

P. F. DUNDON.
 COMBINED CHARGING HOPPER AND TRAP DOOR THEREFOR.
 APPLICATION FILED JULY 3, 1911.

1,040,906.

Patented Oct. 8, 1912.

Fig. 1.

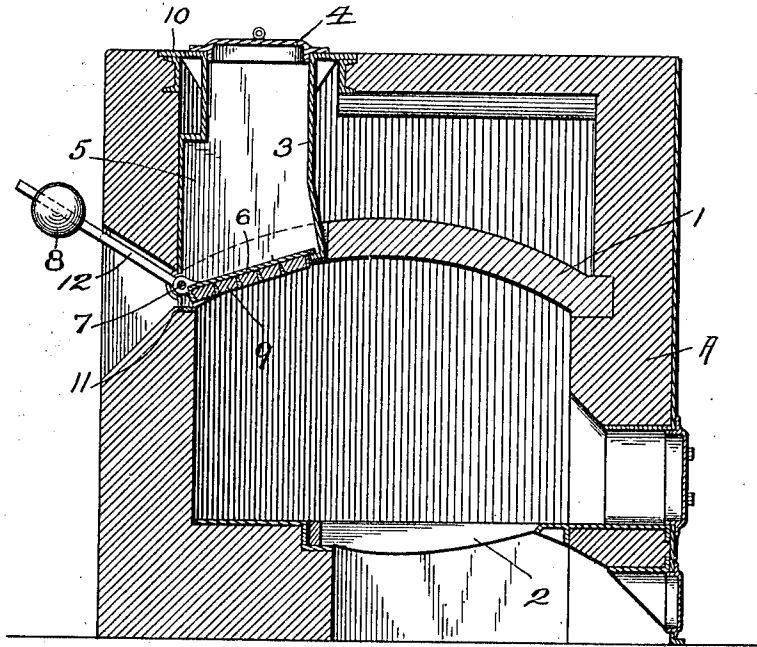
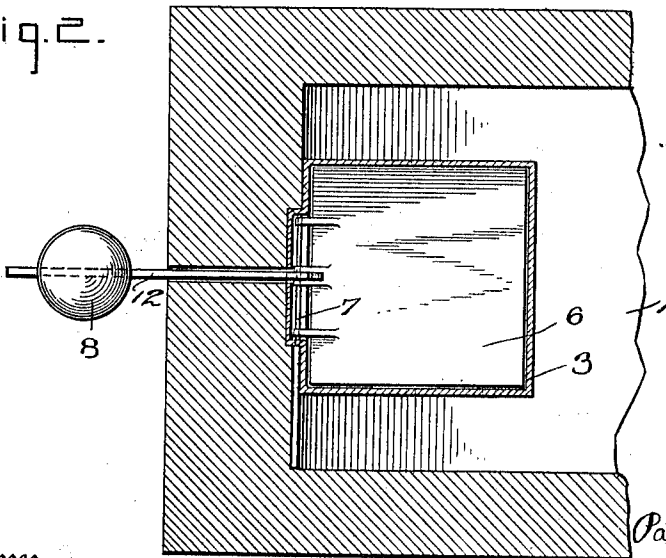


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

PATRICK F. DUNDON, OF SAN FRANCISCO, CALIFORNIA.

COMBINED CHARGING-HOPPER AND TRAP-DOOR THEREFOR.

1,040,906.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed July 3, 1911. Serial No. 636,674.

To all whom it may concern:

Be it known that I, PATRICK F. DUNDON, a citizen of the United States, residing at San Francisco, in county of San Francisco and State of California, have invented certain new and useful Improvements in Combined Charging-Hoppers and Trap-Doors Therefor, of which the following is a specification.

10 My invention relates to an improvement in combined charging hoppers and trap-doors therefor, the object being to provide a counterbalanced door at the lower end of the hopper and approximately coincident with the arch of the furnace as a medium through which the furnace is charged or fed.

In the accompanying drawing:—Figure 1 is a vertical section, and Fig. 2 is a horizontal section.

20 A, represents the furnace; 1, is the arch; 2, the grate; and 3 is the hopper. This hopper is constructed in any approved manner and let down from above, as indicated in Fig. 1, where it has a lid or cover 4; and in the body of the hopper it is provided with an enlargement or offset 5 to receive and house the trap-door. The numeral 6 indicates this trap-door, it being hinged at 7 in the lower end of the hopper, and provided with an arm 12 on which is slidably mounted a counterweight 8 to facilitate the opening of the trap-door, and for retaining it in an open position, if desired. The door is faced with fire-brick or other refractory material 9, on its lower side, in position to withstand the heat of the combustion chamber below.

40 When closed, the trap-door virtually forms a continuation of the arch 1, and when opened, it takes the position in the recess or enlargement 5 of the hopper 3, out of the

way of material dropping down from above through the opening at the top.

A hopper of this character may be easily inserted, and removed or replaced, if desired, it being supported mainly from above by the flanges 10, 10, resting on the masonry as well as upon the arch-plate 11 at the bottom of the arch.

It is evident that more or less slight changes might be resorted to in the form and arrangement of the several parts described without departure from the spirit and scope of my invention, and hence I do not wish to be limited to the exact construction herein set forth, but:—

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

The combination with a furnace, an arch having an orifice therein and one wall of the furnace having an opening adjacent to the orifice in the arch, of a hopper removably located within the furnace, its lower end encompassing the orifice in the arch and its upper end extending to the top of the furnace, the hopper having an enlargement in one side, a trap-door hinged at the lower end of the hopper in position to close the orifice in the arch when in one position and to enter the enlargement when opened, an arm secured to the hinged portion of the door, and extending through the opening in the wall, and a counterweight slidably mounted on the arm for opening the door and, holding it in an open position.

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

PATRICK F. DUNDON.

Witnesses:

P. B. BEAL,
LEONARD J. FORDE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."