

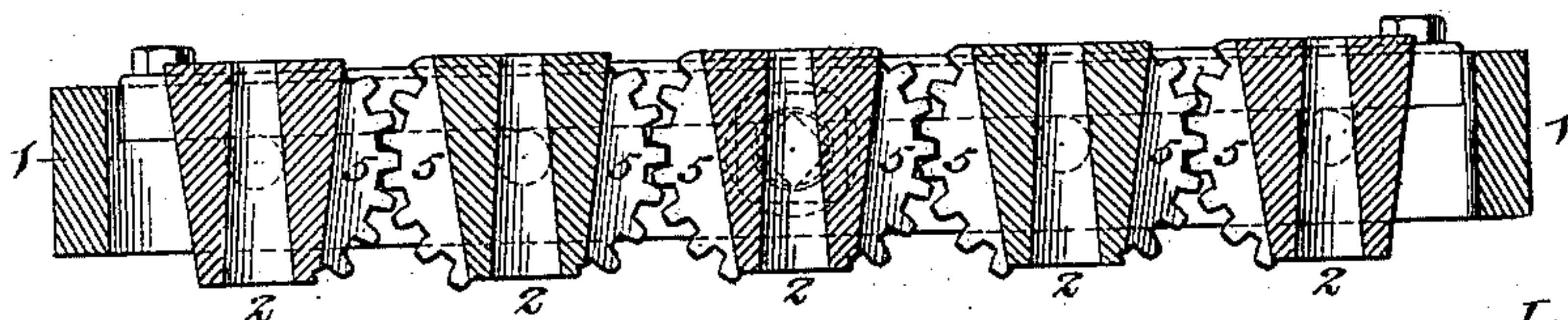
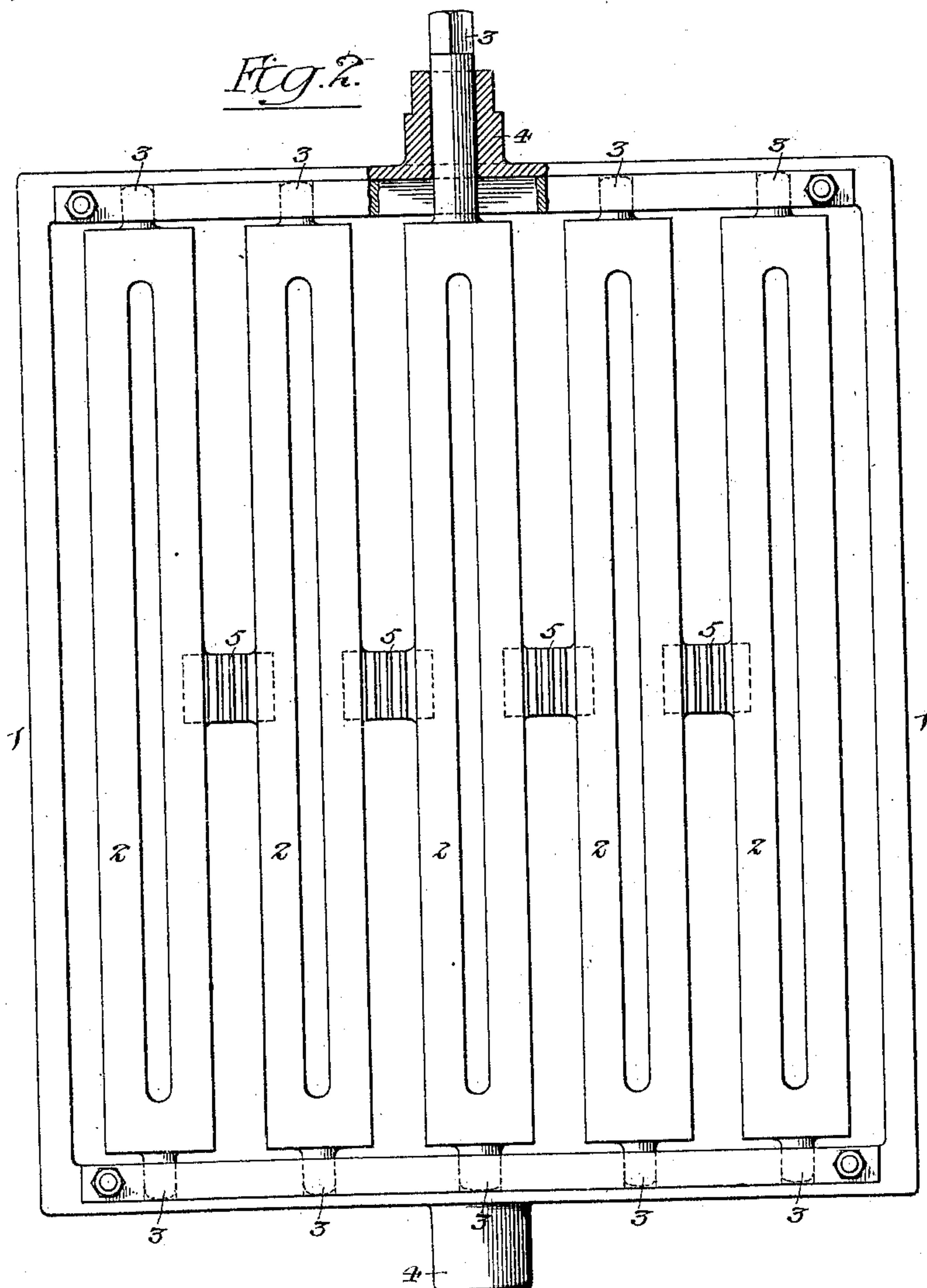
No. 688,105.

