Dec. 18, 1928. 1,695,467

F. J. PETERSON

SUPPORTING AND SEALING MEANS FOR CYANIDE POTS

Filed May 3, 1928

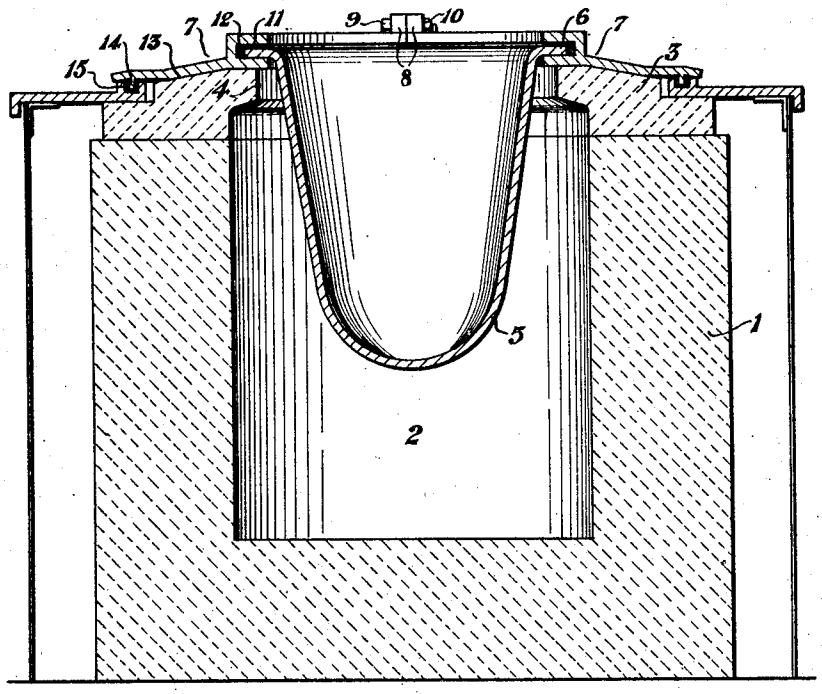


Fig. 1

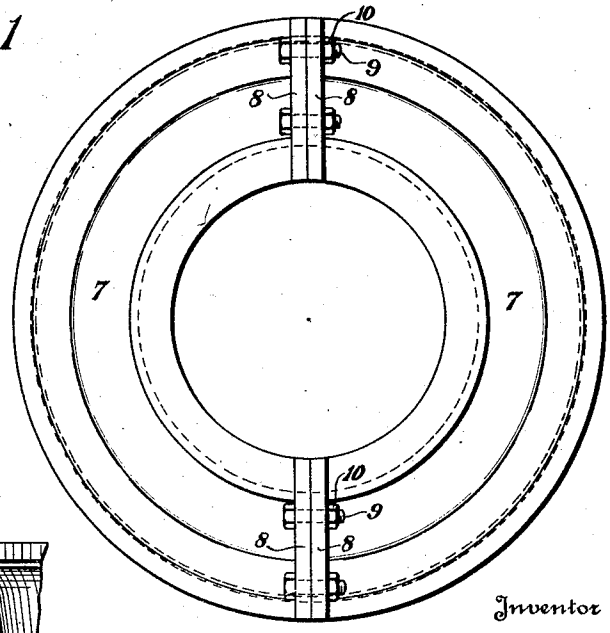


Fig. 2

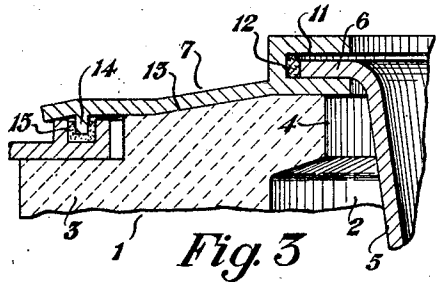


Fig. 3

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Patented Dec. 18, 1928. 1,695,467

UNITED STATES PATENT OFFICE.

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SUPPORTING AND SEALING MEANS FOR CYANIDE POTS.

Application filed May 3, 1928. Serial No. 274,797.

