(No Model.)

# R. TEICHMANN.

## TAP VALVE AND TAPPER FOR CASKS.

No. 359,039. Patented Mar. 8, 1887.

Fig. 1.

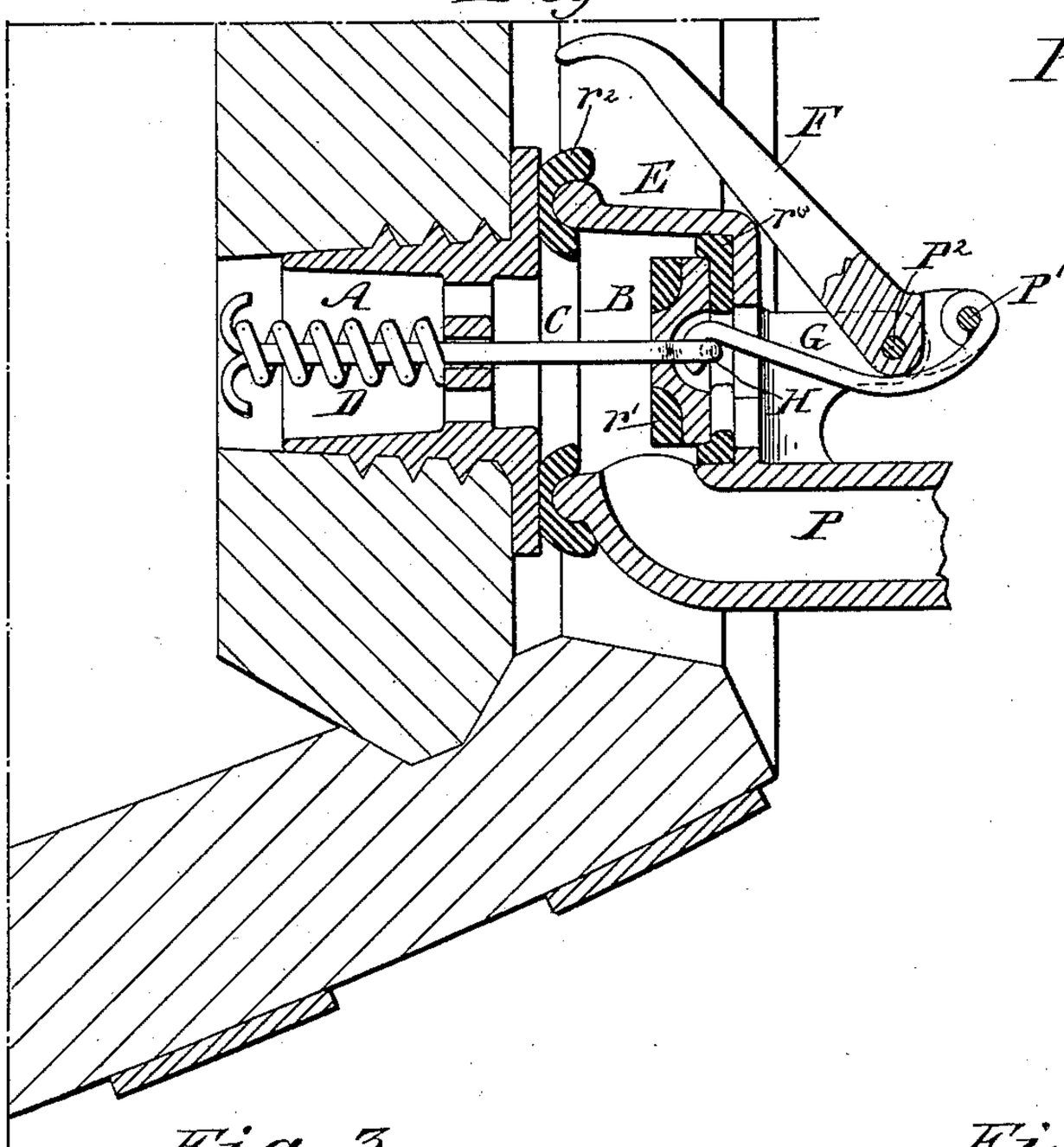



Fig. 2.

