

No. 650,287.

Patented May 22, 1900.

W. M. WHEILDON.

DRAFT TUBE FOR EFFERVESCENT DRINKS.

(Application filed Feb. 12, 1900.)

(No Model.)

Fig. 3.

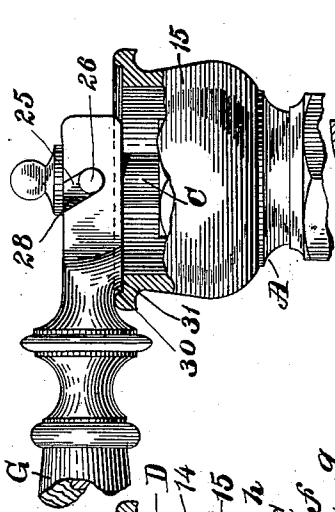


Fig. 1.

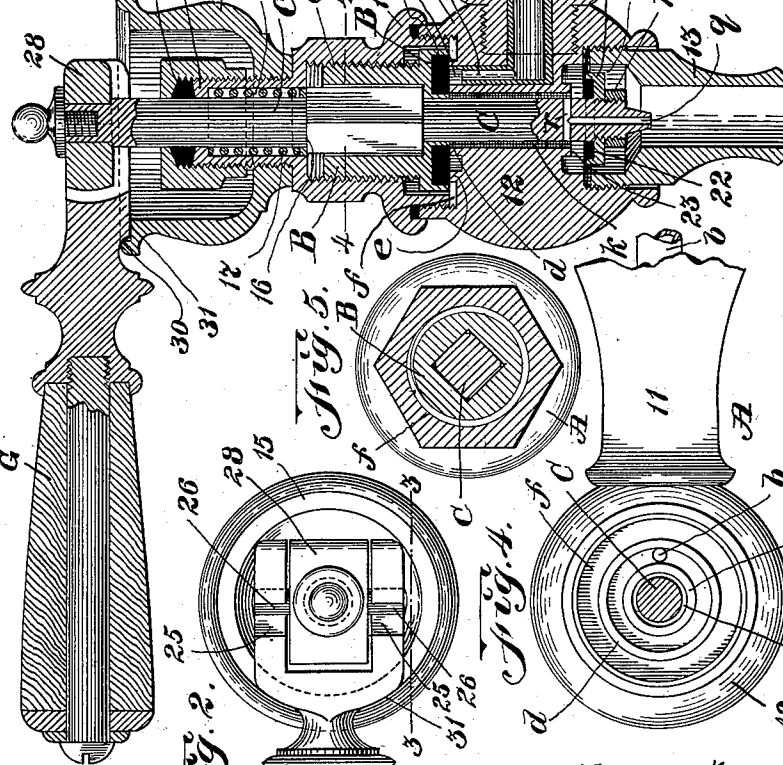
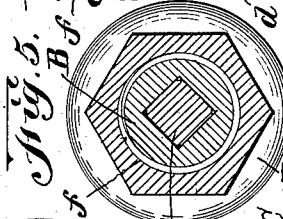


Fig. 4.

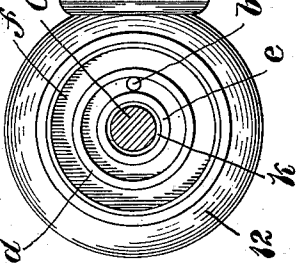
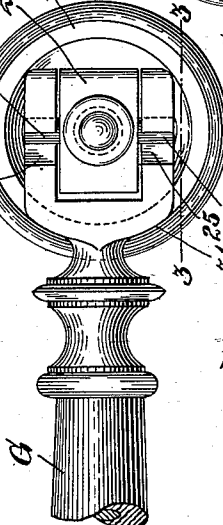


Fig. 2.



Witnesses.
L. Henry Marsh.
Lillian I. Basford

Inventor,
William Maxwell Wheildon,
by P. C. Schenck
Att'y.

UNITED STATES PATENT OFFICE.

WILLIAM MAXWELL WHEILDON, OF BOSTON, MASSACHUSETTS, ASSIGNOR
TO THE AMERICAN SODA FOUNTAIN COMPANY, OF TRENTON, NEW
JERSEY.

DRAFT-TUBE FOR EFFERVESCENT DRINKS.

SPECIFICATION forming part of Letters Patent No. 650,287, dated May 22, 1900.

Application filed February 12, 1900. Serial No. 5,000. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MAXWELL WHEILDON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Draft-Tubes for Effervescing Drinks, of which the following is a specification.

