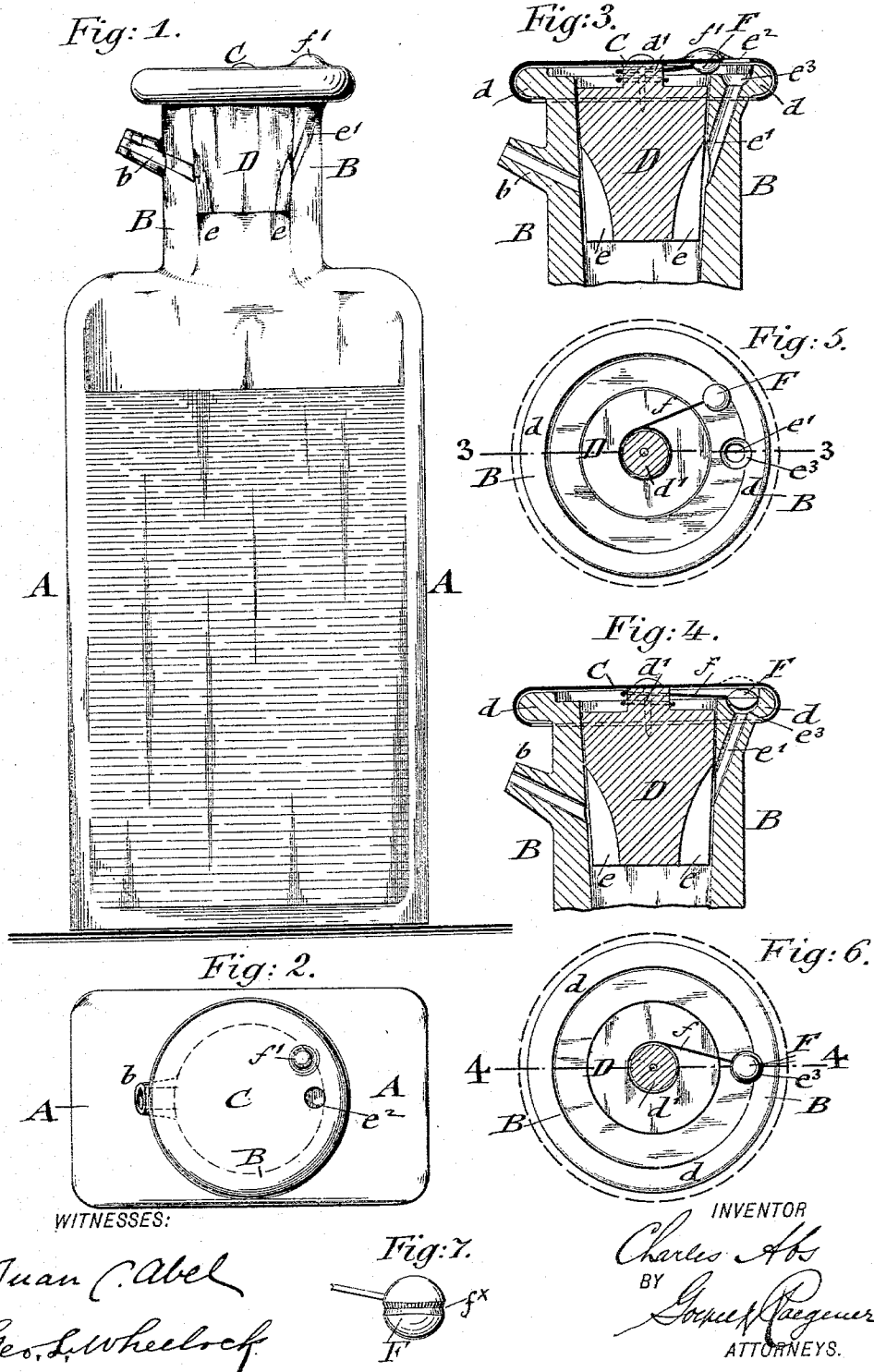


(No Model.)

C. ABS.
MEDICINE BOTTLE.

No. 531,759.

Patented Jan. 1, 1895.



UNITED STATES PATENT OFFICE.

CHARLES ABS, OF HOBOKEN, NEW JERSEY, ASSIGNOR OF ONE-HALF TO
CHARLES SCHULTZ, OF SAME PLACE.

MEDICINE-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 531,759, dated January 1, 1895.

Application filed October 18, 1894. Serial No. 526,271. (No model.)

To all whom it may concern:

Be it known that I, CHARLES ABS, of the city of Hoboken, in the county of Hudson, in the State of New Jersey, have invented certain new and useful Improvements in Medicine-Bottles, of which the following is a specification.

This invention relates to an improved bottle for medicine or other liquids, in which a cap is so arranged that when a bottle is once filled and the cap placed in locked position, the re-filling of the bottle is rendered impossible, while the contents of the bottle can be poured out as required, vent being given by moving the stopper into suitable position in the mouth of the bottle, so that the bottle is especially adapted for proprietary medicines, whiskies and other liquids, in which the re-filling of the bottles is to be prevented.

The invention consists of a bottle, provided with a rimmed neck, a ground stopper fitted tightly into the same and provided with recessed channels at diametrically-opposite sides of the same, a cap attached to the stopper and extended over the rim of the bottle-neck, a vent-channel in the wall of the bottle-neck, a filling opening in the bottle cap, and a valve, the shank of which is connected with the shank of the stopper and which is placed in position on the vent-channel by means of the cap after the bottle is filled, but prevented from being moved therefrom when once placed in position on said channel, so as to prevent the unauthorized refilling of the bottle.

