No. 849,509. PATENTED APR. 9, 1907.

J. B. SHORT.

BOTTLE CLOSURE.

APPLICATION FILED DEC. 1, 1906.

2 SHEETS—SHEET 1.

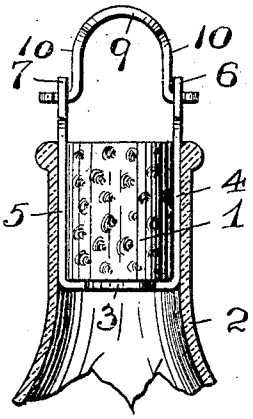

Fig 1

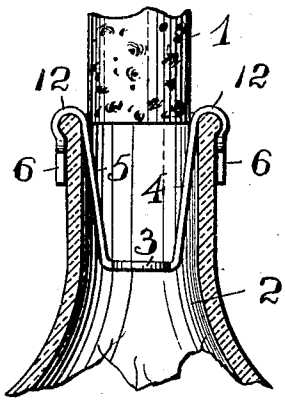

Fig 2

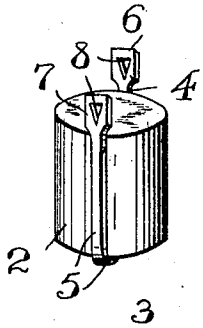

Fig 3

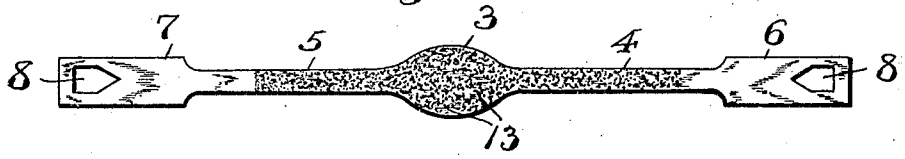

Fig 4

Fig 5

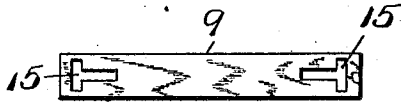

Fig 7

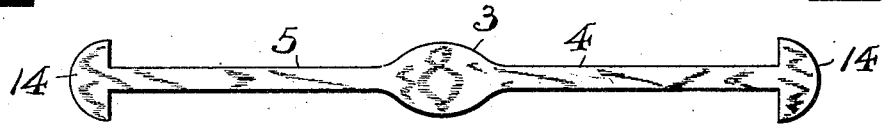

Fig 6

WITNESSES:

Frederick Jamison

Anna H. Salter

INVENTOR:

Joseph B. Short,

BY

Fraentzel and Richards,

ATTORNEYS.

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2 SHEETS—SHEET 2.

