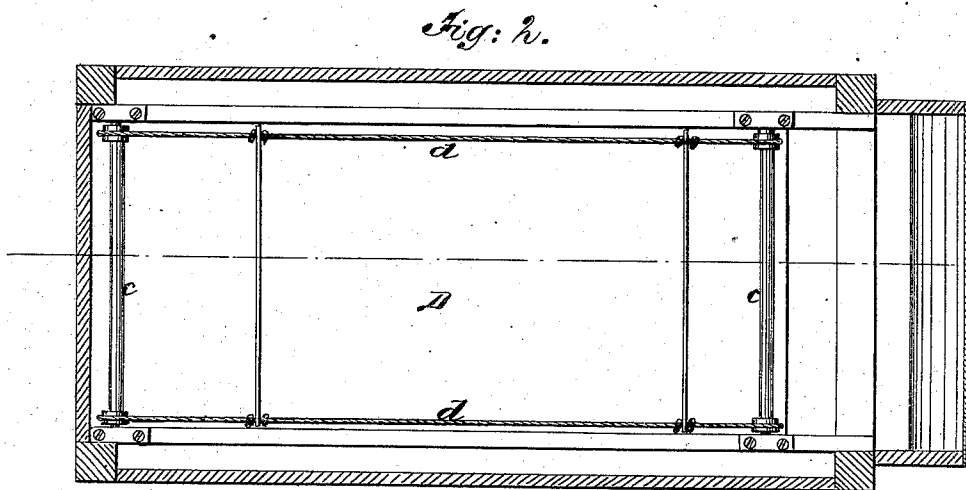
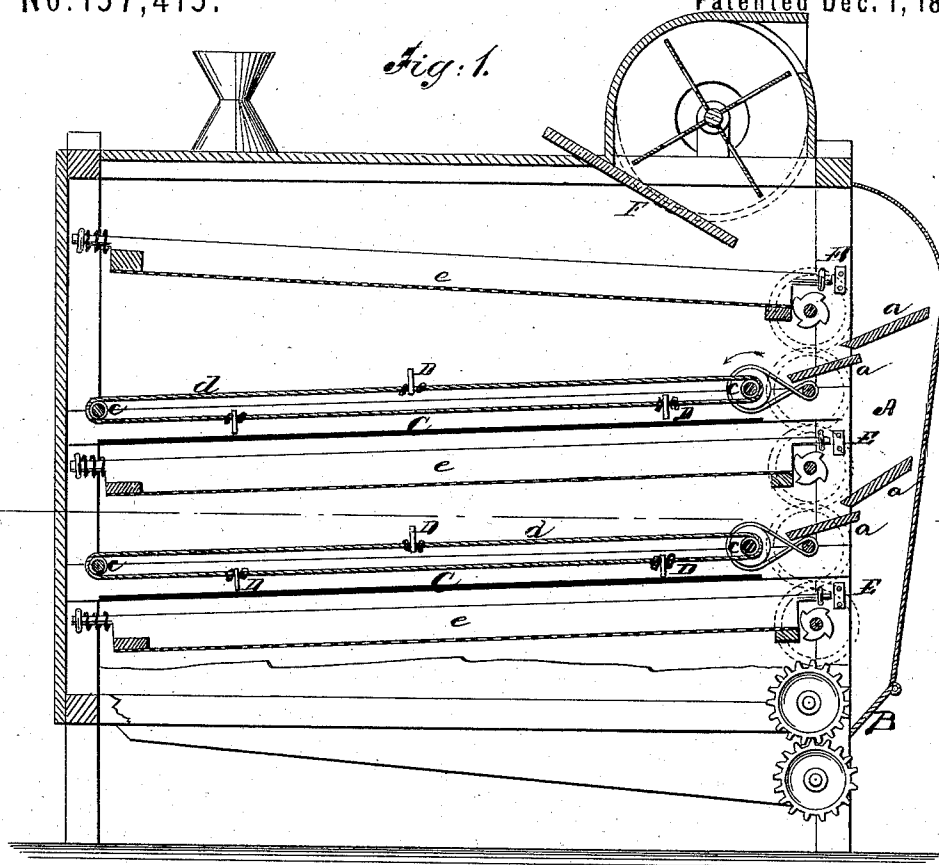


G. PARKER.
Middlings-Purifiers.

No. 157,415.

Patented Dec. 1, 1874.



Witnesses:
H. C. Mattenberger.
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UNITED STATES PATENT OFFICE.

