(No Model.)

A. LIFE.

COCKLE MACHINE.

No. 260,212. Patented June 27, 1882.

Fig. 1.

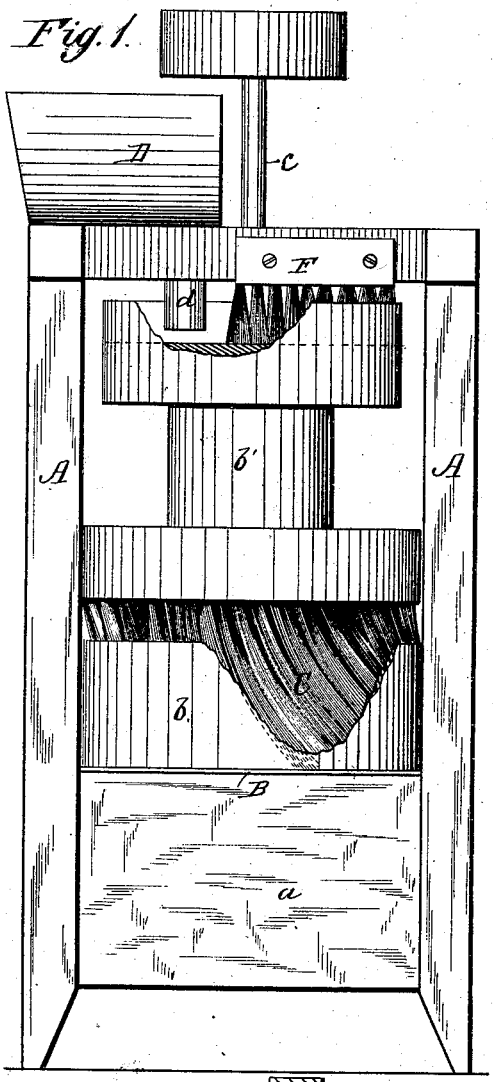


Fig. 2.

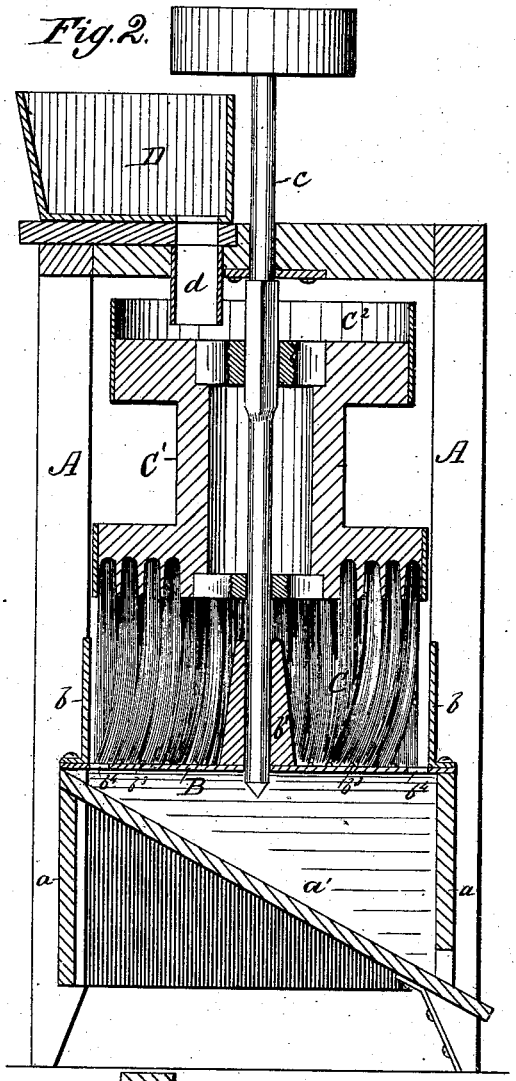
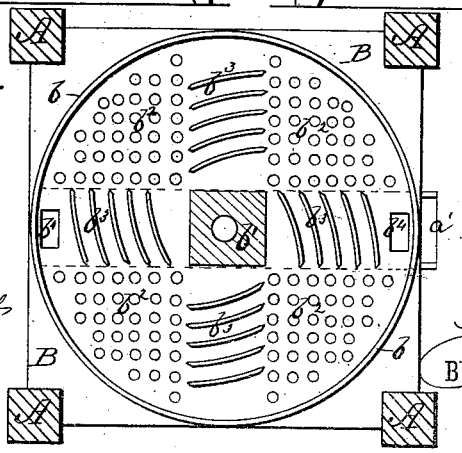


Fig. 3.



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ABRAHAM LIFE, OF NEW HAMPDEN, VIRGINIA.

COCKLE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 260,212, dated June 27, 1882.

