

J. EASTERLY.

Stove Grate.

No. 21,410.

Patented Sept. 7, 1858.

Fig. 1.

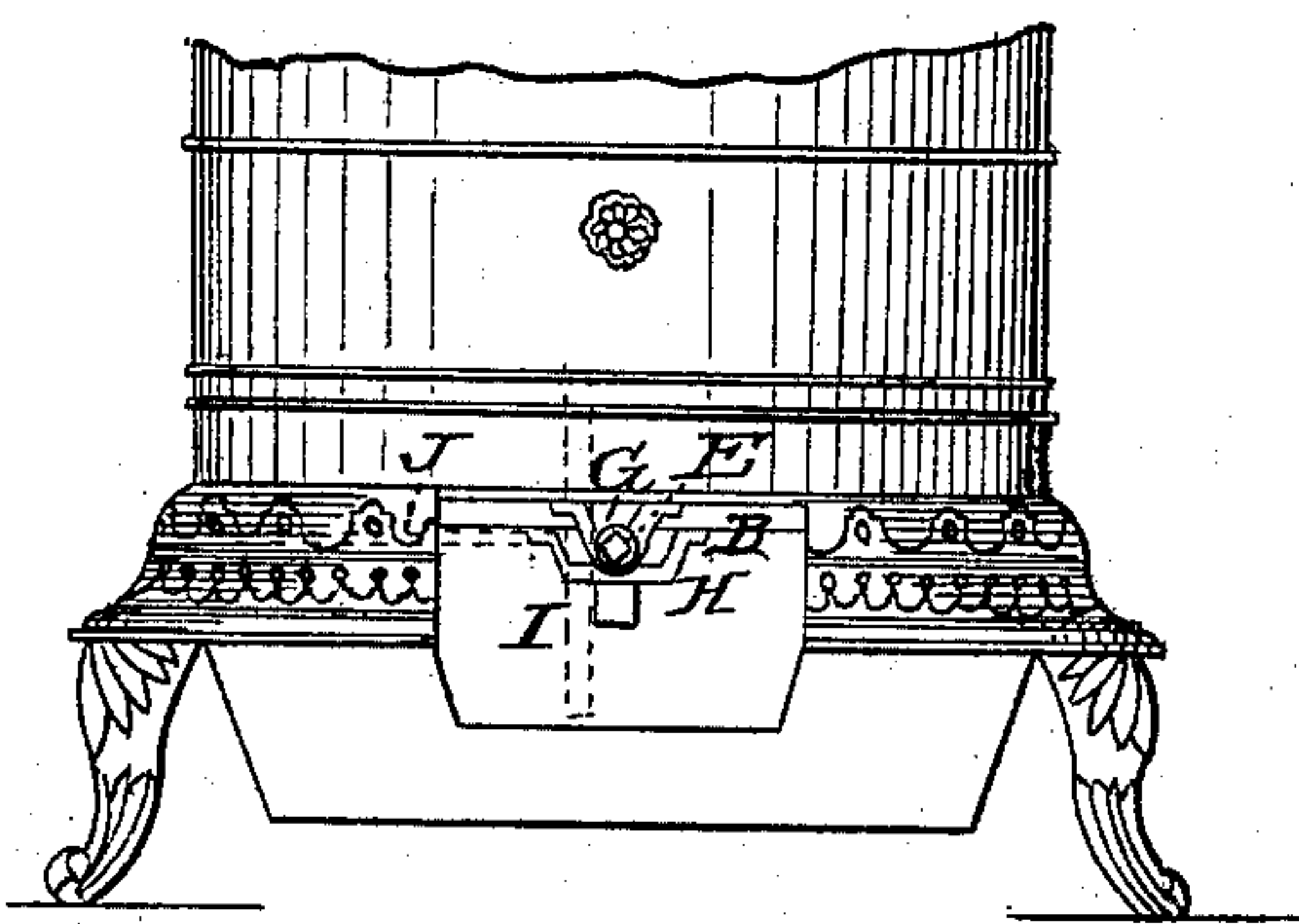


Fig. 2.

