No. 785,119. PATENTED MAR. 21, 1905.

P. PROVOST.

GRAIN STEAMER.

APPLICATION FILED SEPT. 1, 1904.

Fig. 2.

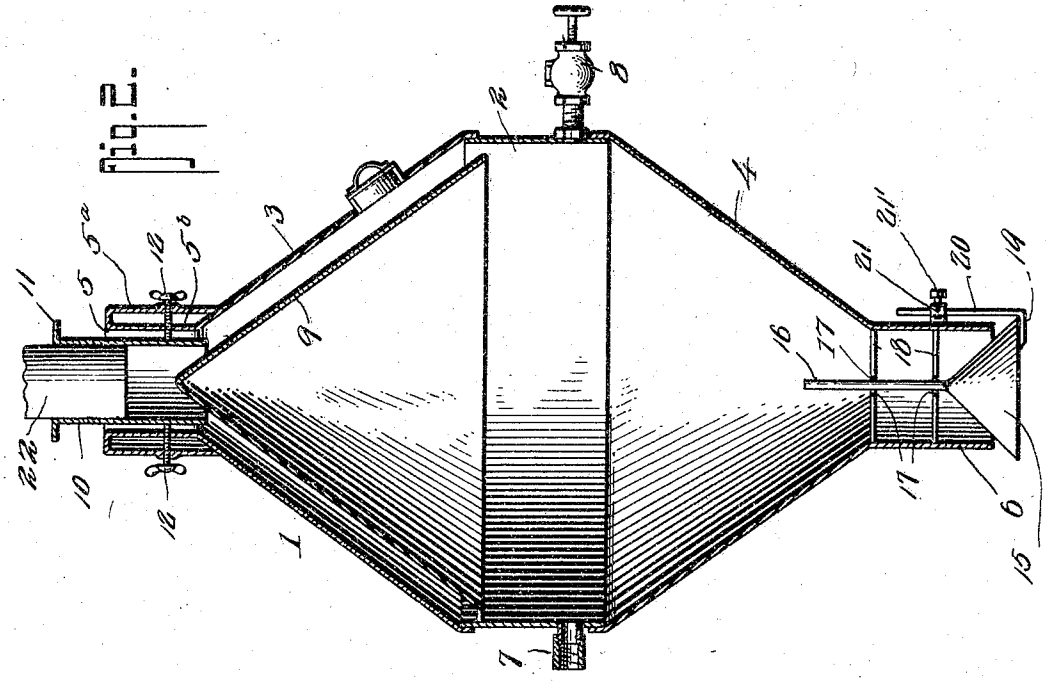
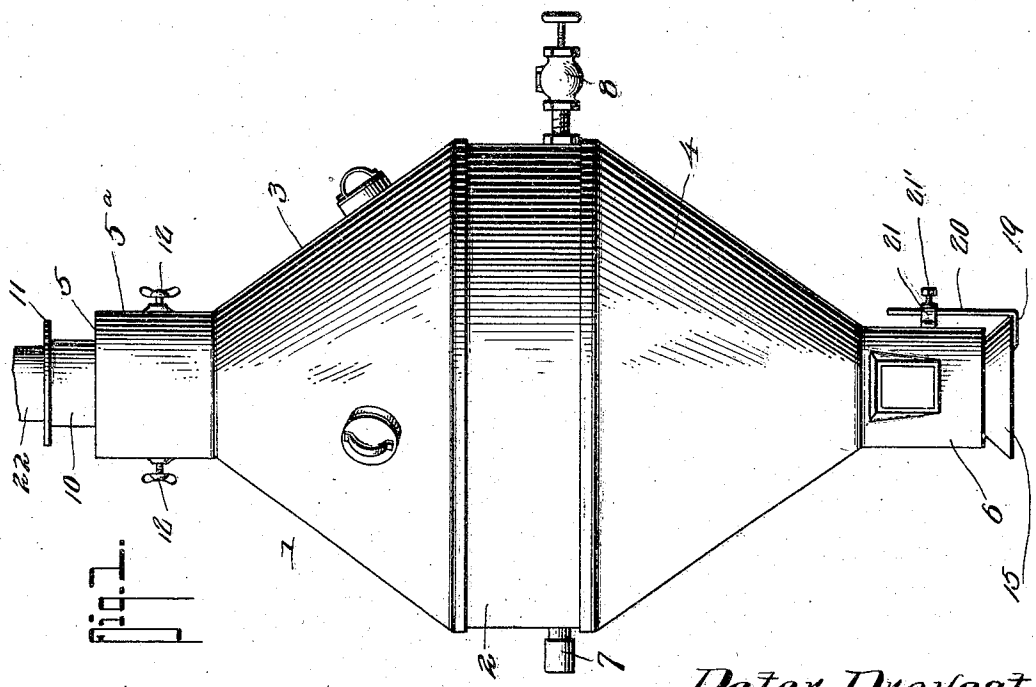


Fig. 1.



