

J. H. GOODFELLOW.
Ash-Sifter.

No. 159,666.

Patented Feb. 9, 1875.

Fig. 1.

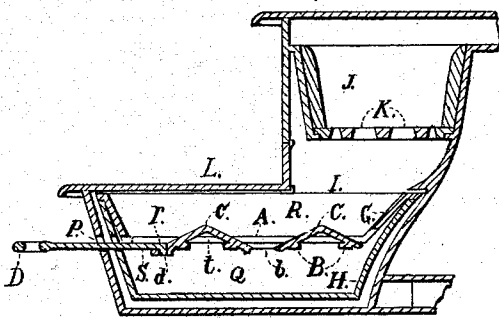


Fig. 2.

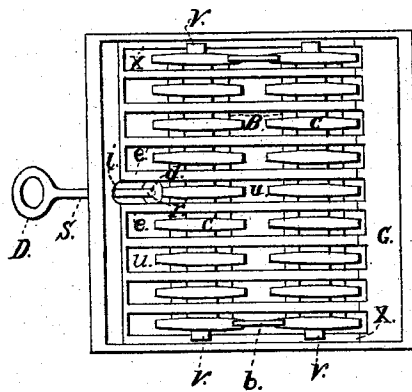


Fig. 3.

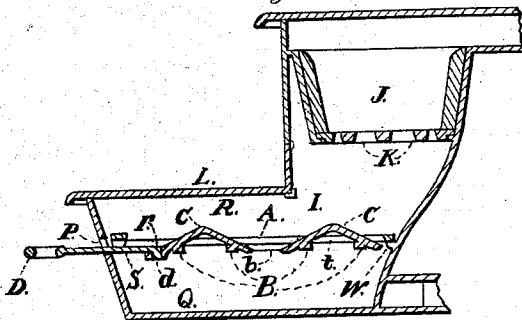
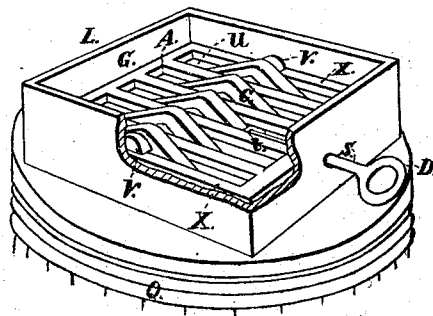


Fig. 4.



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John R. Young

Inventor,
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Fig. 5.

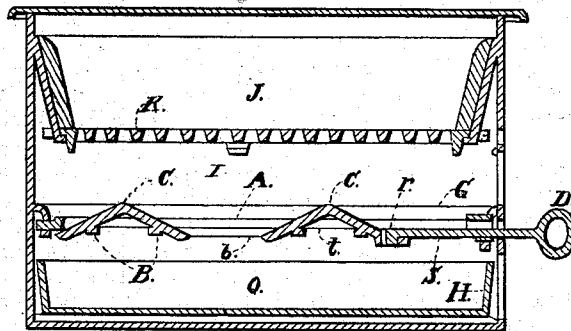
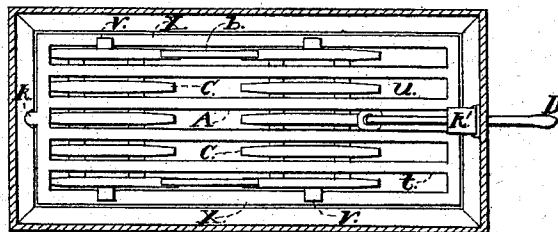


Fig. 6.



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JOHN H. GOODFELLOW, OF TROY, NEW YORK.

IMPROVEMENT IN ASH-SIFTERS.

Specification forming part of Letters Patent No. **159,666**, dated February 9, 1875; application filed December 29, 1874.

To all whom it may concern:

Be it known that I, JOHN H. GOODFELLOW, of the city of Troy, in the county of Rensselaer and State of New York, have invented certain Improvements in Ash and Coal Sifters for Stoves and Ranges, &c., of which the following is a specification:

My invention has for its objects to provide a sifter for grates (wherever they may be located, whether in the ash-pan, stove, range, &c.,) which shall effectually sift the ashes and agitate the coal, and at the same time clear the grate-bars and prevent the spaces between them from becoming clogged or jammed with cinders or particles of coal; and with these ends in view my invention consists of a sifter adapted to be arranged on the under side of the grate and provided with obtuse-angular or slightly-curved projections extending up between and slightly above the top horizontal surface of the grate, and adapted to be readily vibrated, as will be hereinafter more fully set forth.

