H. L. McAVOY.

Fire-Plates for Stoves.

No. 199,844. Patented Jan. 29, 1878.

FIG. I.

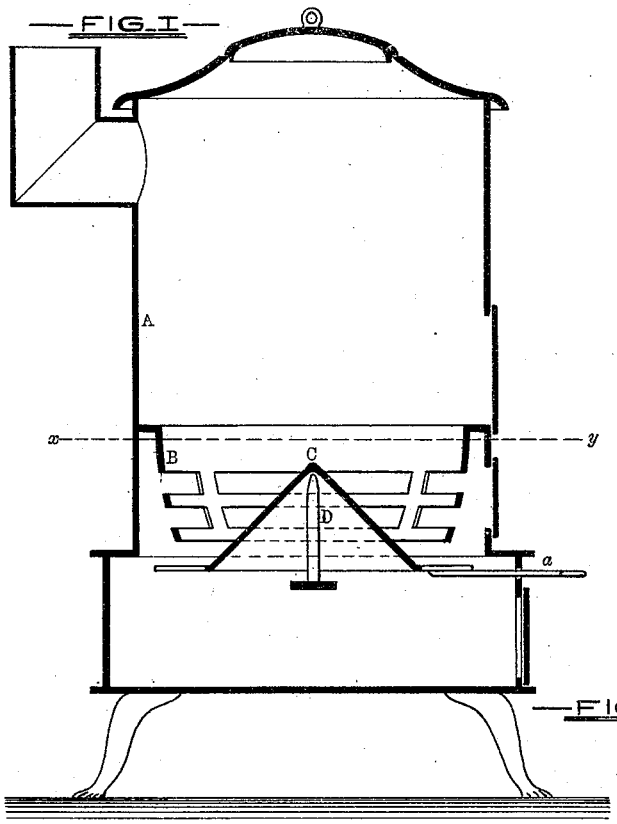


FIG. II.

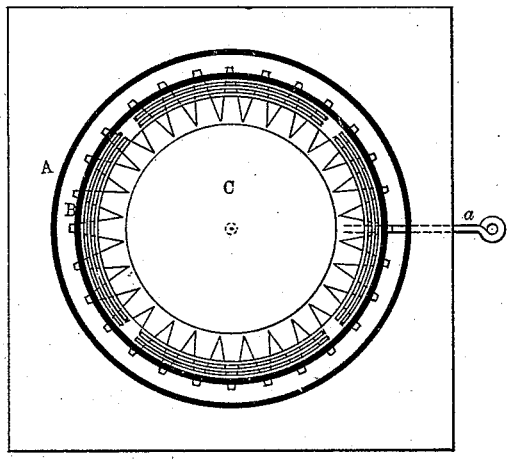


FIG. III.

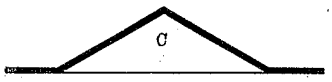


FIG. IV.

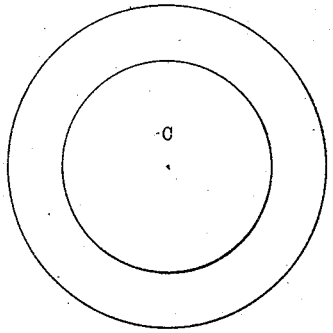


FIG. V.

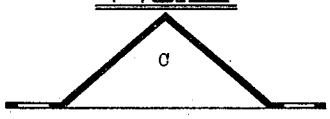
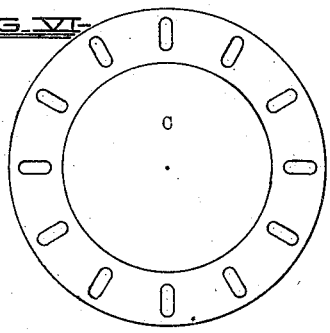


FIG. VI.



WITNESSES.

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UNITED STATES PATENT OFFICE.

HUGH L. McAVOY, OF BALTIMORE, MARYLAND, ASSIGNOR TO DAVID L. BARTLETT AND HORACE W. ROBBINS, OF SAME PLACE.

IMPROVEMENT IN FIRE-PLATES FOR STOVES.

Specification forming part of Letters Patent No. **199,844**, dated January 29, 1878; application filed August 17, 1877.

To all whom it may concern:

Be it known that I, HUGH L. McAVOY, of the city of Baltimore and State of Maryland, have invented certain Improvements in Fire-Plates for Stoves, Furnaces, and Boilers, of which the following is a specification; and I do hereby declare that in the same is contained a full, clear, and exact description of my said invention, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

This invention relates to a novel construction of the fire-plate, or that part of the stove, furnace, or boiler upon which the fuel rests, and to the manner of supporting the same within the stove and in proper relation with the fire-pot thereof.

The said invention consists of a fire-plate having a raised center of conical or pyramidal form, so supported by a pin or bar extending from some stationary part of the stove, boiler, or furnace that both a rocking and a vibratory movement can be imparted to the fire-plate, in order to expel more readily the ashes and clinker.

The base of the fire-plate may be either plain, or perforated, or fimbriated, the latter construction being preferred, as the perforations or fringed edge admit of a better draft, and facilitate the passage of ashes from the fire.

In the further description of my invention which follows reference is made to the accompanying drawing, forming a part hereof, and in which—

Figure 1 is a vertical section of a stove incorporating my improvements; Fig. 2, a sectional plan of the same; and Figs. 3, 4, 5, and 6, views of a part of the invention.

Similar letters of reference indicate similar parts in all the figures.

A and B are, respectively, the casing and the fire-pot of the stove, and C the fire-plate of the same. The fire-plate C consists of a disk having the central portion thereof raised, and of a pyramidal or a conical form, and bounded by a plain line, and provided with peripheral ash-openings; or the ash-openings may be omitted and a plain or fimbriated circumference used in connection with the pyramidal or conical projection aforesaid.

The plate C is supported within the stove-casing by means of a pin or bar, D, projecting from some stationary part of the stove. This manner of supporting the fire-plate admits of a complex movement being imparted to the same by means of the shaking-bar *a*, consisting of a rotary motion and a vibratory or swinging movement upon the end of the pin or bar D. This complex movement of the fire-plate causes a thorough agitation of the fire, and is found to be very effective in removing ashes therefrom.

In cases where the fire-plate is used with peripheral ash-openings, or with a fimbriated circumference, the vertical distance between the said plate and the lower edge of the fire-pot may be reduced so as to prevent the passage of cinders and coal to the ash-pit.

The office of the pyramidal or conical projection on the fire-plate is to conduct the ashes, which fall to the lower part of the fire in the shaking operation, to the outer edge or circumference of the said plate, from which they pass to the ash-pit.

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

A fire-plate for stoves, boilers, and furnaces, consisting of a plate provided with a raised center of conical or pyramidal form, combined with a central pin or bar, supporting the said plate at the apex of the under side of the same, whereby both a rocking and a vibratory movement may be given to the plate, substantially as and for the purposes herein specified.

In testimony whereof I have hereunto subscribed my name this 11th day of November, in the year of our Lord 1876.

HUGH L. McAVOY.

Witnesses:

THOS. MURDOCH,

GEORGE H. HOWARD.