(No Model.)

E. G. GERMER.

COMBINED FIRE POT AND GRATE FOR STOVES.

No. 587,366. Patented Aug. 3, 1897.

Fig. 1.

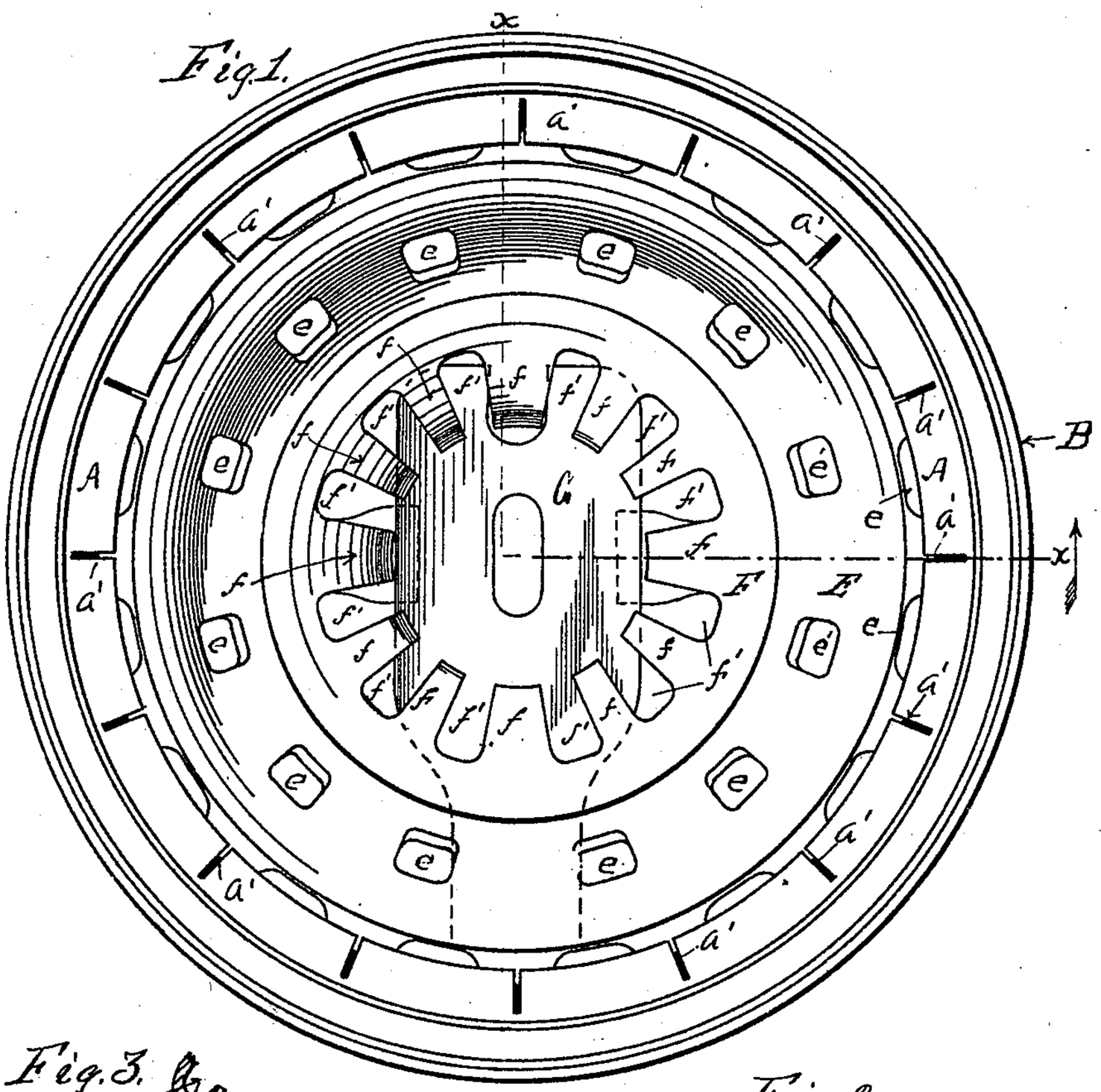


Fig. 3.

