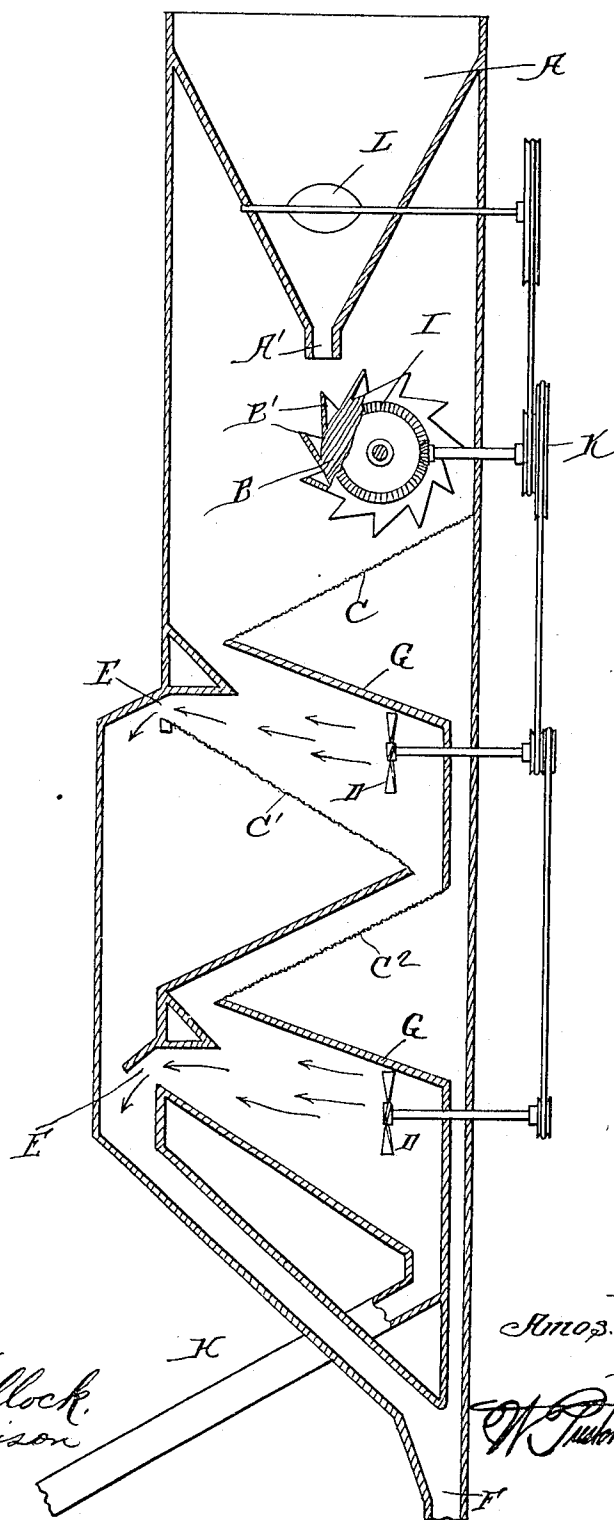


No. 818,944.

PATENTED APR. 24, 1906.

A. W. EACHES.
GRAIN CLEANER.

APPLICATION FILED JULY 7, 1905.



Witnesses.

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UNITED STATES PATENT OFFICE.

AMOS W. EACHES, OF ROSEMONT, PENNSYLVANIA.

GRAIN-CLEANER.

No. 818,944.

Specification of Letters Patent.

Patented April 24, 1906.

Application filed July 7, 1905. Serial No. 268,743.

To all whom it may concern:

Be it known that I, AMOS W. EACHES, a citizen of the United States, residing at Rosemont, county of Montgomery, and State of Pennsylvania, have invented a certain new and useful Improvement in Grain-Cleaners, of which the following is a specification.

My invention relates to a new and useful improvement in grain-cleaners, and has for its object to provide a cleaner in which the grain travels downward over a successive series of sieves, and while traveling downward the lighter dust is blown away from the grain by a series of fans, and these fans are operated from power generated by the falling of the grain.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claim.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawing, forming a part of this specification, in which is illustrated a longitudinal vertical section through my improved device.

A represents the hopper in which the grain to be cleaned is located. A' is a small opening at the lower end of the hopper through which the grain falls into the cleaning device.

B is the power-wheel journaled in the framework of the device underneath the hopper. The periphery of said power-wheel is provided with a series of pockets or buckets B', and the wheel is so located that the stream of grain falling from the hopper will strike the wheel tangentially, and thus the pockets or buckets B' will fill upon one side and cause the power-wheel to revolve and operate much in the same manner as an over-shot water-wheel. The grain in falling from the pockets or buckets of the power-wheel will fall upon an incline screen C and will pass from said screen downward to a second screen C', then upon another incline screen C'', and so on downward. There may be as many screens used as desired. There is a difference between the lower end of one screen and the higher end of the other screen, so that the grain must fall a distance from one screen to the other, and in thus falling is subjected

to a blast of air generated, preferably, by means of fans D, and the air in passing through this stream of falling grain blows the lighter dust from the grain, said dust passing through openings E, which communicate with the dust-chute F. There are inclined boards G, arranged underneath each inclined screen, which will catch the dust and dirt passing through the screen and convey it to the chute F. The clean grain after passing from off the last screen and being subjected to the last blast of air then passes into the grain-chute H to a suitable receptacle.

The principal feature of my invention consists in utilizing the falling of the grain for generating power to cause the blast of air for the cleaning of the grain. The power may be taken from the power-wheel B in any desired manner. That means shown in the drawing consists in forming with the power-wheel a beveled gear-wheel I, meshing with the beveled gear-wheel J, and upon the same shaft with the gear-wheel J is arranged a pulley K, from which, by means of belts or chains, the power is transmitted to the fan-shafts.

Of course other means could be employed for generating the blast of air, such as bellows or by means of a reservoir or compressed air, for the power-wheel could be utilized to compress the air within the reservoir and then be directed to the proper place by means of pipes.

If desired, the agitator L could be located in the hopper to keep the grain from clogging, and this agitator could also be operated through power generated by the wheel B.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

In combination, an inclosed casing having a hopper at one end and terminating at the opposite end in a series of chutes, screens within the casing inclined in opposite directions and arranged one beneath the other and positioned intermediate the hopper and the chutes, each of said screens terminating at a point away from the walls of the casing, inclined partitions arranged beneath each screen, the lower edge of the screen being se-

cured to an upper edge of a partition, a wheel
arranged within the casing adapted to be re-
volved by a substance discharged from the
chute of the casing, fans extending within
5 the casing, said fans being rotated by the ac-
tion of the wheel.

In testimony whereof I have hereunto

affixed my signature in the presence of two
subscribing witnesses.

AMOS W. EACHES.

Witnesses:

MILTON R. YERKES,
DAVID KNAPLE.