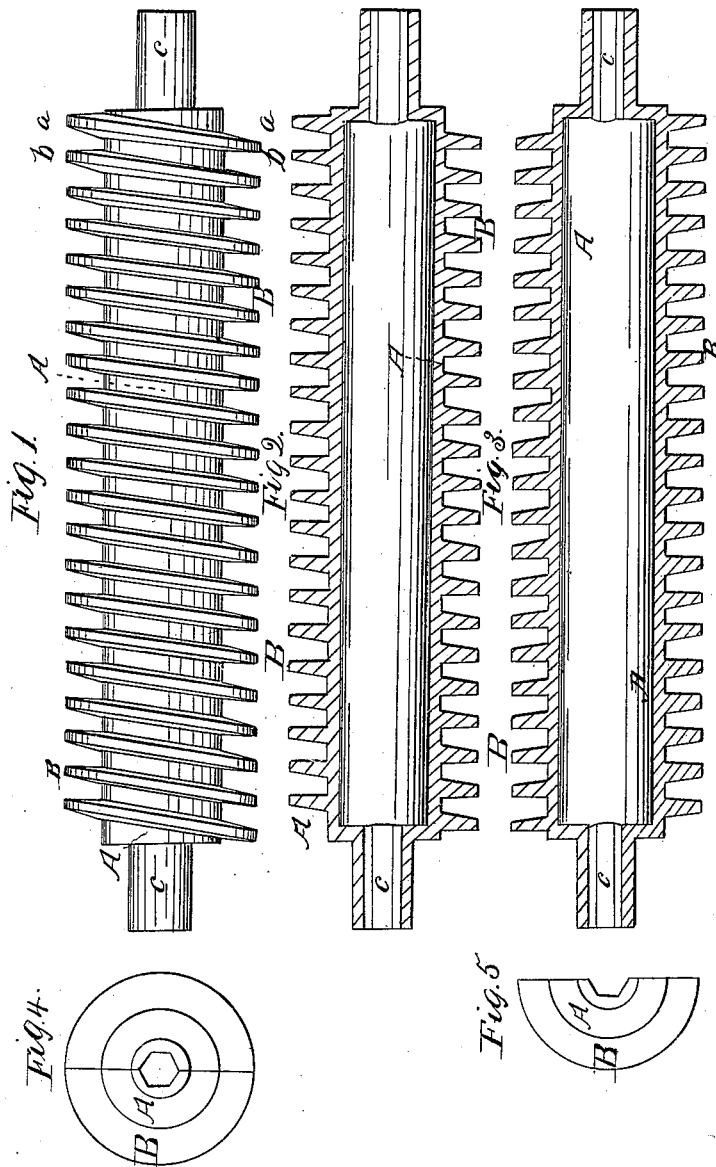


*J. B. Chollar,*  
*Furnace Grate.*

*N<sup>o</sup> 7593.*

*Patented Aug. 27, 1850.*



# UNITED STATES PATENT OFFICE.

JNO. B. CHOLLAR, OF WEST TROY, NEW YORK.

## REVOLVING COAL-GRATES.

Specification of Letters Patent No. 7,593, dated August 27, 1850.

*To all whom it may concern:*

Be it known that I, JOHN B. CHOLLAR, of West Troy, in the county of Albany and State of New York, have invented a new and Improved Mode of Constructing Circular Fire-Grates for Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a top view of the grate, Figs. 2, and 3 longitudinal sections through the same, Fig. 4 an end view of the whole, and Fig. 5 of half of the grate. The same letters referring to like parts in all the figures.

The nature of my invention consists in making the great hollow in the usual form of a cylinder, the bars surrounding it at an angle of about ten degrees more or less from the right angle line with the axis of the cylinder similar to a screw thread, each circuit of the thread being disconnected from the next succeeding one, its two ends joining together, and a proper space left between the bars.

Grates have heretofore been constructed in the form of the screw, but it is found that they tend to carry the coal to one end of the fire chamber in revolving it in following the screw; this objection I obviate in my mode of construction, and at the same time stir the coal sufficiently to separate the ashes therefrom, each bar or flange being separate from the next succeeding one the coal will not be carried beyond the one on which it rests; but at the same time from the angle of the bars, will be moved sufficiently to perfectly separate it, each revolution of the

grate returning the coal back to its original position.

The construction is as follows.

A is the cylinder, on which is cast the bars B, surrounding the cylinder at an angle of about ten degrees more or less from the right angle with the axis of the cylinder; C, C, are the journals by which it has its rest and revolves in the fire box.

The operation is as follows: for example the coal may rest at the line *a, a*; at one half revolution it will be carried to the line *b, b*, and at a full revolution it will be returned to the line *a, a*, and will not therefore be carried to either end as in following a screw and at the same time it will be thoroughly stirred and the ashes separated from the coal.

To save the forming of a core for casting, I usually cast the grate in two pieces as represented in Figs. 2 and 3, and secure them together by rivets, or bands around the journals, but they may if preferred be cast whole with a core.

Having thus described the nature of my invention, what I claim as new and desire to secure by Letters Patent, is

The manner of arranging bars or flanges B B around the cylinder, at an angle of any desired degree from the axis of the cylinder so as to move the coal alternately in opposite directions, the same forming a fire grate in the manner and for the purpose substantially the same, as here described and represented.

JOHN B. CHOLLAR.

Witnesses:

E. L. BRUNDAGE,  
H. C. EMMONS,