E. D. LOVERIDGE.

Stills.

No. 167,346. Patented Aug. 31, 1875.

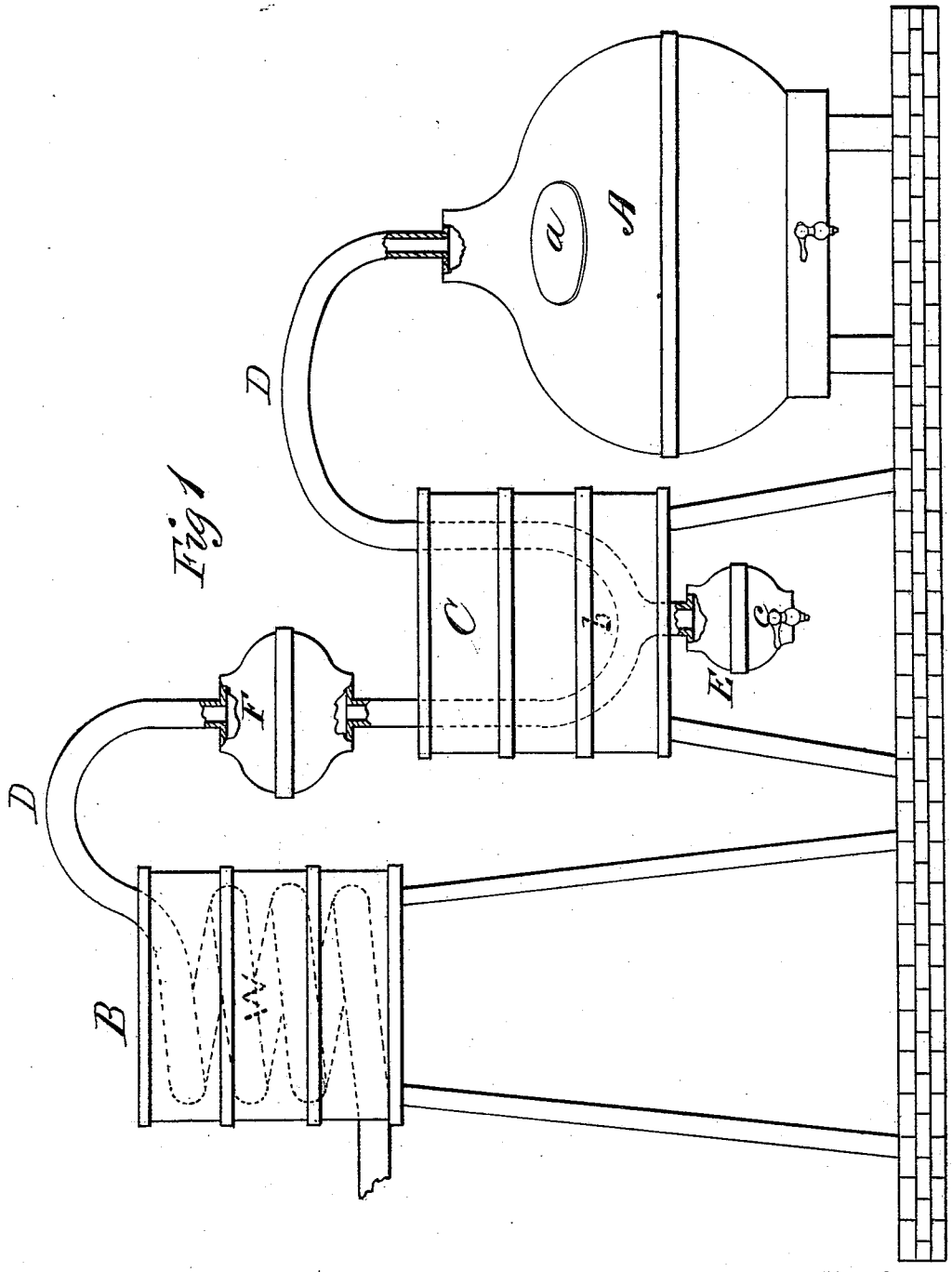

Fig 1

WITNESSES

Eug. W. Johnson

Geo. E. Upham.

