L. BRONSON.

FANNING MILL.

No. 110,196. Patented Dec. 20, 1870.

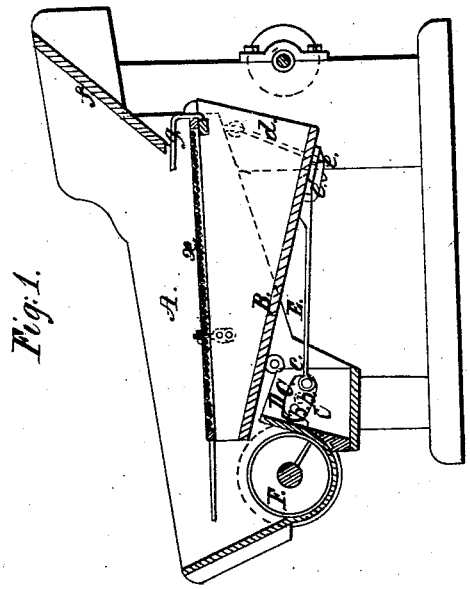

Fig. 1.

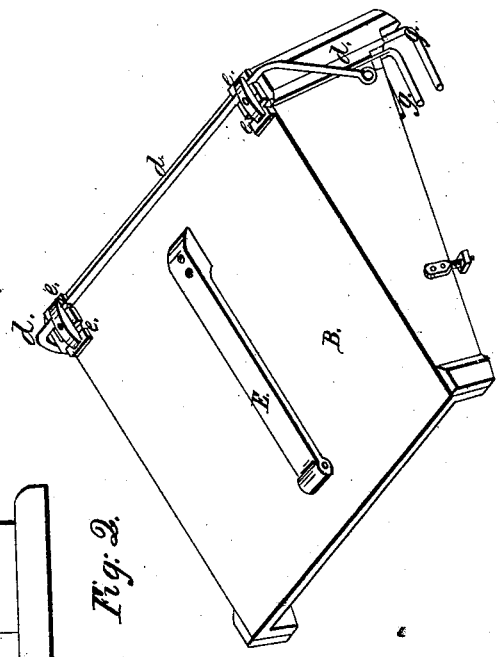

Fig. 2.

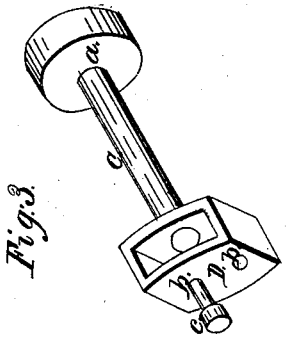

Fig. 3.

Witnesses.

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United States Patent Office.

LEVI BRONSON, OF BUFFALO, NEW YORK, ASSIGNOR TO JAMES BRALEY, OF SAME PLACE.

Letters Patent No. 110,196, dated December 20, 1870

IMPROVEMENT IN FANNING-MILLS.

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

I, LEVI BRONSON, of Buffalo, in the county of Erie, and State of New York, have invented certain new and useful Improvements in "Fanning-Mills," of which the following is a specification.

Nature of the Invention.

My invention relates to the "shoes" of fanning-mills, and consists in the employment of an inner movable and adjustable shoe hung within an outer shoe or frame; and also in the means of giving it a double movement.

It further consists in attaching fingers to the inner shoe, as hereinafter described.

General Description.

In the drawing—

Figure 1 is a sectional side elevation.

Figure 2 is a perspective view of the bottom of the shoe.

Figure 3 is a perspective of the half shaft and head.

A is the ordinary shoe, except that it is stationary instead of movable, as is usual.

Inside of this I arrange another shoe, B, to which is attached the sieve or sieves *x*, and give to it a longitudinal, vibrating, and also an up-and-down movement.

This is accomplished by means of the half shaft C having a pulley, *a* on its outer end, and an adjustable head, D on its inner end, which is provided with holes *b b'*, set at unequal distances from the center, through which a wrist-pin, *c*, is set, having attached a spring arm or pitman, E, the other end being fastened back to the bottom of the movable shoe B.

This gives it the forward-and-backward or vibrating movement, which is regulated by means of the adjustable head, as above described.

To produce the up-and-down movement, a bent rod or hanger, *d*, is hung by both ends to the front end of outside frame A, and runs across and underneath the shoe B, the bottom of the shoe near its end resting on the hanger.

As the shoe is moved forward and backward, this hanger which sways with it, moves the shoe up and downwhen carried beyond the perpendicular.

To produce a higher movement, the hanger is set back a short distance on the bottom of the shoe, in slot *e*, provided for it.

To get less of this tossing motion, it is set in slot *e'* toward its outer end, (see fig. 2.)

By this method of adjustment I claim that my fanning-mill will discharge more freely than others.

F is the ordinary screw-conveyer.

Instead of attaching fingers to the grain-board *f*, I attach fingers *g g* to the feeding end of the inside shoe, and which, therefore, receive the double motion of the shoe, and thereby distribute better than stationary fingers attached in the usual manner.

My grain-board *f* is stationary, being attached to the outer shoe, as shown in fig. 1.

Screens are ordinarily attached to the shoe in a loose manner, by pins or lugs, but soon wear loose and have to be repaired; but I attach mine by means of bolts or their equivalents, as shown in figs. 1 and 2.

The special advantages of my construction are,

The shoe is less liable to clog; also, by means of the adjustable head and pitman, a long or short stroke, for different kinds of grain, is obtained, which is highly important.

The adjustment of the shoe for the up-and-down motion is also important, as it allows the screens to clear themselves with much less blast than by the old method.

I am aware that shoes are often hung to vibrate forward and back and up and down, but not like mine, or moved by my means.

I am acquainted with a patent of M. Laufenburge, June 2, 1860, which shows "two inclined sieves vibrating alternately, but mine do not vibrate alternately, but both have the same motion and are attached to the shoe B.

The novelty in my invention consists of the inner shoe B, with spring arm or pitman E, with the head D, having adjustable holes *b b'* for the wrist-pin *c*, by which a forward-and-backward movement is obtained; also, in the adjusting of the hanger *d* on the bottom of the shoe B by means of slots *e e'*, or their equivalents, which gives a greater or lesser tossing motion to the shoe; also, attaching the fingers *g g* to the inner shoe, by which they receive a double motion, and thereby distribute better.

Claims.

1. The arrangement of the spring E with the inner shoe B, hanger *d*, and slots *e e'*, when constructed substantially as shown and described.

2. The skeleton head D, upon short shaft C, provided with the adjusting holes *b b'*, combined with the inner shoe B, constructed substantially as set forth.

3. The combination and arrangement of the inner shoe B, screw-conveyer F, bent fingers *g g*, attached to the head of the inner shoe, the whole constructed substantially as and for the purpose described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LEVI BRONSON.

Witnesses:

J. R. DRAKE,

C. N. WOODWARD.