

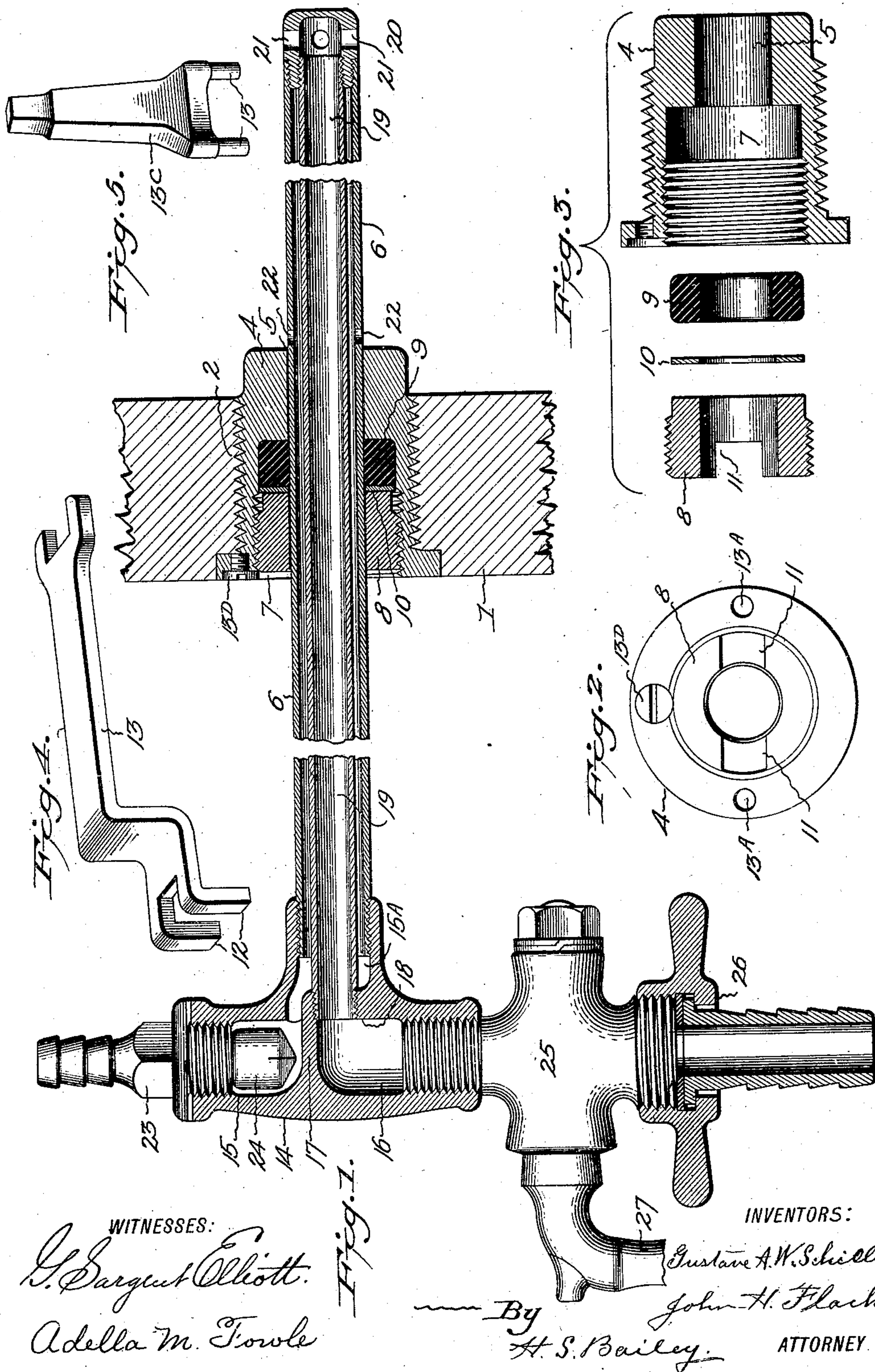
No. 842,343.

PATENTED JAN. 29, 1907.

G. A. W. SCHILLING & J. H. FLACH.

AIR INLET AND BEER OUTLET BUNG FOR BARRELS.

APPLICATION FILED FEB. 28, 1906.



UNITED STATES PATENT OFFICE.

GUSTAVE A. W. SCHILLING AND JOHN H. FLACH, OF DENVER, COLORADO, ASSIGNORS OF ONE-THIRD TO LOUIS BECKER, OF DENVER, COLORADO.

