(No Model.) 2 Sheets—Sheet 1.

A. MEKELBURG.

FANNING MILL.

No. 334,183. Patented Jan. 12, 1886.

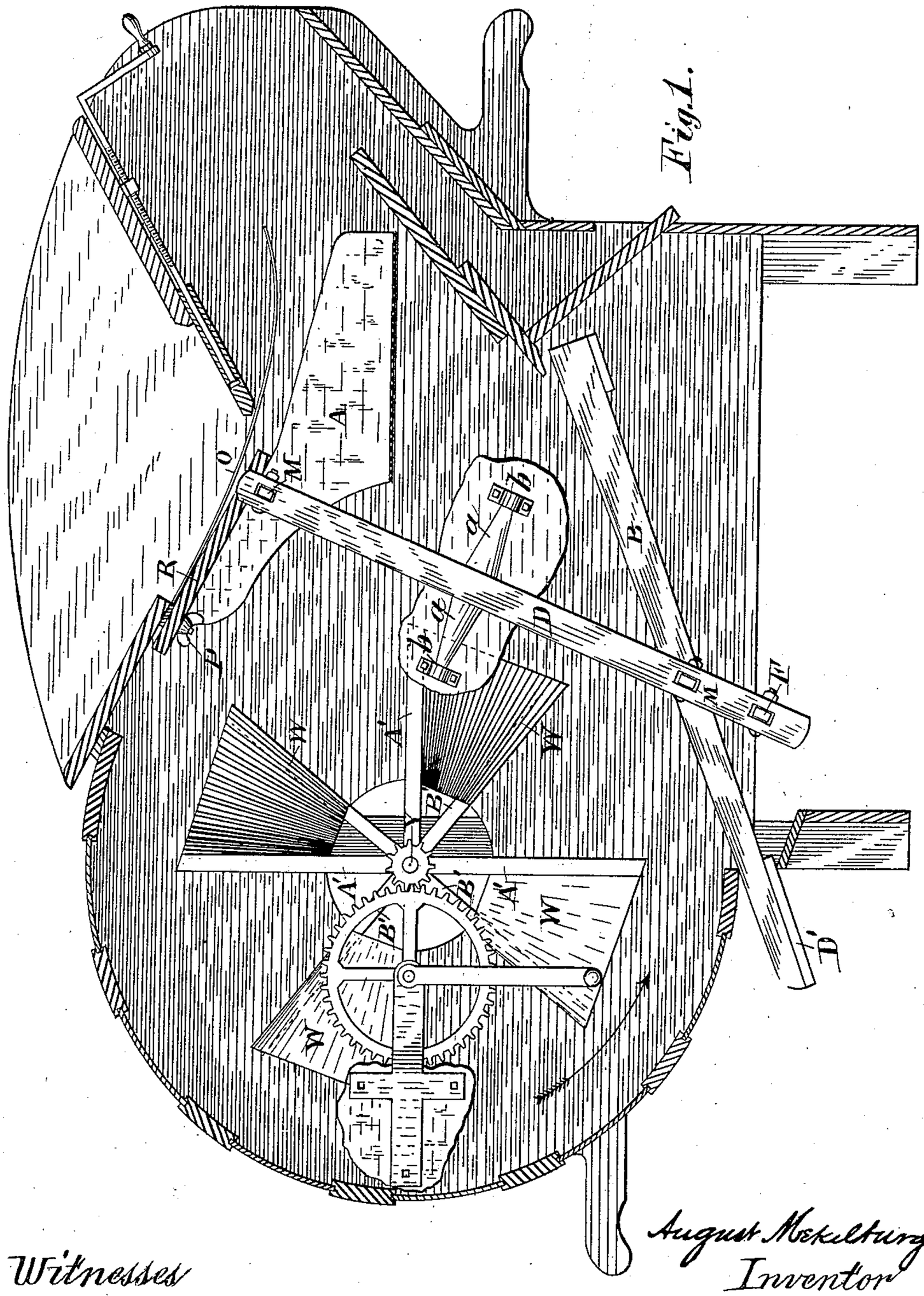

Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2

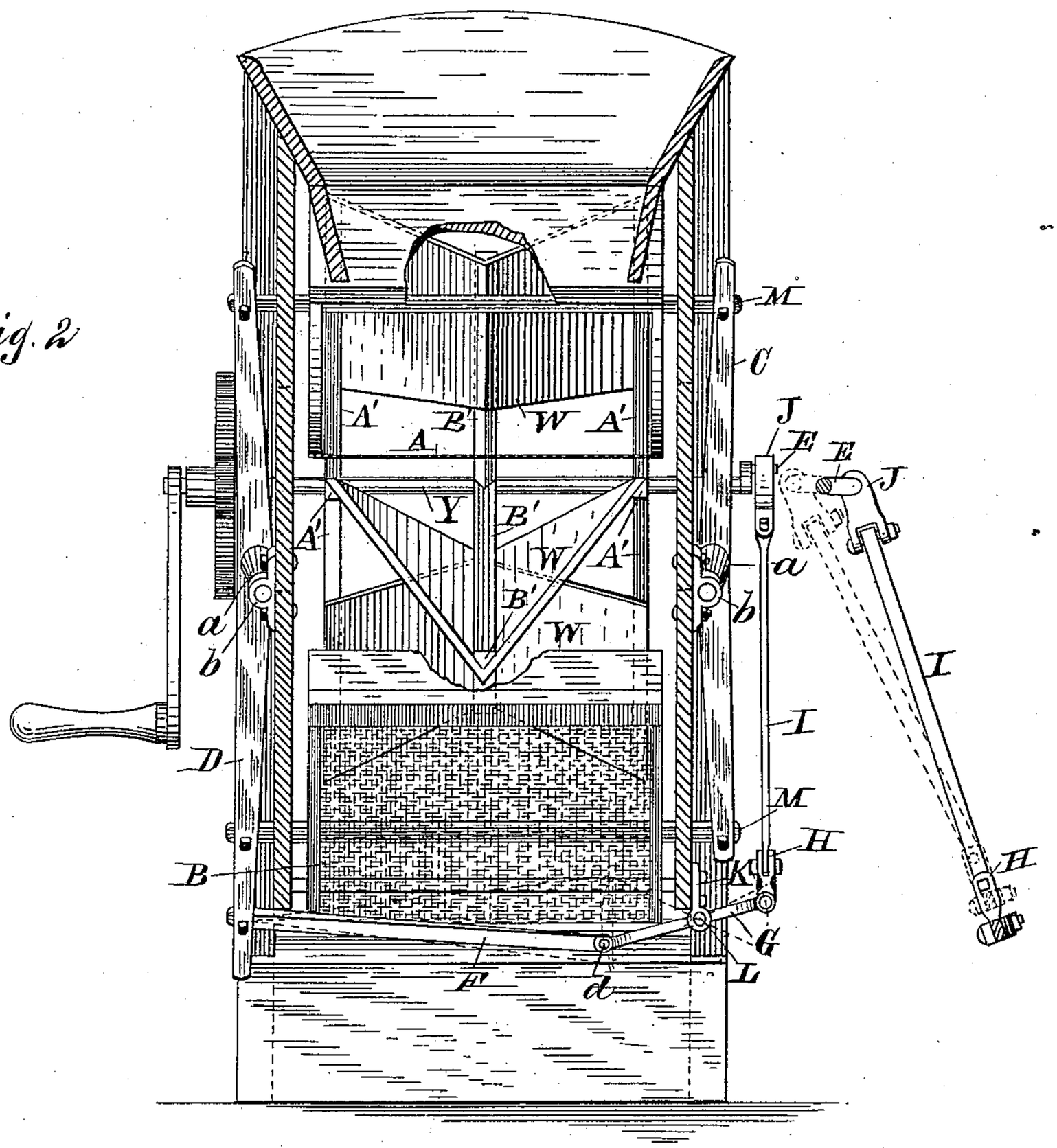
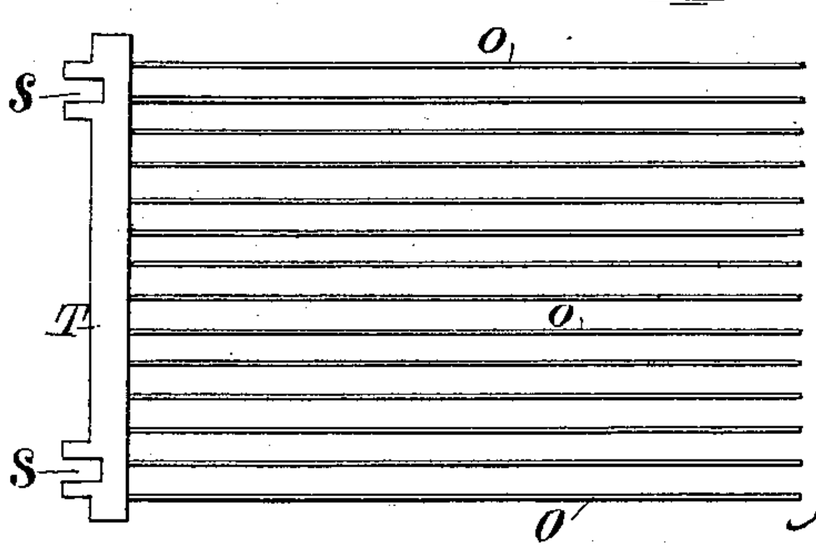


Fig. 3.



