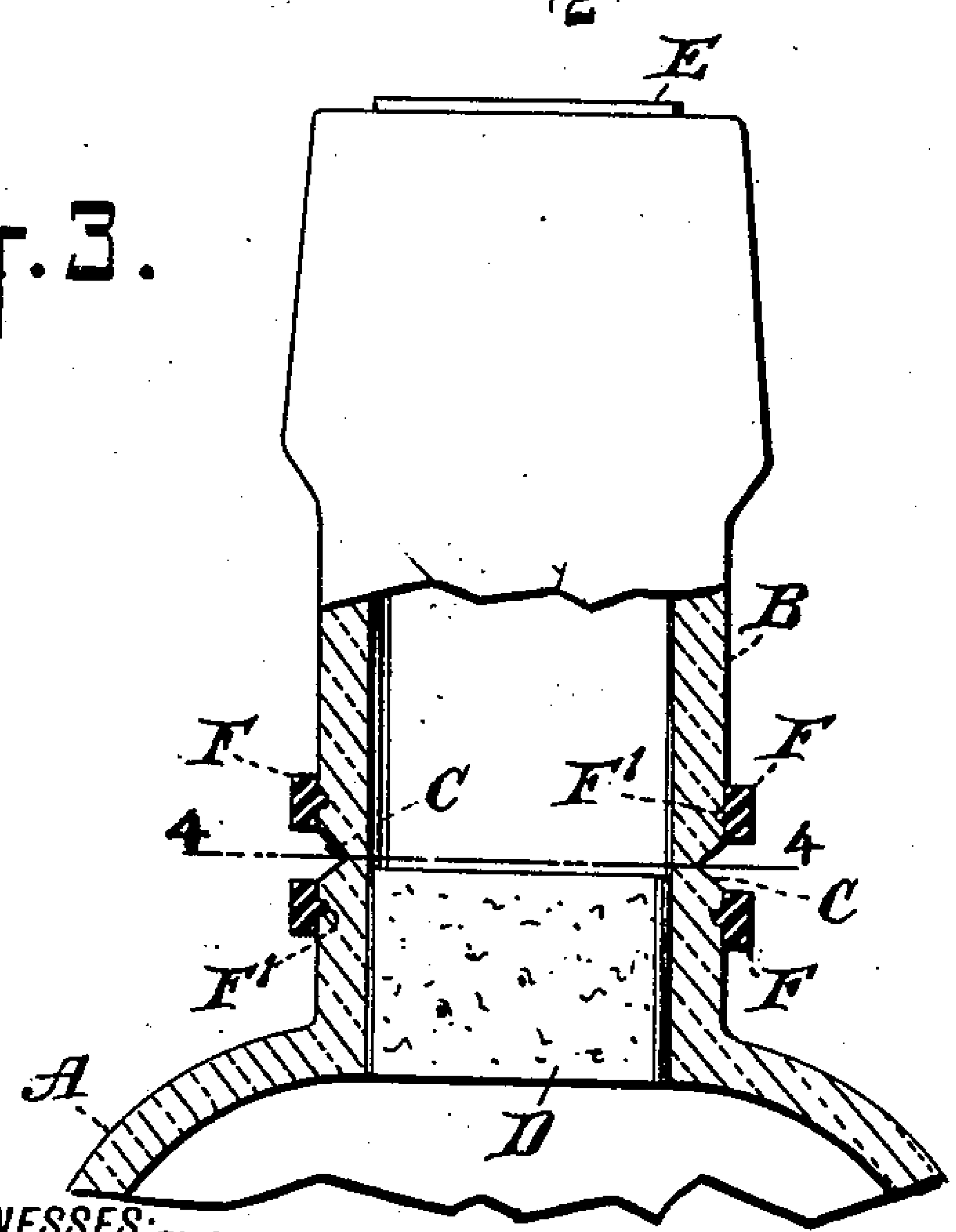
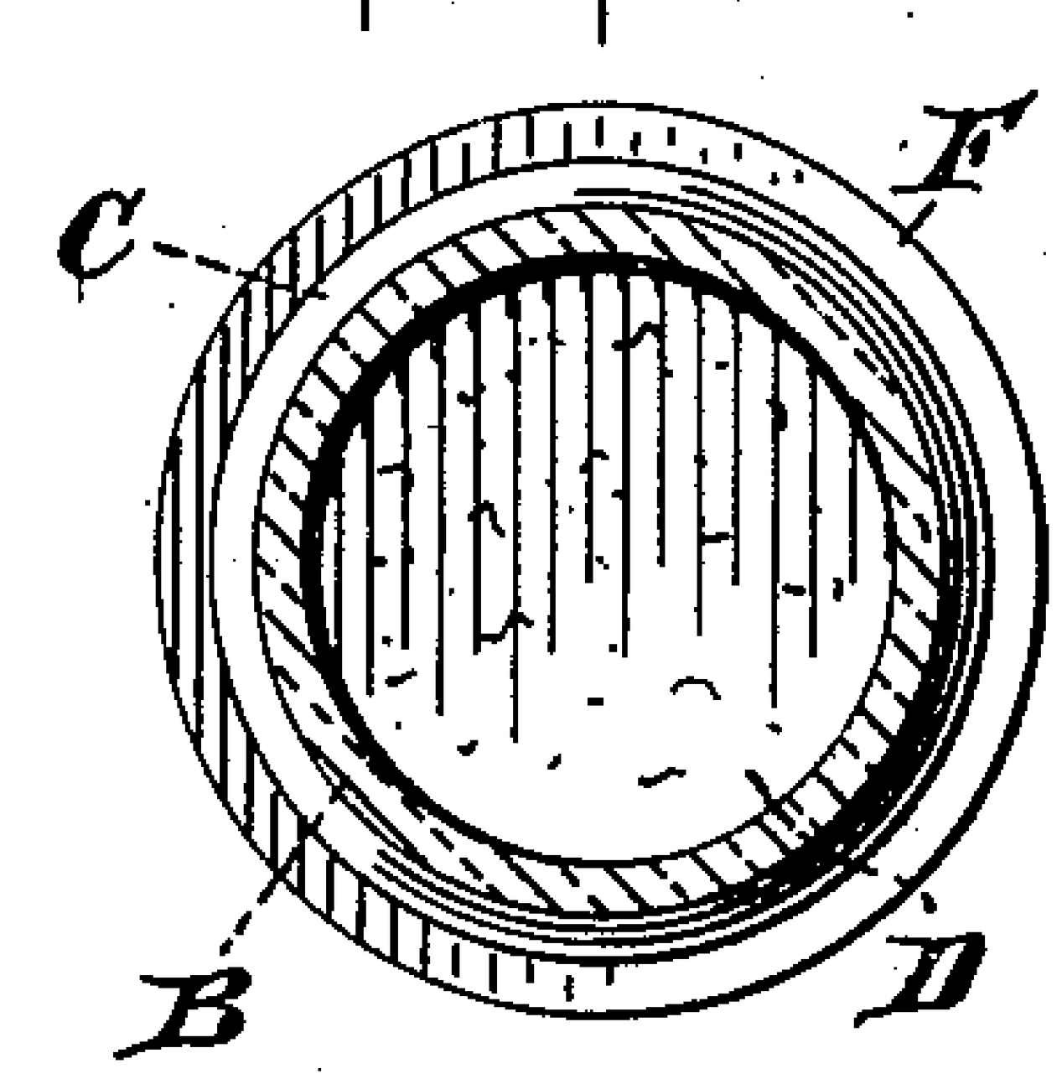


