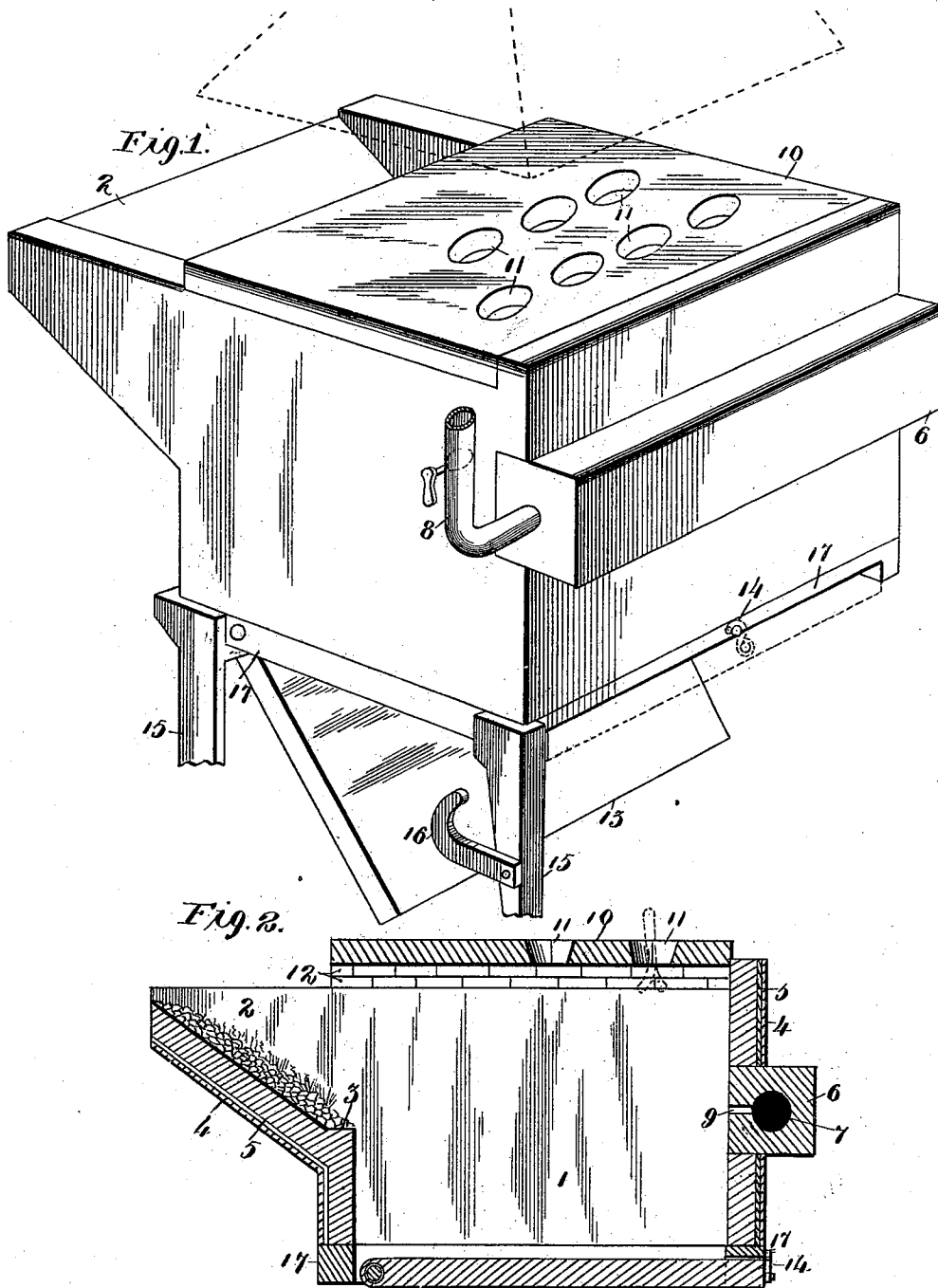


(No Model.)

O. WAGENER.
FURNACE.

No. 516,748.

Patented Mar. 20, 1894.



Witnesses
J. J. O'Donoghue
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UNITED STATES PATENT OFFICE.

OSCAR WAGENER, OF ST. MARY'S, OHIO, ASSIGNOR TO THE INDUSTRIAL CHAIN COMPANY, OF SAME PLACE.

FURNACE.

