(No Model.)

G. McALLISTER.

WHEAT STEAMING AND HEATING MACHINE.

No. 424,808. Patented Apr. 1, 1890.

Fig 1.

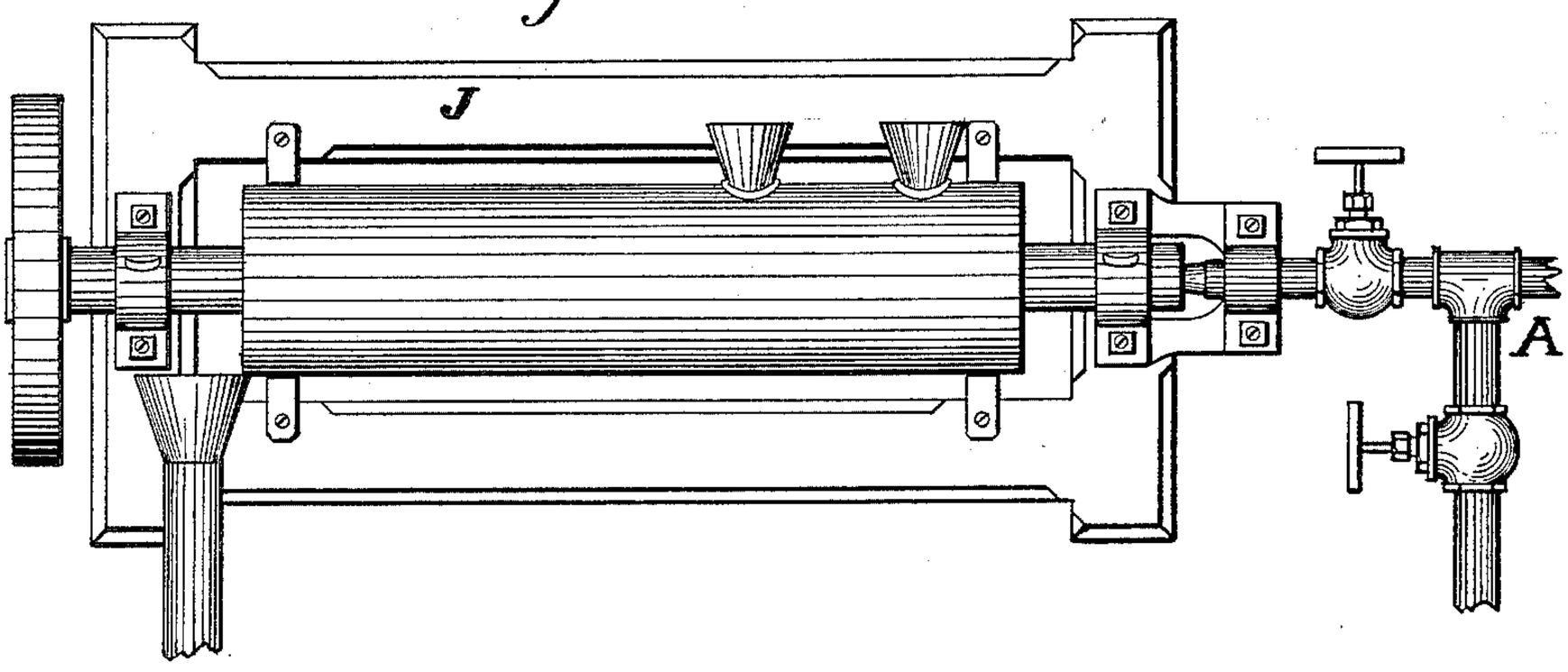
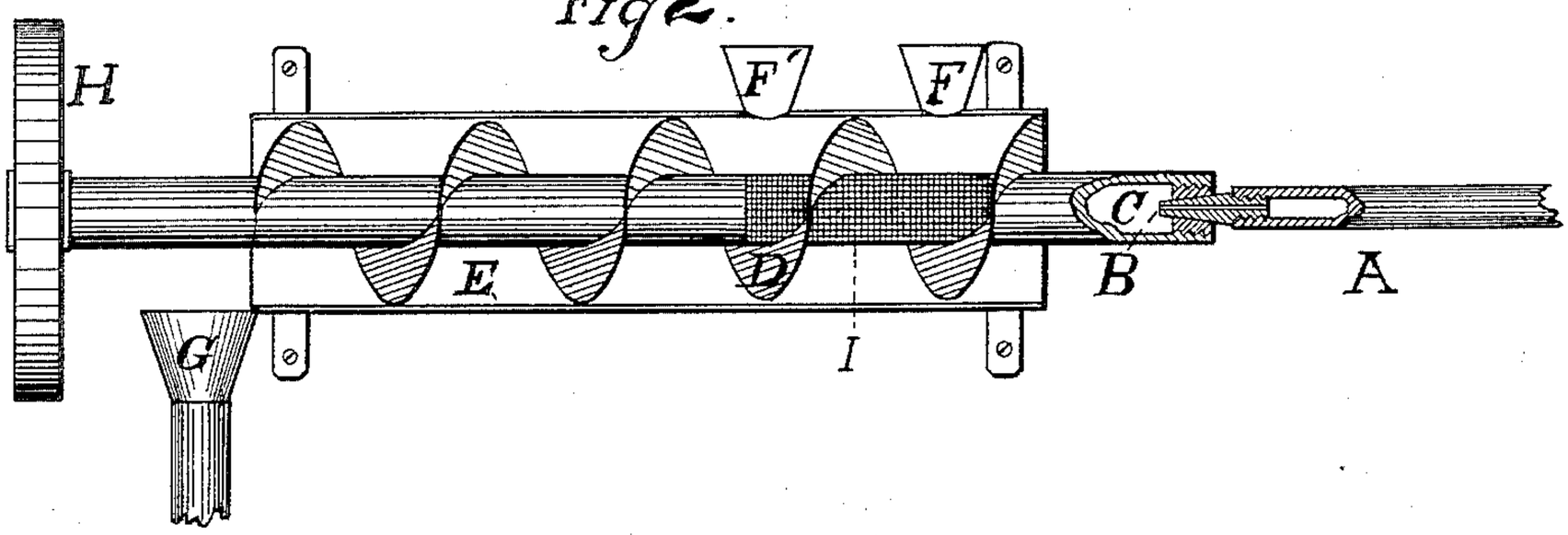


