

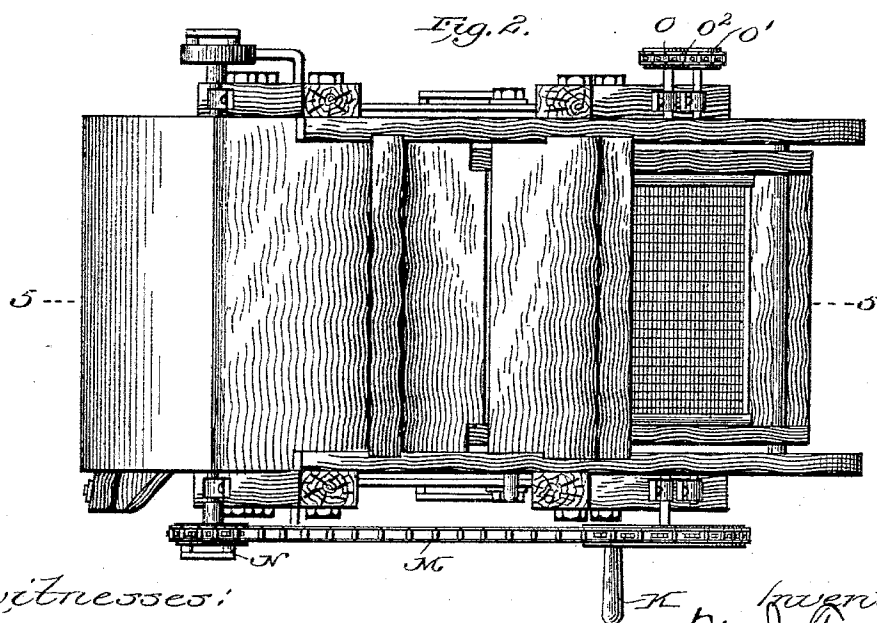
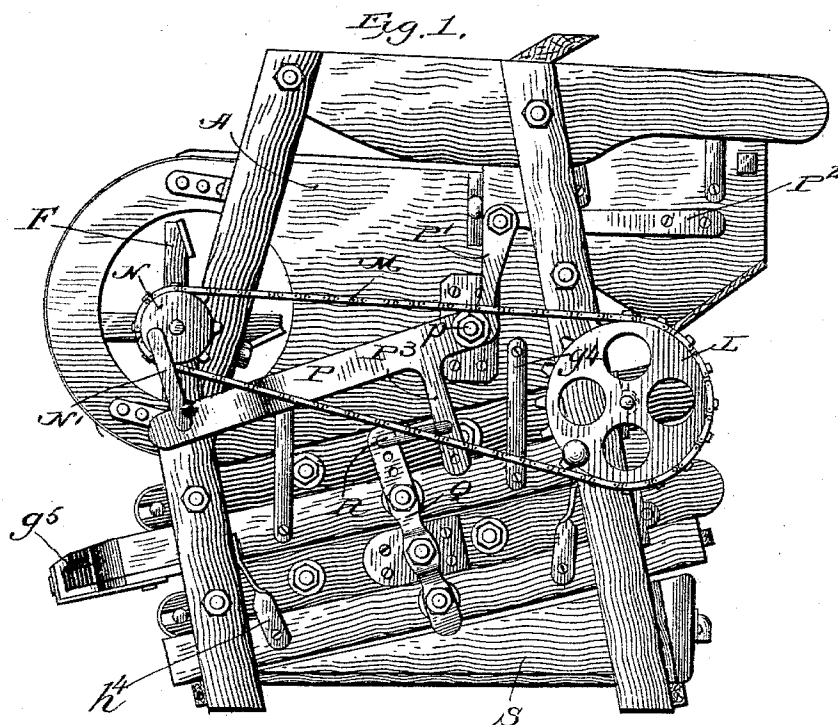
(No Model.)

3 Sheets—Sheet 1.

M. J. FRAMBACH.
FANNING MILL.

No. 569,629.

Patented Oct. 20, 1896.



witnesses:

Henry B. Rohrer.
A. M. Parkins.

Inventor:
M. J. Frambach
by Lemuel Goldsborough
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(No Model.)