The invention consists further of certain details of construction, which will be fully described hereinafter and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side-elevation of my improved medicine bottle. Fig. 2 represents a plan-view of Fig. 1. Figs. 3 and 4 are vertical central sections through the neck of the bottle and the safety-stopper in the same, drawn on a larger scale and taken respectively on lines 3, 3, Fig. 5, and 4, 4, Fig. 6. Figs. 5 and 6 are top-views of the safety-stopper, in which the cap is detached and the stopper shown in section through its shank, and Fig. 7 is a detail

bottom view of the valve for closing the filling channel of the bottle.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a bottle for medicine, whisky or other liquids, which bottle may be made of any suitable shape, and B is the bottle-neck, which is provided at one side with a spout *b* that communicates with the interior of the bottle-neck, said spout being preferably made integral with the neck of the bottle. The bottle-neck B is provided with a rim *d* at its upper end and is covered by a cap C, of sheet metal or other suitable material, which is bent over the rim *d* so as to be prevented from being detached therefrom, while capable of axial motion on the rim of the bottle-neck.

The cap C is applied to the shank *d'* of a glass or other stopper D, which is inserted into the mouth of the bottle, and which is ground at its upper part, so as to fit tightly in the bottle-mouth. The cap C is rigidly connected with the shank *d'* of the stopper D, so that the latter turns with the cap when the latter is turned on the rim *d* of the bottle-neck.

The lower part of the stopper D is provided at diametrically-opposite sides with channels *e e*, and the bottle-neck at a point diametrically-opposite to the spout *b* with a channel *e'*, so that when the channels *e e* of the stopper are placed in line with the spout *b* and with the channel *e'*, the air can readily enter into the interior of the bottle.

For the purpose of filling the bottle, the bottle-cap C is provided with an opening *e²*, which is located vertically above the upper end of the channel *e'* in the bottle-neck B, the shank of a small funnel being inserted into the opening *e²* and channel *e'* so that the bottle can be filled with medicine or other liquid. When the bottle is filled, the stopper D is turned on its axis by turning the cap C on the rim of the bottle-neck, whereby the channels *e e* of the stopper are placed out of register with the spout *b* and communicating-channel *e²* and the bottle closed in a perfectly air-tight manner. When it is desired, to pour out the contents of the bottle, the stopper is turned, until the

channels $e e$ are in register with the spout b and channel e' so that the air can enter and permit the free discharge of liquid. By turning the stopper again on its axis, the bottle-neck is closed again.

To prevent the re-filling of the bottle, a valve F is employed, the shank f of which is either made of wire or of a piece of flat sheet metal, and attached to the shank d' of the stopper D .

The valve F is pressed in upward direction into a bulge or convex rise f' of the cap by resting on an annular depression f^2 at the inner circumference of the rim d , as shown in Fig. 3, when the bottle is filled. To the wire-shank f of the valve F is imparted a spring-action in downward direction, so that as soon as the cap C is turned and the valve F placed over a valve-seat e^3 at the upper end of the vent-channel e' , it is retained in said seat by the action of its spring-shank, so as not to be removed therefrom whether the cap and stopper be turned in one or the other direction. After the bottle is filled, the cap and stopper are turned on their axis, so as to seal the bottle hermetically by the stopper D , as the channels of the stopper are out of register with the spout and vent-channel. The valve is retained in its seat e^3 at the upper end of the air-channel e' , the discharge of the contents of the bottle being permitted by the air passing around the valve into the vent-channel, while re-filling is positively prevented, as the valve cannot be removed any more from its seat in the air-channel by the turning of the cap C even when the bulge f' is placed over the valve F .

The under side of the valve F is provided with a diametrical groove or nick f^x , as shown in detail in Fig. 7, which enables the air to pass through the vent-channel e^2 into the interior of the bottle when the vent-channels $e e$ of the stopper are set in line with the vent-channel of the bottle-neck, on the one side, and the spout b on the other side which is indicated when the opening e^2 in the cap is in line with the spout, as shown in Fig. 2. As the cap cannot be detached, its circumference being permanently bent around the rim of the bottle-neck, the bottle can be gradually emptied of its contents as required, provided the stopper is set to proper position, while the re-filling of the bottle is prevented by the

valve arrangement so that it forms a safety-device against the refilling of bottles, which is of especial advantage in proprietary medicines, special brands of whisky, and other liquids.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a bottle, the rimmed neck of which is provided at one side with a discharge-spout and at the opposite side thereof with a vent-channel, of an axially-turning stopper, having channels at diametrically-opposite points of the same, which channels register with the spout and vent-channel of the bottle-neck, a cap attached to the stopper and applied to the rim of the bottle-neck, said cap being provided with an opening, and a valve, the shank of which is applied to the shank of the stopper and adapted to close the vent-channel after the bottle is filled, so as to prevent the re-filling of the bottle, substantially as set forth.

2. The combination of a rimmed bottle-neck provided with a discharge-nozzle at one side and a vent-channel at the opposite side, a stopper fitted tightly into the neck of the bottle and provided with channels at diametrically-opposite points, said channels registering respectively with the discharge-spout and vent-channel of the neck, a bottle-cap applied to the rim of the bottle-neck and connected with the shank of the stopper, said cap being provided with a bulge and a filling opening, a valve below said cap the shank of which is connected with the shank of the stopper, and adapted to spring into a seat at the upper end of the vent-channel in the bottle-neck after the bottle is filled and the cap turned, the valve being retained in position in its seat at the upper end of the vent-channel so as to prevent refilling of the bottle, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CHARLES ABS.

Witnesses:

PAUL GOEPEL,
JUAN C. ABEL.