

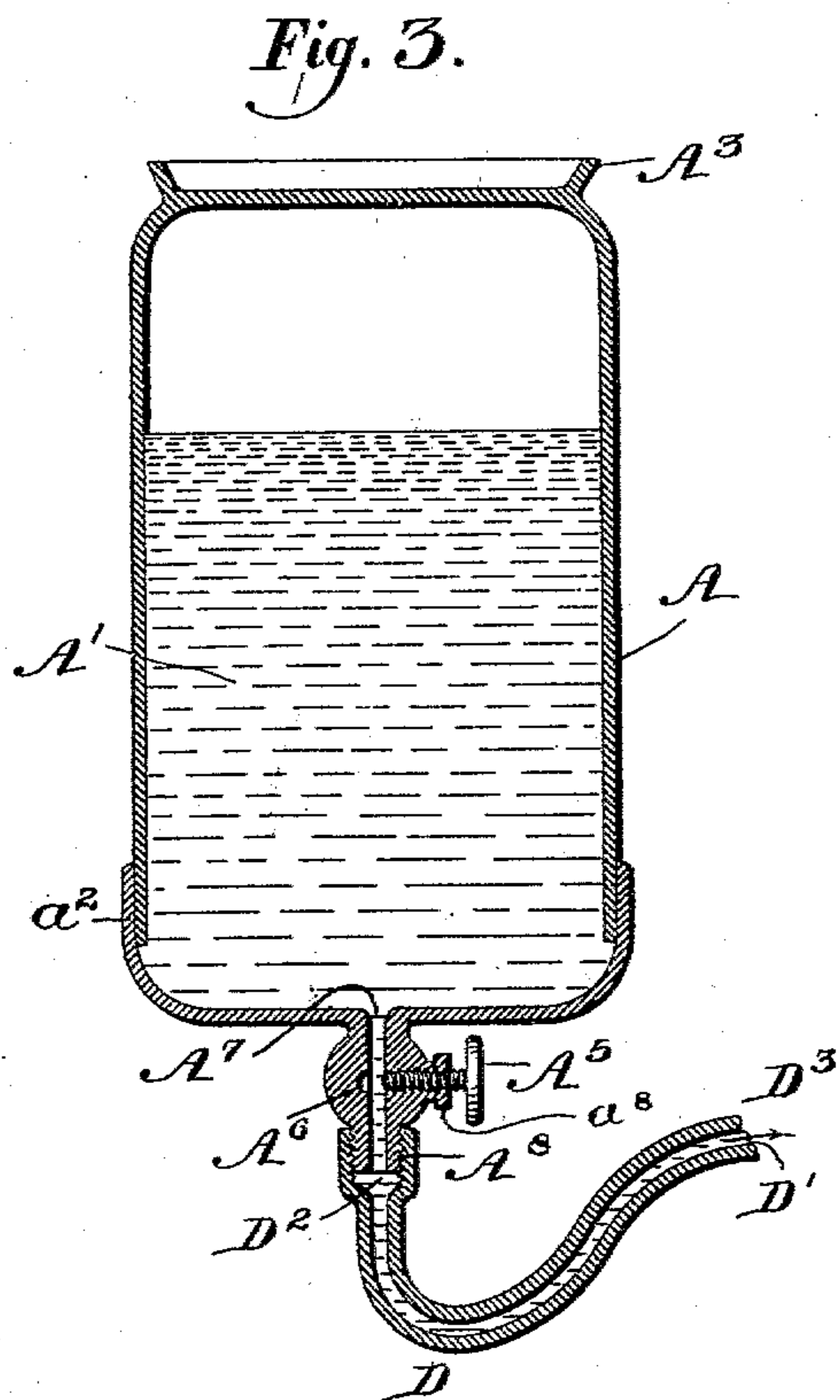
