(No Model.)

J. H. BLESSING & T. E. MURRAY.

TAP FOR DRAWING LIQUIDS FROM CASKS, BARRELS, &c.

No. 529,355. Patented Nov. 20, 1894.

Fig. 1.

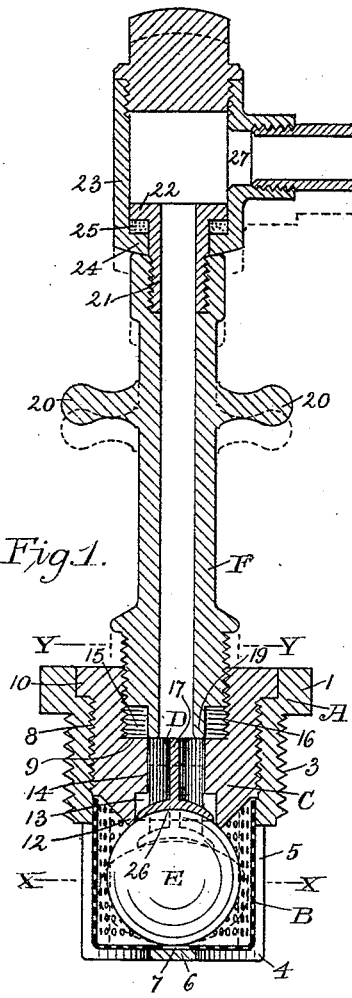


Fig. 3.

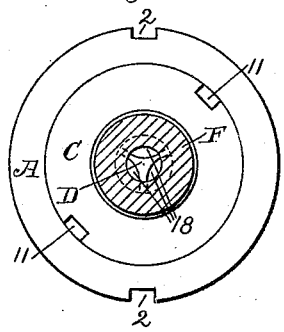


Fig. 4.

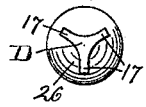
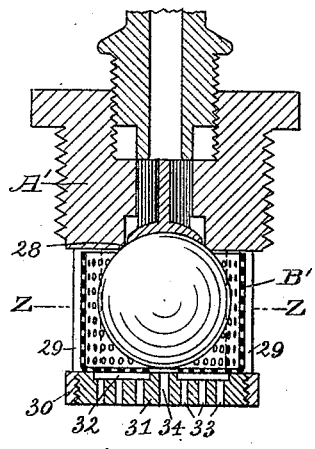


Fig. 5.



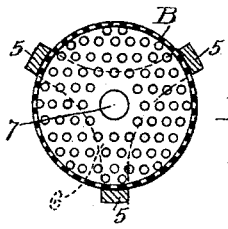
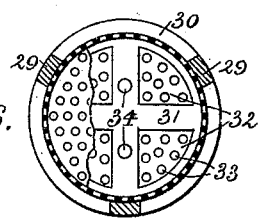


Fig. 2.

Fig. 6.



Witnesses:
John W. Fisher
Benj. A. Burton

Inventors,
James H. Blessing
and
Thomas E. Murray.
by William H. Love.
Attorney.

UNITED STATES PATENT OFFICE.

JAMES H. BLESSING AND THOMAS E. MURRAY, OF ALBANY, NEW YORK.

TAP FOR DRAWING LIQUIDS FROM CASKS, BARRELS, &c.

SPECIFICATION forming part of Letters Patent No. 529,355, dated November 20, 1894.

Application filed March 14, 1894. Serial No. 503,589. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. BLESSING and THOMAS E. MURRAY, both of Albany, in the county of Albany and State of New York, have invented new and useful Improvements in Taps for Drawing Liquids from Casks, Barrels, &c., of which the following is a specification.

Our invention relates to improvements on that class of taps which are employed for drawing beer, and other liquids containing gas under pressure, from casks and other vessels, and it consists of a valve-section, which forms a permanent attachment to a cask or barrel, and a detachable tubular section, by which the valve can be opened and through which the liquid will be drawn.

In the accompanying drawings, which, being herein referred to, form part of this specification, Figure 1 is a longitudinal section of a preferred form of our invention. Fig. 2 is a transverse section of Fig. 1, at the line X X, with the valve removed therefrom. Fig. 3 is a transverse section of Fig. 1 at the line Y Y. Fig. 4 is a detached plan view of the compressor. Fig. 5 is a longitudinal section of a modified form of our valve-section; and Fig. 6 is a transverse section of Fig. 5 at the line Z Z, with a portion of the bottom of the inner cage, or strainer, broken away to show the chambered and perforated stopper at the inner end of said section.

As represented in the four first figures of the drawings, A designates a tubular valve-section which forms a permanent attachment to a cask, or vessel, for containing liquid. Said section is provided with a circumferential flange, 1, which forms a bearing at the outer end of the section against the cask or other vessel, and said flange is provided with oppositely-located grooves, 2, or other suitable means, for receiving a tool by which the section A can be screwed into place. The outer surface of the body of said section is provided with screw-thread, 3, for fastening the section in a cask or barrel. Extending from the inner end of the valve-section A and integral therewith, there is a skeleton-cage, 4, formed by ribs, 5, and bottom, 6, for containing a removable inner cage or strainer, B, whose bottom and cylindrical sides are perforated with small holes through which the liquid will pass to effect the removal of floating particles therefrom, and preferably the central hole 7, in the bottom of said strainer, is enlarged for a purpose shortly explained.

The body of the valve-section A is tubular and its bore is provided with screw-threads, 8, and is counter-bored, at it outer end, to form a seat, 9, for a purpose hereinafter explained.

