

(No Model.)

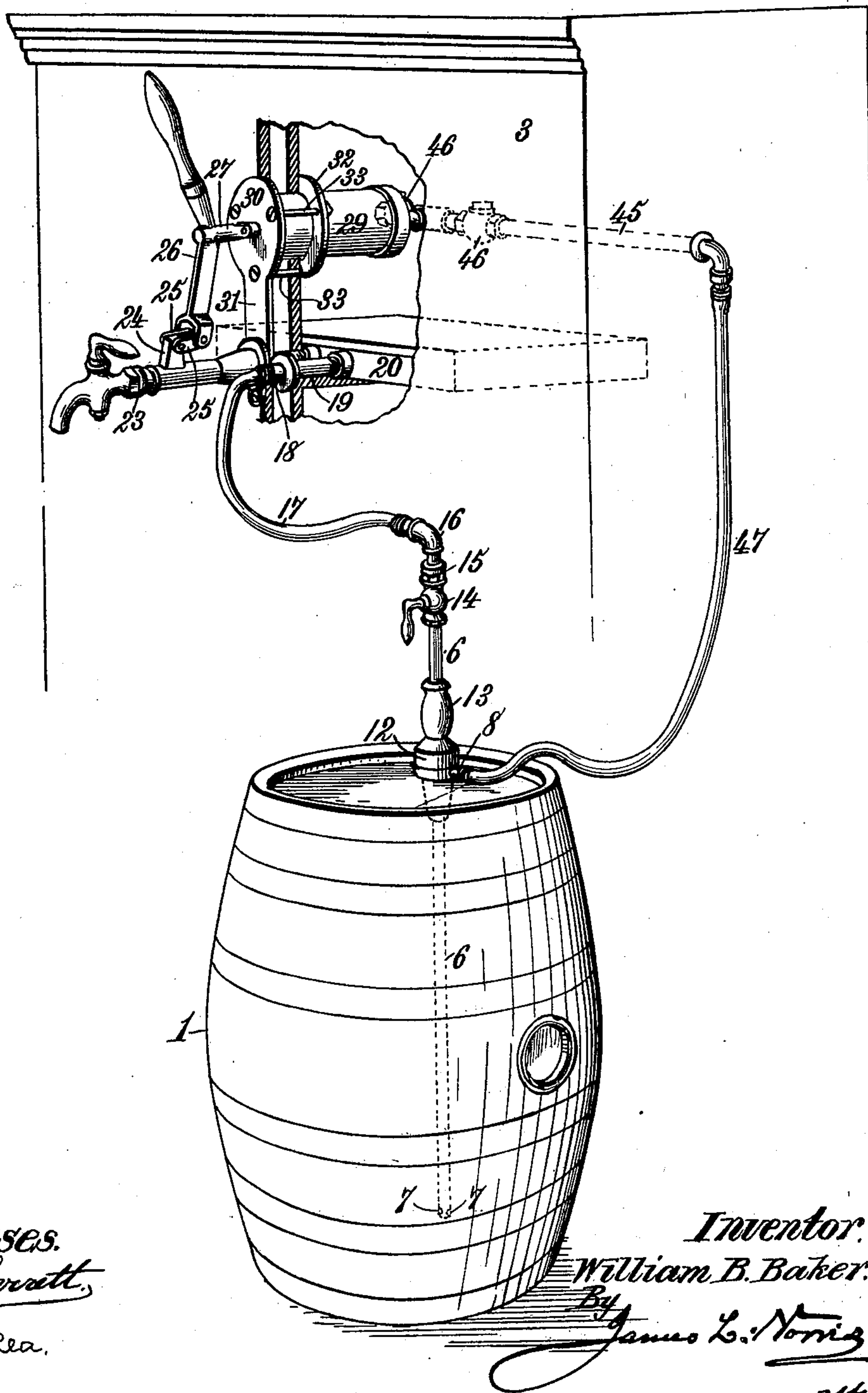
3 Sheets—Sheet 1.

W. B. BAKER.
COMBINED BEER TAP, COOLER, AND PUMP.

No. 589,237.

Patented Aug. 31, 1897.

Fig. 1.



Witnesses.
Robert Everett.

Geo. W. Rea.

Inventor.
William B. Baker.

By *James L. Norris.*

Atty.

