

F. F. QUITZO.
WHEAT STEAMER.

Patented May 5, 1896.

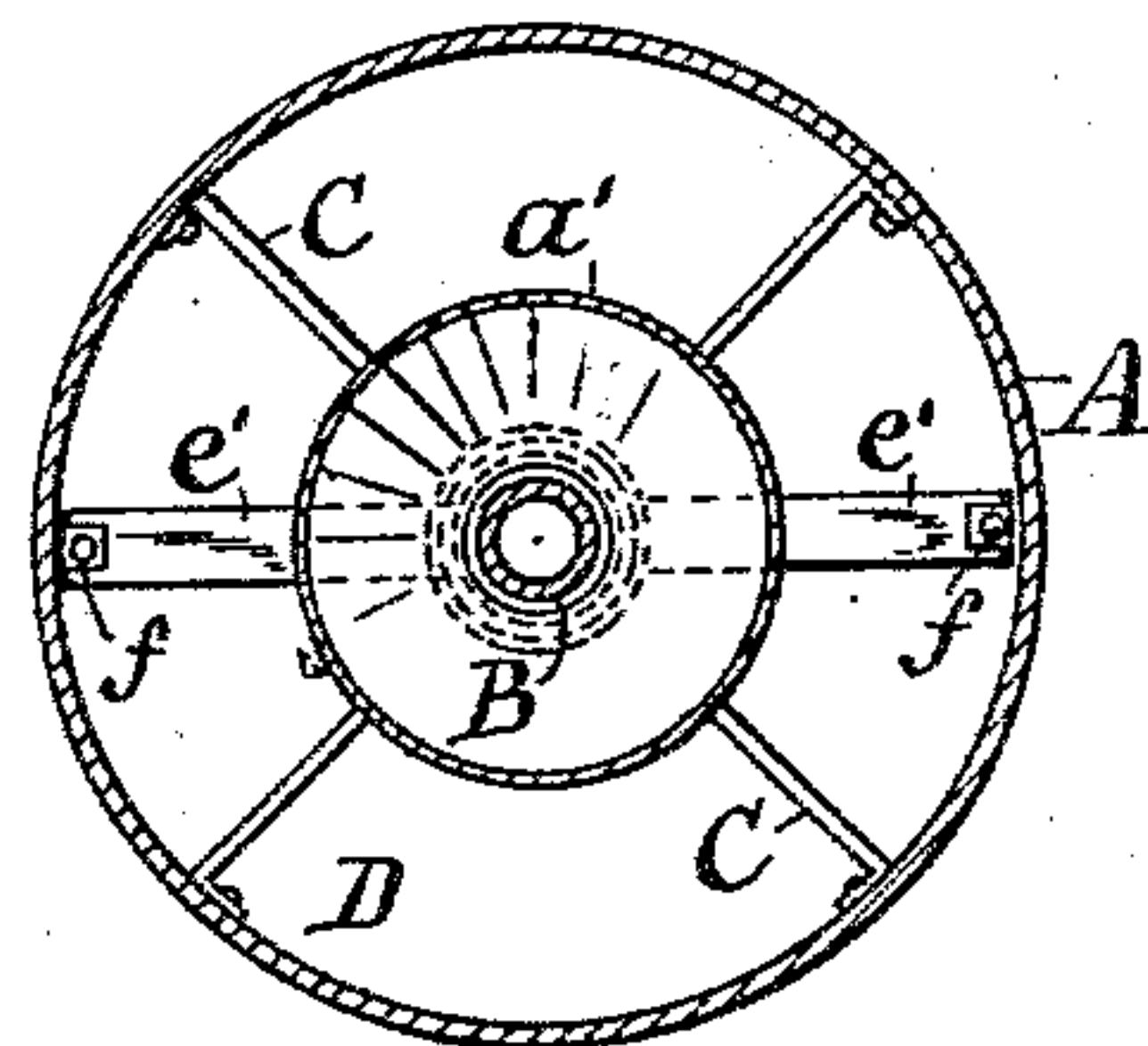


Fig. 2.

