No. 695,767. Patented Mar. 18, 1902.

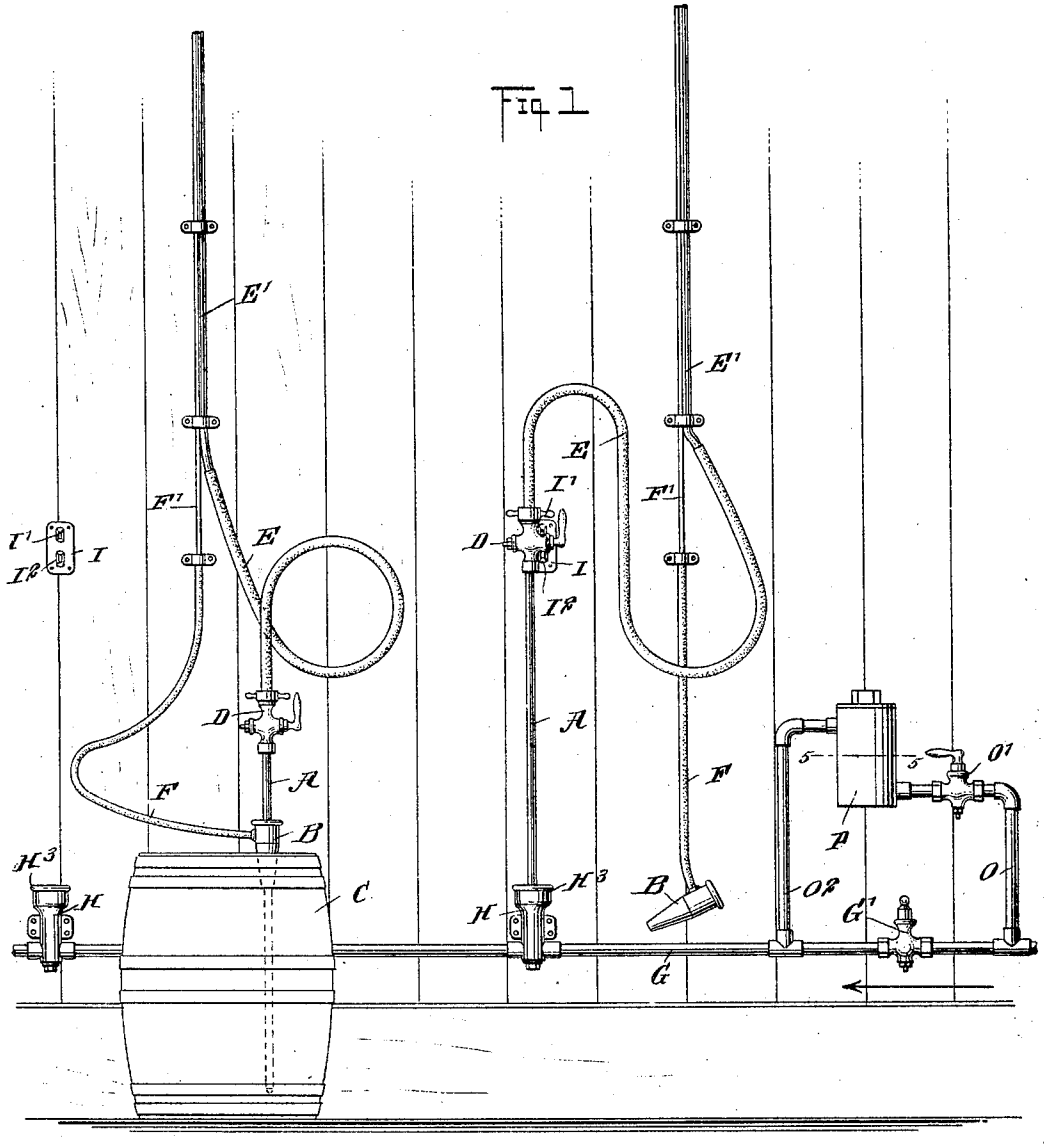
J. L. STEITZ.

PIPE CLEANER.

