

No. 821,875.

PATENTED MAY 29, 1906.

G. M. KNEUPER.
MEANS FOR EMPTYING RECEPTACLES.
APPLICATION FILED FEB. 21, 1903.

Fig. 1.

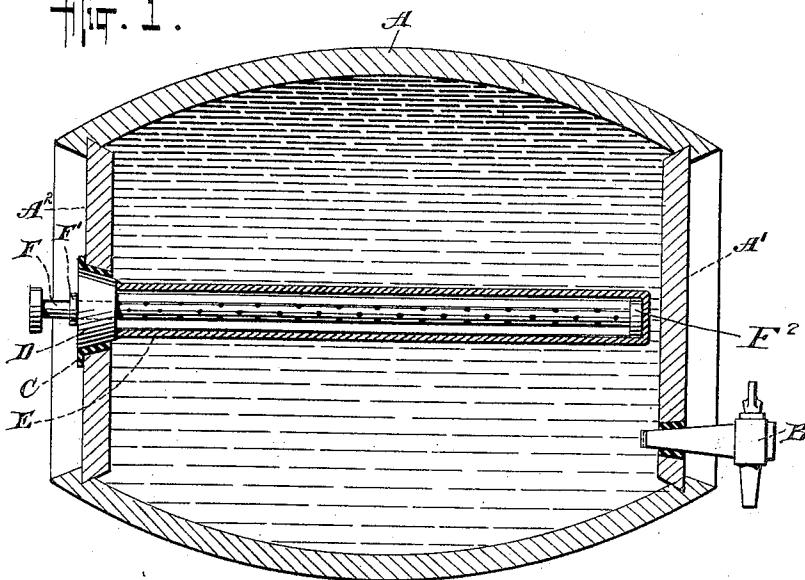


Fig. 2.

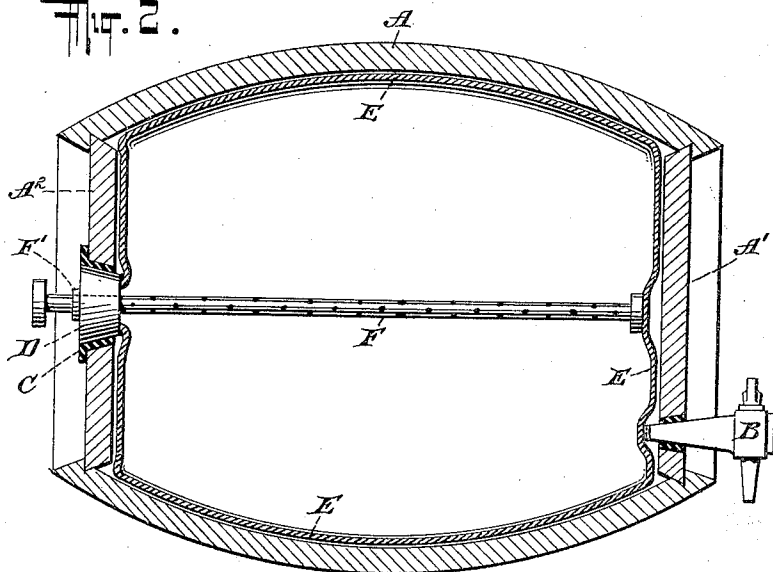
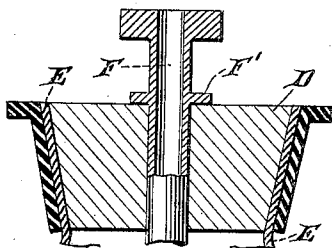


Fig. 3.



WITNESSES:

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MEANS FOR EMPTYING RECEPTACLES.

No. 821,875.

Specification of Letters Patent.

Patented May 29, 1906.

Application filed February 21, 1903. Serial No. 144,456.

To all whom it may concern:

Be it known that I, GEORGE M. KNEUPER, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Means for Emptying Receptacles, of which the following is a specification.

My invention relates to receptacles of various kinds, and particularly to such as are intended to contain liquids, and has for its object to allow such receptacles to be emptied without admitting air into direct contact with the liquid remaining in the partly-filled receptacle.

It is well known that many beverages and other liquids are injuriously affected by prolonged contact with air, and my invention has been devised to avoid this drawback.

I will now proceed to describe my invention in detail, after which I will particularly point out its novel features.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a longitudinal section of a barrel provided with my invention, the barrel being full. Fig. 2 is a similar view showing the barrel empty, and Fig. 3 is a detail cross-section of the bung.

The barrel A is of any approved construction, being, for instance, provided with two heads A' A², through one of which the faucet B is introduced. In the other head A² or at any other place of the barrel is provided a bung-opening, preferably furnished with a lining or bushing C. Into this bushing fits the bung D, which in the structure shown clamps the edge of an expansible bag E against the said bushing. The bung is perforated and preferably receives a pipe F, having a flange F' to engage the bung and extending into the bag and having an enlarged end F², adapted to hold the bag in a stretched condition even when deflated, as shown in Fig. 1, so that it will present the smallest possible surface to the contents of the barrel or receptacle. The outer end of the pipe is open to the atmosphere, while the portion within the bag E is open or perforated, so that the interior of the bag communicates with the outside air; but the space which contains the liquid—that is, the space exteriorly of the bag—does not communicate with the outside air. In other words, the bag or diaphragm E forms a partition or barrier between the liquid and the outside air and prevents con-

tact of the air with the liquid, while allowing the air to exert pressure on the liquid through the interposed diaphragm or movable partition. It may therefore be said that the partition E divides the receptacle into an air-compartment and a liquid-compartment or containing-compartment, and the position of the partition changes automatically as the size of the liquid-compartment is decreased by the outflow of liquid. Thus the size of the liquid-compartment will finally be reduced to practically nothing, as shown in Fig. 2. At this stage air will enter the liquid-compartment through the faucet B or other outlet, and when the movable partition is in the nature of an expansible bag, as shown, the equalization of the air-pressure on both sides of the partition will cause the latter to collapse to resume substantially the shape shown in Fig. 1. In order to fill the barrel, the partition or bag E is removed from the barrel, together with the bung D. The pipe or holder F is used chiefly to keep the bag E steady and stretched in its collapsed condition. If the said bag E were not held in a stretched condition, as shown in Fig. 1, it would sag between the bung D and the enlarged end F² of the pipe F. In fact, the said bag E would not only sag, but would double up in folds. The bag E is made of india-rubber or other suitable material.

Various modifications may be made without departing from the nature of my invention.

I claim—

1. The combination with a receptacle having an outlet for its contents, of a holder extending within said receptacle, and an expansible bag stretched or distended over the end of said holder, within the receptacle, and communicating with the outer air.

2. The combination with a receptacle having an outlet for its contents, of a tubular perforated holder communicating with the outer air and located within the receptacle, and an expansible bag located within the said receptacle and stretched over the end of said holder so as to be held permanently in a distended condition.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE M. KNEUPER.

Witnesses:

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