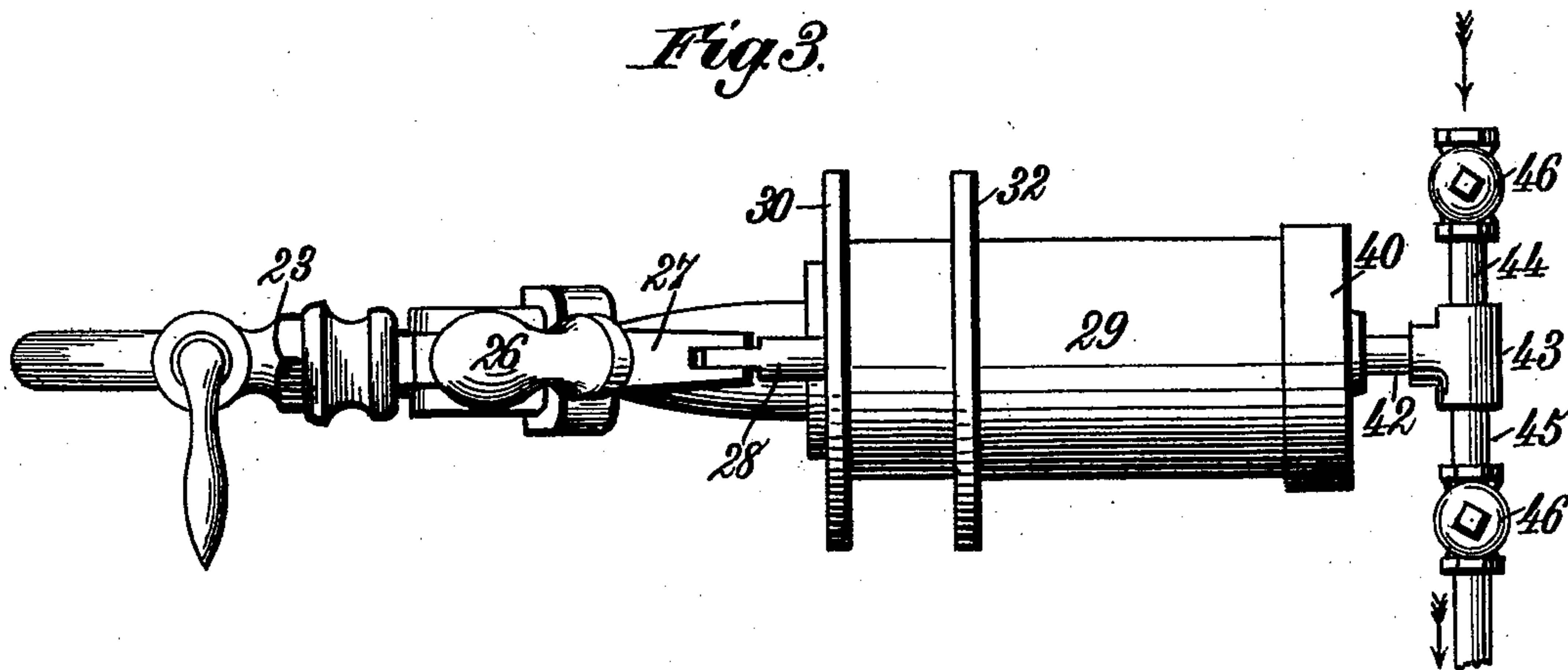
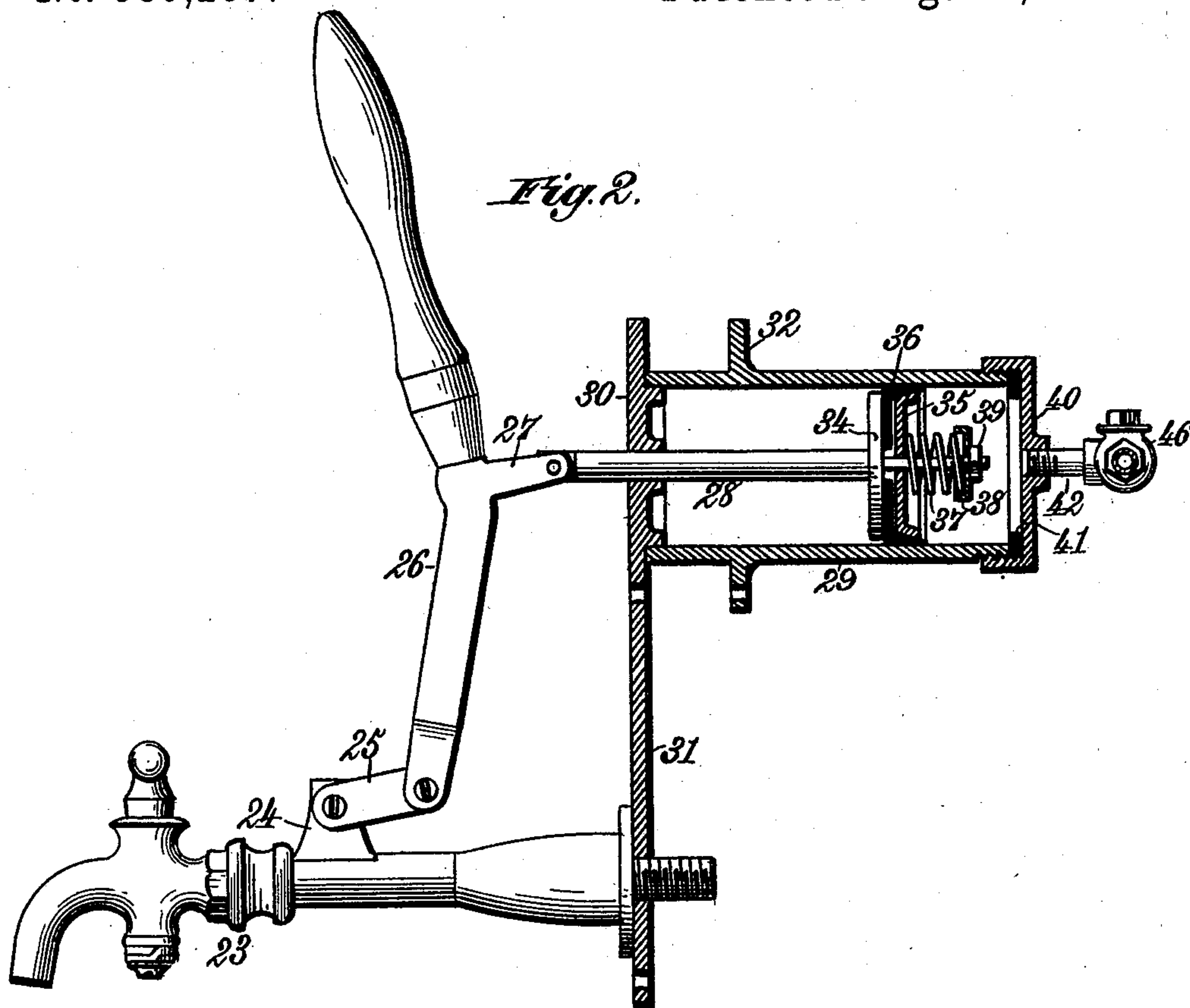
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W. B. BAKER.
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No. 589,237.

