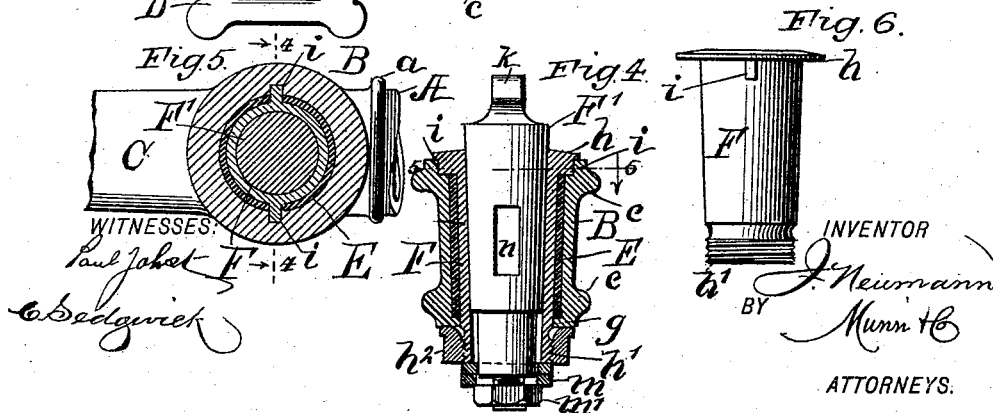
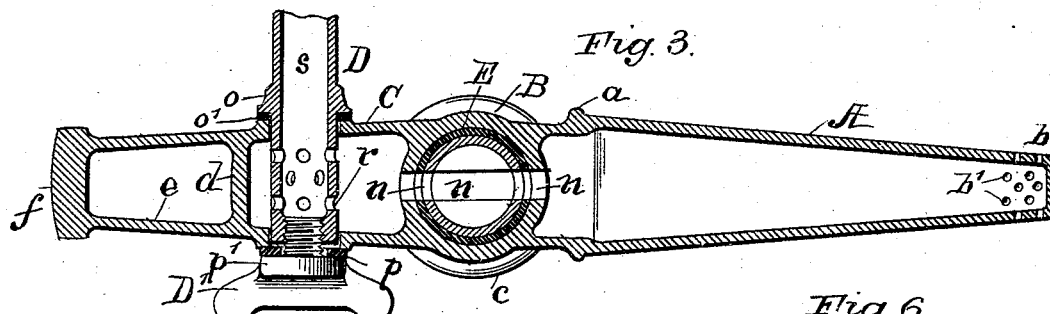
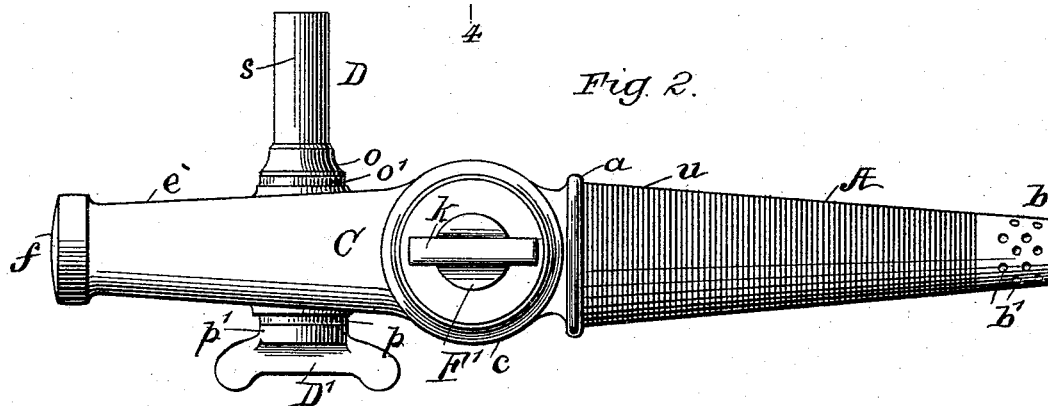
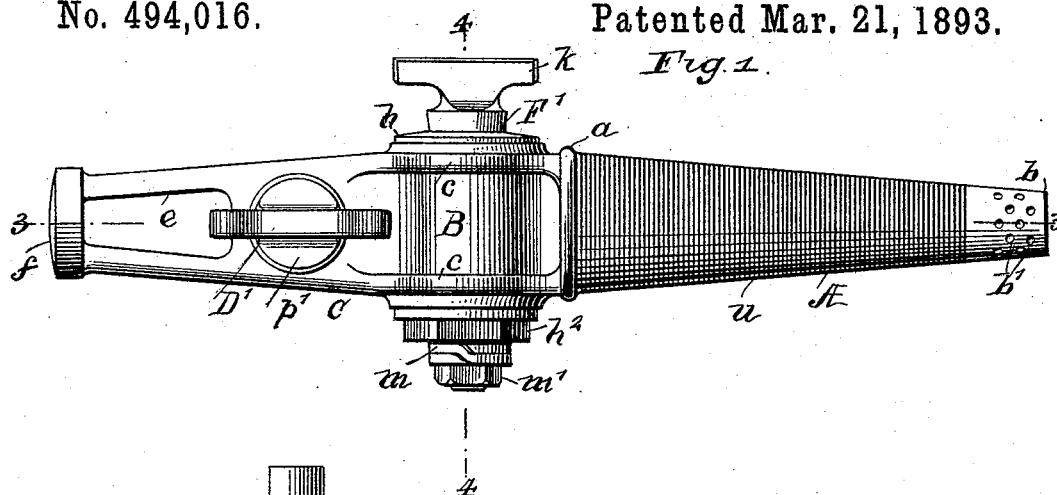


