(No Model.)

J. M. BARNES.

CORK EXTRACTOR.

No. 481,093. Patented Aug. 16, 1892.

Fig. 1.

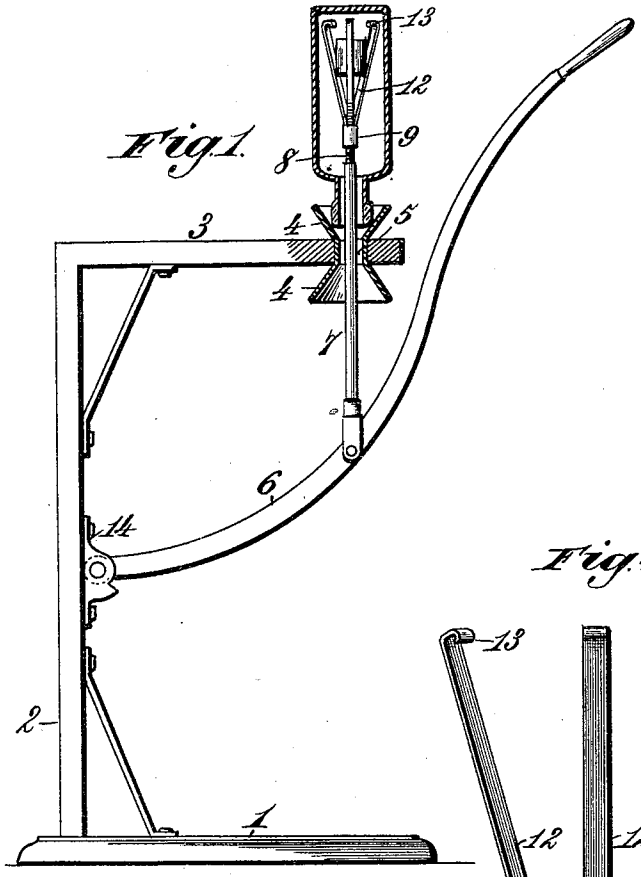


Fig. 2.

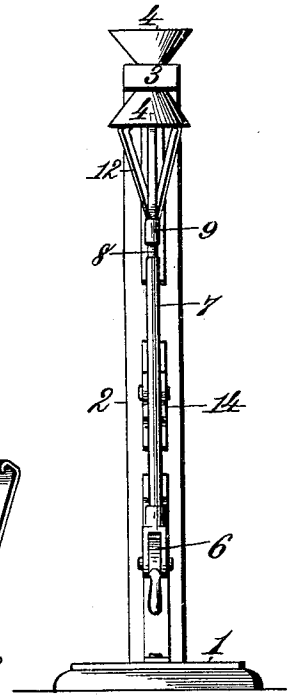


Fig. 4.

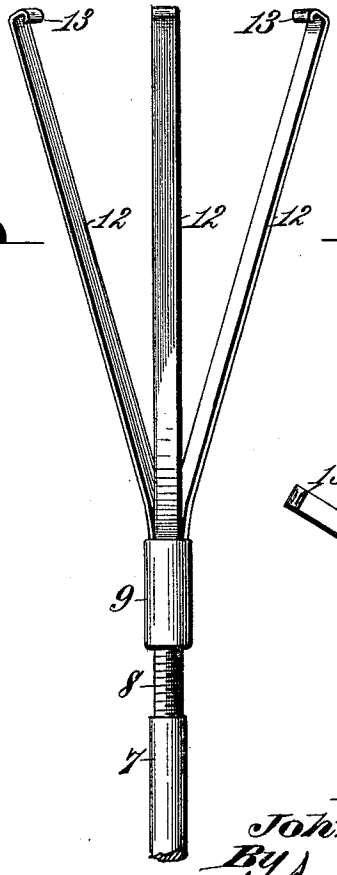


Fig. 3.

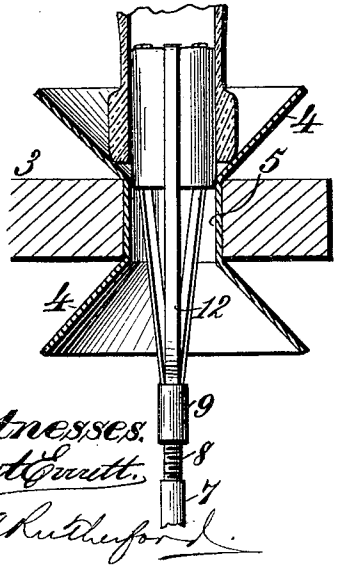
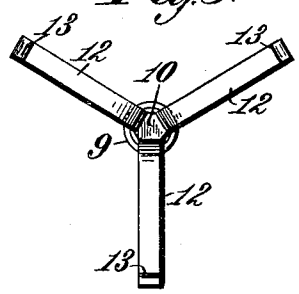


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN M. BARNES, OF NORTH ADAMS, MASSACHUSETTS.

CORK-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 481,093, dated August 16, 1892.