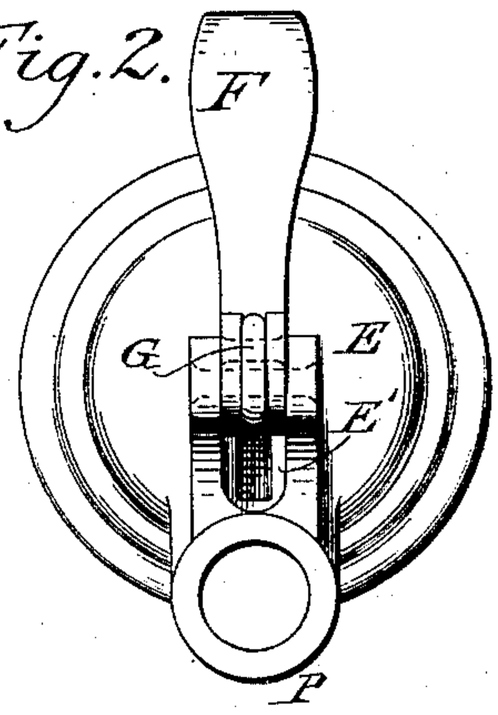



Fig. 3.

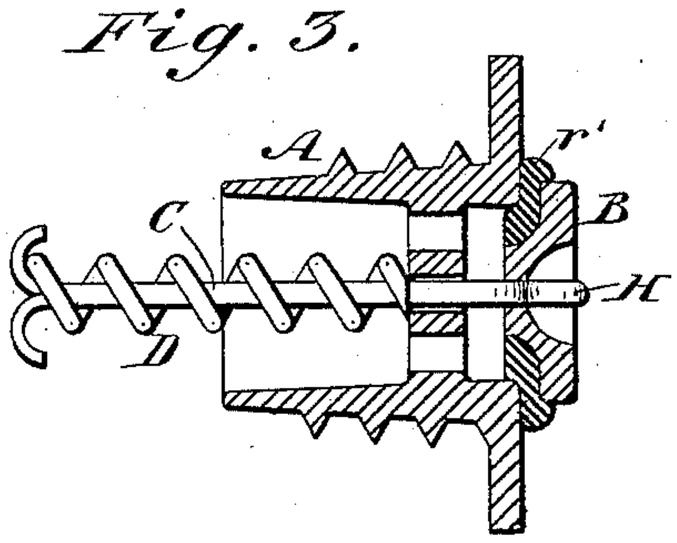



Fig. 4.

