H. MILLER.
Stove-Grates.

No. 206,033. Patented July 16, 1878.

Fig. 1.

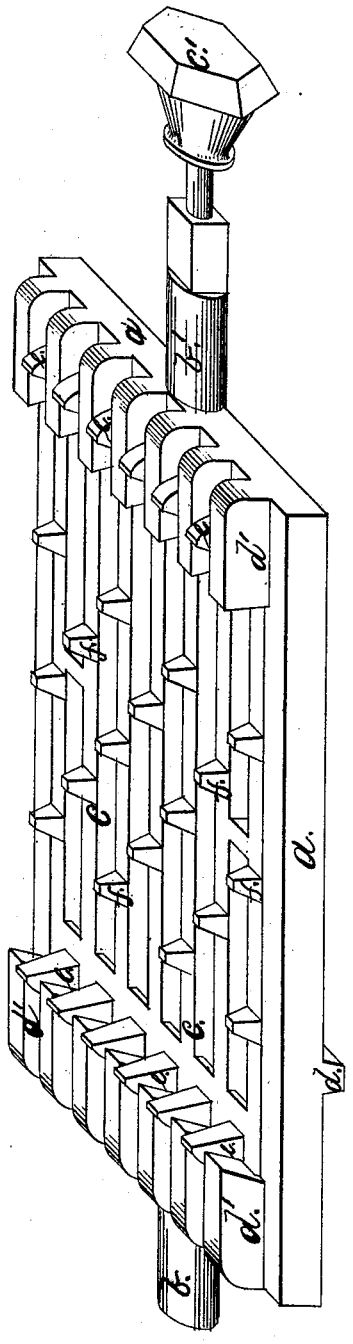
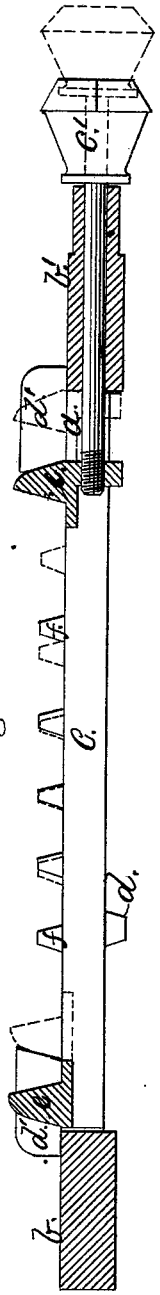


Fig. 2.



WITNESSES:
Joseph A. Miller Jr
William L. Coe

INVENTOR:
Henry Miller
by Joseph A Miller
attorney

UNITED STATES PATENT OFFICE.

HENRY MILLER, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN STOVE-GRATES.

Specification forming part of Letters Patent No. **206,033**, dated July 16, 1878; application filed May 4, 1878.

To all whom it may concern:

Be it known that I, HENRY MILLER, of the city and county of Providence, and State of Rhode Island, have invented certain new and useful Improvements in Stove-Grates; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a perspective view of my improved stove-grate. Fig. 2 is a longitudinal section of the same.

The object of the invention is to produce a compound dumping and shaking grate not liable to clog, and by which ashes can be removed without disturbing the mass of the fire.

It consists in the combination, with a dumping-frame, of a shaking grate provided with projections, part of which slide between clearer-bars, as will be more fully set forth hereinafter, and pointed out in the claims.

In the drawings, *a* is a dumping-frame, provided with the round bearings *b* and *b'*, the latter forming a hollow sleeve, through which a rod is passed, by which the grate *c* is secured to the knob *c'*. One end of the grate is supported on the rod secured to the knob *c'* and in the tubular sleeve *b'*, the other end on the projections *d*, cast on the frame. *d' d'* are a series of clearers placed on each end of the frame *a*, raised above the same, between which the raking-points *e* on the ends of the grate *c* pass. These clearers allow the ashes to fall through behind the grate, and allow the air to enter the fire, but prevent clinkers, pieces of coal, or other substances from falling behind the grate, and prevent its reciprocation. They are better than closed plates, as they clear themselves, and prevent the accumulation of ashes, which stops and firmly holds such reciprocating grates as heretofore constructed. *f f* are smaller projecting points cast on the grate to keep the large lumps from obstructing the air-draft through the fire by closing a portion of the grate-surface, and act as raking-points in separating the ashes when the grate is reciprocated by the knob *c'*.

The grate can be readily removed from the frame by unscrewing knob *c'*, to which the rod passing through the sleeve *b'* is secured from the grate, when the front end will drop down and the rear slide over the projections *d*.

As the intense heat is kept by the points *f*, raking-points *e*, and clearers *d* above the grate, and the air drawn into the fire cools the same, the grate is not liable to warp, and as no ashes, coal, or clinkers can lodge at any point the grate is at all times loose, and can be easily cleared of ashes without disturbing the main portion of the fire, thus insuring complete control of the fire and economy in fuel.

It will be observed that the only bearings of the grate are on the two points *d d*, and the rod screwed in the front end of the grate and the knob *c'*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the frame *a*, provided with the bearing *b* and hollow sleeve *b'*, of the grate *c*, supported on the projections *d*, and the rod by which it is connected with the knob *c'*, substantially as and for the purpose described.

2. The combination, with the frame *a*, provided with the projections *d*, hollow sleeve *b'*, and upward-projecting clearer *d'* at the ends, of the grate *c*, provided with the projections *f* and raking-points *e*, the latter arranged to pass between the clearers, and the knob *c'*, arranged to screw into the grate, the whole operating substantially as and for the purpose set forth.

HENRY MILLER.

Witnesses:
JOSEPH A. MILLER,
JOSEPH A. MILLER, Jr.