(No Model.)

P. E. DUNN & W. H. PARTRIDGE.

AIR AND BEER CONNECTION FOR BEER CASKS.

No. 575,545. Patented Jan. 19, 1897.

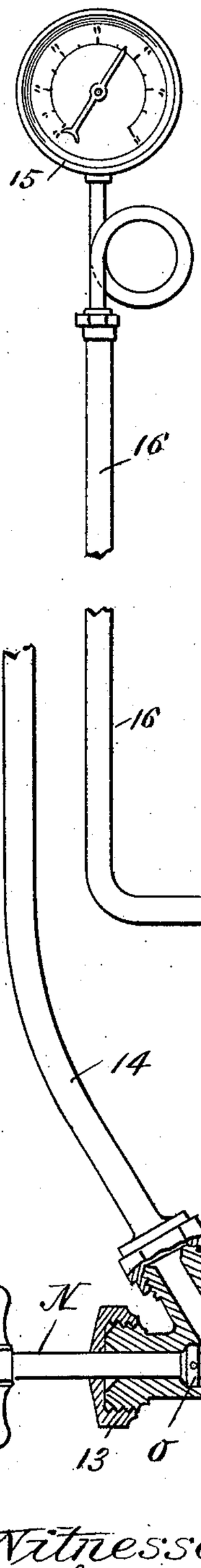

Fig. 1.

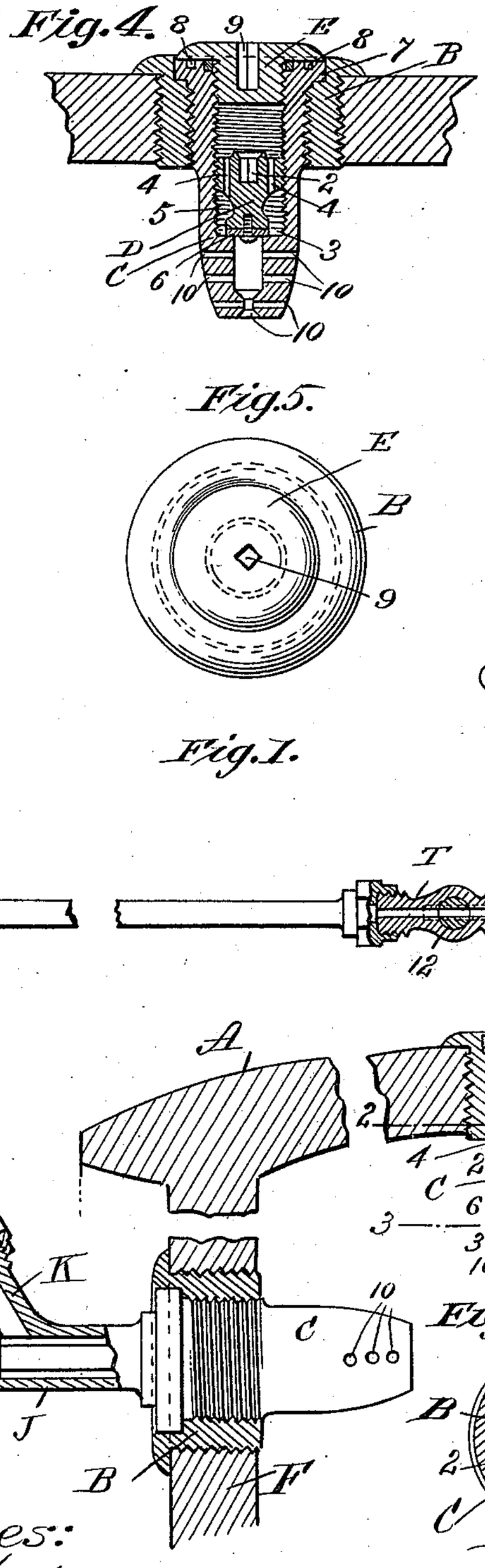

Fig. 2.

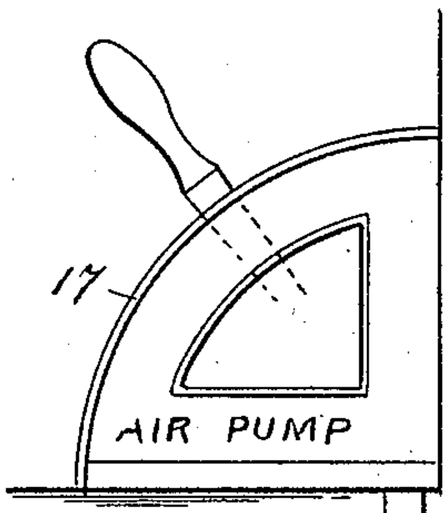

Fig. 5.

