2 Sheets--Sheet 1.

D. E. PARIS.

Cooking Stoves.

No. 153,600. Patented July 28, 1874.

Fig. 8.

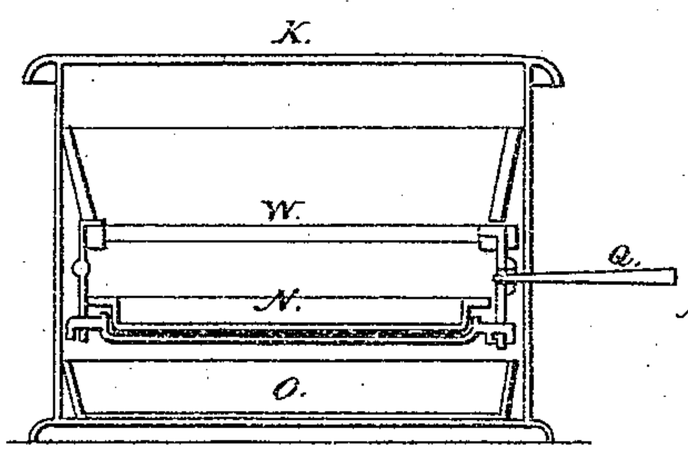


Fig. 9.

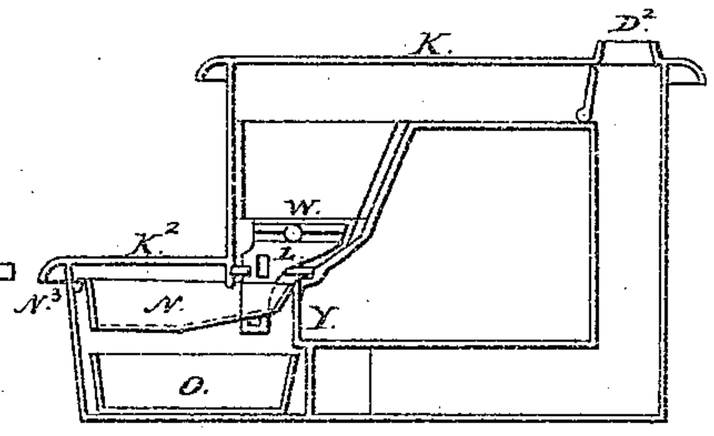


Fig. 10.

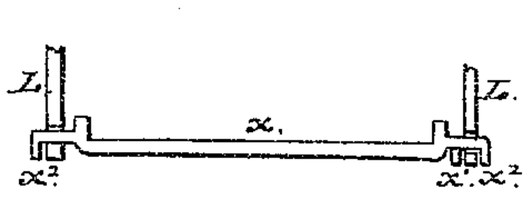


Fig. 11.

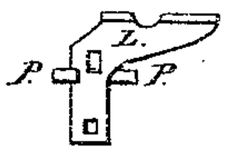


Fig. 1.

