

W. L. WRIGHT.
Ventilator for Corn-Cribs.

No. 202,086.

Patented April 2, 1878.

Fig: 2.

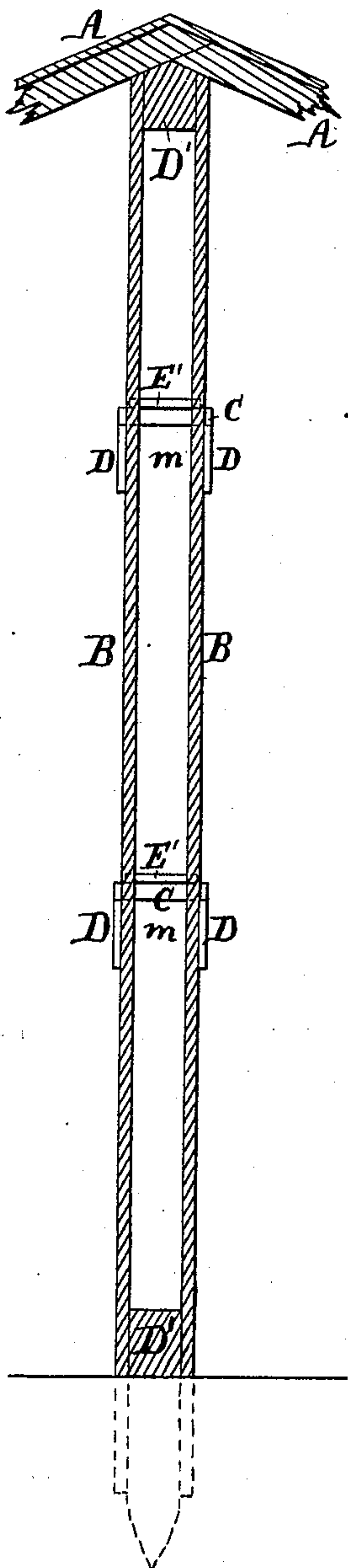


Fig: 1

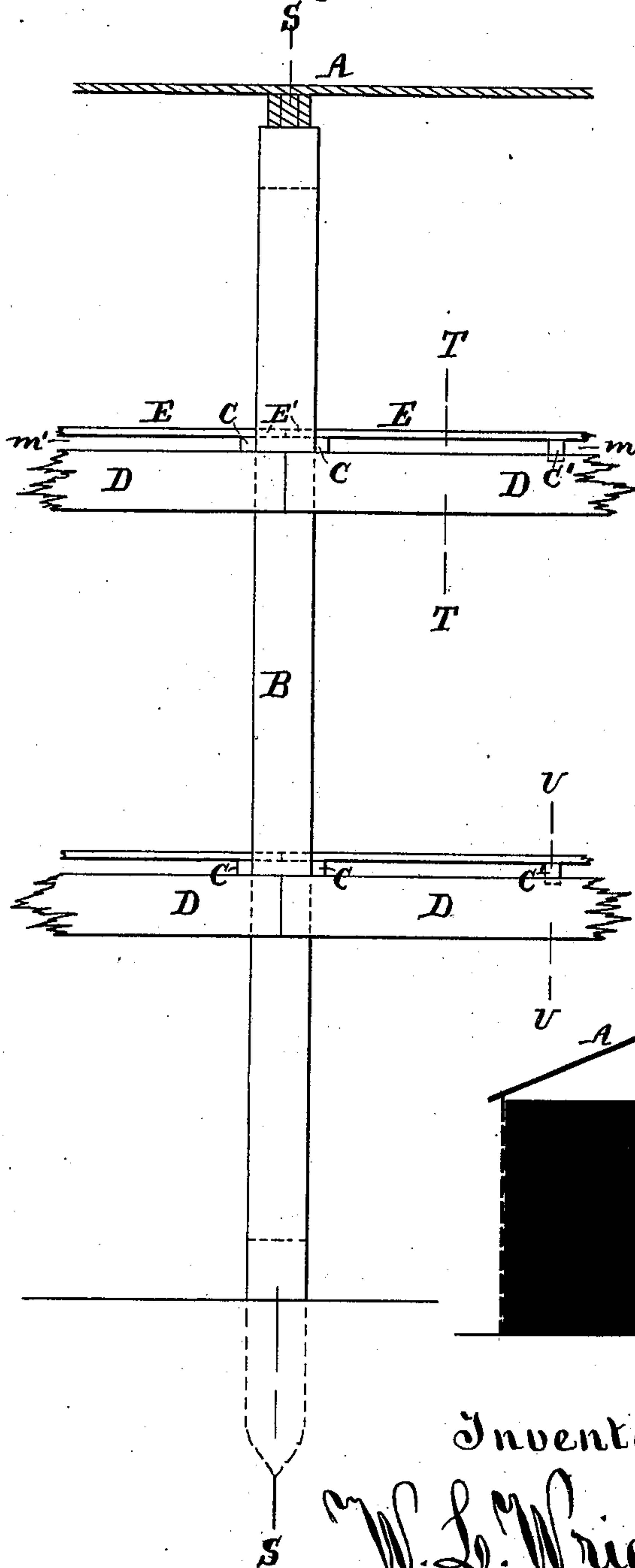


