

W. WICKE.
Grate for Stoves.

No. 226,895.

Patented April 27, 1880.

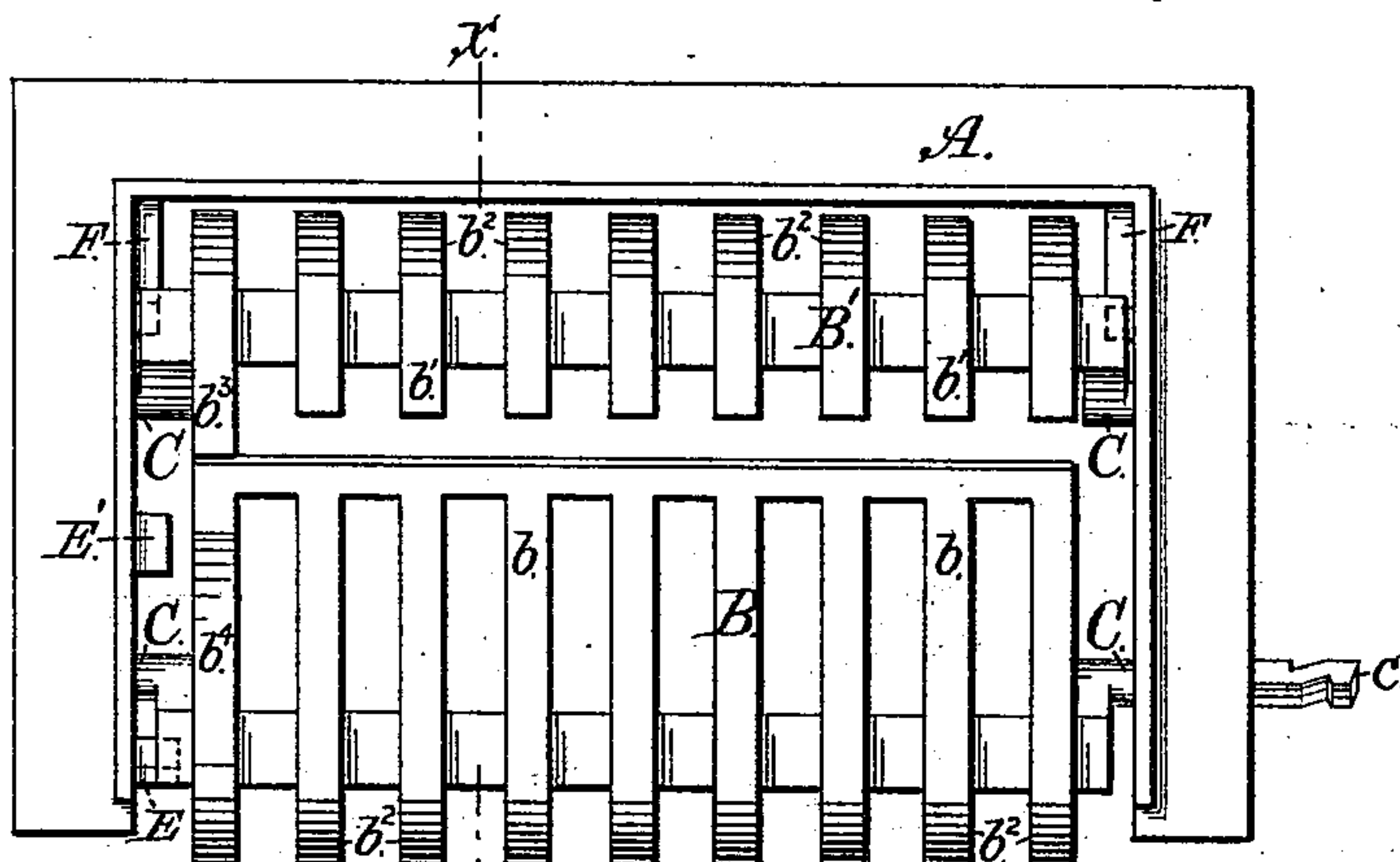


FIG. 1.

