G. A. DICKERMAN.

Measuring Device for Creating Wantage.

No. 219,806. Patented Sept. 23, 1879.

Fig. 1.

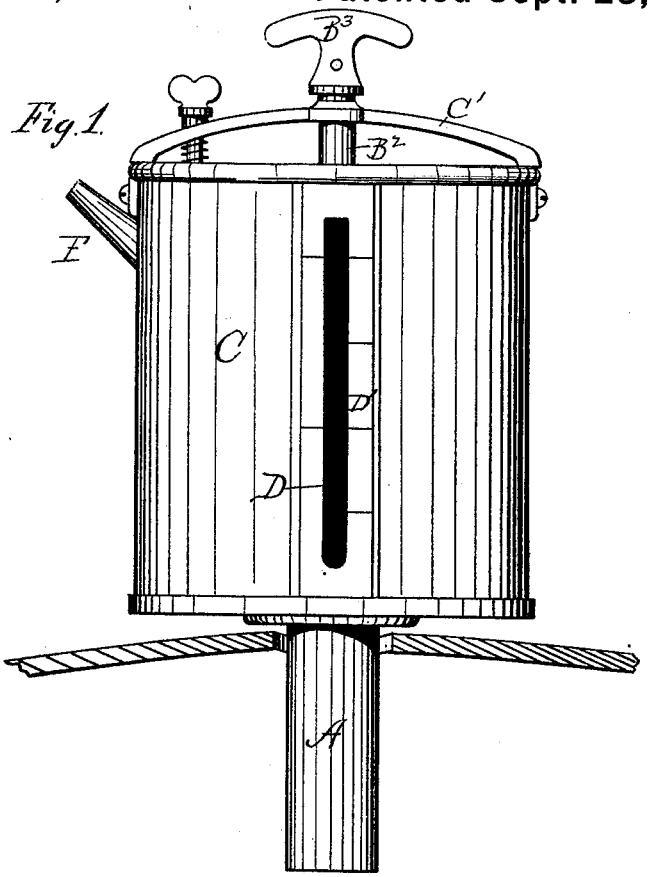
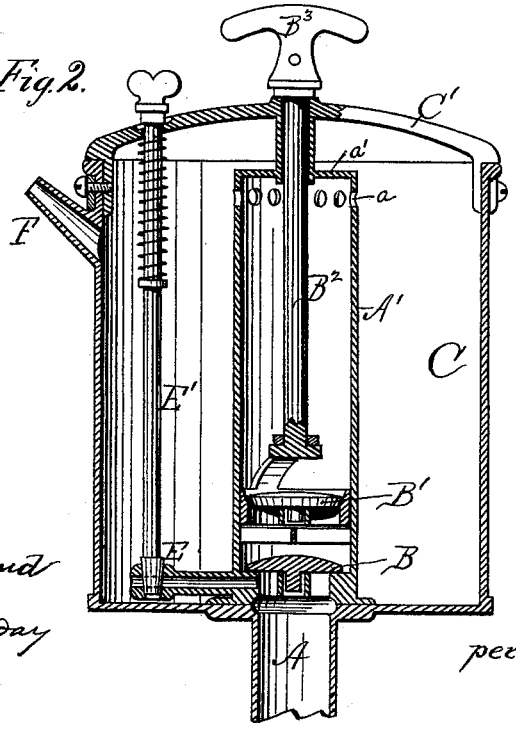


Fig. 2.



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GEORGE A. DICKERMAN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN MEASURING DEVICES FOR CREATING WANTAGE.

Specification forming part of Letters Patent No. **219,806**, dated September 23, 1879; application filed October 24, 1878.

To all whom it may concern:

Be it known that I, GEORGE A. DICKERMAN, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Devices for Creating Wantage in Spirit-Packages, of which the following is a specification.

In the accompanying drawings, which form a part of this specification, Figure 1 is a side view of my improved device, and Fig. 2 a vertical section thereof.

Like letters of reference indicate the same parts in both figures.

In barreling spirits and liquors it is necessary, because of the liability of the contents to expand with any increase of the temperature, to leave an empty space in the barrel proportioned to the size or cubical contents of the package, in order to permit the necessary expansion to take place without injury. This vacancy, and also the spirits withdrawn to create the vacancy, are called the "wantage," and, of course, must be estimated as a deduction in the payment of the Government per gallon tax.

