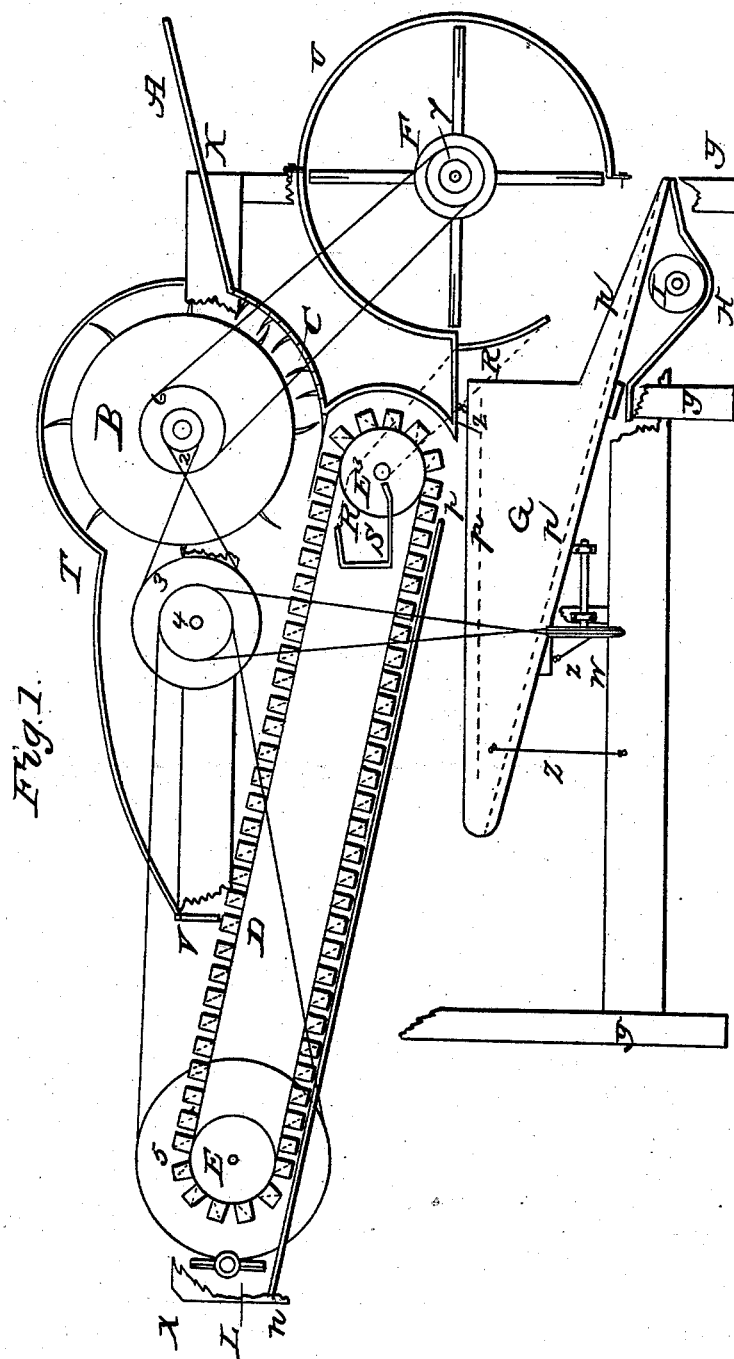


W. EATON, Jr.

Thrashing Machine.

No. 3,199.

Patented July 28, 1843.



UNITED STATES PATENT OFFICE.

WM. EATON, JR., OF UPPER ALTON, ILLINOIS.

THRESHING-MACHINE.

Specification of Letters Patent No. 3,199, dated July 28, 1843.

To all whom it may concern:

Be it known that I, WILLIAM EATON, JR., of Upper Alton, county of Madison, and State of Illinois, have invented a new and useful Improvement in a Machine for Getting Out and Cleaning Wheat and other Small Grain, which I denominate "Eaton's Improved Grain Thresher and Cleaner;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view or elevation of the working parts thereof, and Fig. 2, a bird's eye view or horizontal projection of the same; both in conjunction exhibiting the various parts of the machinery and their connection and operation together, the same letters and marks in each figure being set to the same portions of it.

A, represents the feed board; B the working cylinder; C, the concave; all of which are of the ordinary construction, and set in the frame X, X'.

