

J. GROSSIUS.  
Stove-Grate.

No. 218,381.

Patented Aug 12, 1879.

Fig. 1

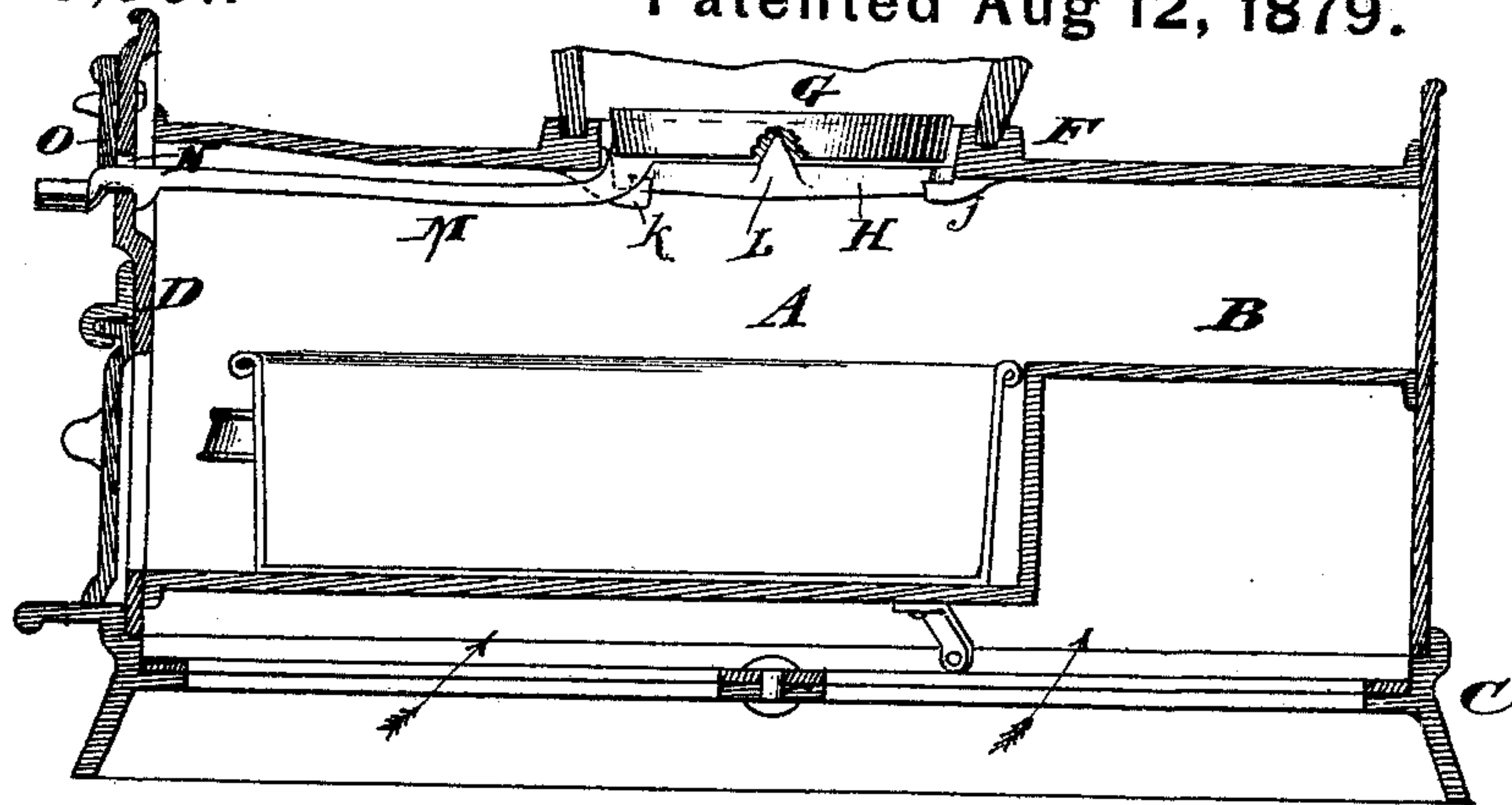


Fig. 2