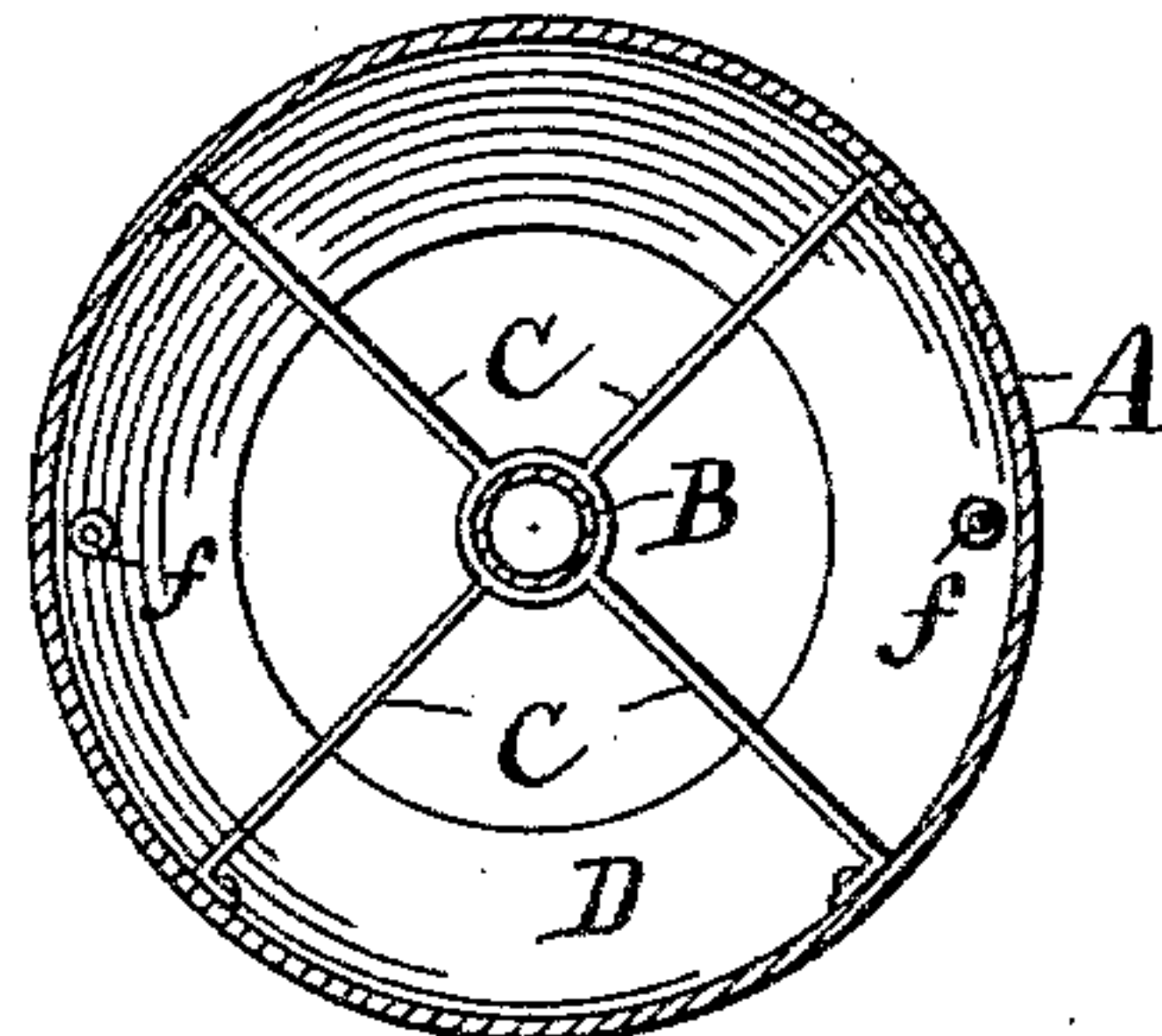


Fig. 3.

