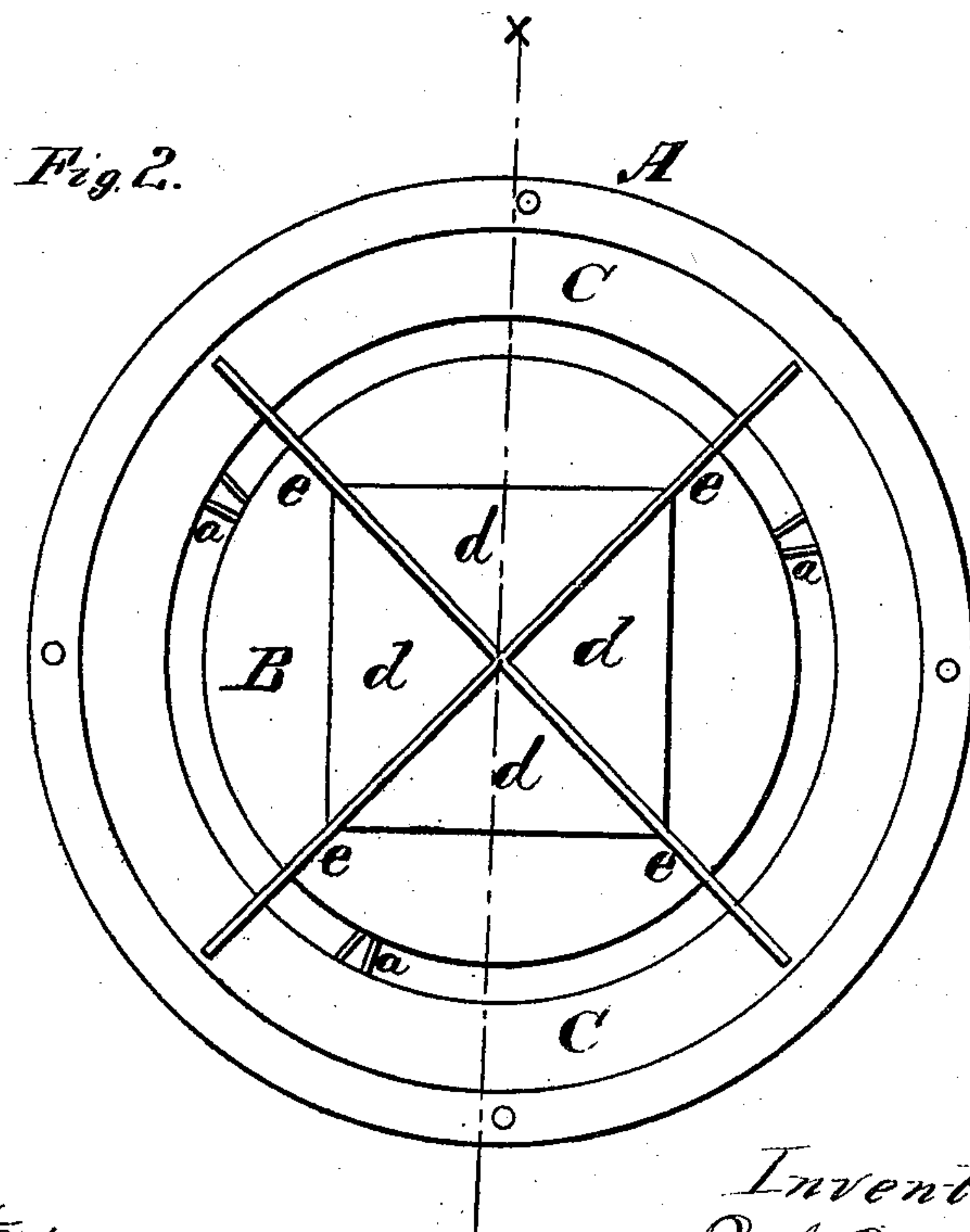
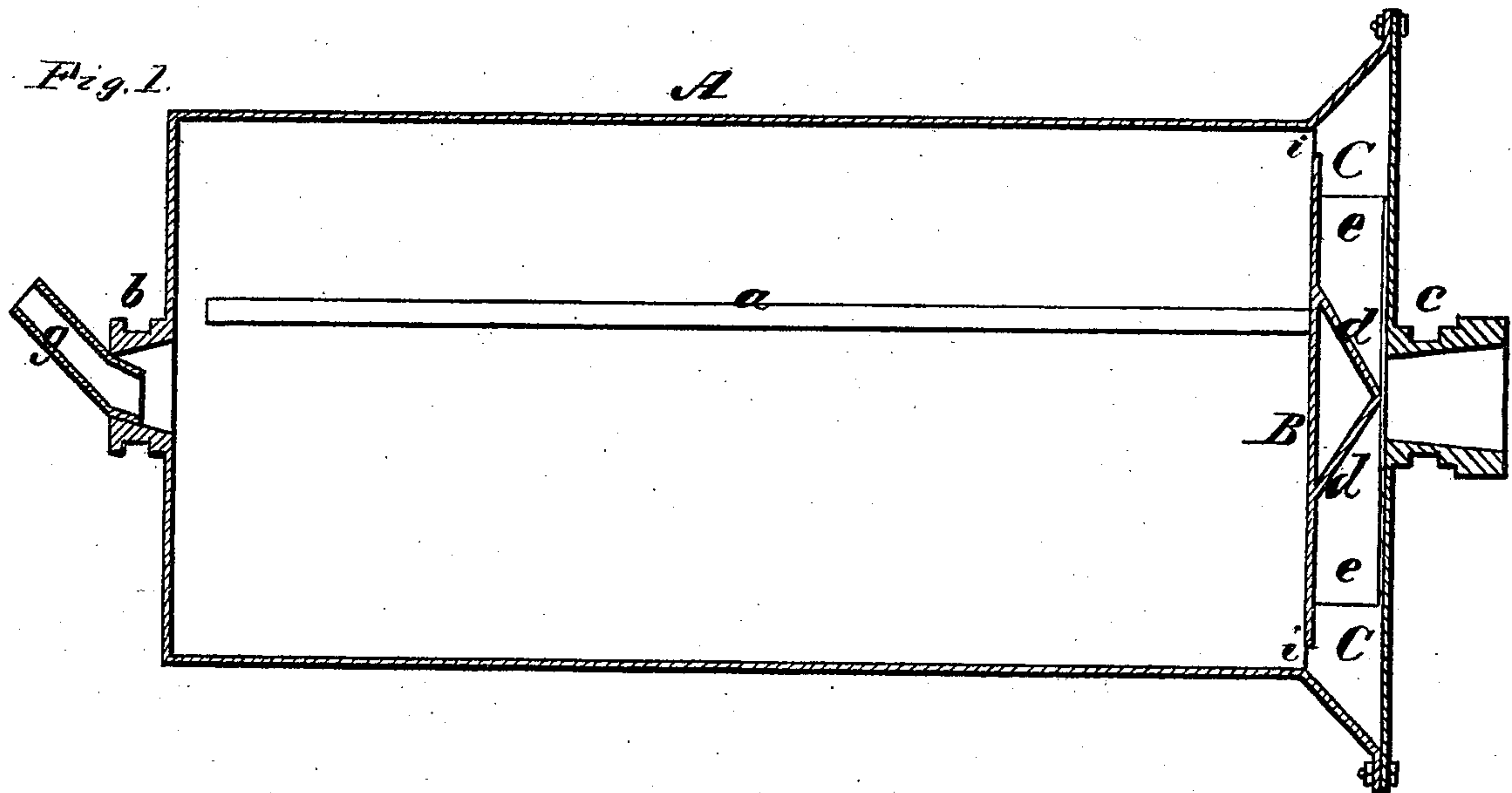


