

UNITED STATES PATENT OFFICE.

LAWRENCE F. FRAZEE, OF NEW BRUNSWICK, NEW JERSEY.

ASH-SIFTER.

Specification of Letters Patent No. 27,439, dated March 13, 1860.

To all whom it may concern:

Be it known that I, L. F. FRAZEE, of New Brunswick, in the county of Middlesex and State of New Jersey, have invented a new and Improved Coal-Sifter; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1, represents a vertical section of my invention, taken in the plane indicated by the line *y, y*, Fig. 2, Fig. 2 is a similar section taken in the plane indicated by the line *x x*, Fig. 3, and Fig. 3 is a plan or top view with the cover removed.

Similar letters of reference in the three views indicate corresponding parts.

This invention consists in arranging around the sieve, and close up to the same, a ring, the edge of which is partly undulatory, so that the same forms a support for arms which are secured to the sides of the sieve, and that when a vibrating motion is imparted to the sieve, the undulatory portion of the edge of the ring produces a side shake which materially facilitates the sifting operation; and my invention consists also in arranging the box with a double bottom, which fits closely to the sieve, so as to keep the dust down, and which is furnished with a covered aperture to admit the cinders and stones; and it further consists in the arrangement of sloping conductors which carry the ashes down to the drawer, and which keep the edges of the drawer clear.

To enable others skilled in the art to make and use my invention I will proceed to describe it with reference to the drawing.

A, represents a box made of wood or any other desirable material, and furnished with a cover B, which fits over the edge of the box by means of a projecting flange *a*, and which can be removed without difficulty. Said box is provided with two bottoms C, D, and a cross bar *b* which extends transversely through the box, and serves to support the sieve E. This sieve fits closely into an opening cut into the upper bottom C of the box, and the edge of said opening is furnished with a ring F, which serves to steady the sieve, and to keep it in an upright position.

Arms *c*, are secured to the sides of the sieve, which extend over the edge of the ring F, and a portion of said edge is provided with undulations *d*, so that friction rollers *e*, attached to one or more of the arms *c* rise and fall as they pass over said undulations, and that by imparting a vibrating motion to the sieve, it receives at the same time a side shake which causes the ashes to separate much quicker from the coals than by a simple swinging motion. A handle G, attached to a rod *f*, which extends through the side of the box, serves to operate the sieve.

The lower part of the box is occupied by a drawer H, and conductors *g*, carry the ashes and other impurities, which drop down from above, over the edge of the drawer. These conductors are made sloping, as clearly shown in Figs. 1 and 2, and their under side reaches close down to the top edge of the drawer, so that no ashes or dust can accumulate on the said edge of the drawer.

After the ashes have completely separated from the large lumps in the sieve, and when the dust has somewhat settled, the cover is taken off, and the cinders and stones can now be picked out without removing the sieve. An aperture I, in the upper bottom C, admits of dropping the cinders and stones to the drawer H, without pulling the latter out, and this aperture is covered up by a cover *h*, so as to keep the dust down as much as possible, while the sifting is going on.

This sifter is very compact, it does its work quick, and the dust is kept inclosed in the lower part of the box, so that the person who operates the sifter, suffers no inconvenience, and that the cover from the box can be taken off almost immediately after the motion of the sieve has been stopped, so that no time is lost in separating the good coal from the ashes, and also from the cinders and stones.

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

Arranging in the box A, a double bottom C, with an aperture I, substantially as, and for the purpose specified.

LAWRENCE F. FRAZEE.

Witnesses:

W. HAUFF,

WM. THOMPSON.