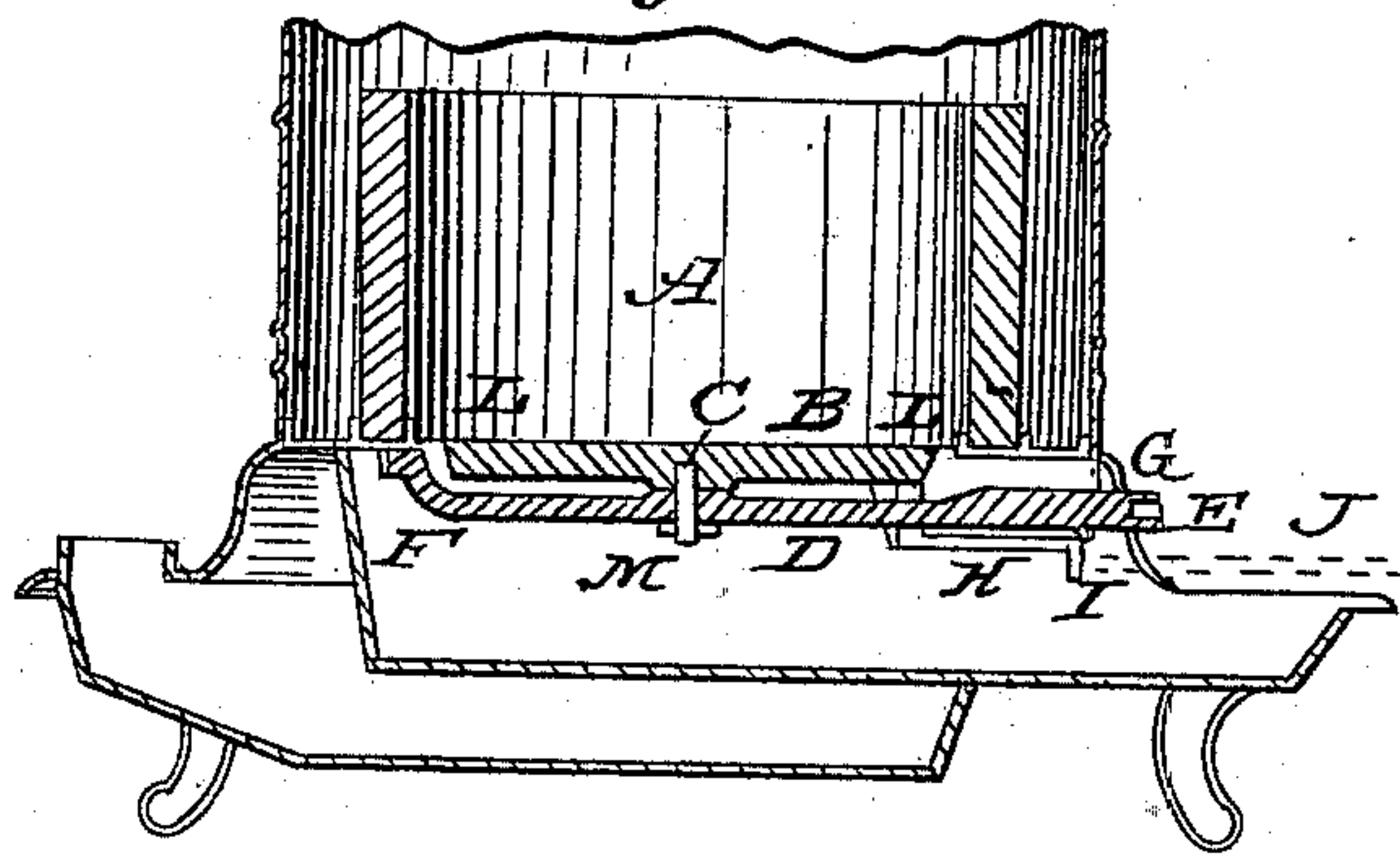