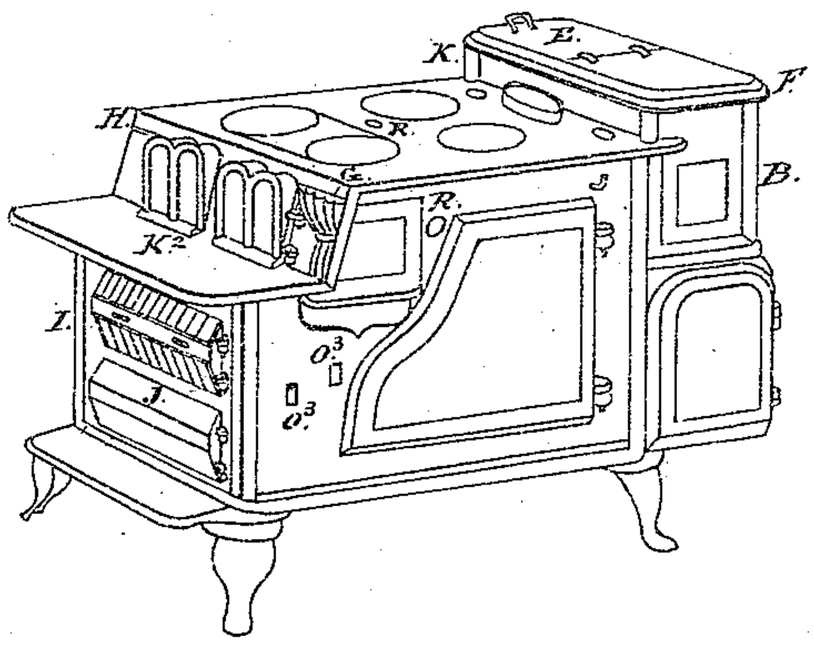
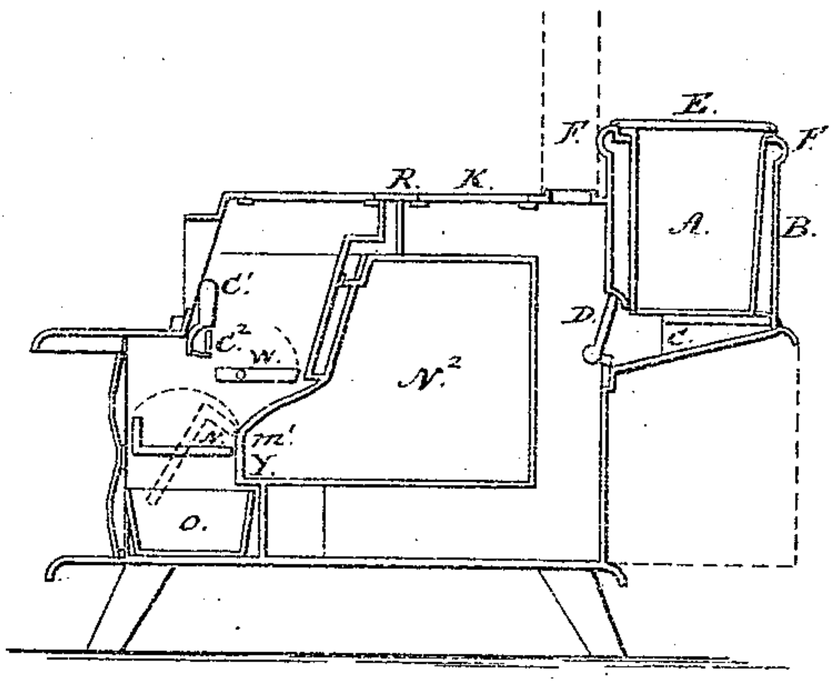


Fig. 2.



Witnesses.

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Inventor.

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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

2 Sheets--Sheet 2.

D. E. PARIS.

Cooking Stoves.

No. 153,600. Patented July 28, 1874.

Fig. 3.

