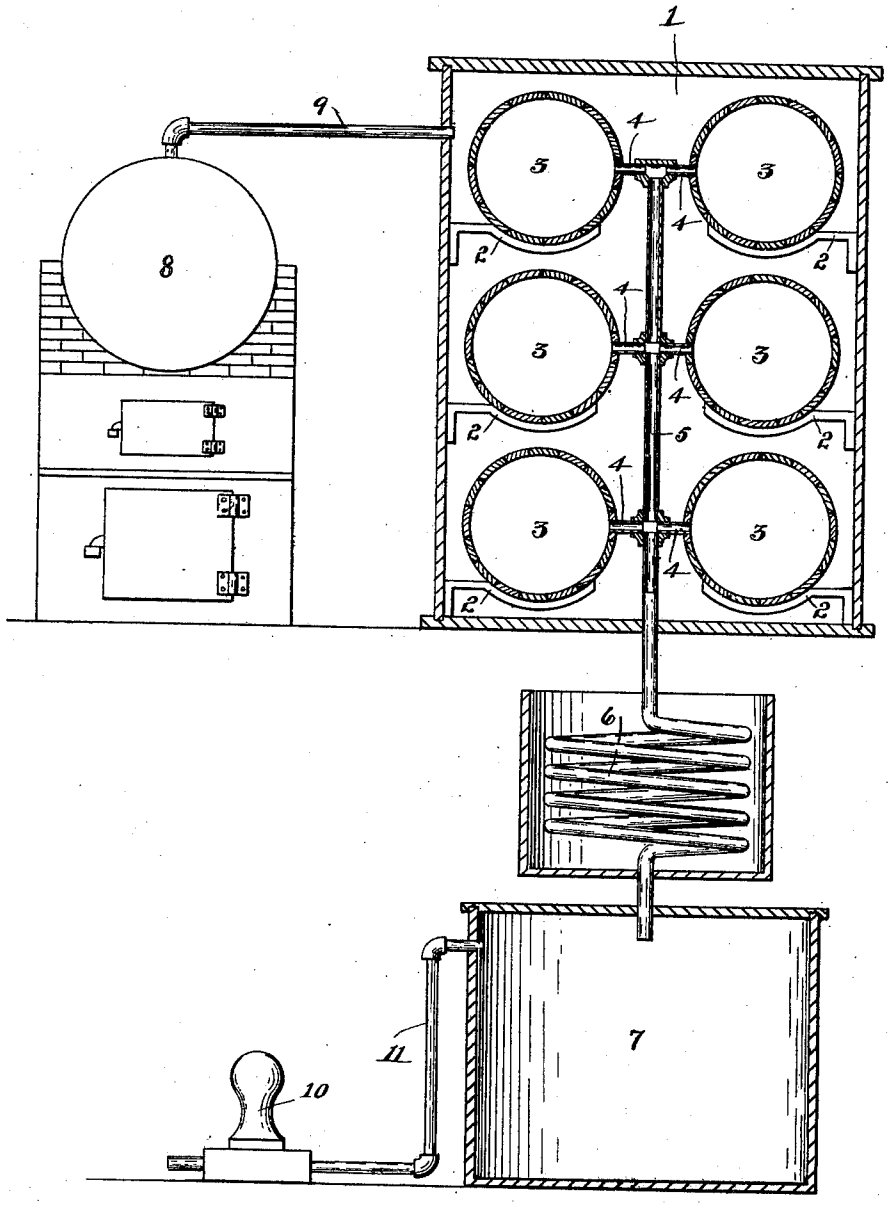
No. 686,772. Patented Nov. 19, 1901.

C. J. SELTZER.

PROCESS OF RECOVERING ABSORBED ALCOHOL FROM EMPTY BARRELS.

(Application filed Jan. 28, 1901.)

(No Model.)



WITNESSES:

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CYRUS JAY SELTZER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE NATIONAL RECOVERY COMPANY, A CORPORATION OF DELAWARE.

PROCESS OF RECOVERING ABSORBED ALCOHOL FROM EMPTY BARRELS.

