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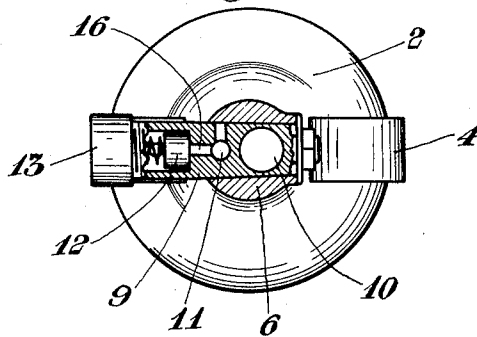
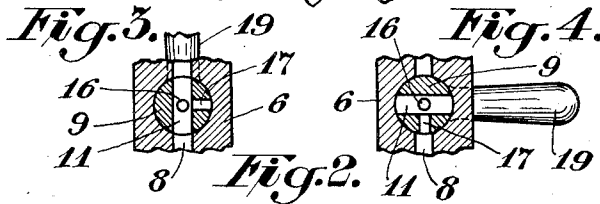
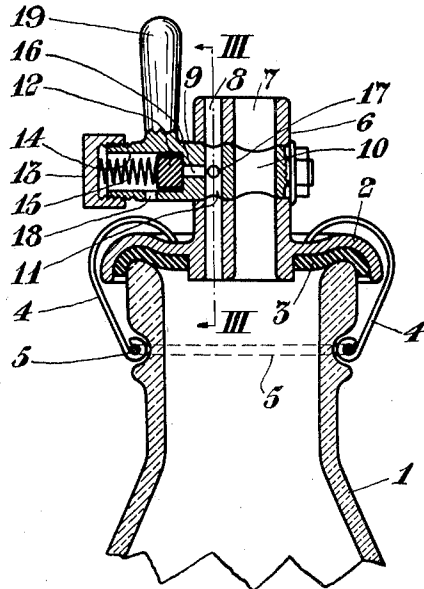
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1,953,931

STOPPER FOR BOTTLES AND THE LIKE

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Fig. 1.



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UNITED STATES PATENT OFFICE

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STOPPER FOR BOTTLES AND THE LIKE

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1 Claim. (Cl. 215—76)

The present invention relates to a stopper for bottles and the like which comprises a cap placed over the mouth of the bottle or the like and retained by means of a fastening device, and in which cap a plug cock is provided which has two separate passages both of which may be shut off by means of a common plug, and one of which passages has, preferably, a larger cross sectional area than the other and is intended for the discharge of liquid from the bottle, while the other passage serves to admit air into the bottle during such discharge of liquid. The invention has for its purpose to provide a simple and inexpensive stopper of this type which may be used with advantage in such cases when the bottle or the like is intended for small beer or similar liquids in which a re-started fermentation may easily set in, which may cause a considerable pressure in the bottle. The invention consists in the said plug which is common to both passages, being provided with a spring-actuated safety or vent valve which communicates through a passage in the plug with the interior of the bottle also when the plug is turned shut, so that pressure arising in the bottle owing to such re-started fermentation or from any other cause may be relieved through the safety valve, so that bursting of the vessel is prevented.

A constructional form of the invention is illustrated by way of example in the accompanying drawing. Fig. 1 shows the stopper in vertical section, and Fig. 2 shows the same in top plan view and partly in horizontal section. Figs. 3 and 4 are sections on the line III—III in Fig. 1 and show the plug in open position and in closed position, respectively.

In the embodiment illustrated, 1 denotes the neck of the bottle, and 2 is the cap placed over the mouth of the bottle, and which is provided with a sealing ring 3 for producing the necessary tightness, and is retained over the mouth by two strong spring clips 4 which in their turn are retained in position by a metal ring 5 placed in an annular groove on the outside of the neck. Provided in the cap 2 is a plug cock 6 having two separate passages 7 and 8, both of which may be shut off by means of one and the same rotatable plug 9 which is provided with two passages 10 and 11 corresponding to the passages 7 and 8, respectively. The passage 7 has a larger cross sectional area than the passage 8 and is intended to serve for the discharge of liquid from the bottle, while the narrow passage 8 serves to admit air into the bottle during the discharge of liquid, so that a steady and quiet flow of liquid is ob-

tained. When liquid is being poured from the bottle, the latter should of course be inclined to the right in Fig. 1, so that the passage 8 comes above the passage 7.

Provided in the plug 9 is a safety or vent valve which comprises a body 12 of rubber or the like which is placed in an axial bore 14 in the plug covered by a screw cap 13. The plug is forced by a coil spring 15 against the mouth of an axial passage 16 which communicates with the passage 11. The plug is provided with another passage 17 which serves to connect the passage 16 with the lower portion of the passage 8 and with the interior of the bottle when the plug occupies closed position, as shown in Fig. 4. The bore 14 communicates through a port 18 with the outside air. The plug is provided with a handle 19 so as to make it easy to turn the same.

When it is desired to pour off some of the liquid from the bottle, the plug 9 is turned to the position illustrated in Figs. 1 and 3 in which both passages 7 and 8 are open. When afterwards the plug is turned to the position shown in Fig. 4, both passages 7 and 8 are shut off, but the interior of the bottle is placed in communication with the passage 16 through the lower portion of the passage 8 and the passage 17. If a pressure is set up in the bottle, for instance, owing to re-started fermentation, the pressure acts on the body 12 and, when the pressure exceeds a certain limit, said body is pushed back and compresses the spring 15, so that the pressure is relieved through the port 18.

The constructional form above described and illustrated in the drawing is only to be regarded as an example and may of course be modified in several ways in respect of its details without departing from the principle of the invention.

I claim:

A stopper for bottles and the like, comprising in combination a cap adapted to be placed over the mouth of the bottle neck, a fastening device for said cap, a plug cock in said cap, said cock having two separate passages, one of said passages serving to discharge liquid from the bottle, and the other of said passages serving to admit air into the bottle during the discharge of liquid, a plug in said cock adapted to shut off both of said passages, a spring-actuated vent valve in said plug, and a passage in said plug affording communication between the interior of the bottle and said vent valve when said plug occupies closed position.