To enable those skilled to more fully understand the construction and advantages of my improved sifter, I will proceed to describe the same, referring by letters to the accompanying drawings, which I have made full and complete, in order to show its application to varieties of ash-pans, stoves, ranges, &c.

Figure 1 is a central vertical section from front to rear of the forward portion of a cooking stove having my improvement arranged with the grate in the cinder-box under the fire-grate. Fig. 2 is a top or plan view, on an increased scale, of ash-sifter and grate. Fig. 3 is a similar view with Fig. 1, but with the sifter arranged within the walls of the hearth-pit. Fig. 4 is a perspective view of an ordinary screen mounted upon the head of an ash-barrel, and provided with my improved sifter. Fig. 5 is a central longitudinal vertical section of a fire-pot and ash-pit, the grate in the latter adapted to be dumped, and provided with my improved sifter, operated through the shank or journal of the grate. Fig. 6 is a plan view of the grate and sifter removed from the stove.

Like letters indicate the same parts in the several figures.

A represents the grate, composed of paral-

lel bars *t*. B is the suspended sifter-frame, suspended below the grate A by lugs V resting upon the outside bars of the grate or upon suitable flanges. The agitator or sifter-frame B has cast or otherwise secured thereto upwardly-projecting inclined or curved fingers C, the angle or curve being obtuse, for the objects presently explained. J is the fire-pot of a stove, and K its grate, so arranged that the ashes and cinders shall fall directly therefrom onto the grate and sifter in the hearth-pit I. L is the removable cover of the ordinary pit. R is the cinder-chamber above, and Q the ash-chamber below, the grate A. D is a suitable handle secured to or cast with the sifter, and by which it is reciprocated, and when desirable—as, for instance, when the sifter is applied to dumping-grates—the handle D may be modified in design and protrude through the shank or journal of the grate, and it may be “squared” therein, so that the handle may serve as a means by which the grate may be dumped.

I have shown in all the figures of the drawing, except Fig. 4, a double sifter, or two parallel frames, each with a series of protruding agitating and clearing fingers; but of course, as in Fig. 4, only one frame and set of fingers may be used, in which case a longer vibration or stroke is attainable.

The advantage arising from locating the frame B underneath the grate is, that there is not the same likelihood there would be, were it located on top, to mount and ride upon small particles of cinders which would work between the frame and the top surface of the grate-bars, and ultimately jam and render immovable the frame; but on the contrary, the frame being below the grate-bars, there is no chance for any such action, as when the fall of any ashes or cinders takes place they drop between the grate-bars directly into the ash-pan below.

It will be observed that my sifter is preferably cast in one piece, the lugs V being riveted thereto when placed in position, or the lugs may be cast with the frame and extend beyond the side bars of the grate, and an independent rail or way placed under them to support and hold the sifter in position, or such other changes may be made as would naturally

suggest themselves to one skilled, the gist of my invention resting in the idea of locating the frame below the grate and providing said frame with obtuse-angular fingers extending between the grate-bars and slightly above their upper horizontal plane, so that when the sifter-frame is vibrated the space between the bars is cleared by the fingers, and the coal and ashes lying on the grate are agitated by the upper angular or curved knuckle of the fingers.

The advantage of the peculiar construction of the fingers is that their knuckles ride under, agitate, and lift the coal, &c., in the fire-pot, and any coals or small cinders which lodge between the bars are likewise lifted in an obvious manner and dislodged.

The frame and handle may be made separate, and adapted to be secured together by inserting the small end of the latter within the hole *d* in the former, as shown in the drawing.

It will be also observed that the agitator and sifter is located entirely within the limits of the grate, the advantage of such arrange-

ment being that the agitator and sifter may be combined with a dumping-grate and be susceptible of turning therewith, which is not the case with any ash-sifter or agitator with which I am familiar.

The handle may be located within the spindle or journal of the grate, as heretofore described, or any other suitable means may be employed to operate the sifter.

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

A sifter and agitator adapted to be located beneath a grate, and composed of a suitable frame provided with longitudinal obtuse-angular bars extending between and above the top surface of the grate, whereby the coals, &c., resting thereon are agitated, and the spaces between are cleared by the vibration of the sifter-frame, substantially as hereinbefore set forth.

JOHN H. GOODFELLOW.

Witnesses:

GEO. S. PRINDLE,

JOHN R. YOUNG.