(No Model.)

J. NEUMANN.
ALE TAP.

No. 494,016.

Patented Mar. 21, 1893.



UNITED STATES PATENT OFFICE.

JOHN NEUMANN, OF BROOKLYN, NEW YORK.

ALE-TAP.

SPECIFICATION forming part of Letters Patent No. 494,016, dated March 21, 1893.

Application filed November 12, 1892. Serial No. 451,769. (No model.)

To all whom it may concern:

Be it known that I, JOHN NEUMANN, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful
5 Improvement in Ale-Taps, of which the following is a full, clear, and exact description.

My invention relates to an improvement in taps or spigots for the tapping of ale or beer from casks, and particularly from those that
10 are located in vaults or cellars, and are to be connected with a dispensing device in a room above the casks.

The object is to provide a simple, cheap and reliable tap, which will be more durable than
15 taps of ordinary construction, and which can be renewed or repaired in its parts liable to wear, at a low cost.

To these ends, my invention consists in the construction and combination of parts, as is
20 hereinafter described and claimed.

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.

25 Figure 1 is a side view of the improved ale tap. Fig. 2 is a top view of the same. Fig. 3 is a plan view in section through the longitudinal axis of the device, taken on the line 3—3 in Fig. 1. Fig. 4 is a transverse sectional
30 view, on the line 4—4 in Figs. 1 and 5. Fig. 5 is a sectional plan view taken on the line 5—5 in Fig. 4; and Fig. 6 is a side view detached, of a portion of the plug valve forming
part of the improvement.

35 The tap shell A, that is, the part of the device which is to be driven into a plugged hole in a full cask, is by preference, cast into form from malleable metal, and as represented in
40 Fig. 3, consists of an elongated hollow body, which is tapered from the point *a*, to the terminal end *b*, which latter is closed and designed to engage a plug or cork in a cask, when the shell A is to be driven into the hole filled
45 by said cork, a series of holes *b'*, being formed in the side wall of the part A, around it and near the end wall *b*.