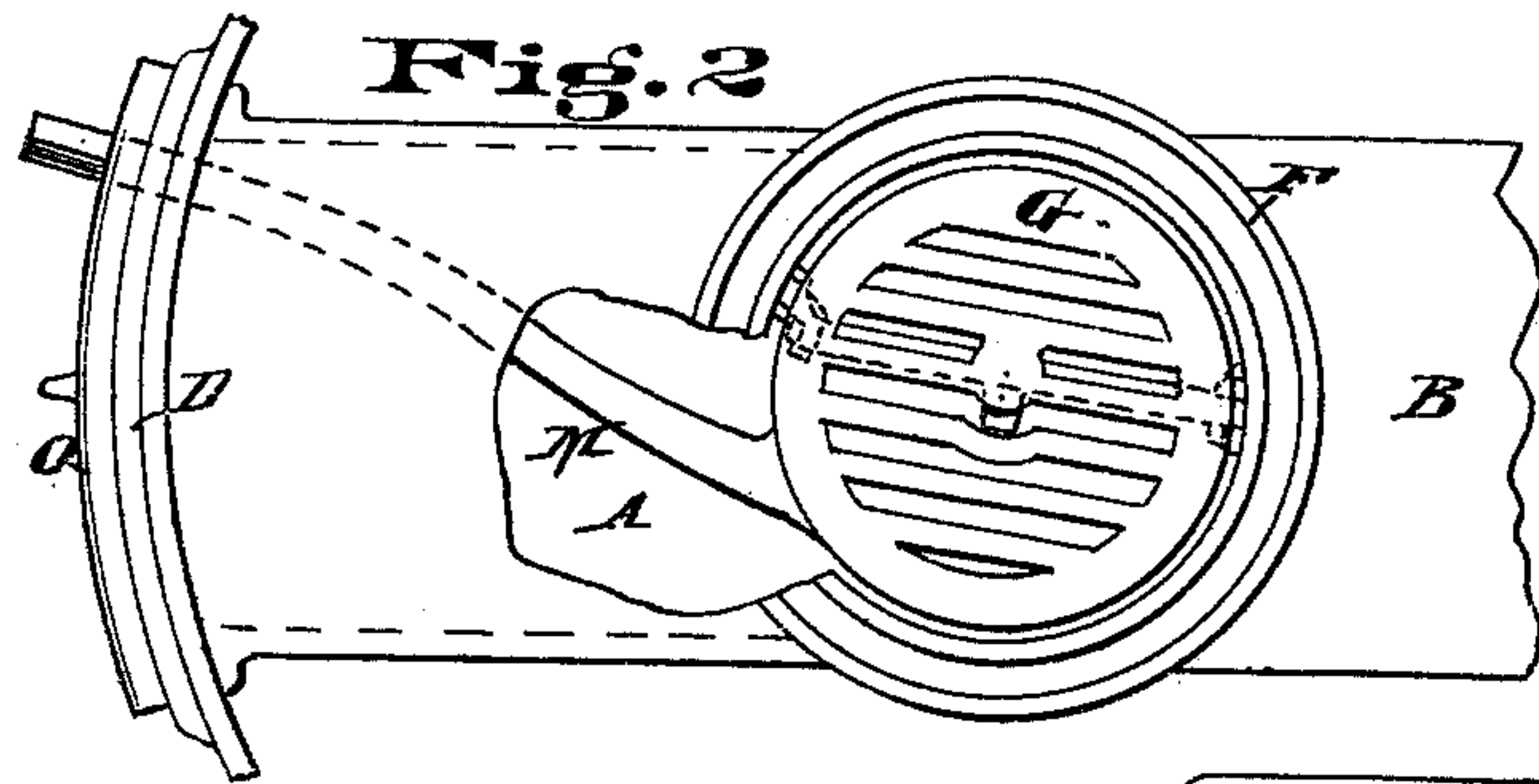


Fig. 3

