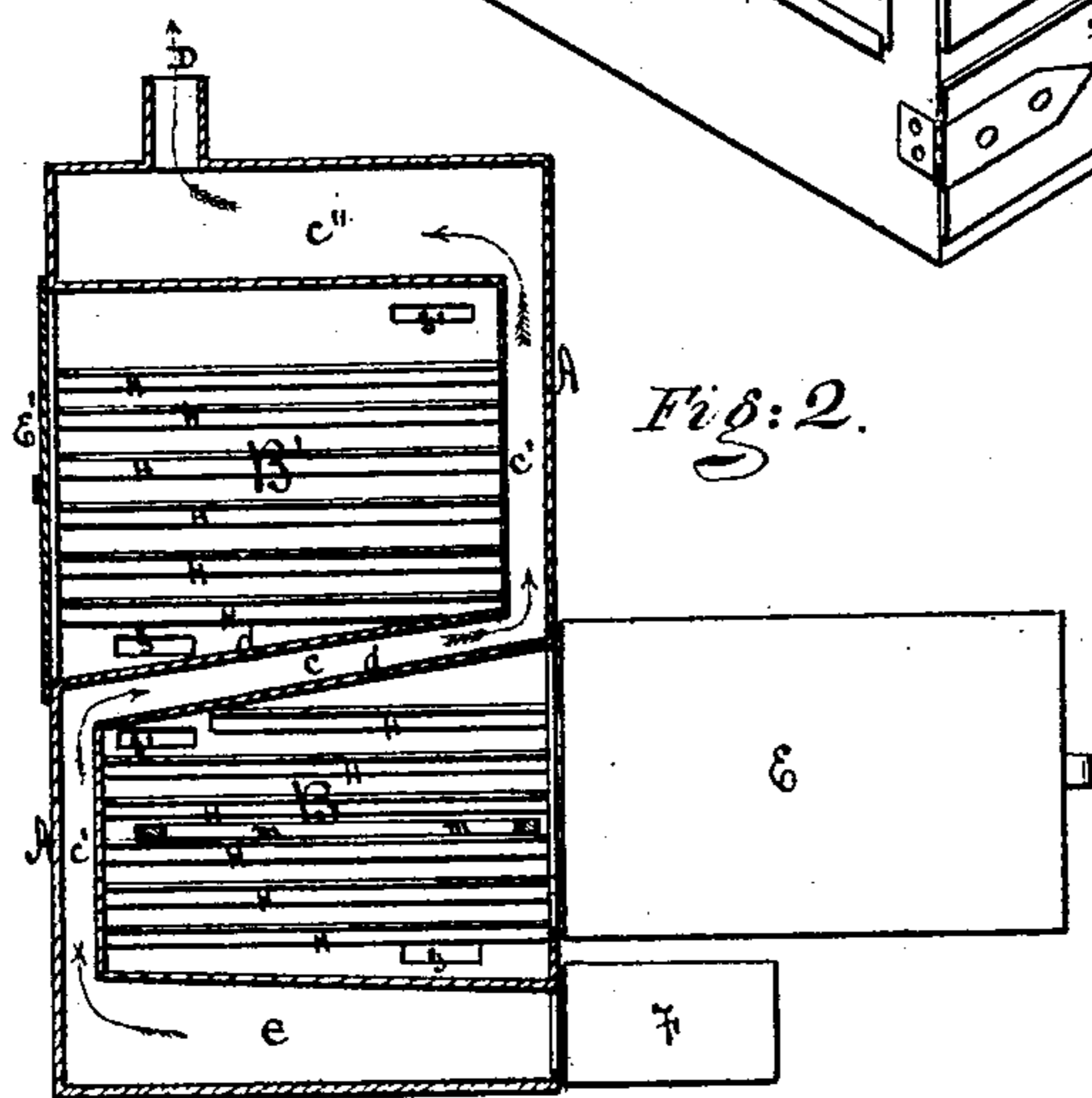
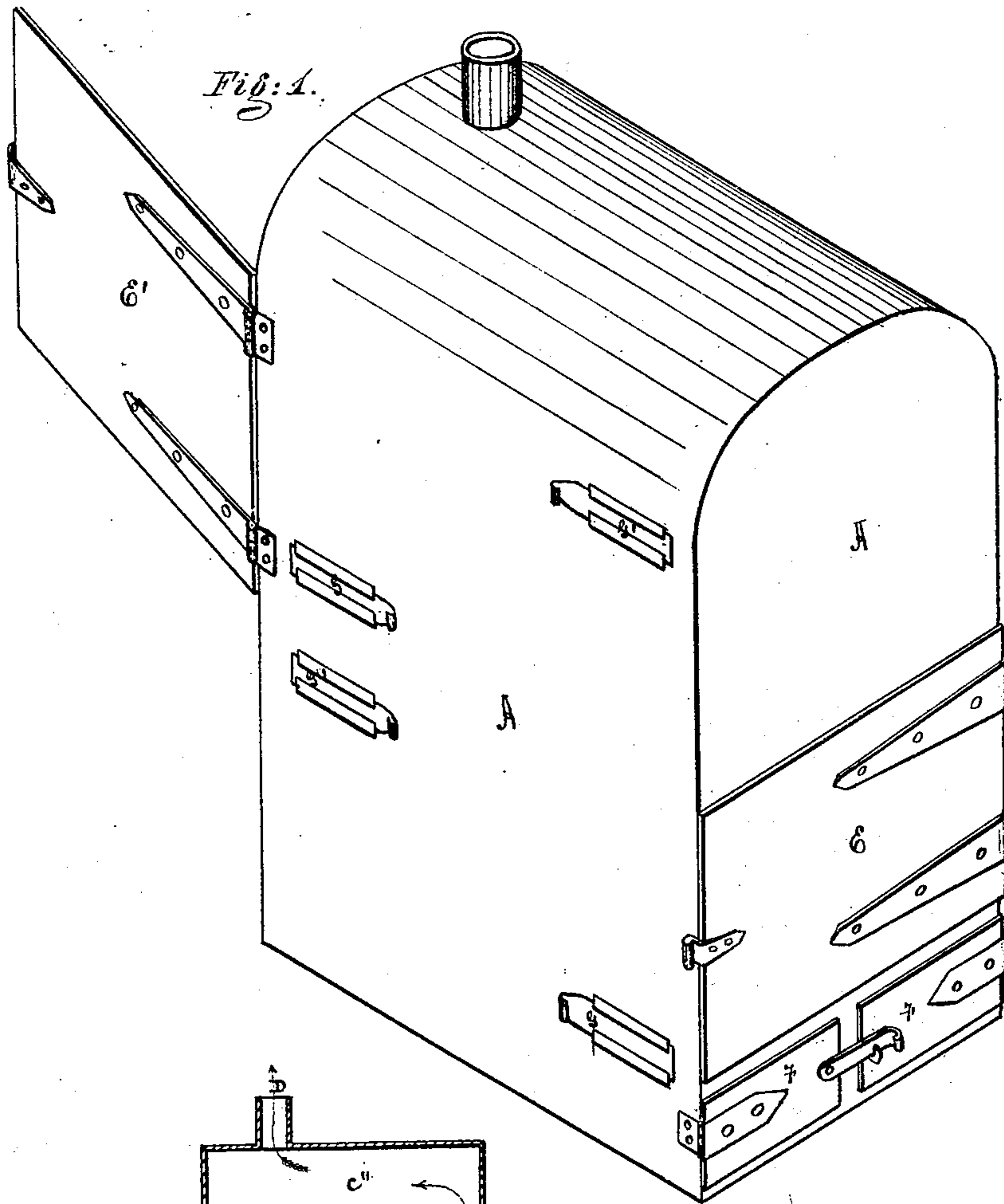


