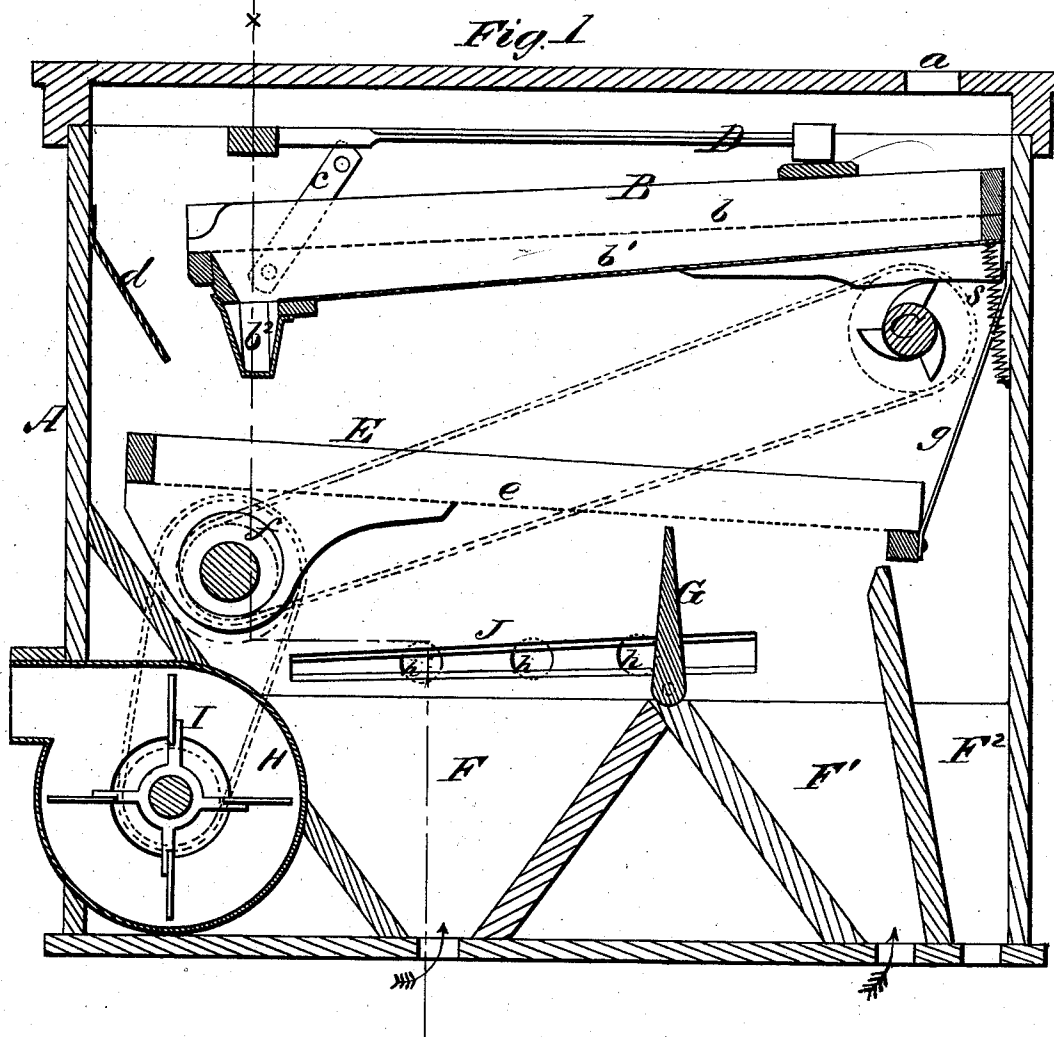


C. F. KELLER.
Flour and Middlings Purifiers.

No. 156,294.

Patented Oct. 27, 1874.



