

J. Weed,
Grain Ventilator,

N^o 57,022.

Patented Aug. 7, 1866.

Fig. 1.

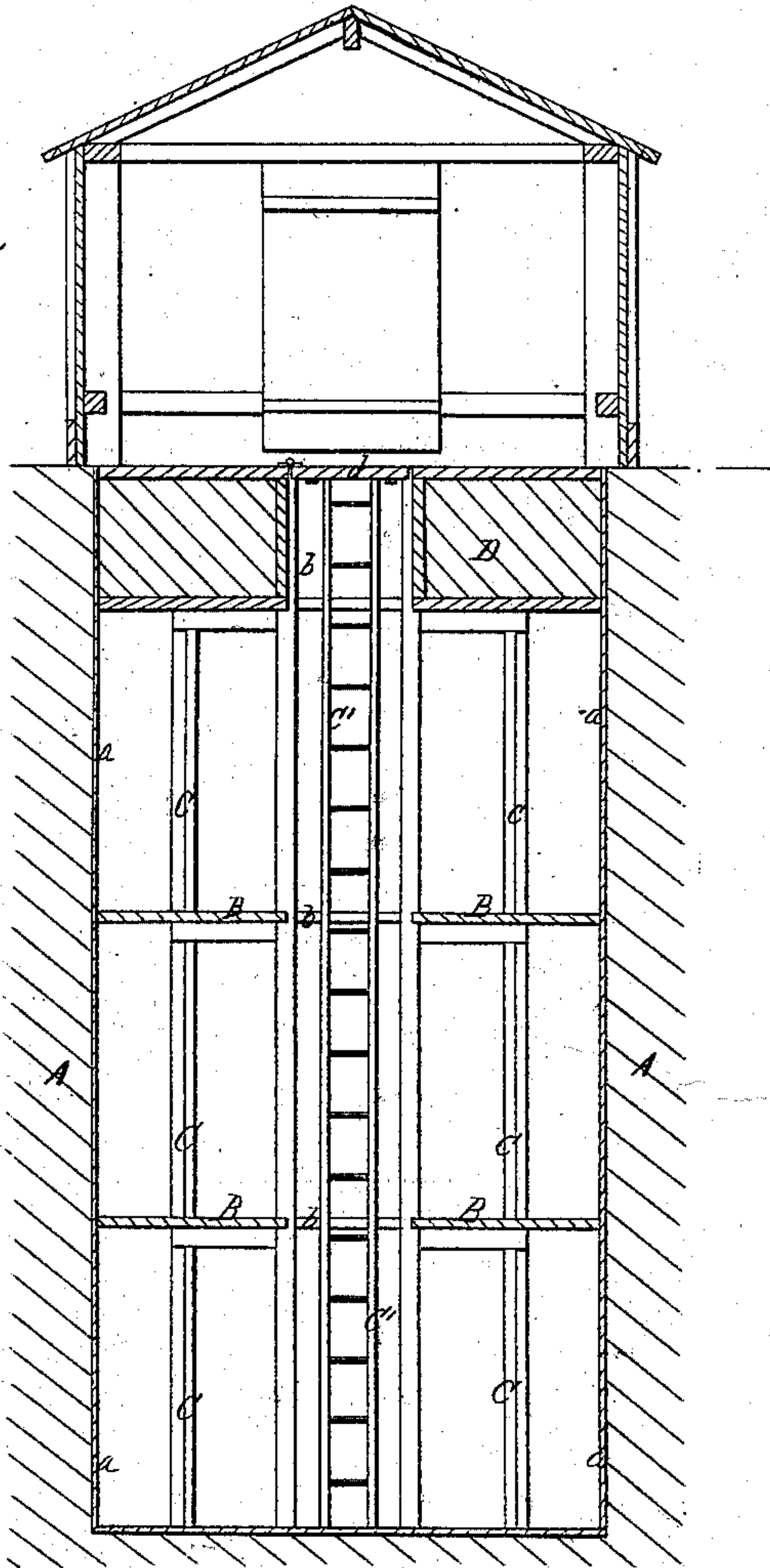
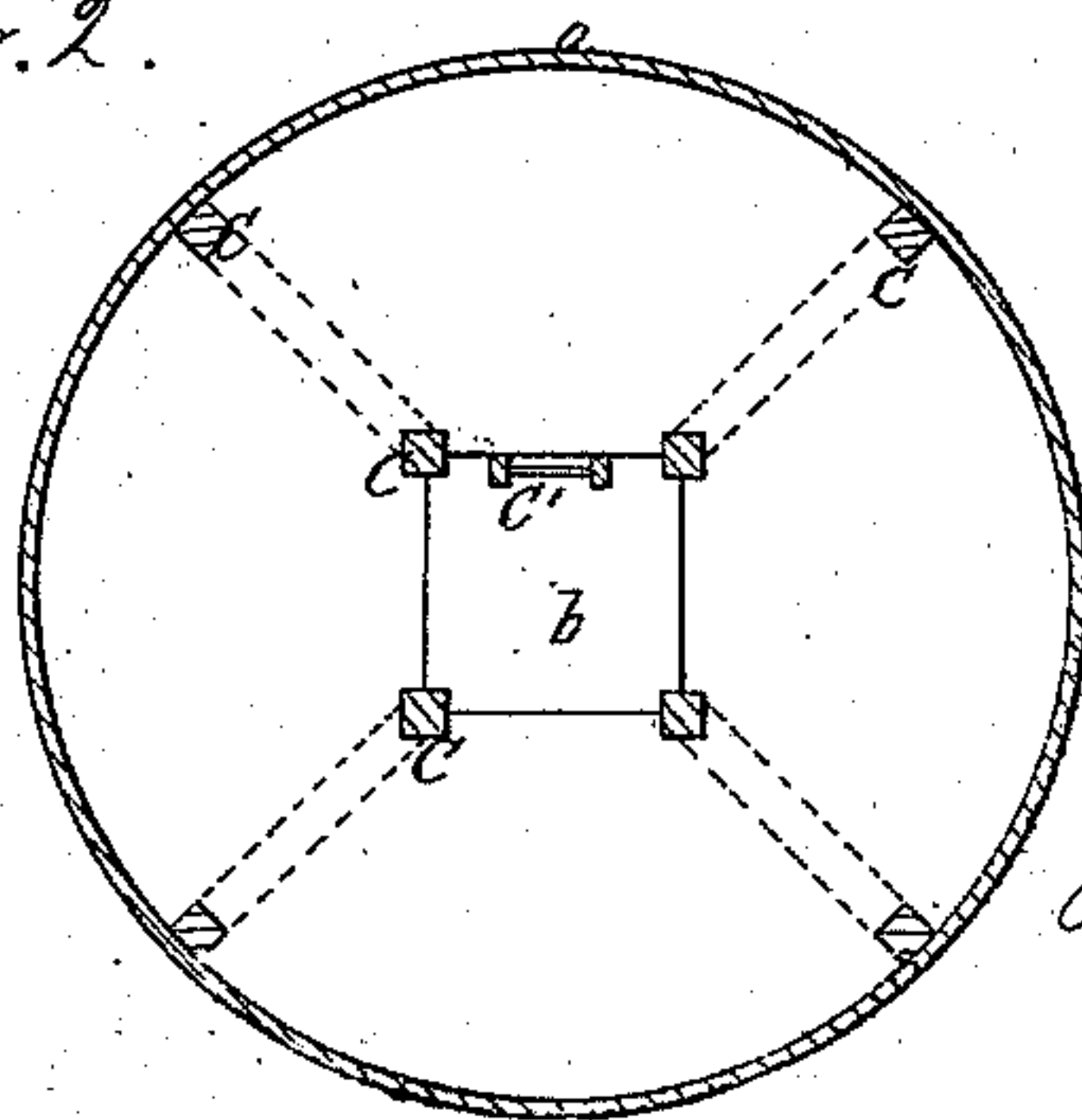


