

P. W. PRATT.
Improvement in Grates for Furnaces, Stoves, &c.
No. 127,514. Patented June 4, 1872.

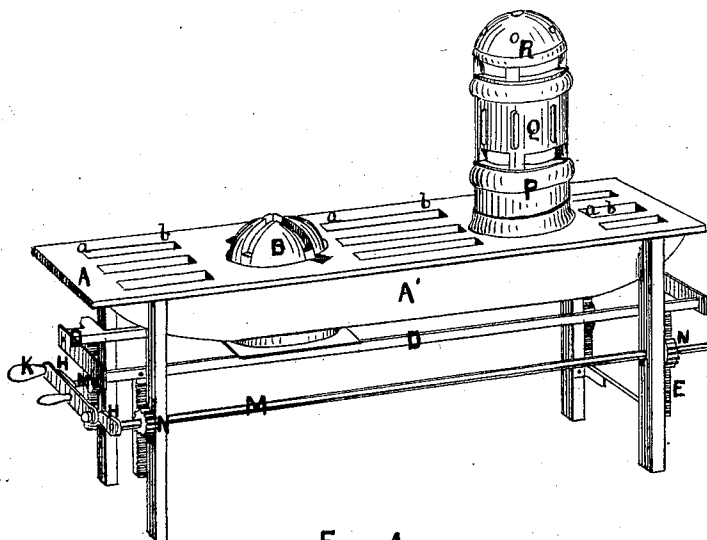


Fig. 1

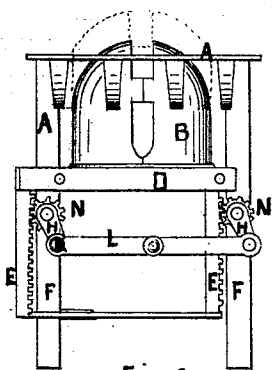


Fig. 2

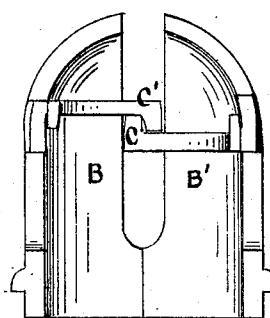


Fig. 3

WITNESSES

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PHILIP W. PRATT, OF ABINGTON, MASSACHUSETTS.

IMPROVEMENT IN GRATES FOR FURNACES, STOVES, &c.

Specification forming part of Letters Patent No. 127,514, dated June 4, 1872; antedated May 18, 1872.

To all whom it may concern:

I, PHILIP W. PRATT, of Abington, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Grates for Furnaces, Stoves, &c., of which the following is a specification:

The Nature and Object of the Invention.

The nature of my invention consists in combining with a furnace-grate a series of perforated cones, said cones being fixed or movable, as may be desired; the object being to provide a means for a more ample supply of air, and also an arrangement by which the fire-bed may be effectually stirred up.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of my invention, showing a single section of the grate. Fig. 2 is an end elevation of the same. Fig. 3 is an enlarged section of one of the cones.

General Description.

A A', Figs. 1 and 2, represent a single section of a grate-bar, the bar being provided with longitudinal slots or openings *a b*, and with large circular openings to accommodate the cones P, Q, R, and B. D, Figs. 1 and 2, is a movable skeleton or frame, hung under the grate-bars, and is provided with ratchets *e e*, which mesh into the pinions N N on the shafts M, Fig. 1, the whole being arranged as shown, so that by turning the crank H K the skeleton D may be raised or lowered. To the skeleton D a series of cones like B may be attached, so that when desirable they may be raised bodily through the grate, so as to occupy the position represented by the dotted lines in Fig. 2. The cones B may be constructed in longitudinal sections, as repre-

sented in Fig. 3, and connected together by interior hooks C C'. The whole may be attached to the skeleton by the bayonet-lock device or any other suitable fastening. These cones are made hollow and furnished with air-openings. If desirable, each alternate cone may be attached to a different skeleton or support system, so that as one cone is raised the alternate one will lower, and vice versa. The fixed cone P Q R, Fig. 1, is made in horizontal sections, the sections being fastened together and the whole being fastened to the bar by the bayonet-lock device. This cone may be provided with suitable air-openings. These cones, both movable and fixed, may be made in a great variety of styles, but I do not wish to confine myself to any particular form or construction.

This device is more particularly adapted to burning fine fuel, like sawdust, coal-screenings, &c., but may be applied to any fuel that needs much air or agitation. In case solid—that is, unperforated—projections are used, then their only use would be to clear the grate. If desirable, both solid and perforated projections may be used in the same furnace attached to the same skeleton.

I claim as my invention—

1. The combination of the grate A A', the air-cone B, and the moving frame D D, operating substantially as described, and for the purpose set forth.

2. The air-cone, formed of separable parts, P Q R, in combination with the grate A A', substantially as and for the purpose set forth.

PHILIP W. PRATT.

Witnesses:

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