C. SAUNDERS.

FANNING-MILL.

No. 179,732. Patented July 11, 1876.

Fig. 1.

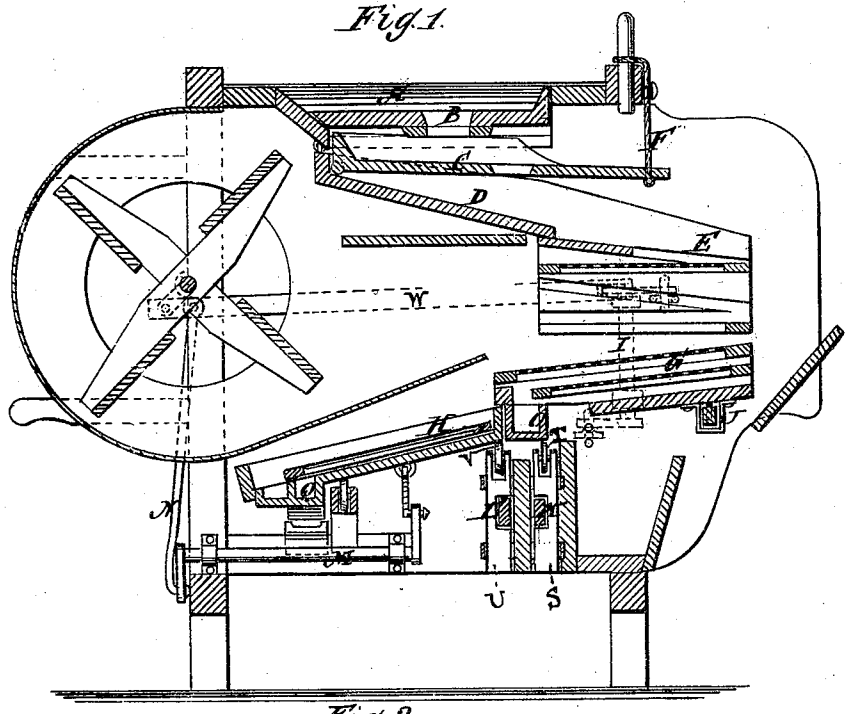
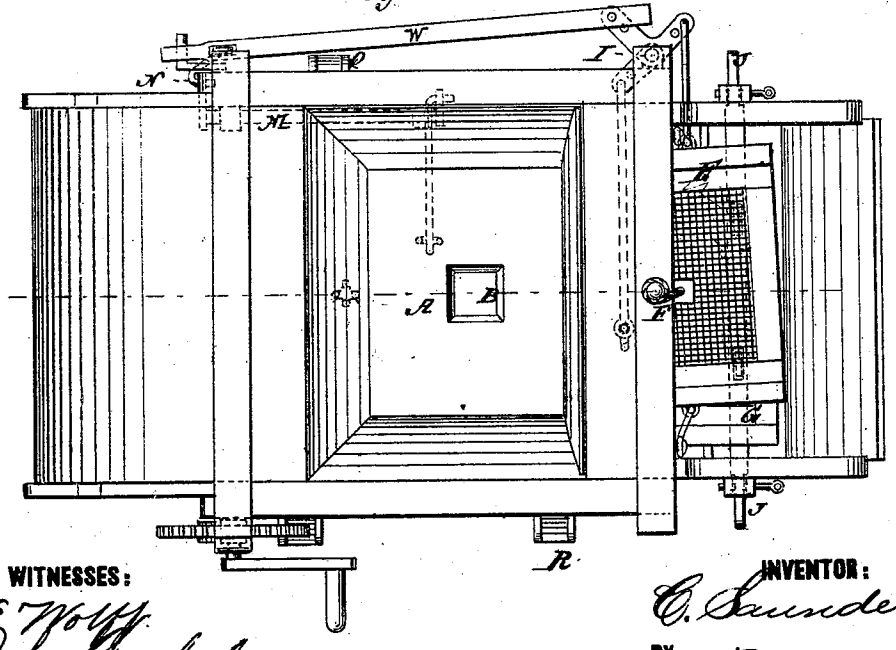


Fig. 2.



WITNESSES:

E. Wolff

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INVENTOR:

C. Saunders

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ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES SAUNDERS, OF CAPE VINCENT, NEW YORK.

IMPROVEMENT IN FANNING-MILLS.

Specification forming part of Letters Patent No. **179,732**, dated July 11, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, CHARLES SAUNDERS, of Cape Vincent, Jefferson county, New York, have invented a new and Improved Fanning-Mill, of which the following is a specification:

This invention consists of an improved feed apparatus; also, an arrangement of chaffing, screening, and separating shoes independently of each other, for regulating each according to its needs, and for working them so as to counteract the shocks of one by the other; and also of adjusting contrivances for regulating the inclination of the screens, all as hereinafter described.

Figure 1 is a longitudinal sectional elevation of my improved fanning-mill, taken in line *x x*, Fig. 2; and Fig. 2 is a plan view.

Similar letters of reference indicate corresponding parts.

A is the hopper, in the bottom of which is a hole, B, through which the grain falls onto a shoe, C, attached to the chute-board D of the chaffing-shoe E, so as to be vibrated by it, and being suspended by the cord F, by which it is regulated to vary the feed. G is the screening-shoe, which is constructed, mounted, and operated independently of the shoe H, which is also arranged to work independently of the chaffing-shoe, thus enabling each shoe to be vibrated more or less, as the work demands, and it also allows them to be so operated that the shocks of one will counteract those of the other.

The shoes E and G are worked by the upright crank-shaft I, to which they are connected at opposite sides, so that they work in opposite directions at the same time, and thus neutralize each other's shocks. The crank-shaft I is connected with the fan-shaft by a pitman, W.

The screening-shoe is supported at the outer end on the cross-bar J, one end of which is made to shift up and down to adjust the inclination laterally, to prevent the grain from flowing to one side, and the inner end is mounted on vertically-sliding post S, carrying a roller, T, at its upper end, which post is adjusted by a lever, K, for varying the descent of the screen, to make the grain pass off more or less rapidly. The shoe H is in like manner arranged on the post U and roller V, adjusted by the lever L, to vary its descent or pitch, for the same purpose. This shoe is connected to the cranked rock-shaft M, which is worked, by the connecting-rod N, from the fan-crank.

The screen G has two sieves, from one of which the grain falls into the spout O, to be carried out at P, and from under the separator-sieve H a spout, Q, discharges the smaller grain falling through it, while that which passes off from the top falls into another receptacle.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the hopper A, having passage B, of the shoe C, connected at the upper end to the vibrating chaffing-shoe, and suspended adjustably at the lower end by the cord F, substantially as specified.

2. The combination of the vertical crank-shaft I, bottom crank-shaft M, connecting-rod N, and pitman W with the independent shaking-screens E G H and the fan-shaft, as and for the purpose set forth.

3. The combination of the sliding posts S U, carrying rollers T V, and the levers K L, with the screen-shoes G I, as and for the purpose set forth.

CHARLES SAUNDERS.

Witnesses:

GEORGE SAUNDERS,

CALEB ROBBINS.