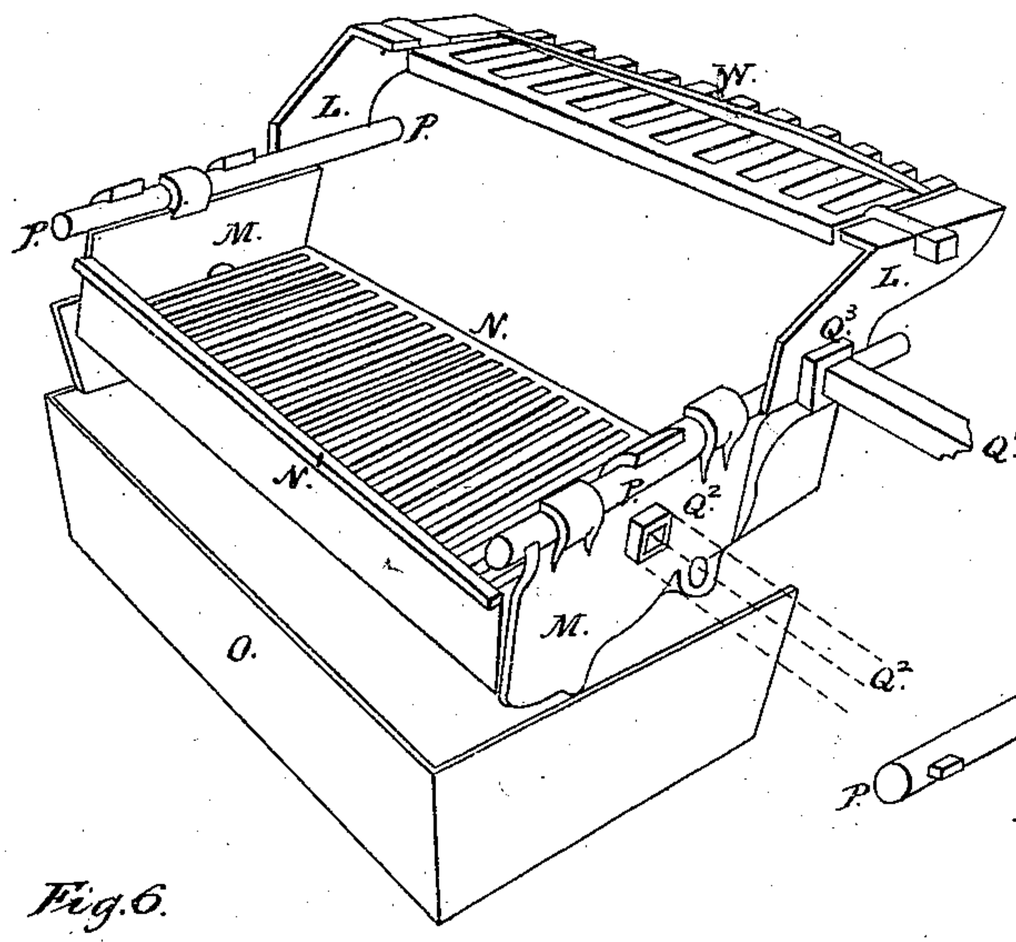


Fig. 4.

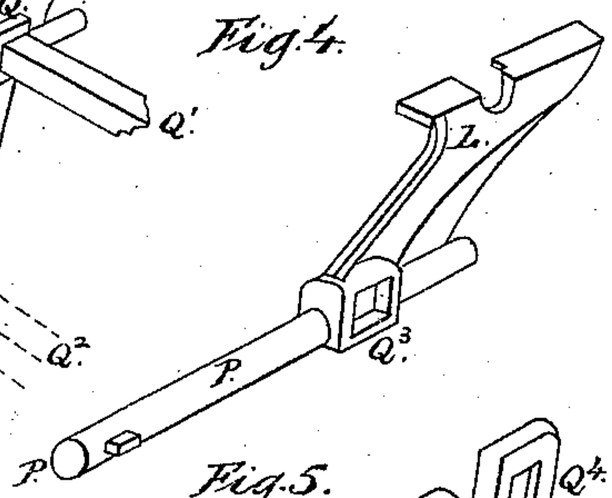


Fig. 5.

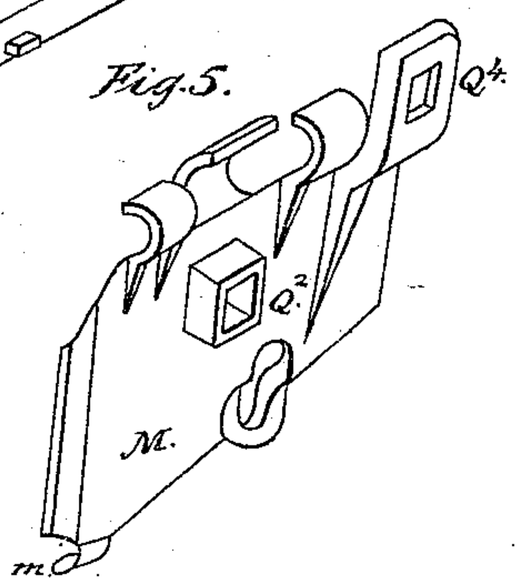


Fig. 6.

