

(No Model.)

W. P. CLARK.

Draft Tube for Drawing Soda Water, &c.

No. 229,304.

Patented June 29, 1880.

FIG 1.

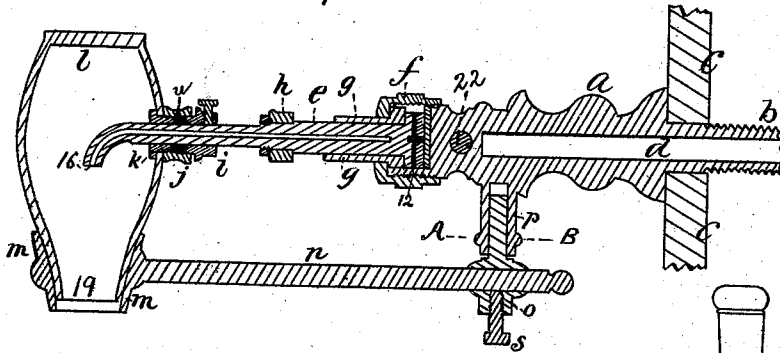


FIG 2.

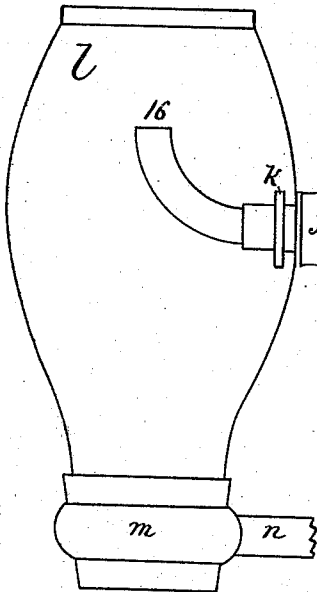


FIG 3.

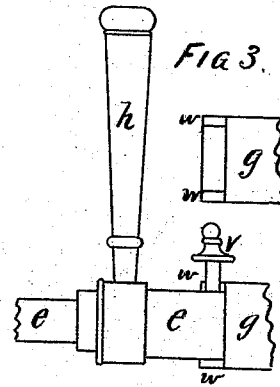


FIG 4.

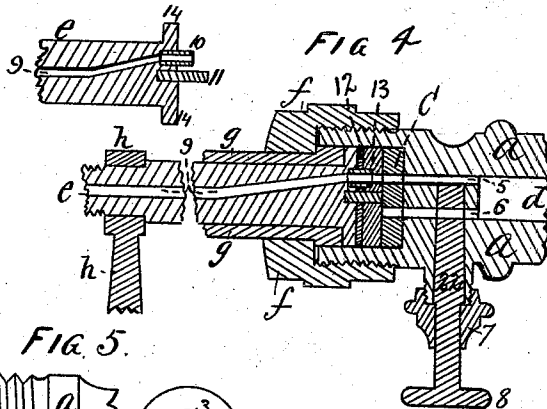


FIG 5.

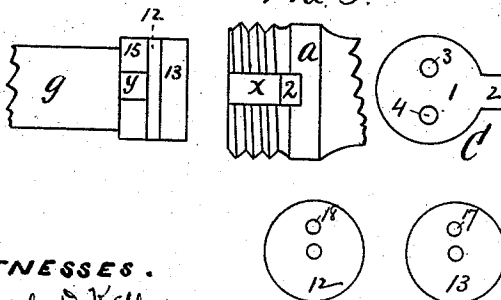


FIG 6.



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DRAFT-TUBE FOR DRAWING SODA-WATER, &c.

SPECIFICATION forming part of Letters Patent No. 229,304, dated June 29, 1880.

Application filed April 9, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. CLARK, of the town of Medford, State of Massachusetts, have invented an Improvement in Draft-Tubes for Drawing Soda-Water and other Beverages, of which the following is a specification.

This invention relates to the ornamental draft-tubes through which soda-water and other beverages are drawn into drinking-vessels for the purpose of serving the same to customers, and by which tubes a small sharp stream is first drawn into such drinking-vessel to "cut" the sirup therein, after which a large or flat stream is substituted for such sharp stream, in order that the contents of the drinking-vessel, when filled, shall consist of the proper quantity of solid liquid; and the invention consists in so combining with the draft-tube an inverted condensing vessel or bottle that a sharp stream may be delivered from such tube directly into the drinking-vessel until the sirup therein is sufficiently cut, whereupon such direct sharp stream may be discontinued, and a stream delivered against the interior of such condensing-vessel, which, breaking thereon, will be condensed, and will flow through the inverted passage in the lower end of such condensing-vessel, falling thence into the drinking-vessel as a solid stream.

It also consists in the means and method of combining the inverted condensing-vessel and the draft-tube, and in the constituent devices of such tube itself.

