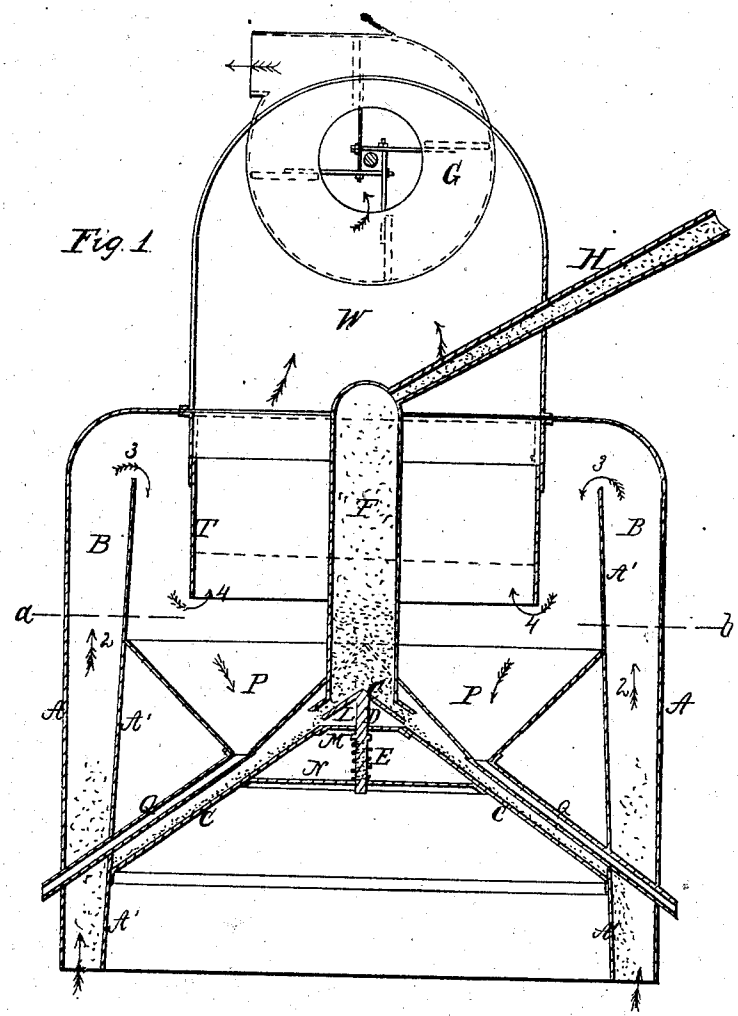
2 Sheets—Sheet 1.

G. CLARK.

GRAIN CLEANER.

No. 38,258. Patented Apr. 21, 1863.

Fig. 1



Witnesses,

H. C. Forbush

E. B. Forbush

Inventor

George Clark

2 Sheets—Sheet 2.

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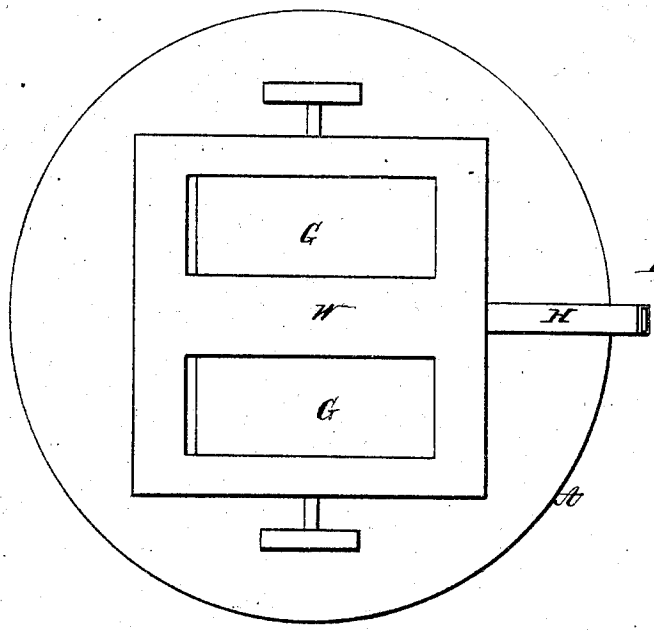
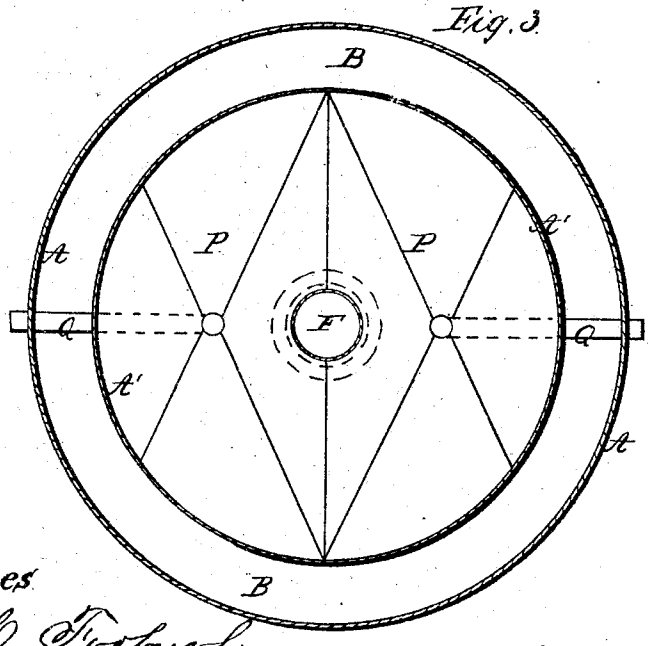


Fig. 2.

