

(No Model.)

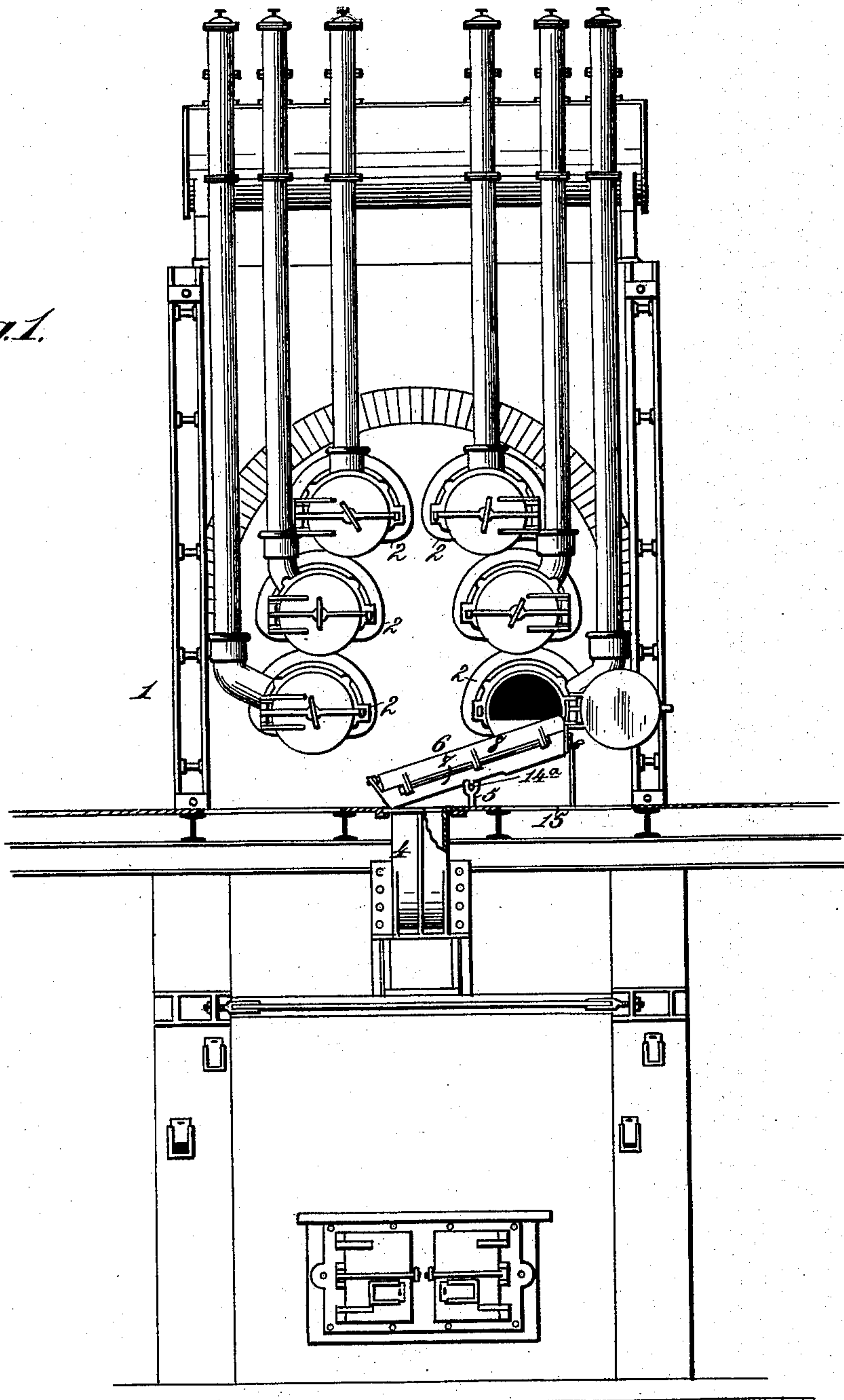
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G. A. McILHENNY.  
COKE CHUTE.