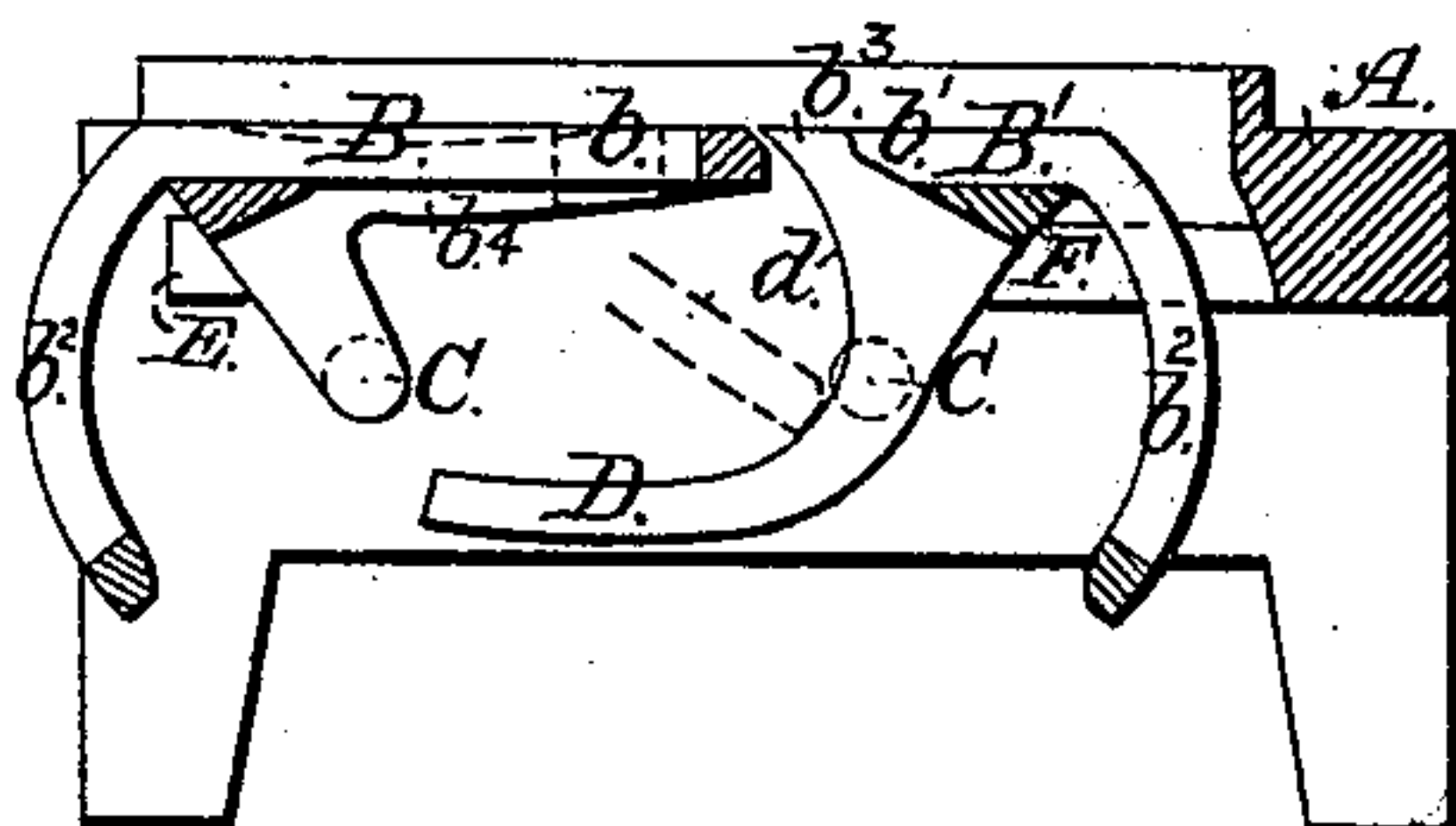


FIG. 2.

