G. NOSTWICK.

STOVE ASH SIFTER.

APPLICATION FILED APR. 27, 1908.

902,829. Patented Nov. 3, 1908.

Fig. 1.

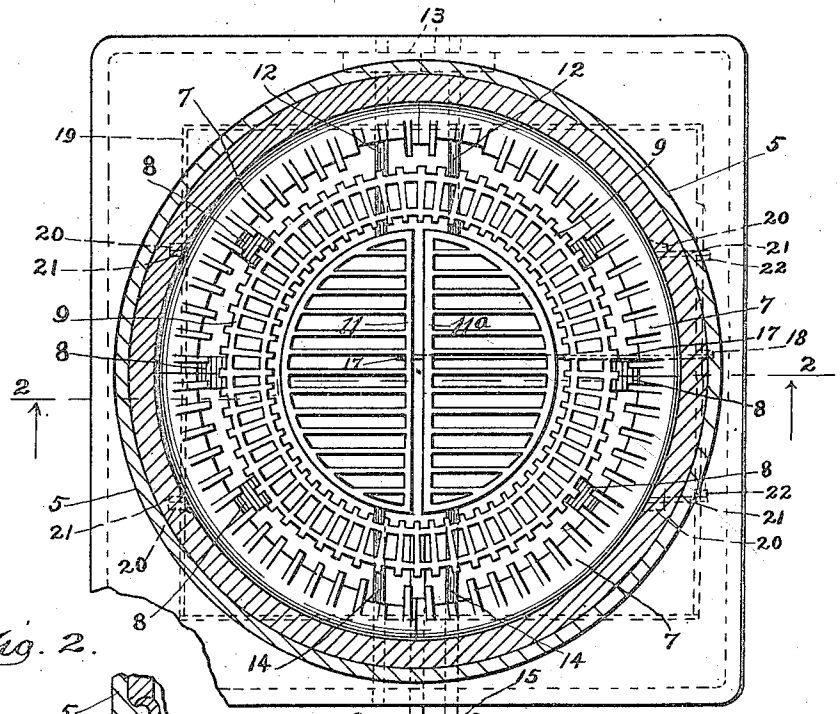


Fig. 2.

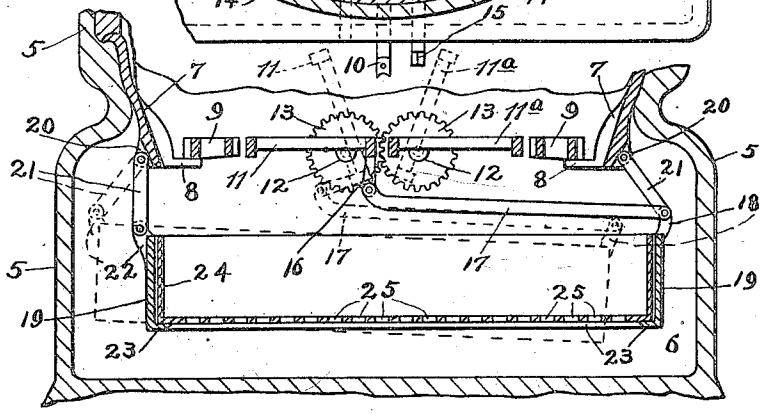
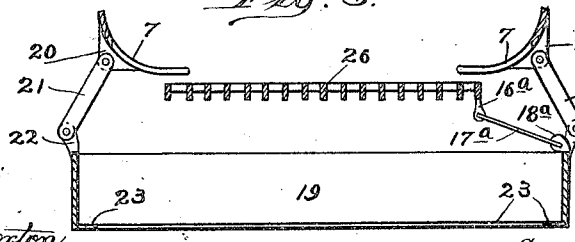


Fig. 3.



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UNITED STATES PATENT OFFICE.

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STOVE ASH-SIFTER.

No. 902,829. Specification of Letters Patent. Patented Nov. 3, 1908.

Application filed April 27, 1908. Serial No. 429,351.

To all whom it may concern:

Be it known that I, GUSTAV NOSTWICK, a subject of the King of Norway, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Stove Ash-Sifter, of which the following is a specification.

This invention relates to improvements in ash sifters for stoves, furnaces and heaters, and it consists in certain peculiarities of the construction, novel arrangement, and operation of the various parts thereof, as will be hereinafter more fully set forth and specifically claimed.

The principal object of the invention is to provide an ash-sifter to be used in connection with the grates of stoves or other fire pots for separating the coal from the ashes and for holding the former in a removable receptacle.

Another object of the invention is to provide an ash-sifter of the above-named character, which shall be simple and inexpensive in construction, strong, durable and effective in operation, and so made as to combine a horizontally movable grate or a rotary mechanism of the grate with a reciprocating sieve or screen for sifting the ashes and for retaining the pieces of coal.

Other objects and advantages of the invention will be disclosed in the subjoined description and explanation.

In order to enable others skilled in the art to which my invention pertains, to make and use the same, I will now proceed to describe it, referring to the accompanying drawing, in which—

Figure 1 is a plan sectional view of a stove provided with a duplex dumping grate and equipped with an ash-sifter, embodying one form of the invention; Fig. 2 is a vertical sectional view taken on line 2—2 of Fig. 1 looking in the direction indicated by the arrows, showing by dotted lines the positions to which the dumping grate members may be turned and the movement of the ash-sifter;—and—Fig. 3 is a view partly in section and partly in elevation of a portion of a grate of a fire-box or pot, showing a modification in the construction of the ash-sifter-frame and in the manner of connecting it to a horizontally movable grate.

Like numerals of reference, refer to corresponding parts throughout the different views of the drawing.

