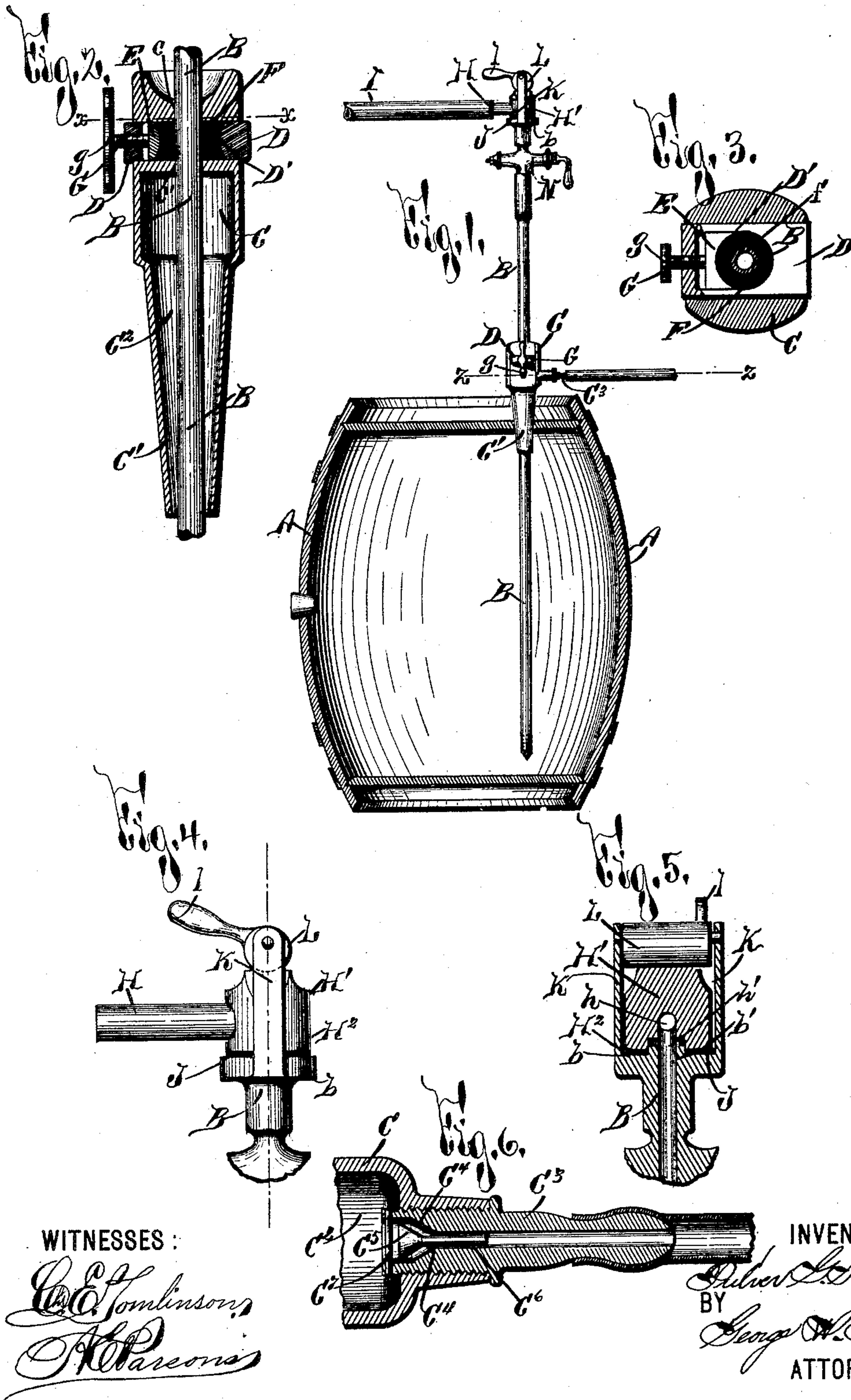


(No Model.)

P. G. HERMANCE.
TAPPING APPARATUS.

No. 459,138.

Patented Sept. 8, 1891.



WITNESSES :

C. C. Tomlinson
A. Parsons

INVENTOR

P. G. Hermance
BY
George W. Hey
ATTORNEY.

UNITED STATES PATENT OFFICE.

PULVER G. HERMANCÉ, OF SYRACUSE, NEW YORK.

TAPPING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 459,138, dated September 8, 1891.

Application filed July 13, 1889. Serial No. 317,445. (No model.)

To all whom it may concern:

Be it known that I, PULVER G. HERMANCÉ, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in a Tapping Apparatus, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to an improved tapping apparatus for withdrawing the contents of barrels and other liquid-containing receptacles; and it has for its object the production of a simple and effective device which can be readily removed from one barrel to another with the exercise of a minimum amount of care, skill, and time; and to this end it consists, essentially, in a withdrawing-pipe, and a bung of novel construction for fitting around the withdrawing-pipe and making an air-tight connection therewith.

It also consists in the detail construction and arrangement of the parts, all as hereinafter more fully described, and pointed out in the claims.

In describing my invention reference is had to the accompanying drawings, forming a part of this specification, in which like letters indicate corresponding parts in all the views.

Figure 1 is a longitudinal section of a barrel and my tapping device. Fig. 2 represents a longitudinal section of the bung with the withdrawing or tapping pipe operatively secured therein. Fig. 3 is a sectional view taken on line $x x$, Fig. 2. Fig. 4 is an enlarged elevation of the outlet-nipple of the tapping-pipe. Fig. 5 is a longitudinal vertical section taken on line $y y$, Fig. 4; and Fig. 6 is a horizontal section taken on line $z z$, Fig. 1.

