

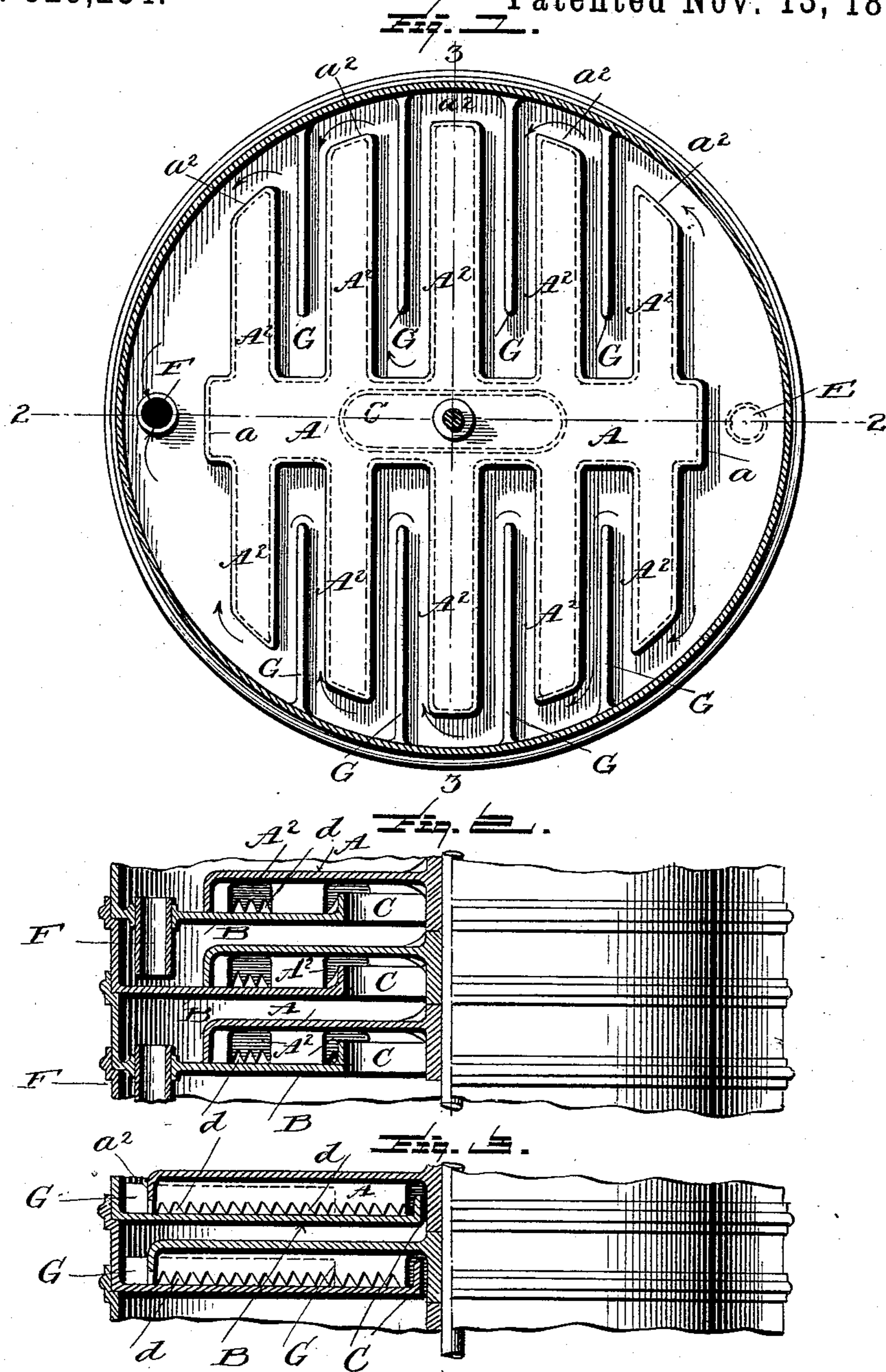
(No Model.)

W. T. WALKER, Dec'd.

M. BAILEY, Administrator.

APPARATUS FOR DRIVING OFF VOLATILE CONSTITUENTS FROM LIQUIDS.  
No. 529,234.

Patented Nov. 13, 1894.



Witnesses:  
L. C. Hills.  
E. A. Dyer

Inventor:  
Marshall Bailey  
Administrator of the  
Estate of William Thomas Walker, dec'd.

# UNITED STATES PATENT OFFICE.

MARCELLUS BAILEY, OF WASHINGTON, DISTRICT OF COLUMBIA, ADMINIS-  
TRATOR OF WILLIAM THOMAS WALKER, DECEASED.

