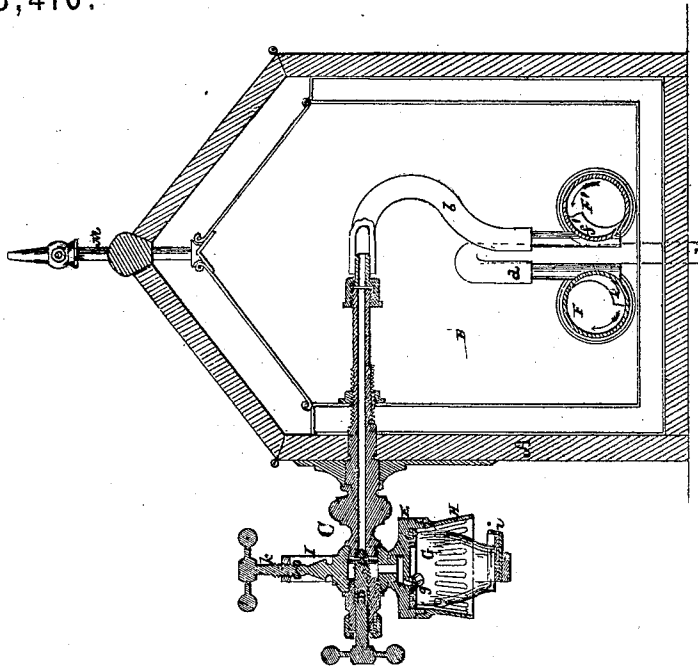


J. MATTHEWS.
Soda-Fountain.

No. 128,410.

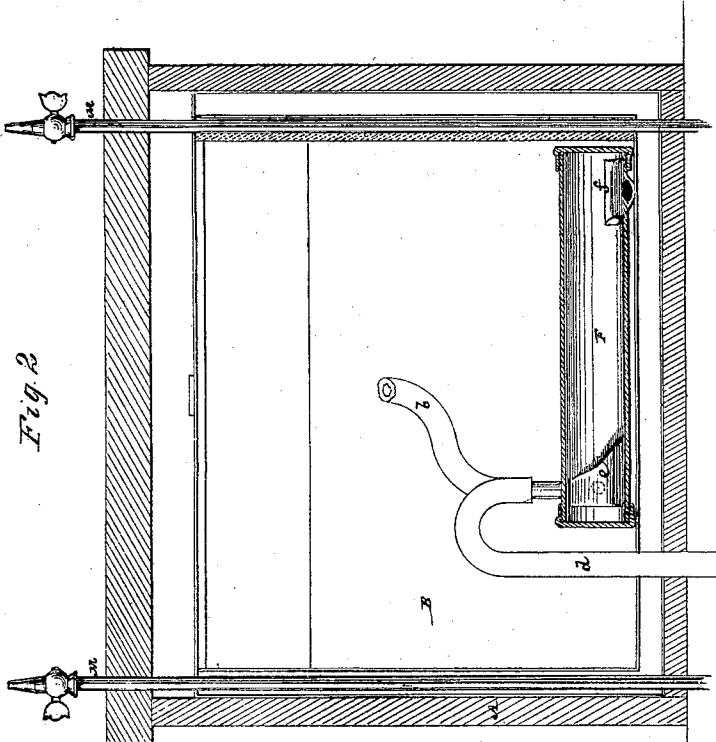
Patented June 25, 1872.

