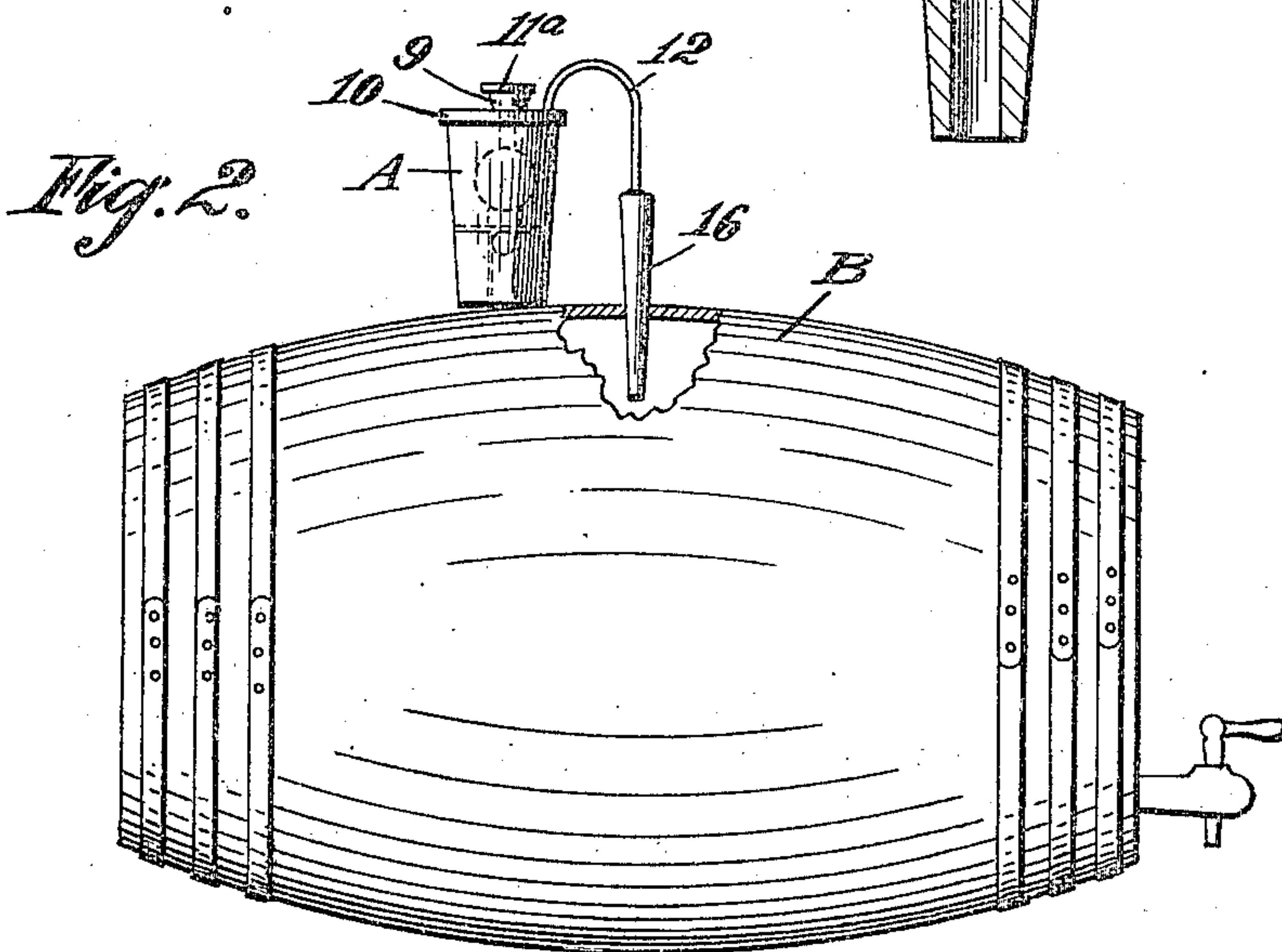


AERATING LIQUORS.

948,831.

Patented Feb. 8, 1910.



