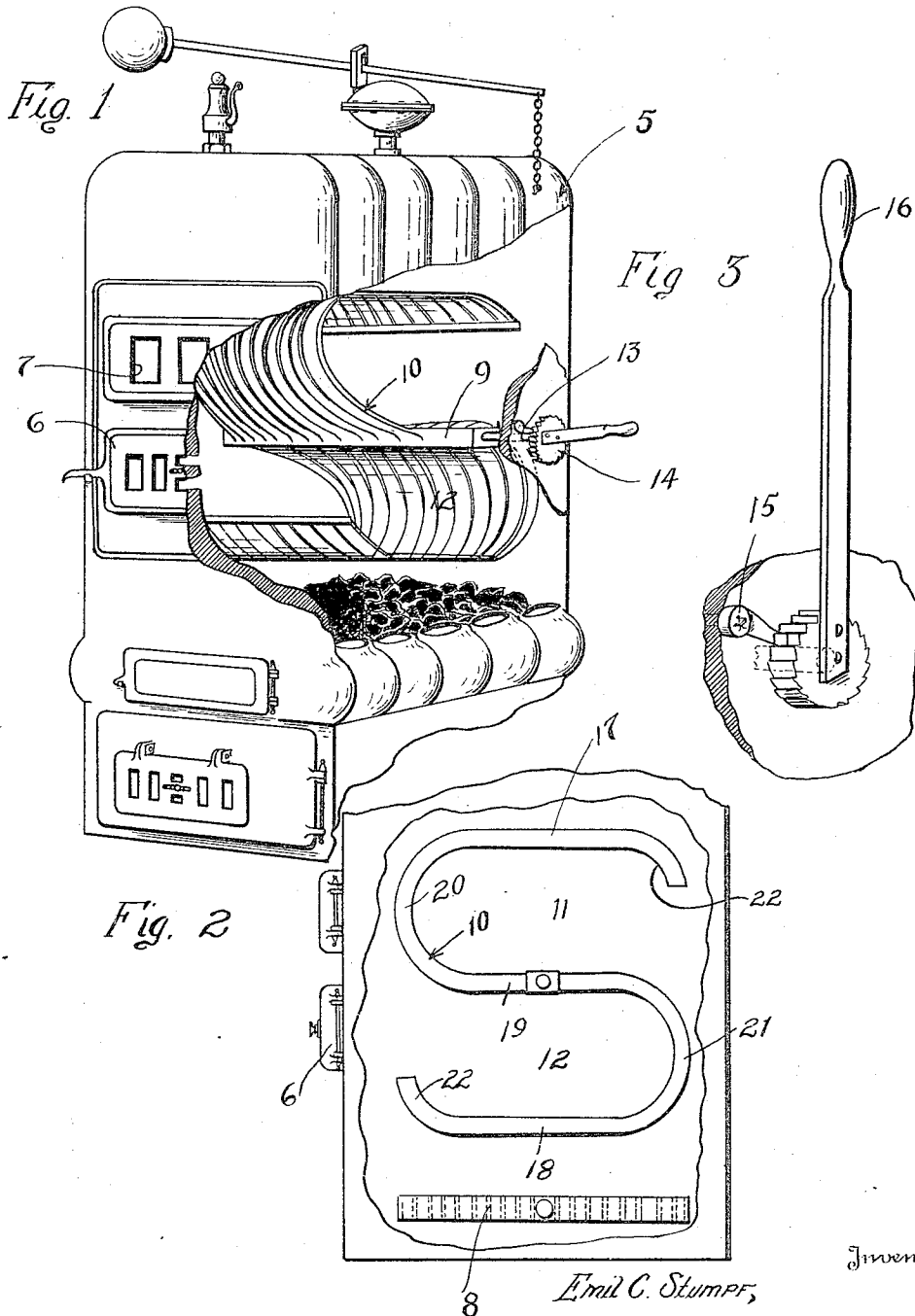


E. C. STUMPF.
REVOLVABLE GRATE.
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1,124,551.

Patented Jan. 12, 1915.



Witnesses
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REVOLVABLE GRATE.

1,124,551.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMIL C. STUMPF, a citizen of the United States, residing at Dubuque, in the county of Dubuque and State of Iowa, have invented certain new and useful Improvements in Revolvable Grates, of which the following is a specification.

The primary object of this invention is to provide a revolvable grate for stoves, furnaces and heaters of all types, to be used in addition and supplemental to the ordinary grate.

Another and more specific object of the invention is to provide a revolvable grate having two fuel holding compartments arranged one above the other and interchangeable in position.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a perspective view of a heater, having the wall or casing thereof partly broken away to expose the revolvable grate, Fig. 2 is a side elevation of the heater with the near wall broken away to disclose the revolvable grate, and Fig. 3 is a fragmentary detail perspective view of the grate revolving mechanism.

Referring in detail to the drawings by numerals, 5 designates as an entirety, a furnace which is shown to illustrate the application of my supplemental grate to a heater, and which is provided, as is customary, with a feed door 6, glass covered sight openings 7, and a horizontal grate 8.

My supplemental rotary grate comprises a central longitudinal bar 9 which is cast integrally with a plurality of substantially S-shaped bars 10 which form two fuel holding compartments 11 and 12. The central bar 9 extends transversely across the S-shaped bars 10 and is rotatably supported in a horizontal plane above the grate 8. One end of the bar is reduced and rounded to form a bearing shaft 13 which extends through the side of the heater and which has secured to its outer terminal a ratchet wheel 14, held

against rotation in a counterclockwise direction by a pawl 15 pivoted on the side of the heater. An operating lever 16 is rigidly secured to the outer face of the ratchet wheel 14 so the grate may be easily rotated in a clockwise direction. The S-shaped grate bars comprise straight portions 17, 18 and 19 arranged in parallel relation and connected by curved sections 20 and 21. The terminals of the bars 10 are turned inwardly, as indicated by the numeral 22, to somewhat restrict the entrance to pockets or compartments 11 and 12.

Having explained the construction of my rotatable supplemental grate, I will now explain its operation and set forth its advantages.

The grate is mounted within a heater so that the lower compartment or pocket opens opposite the feed door through which fuel is fed. In using the grate, fresh coal is fed into the lower compartment or pocket and the fine particles sift through onto the horizontal grate 8. The heat from the fire on the grate 8 drives the gases from the fresh coal, converting it to a coke, and then the grate is rotated in a clockwise direction through one hundred and eighty degrees by means of the handle or lever 16 to bring the lower compartment 12 above the compartment 11. The fuel which was burning in the compartment 11 is dumped during this movement onto the grate 8 in the form of ashes and may be removed. The lower compartment, which was formerly the upper one, is now filled with a fresh supply of coal. I have found that my improved grate is a very valuable adjunct to any heater, since it saves money by reducing the amount of fuel necessary to obtain the desired heat.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention as claimed.

Having thus described my invention, I claim:—

1. A rotatable grate of the character described, having grate bars of S-shape formation, providing a pair of fuel holding compartments.

2. A rotary grate of the character described, comprising a plurality of substan-

tially S-shaped bars forming a pair of fuel holding compartments, and means for rotating said grate about a horizontal axis.

3. A grate of the character described comprising a center longitudinal bar and a plurality of S-shaped bars formed integrally with said longitudinal bar and providing a pair of fuel holding pockets, a bearing shaft formed on one end of said longitudinal bar,

a lever secured to said bearing shaft and a pawl and ratchet mechanism for locking the grate against rotation in one direction.

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

EMIL C. STUMPF.

Witnesses:

F. J. REILLY,

JOHN P. DELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."