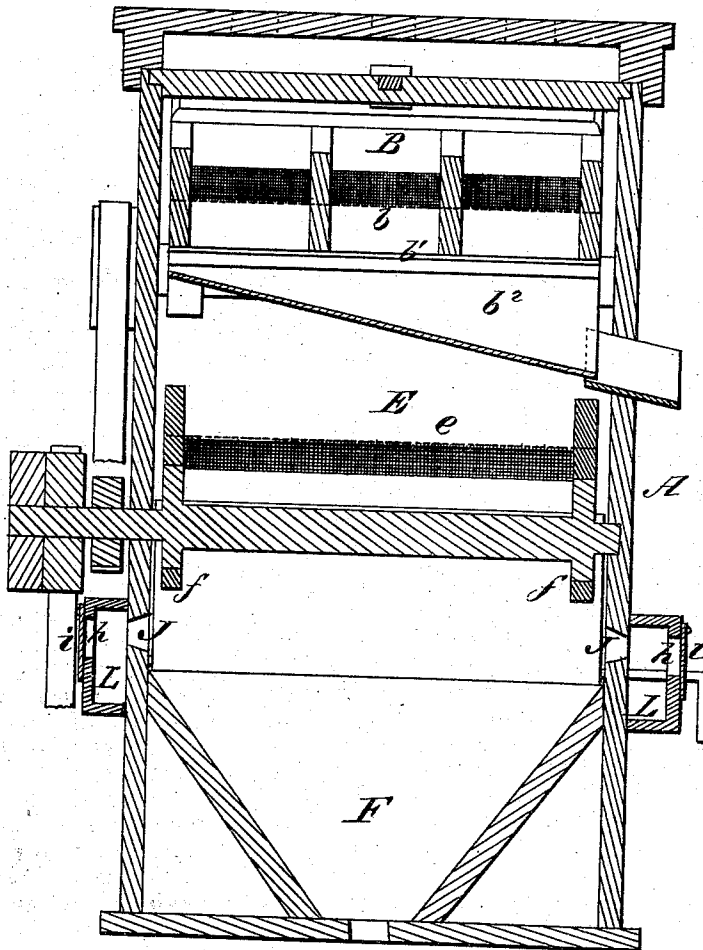
WITNESSES
E. H. Bates
Robert Everett

INVENTOR
C. F. Keller
Chipman & Son & Co

Attorneys

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Fig. 2



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UNITED STATES PATENT OFFICE.

CHAUNCY F. KELLER, OF NEVADA, OHIO, ASSIGNOR OF ONE-HALF HIS
RIGHT TO G. W. BALLIET, OF SAME PLACE.

IMPROVEMENT IN FLOUR AND MIDLINGS PURIFIERS.

Specification forming part of Letters Patent No. **156,294**, dated October 27, 1874; application filed
August 29, 1874.

To all whom it may concern:

Be it known that I, CHAUNCY F. KELLER, of Nevada, in the county of Wyandot and State of Ohio, have invented a new and valuable Improvement in Middlings-Purifiers; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation 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 representation of a longitudinal vertical sectional view of my middlings-purifier. Fig. 2 is a transverse vertical sectional view of the same.

This invention has relation to middlings-purifiers; and it consists in combining with a riddle-shoe, which has a vibrating motion from rotary knockers, a spring-hammer arranged over the shoe, for the purpose of keeping the riddle-cloth clear and the meshes open, so that the fine flour will pass through the cloth, after which it is conducted directly out of the machine. It also consists in arranging another riddle below the shoe, which riddle separates the middlings according to quality, and discharges the same into hoppers at the lower end of the machine; and in combining with this lower riddle suction-outlets leading to a fan-case, for the purpose of carrying off the offal from the falling middlings, as will be hereinafter explained.

The following is a description of the improved middlings-purifier.

In the annexed drawings, A designates the case or housing of the purifier, having a feed-opening, *a*, through its top, through which the material to be treated is fed upon the upper end of a bolting-cloth, *b*, in a shoe, B. This shoe B is hung by means of straps *c* at its lower end, and its upper end is held down upon knockers C by means of a spring, *s*, so that when the knockers are rotated the shoe receives an up-and-down motion, and also a longitudinal motion, which movements actuate a hammer, D, on a spring-arm, and cause this hammer to rapidly strike the shoe, and thus keep the meshes of the bolting-cloth clear.

The finest flour passes through the cloth *b*, and falls upon a board, *b'*; thence into a spout, *b''*, which latter conducts the flour directly

out of the machine. The middlings pass off the lower end of the cloth *b*, and are directed, by a deflecting-board, *d*, upon the upper end of a riddle, E, having a bolting-cloth, *e*, which will allow the middlings to pass through it, and discharge the tailings into a hopper, F². This riddle E is hung by straps *g* at its lower end, and supported by rotating eccentrics *f* at its upper end, which eccentrics impart a longitudinal shaking motion to the riddle.

Knockers and a hammer like those applied to riddle B may be applied to the riddle E in place of the eccentrics *f*.

The middlings which fall through the riddle E are assorted in quality, and collected in the two hoppers F F¹, between which is an adjustable cut-off valve, G.

J J designate two long openings, which are made through the sides of the chest A, between the hoppers F F¹ and the lower riddle E, which openings communicate with the case H of a fan, I, by means of trunks L L, provided at several points with regulating-valves *i*, covering inlet-openings *h*.

During the operation of the machine, the fan I receives rapid rotation, and exhausts the offal from the middlings as they fall from the riddle E, and discharge this offal from the machine through the fan-case.

The force of the exhaustion is regulated by means of the valves *i*, and the air is admitted into the machine from the bottom, as indicated by the arrows.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the hammer D, knockers C, and springs *s*, with the riddle-shoe B, suspended by hangers C, and having cloth *b*, board *b'*, and discharge-spout *b''* for the flour, substantially as described.

2. The middlings-separating riddle E, arranged over the hoppers F F¹ F², in combination with passages J J, valves *i*, trunks L L, and suction-fan I, arranged substantially as described.

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

CHAUNCY F. KELLER.

Witnesses:

C. W. BURKE,

JAMES K. AGNEW.