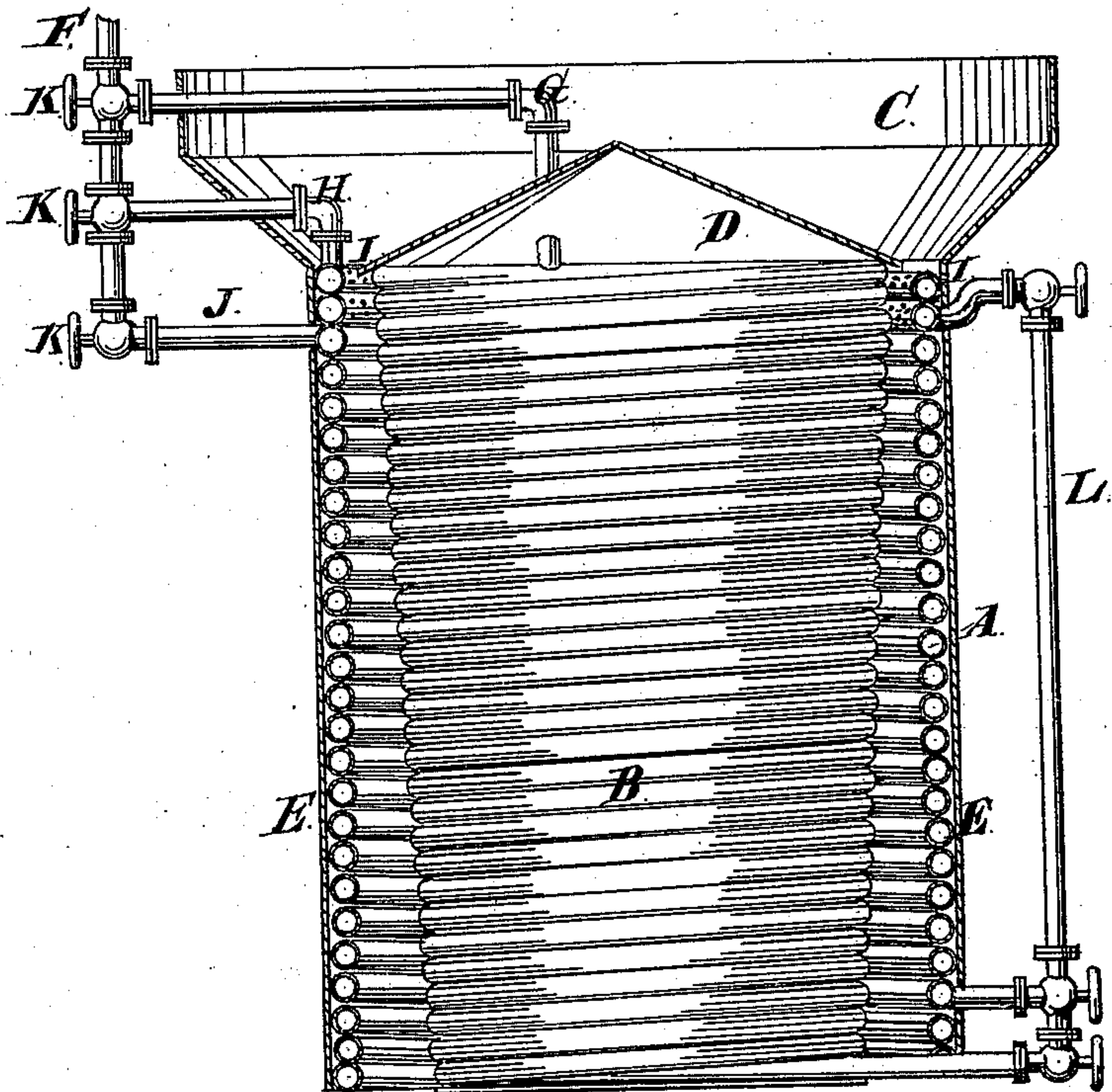


E. H. & C. L. GRATIOT.
WHEAT STEAMING APPARATUS.

No. 174,360.

Patented March 7, 1876.



Witnesses:

Heinrich F. Bruns.
J. L. Coburn

Inventor:

E. H. Gratiot
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Atty -

UNITED STATES PATENT OFFICE.

EDWARD H. GRATIOT AND CHARLES L. GRATIOT, OF PLATTEVILLE, WIS.

IMPROVEMENT IN WHEAT-STEAMING APPARATUS.

Specification forming part of Letters Patent No. **174,360**, dated March 7, 1876; application filed July 12, 1875.

To all whom it may concern:

Be it known that we, EDWARD H. GRATIOT and CHARLES L. GRATIOT, both of Platteville, in the county of Grant and State of Wisconsin, have invented an Improvement in Wheat-Steaming Apparatus, of which the following is a specification, reference being had to the accompanying drawing, which forms a part hereof.

Our invention relates to that class which steams or heats the wheat to properly prepare it to be ground. The wheat passes directly from the steaming and heating apparatus to the millstones.

Our invention consists of two concentric coils of steam-pipes, having an annular space between them, through which the wheat passes, as hereinafter fully described.

The drawing is a central vertical section of our invention.

A represents the outer coil of steam-pipe. B represents the inner coil. The inner coil is made smaller in diameter at the bottom than at the top, for the purpose of making the space between the two coils gradually increase in width from the top toward the bottom, to insure the free discharge of the grain. The two coils are braced to each other and supported in any suitable manner. C is the hopper on the top of the coil A, into which the grain is poured. D is a conical cover on the inside coil, which carries the grain into the space between the two coils. E is an outside metal casing covering the coil or pipe. F is a pipe that conducts steam into the apparatus. G is an auxiliary pipe, which takes steam from the main supply-pipe and conducts it into the inside coil B. H is an auxiliary pipe, which conducts steam from the supply-pipe into the perforated coil I at the top of the outside coil

A. J is an auxiliary pipe, which conducts steam from the supply-pipe into the outside coil A. Each of these auxiliary pipes is provided with a cock, K, which can be opened and closed to control the passage of the steam through them. L is a pipe for the exhaust or for the exit of steam from the apparatus. Each of the coils above described is connected with this exhaust-pipe L by means of a short auxiliary pipe. These auxiliary pipes are also furnished with cocks for the purpose of controlling the direction and exit of the steam and exhaust. If the wheat is too dry, and it is found desirable to steam it, the auxiliary pipe H is opened. This steam is admitted into the perforated pipe, from which it escapes through the perforations directly in contact with the wheat. If it is desirable to only heat the wheat, this auxiliary pipe H is closed. The wheat is then heated from the other coils or pipe by radiated heat from the steam within the coils.

As the wheat passes down the space between the coils of pipe, it strikes against the separate layers of pipe, and is interrupted in its passage, and turned over and stirred, and more thoroughly exposed to the action of heat than it otherwise would be. These coils of pipe are also strong and durable and not liable to leak steam and get out of repair.

We claim—

The combination, in a wheat-steaming apparatus, of the two concentric coils of pipe A and B, as and for the purpose specified.

EDWARD H. GRATIOT.
CHAS. L. GRATIOT.

Witnesses:

HEINRICH F. BRUNS,
J. L. COBURN.