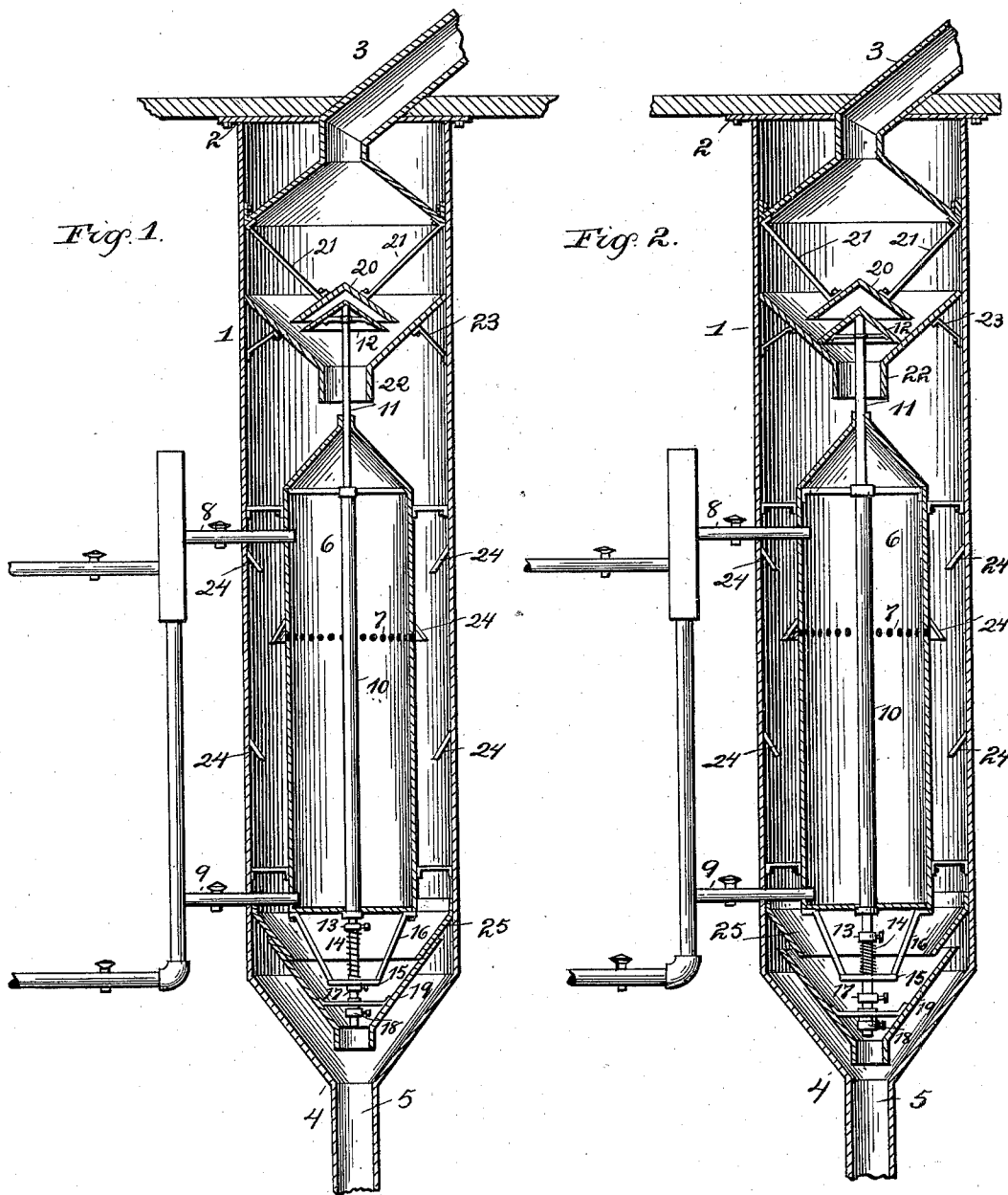


(No Model.)

F. AMENDT.
WHEAT STEAMER AND HEATER.

No. 586,111.

Patented July 13, 1897.



Witnesses
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UNITED STATES PATENT OFFICE.

FREDRICK AMENDT, OF PORT WASHINGTON, OHIO.

WHEAT STEAMER AND HEATER.

SPECIFICATION forming part of Letters Patent No. 586,111, dated July 13, 1897.

Application filed June 22, 1896. Serial No. 596,479. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK AMENDT, a citizen of the United States, residing at Port Washington, in the county of Tuscarawas and State of Ohio, have invented certain new and useful Improvements in Automatic Wheat Steamers and Heaters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in wheat steamers and heaters, the object of the same being to produce a device into which the wheat may be fed, in which the flow thereof may be automatically regulated, and in which every grain of wheat will be equally and properly steamed and heated.

The invention consists of the construction, combination, and arrangement of parts which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 represents a vertical longitudinal section through my device with the parts shown in their normal operative positions. Fig. 2 is a similar view with the valve at the upper end of the cylindrical casing closed.

Like reference-numerals indicate like parts in both views.

