L. L. KNOX.

ANNEALING BOX.

APPLICATION FILED DEC. 31, 1917.

1,268,582. Patented June 4, 1918.

FIG. 1.

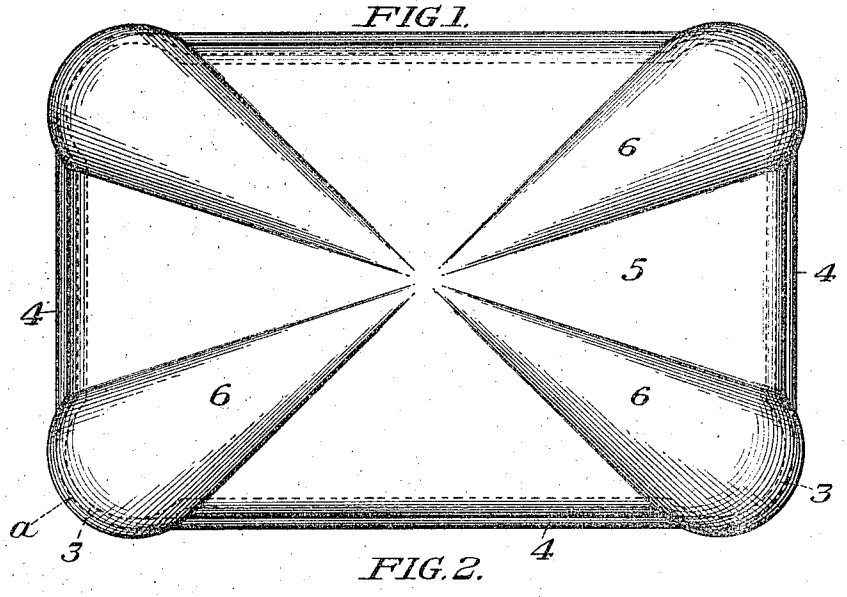
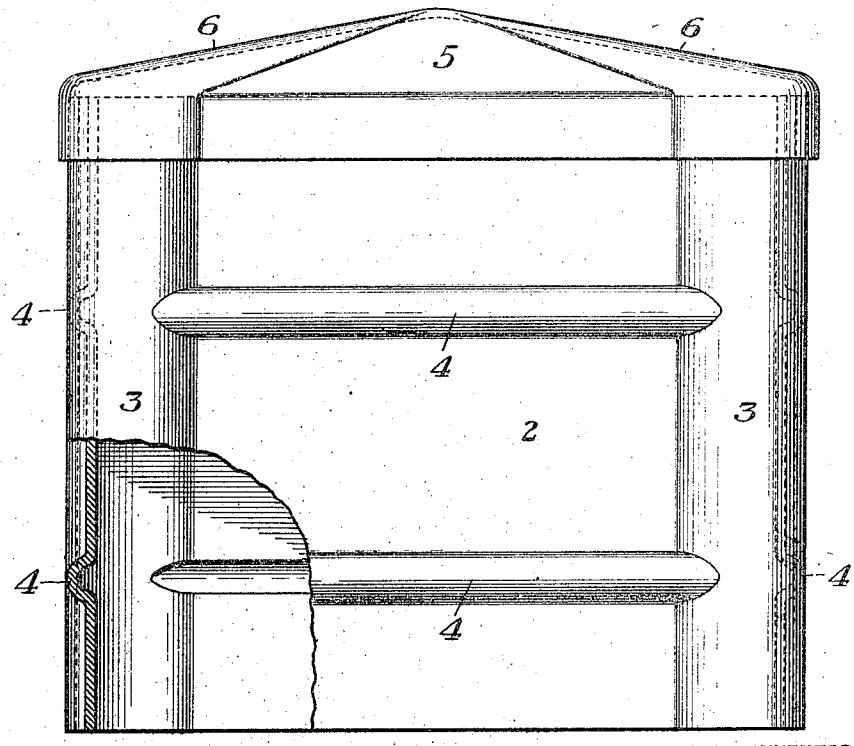


FIG. 2.



WITNESSES

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ANNEALING-BOX.

1,268,582. Specification of Letters Patent. Patented June 4, 1918.

Application filed December 31, 1917. Serial No. 209,636.

To all whom it may concern:

Be it known that I, LUTHER L. KNOX, a citizen of the United States, residing at Bellevue, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Annealing-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of an annealing box embodying my invention; and

Fig. 2 is a side elevation of the same with a portion of one of the walls broken out.

My invention has relation to annealing boxes, and more particularly to annealing boxes formed from sheet metal.

The object of my invention is to provide a sheet metal annealing box which can be readily manufactured, which is of such construction as to permit of expansion and contraction movements without injury to the box, and which will be durable in service.

Referring to the accompanying drawings, the numeral 2 designates the body of the box which is of the usual approximately rectangular form in cross section. This body is preferably formed from a single sheet of metal, the edges of which are brought together and welded at a suitable point, as at *a*, at one of the corners. The metal is pressed outwardly at each corner to form the vertical concavo convex swells 3 of relatively large radii. These swells are connected preferably at both sides and both ends of the box by transversely extending concavo-convex ribs 4, which are pressed outwardly in the metal.

The cover 5 is formed in a separate piece which is fitted over the upper end of the body and is preferably welded to the body, thereby forming a practically integral structure. This cover member has the upward swells 6, which radiate from its center toward each corner, their lower portions conforming substantially to the swells 3 in the body portion of the box. These swells 6 gradually taper out as they approach the center of the top.

The corner swells provide for relatively free lateral expansion and contraction movements, restrained, however, to some extent by the tie connections afforded by the horizontal ribs 4. The latter ribs while thus acting to the proper extent as tie members render the sides and ends of the box sufficiently elastic to relieve vertical stresses. They also greatly stiffen the body of the box against the tendency to buckle or bulge under the weight of the top.

The corner swells also provide clearance spaces at the corners of the pile of sheets or other similar articles being annealed and over which the box is placed in the usual manner. The overlapping portions of the body and top also provide increased strength at this part of the box.

I claim:

1. An annealing box comprising a body portion and a separately formed top portion, both portions being shaped from sheet metal, the body portion having concavo-convex swells pressed outwardly at its corners and the top member having a depending flange formed with corresponding swells and fitting over the upper portion of the body of the box, including the swells thereof, and secured thereto, substantially as described.

2. An annealing box comprising a body portion and a separately formed top portion, both portions being shaped from sheet metal, the body portion having concavo-convex swells pressed outwardly at its corners and the top member having a depending flange formed with corresponding swells and fitting over the upper portion of the body of the box, including the swells thereof, and secured thereto, the body of the box also having outwardly pressed concavo-convex ribs uniting the corner swells, substantially as described.

3. An annealing box comprising a body portion and a separately formed top portion, both portions being shaped from sheet metal, the body portion having concavo-convex swells pressed outwardly at its corners and the top member having a depending flange formed with corresponding swells and fitting

over the upper portion of the body of the box, including the swells thereof, and secured thereto, the body of the box also having outwardly pressed concavo-convex ribs uniting the corner swells, there being one of such ribs on each wall of the box above the center thereof, and another rib on each wall below the center thereof, substantially as described.

In testimony whereof, I have hereunto set my hand.

LUTHER L. KNOX.