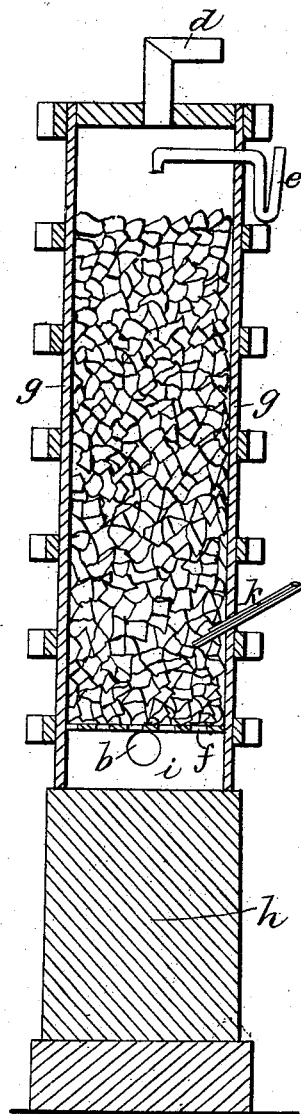
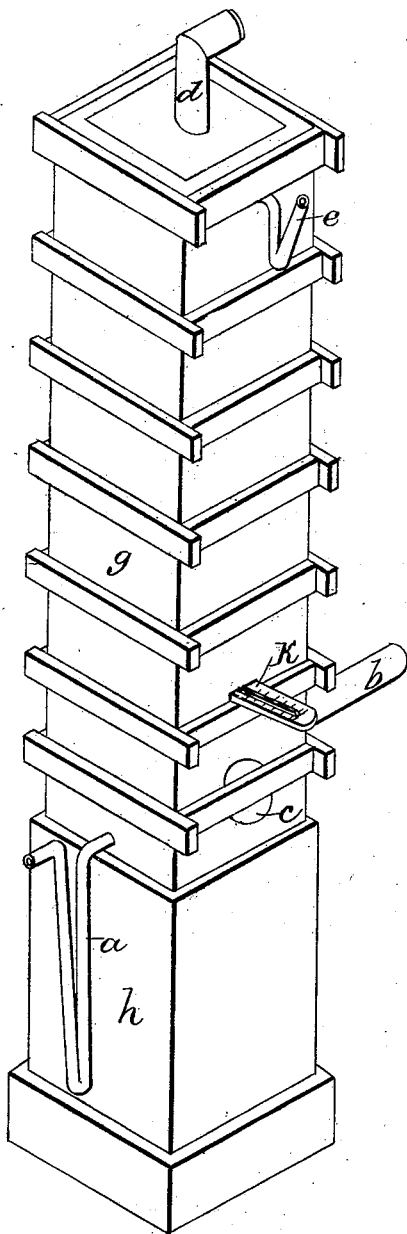


G. RILEY.
Ageing Liquors.

No. 5,133.

Patented May 29, 1847.



UNITED STATES PATENT OFFICE.

GEORGE RILEY, OF NEW YORK, N. Y.

IMPROVEMENT IN DISTILLING.

Specification forming part of Letters Patent No. 5,133, dated May 29, 1847.

To all whom it may concern:

Be it known that I, GEORGE RILEY, of the city, county, and State of New York, have invented new and useful Improvements in Distilling and Rectifying Spirituous Liquors, Turpentine, &c.; and I hereby declare that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an isometrical view of my apparatus, and Fig. 2 a vertical section through its center.

The same letters indicate like parts in all the figures.

The nature of my invention consists in causing the "wash" or other article to be distilled to percolate down through a vessel filled with porous material, meeting an ascending current of steam by which all the volatile spirits are released and pass off through the worm of the still, the wash being made to constantly run off below.

The construction is as follows: The still may be a square or other formed vessel, *g*, made steam-tight and elevated on a base, *h*. In this vessel is placed a grating, *f*, at a little distance from the bottom, so as to form a chamber, *i*, above the grate. The vessel is filled to within about nine inches of the top with either stones, pebbles, stone-coal, charcoal, broken glass, or any similar substance; but I find that round smooth granite stones of about five inches diameter are the best for the purpose. A man-hole, *c*, is formed in one side of the chamber *i* to clean it out. This is closed when the apparatus is in action. A short distance above the grating, *f*, a thermometer, *k*, is placed with the bulb within the case and its index outside. There is a tube, *a*, that communicates with the lower chamber, *i*. This is of siphon form, bending downward, and then turning up again, the outlet being as high as the part that enters the chamber.

I make this siphon about six feet long to the bend to prevent the steam under proper pressure from escaping. There is another pipe, *b*, that enters below the grate through which steam is introduced. Above the pebbles above named there is a siphon-formed tube, *e*, that enters the case and extends in to about the center. The outer part bends down in the siphon form for the purpose of preventing the escape of steam through it. This connects with the reservoir in which the wash is kept. Another tube, *d*, is fixed in the top of the still, which is connected with the common worm.

The operation of the above-described apparatus is as follows: The steam is let in through the tube *b* and ascends through the grate, stones, &c., till the whole is sufficiently heated, which may be known by the steam passing off through the worm. A stop-cock in the pipe *e*, which is not shown in the drawings, is then turned and lets the wash run into the still. This, coming in contact with the steam, is heated, and the spirits contained therein is vaporized, and passes through the pipe *d* into the worm, the wash descending through the stones, &c., into the chamber *i*, and thence off through the tube *a*. This state of things is kept up till the whole of the wash has run through. The heat is regulated by letting in more or less wash at a time, and the temperature is indicated by the thermometer, which should always stand as high as 210° Fahrenheit.

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

Distilling alcohol and other volatile spirits by causing a current of steam to pass up through a vessel filled with stones or other substance, as above mentioned, through which the wash or other material is percolating, the apparatus therefore being constructed substantially in the manner described.

GEORGE RILEY.

Witnesses:

JOSEPH C. ALBERTSON,
J. W. MOORE.