Hoyt & Murray,

Soda Water Apparatus.

No. 48,489. Patented June 27, 1865.

Fig: 1.

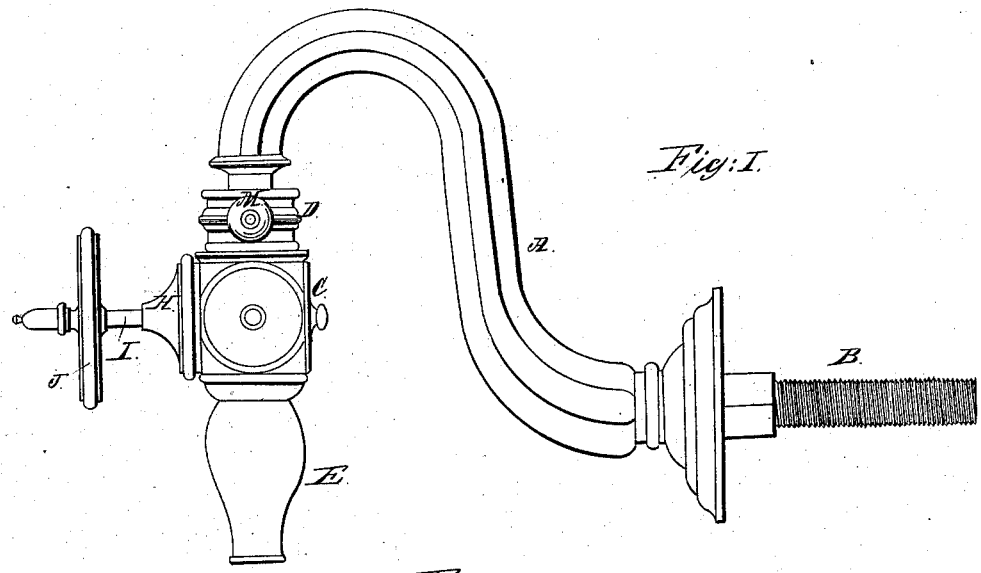


Fig: 2.

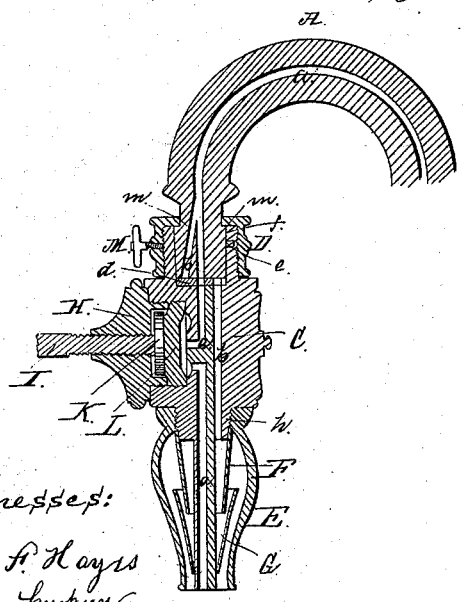


Fig: 3.

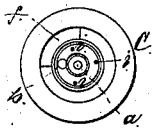
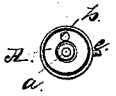


Fig: 4.



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UNITED STATES PATENT OFFICE.

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IMPROVED DRAFT-COCK FOR SODA-WATER APPARATUS.

Specification forming part of Letters Patent No. **48,489**, dated June 27, 1865.

To all whom it may concern:

Be it known that we, L. D. HOYT, of Medford, in the county of Middlesex, and ROBERT MURRAY, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Draft-Cock for Soda Apparatus; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation; Fig. 2, a central section through a portion of the same. Fig. 3 is a top-end view of the cock C, the thimble D and pipe A being removed. Fig. 4 is an end view of the pipe A inside of the cock C.

Like parts are indicated by the same letters in all the drawings.