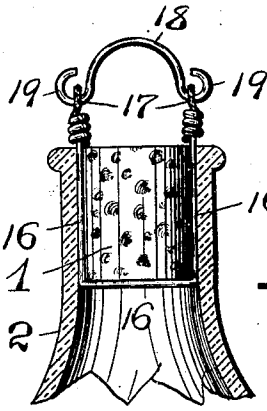

Fig 8

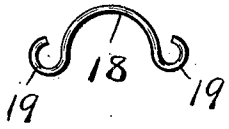

Fig 9

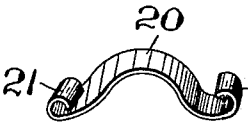

Fig 10

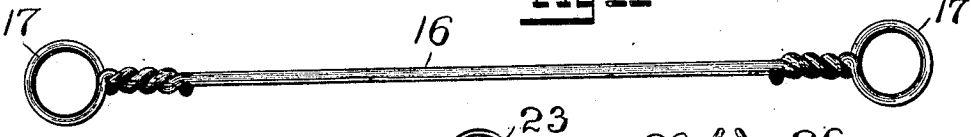

Fig 11

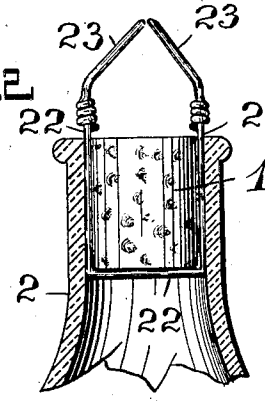

Fig 12

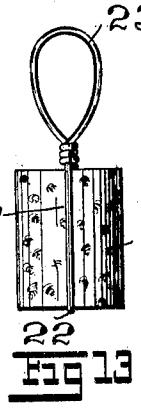

Fig 13

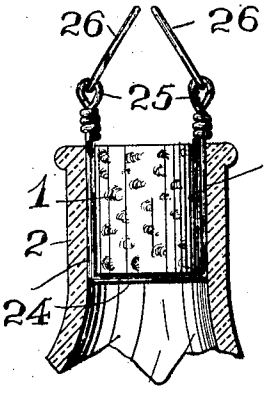

Fig 14

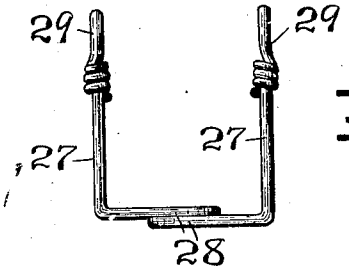

Fig 15

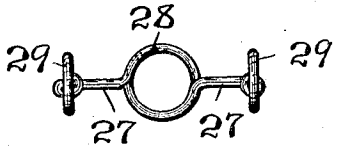

Fig 16

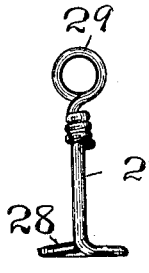

Fig 17

WITNESSES:

Anna H Alter

Frederick Jamison

INVENTOR:

Joseph B. Short,

BY Fraentzel and Richards,

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOSEPH B. SHORT, OF NEWARK, NEW JERSEY.

BOTTLE-CLOSURE.

No. 849,509. Specification of Letters Patent. Patented April 9, 1907.

Application filed December 1, 1906. Serial No. 345,895.

To all whom it may concern:

Be it known that I, JOSEPH B. SHORT, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottle-Closures; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The present invention has reference generally to improvements in cork or stopper extractors; and the invention relates more particularly to a novel extractor or pulling device which is to be used with a cork or stopper of a tightly-sealed bottle, jar, or the like.

The invention has for its principal object to provide a novel and simply-constructed extractor which, although cheaply made, is of great strength and which is of such a construction that it can be used in connection with the cork or stopper during the corking operation and with any of the types of corking-machines in present use without damaging any portion of the extractor, the parts of the extractor being arranged in such a manner that there will be a space for the plunger in exerting its force upon the cork and the corks can be placed in the hopper of the corking-machine and fed down the chute or feeding-tube to the mouth of the bottle in the usual manner.

A further object of the present invention is to provide a cork-extractor which is inseparably connected with the cork and package until the cork is drawn and adds but an insignificant amount to tne cost of the package, is a great convenience, and permits the cork to be withdrawn or extracted from the bottle or jar without the aid of any extraneous appliance.

By the use of the novel extractor to be hereinafter particularly described it enables the user to put back into the mouth of the bottle in a perfect condition the drawn cork, no matter how tightly it had been fitted in the bottle; and, furthermore, to overcome and entirely eliminate the danger of the metal or other material of which the extractor is made causing corrosion or contamination by coming in contact with the contents of the package or bottle the extractor may be treated with chemical preparations or with a coating of paraffin or the like. The paraffin has this special advantage that while it helps to hermetically seal the bottle it also greatly aids the cork in sliding into position and also aids in extracting the cork on account of the paraffin being of a lubricating or greasy nature.

Other objects of this invention not at this time more particularly set forth will be clearly evident from the following detailed description of the same.