Patented Aug. 31, 1897.



Witnesses.
Robert Emmett,
Geo. W. Rea,

Inventor.
William B. Baker.
By *James L. Norris,*
Atty.

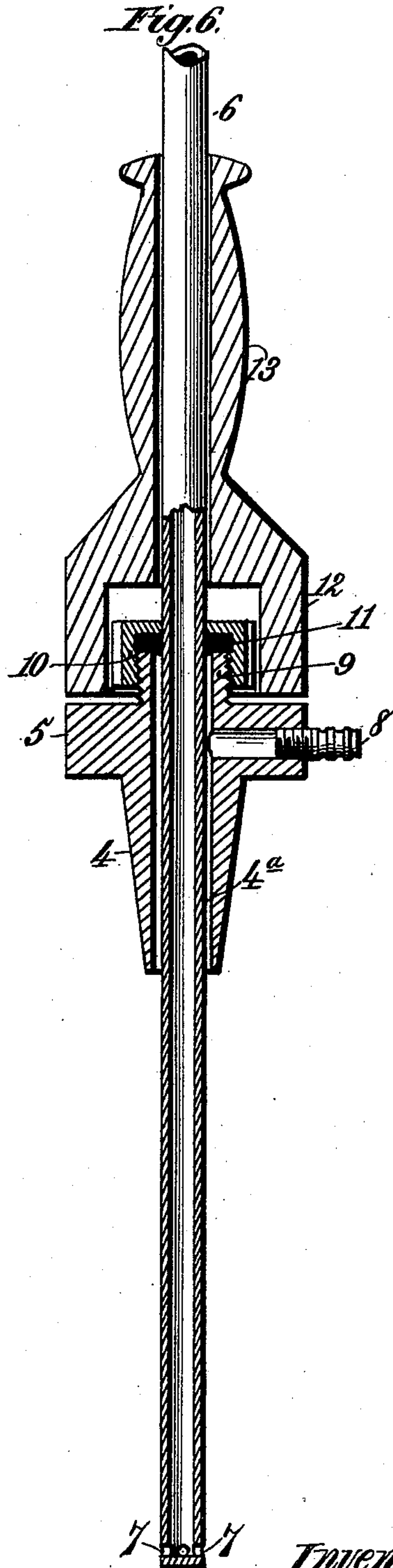
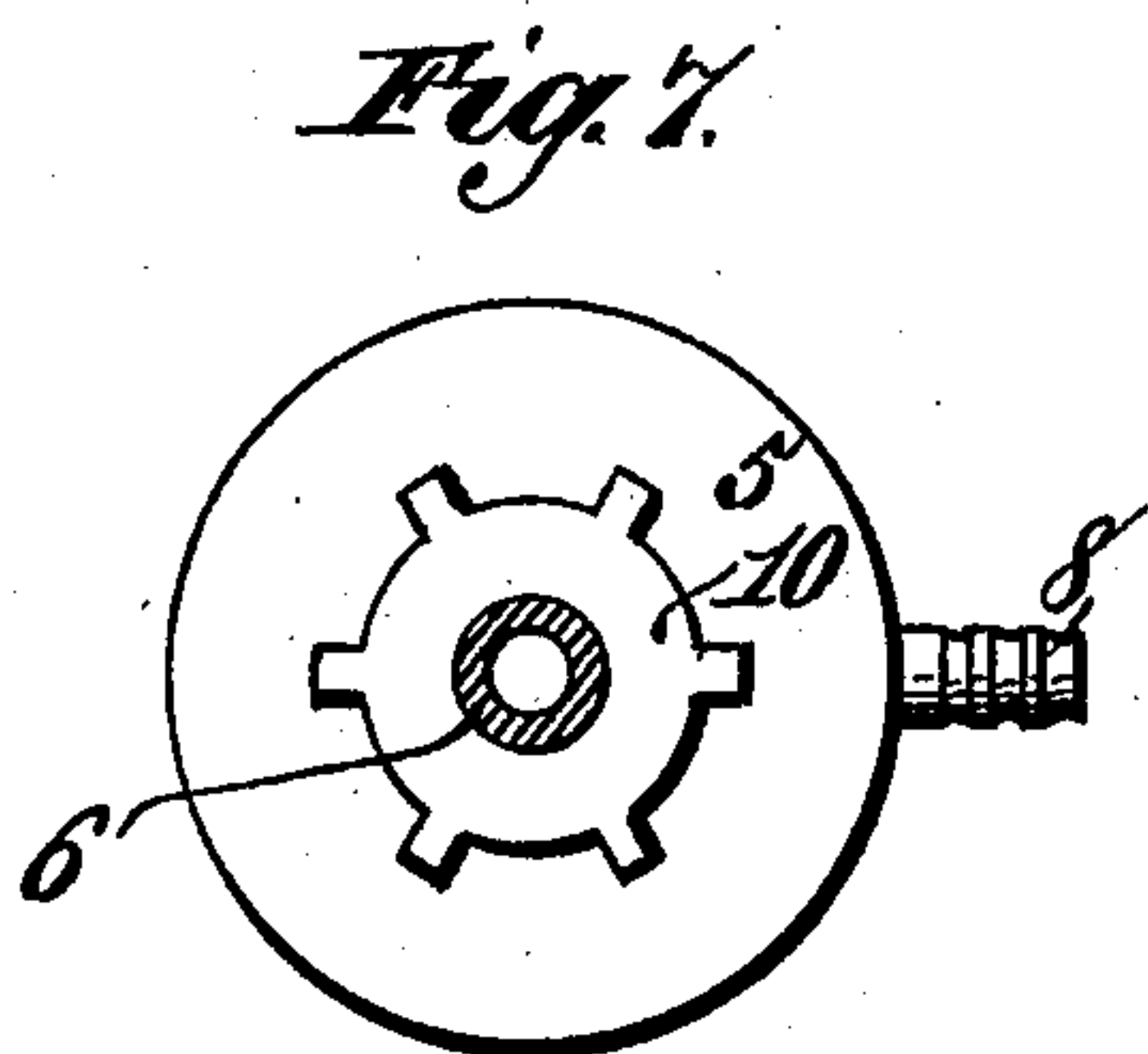
