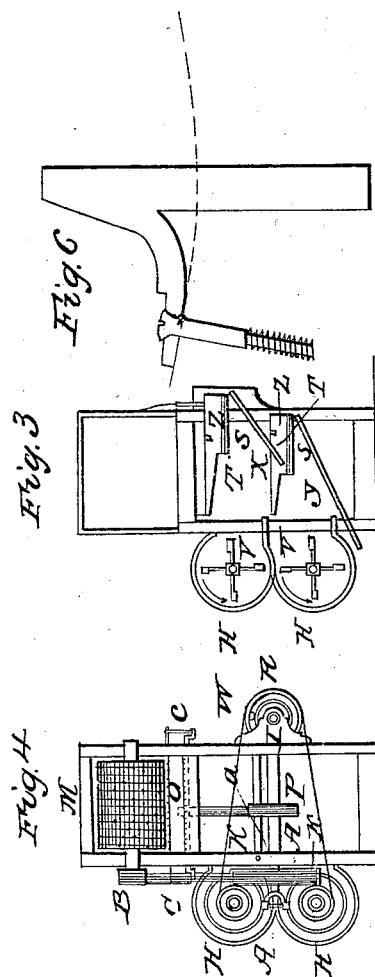
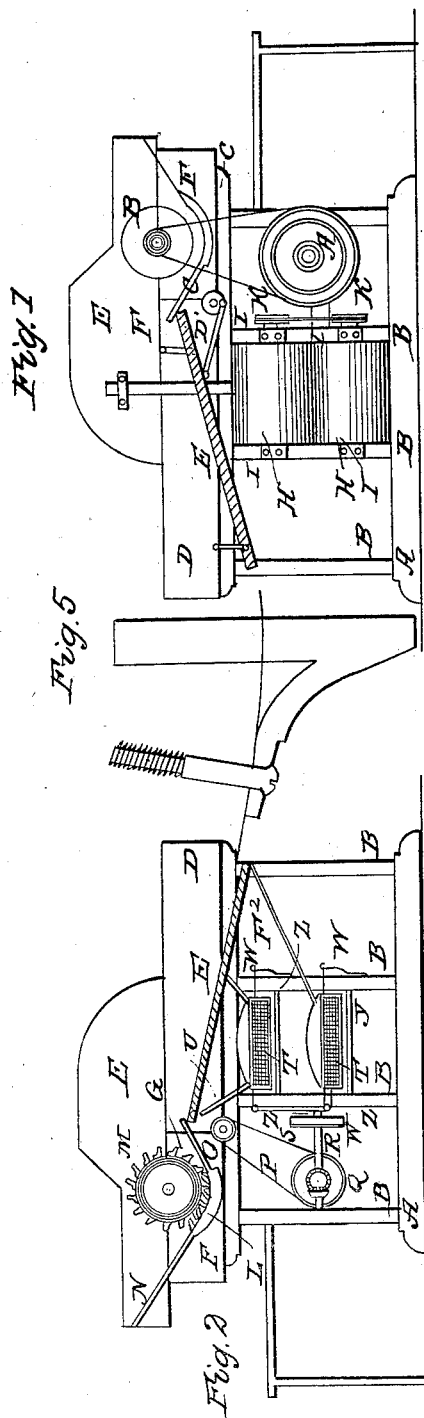


M. McKEEVER.  
Thrashing Machine.

No. 1,104.

Patented March 15, 1839.



# UNITED STATES PATENT OFFICE.

MATHEW MCKEEVER, OF STAUNTON, VIRGINIA.

## MACHINE FOR THRESHING AND CLEANING GRAIN.

Specification of Letters Patent No. 1,104, dated March 15, 1839.

*To all whom it may concern:*

Be it known that I, MATHEW MCKEEVER, of Staunton, in the county of Augusta and State of Virginia, have invented a new and  
5 useful Improvement on Machines for Threshing and Cleaning all Kinds of Small Grain, and do hereby declare that the following is a full and exact description.

The nature of my invention consists in a  
10 frame so constructed as to attach two winnowing fans and a shaker for the purpose of separating the grain from the straw and cleaning the grain as it falls from the threshing cylinder.

15 To enable those skilled in mechanism to make and use my invention I will proceed to describe its construction and operation.

I construct a frame eight feet in length, four in height and three in width. The  
20 drawing (hereunto annexed) No. 1 represents a side view of the said machine. The sills and plates are connected by four upright posts on each side dividing the machine into three equal sections or the machine may be  
25 lengthened by the addition of a fourth section in which case the fans would occupy the third instead of the second section. The first section is occupied by the master band wheel A drawing No. 1 driving the cylinder  
30 by a band passing around said wheel and the pulley or whirl B, which is on the end of the shaft of the cylinder. On the center of the shaft of the master band wheel A (which wheel is  $2\frac{1}{2}$  ft. in diameter) is another band wheel P (No. 2 which represents  
35 the side opposite to No. 1). The above named band wheel P is twelve inches in diameter and drives the pulley O (No. 2) by a band passing around said wheel and pulley,  
40 the said pulley O is on the center of the shaft of the shaker cranks C, C, as seen in No. 4, which is an end view of the machine, on the shaft of the master band wheel A, and on the end opposite to the said wheel is  
45 a bevel cog wheel six inches in diameter, driving another bevel cog wheel of the same size on a shaft at right angles as seen in No. 2, letter Q of the drawings. On the last  
50 named shaft is the band wheel R (No. 2) ten inches in diameter (which is also seen in No. 4) driving the fan pulleys K, K, (No. 4) by a band passing around said wheel and pulleys, as there represented. The second  
55 section is occupied by the fans which are represented in drawings Nos. 1, 3 and 4. H

H the fan boxes I, I, I, I, No. 1, the head blocks supporting the shafts of the fans on the ends of which shafts are the above named fan pulleys K K.