Fig 2.



Witnesses.
Jacob F. Wolslagel
Carey W. Lambeck

Inventor
George McAllister

UNITED STATES PATENT OFFICE.

GEORGE McALLISTER, OF STERLING, KANSAS.

WHEAT STEAMING AND HEATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 424,808, dated April 1, 1890.

Application filed March 15, 1889. Serial No. 303,491. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MCALLISTER, a citizen of the United States, residing at Sterling, in the county of Rice and State of Kansas, have invented certain new and useful Improvements in Wheat Steaming and Heating Machines, of which the following is a description.

My invention relates to a machine for steaming and heating wheat; and it consists in the construction and arrangement of its several parts by the use of which the wheat will receive a uniform treatment and put the same in a superior condition for milling. I attain this uniformity of treatment by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 represents the machine as it appears set up and ready for operation. Fig. 2 is a vertical section of a part of the machine, showing the interior of the steaming-chamber.

Its construction is as follows, viz: The part marked J, Fig. 1, represents a frame of wood. To this frame the machine is fastened with bolts in a horizontal position. The conveyer-shaft C, Fig. 2, is a galvanized-iron pipe, fitted into suitable boxes or bearings near each end of frame J, in which the shaft C revolves. The flights D, Fig. 2, are of steel or other metal and fastened to the shaft C, forming a worm or screw conveyer. A portion of shaft C is perforated with several small holes and covered with wire-gauze I, Fig. 2.

The outside case E is of sheet-steel or other metal, in which the conveyer revolves. This case E is stationary and fastened to the frame J. The end of the case E on the right is closed with suitable collars to fit the conveyer-shaft. The opposite end of the case is left open to allow the free delivery of the grain.

The receiving-hoppers F and F are of steel and riveted to the case E. The discharge-spout G is of steel and placed under the open end of the case E to receive the grain as it is discharged from the conveyer.

Attached to the end of the conveyer-shaft C is a driving-pulley, by which the conveyer is revolved. At the opposite end of the conveyer-shaft C is a steam-jet B, Fig. 2, with suitable packing to prevent the escape of steam. To this jet is a steam-supply pipe A, Fig. 1, with a globe-valve to regulate the amount of steam to supply the machine. To pipe A is attached a waste-pipe to draw off the condensed water.

The machine is operated as follows, viz: Motive power is applied to the driving-pulley H, which revolves the conveyer. The steam is admitted through the jet B into the hollow shaft C, and then through the perforated shaft and gauze covering to the steaming-chamber. The wheat is admitted into the hoppers F and F′ and falls into the steaming-chamber and onto the worm conveyer D. This conveyer by its rotating motion conveys the wheat along the shaft toward the outlet. When it arrives at that portion of the shaft covered by gauze, it comes in contact with the steam, and by the rolling and tumbling of the wheat caused by the rotating conveyer the wheat is brought into even and equal contact with the steam and has a uniform treatment. After passing that portion of the shaft which is covered with gauze the warm shaft dries up the surplus moisture.

The object obtained by having two receiving-hoppers is that it permits of the steaming of hard and soft wheat at the same time, and gives each the requisite amount of treament. By entering the hard wheat into the hopper on the right it remains longer in the steaming-chamber and passes over the entire length of the gauze. The soft wheat is admitted through the hopper on the left and comes into contact with less steam, and is thoroughly mixed with the hard wheat before going to the rolls.

The amount of steaming is regulated by the speed of the conveyer and the amount of steam admitted to the chamber.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the steam-supply pipe A, the hollow conveyer-shaft C, perforated in the forward portion of its length and imperforated in the rear portion, the casing E, and the hoppers F and F′.

2. The combination of the steam-supply pipe A, the hollow conveyer-shaft C, perforated in the forward portion of its length and imperforated in the rear portion, the casing

E, the hard-wheat hopper F, located at the forward end of the casing, and the soft-wheat hopper F′, located above the rear portion of the perforated part of the pipe.

3. The steam-supply pipe A, a valve therein, the steam-jet nozzle B, the hollow conveyer-shaft perforated in the forward portion of its length and imperforated in the rear portion, the casing E, the hopper F, located at the forward end of the casing, and the hopper F′, located above the rear portion of the perforated part of the pipe.

GEORGE MCALLISTER.

Witnesses:
JACOB F. WOLESLAGEL,
CAREY W. LUNBECK.