

(No Model.)

D. BEEBE.
FAUCET BUNG.

No. 534,708.

Patented Feb. 26, 1895.

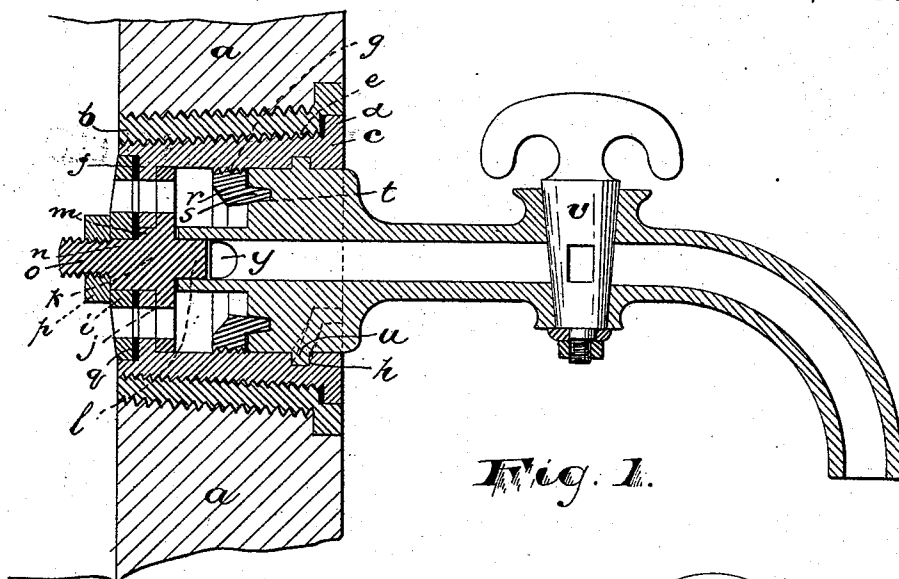


Fig. 1.

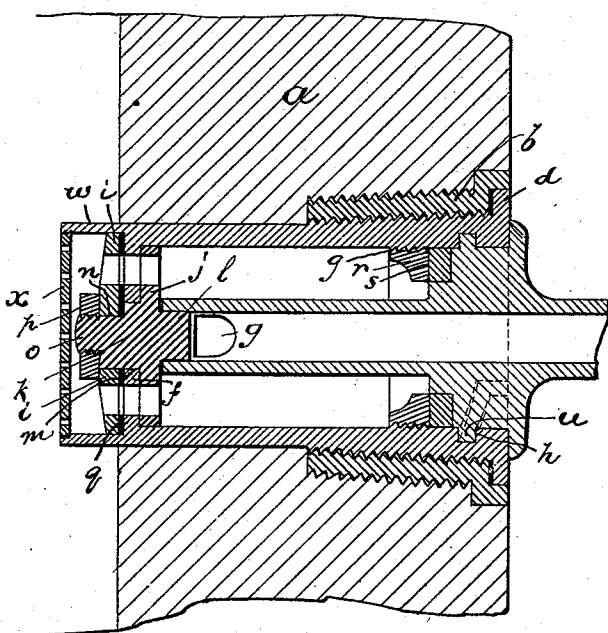


Fig. 2.

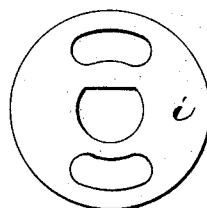


Fig. 3.

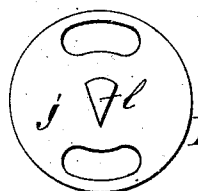


Fig. 4.

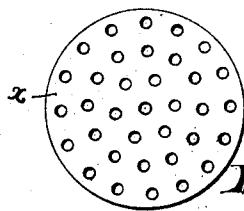


Fig. 5.

WITNESSES:

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UNITED STATES PATENT OFFICE.

DILLON BEEBE, OF NEWARK, NEW JERSEY.

FAUCET-BUNG.

SPECIFICATION forming part of Letters Patent No. 534,708, dated February 26, 1895.

Application filed April 4, 1894. Serial No. 506,254. (No model.)

To all whom it may concern:

Be it known that I, DILLON BEEBE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Faucet-Bungs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in that class of faucet bungs represented by the one shown in my prior application, filed February 8, 1894, Serial No. 499,434, the objects of the present improvements being to secure greater impermeability to the valves when subjected to the strain of the compressed fluid, to simplify and reduce the cost of construction, as compared to other devices now in use, and to secure other advantages and results, some of which will be referred to hereinafter.