SPECIFICATION forming part of Letters Patent No. 686,772, dated November 19, 1901.

Application filed January 28, 1901. Serial No. 45,069. (No specimens.)

To all whom it may concern:

Be it known that I, CYRUS JAY SELTZER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Processes of Recovering Absorbed Alcohol, &c., from Empty Barrels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing.

It is well known that the pores of the wood of barrels containing alcoholic liquids—such, for example, as whisky—absorb a valuable quantity of the liquid, which remains therein occluded for a considerable time after the barrels have become empty.

The object of my improved process is to recover or extract the alcohol from the barrels economically without affecting their integrity.

My invention consists in subjecting such empty barrels to an external bath of steam, whereby the alcohol in the pores of the wood is vaporized and is driven out therefrom into the interior of the barrel, and drawing off this alcoholic vapor and subsequently condensing it into liquid form and, if desired, finally rectifying the same, all as hereinafter more particularly described.

I have shown in a drawing accompanying this specification an apparatus for conveniently practicing my improved process wherein the same is applied to a series of barrels simultaneously.

Referring to the drawing, which represents a sectional end elevation of the apparatus, 1 denotes a practically steam-tight chamber or receptacle, to the side of which are secured brackets 2 for supporting the barrels 3 (six in number in the present instance) to be subjected to my process. Communicating with the interior of the respective barrels are pipes 4, which also communicate with a main pipe 5, that extends through the bottom wall of the chamber 1 and is formed into a coil or "worm" 6, thence leading into a tank 7. 8 is a boiler for generating steam, from which a pipe 9 leads into the chamber 1. Any openings in the barrels are closed before they are placed in said chamber, so that steam shall not flow into the interior of the barrels, and there shall be no exit from the latter except by way of the pipes 4. These pipes are passed through and made to fit tightly in the usual bung-holes of the barrels. Steam is now allowed to pass from the boiler 8 into the barrel-containing chamber, whereupon the alcohol that may be in the pores of the wood becomes vaporized, filling the interior of the barrels, whence it passes off by way of the pipes 4 and the main pipe 5 and is condensed in the coil 6, whence it flows into the tank 7. If necessary, the liquid may afterward be rectified by any of the usual methods.

The steam within the chamber 1, which is under some pressure—say a few pounds—enters the pores of the wood of the barrels, thereby aiding in driving out the alcohol therein, which escapes in the direction of least resistance—that is, into the interior of the barrels.

It may sometimes be desirable to aid or hasten the process. In such case suction may be employed as an auxiliary. To this end I make the tank 7 air-tight and connect the interior thereof with an exhaust-pump 10 by a pipe 11, as shown, this pump being put into operation when the steam is admitted to the chamber 1.

When the series of barrels have been treated as described, they are detached from pipes 4 and removed from the chamber, when they may be replaced by others.

A salient advantage of my process is that the barrels being subjected to the steam on the outside only (the same being steam-tight) the alcohol is recovered without the admixture of water, that would result from the condensation if steam were permitted to flow into the interior of the barrels. Incidentally the latter are kept moist by the steam. Thus their integrity is maintained and their utility for holding similar or other liquids unimpaired.

While I have described my improved process as applied to the recovery of alcohol, it may be applied to barrels that have held other liquids which volatilize by steam heat.

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

1. The process of recovering alcohol or the like, from the wood of barrels that have contained alcoholic liquids or the like, which consists in subjecting the barrel to a steam-bath, external only, in such manner that the liquid is vaporized and the vapor escapes into the interior of the barrel, the latter being closed against the entrance of the steam therein, drawing off the vapor from the barrel and condensing the same into liquid form substantially as set forth.

2. The process of recovering alcohol or the like, from the wood of barrels that have contained alcoholic liquids or the like, which consists in subjecting the barrel to a steam-bath, external only, to vaporize the liquid within the pores of the wood, and drawing off the vapor from the interior of the barrel with the aid of suction, and finally condensing the vapor into liquid form, substantially as set forth.

In testimony whereof I have hereunto affixed my signature this 21st day of January, A. D. 1901.

CYRUS JAY SELTZER.

Witnesses:
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