W. C. NORTH.

Ventilating-Faucet.

No. 161,630. Patented April 6, 1875.

FIG. 1.

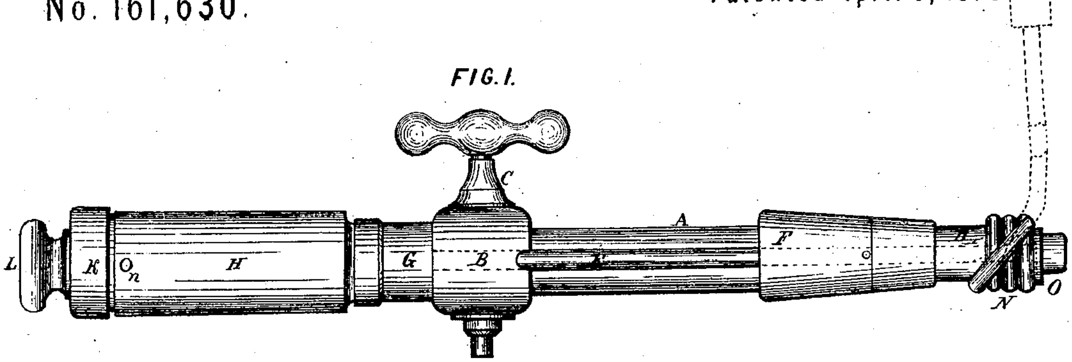


FIG. 2.

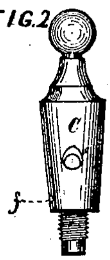


FIG. 3.

FIG. 4.

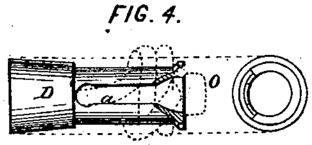


FIG. 5.

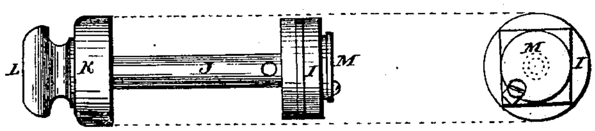


FIG. 6.

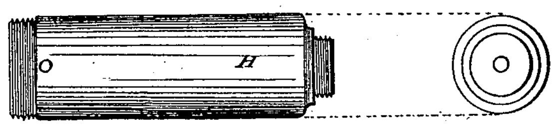


FIG. 7.

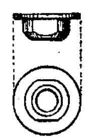
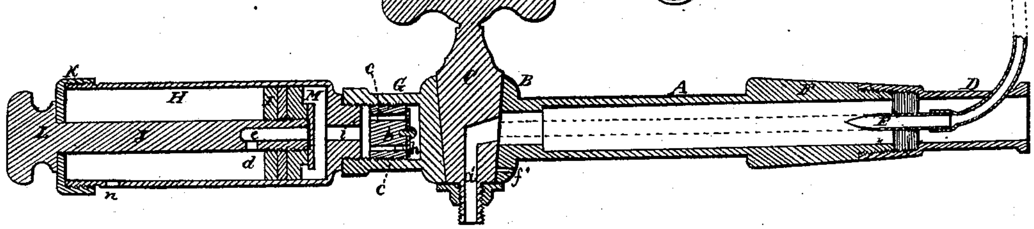


FIG. 9.

FIG. 8.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM C. NORTH, OF CLEVELAND, OHIO.

IMPROVEMENT IN VENTILATING-FAUCETS.

Specification forming part of Letters Patent No. **161,630**, dated April 6, 1875; application filed March 4, 1875.

To all whom it may concern:

Be it known that I, WM. C. NORTH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Ventilating-Faucets, of which the following is a description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is an outside view of the faucet. Fig. 8 is a longitudinal section. The rest of the figures are detached sections, to which reference will be made.

Like letters of reference refer to like parts in the several views.

The object of this invention is to ventilate beer-barrels and other barrels containing liquors, and to produce a pressure upon the beer by forcing air into the barrel by means of a piston and cylinder, so that while charging the barrel with air for ventilating the same the gas and flavor of the contents of the barrel will not escape; hence the quality of the liquor is not injured by the ventilation.

The following is a more full and complete description of the invention.