3 Sheets—Sheet 2.

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Fig. 3.

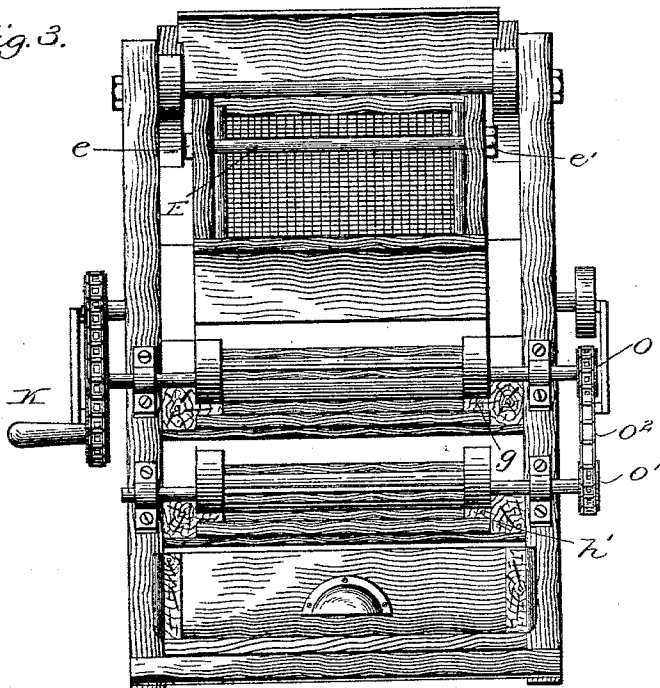
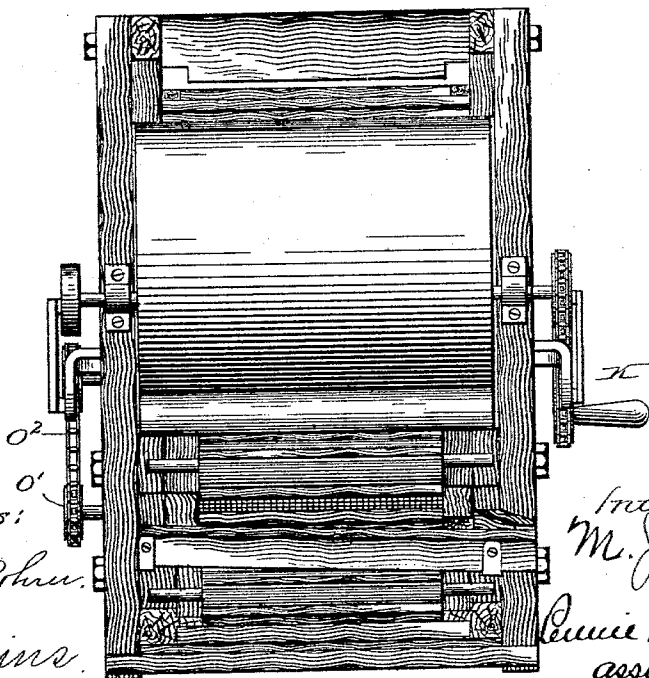


Fig. 4.