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To all whom it may concern:

Be it known that I, AGOSTINO Tosco, subject of the King of Italy, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Aerating Liquors, of which the the following is a specification.

My invention relates to apparatus for preserving wines and other alcoholic liquors.

Where a liquor like wine, and especially clarets, is drawn glass by glass from a barrel, the contents of the barrel deteriorate as the amount of liquor in the barrel grows less and the air space above the liquor increases, unless some means are employed to purify or treat the air admitted to the barrel to take the place of the displaced liquid.

The object of the present invention is to provide a simple, cheap, practical device which may be applied to any barrel, keg, or other container, for the purpose of preserving the original quality of the liquor therein, irrespective of the amount of liquor in the container.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a view in vertical section of the invention. Fig. 2 is a side elevation showing the invention as applied.

My invention comprehends essentially a receptacle A preferably made of glass, or some other non-corrosive substance, and of suitable size and shape and adapted to contain a body of alcohol.

Fitting in within the receptacle A is a perforated plate or partition 2 suitably supported in the receptacle, as on the legs 3, which latter form a cage for the float valve 4. This valve 4 is adapted when the receptacle is filled, or partially filled, with a suitable disinfecting liquid, like alcohol, to a level above the partition 2, to lift the valve 4 and close an opening 5 centrally arranged of the partition plate 2, for the purpose shortly to be described. The top of this partition plate 2 and surrounding the port opening 5 carries an upwardly projecting flange 6, and a tube 7 preferably of glass has its lower enlarged end seating snug within the flange and over the port 5. If

desired, the tube 7 may be expanded between its ends, as shown at 8, to form a deflector. The upper end of the tube 7 is preferably reduced and extends above the top edge of the receptacle A and enters a funnel-shaped projection 9 on the cover or cap 10 for the receptacle. This cover 10 is hermetically sealed over the receptacle, and the joint around the end of the tube 7 and funnel 9 is also hermetically sealed; the receptacle being filled through the funnel 9 and tube 7.

After the receptacle is filled with a suitable liquid, as pure alcohol, a suitable straining material 11, such as absorbent cotton, is placed in the funnel 9 and over the tube 7, and over the strainer is placed a perforated cap 11^a. Suitably attached to the cover is a pipe 12 which opens into the space in the receptacle A and between the wall of the latter and the tube 7, and the open end of the pipe 12 within the purifying apparatus may be suitably covered by a screen 13. This tube is suitably bent and carries a packing ring 14 held against the shoulder or flange 15 on the tube; the portion of this tube below this packing ring being adapted for insertion into a stopper member 16, which latter fits tight in the bung of a barrel or keg. The tube is of sufficient length that when in position the receptacle A may rest on the barrel, as shown. The packing ring 14 forms a tight joint with the corresponding packing 17 in the top of the stopper or plug 16.

If desired, the space in the receptacle above the partition 2, and below or around the expanded part 8 of tube 7, may be filled with a filtering material, such as little glass beads 18, through which the air entering the receptacle through the tube to a point beneath the plate may pass upwardly, thus increasing the aerating or purifying effect.

In practice, the device is applied to a barrel, or other container, by suitably connecting and seating the parts in the manner above described, and as illustrated in Fig. 1. If there is no liquid in the receptacle A the valve 4 will drop down and uncover the port 5 in the partition plate 2. Where it is desired to use the device, the receptacle A is filled or partially filled to a suitable depth above the partition plate 2 by admitting alcohol or like purifying medium into the receptacle A through the funnel 9 and

the tube 7, after placing the absorbent or filtering medium 11 in the funnel and covering the funnel with the cap 11^a. As liquor is drawn from the barrel B through the
 5 usual tap or faucet, air will enter the barrel to take the place of the liquor thus withdrawn; it being understood that the only way air can enter into the barrel is by passing in through the filtering medium 11 and
 10 down through the tube 7, through port 5, thence upwardly through the perforations in the partition 2 and beneath the filtering medium 18 and out around the expanded deflector 8 to the pipe 12 which leads into
 15 the barrel. This inrush of air, due to the turning on of the faucet or cock, in the barrel will temporarily force down the valve 4 in its cage formed by the legs 3, allowing the air to pass, but the moment the flow of
 20 liquor from the cask or barrel B ceases, the valve will again rise and close the port 5. Thus it is seen that all air which enters the cask or barrel is first strained through the straining medium 11, and thence is made to
 25 bubble through a considerable body of alcohol, thereby destroying all germs and carrying over into the tank a sufficient quantity of alcoholic vapors to maintain the liquor in the barrel or cask perfectly fresh.