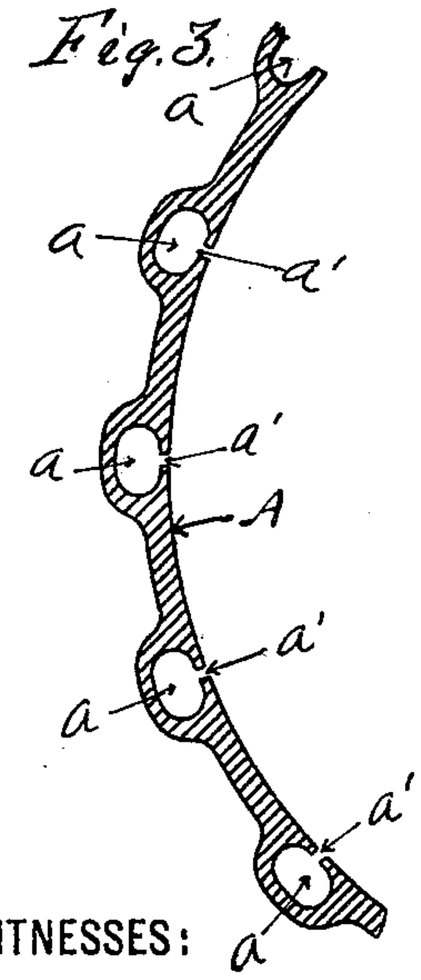
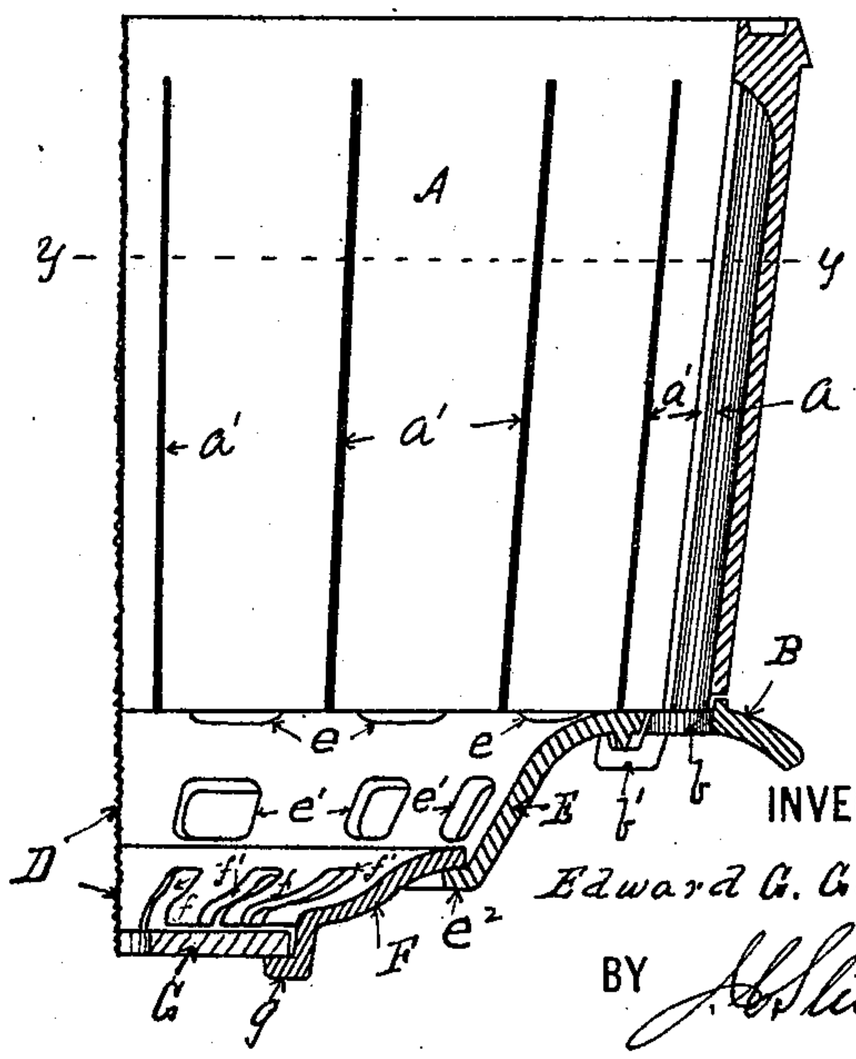


Fig. 2.



