S. KEPNER.

Grate.

No. 159,271. Patented Feb. 2, 1875.

Fig. 1.

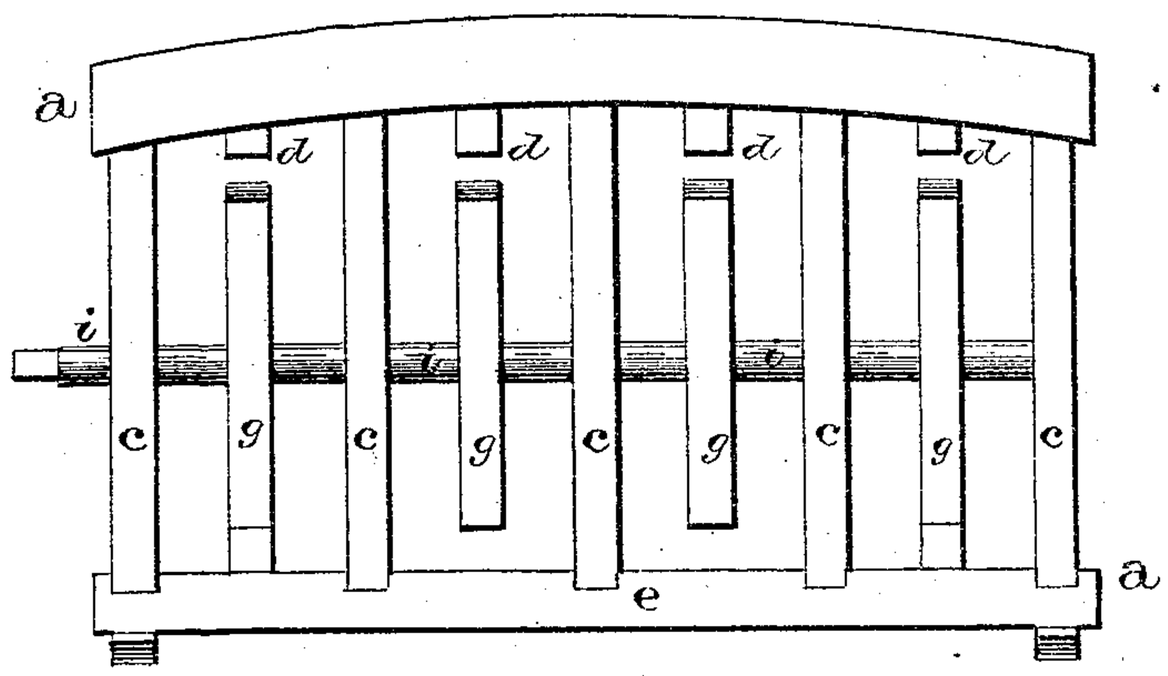
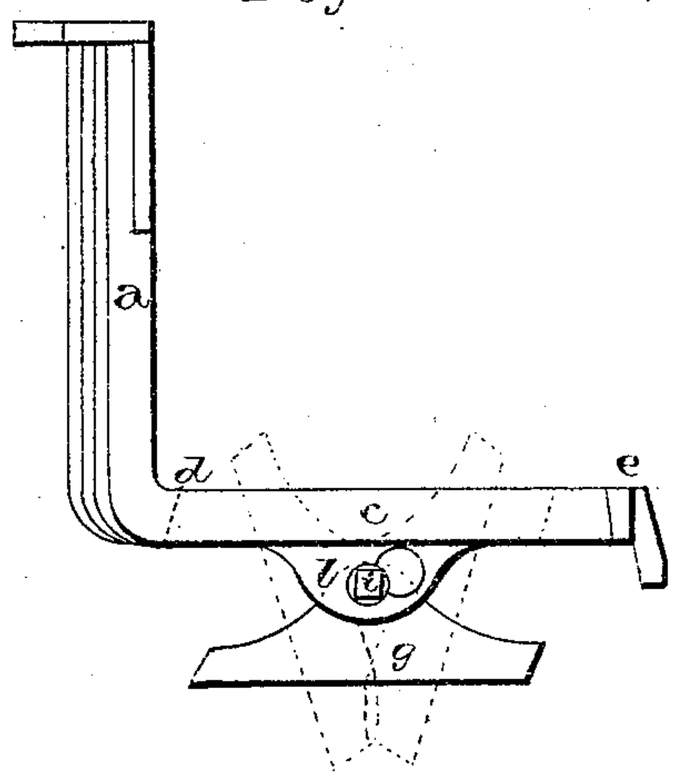


