

White Hall III.

May 1, 1905

Professor Binns

Dear Sir,

From my work here I have concluded that rapid cooling has little to do with pin holes in Bristol glazes. My trials for the most part have been made in a kiln which is fired off and its fires drawn at usually 5 o'clock p. m. and the door is knocked in between 6 and 9 the next morning. This represents about as rapid a cooling as can be found. The ware in this kiln is not more pin holed than in other local kilns that are cooled much longer.

I have found that if a clay is lawned through a 160 lawn, rather than a 90 brass lawn, that a glaze is less likely to pinhole. In fact, it does not pinhole at all except if the glaze is too thin.

Bristol glazes are usually dipped too thin and it seems there is greater reactions between glazes on raw clay than between glazes on biscuit. Hence the glaze is hardened and becomes dry in the thinner places. Where sand particles stick through the glaze coat from the clay body, a pit or pinhole is usually found. This is to be observed in the case of turned ware made from ground raw clay. By "turned" I mean "thrown."

My idea then, is that a thick coat covers the sand, dissolves it, and leaves the coat smooth. Anyhow a thick glaze coat is free from pinholes when the clay has been carefully prepared.

Pyrites (?) I think will also cause a breaking of the glaze coat and a consequent pinhole. These are removed by lawning the clay. Organic matter also causes pin holes in turning out. And lastly a hole is left in the glaze in dipping the piece if a depression filled with air is left in the piece. The glaze cannot displace the air, a bubble forms and breaks and a small hole is there no trick never covers over. A person can touch these up with a brush and secure a perfect piece.

To sum up. Pinholes are caused by dirty clay, poor workmanship in dipping and making the ware, and by a too thin glaze coat.

I thank you for the endorsement you gave me to the Roodhouse (?) parties. Perhaps Jerseyville parties will also write you. I am lucky enough to have two lots bidding for my services, hence the two references.

I am glad to answer any questions at any and all times you may care to honor me with.

So you think it would be a good thing for Bill to take my place here in case of a change, he to gain practical experience for a year and then to finish his course? I think I can arrange it for him.

Yours very truly,

Paul E. Cox