W. J. WILSON.
Meal-Driers.

No. 148,537.

Patented March 10, 1874.



Witnesses.
E. H. Bates
Phil. C. Masi.

Inventor.
W. J. Wilson.
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Attys

UNITED STATES PATENT OFFICE.

WALSTEIN J. WILSON, OF TONICA, ILLINOIS.

IMPROVEMENT IN MEAL-DRIERS.

Specification forming part of Letters Patent No. **148,537**, dated March 10, 1874; application filed September 20, 1873.

To all whom it may concern:

Be it known that I, WALSTEIN J. WILSON, of Tonica, in the county of La Salle and State of Illinois, have invented a new and valuable Improvement in Meal and Grain Driers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a section of my meal and grain drier. Fig. 2 is an end view with cap removed.

The object of my invention is to construct a revolving grain and meal drying drum in such manner that the material to be dried can be introduced into the drum through one of its gudgeons, and conducted longitudinally through the drum, and then delivered from it through the other gudgeon, as will be hereinafter explained.

The following description will enable others skilled in the art to understand my improvement:

In the annexed drawings, A represents a sheet-metal drum or drying case, inside of which are arranged a number of longitudinal ribs, *a*, which elevate the grain or meal nearly to the top of the drum, and then discharge the same to the bottom of the drum again, thereby keeping the material in constant agitation while it is passing from one end to the other of the drum. The ends or heads of the drum are closed and provided with hollow gudgeons, one of which, *b*, receives into it a spout, *g*, through which the material to be dried is fed into the drum, and the other, *c*, is made slightly flaring, for the purpose of discharging the dried material through it. Near the drum-head, to which the discharging-gudgeon *c* is applied, is a circular diaphragm, the diameter of which is less than the interior diameter of the drum A, for the purpose of leaving an annular space, *i*, through which the material, after reaching this end of the drum, is

discharged into an outwardly-flaring space, C. In this space C are secured a number of radial blades, *e*, and a central pyramid, *d*, the apex of which latter coincides with the longitudinal axis of the drum, as shown in the drawing. The drum A is supported by its tubular gudgeons *b* *c* in journal-boxes mounted upon a suitable frame, and is inclined, more or less, so that the material will move toward the discharging end as it is dried. As the material passes through the space *i* below the diaphragm B into the space C, it is caught by the radial blades *e*, and elevated and discharged from the drum through the gudgeon *c* by means of the inclined sides of the pyramid *d*.

In carrying my invention into effect, I may employ a number of the driers, arranged one over the other, and inclined in a zigzag manner, so that one will discharge its contents into the other in regular order. Such an arrangement of the driers will be inclosed in a case, through which heated air or steam will be conducted in any convenient manner. When the driers are used singly they may be arranged over a furnace, or heated air may be forced through them, or, if desired, heat may be applied to them by means of steam in pipes.

I am well aware that drying-drums have been constructed with receiving and discharging gudgeons and a central discharging pyramid, and, therefore, I do not claim such invention broadly; but

What I claim as new, and desire to secure by Letters Patent, is—

The grain and meal drying drum, having receiving and discharging gudgeons *b* and *c*, the elevating stirring-ribs *a*, and the elevating discharging-blades *e*, for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WALSTEIN J. WILSON.

Witnesses:

HENRY GUNN,
JOHN SMITH.