

T. HOLT.
STOVE-GRATE.

No. 183,927.

Patented Oct. 31, 1876.

Fig. 3.

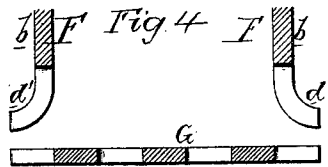
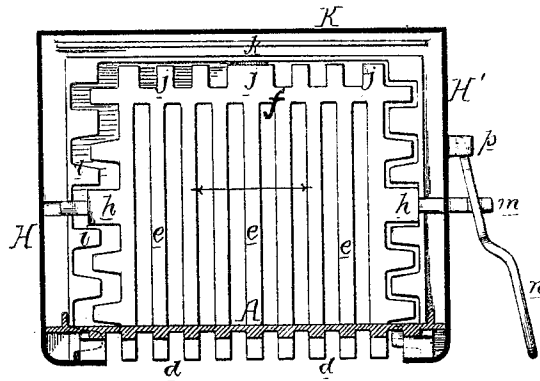


Fig. 1.

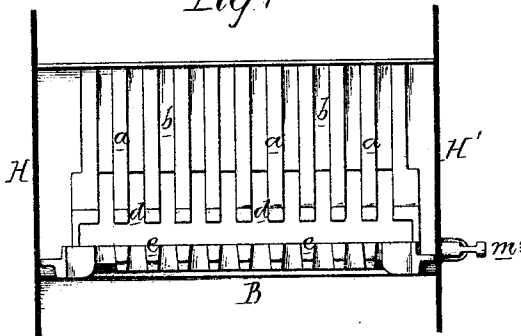


Fig. 2.

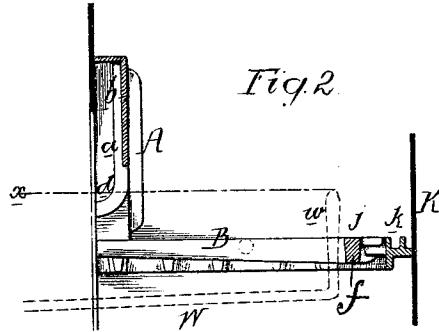


Fig. 6.

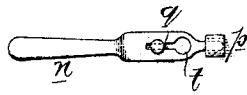
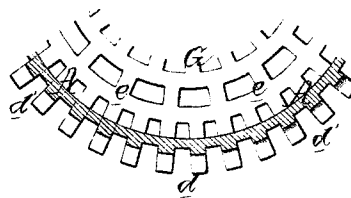


Fig. 5.



Witnesses
Hermann Moessner
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Thomas Holt
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UNITED STATES PATENT OFFICE.

THOMAS HOLT, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. 183,927, dated October 31, 1876; application filed September 30, 1876.

To all whom it may concern:

Be it known that I, THOMAS HOLT, of Philadelphia, Pennsylvania, have invented certain Improvements in Stoves, of which the following is a specification:

The object of my invention is to so construct the vertical and horizontal grate of a cooking stove or range, or the lower end of the fire-pot and the grate of a heating-stove, that the waste ashes and cinders may be readily removed.

In the accompanying drawing, Figure 1 is a front view of the two grates of a cooking stove or range with my improvement; Fig. 2, a transverse section on the line 1 2; Fig. 3, a plan view; Fig. 4, a vertical section of a fire-pot with grate; Fig. 5, a plan view of Fig. 4, and Fig. 6 a view of the grate-operating lever.

In Figs. 1, 2, and 3, A represents the front vertical grate of the fire-place of a stove or range, *a* being the bars of the grate, which are connected together above by a web, *b*, but disconnected below, so as to form a series of fingers, *d*, bent outward at the lower ends, as best observed in Fig. 2. B is the horizontal or base grate, consisting, mainly, of a series of bars, *e e*, which are connected together at the rear only by a bar, *f*, the opposite edges of this grate being provided with projections *h h*, arranged between projections *i i* on plates resting on ledges secured to the opposite sides H H' of the fire-place, similar projections *j* at the rear of the bar *f* extending nearly to the ledge *k*, which supports the brick lining fitted against the rear plate K of the fire-place. The opposite ends of the grate B are provided with trunnions, one of which projects through one of the side plates of the fire-place, for receiving a lever by which the grate may be tilted downward in front, the downward tilting at the rear being prevented by a projecting lip on the ledge K. By means of a lever, *n*, having its fulcrum on a stud, *p*, attached to the side plate H' of the fire-place, the grate B can be reciprocated in the direction of the arrows, Fig. 3, the lever having a slot, *q*, Fig. 6, adapted to a flat portion of the turning-lever *m*, so that it can be used either for reciprocating the grate or, after drawing back the lever clear of the stud *p*, for tilting the grate.

The lever may be entirely detached from the trunnion when the hole *t* coincides with the same. When the grate B is at rest, its bars or fingers *e* should be directly below the pendent fingers of the grate A, so that if the tongue *w* of a poker, W, be passed upward between the fingers, as shown in Fig. 2, there can be no impediment excepting the ashes and cinders to the pulling out of the poker in a straight course, as indicated by the dotted line *x*, the tongue of the poker passing between the fingers *d* of the front grate. Hence it will be seen that the ashes and cinders can be more readily removed from the fire-place than if fingers *d* were situated above the spaces between the fingers of the lower grate. This removal of the ashes and cinders is facilitated by the outward bending of the fingers *d* of the grate A, for, owing to this outward bend, the ashes acted on by the weight of the superincumbent fuel will naturally seek the space between the grates as an outlet.

Figs. 4 and 5 illustrate my invention as applied to the circular fire-pot and grate of an ordinary heating-stove, F being the fire-pot, terminating below in outwardly-curved fingers *d'*, which are directly above fingers projecting from the grate below. The ashes and cinders will naturally seek the outlet presented by and between these outwardly-bent fingers and the grate, and can be easily removed, either by a poker or by agitating the grate.

I claim as my invention—

1. The combination of the grate A and its fingers *a* with the grate B and its fingers *e*, unconfined at their front ends, and coinciding with the fingers *a* of the grate A, as set forth.

2. The combination of a grate or fire-pot having outwardly-bent fingers *a*, a base grate having fingers *e*, coinciding with the fingers *a*, and unconfined at the outer ends, and the space between the two grates.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS HOLT.

Witnesses:

HERMANN MOESSNER,
HARRY SMITH.