

W. HAGERTY.
Stove-Grates.

No. 145,172.

Patented Dec. 2, 1873.

Fig. 1.

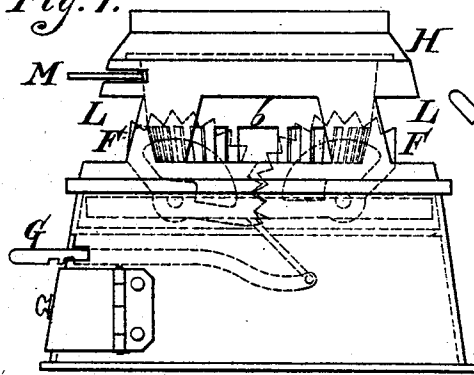


Fig. 4.

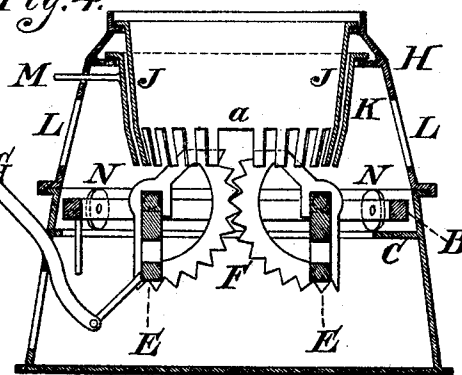


Fig. 2.

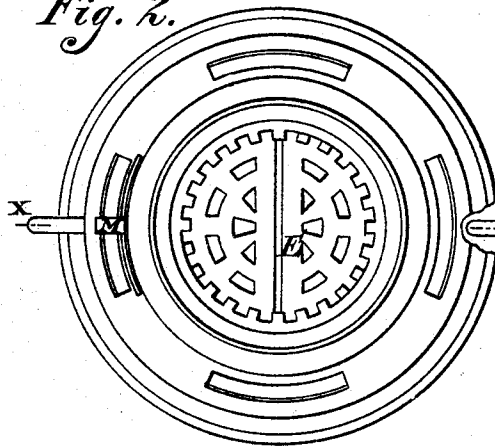


Fig. 5.

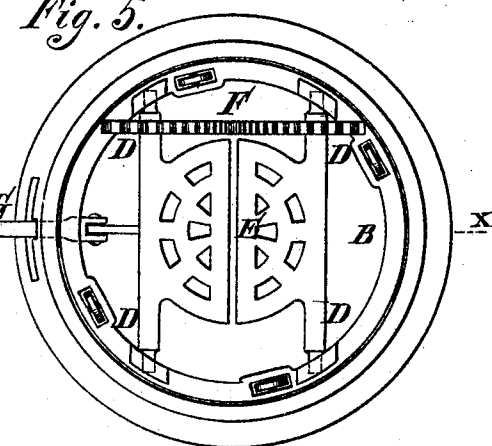


Fig. 3.

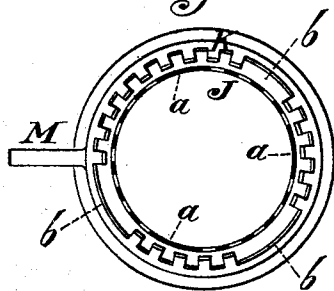
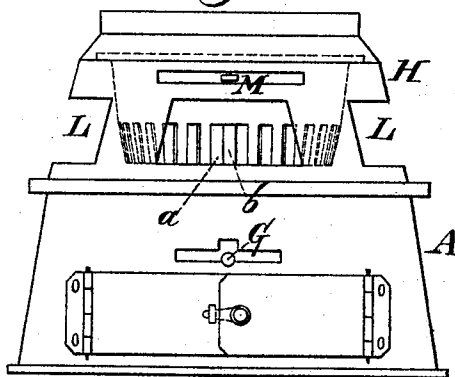


Fig. 6.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent, No. **145,172**, dated December 2, 1873; application filed May 31, 1873.