Application filed February 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM LIFE, of New Hampden, in the county of Highland and State of Virginia, have invented a new and Improved Cockle-Machine; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention consists in the combination of a sieve having ribs and two or more series of openings, the diameters of which openings exceed the short diameters of the wheat-kernels, but do not equal the long diameters of the same, with a brush or equivalent device for sweeping over the sieve, the construction being such that while the wheat and cockle are carried together over the sieve by the revolution of the brush the oblong kernels of the wheat, being held with their longer diameters in a horizontal plane, are caused to pass over the openings. The spherically-shaped cockle-seeds are forced through the same.

It further consists in certain details of construction which, in connection with the foregoing, will be fully described hereinafter.

In the accompanying drawings, Figure 1 represents a side view of my improved machine with certain parts broken away to show the interior construction; Fig. 2, a transverse vertical section, and Fig. 3 a transverse horizontal section.

A A represent vertical beams, forming the main supports for the machine; and *a a*, side and end pieces, forming a portion of the frame. *a'* represents the discharge-spout by means of which the cleansed wheat is delivered into any proper receptacle.

B represents the sieve, consisting of a metal plate of rectangular form, adapted to rest upon the frame-work *a a*, which is provided upon its upper surface with an annular casing, *b*, adapted to receive the brush hereinafter referred to.

b' represents a central post rising from the sieve, having an opening adapted to receive the lower end of the vertical shaft of the brush.

b^2 represents one of a series of openings formed in the metal plate B, the diameters of which exceed the short diameter of the average kernel of wheat, but do not equal the long diameter of the same.

b^3 represents one of a series of ribs located on certain imperforated portions of the sieve-plate, as shown, which are set at a tangent to concentric lines, for purposes hereinafter explained.

b^4 b^4 represent discharge-openings in the plate, located at the edge of the same and directly opposite each other, by means of which the wheat is delivered to the spout *a'*, which is arranged under the sieve in line with two of the imperforated portions of the said sieve, and extends out to one side of the machine.

C represents a cylindrical brush, rigidly secured upon the vertical shaft *c*, which brush may be made of bristles, hair, or any other suitable material. These bristles, it will be observed, are inclined from the perpendicular at about an angle of thirty or thirty-five degrees.

C' represents the stem of the brush, which is provided with an opening in its center for permitting the grain to pass from the hopper through the same to the sieve-plate.

C^2 represents a casing about the enlarged portion of the stem of the brush, by means of which the grain received from the hopper is directed to the central opening.

D represents the hopper, supported upon the upper beams of the frame-work, which is provided with a discharge-tube, *d*, adapted by any suitable means to be adjusted nearer to or farther from the upper face of the brush-stem to control the amount of grain delivered.

F, Fig. 1, represents a stationary brush, which serves to guide the grain to the central opening of the stem C'.

The operation is substantially as follows: The hopper having been filled and motion having been given to the machine by means of a belt from any motive power applied to the pulley on the upper end of the shaft *c*, the grain, with the cockle mixed therewith, is fed down through the brush to the center of the sieve. By the revolution of the brush the wheat and cockle are carried around over the sieve, the pressure of the bristles during this movement tending to hold the oblong kernels of wheat with their long diameters in a horizontal plane, so that they slide over the openings instead of passing through them, while at the same time it forces through the spherically-shaped cockle-seeds, which fall into a suitable receptacle under the sieve. By means of the ribs b^3, ar-

ranged at a tangent to lines concentric with the sieve, a lateral movement is given to the current of grain and cockle for the double purpose of disengaging it from the brush and of moving it toward the circumference of the plate. The plate under the ribs is not provided with perforations, in order that the wheat may not escape, even if its position should be changed from a horizontal to a vertical plane by the act of disengaging it from the brush. By the continued movement of the machine the wheat is moved to the circumference and discharged through the openings b^4 to the spout a'. By giving the brush the incline described it is better adapted to release the grains when the proper openings are reached.

By means of the described construction a much more perfect separation of the cockle from the wheat is effected than has been before accomplished.

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

1. An improved sieve provided with two or more series of openings, connected together by ribs, and having grain-discharge openings near the outer edge thereof, substantially as herein shown and described.

2. The combination, with a revolving brush, of a sieve provided with two or more series of openings and ribs between the said series, substantially as and for the purpose set forth.

3. The combination, with a revolving brush, of a sieve having openings the diameters of which exceed the short diameters of the average kernels of wheat, but do not equal the long diameters of the same, substantially as herein shown and described, whereby the kernels of wheat are swept over the sieve with their long diameters in a horizontal plane and prevented from passing through the same, as set forth.

4. In combination with a sieve having openings, substantially as described, and ribs arranged at a tangent, as described, a brush, substantially as described, adapted to sweep over the sieve.

5. In combination with the sieve B, having the openings b^2 and ribs b^3, the brush C, having a stem with central opening, as described.

6. The combination, with the revolving brush C, of the sieve B, provided with the openings b^2, the ribs b^3, and the discharge-openings b^4 near the edge, substantially as and for the purpose set forth.

7. The cockle-machine described, having the sieve B, brush C, hollow stem casing C^2, and hopper D, combined and arranged as and for the purpose set forth.

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Witnesses:
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