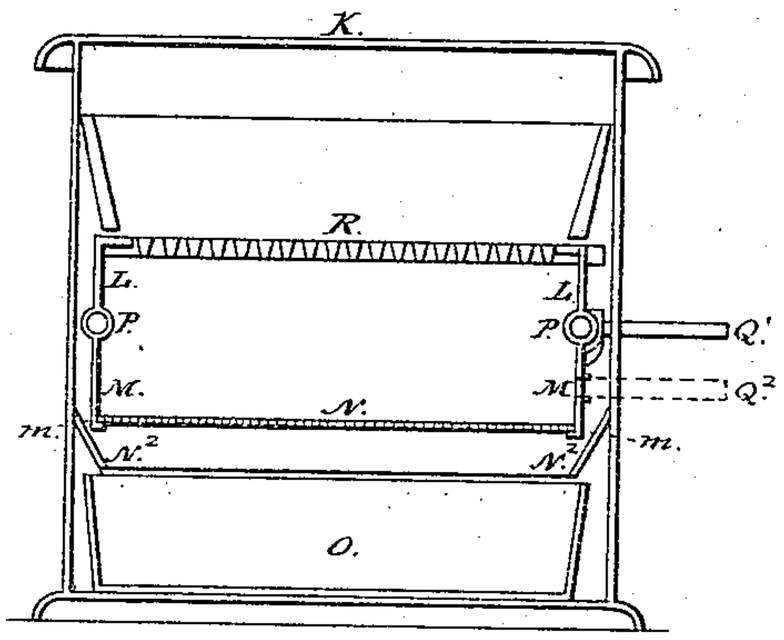
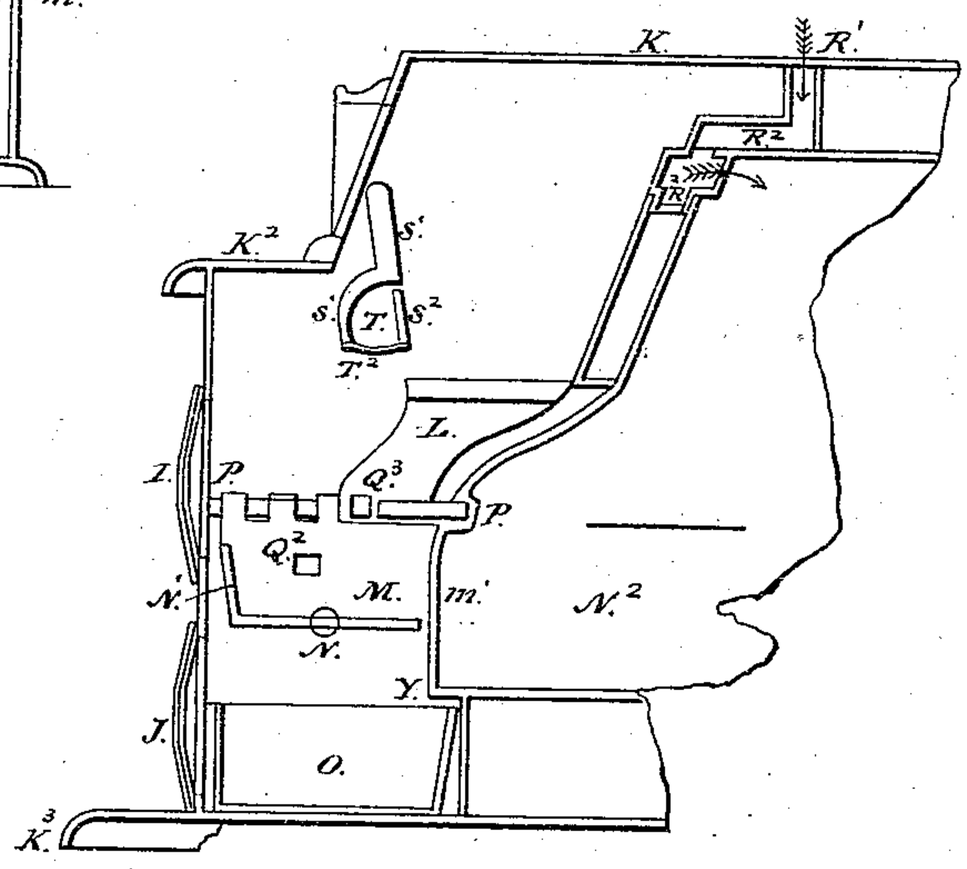


