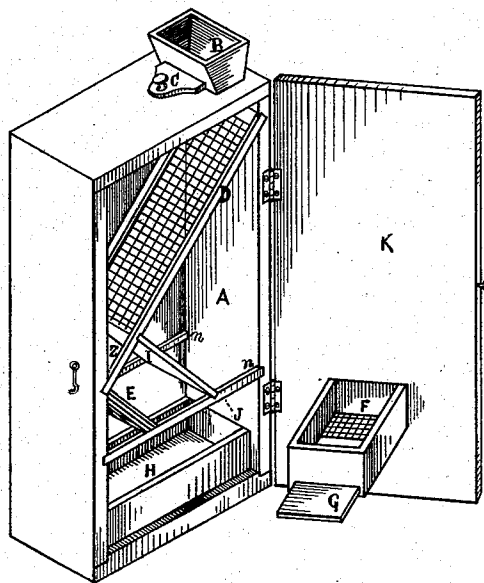


J. S. PEARCE.
Coal-Sifters.

No. 158,808.

Patented Jan. 19, 1875.



Witnesses;

Saml C. Oliver
H. E. Metcalf

Inventor;

James S. Pearce,
per C. A. Shew,
Atty.

UNITED STATES PATENT OFFICE.

JAMES STURGIS PEARCE, OF NORTHAMPTON, MASSACHUSETTS.

IMPROVEMENT IN COAL-SIFTERS.

Specification forming part of Letters Patent No. 158,808, dated January 19, 1875; application filed December 15, 1874.

To all whom it may concern:

Be it known that I, JAMES S. PEARCE, of Northampton, in the county of Hampshire, State of Massachusetts, have invented a certain new and useful Improvement in Coal-Sifters, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which my invention appertains to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is an isometrical perspective view of a sifter constructed upon my improved plan.

My invention relates more especially to that class of coal-sifters in which the screens are housed or inclosed in a cabinet to confine the ashes and dust; and consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a simple, cheap, and effective device is produced.

In the drawing, A is the case or cabinet; B, the hopper; and C the hopper-slide. The hopper is disposed near one side of the case, the coal in passing through it falling upon the upper end of the long screen D, which is arranged diagonally across the body of the cabinet, as shown. Between the lower end of the screen D and the side of the cabinet there is an opening, *z*, and beneath this opening a short screen, E, having finer meshes, and inclined in a direction opposite to that of the long screen. Near the lower end of the screen D, and above the opening *z*, there is a chute, I, arranged in parallelism with the screen E, the lower ends of the last-named screen and of the chute being supported by the cross-girders *n n*. A drawer or pan, H, is arranged in the lower part of the cabinet, into which it slides transversely through an opening in the side which supports the upper end of the screen D. A drawer, F, is fitted to slide in an aperture in the door K, and is arranged in such a position with respect to the other parts of the sifter that when the door is closed, the drawer will be supported centrally over the drawer H, and immediately under the opening between the short screen E and chute I. The drawer F has a sliding bottom, G, and a short distance above this there is a wire-screen, a part of which is rep-

resented in the drawing as removed, in order to show the space between the screen and bottom.

From the foregoing the nature and operation of my invention will be readily understood by all conversant with such matters.

The coal to be sifted is poured into the hopper B, and falls upon the upper end of the screen D, over which it passes, and, through the opening *z*, falls upon the screen E, and thence into the drawer F. In passing the screen D the bulk of the ashes will be separated from the coal and fall through the meshes of the screen upon the chute I, passing through the opening J into one end of the drawer H. On striking the screen E, a large proportion of the ashes which have passed over the screen D will be separated from the coal and fall through the screen into the opposite end of the drawer. A small quantity of ashes, however, will generally adhere to the coal until it is deposited in the drawer F. This is separated by shaking the door in which the drawer F is supported, thus agitating the coal, and causing the ashes to fall into the lower part of the drawer, from whence they may be removed by means of the slide G.

It will be seen that the door K not only performs the office of closing the cabinet and preventing the ashes and dust from escaping, but affords a convenient means of sifting the coal in the drawer F, after it has passed the screens D E.

I sometimes hinge the screen in the drawer F in such a manner that it may be dropped or attached to slides, so that it may be withdrawn after the ashes have been removed by means of the slide G, as described, thereby enabling the coal to be discharged directly into a hod or other vessel without removing the drawer from the door.

Having thus described my invention, what I claim is—

In a coal-sifter, constructed substantially as described, the drawer F, combined to operate with the door K, screens D E, and drawer H, substantially in the manner and for the purpose specified.

JAMES STURGIS PEARCE. [L. S.]

Witnesses:

DAVID W. CRAFTS,
CHAS. S. BARTLETT.