Figure 1 is a longitudinal vertical section taken through the axis of the draft-tube and condensing-vessel. Fig. 2 is a side elevation of the condensing-vessel and of that portion of the draft-tube which extends outward beyond the coupling-nut. Fig. 3 is a plan view of the central portion of the draft-tube, and showing the actuating-lever, the stop-pin, and the stops with which it comes in contact. Fig. 4 is an axial horizontal section of the central portion of the tube, showing the packing, the passages, the side cock, and the coupling-nut, all in section. Fig. 5 is a detached plan view of the meeting ends of the two sections of the tube, and also showing, in plan, the packing employed between said sections, as also the interposed disk. Fig. 6 is a horizontal section taken on line A B, Fig. 1.

In the said views, *a* represents the body of the tube, having the usual threaded shank *b*, Fig. 1, by which it is secured in the vertical slab or fountain-front *c* in the well-known manner.

d is the axial passage by which the liquid is introduced into the tube, and which extends to near the outer or front end of body *a*, as shown in Figs. 1, 4, and with which the intermediate minor passages, 5 6, communicate, as shown in Fig. 4.

An extension or outer tubular section, *e*, is coupled to section *a* by coupling-nut *f*, which is threaded upon part *a*, and engages shoulder 15 of a sleeve, *g*, Fig. 5, which is arranged upon part *e*, and which, at its inner face, engages the shoulder 14 of part *e*, Fig. 4, thereby securing parts *a* and *e* in axial coincidence, as shown in Figs. 1 and 4. The outer extremity of part *e* is inserted through an aperture in the side of the condensing-vessel *l*, and terminates in a curved nozzle, 16, as shown.

To secure vessel *l* upon part *e*, a shouldered sleeve, *k*, extends out through the aperture in the side of *l*, and upon it is threaded a collar, *j*, into which is concentrically recessed the set-collar *i*, which is adjustable upon and secured to part *e* by a set-screw, a packing, *u*, being interposed between *i* and *j*, as shown in Fig. 1, to prevent escape of the liquid from *l*, an elastic packing being also interposed between the wall of vessel *l* and the sleeve *k* and collar *j*.

The inverted neck of vessel *l* is inserted in a ring, *m*, which is formed upon rod *n*, which latter is inserted in stud *o* and locked by set-screw *s*, said stud *o* being inserted in tube *p* of part *a*, and secured by screw *t*, Fig. 6; and as rod *n* may be lineally adjusted to bring the mouth 19 of vessel *l* centrally beneath nozzle 16, while stud *o* is vertically adjustable, and set-collar *i* can be adjusted against packing *u*, by these means vessel *l* can be accurately adjusted and secured upon tube *e* and relatively to nozzle 16, while the tube will be free to revolve upon its axis, as will be presently described.

In Fig. 4 is shown a plug, 22, fitted in body *a* and secured in position by the packing-nut 7, and provided with the cross-head 8, by which to actuate it. A transverse passage through

this plug is shown in said Fig. 4 as coincident with a passage, 6, which leads from axial passage *d* to the annular recess in the outer end of *a*, while a parallel passage, 5, also leading from passage *d* to said recess, is not penetrated by said plug, and by rotating plug 22 more or less the passage 6 will be thereby in the same degree reduced in the volume of its effective delivery. In the bottom of said recess is seated the elastic packing C, which is formed with a disk-like body, 1, a projection, 2, and two passages, 3 4. Said projection is seated in the longitudinal slot *x*, Fig. 5, which is cut through the wall of part *a*, which incloses said annular recess; and when said packing is so seated it is held from rotary displacement by said projection, and said passages 3 4 are coincident with passages 5 6, as shown in Fig. 4.

Upon the inner face or end of part *e* is formed or secured a central pin, 11, and a short tube, 10, the passage in which is a prolongation of the axial passage 9 in part *e*, and said tube is arranged at the same distance from the axis of *e* as are the passages 5 6 from the axis of *a*.

An elastic packing, 12, Figs. 1, 4, 5, is formed with an axial passage to receive the central pin, 11, and with a hole, 18, to receive tube 10, and a disk, 13, formed of hard rubber, metal, or other suitable material, is perforated at the center, and with a side passage, 17, in the same manner as is packing 12, to receive said pin 11 and tube 10.

A short stud or stop-pin, *v*, is secured in extension *e*, so as to be brought in contact with the stops *w*, formed in sleeve *g*, Figs. 2, 3, which are at one hundred and eighty degrees from each other, to allow a half-revolution of part *e* in either direction before arrested by said pin, said sleeve being secured from rotation by a stud, *y*, formed upon its shoulder 15, which enters and is locked by slot *x* in part *a*, as shown in Figs. 1, 5.

