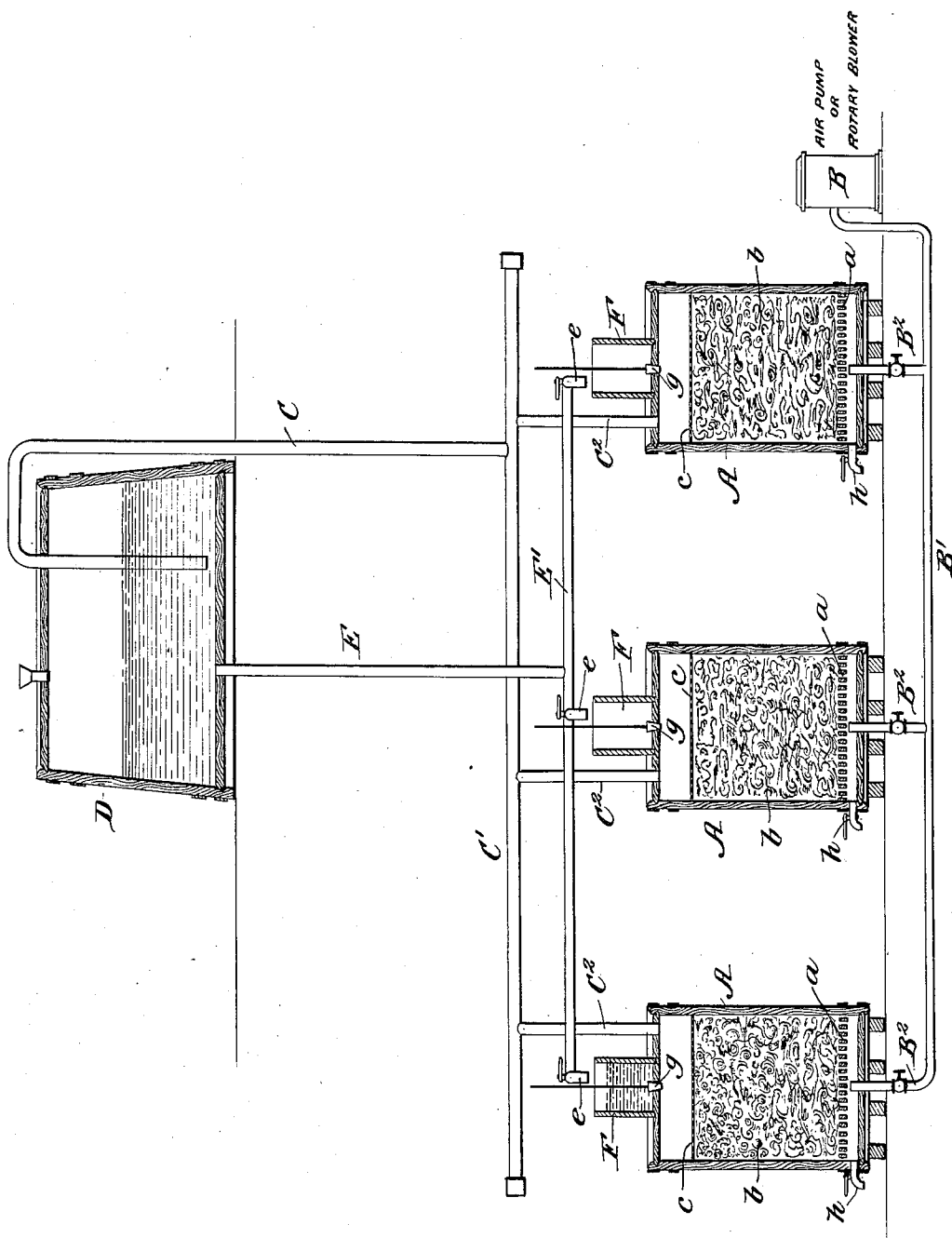


(No Model.)

E. A. SPINK.
PROCESS OF AGING LIQUORS.

No. 489,337.

Patented Jan. 3, 1893.