INVENTOR

Edwin D. Loveridge

Chipman Fenner & Co

ATTORNEYS

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON D. C.

UNITED STATES PATENT OFFICE.

EDWIN D. LOVERIDGE, OF BUFFALO, NEW YORK.

IMPROVEMENT IN STILLS.

Specification forming part of Letters Patent No. **167,346**, dated August 31, 1875; application filed May 1, 1875.

To all whom it may concern:

Be it known that I, EDWIN D. LOVERIDGE, of Buffalo, in the county of Erie and State of New York, have invented a new and valuable Improvement in Flavoring-Stills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side view of my still.

This invention has relation to improvements in stills, which are especially designed for distilling or redistilling all kinds of alcoholic liquors.

It is well known to those skilled in the art that high-proof spirits pass over from the still to the condenser at a much lower temperature than the low-proof, and that the high degree of heat required to volatilize the latter will also carry over the fusel or other oils, which are either carried into a flavoring-bulb, when one is used, or into the worm when the bulb is dispensed with, or allowed to fall back into the still, greatly impairing the perfume of the extracts, and requiring frequent and tedious cleansing of the still.

The object of my invention is to separate the fusel-oils and other refuse products of distillation from the spirit-vapors before they reach the flavoring-bulbs, or the worm when the bulb is dispensed with, thus preserving the purity of the extracts contained therein, and delivering the condensed spirits into the receiver in a state of great purity.

To this end the nature of the invention consists in a bulb or reservoir connected with a bend of the pipe leading into a supplemental reservoir inclosing the said bend, which reservoir is situated at a point intermediate to the still and principal condenser, whereby the oils and refuse products of distillation will be condensed, and will flow into the said bulb before reaching the flavoring-vessel or worm, as will be hereinafter more fully explained.

In the annexed drawings, A designates a metallic still of the usual well-known form and construction, which is supported upon suitable legs, and is adapted to be heated by an appropriate furnace. It has also a manhole, *a*, whereby access may be had to its interior for the purpose of removing impurities and making necessary repairs. This still is connected by means of a suitable pipe with a principal condenser, B, and an intermediate secondary condenser, C, the said pipe being bent in coils to form a worm, W, inside of condensing-vessel B, and extended through its walls to form an eduction-spout leading into a receiver. Condenser B is preferably at a greater height than condenser C, the bottom of each being on a higher level than that of the still, and pipe D is bent down into the latter, forming a U-shaped curve, *b*, extending to the bottom of the same, and connected by means of a suitable joint to a hollow bulb, E, under condenser C, which bulb is provided with a faucet, *c*, for a purpose hereinafter explained. When the still has been filled with the liquor to be distilled or redistilled, and flavored, if required, and heat is applied, the first products pass over in nearly a pure state with great rapidity, and being passed into a bulb, F, containing suitable flavoring-extracts, when used, take up the scent, and, passing into worm W, in condenser B, will be rapidly condensed and reduced to a liquid state; but as the process continues more heat will be required to volatilize the parts of alcohol remaining in the still, thus causing the fusel-oils to be also volatilized, and to be carried into pipe D, when, passing down its bend *b*, they will be condensed by the water in reservoir C, and will flow into the bulb E, arranged below it and connected with the pipe for their reception. The volatilized alcohol will pass upward through flavoring-bulb F, where one is used, and, passing through worm W, will be discharged in a pure state into the reservoirs.

By this means the oils and other undesirable impurities used in coloring and adulterating liquors will be prevented from falling back into the still, or from getting into the flavoring-bulb, when one is used, and, being retained in a liquid form, may be discharged when necessary through faucet *c*.

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

The intermediate water-condenser C, in combination with the still A, pipe D, bent in U-shaped form in the condenser C, and provided with the bulbs E F, and the worm W, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

EDWIN DEXTER LOVERIDGE.

Witnesses:
L. L. CLEM,
JACOB ROSENBAUM.