(Model.)

J. F. PAULFRANZ.

TAP FOR BEER, &c.

No. 248,262. Patented Oct. 11, 1881.

Fig. 1.

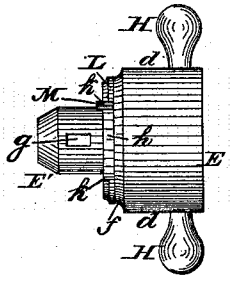


Fig. 2.

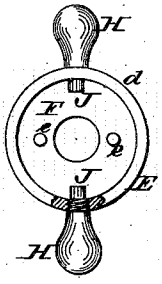


Fig. 4.

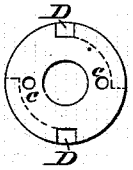


Fig. 3.

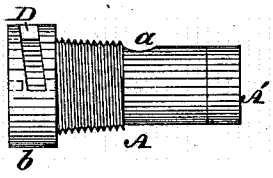


Fig. 5.

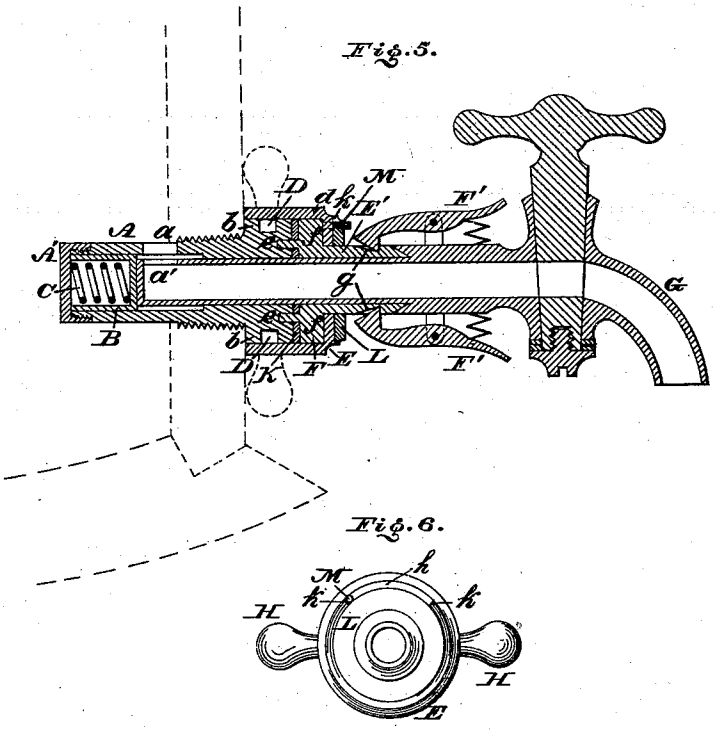


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN F. PAULFRANZ, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CASPER WEBER, OF SAME PLACE.

TAP FOR BEER, &c.

SPECIFICATION forming part of Letters Patent No. 248,262, dated October 11, 1881.

Application filed July 13, 1881. (Model.)

To all whom it may concern:

Be it known that I, JOHN F. PAULFRANZ, a subject of Bavaria, Germany, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Taps for Beer, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of the cap of the tap embodying my invention. Figs. 2 and 6 are end views thereof. Fig. 3 is a side view of the plug. Fig. 4 is an end view thereof. Fig. 5 is a longitudinal section of the complete device.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a plug to be attached to the barrel, keg, &c., and containing a valve, a cap to be secured to the plug provided with means for causing the proper register of the parts and expansion of packing, and a cock adapted to open the valve of the plug provided with means for attachment to the cap.

Referring to the drawings, A represents a tubular plug, which is exteriorly of cylindrical, conical, or other suitable form, and adapted to be inserted in the tap-hole of a barrel, keg, &c., containing beer or other liquid, said plug having an opening, *a*, for the passage of the liquid from the keg. Within the plug is fitted a sliding valve, B, which is held closed, covering the opening *a* by means of a spring, C, which bears against the plug and valve, as shown in Fig. 5. The head *b* of the plug has formed on its circumference spiral grooves D, and in its front end one or more openings, *c*, and the surface of the plug adjacent to the head may be threaded for screwing the plug to the keg in the tap-hole, as above referred to.

E represents a cap consisting of a shell, *d*, which is adapted to encircle the head *b* of the plug, and containing a tubular block, F, from whose inner face project studs or pins *e*, which are adapted to enter the openings *c* of the head of the plug A. The outer or forward face of the block F has a tubular extension, E′, which is passed freely through the front wall, *f*, of the cap and provided with notches or shoulders *g* for engagement of the catches or fastenings F′ of the cock G.

