Holograph memoranda on costings for copper coinage.

Author: Isaac Newton

Source: MINT 19/2/348, 350, 358, National Archives, Kew, Richmond, Surrey, UK

<348r>

If Copper be mixed with any other base metall or semi-metall 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 metalls, it begins to endure the hammer hen red hot & to be worth about 98 or 100^{li} per Tunn; & such copper they call fine copper. For making Copper Vessels they refine it a little higher, & for drawing into wyer they refine it still higher. But for money it suffices to refine it till it begins to beare the hammer when red hot. They that work in copper can readily judge of the fineness also by breaking off a little piece & observing the grain & colour where it breaks. There is also a way of assaying copper by separating the other base metalls from it, but the assay by the hammer I reccon sufficient for the Mint. For it will be proper for the Master & Worker not to receive course copper & put it out to refine as is done in gold & silver, but only to receive it when refined to the degree above mentioned.

In the reign of King Charles II a pound weight of Swedish copper was cut into 20^{d}. The copper & making the blanks cost 18^{d} the stamping 1^{d}, & a penny remained for other charges.

A pound weight of fine English copper such as will endure the assay above mentioned will cost 10$\frac{1}{2}$^{d} or 10 $\frac{3}{4}$^{d}, & the coynage will cost 5$\frac{1}{2}$ or 5$\frac{3}{4}$ including the work of the Smith & Graver: so that the whole charge of copper & coynage will scarce exceed 16$\frac{1}{2}$^{d} per pound weight averdupoise. And if the same be edged the edging will cost a penny more. And if a pound weight not edged be cut into 19^{d}, or a pound weight edged be cut into 20^{d}, there will remain 2$\frac{1}{2}$^{d} per pound weight for purchasing Mills & Presses & setting up a copper Mint, & paying Clerks & incident charges of assaying, weighing, telling, porterage, putting off, &c

The Mills & Presses & other Engines for setting up a copper Mint will cost six or seven hundred pounds. And three farthings per pound weight in coyning an hundred tunns will pay that charge. And when a copper Mint is set up, a pound weight of copper may be cut into 18$\frac{1}{2}$^{d} or 18^{d} not edged, or a penny more if edged.

The weight of all the copper received, & the weight & tale of all the copper money coined may be entred in books & in the Master & Workers account, & the surplus above all charges may be paid into the Exchequer.

<350r>

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 metals, it begins to endure the hammer hen red hot & to be worth about 98 or 100^{li} per Tunn; & such copper they call fine copper. For making Copper vessels they refine it a little higher & for making wyer they refine it still higher: but for money it suffices to refine it till it begins to beare the hammer when red hot. They that work in Copper can readily judge of the fineness also by breaking off a little piece & observing the grain & colour where it breaks. There is also a way of assaying copper by separating the other base metals from it, but

the assay by the hammer I reccon sufficient for the Mint. For it will be proper for the Master & Worker not to receive course copper & put it out to refine as is done in gold & silver but only to receive it when refined to the degree above mentioned

In the reign of King Charles II a pound weight of Swedish Copper was cut into 20^{d}. The copper & making the blancks cost 18^{d}, the stamping 1^{d}, & a penny remained for other charges.

A pound weight of fine English copper such as will endure the assay above mentioned will cost $10\frac{1}{2}^{d}$ or $10\frac{3}{4}$ & coynage will cost $5\frac{1}{2}$ or $5\frac{3}{4}^{d}$ including the work of the Smith & Graver, so that the whole charge of copper & coinage will scarce exceed $16\frac{1}{2}^{d}$ per pound weight averdupois. And if the same be edged the edging will cost a penny more. And if a pound weight not edged be cut into 19^{d} or a pound weight edged be cut into 20^{d} there will remain $2\frac{1}{2}$ per pound weight for purchasing Mills & Presses & setting up a Copper Mint & paying Clerks & incident charges of Assaying, weighing, telling, Porters putting off &c

The Mills Presses & other Engins for setting up a Copper Mint will cost six or seven hundred pounds. And three farthings per pound weight in coining an hundred Tunns will pay that charge. And when a Copper Mint is set up, a pound weight of copper may be cut into $18\frac{1}{2}^{d}$ or 18^{d} not edged, or a penny more if edged.

The weight of all the Copper received, & the weight & tale of all the copper money coined & made fit for delivery to be entred in Books & in the Master & Workers account, & the surplus to be paid into the Exchequer.

<358r>

The weight of all the Copper received & the weight & tale of all the Copper money coyned & made fit for delivery to be entred in books, & the Master to stand charged thereby & account for the same & to pay the surplus of all charges into the Exchequer,

That about $\frac{1}{2}^{d}$ per pound weight be allowed to him shall put off the copper money.