Application filed April 9, 1892. Serial No. 428,495. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. BARNES, a citizen of the United States, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Cork-Extractors, of which the following is a specification.

My invention relates to that class of devices employed in extracting corks from bottles, and especially from empty ale, beer, wine, and other bottles.

The object of my invention is to so organize a device of this character as to enable the hooked prongs by which the cork is seized and withdrawn to expand or open to the maximum limits of the interior of the bottle and to preserve such position while moving from end to end of said interior, or practically so, in contradistinction to constructions heretofore known, in which the said expansion is more limited and is confined to the lower portion of the bottle or to the part most remote from the neck. To accomplish this object the invention consists in the several novel features of construction and new combinations of parts hereinafter fully explained, and then particularly pointed out and defined in the claim following this specification.

To enable others to understand and to make, construct, and use my said invention, I will proceed to describe the same in detail, reference being had to the accompanying drawings, showing my invention, in which—

Figure 1 is a sectional elevation showing my invention. Fig. 2 is a front end elevation of the same. Fig. 3 is a detail section, upon an enlarged scale, showing the guide for the bottle-neck and extractor and the manner of engaging the cork. Fig. 4 is a detail elevation of the extractor-rod and hooked prongs, the scale being enlarged. Fig. 5 is a detail top plan view of the same on a smaller scale.

The reference-numeral 1 in said drawings indicates a base-plate, from which rises a frame or stand 2, suitably braced and having usually a horizontal arm or support 3. Upon the end of this arm is mounted a double conoidal guide consisting of two oppositely-turned funnels 4, connected by a short tubular section 5, the internal diameter of which is substantially equal to that of the necks of the bottles upon which the extractor is to operate. The guide is mounted in the end of the arm 3 by inserting the tubular section in a seat in said arm, as shown in Fig. 3, the funnels lying above and below the same and flaring in opposite directions.

Upon the stand 2 is fulcrumed a lever 6, to which is pivotally connected, between its ends, a rigid rod 7, the point of attachment being such that the end of the rod may enter the guide and pass into the neck of the bottle by simply raising the lever 6.

Upon the reduced end 8 of the rod 7 is formed a thread, and a sleeve 9 is screwed thereon, the length of such sleeve being such as to extend above the threaded part 8 and surround a further portion of said rod rising above the threaded part and being dressed off to form a triangular part 10, the flat faces of which are of equal width. Within the spaces between the sleeve and the flat faces referred to are inserted the ends of the elastic arms 12, which are three in number, bent to diverge at equal intervals and having hooks 13 at their ends. The latter normally are spread as far as the maximum diameter of the bottle will allow. The length of these arms is less than the interior length of the bottle between the bottom and the point where the shoulder contracts to form the neck. The lower extremities of the elastic arms 12 are rigidly secured to the rigid rod 7, and by adjusting the screw-threaded sleeve 9 on the screw-threaded part 8 of the rod the divergence of the elastic arms can be varied, while such sleeve strengthens the parts by bracing the arms where they join the rod. A metallic cushion is formed upon the fulcrum-bearing 14 for the end of the lever in order that it may not drop too far by gravity and thus entirely remove the elastic arms 12 from the vicinity of the lower funnel-guide.

The operation is as follows: Taking the empty bottle in one hand the operator places its mouth in the upper funnel 4 of the guide, and at or about the same time he raises the lever 6, thereby carrying the hooked ends 13

of the elastic arms 12 into the lower funnel 4, by which they are compressed as they pass upward until they enter the bottle-neck and pass the shoulder at the base of the neck. Before the end of the rod 7 passes the shoulder the elastic arms will have full expansion and will lie against the inner surface of the bottle. Being three in number and at about regular intervals, the cork will pass within or between said arms in the position shown in Fig. 3, it being practically impossible that the cork should be seized by the two ends or be caused to assume a position in which it cannot be removed through the neck of the bottle. If, on the other hand, I attach the elastic arms at a point upon or very near the lever 6, the operation will not be the same as that described, since the point at which divergence takes place cannot pass the shoulder of the bottle, which will therefore contract these arms and prevent their having at any time an expansion equal to the interior diameter of the bottle. Moreover, the use of two arms only causes a liability that the corks will be caught by the ends and will lie transverse to the contracted neck.

What I claim is—

The combination, with a base 1, standard 2, overhanging arm 3, double conoidal guide 4, and lever 6, pivoted to the standard, of a rigid rod 7, pivoted to the lever, having a screw-threaded upper end 8 and extending through the double conoidal guide into a bottle when the lever is raised, a series of diverging elastic hooked arms 12, rigidly secured to the rigid rod, and a screw-threaded sleeve 9, adjustable on the threaded part of the rod and circling and movable on the exterior of the elastic arms to press them toward each other when the sleeve is adjusted upward, substantially as described.

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

JOHN M. BARNES. [L. S.]

Witnesses:

FRANK D. STAFFORD,

FRED F. DOWLIN.