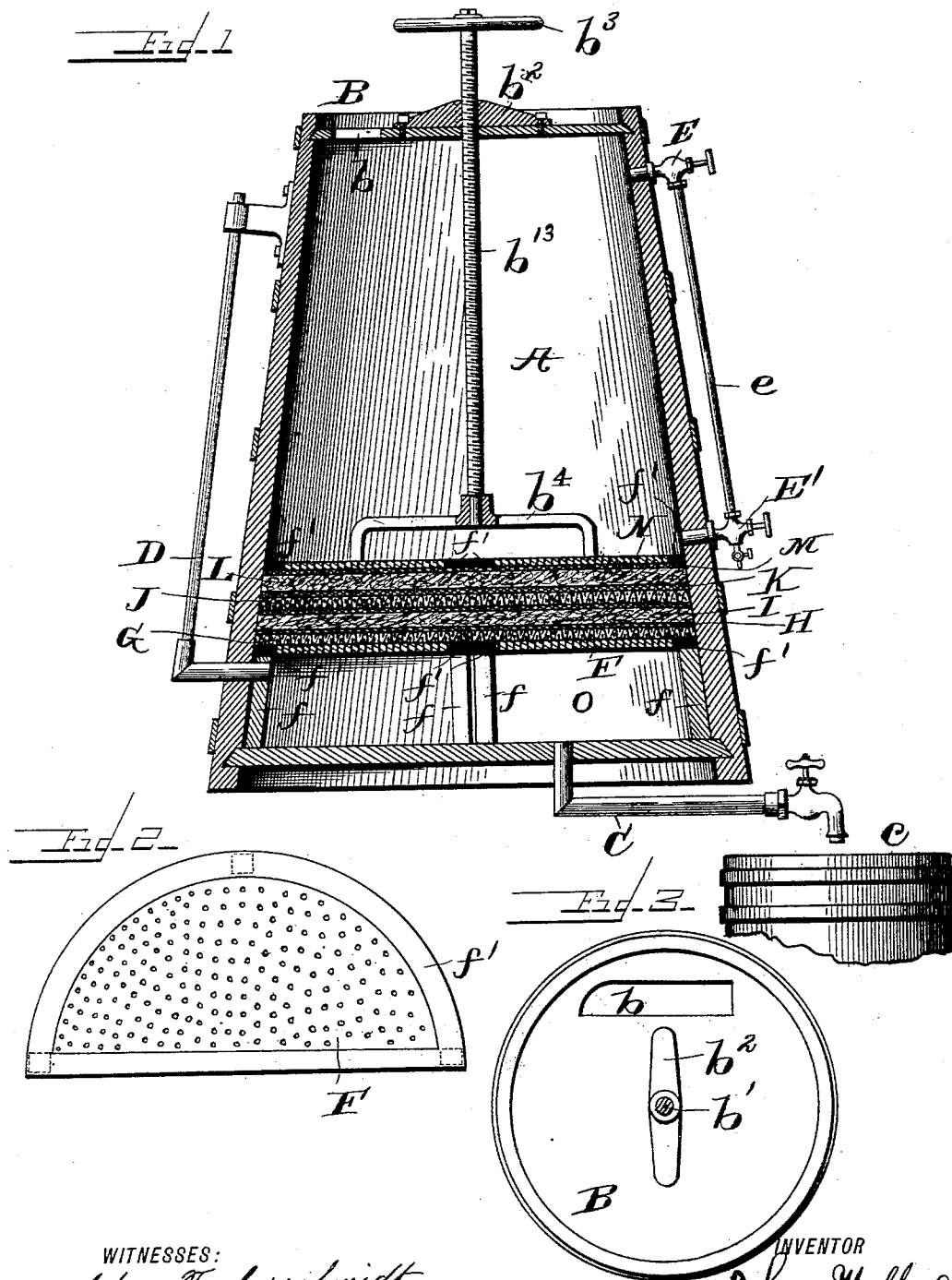


(No Model.)

J. MOELLER.
BEER FILTER.

No. 476,671.

Patented June 7, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

JOHAN MOELLER, OF BOSTON, MASSACHUSETTS.

BEER-FILTER.

SPECIFICATION forming part of Letters Patent No. 476,671, dated June 7, 1892.

Application filed November 14, 1891. Serial No. 411,892. (No model.)

To all whom it may concern:

Be it known that I, JOHAN MOELLER, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Beer-Filters; 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 appertains to make and use the same.

