(No Model.) 2 Sheets—Sheet 1.

G. J. SCHLOSSER.

AUTOMATIC FANNING MILL.

No. 441,331. Patented Nov. 25, 1890.

Fig. 2.

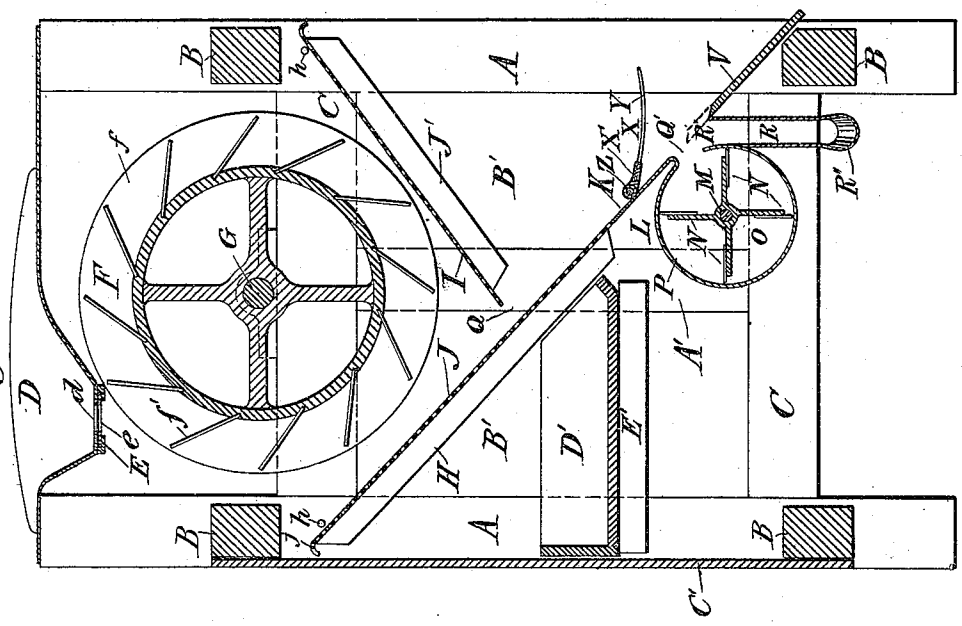
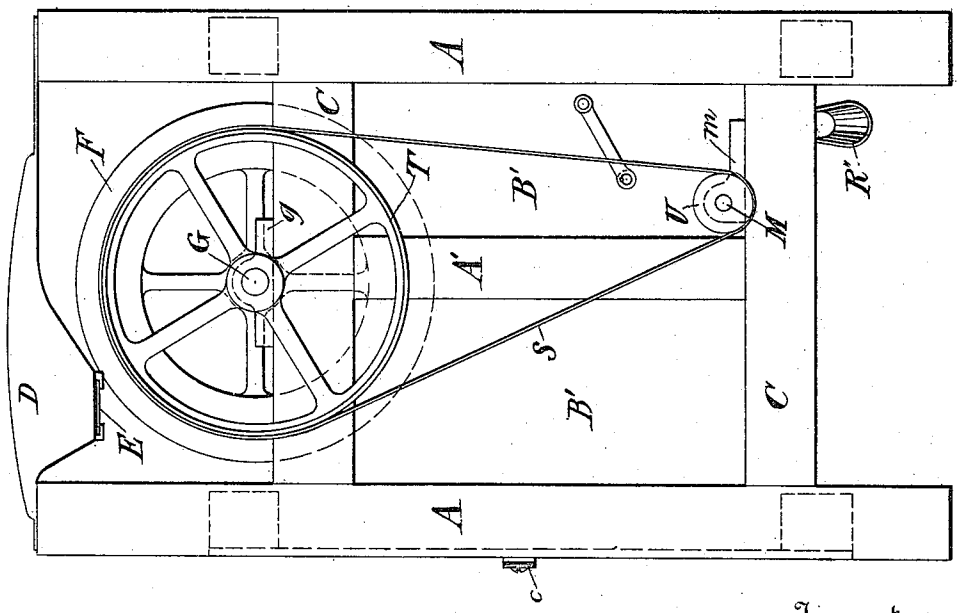


Fig. 1.