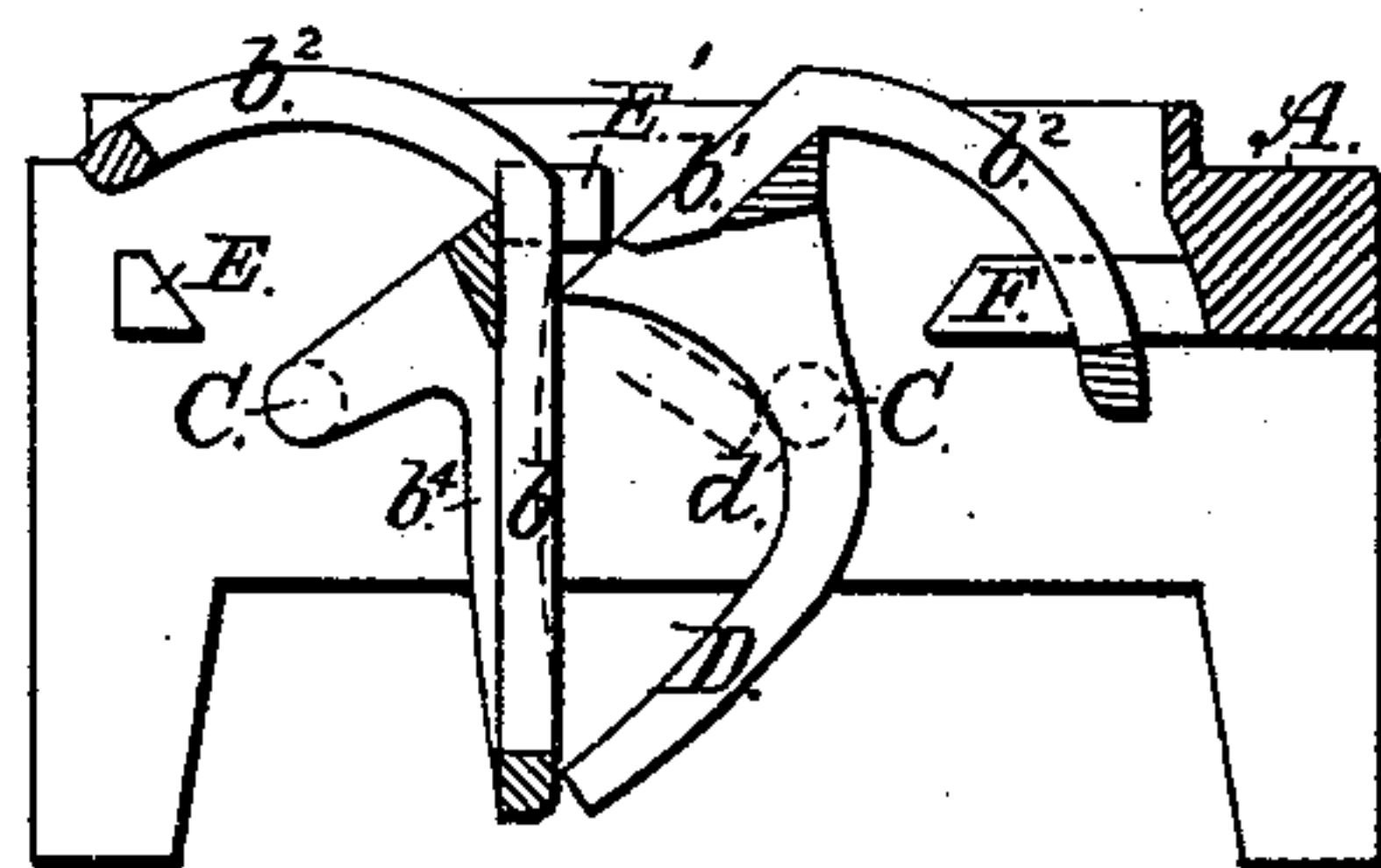


FIG. 3.

Witnesses,

E. F. Benham,
A. F. Low.

Inventor,

WILHELM WICKE,

by

William H. Low,
Attorney.

UNITED STATES PATENT OFFICE.

WILHELM WICKE, OF STUYVESANT, NEW YORK.

GRATE FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 226,895, dated April 27, 1880.

Application filed October 11, 1879.

To all whom it may concern:

Be it known that I, WILHELM WICKE, of Stuyvesant, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Grates for Stoves, Ranges, Heaters, &c., of which the following is a full and exact description.

