P. PROVOST.
Grain-Drier.

No. 203,933. Patented May 21, 1878.

Fig. 1.

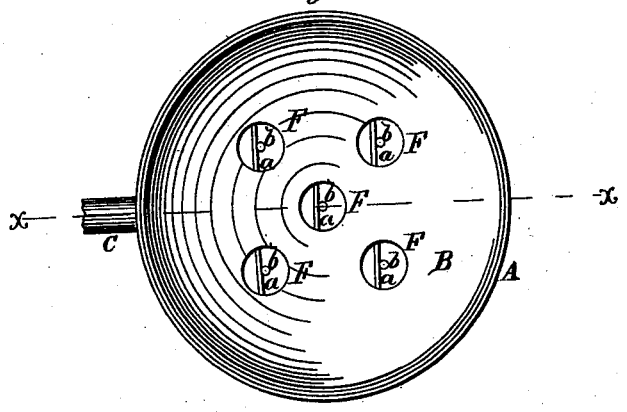
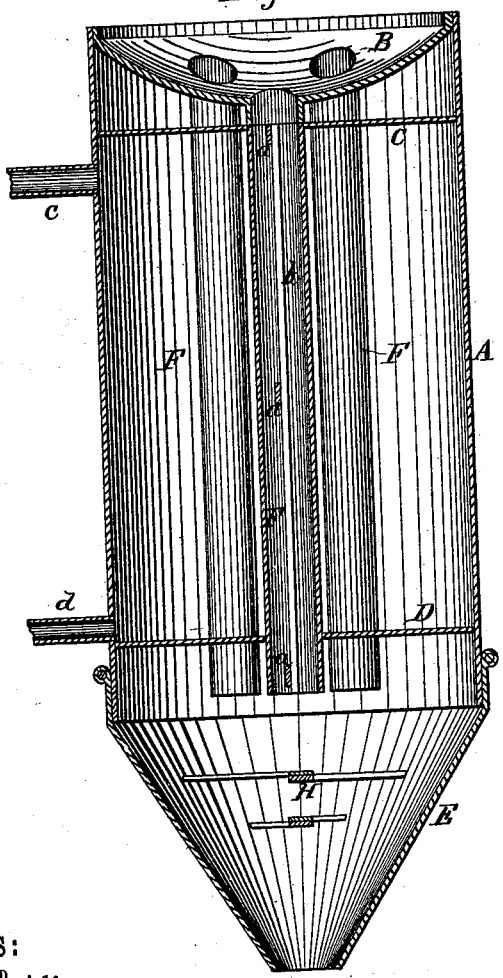


Fig. 2.



WITNESSES:
Henry N. Miller
C. Sedgwick

INVENTOR:
P. Provost
BY Munn & Co
ATTORNEYS.

UNITED STATES PATENT OFFICE.

PETER PROVOST, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN GRAIN-DRIERS.

Specification forming part of Letters Patent No. **203,933**, dated May 21, 1878; application filed January 29, 1878.

To all whom it may concern:

Be it known that I, PETER PROVOST, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Wheat-Driers, of which the following is a specification:

Figure 1 is a plan view of my improved wheat-drier. Fig. 2 is a vertical section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to apparatus for drying wheat and other grain preparatory to grinding; and it consists of a drum having a double head in its upper end, and a head and discharge-funnel at its lower end, and containing a number of vertical tubes, which run through both of the upper heads and also through the lower head.

Referring to the drawing, A is a cylinder of sufficient strength to withstand the pressure of steam required to furnish the heat required for drying the grain. In the upper end of this cylinder a concave head, B, is fitted, and a short distance below it the plane head C is fixed.

Near the lower end of the cylinder there is a head, D, and a funnel, E, is fitted to the lower end of the cylinder, for receiving the dried grain and delivering it to the hopper of the burr-stone.

Several tubes, F, extend through the heads B C D, and open above the funnel E. In each of these tubes transverse bars, *a*, are secured, by which a rod, *b*, is supported in the center of the tube.

In the funnel E there are cross-bars H, that break the fall of the wheat as it is discharged from the tubes, and prevent it from escaping too rapidly from the funnel.

The cylinder A is supplied with steam through the pipe *c*, which enters it near the top, and the drip-water is removed by the pipe *d*, near the bottom.

Wheat to be treated by this apparatus is delivered to the concave head B, and flows through the tubes F, being checked somewhat in its passage by the cross-bars *a*. Heat is communicated to the rod *b* by the bars *a*, so that the grain at the center of the tube is heated.

The grain on the concave head is prevented from becoming overheated by the air which intervenes between it and the plane head C.

By increasing or diminishing the number of tubes, and by making the cylinder longer or shorter, the capacity of the apparatus may be proportioned to the requirements.

The flow of grain through the drier is controlled by a gate at the discharge-opening.

The drier may be used independently of the burr-stone, if desired.

I am aware that it is not new in the grain-drier to pass grain through tubes in a steam-chamber, or to provide such tubes with interior stirrer-rods, and I therefore do not wish to be understood as making a claim thereto; but, so far as I know, my peculiar construction of drier and the use in the tubes of heat-conducting rods and cross-bars are new. Hence,

What I claim is—

1. The wheat-drier consisting of the cylinder A, having the concave head B and plane heads C D, and provided with the tubes F and funnel E, substantially as herein shown and described.

2. In a grain-drier, the combination of the bar *b* with the tubes F, substantially as herein shown and described.

PETER PROVOST.

Witnesses:

JACOB N. COOK,

ALLEN SMITH.