

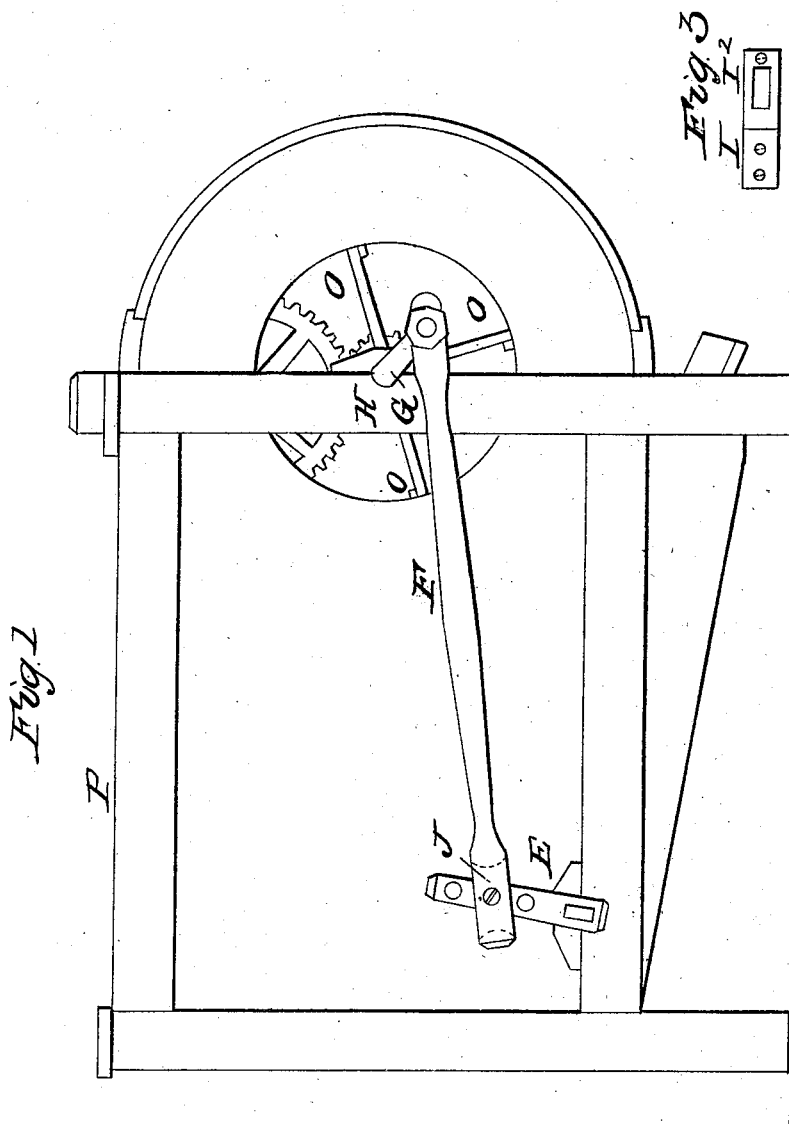
J. SHERMER.

2 Sheets—Sheet 1.

Grain Fan.

No. 4,648.

Patented July 20, 1846.



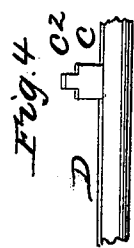
J. SHERMER.

Grain Fan.

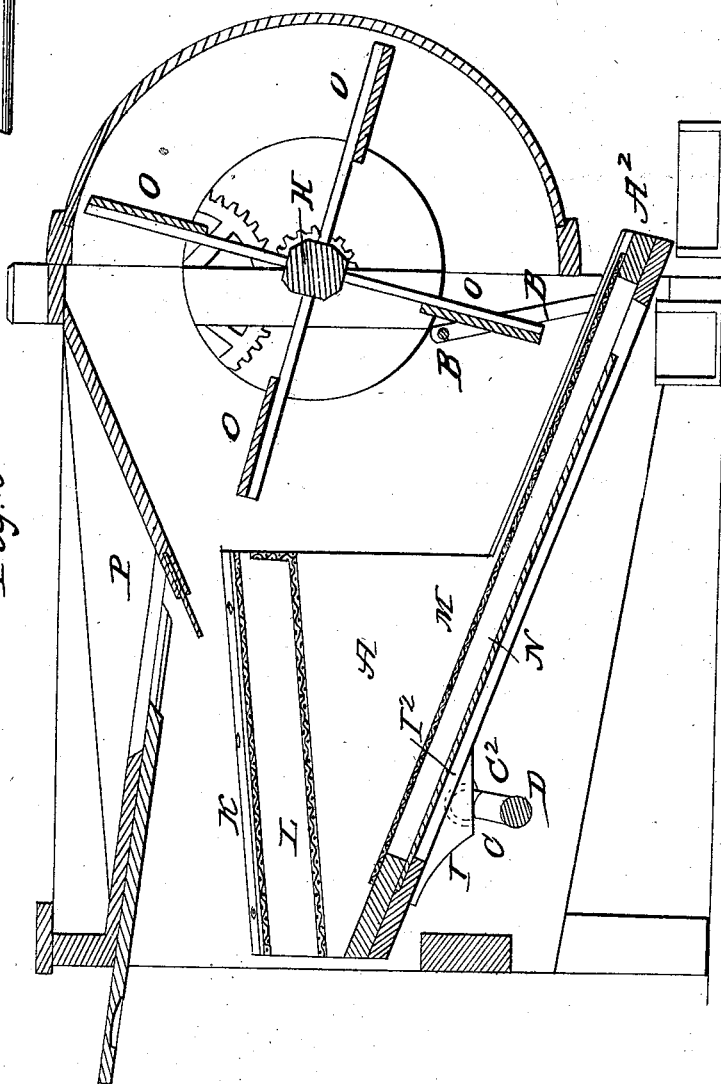
2 Sheets—Sheet 2.

