Detailed instructions on melting and description of London practice.

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Source: MINT 19/1/201, National Archives, Kew, Richmond, Surrey, UK

<201r>

Sir

I am enquiring for a melter to be sent down to you. But its not practicable for any man to undertake the meltings with your Pit Coal untill he has had some experience working with it, & finds out by that experience how the fire may be governed so as not to over heat the metal. For no man can undertake to do a thing before he knows how to do it, nor know how to do a thing of this nature without experience. * < insertion from the top of the page > * All that we can do is to send you down a Melter who may assist you in moderating the fire as well as he can till he has learnt by experience to do it as well as he should. < text from f 201r resumes > By your putting in the allay when you are ready to pour off I know that your metall is much too hot for otherwise the allay would not be melted so quickly We put in the allay soon after the silver begins to run, that it may have time to melt, I heare also that the Barrs are sandy For if the metal be too hot it will disturbe the sand & make it blow. I Feare your Melter makes too much hast with the melting & putts in too much fire to make the silver melt quickly, & that your potts are too thin & your furnace not so substantial as ours. For if the silver heat too fast it will grow too hot, & if the pot be too thin it will heat faster then if the Pot be thick, & a thin furnace heats sooner then a thick one & may grow so hot on the outside as to scorch the Melter when he lades off the pot Our Pots are about an inch & a quarter or an inch & an half thick & we melt three times a day in the same furnace & no more & the silver (according to the best of my memory) is about 2 hours or $2\frac{1}{2}$ in melting the first time. But the furnace being once heated the silver runs sooner the second & third time. Pray therefore the next melting see that no more coals be put into the furnace then suffice to make the silver run in two hours time or $2\frac{1}{2}$, & see that the heat be not encreased suddenly to make the silver run, but kept eaven & let the allay be put soon after the silver begins to run that it may have time to melt & mix well with the silver, & as soon as the silver is all melted & hot enough to run to the bottom of the mold before it congeales let the melter lade it off with all dispatch. We lade off a pot of 5 or 600 weight in 20 or 24 minutes. If the furnace holds too many coals, the Melter may put in some brick-bats or stones instead of coales. And if the furnace grow too hot on the outside it may be cased with bricks. The more substantial the Pot & Furnace is the eaven will the heat of the silver bee. Since the scissel is too fine to be remelted without allay, I doubt it must be run into Ingots & the Ingots rated & standarded & allayed a new but it may be kept a while till the meltings are setled.

As soon as the melting is put into better order, which I hope will be in two or three meltings more, you may come away. For my Lord Treasurer has given me leave to dismiss you. But before you come away, I desire that you would take a survey of the whole Mint & see particularly how many hours the Mill works in a day & whether there be room for another mill, & how many sizers are at work & how many more there is room for, & what is further to be done that they may coine 8 or $9000^{\overline{li}}$ weekly & I desire you would leave a correspondence between me & M^{r} Scott or Mr Drummond or both of them for promoting the service.