Fig. 2.



WITNESSES.

J. Wm. Gasner,

C. V. Lemon.

INVENTOR.

Solomon Kepner

per

F. A. Lehmann,

Atty.

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

UNITED STATES PATENT OFFICE.

SOLOMON KEPNER, OF POTTSTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-HALF HIS RIGHT TO J. B. PARKER, OF SAME PLACE.

IMPROVEMENT IN GRATES.

Specification forming part of Letters Patent No. **159,271**, dated February 2, 1875; application filed January 11, 1875.

To all whom it may concern:

Be it known that I, SOLOMON KEPNER, of Pottstown, in the county of Montgomery, and in the State of Pennsylvania, have invented certain new and useful Improvements in Stove-Grates; and do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to an improvement in grates; and it consists in the arrangement and combination of parts, which will be more fully described hereafter, whereby a double grate is formed.

Figure 1 is a plan view of my invention. Fig. 2 is an end view of the same.

a represents an ordinary grate for open-front stoves; but my invention is intended for base-burners, and all other forms of stoves equally as well. Every other one of the bars *c* of this grate across the bottom are removed from the points *d* to the rear edge *e*, and their places supplied by the short swinging bars *g*. These bars *g* are formed upon the top of the pivot-rod *i*, which is held suspended in the bearings *l* at each end of the grate, below the bottoms of the bars *c*. As the bars *g* are formed upon the top of this rod, when the rod is turned around they sweep through a large circle around the axis, instead of in the same one. When the short bars *g* are turned so that their tops are on a level with the bars *c*, an ordinary grate is formed, but with the advantage of admitting more air to the fire at those points where the bars are too short to touch the balance of the grate. In this position, by partly turning rod *i* these short bars are used to shake out the ashes and cinders. The rod *i* and bars *g* are all removable. By turning the rod one-half way around, the bars *g* sweep through half a circle, and assume the position shown in Fig. 2, below the level of the bars *c*. In this position a double grate is formed, one above the other. The upper one supports the mass or body of the coals, while the lower one supports the bottom part, leaving openings large enough for a hook to be inserted, and all the clinkers and pieces of slate to be drawn freely out, besides admitting far larger quantities of air to the fire than can be done in any other way. While in this suspended position, by partly rotating the pivot-rod, the bars *g* can be partially turned around, as seen in dotted lines, and thus thoroughly shake down the fire and clean the grate.

Heretofore short bars, on the same plane with their axis, have been used to shake down the fire and clean the grate, but they will not form a double grate, nor permit the clinkers to be cleaned out without disturbing the fire, or admit more air. But their greatest trouble and defect is, that when cinders or clinkers get between their ends and the grate, it is almost impossible to remove them without cleaning out the whole stove. With my invention this cannot occur.

Having thus described my invention, I claim—

1. The combination of a grate with the swinging bars *g*, the bars being adapted to be dropped below the level of the grate, whereby a supplemental grate is formed, substantially as set forth.

2. The bars *g*, formed upon the top of the rod *i*, in combination with a grate, the rod being pivoted below the level of the bars *c*, whereby the bars *g* are adapted to be used as a shaking device, and to form a double or supplemental grate below the bars *c*, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of January, 1875.

SOLOMON KEPNER.

Witnesses:

E. W. KEPNER,

D. F. REINERT.