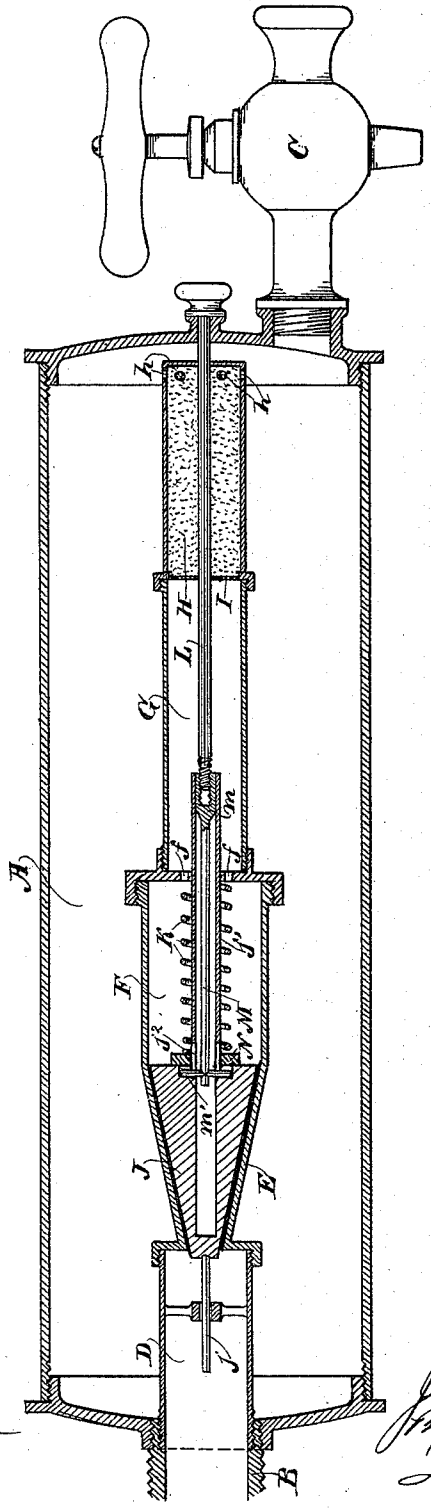
(No Model.)

# J. R. YOUNG.

## BEER DRAWING APPARATUS.

No. 573,172. Patented Dec. 15, 1896.

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# UNITED STATES PATENT OFFICE.

JOHN ROBERT YOUNG, OF SAN JOSÉ, CALIFORNIA, ASSIGNOR OF THREE-FOURTHS TO CHARLES M. GARDNER, LOUIS H. HARTMANN, AND JOHN SHIELDS, JR., OF SAME PLACE.

## BEER-DRAWING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 573,172, dated December 15, 1896.

Application filed July 27, 1896. Serial No. 600,624. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN ROBERT YOUNG, a citizen of the United States, residing at San José, county of Santa Clara, State of California, have invented an Improvement in Beer-Drawing Apparatus; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to the class of apparatus for drawing beer and other liquids under pressure.

My invention has for its general object the drawing of any liquid under pressure without permitting the escape of the gas, but its specific object is the drawing of steam-beer directly from the keg in such a manner that its gas will be retained and a suitable pressure maintained even to the last, so that the beer will continue sharp and sparkling from the beginning and until the keg is exhausted and will be drawn off clear and without undue foaming.

My invention consists of the parts and the constructions and combinations of parts hereinafter described and claimed.

The figure is a section of my apparatus.

A is a casing forming a reservoir. This is constructed of suitable parts properly fitted together, so that its interior may be reached when necessary. At its rear end it has a coupling B, adapting it to be connected either directly or through any of the usual intermediate devices with the keg. At its forward end it has connected with it any suitable faucet or drawing device, (herein indicated by C.)

Fitted within the rear end of the casing A and communicating with the liquid-passage from the keg is a tube D, to the forward end of which is fitted a conical valve-seat E, the front end of which terminates in a pressure-chamber F, having exit-apertures *f* in its head, These communicate with a tube G, fitted to the chamber-head, and said tube has fitted to its front end a filter H of any suitable character, in practice a tube filled with marble-dust and communicating with tube G through the intervention of a strainer I. The forward portion of the filter has discharge-holes *h* opening out into the casing A.

Within the seat E is fitted a long conical valve J, having a tail extension *j* and a tubular guide-stem *j'*. A spring K encircles this stem and bears against the valve, tending to keep it normally closed.

Now, as far as described the operation is as follows: The beer flowing in through tube D presses open valve J and flowing around it in an attenuated stream enters chamber F. In this its pressure reaches a certain point. When combined with the pressure of the spring K, the valve is automatically closed again by this combined pressure. The tension of the spring is initially regulated to such pressure as may be determined to permit such volume of gas to pass as may be required and no more. Thus the remainder of the gas is kept back in the keg and the beer remains sharp and lively all the time. From chamber F the beer passes through apertures *f* and tube G and filter H into the outer casing A, which, serving as a reservoir, permits its contents to be drawn upon as may be required.

