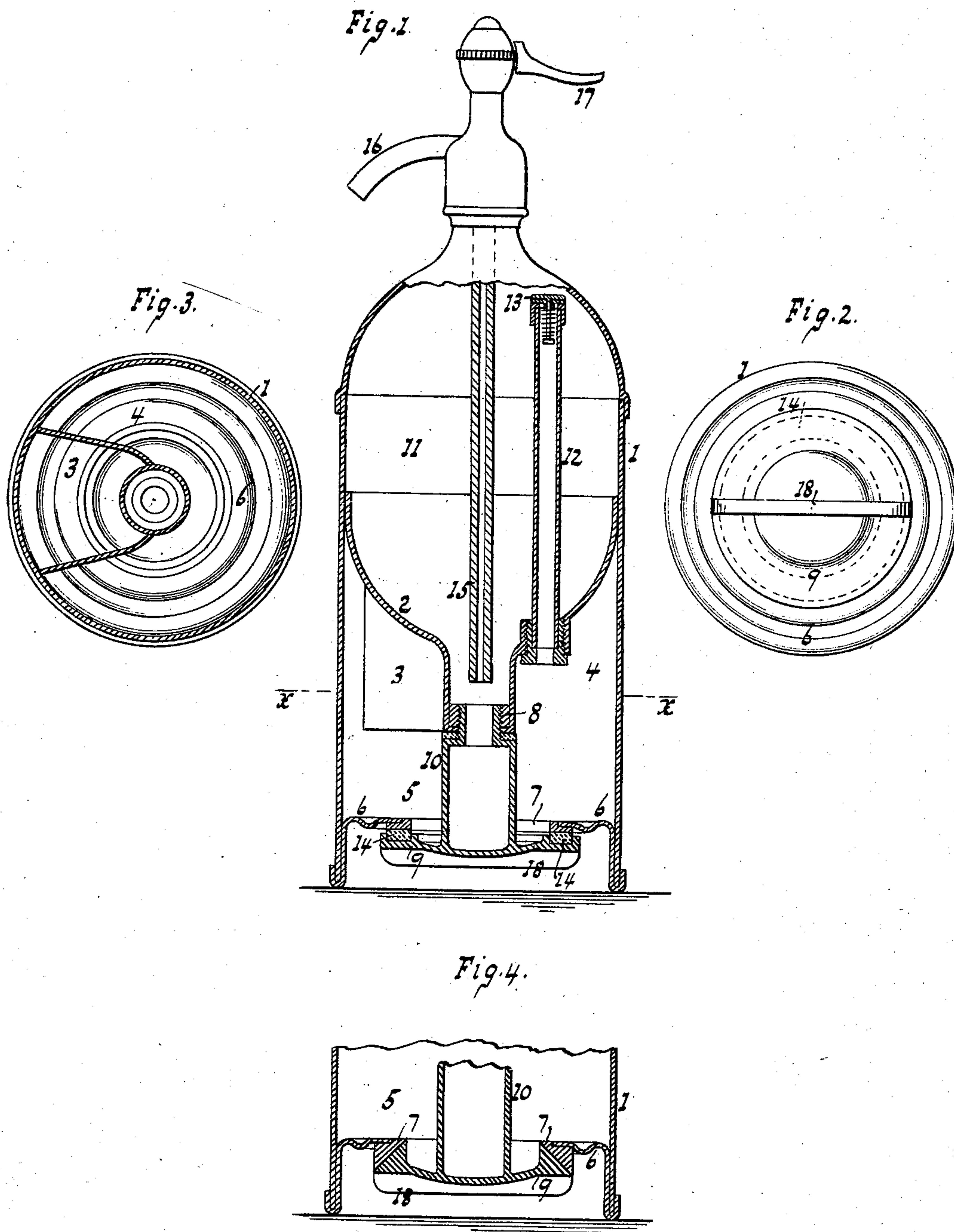


(No Model.)

S. DAVIS.
SIPHON OR VESSEL FOR AERATED LIQUIDS.

No. 534,552.

Patented Feb. 19, 1895.



WITNESSES:

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SAMUEL DAVIS, OF NEW YORK, N. Y.

SIPHON OR VESSEL FOR AERATED LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 534,552, dated February 19, 1895.

Application filed July 5, 1894. Serial No. 516,643. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL DAVIS, a citizen of the United States, residing at New York, in the county and State of New York, have
5 invented new and useful Improvements in Siphons or Vessels for Aerated Liquids, of which the following is a specification.

The object of this invention is to provide a
10 siphon or vessel by which aerated liquids, carbonated beverages and the like can be readily generated and the invention resides in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

15 Figure 1 is a sectional elevation of the vessel. Fig. 2 is an inverted plan view of Fig. 1. Fig. 3 is a section along $x x$ Fig. 1. Fig. 4 is a sectional detail view of a modification.

The side or wall 1 of the bottle or vessel has
20 a bottom 2, the side 1 extending down below this bottom to form a gas generating chamber comprising three compartments, the compartment 3 being for the reception of a chemical or powder and the compartment 4 for water
25 or a generating liquid, so that when the chemical and generating liquid mingle in the lower space of the gas generating chamber which forms a mixing compartment 5, carbonic acid is generated. The bottom 6 of the gas gen-
30 erating chamber has an opening 7 and the bottom 2 has a screw threaded opening 8. The cover 9 has a screw threaded stem 10 which when screwed into opening 8 will close the latter, while cover or main part 9 closes the
35 opening 7, the openings 7 and 8 being superimposed as seen.