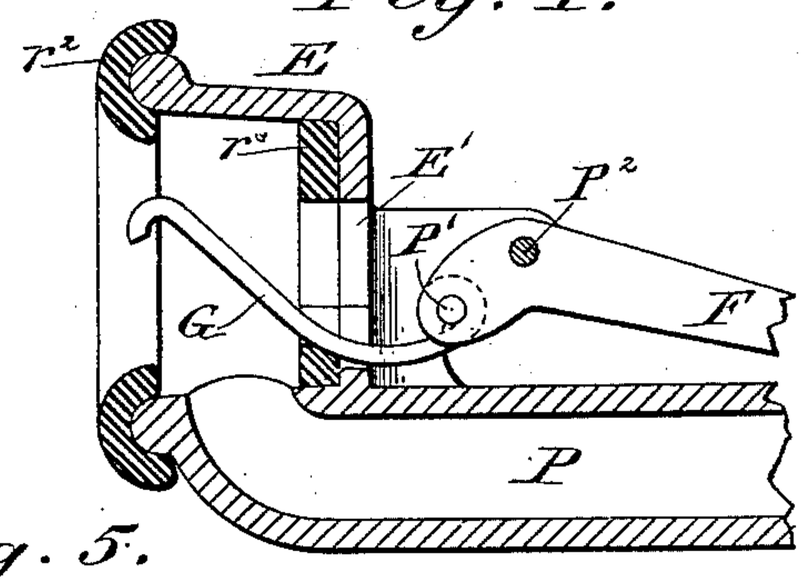
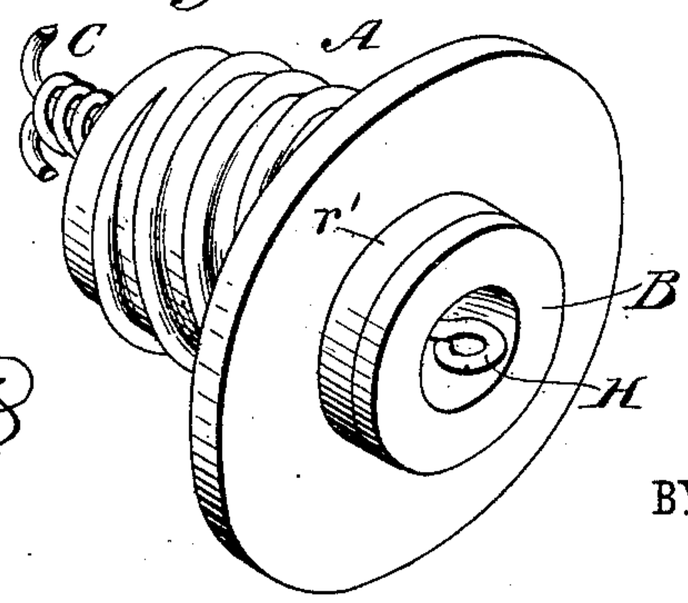



Fig. 5.

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# UNITED STATES PATENT OFFICE.

RICHARD TEICHMANN, OF BROOKLYN, NEW YORK.

## TAP-VALVE AND TAPPER FOR CASKS.

SPECIFICATION forming part of Letters Patent No. 359,039, dated March 8, 1887.

Application filed May 6, 1886. Serial No. 201,307. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD TEICHMANN, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Tap-Valve and Tapper for Casks, &c., of which the following is a full, clear, and exact description.

The object of my invention is to arrange in the tap-hole of each beer barrel or cask a spring-valve opening to the outside, which shall be a permanent fixture for the same, and to furnish a special opening or tapping device fitting over the valve-seat and drawing the spring-valve open by means of a hook and a latch or lever.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation showing my invention applied for use, the spring-valve being in open position to permit the liquid to flow through the faucet. Fig. 2 is a front elevation of the opener. Fig. 3 is a longitudinal section of the tap-hole bushing with the spring-valve, showing the same in closed position. Fig. 4 is a sectional elevation of the opener or tapper, showing the same in position to be hooked on the eye of the spring-valve. Fig. 5 is a perspective view of the tap-holder bushing, showing the spring-valve, large face-plate, and valve-disk with eye.

In the drawings, A is a bush screwed into the tap-hole of the barrel or cask as a permanent fixture, and provided with a spring-valve, B, that keeps itself automatically closed, be the barrel full or empty, but can be opened by means of the opener or tapper, as will be described. The valve-disk B is guided by its stem C in a cross-piece inside of the bush and kept on its seat by a coiled-wire spring, D, which is strong enough to resist the inside pressure of the contents of the cask. This spring is closed on the stem by means of a nut or by bending the split ends of the valve-stem apart. The front end of this wire is formed into a U-shaped loop, H, before the metal disk is cast onto it. This loop serves as an eye for the hook of the opener or tapper, and furnishes a means to draw the valve open against the pressure of the spring D. The valve-disk is kept tight on its seat by a rubber washer, $r'$.

The face-plate of the bush is considerably larger than the valve-disk, and offers a smooth annular place surrounding the valve-disk for the application of the cap of the opener or tapper.