No. 410,006.

Patented Aug. 27, 1889.

*Fig. 1.*



*Witnesses:*

*Robert Everett,*

*James A. Rutherford.*

*Inventor:*

*George A. McIlhenney.*

*By James L. Norris,*  
*Atty.*

(No Model.)

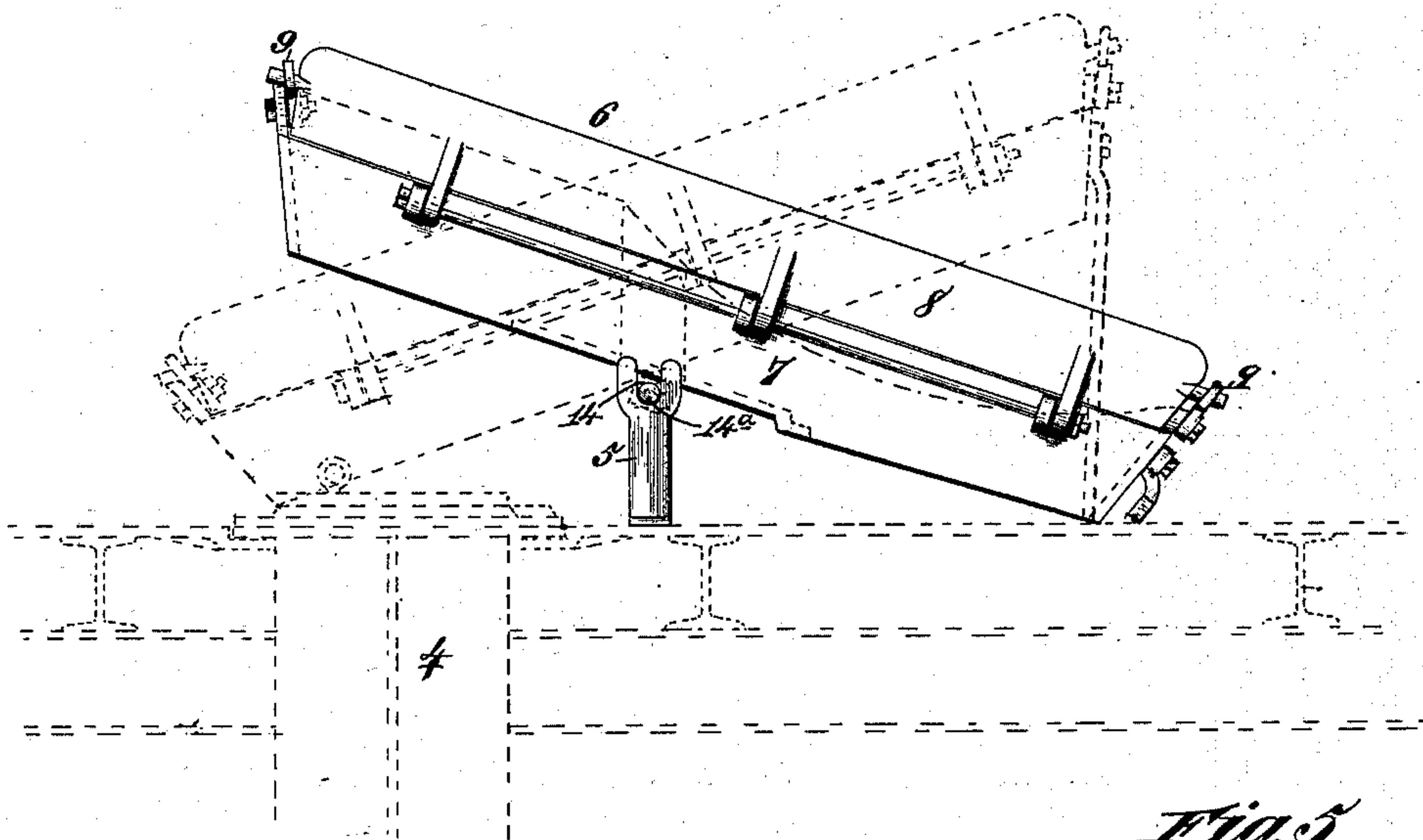
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