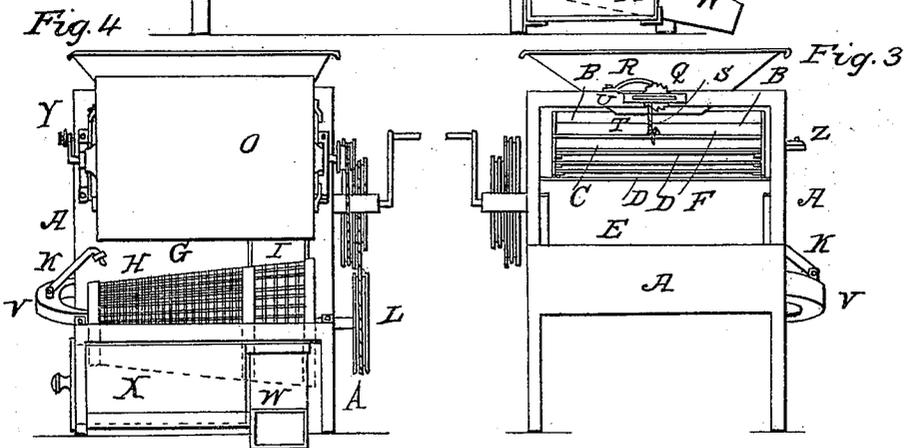
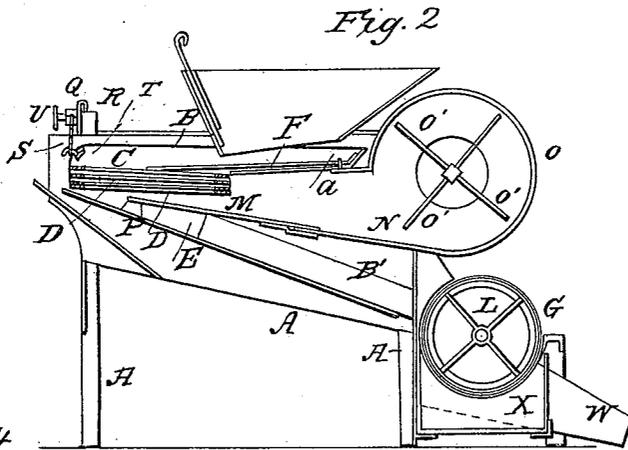
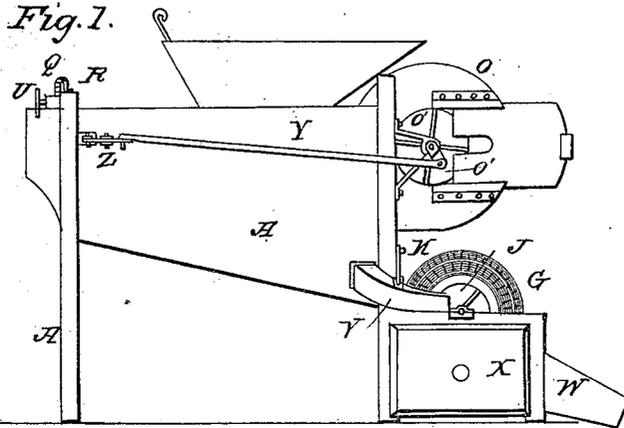


J. G. GOSHON.
Grain Winnower.

No. 7,740.

Patented Oct. 29, 1850.



UNITED STATES PATENT OFFICE.

J. G. GOSHON, OF SHIRLEYSBURGH, PENNSYLVANIA.

WINNOWING-MACHINE.

Specification of Letters Patent No. 7,740, dated October 29, 1850.

To all whom it may concern:

Be it known that I, J. G. GOSHON, of Shirleysburgh, in the county of Huntingdon and State of Pennsylvania, have invented a new and useful Improvement on the Machine for Winnowing and Cleaning Grain; and I do hereby declare the following to be a full and clear description thereof, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is an elevation of the side of the machine. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is an elevation of the front end thereof. Fig. 4 is an elevation of the rear end thereof.

Similar letters on the several figures refer to corresponding parts.

The frame A, oscillating shoe B, with its riddle C, and screens D, discharging bottom board E, conducting board F, of the oscillating shoe B, with the actuating power for the fan and shoe, are made and arranged in the usual manner.

My invention and improvement consists in the combination and arrangement of a rotating screen G, of the form of a frustum of a cone, composed of two or more sections of different sized meshes H, I Fig. 4 and placed transversely in the position heretofore occupied by the fan and the usual large fan case of the mill.

