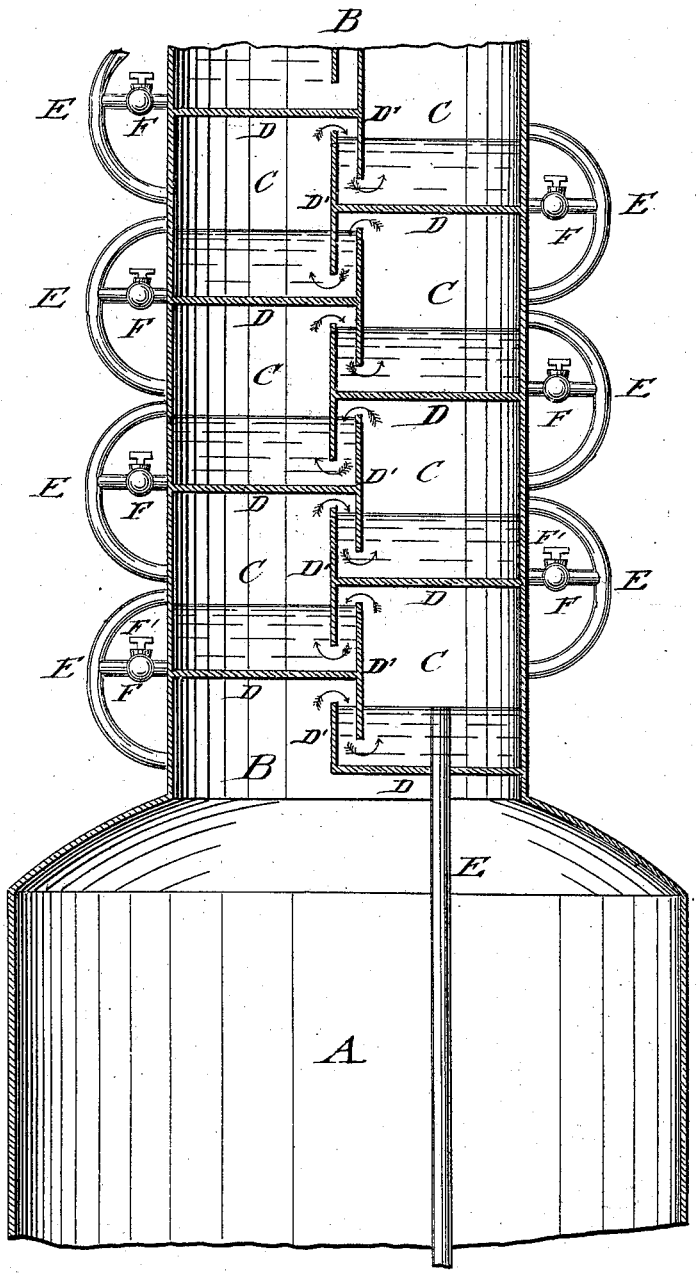
H. DEYMANN & E. MELCHERS.

STILLS.

No. 169,970. Patented Nov. 16, 1875.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY DEYMANN AND EDWARD MELCHERS, OF TOLEDO, OHIO.

IMPROVEMENT IN STILLS.

Specification forming part of Letters Patent No. **169,970**, dated November 16, 1875; application filed September 11, 1875.

To all whom it may concern:

Be it known that we, HENRY DEYMANN and EDWARD MELCHERS, of Toledo, in the county of Lucas and State of Ohio, have invented a new and Improved Still, of which the following is a specification:

The accompanying drawing represents a vertical transverse section of our improved still.

Our invention relates to an improved column for refining-stills, in place of the so-called "French column" in common use, so that a finer spirit, with less steam-pressure, is produced by means of a simpler and more compact construction, which prevents leakage, decreases the trouble and expense connected with the repairs of the French column, and which may be put in the space of one story, with a considerable saving in copper plate.

The invention consists in arranging the chambers of the columns, on opposite sides thereof, with alternating horizontal and vertical partition-plates and connecting overflow-pipes and draining stop-cocks.

In the drawing, A represents a common refining copper still, and B a cylindrical column placed thereon, of such diameter that two series or columns of chambers, C, may be arranged on opposite sides thereof, to take the place of the chambers of the French column, which are placed one vertically above the other, extending through three stories, and taking up a great deal of space.

By arranging the chambers sidewise of each other the size of the column is reduced, so that the same number of chambers requiring heretofore three stories may be brought within the height of one story.

The chambers C are formed by semicircular horizontal partition-plates D, which extend alternately from opposite sides, and are provided with vertical partition-plates D′, near the center, that form small spaces between each other, and establish thereby the communication between the alternating chambers of each series.

Overflow-pipes E, at both sides of the column, connect the chambers of each series, and convey gradually the exhausted liquor into the still A.

Draining-pipe F, with stop-cocks F′, communicate, near the bottom of each chamber, with the overflow-pipes, for emptying the chambers entirely for cleaning and other purposes.

An overflow-pipe of the lowest chamber passes directly from the same into the still, as indicated in the drawing.

The operation is as follows: The still is heated by fire or steam, after being filled with liquor. The alcoholic vapors are eliminated soon, and pass over the vertical partition-plate D′ into the lower chamber, striking against the adjoining cap or partition plate D′ of the next chamber above. The vapors are then forced through the liquor in the lower chamber, and pass, taking up additional strength, to the next chamber, where the same process is repeated, which is continued until the vapor reaches the goose-condenser, where it is partly condensed, and returned to uppermost chamber of the column. The strongest vapor passes over to the worm, and is entirely condensed to a liquid, and drawn out at the tail of the worm. The liquor falls from the highest to the next chamber below, and so on until it reaches the bottom of still through the overflow-pipe of the lower chamber, being completely exhausted of alcohol.

The intercommunicating arrangement of the chambers virtually produces two columns in one, so as to require about half the height and material only, and offers the advantage of having all the overflow-pipes at the outside, which admits of their repairs without delay, and prevents the expensive repairing of the interior pipes in the French columns.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The column of a refining-still constructed of two series of alternating and communicating chambers arranged on opposite sides thereof, substantially in the manner and for the purpose set forth.

2. The alternating chambers of the column, communicating by central spaces formed by alternating horizontal and vertical partition-plates, substantially as specified.

3. The alternating chambers of the column, having overflow and drain pipes arranged at the outside of the column, substantially as set forth.

HENRY DEYMANN.
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Witnesses:
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