

J. LEWIS.

GRATE.

No. 176,750.

Patented May 2, 1876.

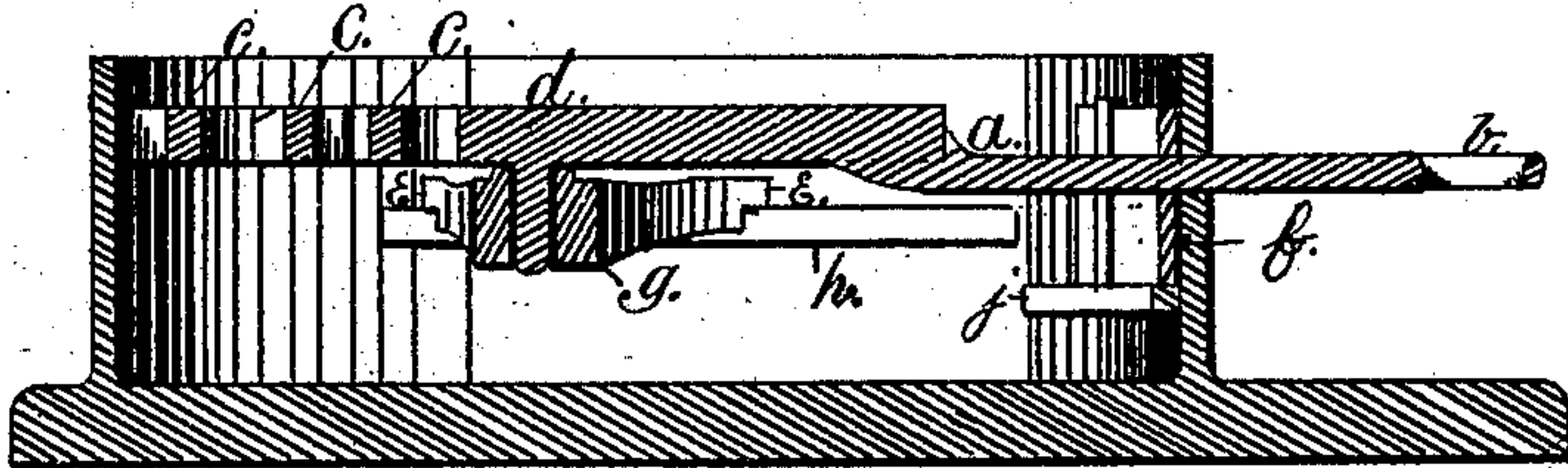


Fig. 1.

