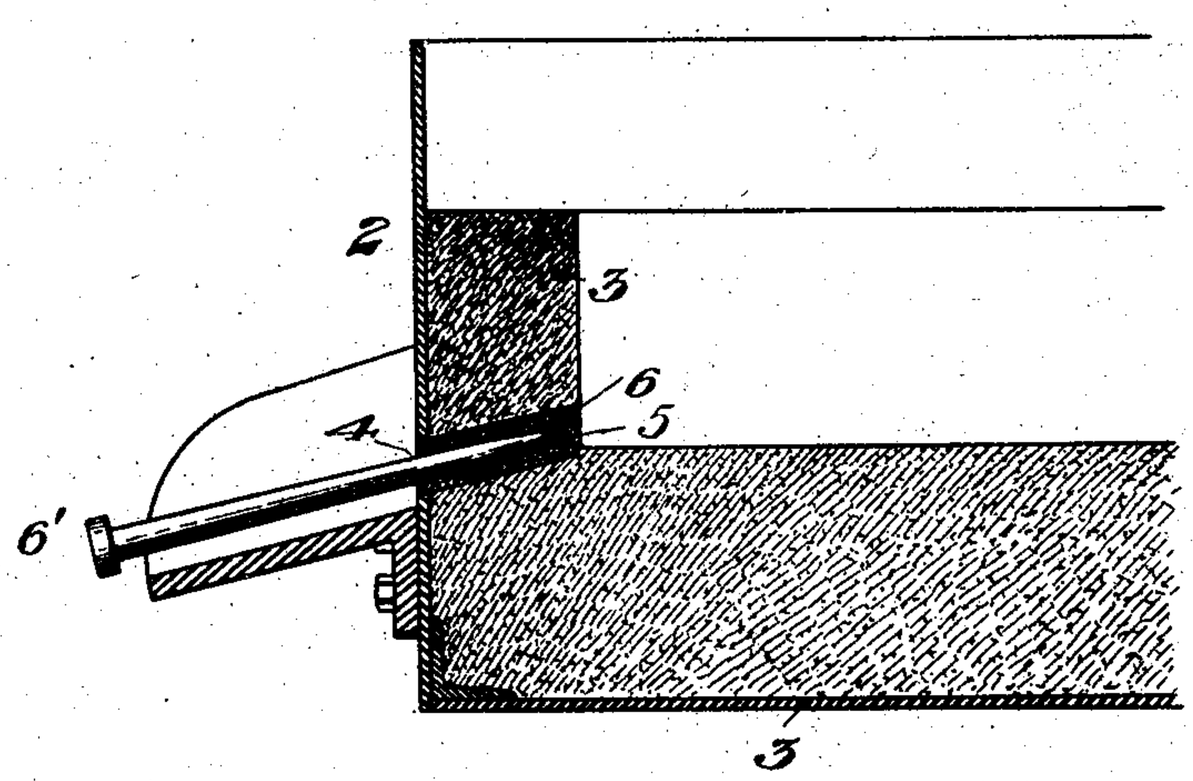
No. 796,325. PATENTED AUG. 1, 1905.

C. M. HALL.

STOPPER FOR ELECTROLYTIC POTS CONTAINING FUSED BATHS.

APPLICATION FILED APR. 30, 1902.



WITNESSES

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CHARLES M. HALL, OF NIAGARA FALLS, NEW YORK.

STOPPER FOR ELECTROLYTIC POTS CONTAINING FUSED BATHS.

No. 796,325. Specification of Letters Patent. Patented Aug. 1, 1905.

Application filed April 30, 1902. Serial No. 105,265.

To all whom it may concern:

Be it known that I, CHARLES MARTIN HALL, of Niagara Falls, Niagara county, New York, have invented a new and useful Stopper for Electrolytic Pots Containing Fused Baths, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, which shows in vertical section a pot provided with my improvement.

The purpose of my invention is, primarily, to provide means for stopping and enabling the ready tapping of the tap-holes of electrolytic pots containing fused baths, such as pots used in the reduction of aluminium. It is necessary that the workmen should be able to open quickly and easily the tap-holes of such pots when it is desired to withdraw the metal. Any delay in inserting the stopper entails waste of the molten bath which overlies the layer of metal to be withdrawn, and if the stopper is hard to dislodge it requires an expenditure of labor, and the effort required to dislodge it may occasion injury to the pot or to its lining.

My invention consists in a tapering metal plug which is driven into a body of plastic material composed, preferably, of powdered carbon and a carbonaceous binder, such as tar, previously placed in the tap-hole. The plug is driven into the plastic body before the latter has become hard, and it is forced inward until its end nearly reaches the interior of the pot-lining, and although the plastic body which surrounds the plug hardens and becomes baked around the plug and effectually seals the tap-hole against the escape of metal the plug can be withdrawn readily when it is desired to open the hole. The plug is sufficiently long to project outwardly beyond the shell of the pot and is provided with a head which can be struck with a hammer or bar, enabling the plug to be removed. The contact of the plug with the atmosphere cools it and prevents the destruction of the inner end by heat or corrosion.

In the drawing, 2 represents the metal shell of a pot for the reduction of aluminium. 3 is the lining. 4 is the tap-hole.

In stopping the tap-hole I first place in it a ball 5 of plastic material, as above stated, and then drive thereinto a tapering iron plug 6, the end of which has a head 6′, enabling it to be seized when it is to be withdrawn.

I claim—

1. A stopper for pots containing fused baths, consisting of a tapering metal plug, and a plastic body set in the tap-hole and baked around the metal plug, said plug projecting outwardly beyond the pot and being removable from the plastic body to open the tap-hole; substantially as described.

2. A stopper for pots containing fused baths, consisting of a tapering metal plug and a plastic body of carbon set in the tap-hole and baked around the plug, said plug projecting outwardly beyond the pot and being removable from the plastic body to open the tap-hole; substantially as described.

In testimony whereof I have hereunto set my hand.

CHARLES M. HALL.

Witnesses:
C. H. MORITZ,
LILIAN E. COLT.