

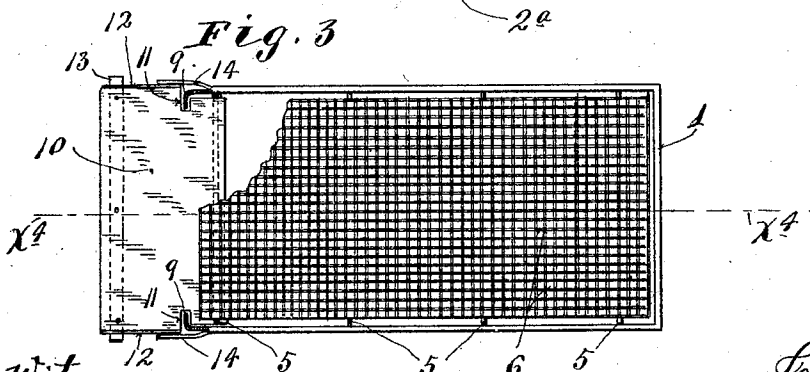
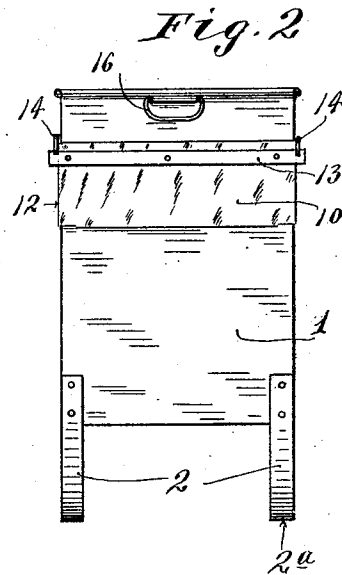
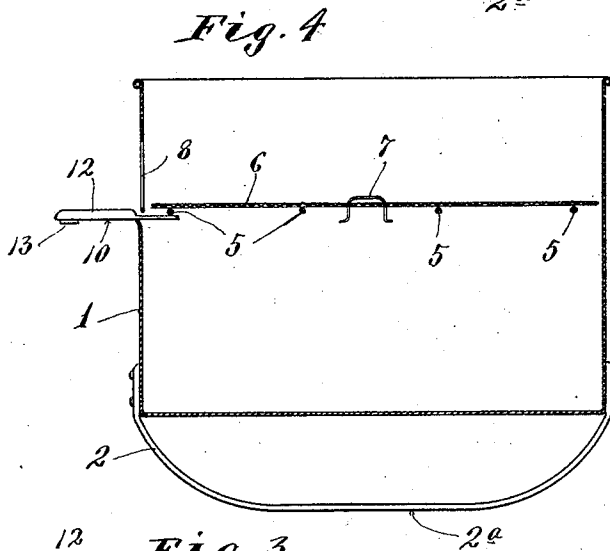
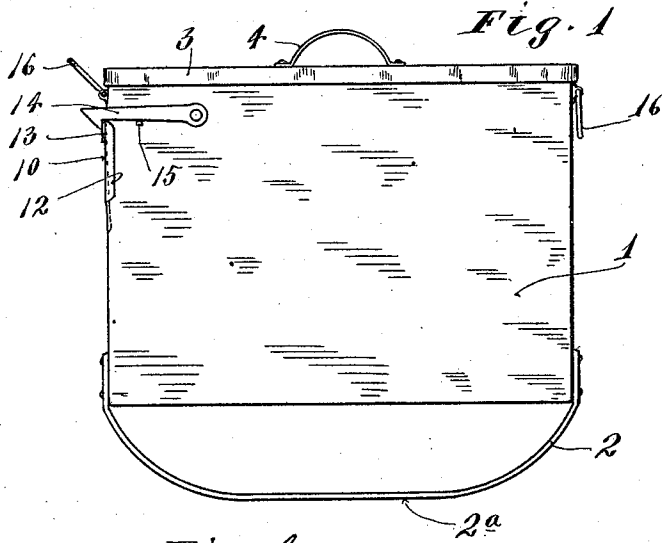
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ASH SIFTER.

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938,103.

Patented Oct. 26, 1909.



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ASH-SIFTER.

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To all whom it may concern:

Be it known that I, CHARLES WOLFENDEN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Ash-Sifters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide an extremely simple and highly efficient sifter, especially adapted for sifting ashes from coal and, to this end, it consists of the novel devices and combinations of devices herein-after described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation, showing the improved ash sifter; Fig. 2 is an end elevation of the same; Fig. 3 is a plan view of the sifter, with some parts broken away; and Fig. 4 is a vertical section taken on the line x^x of Fig. 3.

