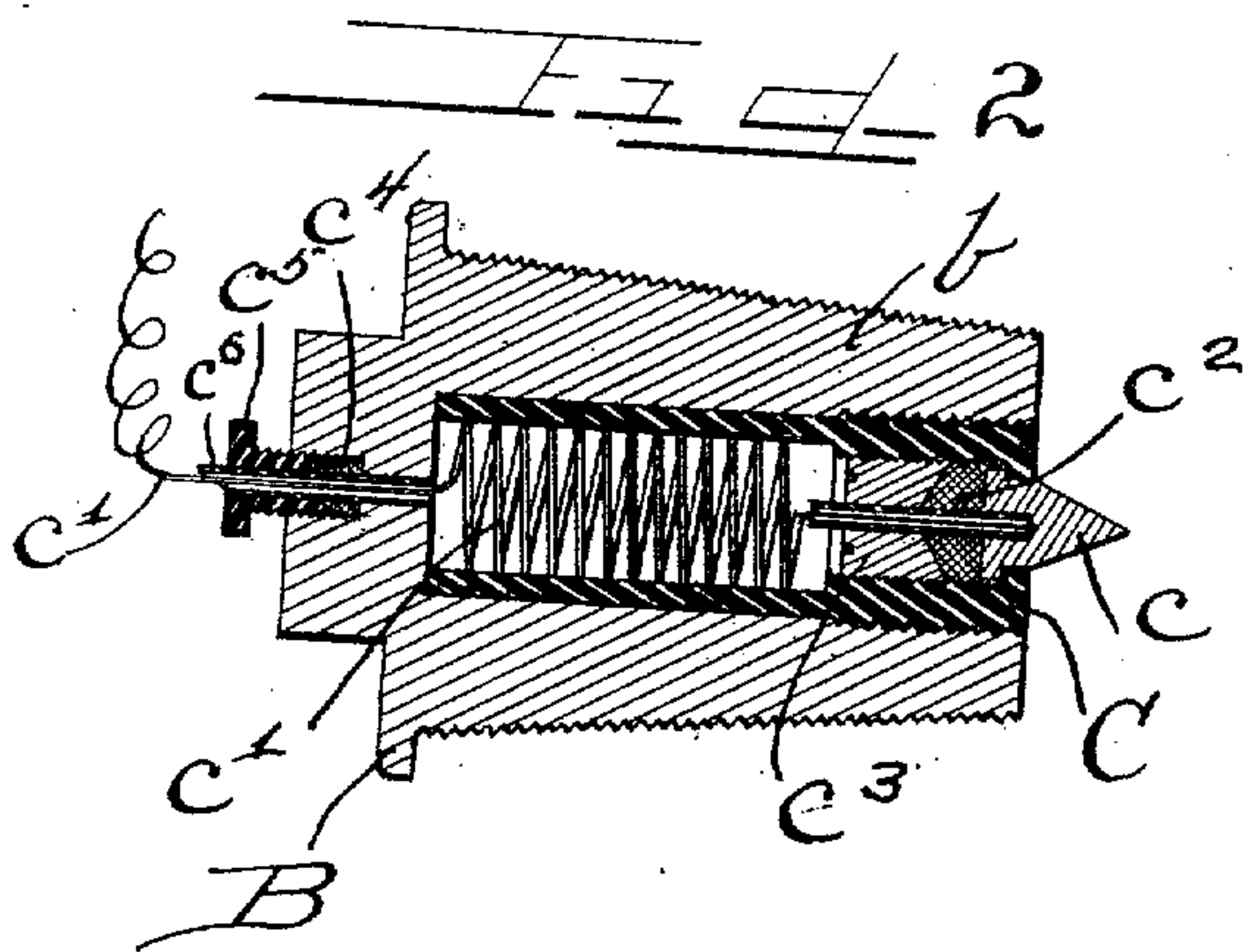