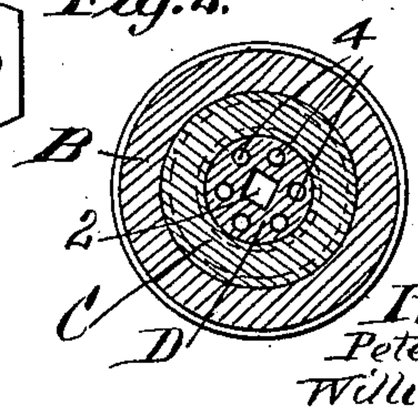

Fig. 4.

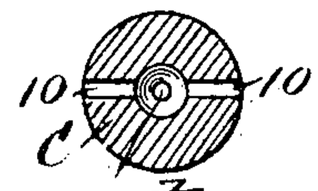

Fig. 3.

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AIR AND BEER CONNECTION FOR BEER-CASKS.

SPECIFICATION forming part of Letters Patent No. 575,545, dated January 19, 1897.

Application filed January 11, 1896. Serial No. 575,061. (No model.)

To all whom it may concern:

Be it known that we, PETER E. DUNN and WILLIAM H. PARTRIDGE, citizens of the United States of America, residing at Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Attachments and Air and Beer Connections for Beer-Casks, of which the following is a specification.

This invention relates to devices for hermetically closing the outlets or inlets to beer-casks and to attachments for said devices for controlling the discharge of beer therefrom, and to a system of gage and pump connections attached to said devices, the object being to provide devices of improved construction for closing beer-cask openings for transportation and for connection with said openings for operating the devices thereof and for governing the discharge of beer from said casks and the introduction of air-pressure thereto; and the invention consists in the peculiar construction of said devices, apparatus, and connections, all as fully described, and more particularly pointed out in the claim.

In the drawings forming part of this specification, Figure 1 is a sectional view of a portion of a beer-cask, showing devices and apparatus connected thereto, the bilge and one head thereof for admitting air thereto and for drawing beer therefrom, constructed according to our invention, this figure showing said apparatus and devices partly in sectional and partly in side elevation, as below described. Fig. 2 is a section on line 2 2, Fig. 1. Fig. 3 is a section on line 3 3, Fig. 1. Fig. 4 is a section of the bung containing a portion of a cask and a sectional view of a bung applied thereto and a longitudinal sectional view of said device for controlling the discharge of the contents of said cask or the admission of air-pressure thereto. Fig. 5 is a plan view of the devices shown in Fig. 4.

The within-described improved devices for closing the outlets or inlets of beer-casks are alike applicable to either the bilge for admitting air or the head of the same for drawing beer, as shown in the drawings, and are preferably applied and secured thereto by a screw connection with a metallic bung B, permanently attached to the cask in either or both of the said two positions. Said bung has an annular collar extending over the adjoining part of the cask, as shown. The said attachments for either the bilge or head of the cask for securely closing the same are structurally substantially identical and are made as follows:

In the drawings, C indicates a metallic valve-case, preferably of brass, of cylindrical tubular form. Said case C is externally screw-threaded to provide for screwing the same into said bung, and its inner wall is screw-threaded to receive the valve D, hereinafter described. The said valve-case has several beer-passages 10, or air, as its use may determine, through the inner end and sides, as shown, which communicate with the interior of said case. A valve-seat 3 is formed at the base of the chamber in said case. Spanner-holes 8 are formed in the outer end of said case for applying a spanner to turn the same to screw it into said bung. The said shoulder 7 on the case C is received into an annular recess in the bung B, as shown in Figs. 1 and 4. A cap E is provided to be screwed into the outer end of the case C when the cask is to be shipped from the brewery in a filled condition, as shown in said Fig. 4, and has a socket 9 therein to receive the end of a key by which it is unscrewed and so that it may be removed from the case C. The flange of said cap E is of a diameter sufficient to extend over the outer end of the case C, as shown, and completely cover the said spanner-holes 8 therein, thereby preventing the removal of the case from the bung until the cap E shall have been removed by a key which fits the said socket 9. A valve D, of cylindrical form, is adapted to be screwed into the said case C by the insertion into a socket 2 in its outer end of a suitable key, whereby the valve is turned so that its lower end, on which is a packing-ring 6, shall be brought against the valve-seat 3, thereby closing all passages leading into the case, as shown in Fig. 4, or whereby the valve shall be lifted from said seat, as shown in Fig. 1. The said valve D has an annular groove 5 around it just above its lower end, and the last-named part of the valve is made of less

