(No Model.)

C. & N. ALTRINGER & N. ALTRINGER, Jr.

FANNING MILL AND SEPARATOR.

No. 244,727. Patented July 26, 1881.

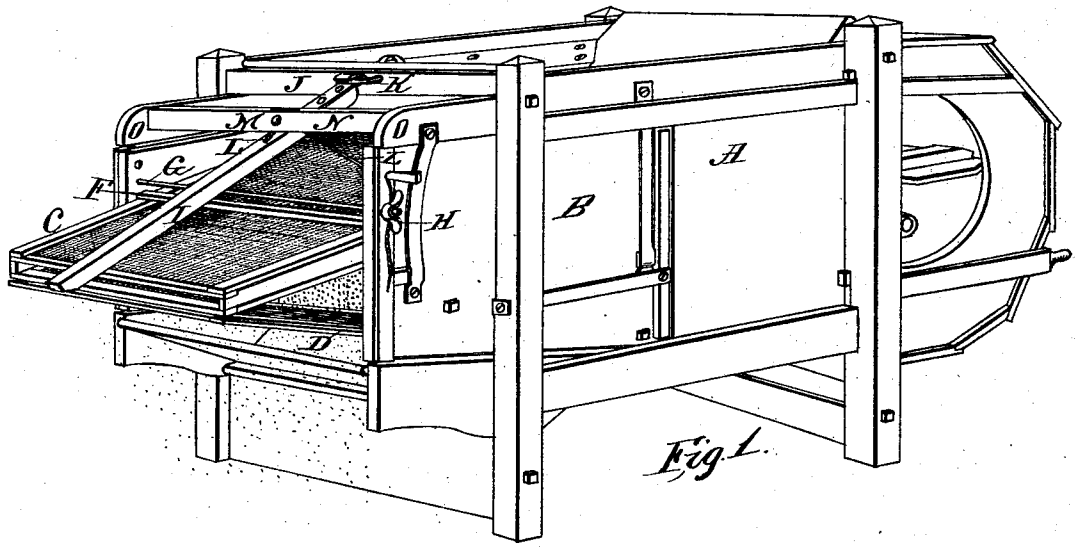
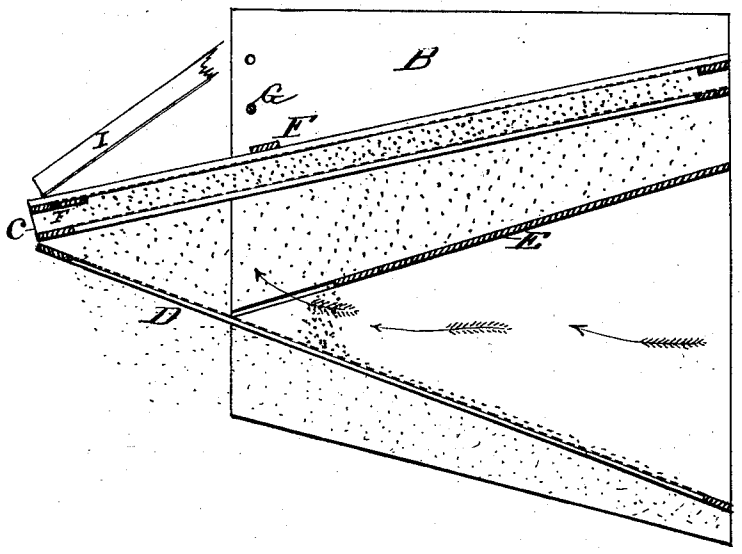


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

CHRISTOPHER ALTRINGER, NICOLAUS ALTRINGER, AND NICOLAUS ALTRINGER, JR., OF RACINE, WISCONSIN.

FANNING-MILL AND SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 244,727, dated July 26, 1881.

Application filed January 7, 1881. (No model.)

To all whom it may concern:

Be it known that we, CHRISTOPHER ALTRINGER, NICOLAUS ALTRINGER, and NICOLAUS ALTRINGER, Jr., citizens of the United States, residing at the city of Racine, in the county of Racine and State of Wisconsin, have invented certain new and useful Improvements in Fanning-Mills and Separators; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in fanning-mills and separators, and relates to the construction of the hurdle, the arrangement of the hurdle-screens, and for rapping upon and jarring the sieves and screen from their upward side simultaneously with their ordinary reciprocating motion, whereby the mill is better adapted to cleaning flax and other small seeds.

Our invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a perspective of a fanning-mill provided with our improvement. Fig. 2 represents a vertical section of the shoe removed from the mill, showing the relative arrangement of the sieves, screens, and slide to each other.

