

(No Model.)

J. W. GREENE.
GRATE.

No. 472,171.

Patented Apr. 5, 1892.

Fig. 1.

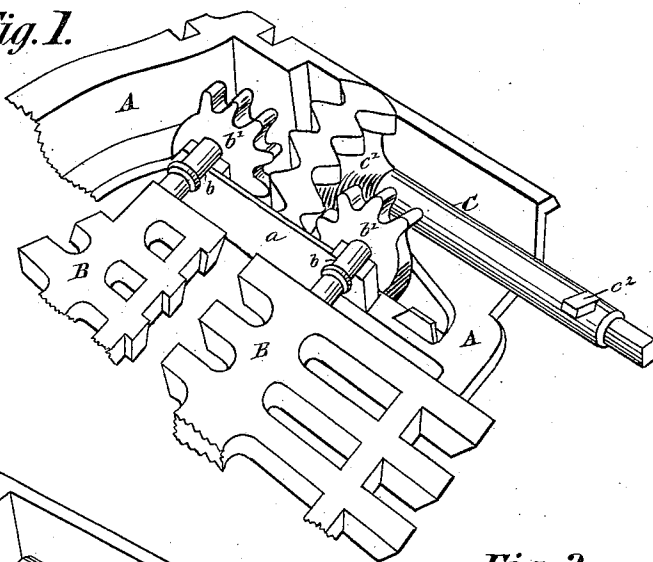


Fig. 2.

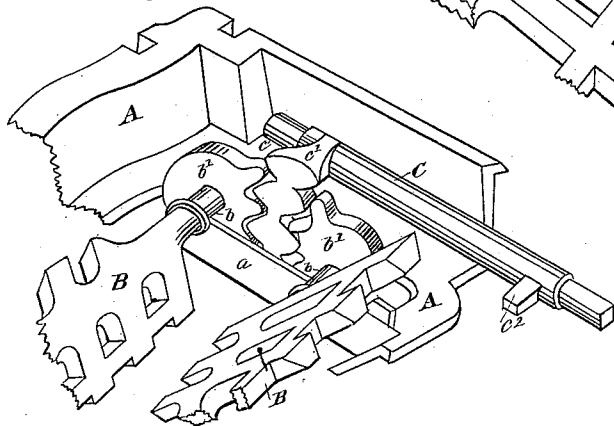


Fig. 3.

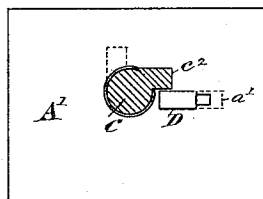
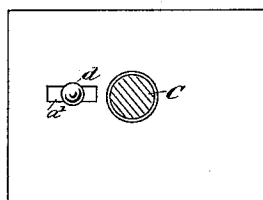


Fig. 4.



WITNESSES.

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GRATE.

SPECIFICATION forming part of Letters Patent No. 472,171, dated April 5, 1892.

Application filed March 23, 1891. Serial No. 385,965. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. GREENE, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Grates; 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.

The object of my invention is to provide a grate for a stove or open fire-place from which the ashes can be conveniently shaken and from which the cinders and all contents can be easily emptied into the ash-pan.

In the drawings, Figure 1 is a perspective view showing a part of my grate and grate-frame and means for shaking and emptying the grate. Fig. 2 is a perspective view indicating the position into which the grate is thrown to empty its contents. Fig. 3 is a rear view of part of the front wall of the grate, showing plan of the stop-slide and the stop-nib and shaking-shaft in cross-section. Fig. 4 is a front view of the same part of the grate-wall, showing plan of the slide-knob and slot and the shaking-shaft in cross-section.

A is the grate-rest, and *a* is an appurtenance of the rest designed to furnish bearings for the journals of the grate-section. This appurtenance *a* is raised a sufficient distance from the end of the grate-rest to allow room between it and the end for the shaking device, which will be described farther on.

B B represents the grate, which is cast in two sections, which sections are supported in front and rear, respectively, by the grate-frame and at each end by journals *b*, cast integral with them and having bearings in the grate-frame, and are but partially rotatable. In the form of grate shown the sections are each made of an integral piece of metal having openings therein for the passage of the ashes.

In the portion of the grate shown the journals have their bearings in the appurtenance *a*. These journals are so placed as to be next to the front and rear of the grate-frame, and therefore the weight of the

fuel will prevent the grate from dumping automatically.

The means by which I shake or dump my grate may be described as follows: On the right-hand journal of each section I fasten firmly a toothed segment *b'*, the teeth of which are on less than half its circumference, so that the toothed portion of each wheel will face each other. A rocking shaft C is arranged at the right side of the grate, passing through the front wall of the grate and having a bearing for its inner end on the back of the grate-frame at *c*. Projecting from one side of this shaft is a segment of a wheel or a slightly-curved rack *c''*, having laterally-projecting teeth on the opposite sides thereof which extend between said segments *b'* and engage the teeth thereof.

On the shaft C, at a point just inside of where it passes through the grate-front, is cast a stop-nib *c'*. The outer end of the shaft is provided with a square or shoulder end adapted to receive a crank-arm. On the inner side of the front wall *A'* of the grate, between the aperture through which the shaft passes and the grate, is provided a stop-slide D, adapted to engage the stop-nib *c'* on the shaft, and which can be moved to and from the shaft by a knob *d*, projecting to the front and working in a slot *a'* in the grate-wall *A'*.

The journals of the grate will be held in their bearings by the end linings of the grate, and the shaft will be held in its inner bearings by the same means.

When the grate is in position to retain fuel or is to be shaken so as to remove ashes, the stop-slide D will be kept in the position shown in Fig. 3, where it will engage the stop-nib *c'*. When it is desired to shake the ashes from the grate, the crank-arm will be placed on the end of the shaft and turned toward the grate and back, and the shaft C must be so adjusted in its bearings that the stop-nib *c'* will, when the grate is in position to receive fuel, project at such an angle with the stop-slide D as to allow sufficient movement for that purpose. When it is desired to dump the whole contents of the grate into the ash-pan, the slide-stop can be pushed away from the shaft so as to allow the stop-nib to clear it, and the

grate-sections can be thrown into the position shown at Fig. 2 or at a greater angle.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A grate for stoves and fire-places, comprising the grate B, cast in two sections, having journals *b* at both ends of each section, toothed segments fastened on the journals of both sections at one end and having their teeth facing each other, and a rocking shaft C, having a segment of a wheel provided with laterally-projecting teeth on the opposite sides thereof extending between said segments and adapted to engage the teeth thereof to partially rotate said grate-sections, substantially as shown and described.

2. The herein-described grate for stoves and

fire-places, comprising the grate B, cast in two sections having journals *b* at both ends of each section, toothed segments fastened on the journals of both sections at one end and having their teeth facing each other, a rocker-shaft C, having a segment of a wheel projecting inward from one of its sides and formed with laterally-projecting teeth on each side, said teeth extending between said segments and adapted to engage the teeth thereof to partially rotate said grate-segments, and means for locking said shaft, as described.

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

JOHN W. GREENE.

Witnesses:

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CHAS. P. WILL.