(No Model.) 2 Sheets—Sheet 1.

S. T. & C. H. WELLMAN.

CHARGING BOX FOR FURNACE CHARGING APPARATUS.

No. 589,768. Patented Sept. 7, 1897.

FIG. 1.

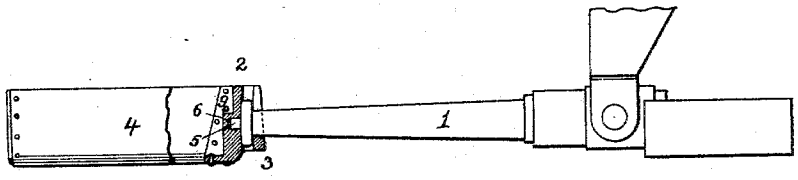


FIG. 2.

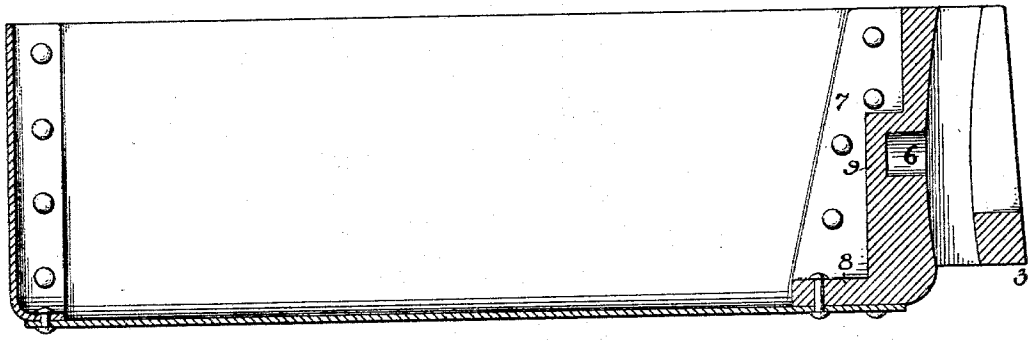
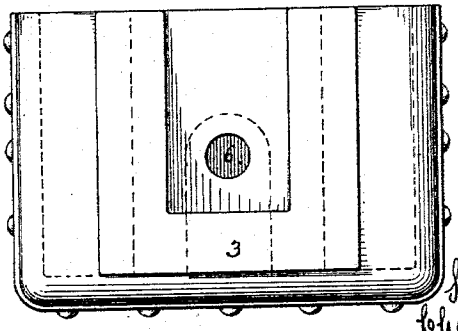


FIG. 4.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

S. T. & C. H. WELLMAN.

CHARGING BOX FOR FURNACE CHARGING APPARATUS.

No. 589,768. Patented Sept. 7, 1897.

FIG. 3.

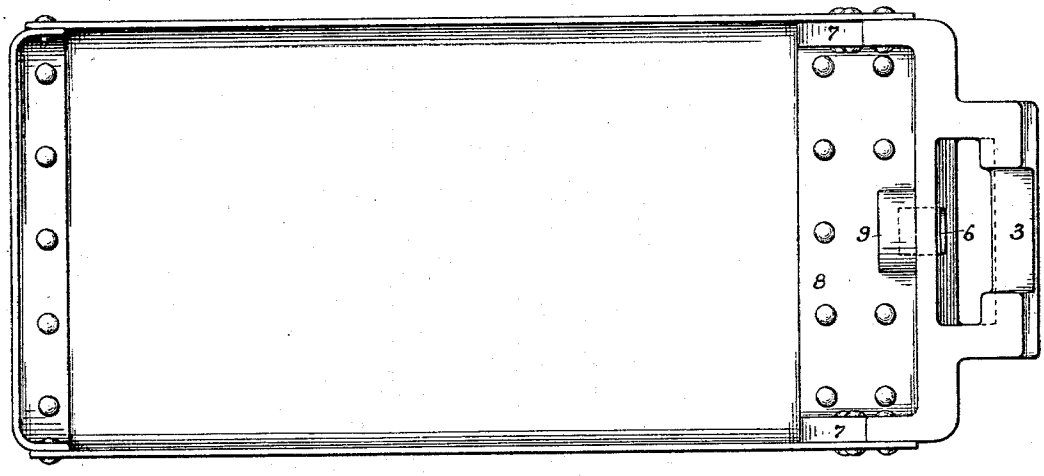
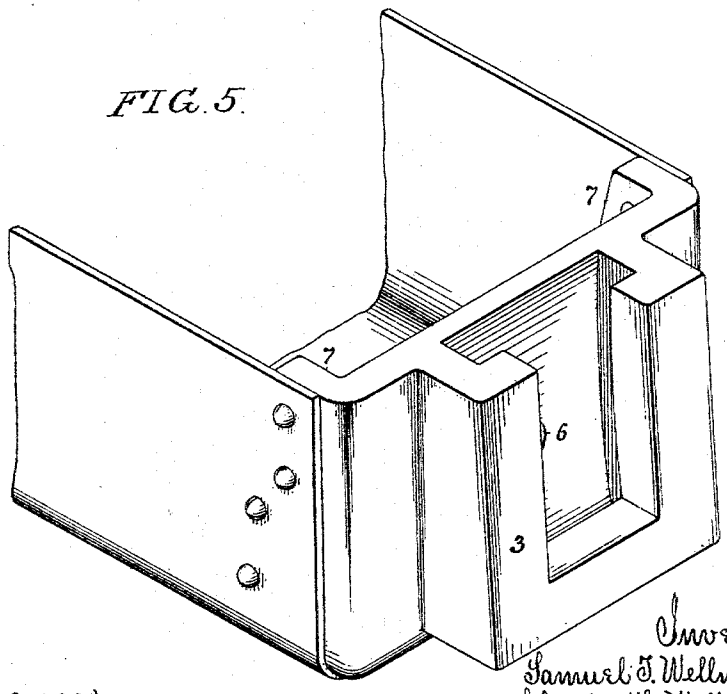


