

D. G. LITTLEFIELD.

Base Burning Stove.

No. 53,995.

Patented April 17, 1866.

Fig. 1.

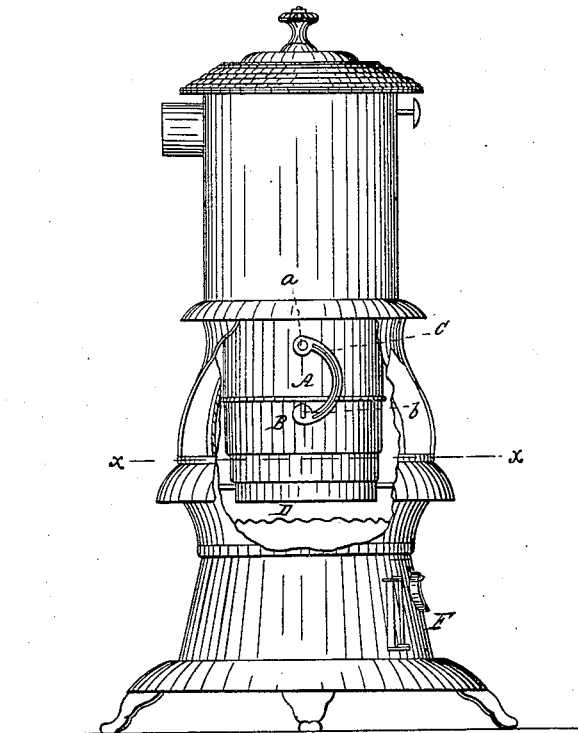


Fig. 2.

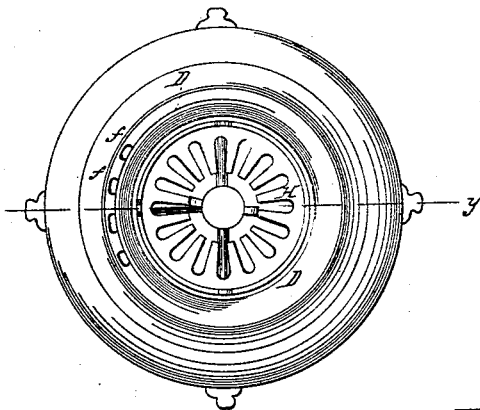
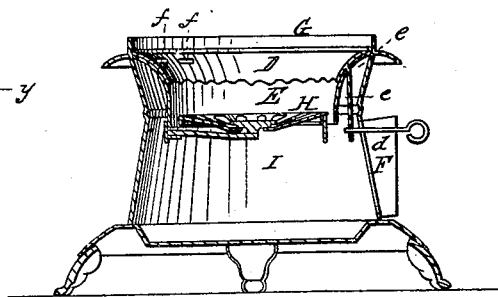


Fig. 3.



Witnesses:

Randolph Boyd
H. King

Inventor:

Dennis G. Littlefield
By Robbins & Burr
attys

UNITED STATES PATENT OFFICE.

DENNIS G. LITTLEFIELD, OF ALBANY, NEW YORK.

BASE-BURNING STOVE.

Specification forming part of Letters Patent No. 53,995, dated April 17, 1866.

To all whom it may concern:

Be it known that I, DENNIS G. LITTLEFIELD, of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Coal-Burning Stoves, of which I hereby declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, of which—

Figure 1 is a side elevation of a cylinder-stove with a portion of the outer casing broken away in order to show more clearly my improvements; Fig. 2, a top or plan view of the lower portion of the stove, all that part above the line *x x*, Fig. 1, being removed; and Fig. 3, a section in the line *y y* of Fig. 2.

Similar letters indicate like parts in each of the drawings.