The invention consists in the improved faucet bung and in the arrangements and combinations of the parts, substantially as will be hereinafter described and finally embraced in the clauses of the claim.

Referring to the accompanying drawings in which like letters of reference indicate corresponding parts in each of the views, Figure 1 is a central vertical section of the bung and key faucet, when in their relative positions, the parts being shown as formed for beer barrels more particularly. Fig. 2 is a similar view showing the parts formed for ale barrels; and Figs. 3, 4 and 5 are detail plans of an inner valve disk, an outer valve disk, and a screen, respectively.

In said drawings *a*, indicates the barrel; *b*, the bushing adapted to be arranged in the bung hole thereof, said bushing being interiorly and exteriorly threaded to receive the bung and to be secured in the barrel in the manner ordinary in this class of inventions.

c, indicates the bung, which is outwardly flanged as at *d*, and threaded as at *e*, to engage the bushing. Interiorly, at its inner end, said bung is provided with a perforated valve seat, *f*. Next toward the center of the inte-

rior and distant from the valve seat, are threads, *g*, on which a faucet seat may be adjustably arranged, and, toward the front end of the bung are disposed inclined grooves *h*. The valve seat is preferably flat on its opposite sides to receive the disk valves *i*, and *j*. The said disk valves are perforated in correspondence with the perforation in the valve seat, and are adapted to be turned simultaneously to open and cut off communication from the interior to the exterior of the barrel, as will be understood. The several perforations in the valve seat and disks are formed at points a greater distance from the axial center of the valve than the outer periphery of the key end of the faucet, the disks being enlarged in diameter to provide such arrangement. The perforations may thus be made more ample in passage capacity to admit a freer flow than if the passages were nearer the axial center and lead the fluid directly into the faucet passage as in certain devices heretofore provided.

The bung chamber outside of the key end of the faucet, when the same is in place, and between the valve seat and the forward faucet seat is also of ample capacity to receive the flow from the several or plurality of large valve passages and store a limited amount of fluid therein and transmit a steady flow into and through the large opening, *y*, in the side of the faucet forward of its key end, without producing a too sharp change in the direction of flow. By this construction, the fluid is given an easy and full flow through the faucet, the openings are capacious and are not easily clogged by solid matter contained in the fluid, and withal, and notwithstanding the distance of the valve openings from the center, the flow is fully and completely checked by the oppositely disposed disks bearing on the sides of the valve seat.

The capacity of the large valve openings, outside bung chamber and passage, *y*, being substantially equal to or greater than the passage through the faucet, the flow through the latter is rendered full and yet free from bubbles or "splutter."

The interior disk valve *i*, is formed integral with a spindle or hub *k*, the said spindle or hub being, at its outer end, angular as at *l*, (Fig 4) to receive the key end of the faucet. Back of this end, the said hub is provided with the

outer disk *j*. Back of this, in turn, said hub provides a bearing *m*, to enter the central opening in the valve seat, the said bearing admitting of a pivotal operation of the valves.

5 Back of this again, as at *n*, the said hub provides a bearing for the inner valve *i*, the said bearings being shaped to prevent independent pivotal movement of the valve. At the inner extremity, as at *o*, the hub is threaded to receive the nut *p*, by means of which the disks are held in close or impervious relation to the valve seat. The inner valve disk serves as a washer for the nut, as well as giving increased impermeability to the valve. I prefer to provide the engaging surface of the inner valve disk with a packing *q*. By employing the inner and outer valve disks in relation to the one valve seat as described, I secure greater engaging surface of valves and

20 valve seats, so that there is less opportunity for leaking because of imperfect engagement or interference produced by the introduction of extraneous matters tending to hold the surfaces apart. The inner valve, *i*, takes the strain or pressure of the compressed fluids, and relieves the outer valve of the same, so that the said outer valve simply serves in the event of the inner valve being imperfect, the purpose of preventing the escape of fluid due to leakage. To enable the outer disk valve to be arranged in relation to the seat as described, and yet to provide the bung with a seat against which the faucet may bear and produce an impervious joint, I have formed on the interior of the bung, forward of the valve seat, the threads, *g*, before referred to, on which is secured a removable and adjustable faucet seat ring, *r*, which secures with its packing, an impermeable joint of faucet and bung, and

40 lies considerably distant from the valve seat, so as to form a chamber between the faucet seat and valve, through which the fluid passes to the perforated side of the faucet. Said ring at its inner edge is turned outwardly, as at *s*, in the construction adapted for beer barrels, so as to enter into close and impervious engagement with a packing ring arranged in an annular groove, *t*, in the faucet. Said ring may, however, have a flat bearing surface as

