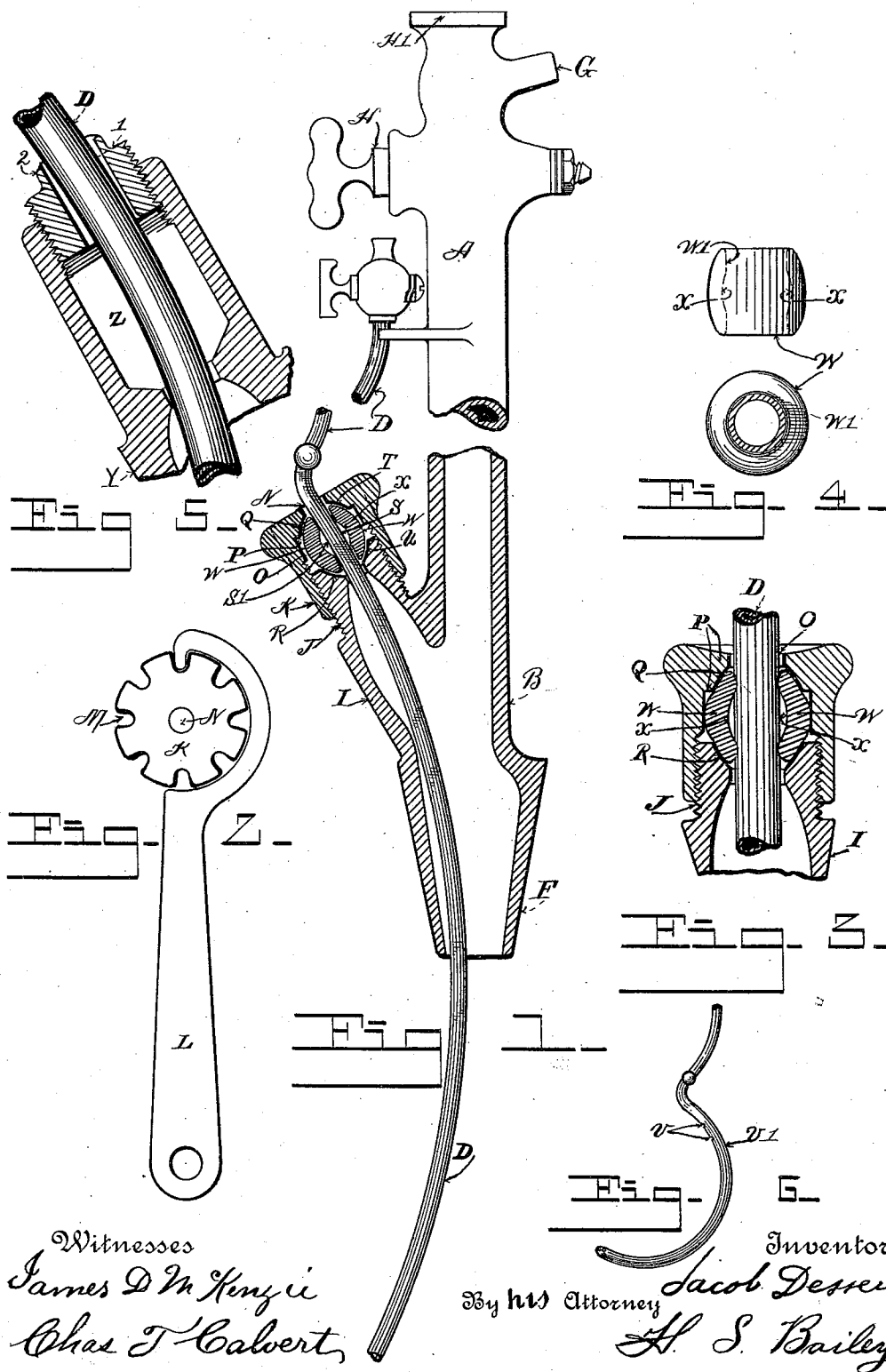


(No Model.)

J. DESSERICH.
PACKING DEVICE FOR BEER FAUCETS.

No. 546,732.

Patented Sept. 24, 1895.



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UNITED STATES PATENT OFFICE.

JACOB DESSERICH, OF DENVER, COLORADO.

PACKING DEVICE FOR BEER-FAUCETS.

SPECIFICATION forming part of Letters Patent No. 546,732, dated September 24, 1895.