Near the larger end of the part A, a transverse coniform wall B, is integrally formed
50 therewith, of suitable thickness for effective service, and for an increase of strength at the top and lower ends of said wall, longitudinal-ribs *c*, are externally produced on each side,

and extend forwardly and merge into the nearly cylindrical hollow part C, of the device, which latter is axially coincident with the
55 conical tap-shell A, and is transversely apertured through opposite walls for the introduction of a pipe connection D, which will be further described.

There is a transverse wall *d*, provided for
60 the chamber C, at its forward end, from which two nearly parallel walls *e*, project on opposite sides of the same, leaving an elongated space between these walls, which are forwardly joined together by a head wall *f*,
65 designed to sustain the impact of blows applied to drive the tap shell into a cask. The several portions described, are integral members of the "tap stock" that is an essential part of the invention.
70

Within the slightly tapering circular passage afforded by the transverse coniform wall B, a conical joint sleeve E, is introduced,
75 which is formed of leather or vulcanized gum fabric, said piece being extended from near the top, or end of greatest diameter, to a shoulder *g*, on the wall B, as shown in Fig. 4.

The plug valve which is provided to control the discharge of liquid from a cask
80 through the shell A, is composed of a slightly tapering shell that is circular in cross section as shown in Figs. 4, 5 and 6, said piece F having a radial flange *h*, at its large end, and an external thread at its small end *h'*. Two
85 opposite locking ears *i* are formed on the shell F, which project from it and are integral with the flange *h*; these ears having seats in shallow notches formed in the coniform wall B,
oppositely at its upper edge, also enter opposite notches in the upper edge of the joint
90 sleeve E. The shell F, is made true on its inner conical surface, for the engagement therewith of a conical plug F', which is adapted to form a liquid-tight joint with the shell F, and project above and below the latter as
95 shown in Fig. 4. Upon the threaded lower end *h'* of the shell F, a closely fitting nut *h''*, is placed and securely adjusted to bind the shell against the joint sleeve E, and produce a liquid-tight joint between the coniform wall
100 B, and the shell F. The upper projecting end portion of the plug F', is furnished with a cross-bar *k*, of ordinary form, to adapt the plug for manipulation and rotatable movement, and on

the lower threaded extension of the plug a spring washer *m*, and nut *m'*, are placed, the latter serving to retain these parts connected, and permit a proper contact of the plug with the shell *F*, to be produced. Similar slots *n*, of proper capacity are formed in the wall *B*, sleeve *C*, shell *F*, and plug *F'*, which slots when in alignment afford a direct passage from the tap shell *A*, to the chamber *C*, the rotatable movement of the plug graduating the dimensions of said passage, or closing it entirely, as may be required.

The pipe connection *D*, before mentioned, consists of a tubular piece of a proper length and such a relative diameter, as will allow it to penetrate the opposite circular apertures formed in the wall of the chamber *C*, for its reception, the degree of insertion being defined by a collar *o* that is formed or secured upon the tubular piece *D*, at a proper point. A pliable washer *o'*, made of any suitable material, is placed on the part *D*, in contact with the collar *o*, previous to the introduction of said part within the chamber *C*, on which the washer bears when the parts are securely connected. The inserted terminal of the tubular connection *D*, is perforated and internally threaded therein to receive a thumb-screw bolt *D'*, and on the latter a pliable washer *p*, is placed for the formation of a liquid-tight joint between the side of the chamber *C* and a collar *p'* formed on the head of the thumb screw. A suitable number of perforations *r*, are formed in the wall of the tubular piece *D*, that is located within the chamber *C* when the part *D* is secured thereto, which holes are designed to afford a passage for ale or beer from a cask, through the tap stock and into the tubular piece *D*. Upon the free end portion *S*, of the piece *D*, a metallic pipe or flexible hose may be connected, preferably a pipe is used, to transfer the liquid passing through the ale tap, to a dispensing apparatus at some distance from the cask that the improved device is inserted in, the junction between the end portions of the piece *D* and said pipe being produced by soldering or other suitable means.

