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F. C. MERK

2,071,233

WELDED ROLLED STEEL CINDER POT

Filed June 13, 1936

Fig. 1.

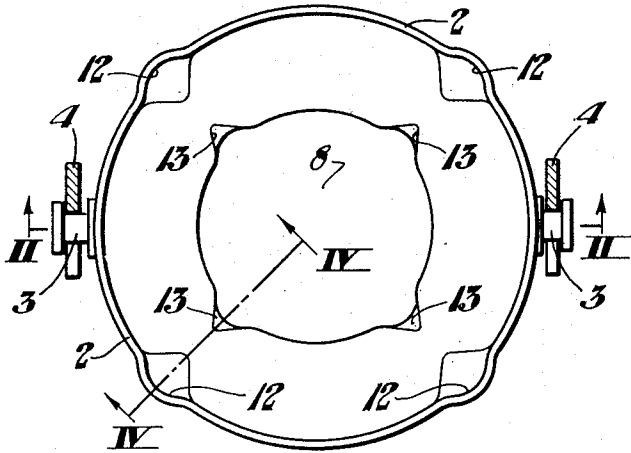


Fig. 5.

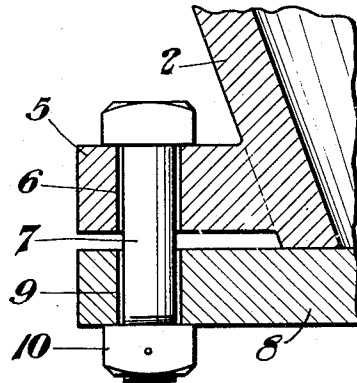


Fig. 2.

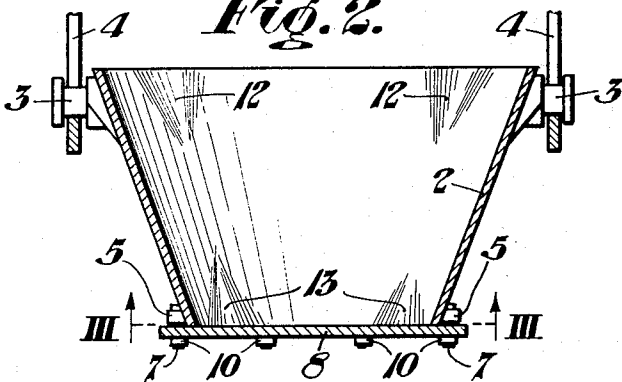


Fig. 4.

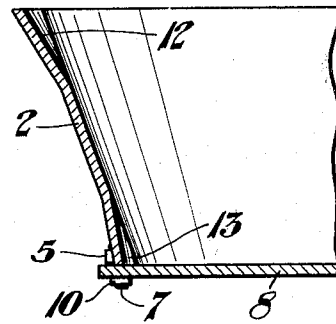
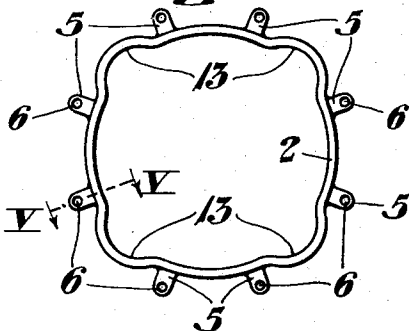


Fig. 3.



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WELDED ROLLED STEEL CINDER POT

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2 Claims. (Cl. 266—39)

The present invention relates to welded rolled steel cinder pots having a sufficient number of folds or flared portions of proper shape and length to permit free expansion of the cinder pot in a horizontal as well as a vertical direction, thereby eliminating the possibility of warping and fracturing of the vessel caused by the heat absorbed from the liquid cinder.

Other objects and advantages will become apparent as the description proceeds in which,

Figure 1 is a top plan view of the cinder pot,

Figure 2 is a sectional elevation on line II—II of Figure 1,

Figure 3 is a bottom plan view taken on line III—III of Figure 2,

Figure 4 is a sectional elevation on line IV—IV of Figure 1, and

Figure 5 is a section on line V—V of Figure 3.

In the drawing, 2 represents the welded rolled steel body forming the cinder pot provided with trunnions 3 for receiving the chain hooks 4. There is provided a plurality of spaced lugs 5 integral with the body 2, having openings 6 through which bolts 7 pass to rigidly secure the bottom plate 8 to the body member 2. The bottom plate 8 is provided with a plurality of openings 9 to receive the bolts 7, which rigidly retain the bottom plate to the body 2 by means of the lock nuts 10.

Cinder pots having bolted-on bottoms are usually made of cast iron or cast steel in the shape of an inverted frustum cone with upper and lower reinforcing means to provide a strong anchorage against expansion of the vessel but, due to the heat absorbed by the cinder pot from the liquid cinder, these reinforcements prevent free expansion of the cinder pot in both vertical and horizontal direction, which results in fracturing the cinder pot at the top and bottom ends, and in distortion of the original shape of the vessel. However, under the present invention, such difficulties are eliminated in that the cinder pot, which is a welded rolled steel construction of an inverted frustum cone shape, is provided at its top and bottom ends with a plurality of folds or flared portions 12 and 13 of proper shape and length tapering into the frusto-conical body. These flared portions permit the body to expand

in a radial direction depending upon the temperature necessary to be absorbed by the body 2. The absence of any reinforcement at the top and bottom ends of the pot permits free expansion thereof in both a horizontal as well as a vertical direction and thereby eliminates the internal strains usually set up when these actions are resisted by reinforcement of the body at the top and bottom ends thereof.

These folds or flared portions 12 and 13, formed at the top and bottom ends of the body portion 2, may be of any desired shape and length depending on the amount of heat required to be absorbed by the cinder pot and gradually taper into the body portion 2. Also, there may be any desired number of these folds at the top and bottom ends suitably spaced and positioned around the body to obtain the best results for expansion of the cinder pot in both a horizontal as well as a vertical direction. For the purpose of illustration, however, there is shown four such folds located at the top and bottom ends of the pot and comprise flared or outstruck portions of substantially V-shaped cross-section.

While I have shown and described several specific embodiments of my invention, it will be understood that I do not wish to be limited exactly thereto, as various modifications may be made without departing from the scope of my invention, as defined by the appended claims.

I claim:

1. A welded rolled steel cinder pot comprising a body member, said body member provided with flared portions at each end tapering toward the center of said body member, lugs formed on one end of said body member, a bottom closure plate for said body member provided with a plurality of openings and means extending through said openings adapted to secure said bottom closure plate to said lugs.

2. A cinder pot comprising a body member provided with substantially V-shaped flared portions tapering toward the center of said body member from each end thereof, and a bottom closure plate for said body member.

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