No. 706,792. Patented Aug. 12, 1902.

E. A. AUGUST.

ATTACHMENT FOR BEER PUMPS.

(Application filed Aug. 23, 1901.)

(No Model.)

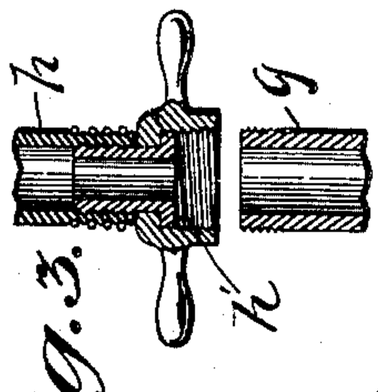


Fig. 3.

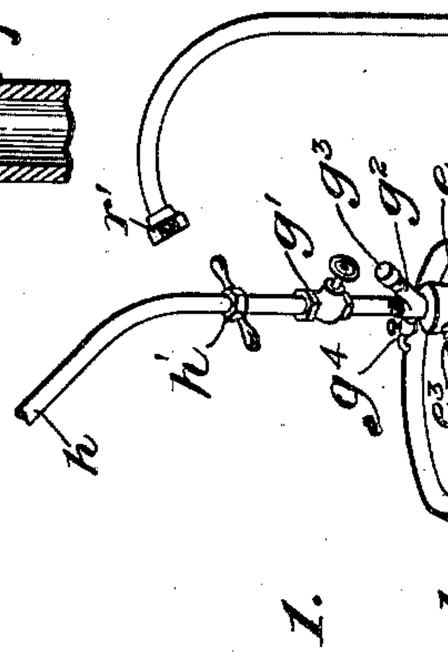


Fig. 1.

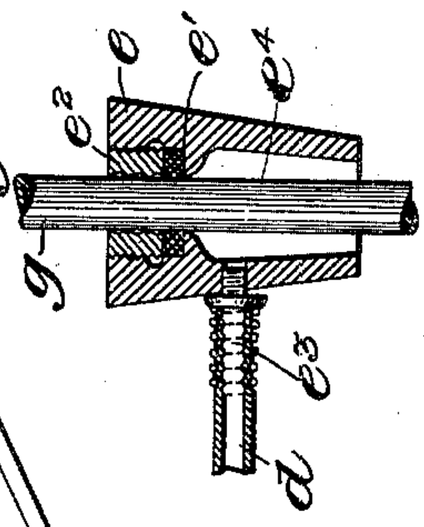


Fig. 4.

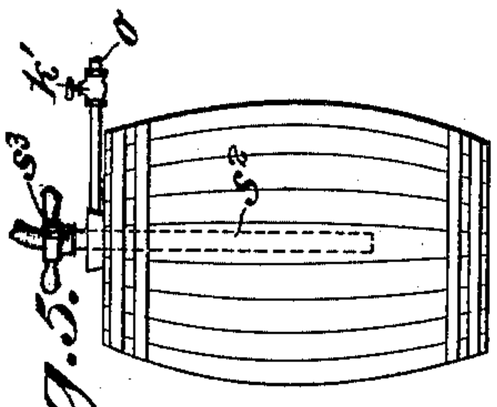


Fig. 5.