My improved device is made up of a cylindrical casing 1, having flanges or projections 2 at its upper end for supporting the device upon the floor of a mill, an inlet-pipe 3 entering the upper end of said casing, and a cone-shaped discharge-spout 4 upon the lower end thereof provided with an opening 5 therein through which the hand may be inserted for the purpose of getting at the operative parts of the device located in the lower end thereof. On the inside of the casing 1 is a steam-cylinder 6, having a series of openings or perforations 7 7 therein, a steam-inlet pipe 8 entering said cylinder near the upper end thereof, and a discharge-pipe 9 for water and condensed steam leading from the lower end of said cylinder. The top of the cylinder 6 is cone-shaped, as shown, and passing centrally through said cylinder is a pipe or sleeve 10, in which fits a sliding-mounted rod 11, hav-

ing a cone-shaped valve or cut-off 12 upon its upper end. Said rod has a set-screw 13 upon it at a point just beneath the bottom of the cylinder 6 and has a coil-spring 14 surrounding it which is engaged at its upper end by said set-screw 13 and at its lower end bears against a cross-bar 15, mounted upon a bracket 16, extending downwardly from the underside of the cylinder 6. Just below the cross-bar 15 said rod has secured to it two set-screws 17 18, the upper set-screw 17 being adapted to bear against the cross-bar 15 and limit the upward movement of said rod, the lower set-screw 18 being provided for the purpose of adjusting the position of a discharge-funnel 19 upon said rod. Just beneath the inlet-opening in the upper end of the casing 1 is a cone-shaped deflector 20, which is suitably supported by brace-rods 21. The cone-shaped valve 12 is located directly beneath this deflector, and the sides thereof are adapted to engage, when the valve is in its closed position, an inwardly-projecting angularly-arranged guide or ledge 22, which is suitably braced against the sides of the casing 1 by brace-rods 23. Located at intervals within the space between the casing 1 and the steam-cylinder 6 are deflecting arms or ledges 24 24, provided for the purpose of imparting a revolving movement to the grains of wheat as they pass through the machine, thereby bringing the steam into contact with every part of the surface thereof. Secured to the inside of the cylindrical casing 1, at a point just opposite the lower end of the steam-cylinder 6, is an inwardly-projecting stationary funnel or guide 25, against which the discharge-funnel 19 bears when the latter is in its raised position.

As thus constructed the operation of my device is as follows: Steam admitted through the pipe 8 into the steam-cylinder 6 is discharged therefrom through the perforations 7 7 in the upper end of said cylinder into the space between said cylinder and the inner surface of the casing 1. The wheat is then admitted through the inlet-pipe 3 to the top of the casing 1 and falling upon the deflector 20 is thrown outwardly against the ledge or deflector 22, thence upon the cone-shaped top of the cylinder 6 and down through the annular space between the cylinder 6 and the

casing 1. When within this passage, the grain is brought into immediate contact with the steam discharged through the perforations 7, and by reason of the ledges or arms 24 each grain of wheat is given a revolving movement, which causes the same to be completely steamed and heated, permitting the easy removal of the bran therefrom. The grain then passes down through the stationary funnel 25 into the funnel 19 upon the lower end of the rod 11, passing thence out of the bottom of the machine through the discharge-opening in the spout 4. To regulate the feed of the grain to the machine, it is simply necessary to change the position of the set-screw 17 on the rod 11, permitting said rod to rise and open the valve 12 to a greater or less extent. The tension of the spring 14 may be regulated by tightening or loosening the set-screw 13. If by chance the grain passing through the machine becomes clogged in the funnel 19, the weight thereof acting against the spring 14 surrounding the rod 11 will draw down said rod, partially or completely closing the valve 12 and partially or completely cutting off the flow of grain into the machine from the inlet-pipe 3. Time will thus be given for the packed grain to discharge itself through the funnel 19 and the discharge-opening in the spout 4. When this has been done, the pressure will be relieved from the funnel 19 and the rod will be thrown back into its normal position by the spring 14, thereby opening the valve or cut-off 12. The feed may thus be adjusted by hand to the proper amount, and the same is also automatically operated when the same becomes greater than the machine can stand.

Having now described my invention, what

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

The combination with a casing having an inlet-opening at its upper end for the admission of grain and a discharge-opening at its lower end, a cone-shaped deflector suitably supported on the inside of said casing just beneath said inlet-pipe, a ledge just beneath said deflector and inwardly projecting, angularly-arranged annular ledges on the inside of said casing, of a steam-cylinder located centrally of said casing, having a series of perforations near its upper end, means for admitting steam thereto and for discharging the water of condensation therefrom, a pipe or sleeve extending centrally through said cylinder, a rod fitting within said sleeve, having a valve or cut-off upon its upper end which acts in engagement with said ledge, a coil-spring surrounding the lower end of said rod, an adjustable stop thereon against which the upper end of said spring bears and a cross-bar secured to a stationary part of the machine against which the lower end of said spring bears, an adjustable stop for limiting the upward movement of said rod, a discharge-funnel adjustably mounted upon the lower end of said rod and a stationary funnel acting in engagement therewith secured to the side of the casing and located at a point a short distance above the same, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

FREDRICK AMENDT.

Witnesses:

J. C. WOLF,
J. D. MCGILL.