D is a lattice band moved by the wheels E, E, which are set on the shaft N; it is constructed by riveting cross bars or slats of wood to two or more leather or chain bands, which match and ride upon the aforesaid wheels E, E, and the rollers E', E'. These bars are beveled on the outer side and toward the cylinder as indicated in the drawings. They may be perforated with holes for the insertion of any requisite number of threads of leather, or any other suitable material, or riveted equidistant from each other, and parallel with the above mentioned bands. The lattice band is of a width superior to the length of the cylinder, and is arranged in front of it in the inclined position indicated in the drawings, and receives the straw and grain as it leaves the cylinder; the straw being carried off by it and the grain falling through upon the apron or inclined plane *p, p*, down which it is carried to the fan mill by the under or descending portion of said band.

E, E, are wheels set on the shaft N, which work the lattice band as stated above.

E', E', are rollers set in the line of each of the wheels E, E, whose office is to support the said lattice band at its lowest extremity.

p p is an inclined plane or apron whose

use is above stated. It is made to remove and be replaced for the convenience of adjusting the machinery, &c.

T is the cover to the cylinder which extends forward over the lattice band to V, which is a curtain or falling lid that closes the front and prevents the waste of the grain; also may be added a second cover extending forward, and covering any portion of the machine desired.

L is a wind or flutter shaft, furnished with two or more fan boards of wood or sheet iron; the purpose of which is to clear the straw from the lattice band, and machine, which is effectually done by the motion given to the air about it.

G is a sieve frame supported on the jack rods Z in one direction, and by a hook and eye at Z' in the other. It is furnished with the sieves P, P' and screen P'. The outer or forward end of the sieve P may admit of being moved up or down as the case may require; to impede the passage of the light grain with the chaff; and a portion of the upper end of the screen P' may be a plane, or apron, which may admit of the same arrangement. The sieve P' is an additional one to those in ordinary use. It extends over the receiver H, to separate, and pass off, any sprouted or grown wheat, together with such portions of trash not removed by the fan mill; while at the same time admitting the grain to fall through within the machine upon the conveyer.

Z' is a pitman or shake rod, worked by the band wheel W, with any desired length of stroke for shaking the sieves.

H is a receiver for the grain on its passage through the fan mill.

I is a conveyer or a shaft with a spiral thread fixed within said receiver to convey the grain to the elevator J, which carries it up to be finally discharged from the machine at the spout K.

F is the fan wheel, U its inclosure which is of ordinary construction.

S is a trough extending horizontally across the machine, within the lattice band, at its lowest extremity, so as to catch and receive such portions of straw, and trash, as may be worked within it, the same being carried down underneath said trough, and raised by the band, with the aid of the aforesaid threads, as it passes around the rollers E', E', and pitched into said trough.

R R' is an air duct leading from the

fan mill, with its mouth at R', to one end of the aforesaid trough S; the object of which is to direct a current of air sufficient to clear it from the trash thrown into it as
 5 above named; or in connection with this arrangement, a revolving band passing horizontally through upon the bottom of said trough, and down outside the machine, passing around a pulley placed upon the shaft
 10 of the band wheel W, thence underneath the sieve frame, to rollers upon the opposite side and end of machine and trough; may be added to assist in the discharge; or used altogether as a substitute.

15 The gearing and operation of this machine is by the band wheels marked with figures in the drawing. They may be arranged either for flat or round bands.

20 1 is the driving band wheel on the shaft M of the working cylinder.

2, 3, 4 and 5, are band wheels to work the shaft N, and E, E, the wheels which give motion to the lattice band D.

25 6 and 7, are band wheels assorted for any desired motion of the fan shaft O, according to the quantity of wind required, or the kind of grain to be cleaned; also may be added dampers, or shutters, to slide over

the supply holes (by which the fan is furnished with air) to regulate or give the necessary quantity. 30

8 and 9 are band wheels to drive the wind or flutter shaft L, for the purpose heretofore described.

10 and 11 are band wheels to work the elevator J; and by it the conveyer I. 35

12 and W are band wheels to work the pitman or rod Z'; the motion of each being easily comprehended by the drawings.

What I claim is— 40

1. The combination of the flutter shaft L, with the lattice band, in the manner described.

2. The arrangement of the trash trough S, and the air duct R, R', in combination 45 with the lattice band.

3. The arrangement of the additional sieve P''.

4. Also in combination with the above described threshing machine, the spiral conveyer I, and the elevator J; all as described. 50

WILLIAM EATON, JR.

Attest:

WM. W. WEBBER,
 ANDREW CAMPBELL.