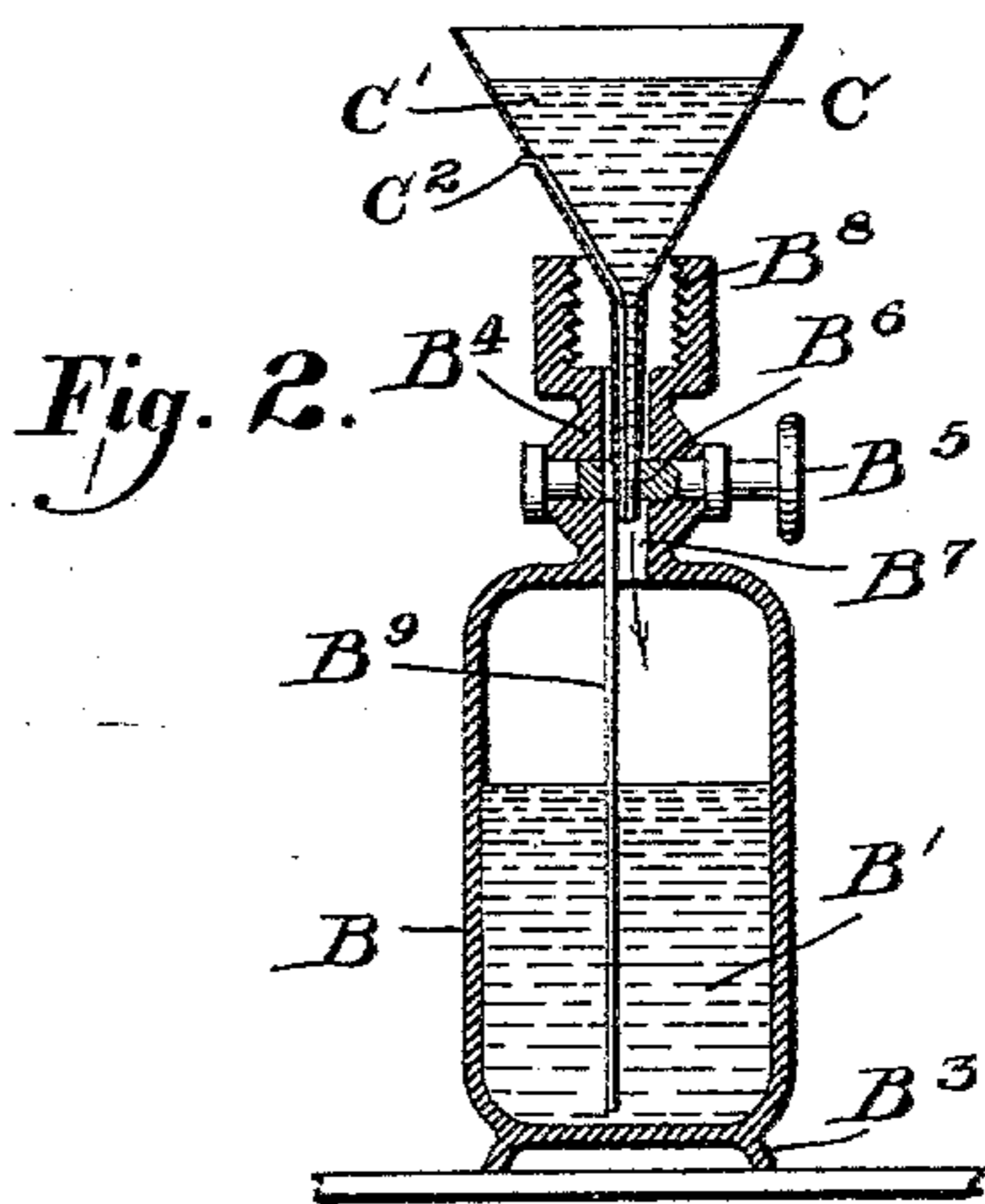
