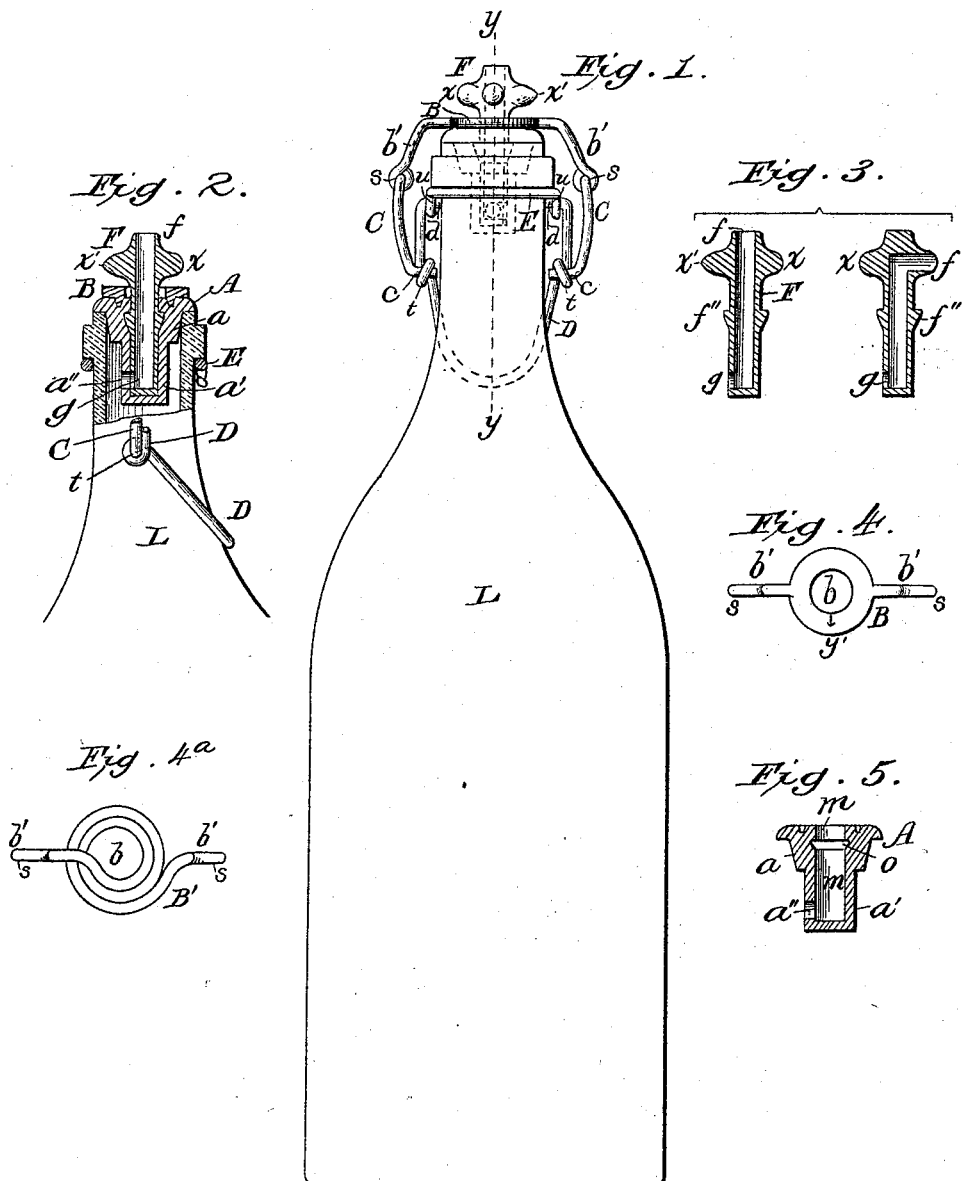


(No Model.)

B. F. McINTYRE.
BOTTLE STOPPER.

No. 492,098.

Patented Feb. 21, 1893.



WITNESSES:
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BYRON F. MCINTYRE, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO JOHN
A. RILEY, OF SAME PLACE.

BOTTLE-STOPPER.

SPECIFICATION forming part of Letters Patent No. 492,098, dated February 21, 1893.

Application filed December 28, 1891. Serial No. 416,343. (No model.)

To all whom it may concern:

Be it known that I, BYRON F. MCINTYRE, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; 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.

This invention relates to bottle stoppers having wire fastenings and locking devices to be applied to bottles containing effervescent liquids.

The object of the invention is to provide for conveniently drawing off a portion of the effervescent contents of the bottle and directing it into a drinking glass or mug without permitting the escape of the gas contained in the liquid not drawn, as ordinarily occurs when the entire stopper is removed. I accomplish this object by tightly fitting into the rubber or other elastic portion of the stopper a turning tap or spigot, having at the lower end a lateral opening adapted to register with a lateral opening in the stopper or to be turned around for closing its opening and longitudinal passage. The elastic portion of the stopper is provided with a downward tubular extension or socket for receiving the tubular tap.

The matter constituting my invention will be defined in the claims.

I will now describe my stopper device and tap in detail by reference to the accompanying drawings, in which

Figure 1 represents a side elevation of the stopper and tap applied to a bottle; Fig 2 represents a vertical section thereof on the line *y-y*; Fig. 3 represents vertical sections of the tap detached; Fig. 4 represents a top plan view of the top disk or cap; Fig. 4^a represents a similar view of a modified form of cap; Fig. 5 represents a sectional detailed view of the rubber portion of the stopper. The neck of the bottle, *L*, is provided with the usual glass bead molded with it for holding the wiring devices, which are applied in substantially the usual manner, but are modified in construction as pointed out below.