Fig. 1



0 3 6 9 12 Inches
Scale for Figs. 1 and 2

Fig. 2



Witnesses

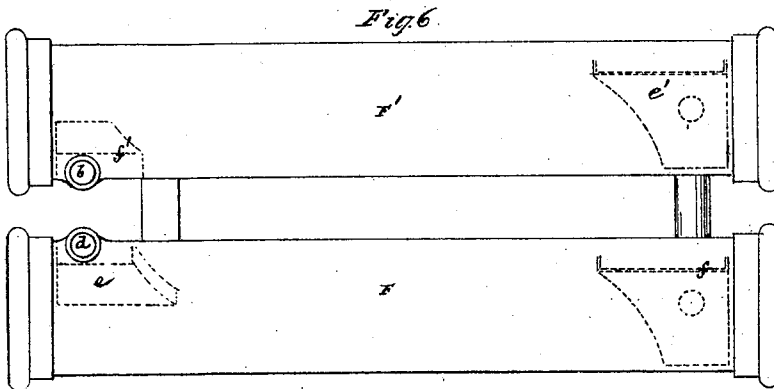
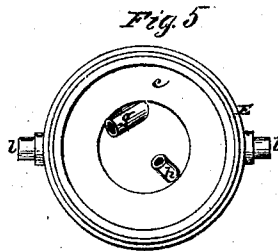
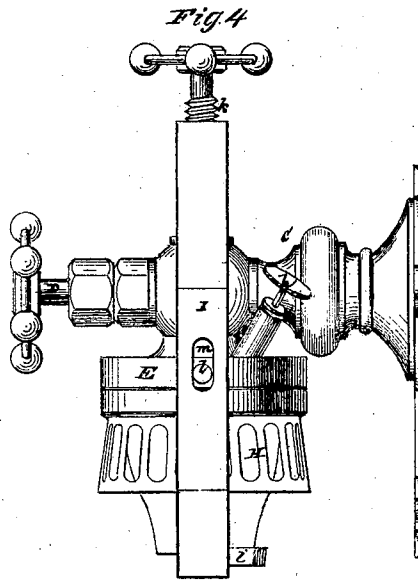
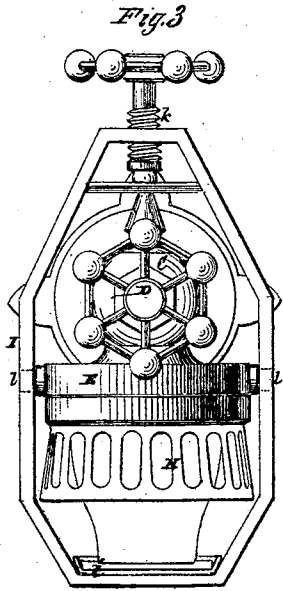
Wm. Haynes
McCombs

per John Matthews
Attorneys

J. MATTHEWS.
Soda-Fountain.

No. 128,410.

Patented June 25, 1872.



0 3 6 9 12 Inches

Scale for Figs. 3, 4, 5, and 6.

Witnesses
Fred Haynes
J. M. Combs

John Matthews
per Brown Combs
Attorney

UNITED STATES PATENT OFFICE.

JOHN MATTHEWS, OF NEW YORK, N. Y.

IMPROVEMENT IN SODA-FOUNTAINS.

Specification forming part of Letters Patent No. 128,410, dated June 25, 1872; antedated June 19, 1872.

To all whom it may concern:

Be it known that I, JOHN MATTHEWS, of the city, county, and State of New York, have invented certain new and useful Improvements in Apparatus for Dispensing Soda-Water and other aerated or gaseous liquids; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a vertical transverse section of an apparatus constructed in accordance with my invention, and Fig. 2 an irregular vertical longitudinal section of the same. Fig. 3 is a front view, upon an enlarged scale, of the draught-arm with its attachments; Fig. 4, a side view thereof; and Fig. 5, an inverted plan of the mouth-piece of the draught-arm. Fig. 6 is a plan of the cooler arranged within said apparatus.

Similar letters of reference indicate corresponding parts throughout the several figures of the drawing.

My invention consists in an apparatus for dispensing soda-water and other aerated or gaseous liquids, in which the draught-arm of the apparatus is provided with a mouth-piece constructed to adapt it to drinking cups or tumblers, whereby the latter are filled under pressure. The invention also includes a combination, in one and the same apparatus, of a device for drawing under pressure, with a cooler for the gaseous liquid, whereby the gas is more perfectly or fully retained in the water, of which said liquid is composed. The invention furthermore comprises a helical current-cooler, which has the effect of more perfectly cooling the liquid. It also includes a spirally arranged or constructed nozzle or outlet from the draught-arm, by which the gaseous liquid is introduced in a spiral stream around the interior of the cup or tumbler, thereby preventing violent commotion and preventing escape of the gas from the incoming liquid. Furthermore, the invention embraces a combination of a tumbler-guard with a draught or dispensing arm; likewise numerous details, including a tumbler-holder, in combination with said arm. The invention also consists in a combination of gas fixtures and tubes for conveying illuminating-gas with an apparatus for dispensing aerated liquids, when said tubes (if

more than one) are arranged to run up through or within said apparatus—that is, through the ice-chamber or up within its walls—and so that they form part of the apparatus, ready for the attachment of gas-pipes to effect the necessary illumination for using the apparatus by gas-light and to light up the same.

In the accompanying drawing, A represents the outer case of an apparatus for dispensing soda-water or other aerated liquid. This case may be of marble, and of any desired design or pattern. B is the interior case or ice-chamber of the apparatus, having its sides and bottom made hollow or double, as usual, for reception of a suitable non-conducting material or packing. C is the dispensing or draught arm of the apparatus, arranged, as ordinarily, to project through the one side of the structure from within the interior case B, where it is connected, by a pipe, *b*, with the cooler, to the outside of and beyond the outer case A, said arm being provided externally with a suitable cock or tap, D, for opening or closing and controlling the draught, and being furthermore provided with a mouth-piece, E, through which the liquid is passed from the draught-arm. This mouth-piece is of an inverted cup-form or other equivalent construction, with a soft and flexible pad, *c*, which may be of rubber, arranged within it—that is, upon its under side or face—surrounding the aperture in it through which the liquid is passed from the draught-arm, and of proper dimensions to constitute a packing to the outer edge of the tumbler or cup when the latter is held or pressed up against it, whereby I am enabled to fill said tumbler or cup under pressure, thus avoiding the waste of the gas consequent upon drawing the aerated liquid into a receiver or tumbler exposed at its mouth to the atmosphere. In connection with this feature or device for dispensing the liquid under pressure the cooler, irrespective of its peculiar construction, but arranged within or combined with the same apparatus, performs an important function or adds to the strength of the charge with which the liquid passes into the tumbler, inasmuch as the liquid being kept cool the water of which it is composed is made to retain a larger proportion of the carbonic-acid gas. Said cooler is represented as constructed of two (or there may be more) cylin-

