J. W. KEITH.

CORK PULLER.

APPLICATION FILED FEB. 18, 1918.

1,332,043. Patented Feb. 24, 1920.

Fig. 1.

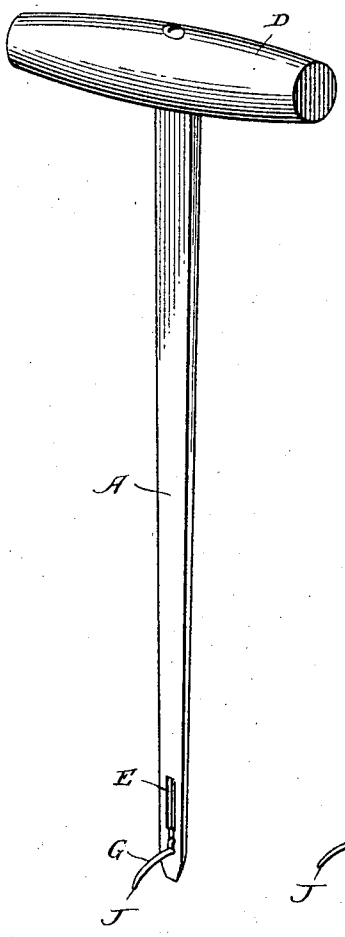


Fig. 2.

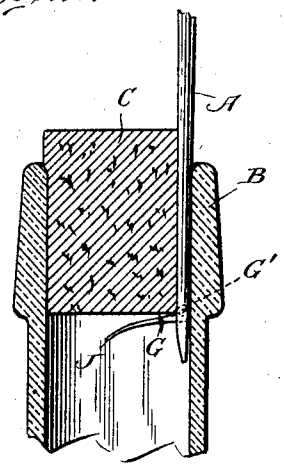


Fig. 3.

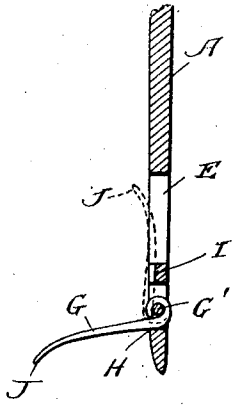


Fig. 4.



Witness

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CORK-PULLER.

1,332,043. Specification of Letters Patent. Patented Feb. 24, 1920.

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To all whom it may concern:

Be it known that I, JAMES W. KEITH, a citizen of the United States, and resident of Lynchburg, in the county of Campbell and State of Virginia, have invented certain new and useful Improvements in Cork-Pullers, of which the following is a specification, reference being had therein to the accompanying drawing.

The object of this invention is to produce a light, simple device by the use of which ordinary corks may, without mutilation, be removed from ordinary bottles.

In the accompanying drawings,

Figure 1 is a perspective view of the device.

Fig. 2 is an axial section of a bottle neck and cork therein, the pulling device being in position for bringing out the cork when itself withdrawn.

Fig. 3 is a longitudinal section of the working end of the tool or device.

Fig. 4 is a cross sectional view of a slightly modified construction.

In these views, A represents a stiff metal member, or blade, which is usually flat, terminally very thin and having its lateral portions rounded, nearly to an edge, on the side which is to make contact with a bottle neck B when the blade is inserted alongside a cork C therein. Preferably the member A is provided with a suitable handle here shown at D as non-integral. This blade or member A is provided near its free end with a central longitudinal slot or recess E in which a spring steel finger G is pivoted at G′ to swing downward against a stop H and to fold upward into the recess and against a stop I near the pivot, the part of the finger below this stop being nearly rigid and the part above the same preferably, but not necessarily, being diminished so that it is somewhat readily sprung, and so curved that its free end when it is folded projects from the slot as indicated in dotted lines at J.

When this blade is pushed into a bottle neck alongside a cork the finger first folds to the position shown in dotted lines in Fig. 3, and as the blade advances the spring portion J (if it be made yielding) is pressed into the slot by the body of the cork. If unyielding, the cork yields. The blade is carried on until the end J of the finger is below the inner end of the cork, when resiliency throws the end J out of the slot and beneath the cork, or if the curved finger be rigid, the cork springs back. If now the blade be pulled outward, the end J of the finger strikes the cork and the finger swings to the position shown in Fig. 2, where it makes an angle greater than 90° with the blade so that the pull of the finger is exerted on the cork almost at the pivot G′, or almost without leverage. If the cork strongly resists the pull, the rigid portion of the finger compresses the cork but most largely near the pivot. As the part most compressed offers most resistance the pull is always very near the pivot. Arranging the finger so that its free end swings to a plane below its pivot is of great importance, since thereby leverage being slight, a light construction may be employed and the pull is at the periphery of the cork, instead of being transmitted through a considerable distance through yielding cork. When the cork has been extracted its compressed portions return to initial shape and the cork, even if many times extracted, hardly shows a trace of the operation.

The cork is shown as projecting from the bottle, but it may be flush or be sunk below the margin of the neck without affecting the operation set forth.

The blade may, if desired, be curved to nearly cylindrical form as shown at A′, Fig. 4, this form combining stiffness and lightness with simplicity in manufacture.

The advantage of having extracted corks as fully serviceable as new corks is obvious, and to secure this advantage through using upon any and all corks already in place a simple extractor is a result not before reached so far as I am aware.

It may be further stated that the device set forth may be used very successfully for removing corks which have been pushed into the space in the bottle and below its neck, and that such corks are also withdrawn without injury and usually without even marking them.

What I claim is:

1. A cork extractor consisting of a stiff member adapted to be forced between a cork and the bottle neck in which it lies and a folding finger pivoted near the free end of said member to fold as the member

is forced inward and to open a little more than 90° against a stop on the member as the latter is withdrawn.

2. The combination with a stiff metal member adapted to be forced inwardly between a cork and a bottle neck in which the cork lies, of a finger adapted to fold to position nearly parallel to said member as the latter is inserted and to open, when below the cork, and make with the member an angle slightly exceeding 90°, said member being provided with stops limiting the movement of the finger in each direction.

3. The combination with a stiff member adapted to be forced inwardly between a bottle neck and a cork lying therein, of a finger pivoted to the member and arranged for limited downward swinging below the cork until its free end lies materially below the pivotal axis.

4. The combination with a stiff member adapted to be forced inwardly between a bottle neck and a cork therein, of a finger pivoted to the member, to fold as the member carries it past the cork and to open automatically a little more than 90° when the member is retracted, whereby the pull of the finger upon the cork is only near the pivotal axis.

5. The combination with a member adapted to be forced inwardly alongside a cork in a bottle neck, of a spring finger pivoted to said member near its end and arranged to swing against stops, on said member, which limit its opening to a little more than 90° and its closing to a position where resiliency tends to hold its end at one side of said member.

6. The combination with a member adapted to be forced inward alongside a cork lying in a bottle neck and provided near its free end with a longitudinal slot, of a terminally curved finger pivoted to said member to swing into and out of the slot, a stop preventing the curved finger end from swinging fully within the slot, and a stop limiting the opposite motion of the finger to a position where it makes a small angle with the inner end face of the cork.

In testimony whereof I hereunto affix my signature.

JAMES W. KEITH.