Double-stream draft-tubes as heretofore constructed have been provided with a rotary valve turning frictionally upon a seat having two openings, one for the large and the other for the fine stream. This form of valve is, however, objectionable, as it soon becomes leaky owing to the wearing away of the leather packing due to the friction produced by its sliding movement around the surface with which it is at all times in contact. These valves also require complicated adjustments to take up the wear and maintain the necessary degree of compression. In another class of lever-operated double-stream draft-tubes one of the two streams cannot be drawn without momentarily opening the passage for the other stream, which interferes with the proper operation of the draft-tube. Furthermore, all of these draft-tubes above referred to are so exceedingly complicated as to require a skilful mechanic to take them apart for repairs and again put them in condition for use.

To overcome all of the above-mentioned difficulties and to greatly simplify the construction and reduce the number of parts is the object of my invention, which consists in a draft-tube embodying certain novel features of construction and combinations of parts, as will be hereinafter fully described, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a central vertical section of a draft-tube embodying my invention. Fig. 2 is a plan of a portion of the top of the same. Fig. 3 is a sectional elevation on the line 3-3 of Fig. 2. Fig. 4 is a transverse section on the line 4-4 of Fig. 1. Fig. 5 is a plan of the bottom of the upper valve-chamber.

In the said drawings, A represents the body or casing of the draft-tube, composed of the

portions 10, 11, 12, 13, 14, and 15, screwed together, as shown in Fig. 1.

b is the inlet-passage, the inner vertical portion of which opens upwardly into an annular space *c*, formed between two annular concentric flanges *d e*, rising from the bottom of the main-valve chamber *f* and forming the valve-seat, said chamber *f* having a screw-threaded wall upon which turns a screw-threaded rotary compression-valve *B*, provided at its bottom with a valve-disk *g*, of leather or other suitable material, adapted to fit closely down upon the flanges *d e*, which form the valve-seat to prevent the water from passing from the inlet-passage *b* into the valve-chamber. By providing the valve-chamber with a double valve-seat composed of two concentric flanges, as described, the water is excluded from the valve-chamber while the valve is closed, thus reducing the liability of leakage.

C is a vertical spindle, by which the valve *B* is turned to screw it up and down within the valve-chamber *f* away from or toward its seat, the valve during such movement sliding longitudinally upon the spindle, which is made square in cross-section at that portion of its length or provided with other suitable means, such as a spline or key, whereby it is prevented from rotating independently of the valve, while permitting the latter to slide freely thereupon in the direction of its length. Above the chamber *f* the spindle is provided with a shoulder 16, against which bears a spiral spring 17, inclosed within a chamber *h* at the upper tubular end of the portion 14 of the casing, said spring exerting a downward pressure upon the spindle. At the upper end of the portion 14 of the body and located within the upper open cup-shaped portion 15 is a stuffing-box *D*, surrounding the spindle *C*, whereby all liability of leakage from the valve-chamber *f* is prevented. That portion of the spindle *C* below the valve-chamber *f* passes through a vertical opening of somewhat greater diameter than the spindle, leaving an annular space *k* around the same, forming an outlet-passage from the valve-chamber, through which when the valve *B* is

raised the water passes down into a valve-chamber *m* and thence directly into the discharge-nozzle 13 at the bottom of the draft-tube. Within this chamber *m* and rigidly secured to the lower end of the spindle C by means of a nut *n* is a valve 21, provided on its upper side with an elastic valve-disk 22, which when the spindle is raised against the resistance of its spring 17 is brought into contact with an annular seat 23, thus closing the bottom or mouth of the annular passage *k*, through which the larger stream of water is drawn into the tumbler. In the bottom of the spindle C is bored a vertical passage *q* of small diameter forming a nozzle, said passage being intersected by a transverse passage *r*, bored diametrically through the spindle to meet the annular passage *k* above the valve 21, whereby when said valve is closed the water is caused to pass in a fine stream and with great force through the vertical passage *q* directly into the tumbler to stir up its contents and increase the effervescence of the liquid as required.

G is a lever-handle having its inner end bifurcated and provided with inclined open slots 25, which are hooked under horizontal pins or trunnions 26, projecting from opposite sides of a block 28, secured to the top of the spindle C, the curved edge 30 of the handle resting on a shoulder 31, just inside and extending around the top of the cup-shaped portion 15 of the body A, which thus forms a fulcrum therefor, so that a downward pressure on the handle G will lift the spindle C against the influence of its spring 17 and close the lower valve 21, thus shutting off the larger stream, as required, if the main valve B has been previously raised by the rotation of the spindle C, produced by a lateral movement of the lever G.

In operating the draft-tube the handle G may be first swung around in a horizontal plane to turn the spindle C and raise the rotary valve B, when the water will flow freely in a large stream through the annular passage *k* into the nozzle 13, from which it will be discharged into the tumbler beneath, the valve 21 being normally wide open. The handle G is then depressed, closing the valve 21 and shutting off the large stream, when the water will be discharged in a fine stream directly from the passage *q* at the lower end of the spindle C into the tumbler, as before described. If a fine stream only is desired, it will be seen that it will merely be necessary to depress the handle G before swinging it around in a horizontal plane to open the valve B, when as the valve 21 will then be closed a fine stream only will be produced, the pressure on the handle being continued until it is swung back again to close the valve B. On the other hand, if the larger stream only is required, it will merely be necessary to swing the handle around without depressing it, and it will thus be obvious that either the fine or the larger stream may be drawn inde-

pendently without even momentarily opening the passage for the other stream, which is an advantage in an apparatus of this description, as it avoids waste and produces better results.

