No. 820,060. PATENTED MAY 8, 1906.

R. C. MONTEAGLE.

GRATE BAR.

APPLICATION FILED MAY 3, 1904.

Fig. 1.

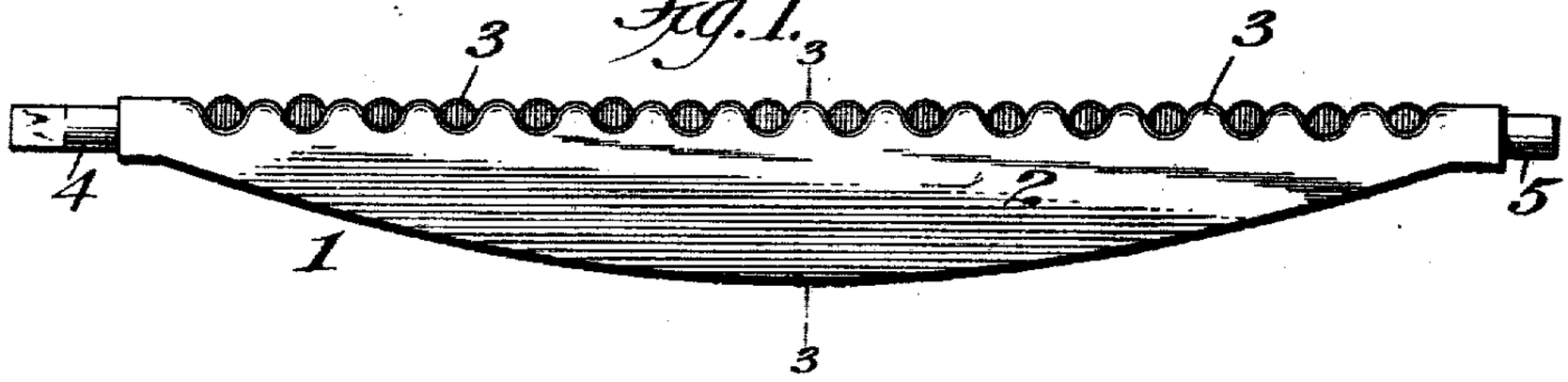



Fig. 2.

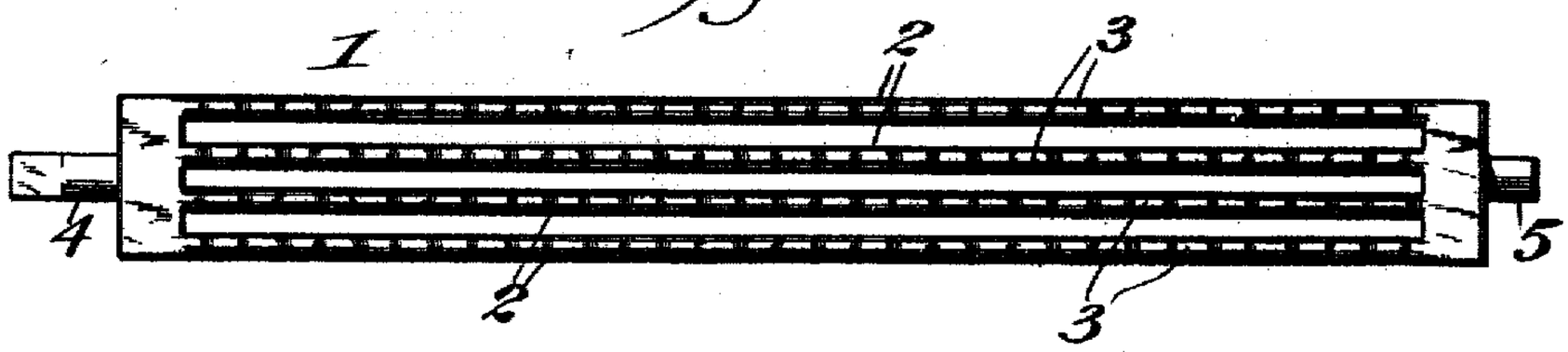
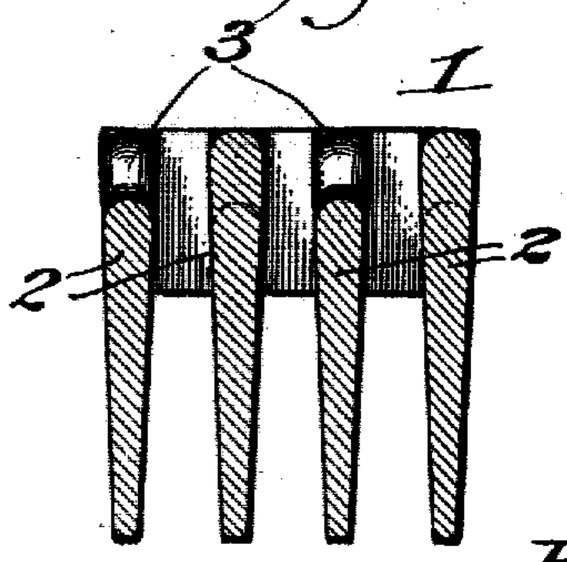



