

J. GRAHAM.
MIDDLINGS-SEPARATOR.

No. 180,576.

Patented Aug. 1, 1876.

Fig. 1.

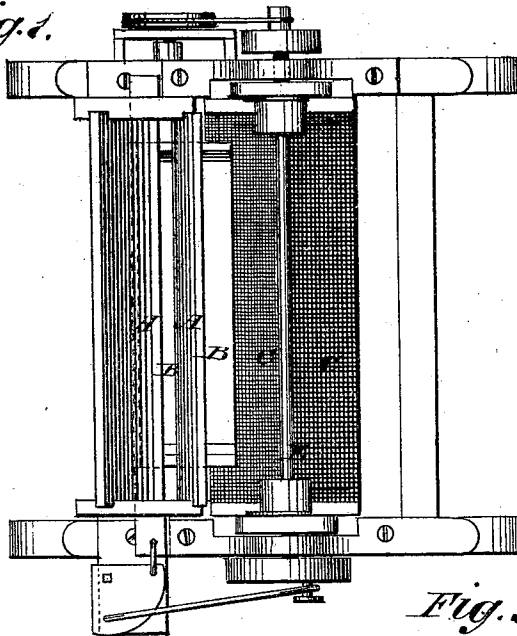


Fig. 2.

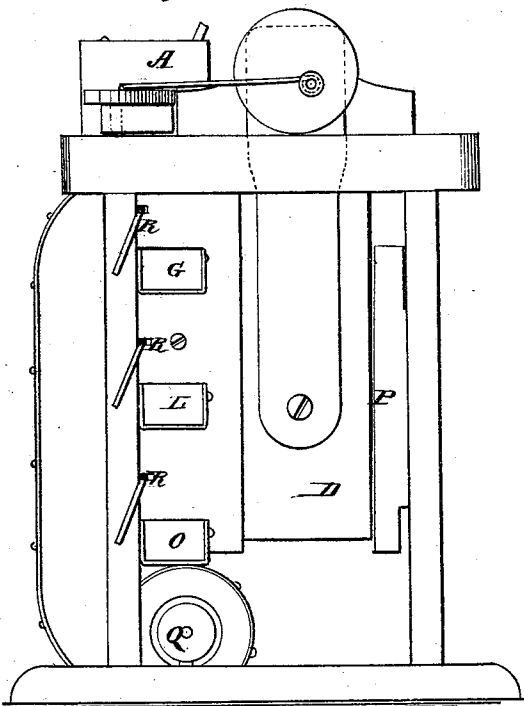
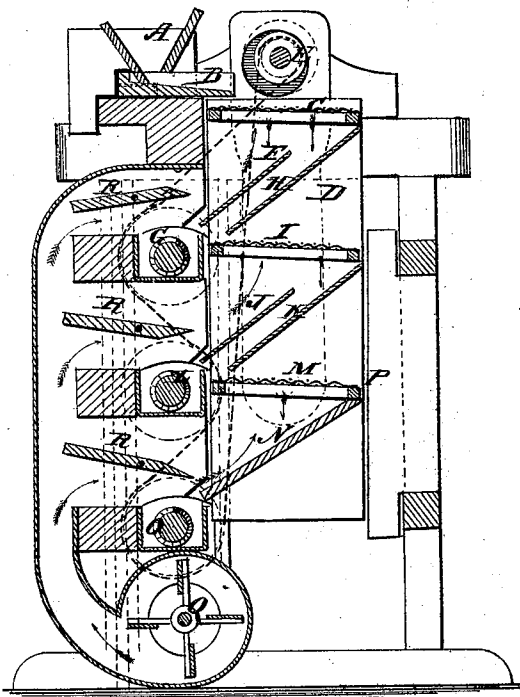


Fig. 3.



WITNESSES:

Francis McArthur
John Goethals

INVENTOR,

J. Graham
BY *[Signature]*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JEFFERSON GRAHAM, OF ALDEN, MINNESOTA.

IMPROVEMENT IN MIDLINGS-SEPARATORS.

Specification forming part of Letters Patent No. **180,576**, dated August 1, 1876; application filed May 27, 1876.

To all whom it may concern:

Be it known that I, JEFFERSON GRAHAM, of Alden, Freeborn county, Minnesota, have invented a new and Improved Middlings-Purifier, of which the following is a specification:

My invention consists of a series of sieves, one above another, together with gathering-boards, on a vertically-shaking shell, and subject to blasts from a fan, all contrived in a simple manner, calculated to afford a cheap and small, but effective, machine.

Figure 1 is a top view of my improved machine. Fig. 2 is a side elevation, and Fig. 3 is a sectional elevation.

Similar letters of reference indicate corresponding parts.

A is the hopper on the top of the machine, into which the middlings are supplied in any approved way, and from which they are fed through the shoe B, onto the upper sieve C of a vertically-shaking shoe, D, operated by the eccentrics E. The upper part of the sieve is finer than the lower part, and separates the fine middlings, which fall on the gathering-board F, and pass into the conveyer G, to be conducted away. The coarser parts fall onto the board H, and pass onto the next sieve,

I, which makes two grades, one of which passes into conveyer L from board J, and the other falls into sieve *m*, which separates all the best portion, discharging it onto the board *n*, to be delivered into the conveyer O, while the light coarse matters are discharged over the edge of the sieve at P, by the blast from fan Q, which also acts at the same time on the other series, to carry off the light refuse matters. The valves R in the passage to the sieves regulate the force of the blasts.

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

The vertically-reciprocating shoe D, having screens C I M, each clothed with finer and coarser numbers of bolting-cloth, and a series of chutes, one set for delivering the purified middlings out of the machine, and the other for delivering the imperfectly-separated matters upon the screen below, in combination with the blast-fan Q, substantially as herein shown and described.

JEFFERSON GRAHAM.

Witnesses:

THOMAS W. WILSON,
EDWARD EMERSON.