The invention consists in the novel cork-extractor or pulling device hereinafter set forth, and, furthermore, this invention consists in the various novel arrangements and combinations of the devices and parts, all of which will be more fully described in the following specification and then finally embodied in the clauses of the claims, which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional representation of the mouth portion or neck of a bottle and an elevation of an ordinary cork and the extractor, the latter being shown in its extracting position about the sides and bottom of the cork and the end portions of the extractor in operative connection with a detachably-connected pull-piece or finger portion ready for the extraction of the cork or stopper from the bottle. Fig. 2 is a similar view of the mouth portion of the bottle with a side view of the extractor bent in shape for insertion in the mouth of the bottle prior to forcing the cork and extractor by means of any usual corking-machine into the bottle, the cork being indicated in a position about to be forced into the mouth of the bottle; and Fig. 3 is a perspective view of the cork provided with the novel extractor in operative relation thereto. Fig. 4 is a plan view of the extractor, drawn on an enlarged scale and shown before being bent to be inserted in the neck or mouth of a bottle. Fig. 5 is a plan view of the detachable pull-piece or finger portion adapted to be connected with the extractor to aid in removing the cork from the bottle. Fig. 6 is a slightly-modified form of extractor shown in plan, and Fig. 7 is a plan view of the pull-piece or finger portion to be used therewith. Fig. 8 is a vertical section of the neck of a bottle and an

elevation of an ordinary cork provided with a modified form of extractor, the latter being shown in its extracting position about the sides and bottom of the cork and the end portions of the extractor being in operative connection with a detachably-connected pull-piece or finger portion made of wire. Fig. 9 is a view of said wire finger portion or pull-piece detached; and Fig. 10 is a view of a modified construction of finger portion or pull-piece, this construction being made of flat metal. Fig. 11 is a plan view of the modified construction of extractor shown in said Fig. 8 before being bent to be inserted in the mouth of the bottle. Fig. 12 is a vertical section of a bottle-neck with a cork in elevation provided with another modified form of extractor, this form of extractor being provided at its free ends with loops which serve as pull-pieces or finger portions. Fig. 13 is a side elevation of this form of extractor and cork removed from the bottle, said view illustrating more particularly the said loops. Fig. 14 is a view similar to that shown in Fig. 12, except that the extractor is provided at its free ends with rings to form the said finger portion or pull-pieces. Fig. 15 is a side elevation of a modified form of extractor made of wire, the same being constructed to give a better contact with the bottom of the cork when placed in operative relation therewith. Fig. 16 is a plan view of the same, and Fig. 17 is an end elevation of the same.

Similar characters of reference are employed in all of the above-described views to indicate corresponding parts.

Referring now to the several figures of the drawings, the reference character 1 indicates the ordinary form of cork or stopper, and 2 is the mouth portion or neck of the bottle. The novel cork or stopper extractor is made, preferably, in the form of a strap of metal or any other suitable material and of any suitable width.

The extractor shown in Figs. 1 to 5, inclusive, consists, essentially, of a central portion 3, from which extend in opposite directions the strap members 4 and 5, these said members being formed with end pieces 6 and 7, respectively, each of said end pieces being provided with an opening 8, preferably of the configuration shown in Fig. 4 of the drawings. A detachably-connected pull-piece or finger portion 9 is adapted to engage with the end pieces 6 and 7, said pull-piece or finger portion being provided at each end with a short end piece or tail 10, formed with a holding member 11, said holding members being adapted to engage with each opening 8 of the extractor-strap, substantially as shown and for the purposes to be more fully described.

