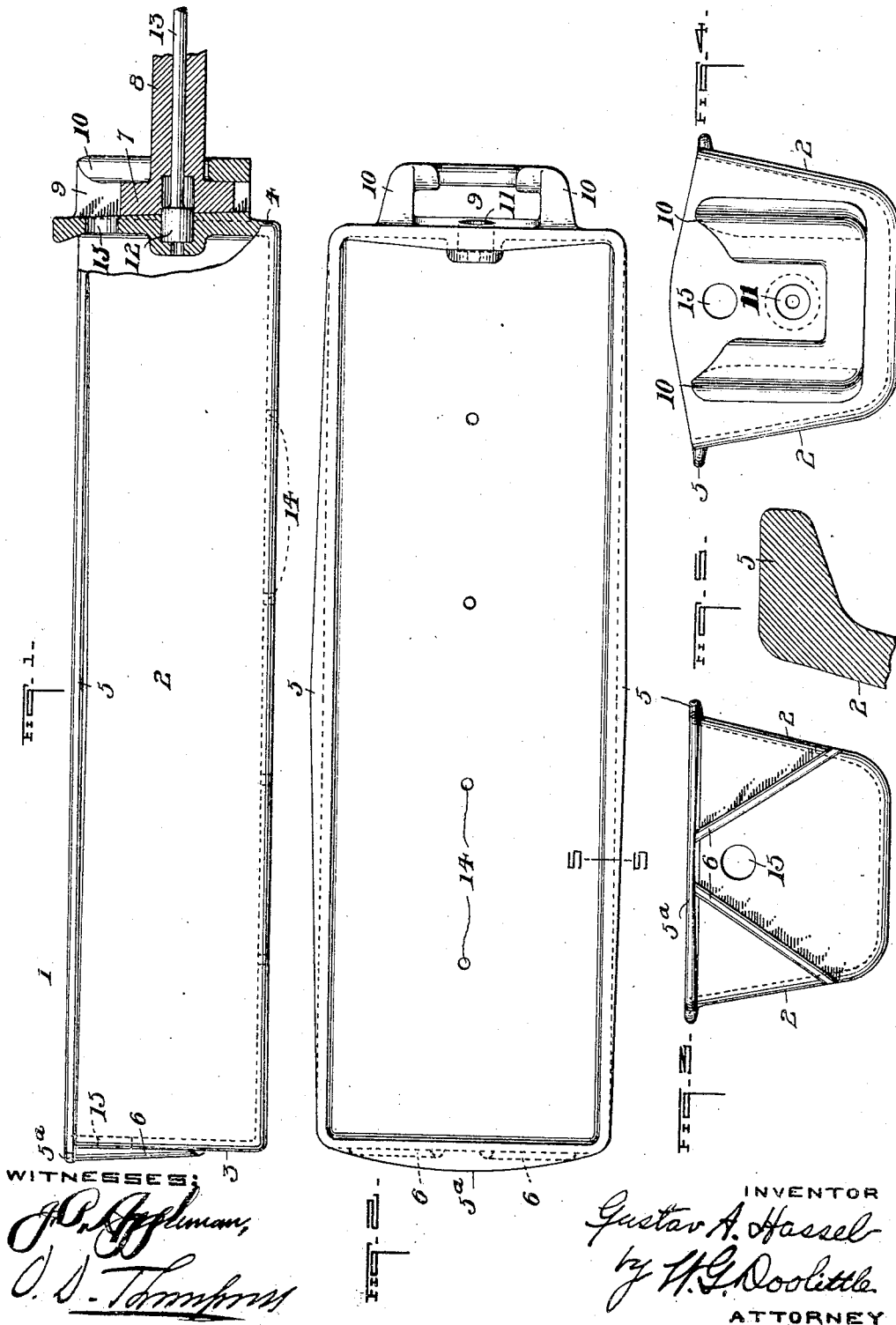


No. 876,640.