The nature of my invention consists, first, in placing around the lower end of the cock C, an upward-flaring conical deflector, G, inside of an enlarged delivery chamber or nozzle E, so that the small rapid current of soda from the fountain, striking inside of said conical deflector, will be broken and thrown upward, filling said nozzle with expanded gas and liquid, from which it will flow into the drinking-vessel in a greatly-enlarged and consequently much less rapid stream, enabling the operator to draw the required amount directly into the drinking-vessel very quickly, and without being obliged to wait for the foam to subside, at the same time saving much of the gas that would otherwise escape; second, in constructing the cock C with two outlets, *a* and *b*, so arranged that the one, *a*, may be opened and closed by means of a reciprocating valve, L, and the other, *b*, by giving a partial rotation to the cock itself, so that one at a time or both together may be drawn from at pleasure; and, third, in the employment of the conical cup F, to operate, in combination with the upward-flaring conical cup G and the nozzle E, to still further assist in checking the force of the stream.

To enable others skilled in the art to make and use our improvements, we will now proceed to describe the construction and operation of the same.

A is the pipe leading from the fountain, and having its end B provided with a screw, by means of which it is attached to the usual ornamental stand. Running through the center of A is the soda-channel *a*. At the lower end of A, and leading from the channel *a*, is an oblique channel, *b*, as clearly shown in Fig. 2.

D is a thimble, through the top of which the end of the pipe A is passed before it is soldered to the main body, said thimble being supported by means of the shoulder *m*. The inside of this thimble is provided with a screw to receive the external screw cut on the upper end of the cock C, as represented in Fig. 2, M being a set-screw to prevent the cock from getting loose in the thimble.

e is a small pin projecting from the lower end of the pipe into a slot, *f*, (see Figs. 2 and 3,) to prevent the cock from turning too far.

d is a packing of leather or other suitable material, confined to its bed in the cock C by means of the small pins *i i i*, as shown in Fig. 3.

Through the cock C are two channels, *a* and *b*, the channel *b* being direct and one side of the center, while the channel *a* is at its upper end, in the exact center of the cock and directly under the hole *a* in the pipe A. At the center of the cock, however, it turns at a right angle and enters the chamber of the valve L. About the eighth of an inch lower down it turns back again to the center of the cock, and thence descends directly through the same, as clearly shown in Fig. 2. This forms the direct or uncheck passage of the soda from the fountain into the receiving-vessel.

H is a cap screwed into the side of the cock, as shown in Fig. 2.

L is the packing of leather or other suitable material.

K is the follower, and I is its shank, provided with an external screw, which fits an internal screw in the cap H.

J is the wheel fast to the handle I, by turning which the valve L is opened or closed. When opened, as in Fig. 2, the soda will flow directly through the channel *a* of the cock C, and when the said packing is forced against the channel *a* the latter will be closed.

In order to cause the soda to flow through the cock-channel *b*, a quarter-revolution is given to the cock, which will fetch the top of the cock-channel *b* directly under the bottom of the pipe-channel *b*, and the soda will then flow through the channel *b* directly into the cone G, the shape and position of which are clearly shown in Fig. 2. This cone G is sol-

dered to the small end of the cock, and both of them are inclosed in the enlarged delivery chamber or nozzle E, which is attached to the cock by means of the screw *h*.

F is a conical thimble, the larger end of which is soldered to the cock, as represented in Fig. 2, the smaller end entering the upper end of the conical deflector G, and forming a continuation of the channel *b* into said deflector, and for the purpose specified above.

When the operator wishes to draw a full rapid stream of soda directly into the drinking-vessel to agitate the sirup he opens the valve L by turning the wheel J. Then, to complete the operation of filling the vessel, he gives a quarter revolution to the cock C, which will cause the soda to flow through the pipe *b* into the deflector G, thence into the nozzle E, filling the same, and thence in a much larger and slower stream into the vessel, which can thus be rapidly filled without overflowing or interruption, and with comparatively little loss of gas.

Having thus described the construction and operation of our improvement, what we claim as new, and desire to secure by Letters Patent, is—

1. The deflector G, constructed and arranged substantially as set forth, in combination with the chamber E or its equivalent, for the purposes described.

2. The combination of the cone F with the cone G and nozzle E, substantially as and for the purpose described.

3. Providing the cock C with two channels, *a* and *b*, and so arranging the same that the one may be opened and shut by means of the valve L, and the other by giving a partial rotation to the cock itself, substantially as and for the purpose described.

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