

# Another holograph draft of MINT00601 (/catalogue/record/MINT00601), (Mint 19/2/352), adding details of the hammer test and calculations of costs.

**Author:** Isaac Newton

**Source:** MINT 19/2/357, National Archives, Kew, Richmond, Surrey, UK

---

<357r>

2 In the reign of King Charles II a pound weight of of Swedish copper was cut into 20<sup>d</sup>. The copper & making of the blanks cost 18<sup>d</sup>, the stamping 1<sup>d</sup>, & a penny moer was allowed for the Graver Smith & incident charges.

3 A pound weight of fine English copper such as will hammer when red hot will cost 10 $\frac{1}{2}$ <sup>d</sup> or 1{0} $\frac{3}{4}$  in silver moneys, the same may be coyned without edging for edging for 5 $\frac{1}{2}$ <sup>d</sup> or 5 $\frac{3}{4}$  including the work of the Graver & Smith. the whole charge of copper & coinage is not above 16 $\frac{1}{2}$ <sup>d</sup> per pound weight & if the same be edged the edging will cost a penny more. And if a pound weight be cut into 20<sup>d</sup> there will remain at least 2 $\frac{1}{2}$ <sup>d</sup> per pound weight for purchasing Mills & presses & setting up a copper Mint & paying Checks & all incident charges.

1 If copper be mixed with any other base metal or semi-metal it will not endure the hammer when red hot but fly in pieces. So soon as it is refined by the copper workers to that degree as to be purged from all other base metal it begins to endure the hammer when red hot & to be worth about 98 or 100<sup>li</sup> per Tunn & such copper They call fine copper. For making copper vessels they refine it a little higher to make it more malleable & for making copper wyer they refine it still higher . But for money it is sufficient to refine it till it begin to beare the hammer when red hot. They that work in copper can readily judge of the fineness of it al{so} by the breaking off a little piece & observing the grain & colour where is is broken. There is also a way of assaying copper by separating the other base metals from it: but the assay by the hammer I reccon convenient certain & sufficient for the Mint. For it will be proper for the Master & Worker not to receive coarse copper & put it out to refine, as is done in gold & silver but only to receive fine copper, such as will endure the test by the hammer, & by the grain & colour in breaking

8 One M<sup>r</sup> Eyres a copper worker proposes to work fine copper into barrs paying 15<sup>d</sup> perr pound weight for the blanks which shall be cut out of them by the moneyers in the Mint & returning back the scissel. The barrs

to stand the test of the hammer when made red hot. Such barrs will be something cleaner then those made by casting the copper in molds of sand & milling them in the Mint, but will be dearer by about a penny in the pound weight.

4 The Mills Presses & other Engins for setting up a Copper Mint will cost six or seven hundred pounds & three farthings in the pound weight in coining an hundred Tunns will pay that charge.

5 Weighing & telling may cost  $\frac{1}{8}^d$  per pound weight, paper

<357v>

A pound weight of fine copper, such as will endure the assay abovementioned will cost  $10\frac{1}{2}^d$  or  $10\frac{3}{4}^d$  & the coynage will cost  $5\frac{1}{2}^d$  or  $5\frac{3}{4}^d$  including the work of the graver & smith, so that the whole charge of copper & coinage will scarce exceed  $16\frac{1}{2}^d$  per pound weight. And if the same be edged the edging will cost a penny more. And if a pound weight not edged be cut into 19<sup>d</sup> or a pound weight edged be cut into 20<sup>d</sup> there will remain  $2\frac{1}{2}^d$  per pound weight for purchasing mills & Presses & setting up a copper Mint & paying Clerks & incident charges.

---