J. C. & F. C. KNOEBEL.

Middlings Purifier.

No. 165,240. Patented July 6, 1875.

Fig. 1.

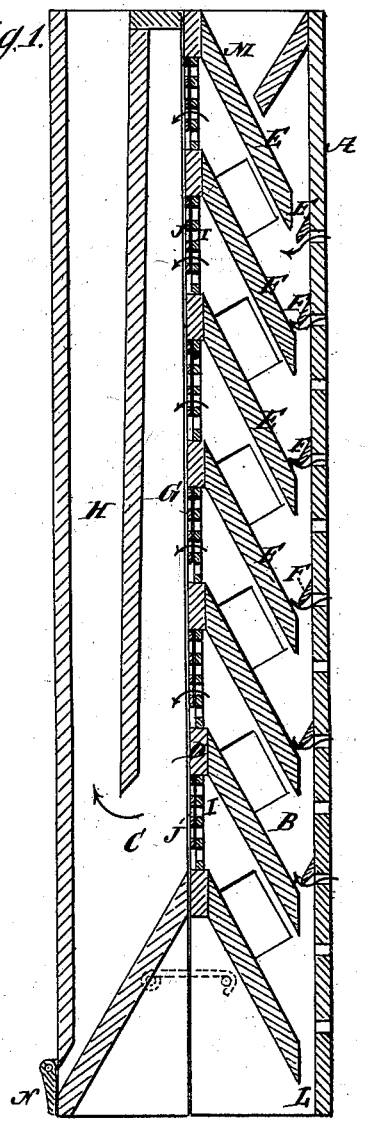


Fig. 2.

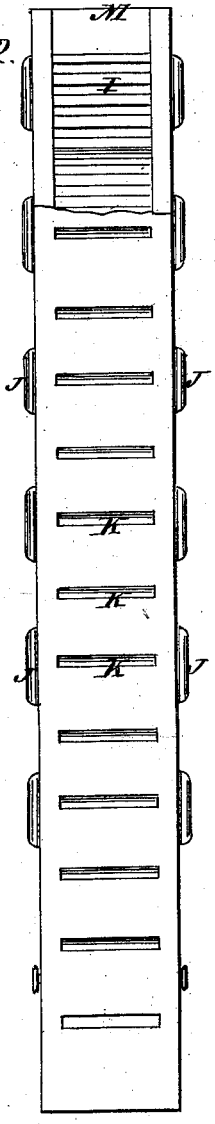


Fig. 3.

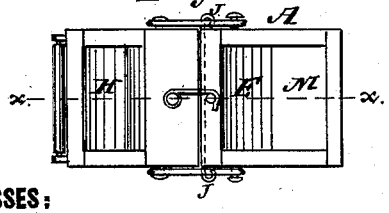
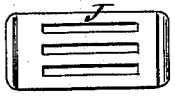


Fig. 4.



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UNITED STATES PATENT OFFICE.

JACOB C. KNOEBEL AND FRED C. KNOEBEL, OF BELLEVILLE, ILLINOIS.

IMPROVEMENT IN MIDDLINGS-PURIFIERS.

Specification forming part of Letters Patent No. **165,240**, dated July 6, 1875; application filed April 10, 1875.

To all whom it may concern:

Be it known that we, JACOB C. KNOEBEL and FRED C. KNOEBEL, of Belleville, in the county of St. Clair and State of Illinois, have invented a new and Improved Middlings-Purifier, of which the following is a specification:

Our invention consists of a vertical case of two chambers separated by a vertical partition, in one of which compartments is a series of cant-boards arranged one above another at suitable distances apart on the partition, and canting downward and nearly to the face-board, which has openings for air and stops to prevent the direct descent of the middlings which enter at the top, and the other compartment consists of a diving and ascending suction-passage, into which the light and impure matters are taken from the front compartment through passages in the partition regulated by dampers or valves, there being a passage for each space between the cant-boards.

Figure 1 is a sectional elevation of my improved middlings-purifier, taken on the line *x x* of Fig. 3. Fig. 2 is a front elevation. Fig. 3 is a top view, and Fig. 4 is a plan of one of the dampers for regulating the drafts of air.

Similar letters of reference indicate corresponding parts.

A represents a long vertical case, which is divided into two compartments, B and C, by a partition, D, the first of which contains the cant-boards E and stops F, and the other contains the diving and ascending flue G H, while the partition has air-passages I and regulating-valves J, and the front plate of the case has air-inlet openings K, and at the bottom of each compartment is an escape-passage, L, for the middlings which fall down through the air-currents. A fan will be attached to the mouth-passage H, for creating the necessary air-currents through the machine, while the middlings will be fed in at M to pass along down through the currents going in at K, which separate the light impurities and carry them into the passage G, at the bottom of which another separation takes place. The strength of the currents will be regulated by shifting the valves up and down. A drop-valve, N, is placed at the bottom of compartment C, to let out the middlings without admitting wind.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The combination of the cant-boards E and stops F in a case having air-inlet passages K and outlet-passages I, with regulating-valves J, substantially as specified.

2. The combination of the diving passage G H and passage L with the case having the cant-boards E and outlet-passages I, substantially as specified.

JACOB C. KNOEBEL.
FRED C. KNOEBEL.

Witnesses:
CARL KNOEBEL,
HERMANN KNOEBEL.