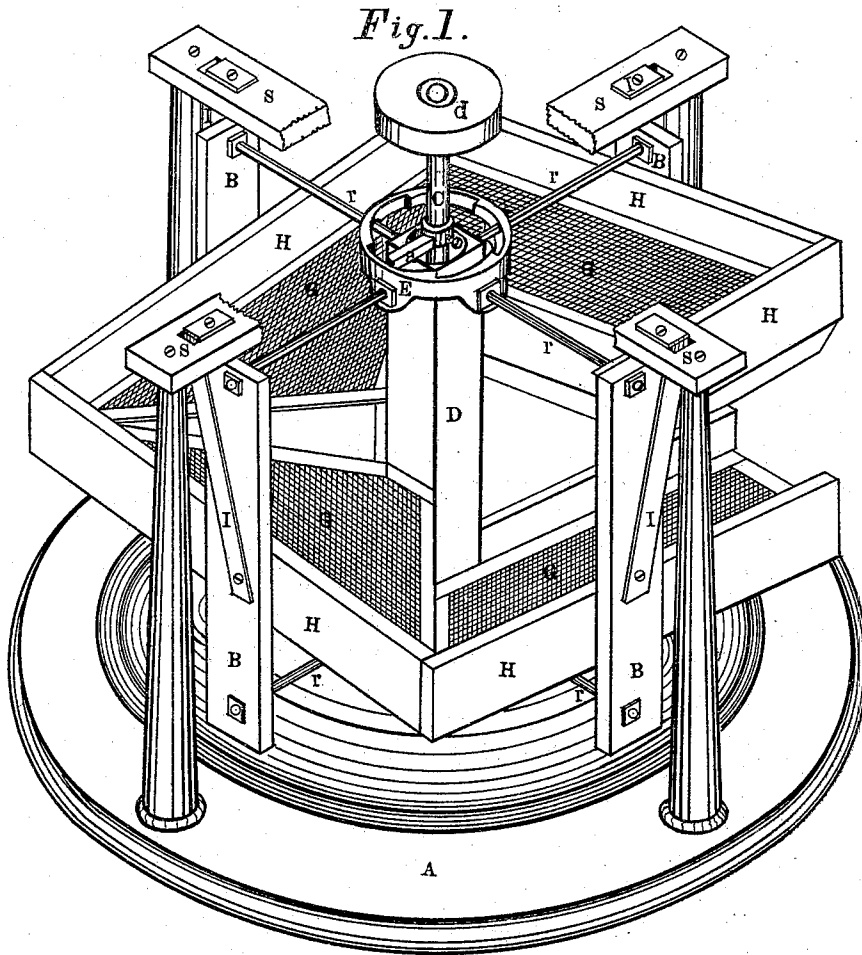


W. J. MERRITT.
MIDDLINGS SEPARATOR.

No. 173,734.

Patented Feb. 22, 1876.



WITNESSES.

Thos. J. Price
J. M. Price

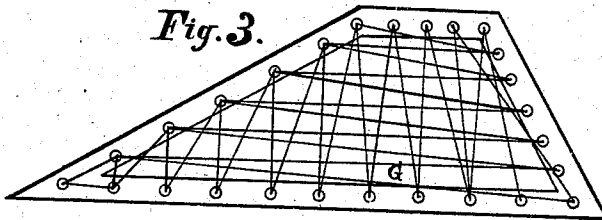
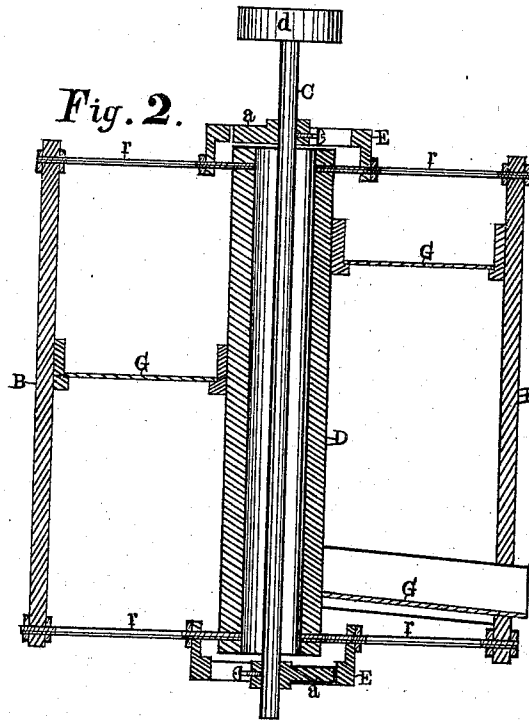
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UNITED STATES PATENT OFFICE.