diameter than its screw-threaded portion above, to the end that when the valve is lifted from its seat, as in Fig. 1, there may be a passage between the lower end of the valve and the walls of the case C which will permit beer which enters into the case C through the said passages 10 to flow upwardly, or to permit air to flow from the air-pump 17 into the cask, according to the position of the case in the cask A. A number of passages 4 are formed in the valve D, extending from the wall of said annular groove 5 therein through the valve, and beer or air is thereby permitted, when the valve is lifted from its seat as aforesaid, to flow through the valve. When the cask is filled at the brewery, the valve D is screwed down to its seat in the case C by means of any suitable key which will fit said key-socket in the valve, and the said cap E is then screwed into the case, as in Fig. 4, thus tightly closing the cask.

The fixtures or attachments which are connected with the bilge of the cask at the place where air is admitted and where the beer is to be drawn and sold consist of a hollow hub H or J, as the use requires, which is screwed into the outer end of the case C, when the cap E has been removed as aforesaid, and said hubs have one or more branches T thereon, as shown in Fig. 1. A stop-cock 12 is placed in each branch T, and the extremities of said branches T and K are provided with suitable couplings for connecting therewith pipes 14, 16, and 18, leading to a suitable air-pump 17 and to a pressure-gage 15, pipe 14 leading to a place for drawing beer from the cask. Within said hub H is placed a spindle N, having a handle thereon for turning the same, and on the inner end of said spindle is formed a part which is adapted to enter said socket 2 in the valve D. The spindle-passage in said hub H is larger than said spindle from the lower end thereof to a point somewhat above the air-passages in the said branches T, to the end that when the valve D is lifted from its seat, as in Fig. 1, there may be a free passage from the interior of the cask through the case C, and through said valve and hub, to the passages in said branches T, which connect with the hub H. On said spindle N is placed a packing-ring *o*, located above the said passages through the branches T, which has a suitable seat in the interior of the hub H, whereby the escape of air or gases from the beer-cask through the upper end of said hub is prevented. As a further safeguard against any leakage around said spindle M, a packing-nut 13 is screwed onto the outer extremity of said hub through which the spindle N extends.

When a cask of beer arrives at the place where the beer is to be drawn, the cap E is first removed from the case C, as aforesaid, and the hub H, from which the pipes 16 and 18 have been first disconnected, is, after shutting the stop-cocks 12 in branches T, screwed into the said case. The spindle N, which has a sliding movement in said hub, is then forced downwardly until its inner extremity shall have entered the socket 2 in the valve D, and then by turning said spindle the said valve is lifted from its seat, substantially as shown in Fig. 1. The said pipes 16 and 18 are then connected to the said branches T, and the stop-cocks or faucets being opened the parts are in position to admit of air being forced into the cask by the air-pump 17, and the pressure-gage 15 indicates the pressure that is exerted on the beer in the cask.

As aforesaid, the construction of the valve-case and its valve and the cap E therefor, which are placed in the end F of the cask, are substantially identical, as also is the spindle N and the hub J, which is applied to said case in the head of the cask. Therefore when the cask is to be further prepared for drawing beer therefrom the cap E is removed, as aforesaid, and the hub J is screwed onto the case C. The spindle N is then pushed into said hub J and into engagement with the valve in the case C, and said valve is screwed away from its seat by the action of turning said spindle, and the beer flows, as above described, through the passages 10 of the case, and through the said passages 4 in the valve D and through the hub itself, around the spindle N and through the branch K into the beer-delivery pipe 14, which is connected with any suitable faucet for drawing the beer, as may be demanded.

The above-referred-to two valve-cases C, with their valves D and spindles N, one for the bilge and one for the head or other suitable part of a cask from which beer may be drawn, together with the hubs H and J, connected to said valve-case, having, respectively, the branches T T and K, the connecting-pipes 14, 16, and 18, and an air-pump 17 and pressure-gage 15, constitute an improved system of air-pressure and beer-drawing connections of easy manipulation and effective for the object of its construction.

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

The improved system of air-pressure and beer-drawing connections for beer-casks herein described, consisting of the two valve-cases C, C, with their spindles N, N, and valves D, D, the hubs H, and J, and their branches T and K, the air-pump 17, and gage 15, pipes 18 and 16, connecting said gage and pump with said branches T, and a delivery-pipe 14, connected to said branch K, combined and operating substantially as set forth.

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