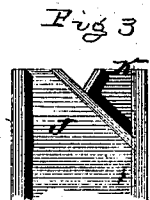
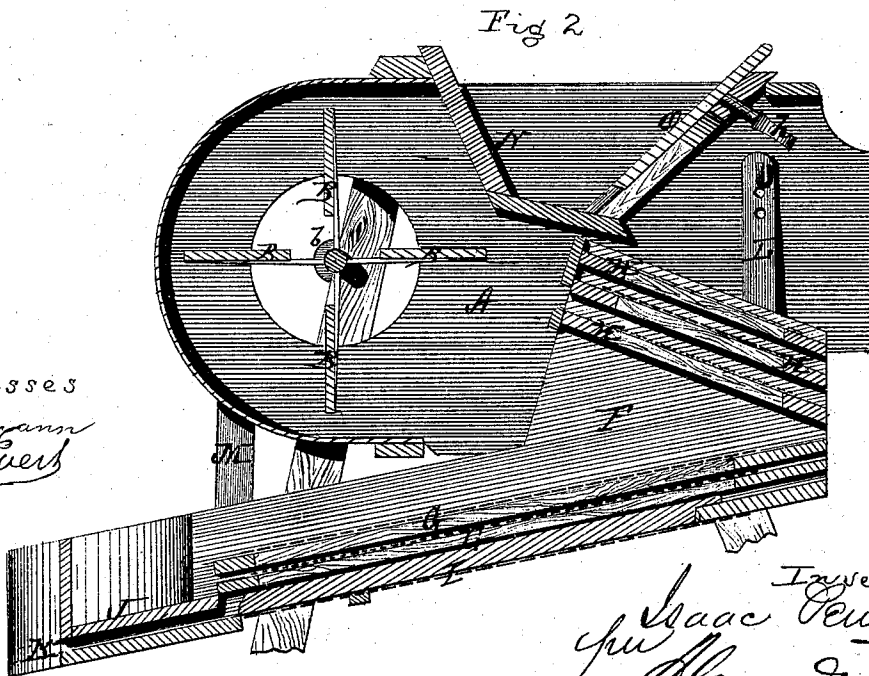
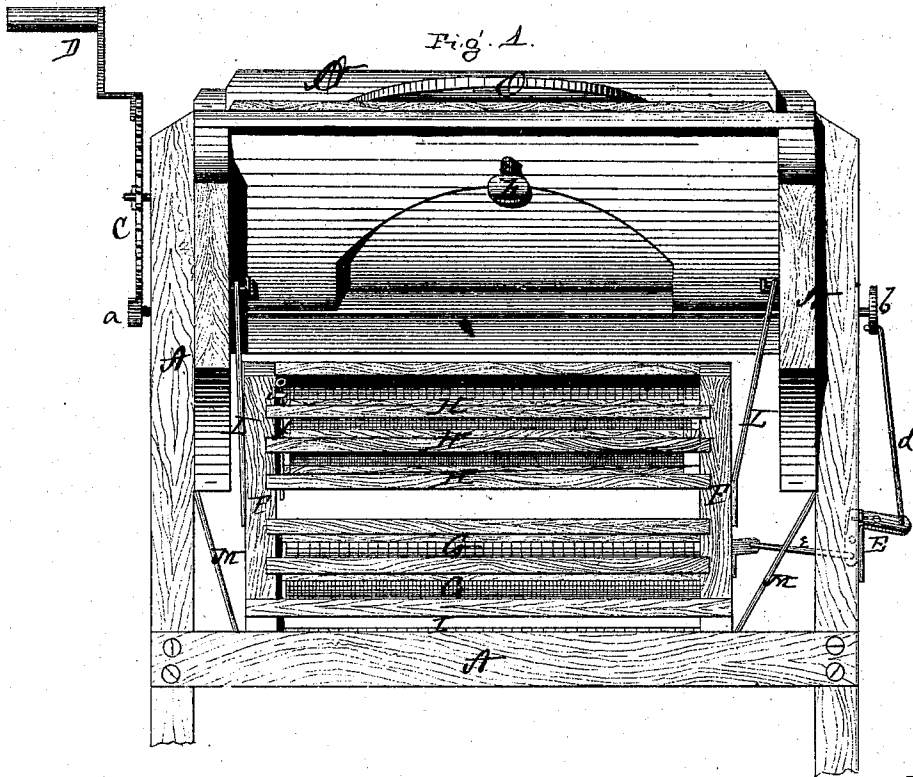


I. PENNINGTON.

Grain Winnower.

No. 99,469.

Patented Feb. 1, 1870.



Witnesses
J. Lehmann
& C. Guert

Inventor.
Isaac Pennington
per Alexander Macdonald
att'y.

United States Patent Office.

ISAAC PENNINGTON, OF TIFFIN, OHIO.

Letters Patent No. 99,469, dated February 1, 1870.

IMPROVEMENT IN GRAIN-FANS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, ISAAC PENNINGTON, of Tiffin, in the county of Seneca, and in the State of Ohio, have invented certain new and useful Improvements in Grain-Fans; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference thereon, making a part of this specification.

The nature of my invention consists in the construction and general arrangement of a "grain-fan," as will be hereinafter fully set forth.

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

Figure 1 is a rear elevation, and

Figure 2, a longitudinal vertical section of my grain-fan.

Figure 3 is a plan view, in reduced dimensions, of the front end of the spouts.

A represents the frame of the machine, in the front portion of which is situated the fan B.

On one end of the fan-shaft is attached a small pinion, *a*, which gears with a large cog-wheel, C, turned by a crank, D, thus imparting a rapid rotary motion to the fan.

From a crank or crank-wheel, *b*, on the other end of the fan-shaft, a rod, *d*, communicates motion to one end of a bent lever, E, which is pivoted, at its angle, at a suitable point on the frame A.

The other end of the lever E is, by a rod, *e*, connected with the vibrating frame F, thus giving said frame its necessary reciprocating or vibrating motion.

By changing the rods *d* and *e* closer to or further from the pivot-point of the lever E, the motion of the frame F can be readily regulated.

In the rear portion of the frame F are two, three,

or more inclined sieves, H H, which are adjustable in grooves in the sides of the frame, and held by a rod, *f*, which passes through holes in the frames of said sieves, and also through a loop, *i*, in the frame F.

The sieves H H are inclined toward the rear and downward, as seen in fig. 2.

In the lower portion of the frame F, and inclining in the opposite direction, are two or more sieves, G G, which empty in the spout J, while anything that passes through the sieves G G is caught by a sieve, I, in the bottom of the frame F, and is carried out under the spout J, through the spout K.

The frame F, with its sieves and spouts, is suspended by adjustable straps L L, at the rear end, and by other adjustable straps, M M, at or near the front end.

The hopper N is provided with a slide, O, dovetailed between guides, and held in any position desired by the set-screw *h*, so that the amount of grain passing to the fan can be easily regulated.

I am aware that the devices herein shown and described, when taken separately, are not new, and I do not therefore claim them as such; but

What I do claim as new, and desire to secure by Letters Patent, is—

In the grain-fan herein described, an improved arrangement of parts, consisting of the frame A, fan B, crank *b*, connecting-rods *d e*, lever E, frame F, with sieves G H and bottom I, spouts J K, hopper N, and adjustable slide O, when said parts are constructed, arranged together, and operated as described.

In testimony that I claim the foregoing, I have hereunto set my hand, this 11th day of September, 1869.

ISAAC PENNINGTON.

Witnesses:

D. J. GOODELL,
H. GRASS.