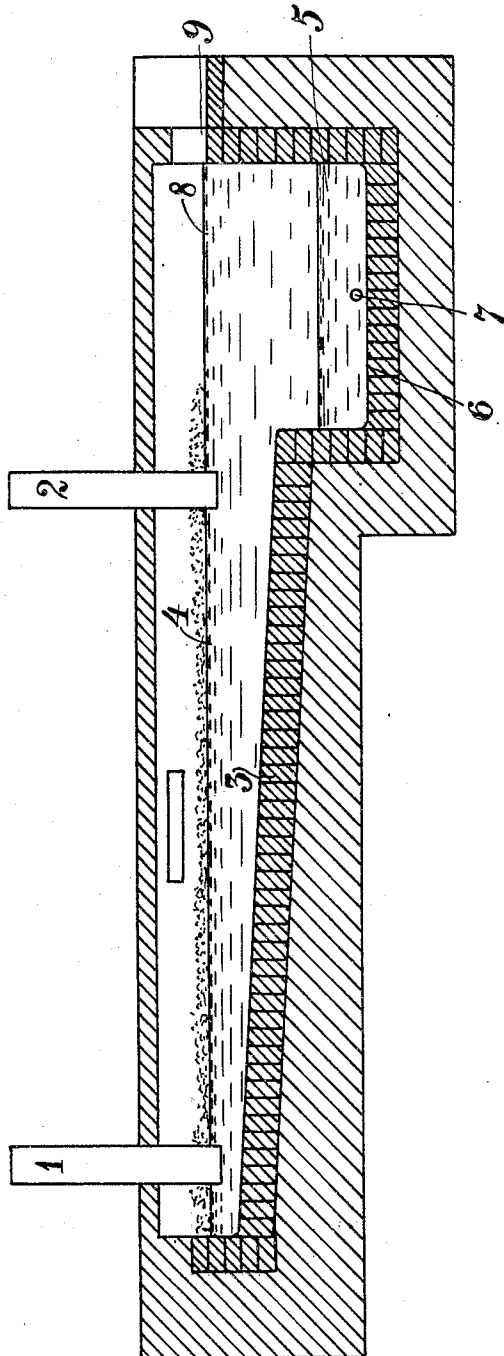


J. WESTLY.
ELECTROMETALLURGICAL FURNACE.
APPLICATION FILED MAY 1, 1912.

1,050,189.

Patented Jan. 14, 1913.



Witnesses:
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By *[Signature]* atty.

UNITED STATES PATENT OFFICE.

JENS WESTLY, OF SULITJELMA, NORWAY.

ELECTROMETALLURGICAL FURNACE.

1,050,189.

Specification of Letters Patent.

Patented Jan. 14, 1913.

Application filed May 1, 1912. Serial No. 694,406.

To all whom it may concern:

Be it known that I, JENS WESTLY, a subject of the King of Norway, residing at Sulitjelma, Norway, have invented certain new and useful Improvements in Electrometallurgical Furnaces; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to an electrometallurgical electrode furnace of the resistance type, which is particularly adapted for the treatment of cuprous ores and products of ores but which may also advantageously be used in treating ores containing other metals, for instance lead, iron, etc.

This furnace is illustrated in the drawing, showing a longitudinal section of the same.

1, 2 are the carbon or graphite electrodes, which dip in the slag bath 4. As will be seen the furnace bottom 3 is made gently sloping toward a sump at one end of the same, both electrodes being placed above the sloping furnace bottom so that the electrical

current between the electrodes passes solely through the slag layer 4. Of course some current may also pass through the furnace bottom when it has got warm. The molten metal (5) sinks down in the sump 6 at the end of the furnace outside of the zone of the electric current.

The charge is preferably fed in so as to form a layer between the electrodes. The molten metal is let off through the hole 7 and the slag 8 by the overflow 9.

The furnace may suitably be made of a great length relatively to its breadth.

Claim:

In an electrometallurgical furnace of the resistance type, a furnace bottom sloping gently toward a sump at one end of the furnace, electrodes immersed into slag covering said bottom and sump and placed in such manner, that the metal assembled in the sump is kept wholly outside the electrical circuit.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

JENS WESTLY.

Witnesses:

N. GUTTORENSY,
NANA SCHIANDER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."