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To all whom it may concern:

Be it known that I, JACOB DESSERICH, a citizen of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Devices for Packing Air-Pipes of Beer-Faucets; and I do 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 the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in beer-faucets, and the objects of my invention are, first, to provide an improved method of packing the air-pipe of the faucet; second, to provide a method of packing which admits of quick and easy manipulation when changing the faucet from one keg to another; third, to provide a packing which does not absorb the beer, and is therefore free from poisonous acids, like the packing at present in use for this particular purpose does; fourth, to provide a packing with a double bearing on the air-tube, each bearing of which is independent of the other; fifth, to provide an improved packing and gland, having an external connection to the faucet which allows it to be quickly and easily cleansed, instead of an internal one, as at present in use.

I attain these objects by the mechanism illustrated and described in the accompanying drawings and specification, in which—

Figure 1 represents an elevation, partially in section, of a beer-faucet embodying my improved packing device. Fig. 2 represents a plan view of the gland and a spanner-wrench adapted to the same. Fig. 3 represents a fragment of the faucet and gland and packing on a larger scale than that shown in Fig. 1. Fig. 4 represents two views of my improved double independent bearing packing-ring. Fig. 5 represents a fragment of a faucet, showing the method at present in use of packing the air-pipe. Fig. 6 represents an elevation of the curved portion of the air-pipe.

Similar letters and figures of reference refer to similar parts throughout the several views. Referring to Fig. 1, A designates the upper

part of the body of the faucet, B the lower part.

D designates the air-pipe with the extreme end broken off. The full curved end, however, is shown in Fig. 6. The ends of the pipe are provided with several small holes through which the air escapes. The lower part F of the faucet is designated its "bung" and is adapted to be driven into one end of the keg. The air-pipe extends through it in a semicircular curve to the upper part of the keg, which lies on its side when beer is being drawn from it through the faucet to above the body of the beer. The faucet is hollow to the outlet G, which is controlled by the bib H. The top flat portion H' is extended higher above the outlet G than is usual in order that when hammering the bung into a keg the mallet will not strike the outlet. A projection I is formed on the faucet just above the bung, which stands at a suitable angle to guide the air-pipe through it. The projection is also made hollow to allow ample space for the pipe to move into and through the bung portion of the faucet. Adjacent to the end of the projection the opening through it is reduced to but a trifle larger than the diameter of the air-pipe. The external portion J of the projection is threaded far enough to make a good support for the gland K. The top edge of this gland projects beyond its body. Through this extending edge are cut a radial circle of notches M, which enables the operator to hold it firmly while turning it by hand and also enables a spanner-wrench L to be applied to it, if necessary from any cause to tighten the packing tighter than is usually required, such as a short dent or kink in the air-pipe at one of the points where the packing bears, which might otherwise cause a leak. The air-pipes are usually about three-eighths of an inch in diameter. They are hollow, the metal being quite thin, and as they receive very frequent and rough handling they are continually getting nicks, dents, and kinks in them. The gland has a hole N through its top opening into a larger opening O, which extends into it from the opposite end. The larger opening is interiorly threaded and fits the outside J of the projection. In the partition P of the gland, which is formed by the bottom of this opening and the top of the

gland and also in the top of the projection, I counterbore a hole concentric to the hole through which the pipe passes in each of these pieces, which in form is preferably an ellipse or oval. Thus the center of the curve Q of the gland and the curve R of the projection is approximately at a point S, while the center of the curves T and U is approximately at the point S'. Consequently the counterbore in the top of the projection and in the partition of the gland would have to be cut by a tool whose point would have an oval or elliptical outline. A semicircular counterbored hole can be used; but it requires so much more power to turn the gland by hand to make a tight joint, as it compresses the washer vertically rather than concentrically to the axis of the pipe, as the oval and elliptical forms do. Consequently I preferably use the first named forms, as with them the gland can be tightened by the hand and a tight joint secured without the use of a wrench, except when the pipe has received sharp dents, like V and V' in Fig. 6.

W designates, preferably, a rubber sleeve of peculiar form, which constitutes a double bearing packing-sleeve. (See Fig. 4.) Externally it has an elliptical shape. It is provided with a hole W' through its center, adapted to fit freely on the air-pipe. This hole is enlarged intermediate of the ends of the ring at X in order that the central portion of it may not touch the pipe. It is adapted to fit nicely in the oval or elliptical counterbores in the projection and gland at the ends; but its external central portion has no external support until the ends are slightly compressed by screwing the gland on the projection, when it is expanded or thrown out at the central portion against the walls of the gland. The packing-ring then has three external independent bearing-points on the gland and projection and two independent internal points of bearing on the pipe. Under action of the counterbore in the gland and the projection the packing-ring is compressed tightly around the air-pipe at each end, and in a plane almost at right angles to the axis of the pipe, while the slight direct compression of the ring forces the central portion away from the pipe against the walls of the gland, which forms an abutment at this point. This allows that part of the ring between its bearing parts to accommodate the disposition of the ring to fold. I am thus enabled to make two perfectly-tight independent joints around the pipe with one packing-ring. In Fig. 3 the packing-ring is shown under pressure. The portions intermediate of the center and the ends are bulged out and are free from contact of either the gland or the pipe. The conditions met with are entirely different from those found in packing straight round smooth tubes or rods. It must be remembered that the tubes to be packed are bent in a semicircular curve and consequently continually change their course. They do not lie

in the glands straight, but always lie eccentric to it and the projection's axis, and if partially rotated in either direction while being withdrawn or inserted moves in the gland with an eccentric motion. Consequently it is a difficult thing to pack and keep tight, as the packing has to be loosened every time the faucet is removed from a keg. When in use the faucets are changed daily and sometimes oftener.

