(No Model.) 2 Sheets—Sheet 1.

T. T. ROCKETT.

GRATE.

No. 408,526. Patented Aug. 6, 1889.

FIG. 1.

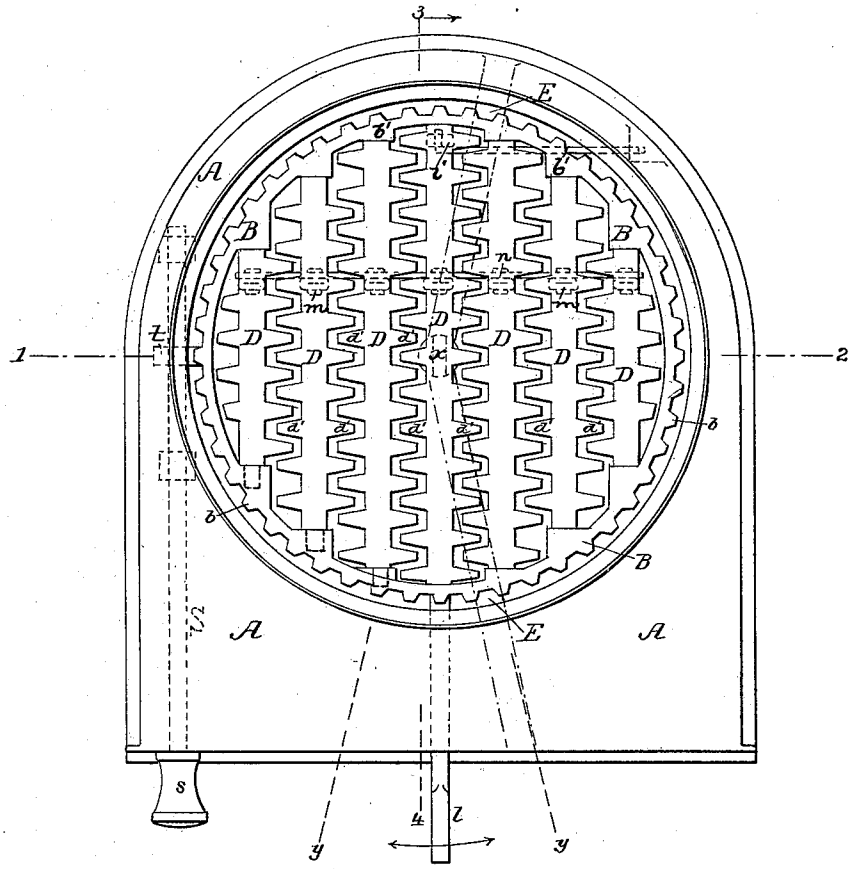
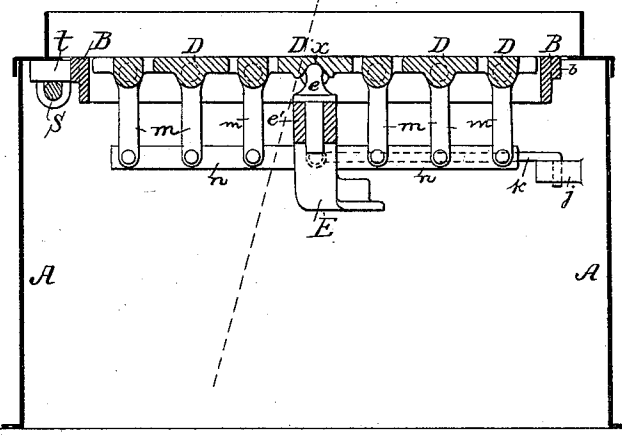


FIG. 2.



Witnesses:
George O. Gibson.
Harry Drury

Inventor:
Thomas T. Rockett
by his Attorneys
Howson & Sons

(No Model.) 2 Sheets—Sheet 2.

T. T. ROCKETT.

GRATE.

No. 408,526. Patented Aug. 6, 1889.

FIG. 3.

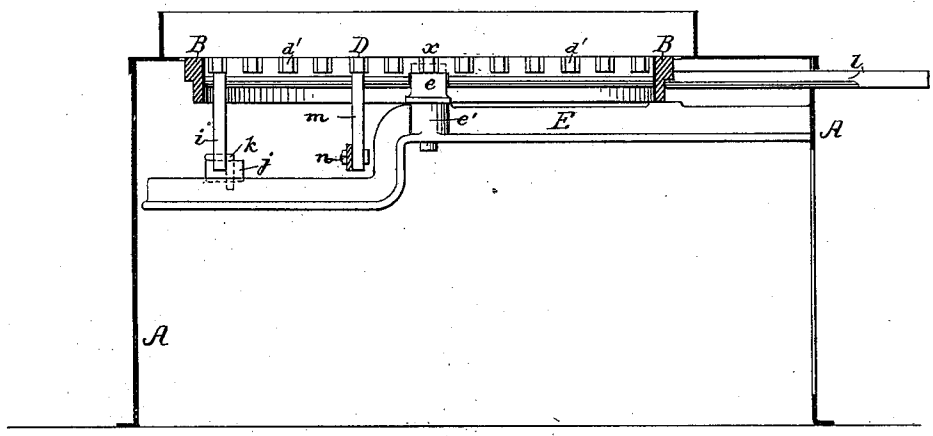


FIG. 5.