Fig: 3.

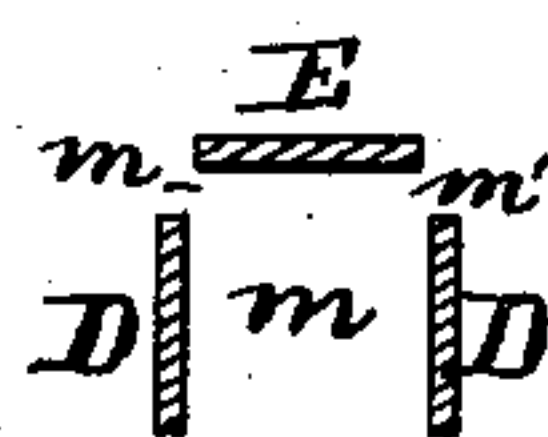


Fig: 4.

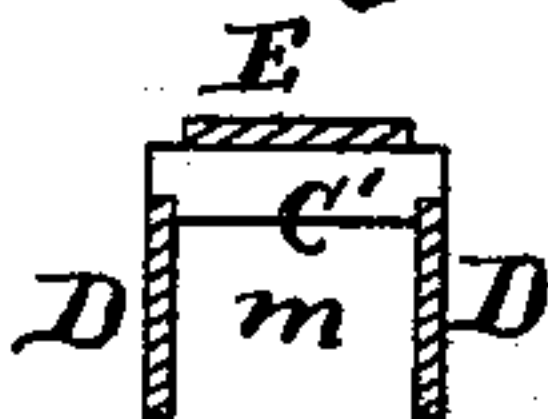
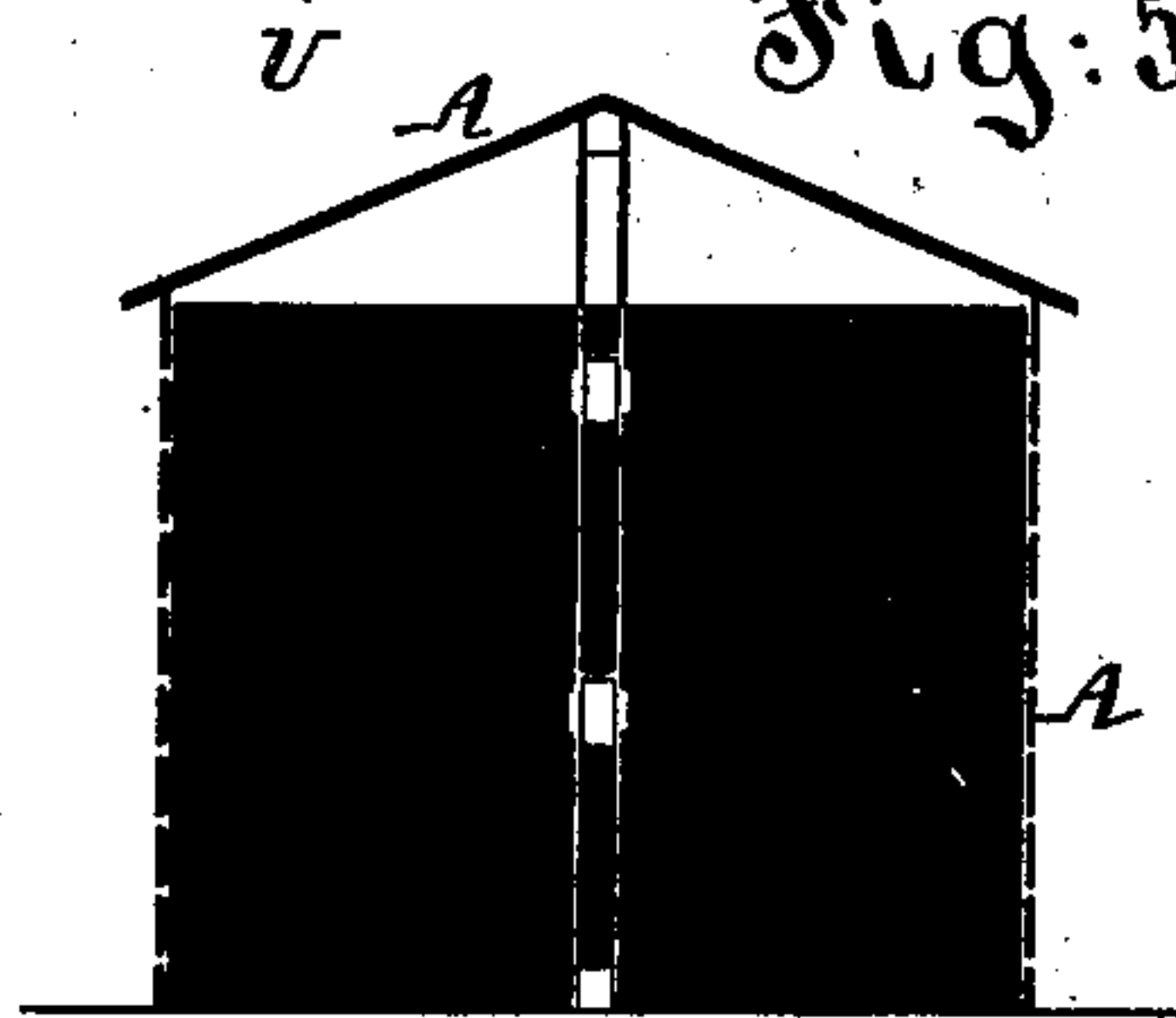


