C. H. GIBBS.
Heating Stove Grate.

No. 227,242. Patented May 4, 1880.

Fig. 1.

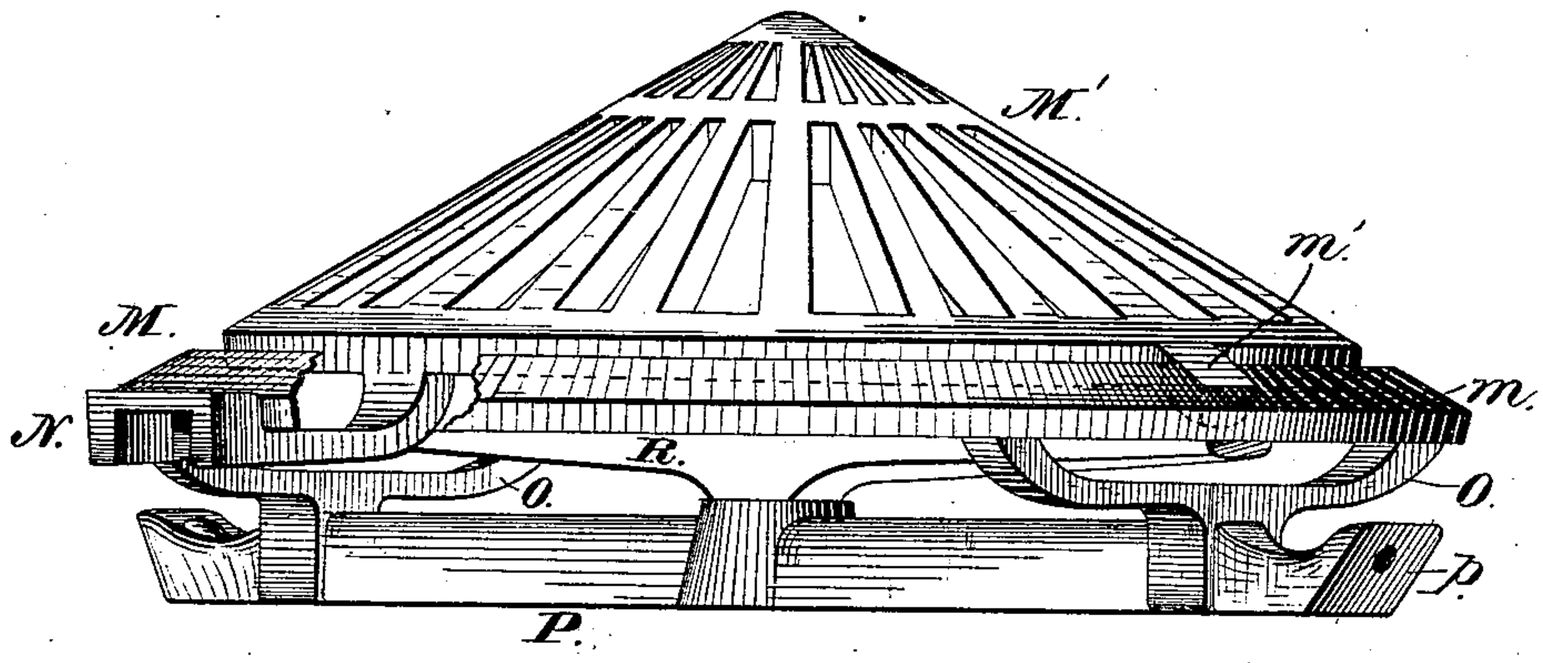
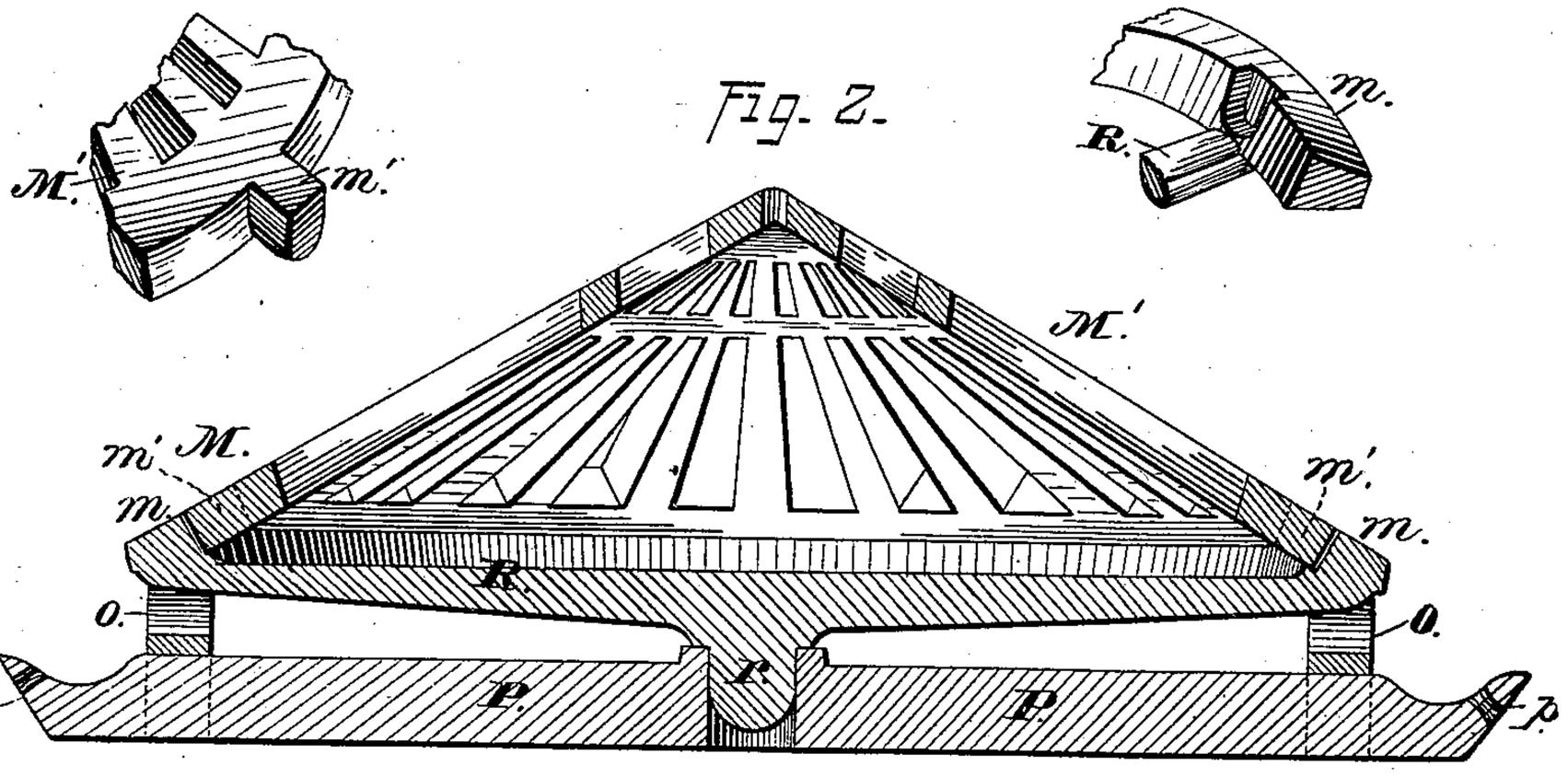



