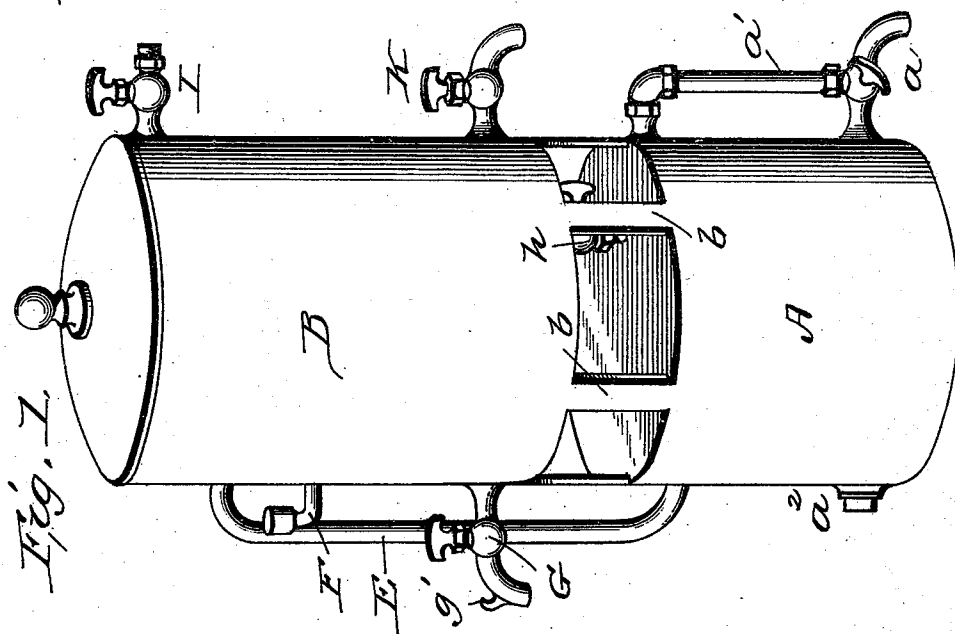
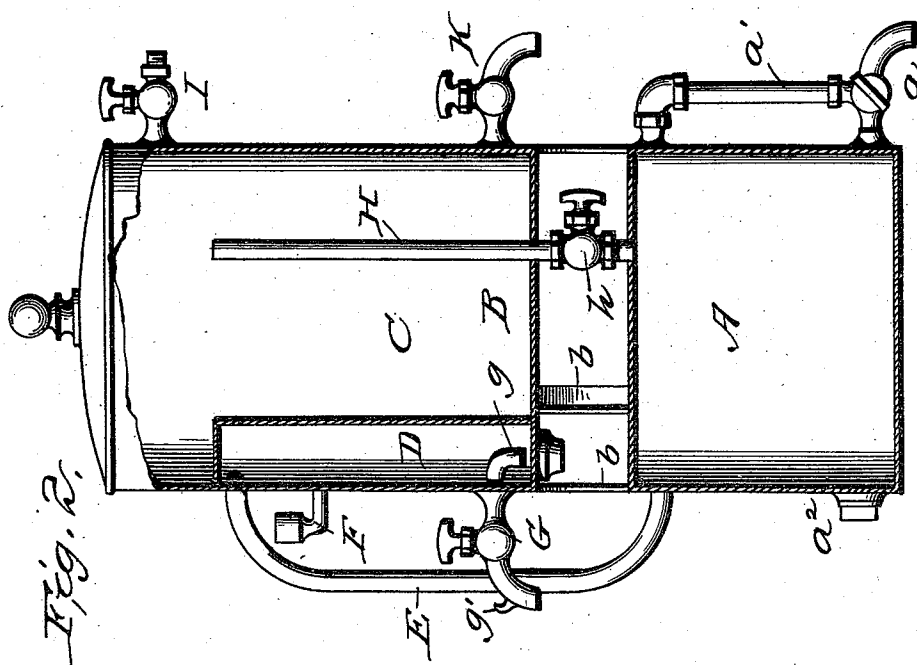


(No Model.)

E. L. JACKSON & W. FITZGERALD.  
WATER STILL.

No. 532,377.

Patented Jan. 8, 1895.



Witnesses

*W. H. Jackson*  
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# UNITED STATES PATENT OFFICE.

EDWARD LYNNAH JACKSON AND WILLIAM FITZGERALD, OF MEMPHIS,  
TENNESSEE.

## WATER-STILL.

SPECIFICATION forming part of Letters Patent No. 532,377, dated January 8, 1895.