WITNESSES:

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COMBINED FIRE-POT AND GRATE FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 587,366, dated August 3, 1897.

Application filed February 26, 1897. Serial No. 625,116. (No model.)

To all whom it may concern:

Be it known that I, EDWARD G. GERMER, a citizen of the United States, residing at the city of Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Fire-Pot and Grate for Stoves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, forming part of this specification.

This invention relates to improvements in stove-grates and fire-pots for stoves; and it consists, substantially, in constructing a fire-pot with vertical air-passages in the walls thereof having narrow vertical slits opening on the inside of the pot, so that the air passes up through these passages and out through these narrow slits to the fuel in process of combustion, and in combining with the fire-pot so constructed a substantially closed grate having such restricted air-passages that comparatively a small portion of the air necessary to the combustion of the fuel thereon is supplied therethrough.

This invention is illustrated in the accompanying drawings, in which—

Figure 1 is a top or plan view of this invention. Fig. 2 is a vertical section of a portion of the same on line $x\,x$ in Fig. 1. Fig. 3 is a sectional view in detail on the line $y\,y$ in Fig. 2 of a portion of the fire-pot, showing the air-passages therein.

In the construction of this invention illustrated in the accompanying drawings, A is a cylindrical fire-pot provided in its walls with vertical passages a, which are open at their lower ends and closed at the top, as illustrated in Fig. 2. These passages a have narrow vertical slits a', which connect them with the inside of the fire-pot throughout their entire lengths, as clearly illustrated in Figs. 2 and 3. This fire-pot is preferably supported by a ring B, adapted to be secured to the inside of the stove above the ash-pit thereof, which ring B is provided with openings b, registering with the lower ends of the vertical passages A, as illustrated in Fig. 2.

Upon the ring B are inwardly-projecting lugs b', upon which a grate D is supported. This grate I make in any convenient form, provided that the air-spaces therein are so constructed as to admit but a small proportion of the air necessary for the combustion of the fuel thereon therethrough. The grate which is shown in the drawings is made of outer and inner concentric rings E and F, the outer ring E resting upon the lugs b' and being provided with a series of narrow openings e around its periphery and a series of small openings e' therethrough. The inner ring F rests upon a ledge e^2 on the inner edge of the ring E, forming a close joint therewith, and the inner edge of the ring F is provided with serrations or teeth f, leaving narrow slits f' between them, and under the central opening in the ring F there is a sliding plate G, which rests upon parallel guides g on opposite sides of the central opening in the ring F, which plate G normally closes the opening in the center of the ring F, this plate G being adapted to be pulled out when desired to discharge ashes and clinkers accumulating in the grate.

In will be observed from the foregoing description and from the drawings that the salient feature of this invention consists in supplying the greater portion of the air necessary for combustion through the vertical passages a and the slits a' opening thereinto, while a very small portion of air is supplied through the constricted openings in the grate, in contradistinction to the usual practice of supplying the greater portion, if not all, of the air through the open interstices of the grate as ordinarily constructed. Therefore

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, of a fire-pot having vertical passages in the walls thereof, and vertical slits connecting said passages with the inside of the fire-pot, with a substantially closed grate, substantially as and for the purpose set forth.

2. The combination, of a fire-pot having

vertical passages in the walls thereof, a supporting-ring having openings therein registering with the vertical passages in the fire-pot, vertical slits in the inner surface of the fire-pot opening into said vertical passages, and a grate having the openings therein so constricted as to admit but a small portion of the air necessary for combustion therethrough, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD G. GERMER.

Witnesses:
L. D. DAVIS,
FRED EINFELDT.