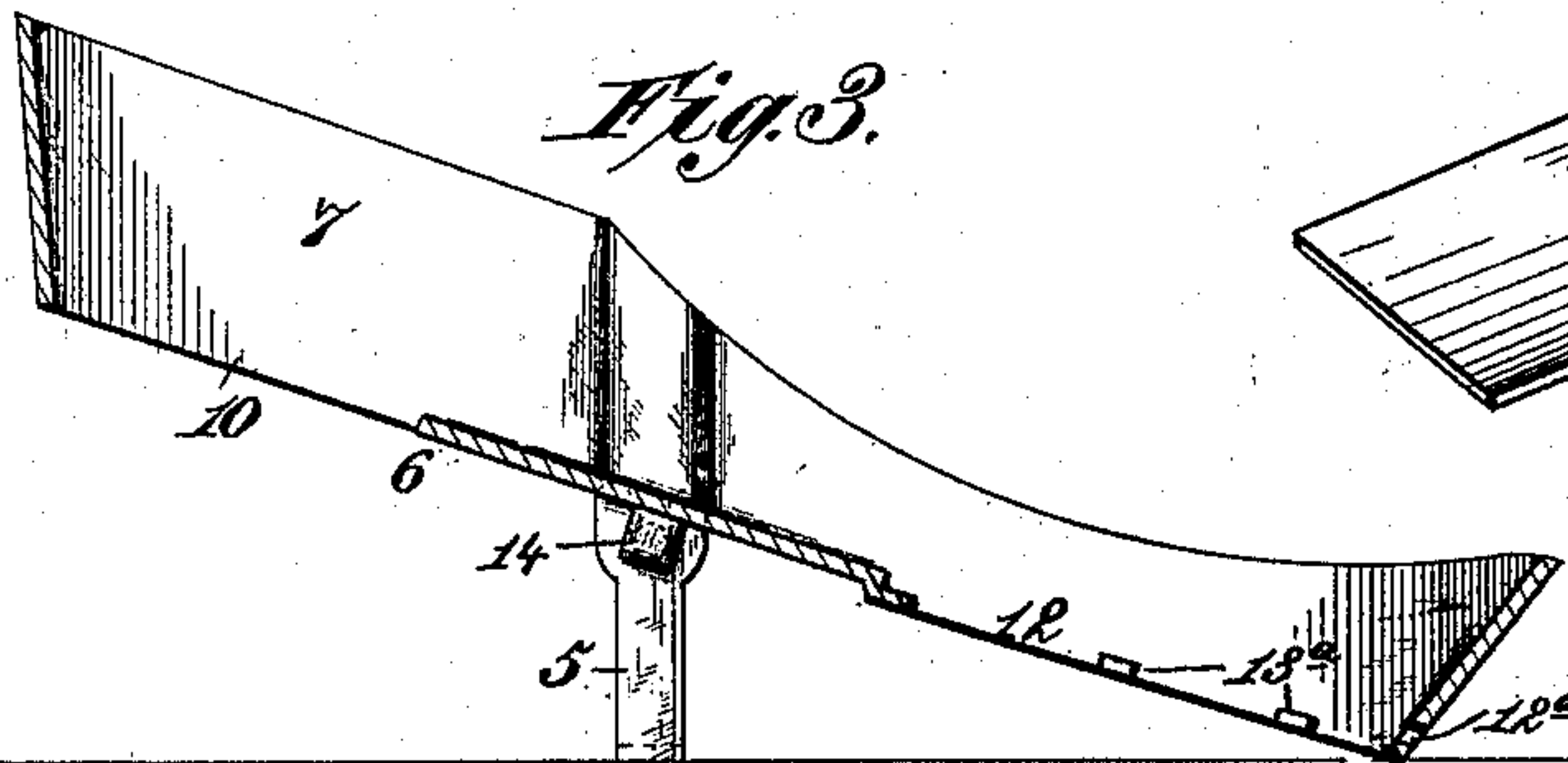
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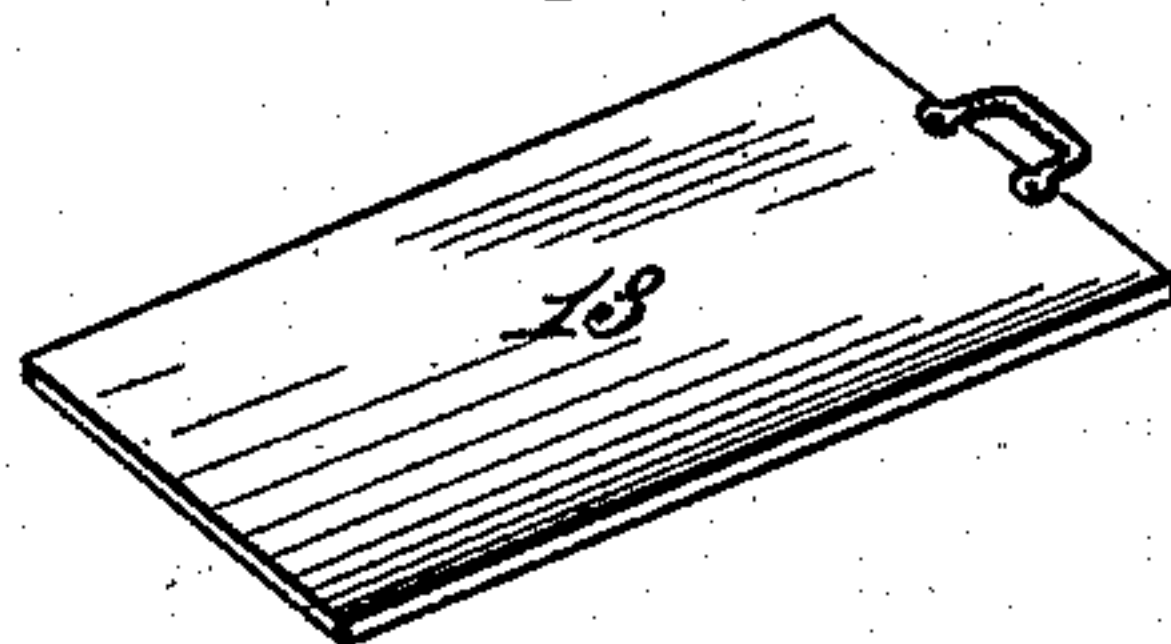
*Fig. 2.*