Like parts are represented by the same reference-letters in both views.

A represents the fanning-mill proper. B is the shoe. C is a hurdle of sieves. D is a screen. E is a slide. F is a strengthening or stay bar.

The hurdle C may be composed of more than two sieves, if desired, or they may be substituted by a single sieve of equal length.

The strengthening-bar F is attached to the sides of the hurdle, above the sieve, leaving a space between the said bar and sieve for the passage of air and grain, and located back from the front edge of the hurdle at or near the binding-rod, at a point near the center of the hurdle, where it is best adapted to receive the binding pressure of the rod when screwed up for the purpose of supporting the hurdle. It is obvious that when the bar is thus located it relieves the sieves in the hurdle of all pressure from said binding-rod.

The hurdle C is secured at any angle at which it may be adjusted by compressing the respective sides of the shoe against it, which end is accomplished by means of the binding-rod G and screw-nut H. The front or projecting ends of the sieves are arranged in contact with each other, as shown, so that all may be simultaneously jarred. When the mill is operated the hurdle of sieves is struck and jarred by the bar or lever I, which is caused to rise from and fall upon the upper side of the sieve or hurdle with each reciprocating motion of the shoe. The rear end of the lever I is hinged to the bar J by hook and staple K, as shown, while it is suspended at a point between its respective ends by cord L, which cord passes over pin M and is attached to the reciprocating shoe. The pin M is retained in position above the lever by bar N, which bar is supported at its respective ends by the stationary projecting sides of the mill O O, in sockets or grooves temporarily, and may be raised therefrom and removed when not required for use. The end of the lever may also be unhooked and detached from the bar N and likewise removed. When the lever is thus suspended above the sieve it is obvious that it will be raised by the action of the shoe B as it vibrates toward the right, and will drop upon the sieve or hurdle as it vibrates toward the left, whereby a continuous jarring is produced upon the upper side of the sieve. This jarring may be increased by applying another cord in like manner to the lever and the opposite side of the shoe, when the lever will be raised both when the shoe moves toward the right and the left, and will drop of its own gravity upon the sieves as the shoe approaches the center of the mill.

By our improvements the cleaning of flax and other small seeds is greatly facilitated, as it is desirable to accomplish the work as far as possible by screening instead of fanning, and by the aid of the dropping-lever upon the sieves this end is accomplished.

It is obvious that by the use of the slide E the seed is conveyed to near the front edge of the screen before falling upon it. Thus it is further obvious that in passing from the mill

it is caused to traverse downward over the greater portion of the screen, and ample opportunity is afforded for foul seeds and other refuse matter to pass through the screen. The slide also serves to direct a portion of the air forward, as indicated, whereby more favorable results are attained.

It is obvious that, owing to the greater length of the screen D and the elevation of its front edge, the seeds are not liable to be blown therefrom.

It is also obvious that the jarring upon the screens dislodges the seeds from the hulls and chaff and facilitates their passage through the sieve; also, that by bringing the rear ends of the hurdle and screen in contact with each other the jarring upon the hurdle will be communicated to the screen D, whereby the finer refuse matter is more effectually removed from the seed.

Having thus described our invention, we do not confine or limit ourselves to the peculiar device for operating the lever I, as it may be suspended and automatically operated in a great variety of ways.

What we do claim as our invention, and desire to secure by Letters Patent, is—

1. In fanning-mills and separators, a lever or pounding-bar suspended from a fixed portion of the mill above the sieve or hurdle by flexible bearings, in combination with the vibrating shoe, in such a manner that the vibrating motion of the shoe will cause the lever to rise, and allow it to fall of its own gravity upon the upper side of the hurdle or sieve, substantially as and for the purpose specified.

2. In fanning-mills and separators, the combination of the hurdle C and strengthening-bar F, said bar being attached to the side of the hurdle, above the sieve, leaving a space between it and the sieve for the passage of air and grain, and located back from the front edge of the hurdle, at or near the binding-rod, and adapted to relieve the hurdle from the pressure of the sides of the shoe and prevent the screens in the hurdle from sagging, substantially as set forth.

3. The combination of the hurdle or sieve C as extended outward and downward at an angle from the shoe, screen D as extended outward and upward at an angle from the shoe, and bar I, the said hurdle and screen converging toward each other, whereby their front edges are brought in contact and the jarring stroke applied to the hurdle is communicated to the screens, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

CHRISTOPHER ALTRINGER.
NICOLAUS ALTRINGER.
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Witnesses:
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