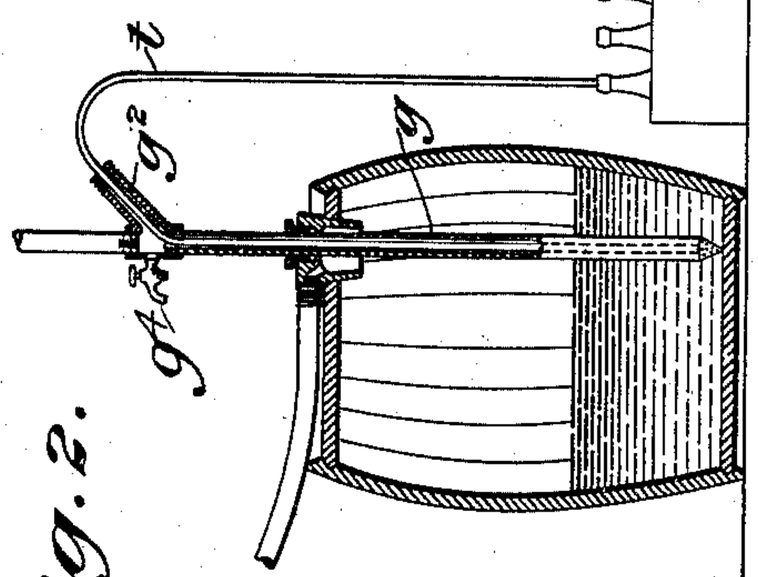
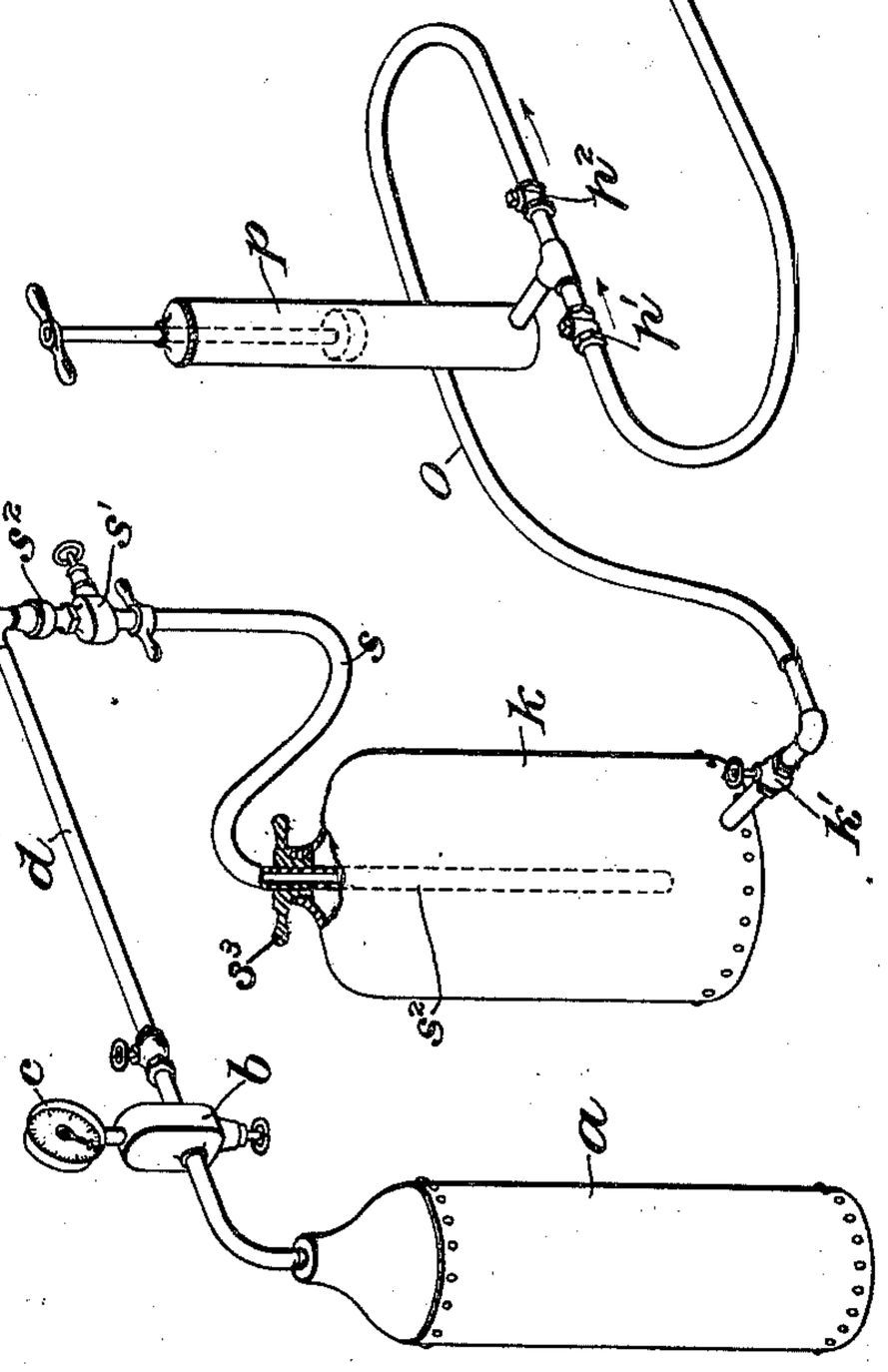


Fig. 2.



