

## Grain Cleaner.

Patented June 22, 1869.

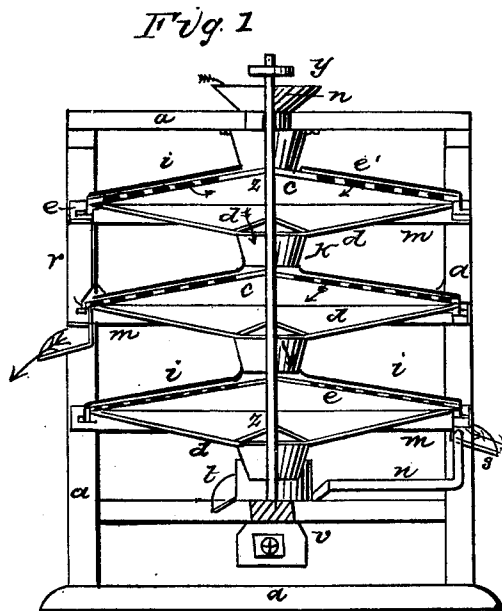
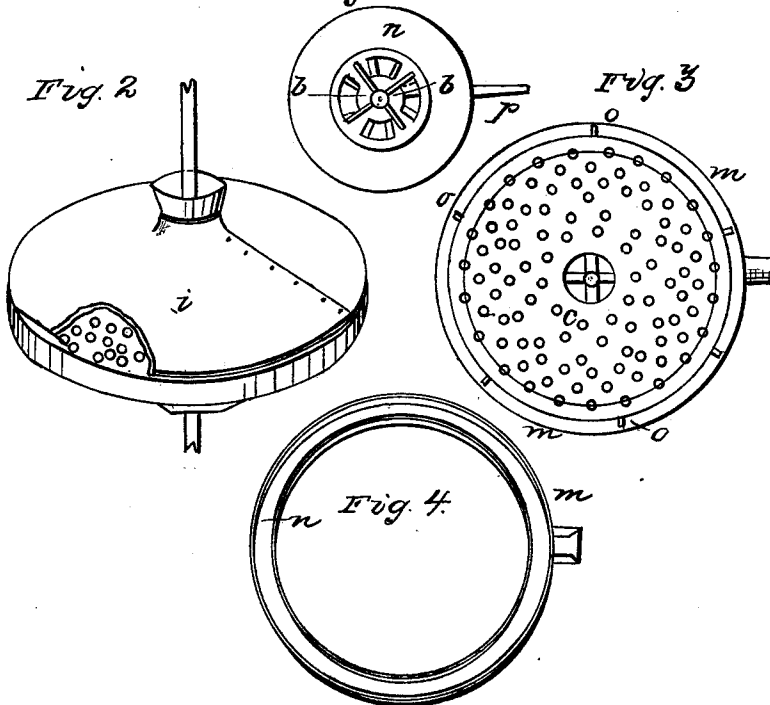


Fig. 5.



*Witnesses*

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Letters Patent No. 91,549, dated June 22, 1869.

## IMPROVEMENT IN GRAIN-CLEANER.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, WILLIAM A. LEWIS, of the city of Joliet, in Will county, and State of Illinois, have invented a new and useful Improvement on a Grain-Cleaner; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal section;

Figure 2, a perspective view of one of the sieves and shield;

Figure 3, a plane view on the top of said sieve and circular trough;

Figure 4, a perspective view of said trough; and

Figure 5, a plane view on the top of the feed-box or hopper and regulator or distributor.

My invention consists in a device for the purpose of cleaning grain from straw, chaff, dust, and different kinds of grain, the construction of which is substantially as follows:

*a* is a frame, bearing a central vertical shaft, *z*, to which at intervals are attached three conical-shaped devices, such as is shown in fig. 2, which inscribe a circular motion as the shaft revolves, the motion being imparted to said shaft by the pulley *y* at the top.

The upper surface of the said cones is perforated, as shown in fig. 3, and forms a sieve, through which the grain to be cleaned passes.

The mode of operation is substantially this:

The grain is let in from the hopper *n* at the top, passes through the funnel *x* until it falls on the central part of the sieve *c*, the same being in motion.

The motion of the sieve causes the grain to diverge over the sieve, and in so doing drops down through the same on to the floor *d*, from whence it passes to the next sieve, where it goes through the same process, and so on until it is finally discharged, while the straw, chaff, oats, &c., are carried over the sieve, being too large to pass through the holes and fall into the circular troughs *m* and out at the spout *r*.

The sieves are covered with a stationary shield, *i*, which is constructed in this instance of leather, but may be of wood or other material.

These shields are more particularly shown in fig. 2, with a piece broken out to show the sieve beneath.

The shields serve to hold the grain down on to the sieve, and prevent it from flying off. They are, in this instance, stationary, their periphery being fastened to the frame *a*; but the order might be reversed by having them revolve, and have the sieve stationary, with the same result.

The apertures in the lower sieve *e* are much smaller than in the others, for the purpose of causing the grain cleaned to discharge at the spout *s*, while the chaff will drop through and discharge at the spout *t*.

The sieves have wings attached to their periphery, marked 1, shown in fig. 3, to carry the grain or chaff around to the discharge-spout.

The sieves are constructed of metal, either cast or sheet. If cast, the holes are left in the casting, which saves punching them through.

The sieves, as shown, are conical in shape, but may be plane, for their momentum, when in operation, will cause the grain to diverge as well, nearly, as if conical in shape.

Any number of such conical-shaped devices may be used that may be thought necessary. One has been used with success.

The arrows show the direction the grain goes in.

It is necessary that the grain should be equally distributed around the central shaft on the sieves, and in order to accomplish this the hopper *n*, shown in figs. 1 and 5, is constructed with radial apertures in its bottom, having valves to close them by moving the lever *p*, fig. 5.

*o o* are radial arms on the shaft *z*, for the purpose of assisting in the equal distribution of the grain.

*v* is a blower, which drives a current of air through the tube *u*, through the column of grain, as it is discharged at the spout *s*, which blows out any chaff or dust that might be in the grain.

No particular kind of a blower is necessary; any that will blow is sufficient.

### Claims.

Having thus described my invention,

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

1. The shield *i*, over the sieves, for the purposes described.

2. The regulator *p* and radial arms *o o*, on the shaft *z*, in combination with the hopper *n*, arranged, operating, and constructed as and for the purposes set forth.

3. A machine, constructed, operating, and arranged substantially as described, for the purpose set forth.

WM. A. LEWIS.

Witnesses:

THOS. H. HUTCHINS,  
HENRY LOWE.