No. 633,519. Patented Sept. 19, 1899.

W. KIRCHHOFF.

BUNG FOR BEER BARRELS.

(Application filed May 13, 1899.)

(No Model.)

Fig. 1.

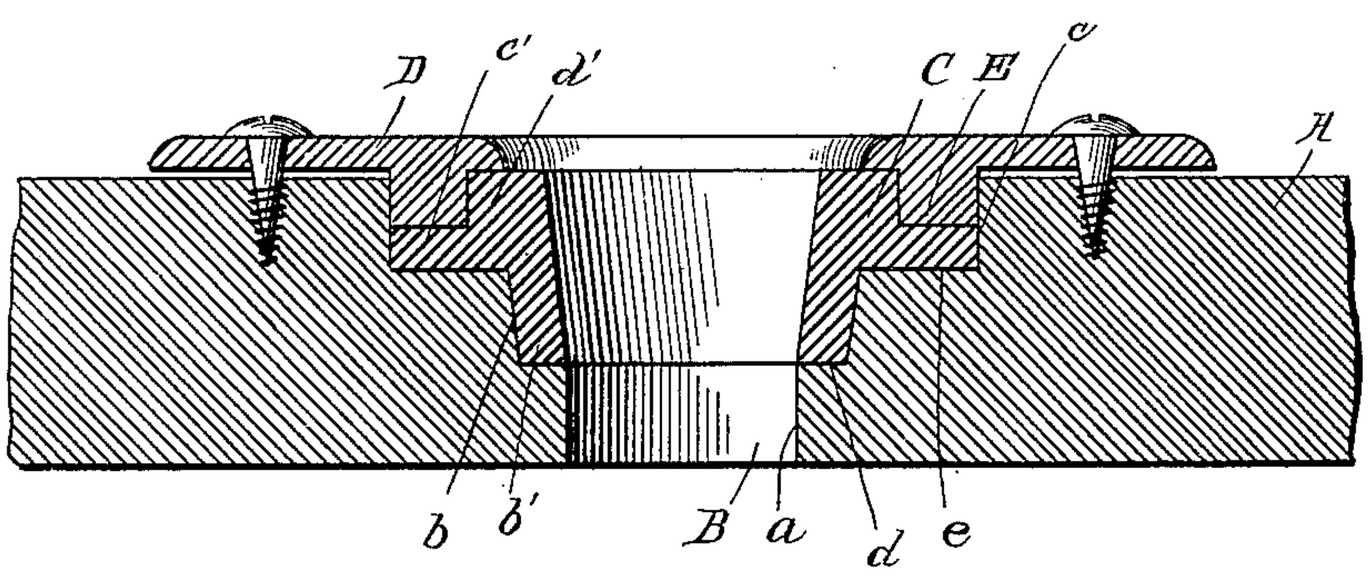
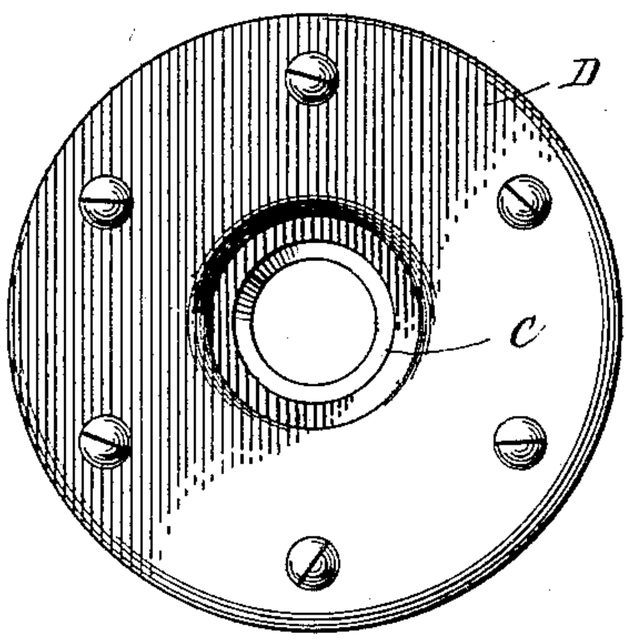


Fig. 2.