(Application filed June 17, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1



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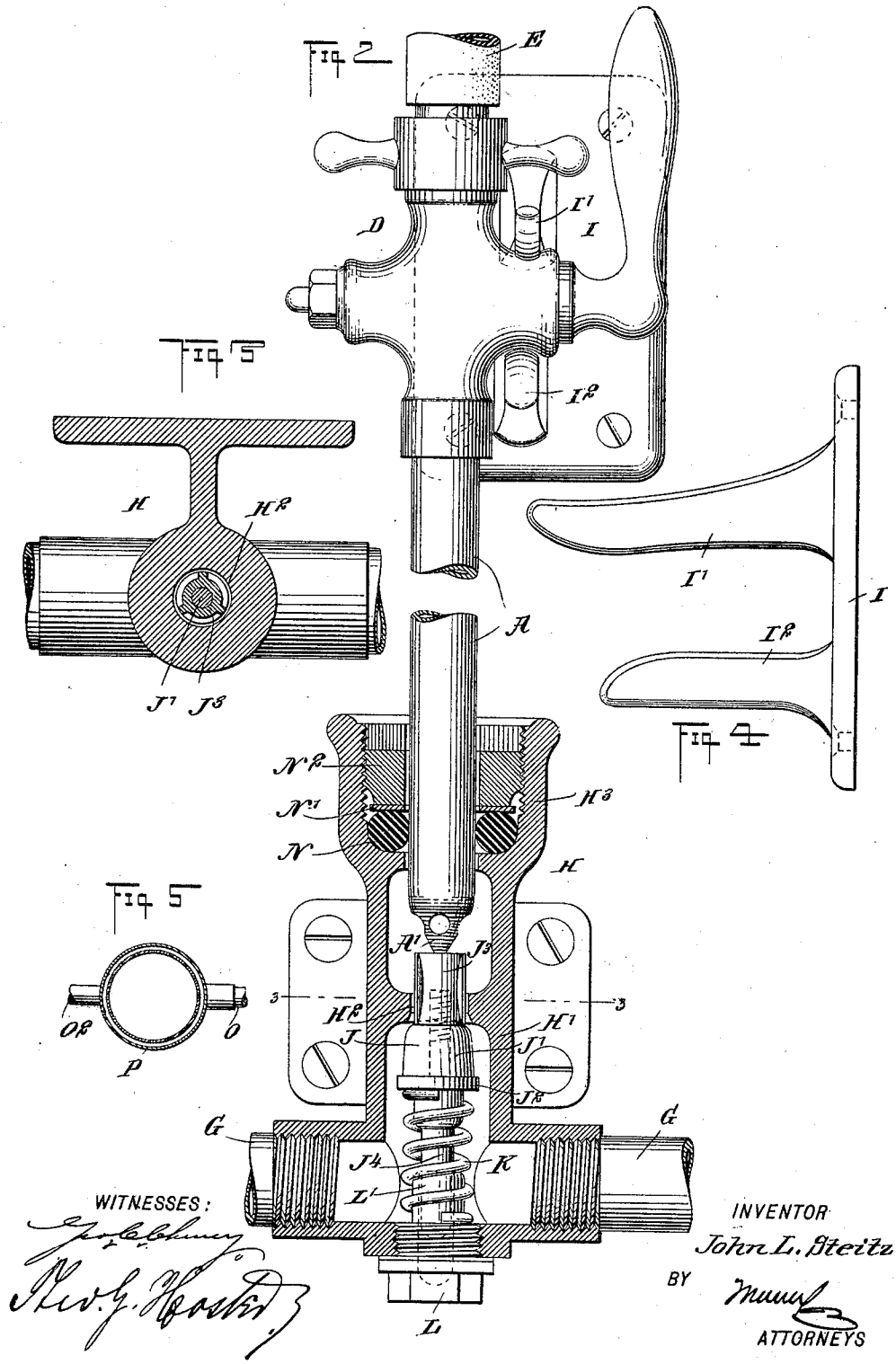

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UNITED STATES PATENT OFFICE.

JOHN L. STEITZ, OF CHICAGO, ILLINOIS.

PIPE-CLEANER.

SPECIFICATION forming part of Letters Patent No. 695,767, dated March 18, 1902.

Application filed June 17, 1901. Serial No. 64,867. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. STEITZ, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Pipe-Cleaner, of which the following is a full, clear, and exact description.