The object of this rotating conical screen, is to receive the grain, after it has passed through the riddle and screens and subject it to a more thorough and complete separation from the cheat and cockle, its axis being horizontal or nearly so and supported by suitable frame work, and the grain introduced by means of a curved spout V into the small end of the screen and prevented from flying out by a circular collar J, Fig. 1.

The curved spout V is suspended by means of a hook K, and connects with an opening in the side of the frame beneath the shoe, while its opposite end projects within the screen, the section H, of which screen is to permit the discharge of the cheat and cockle, and the section I, being about one-third the length of the section H, of larger mesh is for the discharge of the cleaned wheat into a conducting spout W which nearly encircles the same, while the larger impurities, such as sticks, straw, stones, &c., pass out at the larger end of the screen G, which is open,

and of a diameter great enough to give the necessary inclination of the reticulated surface, to insure the descent of the grain.

There is a slide draw X beneath the first named section of the screen to receive, and collect the screenings from the wheat after it has been subjected to the winnowing operation. This conical screen is secured to the shaft by radial arms and bands, and is provided with a pulley L, around which a band passes to the propelling power.

Another improvement relates to the use of an additional bottom board M, designed only to be used as a continuation of the bottom board N of the pan case O, for diminishing the space between the discharging bottom board and screen of the shoe, for concentrating the blast directly in contact with the screens when the wheat is undergoing a second passage through the mill, said additional board M, being shorter than the discharging bottom N, and resting upon the same by projections P, leaving a space between the two for the discharge of the grain, there being an oblique division board B' between the boards M and N, for directing the grain to the side opening in the frame into the curved spout and screen C. This additional board M, is connected with the bottom board N, of the fan case O, by being ship-lapped, or any otherwise arranged and in connection with the elevated fan forms an important and useful feature of the machine.

The position of the fan O' being elevated on a line with the screens and shoe, possesses many advantages over the ordinary manner of arranging it near the bottom of the frame, and can be made about half the size of the fans in use, and will produce a sufficient blast of wind, for the purpose intended.

Another improvement is the use of a ratchet wheel Q, and spring catch R, attached to the upper front part of the frame, the axis of the ratchet wheel being horizontal, and secured by a box plate, in which its outer end turns, there being a cord s, attached to the axle of said ratchet wheel, and to the front bar T, of the shoe; for the purpose of regulating the inclination of the riddle and screens to suit the character of the grain and give it more or less pitch therefrom, by winding or unwinding the cord around the axle of the ratchet wheel, by turning the crank or handle V thereof, to the right or left, which will raise or lower the outer ends of the riddle and screens.

The shoe is oscillated by means of a connecting rod Y and bell crank Z in the usual manner; and is provided with a conducting board F, attached to the pin (a) upon which the shoe oscillates to receive the grain from the hopper, and conduct it to near the front of the riddle before discharging it thereon to be subjected to the blast from the fan.

In the operation of this cleaning and fanning mill, it is designed to subject the grain to a second passage through the same, the first operation being chiefly to clean the grain of chaff, and other light stuff, in which case the conducting board F, of the shoes, and additional board M of the fan case O with the curved spout V must be removed, which can be done without any trouble, the grain being introduced to the hopper in the usual manner, receives the blast which is diffused within the space below the additional bottom board M, and thus its concentrated force is in a measure destroyed, and the grain falls upon the discharging board, and is conducted by the oblique division board, to the side opening in the frame.

In the second operation on the grain, the conducting board F, is placed on the shoe, B, and the additional bottom board M put in its place between the discharging board, E,

and screens of the shoe, to diminish the space between the same, and thus concentrate the blast from the fan, in a body directly beneath the front end of the screen—the curved spout V is secured as represented in Fig. 1—and thus the connection with the side opening in the frame, and rotating conical screen G is effected, and the grain discharged therein, and the cheat and cockle, &c., separated therefrom, and the wheat delivered thoroughly cleaned from all impurities.

Having thus described my improvements in the machine for winnowing and cleaning grain, what I claim therein as new and desire to secure by Letters Patent, is—

In the combination of the additional bottom board M with the elevated fan O' and fan case O for the purpose of diminishing the space between the discharging board E, and screens for concentrating the blast beneath and in contact with the screens, for the purpose described.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

J. G. GOSHON.

Witnesses:

WM. JOHNSON,
PETER BOWMAN.