My invention consists of a grate made in two sections, of dissimilar widths, both of which are provided with trunnions, on which the sections turn for the purpose of removing the débris from the fire, one of said sections being provided with an arm so arranged that when the other section is turned on its trunnions it will engage with the said arm and cause the section to which the arm is attached to turn on its trunnions, as herein described.

In the accompanying drawings, which form a part of this specification, and to which reference is herein made, Figure 1 is a plan view of the grate and frame; Fig. 2, a transverse section of same at the line xx , showing the grate-sections in proper position while the fuel is burning; and Fig. 3, the same, showing the position of the sections for automatically removing the clinkers and other débris from the fire.

As shown in the drawings, the grate-frame A is made in the ordinary form used in a cooking-stove. The grate is composed of the sections B and B', both of which are provided with trunnions C, on which the sections turn, as hereinafter described.

Both of said sections are constructed with straight parallel bars for supporting the burning fuel, and when in the positions shown in Fig. 2 (which is the proper position for the sections while the fire is burning) said bars form a level fire-bed for the fuel. The length of the straight bars b of the section B should constitute about seven-tenths of the width of the fire-bed, and the straight bars b' of the section B' about three-tenths of such width.

The bars of each section terminate at their outer ends with the curved portions b^2 , which are formed to a segment of a circle of which the axial center of the trunnion is the center.

The outer straight bar, b^3 , at one end of the section B', has attached to the under side of it an arm, D, projecting downward and then

forward beneath the corresponding end bar, b^4 , of section B, as shown in Fig. 2.

Sufficient clearance is left between the ends of section B and the frame A to permit the section to be moved endwise (independently of the section B') with a shaking motion for the purpose of sifting the ashes from the fuel lying on said section, and for this purpose the protruding end C of one of the trunnions of section B should be constructed in any of the well-known forms for receiving the implements commonly used for producing a shaking motion.

The stops E and E' prevent the section B from being turned too far in either direction on its trunnions, and the stop F prevents the section B' from being carried too far back.

To remove the débris from the fire the section B must be turned on its trunnions, by means of a wrench or handle applied to the protruding end C of the trunnion, until the end of the outer bar, b^4 , is brought into contact, as indicated by the dotted lines in Fig. 2, with the arm D of the section B', and then the continued movement of the section B forces the section B' to turn on its trunnions into the position shown in Fig. 3.

By this movement of the two sections all the débris that has settled to the under side of the fuel is removed therefrom, leaving the body of the fuel sustained by the curved bars b^2 .

In turning the section B back to its normal position the outer bar, b^4 , of said section comes in contact with the curved portion d of the arm D, as indicated by the dotted lines in Fig. 3, and the continued backward movement of the section B restores both sections to the positions shown in Fig. 2.

It is obvious that the section B can be turned on its trunnions until its outer bar, b^4 , strikes the arm D, and then returned to the position shown in Fig. 2, without imparting any movement to the section B', and in this manner a partial cleansing of the débris from the fire may be effected.

I am aware that sectional grates have heretofore been made with curved ends to the bars; but in such constructions the two sections have, in some instances, been adapted to move entirely independent of each other, and in other

instances the two sections are adapted to move simultaneously by means of connecting gearing; but in no instance have the sections been arranged, as herein described, to move at the will of the operator either independently or conjointly.

I claim as my invention—

1. In a grate composed of the sections B and B', arranged to turn on the trunnions C, and made of dissimilar widths, as herein described, the combination of the section B with the section B', having an arm, D, projecting beneath the section B, as herein described, whereby the section B' is adapted to be moved by the section B, in the manner herein specified.

2. In a grate composed of two sections, the mechanism, as herein described, whereby one

of the sections, B, may either be turned on its trunnions with a short vibratory motion without affecting the section B', or the section B may be turned on its trunnions to overthrow the section B', as herein specified.

3. In a grate composed of two sections adapted to turn on their respective trunnions, the combination of the section B, the frame A, and section B', as herein described, whereby the section B is adapted to move independently, either with an endwise vibratory motion or an oscillatory motion, on its trunnions, as herein specified.

WILHELM WICKE.

Witnesses:

WILLIAM H. LOW,
E. F. BENHAM.