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UNITED STATES PATENT OFFICE.

EDWARD A. AUGUST, OF CHICAGO, ILLINOIS.

ATTACHMENT FOR BEER-PUMPS.

SPECIFICATION forming part of Letters Patent No. 706,792, dated August 12, 1902.

Application filed August 23, 1901. Serial No. 72,980. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. AUGUST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Attachment for Beer-Pumps, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

It is well known that a large percentage of the gas or other fluid under pressure used in beer-pumps is entirely wasted and lost in changing the apparatus from an emptied keg or barrel to a new and full keg or barrel; also, that it is impossible with the pumps as heretofore used to fill bottles directly from a keg or barrel that is on tap on account of the foaming of the liquor.

My invention relates to a means for saving the gas thus usually wasted and also to apparatus for filling bottles directly from a keg or barrel on tap.

In practicing my invention I employ an auxiliary gas tank or reservoir, and my invention further includes a device whereby this tank or receptacle may be either a metallic tank or an ordinary air-tight keg or barrel.

The invention is shown in the drawings for the purpose of illustrating its principle and operation as applied to a beer-pump, though it will be undestood that the pump shown is merely typical and that the invention may be applied to any pump and for any similar purpose.

Figure 1 is a view of a typical pump with the invention applied thereto. Fig. 2 is a sectional detailed view of the keg and other apparatus as used for filling bottles. Fig. 3 is a detail view of the coupling by means of which the coil or faucet pipe is connected with the tube or pipe inserted through the bung into the keg. Fig. 4 is a sectional view of the bung which is used in the keg, and Fig. 5 is a view showing an ordinary keg used as the auxiliary gas or fluid receptacle.

In Fig. 1 the usual pump apparatus is shown comprising a gas-pressure tank a, supplied with a regulating-valve b and gage c, from which a supply-pipe d leads by a flexible tube to the bung e, inserted in a beer keg or barrel f, the tap or outlet pipe g being inserted through the bung in the usual way and being connected with the pipe h, leading to the usual coil and onto the faucet. To save the gas which is usually lost, I provide the auxiliary tank k, which may be of any desired size and which is connected by means of a flexible tube o with the exit-port of an air-pump p, the inlet-port of which is connected with a similar tube r, having a coupling r' at its other end, by means of which the tube is connected with the upper end of the tap-pipe g when the coil-pipe h is disconnected therefrom. This coupling is of any desired kind, that shown in Fig. 3 being the form used in this instance. The pump may be operated by hand or power, and its inlet and outlet ports are provided with suitable check-valves p' and p^2, acting in the direction of the arrows. The tank k, which is supplied with a suitable cock or valve k', is connected by means of a flexible tube s with a regulating-valve s' and a check-valve s^2 connected with the main pressure-supply pipe d. By means of the regulating-valve s' the pressure from the tank k can be regulated to allow the gas to feed into the main pipe d as fast as desired. The function of the check-valve s^2 is to prevent the passage of gas therethrough from the supply-pipe d, so that there can be no possible leakage through the valve s', and the tube s and tank k may be entirely disconnected. The tubes connected with the tank k may be of any desired length, so that the tank and the pump may be located in any desired place. In the operation of this portion of my invention the valve d' in the main supply-pipe d is closed, as well as the valve g' in the tap or outlet pipe g. The coupling h' on the coil-pipe h is disconnected from the tap or pipe g, and the coupling r', connected with the hose leading to the air-pump, is connected therewith. The gas in the empty barrel f will now immediately flow through the tap or outlet pipe g and hose r, connected to the pump p, and through the check-valves p' and p^2 and the hose o to the tank k until the pressure in the keg and tank is equalized, which will take place almost immediately, and the pump p is then operated to draw out the remainder of the gas in the keg and force it into the auxiliary tank k. The pump-hose may be disconnected from the tap or outlet pipe g, which is then withdrawn from the bung e. A new barrel or keg is then placed in position, the bung e inserted, and the tap g passed through the same down to the bottom of the barrel,

when the coil-pipe *h* is connected therewith, as above explained. Upon opening the valve *d'* of the main supply-pipe the gas from the auxiliary tank *k* will flow into the barrel and charge the same.

