C. O. Green.

Grate.

No. 6,985. Patented Jan. 1, 1850.

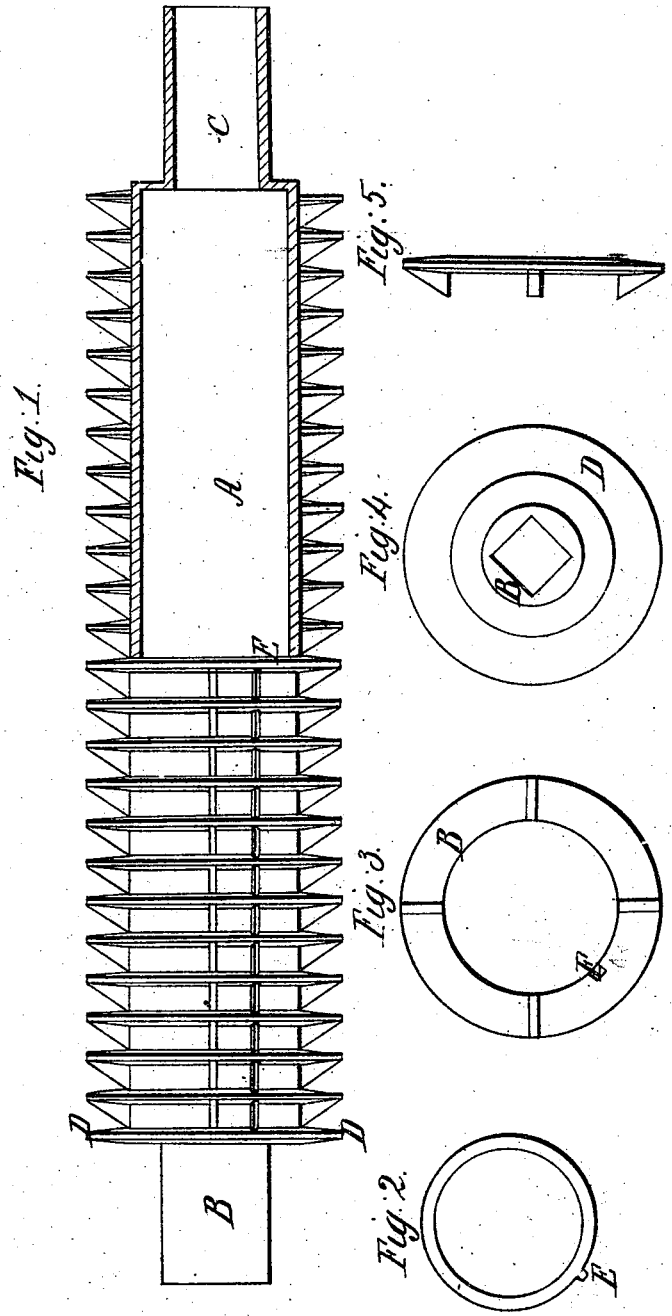

Fig. 1.

Fig. 5.

Fig. 4.

Fig. 3.

Fig. 2.

UNITED STATES PATENT OFFICE.

CHAUNCEY O. GREENE, OF WEST TROY, NEW YORK.

COAL-GRATE.

Specification of Letters Patent No. 6,985, dated January 1, 1850.

To all whom it may concern:

Be it known that I, CHAUNCEY O. GREENE, of West Troy, in the county of Albany and State of New York, have invented a new and useful Grate for Burning Either Coal or Wood; 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 represents the grate partly in longitudinal section. Fig. 2 represents a cross section of the same. Fig. 3, represents a flange. Fig. 4, gives a view of one end of the cylinder upon which the grate is formed with stationary flange D, and journal B. Fig. 5 gives a top view, of the flange Fig. 3.

To enable others to make and use my invention, I will proceed to describe its construction and operation.

The cylinder which A represents, Fig. 1, is constructed of cast iron, the extreme length of which including the journals B and C, is eighteen inches. The diameter of A is two and one eighth inches, that of each, B and C being one and one eighth inches. The average thickness of the whole, A, B, and C, is three sixteenths inches. The length of each journal, B and C, is two inches. Length of A is fourteen inches.

The cylinder A is cast entirely plain with the exception of the stationary flange D, and the feather or flange E which (E) runs the extreme length of A, see Fig. 2. The flange D is three and three fourths inches in diameter, the thickness at the base (which is the cylinder A) being one fourth of an inch with a gradual slope toward the outer edge which is three sixteenths of an inch. The loose flange B, Fig. 3, corresponds in thickness and size with the stationary flange D, Fig. 1. It is cast as the drawing represents, with a hole in the center two and one half inches in diameter with a recess F cast into it. Upon one side only of this flange are four small lugs or flanges which are three eighths inches at the base by one fourth of an inch wide, sloping toward the outer edge until they vanish. This flange B passes over the journal C on to the cylinder A (Fig. 1) the recess F passing over or receiving the feather or flange E until it faces close against the stationary flange D, the side which has the lugs or projections upon it being the face. This flange is followed by twenty three others of the same dimensions and form, the last one which is put on the cylinder being made fast with two small wrought iron wedges. Those lugs or projections upon the flange serve to keep them the proper distance apart so as to give the ashes a chance to escape also to admit the draft.

This grate, Fig. 1, when applied to stoves rests in the sides of the stove upon each journal B and C, thereby giving a free circulation of cold air throughout the whole grate from one end to the other, which serves to keep the cylinder from acquiring too great a heat. It also aids in heating as it passes in and out.

Each stove has a frame of sufficient size to admit one third of the diameter of the grate, the frame resting upon the journals B and C at each end. It has also bearings upon each side in which place it should be made stationary.

The grate when applied in the above manner rests in the stove in such a style that upon the application of a crank placed into the square end of the cylinder (Fig. 4) it can be easily revolved, thereby disposing of the ashes which shall have accumulated, also giving the air a chance to enter, which is upon each side between the cylinder and frame.

What I claim as my invention and desire to secure by Letters Patent is—

The formation of a revolving cylinder grate by placing circular grate bars or flanges around a hollow cylinder, a draft of cold air being passed through the said hollow cylinder for the purpose of cooling the same, at the same time making it answer the purpose of a hot air chamber substantially as above described.

West Troy, Albany Co., N. Y., Dec. 11. 1849.

CHAUNCEY O. GREENE.

Witnesses:

S. E. ABBOTT,

JOHN MORRIS.