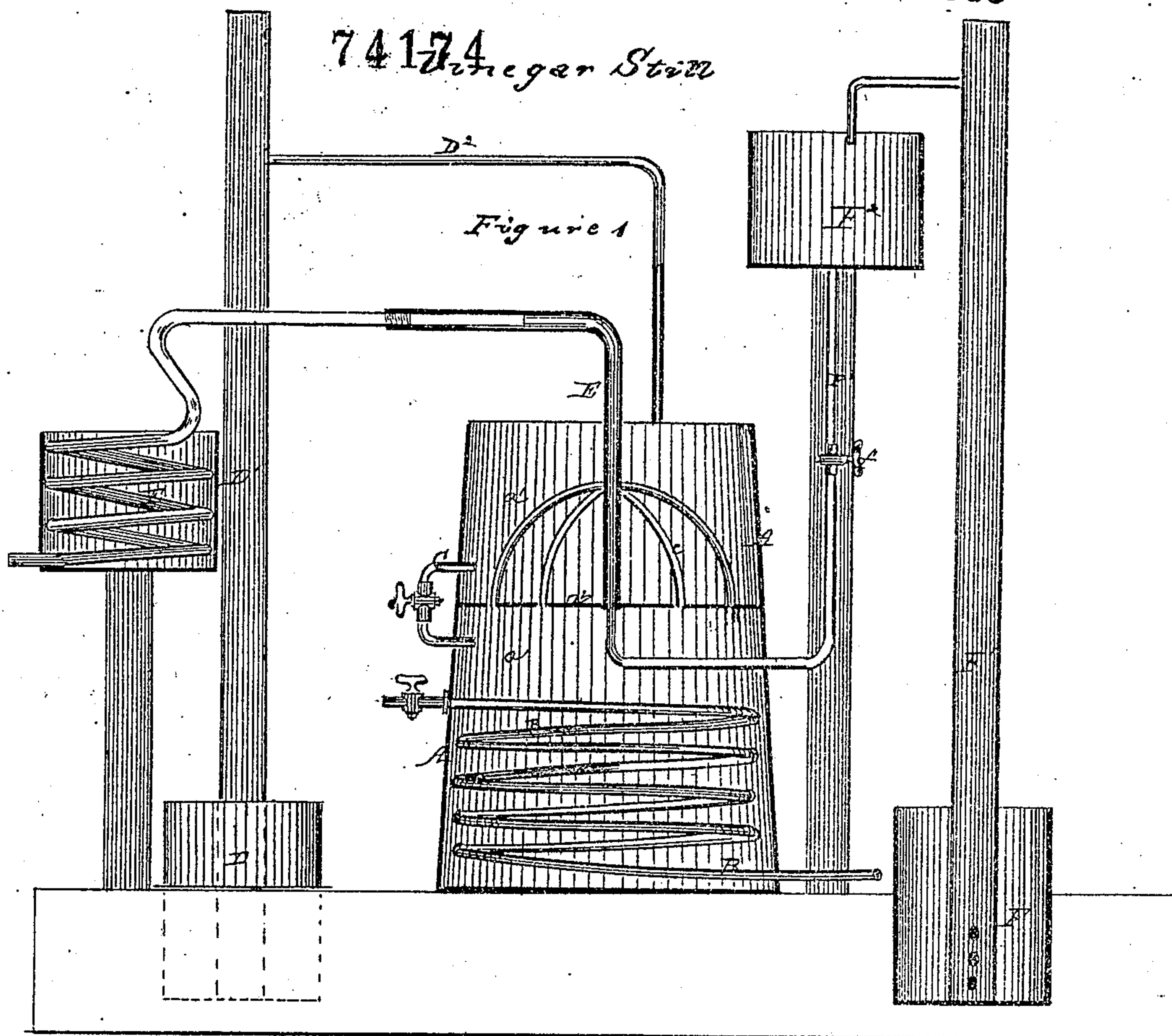


PATENTED

R. L. Vance

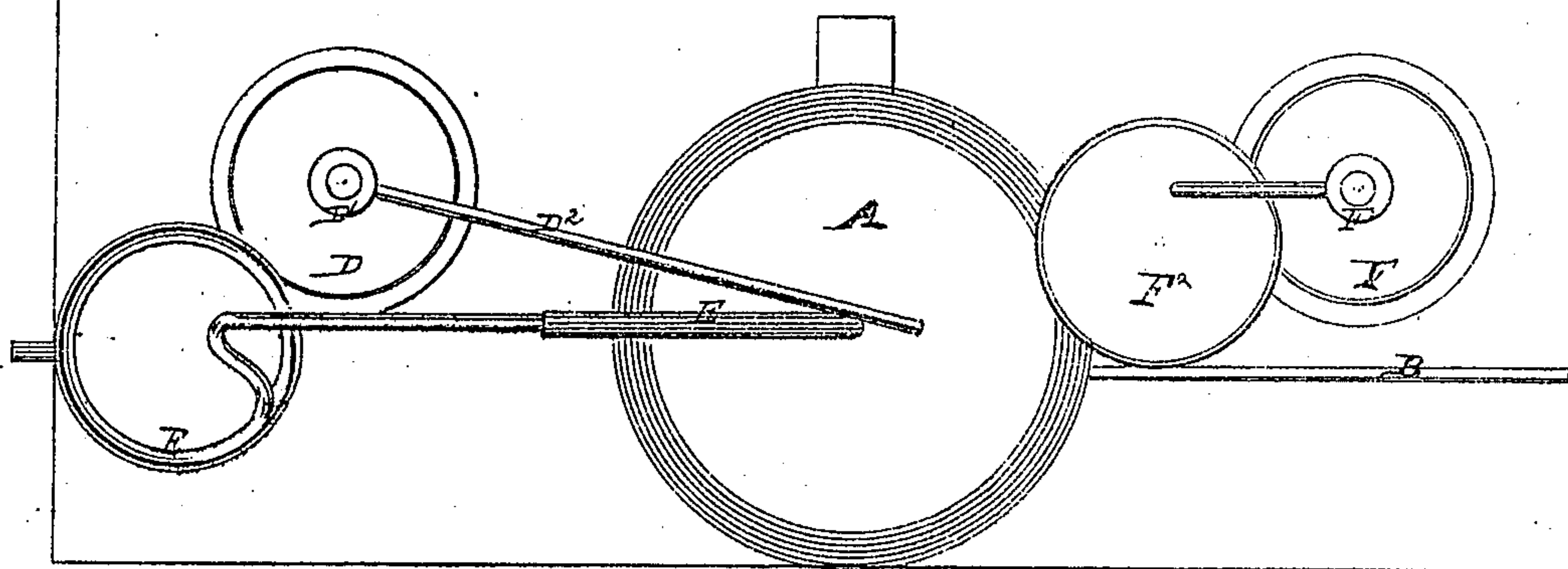
FEB 4 1868

74174 *Wetger Still*



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Figure 2



Witnesses

H. Pauling
L. J. Dean

Inventor

R. L. Vance
By his Att'y
Chas. Randolph

United States Patent Office.

R. L. VANCE, OF ST. LOUIS, MISSOURI.

Letters Patent No. 74,174, dated February 4, 1868.

IMPROVED VINEGAR-STILL.

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, R. L. VANCE, in company with Anthony Cash, of St. Louis, in the county of St. Louis, and State of Missouri, have made certain new and useful Improvements in Vinegar-Stills; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This still is so constructed and operated that by the employment of a very small amount of vinegar, in combination with the steam generated from some kind of saccharine mash, as of corn or sorghum, a pure article of vinegar may be produced without the use of any alcohol.

To enable those skilled in the art to construct and operate the improved still, I will proceed to describe its construction and operation.

The accompanying drawings represent a sectional elevation of the improved still in Figure 1, and a plan in Figure 2.

A is a tank, which may be built of wood or iron, and which is to be divided into two compartments, a and a^1 , by means of a partition, a^2 . In the bottom part of this tank, or in the cell a , there is a coil of pipe, B, through which steam from a boiler is passed, so as to heat a surrounding mass within the cell a . In the upper cell, a^1 , the mash is stored, and partially warmed, by the pipes passing through it, until it is needed