

L. K. FULLER.

DEVAPORIZING APPARATUS.

No. 170,844.

Patented Dec. 7, 1875.

Fig. 1.

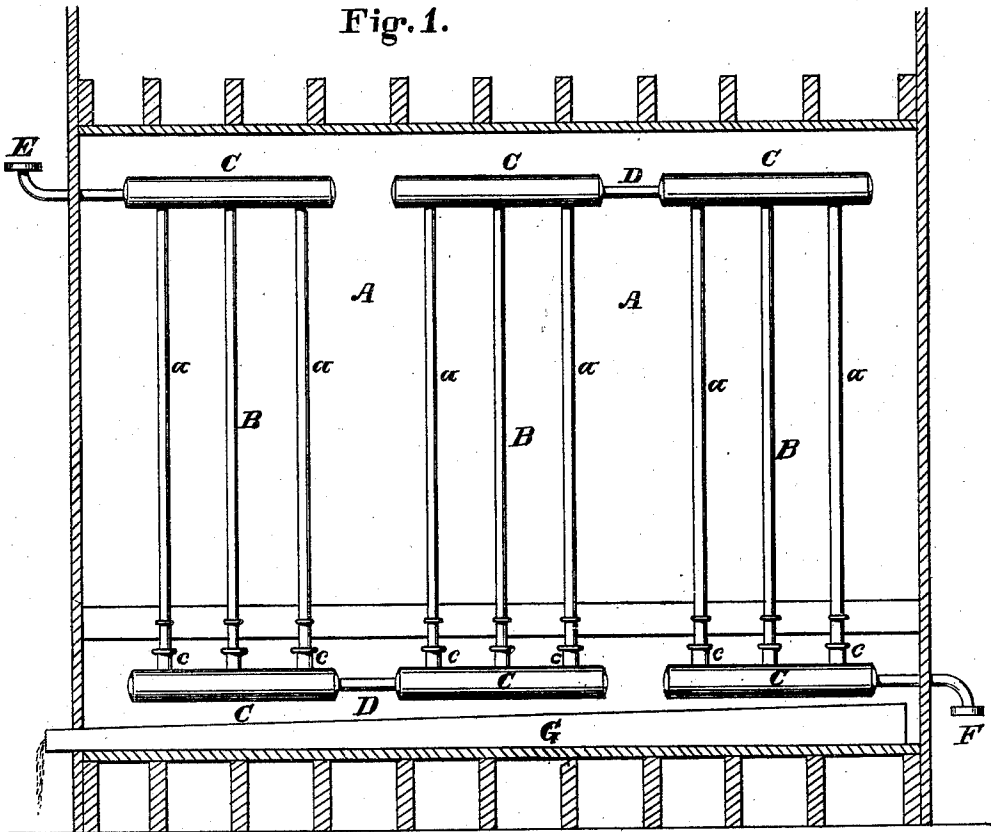
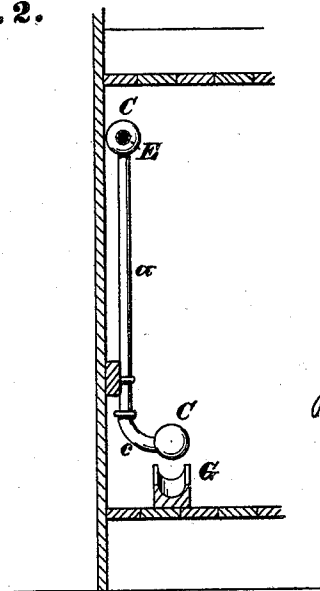


Fig. 2.



ATTEST:

Chas. W. Higgins.

INVENTOR:

Levi K. Fuller
Per Burke & Fraser
Atty's.

UNITED STATES PATENT OFFICE.

LEVI K. FULLER, OF BRATTLEBOROUGH, VERMONT.

IMPROVEMENT IN DEVAPORIZING APPARATUS.

Specification forming part of Letters Patent No. **170,844**, dated December 7, 1875; application filed October 29, 1875.

To all whom it may concern:

Be it known that I, LEVI K. FULLER, of Brattleborough, in the county of Windham and State of Vermont, have invented certain Improvements in Devaporizing Apparatus, of which the following is a specification:

My invention relates to that class of apparatus in which the moisture held in suspension by the warm air of a dry-house is condensed upon the surfaces of pipes containing cold water, or through which cold water is caused to pass; and it consists, essentially, in groups of pipes—two or more in each group—with drums or cross-pipes across the ends of each group, each drum connecting with the next adjoining, at opposite ends of the groups, alternately, as clearly shown. Each pipe of the group may be provided with an elbow at the lower end, as shown.

I am well aware that single serpentine pipes, with streams of cold water passing through them, have been used for this purpose, but these are very defective in practice.

With a low hydrant pressure, the excessive friction in the pipe renders the flow uncertain, and if only a trifling amount of air accumulates in the pipes—which is inevitable—it causes serious trouble.

To obviate these defects, and, at the same time, provide ample condensing-surface, are the objects of this invention.

In the drawings, Figure 1 is an interior view of a dry-house, showing my improved apparatus in side elevation. Fig. 2 is a sectional view in the plane of the line *x x*, Fig. 1, and at right angles to the said figure.

Let A represent any form of dry-house, and B B groups of condensing-pipes, here shown grouped in threes, and placed vertically. The

pipes *a a* of each group are tied at the top and bottom by connection with drums or cross-pipes C C, which should be of a suitable diameter to receive the pipes *a a*. D D are pipes connecting the adjoining pipes C C at opposite ends of the groups, alternately. E is the inlet-pipe, by which cold water is admitted to the groups of pipes, and F the outlet.

The groups may be supported in position by the means shown, or in any other convenient manner.

The water, entering at E, passes down through the first group of pipes, up through the second, down through the third, and so on to the outlet—the number of groups depending, of course, on the capacity of the dry-house.

An inclined trough, G, may be arranged beneath the lower pipes C C, to catch and convey the water of condensation out of the dry-house. *c c* are elbows, by which the pipes *a a* are connected with the pipe C. If the pipes *a a* are to enter the pipe C at the top, these will be omitted.

I claim—

1. The combination of the vertical pipes *a a*, grouped as shown, with the elbows *c c* and cross-pipes C C, in the manner specified.

2. The combination of the pipes *a a* arranged in groups of two or more, with the pipes C C, D D, E, and F, substantially in the manner and for the purposes specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEVI K. FULLER.

Witnesses:

J. E. HALL,
J. E. TILSON.