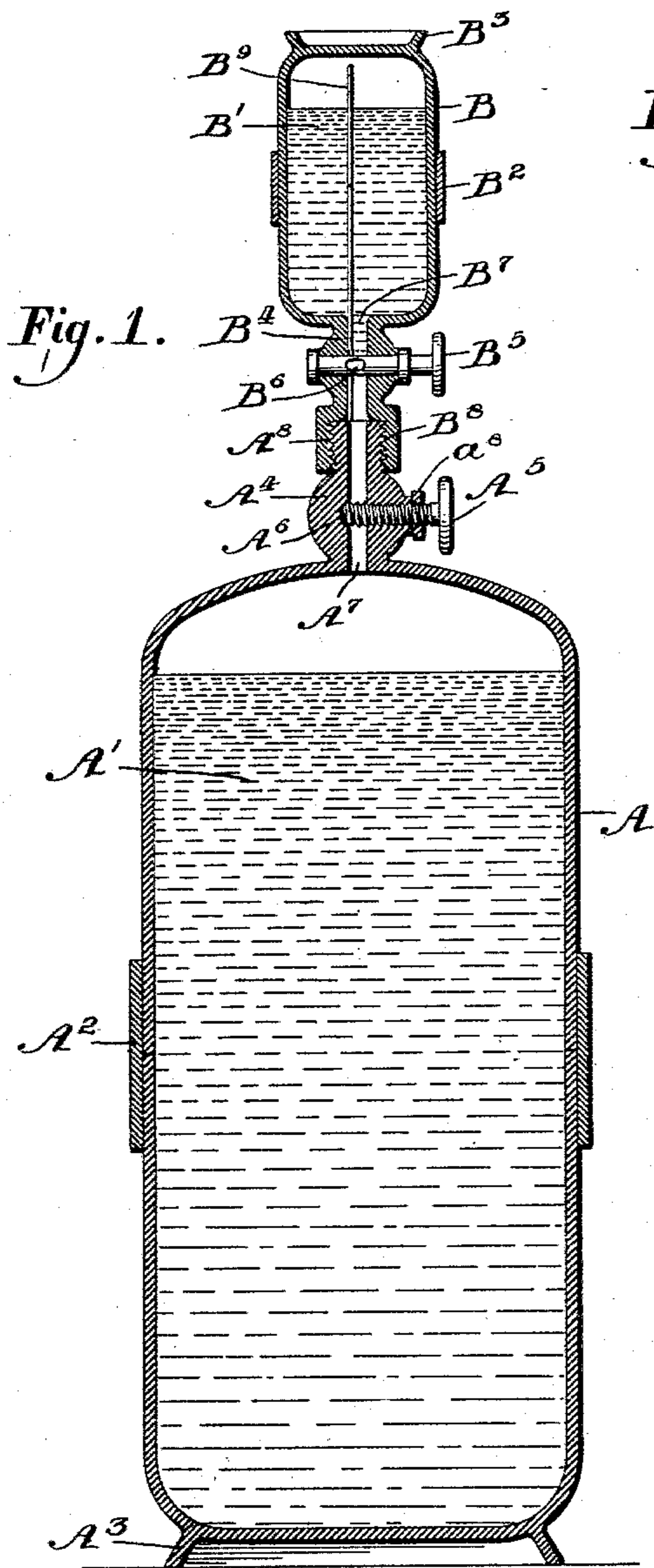
(No Model.)