dricial vessels, F F', arranged side by side within the ice-chamber B. Such cooler—that is, each one, or it may be both or all of them, if two or more be used—is constructed to produce a helical current of the liquid passing through it, whereby said liquid is spread or caused to travel in a thin stream over or in contact with the interior of the shell of the cooler, thereby more effectually cooling the liquid as it passes through the cooler. Thus, the aerated liquid is introduced, as by a pipe, *d*, from the generator into the first cooler F, at or near its one end, onto or within a spiral conductor, *e*, which imparts to the liquid a helical course through or along said cooler and distributes it in a thin stream against the interior of the outer wall or shell thereof, and on the liquid reaching the opposite end of such cooler it is caught or received by a hollow spiral shield, *f*, which leads it into or against a second spiral conductor, *e'*, in the next cooler F', so as to make it assume a further or repeated helical course through the latter cooler in a reverse direction, and when arriving at the far end of said last-mentioned cooler the liquid is again caught by a second hollow shield, *f'*, and conducted into the pipe *b*, which connects with the draught-arm. Upon the aerated liquid leaving the draught-arm to enter the tumbler G it is desirable to conduct it into the tumbler in a spiral stream around the interior of the latter, for which purpose the liquid is delivered through a lateral and spirally arranged or constructed nozzle, *g*. This prevents or reduces that violent commotion of the liquid on entering the tumbler which is apt to disengage the carbonic acid from the water composing said liquid. Such nozzle *g* may be constructed to form a part of the mouth-piece E, as shown in the drawing. *h* is a safety-valve attached to the mouth-piece E to prevent any excessive pressure of the gas likely to endanger the bursting of the tumbler. H is a tumbler-guard connected with the draught-arm C or its mouth-piece E to prevent accident or damage in case of the breakage of the tumbler when being filled under pressure. The tumbler-holder I, used in combination with the draught-arm, is constructed with a cushioned foot-piece, *i*, onto which the tumbler is placed, and said holder elevated by a screw, *k*, to bring the mouth of the tumbler G up against the pad *c* of the mouth-piece E, which latter, with its attached tumbler-guard, may be fitted to swivel or turn on a vertical axis in common with the tumbler-holder, that is connected with the mouth-piece by side studs *l* of the latter, arranged to fit slots *m* in

the sides of the holder. M M are tubes, of which there may be one or more, provided with burners at top for conveying and using illuminating-gas to light up the apparatus, the same forming gas-fixings, which are combined with the apparatus as a part and parcel of it, so that said apparatus forms a complete illuminated one when adjusted to its place, and only requires an ordinary connection with the gas-pipes from below. These tubes M M are arranged to run up through or within the apparatus—as, for instance, up through or within the non-conducting material between the walls of the ice-chamber B, or through the interior of said chamber—when they should be clothed or protected by rubber or other suitable material.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The draught-arm of an apparatus for dispensing soda-water and other gaseous or aerated liquids, fitted or provided with a mouth-piece constructed to hermetically seal a drinking cup or tumbler, substantially as and for the purpose herein set forth.

2. The combination of the cock D, the draught-arm C, and the tumbler-sealing mouth-piece E, and clamp I, essentially as described.

3. The combination, with the draught-arm C, of the spirally arranged or constructed nozzle *g*, essentially as herein set forth.

4. The combination of the spirally arranged or constructed nozzle *g* with the tumbler-sealing mouth-piece E, clamp I, and the draught-arm C, substantially as described.

5. The combination of the tumbler-guard H with the tumbler-sealing mouth-piece E, clamp I, and the draught-arm C, essentially as specified.

6. The cooler or coolers F F', constructed substantially as described, whereby the liquid is passed in a helical current or currents through said cooler or coolers, and in contact with the interior of the shell thereof, as specified.

7. The construction of an apparatus for dispensing soda-water or other aerated liquid with gas-fixings, consisting of a tube or tubes, M, carrying a burner or burners, and serving to convey illuminating-gas, when said tubes form an integral portion of said apparatus, substantially as herein set forth.

JOHN MATTHEWS.

Witnesses:

THEODORE M. TUTHILL,
GEORGE MILLS.