The bung *e* is of the ordinary construction and is provided with a gasket *e'*, which is adapted to be pressed closely about the pipe *g* to form a gas-tight joint by means of the screw-plug e^2. A coupling e^3, with which the main supply-pipe *d* is connected, is inserted in the side of the bung *e* and communicates with the annular recess e^4, through which gas is admitted to the interior of the keg or barrel. The withdrawal of the pipe or tube *g*, as above explained, is readily accomplished by loosening the screw-plug e^2, when it may be readily drawn out. By this means the gas in the barrel is saved and is returned to the main supply-pipe *d* to be used over again in any of the connected kegs or barrels.

In order that a common keg or barrel provided with an ordinary bung—as, for example, the kind shown in Fig. 5—may be used in place of the metallic tank *k*, I provide the screw-coupling s^3, connected with the tube *s*, leading away from the tank *k*, with an extension-pipe s^2, as shown in Figs. 1 and 5, which is adapted to be inserted through a bung and to be tightly held therein by means of the usual gasket and screw-plug. The threaded portion of this device, as shown in Fig. 1, engages the complementary threaded opening of metallic reservoir *k*.

The same apparatus may be used for the purposes of filling bottles, and for this purpose the pipe *g*, which is inserted through the bung of the barrel, is provided with a branch tube g^2, connecting with the interior thereof and inclining upwardly and which is normally closed by means of the screw-cap g^3. An air cock or valve g^4 is also connected with the pipe *g* opposite the pipe g^2. When it is desired to fill bottles from the keg or barrel on tap, the pipe *g* is first drawn above the liquid and the pump *p* connected therewith and operated as above described to withdraw the gas from the keg, after which the liquid-pipe *g* is lowered into the liquid, the screw-cap g^3 removed, and a siphon-tube *t* inserted therein and into the liquid. The air is then drawn or sucked from the siphon-tube *t*, when the liquor will flow, and the bottles can be filled without causing the liquor to foam. The air-cock g^4 may be opened at this time to admit air, if necessary. During the bottling operation the valve *g'* is closed. At the termination of the operation the siphon-tube is withdrawn and the screw-cap again placed in position, the air-cock closed, and the coil-pipe *h* connected with the pipe *g*. As soon as the valve *d* in the main pressure-supply pipe is opened the device is ready for operation in the usual way.

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

1. The combination with a beer keg or barrel, of a gas-charging cylinder, a supply-pipe directly connecting said cylinder with the keg or barrel, a storage-tank, a pump between the keg or barrel and the tank, a pipe leading directly from said storage-tank to the supply-pipe between the charging-cylinder and the keg or barrel, a reducing or regulating valve in said pipe leading from the storage-tank, and means to prevent the gas from flowing in the reverse direction from the supply-pipe into the storage-tank, substantially as described.

2. The combination with a beer keg or barrel, of a bung therefor and a tapping-pipe passing through the bung and capable of longitudinal adjustment therein, a charging-cylinder, a supply-pipe directly connecting the said cylinder with the bung and therethrough to the keg or barrel, a storage-cylinder and a pipe connecting it with the supply-pipe, a regulating-valve in the pipe from the storage-tank, a check-valve in the last-named pipe, a pump connected with the storage-tank, and a tube leading from the pump to the keg or barrel, said tapping-pipe being adapted to be connected with the pipe leading to the draft-faucet when its lower end is extended beneath the surface of the beer in the keg or barrel, and to be disconnected from said pipe and connected with the said pump-tube when its lower end is drawn up above the surface of the beer, substantially as described.

3. The combination with a beer keg or barrel, of a bung therefor adapted to be connected with a gas-charging cylinder, a tapping-pipe passing through said bung and capable of longitudinal adjustment therein, said pipe being arranged when its lower end is beneath the surface of the beer and the gas-pressure is turned on to be connected with the draft-faucet for drawing beer in the usual manner, a controlling means to close the passage through said pipe, a gas-saving mechanism adapted to be connected with said pipe when the latter is drawn above the beer to draw the gas out of the keg or barrel, and a normally closed branch connection formed on said tapping-pipe outside the barrel or keg through which a suitable siphon-tube may be inserted when the pipe is again inserted into the beer for siphoning purposes, whereby the same pipe is utilized for drawing beer and for siphoning, the gas is saved and the beer is prevented from foaming during the siphoning process, substantially as described.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

his
EDWARD A. × AUGUST.
mark

Witnesses to signature and mark:
ELLEN THOMPSON,
W. CLYDE JONES.