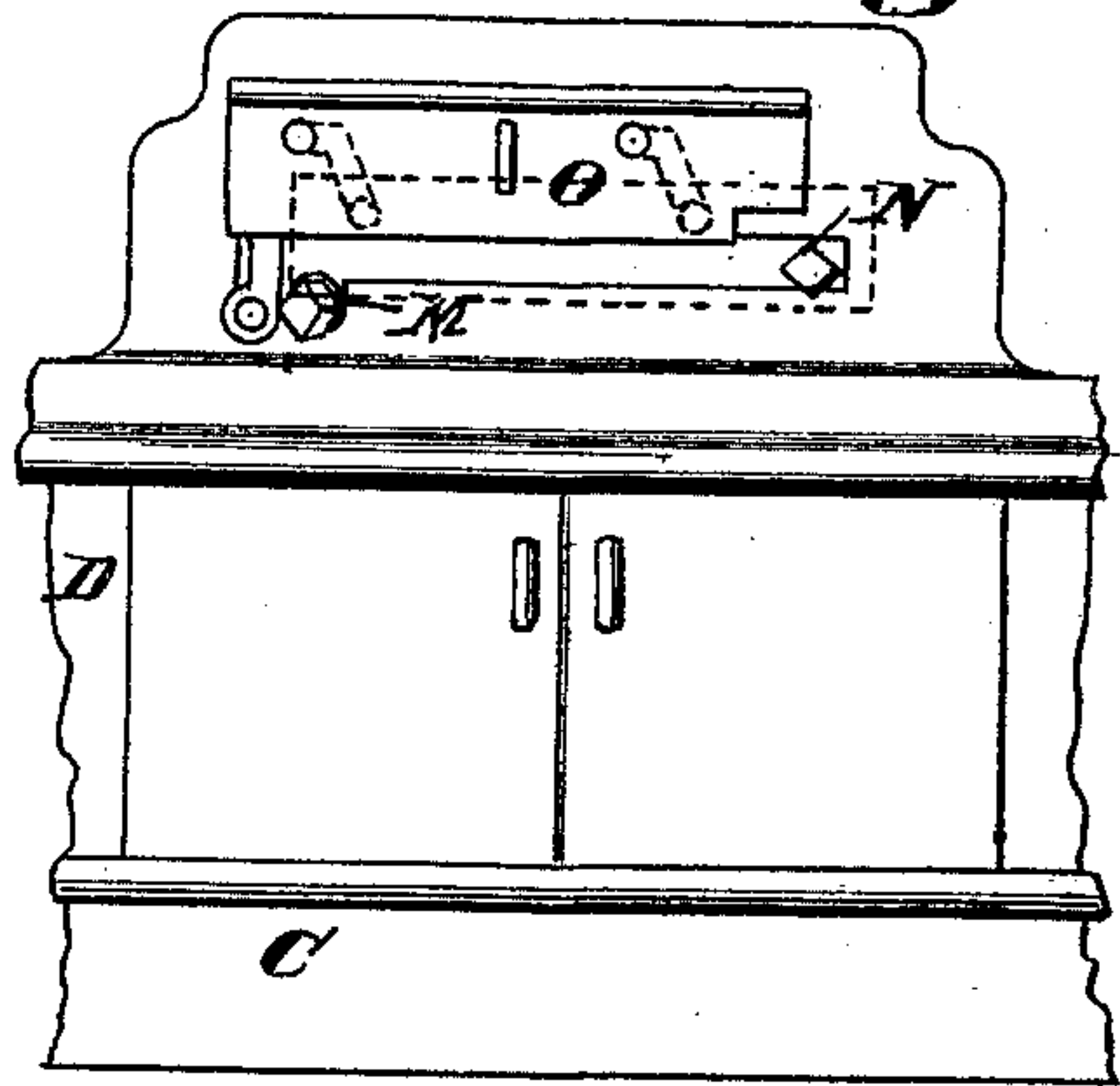
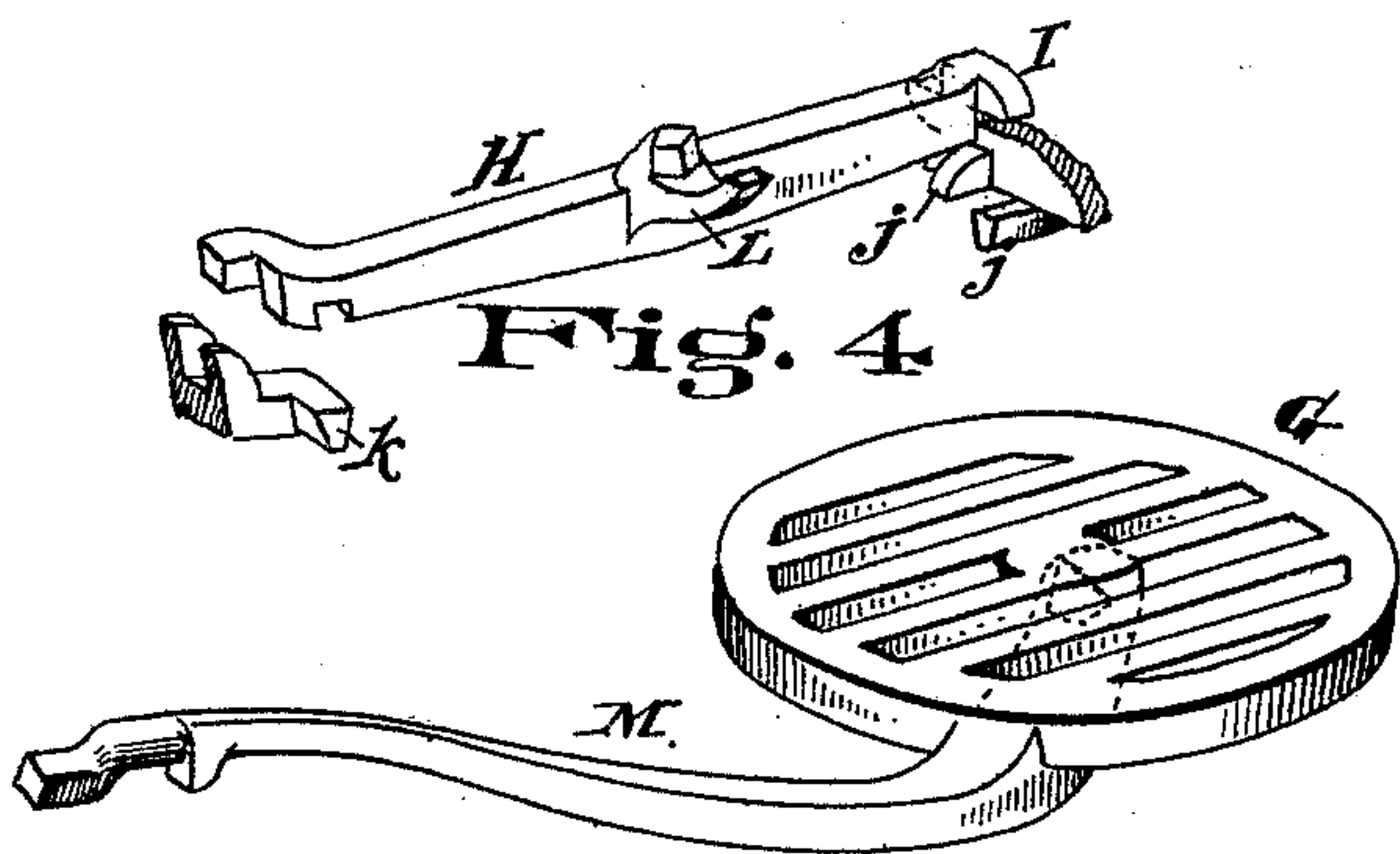


