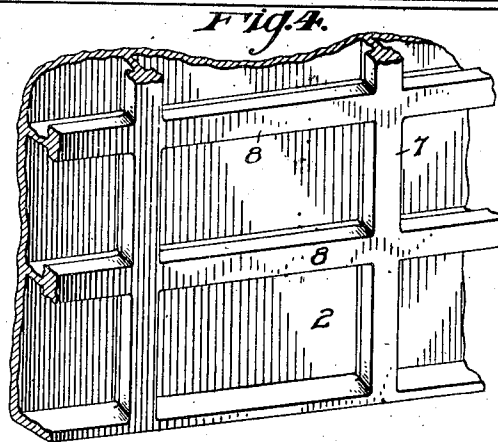
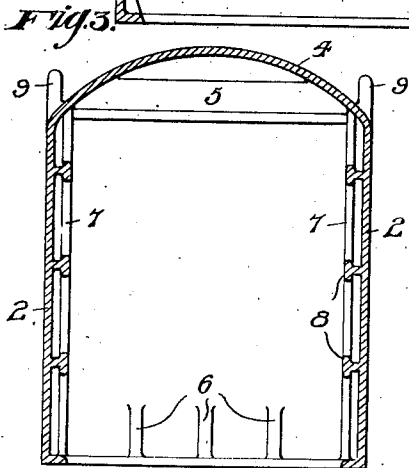
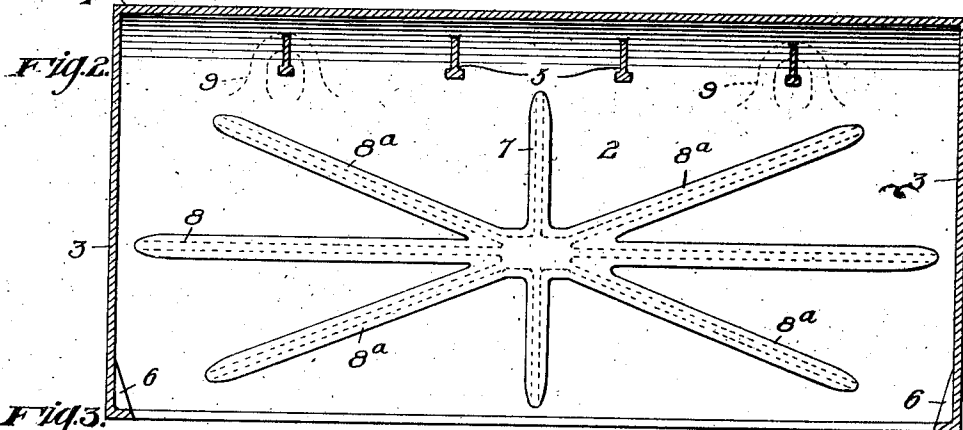
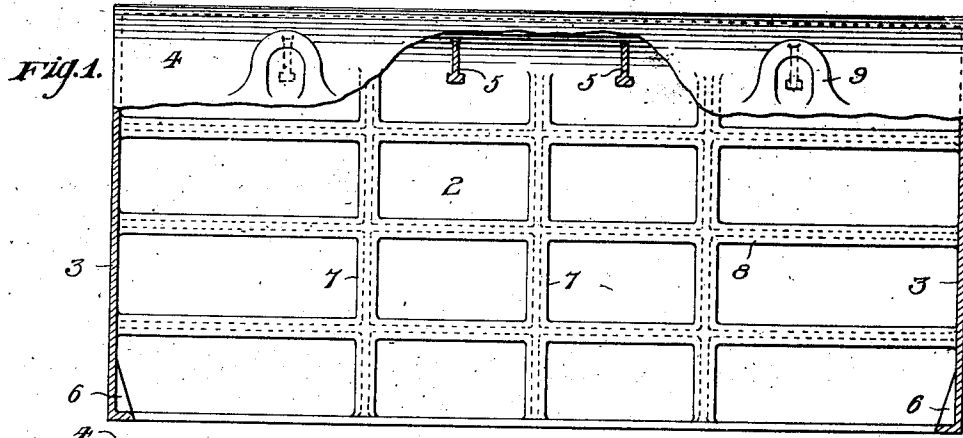


E. R. WILLIAMS.
ANNEALING BOX.
APPLICATION FILED MAY 27, 1909.

934,867.