I. W. HEYSINGER.

EXTRA CHARGING DEVICE FOR AERATED WATER FOUNTAINS.

No. 562,823.

Patented June 30, 1896.



Witnesses.

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EXTRA-CHARGING DEVICE FOR AERATED-WATER FOUNTAINS.

SPECIFICATION forming part of Letters Patent No. 562,823, dated June 30, 1896.

Application filed May 21, 1895. Serial No. 550,067. (No model.)

To all whom it may concern:

Be it known that I, ISAAC W. HEYSINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Extra-Charging Devices for Aerated-Water Fountains and the Like, of which the following is a full, clear, and exact description, reference being had to the drawings which accompany and form a part of this specification, in which—

Figure 1 is a transverse vertical section through the middle of an aerated-water fountain, already charged, and one of my extra-charging devices temporarily attached thereto and supplied with a saline or other solution ready to be charged into said fountain, the valves between the same still closed. Fig. 2 is a similar view of one of my extra-charging devices detached from the fountain and upright in position, with the cock open and a funnel inserted, the said device being shown as in process of being filled with the extra charge for a fountain; and Fig. 3 is a similar sectional view of a fountain of aerated or carbonated water, which, presumably, has received its extra charge, the extra-charging device having been detached from the discharge-nozzle of said fountain and replaced by the ordinary feed-pipe from the said fountain to the so-called "soda-water apparatus" above, which supplies the beverage to customers, and which apparatus is not shown in the figure.

The lettering in all the figures is uniform. My invention consists in the construction and use of a separate extra-charging apparatus by means of which I am enabled to introduce into a charged fountain of aerated or carbonated water, such as is usually known as "soda-water," consisting of pure water highly charged and supersaturated with absorbed carbonic-acid gas to a pressure of perhaps two hundred and fifty pounds to the square inch, certain extra material, in the form of powder or solution, by means of which I am enabled to change the composition of the simple compound of water and carbonic acid into a more complex compound in the form of a mineral water, such as Lithia, Deep Rock, Carlsbad, Apollinaris, or other natural composite mineralized waters, without reducing the pressure of the water within the fountain

to an appreciable extent, and without waste, and in a very brief space of time. These fountains, as shown in Figs. 1 and 3, are made of thin steel or other strong material, usually seamed together, as at A^2 or a^2 , from two cup-shaped sections, and provided at one end with a single discharge faucet, as shown in the figures along the line of axis of said fountain, and provided with a transverse cock adapted to close or open the faucet-passage into the said fountain. At the extremity this projecting faucet is provided with a screw-thread, usually male, in which case I use a female screw in my extra-charging device, and conversely, in case the end of the fountain-faucet is provided with a female screw. The interior of the fountain is lined with sheet-tin, or in some cases with porcelain or the like, to prevent chemical action between the carbonated water and the material of which the fountain is composed.

The purpose of my invention is to enable each druggist, at the simple cost of the materials used, to convert, whenever required, a fountain of ordinary aerated or carbonated water into the special mineral water wanted. In case also the sale for any special mineral water be small, while still needed, a druggist can recharge a partially-exhausted fountain by means of my apparatus, so as to avoid the cost of carrying and possible deterioration by time of an entire fountain, as these fountains usually have a capacity of ten gallons, more or less.

Referring to the drawings, in Fig. 2 I show standing on a table a small vessel having powerfully-resistant walls, which may be of cast metal tinned inside and outside, or constructed in the same manner as a soda-water fountain, as shown at B^2 in Fig. 1. As shown in Fig. 2, this vessel, which I usually make of a capacity of one quart or less, terminates in a vertical neck, expanded at its upper part and provided with a female screw-thread B^3 . Beneath this between said screw-thread and the vessel itself, and closing the internal passage B^7 of said neck, is a stop-cock B^5 , having opening B^6 . (Shown open in line with the passage B^7 in Fig. 2, and closed in Fig. 1.) The passage B^7 , which extends from without entirely through the neck of said vessel, I form as a straightway-channel of sufficient cross-sectional size to permit the contained solution to flow freely out by gravity when

the vessel is inverted, and which will also enable the same to be readily filled, as shown in Fig. 2, by simply pouring in the solution used, without external pressure, from a funnel or the like, as shown.

The funnel C (which I provide, preferably, with an internal air-vent tube C²) is used to fill the extra-charging vessel B.

The vessel B can of course be used for charging all manner of fountains, a single one being all that is required.

When the fountains themselves are provided with female screws upon the neck A⁴, then I provide the neck of my vessel B with a male screw instead of a female one, the purpose being to match them in pairs.