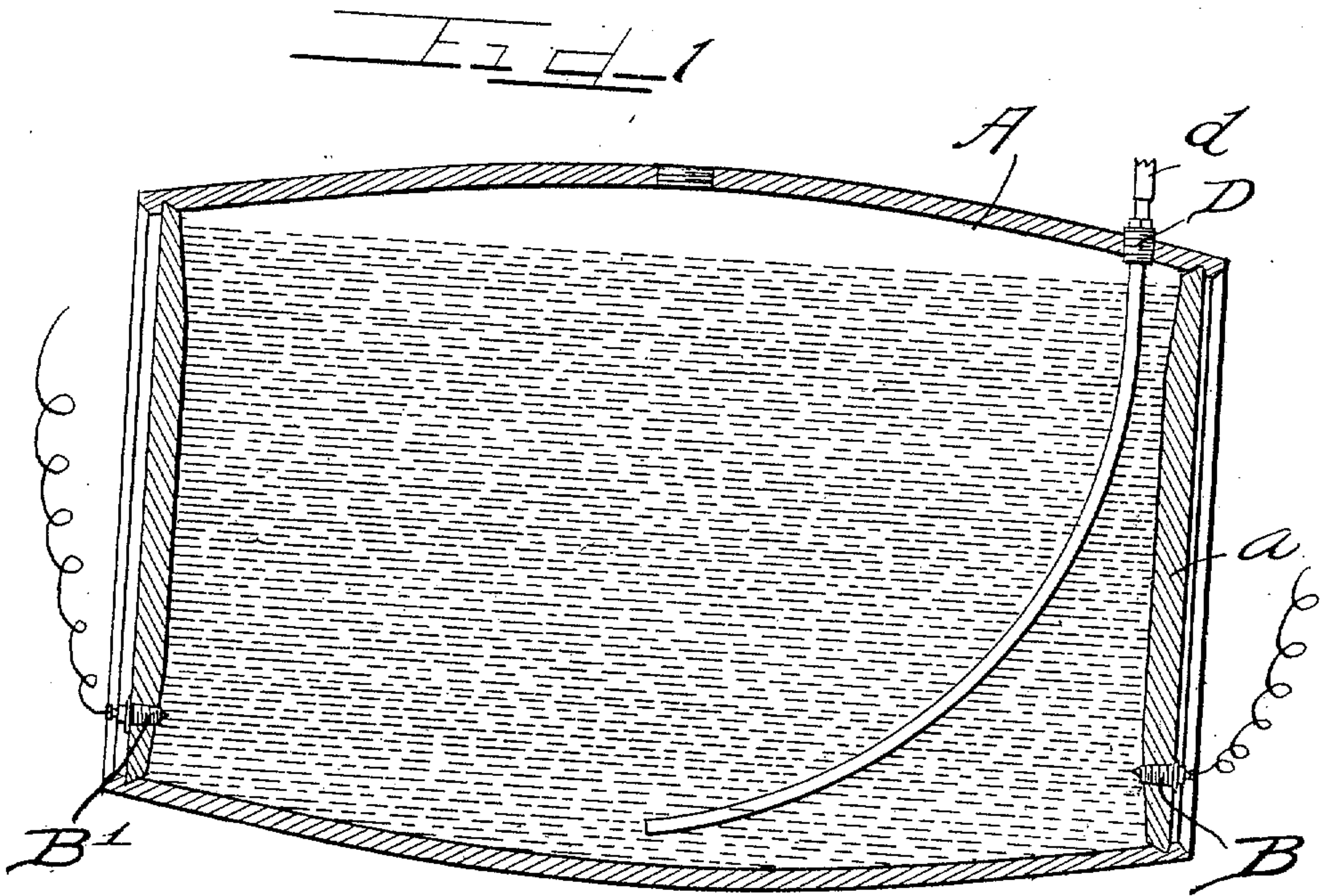