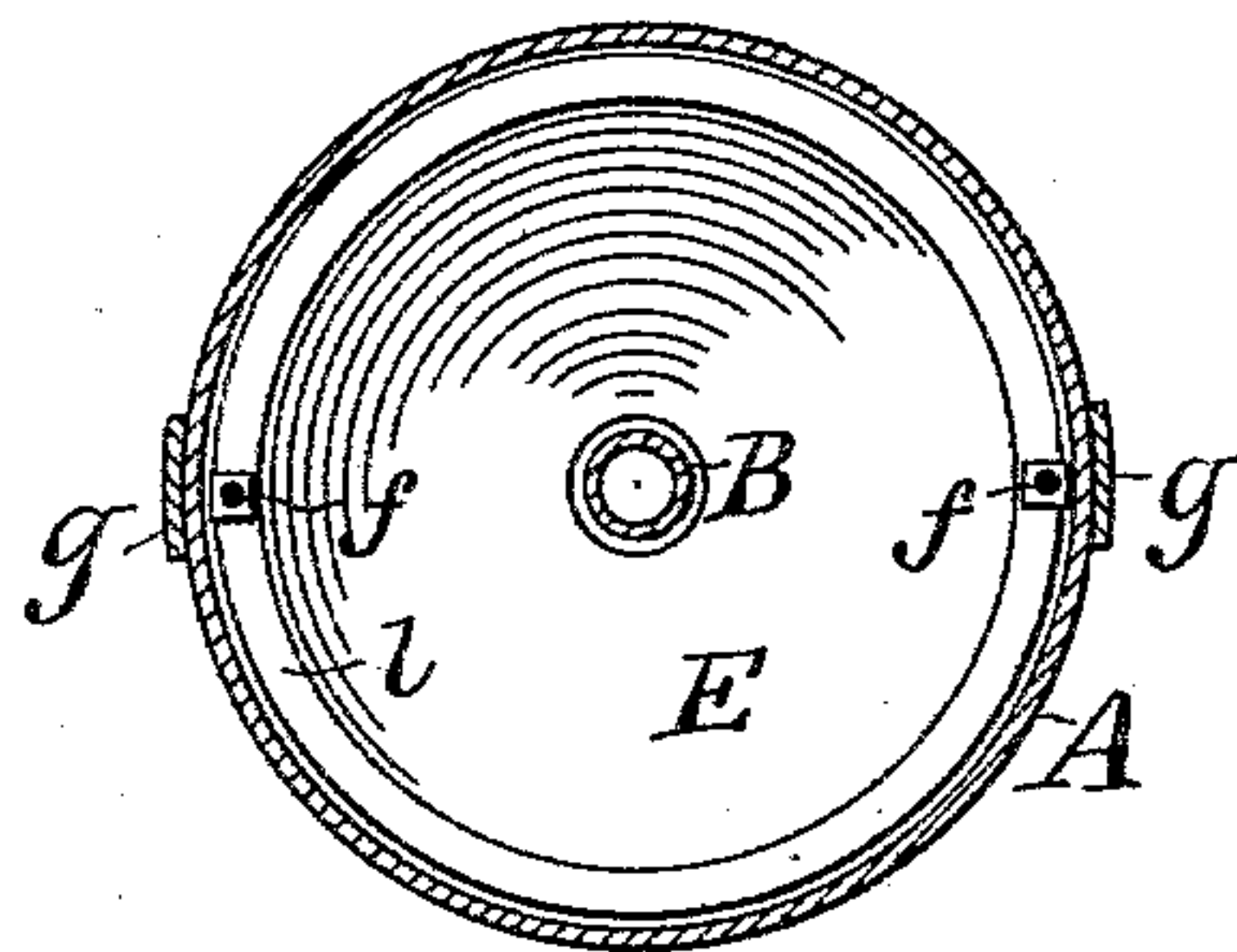


Fig. 4.

R. S. Dwyer.
Mark W. Dewey

Inventor.
Frederick F. Quitzo
By C. H. Duell
his Attorney.

UNITED STATES PATENT OFFICE.

FREDERICK F. QUITZO, OF MINOA, NEW YORK.

WHEAT-STEAMER.

SPECIFICATION forming part of Letters Patent No. 559,603, dated May 5, 1896.

Application filed January 2, 1896. Serial No. 574,023. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK F. QUITZO, of Minoa, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Wheat-Steamers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to wheat-steaming apparatus, and the object is to provide an effectual device of this nature that is adjustable and automatic in its action, or, in other words, self-regulating as to its supply, or the quantity of grain contained therein.

To this end my invention consists in the combination, in a wheat-steaming apparatus, of the outer casing, the vertical and centrally-located steam-pipe therein secured to the casing and containing several perforations near its upper end, a pocket for the grain near the lower end of the casing, having an opening therein around the steam-pipe, a valve near the upper part of the casing to admit the grain, rods connecting the said pocket with the valve, and springs to raise the pocket and open the valve; and my invention consists in certain other combinations of parts hereinafter described, and specifically set forth in the claims.

In the drawings hereto annexed and forming a part of this specification, Figure 1 is a central vertical cross-sectional view of the apparatus. Fig. 2 is a horizontal sectional view on line *xx* of Fig. 1. Fig. 3 is a horizontal sectional view on line *yy* of Fig. 1, and Fig. 4 is a sectional view on line *zz* of Fig. 1.

