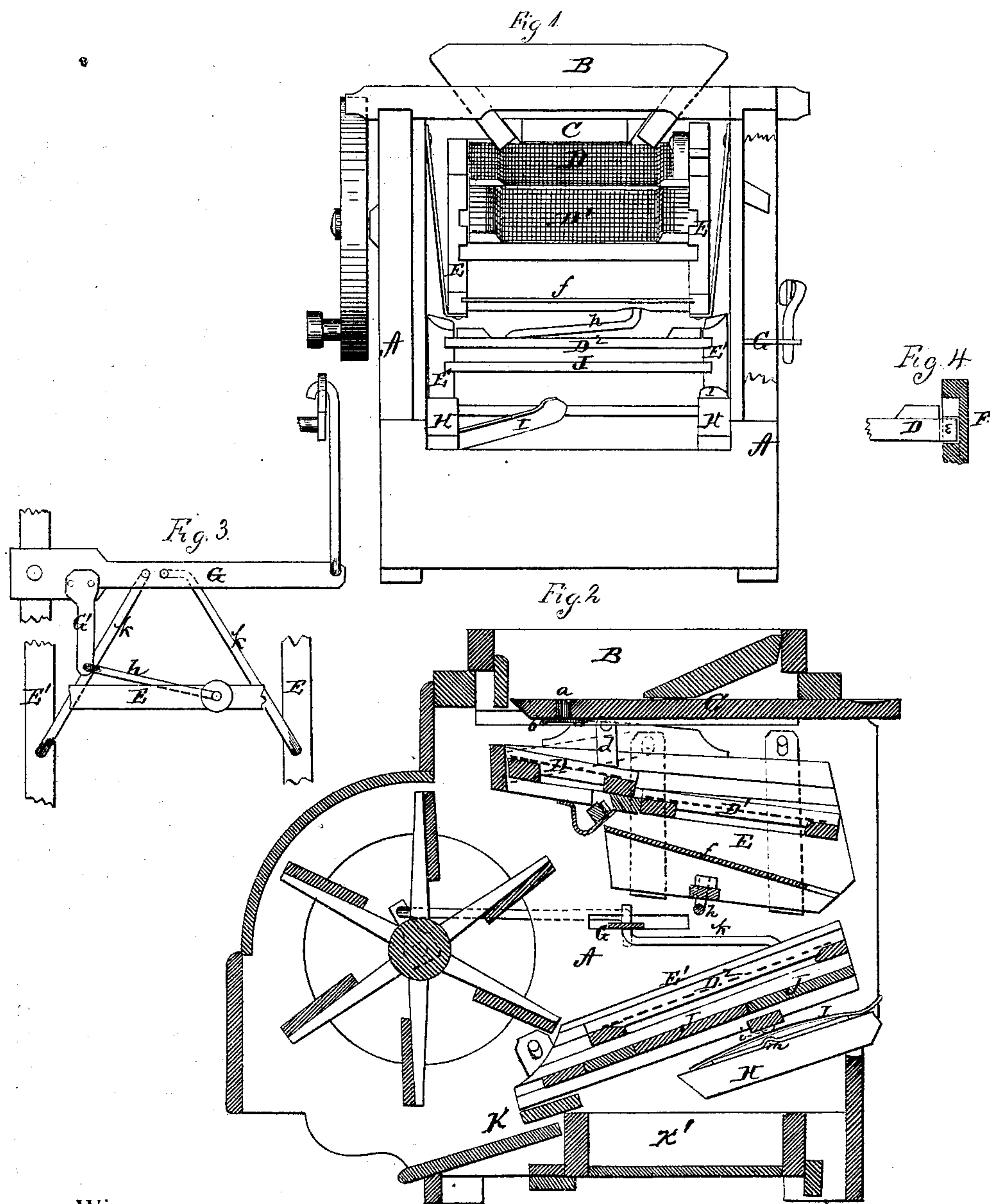


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Improvement in Fanning-Mills.

No. 126,616.

Patented May 7, 1872.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

BENJAMIN WRIGHT AND JOHN C. HOGABOAM, OF HUDSON, MICHIGAN.

## IMPROVEMENT IN FANNING-MILLS.

Specification forming part of Letters Patent No. 126,616, dated May 7, 1872.