Fig. 7.



Witnesses.

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A. H. Norris

Inventor.

Dan'l E. Paris

UNITED STATES PATENT OFFICE.

DANIEL E. PARIS, OF TROY, NEW YORK.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **153,600**, dated July 28, 1874; application filed May 13, 1874.

To all whom it may concern:

Be it known that I, DANIEL E. PARIS, of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Cooking-Stove, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the stove; Fig. 2, a sectional view. Fig. 3 is a perspective view of the grate, the sifter, the ash-pan, and rockers, and the same parts are shown again in a vertical cross-section in Fig. 6, and in a vertical longitudinal section in Fig. 7. Figs. 4 and 5 show one of the rockers which supports the grate and sifter in perspective, the upper and lower parts being separated. Figs. 8 and 9 are vertical sections taken through the fire-box, showing a modification of the grate, sifter, and rockers. Shown in Sheet 2 of drawings. Fig. 10 shows the cross-bar that is attached to each of the rockers, and which moves or vibrates the sifter below the fire-grate. Fig. 11 shows one of the rockers to which the grate and sifter are attacned, or by which they are operated.

In order to enable others skilled in the art to which my invention appertains to understand the same, I will proceed to describe more fully my said invention.

The reservoir-casing B, as seen in Fig. 1, is raised above the stove top, and reservoir A rests upon the top rim F of the casing, and is removable, being provided with a rim or flange at its top, Fig. 2, which assists in supporting it. The reservoir rests upon two supports, C C, in the bottom of the casing. (Seen in Fig. 2.) The hot-air currents pass under these supports C as they circulate through the casing. The grate and sifter, to which my invention particularly relates, are shown in Figs. 3 and 7. The grate W lies on the rockers L L, while the sifter is supported by the rockers M M, located at each side of the stove. These rockers are hooked or attached together, so as to operate or move in unison with each other, and if the shaker Q^1, Fig. 3, be placed in the upper opening Q^3 both the grate and sifter vibrate horizontally, but if the shaker be placed in the opening Q^2, Fig. 3, only the sifter is vibrated, which is necessary sometimes when the grate does not need shaking—that is, it does harm sometimes to shake the grate, but none at all to shake the sifter, and as the latter needs more shaking than the former it is important that provision be made for shaking the sifter separately from the grate; but it is equally important that the sifter be shaken when the grate is neglected by carelessness, for the coals and ashes passing through the grate would fall and lie on the sifter, and gradually accumulate on it till they reach the grate, and thus be apt to melt it down or destroy the draft of the stove.

The rockers L and M, when attached, become as one and rock from the common center P P, Figs. 3 and 7, and these rockers are supported by the front oven-plate and the front of the stove. The sifter N not only vibrates with the rockers M M but it turns on journals formed on each end of it, and dumps its contents into the ash-pan below. These journals rest on the rockers M M, through slots or openings at their lower edges at or near the center. The front part of the sifter N rests on pins or projections *m*, Figs. 5 and 6, formed on the rockers, and the front part N of the sifter is raised up vertically, thus forming a front side to the sifter, while the front oven-plate *m′* forms its rear side, and the two rockers, M M, form, respectively, the end sides to the sifters. The bottom of the sifter is slightly inclined to the front, so as to carry the coals forward as the sifter vibrates lengthwise, the openings being formed crosswise of the sifter.

