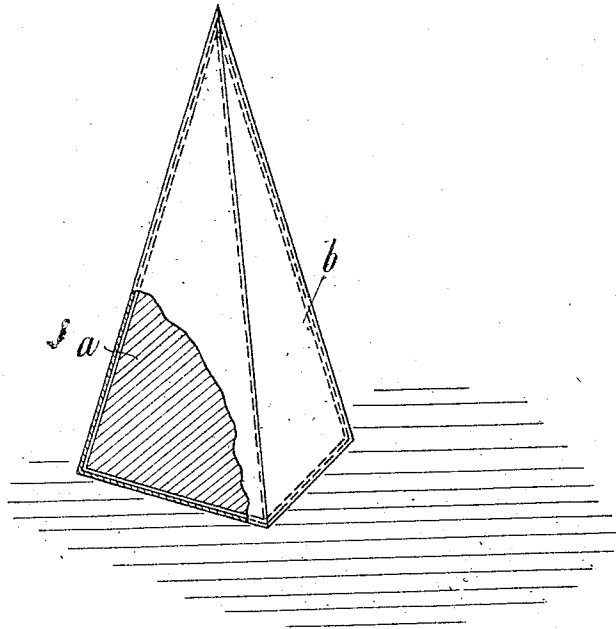


E. CRAMER.
PROCESS OF TREATMENT OF FUSIBLE CERAMIC BODIES FOR INDICATING TEMPERATURE
IN FURNACES.

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Patented May 27, 1913.

1,063,012.



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UNITED STATES PATENT OFFICE.

EDUARD CRAMER, OF BERLIN, GERMANY.

PROCESS OF TREATMENT OF FUSIBLE CERAMIC BODIES FOR INDICATING TEMPERATURE IN FURNACES.

1,063,012.

Specification of Letters Patent.

Patented May 27, 1913.

Application filed February 27, 1911. Serial No. 611,273.

To all whom it may concern:

Be it known that I, EDUARD CRAMER, a subject of the German Emperor, and residing at 109 Alt-Moabit, Berlin, N. W., Germany, have invented certain new and useful Improvements in the Process of Treatment of Fusible Ceramic Bodies for Indicating Temperature in Furnaces, of which the following is a specification.

10 This invention relates to improved fusible ceramic bodies for indicating temperature in furnaces such as sagar cones and the like. Such bodies when heated in the water-laden atmosphere of a furnace, have the disadvantage that fluxes are drawn from their surface by the fire gases. This has been especially noted in connection with the alkalis and boron compounds.

Now this invention has for its object to 20 obviate this injurious action of the fire gases, and with this object the present invention consists substantially in providing such ceramic bodies, adapted to fuse at a given temperature, with a coating or covering of material which will protect the bodies from the action of the fire gases as long as 25 these gases are injurious.

The invention will be now described with reference to the accompanying drawing 30 which shows a perspective view of a sagar cone.

One way of carrying out this invention consists in coating or covering the ceramic

body *a* with sheet metal *b* having a lower melting point than the ceramic body. In the heat of the furnace the sheet metal *b* will melt and run off the ceramic body *a* without affecting the latter, but so long as the sheet metal covers the ceramic body it will prevent the fire gases from coming into direct contact with the ceramic body. Since the moist aqueous furnace gases of low temperature are the most injurious, a sheet of metal having a low melting point will be sufficient in most cases.

Instead of covering the ceramic body with sheet metal, the invention may also be carried out by providing the ceramic body with a covering of difficulty combustible organic substances, for instance, paper impregnated with sodium vanadate or sodium tungstate.

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

In combination, a ceramic body adapted to fuse at a given temperature, and a protective metallic coating thereon adapted to fuse at a temperature lower than that at which the body will fuse.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDUARD CRAMER.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.