The invention relates to air-pressure devices for forcing beer, ale, and other liquids from a barrel or keg through the draft-pipe to the faucet.

The object of the invention is to provide a new and improved pipe-cleaner which is simple and durable in construction, readily applied, and arranged to thoroughly cleanse the pipe or draft-tube after a barrel or keg is emptied to render and keep the pipe as sweet as possible.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is an enlarged side elevation of the improvement with parts in section. Fig. 3 is a sectional plan view of the same on the line 3 3 of Fig. 2. Fig. 4 is an enlarged side elevation of the hanger for revolubly supporting the tapping-tube, and Fig. 5 is a sectional plan view of the vessel for containing the cleansing mixture.

The improvement, as illustrated in Fig. 1, is contained within an ice-box and is applied to the usual apparatus for forcing the liquid from a keg or barrel to the dispensing-faucet at the bar. The apparatus referred to consists, essentially, of the tapping-tube A, extending through the bung B into the barrel or keg C containing the beer, ale, or other liquid, and the said tapping-tube A is provided at its outer open end with the usual valve D, adapted to be opened and closed by the operator and coupled to the hose E, connected with the pipe E′ leading to the dispensing-faucet at the bar. The bung B is also connected with the hose F, connected with the pressure-pipe F′, through which passes air under pressure into the keg or barrel C to force the liquid therein through the tapping-tube A, the valve D, hose E, and pipe E′ to the dispensing-faucet.

When the barrel or keg C is empty, it is desirable to cleanse the tapping-tube A, the valve D, the hose E, and the pipe E′, as well as the dispensing-faucet, so as to keep these parts sweet. For this purpose the following arrangement is provided: In the ice-box containing the keg or barrel C and the parts enumerated is arranged a water-supply pipe G, connected in the usual manner with a water-supply, such as a city main or the like, and in the said pire G is arranged a self-closing supply-valve H, adapted to be opened by the tapping-tube A when the latter is inserted into the said valve H, as illustrated in Figs. 1 and 2, so that the water or other cleansing liquid passing through the pipe G under pressure flows through the open valve H into the draft-tube A and then through the valve D, the hose E, and the pipe E′ to and through the dispensing-faucet at the bar, so as to cleanse the said parts previous to using the tapping-tube A on another full keg or barrel.

In order to hold the tapping-tube A in position while engaging the valve H, I provide a hanger I, secured to the wall of the ice-box and having prongs I′ and I^2, located one above the other and adapted to be engaged by the valve-body D to cause the tapping-tube A to hold the valve H in an open position.

The valve H consists, essentially, of a valve-body H′, containing a valve-seat H^2, on which is normally seated a valve-plug J, preferably of rubber, and held on a valve-stem J′ with the lower end of the valve-plug J seated on a flange J^2, integral with the stem J′. (See Fig. 2.) On the upper end of the stem J′ screws a nut J^3, having its sides cut out and fitted against the wall of the valve-seat H^2, so as to guide the valve-plug J in its up-and-down movement. The top of the nut J^3 is adapted to be engaged by the lower pointed and apertured end A′ of the tapping-tube A, so that when the latter is moved downward it presses against the nut J^3 and causes the valve-plug J to slide off of its seat in a downward direction and against the tension of a spring K, pressing at its upper end against the under side of the flange J^2. The

lower end of the spring K rests on a block L, screwed into the bottom of the valve-body H′, and the upper end of the block L is reduced to form an offset L′, in which slides loosely the lower end J^4 of the valve-stem J′.

The top of the upper end of the valve-body H′ is made in the shape of a cup H^3, which contains a rubber gasket N, pressed on at the top by a metallic washer N′, against which screws the nut N^2, screwing in an internal thread on the cup H^3. By screwing the nut N^2 downward the washer N′ presses the gasket N, so as to firmly and snugly engage the wall of the tapping-tube A to prevent leakage at this point.