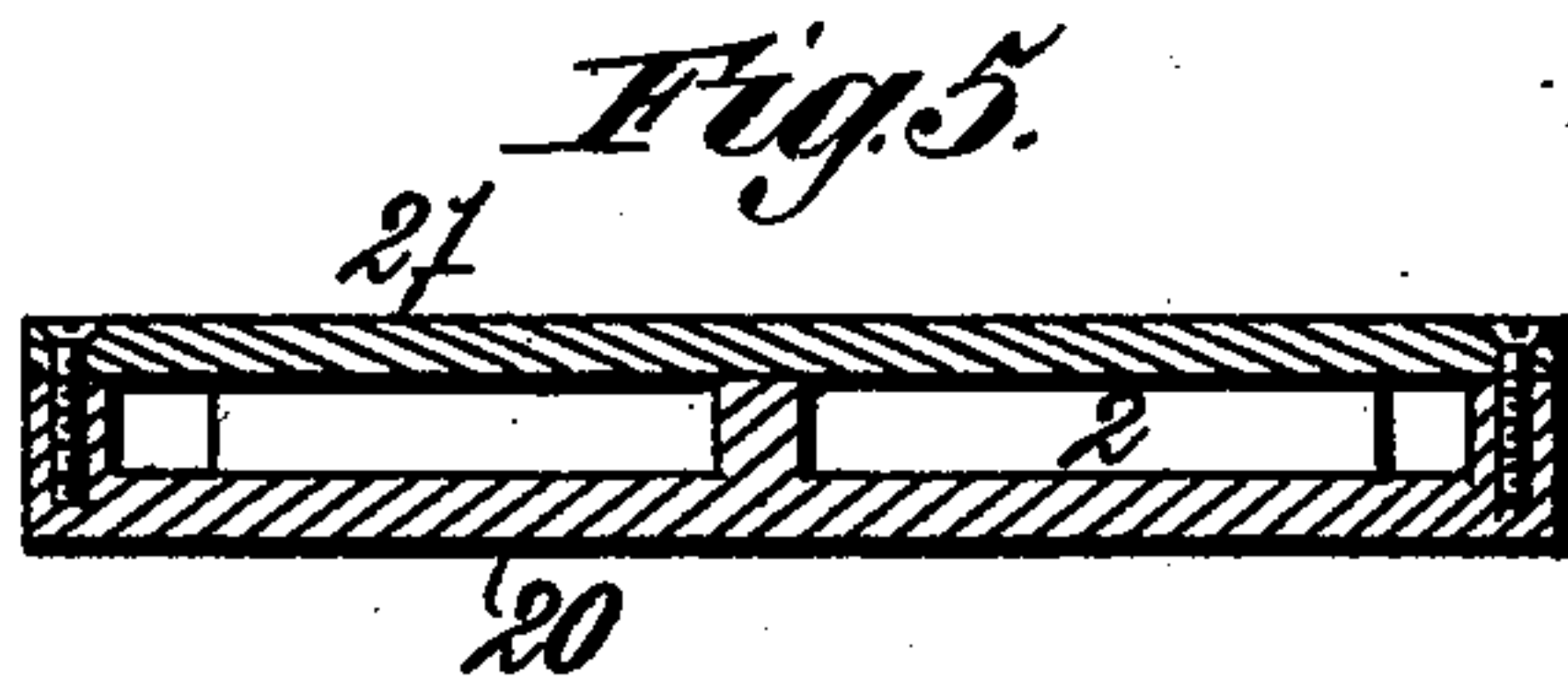
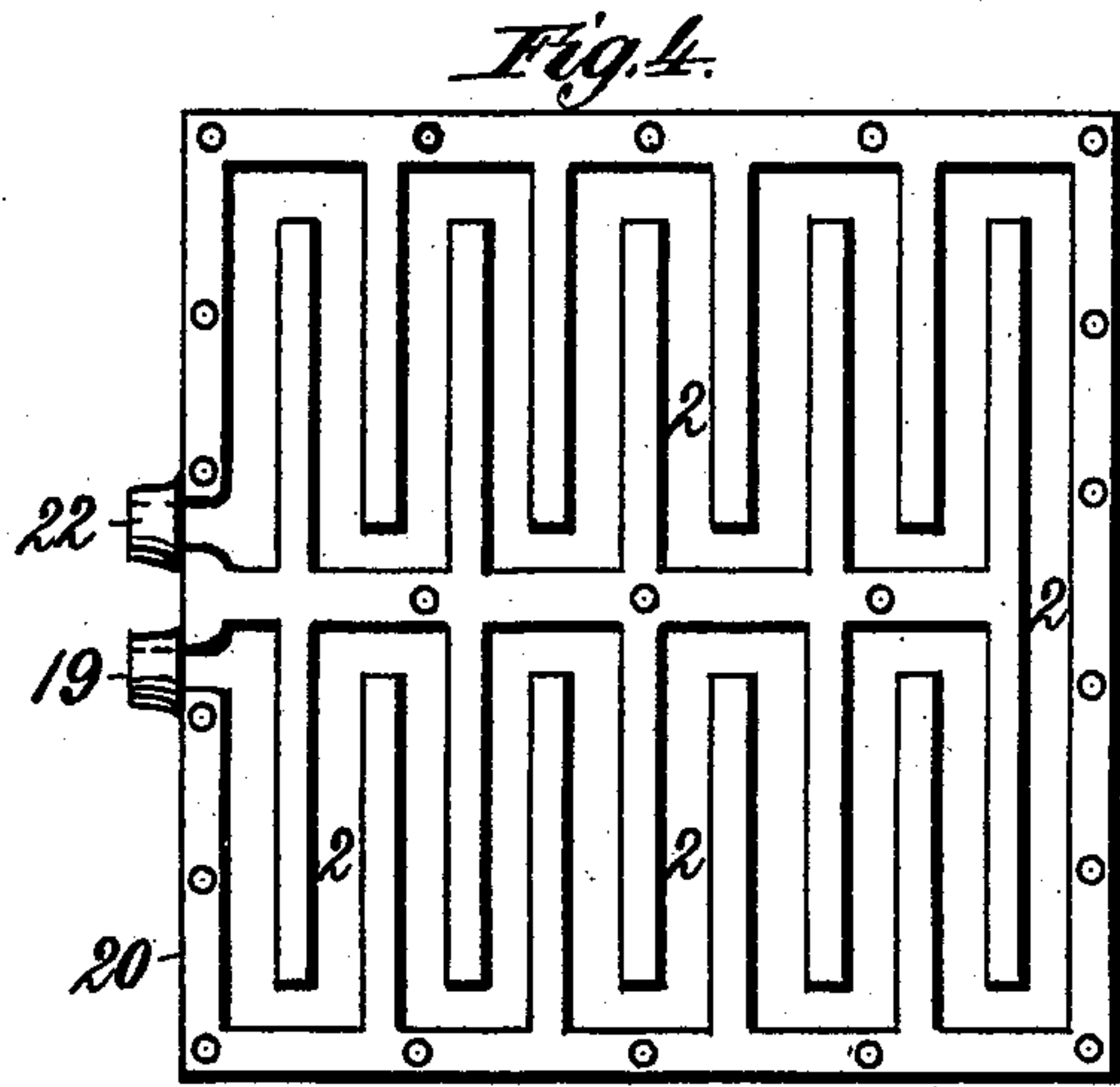
(No Model.)