My invention relates to filters generally, but more especially to filters for rest and stock beer.

It consists of a wooden vat provided with a false bottom. The staves forming the vat are much thicker at the bottom for the purpose of giving more strength to the false bottom, which rests on three standards and is provided with a rubber washer in order to make a "close joint." On this false bottom is laid first a wire strainer, then a flannel cloth covering the same, on top of this a layer of prepared filter cellulose, again on top of this a wire strainer, then a flannel cloth with a layer of cellulose, and on top then a strong strainer, which is laid on through the door in the top of the vat. Each strainer is divided into two parts and is provided with rubber washers, which extend entirely around each part. In the center of the top of the vat is an opening, through which passes an iron rod having a handle and provided with screw-threads. This rod has a suitable base which rests on the filter. As above stated, each half of the lower strainer has three legs, the object of which is to support the pressure between the upper and lower strainers, leaving at the same time free space for the filtered beer to collect before running it off through a pipe attached outside of the vat and provided with a faucet. An air-pipe is attached to one side of the vat, leading nearly to the top of the same, and on the other side of the vat a cylinder glass tube is attached for the purpose of showing the quality and quantity of beer filtering. Preferably the vat is supported by suitable means high enough to allow a tub or other receptacle to be placed underneath it for the purpose of receiving the filtered beer. The inside of the vat is thoroughly varnished, and the wire and bottom strainers are manufactured of copper and well zinked.

In the drawings, Figure 1 is a vertical central section through the vat and strainer. Fig. 2 is a detail view of one-half of bottom strainer. Fig. 3 is a plan view of the head of the vat.

A represents the vat, the staves of which are thicker at the bottom than at the top, said vat having the head B, provided with openings *b* and *b'*.

*b*² is a block having an opening which, when the block is secured properly, forms a continuation of the opening *b'*.

C is a tube leading from the vat to a suitable receptacle *c* for the purpose of drawing off the filtered beer.

D is an air-pipe secured to one side of the vat, the upper end of which is open and extends nearly to the top of the vat, the lower end of said pipe extending a short distance into the compartment containing the filtered beer.

E and E' are two valves secured to the side of and extending into the vat, and *e* is a glass tube connecting said valves. The object of this tube *e* is to enable the operator to ascertain at any time the quantity and quality of the filtering-beer.

The filter is constructed as follows: F is the bottom and large strainer supported upon legs or standards *f*, and is provided with a rubber washer *f'*, extending entirely around each half of said strainer. G is a wire-gauze; H, a layer of flannel cloth; I, prepared cellulose; J, wire-gauze; K, flannel; L, cellulose; M, flannel, and N a large strainer, preferably of metal. Each strainer is divided into two parts and a rubber washer *f'* extends entirely around each part. These parts are laid in the vat through the opening *b*. Through the opening *b'* is passed a rod *b*¹³, screw-threaded and provided with a handle *b*³. *b*⁴ is a base having projecting prongs. The rod *b*¹³ works loosely in said base. O is the compartment that receives the filtered beer.

The operation of my invention is obvious. This filter serves to bring the "rests" of beer left in either stock-beer vat or in the casks (from which the beer is racked off) back to a finely and carefully filtered beer, which can then be transferred (by pump or otherwise) into any cask ready to be "racked off" in two weeks. These "rests of beer" are car-

ried over in some breweries for quite a long time, and very frequently they are detrimental to the best of beer.

5 This filter can be manufactured at a small cost, works without steam-pump, and will save many barrels of beer otherwise lost. In addition to the above, it saves a very large per cent. of isinglass.

10 It is evident that many slight changes and alterations may be made in the construction of my invention without departing from the spirit thereof, and hence I would have it understood that I do not confine myself strictly to the construction and arrangement herein
15 described.

What I claim, and desire to secure by Letters Patent, is—

The combination, with the vat provided with the opening *b*, the vent-pipe, and the valves *E* and *E'*, connected by the glass tube 20 *e*, of a filter consisting of the divided plate *F*, the rubber washer *f'*, and standards *f*, secured to and supporting the said divided plate, wire-gauze, flannel, cellulose, flannel, wire-gauze, flannel, cellulose, flannel, and the 25 perforated divided plate *N*, all combined as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHAN MOELLER.

Witnesses:

OTTO FEINMÜLLER.

THEODORE HALDER.