Patented Sept. 21, 1909.



witnesses:
R. H. H. H. H. H.
all Way

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UNITED STATES PATENT OFFICE.

EDWARD R. WILLIAMS, OF SWISSVALE, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH STEEL FOUNDRY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

ANNEALING-BOX.

934,867.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed May 27, 1909. Serial No. 498,645.

To all whom it may concern:

Be it known that I, EDWARD R. WILLIAMS, a resident of Swissvale, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Annealing-Boxes, of which the following is a specification.

An object of my invention is to provide a new and improved annealing-box consisting of an integral cast-metal structure having the exterior of the side and end walls free of all projecting parts.

A further object of the present invention is to provide a strong and durable box of the character described having strengthening members or ribs, transverse tie-members or chords all formed in the interior of the box.

A still further object of the present invention is to provide the box with convenient handles instead of the usual trunnions heretofore so generally employed in boxes of this class.

In the accompanying drawing, which illustrates applications of my invention, Figure 1, is a part sectional view and a part elevational of an annealing-box constructed in accordance with my invention, particularly showing the interior of a side wall of the box; Fig. 2, a view similar to Fig. 1, showing a modified arrangement of the strengthening members on the interior of a side-wall of the box; Fig. 3, a transverse sectional view of the form of Fig. 1; and Fig. 4, a detail perspective view of a portion of a side wall of the box.

As illustrated and as preferred, the box is made as an integral cast-metal structure and comprises two side-walls 2 having flat and plain exterior surfaces free of all projecting parts, end-walls 3, also having exterior surfaces free of any projecting parts or members; and a roof 4.

Extending transversely of the box and intersecting the roof at two points only are chords or tie-members 5. These tie-members are preferably of substantially T-shape in cross-section. Extending upwardly from the lower edge of the end-walls 3 and formed on the interior surface of said walls, I provide a plurality of vertically disposed ribs 6. Formed integral with the side-walls 2 and on the interior surface thereof I provide intersecting ribs or strengthening-members.

In the form of Fig. 1, I employ vertically extending ribs 7 and horizontally extending ribs 8. These ribs are of T-shape in cross-section or are formed with a comparatively thin web portion and a bulbous head.

In the form of Fig. 2, in addition to the vertical and horizontal intersecting ribs 7 and 8 formed on the interior of the side-walls, I employ inclined ribs 8^a. In place of the usual trunnions located on and projecting outwardly from the side-walls of the box, I employ apertured lugs or handles 9. These handles are preferably arranged as shown by the drawing at the juncture of the roof and side-walls although they may be formed on the roof.

What I claim is.

1. An annealing-box consisting of an integral cast-metal structure comprising a roof, and end and side-walls having their exterior surfaces free of projecting parts or members said box being formed with interior strengthening-members.

2. An annealing-box consisting of an integral cast-metal structure having interior strengthening-members, said box comprising a roof, side-walls, and end-walls, said walls each having its exterior surface free of a projecting part, and handles formed at the juncture of the roof and side-walls.

3. An annealing-box consisting of an integral cast-metal structure, comprising end-walls, and side-walls formed with interior intersecting ribs or strengthening-members.

4. An annealing-box consisting of an integral cast-metal structure comprising a roof, end-walls formed with vertical interior ribs, and side-walls formed with interior intersecting ribs.

5. An annealing-box consisting of an integral cast-metal structure comprising a roof, end-walls, side-walls formed with interior ribs, and a transverse tie-member intersecting the roof at two points only.

6. An annealing-box comprising a roof, end-walls, and side-walls formed with interior strengthening-members.

7. An annealing-box comprising a roof, end-walls, and side-walls formed with interior ribs of T-shape cross-section.

8. An annealing-box consisting of an integral cast-metal structure comprising a roof, end-walls formed with interior vertical ribs, side-walls formed with interior intersecting

ribs of T-shaped cross-section, and a transverse tie-member of T-shape cross-section intersecting the roof at two points only.

5 9. An annealing-box consisting of an integral cast metal structure comprising a roof, end and side-walls having their exterior surfaces free of projecting parts, said box being formed with interior strengthening ribs,

and apertured lugs or handles located above the side-walls.

In testimony whereof I affix my signature¹⁰
in presence of two witnesses.

EDWARD R. WILLIAMS.

Witnesses:

A. C. WAY,

W. G. DOOLITTLE.