V V No. 3 represents the wings of the fans, the arrows indicating the direction  
60 they move when in operation.

The fan boxes H H are covered on the outside of the circular part with sheet iron. The sides are of wood with a circular opening  
65 in the center as seen in No. 4. The interior diameter is 20 inches, the width 22 inches, in the clear.

T, T, No. 3, represents the shoes in which the riddles S, S, 16 inches square are placed.  
70

Z, Z, represents the place where the shaker is attached to the shoes; this shaker consists of a lever (represented in drawing No. 4) attached to the upright post at a, and passing  
75 through the machine to the opposite side is moved by the pin W, in the band wheel R, to this lever a strap is attached which passes over two small pulleys as represented in No. 2 by Z, Z, and one end of  
80 said strap is fastened to the lower shoe and the other end to the upper shoe, so that when the lever rises or falls it gives the shoes a horizontal motion.

The feeding chute N, in drawing No. 2, is  $2\frac{1}{2}$  feet long by the width of the machine, it  
85 is attached to the cap E, and comes in contact with the concave as there represented. The concave box F, No. 2, in which the cylinder works is 2 feet 10 inches long by 14 inches high and of the same width with the  
90 machine. The concave L, is the segment of a circle whose center is the same with that of the cylinder M and of the same length which is  $2\frac{1}{2}$  feet, the concave is two inches  
95 below the face of the cylinder, the spikes of said concave are so arranged that those in the cylinder may pass through and very near them without coming in contact.

The cylinder M of which an end view is seen in No. 2 and a side in No. 4 of the  
100 drawings, is  $2\frac{1}{2}$  feet long by 16 inches in diameter. The apron G No. 2 is a continuation of the concave L and forms a part of the concave box extending from the concave  
105 beyond the end of the box to deliver the threshed grain onto the shaker E No. 2. This shaker is a frame of wood whose width is governed by that of the machine and its length from the apron G (No. 2) to the extreme end of the machine the pieces compos-  
110

ing the outer frame is  $2\frac{1}{2}$  or three inches wide by  $1\frac{1}{2}$  inch thick and the interior is composed of slats two inches wide and  $\frac{3}{8}$  of an inch in thickness. These slats are mortised into the sides of the outer frame, their length being the same with the width of the frame and at an angle of 45 degrees with its face or upper surface, allowing a space of 1 inch between the slats for the grain to pass through. As there represented it receives its motion from the cranks C, C, Nos. 4 and 1. It is hung within the side boards by four iron rods, two on each side (two of which are represented by letters F F, No. 1). One end of the rods are fastened to the shaker E and the other end to the side board D, permitting it to play back and forth.

The pitman D', No. 1, is a bar of iron 18 inches long with a round hole in each end. Through one of these passes the shaker crank and through the other an arm attached to the shaker which works through an aperture in the side board D of a proper size and shape to admit of its motion. In front of the band wheel A, No. 4, is the forked gudgeon by which the horse power is attached to give motion to the machine.

The cap E, Nos. 1, and 2, is so attached to the machine as to be movable at pleasure, it covers the cylinder and extends over a part of the straw shaker, thus preventing any portion of the straw from being thrown off till the grain is separated therefrom.

U, V, No. 2, are the sides of the hopper which receives the grain from the straw shaker and conveys it into the upper shoe.

F<sup>2</sup>, No. 2, is an extra chute to catch any grain that may remain on the straw shaker E, after passing the hopper and convey it into the lower shoe.

No. 5 represents the spike for the cylinder and No. 6 for the concave drawn to the full size, the brace of this spike may be turned

either to the front or rear and secured by an inch and half screw as there represented.

The operation of threshing and cleaning grain with this machine is performed in the following manner (to wit): The feeder having taken his stand receives the grain after the bands are cut and spreads it upon the feeding board N (No. 2) when it is caught by the spikes of the cylinder M and forced rapidly between that and the concave L and thrown into the cap *e* completely threshed, from the cap it falls upon the straw shaker E, by the motion of which the straw and grain are effectually separated, and the straw thrown out at the rear of the machine and the grain passing through the slats of the shaker is received into the hopper U, V, which conveys it into the shoe T' (No. 2). Any grain which may pass V, will be caught by the extra chute board F and conveyed into the shoe T<sup>2</sup>. The grain thus passing through the riddles of the two shoes, (which riddles may be increased to 4 in number and of different degrees of fineness,) and winnowed by the two fans is conveyed by the chute boards X and Y (No. 3) to the floor outside of the machine perfectly clean and ready for market.

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

1. The combination of the two fans and their fixtures with the threshing machine in the manner substantially as above described.

2. The chute board F<sup>2</sup> in combination with the straw shaker E as herein described.

3. The wooden shaker E constructed and operating as herein described.

4. The brace spike or tooth constructed and operating as herein described.

MATHEW McKEEVER.

Witnesses:

CHESLEY KINNEY,  
JOHN COWAN.