

GEO. R. MOORE

FIRE BED

117194

PATENTED JUL 18 1871

Fig. 1

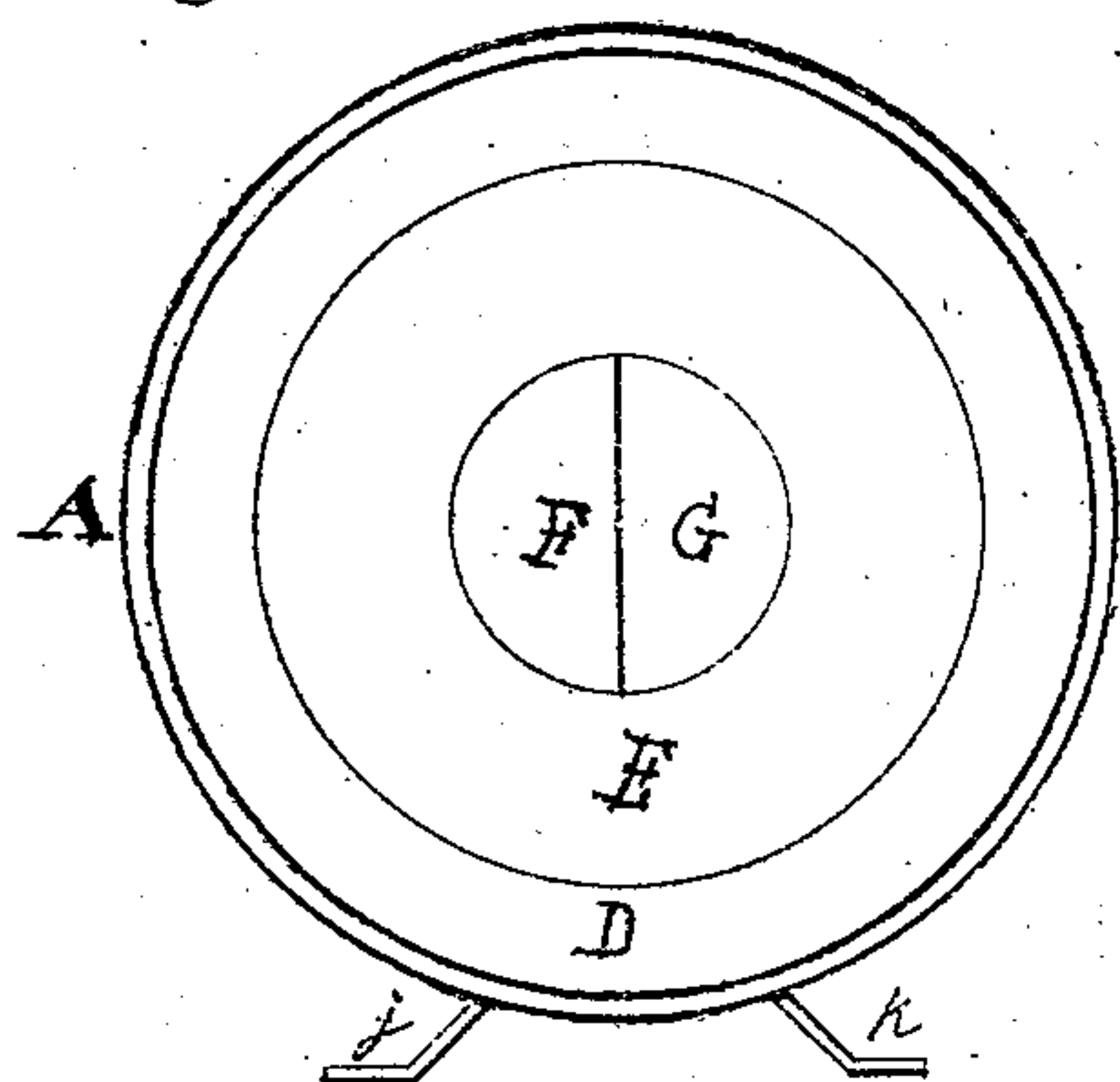


Fig. 2

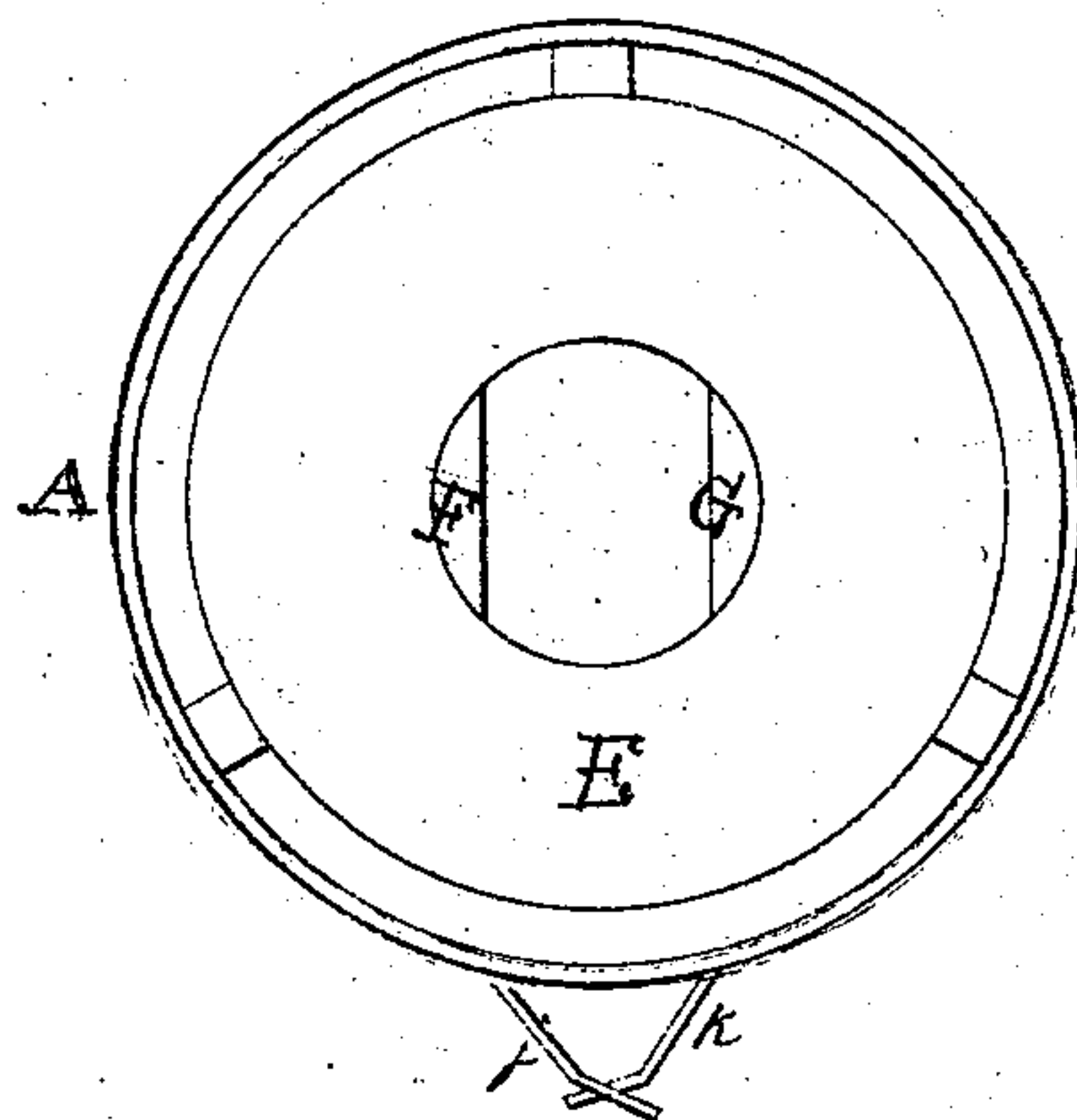


