(No Model.)

G. E. REED.

APPARATUS FOR SCALING ANNEALED SHEET METAL.

No. 456,340. Patented July 21, 1891.

Fig. 1

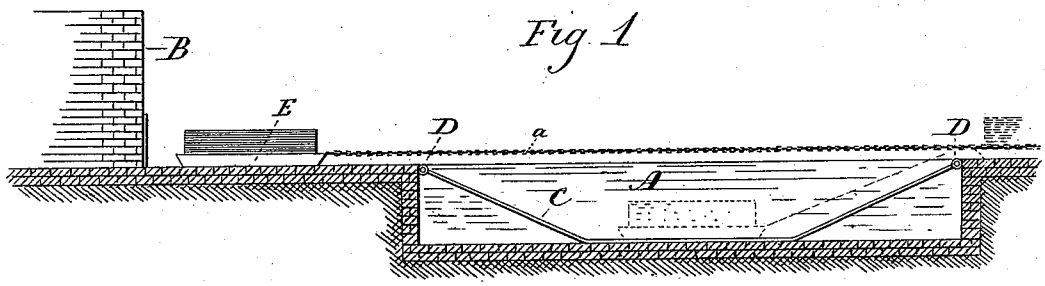
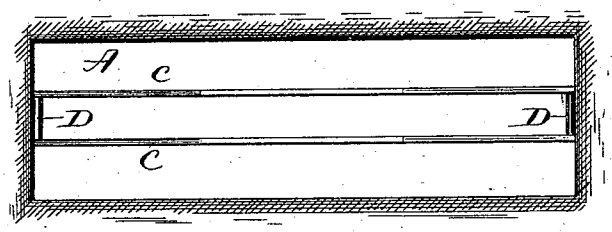


Fig. 2



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UNITED STATES PATENT OFFICE.

GEORGE E. REED, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE SCOVILL MANUFACTURING COMPANY, OF SAME PLACE.

APPARATUS FOR SCALING ANNEALED SHEET METAL.

SPECIFICATION forming part of Letters Patent No. 456,340, dated July 21, 1891.

Application filed June 30, 1890. Serial No. 357,231. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. REED, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Apparatus for Scaling Annealed Sheet Metal; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a partial side view of the muffle-furnace, with the bath in longitudinal section, showing the inclined trackways into and out of the bath, and also showing a tray as on its way from the muffle to the bath, with the tray in the bath in broken lines; Fig. 2, a top or plan view of the bath.

My invention relates to an improved apparatus for scaling sheet metal after annealing the same, the object being to save time and labor by dispensing with the individual manipulation of the sheets in the bath to which they are collectively subjected under my invention in the same trays in which they are annealed.

With these ends in view my invention consists in the combination, with a muffle, of a bath located below the floor thereof, an inclined trackway leading down into the bath and up out of the same, and anti-friction rollers located at opposite ends of the trackway at the upper edges of the bath.

In carrying out my invention the bath A is preferably arranged with its upper edge in the same horizontal plane with the floor of the muffle B, which may be of any approved construction, and which is separated from the bath a sufficient distance to permit the work at the muffle to be conveniently carried on. An inclined trackway leading down into and up out of the bath is composed, as shown, of two parallel rails C C, arranged in the line of the draft of the chain attached to the trays to draw them out of the muffle and through the bath and secured to a windlass located beyond the outer edge thereof, the said windlass not being shown, *a* representing the chain. The center of the trackway is horizontal and long enough to receive the entire lengths of a tray, which will rest upon it as long as may be necessary to effect the scaling of the metal. An anti-friction roller D, located at each end of the trackway, facilitates the handling of the trays.

In utilizing my improved apparatus the bath is supplied with water or other fluid to a depth sufficient for the entire immersion of the metal to be introduced into the bath. The sheets of metal, or whatever the metal articles to be treated, are placed in trays in the usual manner and introduced into the muffle. Then after they have been annealed the chain is attached to the trays one by one and they are drawn out of the muffle, E representing one loaded tray as being drawn from the muffle. The drawing from the muffle continues and is made as rapidly as conveniently may be, the tray passing along the floor until the edge of the bath is reached, where it passes over the roller D, thence down the incline onto the bottom of the bath, as represented in broken lines, Fig. 1, thus making an almost instantaneous plunge of the metal from the muffle into the bath. After the metal has received the required treatment in the bath it is drawn up the opposite incline out of the bath onto the floor, as also represented in broken lines at the right, Fig. 1. This operation takes the metal from the muffle into and out of the bath without any intermediate handling. The whole tray of sheets is thus scaled at once and with the minimum expenditure of labor and time and before they can cool, while the scaling is as effectually done as under the old method of manually subjecting the sheets independently to the bath.

I do not wish to be understood as claiming, broadly, a bath in so near relation to a furnace that articles from the furnace may be readily plunged into the bath, as such I am aware, broadly considered, is not new.

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

1. The combination, with a muffle, of one or more trays, a bath located near the exit-door of the muffle in the path in which the trays are drawn therefrom, inclined trackways respectively leading down into and up out of the opposite ends of the bath, and means for

drawing the trays from the muffle and through the bath, substantially as described, and whereby a loaded tray may be drawn out of the muffle, down the trackway at the end of the bath adjacent thereto, and up the other trackway and then out of the bath.

2. The combination, with a muffle, of one or more trays, a bath located near the exit-door of the muffle with its upper edge in substantially the plane of the floor thereof, inclined trackways respectively leading down into and up out of the opposite ends of the bath, anti-friction rollers located at the upper ends of the respective trackways, and means for drawing the trays from the muffle and through the bath, substantially as described, and whereby a loaded tray may be drawn out of the muffle, down the trackway at the end of the bath adjacent thereto, and then up the other trackway and out of the bath.

GEORGE E. REED.

Witnesses:
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