Fig. 4



Attest

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# UNITED STATES PATENT OFFICE.

JOHN GROSSIUS, OF CINCINNATI, OHIO.

## IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. **218,381**, dated August 12, 1879; application filed May 3, 1879.

*To all whom it may concern:*

Be it known that I, JOHN GROSSIUS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Stove-Grates; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to make and use it, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view of a stove-base, showing my improved grate and its attachments. Fig. 2 is a plan view of the grate and its connections. Fig. 3 is a front elevation of the stove-base, showing the slot and covering-door for the grate-handle; and Fig. 4 is a perspective view of the grate and its supporting-bar.

Similar letters of reference denote like parts in the several figures of the drawings.

My invention has for its object to improve the construction and operation of stove-grates, more especially applicable to the school-house ventilating-stove for which Letters Patent of the United States No. 104,581 were granted to me, dated June 21, 1870, although the improvements may be applied to stoves of other forms.

To this end the invention consists in the construction of the grate, the means by which it is supported, dumped, and oscillated, and the mode of locking it in place to support the fuel in the stove, as I will now proceed to describe.

In the accompanying drawings, A represents the ash-box; B, a foul-air flue connected therewith, and both together mounted upon the base C of a jacket surrounding the stove. The outer end of the ash-box is closed by a door and its frame D, the frame being arranged to bear against the outside of the jacket.

F is the grate-rim, surrounding an opening in the top of the ash-box and flue B, and G is the grate. H is the supporting-bar for the grate, which, instead of extending across the grate-opening at the point of its greatest diameter, is placed with its rear end in the center thereof and its front end to the right or to the left of the center, in order to leave a large

open space on one side. By this means the largest open space is covered by the largest part of the grate.

The bar is held in place at its rear end by a reverse-curved T-head, I, formed upon it to engage with two lugs or pins, *j j*, projecting from the grate-rim beside each other, but not in the same vertical plane. The downward curve of the T-head rests down upon the lower pin, and the upward curve bears against the under side of the upper pin.

The front end of the supporting-bar is curved a little to one side, and formed with a notch in the under side, which fits over a hook, *k*, on the grate-rim, as shown. By this construction the bar can be readily applied and removed, and when in place is effectually prevented from turning upon its supports.

The center of the bar carries a lateral up-turned double hook, L, the inner prong of which fits into a central recess in the under side of the grate to support the latter and form a pivot, upon which it is oscillated to sift the ashes. The outer prong serves to catch and hold the grate when dumped.

The flattened or squared end of the grate-handle M is a little on one side the center and projects to the front of the stove through a narrow horizontal slot, N, in the door-frame or jacket, just above the doors of the ash-box.

When the handle is swung to the right of the slot the grate is supported horizontally on the bar to sustain the fuel in the fire-pot; but when swung to the left of the slot the preponderance of weight lies to the right of the supporting-bar, and it can then be easily turned in that direction to dump the fuel into the ash-box. As it swings over, its center bar is caught by the outer prong of the hook L, and the grate is therefore prevented from falling down.

The prongs of the hook are so arranged with relation to each other that when the grate is swung up its center recess will readily drop over the center or inner prong.

When the grate is turned with its handle at the right of the slot a vertically-sliding door, O, on the jacket or door-frame is moved down to cover the slot, a notch being made in one corner to catch the grate-handle and lock it



against being casually turned, and also to allow the door to slide down the proper distance to close the slot completely.

Having thus described my invention, what I claim is--

1. The notched sliding door, in combination with the slotted stove-jacket or door-frame and the grate-handle, substantially as described, for the purpose specified.

2. The grate-supporting bar provided with the reverse-curved T-head at one end and the notched head on the opposite end, in combination with the pins *j j* and hook *k* on the grate-ring, substantially as described, for the purpose specified.

3. The combination, with the ash-box, of the

grate-ring having the supports for the grate-bar upon its opposite sides in a line diagonal to a line extending from the front to the rear of the stove through the center of the grate-opening, the diagonal grate-supporting bar having a reverse-curved T-head at one end, a notched head at the opposite end, and a double center hook, and the grate having a recessed center and an eccentric handle projecting through the front of the stove-jacket, substantially as described, for the purpose specified.

JOHN GROSSIUS.

Witnesses:

L. M. HOSEA,

E. A. ELLSWORTH.