For the purpose of rotating part *e* an arm, *h*, is rigidly secured thereto and in the same plane as the pin *v*, so that when said pin is in contact with either of shoulders *w* the arm *h* will be in a horizontal position, and when in such position the passage in tube 10 of part *e* will be coincident with one or the other of passages 5 6 in part *a*; and as the passages in packing C are always coincident with passages 5 6, and as the packing 12 and disk 13 are, by their contact with tube 10 and pin 11, always revolved coincidently with part *e*, therefore when the passage in part *e* is coincident with one of the passages 5 6, there will be a continuation thereof through the said two packings and said disk.

When lever *h* is in a vertical position the axial passage in *e* is intermediate between passages 5 6, and the face of *e* then constitutes the valve; therefore the part *e*, while serving as a portion of the draft-tube, is also the valve and valve spindle or stem, while arm *h* supplies the place of a hand-wheel usually attached to such spindle.

When a glass of soda is to be drawn, and a sharp stream being first required, the lever *h* is turned to the position shown in Fig. 3, which will turn nozzle 16 downward, as shown in Fig. 1, and will also bring the axial passage in *e* coincident with passage 6 in *a*, whereby a sharp stream will be delivered directly into the tumbler. Said nozzle 16 being arranged, as described, in the axis of vessel *l*, such stream will pass through mouth 19 without contact therewith, and without being broken, and such stream will, by the adjustment of plug 2, as before described, be graduated in its force as the pressure in the supply-fountain may render necessary.

When said sharp stream has sufficiently cut the sirup, lever *h* will be reversed to the position shown in Fig. 4, thereby turning nozzle 16 upward, as shown in Fig. 2, and bringing the passage 9 in *e* coincident with passage 5 in *a*, whereby a stream will be delivered against the interior wall of the bottle, being thereby condensed, and will fall as solid liquid into the tumbler; and when the latter is filled lever *h* is raised to a vertical position, thereby closing both passages 5 and 6.

By forming the condensing-vessel *l* of transparent glass it is less expensive than if made of any other material, is highly ornamental, produces a pleasing effect when used to condense the aerated liquid discharged within it, and is clean and incorrodible.

I claim as my invention—

1. In a draft-tube, the combination of the inverted condensing-vessel and a conduit-tube constructed and arranged to deliver a stream within said condensing-vessel in an upward or downward direction, as desired, whereby a sharp stream may be first delivered direct into the drinking-vessel, when a stream may be delivered against the interior of the condensing-vessel, and be thence delivered into the drinking-vessel, substantially as specified.

2. In a draft-tube, the rotative tubular extension *e*, having a suitable delivery-nozzle, and constructed, combined, and arranged relatively to part *a* to serve as a conduit, a valve, and a valve-stem, substantially as specified.

3. In a draft-tube, the combination of tubular body *a*, formed to be secured to slab *c*, tubular extension *e*, coupled to body *a*, and the inverted condensing-vessel *l*, connected with extension *e*, substantially as specified.

4. In a draft-tube, and in combination with such tube and the inverted condensing-vessel, the rod *n*, with its holding-ring *m*, attached to such vessel and provided with lineal and vertical adjustment to accommodate such vessel to its draft-nozzle, substantially as specified.

5. In a draft-tube, the combination of the tubular conduit constructed and arranged to deliver a stream in an upward or downward direction, as desired, and an inverted condensing-vessel having a side aperture wherein such conduit is inserted, substantially as specified.

6. In a draft-tube, the combination of the fixed section *a* and rotative part *e* with suit-

able relative passages, the packings C and 12, and the perforated disk 13, interposed between said packings, substantially as specified.

7. In a draft-tube, the combination of fixed part *a*, rotative part *e*, and sleeve *g*, arranged to interlock in part *a*, the stops *w* in said sleeve, and stop-pin *v* in part *e*, substantially as specified.

8. In a draft-tube, the combination of fixed part *a* and rotative part *e*, the passages 5 6, at equal distances from the axis of *a* and the axial passage in part *e*, terminating in tube 10 at the same distance from the axis of *e*, and the packing 12 and disk 13, correspondingly perforated and arranged to rotate with part *e* and the fixed perforated packing C, substantially as specified.

9. In a draft-tube, the combination of pas-

sages 5 6, arranged to be alternately operative, as specified, and the plug 22, arranged to intersect but one of said passages, and its transverse passage coincident with such intersected passage, whereby, by the rotation of such plug, such intersected passage may be graduated in the volume of its delivery, substantially as specified.

10. In a conduit-tube, the combination of perforated packing C, having the projection 2, and the tube *a*, having a slot or recess, *x*, cut in its concentric wall to receive said projection and secure said packing from rotation, substantially as specified.

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Witnesses:

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