3 Sheets—Sheet 3.

W. B. BAKER.
COMBINED BEER TAP, COOLER, AND PUMP.

No. 589,237.

Patented Aug. 31, 1897.



Witnesses.
Robert Orritt.
Geo. W. Rea.

Inventor.
William B. Baker.
By James L. Norris.
Attys.

UNITED STATES PATENT OFFICE.

WILLIAM B. BAKER, OF NEWPORT NEWS, VIRGINIA, ASSIGNOR TO W. B. BAKER & BROS., OF SAME PLACE.

COMBINED BEER TAP, COOLER, AND PUMP.

SPECIFICATION forming part of Letters Patent No. 589,237, dated August 31, 1897.

Application filed May 25, 1897. Serial No. 638,109. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. BAKER, a citizen of the United States, residing at Newport News, in the county of Warwick and State of Virginia, have invented new and useful Improvements in a Combined Beer Tap, Cooler, and Pump, of which the following is a specification.

This invention relates to a combined beer tap, cooler, and pump; and it consists in the novel features of construction and combinations of parts in such an apparatus, as hereinafter described and claimed.

In the annexed drawings, Figure 1 is a perspective view showing the arrangement of parts in a beer tap, cooler, and pump constructed according to my invention. Fig. 2 is an enlarged sectional view of the pump with bar-faucet in side elevation. Fig. 3 is a top view of the pump and bar-faucet. Fig. 4 is a plan of the cooler with cover removed. Fig. 5 is a cross-sectional elevation of the cooler. Fig. 6 is an enlarged sectional elevation of the drawing-off pipe, bung-plug provided with stuffing-box, and a recessed bung-driver surrounding the drawing-off pipe and normally resting on the bung-plug. Fig. 7 is a plan or top view of the bung-plug with drawing-off pipe in cross-section.