AIR-INLET AND BEER-OUTLET BUNG FOR BARRELS.

No. 842,343.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed February 28, 1906. Serial No. 303,424.

To all whom it may concern:

Be it known that we, GUSTAVE A. W. SCHILLING and JOHN H. FLACH, citizens of the United States of America, residing in the city and county of Denver and State of Colorado, have invented a new and useful Air-Inlet and Beer-Outlet Bung for Barrels, of which the following is a specification.

Our invention relates to improvements in the compressed-air inlet and bung-hole apparatus for beer-holding barrels and for other liquors that are kept on tap; and the objects of our invention are, first, to provide an improved adjustable air-inlet and removable bung for beer-barrels of different capacity; second, to provide a simple bung adapted to be threaded to the bung-holes of barrels and an improved air-inlet and beer-outlet valve-controlled pipe that is adapted to be held in barrels of different capacities by any predetermined part of the length of said air-inlet and beer-outlet tubes, and, third, to provide a simple inexpensive air-inlet and beer-drawing apparatus that can be changed from one barrel to another. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal sectional view illustrating the application of our improved device. Fig. 2 is a front elevation of the improved bung. Fig. 3 is sectional view of the several parts constituting the bung. Fig. 4 is a perspective view of the wrench used for removing the nut which is threaded within the bung. Fig. 5 is a perspective view of a device for removing the bung.

Similar letters of reference refer to similar parts throughout the several views.

Referring to the drawings, the numeral 1 designates a fragmentary part of the head of a beer-barrel which is provided with a bung-hole 2, in which a thread is cut. A slight enlarged counterbore is also preferably formed at the entrance of the bung-hole. In this bung-hole we thread a plug 4, which is provided with a flange end that fits in the counterbore of the bung hole. This bung is provided with an axial aperture 5, which fits slidably a pipe 6, that extends slidably through the bung. This aperture is formed through the lower end of the bung, the upper

portion being provided with a counterbore 7, the entrance to which is threaded and a nut 8 is threaded to it. Between the bottom of this nut and the bottom of the counterbore we place a rubber washer 9, which rests on the bottom of the counterbore, and a metal washer 10, which is placed between the rubber washer and the bottom of the nut. This nut is also provided with an axial aperture that fits slidably the pipe 6. The nut is also provided with two diametrically-formed slots 11, which extend from the periphery of its axial hole radially into its surface and are adapted to receive the fingers 12 of a forked wrench 13, which are separated far enough apart to straddle the pipe 6.

The flange of the bung is provided with two oppositely-arranged holes 13^A, in which pins 13^B, that are formed on a wrench 13^C, fit, which enables the bung to be screwed into or out of the barrel. This wrench is adapted to be used in a bit-stock. 13^D is a screw that is threaded into the flange of the bung in a position so that its head will lap over onto the nut 8, so as to prevent the nut 8 from unscrewing from the bung whenever it is removed from one barrel and before it is placed in another barrel.

The pipe 6 extends through the bung a predetermined distance, which depends on whether it is to be applied to barrels, half-barrels, and kegs, it being made to extend to the bottom of these sizes of barrels. This tube extends through and above the bung and is threaded to a pipe T-fitting 14, to the central entrance of which it is threaded. This T-fitting 14 is of special construction interiorly, and it contains an entrance-passage 15 and an outlet 16, which enter its opposite ends. These entrances are separated by a partition 17, which projects down into one side of the center entrance, to which the pipe 6 is connected, but at a short space from its side sufficient to form a passage from the entrance 15 into the center entrance 15^A to the T 14 and to the pipe 6.

A diaphragm 18 is formed across the center inlet at its junction with the end entrances, and a threaded aperture is formed through it, in which a pipe 19 is threaded. This pipe 19 is enough smaller in diameter than the pipe 6 to extend loosely through it and leave a small annular space all around it, and it is also

made a little longer than the pipe 6, and it connects with the end outlet of the T 14, while the pipe 6 connects with the center inlet 15^A of the T. The lower ends of these two pipes are threaded to a plug 20, which has a central recess in it that connects with the pipe 19, and it is also provided with four holes 21, which are formed diametrically through it and into its central recess. These holes permit the beer to flow into the pipe 19 and into and through the outlet 16 of the T-fitting, as will be more fully explained hereinafter.