While I show the neck and exit of the fountain A as along the line of axis of the body of the fountain prolonged, in some cases these exits are at right angles thereto. In such cases I apply the vessel B while the fountain A is erect, and then lay it over upon its under side, when the fluid will pass from B into A in the same manner as in the figures shown. I do not confine myself to the precise construction shown, but vary the same for special requirements which may from time to time arise, as would be done by any intelligent mechanic skilled in the art, without departing from the principles of my invention as herein shown, described, and claimed.

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

1. In combination with the gas-charged water-fountain, A, having exit-neck, A⁴, internal exit-passage, A⁷, stop-cock, A⁵, and screw-threaded extremity, A⁸, the separate extra-charging device consisting of relatively small vessel, B, neck, B⁴, stop-cock, B⁵, internal exit-passage, B⁷, internal equalizing-tube, B⁹, extended up within said neck, B⁴, and terminal screw-thread, B⁸, adapted to engage with A⁸, and form a secure air-tight attachment thereto, when desired, and to be detached therefrom when not required for use therewith, substantially as described.

2. As an article of manufacture an extra-charging device for so-called "soda-water fountains," consisting of a relatively small, strong vessel, adapted to sustain the heavy pressures of such fountains when charged, an outlet-neck having a straight, open internal passage from said vessel, said neck terminating in means of attachment to such soda-water fountain, so as to communicate by said internal passage with the interior thereof, and adapted, when inverted to be filled by pouring and an open tube within said extra-charging vessel extended up within the neck thereof adapted to permit the gas of said fountain to ascend through the same above the level of the liquid contained within said extra-charging vessel, the whole detachably secured by a single screw connection substantially as described.

3. The apparatus for charging, with an ex-

tra supply of outside material, an ordinary fountain of aerated water, such as are in habitual use in the market, and under a heavy gas-pressure, consisting of a small vessel provided with a nozzle having a single detachable screw connection adapted for attachment to said fountain, an internal, vertical pressure-equalizing tube contained within said screw connection, and adapted to permit the supernatant gas of said fountain to pass through the same above the level of the extra-charging contents of said small vessel, and at the same time permit the contents thereof to flow down by gravity into said fountain, the said small vessel adapted to be removed from the outlet-nozzle of said fountain, and replaced by the ordinary service-pipe thereof which supplies said aerated beverage for consumption thereof, substantially as described.

4. An extra-charging vessel for soda-fountains consisting of a small, strong, air-tight vessel, having a single opening for inlet and outlet purposes, and a neck adapted to secure the said vessel to the outlet-nozzle of an ordinary soda-fountain; the said inlet and outlet passage extended through said neck, said neck terminated by a screw-threaded extremity corresponding to the screw-threaded nozzle of a soda-fountain, a cock in said neck adapted to close the same, and an internal air-equalizing pipe extended up through said vessel, and inclosed within said screw-threaded extremity, and cock, and the internal passage of said neck, the whole adapted to be temporarily attached, by simply securing the same, to the outlet-nozzle of a soda-fountain, and detached for use with other fountains, and to be refilled, through the said passage in said neck, with such solution or the like, as may be desired, substantially as and for the purposes described.

5. In combination with a detachable extra-charging vessel for soda-fountains, having an air-tight receptacle, terminating in a screw-threaded extremity adapted to engage with the screw-threaded exit-nozzle of an ordinary commercial soda-fountain, a projecting neck closed by an adjustable cock, and having a passage through said screw-threaded extremity and neck into said vessel, the whole adapted, when said cock is open, to permit the said receptacle to be filled with a saline solution or the like, by simply pouring into the same without pressure when said vessel is inverted, and a foot or expansion upon its free end whereupon the same may stand erect for filling, together with a large soda-water fountain, similarly formed, said extra-charging vessel and said fountain mutually adapted, by the screw connections of their ordinary discharge-outlets, to be detachably secured together, substantially as and for the purposes described.

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