(No Model.)

# L. E. BARBEAU.

## GRAIN DRYING APPARATUS

No. 556,129. Patented Mar. 10, 1896.

Fig. 3.

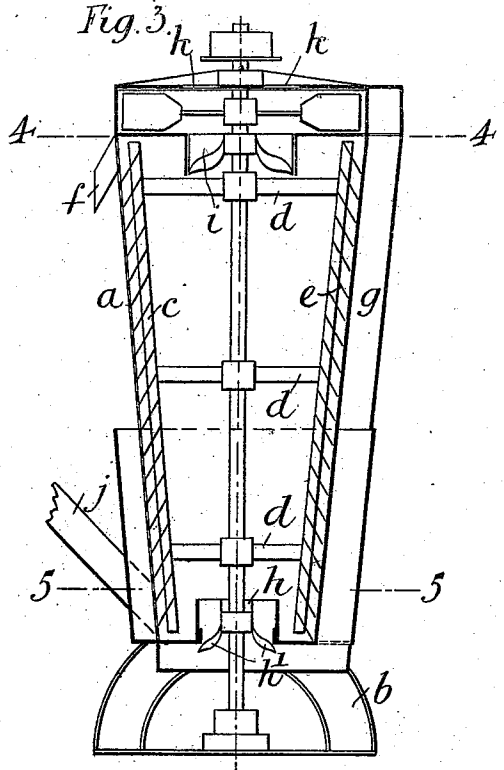



Fig. 1.

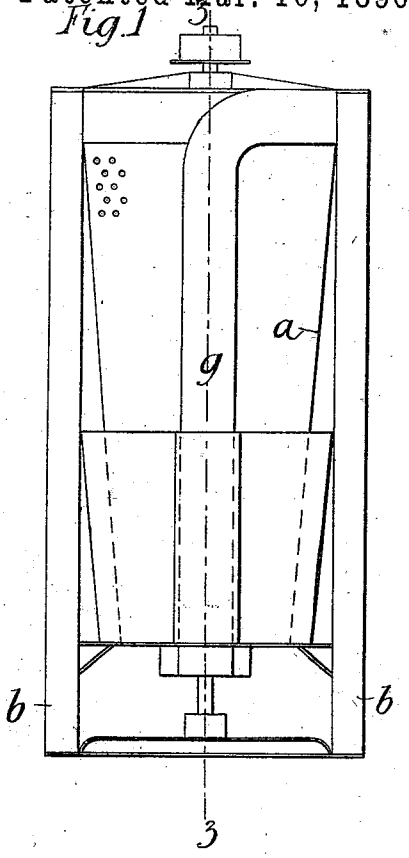



Fig. 4.

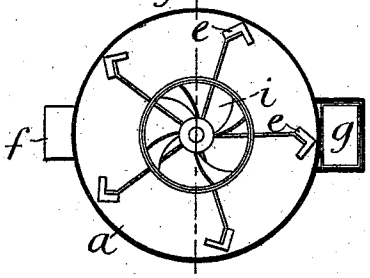



Fig. 5.

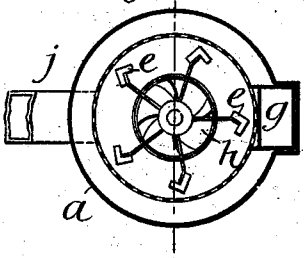
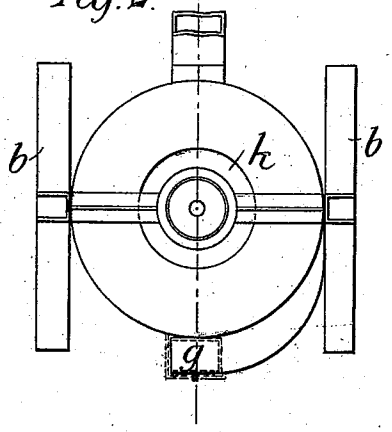



Fig. 2.




Witnesses.
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# UNITED STATES PATENT OFFICE.

LOUIS EVARIST BARBEAU, OF LONDON, ENGLAND.

## GRAIN-DRYING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 556,129, dated March 10, 1896.

Application filed November 29, 1895. Serial No. 570,455. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS EVARIST BARBEAU, a subject of the Queen of Great Britain, residing at London, England, have invented new and useful Improvements in Apparatus for Drying or Improving Grain by Treatment with Dry Air, of which the following is a specification.

This invention relates to a machine or apparatus for drying or improving grain by means of dry air and preferably after washing.

In the accompanying drawings, Figure 1 is an elevation of an apparatus constructed according to this invention for drying grain. Fig 2 is a plan of the same. Fig. 3 is a vertical section on the line 3 3, Fig. 1. Fig. 4 is a horizontal section on the line 4 4, Fig. 1. Fig. 5 is a horizontal section on the line 5 5, Fig. 1.

In carrying out this invention a stationary perforated metal cone *a* is provided supported by two iron frames *b b*. Inside the metal cone *a* are arranged elevators consisting of upright bars *c* connected to arms *d d* on a revolving shaft and having attached thereto flights or blades *e e*, which are inclined spirally, so that in their movement they convey the grain upward along the perforated cone *a* and deliver it dried at the spout *f*, the centrifugal force imparted to the grain, owing to the high velocity of the blades, causing the grain to form a layer along the wall of the cone.

A fan is placed at the top of the machine, which takes in dry air and delivers it by the spout *g* and spiral casting *h* into the interior of the cone, the blades *h'* of the casting directing the air through the layer of grain and making its exit through the perforations in the cone. Another spiral casting, *i*, is also employed at the top of the cone, whereby the air not used in the interior of the cone can be allowed to pass into the fan and be again passed through the casting *h* into the cone, new air being taken into the fan at an opening *k*, which can be adjusted to compensate for the air discharged through the grain.

The action of the machine is as follows: The grain after washing, or such grain as may be required to be improved by drying or passing dry air through it, is fed into the spout *j* at the lower part of the apparatus and is received by the flights or blades *c*, which carry the grain upwardly in the metal cone *a* and deliver it dried or improved at the spout *f* into sacks or other receptacles.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

Apparatus for drying or improving grain by treatment with dry air, comprising a perforated conical chamber having revolving elevators, a fan for delivering dry air into the bottom of the said chamber, spiral blades for directing the air through the grain and an opening into the fan for the passage of the unused air, all substantially as described.

LOUIS EVARIST BARBEAU.

Witnesses:
W. H. MERRITT,
W. J. BRAND.