WITNESSES:
Fred G. Dieterich
Edw. W. Byrum.

INVENTOR:
E. A. Spink.
BY *Man*
ATTORNEYS

UNITED STATES PATENT OFFICE.

EUGENE A. SPINK, OF CHICAGO, ILLINOIS.

PROCESS OF AGING LIQUORS.

SPECIFICATION forming part of Letters Patent No. 489,337, dated January 3, 1893.

Application filed April 19, 1892. Serial No. 429,795. (No specimens.)

To all whom it may concern:

Be it known that I, EUGENE A. SPINK, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Process of Aging Liquors, of which the following is a specification.

The object of my invention is to provide a simple and effective process of transforming and eliminating the fusel oil from spirituous liquors, thereby imparting to the liquor the smoothness and bland qualities of age.

It consists in distributing the liquor over a great superficial area by means of shavings or other similar substance in a receiver, then continuously forcing air by means of a pump or blower through the same, and at the same time condensing the expelled vapors and returning the condensed liquor to the receiver, whereby the fusel oil is transformed by oxidation without loss of any of the liquor, and the requisite age is imparted to the same, rendering it smooth and palatable and free from the injurious effects of fusel oil.

The figure is a side view of an apparatus for carrying out my process.

A are the receivers which are made of wood, and are constructed with a false bottom *a* upon which are placed a mass of shavings *b* preferably of the wood known as beech. On top of the shavings is placed a perforated diaphragm *c* for more evenly distributing the liquor upon the shavings. On top of each receiver is a stationary filling and measuring cup *F*, having in its bottom an orifice opening into the receiver closed by a plug *g* having a stem by lifting which the contents of the cup may be transferred to the interior of the receiver. This cup is of a capacity adapted to charge each receiver sufficiently with liquor. Opening into the receivers below the false bottom and through separate stop cocks are a series of air pipes *B*² communicating with a pipe *B*¹ extending to an air pump *B*, or to a rotary blower, or other air forcing device. Emerging from the tops of the receivers are vertical pipes *C*² communicating with a main collecting pipe *C*¹ from which a pipe *C* leads to a tank *D* located at some convenient point above and which pipe *C* dips down into the same nearly to the bottom. From the bottom of the tank *D* there extends a return pipe *E* for the condensed liquor which

communicates with a distributing pipe *E*¹ which has nozzles *e* immediately above each one of the filling cups of the receivers.

When the apparatus is in action, its operation is as follows. The receivers each being provided with its quantity of shavings, and its charge of raw liquor containing any per cent. of alcohol, and a quantity of liquor being placed in tank *D* sufficient to form a liquid seal to pipe *C*, the air forcing device is set in action, and air is made to pass slowly but positively up through the shavings for oxidizing the fusel oil and transforming it into other and harmless compounds, which proceeds with a regular and rapid effect. This positive movement causes the vapors to issue from the receivers, and passing through pipes *C*² *C*¹ and *C* are condensed in the tank *D* beneath the liquid seal of the liquor as rapidly as it condenses, and this liquor is from time to time drawn off and readmitted to the receivers through pipes *E* *E*¹ and nozzles *e* and is again subjected to the oxidizing effect as often as may be required. The aged liquor is drawn off at the discharge outlets *h*.

By means of the forced circulation of air, it will be seen that the oxidizing effect is facilitated or quickened, and the vapors are made to pass down beneath the liquid seal in tank *D* and be condensed while the air escapes in bubbles.

I may use other materials for affording surface besides shavings such as corn cobs, sponges or excelsior and may also find it desirable to warm the air to about 90° before admitting it to the receivers.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

The process herein described of aging alcoholic liquors which consists in allowing the liquor to slowly percolate through a mass of wood shavings or equivalent material as described, forcing a current of air through the saturated shavings, condensing the vapors under a liquid seal of the condensed liquor, and returning the latter to the shavings again substantially as shown and described.

EUGENE A. SPINK.

Witnesses:

EDWD. W. BYRN,
SOLON C. KEMON.