

A. RING.

COAL-GRATE AND FIRE-POT.

No. 172,778.

Patented Jan. 25, 1876.

Fig. 1.

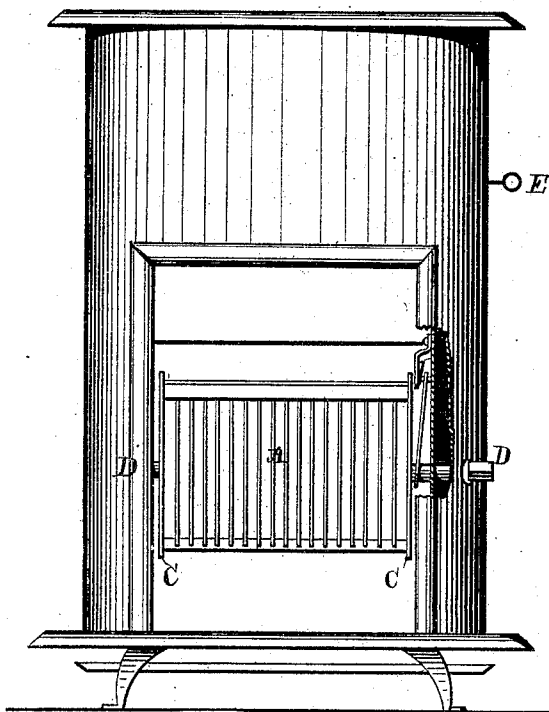
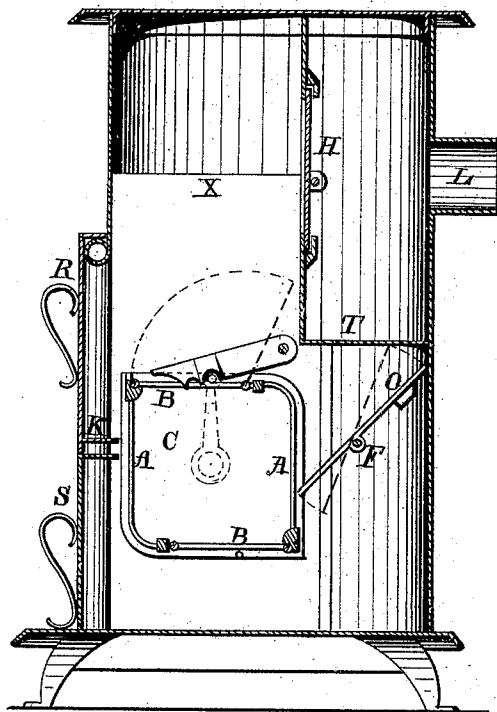


Fig. 2.



Witnesses:

Frances C. Ring
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UNITED STATES PATENT OFFICE.

AARON RING, OF MAPLEWOOD, MASSACHUSETTS.

IMPROVEMENT IN COAL-GRATES AND FIRE-POTS.

Specification forming part of Letters Patent No. **172,778**, dated January 25, 1876; application filed October 20, 1875.

To all whom it may concern:

Be it known that I, AARON RING, of Maplewood, in the town of Malden, in the county of Middlesex and State of Massachusetts, have invented certain Improvements in Coal-Grates and Fire Pots or Boxes, of which the following is a specification, reference being had to the accompanying drawings and to letters of reference thereon, making a part of this specification.