H represents handles, which are secured to the cap E for the purpose of rotating the same; and J represents studs or pins projecting inwardly from the shell of the cap, adapted to enter the spiral grooves D of the plug A, each stud and handle in the present case being formed of one piece of metal.

K represents packing of suitable material, placed against the block F on the side opposite to the extension E′, the pins *e* passing through the packing, and the center of the latter being perforated for the passage of the shank or inlet-branch of the cock G, the packing, when the parts are in position, abutting against the front end of the head of the plug A. The cock G is of ordinary construction excepting the attachment of the spring catches or fastenings F′, and has at its inlet end an opening, *a*′, which is adapted to register with the opening *a* of the plug A.

L represents a washer, which is fitted on and secured to the extension E′ of the block F, and abuts against the front wall, *f*, of the cap E, the latter thus being held in position by the washer L and block F on opposite sides of the front wall, *f*, of said cap.

M represents a pin, which is secured to the rotary cap E, and projects horizontally forward from the front wall, *f*, thereof. A portion of the circumference of the washer L is cut away, as at *h*, the ends of the portion forming shoulders *k*, which limit the motion of the pin M, the location and play of the latter being in said cut-away portion *h*.

The operation is as follows: When the plug A is in position, the valve B, pressed outwardly by the spring C, closes the opening *a* and prevents escape of the liquid from the keg. When the keg is to be tapped the cap E is fitted to the head *b* of the plug A. For this purpose said cap is rotated either by the handles H or the pin M until the pin strikes either of the shoulders *h* of the washer L. This places the studs J and pins *e* in such positions that they register, respectively, with the spiral grooves D and the opening *c* of the head of the plug. Then press the cap to full extent over the head of the plug and rotate it, whereby it is screwed to and wedged tightly on the head of the plug. As the packing K is pierced by the pins *e* it is prevented from being turned and thereby injured,

but being pressed by the block F against the head of the plug, it is compressed and expanded, thus forming a tight joint between the cap, plug, and block, and also bears tightly around the inlet branch of the cock when the latter is applied, thus preventing leakage between the plug and cock. The cock is now forced through the bore of the extension E′, block E, and plug A, thus pressing back the valve B and uncovering the opening *a* of the plug, and causing said opening to register with the opening *a*′ of the inlet branch of the cock. When the catches F′ of the cock reach the notches or shoulders *g* of the extension E′ they engage with them, so that the cock is firmly connected to the cap, and all the parts are held in operative position. It is now evident that the beer, &c., may be drawn simply by properly turning the plug of the cock. By operating the fastenings F′ so that they leave the notches or shoulders *g*, the cock, under action of the spring-pressed valve B, leaves the cap and plug, or may be withdrawn therefrom, the valve B immediately closing and covering the opening *a*. The cap is then rotated so that the studs J are released from the spiral grooves D of the plug, and thus the cap and plug are separated. The plug may be removed or remain a fixture of the keg, &c.

The valve B is of the form of a hollow cylinder, so as to receive the spring C, by which construction I am enabled to use a shoot-valve and spring, and inclose the latter. Access is had to the valve and spring by means of the screw-cap A′, which forms the end of the plug opposite to the head *b* thereof, one end of the spring abutting against said cap.

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

1. The plug A, having an opening, *a*, and a head, *b*, with spiral grooves D, and the rotary cap E, with studs J, combined and operating substantially as and for the purpose set forth.

2. The rotary cap, E, the tubular block F, with extension E′, and the plug A, combined and operating substantially as and for the purpose set forth.

3. The rotary cap E, with studs J, tubular block F, with pins *e*, the plug A, with spiral grooves D and openings *c*, and the washer K, combined and operating substantially as and for the purpose set forth.

4. The rotary cap E and plug A, in combination with the pin M and the shouldered washer L, substantially as and for the purpose set forth.

5. The plug A and rotary cap E, in combination with the block F, formed with a tubular extension, E′, and the washer L, said cap encircling the block, and the washer being fixed to the extension, the washer and block being on opposite sides of the front wall of the cap, substantially as and for the purpose set forth.

6. The plug A and cock G, in combination with the valve B and spring C, said valve being of hollow cylindrical form, inclosing the spring, substantially as and for the purpose set forth.

7. The plug A, the block F, the tubular extension E′, having shoulders *g*, and the cock G, having catches F′, combined and operating substantially as and for the purpose set forth.

JOHN F. PAULFRANZ.

Witnesses:
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F. COOPER.