A. HUNTER.

MIDDLINGS-SEPARATOR.

No. 182,828. Patented Oct. 3, 1876.

Fig. 2.

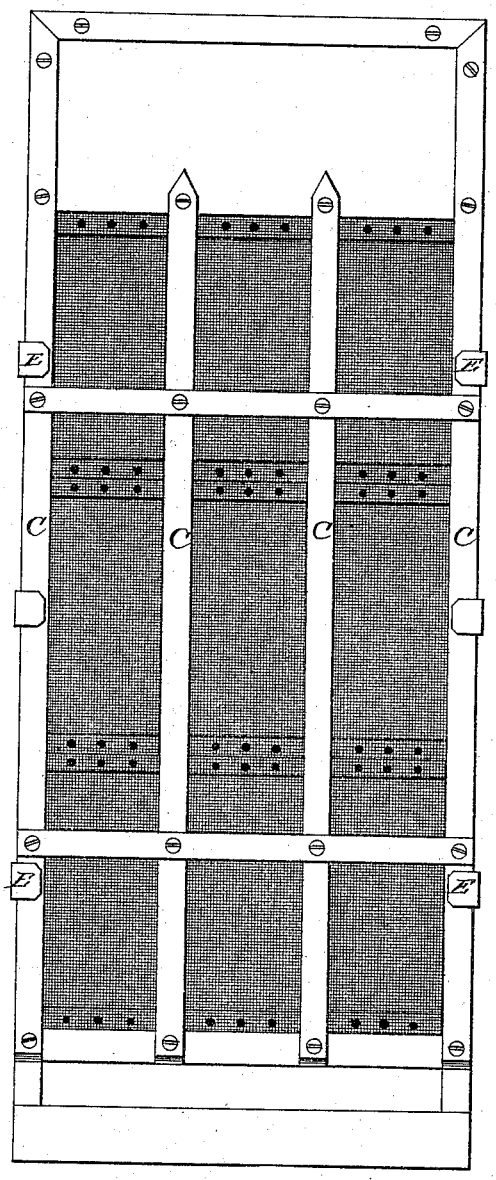
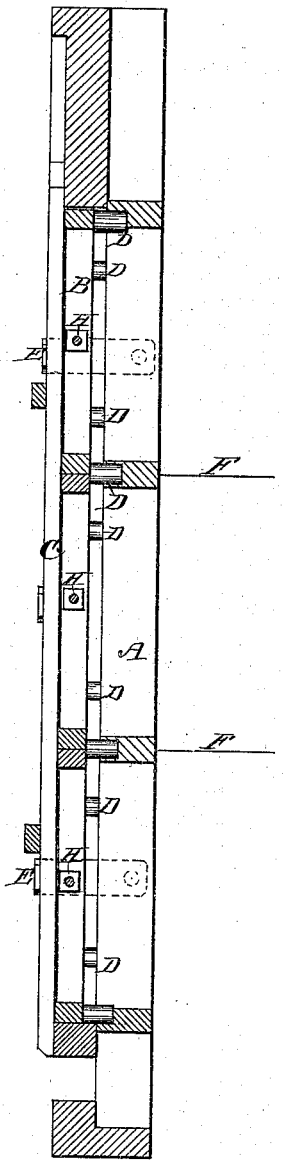


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

ANDREW HUNTER, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN MIDDLINGS-SEPARATORS.

Specification forming part of Letters Patent No. **182,828**, dated October 3, 1876; application filed July 24, 1876.

To all whom it may concern:

Be it known that I, ANDREW HUNTER, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Screens for Middlings-Separators, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

In the ordinary construction of screen-frames, the cloth is fastened to the frame, the cloth adjoining the sides and ends of the frame becomes immovable, and there is no possibility of vibrating the cloth, unless imparted through the screen-frame, such vibration being imperfect from the fact that the screen is usually suspended by close-fitting hangers. If tappers or hammers are used in these machines, a very heavy blow must be given to produce a vibration which involves waste of power, and is often detrimental to the working of the screen.

The object of my invention is to overcome the difficulty described; and to this end the invention consists in making a screen-frame in the ordinary way, and inserting or placing springs on top of screen-frame, and resting the sectional screens upon said springs. Longitudinal strips are fastened on top of the sectional screen, and secured to the screen-frame at either end, and the screens and longitudinal strips are prevented from moving sidewise, or moving too much vertically, by the use of clamps fastened to the screen-frame, and projecting upward and bent down over the longitudinal strips. The longitudinal strips and the screens may be further secured by transverse strips above, as shown.

In percussion-machines, where knockers or hammers are used, an even vibration is given the whole width and length of the screen. The clamps hold the sectional screens down upon the springs. The sectional screens are provided with tension-rods or bolts, placed under the cloth to be out of the way of the flow of the material, and extending across the screen with nuts at each end, for the purpose of stretching the cloth or covering of the screen. The screen is provided with curtains of cloth, or other light flexible material, and extending below the screen and fastened to the cross-pieces of the screen-frame. The object of the curtains is to prevent a current of air from traveling under the whole length of the shaker, and at the same time to be of such lightness as not practically to interfere with the motion of the screen.

In the accompanying drawing, Figure 1 represents a sectional view; Fig. 2, a top view, showing the arrangement of screen and longitudinal strips.

A represents the screen-frame; B, the sectional screens resting therein upon the rubber or other springs D; C, the longitudinal strips which confine the screens B down upon the springs; E, the clamps secured at the sides of the screen-frame A, and bent down over the top of the outer strips C; F, the strips of cloth extending below the screen; H, the screw-bolts below the bolting-cloth for distending the screen-frame to tighten the cloth.

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

1. The combination, with the frame A, and screen or screens B, of the rubber or other elastic bearings D D, supporting said screens, and clamps E for holding said screens down upon the elastic bearings, substantially as and for the purpose set forth.

2. The combination, with screen A, of the curtains F, suspended from the screen-frame transversely thereto, substantially as and for the purpose set forth.

ANDREW HUNTER.

Witnesses:

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