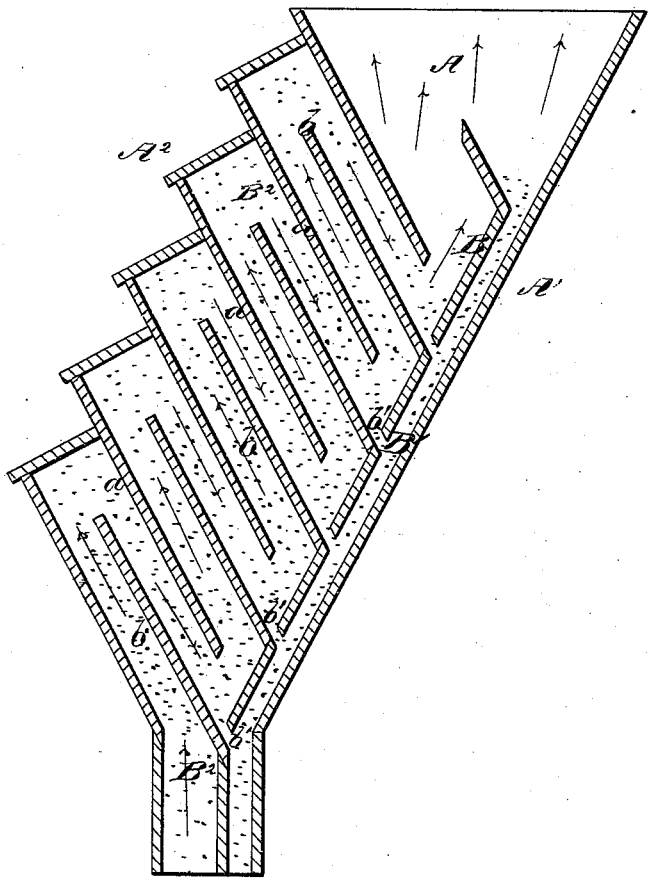
J. B. MARTIN.

MIDDLINGS-SEPARATORS.

No. 181,957. Patented Sept. 5, 1876.



WITNESSES

G. R. Searle,

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INVENTOR,

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UNITED STATES PATENT OFFICE.

JAMES B. MARTIN, OF NEWARK, OHIO, ASSIGNOR TO THE OHIO MIDDLINGS PURIFIER COMPANY, OF SAME PLACE.

IMPROVEMENT IN MIDDLINGS-SEPARATORS.

Specification forming part of Letters Patent No. **181,957**, dated September 5, 1876; application filed July 1, 1876.

To all whom it may concern:

Be it known that I, JAMES B. MARTIN, of Newark, in the county of Licking and State of Ohio, have invented a new and valuable Improvement in Dust-Funnels for Middlings-Purifiers and other Machines; 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 a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a longitudinal vertical section of my dustless dust-funnel for middlings-purifiers, &c.

The object of this invention is to free currents of air from impurities carried thereby, and it is specially adapted to middlings-purifiers as a means of rendering the same dustless.

It consists in an air-passage broken by partitions, which form eddies, and also in perforations in the bottom of said passage, through which the dirt and other foreign matters may fall into an inclined chute or passage, so as to be carried off below without rising in the air and becoming offensive.

In the annexed drawings, A designates a casing, which has a straight inclined side, A^1, and an opposite side, A^2, shaped somewhat like a flight of steps. A partition, B, runs nearly from end to end of this casing, parallel to inclined side A^1, and dividing the inside of said casing into a long shallow dust chute or passage, B^1, between partition B and inclined side A^1, and a larger space or air-passage, B^2, on the opposite side of said partition. Said partition is provided with vertical pieces *b b*, and the side A^2 is provided with depending upwardly-inclined pieces *a a*, which alternate with said pieces *b b*, forming a tortuous channel, with little eddies on the upper side of each of the pieces *b b* at the points where they join partition B. At each of these points I make an opening, *b'*, which communicates with dust-passage B^1.

The operation of the device is as follows: Any suitable exhausting mechanism being attached to the upper end of air-passage B^2, the air is drawn up through said passage, around vertical pieces *a* and *b*, and out at the top. A portion of the foreign matter carried thereby is deposited in dust-passage B^1 through each one of openings *b'*, so that when the last of said openings is passed the air is comparatively pure. The dust and other impurities slide down said inclined passage, and are easily disposed of without filling the air or settling upon the apparatus.

Instead of an exhaust, a blast might be used, applied to the lower end of the casing.

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

1. An apparatus for removing impurities from currents of air, consisting of an inclined dust-passage and a tortuous air-passage, the two communicating with each other at intervals, substantially as set forth.

2. In a dust-funnel for middlings-purifiers for removing impurities from the currents of air, the combination of casing A with perforated partition B and pieces *a a* and *b b*, connected alternately to said partition and to the side of the casing, substantially as and for the purpose set forth.

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

JAMES B. MARTIN.

Witnesses:

ARTHUR L. GREENE,

GEORGE WILLIAMS.