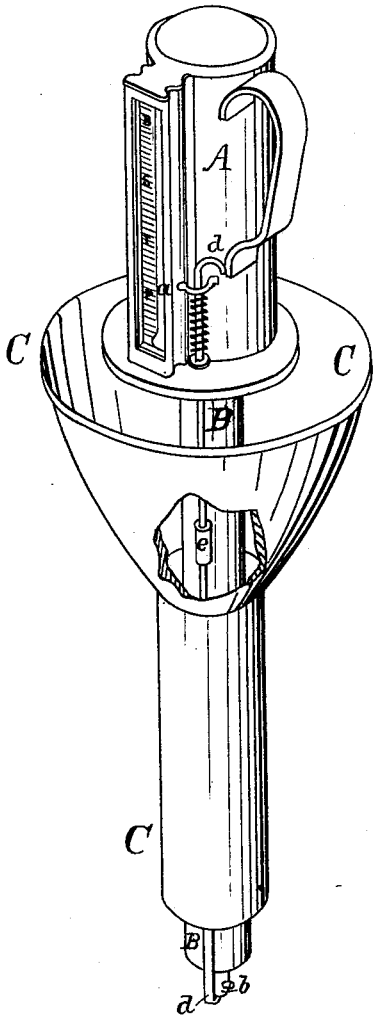
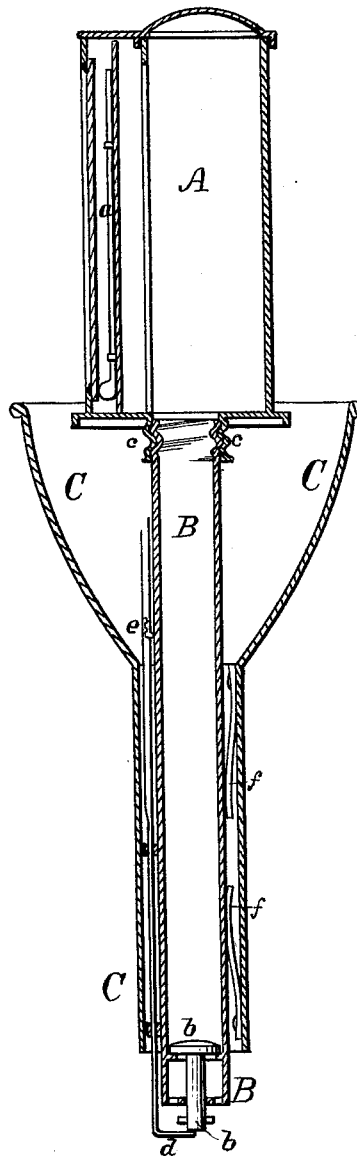


C. COX.  
 Combined Hydrometer Cup and Thief.  
 No. 200,981.                      Patented March 5, 1878.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*  
*F. B. Townsend*  
*Pliny B. Smith*

*Inventor:*  
*Camillus Cox*

# UNITED STATES PATENT OFFICE.

CAMILLUS COX, OF WASHINGTON HEIGHTS, ASSIGNOR OF ONE-HALF HIS  
RIGHT TO CHARLES H. GOODRICH, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN COMBINED HYDROMETER-CUP AND THIEF.

Specification forming part of Letters Patent No. **200,981**, dated March 5, 1878; application filed  
August 31, 1877.

*To all whom it may concern:*

Be it known that I, CAMILLUS COX, of Washington Heights, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combined Hydrometer-Cup and Thief; and do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

Like letters represent like parts in the different figures.

The nature of my invention relates to a combination, in an apparatus for testing liquors in barrels or analogous purposes, of a hydrometer-cup, or vessel designed for similar uses, with a pump or "thief," so that the former may be filled by the latter at one process with the liquor which it may be desired to test with a hydrometer or otherwise from the barrel or other vessel in which it may be contained.

The instrument is more especially designed for the purpose of testing the proof of liquors contained in barrels, but may be applied to other and analogous purposes.

A represents an ordinary hydrometer-cup, of which there are various kinds in use; but for testing the proof of liquors I prefer the one known as "Baumé's hydrometer-cup." In this cup is fixed a thermometer, *a*, in such a way that the tube is in contact with the liquid in the vessel, and is exposed to view on the outside, thus showing at a glance the temperature of the liquid in the cup.

For purposes in which the temperature of the liquid is not important, a cup of the simplest form is sufficient.

B B is a pump, commonly known among gagers as a "thief," in the bottom of which is arranged the valve *b*.

The pump or thief B B is joined to the cup A at *c*, either permanently or with a screw, as shown in the drawing, so that the top of the pump or thief opens into the bottom of the cup.

The pump is inserted into the bung-hole of

the barrel, and by a reciprocal vertical motion of the pump and cup the latter is filled with liquid through the former, and by means of the valve *b* the liquid is thus held in the cup, and may conveniently be submitted to the desired test.

The wire *d d* operates upon the valve *b*, and by raising the wire, which may be done by applying the finger at the top, the valve *b* is opened, and the cup and pump may thus be emptied.

The wire contains a coupling-joint at *e*, by means of which it may be separated when it is desired to disconnect the cup and pump.

Various equivalent devices will suggest themselves to any person competent to construct the machine, and may be substituted for the wire *d d*.

C C C is a funnel, in which the pump or thief B is inserted and held by means of the springs *f f*, the pipe of the funnel being larger than the pump, so that any overflow from the cup A is caught by the funnel C and conducted back into the barrel.

The machine may be used either with or without the funnel.

The cup A and the pump or thief B B are old devices, which have been used separately.

My invention, by combining the two, is designed to obviate the necessity of filling the cup A by first filling the pump or thief, and then emptying into the cup, as formerly practiced.

What I claim as my invention is—

1. The funnel C C C, in combination with a thief, B B, and hydrometer-cup A, as and for the purposes set forth.

2. The self-acting valve *b*, in combination with the thief B B and hydrometer-cup A, substantially as set forth.

In testimony of which I have hereunto set my hand this 27th day of August, A. D. 1877.

CAMILLUS COX.

Witnesses:

CHAS. K. NICHOLS,  
PLINY B. SMITH.