G. S. COLEMAN.

Corn Sheller.

No. 107,761. Patented Sept. 27, 1870.

Fig. 1.

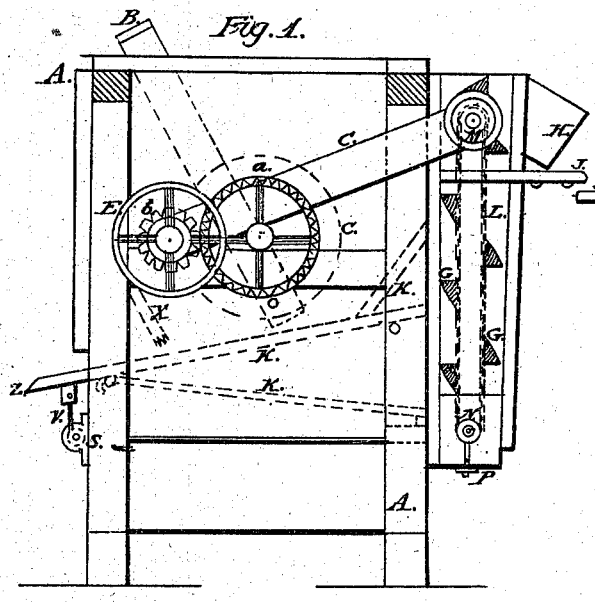


Fig. 2.

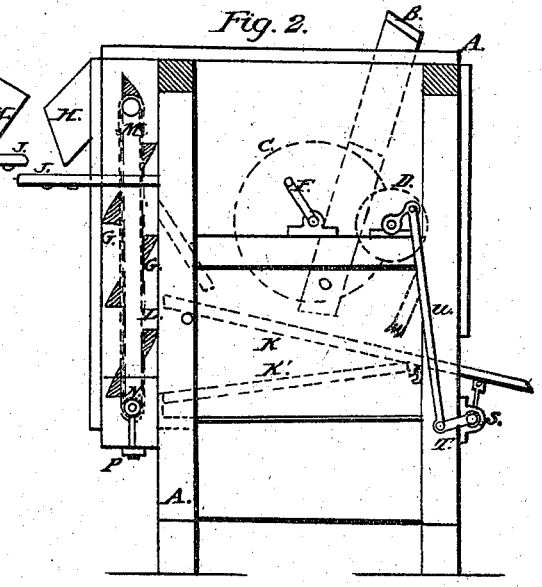


Fig. 4

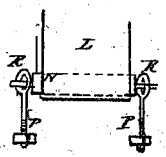


Fig. 3.

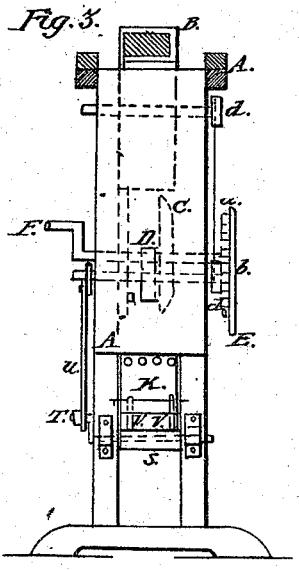
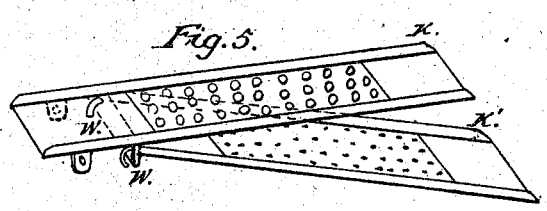


Fig. 5.



Witnesses:

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GEORGE S. COLEMAN, OF ALEXANDRIA, VIRGINIA.

Letters Patent No. 107,761, dated September 27, 1870; antedated September 21, 1870.

IMPROVEMENT IN CORN-SHELLERS, &c.

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

To all whom it may concern:

Be it known that I, GEORGE S. COLEMAN, of Alexandria, county of Alexandria and State of Virginia, have invented an "Improved Corn-Sheller with Cleaner and Elevator Combined;" and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification, in which—

Figure 1 represents a side elevation, exhibiting the fly-wheel, gearing, elevator, and cast-iron sieves or cleaners.