Now, in order to adjust the valve to be operated under the gradually-decreasing pressure in the keg, I arrange the following mechanism: From the front end of casing A extends inwardly an adjusting-screw L, which passes through the filter H and tube G. Its inner end is threaded into a socket-head *m* of a rod M, which extends into the hollow valve-stem *j'*. This stem is slotted at $j^2$, and a pin *m'* in the end of rod M plays in this slot and bears behind a sliding washer N, against which the end of spring K bears. Now as the pressure in the keg decreases and it cannot overcome the valve the adjusting-screw L is turned, so as to draw forwardly rod M, which, through its pin *m'*, pulls the washer N forward and thus presses forward the spring K and relieves the valve, so that the latter will open under the pressure of the beer from the keg.

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

1. In a beer-drawing apparatus, the combination, of a reservoir, a pressure-chamber contained within the same in line with the liquid-passage from the keg, said chamber having a conical valve-seat at its forward end, a long

conical valve movable longitudinally in the forward portion of said chamber and closing the entrance thereto, and adapted to be opened by the pressure from the keg, to permit the beer to pass around it in an attenuated stream, and a spring in the chamber behind the valve and acting in conjunction with the pressure in said chamber to automatically close the valve against the pressure from the keg.

2. In a beer-drawing apparatus, the combination of a pressure-chamber communicating with the liquid-passage from the keg, a long conical valve intervening and controlling said communication, a spring acting behind the valve in conjunction with the pressure in the chamber to automatically close said valve against the pressure from the keg, and a means for relieving the valve of the spring as the pressure in the keg decreases.

3. In a beer-drawing apparatus, the combination of a pressure-chamber communicating with the liquid-passage from the keg, a long conical valve intervening and controlling said communication, a spring acting behind the valve in conjunction with the pressure in the chamber to automatically close said valve against the pressure from the keg, and a means for relieving the valve of the spring as the pressure in the keg decreases, consisting of a sliding washer bearing against the spring, an adjusting-screw and intervening connections to move the washer to press the spring away from the valve.

4. In a beer-drawing apparatus, the combination of a pressure-chamber communicating with the liquid-passage from the keg, a controlling-valve in said communication, said valve having a hollow slotted stem, a spring around said stem and acting upon the valve to normally close it, a sliding washer intervening between the spring and valve, a rod in the hollow stem having a cross-pin playing in the slot of said stem behind the washer whereby the latter presses the spring away to relieve the valve, and an adjusting-screw for moving said rod.

5. In a beer-drawing apparatus, the combination of the tube forming the pressure-chamber and the conical valve-seat in communication with the liquid-passage from the keg, the conical valve in said seat, the spring in the pressure-chamber for closing the valve and the filter communicating with the pressure-chamber.

6. A beer-drawing apparatus comprising a reservoir-casing having at one end a faucet, a pressure-chamber in said casing having its forward end made conical and communicating with the liquid-passage from the keg, a long conical valve movable longitudinally in the tube and closing against the conical end thereof, and adapted to be opened by the pressure from the keg, to permit the beer to pass, and a spring in the pressure-chamber behind the valve and acting on the latter to normally hold the latter closed.

7. A beer-drawing apparatus comprising a reservoir-casing having at one end a faucet, an entrance-tube at the other end, communicating with the liquid-passage from the keg, a pressure-chamber within the casing having at one end an apertured head and at the other a long conical valve-seat communicating with the entrance-tube, a long conical valve in said seat, and a spring in the pressure-chamber acting on the valve to close it in conjunction with the pressure in the chamber.

8. A beer-drawing apparatus comprising a reservoir-casing having at one end a faucet, an entrance-tube at the other end, communicating with the liquid-passage from the keg, a pressure-chamber within the casing having at one end an apertured head and at the other a long conical valve-seat communicating with the entrance-tube, a long conical valve in said seat, a spring in the pressure-chamber acting on the valve to close it in conjunction with the pressure in the chamber, a tube communicating with the apertured head of said chamber and a filter communicating with said tube and with the interior of the reservoir-casing.

9. A beer-drawing apparatus comprising a reservoir-casing having at one end a faucet, an entrance-tube at the other end, communicating with the liquid-passage from the keg, a pressure-chamber within the casing having at one end an apertured head and at the other a long conical valve-seat communicating with the entrance-tube, a long conical valve in said seat, a spring in the pressure-chamber acting on the valve to close it in conjunction with the pressure in the chamber, a sliding washer bearing on the spring and adapted by its movement to relieve the valve of said spring, an adjusting-screw passing into the casing and connections therefrom to move said washer.

10. In a beer-drawing apparatus, the combination of a pressure-chamber communicating with the liquid-passage from the keg, a suitable valve intervening and controlling said communication, a spring acting on the valve in conjunction with the pressure in the chamber to automatically close said valve against the pressure from the keg, and a means for relieving said valve of the spring as the pressure in the keg decreases.

In witness whereof I have hereunto set my hand.

JOHN ROBERT YOUNG.

Witnesses:
WM. F. FOSS,
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