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Patented Jan. 29, 1901.

A. WALTER & S. A. FURMAN.  
FANNING MILL.

(Application filed Feb. 13, 1900.)

(No Model.)

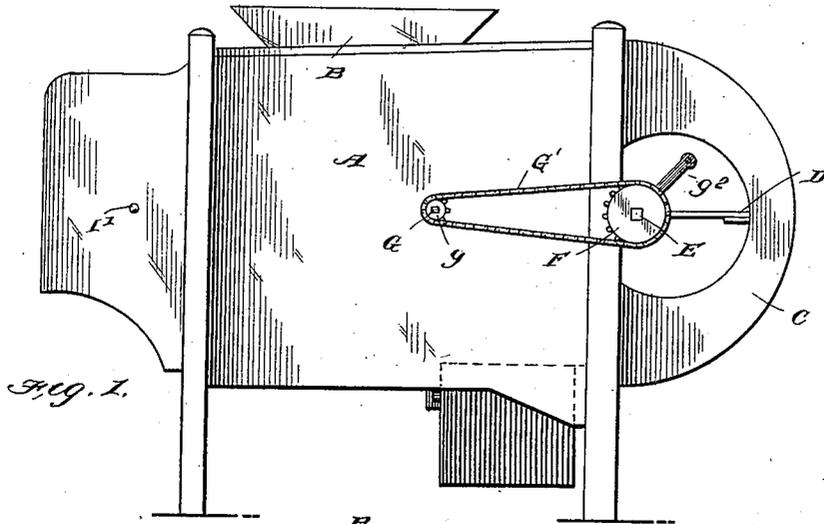


Fig. 1.

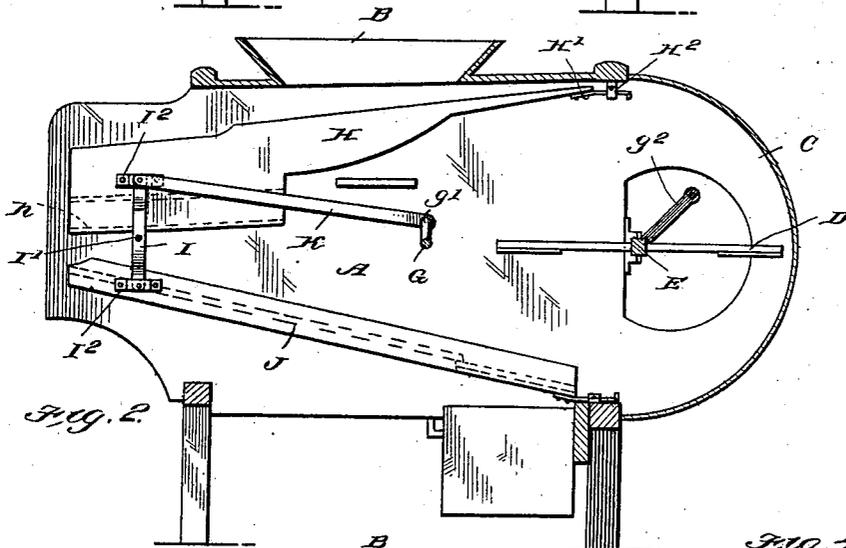


Fig. 2.

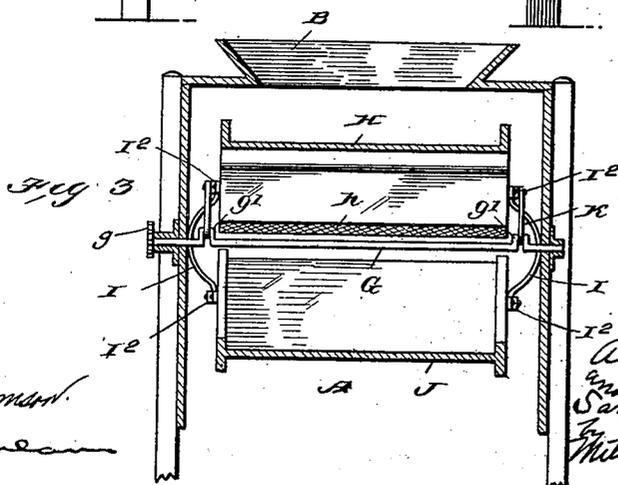
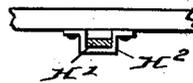


Fig. 3.

Fig. 4.



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# UNITED STATES PATENT OFFICE.

ALONZO WALTER, OF GORHAM, AND SAMUEL A. FURMAN, OF POTTER,  
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## FANNING-MILL.

SPECIFICATION forming part of Letters Patent No. 666,782, dated January 29, 1901.

Application filed February 13, 1900. Serial No. 5,110. (No model.)