WILLIAM J. MERRITT, OF BARDOLPH, ILLINOIS.

IMPROVEMENT IN MIDLINGS-SEPARATORS.

Specification forming part of Letters Patent No. **173,734**, dated February 22, 1876; application filed March 16, 1875.

To all whom it may concern:

Be it known that I, WILLIAM J. MERRITT, of Bardolph, in the county of McDonough and State of Illinois, have invented an Improvement in Middlings-Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to that class of separators that is used for separating or bolting middlings after the flour has been taken out; and its novelty consists in arranging a series of frames provided with suitable bolting-cloth, and placed in an incline or spiral form around a hollow center-post, through which a rotating shaft passes, which, by means of arms and suitable appliances attached to the center-post, gives the proper agitation that is required, as will be hereinafter more fully described.

Figure 1 is a perspective view of the separator, with part of the top frame cut away. Fig. 2 is a cross-section of the separator-frame. Fig. 3 is the sieve-frame, bottom side up, showing the manner of lacing the cloth to the frame.

In the drawings, Figs. 1 and 2, B B B B represent a frame, which is formed by means of the bolts *r r r r*, attached to the center-post D. H H H H represent a frame, which is attached to the inside of the frame B B B B in an incline or spiral form around said frame. Between this frame and the center-post D the sieve-frames G G G G are placed. I I I I represent leather straps, which are attached at their lower ends to the frame B B B B; the upper end to the center of cross-frame *s s s s* of the stand A. (See Fig. 1.) The shaft C passes through the center-post D, (see Fig. 2,) which is bored out sufficiently large to allow the necessary vibration when in operation. At each end of the center-post D is firmly attached a rim, E, which has teeth projecting inward. Opposite these rims on the shaft C arms *a a* are attached.

Fig. 3 shows the under side of the sieve-frame, showing the manner of lacing or tightening the cloth. The bolting-cloth is bound on the edge with canvas of sufficient width to lap over the edge of the frames, and is filled with eyelets, which the lacing-cord passes through, by which the cloth can be stretched to any desirable tightness.

The operation is as follows: Motion is applied to the pulley *d*, and as the shaft C commences to revolve the arms *a a* strike against the teeth on the inside of the rim E, which gives the separator a continuous vibrating motion, and the separator being hung upon the leather straps I I I I, the required agitation is by this means easily produced. The middlings or other material to be separated are let in on the upper sieve, which, being on an incline, the agitation of the separator causes all the bran and other impurities that do not pass through the first sieve to pass over the edge and fall on the second sieve, and so on around the whole series of sieves in the same manner, until they pass out of the separator.

By having different grades of fineness of the cloth on the different sieve-frames, will make different grades of the material separated, and each grade can be taken out under each sieve-frame if necessary, or only one or two places, as may be desired.

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

1. The frame B B B B, and sieve-frame H H H H, in combination with the hollow center-post D, toothed rims E, arms *a a*, and shaft C, substantially as shown, and for the purpose set forth.

2. The bolting-cloth, bound on the edge with canvas of sufficient width to lap over the frame, and provided with eyelets and lacing-cords, substantially as shown and described.

WM. J. MERRITT.

Witnesses:

THOS. J. PRICE,
J. M. PRICE.