(No Model.)

L. T. SCHWAMM.

PORTABLE STOCK COOLER.

No. 381,432. Patented Apr. 17, 1888.

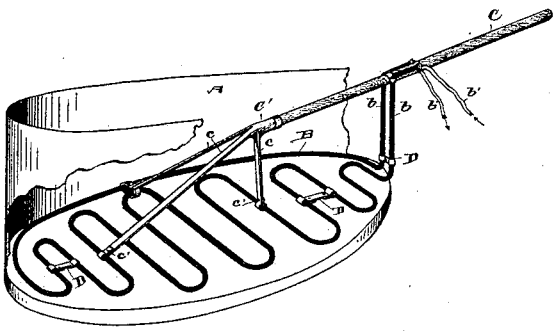

Fig. 1.

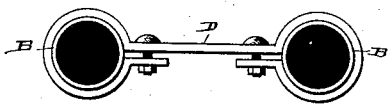

Fig. 2.

WITNESSES
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UNITED STATES PATENT OFFICE.

LEONHARD TH. SCHWAMM, OF CLEVELAND, OHIO.

PORTABLE STOCK-COOLER.

SPECIFICATION forming part of Letters Patent No. 381,432, dated April 17, 1888.

Application filed June 20, 1887. Serial No. 241,855. (No model.)

To all whom it may concern:

Be it known that I, LEONHARD TH. SCHWAMM, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Portable Stock-Coolers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in portable stock-coolers designed more especially for the stock-vats, in which a coil of pipe with handle and hose attached is made light and compact, and is suitable for shifting by hand from one vat to another, to the end that a number of vats can be kept at the desired temperature with a small outlay for cooling apparatus and with little manual labor, and the vats are left unobstructed for cleaning, repairs, and other purposes.

With these objects in view my invention consists in certain features of construction and in combination of parts hereinafter described, and pointed out in the claims.

A number of so-called "stock-vats" are usually had in a brewery, the vats being more or less in number, according to the capacity of the establishment, and the liquid or stock in these vats must be kept at a suitable low temperature. The vats are usually small in size and are assembled in close proximity to each other. Each stock-vat, as often as the contents is drawn off, must be thoroughly cleansed of the "wort-slime" before the vessel is refilled. Heretofore various apparatus for cooling stock-vats have been employed, among which may be mentioned ice-tanks set in the respective vats. With such ice-tanks much labor was required in supplying ice and removing ice-water, and each ice-tank had to be lifted out whenever the vat had to be cleaned, and the ice or the tank had to be removed whenever the temperature of the vat required it. In view of these difficulties I have devised the portable cooler illustrated in the accompanying drawings.

Figure 1 is a view in perspective of a so-called "stock-vat" with my improved cooler in position therein, a portion of the vat being broken away to show the interior thereof. Fig. 2 is an edge view of a suitable clamp for connecting the different parts.

A represents an ordinary stock-vat. Such vats may be of any desired form, size, or construction, but are usually of small dimensions, and for convenience are arranged in rows or clusters, with passage-ways between the rows, so that each vat is accessible. The vats of a plant should be made of the same size and form. A coil of pipe, preferably of thin copper, is made to fit loosely in the vat, and the ends of the pipe have attached hose for passing suitable cooling agent through the coil.

B represents a form of coil adapted to the purpose, although the peculiar form in which the pipe is bent is not essential, but may be varied indefinitely. The ends of the pipe *b* are made to extend above the tub and have hose *b'* attached. A handle, C, preferably of wood, is connected in any suitable manner with the coil for lifting and carrying the coil from one vat to another. A convenient means of attaching the handle to the coil is shown, a metal socket, C', being had to receive the ends of the handle, and the sockets having brace-rods *c*, connecting with different parts of the coil to prevent the latter from being bent or broken.

In Fig. 2 is shown a suitable form of clamp, D, for connecting the different parts of the coil to render the coil rigid. The brace-rods *c* are shown with thin ends bent around the pipe and secured by bolts *c'*. With this arrangement of parts the coil of pipe, though made very thin and light, can be lifted or moved without danger of injuring it. The hose *b'* is arranged in such juxtaposition to the handle C that the hose and handle may be grasped in the hands of the operator, thus relieving the coil of pipe from the strain that would otherwise be had in dragging the hose along in moving the coil from one vat to another. Brine or other cooling agent may, by means of the hose, be passed through the coil continuously.

The coil is placed successively in the different stock-vats and left for a longer or shorter time in each, as may be necessary to reduce the temperature of the respective vats. From the fact that the one coil and set of hose is made to serve a large number of vats the initial cost of the same is comparatively small. A system of

pipes is usually had for passing some cooling agent through the fermenting-vats, in which case the hose *b'* may be connected in such pipe for supplying the coil B with such cooling agent. It is found that much less labor is required in keeping the same number of vats cool by means of my improved portable cooler than with the ice-tank in the manner heretofore practiced, and the vats when drawn off are left entirely free from obstruction in cleaning.

The handle C preferably extends out between the ends of the pipes *b*, the pipes and handle being clamped together, substantially as shown.

What I claim is—

1. A portable cooling-coil consisting, essentially, of a coil of pipe, a series of brace-rods attached thereto and provided with a socket, a handle one end of which is secured in said socket, and hose attached to the ends of the coil, substantially as set forth.

2. A portable cooling-coil consisting, essentially, of a coil of pipe, a handle attached thereto, and hose attached to the ends of the coil, the said hose being attached to the coil at a point near the handle, whereby the handle and hose can be grasped by the operator, substantially as set forth.

3. The combination, with a coil of pipe having upturned ends and hose attached to the ends of the coil, of a series of brace-rods secured to the coil and carrying a socket, and a handle secured in said socket, substantially as set forth.

4. The combination, with a coil of pipe having upturned ends and hose connected with the pipe, substantially as indicated, of a handle for lifting the coil, said handle having brace-rods connected with the differents part of the coil, the said handle being embraced by the ends of the pipe, and clamps for bracing the coil, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 1st day of June, 1887.

LEONHARD TH. SCHWAMM.

Witnesses:

CHAS. H. DORER,

ALBERT E. LYNCH.