Patented Dec. 3, 1901.

J. N. LONG.
ROCKING AND REVERSING GRATE.

(Application filed July 8, 1901.)

(No Model.)



Witnesses:-

Charles M. F. Whitehead

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UNITED STATES PATENT OFFICE.

JAMES N. LONG, OF PHILADELPHIA, PENNSYLVANIA.

ROCKING AND REVERSING GRATE.

SPECIFICATION forming part of Letters Patent No. 688,105, dated December 3, 1901.

Application filed July 8, 1901. Serial No. 67,520. (No model.)

To all whom it may concern:

Be it known that I, JAMES N. LONG, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Rocking and Reversing Grates, of which the following is a specification.

My invention relates to that class of grates for stoves, ranges, hot-air furnaces, and the
10 like which have rocking bars carried by a reversible frame, the object of my invention being to so construct such a grate and so gear together the various bars of the same that the said bars will be operative even if the
15 grate is accidentally left in the reversed position. This object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse section of a grate
20 constructed in accordance with my invention; and Fig. 2 is a plan view of the same, partly in section.

1 represents the outer frame of the grate, which in the present instance is rectangular; but it may be of circular or other desired shape,
25 depending upon the shape of the fire-pot in connection with which it is to be used. Within this outer frame are hung the grate-bars 2, of which as many may be used as desired, 30 five being shown in the drawings, each of said grate-bars having at the ends trunnions 3, adapted to bearings in the frame 1, so that each bar is free to rock within the frame. The frame 1 also has trunnions 4, by which it
35 may be hung in the fixed frame of the stove or heater, so as to be tilted for dumping the contents of the fire-pot into the ash-pit, the front trunnion 4 being tubular for the passage of the front trunnion 3 of the central
40 grate-bar 2, whereby power may be applied to said grate-bar to rock the same.

The central grate-bar and the two bars flanking the same have upon each side a toothed segment 5, and the outer bars of the
45 series have such segments on their inner

sides, the toothed segments of adjoining bars meshing with each other, so that power applied to the central bar to rock the same will be transmitted therefrom to the other bars of the series and will cause a like rocking movement of each of said bars. In the present instance the bars have these toothed segments at the longitudinal center of each bar; but the segments may bear any other desired relation to the bars, or each bar may have two
55 or more of the segments disposed throughout its length, if the use of more than one segment on the side of each bar is considered necessary for the purpose. When this method of gearing together the bars of the grate is
60 adopted, no burning out of the connections or other bad result will follow if in dumping the grate the same is accidentally reversed and left in that position, since the
65 building of the fire upon the grate in the reversed position will have no ill effect either upon the bars or their connections.

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

A grate having a frame with trunnions centrally disposed thereon whereby it is pivoted so as to be reversible, one of said trunnions being tubular, and a series of grate-bars pivoted within said frame so as to be capable of rocking therein, said bars being
75 geared together by intermeshing toothed segments formed upon the sides of the bars, and the pivot-trunnion of the center bar of the series passing through the tubular pivot-trunnion of the outer frame, substantially as specified.

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

JAMES N. LONG.

Witnesses:

FRANK E. BECHTOLD,
JOS. H. KLEIN.