Fig. 4.



WITNESSES:

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MEANS FOR CUTTING BOTTLES AND THE LIKE.

999,668. Specification of Letters Patent. Patented Aug. 1, 1911.

Application filed August 29, 1910. Serial No. 579,536.

To all whom it may concern:

Be it known that I, T ANTONIO MONTAPERTO, a citizen of the United States, and resident of Rosebank, borough and county of Richmond, city and State of New York, have invented certain new and useful Improvements in Means for Cutting Bottles and the Like, of which the following is a specification.

My invention relates to means for severing the neck of a bottle or the like so that it will become impossible to sell said bottles, when empty, for the purpose of refilling with an inferior quality of goods and marketing the same as genuine.

My improvement is further intended to insure a clean cut and to prevent the glass from cracking or breaking in a wrong direction.

My invention will be fully described hereinafter and the features of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a face view of my improved tool partly in section; Fig. 2 is a sectional view thereof on the line 2—2 of Fig. 1; Fig. 3 is a sectional view partly in elevation of my improved bottle neck and Fig. 4 is a horizontal section on the line 4—4 of Fig. 3.

In the drawings I have shown an improved bottle in connection with which my improved cutting means may be used. The bottle comprises a body A from which projects the customary neck B which in the present instance is preferably provided at a point near the body with a circumferential groove C.

My improved bottle is preferably doubly corked one cork D being located in said neck below the groove C and adjacent to the body A and the other cork E serving to close the open mouth of said neck. In the particular illustration two collars or bands F of rubber or like material forming part of my improved cutting means surround the bottle neck at points immediately above and below the groove C and may be maintained against axial displacement on the bottle neck by being partly forced into small grooves F′ formed in the said bottle neck. It is to be understood that these collars F form part of and comprise a bearing or foundation for my improved cutting tool and in the specific form illustrated may if desired be placed in position on the bottle neck some time before the bottle is sold and in which condition the bottle may be sold to the retailer. The functions of these rubber collars are not only to form a soft bearing surface for the cutting tool but to prevent the glass from cracking or breaking in a wrong direction. The slightly compressed rubber checks or deadens the glass at the places where it surrounds the neck and thereby prevents not only the excessive splintering of the glass immediately adjacent to the line of cutting, but also prevents a cracking of the glass on other lines than those defined by the cutting wheel.