Referring to the drawings, the numeral 1 designates a barrel or keg from which beer is to be forced into and through a cooling-coil or tortuous passage 2, Figs. 4 and 5, located in the lower part of a refrigerating-tank or ice-chest 3, Fig. 1, supported at a convenient elevation for drawing off the beverage as required.

There is inserted into the bung-hole or suitable aperture of the keg a conical metal plug 4, Figs. 1 and 6, having a somewhat enlarged cylindrical head 5, as shown. This bung-plug 4 and head 5 are centrally bored for passage of a drawing-off pipe 6, having in its lower end a series of inlet-openings 7, through which the liquid contained in the keg will enter the said pipe under the pressure of the gas in the keg or by an air-pressure forced onto the surface of the liquid, as presently explained.

Between the pipe 6 and the bore of the plug 4 there is a sufficient annular passage

4^a, Fig. 6, to permit the introduction of air into the keg through an air-inlet nozzle 8, tapped into the head 5 of said plug. On the outer side of the head 5 there is an externally-threaded boss 9 for engagement of a hand-nut or screw-cap 10, which is suitably recessed to inclose a washer or packing 11 for making a stuffing-box or close joint around the pipe 6 outside of the plug 4 to prevent the escape of gas or air from the keg.

Surrounding the pipe 6 and normally resting on the plug-head 5 there is a cylindrical plug-driver 12, Figs. 1 and 6, which is suitably recessed or cored to inclose or surround the nut or boxing 10, so as to prevent jamming or other injury thereto in driving the plug. The plug-driver 12 is provided with a handle 13, also surrounding the pipe 6, and which can be conveniently grasped for actuating the driver to force the plug into place.

It will be observed that the plug-driver completely surrounds the drawing-off pipe 6 and rests normally on the head 5 of the bung-plug 4, so that it is always ready for instant use. By providing this driver there will be no need for employing an ordinary hammer or mallet to drive the plug, and which would be liable to deliver its blows unequally and jam or mash the plug-head and nut. The plug-driver 12, being operated on the pipe 6 as a guide and never in contact with the nut 10, cannot possibly injure the said nut or stuffing-box and will always drive the plug true and without battering or mashing.

At a convenient point on the pipe 6 there is preferably provided a cock 14, that may be closed when it is desired to disconnect the drawing-off pipe from the keg. By means of a screw-coupling 15 there may be attached to the pipe 6 or cock 14, as shown, an elbow 16, from which is extended a suitable length of flexible tubing 17 to connect with a short piece of pipe or pipe-coupling 18, which in turn connects with the inlet-nozzle 19 to the cooling-coil or lengthened tortuous passage 2 in the ice-chest or refrigerating-tank.

The coil or tortuous passage 2 is inclosed in a casing 20, removably located in the lower part of an ice chest or chamber 3 of any suitable construction. This tortuous passage 2 may be formed in any convenient manner in

the bottom part of the casing 20, and the said casing is covered by a lid or plate 21, fastened to the casing in such manner as to be removable. Ice is to be placed upon this plate or casing-cover 21 and around the casing 20, so that the beer, in passing through the lengthened passage or coil 2, will be thoroughly cooled. At the termination of the coiled or tortuous passage 2 there is an exit-nozzle 22 for connection with a bar-faucet 23, through which the cooled beer is to be drawn.

The faucet 23 may be provided with a lug 24, to the sides of which are pivotally attached two links 25, that pivotally connect with the bifurcated end of a hand-lever 26, having an arm 27, that is jointed to or pivotally connected with the piston-rod 28 of an air-pump that is located in the upper part of the ice chamber or chest. It will be observed that the linked connection of the hand-lever 26 with its support affords a movable fulcrum for said hand-lever, which with the jointed connection of the lever-arm 27 and piston-rod 28 will cause the pump-piston to move always in a straight line.

The air-pump cylinder 29 is connected to a plate 30 to be secured on the outside of the refrigerating chamber, tank, or chest. A depending extension 31 of this plate 30 will afford support for the faucet 23, through which the beer or other liquid is drawn. On the air-pump cylinder 29 there is an annular flange 32 at a distance from the plate 30 about equal to the thickness of the ice-chest wall. The plate 30 is on the outer side of this wall and the flange 32 is on the inner side. Bolts 33, extended through the plate 30, ice-chest wall, and flange 32, will serve to rigidly secure the air-pump in position.