Witnesses
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Inventor
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per R. G. Dorsey
his Attorney

(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

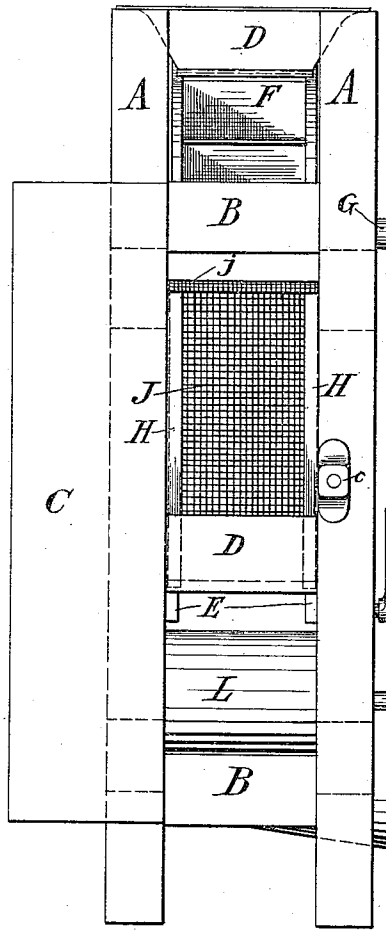
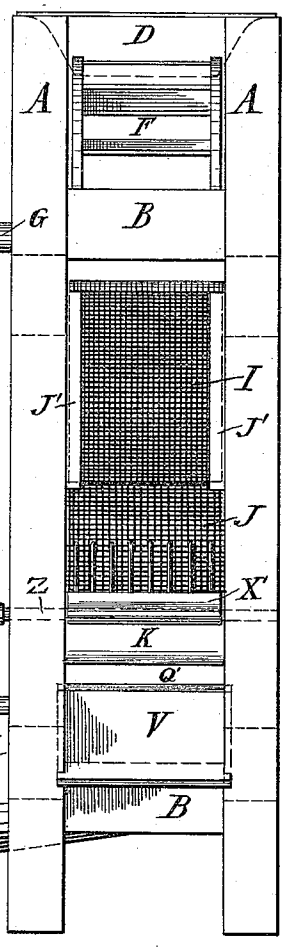


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE J. SCHLOSSER, OF LEADVILLE, COLORADO.

AUTOMATIC FANNING-MILL.

SPECIFICATION forming part of Letters Patent No. 441,331, dated November 25, 1890.

Application filed May 13, 1890. Serial No. 351,602. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. SCHLOSSER, a citizen of the United States, residing at Leadville, in the county of Lake and State of Colorado, have invented certain new and useful Improvements in Automatic 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 has relation to fanning-mills for grain-separating purposes; and my object is to produce a device in which the fanning apparatus is actuated by the weight of the grain passing through the machine.

With this end in view my invention consists in the peculiar construction and combinations of parts more fully described hereinafter, and pointed out in the claim.

Referring to the accompanying drawings, Figure 1 represents a side elevation of my complete structure; Fig. 2, a central section; Fig. 3, a front view, and Fig. 4 a rear view.

The frame-work consists of the main uprights or corner-posts A, the end cross-pieces B, and side bars C, connecting said posts, and the intermediate uprights or posts A′, erected between the side bars C. Panels B close the sides of the structure, while the rear of the same is provided with a door C′, hinged to one of the corner-posts and held in closed adjustment by a suitable button *c* on the opposite post. The front is left entirely open.

