William Schillings improvement in Distilling Apparatus.

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PATENTED
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Fig III

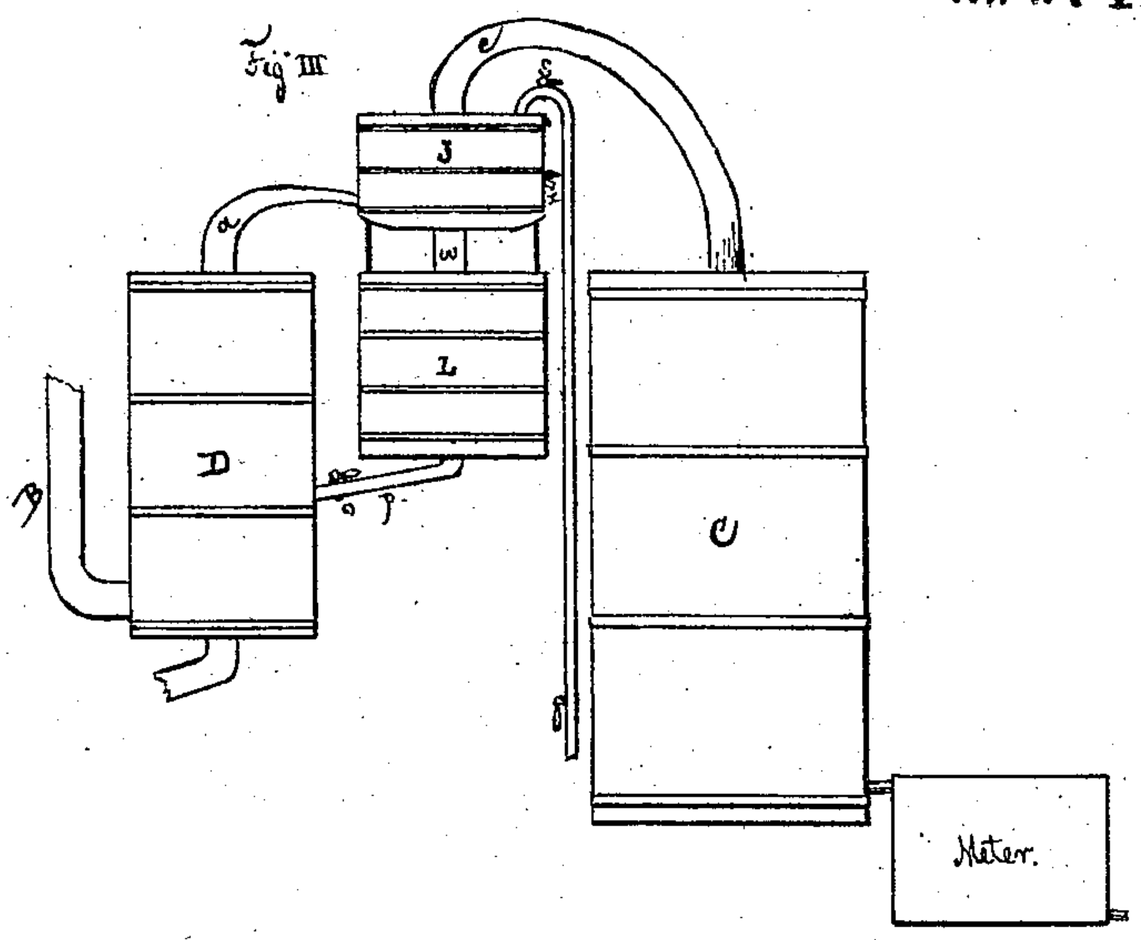


Fig I

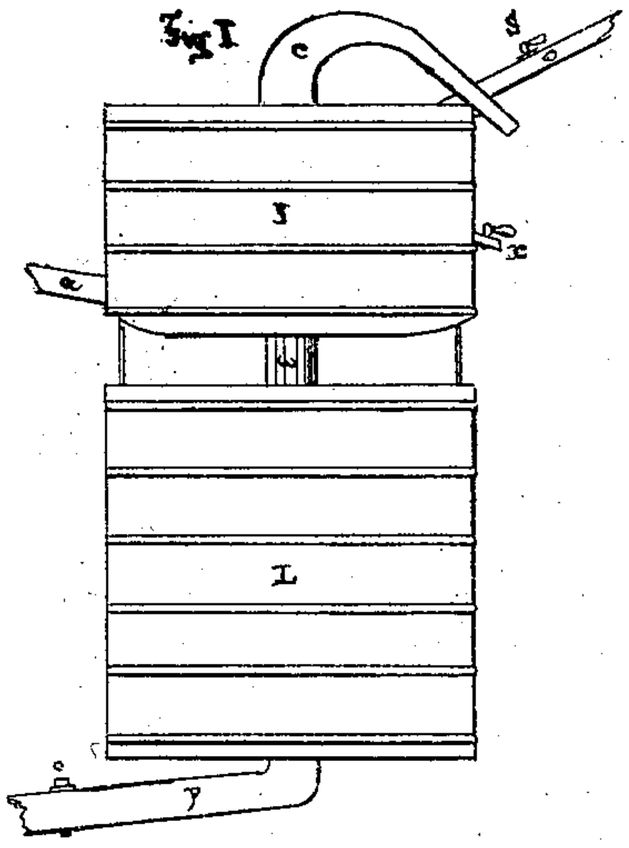
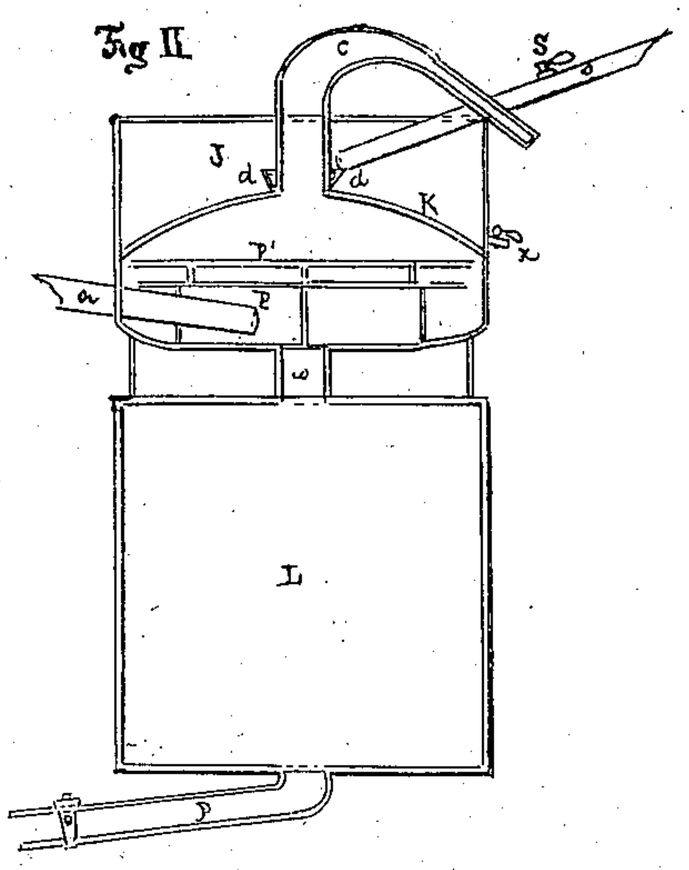