The invention relates to cyanide pots and more particularly to means for supporting a pot in the heating chamber of a furnace or the like and for sealing the same to prevent the cyanide vapor from entering the heating chamber.

It is common practice in supporting a cyanide pot in a furnace or the like to provide a substantially horizontal peripheral rim flange at the upper open end of the pot, this rim flange being provided with spaced depending annular flanges adapted to seat in a sand sealing channel for the purpose of attempting to prevent the admission of cyanide vapor to the heating chamber.

It has been found, however, that it is next to impossible to prevent the cyanide from entering the heating chamber with such a construction and this is a serious objection, particularly where electric heating elements are used in the furnace, as the cyanide vapor combined with air has a very detrimental effect not only upon the exterior of the pot but also upon the heating elements.

The object of the present improvement is to provide means for supporting a cyanide pot in the heating chamber of a furnace or the like and for effectively and practically sealing the joint between the pot and supporting ring to prevent the cyanide or cyanide vapors from entering the heating chamber, thus preventing damage to the exterior of the pot and the heating elements or the like in the furnace.

The above and other objects may be attained by providing a horizontally disposed annular flange at the upper open end of the pot, a supporting ring being formed of two halves provided with channel portions to receive the flange of the pot, a gasket of asbestos rope or the like being compressed in these channels to effectively seal the joint between the pot and supporting ring.

The supporting ring is preferably annularly inclined downward and outward and provided with a depending annular flange near its periphery for engagement in a sand seal provided upon the top of the furnace.

An embodiment of the invention thus set forth in general terms is illustrated in the accompanying drawing, in which

Figure 1 is a vertical sectional view through a furnace or the like, showing the improved means for supporting a cyanide pot within the heating chamber thereof;

Fig. 2, a top plan view of the supporting ring in assembled position; and

Fig. 3, an enlarged fragmentary sectional view of a portion of the cyanide pot and supporting ring.

Similar numerals refer to similar parts throughout the drawing.

The furnace is shown conventionally at 1 and provided with the heating chamber 2, which may be of circular cross section and which is adapted to be heated by electric resistance elements or any suitable form of fuel as desired.

The roof 3 of the furnace may be provided with the central opening 4 of sufficient diameter to permit the cyanide pot 5 to be received therethrough.

This pot may be formed of pressed steel and is preferably of the shape shown, having the substantially horizontal annular flange 6 at its upper open end.

For the purpose of supporting the cyanide pot within the heating chamber of the furnace, a supporting ring is provided, comprising two similar sections indicated generally at 7, having the vertical flanges 8 at their meeting edges adapted to be clamped together as by the clamping bolts 9 and nuts 10.

This ring is provided at its inner perimeter with a horizontally disposed channel 11 which receives the annular flange 6 of the cyanide pot.

Before fitting the two halves of the ring together upon the pot, an asbestos rope gasket as shown at 12 is first placed in the channel and when the ring sections are clamped together around the pot, this gasket is compressed, making an effective seal.

The supporting ring is preferably inclined downward and outward as shown at 13 for contact with the similarly shaped roof 3 of the furnace and may be provided near its periphery with the depending annular flange 14 adapted to be located within the channel or trough 15 located upon the top of the roof and filled with sand to form a sand seal between the supporting ring and the roof of the furnace.

With such a construction it has been found

that an effective seal is produced between the pot and the clamping ring, preventing the leakage of any cyanide into the interior of the heating chamber of the furnace and thus preventing damage by cyanide vapors to the exterior of the pot and to heating elements or the like within the furnace.

I claim:

1. In combination with a pot having a peripheral flange thereon, a ring formed of two separable parts for supporting the pot in a furnace or the like, said ring being provided with an annular channel to receive said flange, and means for compressing a gasket between the flange and channel to form a seal between the pot and ring.

2. In combination with a pot having a peripheral flange thereon, a ring formed of two separable parts for supporting the pot in a furnace or the like, said ring being provided with an annular channel for receiving said flange, and means for clamping the ring parts together for compressing a gasket between the flange and channel to form a seal between the pot and ring.

In testimony that I claim the above, I have hereunto subscribed my name.

FREDOLF J. PETERSON.