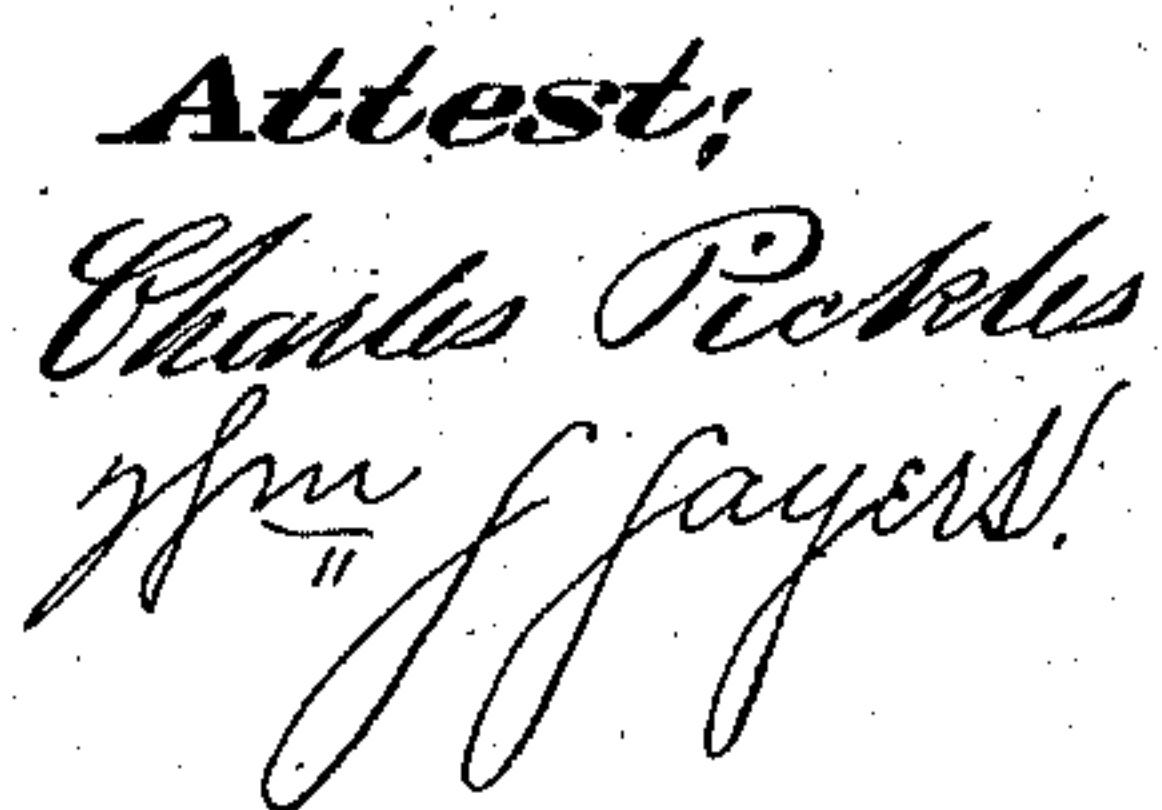


J. O'KEEFE.
ROTARY GRATE.

Patented Sept. 4, 1883.



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UNITED STATES PATENT OFFICE.

JOHN O'KEEFE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE EXCELSIOR MANUFACTURING COMPANY, OF SAME PLACE.

ROTARY GRATE.

SPECIFICATION forming part of Letters Patent No. 284,471, dated September 4, 1883.

Application filed April 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN O'KEEFE, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Grates for Stoves, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 is a top view of the grates, part broken away, being a horizontal section of a stove, taken on line 1 1, Fig. 2. Fig. 2 is a side view, showing the dumping-grate in its natural or upper position. Fig. 3 is a vertical section taken on line 3 3, Fig. 1, and showing the dumping-grate in its lower or emptying position. Fig. 4 is a detail section taken on line 4 4, Fig. 5. Fig. 5 is a similar view taken on line 5 5, Fig. 4. Fig. 6 is a similar view taken on line 6 6, Fig. 7; and Fig. 7 is a similar view taken on line 7 7, Fig. 1.