30 Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. An apparatus for aerating liquors, said apparatus comprising a liquid-containing
 35 receptacle having a foraminous partition supported above its bottom, a buoyant valve within the receptacle beneath said partition adapted to close in an upwardly direction, an air admission tube leading into the recep-
 40 tacle and supported on said partition, said partition having an air admission port connecting with the space beneath the partition, said port adapted to be closed by the valve, means for filtering the air before its
 45 admission to said tube, and means for withdrawing air from the upper part of the receptacle, said valve opening for the admission of additional air coördinately with the withdrawal of air from the upper portion
 50 of the receptacle.

2. An aerating apparatus comprising a liquid containing receptacle having a perforated partition supported therein above its
 55 bottom, a cage within the receptacle forming a support for the partition, said partition having an air admission opening, a buoyant valve below the partition and guided in its movement by the cage and adapted to close said port, an air admission tube extending
 60 through the upper part of the receptacle having its lower end proximate the partition, a closure for the upper end of the receptacle, said air admission pipe extending through the inclosure, and means connecting
 65 the upper portion of the receptacle with a

liquid container whereby air is drawn from the upper portion of the container coördinately with the withdrawal of liquid from the container, said valve adapted to uncover the air admission port coördinately with the
 70 withdrawal of air from the upper part of the container to allow a fresh charge of air to enter said container.

3. An aerating apparatus comprising a liquid containing receptacle, a perforated
 75 partition therein and supported above the bottom, a cage forming a support for the partition, said partition having an upwardly extending flange and a centrally located air admission port, a float valve guided by the
 80 said cage and normally closing said port, an air admission tube having its lower end entering said projecting flange and seating upon the partition, the upper end of the receptacle being closed and said tube extend-
 85 ing through said end, a filtering medium in the receptacle and supported by the partition and means connecting the upper end of the receptacle with a liquid container whereby air is drawn from the receptacle co-
 90 ordinately with the withdrawal of liquid from the container, said valve adapted to open for the admission of a fresh charge of air into the receptacle substantially simultaneously with the withdrawal of air from
 95 the upper part of the receptacle.

4. In an aerating apparatus, the combination of a receptacle adapted to contain liquid, a perforated plate supported in the receptacle above the bottom thereof, a mass
 100 of filtering material supported above said plate, an air admission pipe extending through the upper portion of the receptacle and supported upon the plate, said plate having an air port for conducting the air into
 105 the body of liquid beneath the plate, a buoyant valve adapted to close said port and to automatically uncover the port to admit the fresh charge of air, a filtering medium in which the inlet end of the pipe is inclosed,
 110 and means for withdrawing air from the upper portion of the container, said air first entering the liquid beneath the plate and then bubbling up through the supported filtering medium, and collecting in the up-
 115 per portion of the receptacle.

5. An aerating apparatus consisting of a hollow plug, an air tube fitting said plug, a liquid-containing receptacle, a cover for
 120 said receptacle with which said air pipe connects, said air pipe opening into the receptacle, said receptacle having a perforated partition plate, a tube above the plate and extending out through the cover, said
 125 tube being opened at one end and discharging into the receptacle beneath the plate, means by which air can be admitted into the receptacle only through said tube, and discharged therefrom only through said air pipe, a float
 130 valve in the receptacle beneath the plate and

normally closing over the mouth of said
tube, said tube having an expanded portion
between its ends to deflect the air outwardly
toward the sides of the receptacle, and a
5 granular filtering medium in the receptacle
and on top of the plate.

In testimony whereof I have hereunto set

my hand in the presence of two subscribing
witnesses.

AGOSTINO TOSCO.

Witnesses:

GEO. F. CAVALLI,
E. AVENALI.