APPARATUS FOR DRIVING OFF VOLATILE CONSTITUENTS FROM LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 529,234, dated November 13, 1894.

Application filed December 21, 1893. Serial No. 494,310. (No model.) Patented in England November 19, 1889, No. 18,529; in France December 5, 1889, No. 202,409; in Belgium December 6, 1889, No. 88,745; in Germany December 6, 1889, No. 52,652, and in Austria-Hungary March 20, 1890, No. 52,491 and No. 9,948.

*To all whom it may concern:*

Be it known that WILLIAM THOMAS WALKER, deceased, a British subject, late of Bishopswood, Highgate, in the county of Middlesex, England, did in his lifetime invent certain new and useful Improvements in Stills or Apparatus for Submitting Liquids to the Action of Vapors or Gases, (for which Letters Patent have been granted in the following countries, viz: Great Britain, dated November 19, 1889, No. 18,529; France, dated December 5, 1889, No. 202,409; Belgium, dated December 6, 1889, No. 88,745; Germany, dated December 6, 1889, No. 52,652; Austria-Hungary, dated March 20, 1890, No. 52,491 and No. 9,948), of which the following is a specification.

This invention has for its object to provide stills or apparatus for submitting liquids to the action of vapors or gases with means whereby the vapors or gases and the liquids are caused, in a given sized apparatus to have a much larger or more extended surface of contact than in such stills or apparatus as hitherto constructed, a further advantage being that the rush or pulsation of the vapor or gas hitherto experienced is obviated.

The said invention relates to those stills or apparatus in which the liquids are passed into trays or shallow chambers the vapor or gas being admitted thereto under a hood from which it passes into the liquid, and is an improvement on apparatus of the kind shown and described in my application for Letters Patent of even date herewith, Serial No. 494,309.

I will describe the said invention with reference to the accompanying drawings which show enough of a still or like apparatus to illustrate the application of this invention thereto.

Figure 1 is a plan of the interior of one of the tiers or trays, and Figs. 2 and 3 being half sections respectively taken on the line 1.2 and the line 3.4 of Fig. 1.

According to this invention there is substituted for the hood hitherto used an oblong or inverted trough-like chamber A extending across the lower surface or floor of each of the trays B of which the still is formed the

said oblong or trough-like chamber A receiving the vapor or gas from an inlet C therefor, which is preferably lengthened in plan (instead of being circular) so as to follow somewhat the shape of the inverted oblong or trough-like chamber A which is closed at its ends  $a$   $a$  and has communicating with it a number of inverted trough-like branches  $A^2$   $A^2$  also closed at their ends  $a^2$   $a^2$ , these branches extending out at right angles (or approximately so) from the inverted oblong trough-like chamber A toward the periphery or sides of the tray B. These branches serve to distribute very effectually the vapors or gasses through and over the liquid on the floor of the tray.

The lower edge of any desired parts of the chamber A and branches  $A^2$  are formed with serrations or teeth  $d$  or perforations or the like constituting passage ways for the vapor or gas to pass through in contact with the liquid all over the floor of the tray, the said liquid flowing from the inlet E to the outlet F as indicated by the arrows. It is generally preferred to provide only the branches  $A^2$  with such serrations or the like. Between the branches  $A^2$  and extending upward from the floor of the tray B are walls or plates G which form on either side of the inverted oblong or trough-like chamber A and along the sides of the branches  $A^2$  circuitous passage for the liquid under treatment.

The still or apparatus may consist of any number of these chambers arranged one above the other with communicating passages for the liquids and vapors or gases from chamber to chamber as is customary and as indicated in the drawings. The chambers A with the branches  $A^2$  may be raised and lowered by the central vertical shaft after the manner described in the specification of the application for Letters Patent made by me of even date herewith, Serial No. 494,309.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In stills or apparatus for submitting liquids to the action of vapors or gases an in-

verted oblong or trough-like chamber with  
right angled (or approximately right angled)  
branches with serrations or perforations or  
passage ways at their lower parts, substan-  
5 tially as hereinbefore described.

2. In stills or apparatus for submitting liq-  
uids to the action of vapors or gases an in-  
verted oblong or trough-like chamber with  
right angled (or approximately right angled)  
10 branches with serrations, perforations or pas-  
sage ways at their lower parts and with walls  
or plates for directing the liquids along the

said branches, substantially as hereinbefore  
described.

In testimony whereof I, MARCELLUS BAI- 15  
LEY, administrator of the estate of WILLIAM  
THOMAS WALKER, deceased, hereunto set my  
hand this 21st day of December, 1893.

MARCELLUS BAILEY,  
*Admr., &c.*

Witnesses:

EWELL A. DICK,  
ROBT. W. COX.