Fig. 3

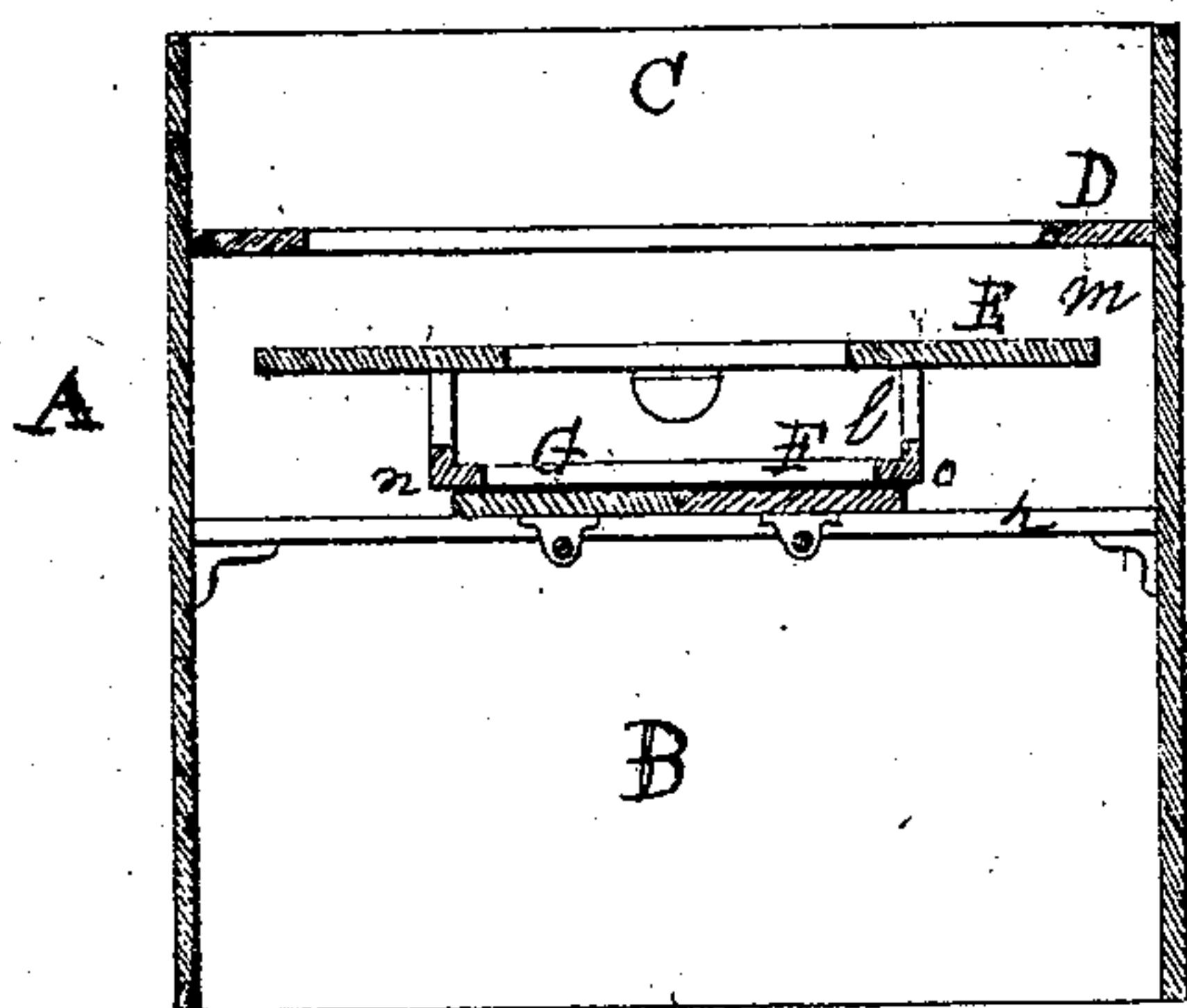


Fig. 4

