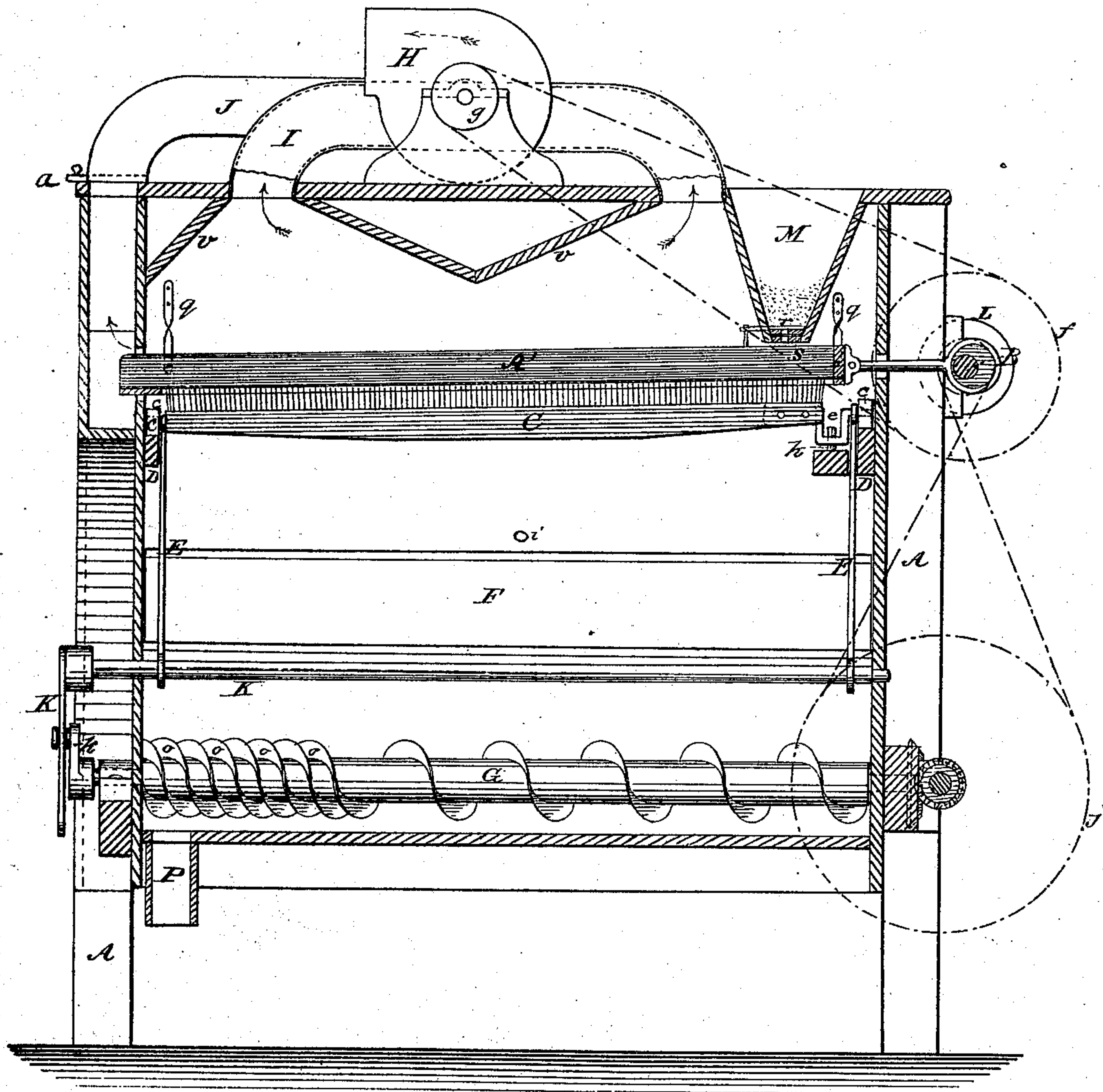


**R. CRAIK.**  
**Feeding-Devices for Middlings Purifiers.**  
 No. 143,887. Patented Oct. 21, 1873.



*Witnesses.*

*J. C. Brecht,*  
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*Inventor.*

*Robert Craik*  
*by*  
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*Attorney.*

# UNITED STATES PATENT OFFICE.

ROBERT CRAIK, OF MONEY CREEK, MINNESOTA.

## IMPROVEMENT IN FEEDING DEVICES FOR MIDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. **143,887**, dated October 21, 1873; application filed March 25, 1873.

*To all whom it may concern:*

Be it known that I, ROBERT CRAIK, of Money Creek, in the county of Houston, State of Minnesota, have invented an Improvement in Midlings-Separator, of which the following is a specification:

The invention relates to an improvement in conveyers for middling-separators; and consists in providing the conveyer with a series of secondary flights, for the purpose hereinafter described.

The figure in the accompanying drawing illustrates a vertical section of a midlings-purifier having my improved conveyer applied to the same.

A is the frame which carries the operating mechanism. L is the driving-pulley attached to the shaft B, and gives motion to the machine. A' A' are vibrating frames, supported by the springs *q q*, to the bottom of which is attached bolt-cloths. Upon the shaft B is secured a cam, which, by its connection, vibrates the frames A' A'. H is a suction-fan, which is caused to revolve by the pulley *g* being belted to the pulley *f* on the shaft B. This fan causes the air to pass up through the bolts from the openings in the adjustable division-boards F F. M is the feed-hopper, and *r* is an adjustable perforated slide, which is vibrated by its connection with the bolt-frame A', and under this is the movable bottom *s*, which is also perforated to correspond with the slide *r*, for regulating the supply of feed. The brushes C are made with a bearing at each end, and are supported in the boxes *c c*, which rest and slide upon the horizontal bars D. These brushes are caused to have a reciprocating movement

across the bottom of the bolt-cloth by the crank *k* on the conveyer G, through the rock-shaft K and arms E E, as shown. G represents my improved conveyer-shaft, which is provided with one thread of flights, *m*, and at one end there are added several flights, *o*, and an opening, *n*, made in the one already on. This will allow the midlings to accumulate and permit each of the secondary or additional flights *o* to take a portion and deliver it to the pipe P, and thus feed it evenly to the millstones. The division-boards F F are adjusted by thumb-screws *i i*, and regulate the draft of air. The tube J is arranged at the top of the separator, so as to take air from off the end of the frames A' and counterbalance the draft of air inward at that point, which obstructs the passage of the light bran from that end of the frame, and, by means of the valve *a*, the light bran may be caused to pass off fast or slow, as desired.

The slide *r* and movable bottom *s* of the hopper M are operated by means of the lever *t* and vibrating frame A'.

I have described the entire midlings-separator, but do not claim such, as my invention only consists in the peculiar manner of constructing the conveyer G.

I claim—

The conveyer G, with a series of secondary flights, *o o*, for feeding the midlings evenly to the pipe P, as herein described.

In testimony that I claim the foregoing I have hereunto set my hand.

ROBERT CRAIK.

Witnesses:

N. BUCK,  
JAMES McINTOSH.