My invention relates to a grate that can be easily and quickly put in place and removed; and my invention consists in points of novelty hereinafter fully described and claimed.

Referring to the drawings, A represents part of the outer wall of a stove.

B represents a ring having lateral projections B¹ B² B³, the two former having downwardly-projecting teats B⁴, (see Fig. 2,) which rest on inwardly-projecting lugs or lips A' on the body of the stove, (see Fig. 1,) and the latter having an upturned lip, B⁵, which hooks into an opening, A², in the body of the stove, (see Figs. 2 and 3,) to keep the ring from being displaced by shaking the grate, &c. The upper faces of the lugs A' have depressions in which the teats B⁴ fit. The ring is thus supported and held in place.

C represents a grate fitting within the ring B and supported by legs D, extending downwardly from the ring, and having upturned ends D'. (See Fig. 5.) This grate is thus free to be shaken horizontally, and it has an arm, C', that extends outward beneath the ring B, and has its end turned upward and perforated to receive a suitable shaker-rod, E. It will be seen that this grate, as well as the ring, can be easily and conveniently removed from and inserted or put in place in the stove. One of the legs D extends down farther than the rest,

having a ledge, D², to support the grate C; and it has hinged or pivoted to it a dumping-grate, F, preferably by means of arms G on the grate inturned at their outer ends. (See Fig. 7.) The inturned portions of the arms fit in the hook formed by the upturned end of this leg D, (see Fig. 7,) and they are held therein by a plate, H, secured over them and to the leg by a bolt, I. (See Figs. 2, 3, 6, and 7.) This grate is thus free for vertical movement, and when it is in its normal or upper position (see Fig. 2) it forms the bottom to the grate C, and when dumped down (see Fig. 3) it allows the escape of clinkers, &c. The ends of the plate H preferably extend out over the arms G, (see Fig. 7,) and thus serve as stops to prevent the dumping-grate from being raised too high. This grate is held in its normal position and dumped by means of an arm or lever, J, hinged or pivoted beneath it. (See Figs. 2 and 3.) This lever passes through an opening in the body of the stove, as shown, and has a notch, J', that engages with the body of the stove, (see Fig. 2,) to hold the grate in its upper position, and it also has a lug or projection, J², which comes against the body of the stove, (see Fig. 3,) to limit the downward movement of the dumping-grate. The nut of the bolt I fits in a recess of the leg D, (see Fig. 7,) so that it is kept from turning with the bolt.

I claim as my invention—

1. In a grate for stoves, &c., a supporting-ring for the grate proper, having one of its supporting lugs or projections provided with a hooked end for engaging in an opening of the stove, or its equivalent, to keep the ring from being displaced by the shaking of the grate, &c., for the purpose set forth.

2. In a grate for stoves, &c., the ring for supporting the grate proper, having lugs, part of which rest on projections of the stove-body, and one of which has a hooked end for engaging in an opening of the stove, as and for the purpose set forth.

3. The combination of stove-body A, ring B, secured within the stove-grate proper, C, supported on legs D of the ring B, and adapted to have horizontal movement, and dumping-grate F, hinged to one of the legs D of the ring B, and having a suitable hinged lever, J, for hold-

ing it in its upper position and for dumping it, substantially as set forth.

4. In combination with the grate C and ring B, the dumping-grate F, hinged to the leg D
5 of the ring B, and held thereon by a plate, H, and bolt I, and having a suitable arm, J, for holding it in its upper position and for dumping it, substantially as shown and described.

5. In combination with the grate C and ring
10 B, the dumping-grate F, hinged to the leg D of

the ring B, and having a pivoted arm or lever, J, passing through a perforation in the body of the stove, and having a notch, J', and projection J², substantially as and for the purpose set forth.

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Witnesses:

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