Having thus described the general construction of the cork or stopper extractor embodying the principle of the present invention, I will now briefly state the manner of applying the same to the lock and bottle and also the manner of using it for the extraction of the cork. After having provided the strap-shaped blank, preferably of the construction shown in Fig. 4 of the drawings, the blank is bent into the conformation shown in Fig. 2 of the drawings, thus providing the central portion 3 with a pair of upwardly-extending and preferably slight outwardly-inclining arms—in other words, the strap members 4 and 5, formed at their tops with the curved or bent portions 12, from which extend in downward directions the respective end pieces 6 and 7. Thus it will be seen that a pair of clamps are provided which permit of the device being arranged in the manner shown in said Fig. 2 of the drawings, partly within the mouth and partly over and down the opposite sides of the upper portion of the neck of the bottle prior to the feeding of the cork or stopper in its position (indicated in Fig. 2) directly over the mouth of the bottle to be finally forced into its seating position by the plunger of the corking-machine in the usual manner. The downward movement of the plunger applied upon the upper unobstructed surface of the cork drives the cork firmly and securely into the mouth of the neck of the bottle without damage to any portion of the extractor, and thereby destroying its usefulness. The turned-over portions or end pieces 6 and 7 are then left in the positions closely hugging the outer surfaces of the neck of the bottle, which makes it very convenient for packing, and there being no protruding parts do not take up any more room in the packing-boxes than the bottles themselves, and, furthermore, the extractor cannot be injured or displaced.

When it is desired to extract the cork or stopper, all that it is necessary to do is to bend the end pieces in an upward direction and then take one of the pull-pieces or finger portions 9, which is usually attached to the side of the bottle by means of a rubber band or otherwise, and insert the holding members 11 thereof into the openings 8 of the end pieces 6 and 7 of the extractor by slightly twisting the same and pulling up until the pull-piece or finger portion assumes the position indicated in Fig. 1 of the drawings, whereby a loop or pull-piece is produced. This pull-piece projects sufficiently above the upper end of the cork for the insertion of one or more fingers therein, and thus provides a simple and strong means for readily and quickly extracting the cork. The device is preferably provided with an enlarged central portion 3, which is fitted against the under end of the cork to prevent cutting into the body of the cork; but this enlarged central portion is not of itself a necessity.

The reference character 13 (see Fig. 4) indicates a suitable coating of chemicals or

paraffin, which renders the metal extractor-strap positively proof to corrosion or contamination by coming in contact with the contents of the bottle, and it is due to this that the metal or other suitably made extractor-strap can be passed directly under the cork.

Various means for separately connecting the extractor-strap and the pull-piece or finger portion may be used. Thus in Figs. 6 and 7 the arms 4 and 5 of the extractor-strap may be provided at their free ends with the holding members 14, and the pull-piece or finger portion 9 may be provided with T-shaped slots or openings 15 for the reception of said holding members 14, which can be easily brought into their locked or holding engagement, as will be clearly evident.

Various styles and constructions of said extractor-straps and pull-pieces or finger portions may be used, all of which embody the principles of the present invention. Thus in Figs. 8, 9, 10, and 11 of the drawings the extractor-strap 16 is made of wire, the same being provided at its ends with eyes 17, which are formed by twisting the ends of the wire. The pull-piece 18 is also provided, the same being constructed of wire and provided at each end with a hooked-shaped portion 19, adapted to operatively engage with the eyes 17 of the extractor-strap, as illustrated in Fig. 8. The pull-piece 20 (illustrated in Fig. 10) is a modification of this style of pull-piece shown in Figs. 8 and 9, the same being made of a piece of flat sheet metal and having its ends curled around to form the hook portions 21, adapted to engage with the eyes 17 of the extractor-strap.

In Figs. 12 and 13 there is shown another modified form of extractor-strap and pull-piece combined. In this construction the extractor-strap 22 is made of wire, and the free ends are formed into loops 23, into which the fingers can be inserted for exerting the pulling force to remove the cork.

In Fig. 14 a wire extractor-strap 24 is shown, the same being provided at its free ends with eyes 25, formed by twisting the wire, and inserted in the said eyes are suitable rings 26, into which the fingers are placed when withdrawing the cork from the bottle.

Fig. 15 is a front view, Fig. 16 is a side view, and Fig. 17 a top view, of still another slightly-modified form of extractor-strap. This extractor-strap 27 is made of wire or the like and is provided at the portion which comes in contact with the bottom of the cork with a coil or outwardly-bent portion 28, adapted to provide a greater contacting surface when engaging with the bottom of the cork, and the free ends of the said strap are provided with eyes 29, made by twisting the wire, and adapted to receive a pull-piece or finger portion, substantially of any one of the constructions hereinabove described.