To all whom it may concern:

Be it known that I, WILLIAM HAGERTY, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Stove-Grates; and I do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which my invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of the device embodying my invention. Fig. 2 is a top view thereof. Fig. 3 is a bottom view of the upper or vertical portion of the grate. Fig. 4 is a central vertical section in line *xx*, Fig. 2. Fig. 5 is a top view of the inner portion. Fig. 6 is a front elevation.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a grate formed in sections, which are respectively opened and closed by simultaneous movements; and it consists in mounting the sectional grate and operating gearing on a rotating ring. It also consists in a lever or rod for rotating the grate and supporting it in position. It also consists in the construction of the fire-pot and a rotating grating, to permit the removal of clinkers, &c., without disturbing or operating the grate proper. It also consists in windows or openings surrounding the fire-pot and rotating grating, for access to the same.

Referring to the drawings, A represents the base or ash-pit of a stove. B represents a band or ring, which is arranged within the ash-pit, and supported on a ledge, C, suitably elevated above the bottom of said pit. On this band there are journaled the parallel axes D of a two-part or sectional grate, E, which consists of a grate divided centrally, and having the axes or journals D on the outside of the sections, so that the central portions of the sections may advance toward or recede from each other. F represents two vertically-arranged toothed segments, which mesh with each other, and are respectively secured to the axes D of the grate at one side thereof, so as not to interfere with the portions of the stove above the grate. An operating-lever or

rod, G, is jointed to one of the sections of the grate, and extends to the front of the stove through a slot in the walls of the ash-pit, so as to be conveniently reached and handled. A notch or other fastening is provided or formed with the lever in order to lock the same, and thus hold the two parts of the grate in proper position when in use. It will be seen that by releasing the lever G, the two sections of the grate are in nowise held up, and at once separate, and allow the fire, ashes, or cinders, as it may be, to drop centrally into the ash-pit or pan therein, and this, without any interference of the grate, the latter as well as the axes D, being entirely out of the way and permitting a free discharge of the contents of the stove. It is evident that motion imparted to one section of the grate will be communicated by the segmental gearing to the other section, and thus the two sections open simultaneously. When it is desired to close the grate, the lever G is forced forward and elevates one section of the grate. This movement is communicated to the segment of said section, which operates the segment of the other section, and thus raises the latter section, the operation being simultaneous. The lever will then be locked or properly engaged, and the grate is held in horizontal position. When the notch of the lever rests on the edge of the slot through which it projects, the grate is readily raked by reciprocating the lever, without danger of disengagement of the grate. A number of rollers or wheels, N, will be mounted on the band B, and run on the ledge C, for causing easy motion of the band and lessening friction between said band and the ledge. H represents the portion of the stove just above the grate, and incloses the fire-pot J, which is suspended within the portion H, and comes closely to the horizontal grate E. Some of the pieces constituting the fire-pot J are cut away, as at *a*, at diametrically-opposite points, in order to afford means of access to clinkers, &c., in the fire-chamber. A rotating grate, K, encircles the fire-pot J, and is constructed to coincide with the said fire-pot J, so that when turned in one direction the cut-away parts *a b* register, and turned in the opposite direction the teeth or pieces constituting the grating K cover or surround the

cut-away pieces of the fire-pot J, whereby in the latter case the parts J K form a continuous circular grating and properly retain the burning mass, and in the former case the exposed places or cut-away parts permit the removal of the clinkers, slate, &c., as has been stated, for which purpose windows or openings L are made in the walls of the part H of the stove to permit access to the grate and fire-pot J K. A lever or rod, M, is attached to the revolving part J, and projects from the part H, or some other convenient point.

It will be seen that when the cut-away parts of the fire-pot J and encircling grating K are to register, the grating may be rotated without disturbing the grate proper, and that when the latter is being raked or shaken the encircling grating is not disturbed or the cut-away parts uncovered.

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

1. The sectional grate E and connected gear-

ing F mounted on the rotating ring B, substantially as and for the purpose set forth.

2. The combination, with the grate E and gearing F, and the rotating ring B supporting said grate and gearing, of the lever G jointed to the grate, and projecting through the base A of the stove, substantially as and for the purpose set forth.

3. The combination, with the fire-pot J, of the grating K, adapted to rotate independently of the grate proper, and operated by the rod M, the parts J K having cut-away portions *a b*, respectively, as herein set forth, and for the purpose described.

4. The combination, with the fire-pot J and rotating grating K, of the windows or openings L, encircling the parts J K in relation to the cut-away portions *a b* of the parts J K, substantially as and for the purpose described.

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