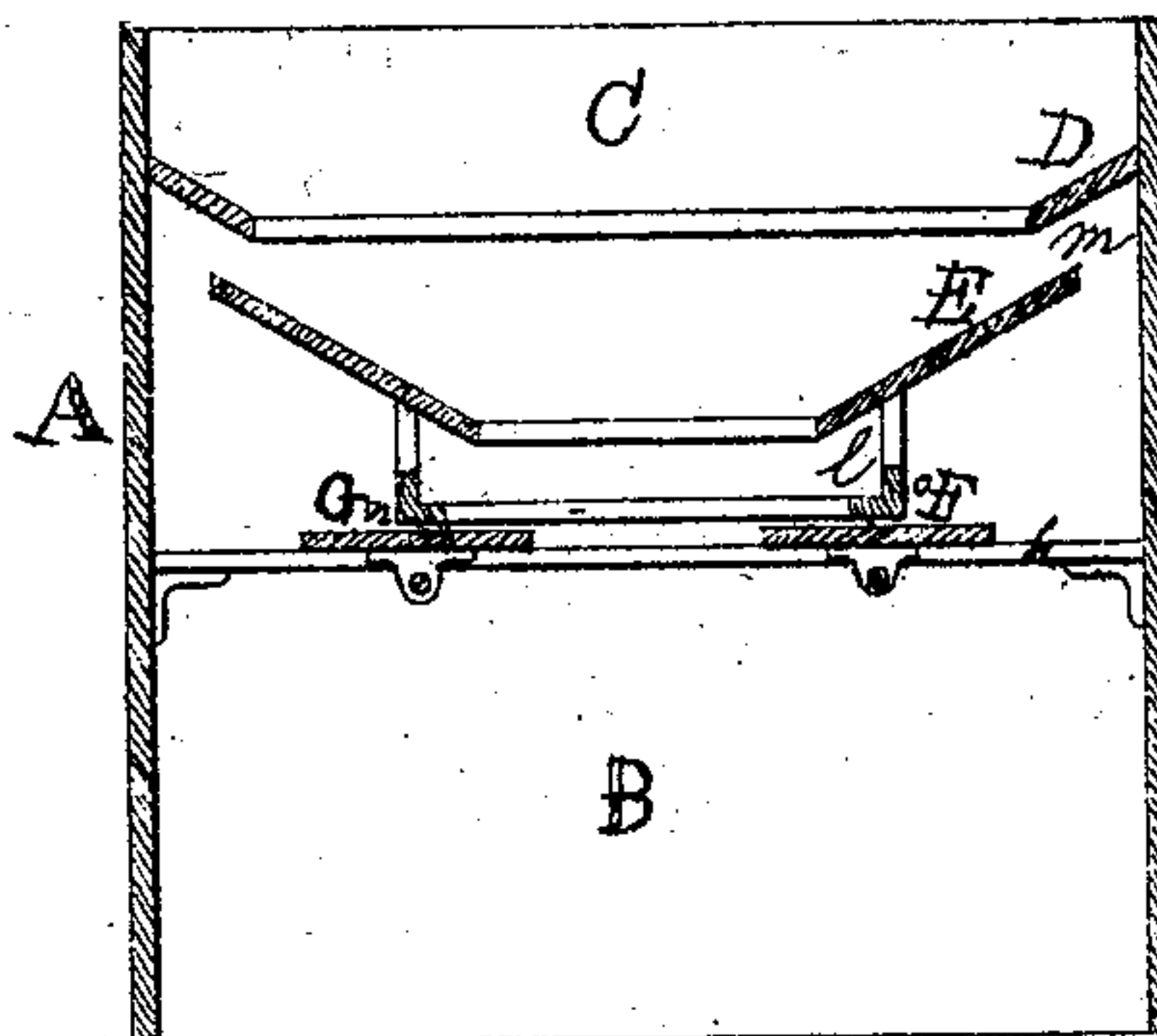


Fig. 5

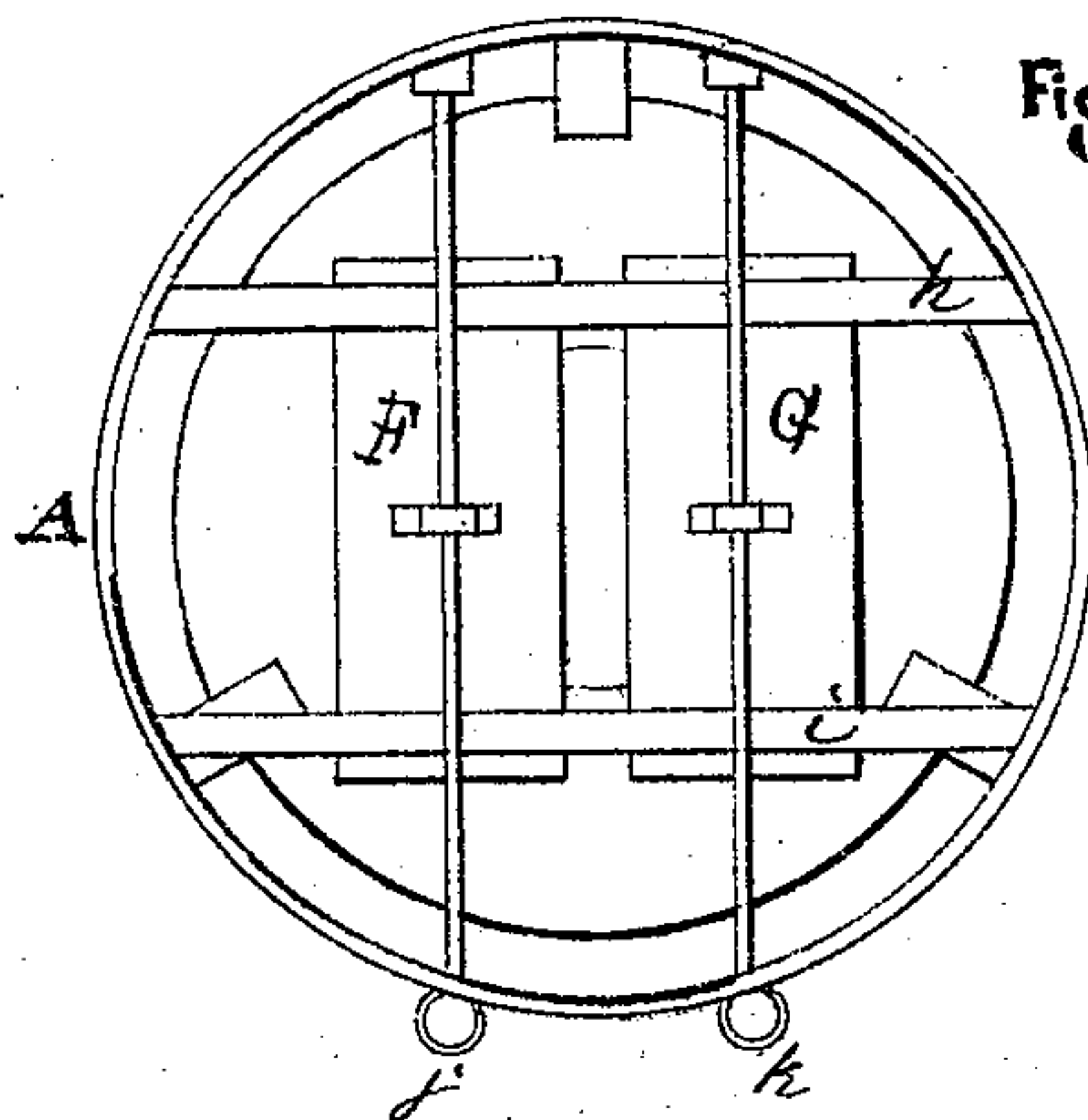
