

(No Model.)

G. W. WHEATER.

VERTICAL DRAFT ATTACHMENT.

No. 353,104.

Patented Nov. 23, 1886.

Fig. 1.

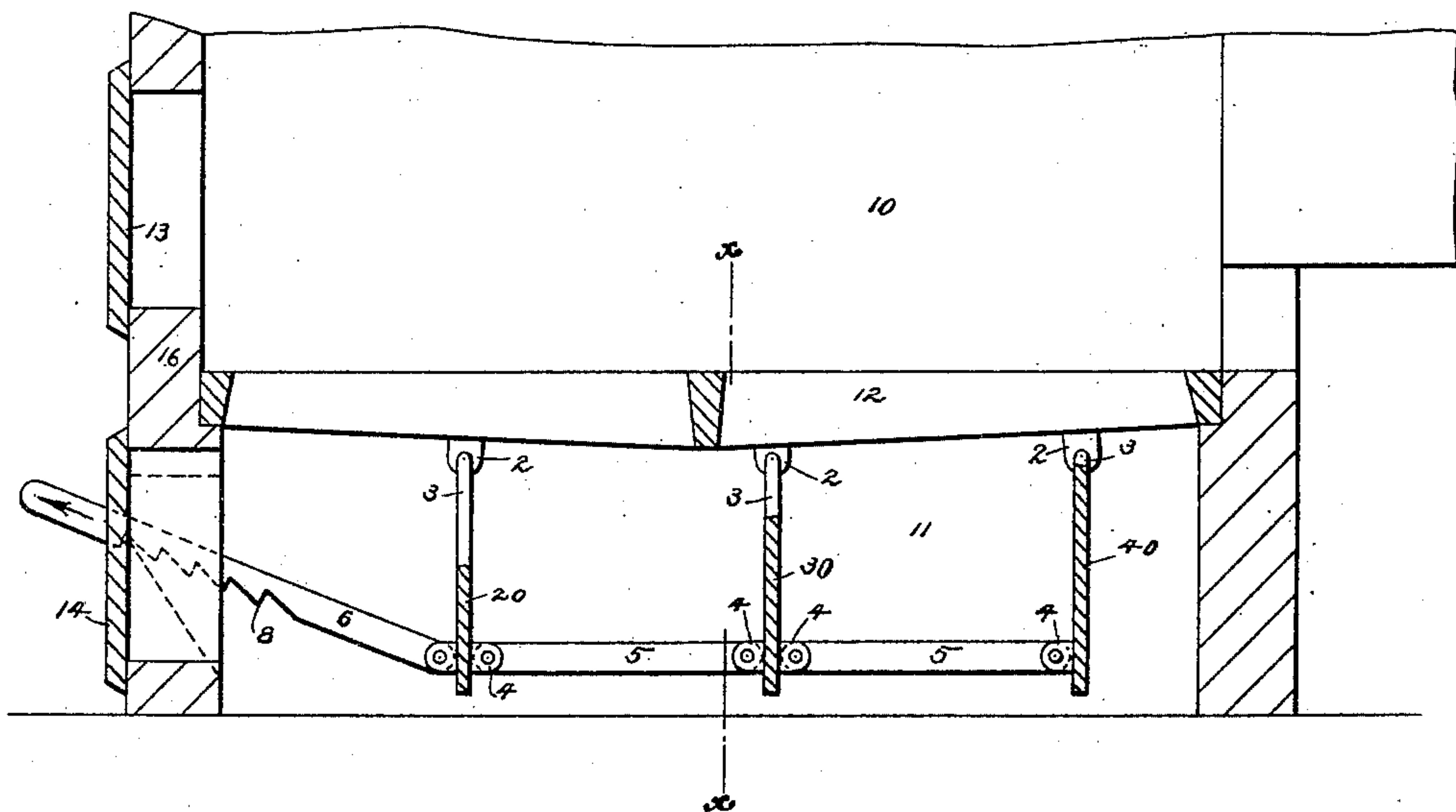
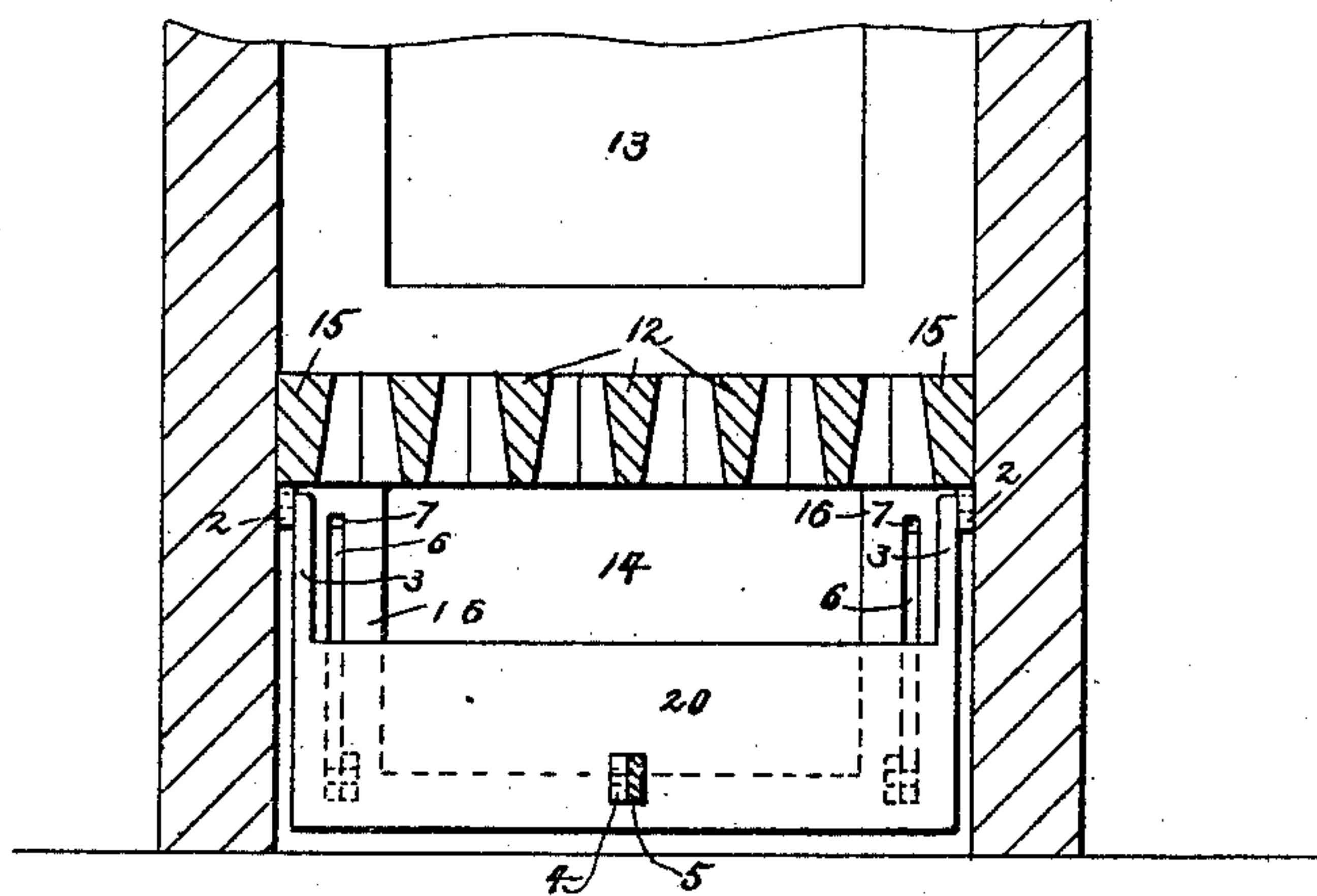