I claim—

1. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor-strap, said extractor-strap being arranged against the lower surface and the opposite sides of the stopper-body, and a separable pull-piece adapted to operatively engage with the free ends of said extractor-strap, substantially as and for the purposes set forth.

2. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor-strap, said extractor-strap being arranged against the lower surface and the opposite sides of the stopper-body, the free ends of said extractor-strap being provided with end pieces provided with openings therein, and a separable pull-piece adapted to operatively engage with the said end pieces of the extractor-strap, substantially as and for the purposes set forth.

3. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor-strap, said extractor-strap being arranged against the lower surface and the opposite sides of the stopper-body, the free ends of said extractor-strap being provided with end pieces provided with openings therein, and a separable pull-piece, said pull-piece being provided at each end with a holding member adapted to engage with the openings in the end pieces of said extractor-strap, substantially as and for the purposes set forth.

4. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor, said extractor comprising a flexible strap-like member arranged against the lower surface and the opposite sides of the stopper-body, said strap-like member having flexible end pieces, and a separable pull-piece adapted to operatively engage with the free ends of said strap-like member, substantially as and for the purposes set forth.

5. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor, said extractor comprising a flexible strap-like member arranged against the lower surface and the opposite sides of the stopper-body, said strap-like member having flexible end pieces, said end pieces being provided with openings therein, and a separable pull-piece provided at each end with means for engagement with the openings of said end pieces of the strap-like member, for the purpose of providing a pull-loop above the stopper-body.

6. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor, said extractor comprising a flexible strap-like member arranged against the lower surface and the opposite sides of the stopper-body, said strap-like member having flexible end pieces, said end pieces being provided with openings therein, and a separable

pull-piece provided at each end with means for engagement with the openings of said end pieces of the strap-like member, consisting, essentially, of a holding member adapted to be inserted within the openings of the end pieces of the strap-like member, and to lock therein for the purpose of providing a pull-loop above the stopper-body.

7. A combined bottle stopper or cork and extractor, comprising a stopper-body and an extractor, said extractor comprising a strap-like member arranged against the lower surface and the opposite sides of the stopper-body, said strap-like member being provided with end pieces having receiving-openings therein, and a separable pull-piece provided at each end with a head forming a holding portion adapted to be brought in engagement with the receiving-openings in the end pieces of the strap-like member, substantially as and for the purposes set forth.

8. An extractor for the corks of bottles, comprising an element adapted to be arranged about the outer faces of the cork, and a separable pull-piece adapted to be brought in holding engagement with the ends of the extractor above the upper surface of the cork, substantially as and for the purposes set forth.

9. An extractor for the corks of bottles, comprising an element adapted to be arranged about the outer faces of the cork, and a separable pull-piece adapted to be brought in holding engagement with the ends of the extractor above the upper surface of the cork, and a coating element over said extractor to prevent corrosion or contamination from the contents of the bottle, substantially as and for the purposes set forth.

10. An extractor for the corks of bottles, comprising a strap-like body or member adapted to be arranged about the outer faces of the cork, end pieces at the free end portions of said body, said end pieces being provided with receiving-openings and a separable pull-piece provided at each end with a head or holding member adapted to be brought in holding engagement with the receiving-openings of the end pieces of the strap-like body to form a loop member above the upper surface of the cork, and a coating element over said extractor to prevent corrosion or contamination from the contents of the bottle, substantially as and for the purposes set forth.

11. An extractor for the corks of bottles, comprising a strap-like body adapted to be arranged about the outer faces of the cork, said body having free end portions projecting above the upper face of the cork and each end portion being provided with a loop, and a pulling device detachably connected with said loops.

In testimony that I claim the invention set forth above I have hereunto set my hand this 30th day of November, 1906.

JOSEPH B. SHORT.

Witnesses:

FREDK. C. FRAENTZEL,

ANNA H. ALTER.