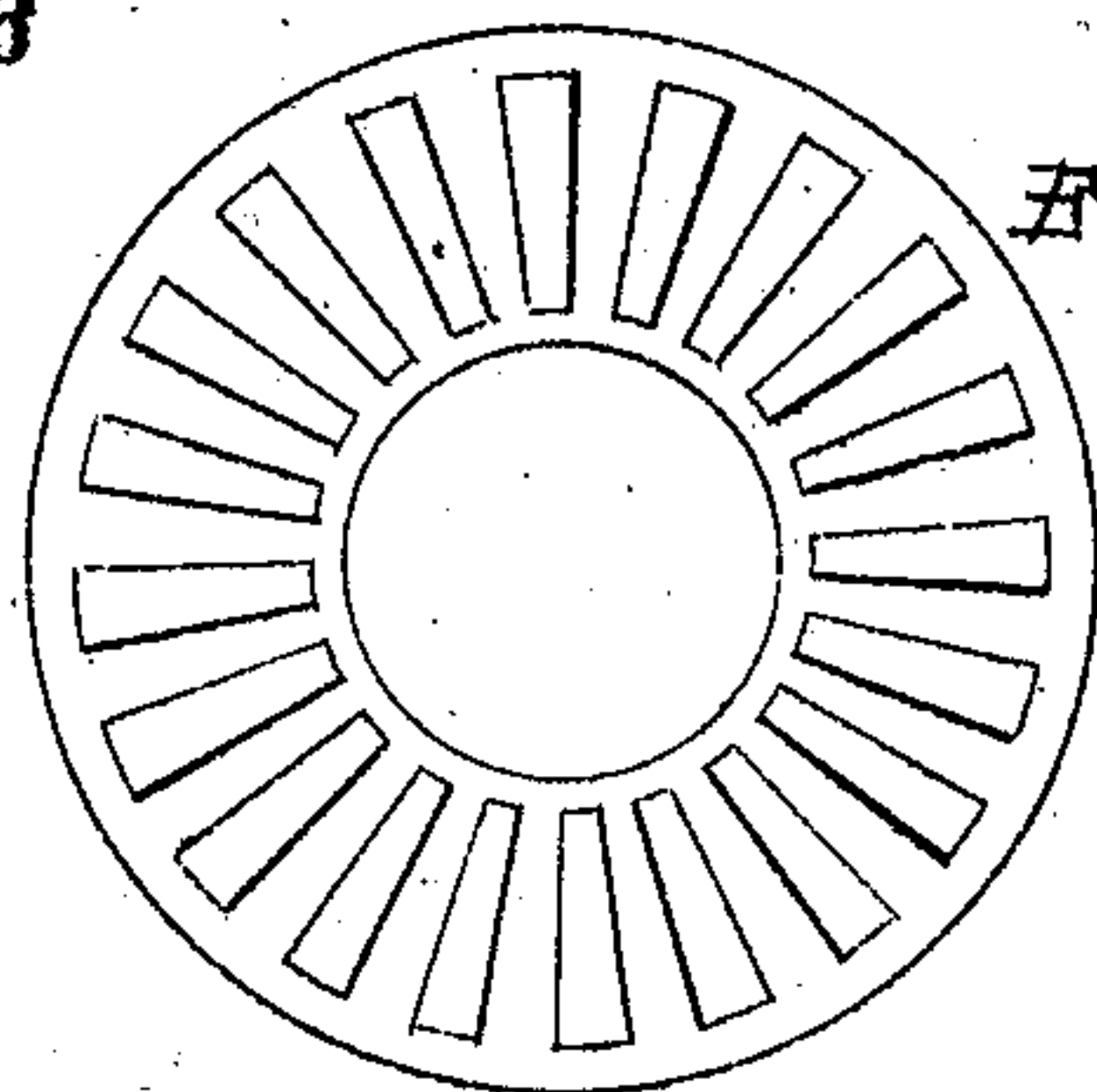


Fig. 6



Witness
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UNITED STATES PATENT OFFICE.