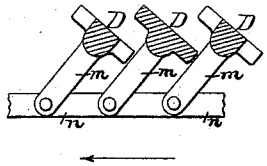


FIG. 6.

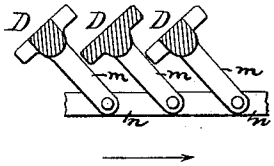


FIG. 8.

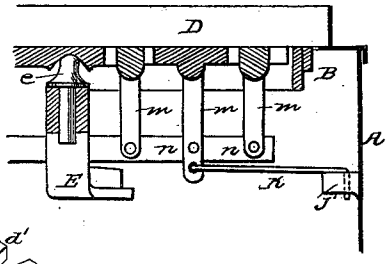


FIG. 4.

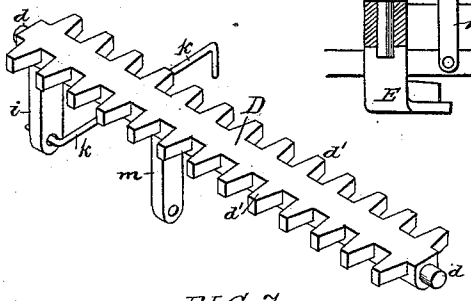
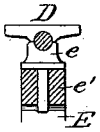


FIG. 7.



WITNESSES:
George O. Gibson.
Harry Drury

INVENTOR:
Thomas T. Rockett
by his attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

THOMAS T. ROCKETT, OF PHILADELPHIA, PENNSYLVANIA.

GRATE.

SPECIFICATION forming part of Letters Patent No. 408,526, dated August 6, 1889.

Application filed July 9, 1885. Serial No. 171,046. (No model.)

To all whom it may concern:

Be it known that I, THOMAS T. ROCKETT, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented a certain Improved Grate, of which the following is a specification.

The object of my invention is to construct a combined vibrating and rocking grate which will effectually crush and facilitate the removal of clinkers, as fully described hereinafter.

In the accompanying drawings, Figure 1 is a plan view of the base portion of an ordinary hot-air furnace provided with my improved grate. Fig. 2 is a transverse sectional view on the line 1 2, Fig. 1. Fig. 3 is a sectional view on the line 3 4, Fig. 1. Fig. 4 is a detached perspective view of one of the grate-bars. Figs. 5 and 6 are diagrams illustrating the movements of the grate-bars. Fig. 7 is a modified form of pivot, and Fig. 8 a view of a modification.

In the drawings I have shown my improved grate as applied to the base of an ordinary hot-air heater; but it will be understood that the grate can be applied to any furnace or stove where a movable grate is needed.

A is the base of the furnace, and B is the grate-frame, which in the present instance is cylindrical, and has a series of projecting teeth on its periphery to break up any clinker that may be lodged between the grate and the edge of the base.

D are the grate-bars, pivoted in the grate-frame, each bar having at opposite ends pivot-pins *d*, adapted to bearings *b'* in the frame B. The bars are toothed on opposite sides, as shown, the teeth *d'* of one bar interlocking with the teeth *d'* on each adjoining bar. The grate-frame B is itself pivoted at *x* on a rest E, secured to the base A, as usual. A universal pivot-pin *e* is adapted to a socket *e'* in the rest E, and on the head of this pivot-pin rests the middle bar of the grate-frame, as shown in Fig. 2. The pivot-pin, however, may be made as shown in Fig. 7, the grate-bar D being provided with a reduced journal fitting in a socket in the head of the pin.

The grate-frame is supplied with a suitable handle *l* for vibrating the grate.

To a projection *i* on the under side of one of the grate-bars is connected a rod *k*, secured to a lug *j* on the base A, so that as the grate-frame is vibrated, the lower end of the projection *i* being held stationary, the bar D is caused to rock in its bearings *b'*, as indicated in Figs. 5 and 6, in which are shown the two extreme positions of the bars.

Projecting from the under side of each grate-bar D is an arm *m*, and all these arms are connected together by a rod *n*, Fig. 2, so that when one bar is rocked in its bearings, as described, the motion is communicated to all the other bars.

It will be seen that the clinker can be crushed, no matter in what part of the fire-pot it may be, as the grate is vibrated and the grate-bars rocked at the same time.

If desired, the projection *i* may be dispensed with, and the hook *k* may be connected to the projection *m* on any of the bars, or to the rod *n*, without departing from my invention. (See Fig. 8.)

The grate can be tipped and the fuel deposited into the ash-pit by withdrawing the pin S, which has a suitable handle *s*, from under a lug *t* on the edge of the grate-frame B. The grate can be returned to its original position by turning the handle *l* and inserting the pin S under the lug *t*.

I claim as my invention—

1. The combination of the base A, the grate-frame B, and a pivot for said frame, with bars D, pivoted to the frame B and having arms *m*, a rod *n*, connecting said arms together, and a rod connecting the bars to the base, substantially as and for the purpose described.

2. The combination of the base A, grate-frame B, and bar E, with the bars D, hung to the frame B and pivoted at *x* to the bar E, a lug *i*, a rod *k*, connected to the base A, arms *m*, projecting from each bar D, and a bar *n*, connecting said arms, all substantially as shown and described.

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

THOS. T. ROCKETT.

Witnesses:

HARRY SMITH,

HUBERT HOWSON.