The piston-head of the air-pump consists of two plates 34 and 35, between which an expansible packing 36 is secured. One of the plates, as 34, may be rigid on the piston-rod 28 or held against a shoulder thereon. The other head 35 is slipped onto the piston-rod after the packing 36 has been put in place. This head or plate 35 is cupped, as shown, or peripherally flanged to afford support for the extended rim of the packing 36, which is between the bore of the cylinder 29 and the flanged rim of said plate 35, and in order to subject the packing to compression and force it firmly and expansively against the cylinder-bore there is provided a spring 37, held by a cap 38 and nut 39 on the end of the piston-rod. Obviously the nut 39 can be tightened so as to cause the spring 37 and plate 35 to exert any required compression and peripheral expansion of the packing.

The inner end of the air-pump cylinder is screw-threaded for connection of a removable head 40 with a packing-ring 41 interposed. This cylinder-head 40 is perforated for attachment of a pipe 42, which connects, through a T-coupling 43, with branch pipes 44 and 45, one for inlet of air to the pump-cylinder and the other for exit of air under compression

to be forced into the beer keg or barrel 1 when necessary. In each of the branch pipes 44 and 45 there is located a check-valve 46 of suitable construction. The air-exit pipe, as 45, will be extended outside the ice-chest or refrigerating-chamber through one wall thereof, and to this pipe is attached a suitable length of flexible tubing 47 to connect with the air-inlet nozzle 8 on the bung-plug 4 at the beer-keg. Thus whenever the pressure of gas in the keg or liquid-receptacle is insufficient to force the beer or other liquid through the pipe 6, tubing 17, and cooling coil or passage 2 the air-pump can be operated by means of the hand-lever 26 to force the beer to the coil or passage 2, whence it may be drawn by the bar-faucet.

As the air-pump is located within the ice-chest and takes its supply of air therefrom the liquid in the keg, barrel, or other receptacle will be subjected to direct action of this cold air when the pump is operated. On reaching the lengthened passage or coil in the ice-chest the liquid will be still further cooled therein before it is finally drawn off for use.

What I claim as my invention is—

1. The combination of a pipe for drawing off liquid, such as beer, from a keg, or barrel, or other receptacle, a bung-plug through which the said pipe is passed with an annular passage between the pipe and plug, an air-inlet nozzle communicating with the side of said annular passage, a stuffing-box at the outer end of said passage, a bung-driver permanently surrounding the drawing-off pipe, an ice chest or chamber having therein a cooling coil or passage connected at one end with the said drawing-off pipe and provided at the other end with a faucet, and an air-pump located in the ice-chest and having a pipe connected with the air-inlet nozzle of the bung-plug, substantially as described.

2. The combination of a pipe for drawing liquid, such as beer, from a keg, or barrel, or other receptacle into which said pipe is inserted, an ice-chest, a cooling coil or passage inclosed by a casing removably located in the bottom of the ice-chest, one end of said passage being connected with the pipe that is inserted into the liquid-receptacle and the other end being provided with a faucet, an air-pump located in the ice-chest above the said cooling-coil and provided with a piston having a spring-compressed packing, and pipe connections from the air-pump cylinder to the liquid-receptacle, substantially as described.

3. The combination of an ice-chest having therein a cooling coil or passage connected at one end with a receptacle for beer or other liquid and provided at the other end with a faucet outside the ice-chest, an air-pump secured to the inner side of the ice-chest above said cooling coil or passage and provided with a pipe leading to the liquid-receptacle, a hand-lever having an arm pivotally connected with the piston-rod of the air-pump, and a link connection between said hand-lever and its

support, to furnish a movable fulcrum for said hand-lever, substantially as described.

4. The combination with a keg, barrel or other receptacle for liquid and a drawing-off
5 pipe inserted into said receptacle, of a bung-plug through which the said pipe is passed with an annular passage between the pipe and plug, a stuffing-box for said plug to prevent the escape of gas or air at said annu-
10 lar passage, an ice chest or chamber having therein a cooling coil or passage connected at one end with the drawing-off pipe of the liquid-receptacle and provided at the other end with a faucet, an air-pump cylinder secured
15 in the ice-chest above the cooling coil or pas-

sage and connected with the liquid-receptacle through the annular passage between the bung-plug and drawing-off pipe, an air-pump piston having a spring-compressed packing, and a pump-operating hand-lever provided 20 with a movable fulcrum and having an arm pivotally connected with the piston-rod of the air-pump, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing wit- 25 nesses.

WILLIAM B. BAKER.

Witnesses:

HOWARD M. NORRIS,
F. B. KEEFER.