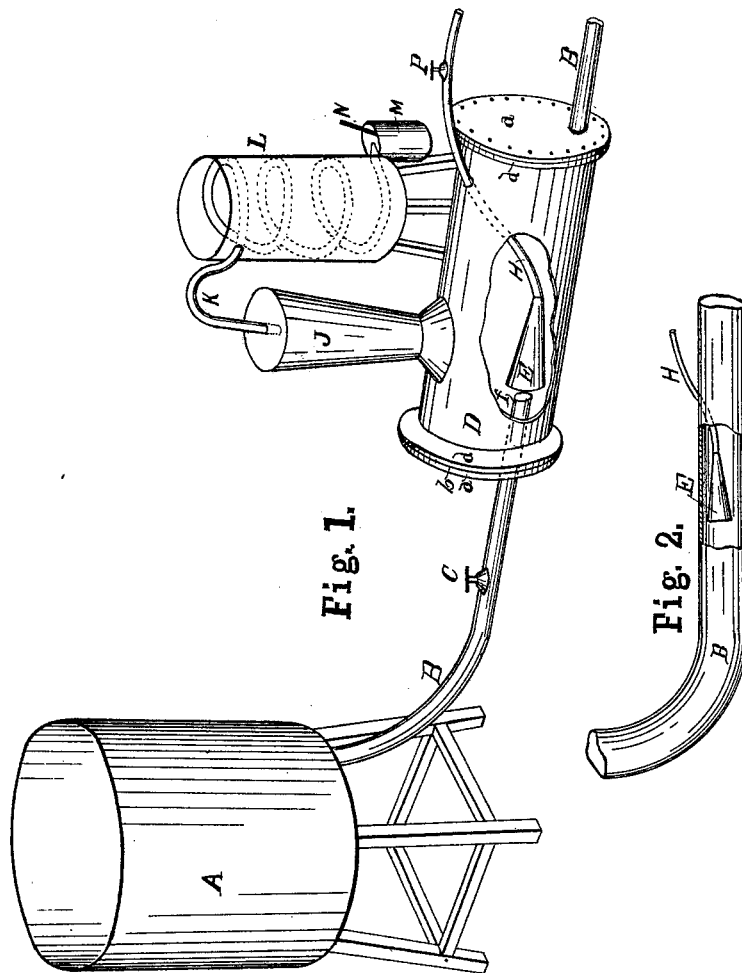


A. RUBI.
Apparatus for Detecting the Escape of Spirituous
Liquor from Stills.

No. 220,091.

Patented Sept. 30, 1879.



Attest.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN APPARATUS FOR DETECTING THE ESCAPE OF SPIRITUOUS LIQUORS FROM STILLS.

Specification forming part of Letters Patent No. **220,091**, dated September 30, 1879; application filed July 16, 1879.

To all whom it may concern:

Be it known that I, ADAM RUBI, of the city of Cincinnati, Hamilton county, Ohio, have invented certain new and useful Improvements in Apparatus for Detecting the Escape of Spirituous Liquors from Stills, of which the following is a specification.

My invention has for its object the production of certain convenient means for detecting the presence of spirits in the waste liquor discharged from the still. The pipe for discharging the waste liquor (usually water) from the still is furnished with a faucet, under the control of a government official, and is kept locked, the key being in the possession of the said official. Under such a condition of affairs the official unlocks the discharge-pipe at the request of the distiller, and he does not know what the liquid or vapor is that is being discharged. Such liquid may have a large per cent. of spirits therein, and may be collected by the distiller afterward at its course through a subterranean or unwatched channel and sold free of tax.

It also often occurs that the distiller himself is unaware of the character of the liquid leaving his still.

My invention enables the character of the liquid passing through the still to be easily and quickly ascertained.

My invention consists, in general, of two features.

The general feature consists in the combination, with the discharge-pipe, of a device for catching some of the liquid passing through said discharge-pipe and conveying it up to a point convenient to draw it off into a proper receptacle for testing.