GEORGE PARKER, OF POUGHKEEPSIE, NEW YORK.

IMPROVEMENT IN MIDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. **157,415**, dated December 1, 1874; application filed October 3, 1874.

To all whom it may concern:

Be it known that I, GEORGE PARKER, of Poughkeepsie, in the county of Dutchess and State of New York, have invented a new and Improved Middlings-Purifier; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an improvement in middlings-purifiers; and the invention consists of a middlings-purifier constructed with stationary check and catch plates arranged in the wind-trunk to direct and control the blast from the fan, and prevent loss of middlings with the chaff, and in combining with such plates and the screens a carrier and bed-plate for gathering such middlings as are deposited on the catch-plates, as hereinafter set forth.

In the accompanying sheet of drawings, Figure 1 represents a vertical longitudinal section, and Fig. 2 a horizontal longitudinal section, illustrating my invention.

The fan-casing is extended into the body of the machine, as indicated in dotted lines, Fig. 1, and has arranged on each side of it a check-plate, F.

Similar letters of reference indicate like parts in the several figures.

It is found in the practical use of middlings-purifiers that the current of air passing between or over the screens at times will carry into the wind-trunk some of the middlings as well as the bran or chaff. To prevent the loss arising in this way, I place within the wind-trunk A of a middlings-purifier catch-plates *a a* that act to some extent in a double capacity—that is, they check the velocity of the current passing through the wind-trunk, allowing the particles of middlings that have been carried into it, and which are heavier than the chaff, to fall, and as they fall they are received on the upper surface of the catch-plates *a a*, these catch-plates being placed at an angle within the wind-trunk, so that as the middlings accumulate upon them they slide off onto the carrier-bed, and are passed through the screen next below, the chaff finding its way to the bottom of the trunk, and out through

the valve or gate B. Instead of using the ordinary carrier to insure the middlings being properly deposited on the successive screens, I place above each of the screens, excepting the first screen of the series, a bed-plate, C, at each end of which, properly supported in bearings, are rollers *c c*. Passing over these rollers are endless bands *d d*. Secured to these bands, and at right angles to the same, and extending across the face of the bed-plate C, are one or more scrapers, D. These scrapers come nearly or quite in contact with the upper surface of said bed-plate. To prevent the noise and destructive effects of the pounding caused by the thrusts of the ends of the screen-frames *e*, I bolt to the frame of the purifier bumpers E.

Having now described the construction of my improvements in a middlings-purifier, their operation is as follows: The current induced by the action of the fan placed on the top of the purifier-box is prevented from passing vertically through the screens by the check-plates F, which cut off any direct influence of the blower through the body of the purifier, so that its action is felt directly within the wind-trunk A, into which are drawn from the interior of the purifier the particles of chaff, &c., but, as before stated, the rapid current within the trunk would to some extent draw within it particles of the middlings, which would descend with the chaff, and be lost. To check the current of air in the trunk, the catch-plates *a a* interpose their surfaces, so that the middlings that have been drawn into the trunk with the chaff may have time to fall by gravity, and as they fall they are deposited upon the upper surfaces of the catch-plates *a*, and these plates being placed at an angle, the accumulated middlings slide off onto the bed-plate C, whence they are carried or scraped up by the action of the scrapers D, which are moved along the surface of the bed-plate by the endless bands *d d* to which motion is imparted by the rollers *c c* as they revolve. The oscillating motion of the screens, or the horizontal thrusts of the same as they oscillate, have generally heretofore been received by the cams which produce the oscillating motion, or by some other rigid part of the mechanism, so that this thrust not only

produced loud and unpleasant noise, but deranged the efficient working of the machine. To obviate this, I bolt or otherwise secure to the inside frame-work of the purifier bumpers E. These bumpers are provided with elastic faces, or have elastic bearings in their rear, or in some other way act as cushions to receive the thrusts of the ends of the screen-frames, so that the force of the thrusts is broken, and the noise of the contact subdued.

My middlings-purifier being constructed and operated substantially as above described, what I claim as new, and desire to secure by Letters Patent, is—

1. In a middlings-purifier, stationary check-plates F, and stationary inclined catch-plates *a*, arranged in the wind-trunk with relation to one another and the screens, as herein shown and described.

2. In a middlings-purifier, the carrier *c d* D, bed-plate, and screens, in combination with the stationary inclined catch-plates *a*, substantially as and for the purpose shown and described.

GEORGE PARKER.

Witnesses:

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