Witnesses

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No. 785,119. Patented March 21, 1905.

# UNITED STATES PATENT OFFICE.

PETER PROVOST, OF MENOMINEE, MICHIGAN.

## GRAIN-STEAMER.

SPECIFICATION forming part of Letters Patent No. 785,119, dated March 21, 1905.

Application filed September 1, 1904. Serial No. 223,049.

*To all whom it may concern:*

Be it known that I, PETER PROVOST, a citizen of the United States, residing at Menominee, in the county of Menominee and State of Michigan, have invented a new and useful Grain-Steamer, of which the following is a specification.

This invention relates to grain-steaming devices, and has for its objects to positively regulate the quantity of grain that shall be permitted to pass therethrough. In this class of devices it is necessary that the quantity of grain permitted to pass through the steaming apparatus shall be capable of perfect and positive regulation, for the reason that different qualities and conditions of grain require to be differently acted upon. To enable this end to be accomplished in a simple, convenient, and economical manner is, as above stated, the principal object of the invention, which consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claim.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications which may be resorted to within the scope of the invention and without departing from the spirit or sacrificing the advantages of the same.

In said drawings, Figure 1 is a side view of a grain-steamer constructed in accordance with the principles of the invention. Fig. 2 is a vertical sectional view of the same.

Corresponding parts in both figures are indicated by like characters of reference.

1 designates the casing of the heater, which is of ordinary construction, consisting in the present instance of a central cylindrical portion 2, frustum-shaped portions 3 and 4 adjacent thereto, a cylindrical inlet 5 at the upper end of the portion 3, and a cylindrical outlet 6 at the lower end of the portion 4. The heater portion has been shown as being provided with a steam-inlet 7 and a steam-outlet 8; but of the interior construction of the heater has been shown only the upper spreading-cone 9, which is suitably supported below the inlet in the upper part of the casing. The cylindrical inlet 5 is provided with double walls, as shown at $5^a$ $5^b$ in Fig. 2 of the drawings.

10 represents a feed-tube which extends through the inlet 5 at the upper part of the casing. This feed-tube is suitably guided in the inlet-tube 5, so as to be maintained in a position concentric therewith, and it is provided at its upper end with handles 11, whereby it may be adjusted vertically, so as to place its lower end at any desired distance from the spreading-cone 9. Set-screws 12 extend through opposite sides of the double walls of the inlet 5 and are adapted to bear against the feed-tube 10, which may thereby be sustained in any position to which it may be adjusted.

The double walls of the inlet 5 afford bearings in which the centering and holding screws 12 may be securely mounted for engagement with the vertically-adjustable tube 10, which latter, it will be seen, is not drawn in the direction of one side of the inlet, as would be the case if a binding-screw were employed. By the use of the screws 12, arranged as herein described, the said feed-tube may be accurately centered, which is of very great importance in order to secure an absolutely even feed and an even distribution of the material fed through said tube.

15 designates a conical valve member which constitutes a closure for the outlet 6 at the lower end of the heater-casing. Said valve member is provided with a stem 16, extending upwardly through perforations 17 in one or more cross braces or guides 18, disposed transversely in the outlet 6. The conical valve member is provided with a laterally-extending bracket 19, having an upwardly-extending arm 20, for the passage of which a collar 21 is provided in a convenient location upon the exterior of the outlet 6. This collar has a set-screw 21′ bearing against the arm 20, which, together with a conical valve member

15, may be retained securely at any desired adjustment.

22 designates a feed-spout through which the grain which is to be operated upon is conveyed to the feed-tube of the heater.

The operation of this invention and its advantages will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed, by those skilled in the art to which it appertains. By properly adjusting the feed-tube the amount of grain permitted to pass into the heater may be gaged and regulated with the utmost accuracy. In a similar manner by adjusting the valve member 15 the escape of the grain from the heater is within perfect control of the operator. The construction is one of extreme simplicity, and the operation of the device has been proven by practical experience to be in every respect satisfactory.

Having thus described the invention, what is claimed is—

In a device of the class described, a steamer-casing having an inlet and an outlet, a spreader-cone supported permanently below the inlet, a feed-tube centered in the inlet above the spreader-cone and vertically adjustable with relation to the latter, set-screws for positively retaining the feed-tube at various adjustments, and for centering the same, a conical valve supported below the outlet, and means for positively retaining said conical valve at various adjustments.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

PETER PROVOST.

Witnesses:

A. L. ROBBINS,

GERTRUDE MURRAY.