*To all whom it may concern:*

Be it known that we, BENJAMIN WRIGHT and JOHN C. HOGABOAM, of Hudson, in the county of Lenawee and in the State of Michigan, have invented certain new and useful Improvements in Fanning-Mills; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists, first, in the slide board in the bottom of the hopper, provided with an aperture having a slide to open or close said aperture at will; second, in the arrangement of the sieve immediately under the hopper, with projecting tenons at the sides falling into gains in the sides of the shoe; third, in the arrangement of the devices whereby the lower shoe obtains its reciprocating as well as vibratory motion; and fourth, in the construction and arrangement of the lower shoe; all of which will be hereinafter more fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front elevation, and Fig 2 a longitudinal vertical section of our fanning-mill. Fig. 3 is a plan view, showing the connections between the shaker-bar and the upper and lower shoes; and Fig. 4 shows the tenon of the sieve immediately below the hopper inserted in its gain or recess.

A represents the frame of our fanning-mill with the hopper B on top. In the bottom of this hopper is a slide-board, C, which slides forward to make an opening for the grain to fall on the upper end of the sieve D immediately under it, and this slide-board is provided with an aperture, *a*, having a slide, *b*, underneath, to allow the grain to pass on to the center of the sieve, when necessary. The sieve D is at its front end on both sides provided with a projecting tenon, *e*, which falls into a gain made in the bottom of the grooves in the sides of the upper shoe E. The sieve D is then held in its place by a button, *d*, as shown in Fig. 2. The upper shoe E is suspended, as shown, to allow of a vibratory motion, and is

provided with another sieve, D', and board *f*. G represents the shaker-bar inside of the frame A, with one end projecting through the same, and receiving its motion from a crank on the fan-shaft connected with said end of the shaker-bar. From the shaker-bar G projects an arm, G', which is, by a rod, *h*, connected with the upper shoe E, by means of which said shoe obtains its vibratory side motion. The shaker-bar G is also, by two rods, *k k*, connected with the lower shoe E', which rods connect one with each side of the shoe, thereby giving it the necessary reciprocating motion. We are aware that a single rod has been used to connect the shaker-bar with the lower shoe, but this has been found to give a very unsteady and uncertain motion, while by using two rods, one attached to each side of the shoe, a steady and uniform reciprocating motion is obtained. This lower shoe or sliding frame E', that holds the lower sieve D<sup>2</sup>, is suspended at either one or both ends, and has, as above described, a horizontal or reciprocating motion over the bed pieces H H. It is also provided on its under side with projecting points *i i*, to give a vibratory motion to the frame and sieve. Upon each of the bed pieces or ways H, and under the shoe or frame E', is pivoted a sliding or adjustable latch I, to regulate the vibration of the shoe. When these latches are turned under either side of the shoe it glides smoothly without any jarring motion, while, when they are turned away from the same, the projections *i* will strike and pass over projections *m* on the ways H, giving to the shoe a violent jarring motion. Under the sieve D<sup>2</sup>, in the shoe E', are sliding lids J J arranged in grooves in the sides of the shoe. When both of these slide-lids are in the lower groove there will be no screenings in the box; but if one is taken out the screenings from half the sieve passes into the box or drawer K'. When the grain falls from the lower sieve D<sup>2</sup> and slide-lids J J, it strikes on a board, K, passing through an air-passage, through which the blast from the fan passes, carrying any foul seed that has escaped the screen into the drawer below, thus giving three chances to get out the foul seed from the time it leaves the hopper.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The slide-board C provided with aperture *a* and slide *b*, and arranged in the bottom of the hopper B, substantially as and for the purposes herein set forth.

2. The arrangement of the sieve D with tenons *e e*, gains in the sides of the shoe E, and button *d*, substantially as and for the purposes herein set forth.

3. The arrangement of the two rods *k k*, connecting the shaker-bar G, one with each side of the lower shoe E', substantially as and for the purposes herein set forth.

4. The combination of the shoe E' with pro-

jections *i i*, ways H H with projections *m m*, and the sliding or adjustable latches I I, all substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 30th day of January, 1872.

BENJAMIN WRIGHT.  
JOHN C. HOGABOAM.

Witnesses:

G. I. THOMPSON,  
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