My improvements relate particularly to that class of stoves which contain a supplying-cylinder; and they consist in an improved manner of combining the two sections of the supplying-cylinder, and in the addition of an annular agitator for removing from the upper rim of the fire-pot the accumulations of ashes and cinders which are apt to lodge thereon, and for keeping the burning coal well down from the sides of said fire-pot; also, in a dust-valve to allow the fine ashes set free by agitating the grate to ascend into the combustion-chamber, and thus to obviate the escape thereof into the room.

The lower end of the supplying-cylinder, by reason of the more intense heat to which it is exposed, is frequently burned out and rendered unserviceable, and it is consequently requisite that it be made in a separate section from the upper portion thereof, which remains comparatively uninjured. It is also necessary that the lower section, which is exposed to the fire, shall be hung in such a manner as that it may be readily removed in order to be repaired or replaced by another. Heretofore this has been done by means of straight metallic hasps or stirrups, as described in Letters Patent issued to me and bearing date August 18, 1863; but experience has demonstrated that the action of the fire upon the lower portion of the supplying-cylinder will cause it to expand to such a degree as to break straight unyielding stirrups or hooks, requiring their constant renewal and causing great inconvenience and annoy-

ance. I propose to remedy this defect by the employment of curved hooks, substantially such as that represented in Fig. 1, for the purpose of connecting the two sections of the supplying-cylinder.

A is the upper portion of the supplying-cylinder; B, the lower section thereof; C, the curved connecting hasp or hook, whose upper end is pivoted by the pin *a* to the upper section, A, of the cylinder, and of which the lower end is notched to receive the projecting eye or lug *b* upon the lower section, B. Two or more of these curved hasps or hooks are employed to hang the lower section, B, and their advantage over the straight ones heretofore used in this connection consists in that from their peculiar curved shape they possess sufficient elasticity to yield to the expansion of the supplying-cylinder without breaking, and yet serve always to retain the two sections closely and firmly together.

The second feature of my invention is more clearly shown in Figs. 2 and 3, and consists in a flaring annular agitator, D, which I combine with the upper rim or edge of the fire-pot, in the manner clearly shown in Fig. 3, wherein it appears that this agitator is made to fit over and upon the upper edge or rim of the fire-pot, E, whereon it freely turns, and its lower edge is scalloped or notched. A rod, *c*, secured to a convenient point of the annular plate or agitator D, and pierced near its lower end for the reception of a lever, *d*, extends down through an elongated slot (seen in section at *e*, Fig. 3) concentric with the rim of the fire-pot E, so as to be reached by the said lever *d* through the lower door, F, of the stove, Figs. 1 and 3.

When in the use of a stove to which this my improvement has been applied, an accumulation of ashes or fine coal forms in the angle between the face of the agitator D and the side of the casing G of the stove, a few vibrations of the agitator, effected by means of the lever *d*, or in other suitable manner, will at once remove the same, leaving the face of the agitator clean and bright; and in such a stove, should the coal become banked up against the sides of the fire-pot, thereby impeding the draft, a similar movement will shake it down well into the center, where it properly belongs, the notched or scalloped edge greatly facilitating this operation.

The holes *f f f f* illustrate a dust-valve to carry off the light floating dust set free by the agitation of the grate. There are corresponding holes through the annular plate D and the rim of the fire-pot. When the grate is to be agitated said plate D should first be so turned that said holes in the plate D and the rim of the fire-pot will coincide, leaving openings for the fine dust set free by agitating the grate to ascend into the combustion-chamber and pass out of the exit-flue or remain in the fire-pot. This is important to prevent the escape of dust and ashes into the room.

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

1. The employment of the curved hook C, when used in combination with the upper and lower sections of the magazine or self-supplying cylinder A and B, constructed and arranged in the manner and for the purposes substantially as herein described and set forth.

2. The employment of the annular agitator, damper, or valve D, constructed, arranged, and combined with the fire-pot or fire-chamber E, in the manner and for the purposes substantially as herein described and set forth.

DENNIS G. LITTLEFIELD.

Witnesses:

H. KING,

RANDOLPH COYLE, Jr.