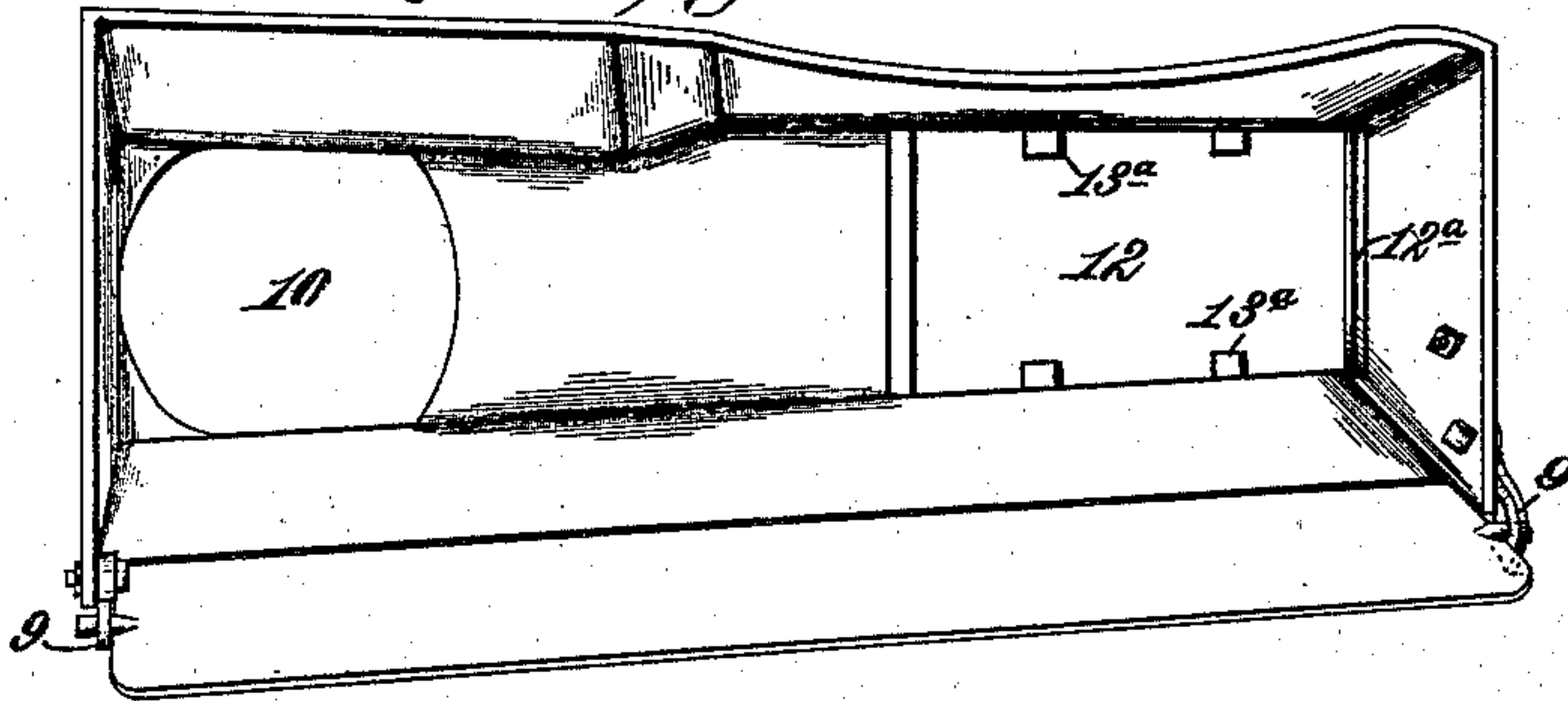
*Fig. 3.*



*Fig. 5.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

GEORGE A. MCILHENNY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## COKE-CHUTE.

SPECIFICATION forming part of Letters Patent No. 410,006, dated August 27, 1889.

Application filed April 29, 1889. Serial No. 309,067. (No model.)

### *To all whom it may concern:*

Be it known that I, GEORGE A. MCILHENNY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Coke-Chutes, of which the following is a specification.

My present invention relates to certain improvements in coke-chutes for facilitating the removal of ignited or glowing coke from the retorts of a gas-bench, and for discharging the same into the regenerating-furnace.

It is the purpose of my invention to provide simple means whereby the coke may be readily discharged or drawn from the retorts of a gas-bench of any ordinary construction and carried direct to the furnace-chute, or whereby, if the supply to the latter is in excess, it may be diverted to the opening leading to the coke-cellar, whence it is removed after being quenched and sold.

The invention consists in the several novel features of construction and new combinations of parts hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a front elevation showing a gas-bench with my invention applied thereto. Fig. 2 is a detail side elevation of the chute, a part of the bench being shown in dotted lines. Fig. 3 is a vertical longitudinal section. Fig. 4 is a plan view of the same. Fig. 5 is a detail perspective of the removable bottom piece.