Application filed July 26, 1894. Serial No. 518,649. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD LYNNAH JACKSON and WILLIAM FITZGERALD, citizens of the United States, residing at Memphis, in the county of Shelby, State of Tennessee, have invented certain new and useful Improvements in Distilling Apparatus; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention is an improved household still and boiler. It can also be used in the kitchen as a substitute for the ordinary hot water kettle, but its main purpose is to rapidly distill water for drinking or other purposes.

The object of our invention is to simplify this class of household stills and provide one that shall be exceedingly cheap and simple in construction and at the same time highly efficient in operation.

With these objects in view our invention consists in the peculiarities of construction and novelties of combination all of which will be fully described hereinafter and pointed out in the claim.

In the drawings forming a part of this specification, Figure 1 is a perspective view of our improved household still. Fig. 2 is a vertical sectional view of the same.

In constructing an apparatus in accordance with our invention we employ a still or boiler A, which may be of any suitable size and shape, but it is preferably shaped to fit an ordinary stove top the same as a domestic boiler or steam kettle. This still is closed at the top, of course, and near the bottom is arranged a draw off cock *a*, and extending upwardly from said cock is a glass water gage *a'* by means of which the level of the water within the boiler or still can be seen. The boiler is also provided with a cleaning out hole *a<sup>2</sup>* at the opposite side and near the bottom of the same.

Above the still or boiler A is arranged a condenser B supported upon the legs *b b* so that a considerable air space exists between the boiler and condenser and by this construction the condenser is kept much cooler than if it were connected directly with the boiler. The condenser comprises a water chamber C, and

condensing chamber D, said condensing chamber being arranged entirely within the water chamber and to one side of the same. A pipe E leads from the upper end of the still or boiler into the upper end of the condensing chamber, said pipe being located upon the outside, and is preferably surrounded with some non conducting material to keep it from acting as a condenser. A safety valve F is arranged near the upper end of the condensing chamber, and near the lower end of the same is placed a draw off cock G which has its inner end *g* turned downward so that the inner orifice rests below the water at the bottom of the condensing chamber and thus forms a seal so that no steam can pass out until condensed. By this construction the use of a coil is avoided. The faucet is formed with a hook *g'* upon which a bucket or pail can be hung to receive the water as fast as it is condensed, the cock being left open. A water supply pipe H leads from the top of the boiler into the water chamber, said pipe extending to within a very few inches of the top of said water chamber so that the water within the chamber can be thoroughly warmed before it is drawn down into the boiler, said pipe being provided with a cock *h* located between the boiler and condenser. The water chamber is also provided with upper and lower faucets I and K through which water can be introduced and drawn off as desired. The water chamber is always kept full of water so that the condensing chamber is continually submerged and in this way a more rapid and complete condensation takes place.

In operation the boiler and water chambers are filled with water and the device placed upon any suitable stove or heater. The steam passes up through the pipe E into the condensing chamber and this chamber being surrounded on the top, bottom and back by cool water the condensation is very rapid. The water supply pipe extending to nearly the top of the water receptacle enables us to draw off the warmest water in said chamber, below into the boiler or still proper, and as fast as the level of the water falls below the top of pipe it is again filled up so that the condensing chamber is always submerged. By means of the water gage the level of the water

within the boiler can also be ascertained and all danger of burning out the bottom by allowing the water to get too low, is avoided.

Faucet G having a curved end enables us to  
5 connect a hose to the faucet or hang a bucket thereon and leave the cock open all the time, so that as fast as the water is condensed it is drawn from the apparatus thus keeping it  
10 much cooler than if the water was allowed to remain therein. This relieves the condensing chamber of all pressure and condensation takes place rapidly. Should the cock be closed and the pressure become too great the safety valve will give an alarm and prevent an explosion. The condensing chamber is also provided with a cleaning out hole should it become necessary to do so at any time.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—  
20 ent, is—

In a distilling apparatus, the combination of a cylindrical boiler A and a cylindrical condenser B, said condenser having a water chamber C, and a condensing chamber D, said

chamber D being arranged at one side of the 25 cylinder B, and of less height than the same whereby it can be totally submerged, said chamber D, being closed at the top, the cylinder B, being supported some distance above the boiler A, by means of legs *b*, a pipe E, 30 leading from the upper end of boiler into the upper end of condensing chamber D, a safety valve F, also located near the upper end, a discharge faucet G, having its end *g*, turned downward so the cock can be continually left open, and a water supply pipe H, 35 extending from the water chamber C, into the boiler A, and provided with a regulating cock *h*, between the boiler and condenser, substantially as shown and described. 40

In testimony whereof we affix our signatures in presence of two witnesses.

EDWARD LYNNAH JACKSON.  
WILLIAM FITZGERALD.

Witnesses:

W. T. ARRINGTON,  
A. M. MCCREIGHT.