J. Miller.

Grain Winnower.

No. 35,461. Patented Jun. 3, 1862.

Fig. 1.

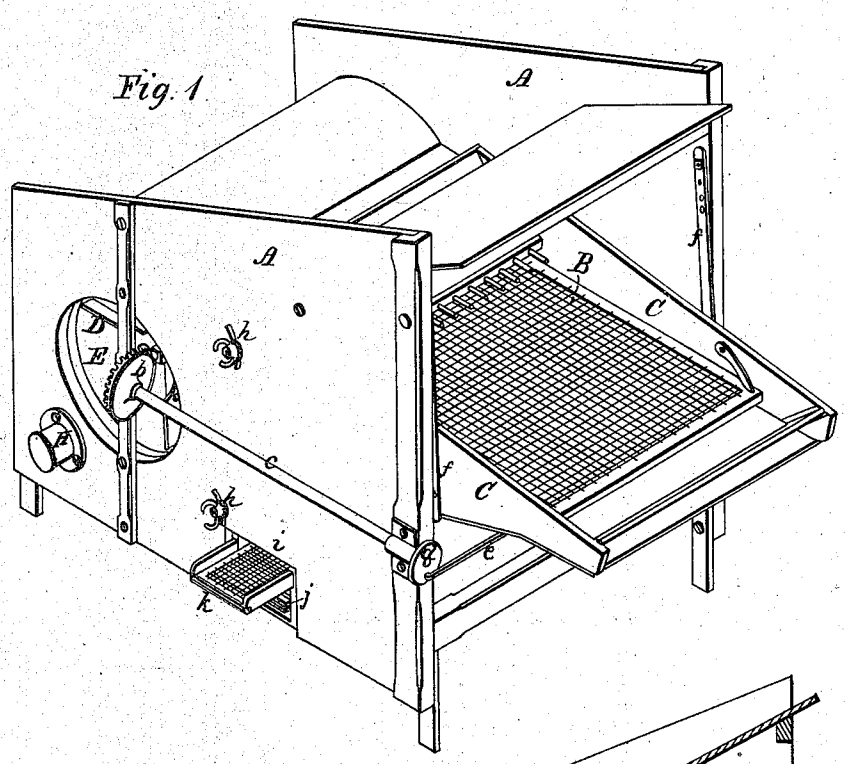


Fig. 2.

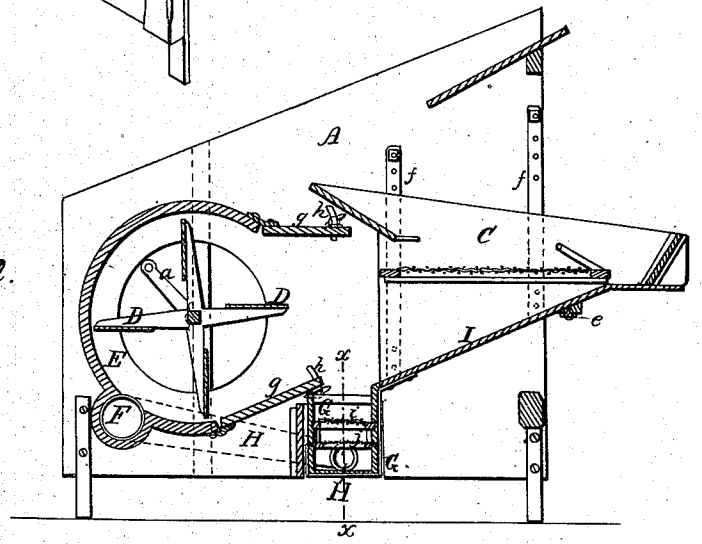
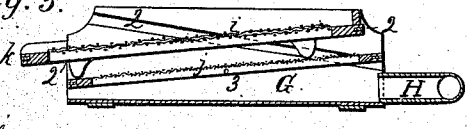


Fig. 3.



Witnesses.

Harry W. Price.

John Mathys.