Fig II



Witnesses.
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United States Patent Office.

WILLIAM SCHILLING, OF BALTIMORE, MARYLAND.

Letters Patent No. 75,470, *dated March* 10, 1868.

IMPROVED APPARATUS FOR DISTILLING SPIRITUOUS LIQUORS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM SCHILLING, of the city and county of Baltimore, and State of Maryland, have invented and made new and useful Improvements in Apparatus for Distilling Spirituous Liquors; and I do hereby declare the following to be a full, clear, and exact description of the nature, construction, and operation of the same, sufficient to enable one skilled in the art to which it is allied to construct and use the same, reference being had to the accompanying drawings, in which my improvements are shown, as applied to stills in general use.

Figure I is a front elevation of my improvement, showing, by the broken lines or pipes *a p c s*, its connection with the doubler and cooler.

Figure II is a sectional elevation, showing its interior construction.

Figure III is an elevation, showing my improvement as connected with the doubler, the cooler, and the meter.

The invention consists of an auxiliary cooler or condenser, so constructed and arranged as to intercept the passage of the vapor, and by convenient arrangements of cold-water supply, to condense the low-wine vapor, and prevent the flow of fusel oils and other impurities through the cooling-worm, and allow the production of pure spirits of any desired strength; also, of a reservoir of any convenient capacity to receive the low wine, until it is desired to turn it back into the doubler for a fresh charge, dispensing with the use of a pump as generally used, and allowing an almost continuous distillation. In case the still runs foul, and the mash is thrown over, the low-wine reservoir receives it, and prevents its running through the worm, and, by turning a cock, it is run back into the doubler and still without waste of material or loss of time.

In the drawings, letters refer to similar parts in all the figures.

In Fig. III, B represents the pipe leading from the still or kettle to the doubler D, the doubler, with its pipe *a*, conducting the vapor to the condenser J, when the low-wine vapor is condensed, and flows through the pipe *w* into the reservoir L, where it is retained until the distiller, by turning the cock *o*, in pipe *p*, allows it to flow back into the doubler. The pure vapor not being condensed has free escape, through the pipe *c*, into the cooler C, when it is either registered in any suitable device or otherwise drawn off. By this improvement most of the obstacles to the use of spirit-meters are removed, as no mash or other impurities can come to the meter, and only the sub-product of the still flows through the worm.

In Fig. II, showing the interior construction of my improvement, *a* is the pipe leading from the doubler. *p* is a perforated disk; *p'*, a plain disk somewhat larger, both intended to impede the rapid current of vapor. The bottom of condenser is depressed to allow the free flow of condensation to the reservoir L, through the pipe *w*. The top is raised to allow the free escape of the pure vapor to the cooler through the pipe *c*. The raised top is made of a thin sheet of copper. The other parts, except the disks and pipes, should be of wood. Above this copper sheet is a tank, J, which is supplied with cold water through the pipe S, the supply being regulated by the cock S, and by operating which, in connection with the draw-off cock *x*, the quantity and temperature of the water in condenser-tank is entirely under the control of the distiller. The collar *d*, surrounding the pipe *c*, holds the cold water, and, by overflowing, spreads it uniformly over the top of condenser.

I do not confine my claim to the exact construction of the various parts, as herein described, as other forms and arrangements might fulfill the same purpose; but

What I do claim as new, and desire to secure by Letters Patent, is—

1. The combination of the condenser J and the low-wine reservoir L, or their substantial equivalents, with the doubler and the cooler C, essentially as described.

2. The combination of the low-wine reservoir L and condenser J with the cooler C and the meter, substantially as described.

3. The low-wine reservoir L, arranged, in relation to the doubler, for the purposes substantially as described.

4. The combination of the low-wine revervoir and the condenser, or their substantial equivalents.

5. The condenser, having its bottom sunk and its top raised, in the manner and for the purpose substantially as described.

6. The perforated disk *p*.

7. The condenser, having a collar, *d*, essentially as described.

8. The combination of the supply-pipe *s*, and cock S, and draw-off cock *x*, or their equivalents, with a condenser constructed substantially as described.

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Witnesses:

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