

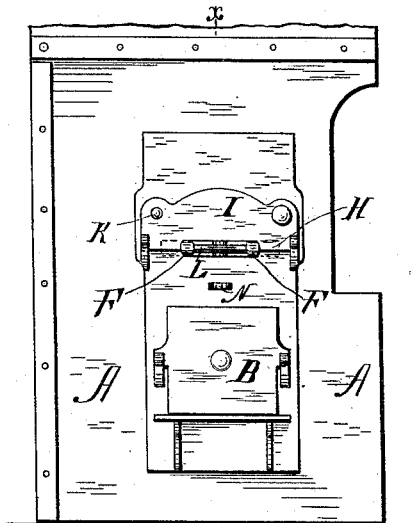
(No Model.)

A. BERTHE.  
STOVE, RANGE, OR FURNACE.

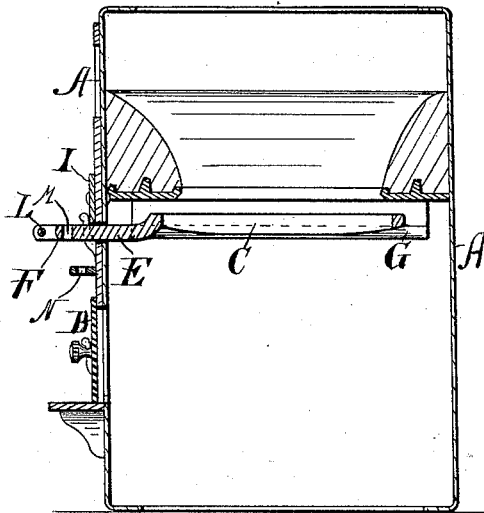
No. 421,228.

Patented Feb. 11, 1890.

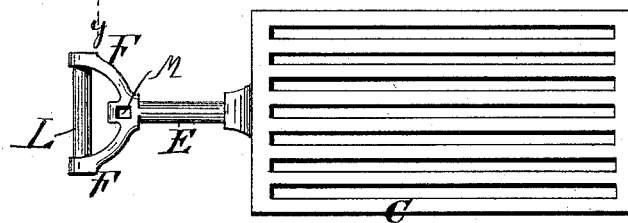
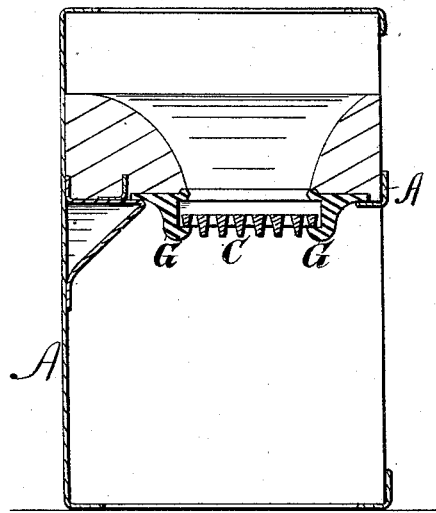
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Fig. 4.*

WITNESSES:

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ATTORNEYS

# UNITED STATES PATENT OFFICE.

ALBERT BERTHE, OF NEW YORK, N. Y.

## STOVE, RANGE, OR FURNACE.

SPECIFICATION forming part of Letters Patent No. 421,228, dated February 11, 1890.

Application filed July 11, 1889. Serial No. 317,170. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT BERTHE, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Stoves, Ranges, or Furnaces, of which the following is a specification.

This invention relates to an improvement in ranges, stoves, or furnaces by means of which the cost and construction of the grate is cheapened and simplified, as set forth in the following specification and claim and illustrated in the accompanying drawings, in which—

Figure 1 is a front view of a range, stove, or furnace. Fig. 2 is a section along *x x*, Fig. 1. Fig. 3 is a section along *y y*, Fig. 2. Fig. 4 is a plan view of a grate.

Similar letters indicate corresponding parts.

In the drawings, the letter A indicates a case or shell of a stove, furnace, or range. The door B closes the entrance to the ash-pit. The grate C has its actuating-stem E fixed thereto in a stationary position by casting the stem with the front cross-bar of the grate. The end of the stem may be forked, as at F. The grate C is shown supported on ways G, on which the grate may be reciprocated, so as to shake down the ashes through the grate-bars. The grate is inserted into and withdrawn from its place through a slit or opening H. (Shown in dotted outlines in Fig. 1.) This opening is just large enough to allow of convenient passage of the grate. Said opening is ordinarily closed by a door I, pivoted or jointed at K. Said door has an opening for the passage of the stem E, so that when the door I is closed the stem E can be used to shake or reciprocate the grate, while the door I prevents the grate being drawn out of the range. When the door I is opened, the grate can be drawn out of its place, so as to dump the fire, after which the grate can be moved back into place or if no longer serviceable a new grate can be slid onto the ways G without the assistance being required of any workman or expert to assist in fitting the new grate in place.

The forked part F of the actuating-stem E

can be used for the attachment of a handle L of a material which is a non-conductor of heat. The grate can be conveniently reciprocated by inserting a poker through the eye M in the stem E and bracing or fulcruming said poker in the eye N, formed in a suitable lug at the front of the range. Said poker then serves as a lever for reciprocating the grate.

As the grate can be cast of a plain or even formation throughout and as the actuating-stem can be cast in one piece with the grate, a structure can be thus obtained which is strong and cheaply made.

It will be seen that the grate can be reciprocated either by means of the handle L on the outer end of the stem E or by means of a poker passed down through the eye M of said stem and engaged in the eye N on the stove-front. By employing a poker in this way a special form of lever is not required, and as the handle L is preferably composed of some material which is a non-conductor of heat it can be conveniently used as a means for manipulating the grate when a poker is not at hand.

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

The combination, with a stove having the parallel guideways G G, the transverse opening H in its front wall, and the eye N, located, beneath said opening, of the reciprocating grate C, supported on said ways and bodily removable through said opening, said grate provided with the forward-projecting stem E, having the handle L on its front end and the eye M, arranged over and in line with the eye on the stove-wall, and the door I, closing the transverse opening in the stove-front and having an orifice through which the grate-stem projects, substantially as shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

A. BERTHE.

Witnesses:

A. FORTWENGLER,  
ERNST F. KASTENHUBER.