Inventor.

Jacob Miller.

By Coby A. B. Stoughton

UNITED STATES PATENT OFFICE.

JACOB MILLER, OF CANTON, OHIO.

IMPROVEMENT IN FANNING-MILLS.

Specification forming part of Letters Patent No. **35,461**, dated June 3, 1862.

To all whom it may concern:

Be it known that I, JACOB MILLER, of Canton, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Fanning-Mills; 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 accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the machine. Fig. 2 represents a vertical longitudinal section, and Fig. 3 represents a section through the trough and riddle at the red line *x x* of Fig. 2.

Similar letters of reference indicate like parts in all the figures.

My invention consists, first, in a transverse trough and riddle connected with the main shoe and riddle for the purpose of giving the grain a second cleaning as it is carried to the side of the machine for bagging.

My invention further consists in combining, with the transverse trough and riddle having a shake motion a conducting-pipe leading from the fan-case, so as to subject the grain to a second blast as it is being carried to the side of the machine.

My invention further consists in so arranging the transverse riddle as that the grain may be delivered at either side of the machine.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A A are the sides of the fanning-mill, and B the main riddle connected with the main shoe C.

The fan D is inclosed in a chamber, E, and connected to or with the chamber E is an air-chamber, F, for supplying a blast to the secondary cleaning apparatus, as will be hereinafter described.

The fan D may be driven by a crank, *a*, and a small bevel-pinion on the fan-shaft may give motion to the bevel-gear *b* and its shaft *c*, said shaft having upon its opposite end from the gear-wheel *b* a crank-wheel, *d*, to which a spring-pitman, *e*, is connected by one of its ends, the other end being attached to the shoe C to give said shoe and its parts the necessary vibratory motion, the shoe being suspended to adjustable spring-straps *f f*. The force and direction of the blast from the fan to the riddle B may be regulated by the wind-boards *g g* and the slots and set-screws *h h*, connected thereto or therewith.

There is connected to the shoe C a trough, G, to which trough a riddle, *i*, is so connected that it may be inclined toward either end of said trough. This is conveniently done by two sets of grooves, 2 2, formed in the sides of the trough, into either of which sets, as the case may be, the riddle may be slid, the grooves inclining in contrary directions; but other modes of inclining the riddle to either side of the machine may be resorted to.

Underneath the riddle *i* there may be a second screen, *j*, of finer mesh, which is pivoted at about its center, as at 3, to the sides of the trough, so that it also may be inclined toward either side of the machine to correspond with the inclination of the riddle *i*. The end of the trough *k* should project far enough from the side of the machine to deposit the straw, chaff, &c., out of the way of the delivery of the cleaned grain.

A pipe or air-passage, H, leads from the fan-chamber F to the trough G, so that a blast may be driven through the trough and its screens to give the grain a second cleaning as it passes to the side of the machine. This pipe or trunk H may be connected to either side of the machine and enter at either end of the trough C, and instead of taking the blast from the main fan D a small fan may be used to make this blast.

The trough G and its riddles being connected to the shoe C, of course has a shake motion as the shoe and its riddles have, and the grain falling through the riddle B is directed by the board I into or onto the riddle *i* of the trough G, and thence the grain passes to the side of the machine.

This machine may be built and used in connection with thrashing-machines, so as to thrash and clean the grain in one continuous operation, or for cleaning and separating thrashed grain, it being applicable to both operations whether joint or separate.

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

1. In combination with the main shoe and

its riddle, the transverse trough and its riddle for the purpose of giving the grain a second cleaning as it passes to the side of the machine, substantially as described.

2. In combination with the transverse trough and its riddle, a conducting-pipe for introducing a blast into the trough to give the grain a second action of air as it passes over the transverse riddle, substantially as described.

3. The so arranging of the riddle or riddles in the trough as that they may be inclined to either side of the machine, for the purpose and substantially in the manner set forth.

JACOB MILLER.

Witnesses:
JOHN LAHM,
L. MILLER.