Fig: 5.



Witnesses:

A. L. Johnson
H. A. Johnston

Inventor:

W. L. Wright
by his attorney
J. S. Peterson

UNITED STATES PATENT OFFICE.

WILLIAM L. WRIGHT, OF HUDSON, NEW YORK.

IMPROVEMENT IN VENTILATORS FOR CORN-CRIBS.

Specification forming part of Letters Patent No. **202,086**, dated April 2, 1878; application filed January 31, 1878.

To all whom it may concern:

Be it known that I, WILLIAM L. WRIGHT, of Hudson, Columbia county, in the State of New York, have invented certain new and useful Improvements relating to Ventilators for Corn-Cribs, of which the following is a specification:

I construct along the interior of the crib a framing composed of uprights and horizontal pieces, so arranged as to form continuous channels at one or more levels along the whole length of the crib, with sufficient longitudinal openings along the channels to allow the air received freely at the ends to rise and be distributed throughout the mass of corn. The corn being always cribbed in the ear allows such openings to be of considerable width without the corn falling through.

My ventilating-frame may be applied in cribs already built, and will be of use whatever may be their construction and the direction in which they extend. Where the crib is to be built with reference to this ventilator, I prefer that it shall extend north and south. The uprights may aid in sustaining the roof, and giving strength to the structure.

The accompanying drawings form a part of this specification, and represent what I consider the best means of carrying out the invention.

Figure 1 is a side elevation. Fig. 2 is a section in the plane of a pair of uprights, or on the line S S in Fig. 1. Fig. 3 is a corresponding section out of the plane of the uprights, or on the line T T in Fig. 1; and Fig. 4 is a section through one of the channels on the line U U in Fig. 1. Fig. 5 is a section through the entire crib, on a small scale, and shows with especial clearness the arrangement of my frames relatively to the crib.

Similar letters of reference indicate like parts in all the figures.

A A, &c., represent an ordinary crib. It may be one hundred (100) feet in length, and twelve (12) feet wide and twelve (12) feet high, with the sides formed of horizontal boards, placed a little way apart, and added one by one as the crib is filled from the wagons drawn alongside.