The main body of the opening or tapping device consists of a cup-shaped cap, E, fitting with a rubber ring, $r^2$, tightly on the above-mentioned annular space on the face-plate of the bush which surrounds the valve-disk. On one side the cap communicates with a short outlet-pipe, P, for the connection to the faucet, which latter, however, is not shown in the drawings. The bottom of the cap E has an opening, E′, through which a hook, G, projects, which may be easily applied to catch the eye of the valve in the barrel. This hook can be projected and drawn back by means of a latch or lever, F, to which it is connected by means of the pin P′. The latch turns on a pin, $P^2$, held in two standards standing outside on the cap, one on each side of the opening for the hook. In the bottom of the cap a thick rubber ring, $r^3$, is inserted, against which the valve-disk is drawn when the barrel is open. This rubber ring forms a packing between the bottom of the cap and the valve-disk, and prevents the loss of liquid through the opening for the hook in the cap.

In order to open a barrel that is fitted with my improved tap-valve, it is only necessary to apply the opening or tapping device in such a way before the valve that the projecting hook drops into the eye of the valve and to snap the latch back. During the first part of this motion of the latch the cap is drawn with its rubber rim tightly against the face-plate of the valve, including the valve-disk, within itself. On a further motion of the latch the valve-disk is drawn from its seat against the pressure of its spring. At the same time the valve-disk is drawn against the rubber ring in the bottom of the cap, forming there a tight joint. The end of the motion of the latch is indicated by a short snap of the latch when it has gone over the dead-point of the combination. The barrel is now open and its contents can flow through the opened valve into the cap and from there through a side opening into the delivery-pipe P. The faucet may be either

rigidly attached to the opener; or both may be connected by any length of tubing.

My invention is intended to avoid the objections found with the use of the common mallet-driven faucets. There are no more tap-plugs necessary; no mallet or wrench; the barrels will be no more ruined by carelessly hammering the faucet in and pulling it out; there will be no more spilling of the liquid while the barrel is being tapped. The barrels, when empty, keep themselves hermetically sealed and will keep sweet and clean inside. The full barrel may be opened with one hand by a child, even in the dark, within a few seconds, without any risk.

I am aware that other inventors have tried to solve the same problem, and have devised tap-hole valves which are opened at the same time and with the same motion by which the faucet or connecting-piece is applied; while with others yet the attachment of the faucet or connecting-piece to the barrel and the opening of the same represent two separate actions. With most of these constructions the attachment is done by means of screw-threads cut into both parts, and the union is effected in the same manner as two pieces of piping or hosing are coupled together. The principle of screwing the faucet to the valve, however, is very objectionable, as the screw-threads are liable to wear out and get spoiled if they are not protected against dirt, &c. Another great objection to this way of coupling lies in the expense for cutting a large screw-thread to each barrel-valve, which part ought to be as cheap as possible on account of the great number wanted. With all these older constructions the valve opens to the inside of the barrel and the entrance of the valve is full of creases, where dirt easily collects. For the protection of the screw-thread and the valve-entrance most inventors of such devices saw themselves obliged to provide temporary screw-caps or plugs for the barrel-valves, which plugs or caps have to be removed when the barrels are to be opened. As these temporary caps and plugs, however, get lost easily, the valves are often without protection, especially when empty.

With my invention the use of a barrel-valve that opens to the outside is of great importance. The face of my valve presents a plain and clean appearance, and any dust or dirt can be wiped off easily. The shape and construction of the bush and valve may vary without interfering with the working of it, and I shall preferably use a ground cone-shaped valve sunk into the face-plate, so as to be flush with the latter. In none of the older constructions a valve like this is seen, nor could such a one be substituted, and I feel therefore entitled to the following claims.

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

1. The tapper formed with a spout, P, and provided with a hook, and means for operating the hook longitudinally, in combination with the bushing A and valve B, held closed by the spring D and formed with an eye to receive the hook of the tapper for opening the valve and for connecting the tapper to the bushing, the spring D serving the double purpose of closing the valve and holding the tapper in place, substantially as described.

2. The detachable tapper for the described tap-valves, formed with the cap E and outlet P, in combination with the bent lever F, and hook G, pivoted to the lever, substantially as described.

RICHARD TEICHMANN.

Witnesses:
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