FIG. 5.



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UNITED STATES PATENT OFFICE.

SAMUEL T. WELLMAN AND CHARLES H. WELLMAN, OF CLEVELAND, OHIO.

CHARGING-BOX FOR FURNACE-CHARGING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 589,768, dated September 7, 1897.

Application filed March 15, 1897. Serial No. 627,598. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL T. WELLMAN and CHARLES H. WELLMAN, citizens of the United States, and residents of Cleveland, Ohio, have invented certain Improvements in Charging-Boxes for Furnace-Charging Apparatus, of which the following is a specification.

Our invention consists of a charging-box intended for use in connection with the furnace-charging apparatus for which we obtained Letters Patent No. 569,075, dated October 6, 1896, the object of our present invention being to so construct the box that the snug fit of the same on the end of the arm will be insured and the movement of the flanged end of the arm into locking position in the socket of the charging-box will not be obstructed. This object we attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a view of the charging-bar of our patented furnace-charging apparatus with the charging-box mounted and secured in position thereon. Fig. 2 is a longitudinal section of the charging-box on a larger scale. Fig. 3 is a plan view of the same. Fig. 4 is a view of the front end of the charging-box, and Fig. 5 is a perspective view of said front end of the charging-box.

1 represents the charging-bar of the furnace-charging apparatus constituting the subject of our before-mentioned patent, this bar having a flanged front end 2, which is adapted to a socket 3, formed on the charging-box 4, the bar having a central bolt 5, which engages with a recess 6 in the socket 3 and serves to lock the box to the bar.

In order to provide for the ready engagement of the flanged end of the charging-bar with the socket of the charging-box and yet permit of the snug fit of said flanged end of the bar in the socket, we form the front and rear walls of that portion of the socket which receives the flanged end of the bar on curves having a radius substantially the same as the distance between the pivotal axis of the charging-bar and the flanged end of the same, so that said flanged end of the bar, swinging in an arc of which said pivotal axis is the center, will follow the lines of the socket and can therefore fit snugly therein, a result which of course could not be obtained if the walls of the socket were vertical, as in that case considerable clearance would have to be allowed into the socket to compensate for the arc followed by the flanged end of the bar.

In our present charging-box we also make the enlarged portion of the socket open at the bottom, so as to prevent the accumulation therein of scale, dirt, or foreign matter generally, which tends to accumulate in a socket having a closed bottom and which in time prevents the descent of the flanged end of the bar into the socket sufficiently to bring the bolt 5 into proper position for engagement with the recess 6.

The sides, bottom, and back of the improved charging-box are composed of sheet metal, but the front end of the box, having the socket therein, consists of a casting with side flanges 7 and bottom flange 8, secured by riveting or otherwise to the sheet-metal sides and bottom of the box, this casting also having an internal projecting boss 9 to provide for the formation of the recess 6, which receives the locking-bolt of the charging-bar.

Having thus described our invention, we claim and desire to secure by Letters Patent—

1. A furnace-charging box having a socket for the reception of the flanged end of a swinging charging-bar, said socket having walls curved so as to coincide substantially with the arc in which the flanged end of the bar swings.

2. A furnace-charging box consisting of sheet-metal sides, bottom and rear end, and a cast-metal front end having therein a socket for the reception of the end of the charging-bar, projecting side and bottom flanges for being secured to the sheet-metal sides and bottom of the box, and a projecting boss having formed therein a recess for the reception of a bolt carried by the charging-bar, substantially as specified.

3. A furnace-charging box having a socket for the reception of the flanged end of a charging-bar, said socket being open at top and bottom, and having walls curved so as to substantially coincide with the arc in which the flanged end of the bar swings, substantially as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SAMUEL T. WELLMAN.
CHARLES H. WELLMAN.

Witnesses:
JOHN MCGEORGE,
C. W. COMSTOCK.