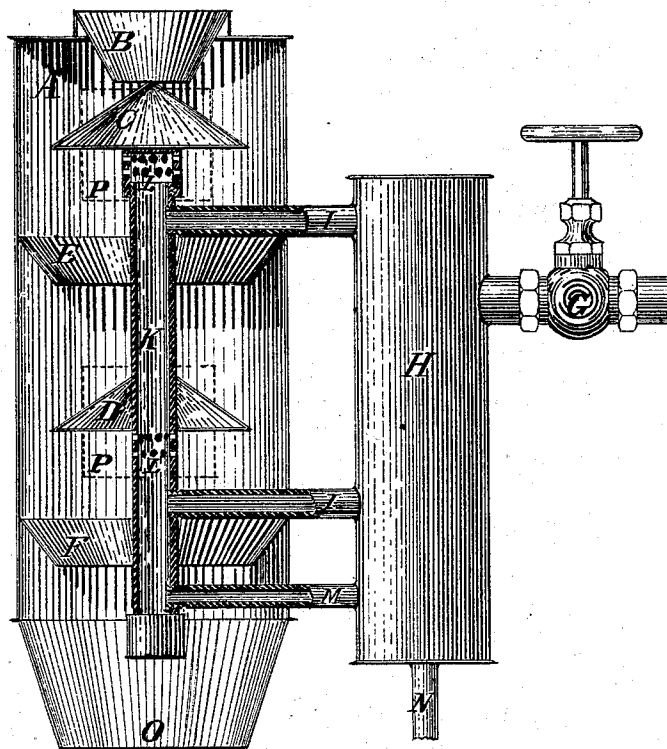


W. C. & J. N. KNOX.

Apparatus for Steaming Grain.

No. 151,034.

Patented May 19, 1874.



*Samuel B. -
James L. Orr*

WITNESSES

*Wm C Knox
Josiah N. Knox*

INVENTORS

UNITED STATES PATENT OFFICE.

WILLIAM C. KNOX AND JOSIAH N. KNOX, OF EVANSVILLE, INDIANA.

IMPROVEMENT IN APPARATUS FOR STEAMING GRAIN.

Specification forming part of Letters Patent No. **151,034**, dated May 19, 1874; application filed December 30, 1873.

To all whom it may concern:

Be it known that we, WM. C. KNOX and JOSIAH N. KNOX, of Evansville, in the county of Vanderburg and State of Indiana, have invented certain Improvements in a Machine for a Wheat Steamer or Dampener, of which the following is a specification:

The object of the invention is to provide an improved apparatus in which the wheat shall be thoroughly and equably subjected to the action of steam as it passes downward through a cylinder, alternately expanding and contracting as it flows in circular sheets or streams from one conical deflecting plate or ring to another, and intersecting and mingling with the jets of steam discharged laterally. The invention is embodied in the construction and arrangement of conical plates and rings within the cylinder, a perforated steam-pipe, a condensing-pipe, and steam-chest, all as herein-after fully described.

In order to enable others skilled in the art to which our invention relates to make and use the same, we will now proceed to describe the construction and operation, referring to the annexed drawings, (which is a vertical section of the machine,) which form a part of this specification.

A is an upright cylinder, through which the grain passes while undergoing the process of steaming, which cylinder is constructed of sheet metal, and has a hopper, B, in the form of an inverted truncated cone, the same being inserted in its top or head. Two or more rings, E, of like form with the hopper, are attached to the inner side or wall of the cylinder, alternating with the conical caps or

plates C. H is a steam-chest, into which as much steam as is necessary is admitted through valve G, thence conducted by suitable horizontal pipes into the vertical pipe K inside of cylinder A, which vertical pipe has closed ends and attached conical caps C and D, and is provided with numerous small apertures L L; also a drain-pipe, M, to conduct water of condensation back to chest H, to be discharged through waste-pipe N, thus securing steam of uniform dampness to apply to the grain.

The grain is conducted through cylinder A, passing in its descent over caps C and D, and aprons E and F, and, while in a scattered condition on leaving the caps, is met by jets of steam escaping through the apertures in K at L L, and discharged from the machine at O. Cylinder A may have doors, indicated by dotted lines P P.

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

The combination of cylinder A, provided with alternating conical caps C C and inverted rings E, the central pipe K, with jet-holes L, connecting-tubes I, condensing-pipe M, and chest H, with waste-pipe N, all constructed and arranged as shown and described, to operate as specified.

In testimony that we claim the foregoing we have hereunto set our hands this 15th day of December, A. D. 1873.

WM. C. KNOX.
JOSIAH N. KNOX.

Witnesses:

SAMUEL ORR,
JAMES L. ORR.