The second feature of my invention consists in the combination, with a discharge-pipe, of a condenser, whereby the steam or vapor passing through the discharge-pipe may be caught and condensed and delivered into a receptacle appropriate for testing the quality of the same.

In the accompanying drawings, Figure 1 represents a portion of a copper still and a discharge-pipe and my invention applied thereto. Fig. 2 is a modification of the mode of combining the devices shown in Fig. 1.

A represents a still of any desired description. The form shown in the drawings is that

known as the ordinary copper still. B is the discharge-pipe of said still, and through which ordinarily only the waste water or liquid resulting from distillation is discharged. C is the usual faucet, which is provided with a device for locking same, the key for locking or unlocking it being in the hands of the government official. The discharge-pipe empties into a drum or receiving-vessel, D, and at the other end of the drum the discharge-pipe again begins and is continued, as is usual in such cases.

Any mode of connecting the drum to either end of the discharge-pipe may be employed, but the preferable mode is by means of disks or flanges *a* affixed to the discharge-pipe and bolted at *b* to the flange *d* of the drum D. The discharge-pipe on the side of the drum next the still preferably projects at *f* into the drum a short distance, as shown. Directly in front of the mouth of extension *f* of the discharge-pipe, and but a short distance from the latter, is a funnel or trumpet-shaped receiver, E, the small end of which terminates in a pipe, H, which passes up through and beyond the drum, and is furnished near or at its upper end with a stop-cock or faucet, P, for controlling the discharge therefrom. At the upper part of the drum is placed a vapor-receiver, J, which has a large connection with the drum D, and whose upper end connects with a tube, K, which is continued into a cooling apparatus, a preferable form of which is shown, and consists of a condensing-vessel, L, and the coiled tube connected to the tube K and extending in the form of a coil within the vessel to the bottom thereof, at which point said tube K passes through the vessel and terminates. Under this terminal end hangs a vessel, M, for receiving the liquid which may collect in the tube K. A gage, N, placed in the vessel M, enables the character of the fluid in the vessel to be ascertained.

It may be desirable in certain cases to reduce the size of the drum D to the size of the discharge-pipe B, retaining appropriate flanges, as *d*, for uniting the drum to the two sections of the discharge-pipe.

I contemplate doing this, and also, when desirable, purpose omitting the drum altogether. In the latter case I locate the funnel E directly within the discharge-pipe and bring the pipe or

tube H up through the discharge-pipe and provide said tube above the discharge-pipe with a faucet, P. The condensing apparatus heretofore described in such case will also be attached to the pipe B.

Either the funnel E and tube H, &c., or the condensing apparatus may be employed separately and still fall within the scope of my invention; but I prefer to employ them together.

The mode in which my improvements operate is as follows, viz: When the stop-cock C is unlocked and opened the waste liquid from the still to be emptied runs through the discharge-pipe, and a portion runs into the funnel and presses to escape at pipe H. On opening the faucet the officer can at any time in a few moments, in a proper gage-cup, collect enough of the waste liquid coming from the still to use his gage therein and determine what, if any, per cent. of spirits is present in said liquid.

A portion of vapor which may pass through the discharge-pipe, or be thrown off from any liquid passing through the same, is collected in the receiver J, and, passing into the condenser L, is condensed and passes into the vessel M, and the officer, by looking at the gage therein, can tell what per cent. of spirits is contained in the vapor passing through condenser L.

It is evident from the foregoing description that my invention is capable of the advantages claimed for it in the first portion of this specification.

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

1. In combination with the discharge-pipe of a still, the funnel E and tube H, substantially as and for the purposes specified.

2. In combination with the discharge-pipe of a still, the receiver J and condensing apparatus L, substantially as and for the purposes specified.

3. In combination, the discharge-pipe of a still, drum D, funnel E, and pipe H, substantially as and for the purposes specified.

4. In combination, the discharge-pipe of a still, drum D, receiver J, and condensing apparatus L, substantially as and for the purposes specified.

5. In combination, the discharge-pipe of a still, drum D, funnel E, pipe H, receiver J, and condensing apparatus L, substantially as and for the purposes specified.

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Attest:

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