

H. PETRIE.

Hydrometer.

No. 48,203.

Patented June 13, 1865.

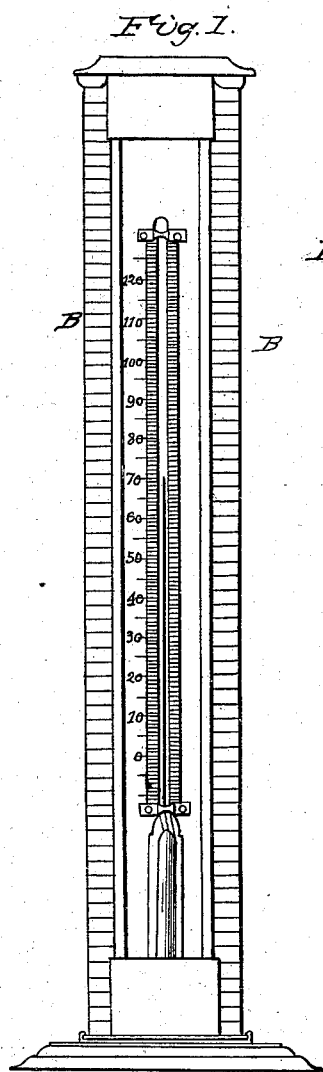


Fig. 2

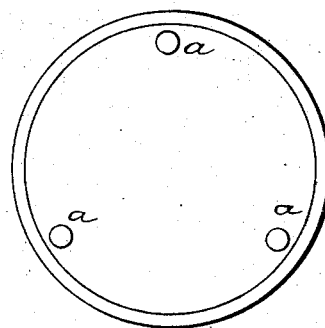
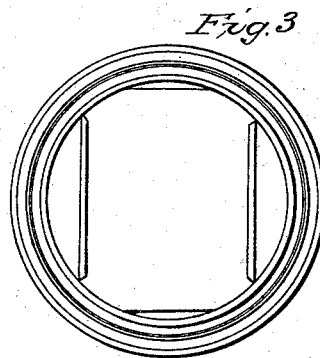


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY PETRIE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HYDROMETERS.

Specification forming part of Letters Patent No. 48,203, dated June 13, 1865.

To all whom it may concern:

Be it known that I, HENRY PETRIE, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Hydrometers and Means for Ascertaining the Commercial Value of Spirituous Liquors; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view, and showing Fahrenheit's thermometer in the foreground. Fig. 2 is Tralle's hydrometer. Figs. 3 and 4 represent different views of an adjustable bottom for the hydrometer case.

The object of my invention is to reduce the calculations of McCulloch's tables for ascertaining the commercial value of spirituous liquors to a small and convenient form, so that they may be attached to the outside of the hydrometer-case, for convenience and easy reference; also, to so construct a hydrometer-case that its heavy bottom may be easily attached thereto or detached therefrom, and, when detached, both the case and bottom may be carried in the inspector's pockets without being cumbersome; also, to provide means for keeping the hydrometer-case in a perpendicular position while standing on a curved or uneven surface.

I construct my hydrometer-case with a second or adjustable bottom, which is shown on the drawings by Figs. 3 and 4. I make this adjustable bottom large and heavy, and from one to two inches greater in diameter than the hydrometer-case proper. I adjust it to the hydrometer-case by means of raised lips or grooves on its upper surface, into which the flanges on the bottom of the hydrometer-case proper may be easily slid. It may also be attached thereto by means of a raised lip or hook on one side, into which one edge or flange of the upper bottom may be hooked, and a spring on the opposite side, that catches over the side or flange and holds it securely. On the bottom of this adjustable bottom I fasten three balls or feet, arranged relatively with each other in the form of a triangle, each one of which occupies a corner thereof, as represented on Fig. 4 by the letters *a a a*. My object in making these three balls or feet on said bottom is to secure a foothold or rest on the curved surface

of a barrel or other vessel, and thereby secure a perpendicular position for the hydrometer with greater ease than could be done by using a bottom that is flat on its lower surface.

I construct my table on brass, zinc, copper, paper, or other suitable substances by printing, stamping, or otherwise, and usually of the proper size to cover the circular portion of the hydrometer-case when the same is attached thereto; or I may stamp it entire on the outer surface of said case. My said table is represented on Fig. 1 by the letter B. I arrange my table by placing the figures representing the temperature by Fahrenheit's thermometer on the top and bottom, and those indicating the results shown by Tralle's hydrometer, I place on the sides.

My method of calculation by this table is as follows: When the value of the liquor is shown by Tralle's hydrometer and the temperature is ascertained by Fahrenheit's thermometer, I take the lines of the figures thus indicated and trace them till they meet. I then take the figures found in the square where the said two lines meet and add them to the value indicated by the hydrometer if that value is below sixty, or I subtract them from said value if the same is above sixty. The result will always correspond with McCulloch's tables. I extend this table, when desirable, so as to embrace all the figures on McCulloch's tables from one to one hundred.

I do not wish to be confined to the use of this table in any particular form or size. I may make it large enough to cover the entire surface of the largest hydrometer-case, except the face of the thermometer, or I may make it so small as only to cover a portion of such case. My object in that regard is accomplished when I have succeeded in placing the said table before the inspector in the most convenient place and form possible for easy reference.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

1. The adjustable bottom 3 and 4, when used for the purposes specified.
2. A hydrometer with the table B attached to the case thereof, substantially as set forth.

H. PETRIE.

Witnesses:

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