The valve-body H′ is preferably secured to the wall of the ice-box, and the hanger I is likewise fastened to the ice-box above the body H′, so that when the operator passes the lower end of the tapping-tube A into the valve-body H′ to bring the point A′ in engagement with the top of the nut J^3 then the valve D stands in such relation to the prongs I′ and I^2 that a transverse pressure will engage the body of the valve D with the upper prong I′, and as the front end thereof is rounded off it is evident that the valve D, and consequently the tapping-tube A, is forced downward, and in moving in this direction the valve-plug J is pushed off of its seat against the tension of the spring K. When this takes place, the water or other cleansing liquid in the pipe G passes through the open valve-seat H^2 into the tapping-tube A and up through the same and through the valve, the hose E, and the pipe E′ to cleanse the same, as previously mentioned.

The prong I′ is slightly curved upward at or near the middle of its bottom edge, as is plainly indicated in Fig. 4, so as to hold the valve D against accidental outward movement, it being understood that the front end of the prong I′ is curved downwardly and outwardly, so as to readily guide the body of the valve D to the said upwardly-curved portion of the prong I′.

When the desired quantity of the cleansing liquid has passed through the said parts and thoroughly rinsed and cleansed the same, then the operator closes the valve D and then moves the valve transversely out of engagement with the prong I′ and pulls the tapping-tube A out of engagement with the valve H to allow the spring K to move the valve J to its seat, so that the cleansing liquid ceases to flow from the pipe G to the tapping-tube A. The operator then lifts the tapping-tube A to disengage the lower end thereof from the gasket N, the washer N′, and the nut N^2. The hose E can now be uncoupled from the valve D to let the water contained in the hose and the pipe E′ run out, after which the hose is again coupled to the valve D, and the tapping-tube A is now ready for insertion into the bung B of a filled keg or barrel.

When it is desired to send a cleansing compound—such as water and soda, for instance—through the parts to be cleaned, then the following attachment is made to the pipe G: A valve G′ is located in the pipe G, and a pipe O is connected with the pipe G at one side of the entrance to the valve G′, and this pipe O contains a valve O′ and is connected with a vessel P, containing soda or other cleansing compound. The vessel P is connected by a pipe O^2 with the pipe G at the exit side of the valve G′, so that when the valve G′ is closed and the valve O′ is opened then the water under pressure from the water-main or other supply passes through the pipe O into the vessel P and forms a solution with the cleansing compound therein, and this solution passes from the vessel P through the pipe O^2 into the forward end of the pipe G and then through the valve H into the tapping-tube A and the parts connected therewith, as previously explained, so as to cleanse the same.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A pipe-cleaner, comprising a self-closing supply-valve connected with the supply of a cleansing liquid under pressure, the valve being arranged to receive the tapping-tube which, when forced downward, opens the valve and connects the supply with the tapping-tube, so that the cleansing liquid flows through the tapping-tube and the parts connected therewith and means whereby the tapping-tube will be held in position to hold the valve open, as set forth.

2. A pipe-cleaner, comprising a self-closing supply-valve connected with the supply of a cleansing liquid under pressure, a tapping-tube having a manually-controlled valve and adapted to engage the said supply-valve to open the same, and means for holding the said tapping-tube in position in the supply-valve to hold the latter open, as set forth.

3. A pipe-cleaner, comprising a self-closing supply-valve connected with the supply of a cleansing liquid under pressure, a tapping-tube for engaging and opening the said supply-valve, and a hanger for the said tapping-tube and arranged to move the latter downward on engaging the tapping-tube with the hanger, as set forth.

4. A pipe-cleaner, having a supply-pipe connected with the supply of a cleansing liquid under pressure, a valve-body connected with the said pipe and having a valve-seat, a spring-pressed valve held normally on the said seat, a tapping-tube adapted to engage the said valve-body to move the said valve off its seat to allow the cleansing liquid to flow from the pipe through the valve-seat into the tapping-tube and a hanger with which the tapping-tube engages to hold the valve open, as set forth.

5. A pipe-cleaner, comprising a self-closing supply-valve connected with the supply of a cleansing liquid under pressure, a tapping-tube for engaging and opening the said sup-

ply-valve, a valve in the tube, a forked hanger between the members of which the valve of the tapping-tube passes to move the latter downward and open the valve, and means for rendering the said tapping-tube water-tight when inserted into the valve-body, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN L. STEITZ.

Witnesses:
ARTHUR COOK,
EUGENE COOK, Jr.