J. D. OVERHOLT.

CRIB AND BIN VENTILATING SYSTEM.

APPLICATION FILED JUNE 5, 1919.

1,317,309. Patented Sept. 30, 1919.

Fig. 1.

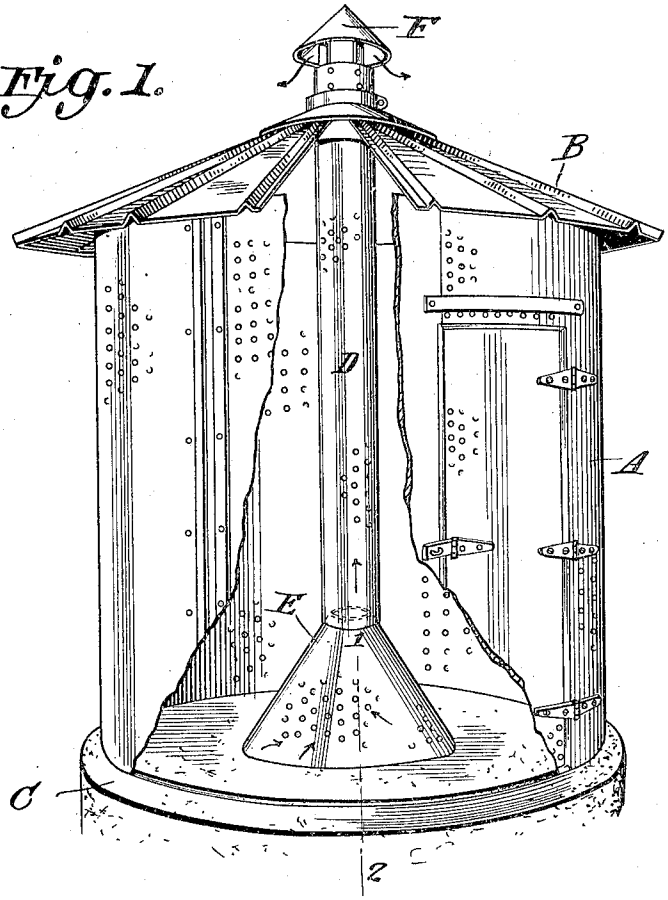
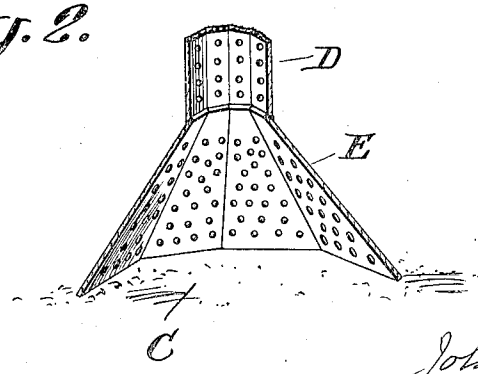


Fig. 2.



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CRIB AND BIN VENTILATING SYSTEM.

1,317,309. Specification of Letters Patent. Patented Sept. 30, 1919.

Application filed June 5, 1919. Serial No. 302,052.

To all whom it may concern:

Be it known that I, JOHN D. OVERHOLT, a citizen of the United States, residing at Wooster, in the county of Wayne and State of Ohio, have invented a new and useful Crib and Bin Ventilating System, of which the following is a specification.

My invention relates to improvements in crib and bin structures for housing corn, wheat and other grains, and particularly such as are shown and described in my Patent No. 1,189,729, dated July 4th, 1916. The principal object of my present invention is to provide improvements in the ventilating system of such cribs and bins, and I accomplish this object by the devices hereinafter shown and described, and as stated in the appended claim.

My invention is illustrated by the accompanying drawings in which similar letters of reference indicate like parts.

Referring thereto, Figure 1 is an outline view of a crib embodying my invention, part of one side being cut away for better illustration; Fig. 2 is a detail sectional view of the lower end of my improved ventilator shaft, on the dotted line 1—2 of Fig. 1. In the drawings, A is the crib body; B, the roof or cover; C the base or floor; and D, the upper portion of the ventilator shaft; all of which are substantially such as heretofore used by me under my said former patent, and no claim is specifically made thereto in the present application.

Heretofore ventilator shafts have been constructed with a cylindrical body of uniform diameter from end to end thereof, and extending from top to bottom of the crib, the lower end being secured solidly to the floor thereof, and with numerous perforations for the admission of air therein from end to end of the ventilator shaft. This arrangement is defective as a ventilating system because it does not sufficiently take into account the fact I have discovered that stored grain will heat and mold in the center and at the bottom of the crib or bin more quickly than elsewhere therein, and that better ventilation is afforded through the ventilating shaft by having the perforations therein limited to at least four fifths of the way up from its bottom, and preferably to the part normally below the top of the pile in the crib or bin, so that the heat at the bottom and center of the pile more rapidly rises through the shaft, and the cool air from outside the crib through the wall perforations takes its place.

Limitation of perforations is reserved for another application.

Moreover, to avoid this tendency to heat and mold the grain at and near the bottom and center of the mass more free air space should be provided at this point, and part of the floor space there should be kept occupied by a suitable air chamber.

To accomplish these objects in a proper and quite inexpensive manner, I construct such air chamber, preferably of perforated sheet metal, and in form of a truncated cone or pyramid, as shown at E, and locate the same upon or near the center of the bottom C of the crib or bin, as shown in Fig. 1, and terminate the ventilating shaft D thereupon so as to rest thereon and be secured at its lower end thereto in any desired manner.

The base and sides of said air chamber may be either circular or polygonal to correspond with the cross section of said bottom or body of the ventilating shaft D, and its bottom may be held a short distance above the floor, by suitable feet in any desired manner, if preferred.

I do not limit myself to the particular form of air chamber shown, nor to the manner of its attachment to the bottom of the ventilating shaft. I am aware it is not new to provide a ventilating shaft with perforations therein, extending from top to bottom of a crib structure, and such I do not broadly claim; but having thus fully described my invention what I claim as new and desire to secure by Letters Patent is—

In a crib or bin structure, the combination with a ventilator shaft, of an air chamber located at or near the center of the crib floor, and connected to the adjacent lower end of the ventilator shaft, the sides of said air chamber being perforated and extended beyond the sides of said shaft, substantially as set forth and for the purpose specified.

In witness whereof I hereunto set my hand this 14th day of April, A. D. 1919.

JOHN D. OVERHOLT.

In presence of two witnesses:
JOHN C. MCCLARAN,
HIRAM B. SWARTZ.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."