SPECIFICATION forming part of Letters Patent No. 516,748, dated March 20, 1894.

Application filed November 4, 1893. Serial No. 490,001. (No model.)

To all whom it may concern:

Be it known that I, OSCAR WAGENER, of St. Mary's, Ohio, have invented certain new and useful Improvements in Furnaces for Reheating Chain-Links, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in reheating furnaces and consists in the novel arrangement and combination of parts more particularly set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a perspective view of my complete invention, and Fig. 2 is a vertical longitudinal section of the same.

The object of my invention is to construct a coke furnace designed especially for the reheating of chain links, and consists of means for temporarily retaining a portion of the fuel charge before entering the fire box; a plate for suspending the chain links over the fire box; means for varying the height or distance of such plate from the source of the products of combustion according to the size of link to be reheated; and in detail it may be described as follows:

Referring to the drawings, 1 represents the fire box of a furnace built preferably of fire brick, and 2 is an inclined chute leading from the top for filling the same. At the lower end of the chute is a retaining ledge 3 running transversely the width of the furnace. The object of said ledge being to hold and support a portion of the charge of coke fuel, the portion thus remaining on the ledge after the furnace has been shut down and the contents of the fire box having been dumped, serving, from the heat retained thereby, to start a fresh fire after said portion has been poked into the bottom of the fire box and fresh coke dumped on top of it.

The furnace which is built of fire brick has a covering of metal 4 between which and the brick work is interposed a layer of non-conducting material 5, preferably asbestos or its equivalent, to prevent undue radiation. Opposite the ledge 3 and also extending the width of the furnace, is a cast iron tuyere 6 having a through passage 7 communicating with a pipe 8 conveying air from any suitable source, said passage 7 having a series of

lateral openings 9 for directing the air into the fire box. Superposed over the fire box and forming substantially the top of the furnace is a perforated plate 10 having a series of elliptical openings 11 from which the open links are suspended and reheated. The plate 10 extends from the front wall containing the tuyere to a position substantially over the ledge 3 as best shown in Fig. 2. It will be seen by inspecting said figure that the plate 10 rests on one or more columns of removable bricks 12, this provision being made for the purpose of varying the height of the plate 10 from the source of heat. Heavy links require a greater amount of heat and for such purpose the columns of brick 12 are removed to bring the plate 10 nearer the escaping products of combustion, and for lighter links the plate 10 is raised to the position indicated in Fig. 2. So that the said plate may be termed an adjustable plate. So too for heavy links the number of elliptical openings is reduced, that is the number of said openings varies with the particular elevation to which the plate 10 is placed.

The fire box is provided with a hinged bottom 13 which can be secured when in its raised or closed position to the front of the furnace by means of a suitable latch or fastener 14, and at the proper time the contents of the fire box can be dumped as shown in Fig. 1. To one of the legs 15 of the furnace is secured a projecting arm 16 which is intended to act as a point of support or a fulcrum for any suitable iron bar or lever with which it is intended to raise the free end of the bottom 13 to its normal position, without necessitating the raising of the same by hand especially after the plate has become hot.

The furnace is built upon an iron frame 17 to the bottom of which the legs 15 are secured.

Having described my invention, what I claim is—

1. A furnace for reheating chain links comprising a suitable fire box, a feed chute leading from above for the same, a suitable ledge at the bottom thereof for retaining a portion of the charge, a tuyere pipe opposite said ledge, and means for suspending the links over the fire-box, substantially as set forth.

2. A furnace for reheating chain links, comprising a suitable fire box, a feed chute for

the same, a suitable ledge at the bottom of said chute for retaining a portion of said charge, a tuyere pipe opposite said ledge, a suspending plate having a series of elliptical openings superposed over the box, and means for adjusting the elevation of said plate with respect to the fire box, substantially as set forth.

3. A furnace for reheating chain links, comprising a suitable fire box, a feed chute for the same, a suitable ledge at the bottom of said chute and running transverse the width of the fire box, a tuyere opposite said ledge, a suspending plate having a series of ellipti-

cal openings superposed over the box and extending from the front wall of the furnace to substantially over the ledge, and a column of removable brick for temporarily supporting said plate and allowing for the variable elevation thereof from the fire box, substantially as set forth.

In testimony whereof I affix my signature in the presence of two witnesses.

OSCAR WAGENER.

Witnesses:

FERDINAND HOORMANN,
MARTIN STURM.