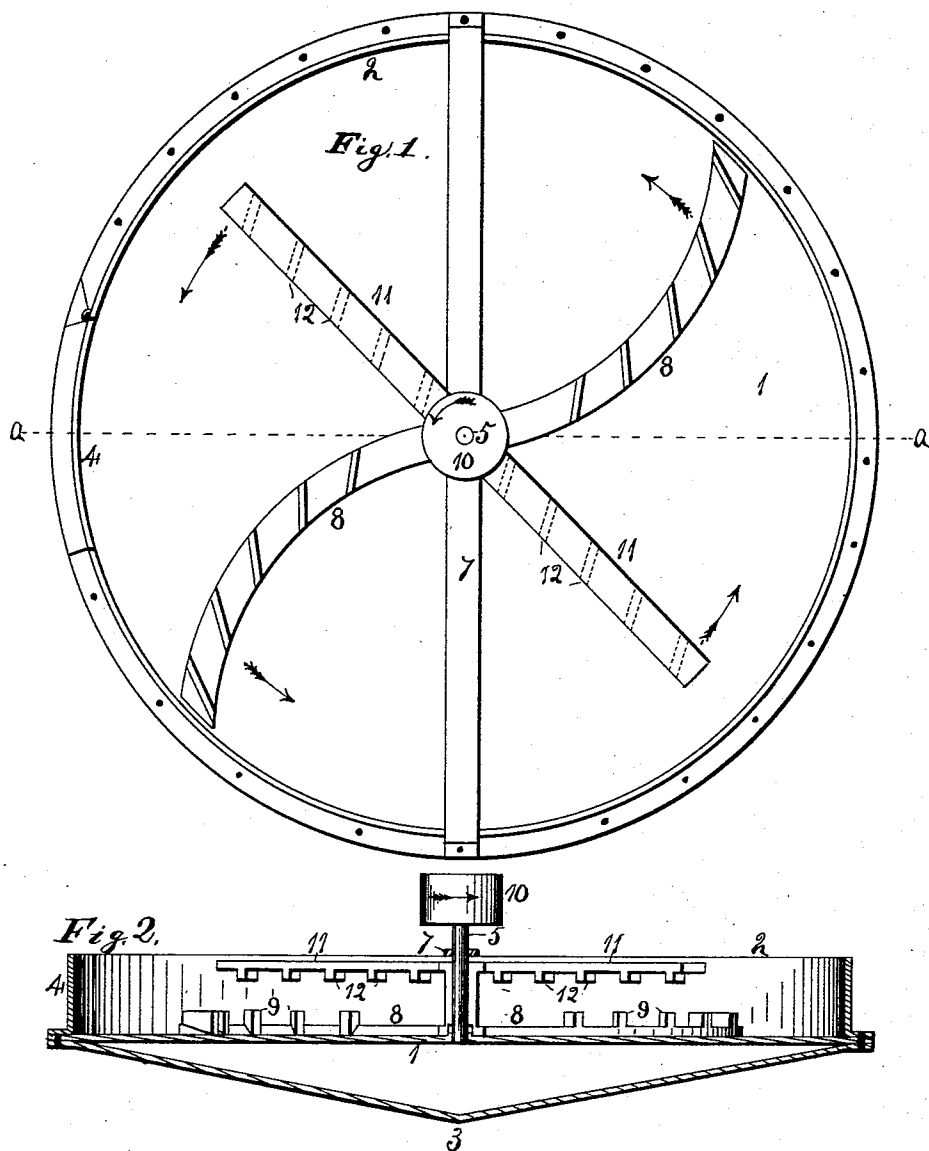


(No Model.)

G. H. CORMACK.
GRAIN DRIER.

No. 570,662.

Patented Nov. 3, 1896.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE H. CORMACK, OF ROCKFORD, ILLINOIS.

GRAIN-DRIER.

SPECIFICATION forming part of Letters Patent No. 570,662, dated November 3, 1896.

Application filed May 27, 1896. Serial No. 593,360. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. CORMACK, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented certain new and useful Improvements in Grain-Driers, of which the following is a specification.

The object of this invention is to properly dry grain by moving the lower portion of the grain toward the center of the drier and the upper portion away from the center, thus causing the grain to be constantly moved and brought in contact with the heated surface of the drier.

In the accompanying drawings, Figure 1 is a plan view of my improved grain-drier. Fig. 2 is a vertical section on dotted line *a*, Fig. 1.

In grain-driers of the class herein shown agitators have been located in the bottom of the drier which revolve and elevate the grain and allow it to fall, but such method only affects the lower strata of grain, which becomes burned while the upper strata is green, and my improvement will dry the grain evenly and keep it in constant circulation.

My drier consists of a circular bottom 1, to the upper face of which is riveted a flange 2 and to its under face a cone 3, forming a steam-space. A section 4 of the flange is movable, forming an outlet for the dried grain.

A shaft 5 is supported centrally within the drier by a brace-rod 7, to the upper end of which is connected a pulley 10, by which a rotary movement is imparted to the shaft.

Within the upper portion of the drier are located four agitators, the two lower ones 8, curved in the direction of their length and of wedge shape in cross-section, being thickest at the rear edge, and from the upper face of these agitators rise projections 9, set at an angle to the lengthwise direction of the agitators, the rear edge being nearest the shaft 5. The two upper agitators 11 extend radially from the shaft 5 and are of rectangular form in cross-section, and from such under face depend projections 12, set at an angle to the

lengthwise direction of the agitators, the rear end being farthest from the shaft 5. The four agitators are connected to the shaft 5 and revolve therewith in the direction indicated by the arrows.

The upper portion of the drier is nearly filled with wet grain and the steam turned in the steam-space, which will heat the drier to the proper temperature. The agitators are revolved at the proper speed. The action of the lower ones will cause the lower strata of grain to be moved toward the center of the drier and the upper strata of grain to be moved toward the periphery of the drier. This action will keep the grain in constant motion and carry it in contact with the bottom of the drier, which will evenly dry all of the grain, and when dried may be drawn through the movable section of the flange and a new batch run on.

I claim as my invention—

1. In a grain-drier, the combination of a cylindrical dish-shaped receptacle, an agitator located therein having a rotary movement, its upper face provided with projections set at an angle to the length of the agitator in order that the bottom strata of grain may be conveyed to the center of the drier.

2. In a grain-drier, the combination of a cylindrical dish-shaped receptacle, an agitator located therein having a rotary movement, its upper face provided with projections set at an angle to the length of the agitator in order that the bottom strata of grain may be conveyed to the center of the drier, and a rotary agitator located above the bottom of the drier having depending projections set at an angle to the length of the agitator in order that the upper strata of grain may be conveyed to the periphery of the drier.

GEORGE H. CORMACK.

Witnesses:

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