My invention consists in so arranging the fire pot or box of a stove or open grate on horizontal axis that the fire pot or box can be turned upside down while the coals in the fire pot or box are burning, thus bringing the top of the fire to the bottom and the bottom to the top, for convenience of rekindling or renewing the fire.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A A are grates, forming the sides of my fire pot or box. B B are swing-grates—the one at the bottom to be used as bottom grate, the one at the top to prevent coal from falling behind the fire pot or box when adding new or fresh coal to the fire. C C are ends of the fire pot or box, and are generally made close, and may be lined with fire-brick or soap-stone, or made sufficiently thick of cast-iron. From the center of each of these ends, and extending, as indicated at D D, are the shafts or journals, having their bearings in the smoke-flue partition, which extends from front to back of stove, and from the bottom up to within a few inches of the top of the stove, as indicated in Figure 2 by the dotted lines at X. The right-hand shaft extends through this partition, and far enough through the outside shell of the stove to receive a crank or lever, for the purpose of reversing or revolving the fire pot or box, and rocking or shaking the same enough to shake out the loose ashes from the burning coals. E is damper-handle, moving the damper H to open or shut the direct draft, which is just above and behind the fire, and opposite the lead-off L in the back of the stove. R is a blower, extending down to about the middle of the grate, with a partition, K, across its bottom, which reaches in to quite near the

front grate, to prevent the draft passing up between the grate and blowers. S is check-draft, with a partition near its top like the one on the bottom of the blower, for the purpose of more effectually checking the fire. F is a swing-partition, for the purpose of assisting the draft at the back grate, as the partition on the blower does at the front grate. This swing-partition will open enough to allow room as the grate on fire pot or box revolves in reversing the fire, and will immediately follow the fire pot or box as it comes to rest, being self-acting, it being weighted with a piece of cast-iron near its top, as in Fig. 2 at O. The partition in which the damper slides extends from one end of the stove to the other, and from the top of the stove to near the top of the fire pot or box, and from thence bends at right angles to the back of the stove, cutting off all draft from the fire to the lead-off L, except by the damper H, or the diving-flue at X, the partition T being removed at either end outside of the ash-pit, to allow the smoke, after passing the dive at X, to rise behind the direct-draft partition to the lead-off L. A hasp or latch is arranged to hold the fire pot or box steady when at rest, as shown in Fig. 1 at the right-hand end of the fire pot or box. The latch can be raised and thrown back when not required.

To use my improvement, open the top grate and let it fall over against the direct-draft partition of the stove, drop the latch or hasp, and let it fall between the end of the fire pot or box and the spring holding the spur-pin which holds the grate when shut. This latch or hasp will force the spur-pin into an opening in the partition, thereby holding the grate or pot firmly in place. Now kindle a coal fire as in any coal-stove. When this fire burns low, add more coal, as in any stove, and when the new coal gets well on fire, and the coal at the bottom looks dull, shut down the grate B, raise the latch or hasp, and the spur-pin will immediately spring in over the grate, securing it in its place. Now, with the crank or lever, turn the fire-pot upside down; this will bring the live coals to the bottom and shake out the ashes at the same time. Now open the top grate and secure the fire-pot in position as in the first place; add more coal, and you

have, to all effects and purposes, a new, clean, bright fire. This may be repeated as often as desired, always turning the top of the pot toward the back of the stove and the bottom to the front; this allows the loose ashes to fall into the back part of the ash-pit.

Having described my improvement in an open-front stove, I do not confine myself to this form or kind of stove, as skillful workmen can easily adjust my improvements to nearly every stove in the market, with slight alteration of their internal structure. Neither do I confine myself to parlor and cooking stoves, as it will be equally valuable in ranges and furnaces by a modification of their internal structure. Neither do I confine myself to any form of grate or fire pot or box. One skilled in the art can easily change size and shape of grate or fire-pot to round or box shape, and square, oval, or oblong. Neither do I confine myself to one material; any common and well-known material can be used; but

What I claim, and wish to secure by Letters Patent, is—

1. The reversible fire pot or box A, in combination with the movable partition F, substantially as and for the purpose set forth.

2. The reversible fire pot or box A, in combination with blower R and check-draft S, substantially as and for the purpose set forth.

3. The reversible fire pot or box A and swing-grates B B, in combination with hasp or latch and spring spur-pin, substantially as and for the purpose set forth.

4. The reversible fire pot or box A, swing-grates B B, movable partition F, blower R, and check-draft S, in combination with the hasp or latch, substantially as and for the purpose set forth.

AARON RING.

Witnesses:

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