In order to facilitate the separation of the bottle neck or other element into two parts and to insure a clean break or cut without jagged points, I have provided the tool shown in Figs. 1 and 2 of the drawings. This tool as illustrated comprises two curved levers G pivotally secured together at H and terminating at their free ends in coöperating handles I. Cutting wheels J of steel or other suitable material are located at spaced intervals on said curved levers G and are journaled in recesses K in such a manner that a portion of the periphery of each cutting wheel is exposed, or, in other words, extends beyond the curved lever G toward the inside.

When it is desired to for instance open the bottle illustrated the tool just described is placed over the neck thereof and brought down to a point opposite the annular groove C. The handles I are then brought together so that the wheels J enter the groove C and the adjacent portions of the curved levers G rest upon the bands or collars F. If the handles I are now tightly clasped so as to hold the wheels J in contact with the glass and the entire tool given a rotary motion about the bottle neck, the wheels J will cut said neck in the groove so that after the tool has been removed the upper portion of the neck may be easily removed. The cork D is brought within easy reach by this operation and may now be readily extracted and the contents of the bottle made accessible. During the actual cutting of the neck as just described, the rubber bands or collars F are compressed by the contracting portions of the cutting tool and form a resilient foundation for the tool thus preventing crushing of the bottle neck and also serving as resilient confining bands to prevent the glass adjacent to the groove from chipping or break-

ing as the tool is operated and therefore insuring a clean regular cut without jagged edges.

In a tool of this character it is important that the pressure on the axis of the cutting wheel shall require as little manual pressure as possible, and in order to bring about this effect I place my pivotal connection, shown at H in the drawings, as close to the center of the bottle neck as I possibly can. In other words, the pivotal connection H, or whatever other pivotally acting part may be employed, shall be located within the circle defined by the circular portions of the device itself. It is furthermore important that the cutting wheels shall be pressed against the bottle neck during the cutting operation in such a way that the direction of pressure is not radial; in other words, that the pressure on the axis of the cutting wheel shall be at an angle to the radius of the circle defined by the cutting tool. Thus, in Fig. 1, the lower wheel J, when moved to the closed position of the tool, will move in a direction far below the center of the circle, whereas the upper wheel J will move in directions above the center of the circle.

My improved cutting means thus provides a ready and simple medium for cutting vitreous elements or more specifically, for severing a bottle neck so that refilling of such bottle and giving it the appearance of the genuine original package is impossible without detection, that is, at least by wholesale dealers for reselling to retailers.

By cutting as I have used the expression above, I do not mean that the wheels J physically penetrate the entire thickness of glass, but only that they cut the outer glaze thereof, whereupon the neck may be easily separated leaving a relatively clean flat surface corresponding to the line of the cut.

Various modifications and changes may be made within the scope of the claims without departing from the spirit of my invention.

I claim as my invention:

1. A means for the purpose described comprising spaced resilient cushions adapted to closely fit a bottle neck, a plurality of cutters adapted to bear under pressure against said bottle neck between said cushions, and means for compressing said cushions simultaneously with the exercise of pressure on said cutters and for moving said cutters about said bottle neck.

2. A means for the purpose described comprising spaced resilient cushions adapted to closely fit a bottle neck, a plurality of cutters adapted to bear under pressure against said bottle neck between said cushions, and means for compressing said cushions toward the axis of the bottle neck and for expanding them toward the line of cut simultaneously with the exercise of pressure on said cutters, said means being also adapted to move said cutters about said bottle neck.

3. Means for the purpose described comprising a cushion adapted to fit a bottle neck, a cutter adapted to bear under pressure against the bottle neck in close proximity to said cushion, and means for compressing said cushion and exercising pressure on said cutter and for moving said cutter about the bottle neck.

4. Means for the purpose described comprising a cutter adapted to bear under pressure against a vitreous element, means for exercising pressure on said cutter and for operating same and a cushion located between said means and said element and adapted to be compressed by said means.

5. In a tool for the purpose described a circular member comprising two relatively movable curved face portions having two spaced members, approximately at right angles to said circle, adapted to lie adjacent or apart, a cutting wheel having its axis located approximately within said circle and means, effective as a pivot, located within said circle to permit movement of said spaced members and of said curved face portions attached thereto toward and away from each other, the cutting wheel being located at such a point within one of said movable curved face portions that the path it traverses during any motion of its axis will be at an angle to a radius of said circle, the pivotally acting part being so located with respect to the cutting wheel that when said wheel serves as a fulcrum pressure upon the spaced members will exert a force upon said pivotally acting part such that if the line of direction of said force is extended it will cut the circle of said circular member.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

T ANTONIO MONTAPERTO.

Witnesses:
GEORGE BENNETTO,
JOHN A. KEHLENBECK.