PATENTED JAN. 14, 1908.

G. A. HASSEL.  
FURNACE CHARGING BOX.  
APPLICATION FILED AUG. 6, 1907.



# UNITED STATES PATENT OFFICE.

GUSTAV A. HASSEL, OF MCKEESPORT, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH STEEL  
FOUNDRY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

## FURNACE CHARGING-BOX.

No. 876,640.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed August 6, 1907. Serial No. 387,376.

*To all whom it may concern:*

Be it known that I, GUSTAV A. HASSEL, of McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Furnace Charging-Boxes, of which the following is a specification.

The object of my invention is to provide a new and improved furnace charging-box preferably made of cast-metal and as an integral structure.

To this end my invention consists of a furnace charging-box, and in the novel features of construction, all as hereinafter described and claimed.

In the accompanying drawing, which illustrates an application of my invention, Fig. 1 is a part side elevational view and a part sectional view of a charging-box embodying my invention and showing the head of a charging-arm in connection therewith; Fig. 2 a top plan; Fig. 3 an end view; Fig. 4 an end view of the opposite end of the box particularly showing the charging-arm engaging-means; and Fig. 5 a cross-section taken on in 5—5 of Fig. 2.

As shown the furnace charging-box comprises a body 1, having sloping side-walls 2 and straight end-walls 3 and 4. The upper edges of the side-walls 2 are each formed with a swelled or bellied-flange 5 extending throughout the length of said walls. Each flange 5 is formed with its widest portion at the middle of the side-walls and is preferably of the form as particularly shown by Fig. 5. In addition to greatly strengthening the box the swelled or bellied flanges of the side-walls center the box during its passage into the furnace. The bellied flanges come into contact with the door-frame and cause the charging-box and charging-arm to swing into proper alinement with the door-frame or furnace charging-opening so that when the charge is dumped and the box is being withdrawn the corners of the box will not strike the door-frame and will not injure said frame or the brick work. As an operator cannot clearly see within the furnace in the act of withdrawing a box and cannot determine when said box is in proper alinement with respect to the furnace charging-opening, the importance of providing means on the box for causing said box to assume the

proper position for withdrawal is apparent. The upper edge of the rear end-wall 3 is also formed with a flange 5<sup>a</sup>, similar to the flanges of the side-walls. 6 designate strengthening ribs formed with the wall 3.

Formed integral with the front-wall 4 I employ charging-arm engaging-means designed to receive and engage a head 7 of the charging-arm 8. The engaging-means are in the form of a pocket 9 and comprise outwardly projecting and downwardly extending members 10. In addition to the engaging-means or pocket 9, the front-wall is formed with an opening 11 to receive the head 12 of plunger-rod 13.

14 and 15 respectively designate the usual openings formed in the body and front and rear-walls.

What I claim is:

1. A furnace charging-box consisting of an integral cast-metal structure having sloping side-walls each formed with a bellied-flange, and means formed integral with an end-wall of the box for engaging a charging-arm.

2. A furnace charging-box consisting of an integral cast-metal structure comprising side and end-walls each formed with a bellied-flange, means formed integral with one end-wall for engaging a charging-arm, and strengthening-ribs formed integral with the opposite end wall.

3. A furnace charging-box consisting of an integral cast-metal structure comprising sloping side-walls formed with a bellied-flange, straight end-walls formed with a bellied-flange, means formed integral with one end-wall for engaging a charging-arm, and strengthening-ribs formed integral with the opposite end-wall.

4. A cast-metal furnace charging-box consisting of an integral structure comprising sloping side-walls having their upper edges flanged, said flanges being widest at the center of the box and diminishing as they approach the ends, end-walls, and means formed integral with an end-wall for engaging a charging-arm.

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

GUSTAV A. HASSEL.

Witnesses:

EDWIN L. ALLEN,  
W. G. DOOLITTLE.