

P. B. HUNT.
Grain-Driers.

No. 148,886.

Patented March 24, 1874.

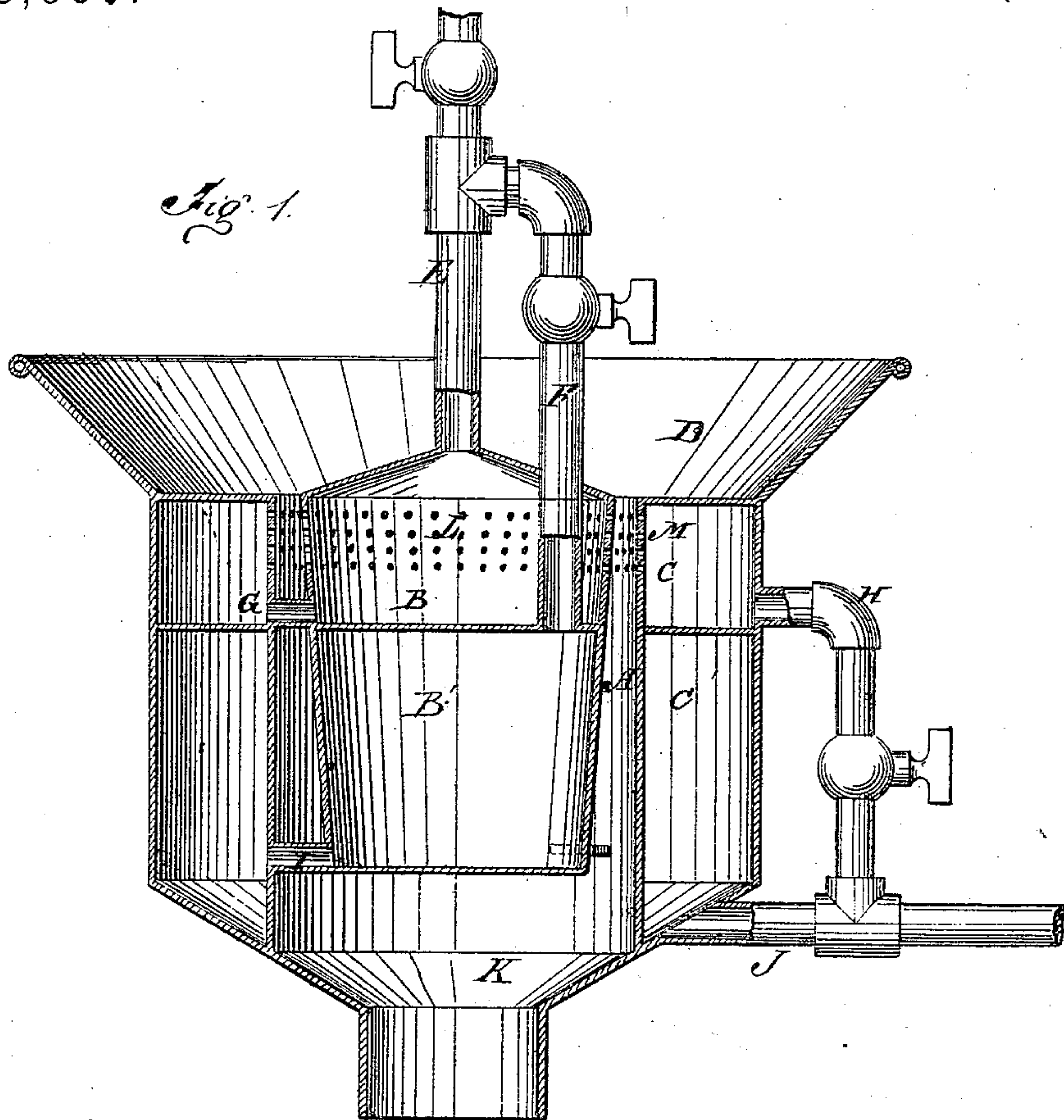
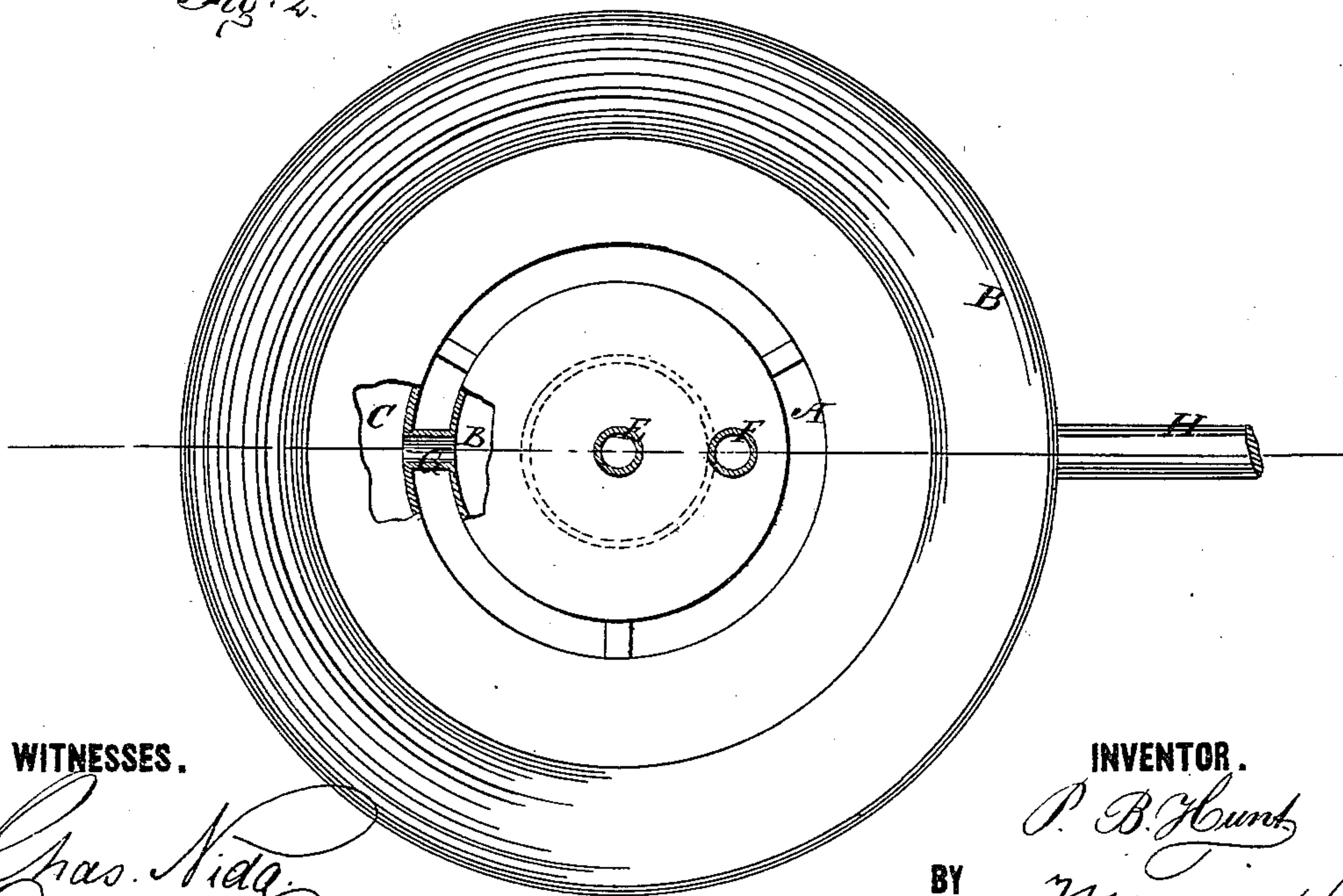