50 in Fig. 2 for use in connection with ale barrels where the axial length of the bung may be considerable; but where, as in the case of beer barrels, the said axial length must be limited and the space for the several operating parts is contracted, I prefer the construction shown in Fig. 1. Here, it may be observed, the faucet seat ring *r*, is reamed out or dished back of the outwardly turned edge, and thus an enlarged chamber or passage to the faucet opening, *y*, is formed so that the flow will not be retarded, and as the opening *y*, lies within the said chamber or passage when in use, the key end of the faucet can be made very short, and the axial length of the

65 bung reduced. The several perforations in the valve seat and disks are formed at points a greater distance from the axial center of the

valve than the outer periphery of the key end of the faucet, the disks being enlarged in diameter to provide such an arrangement. 70 The perforation may thus be made more ample in passage capacity to admit a freer flow than if the passages were nearer the axial center and lead the fluid directly into the faucet passage as in certain devices heretofore provided. Outside of said ring *r*, the bung is provided with inclined grooves such as have been referred to heretofore in my prior application, and these receive lugs, *u*, on the faucet, so that when the said lugs are inserted in said grooves, and the faucet is turned, the latter is brought into close engagement with the faucet seat *s*, so that there can be no escape of fluid through the joint. 80

The inner or key end of the faucet is provided with an opening or aperture, corresponding more or less closely in shape to the angular end, *l*, of the valve hub, so that, when the faucet is inserted into the bung, it is guided into such relation to the end *l*, as that, when the faucet is turned, it also turns the valve, as will be understood. 85

The faucet is provided with the ordinary spigot, *v*, adapted to turn off the outflow when the bung valves are open. 95

When the bung is to be employed in connection with an ale barrel, and I desire to screen the fluid, I prefer to form, at the end of the bung, a threaded flange *w*, and, in the same, I screw a perforated disk *x*, which covers the openings through the valves as will be understood. 100

In operating the device, the same being closed, I first insert the faucet and turn the same ninety degrees more or less, which action throws the said faucet into impervious relation to the seat *s*, and the valves to their opened positions. The fluid from the barrel is thus free to flow through openings in the valves to the opening *y*, in the faucet. A reverse action closes said valves and brings the faucet to a position allowing a removal, all as will be understood. 110

Having thus described my invention, what I claim as new is— 115

1. In a faucet for casks, the combination of a bung having, near its inner end, a perforated valve seat, and threads, *g*, forward of said seat, a hub having disks extending on opposite sides of the valve seat and each of said disks having perforations coinciding with those in the valve seat, and lying beyond the radial point of distance of the key end of the faucet from the axial center of the device, said disks both turning simultaneously with the hub to and from open relation with said seat, and allowing an outflow to the chamber outside of said key end, a faucet seat forward of the outer valve disk and at a distance therefrom, said chamber being formed between, and a faucet, having a key-end engaging said hub, a side passage, *y*, forward of said key end, and opening from the said chamber into the faucet, a seat or bearing, *r*, to en-

gage and form an impervious joint with the faucet, and means for forcing said faucet into impervious relation to the faucet seat, all substantially as set forth.

5 2. In a faucet for casks, the combination of a bung having near its rear end, a valve seat and forward of said seat threads, *g*, and bearings, *h*, a hub, having a disk valve on the inner side of said valve seat toward said threads
10 and a head turning said disk valve to and from open relation, and an adjustable faucet seat arranged on said screw threads at a distance from said inner disk valve, a chamber being formed between, and a faucet having a
15 key end, a lateral opening into said chamber, a flange adapted to bear imperviously upon said adjustable faucet seat and a bearing to engage the bearing, *h*, and force the faucet into impervious contact, substantially as set
20 forth.

3. In a faucet for casks, the combination of a bung having a valve seat near its inner end,

faucet retaining bearings near its outer end, and, at an intermediate point, a faucet seat having a dished inner surface and, upon its
25 outer surface, a projecting annular flange, the faucet seat being so placed as to leave a chamber between it and the valve seat with a disk valve engaging said valve seat provided
30 with a head in said chamber whereby it may be turned, and with a faucet constructed to engage said faucet-retaining bearings and having a key end to engage said head, lateral
35 ports communicating with said chamber, and a face forward of said ports in which is an annular recess to engage the flange on the faucet seat, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of March, 1894.

DILLON BEEBE.

Witnesses:

CHARLES H. PELL,
LOUISA BROWNE.