Fig. 2.



Witnesses.

R. T. Campbell
of
Edw. Schaefer

Inventor.

James Weed
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Mason, Lemuel Hamme

UNITED STATES PATENT OFFICE.

JAMES WEED, OF MUSCATINE, IOWA.

VENTILATED VAULT FOR WINE, POTATOES, &c.

Specification forming part of Letters Patent No. 57,022, dated August 7, 1866.

To all whom it may concern:

Be it known that I, JAMES WEED, of Muscatine, in the county of Muscatine and State of Iowa, have invented a new and Improved Sweet-Potato and Wine Vault; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section, showing the manner of constructing the vault. Fig. 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and improved vault or preserving-chamber for keeping sweet-potatoes, wine, cider, and other articles which require or are benefited by a rather cool and uniform temperature with a moderately dry atmosphere.

The nature of the invention consists in having a well of a suitable depth constructed with its walls impervious to moisture, and in subdividing such a well into a number of apartments, one above the other, the upper apartment having a covering of some suitable non-conductor or poor conductor of heat, for preventing the heat or cold above from being conducted down to the said apartments. Provision is made for ventilation and for access to the apartments, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

To construct my vault or preserving-chamber, I make an excavation of the dimensions desired and of a requisite depth in a circular or other form. I then plaster the walls with water-lime mortar or other hydraulic cement, which is applied directly to the earth walls when they are of such a nature as to admit of it; but, if not, light brick, stone, or clay walls are built up against the earth walls, and the hydraulic cement is applied to the inside surface of the artificial walls. Having rendered the floor and vertical walls of the well or cellar perfectly air and water proof, to exclude external air and moisture, I construct floors about six feet apart, one above another, so as to form a number of apartments within which a person can conveniently stand. The upper chamber is covered with a double floor, leaving the space between the two floors filled

with some suitable non-conducting substance. The ceiling-floor should be air-tight, and also capable of excluding moisture, and this floor, as well as those of the apartments below, should have scuttles for admitting of access to said apartments by means of a ladder or otherwise. These scuttles or doors will allow of a free ventilation and the escape of impurities and moisture in the air.

In the drawings, A represents the well below the surface of the ground, and *a* represents the coating of cement which is applied to the inside of this well for keeping it dry. B B are horizontal divisions, which are sustained by a frame-work, C; and *b b* are the scuttles through which access can be had to the different apartments by means of a ladder, C', which leads from the top to the bottom of the well. The uppermost chamber is covered by a ceiling having a substance, D, which will prevent moisture from descending into the preserving-chambers. This ceiling may be covered by a trap-door, *d*. At suitable times this door can be opened for ventilation. The whole may be protected by a light building, as shown in Fig. 1.

For keeping wine, cider, and other articles my cellar or preserving-well has advantages over the common bank-cellar, usually recommended for such purposes, in cost of construction and in the fact that when open in summer the warmer external air will not enter to displace the cooler air of the well, the latter being, of course, the heaviest.

It is also a very economical manner of storing winter vegetables and fruits, and the abundant ventilation that may easily be given to any degree of temperature above the freezing-point is a highly-important feature in the winter management of these articles.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The construction of preserving-chambers having water-proof walls beneath the surface of the ground, said chambers having communications with each other and means of access to them, and surmounted by a covering of some non-conductor of heat, substantially as herein described.

JAMES WEED.

Witnesses:

HENRY W. MOORE,
JACOB FISCH.