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN GRAIN-DRIERS.

Specification forming part of Letters Patent No. 148,886, dated March 24, 1874; application filed January 10, 1874.

To all whom it may concern:

Be it known that I, PARDON B. HUNT, of Council Bluffs, in the county of Pottawattomie and State of Iowa, have invented a new and Improved Apparatus for Drying and Steaming Grain, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

Figure 1 is a sectional elevation of the apparatus, and Fig. 2 is a plan view with some parts in section.

Similar letters of reference indicate corresponding parts.

A represents the grain-passage, which, in this example, is of annular form, being formed between a central circular chamber, B B', and an outer one, C C'. Above the passage is a hopper, D, from which the wheat flows into said passage. E is a steam-pipe leading from the boiler into compartments B and C. F is a branch pipe for conducting some of the steam from pipe E into compartments B' and C'. G is a passage for steam from compartment B into C; the latter has an escape-pipe, H, for condensed steam. I is a passage for steam from compartment B' into C', which has an escape-pipe, J, for condensed steam. K is the escape-passage for the wheat. The walls L and M are perforated, so that the steam may pass from compartments B and C into the grain, for steaming it as it descends in its passage. Below these perforations the grain is subjected to the hot walls of its passage, to have the surface moisture dried off after it has been sufficiently moistened to toughen it.

If the apparatus is to be used for drying grain which is too damp for grinding or storing, and does not require steaming, the steam will be shut off from the upper compartments.

It will be noticed that the grain-passage widens downwardly to afford a greater space for the grain as it swells by the effect of the steam. This I consider important for such steaming apparatus, and I propose to employ such form whether the passage be annular, as herein described, or otherwise.

I am aware that grain-driers with steaming-chambers having perforated walls, with drying-chambers having closed walls, and with a series of pipes are not new; and I am also aware that driers with conical or funnel shaped grain-passages are well known to the public; but I believe that it is new to arrange two cylinders so as to form a grain-passage in the shape of an inverted cone or funnel, and so that the grain-passage will enlarge as the grain swells, and the passage thus continue throughout to preserve the same relative magnitude to the volume of grain.

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

The combination, with two steam-cylinders, one surrounding the other, of an intermediate grain-passage, A, receiving steam near the top, and diverging toward the bottom, as and for the purpose described.

PARDON B. HUNT.

Witnesses:

JOHN STUBBS,
W. H. TUTTLE.