The body of the sifter is preferably in the form of a thin rectangular sheet metal box 1, which is supported by a pair of laterally spaced rockers 2 afforded by metal straps having flat bottom portions 2^a and having their ends riveted to the sides of the lower end portions of the said box. This box is provided with a flanged removable cover 3, shown as provided with a centrally located hand piece 4. At a point considerably below its top, the box 1 is provided with a multiplicity of transversely extended rods 5, the ends of which are rigidly secured to the sides of the said box by riveting or otherwise. These rods 5 support a removable flat screen 6 which, as shown, is provided with a loosely secured hand loop 7. In one end, just above the screen 6, the box 1 is provided with a discharge orifice 8 that extends nearly from side to side thereof, the end plate of the said box at the sides of said orifice being turned inward at 9 for the purpose which will presently appear.

Mounted in the lower portion of the discharge orifice 8 is a discharge plate 10 formed of sheet metal and provided in its ends with notches 11 with which the said inturned flanges 9 loosely engage to afford

a hinge which permits the said plate 10 to be turned into an approximately horizontal position, as shown in Figs. 3 and 4, or to be turned into a vertical position as shown in Figs. 1 and 2, in which latter position it closes the said discharge orifice 8. Outward of the notches 11, said discharge plate 10 is provided with end flanges 12, which, when the said plate is turned into a closed position, overlaps the side plates of the box 1. A latch bar 13 is secured to the outer face of the discharge plate 10 and its ends project slightly beyond the ends of the said plate, for engagement with the hooked ends of the latch dogs 14 that are pivotally secured to the sides of the box 1. Stops 15 on the sides of the box limit the downward movements of the latch dogs 14, when the discharge plate 10 is turned downward, and hold the beveled outer ends of the said dogs in such positions that they will be engaged and forced upward into interlocking engagement with the ends of the latch bar 13 when the discharge plate 10 is turned from its horizontal into its vertical position. These latch dogs 14, as is evident, normally hold the discharge plate 10 in position to close the orifice 8. At its ends, the box 1 is shown as provided with hand rings 16, by means of which the device may be lifted.

When the mixed coal and ashes are placed within the box 1 on top of the screen 6, while the orifice 8 is closed by the plate 10 and while the cover 3 is applied to the box and the box is then rocked by means of the handle 4, the ashes will be sifted through the screen 6 into the bottom of the box while the coal will be retained upon the said screen. The flat bottom portions of the rockers 2 produce a jarring motion and thereby increase the agitation of the coal and ashes when the box is rocked. Furthermore, the rockers 2 are preferably of spring steel or other spring metal which, in itself, produces a vibration and increases the agitation imparted to the coal and ashes when the box is rocked. Sometimes, it will facilitate the separation of the coal and ashes to rock the box laterally, so that it will be alternatively supported first on one and then on the other of said spring rockers.

When the separation has been completed, the coal may be easily and quickly dumped from the box simply by moving the discharge plate 10 into its horizontal position

and rocking that end of the box downward, so as to cause the coal to run out of the discharge orifice 8 and over the discharge plate 10, either on to the floor or into a suitable receptacle.

When the ashes are to be removed, the screen 6 must first be lifted out of the box 1 and they will then be dumped by turning the box upside down, under which manipulation the open rockers 2 will afford convenient hand pieces for holding the box in its inverted position.

The device above described, while of extremely simple construction and of small cost, has, in practice, been found highly efficient for the purposes had in view.

What I claim is:

1. In a sifter of the kind described, the combination with a box mounted on rockers and having a displaceable cover, of a screen displaceably mounted within said box above the bottom thereof, one end plate of said box being cut to form a discharge orifice extending above said screen and having inturned side flanges, of a discharge plate mounted in the lower portion of said discharge orifice and having notched ends with which the said inturned flanges loosely engage to afford a hinge permitting the said discharge plate to be moved from a position to close said

discharge orifice into a position in which it forms an extension of said screen.

2. In a sifter of the kind described, the combination with a box mounted on rockers and provided with a displaceable cover, of transverse rods supported by the sides of said box above the bottom thereof, a screen loosely supported on said rods, said box having in one end a discharge orifice extending above said screen and having flanges at its sides, a discharge plate mounted in the lower portion of said discharge orifice and provided in its ends with notches with which the said inturned flanges loosely engage to afford a hinge permitting the said discharge plate to be moved from a position to close said discharge orifice into a position in which it forms an extension of said screen, said discharge plate having at its ends latch engaging projections, and latch dogs pivoted to the sides of said box and engageable with said latch projections to hold said discharge plate in its closed position, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES WOLFENDEN.

Witnesses:

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