A represents a suitable liquid-containing receptacle of any desired form or construction, which is here represented as an ordinary beer-barrel. The tapping or withdrawing pipe B may also be of suitable size and construction, and is here shown as supported in and extending vertically through a bung C. One extremity C' of the bung C is of the ordinary tapering construction, in order that the same may be tightly driven into the bung-hole in the head of the barrel and effect an air-tight joint therewith.

In order to produce an air-tight joint of the pipe B within the bung C, I provide the device D. As illustrated, this device consists of a plate formed with an opening D', having a head E guided in one extremity of said opening. The opposite extremity of this opening is preferably rounding and the adjacent face of the head E is also rounding. Interposed between said adjacent rounding faces of the head E and the opening D' is the packing-ring F, formed of rubber or other suitable flexible material. Bearing against the head E is an adjusting-screw G, having a suitable handle or lever g for operating the same. The opening f of the ring F is so arranged within the bung that it is aligned with the longitudinal opening therethrough. When the bung has been driven into the barrel, the pipe is forced through the longitudinal opening C² and through the opening f in the rubber ring F. The lower extremity of said pipe then drives out into the barrel the ordinary cork secured at the inner extremity of said bung. Immediately after the pipe B is forced to the desired position the screw G is operated to tightly compress the packing-ring F against the pipe B and a positive air-tight joint is quickly effected therewith. In order to insure the retention of the rubber ring F, I preferably form the adjacent faces of the head E and the opening D' of convex shape, and when the screw G compresses the rubber ring the same is firmly held in position, with the convex portion of said faces compressed into the rubber. By the use of the device G it is only necessary to have a bearing c and c' respectively above and below said clamping device to guide the pipe B, and it is unnecessary that these bearings closely fit said pipe. The remaining lower portion of the bung may be entirely cored out, as illustrated, thus greatly cheapening the cost of production and also allowing of the ready entrance of air within the barrel. The inlet-nipple C³ is preferably detachable from the bung C, and screwing into a boss on the outside of said bung opens into the cored chamber around the pipe B and below the air-tight joint of said pipe. The inner extremity of said nipple is provided with a valve-seat C⁴, against which bears a valve C⁵, having a stem C⁶ guided in

the inlet-opening of the nipple C³. A pin or other stop C⁶ is placed across the opening in which the valve C⁵ works in order to prevent its forcing into the barrel.

5 Connected to the nipple C³ is a suitable air-pipe, and when air is driven therethrough the valve is forced away from its seat, allowing the entrance of the air. When the force of the incoming air is diminished, the air-
10 pressure within the barrel immediately forces said valve against its seat, preventing the discharge of the air.

The pipe B is provided with an outlet-nipple H, which enters the pipe I. This pipe I
15 is connected to a suitable device for conducting the liquid from the barrel. It is frequently the case that the construction of said pipe renders the bending thereof extremely difficult, and I obviate the necessity of this
20 bending by constructing the outlet-nipple H detachable from the pipe B. Projecting upwardly from the upper extremity of said pipe B are arms K. At the shoulder or face *b*
25 opening of said pipe is provided with the upwardly-projecting annular shoulder *b'*. The outlet-nipple H is formed with a head H', having a withdrawing-opening *h* registering with the like opening of the pipe B. In the
30 lower face of said head H' is a recess *h'*, registering with the shoulder *b'* of the pipe B.

Interposed between the face *b* and the adjacent face H² of the head H' is a packing-ring or washer J, of rubber or other suitable
35 material.

Pivoted to the arms K is the eccentric L, which bears upon the head H' and forces the same toward the face *b*, tightly impinging the washer J and effecting an air-tight joint
40 at the union of the outlet-nipple H with the pipe B. This eccentric is preferably provided with a lever *l*, in order to swing the same into and out of operative position. When the lever *l* is swung backward from
45 the position shown in Fig. 4, it will be seen that the head H' can readily be elevated above the shoulder *b'* and that said outlet-nipple may be withdrawn from its pipe B. After this operation the remaining portion of
50 the tapping device can be withdrawn from the barrel, and after being inserted into a

fresh barrel the outlet-nipple H can then be placed in operative position upon the pipe B and secured thereto by the eccentric L.

At any desirable position upon the pipe B, I 55 provide the valve M, of suitable size and construction, to regulate the flow of the liquid from said pipe.

The operation of my invention will be readily perceived from the foregoing, and it will 60 be understood that the tapping apparatus can be quickly and easily withdrawn from a barrel without the exercise of skill, and can then be readily inserted into an untapped barrel.

The parts of my invention are simple in 65 construction and are cheaply and readily manufactured; but it will be understood that considerable change may be made in the relative construction and arrangement thereof without departing from the spirit of my in- 70 vention.

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

1. The combination of a bung, a plate with- 75 in said bung and provided with an opening, a packing-ring in said opening, a pipe passed through the bung and the opening in the packing-ring, and a compression device for forcing the washer or ring against said pipe, 80 substantially as and for the purpose specified.

2. The combination of a bung, a plate having an opening, a head guided in said opening, with one face of said opening and the 85 adjacent face of the head formed of rounding contour, a pipe passed between said faces of the head and opening, a flexible packing ring or washer around said pipe, and a screw or equivalent bearing against said head for 90 forcing the washer-packing against the pipe, substantially as specified.

In testimony whereof I have hereunto signed my name in the presence of two attesting witnesses, at Syracuse, in the county 95 of Onondaga, in the State of New York, this 9th day of July, 1889.

PULVER G. HERMANCE.

Witnesses:

CLARK H. NORTON,
A. E. PARSONS.