Fig. 4. Fig. 3.

Fig. 2.




WITNESSES:
Jas. E. Hutchinson
J. A. Rutherford

INVENTOR.
C. H. Gibbs,
by James L. Norris.
Att'y.

# UNITED STATES PATENT OFFICE.

CHARLES H. GIBBS, OF BUFFALO, NEW YORK.

## HEATING-STOVE GRATE.

SPECIFICATION forming part of Letters Patent No. 227,242, dated May 4, 1880.

Application filed February 19, 1880.

*To all whom it may concern:*

Be it known that I, CHARLES H. GIBBS, a citizen of the United States, residing at Buffalo, Erie county, State of New York, have invented new and useful Improvements in Heating-Stove Grates, of which the following is a specification.

This invention relates to certain improvements in that class of stove-grates which are constructed with a cone-shaped dumping-section arranged within a surrounding annulus or ring.

My invention consists of an oscillating central conical grate-section formed with a laterally-projecting operating-handle and lugs which set in recesses in a surrounding conical annulus or outer section, said outer section resting at opposite side edges upon bifurcated brackets formed on the upper side of a permanently-fixed cross-bar, all of which will be more fully hereinafter described in detail.

In the accompanying drawings, Figure 1 represents a perspective view of a grate constructed according to my invention. Fig. 2 is a longitudinal vertical central section through the grate and the supporting cross-bar. Fig. 3 represents a perspective view of a portion of the lower section of the grate, showing one of the recesses for the lugs on the upper section; and Fig. 4, a perspective view of a portion of the upper section, showing one of the lugs for supporting the same.

Referring to the drawings, it will be seen that my improved grate is composed of two conical sections, the upper section, M′, of which is detachably connected with the lower section, *m*, and arranged within the same so that it can be readily tilted for the purpose of dumping the grate. The apex of the section M′ extends upward within the lower portion of the fire-pot, and the lower edge of said section is provided with two opposite radially-projecting lugs, *m′*, rounded on their under sides, which rest in corresponding receivers or seats in the lower and outer section, *m*, and said grate-section M′ is also provided with a shaking-handle, N, which curves outward under the outer section, *m*, and is provided with a suitable socket for a shaking-wrench. The outer section, *m*, of the grate rests directly upon the tips of the upwardly-projecting prongs of bifurcated brackets O, secured near the opposite ends of a permanent cross-bar, P, the ends of which are beveled, as at *p*, and are adapted to be secured to a correspondingly-beveled seat in an ordinary stove. To points diametrically opposite each other a cross-bar, R, is secured to the under side of the outer section, *m*, and this cross-bar has at its center a downwardly-projecting journal, *r*, which fits into a bearing formed for it at the center of permanent cross-bar P. The permanent cross-bar P forms a firm support for the entire grate, and the bifurcated brackets, while maintaining the grate in a horizontal plane during its oscillation, prevent the same from canting to one side and dumping the fuel and fire into the ash-box. The conical form of the grate M′ prevents clinker and ashes from accumulating on the grate and in the fire-pot, as they will be entirely removed from the grate and slide down into the ash-pit by shaking or oscillating the grate. This constitutes an important feature of my invention, since it obviates the necessity of removing the clinkers by opening three or more doors and picking them out with a hook, which, as is usual with other forms of grates, is an inconvenient operation, and also gets the ashes over the stove and upon the floor of the room in which the stove is located.

By pressing down the handle N the center section, M′, of the grate can be readily tilted on its lugs *m′* for the purpose of dumping the dead cinders and ashes when it is desired to clean out the fire-pot.

What I claim is—

1. The stove-grate herein described, consisting of an oscillating upper conical section, M′, and lower section, *m*, the conical upper section, M′, being provided with the handle N and with the lugs *m′*, pivoted in bearings diametrically opposite each other in the lower section, *m*, substantially as described.

2. The combination of the permanent supporting cross-bar, P, provided with the ver-

tical bifurcated brackets O, the oscillating cross-bar R, pivoted at the center of said permanent bar, the lower conical grate-section, *m*, rigidly connected to the opposite ends of said oscillating cross-bar and bearing upon said bifurcated brackets, and the upper conical grate-section, M′, pivoted within said lower conical grate-section, substantially as described.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

CHARLES H. GIBBS. [L. S.]

Witnesses:
W. E. HOLCOMB,
JAMES D. WOOD.