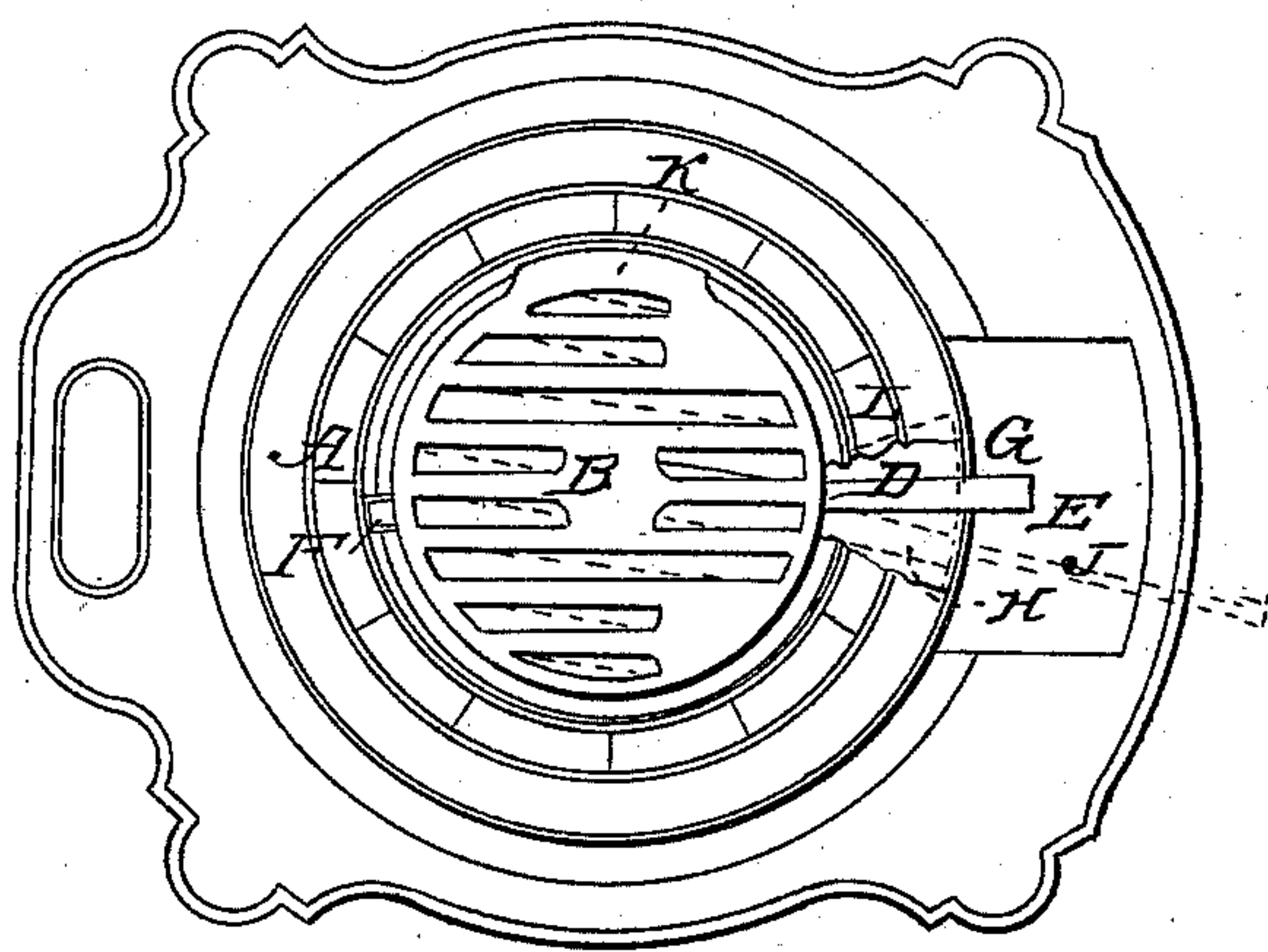