The above-described draft-tube, on account of its simplicity and the ease with which it can be manipulated, greatly facilitates the operation of drawing effervescent drinks, while it is of exceedingly simple construction, having few parts, and can be easily taken apart for repairs and again put in condition for use without requiring the services of a skilled mechanic.

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

1. In a draft-tube, the combination with the body or casing having a screw-threaded valve-chamber, and inlet and outlet passages communicating therewith, of a rotary compression-valve provided with a screw-thread and turning upon the threaded wall of the valve-chamber and controlling said inlet and outlet passages, a spindle for actuating said valve and upon which the latter slides as it is screwed toward or away from its seat, and a handle for rotating said spindle, substantially as described.

2. In a draft-tube, the combination with the body or casing having a screw-threaded valve-chamber and inlet and outlet passages communicating therewith, of a rotary, threaded compression-valve turning upon the threaded wall of the valve-chamber and controlling said inlet and outlet passages, a spindle for actuating said valve and upon which the latter slides as it is screwed toward or away from its seat, said spindle having a central bore or passage at its lower end communicating with the main outlet-passage around the spindle, a valve at the lower end of the spindle arranged to close the main outlet-passage when said spindle is raised and cause the water to pass in a fine stream through the smaller passage at the end of the spindle, and means for rotating and lifting said spindle, substantially as described.

3. In a draft-tube, the combination with the body or casing having a screw-threaded valve-chamber, and inlet and outlet passages communicating therewith, said outlet-passage leading into a valve-chamber opening into the discharge-nozzle, a rotary, threaded compression-valve turning within said valve-chamber and controlling said inlet and outlet passages, a spindle for actuating said valve and upon which the latter slides longitudinally as it is screwed toward or away from its seat, a handle for rotating and lifting said spindle, a valve secured to the lower end of the spindle and controlling the larger outlet-passage into the discharge-nozzle, said spindle having a smaller longitudinal outlet-passage formed within its lower end communicating with the outlet-passage above the last-named valve, whereby as the spindle is raised after the rotary valve has been opened, the larger outlet

will be closed and the water caused to pass in a fine stream through the smaller outlet-passage at the end of the spindle, substantially as described.

5 4. A draft-tube, comprising a body or casing having a screw-threaded valve-chamber and an inlet-passage leading thereto, a rotary screw-threaded compression-valve turning upon the threaded wall of the valve-chamber, 10 a spring-pressed spindle for actuating said valve and upon which it is free to slide longitudinally as it is turned thereby, an annular passage around the spindle forming an outlet through which the water may pass 15 from the valve-chamber to the discharge-nozzle when the main valve is raised, a lever pivoted to the upper end of the spindle and having its fulcrum at the edge of the casing, a packing for the spindle, a valve at the bottom of the spindle controlling the main outlet-passage to the discharge-nozzle, said spindle having a longitudinal passage at its lower 20 end and a transverse passage leading therefrom to the annular outlet-passage around the spindle and located above the valve at its 25 lower end, whereby when said valve is closed by the rise of the spindle after the main valve has been opened, the water will be shut off from the main outlet and caused to pass 30 through the smaller passage at the end of the spindle to produce a fine stream, substantially as described.

5. In a draft-tube, the combination with the

body or casing having an open cup-shaped upper end, and a screw-threaded valve-chamber with inlet and outlet passages communicating therewith, of a spring-pressed spindle having a longitudinal as well as a rotary movement and provided at its lower end with a central passage for producing a fine stream 35 and with a valve for controlling the larger outlet into the discharge-nozzle, an upper screw-threaded compression-valve turning upon the threaded wall of its valve-chamber and sliding upon said spindle as it is turned 40 thereby to control the inlet and outlet passages, and a lever pivoted to the upper end of the spindle and resting on the edge of the open cup-shaped top of the body of the tube which forms a fulcrum for said lever when 45 used to lift the spindle, substantially as described. 50

6. In a double-stream draft-tube provided with two valves, the combination with a spindle operating said valves, of a lever connected with said spindle and having a horizontal as well as a vertical movement, one of said valves being operated by the horizontal, and the other by the vertical movement of said lever, substantially as described. 55 60

Witness my hand this 8th day of February, A. D. 1900.

WILLIAM MAXWELL WHEILDON.

In presence of—

GEORGE A. SWEETSER,
LEONARD TUFTS.