C designates a removable valve-seat section which is fitted to screw into the bore of the section A and is provided with a circumferential flange, 10, that fits into the counter-bore of the section A and bears upon the seat 9 of the latter. The outer end of the section C is provided with notches, 11, or other means, for receiving a wrench for screwing said section into its place. The inner end of the section C is shaped to form a valve-seat, 12, which surrounds a counter-bore, 13, which communicates with a central opening, 14, leading into a counter-bore, 15, at the outer end of the section C. Said counter-bore is provided with screw-threads, 16, for a purpose shortly set forth.

D designates a push-bar that is loosely fitted to slide in the central opening 14, and said push-bar is provided with wings, 17, to form passages, 18, through which the liquid will flow when the valve, hereinafter described, is moved for that purpose. The inner end of said push-bar is preferably provided with a cup-shaped head 26.

E designates a compressible valve which is preferably made in a spherical form of india-rubber, and the diameter of said valve in respect to the length of the chamber wherein it is contained is such that, when the valve is resting on the bottom of the inner cage B, the opposite side of said valve will normally bear against the valve-seat 12 with sufficient tenacity to form a water-tight joint that will prevent a leakage of the liquid at that point.

F designates a tubular connection that is fitted to screw into the counter-bore 15 of the section C, and the inner end of said connection is provided with an annular collar, 19, which is fitted to enter the central opening 14, and, by the inner end of said collar taking against the outer end of the push-bar D, effect a movement of said push-bar to compress the valve E, so that a clear space will be left said valve and the valve-seat 12. The tubular connection F is provided with handles, 20, or

other means, for rotating it, and the outer end of said connection is provided with an extension, 21, having a circumferential flange, 22, to form one part of a swivel-joint. A tubular fitting, 23, provided with an annular flange, 24, is fitted to rotate on the extension 21, and a gasket, 25, between the flanges 22 and 24, forms a water-tight closure at that point, but said fitting, instead of having an outlet, 27, arranged at its side, as shown in Fig. 1, can have said outlet range directly in line with the bore of the connection F.

When constructed as just described, all the internal parts of the valve-section A can be removed through the outer end of said section without removing the latter from its place in a cask or barrel, and, when said parts have been removed, a hose or pipe can be inserted through the bore of said valve-section for the purpose of washing out the interior of the vessel.

By reason of the central hole 7, formed in the bottom of the inner-cage B, the spherical valve E will be retained in a central position in respect to the valve-seat 12.

In the modification shown in Figs. 5 and 6, the valve-section A′ is made without a removable valve-seat section, previously described, the valve-seat, 28, being formed directly on the inner end of the section A′. Ribs, 29, extend from the inner end of the section A′ and join to a ring, 30, to form a skeleton cage for containing the strainer B′, which is made substantially like the one previously described. The ring 30 is screw-threaded internally, and a stopper, 31, is fitted to screw into said ring and form a closure for the inner end of the skeleton cage. The inner face of said stopper is recessed to form chambers, 32, provided with perforations, 33, which permit the liquid to enter said chambers and thence passing into the interior of the strainer B′ through the perforations of the latter. The stopper 31 is provided with openings, 34, or other means, for receiving a wrench by which said stopper can be screwed into its place, or removed therefrom.

By screwing down the tubular connection F, the push-bar D will be forced inwardly to compress the valve E into the form of an oblate spheroid, as indicated by dotted lines in Fig. 1, whereby said valve will be carried away from the valve-seat and the passage through the tap will be opened to allow the liquid from the cask to pass therethrough, and thence, out through the tubular connection F and its connections, to the place where said liquid is to be discharged. When the tubular connection F is moved outwardly, the resilience of the valve E will cause it to resume its bearing against the valve-seat 12, so that the operation of removing the tubular connection F will be certain to effect the closing of the tap.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a tap for drawing liquids, the combination of a valve-section provided with a central discharge-opening and having a valve-seat which surrounds the inner end of said opening; said valve-section being removable from the exterior of the vessel in which the liquid is contained, a solid valve of resilient and compressible material fitted to normally press against said valve-seat and form a water-tight closure for said discharge-opening, and a valve-chamber that is shorter than said valve—so as to normally press the valve against the valve-seat of the valve-section and thereby close its discharge-opening; whereby said valve will be normally retained against the valve-seat in a slightly compressed condition, and the opening movement of the valve will be effected by distorting it out of its normal form, as and for the purpose specified.

2. In a tap for drawing liquids, the combination of a valve-section having a skeleton cage extending from its inner end, a removable valve-seat section provided with a central opening and with a valve-seat, a removable perforated inner-cage or strainer contained in said skeleton cage, a compressible valve of resilient material contained in said strainer and fitted to close said central opening; the opening movement of said valve being effected by compressing it out of its normal form, a push-bar or compressor fitted to bear against said valve, and a tubular connection fitted to take against said compressor; said valve-seat, compressor, valve, and strainer being removable through the outer end of said valve-section without removing the latter from its place, as and for the purpose specified.

3. In a tap for drawing liquids, the combination of a valve-section provided with a central opening and with a valve-seat; said valve-section having a skeleton cage extending from its inner extremity, a perforated inner cage removably inserted in said skeleton cage, a compressible valve of resilient material contained in the inner cage; the latter forming a valve-chamber shorter than said valve which is normally slightly compressed against said valve-seat to form a water-tight closure for the central opening, a removable tubular-section fitted to screw into the outer extremity of the valve-section, and a push-bar which is separable from said tubular-section; said push-bar being a permanent attachment to the valve-section and arranged to receive the pressure from said tubular-section; whereby the operation of screwing the tubular-section into the valve-section will effect the opening movement of the valve by compressing the latter out of its normal form, as and for the purpose specified.

JAMES H. BLESSING.
THOMAS E. MURRAY.

Witnesses:
J. W. WHEELOCK,
WM. H. LOW.