Fig. 3.



UNITED STATES PATENT OFFICE.

JAMES EASTERLY, OF ALBANY, NEW YORK.

GRATE FOR COAL-STOVES.

Specification of Letters Patent No. 21,410, dated September 7, 1858.

To all whom it may concern:

Be it known that I, JAMES EASTERLY, of Albany, in the county of Albany and State of New York, have invented a new and improved mode of constructing the grates for coal-stoves, by which they are better adapted to be agitated on a level to shake the ashes and slag from the fire, and tilted to empty the furnace; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In constructing this improvement, it was assumed that the most effective method of cleaning the ashes and slag from the furnace while it is in action is to vibrate and agitate the grate on a level. But it is equally important to have a convenient method of tilting the grate to empty the furnace, and also to have it so adapted, that it can be removed from the furnace, for repairs or for other purposes, without the inconvenience of "unmounting" the stove.

The nature of my improvement consists in constructing the grate, and the bar on which it rests, and combining therewith a clasp spanning the bar, to be permanently connected to the grate, having a projection extending out parallel with the bar to receive a lever with which the grate may be agitated on a level, and by connecting a lever to the end of the bar the grate may be tilted to a perpendicular position and empty the residuum from the furnace.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

Of the annexed drawings, Figure 1, is a front elevation, and Fig. 2, a vertical section, with the stove above the furnace broken off. Fig. 3, is a plan of the same.

A is the furnace, B the grate, L L is a "bed plate" which supports the lining and the grate.

C is a bolt connecting the grate to bar D, and by the nut M, on bolt C, the grate is kept in place.

H is a clasp spanning bar D, and is to be permanently connected to the periphery of the grate, and have a projection extending out parallel with the bar, to near the front of the ash pit, and perforated at I, to receive a lever J.

F is a "sink" or bearing in plate L L,

at the back side of the stove, in which one end of bar D, is to rest.

G is a clasp or bearing to hold the end of bar D in place at the front of the stove. When adapted in this manner, the grate (by the use of lever J) may be agitated as shown by red dotted lines on Fig. 3, and when necessary the lever J may be connected to bar D at E, and the grate tilted to a perpendicular position, as shown by red dotted lines on Fig. 1, to empty the residuum from the furnace. The bar D is suspended across the ash pit eccentrically, that the grate may have a secondary bearing on plate L L, by projection K, and prevent it from tilting when being loaded with fuel.

I am aware that stoves have heretofore been used with the grate resting at its center on a bar suspended across the ash pit, and so adapted that the grate could be agitated on a level by the use of a lever or tilted to empty the furnace by turning the bar. Such grates, so far as I am acquainted, have not been used with the bar extending from front to rear of the stove, but with those only having a bar extending across the ash pit. Such an arrangement of grate and bar is open to several objections. If the bar projects through the side of the stove to receive a lever for tilting the grate, it is not only a deformity, but the grate and bar cannot be removed from the stove for repairs, or for other purposes, without the inconvenience of having the stove "unmounted," which destroys the lining and also produces other inconveniences not necessary to specify, or if the bar sustaining the grate does not project through the side of the stove, but only rests on the plate which supports the lining, what they (the grate and bar) may be removed for repairs, or for other purposes, without "unmounting" the stove. It must be apparent that other inconveniences arise. A lever purchase cannot be used for tilting the grate, and consequently there is much difficulty in tilting it when loaded with fuel, and as a still further objection it is necessary to have the door of the ash pit open while tilting the grate, thereby allowing dust to flow out and diffuse itself over the room, whereas with my improved device we not only have a grate that its whole fixture may be removed through the ash pit opening for re-

pairs, or for other purposes, by simply detaching bearing G, holding the bar in place at the front of the stove, but we also have a grate that can be agitated through a small
5 opening to the ash pit, and thereby avoid dust, and by the employment of a lever the grate may be tilted when the ash pit is closed, thus entirely avoiding dust while agitating the grate for cleaning the ashes and slag
10 from the fire, and when tilting it to empty the furnace, and also, by the use of a lever, be enabled to tilt the grate without difficulty when loaded with fuel.

Having thus fully described the construction and operation of my improvement, what 15
I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the grate B, the bar D, and the clasp H or its equivalent, when used and operating in the manner, and for 20
the purposes substantially as herein set forth, and made known.

JAMES EASTERLY.

Witnesses:

T. S. VAN HOWENBERGH,
THEODORE GROOVE.