The pipe 6 is an air-feed pipe. Its lower end is closed by the plug 20; but it is provided with a circumferential row of air-outlet holes 22 at a predetermined point in its length relative to the size of the beer-barrel it is to be placed in; but they are placed in each case close to the bung, and the lower ends of the tubes 6 and 19 extend to the bottom of the keg. To the inlet 15 of the T a hose-coupling 23 is threaded, which is adapted to be connected by a hose to a supply of compressed air, and to the inner end of the hose-coupling an automatically-operating rubber valve 24 is secured, which is of a type in use for this purpose and does not form in itself a part of our invention. To the outlet 16 of the T 14 a spigot 25 is threaded, which is provided with an outlet which is connected to a hose-coupling 26 and is controlled by a hand operating-valve 27 and is the beer-drawing outlet.

The operation is as follows: The bung is screwed into the threaded bung-hole in a beer-barrel, half-barrel, or keg filled with beer, its aperture 5 being closed by a cork to prevent the escape of the beer. Now when it is desired to tap the barrel the nut 8 is loosened and the air and beer tubes are pressed into the rubber washer and the bung, so as to dislodge the cork, and are pushed through until they rest on or close to the bottom head of the barrel, half-barrel, or keg, as the case may be, and as the air-holes in the air-pipe have been formed for either a full barrel or a half-barrel or a keg they will be located just below the bung and close to it, either just above or at the edge of the beer in the barrel or keg. The nut is then screwed against the rubber washer and compressed the rubber washer against the air-tube, making an air and beer tight joint. A supply of compressed air is then connected to the air-inlet end 15 of the T 14, and the air flows through the rubber valve 24 and the tube 6 and out of the air-holes 22 into the barrel or keg of beer, charging it with air until it has reached the desired pressure, and the beer under this pressure flows into the pipe 19 and through the outlet of the T to the spigot, where it is ready to be drawn when wanted.

After the beer has been sufficiently charged with air the connection with the supply is

disconnected, and the rubber valve 24 is closed by the back pressure of the air and beer.

Our invention is simple, durable, and practicable, and can be interchanged from one barrel to another.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination with a beer-barrel having a threaded bung-hole, of a bung threaded to said bung-hole, an air-inlet pipe extending slidably through said bung, a T-fitting threaded to said pipe having an independent inlet and outlet, a beer-supply pipe secured to said T's outlet and depending from said T into and through said air-pipe to its opposite end, a plug threaded to the ends of said two pipes provided with beer-inlet apertures entering said beer-pipe, and adapted to close the entrance to said air-pipe, means for admitting air into said air-pipe adjacent to said bung, a faucet connected to the discharge-outlet of said T-fitting and a valve-controlled inlet to said T arranged and adapted to be connected to a supply of compressed air, and means connected to said bung for clamping said air-pipe against leakage, and means for admitting air into said air-pipe at predetermined portions of its length, as specified.

2. In a device of the character specified, the combination with the beer-barrel having a bung-hole, of the threaded plug, the nut threaded thereto, the rubber washer in said plug, the air-pipe extending through said nut and washer and bung and adapted to be clamped to said bung by said nut and washer, and with the beer-pipe and T-pipe fitting connected thereto, said air-pipe provided with an oppositely-arranged inlet and outlet aperture, a partition in said T separating said inlet and outlet passages, a central inlet connecting with said inlet-aperture of said T-pipe fitting, and threaded to said air-pipe, a beer-drawing pipe connected to the outlet-passage of said T-pipe fitting, a faucet connected to the outlet of said T, an automatic air-inlet valve connected to the inlet end of said T, means for admitting air into said air-pipe adjacent to said bung, a plug secured to the ends of said air and beer pipes and beer-inlet apertures in said plug, as specified.

3. In a device of the character specified, a bung having a threaded chamber, and a circular aperture extending from the chamber axially through the bung; a rubber washer in the bottom of the chamber having an aperture registering with the bung-aperture; an apertured nut threaded within the chamber against the washer; a T having inlet and outlet openings separated by a partition, and a central opening common to both; a liquid-receiving pipe which passes through

the central opening and communicates with
the outlet; an air-inlet pipe surrounding the
liquid-receiving pipe and threaded to the
central opening so as to communicate with
5 the inlet-opening, said pipes having a com-
mon cap which closes the outer pipe, and
is provided with apertures communicating
with the inner pipe, said pipes being passed
through said nut, washer, and bung, said
10 outer pipe having apertures occurring adja-

cent to the inner end of the bung, and means
whereby the nut is turned to compress the
rubber washer around the pipe.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

GUSTAVE A. W. SCHILLING.

JOHN H. FLACH.

Witnesses:

G. SARGENT ELLIOTT,
LOUIS BECKER