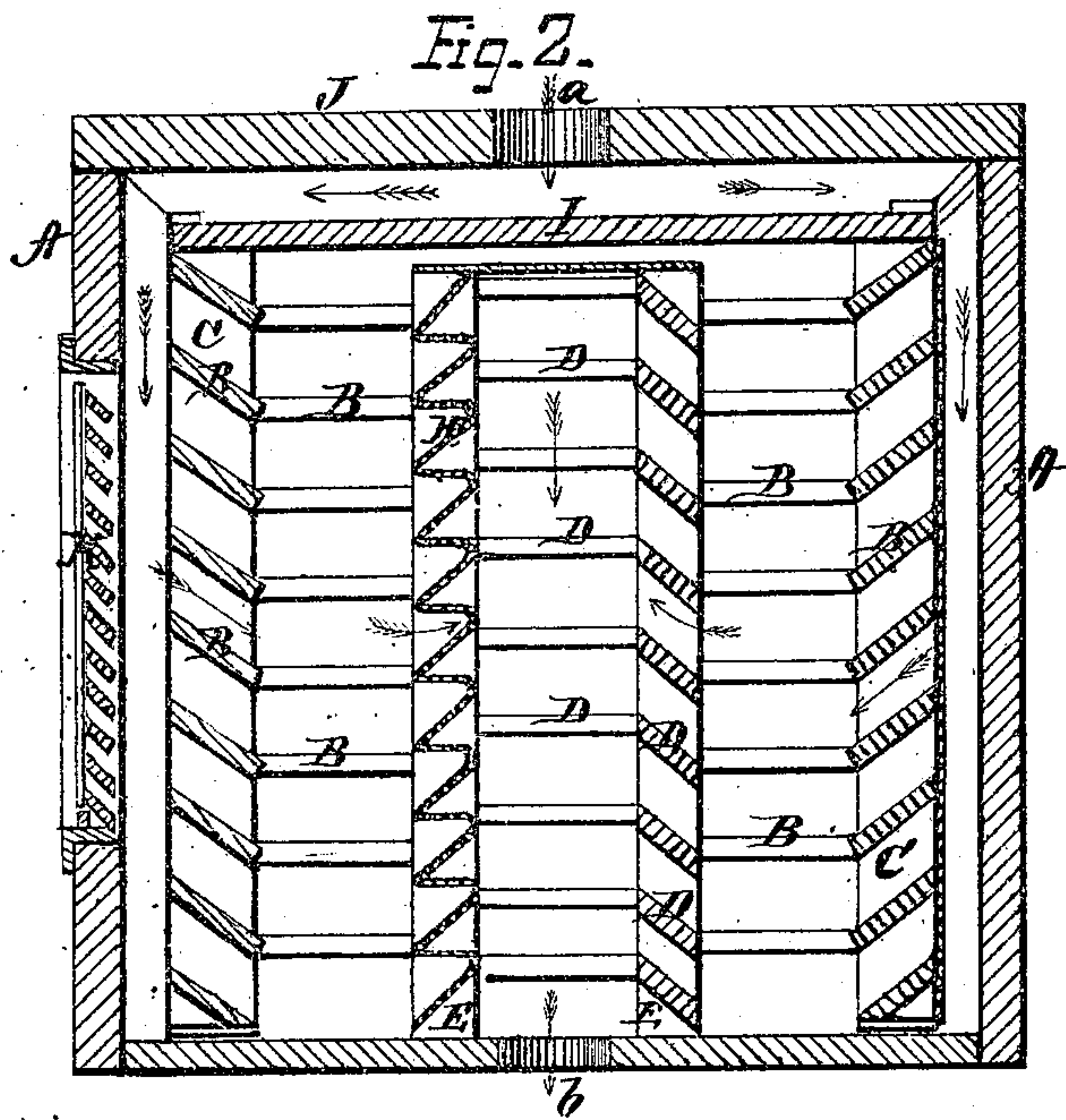
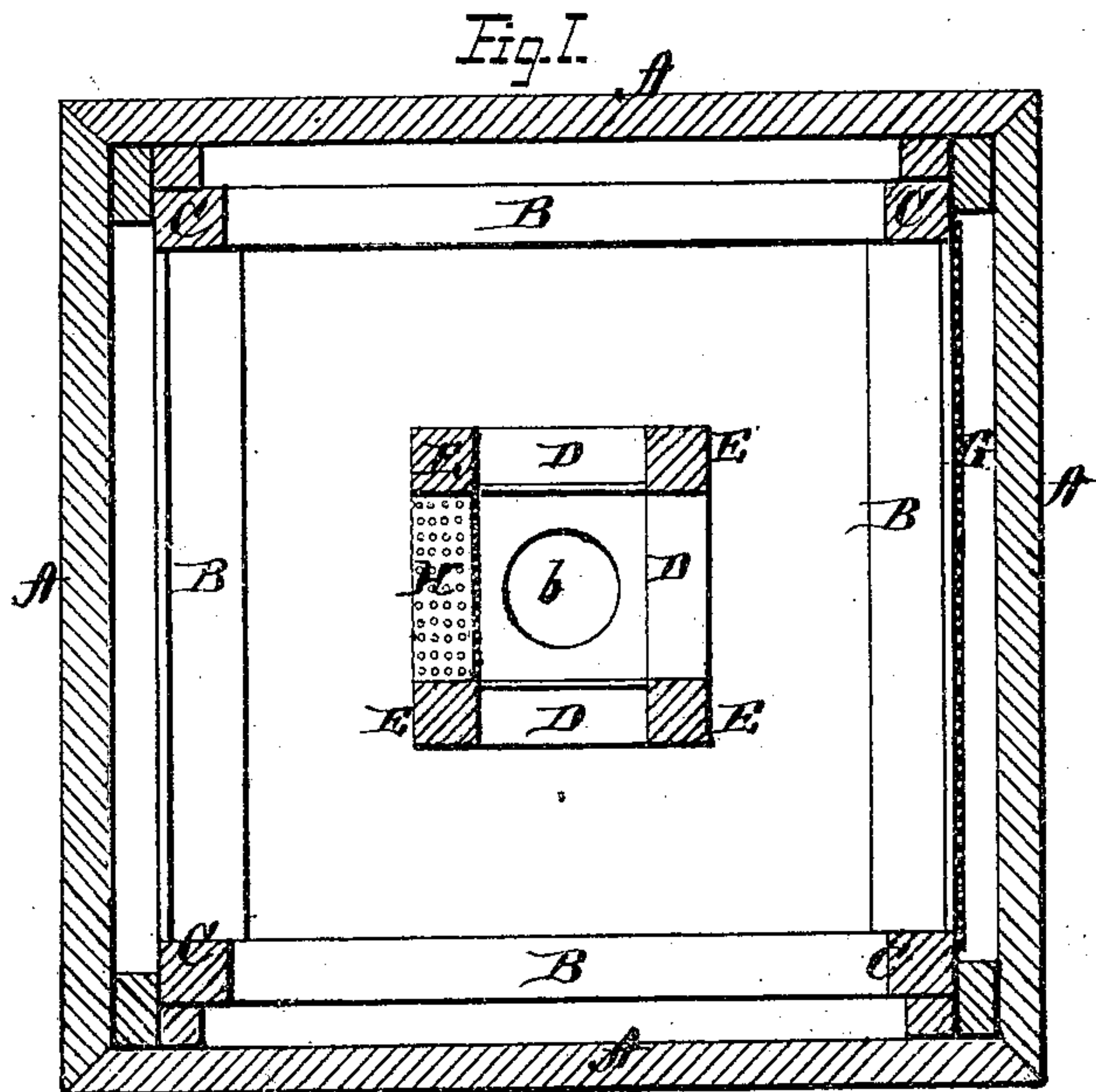