The reference numeral 5 designates a stove or furnace casing, which may be of any desired size, form and material, and, as usual, has in its lower portion an ash pit 6 which may be equipped with a door for access thereto. Supported in any suitable manner within the casing 5 and at the upper portion of the ash pit 6 is a stationary grate or fire-pot 7, which, in the present instance, is shown as being circular and downwardly and inwardly extended. The lower portion of the stationary grate or fire-pot 7 is provided at suitable distances apart with inwardly extending horizontal projections 8 on which is movably mounted a circular grate 9 which is provided at its front portion with an extension 10 which projects through a suitable opening in the stove or furnace casing 5, and may be used for shaking the grate 9 by a horizontal movement of said extension. Located within the central opening of the circular grate 9 are two dumping grate members 11 and 11^a which are substantially semi-circular in shape, and each has on its rear portion a shaft 12 which shafts are journaled at their outer ends in the casing 5, and each has mounted thereon a gear 13 which mesh with one another. Each of the members 11 and 11^a is provided on its front portion with horizontally extending shafts 14 which are journaled in the front part of the stove casing, and one of said shafts has its free end formed as at 15 to receive or engage a crank handle to be used for tilting the members 11 and 11^a when it is desired to shake the coal and ashes therefrom. At about its middle, one of the dumping grate members is provided with a downwardly extending arm 16 to which is pivotally secured at one of its ends a rod or bar 17, the other end of which is pivotally secured to an upward extension or arm 18 on the sifter-frame 19, which is supported within the ash pit by means to be presently explained.

As shown in Figs. 1 and 2 of the drawing, the lower portion of the grate 7 is provided on its outer surface with a series of bosses or projections 20, usually four in number, located in pairs on each side of the stove. Pivotally secured to each of the projections 20 is a link 21, the other end of each of which is pivotally secured to an arm 22 on the upper portion of the sides of the sifter-frame 19, which, as shown, is preferably rectangular in shape, and has at its bottom a perimetral and inwardly extending flange 23 to support the ash-sifter 24, which is also preferably

rectangular in shape and of a form to correspond with that of the frame 19, and has its bottom provided with a series of perforations 25 through which the ashes may be sifted so as to fall on the floor of the ash pit.

In Fig. 3 of the drawing I have shown a modification in the construction of the device, and in said figure have illustrated a sifter-frame connected to a reciprocal grate, instead of to one of the dumping or rotary type. In this modification, the stationary grate 7 of the stove or furnace is provided, as in the other construction, with a number of projections 20, to each of which is pivotally secured at one of its ends a link 21, the other ends of which are similarly secured to arms 22 on the upper surface of the sifter-frame 19, which is of the same construction as that shown in Fig. 2 and just above described, but it will be understood that in Fig. 3 of the drawing the sifter 24 has been omitted therefrom.

From the foregoing and by reference to the drawing it will be seen and clearly understood that, when the construction shown in Figs. 1 and 2 is employed, the circular grate 9 may be turned by means of the extension 10 so as to shake the same, and that the dumping grate members 11 and 11ª may be rocked by means of a crank applied to the end 15 of the shaft 14, thus causing the ashes and small portions of coal to fall into the sifter 24, which, as well as the frame 19 therefor, will be reciprocated by the movement of the dumping grate members, by reason of the connections 16, 17 and 18, which unite one of said grate members and the sifter-frame.

It is apparent that, when the construction shown in Fig. 3 is employed, the grate 26, which may be horizontally supported in any suitable manner so that it can be moved horizontally, will, in its movement, cause the sifter-frame 19 to be reciprocated through the instrumentality of the connecting rod 17ª and arms 16ª and 18ª to which said rod is pivotally connected at its ends.

From the foregoing it will be understood that an ash-sifter of an extremely simple and practicable nature is afforded by my improvements, and that the invention is susceptible of considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise form and arrangement of the several parts of the device herein set forth in carrying out my invention in practice.

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

1. The combination with the casing of a stove or the like, of a grate movably located therein, a sifter-frame of a bottomless box-like form having at its lower portion inwardly extending flanges and movably supported below the grate for reciprocal movement, a sifter of corresponding shape to the frame removably located therein and supported on said flanges, and means connecting the sifter-frame to the grate whereby when the latter is moved reciprocating movement will be imparted to the sifter-frame.

2. The combination with the casing of a stove or the like, of a stationary grate located therein, another grate movably located within the casing, a sifter-frame of a bottomless box-like form having at its lower portion inwardly extending flanges, a series of links pivotally uniting the stationary grate and the sifter-frame, a rod pivotally connected at one of its ends to the movable grate and at its other end to the sifter-frame, and a sifter of corresponding shape to the said frame and removably located therein and supported on the flanges thereof.

3. The combination with the casing of a stove or the like, of a stationary grate located therein and having a central opening, a movable grate located within the casing and central opening of the stationary grate, a sifter-frame of a bottomless box-like form having at its lower portion inwardly extending flanges, a series of links pivotally secured at their ends to the stationary grate and to the sifter-frame, a rod pivotally connected at one of its ends to the movable grate and at its other end to the sifter-frame, and a sifter removably located in the frame therefor and supported on the flanges thereof.

4. The combination with the casing of a stove or the like, of a grate consisting of two rotary members horizontally mounted therein and having means to operatively unite them, a sifter-frame of a bottomless box-like form having at its lower portion inwardly extending flanges and movably supported below the grate, a sifter removably located in the sifter-frame and supported on the flanges thereof, and means connecting the sifter-frame to one of the grate members whereby when the latter is moved reciprocating movement will be imparted to the said frame.

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