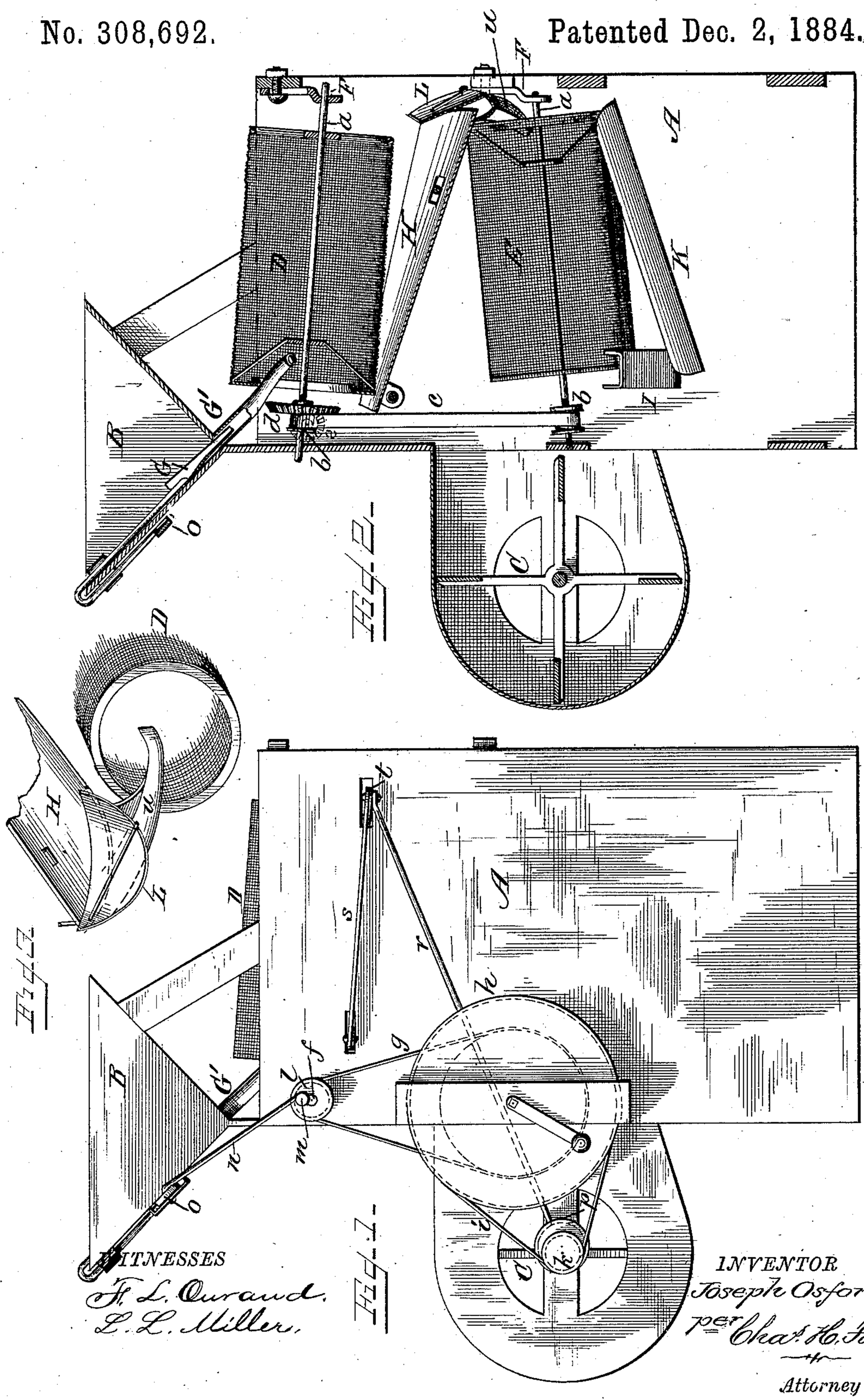
(No Model.)

J. OSFORD.

SEPARATING MILL.

No. 308,692. Patented Dec. 2, 1884.



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SEPARATING-MILL.

SPECIFICATION forming part of Letters Patent No. 308,692, dated December 2, 1884.

Application filed July 29, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH OSFORD, a citizen of the United States, residing in the town of Elk, in the county of Nobles and State of Minnesota, have invented certain new and useful Improvements in Separating-Mills; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side elevation of my invention, and Fig. 2 a sectional elevation thereof; Fig. 3, a detail view in perspective, showing a portion of the lower screen, the upper or reciprocating trough, and the chute and spout connected to the end of the trough.

The present invention has for its object to provide a mill for separating and cleaning grain simple in its parts and effective in its operation; and it consists in the several details of construction, substantially as shown in the drawings and hereinafter described and claimed.

In the accompanying drawings, A represents the frame of the machine, provided with the usual hopper, B, and fan C.

Within the frame A are suspended the rotary screens D E, disposed at angles opposite each other, the shafts *a* of the screens having one end supported in vertically-adjustable brackets F, so that the degree of inclination of the screens may be varied to increase or diminish the discharge of the grain therefrom. The opposite ends of the shafts *a* have suitable pulleys, *b*, over which passes a belt, *c*, the upper one of said shafts having a gear-wheel, *d*, which meshes with the teeth of a similar gear-wheel, *e*, on the inner end of a shaft, *f*, arranged at right angles to the upper one of the shafts *a*.

The shaft *f* is provided with a suitable pulley, over which passes a belt, *g*, said belt extending down and around a larger pulley upon a short shaft, as shown in dotted lines, Fig. 1. This short shaft is provided with a larger pulley, *h*, around which passes a belt, *i*, and which extends to a pulley, *k*, upon the end of the fan-shaft. The driving-pulley *h* may be operated by hand or other power, and by means of the several belts, pulleys, and gearing rotary motion is imparted to the fan C and the screens D E.

To the shaft *f* is secured a disk, *l*, carrying a crank-pin, *m*, to which is connected one end of a rod, *n*, said rod being connected to a pivoted lever, O, which in turn is connected to a suitable plunger, G. This plunger is located within the hopper B, and enters the discharge-spout G′ of said hopper, and while a reciprocating motion is given to the plunger by its connections with the crank-pin it will keep the grain fed to the spout and prevent clogging. A trough, H, arranged below and under the screen D, has a vibratory motion imparted to it by means of the eccentric disk *p*, upon the end of the fan-shaft, the rod *r* being connected to the disk and to the trough by means of the arm *s* and bell-crank lever *t*.

Any desirable and well-known means may be employed to give to the trough a vibratory motion. The fan C acts solely upon the lower screen, E, the upper screen, D, as it rotates discharging the foul seeds or larger particles of foreign substances out through the end of said screen, over the end of the trough H and outside of the machine by a chute, L. This chute, as will be seen, is connected to the trough H, so as to leave a space between it and the chute for the passage of the grain from said trough to the spout *u*, from whence it is delivered to the lower screen, E, and being acted upon by the fan, the grain is relieved of the dust and dirt and discharged into spout I, where it is taken off by any suitble receptacle placed under the spout to receive the grain, the trough K receiving and discharging upon the ground the remaining dust and dirt.

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

A separating-mill provided with a suitable fan and two rotary screens, one arranged above the other and inclined in opposite directions, vertically-adjustable brackets for supporting one end of each shaft, suitable troughs arranged under the screens, and means for reciprocating the upper trough, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JOSEPH OSFORD.

Witnesses:
L. M. LANGE,
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