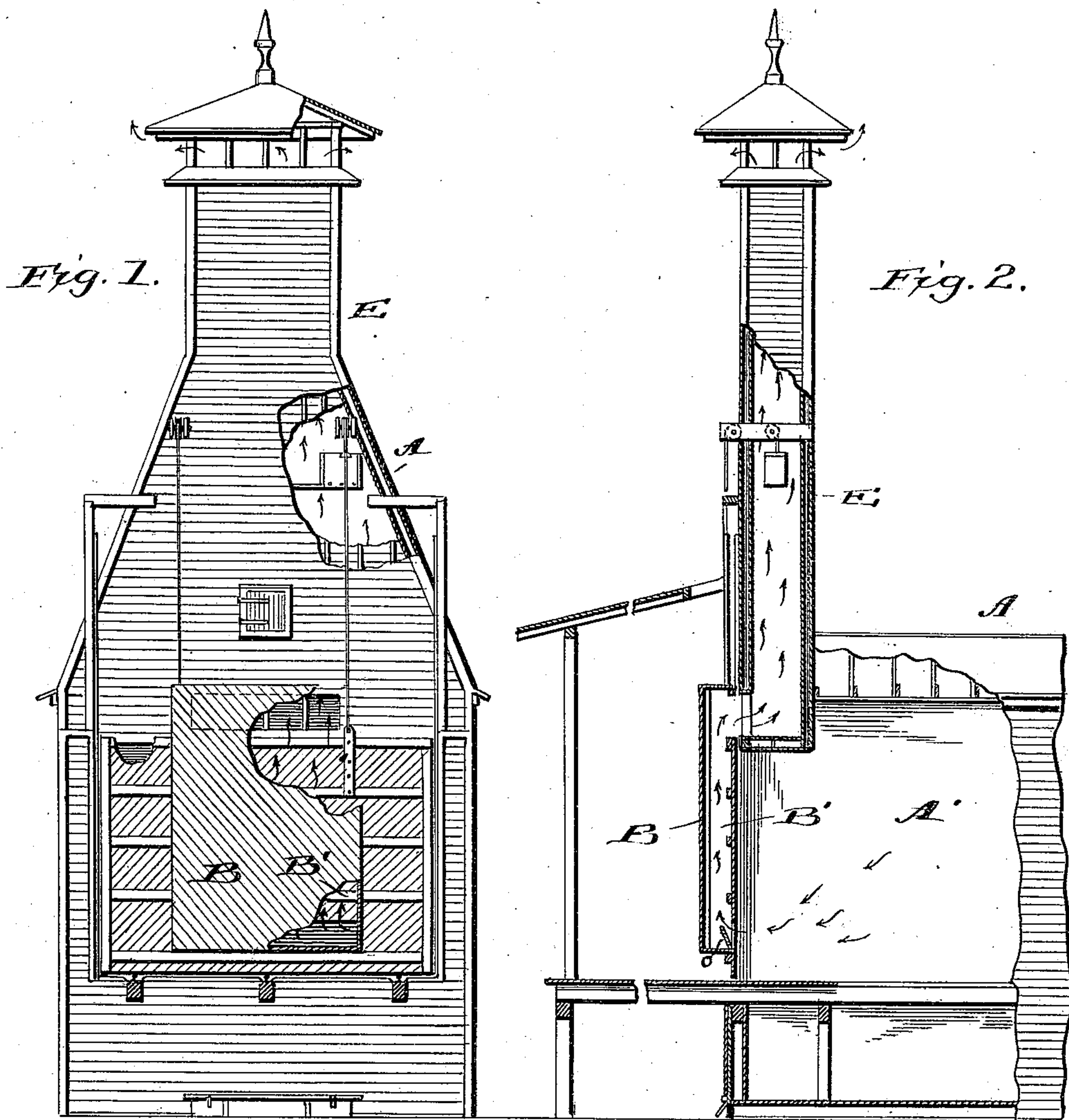


(No Model.)

A. T. BEMIS.  
DRY KILN.

No. 555,067.

