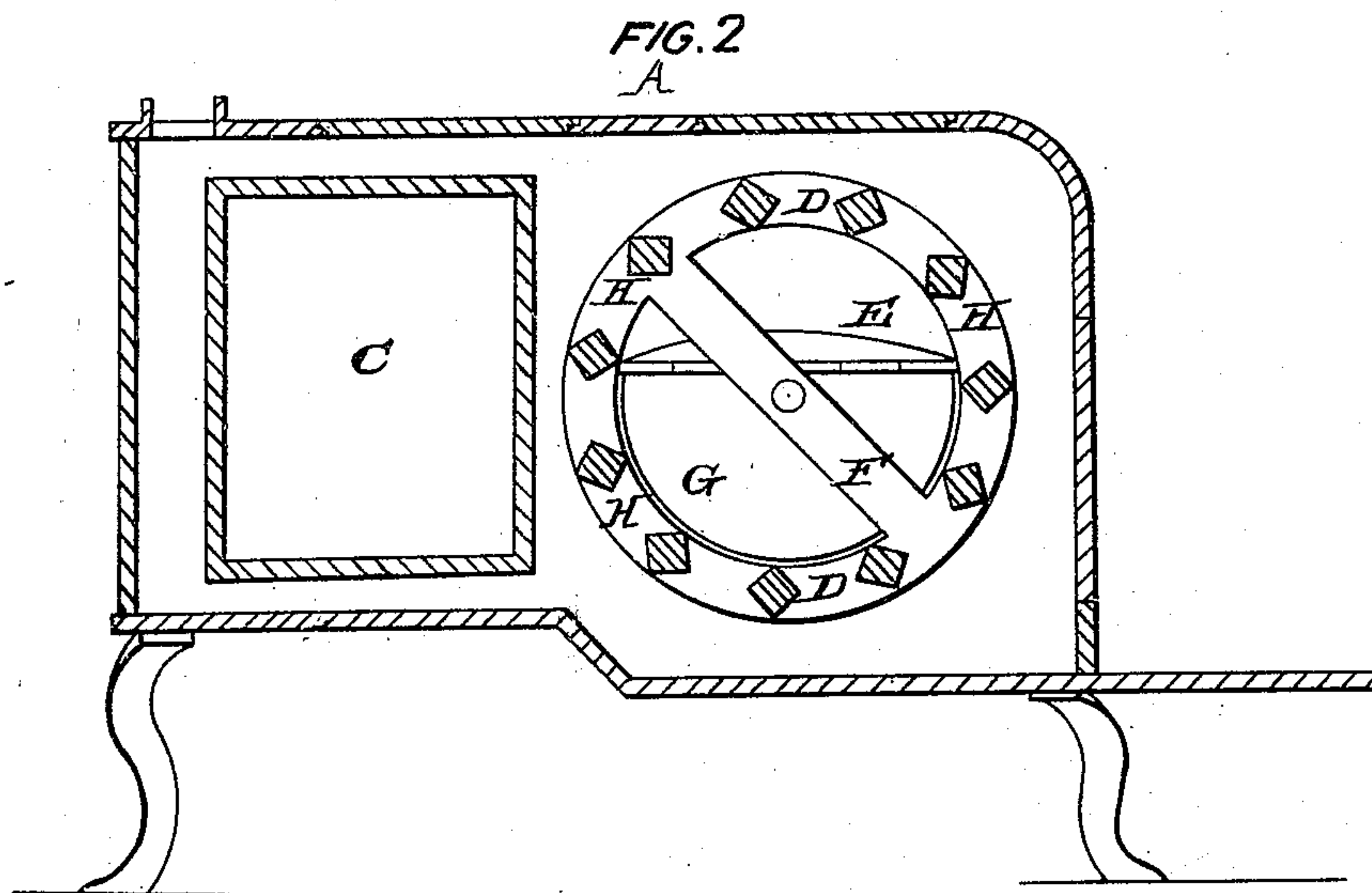
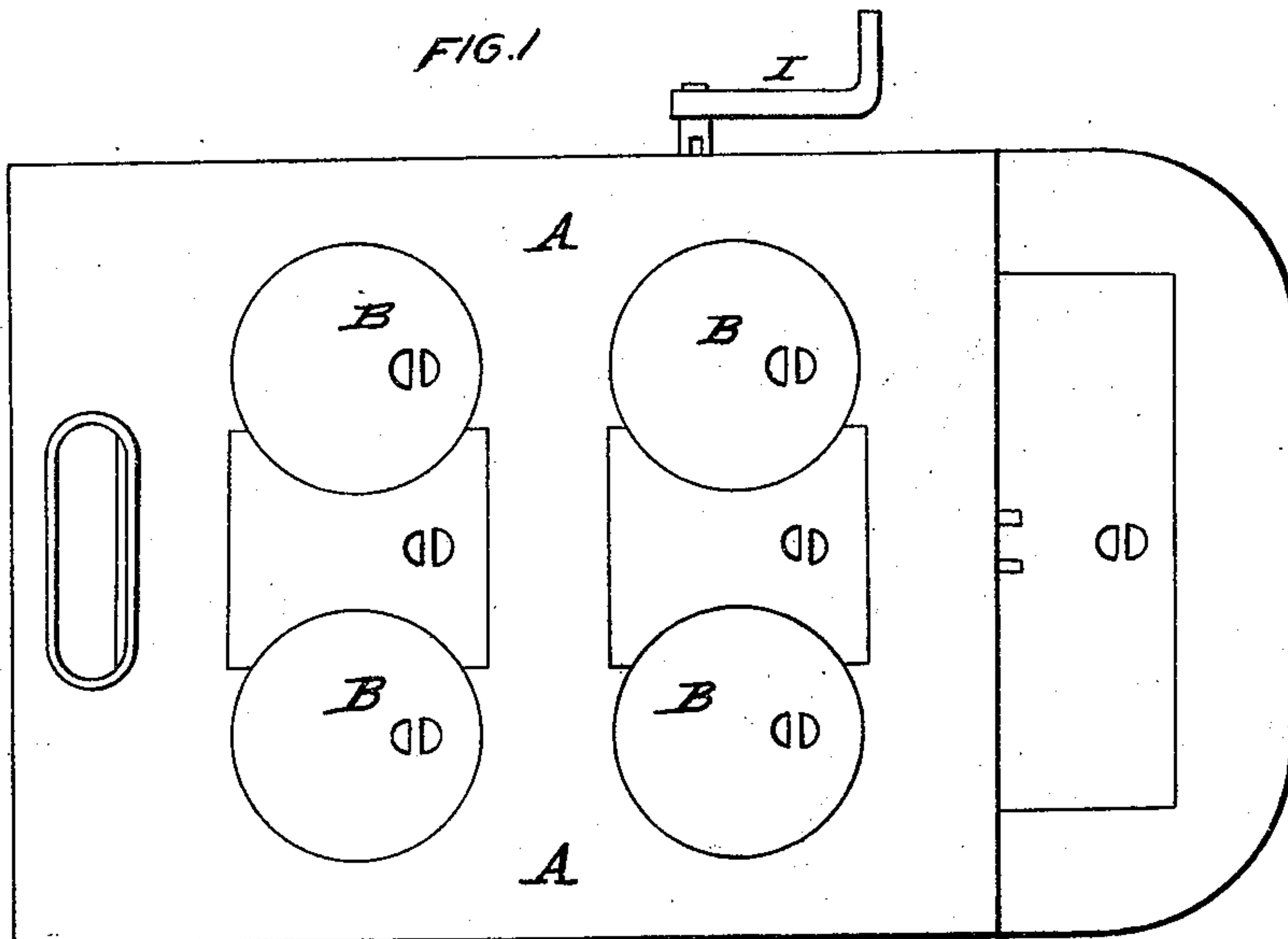


