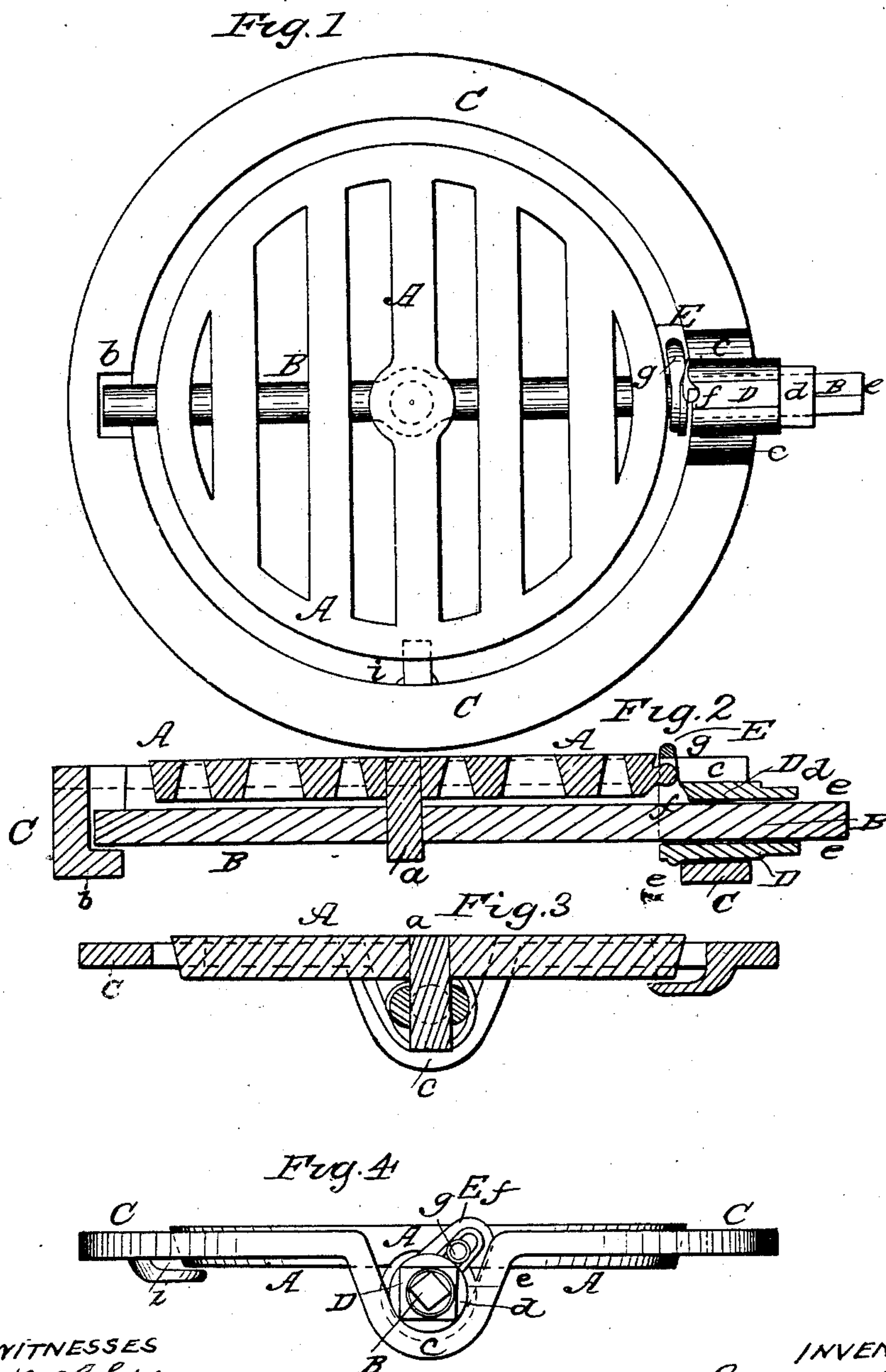


E. MINGAY.

Stove Grate.

No. 28,102.

Patented May 1, 1860.



WITNESSES
R. H. Eddy
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INVENTOR
Edward Mingay

UNITED STATES PATENT OFFICE.

EDWARD MINGAY, OF BOSTON, MASSACHUSETTS.

STOVE-GRATE.

Specification of Letters Patent No. 28,102, dated May 1, 1860.

To all whom it may concern:

Be it known that I, EDWARD MINGAY, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement for Operating the Grate of a Stove or House-Furnace; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 is a top view of a grate and its supporting ring as provided with my invention. Fig. 2 is a longitudinal section. Fig. 3, a transverse section, and Fig. 4, a front elevation thereof.

In such drawings, A, exhibits a circular grate which is supported on a shaft, B, by means of a journal *a*, extended from the center of the grate and through the shaft.

The rear end of the shaft, B, rests in a bearing, *b*, formed in a ring C, which circumscribes or is arranged concentrically with the grate. The equivalent of such ring would be that part of a stove or furnace which might immediately surround a grate. Furthermore, in front of the grate there is a tubular shaft, D, which is supported in a bearing *c*, formed in the ring as shown in Figs. 1 and 4. Through the said tubular shaft, D, the shaft, B, extends, the bore of the tubular shaft being cylindrical so as to allow said shaft to be easily turned on the shaft, B. Each of the said shafts, at its front end is made square or prismatic as shown at, *d*, or, *e*, in order that a key or lever may be applied to it.

A crank or arm, E, extends upward from the inner end of the tubular shaft, D, and is furnished with a slot, *f*, to receive a stud, *g*, extending from the circumference of the grate. The said parts, E, and, *g*, so formed and applied, I, term the "slotted crank connection."

When in a horizontal position, the grate rests on a strut, *i*, extending from the ring and arranged with reference to the shaft of the grate as shown in the drawings.

By applying a key lever to the tubular shaft, D, and turning such shaft on the shaft, B, with a reciprocating motion, the grate may have short horizontal reciprocating movements imparted to it, so as to shake

ashes through it, when a mass of coal or fuel may be resting on the grate; and furthermore, for the purpose of freeing the grate from coals, it may be turned from a horizontal into a vertical position, either by simply turning the tubular shaft, D, farther distance or by applying a key lever to the shaft, B, and turning this latter shaft.

I lay no claim to a combination composed of mechanism for rotating a grate horizontally on a central pivot, and mechanism for tipping such grate into a vertical position; nor to either of the modes of constructing such combination as is shown in the United States Patent, No. 9297, No. 16538, or No. 21410, in neither of which, the shafts for effecting the rotary and tilting movements of the grate are arranged concentrically and with one extending into and entirely through the other so as to project from or beyond the same side or the front of the stove, such being the case in my invention. By my arrangement I save the necessity of cranks on opposite sides of the stove. I also avoid the disadvantages of the swing lever and its application to a stove as shown in the said Patents Nos. 16538 and 21410.

One great advantage of my invention over many others for operating a grate, consists in both shafts B, and D, being carried through one hole in the side of any stove or furnace to which the invention may be applied.

I claim—

My improved arrangement of the shafts B and D, (for effecting the rotary and tilting movements of the grate,) with each other and with respect to the grate and its surrounding ring or part C, the shaft, D, in such arrangement being tubular and concentric with the shaft, B, and the latter being carried through the former and both made to project from one side of the ring C, in manner as described and represented, the grate being operated by a slotted crank connection or its equivalent applied to it and the tubular shaft, D.

EDWARD MINGAY.

Witnesses:

R. H. EDDY,
J. P. HALE, Jr.