Patented Feb. 25, 1896.



Witnesses:

L. C. Hills  
C. L. Hough

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Atty.



# UNITED STATES PATENT OFFICE.

ALBERT T. BEMIS, OF INDIANAPOLIS, INDIANA.

## DRY-KILN.

SPECIFICATION forming part of Letters Patent No. 555,067, dated February 25, 1896.

Application filed December 3, 1895. Serial No. 570,913. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT T. BEMIS, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Dry-Kilns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain new and useful improvements in kilns for drying lumber and other substances, and it has for its object the provision, in connection with a dry-kiln, of means whereby the doors at the ends of the kiln may be utilized as flues, whereby the heated air from the interior of the drying-chamber will be caused to enter the hollow interior of the door through a valve-controlled entrance near the floor of the drying-chamber and after passing upward to be deflected at the top of the door into the stack, which is constructed at the end of the kiln, directly above the door.

It has been found from practical experience in the construction and operation of drying-kilns that by far the best results are to be obtained where provision is had for securing a uniform draft through the drying-chamber at the longitudinal center and that the outlet-passage should be at the end of the kiln and at or near the floor of the drying-chamber. The fact that the door of the kiln is necessarily located at the end of the drying-chamber, and for this reason precluded the possibility of utilizing the door-space for the purposes of maintaining a draft at the end of the kiln, and the necessity of so utilizing the door-space resulted in the perfection by me of a dry-kiln in which I provide the door at the end of the kiln with a hollow space adapted to be utilized as an air-flue, the air entering the door through a valve-controlled space at the floor of the kiln and escaping at the top of the door. Upon a kiln of this construction I was granted a patent April 12, 1892, No. 472,600. Practical experience in the use of the kiln described in said patent demonstrated the fact that the plan of hav-

ing the air from the drying-chamber escape at the top of the door was objectionable in that the draft was sometimes retarded by the wind.

The essential object of the present invention is therefore to improve upon the construction described in my patent above mentioned and to provide a stack at the end of the kiln, directly above the door-opening, and while utilizing the hollow interior chamber of the door as an outlet I close the upper edge of the door, and instead of permitting the air to escape at that point I provide an opening in the lower front edge of the stack, which opening registers with a like opening in the upper portion of the door when the said door is closed, and in this manner I provide an air-space leading upward through the door directly into the stack.

To these ends and to such others as the invention may pertain the same consists in the novel construction and in the peculiar combination, arrangement and adaptation of parts, all as more fully hereinafter described, shown in the accompanying drawings, and then specifically defined in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an end elevation of a dry-kiln embodying my improvements. Fig. 2 is a side view of the end of the kiln, the same being shown partly in section.

Reference now being had to the details of the drawings by letter, A designates a drying-kiln, which may be of any of the usual or preferred forms of construction.

The door B at the end of the kiln is made hollow or provided with an inclosed conduit B', which at its lower end is provided with a valve-controlled entrance B<sup>2</sup>, slightly raised above the floor of the drying-chamber. This passage B' within the door communicates at its upper end with the stack E when the door is closed, as shown in Fig. 2 of the drawings, the stack being located at the end of the kiln, directly over the door, as shown.

The door may be provided with any suitable operating mechanism—as, for instance, with the usual cords and weights, such as I have shown in the drawings; or, if preferred, any

other operating mechanism adapted to the purpose may be substituted therefor.

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

1. In a drying-kiln, the combination with the drying-chamber, of the stack and a door having an air-space formed in it opening into the kiln at the bottom and into the stack at the top when the door is closed so as to serve to convey the exhaust-air from the drying-chamber to the stack, substantially as described.

2. In a drying-kiln, a door provided with an open space for conveying exhaust-air from the drying-chamber of the kiln to the stack, said air-space being provided at its lower end with a valve-controlled inlet and at its upper end with an opening into the stack when the door is down, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ALBERT T. BEMIS.

Witnesses:

A. L. HOUGH,  
FRANKLIN H. HOUGH.