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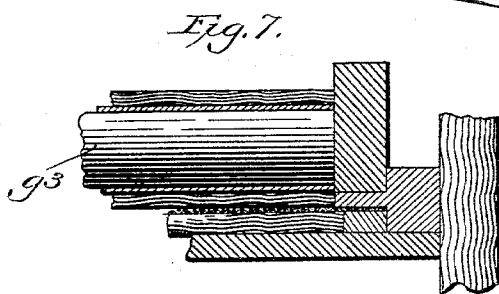
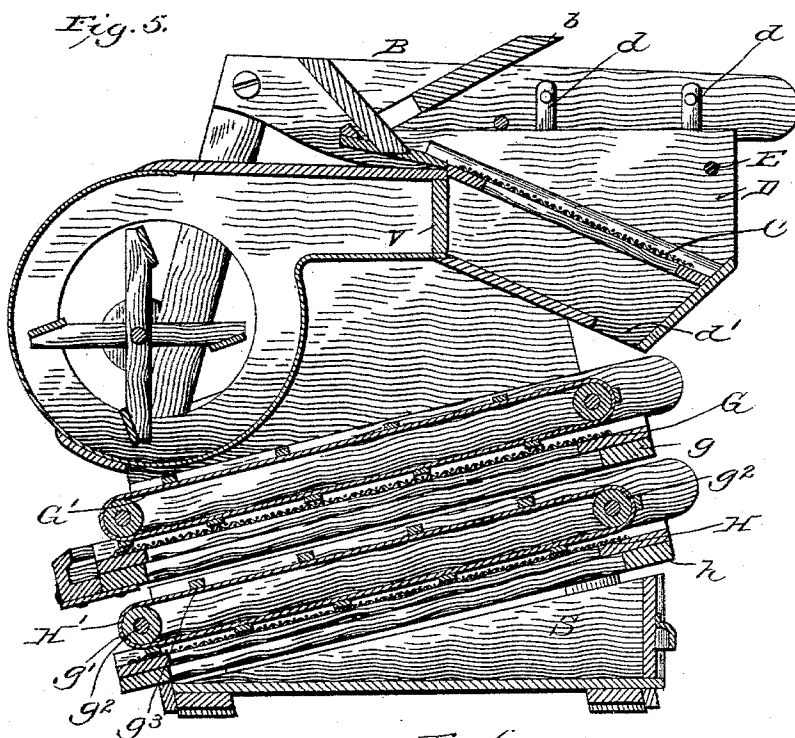
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3 Sheets—Sheet 3.

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No. 569,629.

Patented Oct. 20, 1896.



witnesses
Henry B. Rohrer.
A. M. Parkins.

Inventor:
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UNITED STATES PATENT OFFICE.

MATT J. FRAMBACH, OF ROCK, IOWA.

FANNING-MILL.

SPECIFICATION forming part of Letters Patent No. 569,629, dated October 20, 1896.

Application filed November 12, 1895. Serial No. 568,702. (No model.)

To all whom it may concern:

Be it known that I, MATT J. FRAMBACH, a citizen of the United States, residing at Rock township, in the county of Cherokee and State of Iowa, have invented certain new and useful Improvements in Fanning-Mills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improved fanning-mill or grain-cleaner, by means of which the grain is cleaned and separated from chaff, dirt, &c.; and while the invention is particularly adapted for cleaning oats it can also be used for cleaning other grains.

The object of the invention is to provide a cheap and simple machine for the purpose stated, which can be used either with or without an air-blast, and one in which the various parts can be adjusted as desired.

Another object is to provide a machine in which the screens will always be kept clean.

With these and such other objects as will be hereinafter brought out the invention consists in the peculiar construction of the several parts, and in the novel manner of combining or arranging said parts, as will be more fully described hereinafter, and pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a side view of my improved machine. Fig. 2 is a top plan view. Fig. 3 is a rear end view. Fig. 4 is a front end view. Fig. 5 is a vertical longitudinal section on line 5 5 of Fig. 2. Fig. 6 is a detail view of the cut-off valve, and Fig. 7 is a detail sectional view.

In carrying out my invention I employ a main frame or support A, in the top of which is arranged a hopper B, having an adjustable feed-gate *b*. The hopper discharges upon a screen C, arranged within a shoe D, which shoe is suspended within the frame by means of hanger-bars *d d* and is adapted to be vibrated, as hereinafter described. The screen C can be adjusted within the shoe, and in order to accomplish this I provide a tension-bolt E, which passes through the sides of the shoe, carrying a head *e* upon one end and a nut *e'* upon the other. When it is desired to adjust the screen, the nut is loosened, the

screen moved up or down, and the nut again tightened, thus binding said screen tightly between the sides of the shoe.

A rotary fan or blower F is arranged within the frame and beneath the hopper, the discharge-spout of said blower being projected rearward adjacent to the screen C.

In the lower part of the frame are arranged the screens G and H, the screen G being uppermost, which screens slide upon inclined ways *g* and *h*, respectively; and traveling above each screen is a scraper-belt G' and H', respectively, composed of the straps *g'*, traveling about rollers *g*², and the cross-slats *g*³, made in sections or in single slats, the purpose of the slats being to scrape the upper surfaces of the screens G and H, forcing the grain through and scraping off the dirt, chaff, &c.