GEORGE RODNEY MOORE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. 117,194, dated July 18, 1871.

To all whom it may concern:

Be it known that I, GEORGE RODNEY MOORE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Fire-Beds for Heaters, &c., of which the following is a specification:

The object of my invention is to provide a convenient, durable, and economical fire-bed, with facilities for discharging the ashes and cinder at the bottom of the burning mass without disturbing the fire above; also, to provide ample draughts and to guard against waste of fine coal.

The accompanying drawing shows my invention in a cylindrical chamber, A, the lower part of which B may be regarded as the ash-pit, and the upper part C as the lower part of the fire-chamber in an ordinary heater.

The same letter indicates invariably the same part.

Figure 1 is a plan view from the top, and shows a series of shelves in ascending and widening order, F G E D. Two of these, F G, are sliding shelves, on a level, and complete the fire-bed so that no fuel, not even fine coal, put in the fire-chamber can escape the shelves or be permitted to waste. Fig. 2, the same view, with the first shelf D left out, and the sliding shelves F G thrown open, as for the discharge of the refuse products of combustion, ashes and cinder. Fig. 3 is a transverse perpendicular section, and shows all the parts in their respective places. D is an inward shelf, or a contraction of the fire-chamber. E is a suspended shelf outlapping beyond the inner edge of the one above it, and at the same time extending a considerable distance inward toward completing the fire-bed. Ample air-spaces are left at both edges of it. Fig. 4 shows one of the optional forms in which the shelves D E may be put. These shelves may, at the option of the manufacturer, be put in flat or at any desired angle, and either with or without grate-openings. They may also be put in loose, and made to vibrate, if desired, by any of the ordinary devices in such cases. Fig. 5 is a plan view taken from the bottom, and shows the bars *h i* which sustain the sliding shelves F G; also, the levers *j k* by which the slides are operated. Fig.

6 shows the shelf E, with the usual grate-bars and apertures, should they ever be desired, although all my experiments hitherto indicate that they will not be, and that simple plain shelves are quite sufficient.

The operation of this fire-bed is obvious. The ashes and cinder are discharged by the sliding bottom shelves or their mechanical equivalent, and any manipulations required to clean the shelves above and toward the center may be performed with an ordinary poker, or by putting in the shelves loose and with suitable pitch down, as in Fig. 4, they will clear themselves by being vibrated.

It will be seen that this invention is additional to my patent of January 25, 1870.

The sliding shelves F G are cleaned off when thrown open by the strips above them, *n o*.

I am aware that fire-pots have been made in sections or rings, so that the upper part is open while the lower is closed, and that in base-burning stoves the fuel is sometimes supported by a series of rings or shelves, which forms channels for the introduction of air to the fuel in circuitous passages; but these devices are unsatisfactory in use, and are distinct in construction and the exact method of operation from mine.

I claim—

1. The annular shelf or shelves E, horizontal or inclined, perforate or imperforate, fixed or vibrating, interposed between the grate or bottom of the fire-chamber and the mouth of the reservoir or in the mass of the descending fuel, while at the same time they are open to the base of the stove to admit a direct draught to the burning fuel.

2. The cleaning-strips *n o* with the sliding shelves F G, or their mechanical equivalents, substantially as and for the purpose herein set forth.

3. The levers *j k* and sliding shelves F G, in combination with each other, substantially as and for the purpose herein set forth.

GEO. R. MOORE.

Witnesses:

JOHN C. COX,
F. F. SCEVA.