Fig. 2.



WITNESSES:

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VERTICAL-DRAFT ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 353,104, dated November 23, 1886.

Application filed May 14, 1886. Serial No. 202,183. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WHEATER, of Ogdensburg, in the county of St. Lawrence and State of New York, have invented a new and Improved Vertical-Draft Attachment, of which the following is a full, clear, and exact description.

My invention relates to the construction of a draft-regulating attachment applicable for use in connection with almost any form of furnace, the object of my invention being to distribute the draft in a more equal manner throughout the length of the fire; and to this end the invention consists of the construction and arrangement of parts, as will be hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both the figures.

Figure 1 is a longitudinal sectional view of a boiler combustion-chamber, ash-pit, and grate, representing the same as supplied with my improved vertical-draft-regulating attachment; and Fig. 2 is a cross-sectional elevation taken on line $x x$ of Fig. 1.

In the drawings, 10 represents the combustion-chamber, 11 the ash-pit, and 12 the grate-bars upon which the fire is to be built.

13 14 are doors employed to close the entrances to the combustion-chamber and ash-pit, respectively.

In the construction illustrated in the drawings the outer grate-bars, 15, are formed with downwardly-extending apertured lugs 2, which serve as the supports for deflecting-plates, as 20, 30, and 40, said plates being formed with arms 3, that are provided with hooks adapted to enter the apertures formed in the lugs 2. The plates suspended from beneath the grate-bars are connected by links 5, said links being pivotally connected to lugs or ears 4, that are cast upon or secured to the plates.

It will be noticed that the surface of the plates increases as their position approaches the rear or inner end of the grate.

Air entering through the opening of the ash-pits will strike successively against the

plates 20, 30, and 40 and be deflected upward so as to pass through the body of the fire in currents that move in substantially vertical lines, thus equally distributing the supply of oxygen throughout the length of the fire and preventing an undue combustion at the inner end of the grate.

In order that the plates or leaves 20, 30, and 40 may be drawn up out of the way when it becomes necessary to clear the ash-pit, I arrange manipulating-rods 6 in connection with the forward plates, 20, said rods being pivotally connected to ears formed upon said plates. The rods 6 extend forward and outward through openings 7, formed in the front wall, 16, of the furnace, and, as each rod is formed with teeth 8 upon its lower edge, it will be seen that if the rods are pulled forward in the direction of the arrow shown in Fig. 1, the plates will be raised so as to permit of the introduction of a shovel or other implement for removing the ashes, and will be held in the position to which they are raised through the medium of the teeth 8, which engage with a stop or plate fixed upon the front wall of the furnace.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a grate, of a series of transverse pivoted deflecting-plates below the same, spaces being provided between the grate and the upper edges of the plates, except the rear plate, links pivotally connecting said plates beyond their pivotal points, and an adjustable rod for adjusting said plates at any desired angle, substantially as set forth.

2. The combination, with a grate, of a series of graduated deflecting-plates arranged beneath the grate, substantially as described.

3. The combination, with a grate, of deflecting-plates 20, 30, and 40, pivotally connected to the grate, links 5, arranged to connect the plates, and manipulating-rods 6, substantially as described.

GEORGE W. WHEATER.

Witnesses:

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