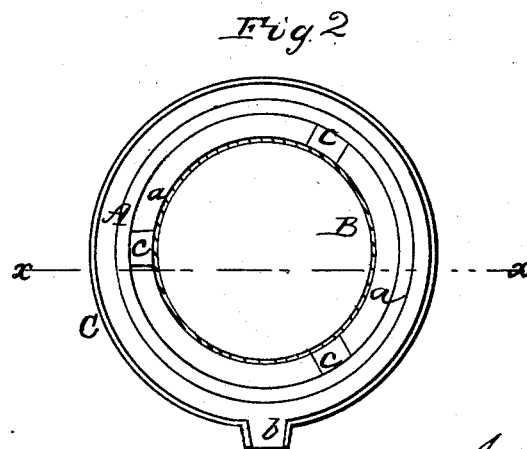
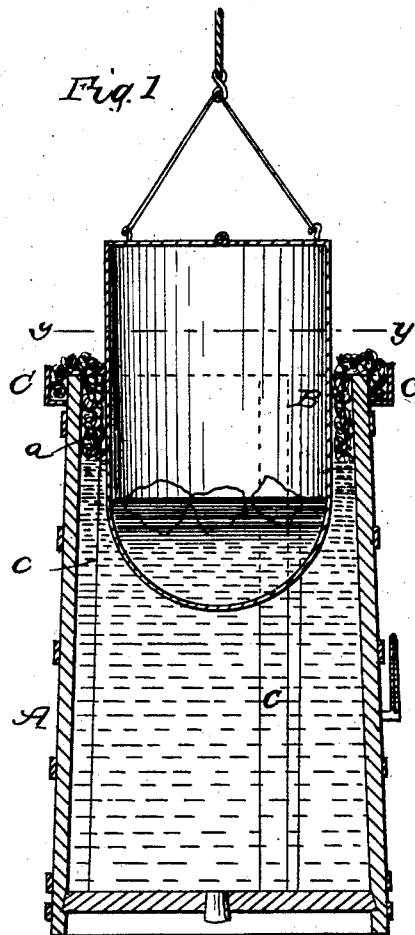


A. HAMMER.

Apparatus for Fermenting Malt Liquors.

No. 45,406.

Patented Dec. 13, 1864.



WITNESSES

*H. Hauff*  
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# UNITED STATES PATENT OFFICE.

ADOLPH HAMMER, OF NEW YORK, N. Y.

## IMPROVED APPARATUS FOR FERMENTING MALT LIQUORS, &c.

Specification forming part of Letters Patent No. 45,406, dated December 13, 1864.

*To all whom it may concern:*

Be it known that I, ADOLPH HAMMER, of the city, county, and State of New York, have invented a new and Improved Apparatus for Fermenting Malt Liquors; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical central section of this invention, taken in the plane indicated by the line *x x*, Fig. 2. Fig. 2 is a horizontal section of the same, the plane of section being indicated by the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention consists in the employment, or use, in combination with a fermenting tun, of a solid or hollow body suspended from a rope or chain, or otherwise arranged in such a manner that it can be lowered more or less into the liquid contained in the fermenting-tun, and that by its action the liquid is forced up in the annular space between the outside surface of the immersed body and the inside circumference of the tun, and the froth and yeast rising to the surface of the liquid during the fermenting process can be made to flow over the edge of the tun, and thus separated from the liquid simply by adjusting the position of the immersed body. The froth and impurities thus discharged are received by a circular trough secured to the outside of the tun, near its top edge, in an inclined position, and provided with a spout at its lowest point, through which the impurities discharged from the tun are conducted to a suitable receiver. In order to regulate the temperature of the liquid in the tun, the immersed body is made hollow, so that it can be filled partially or wholly with cold water and ice, or either, and strips of wood or other suitable material, secured to the inside surface of the tun, keep the immersed body properly in the center of the tun, and guide it during its ascending or descending motion.

A represents a fermenting-tun, made of wood or any other suitable material in the ordinary manner. This tun is filled with the liquid to

be subjected to the fermenting process, to within a few inches of its top, or to any desirable height, according to the nature of said liquid, and by immersing into it, partially or wholly, a body, B, the outside diameter of which is somewhat smaller than the inside diameter of the tun, said liquid is forced up into the annular space *a* between the outer surface of the body B and inner surface of the tun A, and the froth and yeast rising from the liquid to be fermented collect in said annular space, and by lowering the immersed body they are made to flow over the edge of the tun, and to collect in the circular trough, C. This trough is secured to the upper edge of the tun in an inclined position, and it is provided with a spout, *b*, at its lowest point, so that the froth and yeast which collect in the same flow off through the spout, and can be collected in a suitable receiver.

The body B is guided in its up and down motion by strips *c*, nailed at suitable intervals to the inner surface of the tun; and in order to enable the operator to regulate the temperature of the fermenting liquor, the body B is made hollow, so that water can be poured in, the temperature of which can be adjusted, if necessary, by introducing, at suitable intervals, lumps of ice. A thermometer inserted in the side of the tun shows the temperature of the fermenting liquid.

If the body B is made hollow, it will be provided with a cover, through which water and ice can be introduced, and suitable loops or eyes secured to its top edge serve to insert ropes or chains, by means of which said body can be raised or lowered. Three or more such loops are required to keep the body steady, and the several strands emanating from these loops converge, and are secured to a ring or S-shaped hook, which is connected to a suitable hoisting-rope. By these means the body B can be easily handled, and its position adjusted without difficulty, and the progress of the fermentation can be regulated with the utmost nicety, and the operation of cleansing is carried on automatically, so that the use of stillions can be dispensed with.

I claim as new and desire to secure by Letters Patent—

1. The employment or use of a body, B,

either solid or hollow, in combination with a fermenting-tun, substantially as set forth, so that by raising or lowering said body the height of the fermenting liquid in the tun can be regulated, and the liquid is cleansed without additional labor.

2. The tun A, with guide-strips *c* and trough

C, in combination with the body B, either solid or hollow, constructed and operating substantially as and for the purpose described.

A. HAMMER.

Witnesses:

W. HAUFF,

ANDREW B. HINE.