In order to operate the fan-blower, screens, and belts, I employ a crank K, which is applied to a sprocket L, mounted upon the roller-shaft of the upper belt G', and passing over said sprocket is a drive-chain M, which passes around another sprocket, N, mounted upon the fan-shaft. By these appliances the upper belt and fan are operated, and to operate the lower belt I provide a sprocket O upon the opposite end of the upper roller-shaft, a sprocket O' upon the lower roller-shaft, and connect the same by means of a chain O². The screens G and H, besides sliding on the ways *g* and *h*, are also supported by hangers *g*⁴ and *h*⁴, respectively, and to operate these screens and also the top screen I provide levers P P, which are pivoted at *p* to the opposite sides of the main frame or casing and at their forward ends are connected with the sprockets N by means of pitmen N' N', and by means of which the levers are operated. Each lever is formed with an upward arm P', which connects with a rod P² upon the shoe D, so that as the lever is rocked upon its pivot the shoe and its screen C will be shaken back and forth. The lever is also provided with a pendent arm P³, which connects with another lever, Q, by means of a link R, said arm P³ and lever Q having a series of apertures to receive said link, so that a series of adjustments can be had to vary the reciprocation of the screens. The lower end of the lever Q is pivotally connected to the lower

screen, and it is connected with the upper screen near the upper end. It will thus be seen that when the crank is turned the fan will be operated, the screens reciprocated, and the scraper-belt driven, all from one shaft.

The shoe D is constructed with a discharge-opening d' , through which the grain passes to the screens G and H, and the screen G is provided with a discharge g^5 , into which the chaff is brushed.

A drawer or receptacle S is arranged beneath the lower screen, in which the cleaned grain is collected.

By means of the fan, dirt, &c., will be blown out at the rear end of the machine; but in some cases it may be desirable to dispense with the fan, and in such cases I employ a cut-off valve V, which is slid transversely into the case across the mouth of the blower and thus cuts off the blast of air. To restore the use of the air-blast, it is only necessary to remove the slide-valve.

Now, in operation the grain to be cleaned is deposited in the hopper, and from there it passes upon the first screen C, where it is subjected to a shaking motion and an air-blast at one and the same time. The dirt, chaff, &c., is blown out at the rear and the grain passes down to the next screen, where it is further cleaned and then dropped to the next one, after which it is collected. During these operations the screens G and H have been operated, and likewise the scraper-belts, which keep them clean.

The position of the screen C can be adjusted between the sides of the shoe whenever desired, and the throw of the screens G and H can also be adjusted by means of the arm P^3 , lever Q, and link R.

From the above description, taken in connection with the accompanying drawings, the

construction, operation, and advantages of my machine will be apparent to every one skilled in the art to which it relates.

Having thus shown and described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a grain-cleaner, the combination of a shoe carrying a screen, supplemental screens arranged one above the other below the shoe-screen, and means for simultaneously shaking all of said screens comprising a lever having an upwardly-projecting arm connected to the shoe and a downwardly-projecting arm pivotally secured below the upper supplemental screen, a second lever fulcrumed at a point between said supplemental screens and pivotally connected at its ends to said screens, a link connecting the said two levers, and mechanism for imparting motion to the first-mentioned lever.

2. In a grain-cleaner, the combination of a shoe carrying a screen, supplemental screens arranged one above the other below the shoe-screen and means for simultaneously shaking all of said screens comprising a lever having an upwardly-projecting arm connected to the shoe, and a downwardly-projecting arm pivotally secured below the upper supplemental screen, and provided with perforations, a second lever fulcrumed at a point between said supplemental screens pivotally connected at its ends to said screens, and perforated at its upper end, a link adjustably connecting the said two levers, and mechanism for imparting motion to the first-mentioned lever.

In testimony whereof I affix my signature in presence of two witnesses.

MATT J. FRAMBACH.

Witnesses:

STEPHEN A. SPINHARNEY,
JOHN LOUGHLER.