In the said drawings the reference-numeral 1 designates the gas-bench, the construction of which is of any ordinary pattern, the retorts 2 being arranged and operated in the usual manner. The gas-bench is provided with a furnace-chute 4 of any suitable form, and upon the gas-bench, upon one side of the furnace-chute, is placed a support or cradle 5, upon which is pivotally mounted the coke-chute 6, consisting of an oblong substantially rectangular structure, the sides 7 whereof are preferably flared or diverged from the bottom upward. A section 8 of the outer side is hinged upon the body portion to permit its being turned down when required in order to enable the operator to open the door of the retort, the ends of the hinged section being provided with hooked detents 9, or other de-

vice suitable for the purpose to hold the same in a closed position, as shown in Fig. 4. At one end of the chute is an opening 10, formed in its bottom, and at the other end a more extended opening is formed by removing a portion of the bottom by drilling out the required metal or forming the openings during the process of casting the chute. The opening 12 is normally closed by a removable bottom piece 13. (Shown in Fig. 5.) This bottom piece, which is simply a piece of sheet-iron, is inserted in a slot 12<sup>a</sup> in the end wall of the chute and rests upon lugs 13<sup>a</sup> upon the side walls to cover the opening 12.

In the position of the coke-chute shown by dotted lines, Fig. 2, and in full lines, Fig. 1, the discharged or drawn coke strikes upon the bottom piece 13 as it lies in the chute, and is directed toward the opening 10, through which it passes into the furnace-chute. When inclined in the other direction, the bottom piece may be removed to uncover the opening 12, through which the coke passes to the opening leading to the coke-cellar.

The coke-chute is mounted upon the cradle 5 by means of a transverse bottom piece or bar 14, the ends of which are provided with trunnions 14<sup>a</sup>, that rest in the forked ends of the cradle. The construction shown being adapted to the right-hand retorts of the gas-bench, the inner wall of the chute is somewhat cut away upon its edge to cause it to conform to the shape of the mouth-piece of the retort, and to lie closely under the flange surrounding the retort-door.

When properly arranged, as shown in Figs. 1 and 2, the opening 10 in the bottom of the chute will lie directly over the furnace-chute 4, and the other end of said chute will be arranged beneath the three right-hand retorts, its opening 12 being closed by the removable bottom piece 13. Thus the coke raked or drawn from the retorts will fall into the chute, and being directed by the bottom piece 13 it will be at once guided to the opening 10 in the bottom of the chute and carried to the furnace-chute 4, whence it will be delivered to the furnace without effort or manipulation on the part of the operatives. In the event of the furnace-supply being in excess, the bottom piece 13 is removed from the chute to uncover the opening 12 and the chute is in-



clined in the opposite direction, as shown in full lines in Fig. 2, whereby the coke is conveyed to the opening 15 in the bench and dropped into the coke-cellar, where it is cooled and then removed and sold.

In employing the coke-chute in the manner last set forth it is not necessary to cover the opening 10, since the inclination of the coke-chute to raise the end over the furnace-chute and depress the other end will place it in position to receive the drawn coke and guide it to the opening leading to the coke-cellar without using the bottom piece.

What I claim as my invention is—

1. In a gas-bench, the combination, with a series of retorts, of a coke-chute pivotally mounted between its ends upon one side of the furnace-chute and having its higher end lying under the retorts and the other end arranged over said furnace-chute, substantially as described.

2. The combination, with a gas-bench having gas-retorts upon both sides of a furnace-chute, of a coke-chute pivotally mounted upon one side of the furnace-chute and having an opening in its bottom lying over said chute, an opening being also formed in the other end and covered by a removable bottom piece to permit the chute to be inclined in both direc-

tions and to discharge from either end, substantially as described.

3. In a gas-bench, the combination, with a series of retorts, of a coke-chute pivotally mounted under one or more of said retorts and having one end arranged over the furnace-chute, whereby the drawn coke is guided to the latter, said chute provided with an opening in its other end, covered by a removable plate or bottom piece inserted through a slot in the end of the chute and resting on side lugs, substantially as described.

4. In a gas-bench, the combination, with a series of retorts, of a coke-chute pivotally mounted beneath one or more of said retorts and composed of an oblong conveyer having an opening in its bottom at or near each end, in combination with a removable bottom piece adapted to cover one of said openings, a section of the outer wall of said chute being hinged to turn outward, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEO. A. McILHENNY.

Witnesses:

JAMES L. NORRIS,  
A. B. KELLY.