In Fig. 5 I show in section a fragment of a faucet and air-pipe as commonly made and packed. In this view Y designates the projection. It is formed with an internal stuffing-box Z, which is internally threaded part of its depth. A gland 1, formed with a wrench-receiving hub 2, is threaded to screw into said box. The chamber is packed usually with lamp-wicking or similar material. The gland must be tightened with a wrench, as it has to be screwed in very tight to make the packing hug the pipe. It is impossible to keep packing of this character tight, as the pipe is more or less wholly or partially rotated by handling it, either in one or the other direction while withdrawing and inserting it, which churns the packing and loosens and forces it against the outer walls of the stuffing-box. Again, the gland has to be unscrewed quite a distance in order to loosen the packing, so that the pipe can be withdrawn. Packing of this character is saturated by the beer, which sours in it, and the acid formed thereby attacks the copper of the brass and forms a verdigris, which mixes with the acids and makes a deadly and obnoxious poison, which taints the good beer and emits an objectionable odor. My improved packing-rings are entirely free from these objections, as they do not absorb the beer and can be easily rinsed and cleansed. They should be made in molds arranged to separate axially in order to properly mold the enlarged space in the center of the hole.

Consumers having a number of kegs on tap at a time are obliged to change the faucets frequently, and the utility of the invention to them is that it enables the bar-tender to release the pipe by turning back the gland with the fingers in a few seconds. It cannot absorb beer or collect verdigris, and consequently does not throw off a bad odor. It also makes two independent joints on the pipe, which is double security against leakage, and the packing-sleeves seldom have to be replaced. Consequently the device makes a simple, effective, and durable method of packing the air-pipes of beer-faucets.

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

1. A packing device for air pipes of beer faucets comprising a projection on the faucet externally threaded at its end, a gland threaded to said projection, and a packing sleeve comprising a frustum of an elliptical sleeve having a hole therein through which

the pipe slides, and an enlarged space in the walls of said hole intermediate of the ends of the sleeve, whereby the ends of the sleeve are compressed by said gland against the pipe and the internal central portion is removed from contact with it, substantially as described.

2. A packing device for air pipes of beer faucets comprising a projection having its end externally threaded, a gland having a flanged top provided with a circle of radially disposed recesses therein, an opening through the top of said gland and projection through which said air pipe passes, an oval or elliptical counterbore arranged opposite each other in said gland and projection, and a rubber packing sleeve fitting said gland and shaped to fit said elliptical or oval counterbores in said gland and projection, substantially as specified.

3. A packing device for air pipes of beer faucets comprising a projection on the faucet externally threaded to receive a gland, a gland, having a packing chamber, internally threaded thereto, a milled or recessed flanged outer end on said gland adapted to receive a spanner wrench and afford a frictional gripping surface for the hand, a hole through said gland and projection adapted to receive said air pipe, counterbores in the partition of said gland and in the top of said projection oppositely arranged and preferably of oval or elliptical form, a step between the edges of the counterbore of the gland and the side walls of its packing chamber, and a cylindrical, elliptical shaped rubber sleeve fitting said gland chamber and said counterbores

in the gland and projection, a hole through said sleeve adapted to said air pipe and a circumferential recess in the walls of said hole intermediate of the ends of said sleeves, whereby the central portion is prevented from contacting with said air pipe and the ends by manipulation of the gland make two independent joints around it, substantially as herein described.

4. The combination in an air pipe packing device for beer faucets of a projection cast integral with said faucet having its end externally threaded, a gland having a packing chamber therein threaded thereto, oppositely arranged oval or elliptical counterbores concentric to the openings for the air pipe, and a rubber packing sleeve substantially as herein described arranged and adapted to bear at its external center against the side walls of said gland and at the ends in said counterbores, and to compress and pack said air pipe at two independent points, substantially as specified.

5. In an air pipe packing device for beer faucets the combination of the faucet and the air pipe, the gland and the rubber packing having the enlarged space surrounding the air pipe intermediate of the ends of the sleeve, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB DESSERICH.

Witnesses:

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CHAS. T. CALVERT.