

S. M. BRUA.
Middlings-Purifier.

No. 162,620.

Patented April 27, 1875.

Fig. 1

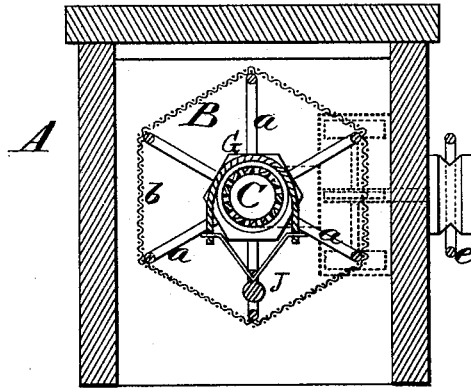


Fig. 3

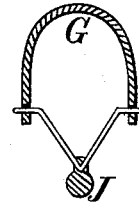
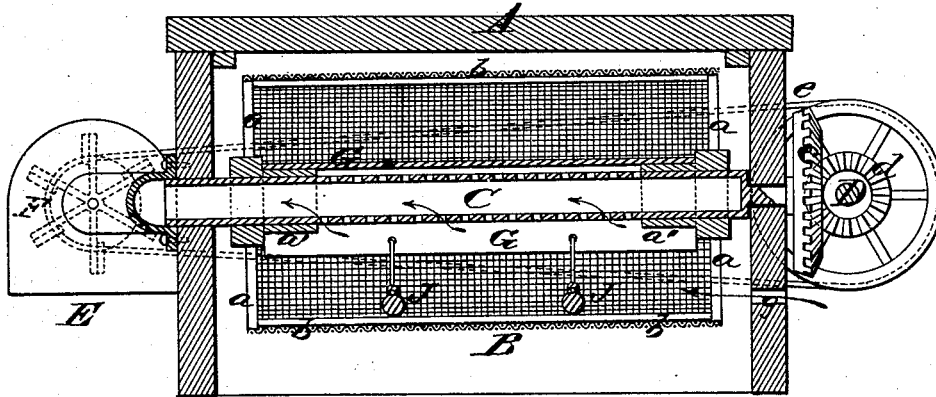


Fig. 2



WITNESSES

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SAMUEL M. BRUA, OF MARTINSBURG, WEST VIRGINIA.

IMPROVEMENT IN MIDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. 162,620, dated April 27, 1875; application filed April 3, 1875.

To all whom it may concern:

Be it known that I, SAMUEL M. BRUA, of Martinsburg, in the county of Berkeley and State of West Virginia, 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 part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a transverse vertical section of my middlings-purifier, and Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a sectional detail view.

This invention has relation to middlings-separators; and the nature of my invention consists in a shield or hood for the perforated reel-shaft, which covers the upper part and sides of this shaft, and prevents any of the flour carried up by the ribs of reel in its revolutions from falling on the shaft and being drawn through the perforations thereof, but allows the impurities to be carried off, as will be understood from the following description. It also consists in means for holding the shield in its place over the reel-shaft, so that it will not turn with this shaft, nor bear upon the perforated portion thereof, as will be hereinafter explained.

In the annexed drawings, A designates the housing or case of the separator, in which I arrange, in a suitable manner, a reel, B, consisting of a hollow shaft, C, from which radiate arms *a*, covered, in the usual manner, with bolting-cloth *b*. One end of the shaft C is closed, and is journaled in one end of the housing A, carrying a large beveled spur-wheel, *c*, which receives motion from a pinion-wheel, *d*, on a driving-shaft, D. The opposite end of shaft C passes through the housing A, and communicates with a case, E, in which is a fan, F, that receives rotation from a pulley on shaft D by means of a belt, *e*. The shaft C is thickly perforated, and the fan F is ro-

tated in such manner as to exhaust the air from the inside of the reel through the perforations in said shaft, carrying with it the "fuzz" and other light particles mixed with the flour, and discharging them through the fan-case out of the machine. To facilitate this separating process a hole, *g*, is made through the housing A, for the free admission of air into the bolting-reel. G designates a thin metal shield of the form (in cross-section) shown in Figs. 1 and 3. The ends of this shield G are supported upon hubs *a' a'*, which are fast on the shaft C, and which are of greater diameter than this shaft, for the purpose of sustaining the shield free from the perforated portion of this shaft. The shield is prevented from turning with shaft C by means of weights J, suspended from this shield, as shown in the drawings. The shield prevents the flour carried up by the ribs of reel in its revolutions from falling on the shaft C, and being carried off by the exhaust; but it allows the light foreign matters to be drawn up from beneath shaft C and carried off.

The drawing shows the top of the shield G rounded; but it may be ridged, so as to shed the flour freely.

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

1. The combination, with a hollow perforated reel-shaft, of a shield, G, arranged to overlap the upper portion of the shaft, substantially as described.

2. The combination, with a perforated reel-shaft, C, and a shield, G, of weights J, substantially as and for the purpose set forth.

3. The enlargements *a' a'* at the ends of the hollow perforated reel-shaft C, in combination with the loaded shield G, substantially as described.

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

S. M. BRUA.

Witnesses:

JOS. B. LOOMIS,
GEORGE E. UPHAM.