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UNITED STATES PATENT OFFICE.

AUGUST MEKELBURG, OF MILWAUKEE, WISCONSIN.

FANNING-MILL.

SPECIFICATION forming part of Letters Patent No. 334,183, dated January 12, 1886.

Application filed January 27, 1885. Serial No. 154,114. (No model.)

To all whom it may concern:

Be it known that I, AUGUST MEKELBURG, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in fanning-mills for cleaning grain, and pertains to the devices for supporting and shaking the screens, and the construction of the fan.

In the accompanying drawings, Figure 1 represents a side view of my improved mill with the wall of the mill upon the front side removed, showing the frame and internal mechanism. Fig. 2 represents an end view from the rear of the mill. Fig. 3 is a detail.

Like parts are represented by the same reference-letters throughout the several views.

In this machine I use two sets of screens—an upper set, A, and a lower set, B—both of which are supported at their respective sides by the vertically-arranged rocking levers C and D. The levers C and D are respectively centrally pivoted to the sides of the inclosing case or frame by the arms *a a* operating in the retaining-keepers *b b*. Thus it is obvious that as the mill is operated the two sets of screens are caused to simultaneously move in opposite directions, the upper set moving toward the right as the lower set moves toward the left, and the reverse. To the lower end of the lower screen, B, is affixed a grain-board, D′, over which the grain passes as it escapes from the screen without coming in contact with any stationary part of mill, whereby the the clogging of the escaping grain is obviated. The lever D is made slightly longer than the lever C, and motion is communicated to such lever D at its lower end from the crank E through the bar F, lever G, joint-coupling H, bar I, and joint-coupling J. The lever G is centrally pivoted to the side of the inclosing wall of the mill by the bracket K and pintle L, upon which pintle L it is caused to oscillate with each revolution of the crank E. To the inner end of the lever G is attached the bar F by a pin, *d*. As the lever G rocks upon the pin L, it communicates a short reciprocating motion to the bar F, which motion is communicated to the lever D, causing it to oscillate, as mentioned, upon its central pivotal support, *a*. The lever D is connected to the lever C at both its upper and lower ends by bars M M, to which the upper and lower sets of screens are respectively attached. Thus it is obvious that as the mill is operated motion is communicated from the crank of the fan-shaft through the mechanism described, causing the two sets of screens to be simultaneously oscillated in opposite directions.

To the upper end of the shoe of the upper set of screens is attached a series of metallic rods or fingers, O O, by means of hand-screws, P, (one of which only is shown in Fig. 1,) which screws pass down through the grain-board R and engages in the recesses S S of the connecting-plate T of said fingers, whereby said fingers are held in place beneath the mouth of the hopper. The office of the series of fingers O O is to catch and screen from the grain the straws and other coarse foreign substances.

To increase the capacity of the fans and the volume of the air-blast of the mill, and to give it a more direct and central course through and beneath the screens, I have substituted the angularly-arranged blades W W W W for the flat blades heretofore used. The blades W are connected to the shaft Y by arms A′ and B′ by nails or screws in the ordinary manner. The diverging edges of the blades are affixed to the inner surfaces of the outer arms, A′, and their converging edges unite upon the outer surfaces of the central arms, B′, as shown in Fig. 2. In operating the mill, the diverging edges of the blades thus united move in advance or precede the converging edges in the direction indicated by the arrows, as shown in Fig. 1.

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

1. In a fanning-mill, the combination of the series of screens A and B, connecting-levers C and D, central pivotal bearings, *a a*, screen-supporting bars M M, bar F, lever G, bar I, crank E, and shaft Y, substantially as set forth.

2. In a fanning-mill, the combination of the two series of screens A and B, levers C and D, supporting-arms *a a*, retaining-clasps *b b*, bars M M, connected at their respective ends to said levers C and D, bar F, lever G, bracket K, pin L, coupling-joint H, rod I, coupling-joint J, crank E, and shaft Y, substantially as and for the purpose specified.

3. In a fanning-mill, the combination of the fan-shaft Y, radial end arms, A′, radial central arms, B′, and angular radial blades W, said blades W being respectively formed in two parts, uniting centrally in a radial line upon said central radial arms and diverging outwardly and secured at or near their outer ends to said radial end arms, substantially as and for the purpose specified.

4. In a fanning-mill, the combination of the two series of screens A and B, connecting-levers C and D, supporting-arms *a a*, and mechanism for operating the levers C and D, and thereby reciprocating said screens horizontally in opposite directions, substantially as and for the purpose set forth.

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

AUGUST MEKELBURG.

Witnesses:
C. T. BENEDICT,
JAS. B. ERWIN.