for distillation in the lower cell, into which it is then to be drawn, through the pipe C, which has a stop-cock, c . The mash is to be taken from the well D, by means of the pump D^1 , and discharged through the pipe D^2 , into the cell a^1 . The steam which is generated in the cell a is to be conducted off in the pipe E, and condensed in the submerged coil E' . There are numerous branch-pipes, e , connecting the lower end of the pipe E with the cell a , so as to furnish a ready exit for the steam therefrom. The vinegar used in this process is to be taken from the well F by means of the pump F^1 , and elevated into the tank F^2 , from whence it may be drawn as required, through the pipe F^3 , which is provided with a stop-cock, f . The pipe F^3 descends into the cell a of the tank A, and passes thence up into the interior of the pipe E, and discharges the vinegar therein at that point where it will most easily descend into the coil within the condenser. A small quantity of vinegar, combined with the steam from the mash, of proper ingredients, such as corn, sorghum, or other saccharine matter, in the manner above described, will produce pure vinegar without the introduction of alcohol.

Having described my invention, what I claim, is—

1. The tank A, when divided into two cells a and a^1 , and combined with the distilling-apparatus e E E' , as described and for the purpose set forth.
2. I claim the combination of the apparatus A E E' , with the devices F F^1 F^2 , substantially as described and shown.

In testimony whereof, I hereunto set my hand, this twenty-eighth day of February, A. D. 1867, in presence of—

Witnesses:

M. RANDOLPH,
P. J. DEAN.

R. L. VANCE.