I. B. KINKEAD.

Fruit Drier.

No. 103,622.

Patented May 31, 1870.



Witnesses
W. Stump
F. H. Young

Isaac B. Kinkead
Inventor
By *David A. Burr*
Atty.

United States Patent Office.

ISAAC B. KINKEAD, OF WATERTOWN, OHIO.

Letters Patent No. 103,622, dated May 31, 1870.

DRIER.

The Schedule referred to in these Letters Patent and making part of the same.

I, ISAAC B. KINKEAD, of Watertown, in the county of Washington and State of Ohio, have invented an Improved Drying-House or Kiln, for desiccating fruits, vegetables, &c., of which the following is a specification.

My invention relates to an improvement in the construction of dry-houses or kilns for drying fruits, &c., by constructing the same of two or more superimposed compartments or chambers, each made distinct, accessible respectively from opposite ends of the structure, and separated by a continuous flue extending from the furnace under the lower chamber, thence behind the end thereof, thence between the two chambers to the rear of the next one, and thus between the several chambers or compartments, and back of the rear end of each, up in the chimney on the top of the structure. In each compartment ventilators are placed near the top and bottom thereof, opening directly into the same from the outer air.

The object of my invention is to obtain, with greater economy of fuel, a more useful and efficient dry-house than those heretofore constructed.

Figure 1 is a view in isometrical perspective of my improved dry-house, constructed with two compartments.

Figure 2, a central longitudinal section thereof.

A A are the walls of the dry-house. The structure may be made of sheet metal, so as to be portable, or of cast-iron in sections, or else solid, of masonry.

B B' are the two compartments or drying-chambers, separated by an air-space, *c*, fig. 2, formed between the parallel inclined plates *d d*. This air-space *c* communicates freely at either end with similar spaces *c'* *c'* at the rear end of each compartment, which end spaces communicate with the furnace-flue *e*, under the lower chamber B, below and with a space, *c''*, over the upper chamber B', leading into the chimney D above, so as to form a continuous passage of a

width equal to that of the compartments from the furnace to the chimney, encompassing the top, bottom, and rear end of each compartment.

E E' are the doors of the two compartments or chambers B B'. They are placed, as illustrated, at opposite ends of the structure.

F F are the furnace-doors.

G G' are ventilating openings, closed by slides, so as to be thrown open at pleasure. These ventilators are formed in the sides of the structure to open at the top and bottom of each compartment, and are arranged to form an upward current to carry off the steam or moisture extracted by the heat from the substances in process of desiccation.

H H, fig. 2, are ways to receive the drying-frames *m*, upon which the articles to be dried are placed.

My dry-house, thus constructed, is simple, yet singularly effective in operation. The moisture expelled by the heat of the furnace-flue is rapidly drawn off and carried away by the cold-air currents through the side ventilators.

I claim as my invention.

The within-described drying-house, constructed of superimposed ventilated drying-chambers, opening alternately at opposite ends of the structure, each surrounded or inclosed at its top, bottom, and inner end by a flue or hot-air passage, extending continuously from the furnace to the chimney, substantially as and for the purpose herein set forth.

Witness my hand hereto this 2d day of April, A. D. 1870.

ISAAC B. KINKEAD.

Witnesses:

L. D. RICHARDS,
H. S. ARNOLD.