Fig. 3.



Witnesses

H. C. Forbush

C. B. Forbush

Inventor,

George Clark

UNITED STATES PATENT OFFICE.

GEORGE CLARK, OF SANDUSKY, OHIO, ASSIGNOR TO HIMSELF AND ROBERT DUNBAR, OF BUFFALO, NEW YORK.

IMPROVEMENT IN GRAIN-CLEANERS.

Specification forming part of Letters Patent No. **38,258**, dated April 21, 1863.

To all whom it may concern:

Be it known that I, GEORGE CLARK, of Sandusky, in the State of Ohio, assignor to myself and ROBERT DUNBAR, of Buffalo, New York, have invented an Improved Grain-Cleaning Machine; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation thereof, reference being had to the annexed drawings, making a part of this specification, in which—

Figure I is a vertical section. Fig. II is a top plan. Fig. III is a transverse section on line *a b* of Fig. I.

The nature of my invention relates to the construction of a double cylindrical grain-cleaner, so arranged as to form an annular suction air-space between the cylinders, in connection with a cone-distributer, which acts automatically, according to the quantity of grain in the supply-tube, and spreads the grain evenly and uniformly into a thin sheet to be acted upon by a current of air.

Letters of like name and kind refer to like parts in each of the figures.

I make an outer cylindrical case or shell of sheet metal, which is represented at A, and an inner cylindrical case or shell, which is represented at A′, leaving an annular suction air-space between them, as shown at B. These cylinders or shells may be of any required diameter and height.

The drawings are on a scale of about three-eighths of an inch to the foot.

Within the inner cylinder or shell I place a conical distributer, as shown at C, the apex C′ of which is made automatic by means of the spindle D and spring E. The spindle D is supported upon the cross-plates M N, and the coil-spring E surrounds the spindle between these plates.

Centrally within the inner cylinder and directly over the apex of the conical distributer I place a grain-supply tube, F, the apex of the cone passing slightly into the mouth of the tube.

The fans G are of ordinary construction and may be placed over the cylinders, as represented in the drawings, or they may be otherwise placed, the object to be gained being to produce a strong suction current of air up between the cylinders, as represented by the arrows 1 2.

H represents a spout, which conducts the grain from the elevator to the supply-tube F.

T is a slide-valve, which may be raised or lowered by ordinary means, as desired, in order to regulate the draft of air.

Power is applied to the fans in a common manner.

This improvement is particularly calculated for use in connection with grain-elevators, but is applicable to all places where grain is to be cleaned. It possesses a greater capacity for cleaning grain, occupies less room in a building, is cheaper of construction, and operates more perfectly than any other grain-cleaner now in use with which I am acquainted.

Operation: The grain is conducted from the elevator or other place through the spout H into the supply-tube F. The apex C′ will close, or nearly so, the mouth of the tube when there is no grain in it. When the grain accumulates in the tube to the amount of one or two bushels, (more or less, according to the power of the spring E,) the spring will yield and lower the apex, so that the grain will pass out evenly over all parts of the apex and drop down upon the cone C, and thence slide into the annular space B in a thin and evenly-spread sheet where the air has full action upon it. The cone-apex C′ acts automatically, according to the pressure of grain in the tube F, yielding more when the supply of grain is large and less when the supply is less, so as to insure a proportionately even supply of grain upon the cone C, although the grain may be delivered from the elevator into the supply-tube F in an unsteady stream. As the grain drops from the cone into the annular space B, the air has full power upon it, and the chess, chaff, dust, and light grain will be carried up by the strong current of air over the top of the inside cylinder and dive down, as shown by the arrows 3 4. The chaff and dust will be carried up again by the air into the chamber W, and thence out through the fan-case, while the chess and light grain will drop down into the chess-box P, and thence be conducted off through the spout Q. A hopper of ordinary construction may be placed at the bottom of the cylinders to catch the grain as it is cleaned,

from whence it may be taken in a common manner.

This improvement accomplishes the object sought in the most satisfactory manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The cylinders or shells A A′, arranged with a suction air-space, B, between them, in combination with the adjustable valve T, for the purposes and substantially as described.

2. The cone-distributer C and automatic cone-apex C′, in combination with the cylinders or shells A A′, and central grain-supply tube, F, for the purposes and substantially as set forth.

GEORGE CLARK.

Witnesses:
E. B. FORBUSH,
W. H. FORBUSH.