To generate an aerated beverage the cover 9 is removed and the vessel turned upside down. The liquid to be charged is then filled
40 into the bottle space 11 through opening 8, the chemical and generating liquid are placed into their respective compartments 3 and 4 and the cover 9 replaced, the stem 10 screwing into opening 8 so that no liquid from bottle
45 space 11 can escape through opening 8 when the bottle is set upright. On the bottle being set upright the chemical and generating liquid mingle in the lower or mixing compartment 5, the mixing if desired being accelerated by
50 shaking the bottle, and the gas or pressure generated will enter from the gas generating chamber into the bottle space through con-

duit 12 having a valve or closure 13 allowing pressure to enter from conduit 12 into the bottle space but preventing said pressure 55 passing back from the bottle space into the conduit.

To prevent the generated gas or pressure from causing leakage between bottom 6 and cover 9, said bottom 6 is made yielding as for 60 example by being made of suitably thin or elastic or corrugated material so that the generated pressure will tend to bulge the bottom 6 outward against the washer or gasket 14 (Fig. 1) seated in cover 9, the pressure of the 65 bottom 6 toward cover 9 preventing leakage at said cover.

As the cover 9 is rigidly held by the engagement of its screw stem 10 with bottom 2, said cover cannot yield as the bottom 6 is pressed 70 thereagainst. The bottom 2 by being made tapering or conical as shown allows space for compartments 3 and 4 and at the same time will be firm or rigid for fixedly holding the cover 9 when connected to bottom 2 by screw 75 stem 10. Instead of being made contracting the bottom 2 may be of any other suitable shape.

Instead of employing a washer or packing 14 as in Fig. 1 the edges of opening 7 and of 80 cover 9 may be suitably inclined or ground to fit one another (Fig. 4) so that the outward bulging of bottom 6 will tend to effect a firm closure between said bottom and the rigidly 85 held cover 9.

The contents in the bottle space 11 can be drawn off by a tube or siphon 15 having spout 16 and valve 17 or by any other suitable arrangement.

The cover 9 can be readily screwed to and 90 from its place by a ridge or handle 18 suitably placed on said cover.

Of course the use of the device is not confined to making aerated beverages, since the space 11 could be variously charged as for 95 example with fire annihilating substance so that the device could be used as a fire extinguisher.

Supposing the vessel space 11 when the device is inverted to have been filled through 100 opening 8 to its full capacity. Then on the insertion of the screw stem 10 if the latter were closed or solid no space would be left in the vessel space 11 for the proper entrance of gas

or pressure from the gas generator. By making the screw stem 10 hollow as seen in Fig. 1, some of the liquid in space 11 will run down into the hollow stem 10 when the device is set upright so as to form a corresponding air space in the vessel space 11 into which air space the gas or pressure from the gas generator can enter for properly charging the liquid.

10 The hollow stem 10 will not only have its interior communicate with the vessel space 11 as stated, but said hollow stem will enable the cover to be made lighter than if the stem were solid, and moreover the air space furnished by the hollow or space in stem 10 will lessen the liability of the device bursting.

As the compartments 3 and 4 communicate with one another only through the mixing compartment 5 and respectively hold the chemical and generating liquid out of active contact while the device is reversed or upside down, the cover can be firmly secured in place before by setting the device upright the chemical and generating liquid are mixed to generate gas, so that loss of gas or pressure while the cover is being put in place can be avoided.

The chemical and generating liquid may be of any suitable well known kind as for example bicarbonate of soda and acid or acidulated water or other suitable substances, as a dry mixture of bicarbonate of soda and tartaric acid to be placed in compartment 3 and water to be placed in compartment 4. The generating substances for generating gas or pressure can readily be selected by those skilled in the art.

What I claim as new, and desire to secure by Letters Patent, is—

1. A vessel for aerated liquids provided with a gas generating chamber made to communicate with the vessel, said chamber having a bottom or wall provided with an opening, and a cover for said opening, said bottom being made yielding so as to be forced against the cover by the generated pressure substantially as described.

2. A vessel for aerated liquids provided with a gas generating chamber made to communicate with the vessel, said chamber having a bottom or wall provided with an opening and a cover for said opening, said cover being se-

cured or connected to the vessel and said chamber bottom being made yielding so as to be forced against the cover by the generated pressure, substantially as described.

3. A vessel for aerated liquids provided with a gas generating chamber made to communicate with the vessel, said chamber having a bottom or wall provided with an opening and a cover for said opening, said cover being provided with a gasket or washer seated in the cover, and said bottom being made yielding so as to be forced against the washer by the generated pressure substantially as described.

4. A vessel for aerated liquids having a rigid bottom 2 provided with a screw-threaded opening, a chemical chamber 3, a mixing chamber 4, a gas generating chamber 5 arranged below said rigid bottom and provided with an opening, a cover 9 closing the opening in the gas generating chamber and provided with a screw-threaded stem which directly engages the screw-threaded opening in the said rigid bottom, and a conduit 12 opening through the said rigid bottom at one side of the screw-threaded opening therein for placing the interior of the vessel in communication with the gas generating chamber, substantially as described.

5. A vessel for aerated liquids, having a rigid bottom 2, provided with a screw-threaded opening, a chemical chamber 3, a mixing chamber 4, a gas generating chamber 5 arranged below said rigid bottom and provided with an opening, a cover 9 closing the opening of the gas generating chamber and provided with a tubular screw-threaded stem which directly engages the screw-threaded opening of said rigid bottom, and a conduit 12 opening through the rigid bottom at one side of the screw-threaded opening therein for placing the interior of the vessel in communication with the gas generating chamber, substantially as described.

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

SAMUEL DAVIS.

Witnesses:

WM. C. HAUFF,
E. F. KASTENHUBER.