Fig. 3.



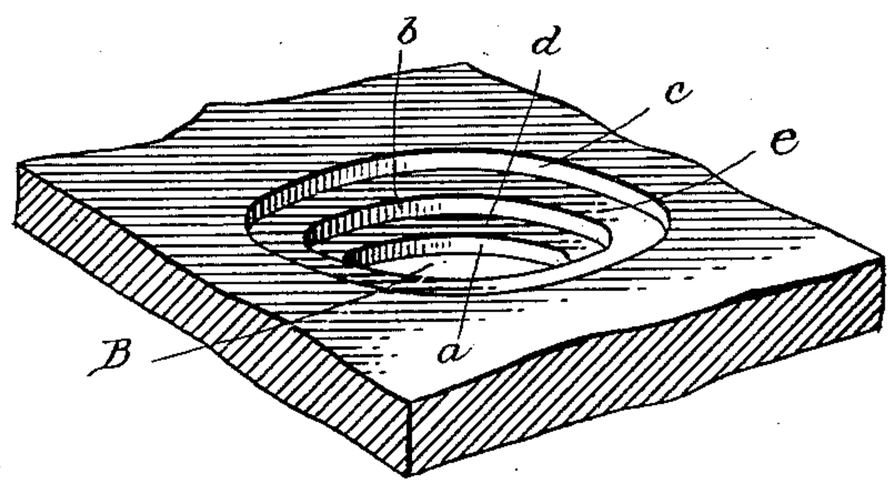


Fig. 5.

Fig. 4.

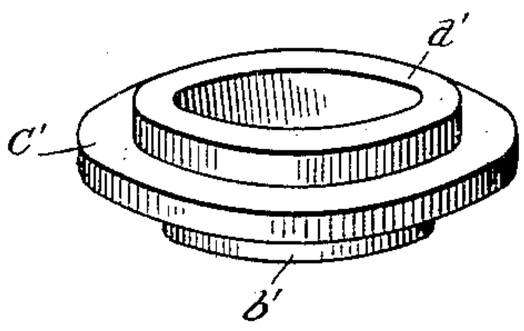
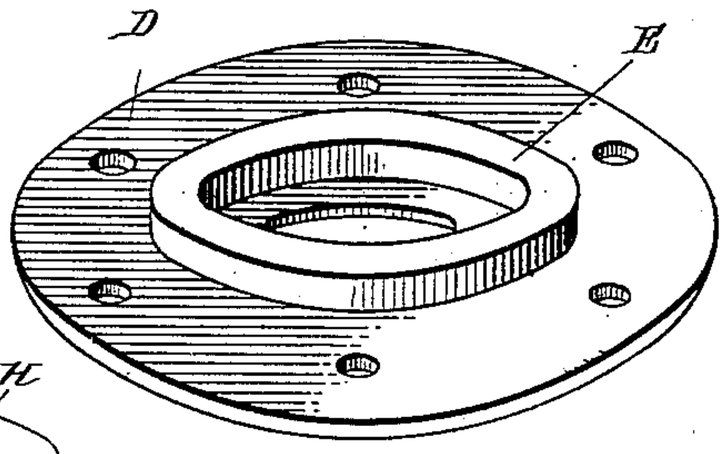
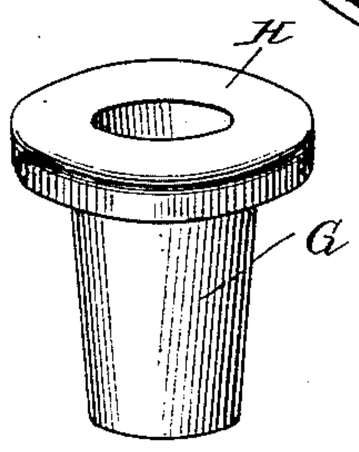


Fig. 6.





Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM KIRCHHOFF, OF DAYTON, OHIO.

BUNG FOR BEER-BARRELS.

SPECIFICATION forming part of Letters Patent No. 633,519, dated September 19, 1899.

Application filed May 13, 1899. Serial No. 716,713. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KIRCHHOFF, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented a new and useful Bung for Beer-Barrels, of which the following is a specification.

My invention relates to beer-barrels, and more especially to bushings or linings for bung and spigot holes of such barrels, the object being to provide a device of this class which, while being cheap, durable, and effective in preventing leaking, will afford easy and efficient means for inserting spigots or bungs.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the appended claim.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is an outside view of part of the head of a beer-barrel equipped with my invention. Fig. 2 is a plan view. Fig. 3 is a perspective view of that part of the head without the bushing. Fig. 4 is a detail perspective view of the rubber bushing or packing ring. Fig. 5 is a similar view of the holding or clamping plate. Fig. 6 is a similar view of a bushing of metal used when tarring the inside of the barrel.

Like letters of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by letters, A indicates the head of a beer or other barrel for containing liquids provided with a bung-hole or spigot-hole B of three different diameters, the smallest being inside and the largest outside, the walls thereof being marked *a*, *b*, and *c* and the flat annular lands between them *d* and *e*.

C indicates a bushing or packing ring, of rubber or other analogous yielding elastic substance, composed of three parts in a single piece—an inwardly-projecting ring *b'*, fitting in the second or middle diameter of the hole within walls *b*, a laterally-projecting flat ring *c'*, projected into the outer diameter of hole B within walls *c*, and a ring *d'*, projecting outwardly beyond flat ring *c'*, of less diameter than ring *c'*, but greater than ring *b'*.

D indicates the covering and clamping plate, of wrought or malleable iron, having a central opening of greater diameter than the inside and lesser diameter than the outside of the outer ring *d'* of the packing-ring C and provided with an annular or ring flange E on its inner surface, whose inner diameter is equal to the outer diameter of said outer ring *d'* and whose outer diameter is the same as the diameter of the inner diameter of hole B.

In use the packing-ring C is placed in the hole B with ring in diameter *b* and abutting against land *d*, ring *c'* in diameter *c* and abutting against land *e* of hole B, and ring *d'* projecting outwardly, its outer face being slightly beyond the outer face of head A. The plate D is now placed in position with its inner edges resting on the outer face of ring *d'* and the annular flange E resting upon the outer face of flat ring *c'* in an annular space between ring *d'* and wall *c* of the outer diameter of hole *b*. The plate D is now secured by screws and pressed tightly inward, expanding the ring C inwardly and tightly clamping flat ring *c'* thereof. With the parts thus in place a spigot or bung will be tightly held in place in hole B and all leakage prevented. The walls of the hole will not be bruised or broken, thereby avoiding the frequent expense of new staves or head every year, as is now necessary.

When it is desired to tar or otherwise coat the inside of the barrel, I place a tapering metal bushing G in the hole, thus protecting the rubber packing-ring from the coating material, said bushing having an enlarged outer annular flange H overlapping the outer end of the rubber ring.

While I have illustrated and described what I consider to be the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact forms and constructions shown, as many slight changes therein or variations therefrom might suggest themselves to the ordinary mechanic, all of which would be clearly included within the limit and scope of my invention.

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

The combination with the barrel-head having hole B, of three different and outwardly-increasing diameters, walls *a*, *b* and *c* thereof being connected by lands *d* and *e*, of the yielding elastic bushing or ring C, consisting of a single piece, comprising rings *b'*, *c'*, *d'*, the ring *b'* inclosed by walls *b*, the rings *c'* by walls *c*, and the ring *d'* projecting outwardly, and clamping the plate D resting on the outside of ring *d'* and provided with inwardly-projecting annular flange E, surrounding ring *d'*, and resting on ring *c'* within walls *c*, substantially as described.

WILLIAM KIRCHHOFF.

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