No. 4,648.

Patented July 20, 1846.



*Fig. 2*



# UNITED STATES PATENT OFFICE.

JACOB SHERMER, OF NEW VALLEY, MARYLAND.

## WINNOWER-MACHINE.

Specification of Letters Patent No. 4,648, dated July 20, 1846.

*To all whom it may concern:*

Be it known that I, JACOB SHERMER, of New Valley, in the county of Cecil and State of Maryland, have invented a new and useful Improvement in Wheat-Fans, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation. Fig. 2 is a vertical longitudinal section. Fig. 3 is a plan of the under side of the block showing the oblong mortise therein. Fig. 4 is a side view of one of the arms showing the tenon and shoulders thereon.

The main body of the fan is made in the most improved manner in use. The improvement is in the construction and mode of hanging and shaking the shoe.

The sides A of the shoe are made of a trapezoidal figure and connected together by suitable cross pieces—the lower portion being extended downward so as to reach a point below the center of the fan and united by cross timbers A<sup>2</sup>, the lower edges of the sides of the shoe being placed at an angle of about 35 degrees with a horizontal plane—the upper edges inclining in a contrary direction at an angle of about ten degrees with a horizontal plane. The back and front edges of the portion of the shoe containing the two upper sieves are vertical and parallel, or nearly so. The lower end of the shoe is suspended by straps B to the frame in the usual manner; but the upper end of the shoe is placed upon the shoulders of two arms C whose upper ends are reduced in thickness forming tenons C<sup>2</sup> and shoulders and inserted into a vibrating shaft D caused to rock to the right and left in suitable boxes in the sides of the frame by a crank E affixed to the end of said rock shaft outside the frame to which is attached a pitman rod F also connected to the crank G of the fan-shaft H by which the shoe is vibrated longitudinally within the frame. The connection of the arms of the rock-shaft with the shoe is effected by means of blocks I fastened to the shoe in which oblong mortises I<sup>2</sup> are made of sufficient size to admit the tenons aforesaid and have room to play back and forth therein so as to impart a jar to the shoe. The tenons are

formed on the ends of the arms. The movement of the rock shaft is increased or diminished by raising or lowering the pitman on the crank which is done by changing the position of the screw J.

The screens K and L and M for separating the straw, chaff, cockle, and cheat from the wheat are made and arranged in the most approved mode. A cloth N is placed below the lower screen for catching the cockle, cheat and filth and conducting it to a receiver placed below the lower end of the said cloth—the wheat passing off the screen to the floor, or into a receiver.

The fan O is operated in the usual manner. The rock shaft D carrying the shoe is moved by means of the pitman or connecting rod F attached to the cranks. As the crank of the fan is turned the rock shaft moves to the right and left causing the shoe to swing longitudinally to and fro. The wheat and foreign matter mixed therewith, are put into the hopper P, from whence it passes to the two upper screens K and L which separate the chaff and straw therefrom—the wheat and cockle passing through the screens to the lower screen M which separates the cockle from the wheat—the wheat passing through the screen onto the cloth conveyer below which conveys it to the receiver, and the cockle or cheat or chaff passing off at the lower end of the screen M.

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

The manner of combining the rock shaft and shoe together by means of the blocks I secured to the shoe having large oblong openings I<sup>2</sup> therein and the arms C inserted into the rock shaft being made with tenons C<sup>2</sup> and shoulders—said tenons being inserted into said openings loosely so as to bring the shoulders of the arms against the under sides of the blocks by which arrangement the arms will be made to perform the double office of vibrating the shoe longitudinally and jarring it vertically in the manner set forth.

JACOB SHERMER.

Witnesses:

WM. P. ELLIOT,  
A. E. W. JOHNSON.