Figure 2 represents a side elevation of the opposite side, exhibiting the elevator, the connecting-rod, giving motion to the shelling devices, and the vibrating sieves, all operated by the crank at the center of the machine.

Figure 3 is an end view of the same, showing the feeding-spout at the top and the vibrating roller beneath.

Figure 4 shows the lower end of the elevator and the mode of tightening the band by the journals of the lower roller, operating in the eyes of two screw-bolts to raise or lower the roller.

Figure 5 represents the cast-iron sieves.

The nature of my invention consists in the construction and use of cast-iron sieves for screening corn or other grains; also the mode of tightening the elevator, and the combination of the screens and elevator with the corn-sheller.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, as follows:

A represents the square upright frame.

B, the feeding-spout, into which the ears of corn are put, to be shelled by the picker-wheels C D, common to corn-shellers.

E is an ordinary fly-wheel, to be attached, of any required size to suit the machine.

F is the main driving-crank, by which the gearing is operated.

G G are the elevators, by which the grain is carried up to the discharge-spout H, where it is discharged into a box or bags at one end of the machine.

J J are projecting arms, with hooks, for the purpose of suspending bags to catch the grain as it is discharged.

The elevators are attached to the upright revolving belt L, that revolves on a roller, M, above, and a roller, N, below.

The lower roller is regulated, tightened, or loosened, as required, by means of nuts and screws P P, having an eye, R, at the upper end, in which the journals of the roller N revolve, (the journals being adjusted up or down in a vertical slot in the frame,) and by tightening or loosening the nuts P P, the roller is raised or drawn down, so as to tighten or loosen the belt.

K K are cast-iron sieves, that vibrate by means of the vibrating roller S, and its crank T, and connecting-rod U.

Two upright rods, V, attached to the roller S, support the upper sieve K and the lower sieve K is attached to the under side of the upper sieve by hooks W.

The upper cast-iron sieve K is perforated with larger apertures than the lower sieve K, and the sieves K K, being made of cast-iron, sift the grain, &c., more completely and rapidly than wooden or gauze-wire sieves, the grain, &c., sliding quicker through the cast-iron sieve than the gauze-wire, that has a tendency to hold the grain longer on the surface, doing less work.

X is an incline board, that prevents the cobs from working back to the rear of the upper sieve K, and the opposite incline board has a brush, Y, on its end, to brush the grain back onto the sieve.

The cobs are discharged at one end of the upper sieve K at Z, and the grain or corn passes through the upper sieve K onto the lower sieve, that carries it to the elevator L.

The screenings fall through the apertures of the lower sieve into a box beneath.

I purpose using my cast-iron sieves for sifting and cleaning corn, or any kind of seeds, by having the sieves cast with larger or smaller apertures, to suit the size of the grain or seed to be cleaned.

I intend to operate my machine by the crank F, or a band-pulley.

The toothed wheel *a* on the main crank-shaft drives a pinion, *b*, attached to the fly-wheel E, and the belt C connects and operates the pulleys *d d*, that drive the elevator L.

At the same time the rod U connects the fly-wheel shaft, (on the opposite side of the machine,) so as to vibrate the roller S and sieves K K.

The cast-iron sieves K K last as long as the machine, while the sheet-iron sieves soon wear out.

Another advantage of the cast-iron is, that it always remains smooth, and will not rust or corrode like the sheet-iron, while the sheet iron corrodes in scales, catches the grain on the surface, and prevents the grain and chaff from sifting as rapidly as the cast-iron.

The cast-iron does one third more work than the other sieves.

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

1. The combination and arrangement of the rollers *a b* and brushes *x* with the cast-iron sieves K K, hinged together at W, when all these parts are constructed and operating as herein described, and for the purposes set forth.

2. The arrangement with the above, the elevator L, provided with adjustable bearing N, and eye-bolts P P, when constructed and operating as herein set forth.

Witnesses: G. S. COLEMAN.

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EDM. F. BROWN.