Fig. 2 shows how the sifter dumps its contents into the pan. This is effected by turning the sifter N inward, until its front plate N^1 strikes the front plate *m′* of the oven N^2, so that the ashes and clinkers will pass off the sifter at its unobstructed side, and between it and the front oven-plate. The front plate N^1, by its weight, assists the sifter to resume its normal position. It will be seen, therefore, that the sifter has a compound movement upon its bearers or rockers—viz., a longitudinal shaking movement and a semirotary dumping movement—the one produced by swinging the bearers from the outside, and the other by turning over the sifter through the door I, Fig. 7. The grate dumps forward upon the

bearers by which it is vibrated. Figs. 8, 9, 10, and 11 show a modification of my improved sifter and rockers, adapted to a low-hearth stove, where there is not room for the sifter to dump; but in this case, as the rocker L is in one piece, the sifter cannot well be attached directly to the rocker, as in Fig. 3, because, as the grate gets hot it expands, and that would throw the lower part of the rockers inward, and thus they would bind in the sifter so that it could not be freely moved. The latter result does not occur when the rockers are made in two parts, for in that case the expansion of the upper part does not affect the lower part, but when the rocker is in one piece, some such device as the bar X represented in Fig. 10 will become necessary. Said bar connects with both rockers by openings through their lower parts, and has hooks on each end to hold the rockers and to vibrate the bar, as seen at X^2 X^2, and on one end there is a double hook, (seen at X^1,) to effect the locking of the bar X with the rockers L. It would not do to put this double hook on the other end, for in that case the grate, in expanding while hot, would break the rockers or bar, or become so tight as not to work perfectly. One end of the sifter rests on the bar X, as seen in Figs. 8 and 9, and thus the sifter vibrates with the rockers, and the rockers are vibrated by means of the lever Q, seen in Fig. 8. The curtains G G, shown in Fig. 1. are not only for ornament, but they serve to cover up the crack or opening formed by the inclined part of the hearth-plate and the top plate of the stove, where they join each other, as seen at G, in Fig. 1. The curtain at H is left off, thus exposing the said crack or opening.

Having thus described my invention, what I claim as new is—

1. A fuel-grate having a compound longitudinal shaking and dumping movement, in combination with bearers or suspending-points, which move endwise with the shaking movement of the grate, substantially as described.

2. The combination of a grate and a sifter with double rockers by which they are carried, whereby a simultaneous horizontal longitudinal sifting or shaking action may be imparted to the grate and the sifter when desired.

3. The plate M, provided with socket Q^4, in combination with plate L, provided with socket Q^3, the said sockets corresponding in position at the axis of the rockers, to receive a shaking-bar for producing a simultaneous movement of the grate and sifter.

4. The combination of separate rockers for the grate and the sifter, with an axis common to both sections, whereby independent action of each may be had.

5. In combination with the sifter N, the rocker M having a socket, Q^2, below the suspending point of the rocker, to receive the shaking-bar.

6. The combination, with the front wall of the oven and the front plate of the stove, of double rockers, connected with and carrying the grate and the sifter in their proper relative positions for action between the inclosing walls.

7. The inclosing walls of a suspended ash-sifter, formed by the front plate N^1 thereof, in combination with the end rockers or bearers M, and the front side m' of the oven, substantially as described.

8. A combined fuel-grate and ash-sifter, secured in position, one above the other, by an axis-rod having its bearing in the front oven-wall and the front plate of the stove, substantially as described.

9. An ash-sifter suspended from rockers, in front of or below the fire-grate, and in combination therewith, for receiving and sifting coals and ashes falling from said grate.

10. An ash-sifter, suspended, held, or supported by rockers, in front of or below the fire-grate, and in combination therewith, arranged to dump or discharge its contents into the ash-pan or ash-pit below.

In testimony that I claim the foregoing, I have hereunto set my hand this 17th day of April, 1874.

DAN'L E. PARIS.

Witnesses:

W. I. LUDLOW,

ALBERT H. NORRIS.