*To all whom it may concern:*

Be it known that we, ALONZO WALTER, residing at Gorham, in the county of Ontario, and SAMUEL A. FURMAN, residing at Potter, in the county of Yates, State of New York, citizens of the United States, have invented certain new and useful Improvements in Fanning-Mills; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in fanning-mills, and has for one object to provide means which can be readily applied to the common types of fanning-mills, in common use, for supporting and giving the proper vibratory or oscillatory motion to the shoes and screens.

A further object of the invention is to provide a very simple and cheap means for supporting and moving the shoes and screens composed of the fewest possible number of parts.

A further object is to provide a single yoke or link supported by the fan-frame and connected to an upper and lower screen or sieve and means for imparting motion to said yoke, whereby motion is imparted to both of said screens or sieves.

A further object is to generally improve and simplify the construction of such machines.

With such objects in view the invention is embodied in the novel parts and arrangement and combinations of parts hereinafter described, and particularly set forth in the claim.

We have shown in the accompanying drawings a practical embodiment of our invention; but desire it understood that we do not wish to limit the invention in its useful application to the construction which we have there shown for the purpose of illustration.

In the drawings, Figure 1 is a side elevation of a fanning-mill embodying our improvements. Fig. 2 is a sectional view through the casing, showing the shoe and screen operating means in elevation. Fig. 3 is a trans-

verse sectional view through the casing. Fig. 4 is a detail view of parts H' and H<sup>2</sup>.

Referring to the drawings, A indicates the frame or casing of a fanning-mill, which may be of any approved or suitable construction and is shown as constructed with sides, a hopper B, a fan-chamber C, and a movable drawer or box for the screened and cleaned grain or other material.

D indicates a fan which, as shown, is mounted on a fan-shaft E, mounted in suitable bearings on the casing. This shaft extends through the casing at one side preferably and is provided with a sprocket-wheel, (indicated at F.) Also mounted in suitable bearings in the casing is a shaft G, parallel with the shaft of the fan and provided with a sprocket-wheel *g*, over which and the sprocket-wheel on the fan-shaft runs a sprocket-chain G' for transmitting motion from the fan-shaft to the shaft G. The shaft G within the casing is provided with one or more cranks, (indicated at *g'*), two being shown. The fan-shaft may be provided with suitable drive means—such, for instance, as a crank, (indicated at *g*<sup>2</sup>.)

Within the casing, between the sides thereof and beneath the hopper B, is an inclined shoe H, having the chafing-sieve *h* at its lower end. The shoe H is movably supported within the casing in the following manner: Secured to its upper or rear end is a strip H', which, as shown, slidingly engages in a U-shaped bearing-bracket H<sup>2</sup>, which is secured in any desired manner, as by screws, to the frame of the mill. One or more of these strips H' and bearing-brackets H<sup>2</sup> may be provided, one only being shown in the drawings. The strip H' is of sufficient length to prevent its disengagement from the bearing-bracket in the vibratory or oscillatory motion of the shoe, and, if desired, a stop device may be provided at or near the end of the strip H'. At its opposite end the shoe H is supported by a yoke I, which yoke, as shown in the drawings, is bent outwardly and pivoted intermediate its ends at said outwardly-bent portion to the mill-casing, as by a bolt or pivot I', the upper end of the yoke I being pivotally secured to the shoe H, conveniently in the manner shown—that is, by means of the U-shaped

bracket I<sup>2</sup>, secured to the shoe and pivotally secured to the upper end of the yoke I.

J indicates an inclined second shoe or screen for receiving the grain from the sieve *h*. This screen J is connected to the lower end of the yoke I, conveniently in a manner similar to the connection between the yoke and shoe H. At its other end the screen I is movably supported on the mill frame or casing, if desired, in a manner similar to the upper end of the shoe H. It will thus be seen that the adjacent ends of the shoe H and screen J are connected together and supported by the yoke I. Preferably two yokes I are employed, one at either side of the mill, as clearly indicated in Fig. 3 of the drawings.

Connected to the cranks *g* of the shaft G are pitman-rods K, each of which is connected at its opposite end pivotally to a yoke I, and conveniently the pitman-rods are provided with eyes engaging over the pivots connecting the yokes to the shoe or screen, and through these pitman-rods K oscillatory or vibratory motion is transmitted from the crank-shaft G to the yoke or yokes I, and thereby to both the shoe H and the screen J.

It is thought the operation of the machine will be readily understood from the above description.

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

In a fanning-mill, the combination with a casing or frame, of a shoe between the frame sides and movably supported at one end, a second shoe between the frame sides and movably supported at one end, and means for movably supporting the other ends of the shoes comprising yokes between the shoes and frame sides, said yokes being pivoted at one end thereof to one shoe and at the other end thereof to the other shoe, and said yokes having intermediate of the ends outwardly-bowed portions pivoted to the frame sides, a fan-shaft and fan between the ends of the shoes, a crank-shaft mounted between the shoes, means for transmitting motion from the fan-shaft to the crank-shaft, and a pitman connecting the crank-shaft to one of said shoes, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ALONZO WALTER.  
SAMUEL A. FURMAN.

Witnesses:

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