E. DRAPER.

Revolving Grate for Stoves.

No. 52,548.

Patented Feb. 13, 1866.



WITNESSES
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UNITED STATES PATENT OFFICE.

ELLWOOD DRAPER, OF OSKALOOSA, IOWA.

REVOLVING GRATE FOR STOVES.

Specification forming part of Letters Patent No. 52,548, dated February 13, 1866.

To all whom it may concern:

Be it known that I, ELLWOOD DRAPER, of Oskaloosa, in the county of Mahaska and State of Iowa, have invented certain Improvements in Stoves, of which the following is a specification.

My invention consists in combining a cylinder-grate with a stove, and has for its object the furnishing a grate which, as it does not come into contact with the sides of the stove, may be placed in any stove without the intervention of fire-brick, and which, from its entire revolution, will last longer and not become so soon warped by the heat as other grates, and which, by its revolution, enables the fresher coal to be revolved to the lower part of the grate, the more nearly consumed portion coming to the top, thus accomplishing the entire combustion of the combustible part of the coal more effectually than it can be accomplished by the use of the ordinary grates.

In the drawings, Figure 1 is a top view of the stove. Fig. 2 is a vertical longitudinal central section of the same.

About the arrangements of the top A of the stove, the boiler-holes B, the oven C, and the dampers, ash-pit, draft, &c., there is nothing new.

D is the cylinder-grate, which is hung and revolves upon bearings in the sides of the stove, the journals therefor projecting from the centers of the ends of the grate.

The end of the grate D farthest from the door E may be made solid, or may be perforated, as may be thought advisable.

The end of the grate next to the door is made open, with the exception of a bar, F, extending across said open end, and to which bar F the journal at this end of the grate is attached.

E is the door for the admission of the coal. The top of the door E is circular to correspond with the curve of the cylinder-grate D, and the size or depth of the door is such that the bottom of said door shall extend no lower than the top of the bar F when the grate D is revolved into such a position that the bar F shall be horizontal.

G is a solid piece of metal, which fits or projects into the open end of the grate sufficiently far to prevent any of the coal falling or working its way into the space between the end of the grate and the side of the stove. When the stove is cast in pieces the piece G may be cast solid with the end of the stove; but when the stove is cast solid (as a box-stove) the piece G, from necessity, must be cast separate, and afterward attached in its place to the side or end of the stove by bolts or otherwise, as may be convenient.

The bars H of the grate D may extend from end to end of the grate without any support; but I prefer to support them at their centers by a ring passing around the central part of the grate as a guard against the warping of said bars.

I is a removable crank, by means of which the grate D is revolved.

Among the advantages of this invention may be mentioned its durability, arising from its revolution, the same part of the grate not being constantly exposed to the intense heat in the same position; second, that the grate may be used in sheet-iron stoves, or stoves of any variety or pattern, no fire-brick being necessary, as the grate does not come into contact with the sides of the stove; third, that the fire may be stirred by a simple movement of the crank; and, fourth, that at any time the fresher coal may be turned to the bottom of the fire and that portion of it which is more nearly consumed revolved to the top of the fire, so as to insure the entire burning of all that is combustible in the coal.

I claim—

1. The combination of a revolving cylinder-grate, constructed substantially as described, with a cooking or heating stove, for the purposes set forth.

2. The combination of the piece G with the grate D, substantially as described, and for the purpose set forth.

ELLWOOD DRAPER.

Witnesses:

J. F. WARNER,
D. HUMPHREYS.