(No Model.)

A. HAARLANDER.

MANUFACTURE OF CAST IRON ENAMELED PIPE.

No. 418,644. Patented Dec. 31, 1889.

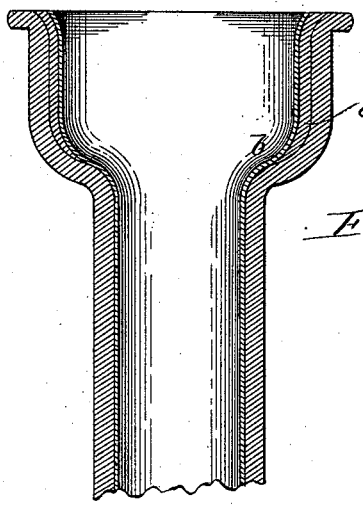

Fig. 1

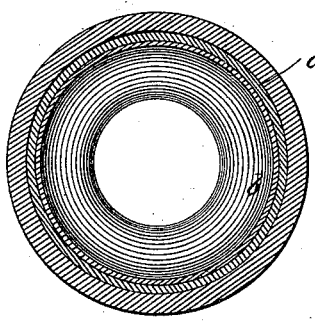

Fig. 2

WITNESSES.
Albert B. Blackwood
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INVENTOR.
by Connolly Bro
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UNITED STATES PATENT OFFICE.

AUGUST HAARLANDER, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR TO THE STANDARD MANUFACTURING COMPANY, OF SAME PLACE.

MANUFACTURE OF CAST-IRON ENAMELED PIPE.

SPECIFICATION forming part of Letters Patent No. 418,644, dated December 31, 1889.

Application filed November 5, 1889. Serial No. 329,341. (No model.)

To all whom it may concern:

Be it known that I, AUGUST HAARLANDER, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in the Manufacture of Cast-Iron Enameled Pipe; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to the manufacture of interiorly-enameled cast-iron soil-pipe or other cast-iron pipe formed with bowl and spigot ends and designed and adapted for the application and use of lead packing to seal the joints.

In the operation of enameling cast-iron pipe the practice is to float the enameling compound inside the pipe-sections and, by rolling the pipe, to cause the compound to coat the entire surface from end to end, including the inside of the bowl. It is very difficult to properly and hermetically pack or seal the joints when the inside of the bowl is enameled, for the reason that the lead has no metallic surface to obtain a purchase on or adhere to.

The object of my invention is to provide a method for the treatment of the pipe so that the enamel may be easily chipped off the inner surface of the bowl, leaving a clean metallic surface, against which the lead seal or packing will impinge and to which it will closely adhere.

My invention accordingly consists in coating the inside of the bowl previous to the floating of the enameling compound with a paste compound of a mixture of loam and fire-clay. When the enamel is baked, the paste or filling is coated, as well as the pipe; but the filling may be readily chopped away at the factory or by the plumber, leaving the metallic surface exposed and clean.

In the accompanying drawings, Figure 1 is a longititudinal central section of a soil-pipe treated according to my invention. Fig. 2 is a transverse section through the bowl.

The preliminary filling or coating is shown at *a*, while *b* designates the enamel.

I have suggested the use of a mixture of fire-clay and loam wherewith to coat the interior of the bowl; but any equivalent refractory material may be substituted of a fragile or easily-destructible character.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In the process of interiorly enameling cast-iron pipe, the method for preventing adherence of the enamel to the surface of the bowl, which consists in coating the interior of the bowl with a paste or composition of fire-clay and loam or other refractory material previous to the floating of the enamel within the pipe, substantially as described.

2. As a new article of manufacture, a cast-iron enameled pipe-section holding between the enamel and the interior surface of the bowl a fragile filling of loam and fire-clay or its equivalent, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of October, 1889.

AUGUST HAARLANDER.

Witnesses:
O. F. GRANT,
FRANCIS J. TORRANCE.