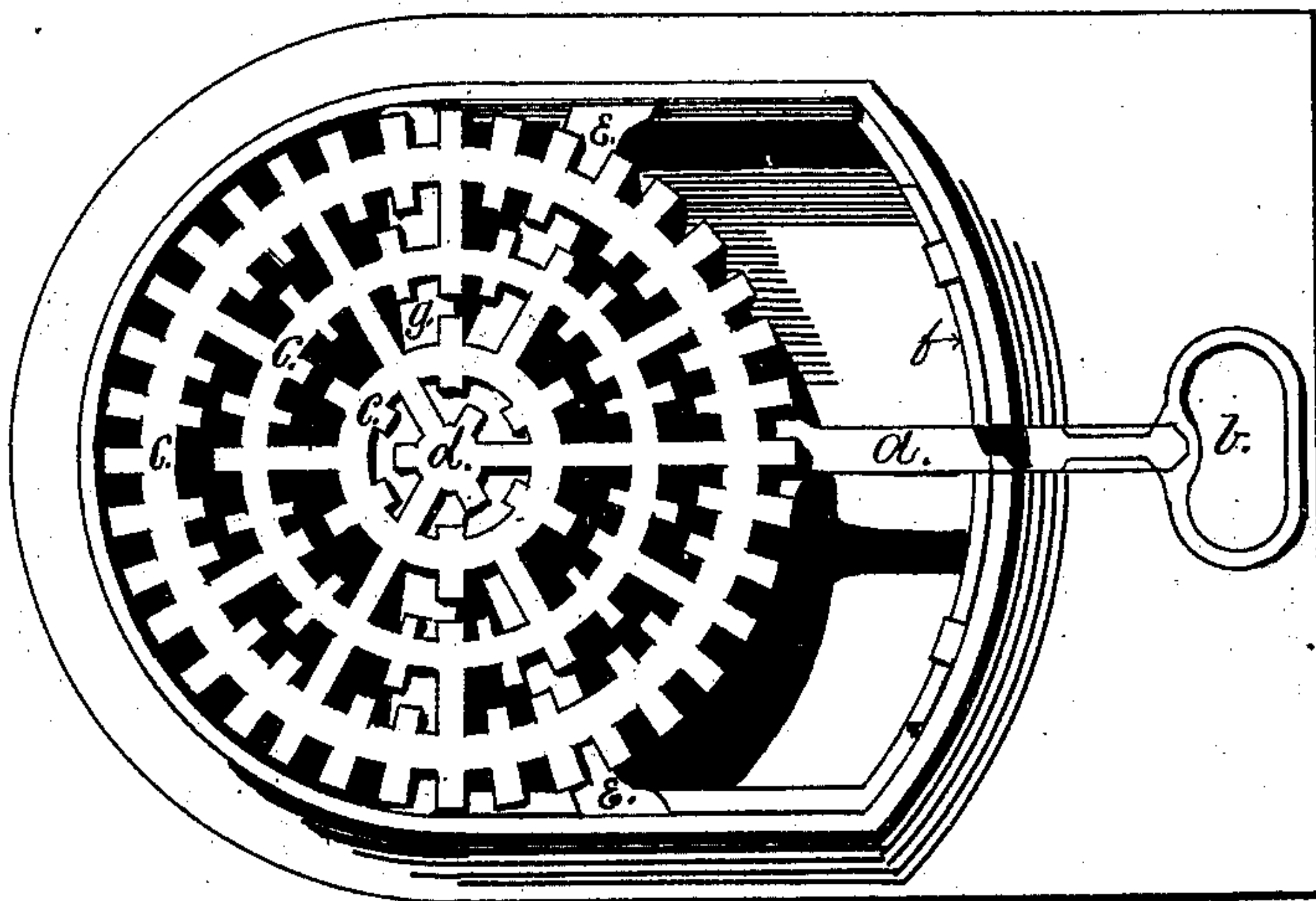


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

JASON LEWIS, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. 176,750, dated May 2, 1876; application filed September 23, 1875.

To all whom it may concern:

Be it known that I, JASON LEWIS, of the city and county of Providence, State of Rhode Island, have invented certain new and useful Improvements in Furnace-Grates; and I do hereby declare that the following is a full, clear, and exact description of the same, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a longitudinal section of my improved furnace-grate, through the center of the grate and the handle. Fig. 2 is a top view of the same.

Similar letters of reference indicate corresponding parts.

The invention consists in the peculiar arrangement of the several parts, as is more fully set forth hereinafter.

In the drawings, *a* is a projecting bar cast on the grate, and provided with the handle *b*, by which the grate is shaken, either by reciprocating in and out, or by swinging from side to side. *c c c* are concentric rings, having projections cast on the same, and bars, by which the several rings are united to the central hub *d*, where the grate rests on the bearers, to which the same is secured by a central pin, surrounded by a flange or bearing-surface, on which it can be freely swung from side to side. The bearers *g*, supporting the grate in the center, rest on the slide *h* by the lips *e*, so that they may slide in or out; and, as the grate is secured to the bearers by the central pin, when the handle *b* is pulled forward the grate and the bearers will slide forward on the

slides *h h*. The arm *a* rests within the slide *f*, so that when the handle *b* is moved from side to side the slide will move with the same, thus covering the slit through which the handle moves, and prevents the ashes from passing through the slit into the room. The peculiar construction of the grate, in which are a number of concentric rings, *c c c*, having projections cast on them and united to the central hub by bars, allows considerable freedom for expansion and contraction under variations of temperature, and insures a more thorough shaking out of the ashes from the fire. By casting the arm *a* and handle *b* in one piece with the grate, the mislaying or loss of the same—now a usual occurrence—is prevented, and also the time required to properly insert the handle, and secure the same safer, while the whole can be cast with less labor, as no cores are required. This grate is more easily dumped than other grates, as it does not require to be turned, but is only pulled forward, and the fire, coal, or ashes will fall into the ash-pan.

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

The combination, with a circular grate, substantially as described, having the handle *b* permanently secured to the same, of the bearers *g*, the slides *h h*, and the slit cover *f*, the whole operating together substantially as and for the purpose described.

JASON LEWIS.

Witnesses:

JOSEPH A. MILLER,
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