Fig. 3.




Witnesses
A. R. Appleman
B. Mottor.

Inventor
Robert C. Monteagle,
By his Attorney,
L. R. Littell

# UNITED STATES PATENT OFFICE.

ROBERT CHARLES MONTEAGLE, OF NEW YORK, N. Y.

## GRATE-BAR.

No. 820,060. Specification of Letters Patent. Patented May 8, 1906.

Application filed May 3, 1904. Serial No. 206,197.

*To all whom it may concern:*

Be it known that I, ROBERT CHARLES MONTEAGLE, a citizen of the United States, and a resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Grate-Bars, of which the following is a specification.

My invention relates to grate-bars.

It has for its object to provide a grate-bar having the upper edges of the bars corrugated, the projections thereof being rounded and the projections of each bar staggered with relation to the projections of the adjacent bars, whereby when coal is placed thereon there will be a thorough circulation of air up between said bars and over them, between the projections, causing a thorough mixing of the air with the gases and preventing the formation of clinkers.

It has for a further object to provide a grate-bar of the character set forth possessing advantages in point of perfect results, inexpensiveness, simplicity, and general utility.

In the drawings, Figure 1 is a front view; Fig. 2, a plan view; Fig. 3, a transverse sectional view.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring to the drawings, 1 designates the grate-bar, which may be cast or formed in one piece and comprising a plurality of spaced bars 2, their upper edges provided with corrugations 3, the projections of each bar being rounded and staggered with relation to the projections of the adjacent bars and the ends of the grate-bar 1 provided with journals 4 and 5, one of which is squared to receive a crank to afford means for shaking the grate-bar.

The lower portions of the bars 2 are preferably tapered, so as to provide adequate space both for air to pass and ashes to fall with the least possible interference. This feature is shown in Fig. 3.

It will be understood that when the coal is placed on my grate-bar it will rest on top of the rounded projections and leave the spaces between the bars and between the projections open for the free circulation of air and that when the coal is burned to ashes the ashes will fall through the grate-bars, as the rounded projections will not offer a support for them.

I do not desire to be understood as limiting myself to the details of construction and arrangement as herein described and illustrated, as it is manifest that variations and modifications may be made in the features of construction and arrangement, in the adaptation of the device to various conditions of use, without departing from the spirit and scope of my invention and improvements. I therefore reserve the right to all such variation and modification as properly fall within the scope of my invention and the terms of the following claim.

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

As an improvement in grate-bars, a plurality of spaced bars each having its top edge provided with a longitudinal series of spaced projections which are convex or rounded in the direction of the longitudinal plane of the bar, the top edge of each bar having said convex or rounded projections being also convex or rounded transversely with respect to the direction of the longitudinal plane of the bar, whereby each projection forms a mount having rounded surfaces extending from its apex at all sides, the bars being relatively arranged so that the rounded mounts or projections of one bar are staggered with relation to the corresponding mounts or projections of the adjoining bar, substantially as and for the purpose set forth.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

ROBERT CHARLES MONTEAGLE.

Witnesses:
D. C. FOX,
B. L. MOLITOR.