The hopper D is mounted between and secured to the upper ends of the main uprights A, and is provided with an opening *d* and a sliding cut-off plate E, provided with a similar registering opening *e* and arranged to either cut off or let flow the supply of grain. Beneath this hopper and between the upper side bars C is mounted a large wheel F on a revolving shaft G, having bearings in boxes *g*, secured to the upper surfaces of said side bars directly over the intermediate posts A′, thus bringing the rear portion of the wheel beneath the opening in the hopper and its lower half below the side bars and between the panels. This wheel F is made like a water-wheel, having high flanges *f* and slanting buckets *f′* secured across between them, on which the falling grain impinges. A screen J is placed behind the wheel F and slides on and is supported by the inclined strips or ways H, secured to the side walls of the outside casing, and said screen is confined in proper position by the pins *h* and also prevented from sliding down too far by the flange *j*, turned down at its upper end and arranged to bear against the ends of the strips. Its lower end rests upon a plate K, bearing upon the lower ends of the strips H and forming part of a casing L, surrounding the rotary fan. Thus it is apparent that the screen is readily removable, and a coarse one can be removed for fine, and vice versa. A similar screen I is arranged beneath the front of the wheel and slants down toward the first screen, an opening Q being left, however, between them for the passage of the grain. This screen also slides upon strips or ways J′, and is thus removable in the same manner as the first one.

The rotary fan consists of a shaft M, mounted in boxes *m* on the opposite sides of the lower side bars, and wings or blades N projecting radially therefrom, and this fan is surrounded by a cylindrical casing L, consisting of the circular side pieces O, secured to the inside walls of the frame at the juncture of the lower side bars and the intermediate posts A′, and the curving plate or cylinder P, extending around the edges of the side or end pieces O, a slot or opening Q′ being left directly in front of the rotary fan, and the plate above said opening is turned back to form the portion K, previously mentioned.

A slide V is provided for regulating the size of the opening Q′. A chute R leads from the opening and consists of the enlarged part R′, extending across the full width of said opening, and inclined spout R″, leading to one side. I also provide a straw-screen X, consisting of a plate X′ and teeth Y projecting therefrom, and this screen is pivoted upon the plate K by means of the pin or bolt Z, projecting through the plate X′ and the side panels B′. It will be seen that this device can be removed, if desired, by simply withdrawing the bolt Z.

The preferred construction of my device having been set forth, I will now proceed to describe its operation. The grain is first introduced into the hopper D and by means of the sliding cut-off plate E allowed to fall

through upon the slanting buckets of the large wheel F. Thus the weight of the grain will revolve the wheel, and at the same time the grain will be carried round the buckets and emptied through the opening Q upon the screen *j*, and some of the dirt and other objectionable matter will be sifted through the latter, the grain passing down over the slanting screen in front of the fan. Some of the grain is also thrown against the opposite screen I, but this screen will also convey it to the opening Q. The dirt and dust sifting through these screens falls into a box or drawer D′, arranged beneath them to slide on a pair of strips or ways E′, secured to the inside walls of the casing, and this box can thus be removed from time to time, when it becomes necessary, by opening the door C′ and sliding it out. It will be seen that as the large wheel revolves it will also carry with it the pulley T, and that through the medium of the belt S the small pulley U, and consequently the fan, will be rotated at a high rate of speed. Hence as the grain flows over the plate K of the casing L and in front of the fan the draft created by the latter will blow or carry off the chaff and other light matter descending with the grain, while the grain itself, being heavier, will continue on into the chute R and out through the slanting spout R″, ready for use in a clear and purified state. The straw and like matter will be caught in the screen X. Thus I produce a simple, economical, and purely automatic mill through which the grain can be passed and will itself act to revolve the rotary fan.

It is evident that my device might be changed in many slight ways which might suggest themselves to a skilled mechanic, and hence I do not limit myself to the precise construction herein shown, but consider myself entitled to all such slight variations as come within the spirit and scope of my invention.

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

The combination, with a suitable hopper and bucket-wheel for conducting the grain, of the inclined screens I J, the slide V in line with the screen J, the blast-fan M N, the spout R, and the hinged fingers X, arranged above said spout to check the descending grain while being subjected to the blast, substantially as described.

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

GEORGE J. SCHLOSSER.

Witnesses:
HENRY C. ROSE,
L. L. CALLEN.