967,575.

J. SEITZ.
LIQUOR AGING AND PROCESSING APPARATUS.
APPLICATION FILED FEB. 3, 1909.

Patented Aug. 16, 1910.



WITNESSES

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LIQUOR AGING AND PROCESSING APPARATUS.

967,575.

Specification of Letters Patent.

Patented Aug. 16, 1910.

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To all whom it may concern:

Be it known that I, JOHN SEITZ, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Liquor Aging and Processing Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in that class of liquor aging or processing devices whereby electricity either used alone or in connection with certain gases, is employed for the purpose of improving the quality of the liquor.

The invention relates to that class of devices set forth in my prior application for patent filed on the 2nd day of November, 1908.

It is an object of this invention to provide electrodes adapted to be connected on opposite sides or ends of the retaining vessel or cask and to project into the liquid and to afford in connection therewith, means for aerating the liquor and producing somewhat violent currents therein, the pressure for that purpose being applied below the path of the electrical current.

The invention embraces many novel features and consists in the matters hereinafter described and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is an enlarged central vertical section of a cask or barrel for the liquor to be treated and illustrating the arrangement of the apparatus. Fig. 2 is an enlarged central longitudinal section of one of the electrodes or conductors.

As shown in the drawings: A, indicates the cask or barrel adapted to contain the liquor to be treated and through the heads *a*, of which are inserted the electrodes B—B', as shown in Fig. 1, and near the lower side of each of said heads. Each of said electrodes, as shown, comprises a threaded bung or plug *b*, of brass or any suitable material not adapted to be affected injuriously either by the contents of the cask or the electrical currents generated. As shown, said bung is provided with a bore extending from its inner end and affording an interior chamber, into which is threaded an insulating bush-

ing or sleeve C, flanged inwardly at its outer end to afford a peripheral shoulder to support the conductor *c*, preferably of platinum or other metal having high conductivity. 60

As shown, a conducting wire or leader *c'*, is connected with the electrode *c*, and extends through a suitable packing *c*², and a follower nut *c*³, threaded in the inner end of said sleeve or bushing and which acts to contact the same to prevent the escape of any liquid past the electrode. Said conductor *c'*, extends outwardly through a suitable aperture in the outer end of the plug or bung *b*, and closely fitted thereto is an insulating sleeve *c*⁴, which is firmly jammed into contact with the conductor by means of the packing *c*⁴, and follower nut *c*⁵, affording a gland for the outer end of the bung. The lead wires or conductors from the respective electrodes lead from any suitable source of current, the circuit being completed, of course, through the liquid to be treated. 65 70 75

Extending through a suitable aperture in the top or upper side of the cask or bung is a hard rubber or other non-conducting and somewhat rigid pipe D, connected by means of the hose *d*, with a suitable source of pressure by means of which compressed air, carbon dioxide, ozone, or the particular gas or vapor it is desired to introduce into the liquor may be delivered thereto. The lower end of said pipe extends inwardly and downwardly to a point between the electrodes and preferably to somewhat near the middle of the cask and to near the bottom of the liquid therein. 80 85 90

In operation, the gas, which may be ozone, atmospheric air or any suitable gas or vapor, is delivered to the bottom of the receptacle to produce more or less violent agitation thereof and to escape eventually through the bung or other aperture. Simultaneously with the admission of the air or other gas or vapor, a current of electricity of the desired strength is caused to pass through the liquor, utilizing the contents of the cask as the conductor to complete the circuit. 95 100

Owing to the resistance of the liquid and the distance between the electrodes, any desired or suitable current may be employed without danger of injuring the liquor and in practice it is found that currents of greater amperage may be used than heretofore, which enables large quantities of liquor to be treated simultaneously and uniformly, the aerating and electrical operation each 105 110

assisting in the process, and conjointly purifying, aging and rendering potable liquors before considered, in some instances, practically worthless.

5 Of course, details of the construction and arrangement may be varied without departing from the principles of this invention.

I claim as my invention:

1. An electrode comprising an externally tapered and threaded plug, an insulating sleeve threaded in the plug, having an internal flange at its outer end, a conducting point projecting outwardly from the sleeve having a flange to engage against the flange on the sleeve to limit the outward movement of the point and a gland in the insulating sleeve adjacent the conducting point.

2. In a device of the class described an electrode comprising a bung externally tapered and threaded for the entire length of the tapered part, a metallic point of high conductivity projecting from the inner end thereof, a non-conducting bushing for insulating the point from the bung, flanges on the bushing and the conducting point adapted one to engage against the other for limiting the outward adjustment of the conducting point, a conductor leading from the metallic point to a source of electric supply and a gland in the bung surrounding said conductor and bearing against the electrode.

3. In a device of the class described, a bung, externally threaded and provided with an axial chamber, a sleeve secured in said chamber having a flange at its outer end, a conducting member having a flange to engage against the flange of the sleeve, a pack-

ing member bearing against the conducting member, means for forcing the same there-against thereby forming a tight joint and a 40 conductor wire extending from said conducting member through the sleeve and head of the bung.

4. In a device of the class described, a bung, externally threaded and provided 45 with an axial chamber, a sleeve secured in said chamber having a flange at its outer end, a conducting member having a flange to engage against the flange of the sleeve, a packing member bearing against the con- 50 ducting member, means for forcing the same thereagainst thereby forming a tight joint, a conductor wire extending from said conducting member through the sleeve and head of the bung, a sleeve insulating the wire 55 from the head of the bung and a packing gland around the sleeve.

5. In a device of the class described an externally tapered threaded metallic plug provided with a flange, said plug provided 60 with a bore opening through one end, a flanged insulating sleeve engaged in the bore, a flanged metallic point in the sleeve limited in its outward movement by the flange engaging against the flange of the in- 65 sulating sleeve and a conductor in electrical connection with the metallic point.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

JOHN SEITZ.

Witnesses:

K. E. HANNAH,
LAWRENCE REIBSTEIN.