A represents the body or stem of the faucet, B the key-chamber or seat, and C the key, all of which are similar to faucets in ordinary use. To the end of the stem is screwed an extension-piece, D, in one side of which is cut a deep cleft or notch, *a*, Fig. 4. Said figure shows a detached view of the extension-piece. E, Fig. 1, is an air-tube, extending along outside of the stem, one end of which penetrates the side of the key-chamber B, wherein it continues through the side of the chamber without intruding upon the seat of the key, which has no communication with the air-tube. The opposite end of the air-tube penetrates the side of the stem directly back of the tapering point F, and terminates within said point, or a little beyond it, as will be seen in Figs. 3 and 8. The neck G of the faucet is hollow, as will be seen in Fig. 8, and which hollow is in open communication with the air-tube referred to as passing through the side of the key-seat. In the neck is fitted a core, *b*, Fig. 8, having more or less air-passages *c c*, covered on the inner side by a valve, *h*, Fig. 8. A detached view of the core and valve is shown in Fig. 9. To the neck is attached a cylinder, H, which is also in open relation to the air-tube by means of the air-passages *c c*. In the cylinder is fitted a piston, I, Figs. 5 and 8, whereof J is the rod passing through the cap K on the end of the cylinder, and terminating in a knob, L. On the inner side of the piston is secured a valve, M, Fig. 5, covering an air-passage, *e*, Fig. 8, through the center of the piston, and opening into the cylinder through the hole *d* in the side of the piston-rod, as shown in said Fig. 8. To the end of the air-tube E is attached a rubber hose, N. The outer end of the hose terminates in a float, O, the purpose of which will hereinafter be shown.

The practical operation of the above-described ventilating-faucet is as follows: As above said, this invention is for ventilating beer-barrels and others containing liquor, in order to cause the contents to flow therefrom when resisted by the external pressure of the air, and also to cause a pressure on the beer when it is not in draft. To this end the hose is first wound around the end D of the faucet, as shown in Fig. 1, in which it will be seen that the float O is inserted in the mouth of the piece D. To allow the float O to be inserted in the end of the extension-piece D is the purpose of the slot or cleft *a* made in the side thereof, which will permit the hose to be drawn back from the edge of the mouth of the piece, as shown in Fig. 8, for the admission of the float, as shown in Fig. 1. The end of the faucet with the hose coiled around it is inserted in the draft-hole in the head of the barrel, and which is held therein by the tapering end F as an ordinary faucet. The hose, when the faucet is inserted in the barrel, will unwind from the end by its elasticity, and the float will rise upward to the surface of the liquor, as shown in Fig. 8, which represents the hose and float when in the barrel. Should the contents of the barrel not flow, in consequence of the external pressure of the air upon it, air can be forced into the barrel, near to or above the liquor, by the piston, which for that purpose is first drawn back to the outer end of the cylinder. A vacuum will not be formed on the inner side of the piston, for the air on the outer side will pass through the piston to the inner side by way of the hole *d* in the side of the piston-rod, and the passage *e* in the center

of the piston. Now, on pushing the piston inward, the air before it will be forced through the open end *i* of the cylinder; thence through the air-passages *c c*, opening the valve *h* into the neck G, from which it passes along through the air-tube E and hose to the top of the liquor in the barrel. As the piston moves inward the space in the cylinder behind it fills with air from the outside through the hole *n*. Air cannot escape from the barrel, for reason of the valve *h* covering the air-passages *c c*, but which will open for the admission of air on pushing in the piston.

It will be obvious that by this device air can be forced into the barrel to cause the contents to flow without the escape of the gas and flavor of the liquor, and without agitating the same, as the air is admitted above it, or so near the surface of the liquor as to cause no disturbance; hence the sediment will not become stirred up, and the liquor thereby rendered thick and misty by it, but will remain fine and clear until it is all drawn off or down to the lees; also, by forcing air on the top of the beer it keeps the carbonic acid in the beer, by reason of the pressure of the air upon it; hence beer or wine on draft with a pressure on the top of it will remain fresh and sparkling nearly or quite as long as if it were not on draft at all.

In the lower end of the key is a small hole, *f*, Fig. 2, opening into the bore *a'* of the key. Said hole, when the faucet is closed, comes in open relation to a corresponding hole, *f'*, Fig. 8, made in the side of the key chamber or seat, the purpose of which is to ventilate the key, so that no liquor shall remain therein when it is turned for stopping draft.

Keys in ordinary faucets retain more or less liquor after each draft is made, which shortly after drips from the faucet and is wasted.

By ventilating the key, as above described, no liquor will remain in the key, there being no pressure of air on the end thereof to prevent it from running out at the time the draft is made; hence there is no drip following the drawing of the liquor.

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

1. The rubber tube N, float O, and air-tube E, in combination with the neck G, core *b*, having passage-ways *c c*, valve *h*, piston I, valve M, and cylinder H, substantially in the manner as described, and for the purpose set forth.

2. The key C, provided with a vent or hole, *f*, in combination with the chamber B, provided with a vent or hole, *f'*, as described, and for the purpose specified.

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Witnesses:

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