C. R. COE.
Grain-Drier.

No. 133,410.

Patented Nov. 26, 1872.



Witnesses:
Jas. O. Hutchinson.
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Inventor.
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Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES R. COE, OF BLOOMINGTON, ILLINOIS.

IMPROVEMENT IN GRAIN-DRIERS.

Specification forming part of Letters Patent No. 133,410, dated November 26, 1872.

To all whom it may concern:

Be it known that I, CHARLES R. COE, of Bloomington, in the county of McLean and in the State of Illinois, have invented certain new and useful Improvements in Grain-Driers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a grain-drier, designed to be used for warehouses and for grain-bins and granaries on farms, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a horizontal section, and Fig. 2 is a vertical section, of my grain-drier.

A represents the warehouse or outside of the grain-bin. Within this exterior house or bin is a frame, composed of slats B B framed into the four corner-posts C C, which slats are flat and situated at an angle of about forty to forty-five degrees from the perpendicular, and incline downward and inward. This frame B C constitutes the grain-bin proper, into which the grain is thrown. In the center of this bin is a hollow shaft or air-duct, constructed, in a similar manner, of slats D D and posts E E, but these slats are inclined downward and outward. The inclination of the slats B B and D D prevents the shelled grain from passing in or out, while it leaves wide openings for the transmission of air, whether heated by artificial means or not. In place of the slats, both of the bin and air-shaft, I may substitute plain perforated metal plates, as shown at G, supported by timbers; or the perforated metal may be bent and adjusted to

the same angle as the slats and properly supported, as shown at H. The bin B C is provided on the top with a wood cover, I, which operates as an air-deflector in the following manner: On the outside house or bin A is placed a cover, J, with central opening *a*, through which air passes or is forced down, striking the interior cover I, and, deflected from the same, is at once diffused all around the bin. The air then passes through the grain into the central shaft D E and escapes through the opening in its bottom. This deflector I may be used at the bottom of the bin and the air forced upward, if so desired. It may also be of any desired shape—flat, conical, or angular. In the house or outside bin A I intend also to arrange blinds K, as shown in Fig. 2, which are to be opened to allow the air to circulate where power is not used to force the air down or up.

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

1. In combination with the interior grain-bin B C, the central shaft or air-duct composed of the posts E E and inclined slats D D, or perforated metal plates, substantially as herein set forth.

2. The air-deflector I, arranged either at the top or bottom of the grain-bin B C, substantially as and for the purposes herein set forth.

3. The combination of the exterior shell A, interior bin B C, central shaft or air-duct D E, deflector I, cover J, passages *a b*, and blinds K, all constructed and arranged substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 6th day of June, 1872.

CHARLES R. COE.

Witnesses:

W. M. HATCH,
J. E. PUGH.