When the improved ale or beer tap is to be inserted through a plugged hole in a cask, the operator grasps the tap stock, and centers the end *b*, of the tap shell *A*, upon the cork or plug in the cask head, which closes a hole that is of such diameter as will allow this end portion of the tap shell to be inserted far enough within the cask to locate all the perforations *b'* within the cask or keg. A sufficient number of blows are struck by a mallet upon the head wall *f*, to produce the insertion of the tap shell as stated; and in case the body of the head stock needs to be rotatably adjusted to secure a proper position for the tubular connecting piece *D*, a lever may be introduced between the walls *e*, and pressed in the proper direction while the driving operation is in progress, which manipulation will effect the desired result. The use of a

lever will also afford means to remove the improved ale tap from an empty cask without striking its body with a mallet, as by inserting one end of the lever between the walls *e*, and vibrating its body, the tap shell *A*, will be loosened and may be withdrawn. The slightly grooved rings *u*, on the shell that afford a bite for it upon the wood of the cask when driven into a perforation of the same, are easily released from their hold by the means stated, and injury to the tap stock is avoided.

It is claimed for this improvement that the major portion of the device, which is ordinarily formed of brass or a like soft metal, that is comparatively costly, is adapted for production from malleable iron or a cheap soft steel, so that the cost of production is considerably reduced. Furthermore, the peculiar form given the tap stock, disposes the connection *D*, and plug valve *F*, *F'*, at such a distance from the head wall *f*, that blows on the latter will not injuriously affect the parts that are connected with the tap stock; and in case the plug valve needs repairs to make it liquid-tight, it can be readily removed to conveniently effect this, or a new plug valve may be temporarily or permanently combined with the plug stock, to make the ale tap serviceable, should wear render this necessary.

Another advantage possessed by the improvement, consists in the facility afforded for a change of direction to be given the tubular connection *D*, as said part may be made to extend from either side of the tap stock that may be most convenient for a direct connection to a conductor pipe leading therefrom, which is important in some situations, as it will avoid the use of a long curved pipe which might otherwise be required to reach the end portion of the connection *D*, whereon said conductor pipe is attached.

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

1. In an ale tap, the combination with a tap stock tapered at one end, and adapted to withstand percussion at the opposite end, of a plug valve the shell of which is securable transversely in a mating formation of the tap stock, and a transversely securable pipe connection in a chamber of the tap stock between the plug cock and the end of the tap stock which receives blows and adapted to receive liquid from the tapered part of said stock, substantially as described.

2. In an ale tap, the combination with a tap stock tapered at one end and laterally perforated near the terminal of said tapered part, and adapted to withstand percussion at the opposite end, of a plug valve securable transversely in the tap stock and removable therefrom, and a transverse tubular connecting piece securable in a chamber of the tap stock in advance of the plug valve and adapted for rotary adjustment, substantially as described.

3. In an ale tap, the combination with a tap

stock having a conical end, a transverse oppositely slotted coniform wall, and elongated chamber adjoining said coniform wall and axially coincident with the conical end, and a head wall projected away from the chamber by two spaced walls, of a plug valve securable in the space formed by the coniform wall, and a transverse pipe connection securable in opposite apertures in the chamber wall, substantially as described.

4. In an ale tap, the combination with a tap stock tapered at one end and sealed thereat, and transversely foraminated near said end, a transverse coniform wall oppositely slotted near the longitudinal center of the conical

part, an elongated chamber joined to the coniform wall and axially aligned with the conical portion, and spaced walls longitudinally projected from the front end of the chamber and joined by a head wall, of a pliable sleeve in the aperture in the coniform wall, a plug valve securable in the sleeve and upon the coniform wall, and a tubular connection transversely secured in opposite apertures in the elongated chamber, and reversible therein, substantially as described.

JOHN NEUMANN.

Witnesses:

WM. P. PATTON,
E. M. CLARK.