When the barrel is filled full it is accurately gaged, so that its containing capacity is accurately known, and all that remains to be done is to withdraw and estimate the wantage. It has been customary to do this by drawing off an uncertain quantity of the spirits by means of a thief-tube or otherwise until there appeared to be a sufficient wantage, after which a sounding-rod with proper provisions and marks upon it, and which is termed a "wantage-stick," was inserted, and the amount of wantage withdrawn was thus roughly estimated. The wantage-rod has no smaller division than a half-gallon, and if there be in the wantage any fraction more than a half-gallon it is called by the Government a gallon or a half-gallon, according as it is nearer to the gallon or half-gallon mark, and thus with fractions less than a half-gallon. Of course, the manufacturer is always sure and skillful enough to secure the fraction every time in his own favor, and the Government loses in this way nearly a half-gallon tax on every package, and certainly a quart.

It is the purpose of my invention to avoid this loss by furnishing a device by means of which a predetermined amount may be withdrawn from the barrel by accurate and actual measurement, so that the wantage-stick may be dispensed with, and no more and no less than the desired amount withdrawn.

In the said drawings, A represents a tube entirely open at the bottom and not closed at the top anywhere in such way as to imprison the air in the tube when it is inserted into the spirits. This is a very necessary provision, because it will be remembered the barrel is filled entirely full of spirits when this tube is to be inserted, and unless the air in the tube could escape above it would cause such a displacement as to create an overflow. Within this tube, or rather within the upper extension, A′, thereof, is a valve, B, and also a piston or plunger valve, B^1, connected to a rod, B^2, which terminates at the top with a handle, B^3, constituting of the upper portion of the tube a suction-pump. C is a vessel or receiver surrounding the upper portion of the pump. This receiver is furnished with the brace or bail, C′, in which the pump-rod finds a bearing. A glass panel, D, in the side, and a graduated scale, D′, at the side thereof, form a measure and indicator of the contents of the receiver. A small discharge-cock, E, operated by a rod, E′, that extends up to the brace or bail C′, serves as a means of discharging a portion of the contents when measuring, in order to bring the top line of the liquid down to a particular mark on the graduate. The discharge of this cock is into the tube A, thence flowing back into the barrel.

By making the connection between the receiver and the inlet-tube below the piston and inlet-valve, any surplus liquid raised may be readily returned directly through said inlet-tube to the barrel without further manipulation, whereas if it be returned above the piston the valve on said piston will prevent the fluid readily returning to the barrel.

A small spout or nozzle, F, is a convenience for pouring the measured liquid, if desired, into a small-mouthed vessel. Generally, however this nozzle will not be used. The discharge from the pump will be through the small holes *a*, thus obviating any danger of throwing the spirits out of the receiver by the action of the piston, the plate *a′* at the top of

the pump-tube being a sufficient and effective guard.

It will be readily understood that this device will enable the accurate withdrawal of a certain predetermined amount of wantage precisely measured—a thing which cannot be done by means of a wantage-rod, because such rods are not adapted to every size and shape of barrel, and cannot be, in the nature of things, so adapted, as it cannot be told in advance what will be the shape or size of every barrel.

The tube being centrally located in the receiver makes the device as easy to handle as a common thief-tube, and much easier to operate, and all the parts are balanced under the hand.

Although I have shown an inlet-tube nearly as large as the barrel or working-chamber of the pump, yet it is obvious that by the construction I have invented any sized tube may be used, as it is unnecessary that the piston should work in the barrel or case from which the liquid is being drawn, as in the measuring-pumps heretofore employed.

I claim—

1. In a wantage device, the combination of the inlet-tube A, the pump A′, and the receiver C with the discharge-cock E, arranged to return from the receiver C to the inlet-tube A below the piston and inlet-valve any surplus liquid raised by the pump, substantially as described.

2. The combination, with the measuring-receiver C, of a pump having its working-barrel A′, piston B^1, and inlet-valve B located entirely within said receiver, and its inlet-tube A connected with the receiver by a passage leading into the inlet-tube below the inlet-valve B, substantially as and for the purpose specified.

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Witnesses:
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