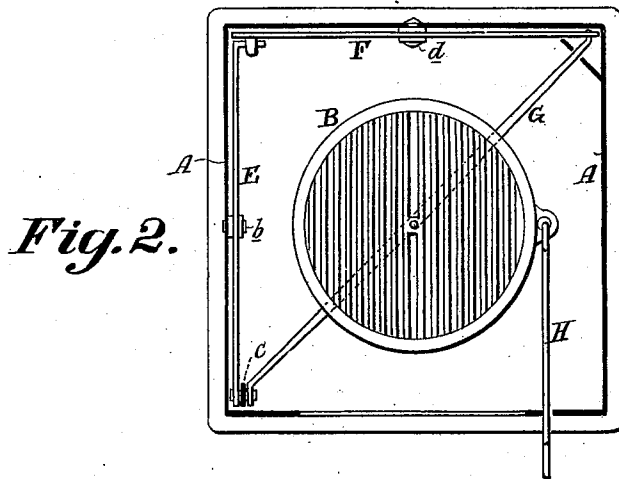
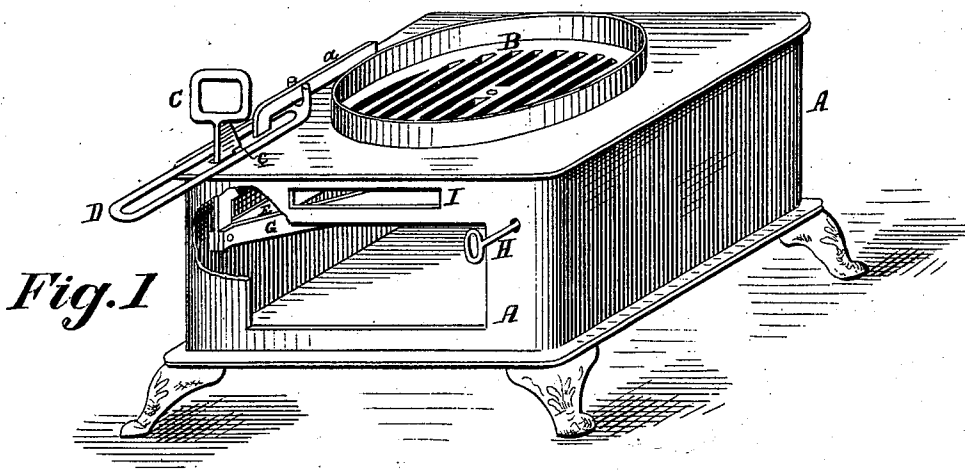


G. R. MOORE.

STOVE-GRATE.

No. 172,822.

Patented Feb. 1, 1876.



Witnesses { *J. H. Anderson*
John Parker

Inventor
Geo. R. Moore

UNITED STATES PATENT OFFICE.

GEORGE R. MOORE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. 172,822, dated February 1, 1876; application filed January 14, 1876.

To all whom it may concern:

Be it known that I, GEO. R. MOORE, of the city and county of Philadelphia, in the State of Pennsylvania, have invented new and useful Improvements in Stove-Grates, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to provide such facilities, in combination with stove and heater grates, that coal-fires may be more easily kept clean.

Figure 1 is a perspective view of the base-section of an ordinary stove containing a grate in combination with my improvements. Fig. 2 is a plan view of the same with the top plate removed.

A is the casing; B, the grate; C, manual hanger, loosely jointed to the levers below, upon which the grate is hung, and provided with teeth *c* for holding upon the casing, through which it passes at any desired point.

D is an extensible lever, to be used in lifting C when very heavy grates are used. *a* is a guide to D, and prevents its accidental removal from the heater.

E F G are connected levers, loosely jointed together in triangular form at their respective ends. E is pivoted at *b*, and F at *d*. G is provided with a central socket, which receives its counterpart (a vertical stem) from the center of the grate. H is a pull-rod for vibrating the grate horizontally. I is a small doorway to the under side of the grate when that is up, and to the upper side of the same when it is down, so that a hand-poker may be used conveniently on either side of the grate by adjusting it as required.

The operation of the levers is such that the grate is carried up and down upon a horizontal level as long as the front ends of E and G are kept together, as in this case; but the front ends of E and G may be left free, and moved separately, and the grate then carried up or down, so as to incline either way at will.

It is easier starting a fire, and less kindlings are required, when the grate is up, so that but little air can pass into the fire-chamber without passing through it; but when the refuse products of combustion are to be removed the operation is more rapidly and easily done by dropping the grate down, and then vibrating it rapidly it will discharge its load over its periphery.

I am aware that it is usual to drop some part of a grate, or even the whole of it, in order more conveniently to get at the fire to clean it; but my improvements are seen in the devices I have brought together and combined for doing this.

I have had regard to preserving a clear space around the grate; also, to the avoidance of dust.

The whole operation may ordinarily be performed without opening any part of the heater. The apertures through which the rod H and the hanger C pass will not allow the escape of dust; and, should it be desirable to use a hand-poker in any given case, the aperture I is made of such size that the ordinary draft of the heater precludes the escape of dust at that point also.

I claim as my invention—

1. The levers E F G in combination, for carrying and operating the grate B, substantially as shown.

2. In combination with the grate B, hung upon the adjustable levers, as shown, the rod H, as and for the purpose herein set forth.

3. The manual hanger C, in combination with the levers E F G, substantially as shown.

4. The extensible lever D, in combination with the hanger C, substantially as shown.

5. In combination, the heater-base A, grate B, and levers E F G, substantially as shown.

GEO. R. MOORE.

Witnesses:

J. PLANKINTON,
THOMAS CASEY.