The uprights of my ventilators are marked B. They are set in pairs a little distance apart,

and serve as supports for the longitudinal pieces D and E, which form the channels *m*, through which the air is received, and from which it is distributed through the apertures *m'*. I have represented two of the longitudinal ventilating-channels. The number may be more or less, and a description of one may suffice for the whole.

The pieces D are set on edge and nailed against the uprights B. The piece E is formed with shoulders near each end, and with extensions E' beyond the shoulders of a width equal to the space between the uprights. Short cross-pieces C hold the horizontal piece E about an inch above the upper edges of the longitudinal pieces D.

On throwing in the corn, the ears distribute themselves with the ordinary uniform irregularity in all the space each side of my ventilating-frames and through the liberal open spaces in the frames; but they are prevented from entering a considerable space under each horizontal board E E'. The whole space between the side pieces D is preserved as a clear channel, and, care being taken in the construction of the crib ends (not represented) to provide a window or suitable hole to match, the air may flow in at both ends, or at either end, according to the direction of the wind, and move freely through the entire length of the building. I have experimented on a large scale, and find that in practice the air enters forcibly at the end against which the wind is blowing, and that it flows out very weakly, if at all, at the other end. The entire current, or nearly all of it, is distributed outward and upward through the long narrow passages *m'* above each longitudinal piece D. The corn is kept in first-rate condition, and if put in wet will rapidly dry.

There is an immense loss constantly occurring from the destruction or deterioration of corn in cribs. It is common to put it in frozen and in various conditions of dampness, and, although the sides of the crib are open, the interior of the crib remains damp. It is common, even, for the corn to become damp and to spoil, or become greatly damaged, in the center when cribbed apparently dry. I believe that my improvement will allow ripe corn to be cribbed in every possible condition, and

will turn it out bright and first quality whenever the crib is opened.

By my construction the horizontal pieces E brace the uprights B against being crowded together by the pressure of the corn. A block, D', should be introduced between each pair of uprights B at the bottom, and a corresponding block may be, if preferred, introduced at the top; but there the pressure is less, and the uprights may often be sufficiently secured by simply nailing to the rafters. I "toe" or secure the bottoms of the uprights by nailing to the floor, with or without the employment of cleats, so as to prevent the displacement of the frames in case the corn is introduced or taken away on one side more than the other. I introduce at one or more points between the pairs of uprights cross-pieces C', corresponding to the pieces C, except that they are formed with shoulders, which drop down a little between the upper edges of the pieces D. These pieces C' not only serve to hold up the horizontal piece E, but also to hold apart the horizontal pieces D. They aid these parts to resist the pressure of the corn, and to hold the passage open to its full area.

The air-passage between each pair of uprights B is less by the thickness of both uprights than the space between the longitudinal pieces D D. I have experienced no difficulty from this inequality in the size of the passage. For a rectangular crib of twelve (12) feet dimensions, I have used lumber two (2) inches thick. The uprights B were four (4) inches wide and the space between them four (4) inches. The pieces D were six (6) inches deep, the pieces E six (6) inches wide, and the cross-pieces C one (1) inch square. The pairs

of uprights B were twelve (12) feet between the centers. The proportions may be varied within wide limits.

The north and south extension of the crib, and consequently of my frame, not only causes the sun to shine with about equal effect on each side, but favorably exposes the ventilating-passages to the north wind, which is in its nature especially drying.

I have in dotted lines shown a modification in which the lower block, which holds the uprights apart, is a short thick stake driven in the ground, and the uprights are nailed thereto. This construction may be preferred in some cases.

I claim as my invention—

1. A ventilating-framing for corn-cribs, having uprights B, aiding to support the roof, in combination with longitudinal pieces E D D, forming inverted troughs or clear spaces *m*, with narrow apertures *m'*, adapted to conduct and distribute the air, as herein specified.

2. In a corn-crib ventilating-frame, the uprights B, arranged in pairs, the longitudinal pieces D D, placed on edge at each side, and the longitudinal pieces E, lying horizontally, in combination with each other and with intermediate pieces C C', adapted to support the parts against the pressure of the corn, as herein specified.

In testimony whereof I have hereunto set my name in presence of two subscribing witnesses.

WILLIAM L. WRIGHT.

Witnesses:

STEPHEN L. MAGOUN,
CHAS. E. WRIGHT.