Referring specifically to the drawings, A is the outer casing, which is cylindrical and vertical. The upper end is closed by a cap *a*, having an inlet *a*^x to one side of its center for the grain or wheat. Below the cap *a* and secured thereto at its outer edge is a funnel-shaped piece *a'*, having its central opening provided with a downwardly-extending circular flange, which is somewhat larger than the steam-pipe extending through the said opening, and hereinafter referred to. The lower end of the casing A is contracted and terminates in a short vertical pipe *a''*, which forms the outlet for the grain or wheat after being steamed, and beneath which are the rolls (not shown) for grinding the wheat.

Extending vertically and centrally through the casing A is the steam-pipe B, having its upper end closed and in contact with the cap *a*, and its lower end in the pipe *a''*, provided with an elbow coupled to a horizontal supply-pipe B'. The latter is provided with a cut-off *b* for regulating the amount of steam and a branch pipe B'', containing a cut-off *b'*, to be opened when the steam supply is cut off to allow the water to drip from the steam-pipe. The steam-pipe is supported in the casing A by the pipe *a''* at its lower end, and also by one or more braces or arms C, radiating from the pipe to the casing to which they are secured by bolts or rivets.

Surrounding and secured to the pipe B, below the funnel *a'*, is a flaring hood *c*, and in the pipe below this hood is a series of small openings *d*, forming outlets for the steam, allowing it to escape into the steam-chamber. The hood not only prevents the grain from clogging the openings *d*, but forms a stationary member of the valve for regulating the supply of grain to the steam-chamber.

The movable member of the valve consists of a short pipe *e*, surrounding the circular flange on the part *a*, said pipe *e* being provided with arms *e' e'*, which extend outward toward and in proximity to the case, where they are secured to the upper ends of vertical and longitudinally-movable rods *ff*. These rods extend downward through holes in the bottom of the case, and also through angle-irons *g g*, secured to the case, and are supported upon the latter by coiled springs *h h*, which bear with their upper ends upon threaded nuts *h' h'*, which may be adjusted or raised and lowered on the rods to regulate the tension of the springs. The springs *h h* serve to raise the rods *ff* and pipe *e*, so that its lower end will be raised from the upper side of the hood *c* and the valve opened, permitting the wheat to pass downward between the pipe and the hood into the steaming-chamber.

The wheat falls into an annular pocket E, surrounding the steam-pipe and near the lower end of the case, its outlet being the annular space between it and the pipe B.

In order to keep the wheat from clogging and interfering with the action of the valve, an annular converging shield D is secured to

the interior of the case A above the upper horizontal flange *l*, thereby preventing the wheat from lodging on the flange or from working between it and the case. When the steaming-chamber becomes sufficiently filled with wheat, the latter being supported by the pocket E, rods *ff*, and springs *hh*, the weight of the wheat causes the pocket, rods, and pipe *e* to drop, closing the valve and cutting off the supply of wheat to the steaming-chamber until some of it has passed out through the bottom, when the pocket is raised and the valve opened to admit more wheat to the chamber.

It will be obvious from the above that the operation is continuous and that the regulation of the supply is automatic or self-controlled.

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

1. The combination in a wheat-steaming apparatus, of the outer cylindrical casing having an inlet for the wheat at its upper end, and an outlet at its lower end, a vertical and centrally-located steam-pipe therein containing perforations near its upper end, a pocket surrounding the steam-pipe, having an inclined bottom near the lower end of the casing and a space between the bottom and the pipe, a valve near the upper part of the cas-

ing above the perforations and surrounding the steam-pipe, the stationary part of the valve being a circular hood, rods connecting the said pocket with the movable member of the valve, and springs on the rods to raise the valve, as set forth.

2. The combination in a wheat-steaming apparatus, of the outer cylindrical casing having an inlet for the wheat at its upper end, and an outlet at its lower end, a vertical and centrally-located steam-pipe therein containing perforations near its upper end, a pocket surrounding the steam-pipe, having an inclined bottom near the lower end of the casing and a space between the bottom and the pipe, a valve near the upper part of the casing above the perforations and surrounding the steam-pipe, the stationary part of the valve being a circular hood, rods connecting the said pocket with the movable member of the valve, springs on the rods to raise the valve, brackets for the springs to bear on, and nuts adjustable on the rods, as and for the purpose described.

In testimony whereof I have hereunto signed my name.

FREDERICK F. QUITZO. [L. s.]

Witnesses:

S. E. TERWILLIGER,

WM. R. SNYDER.