Instead of forming the yoke of a single

piece of wire connecting with the top of the stopper by a pivotal eye, it is formed of a top disk, *B*, having downwardly bent ears or wires, *b'*, and the two lateral wires or links, *C*, connected by suitable pivotal eyes at *s, s*. The disk, *B*, is preferably made of metal and forms the top cap of the stopper, and it is provided with a central opening *b* for receiving the tap or spigot, *F*. The disk or cap, *B*, is united to the rubber or other elastic portion, *A*, of the stopper in the usual manner. These parts however need not be united but simply held loosely together by the knobs *x* of tap *F*. The rubber stopper, *A*, is formed with the usual top flange and with a body, *a*, which fits snugly into the mouth of the bottle and said body is provided with a tubular extension or elongated elastic portion *a'*, which projects down into the neck of the bottle when applied in position.

The stopper, *A*, is provided with a central longitudinal passage, *m*, open at the top, but closed at the bottom of the extension, *a'*, which, however, is provided with a lateral opening, *a''*, near the bottom. Two or more small openings may be provided in the extension, *a'*, if desired. A small annular groove, *o*, may be formed in the wall of the passage, *m*, near the top of stopper, *A*, for receiving an annular bead or flange, *f''* on the tubular tap, *F*. The tubular tap, *F*, is provided with a straight nozzle, *f*, in line with its central passage or with a nozzle, *f'*, turned at right angles to its central passage, as shown in Fig. 3, and the central passage is closed at the bottom, but a lateral opening, *g*, is formed in the wall of the tube near the bottom, adapted to register with the lateral opening, *a''*, in the elastic tubular extension of the rubber stopper. Tube, *F*, is also provided with an annular bead or flange, *f''*, of larger diameter than the annular groove, *o*, so that when the tube is fitted in the stopper, the bead, *f''*, will compress the rubber and make a tight joint. The groove, *o*, may be omitted in which case the beads, *f''*, will simply compress the rubber of the stopper and thus securely hold the tube in the socket, *n*, of the stopper. Since the tubular extension *a'* of the rubber stopper is of elastic yielding material it closely embraces the tubular cap forming a tight joint;

and when the bottle is filled with effervescent liquid and the stopper closed the pressure of the fluids on the yielding material compresses it against the tap F, and prevents leakage and escape of gas or liquid between the parts. The tubular tap, F, is preferably provided near the top with knobs, x , for turning it and the knob, x' , which is in line with the lateral opening g , is preferably made longer than the others and may be pointed, so as to indicate the position of the lateral opening, g . The cap piece, B, or the top of the stopper, A, may have a small boss or lug or a depression in the form of an arrow y' in line with the lateral opening, a'' to indicate the position of such opening, so that when the pointed knob, x' , is turned to register with the boss or lug, y' , the opening, g , in the tap will register with the opening, a'' , in the stopper, thus permitting the liquid to flow out through the tube. When it is desired to shut off the flow of liquid, the tap is turned one quarter or one half around in the stopper.

Instead of using a metallic disk, B, the top wire of the yoke may be formed into a flat coil B' of two or three turns around the tap, F, thus forming a metallic cap for the top of the stopper as shown in Fig. 4^a. The yoke pieces, C, have inwardly bent lower ends, c, c , for engaging with the eyes, t, t , of the lever, in the usual manner. The two ends of the lever, D, are bent inward, as shown at d, d , and engage with the eyes, u, u , of the circular wire, E, which is secured under an annular bead or flange on the neck of the bottle in the usual manner. The tubular tap, F, is inserted in the socket or passage, m , of the rubber stopper, A, so that the annular bead, f'' , will fit tightly in the groove, o , or will force out and compress the rubber in the body a of the stopper. The disk, B, should have an opening large enough for the passage of the lower end of tube, F, and its flange, f'' ; or, if the cap of the stopper is formed of a flat coil of wire instead of disk, B, the wire may be coiled around tube, F, after it has been inserted in the socket of the stopper, A. The tubular tap, F, may be made of any suitable metal or alloy or of hard rubber or other suitable material.

My tap or spigot and new form of rubber stopper are especially useful in connection with bottles containing strongly effervescent liquids such as kumys or champagne, and constitutes an elegant and convenient device for drawing off a portion of the effervescent liquid into a drinking goblet or glass without danger of the contents being blown out and spattered over the furniture or one's clothing as would be liable to occur when removing the old form of stopper. By means of my device, also a portion of the contents of the bottle may be drawn off while the gas is retained in the remaining portion within the bottle and then the opening may be quickly and conveniently closed by turning the tap in its socket, as explained above.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The bottle stopper composed of an elastic rubber body a , and an elastic yielding tubular extension a'' , having a longitudinal passage and a lateral opening in combination with a tubular tap inserted in the passage of the stopper and having a lateral opening adapted to register with the opening of said extension, substantially as described.

2. In a bottle stopper the elastic portion having a longitudinal passage and a lateral opening, in combination with a tubular tap having a closed lower end and a lateral opening, and also having an annular bead or flange arranged to press into the inner wall of the passage in the elastic stopper, substantially as described.

3. The elastic portion of the stopper having a longitudinal passage and the tubular tap fitted in said passage, in combination with a cap having lateral ears or wires as b' , and the yoke wires, C, connecting with wires, b' , by means of pivotal eyes, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BYRON F. MCINTYRE.

Witnesses:

AUGUST BENDIX,
ARTHUR J. LEVY.