

The Coinage Trials of 1651 - The Third Side of the Coin

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This short note presents the background to the coinage trials held at Whitehall on 8 May 1651 and the details of the grained edges that were specified as part of the trials.⁽¹⁾

The sequence of events can be found in the book; *The Answer of the Corporation of Moniers in the Mint* published in 1653, which is a compilation of several documents, letters and pamphlets.⁽²⁾ In the paragraphs below I will list the parts with their titles, summarising the content with short quotes and add comments.

The book begins (pages 1-2) with *A Letter from Master Thomas Violet, to Master John Benfeild, Clarke of the Corporation of Moniers in the Tower of London*. Here Violet outlines the assertions made by Blondeau about the malpractices at the Commonwealth mint. (Jan 25 1652). This is followed (page 3) by *The Corporation of Moniers Answer* where Benfield describes Blondeau's assertions as scandalous libels. (Jan 27 1652).

The humble Representation of Peter Blondeau, as a Warning, touching severall disorders happening by Monie ill favoredly Coined, and the only meanes to prevent them appears on pages 4-6. Here the light weight coins, irregular flans, clipping, counterfeiting and culling and melting of heavy coins by goldsmiths and exporters are described. He states that some mint officials may be complicit in some of these activities. Blondeau proposes a solution to the problem *But that cannot bee don except the monie bee coined after my way, that is, marked on both sides, and upon the brims*.

The next few pages (6-10) provide *An answer to several objections formerly made against Peter Blondeau his waie of Coining the monie*. This covers keeping the edging method a secret, the prohibitive weight of the machinery and the difficulty of counterfeiting milled coins and easy detection plating/washing designed to deceive. Blondeau also claims that mint officials had been trying to find out the secret of his edging method in the nine months after the trial. *Above two years since, the honorable Council of State beeing desirous to remedie all the disorders in the Mint, thought good I should repair into England. Since that time the Officers and Workmen of the Mint have made their utmost endeavors to finde out my Invention, which they could not attain unto, although the Master of the Mint hath had in his hands my Patterns above nine moneths together: Besides that the workemen of the Mint intreated the Committee, that I should bee commanded to make a new tryal here, hoping they should bee able to discover my secret; Accordingly I did it, but they could not come to their end, only they made som few pieces after the old manner, which is not ready and expeditious, nor fit for the Mint, as themselves have confessed before the said Committee for the Mint: And therefore a further time was granted them to indeavor the finding out of the invention, and to make their Proposition; But all this while they could do no other thing but to bring every day new tales to amuse the State*. The trials took place at Whitehall on 8 May 1651, thus dating this letter to around February 1651 or March 1652 (old style)

A most Humble MEMORANDUM from Peter Blondeau begins on page 11 *Concerning the offers by him made to this Common-wealth for the coining of the Monie, by a new Invention, not yet practised in any State of the World; the which will prevent counterfeiting, casting, washing and clipping of the same. Which Coyn shall bee marked on both the flat sides, and about the thickness or the edge; of a like bigness and largness, as the ordinary coyn is: and will cost no more then the ordinarie unequall Coyn, which is used now*. This covers much of the same ground but also adds that Blondeau had been invited to London to demonstrate his methods, arriving on 3 September 1649 and the late Mr. Frost, then Secretary to the said Council, had given Blondeau £40 for the work.

The section continues with Blondeau's description of the aftermath of some early demonstrations. *The Committee for the Mint accordingly took into consideration, whether the said Blondeau should be admitted to coyn the monie of this Commonwealth; and having debated it, they resolved and approved*

that he should be admitted thereunto, provided his coyn and his Proposition should be advantagious to the State.

Afterwards the said Committee having seriously considered and examined all the circumstances of the way of coyning propounded by the said Blondeau, and having heard all the objections that could be alledged against it, both by the Master, Officers and Workmen of the Mint, or by any other of those who appeared in the business; upon debate of the whole, the said Committee concluded and Voted, that the said way of coyning propounded by the said Blondeau, was better, more advantagious and more honorable for the State, then that which is used now in this Common-wealth.

Blondeau continues, suggesting the Mint workers were unhappy with this conclusion. *The Master, the Officers and the workmen of the Mint told the Committee, it was not likely the said Blondeau had don himself, the pieces sent by him to the Council of State. Besides, that it was an old Invention, which they knew themselves, and that such pieces were onely made for curiosity, with very long time and great expence, and that it was impossible, that that way might bee used about the ordinary coyn, which is thin. They desired that the said Blondeau might bee commanded to make a trial of his skill by making som other pieces, and that they would do as much as the said Blondeau. Therefore the said Committee ordered both the said Blondeau and the said workmen to make their patterns and propositions respectively; and that hee that would make it with most advantage to the State, should have the Imployment.*

On the Trial day, 8 May 1651, the Mint workers presented their pieces and *Likewise the said Blondeau brought in about 300 pieces, som half-crowns of the ordinary weight and bigness, som shillings, sixpences, and som Gold pieces, and presented his Proposition.* Blondeau notes *the said workmen of the Mint, although they made use of the great and heavie Engins, that are in the Tower, yet for making of som Tools they had need of, and for the other charges of coyning about a dozen of pieces, they made then for a pattern, have spent £100.* Blondeau finishes by stating that his method will eliminate all of the corrupt practices relating to the coinage, and that he had been in London at the request of the State for 3½ years. As Blondeau arrived on 3 September 1649, that would make this letter date to around March 1652, similar to the previous. This is a very useful paragraph as it is the source of the mintage figures for Blondeau's patterns (about 300) and Ramage (about a dozen). Having been written by Blondeau, this number is a bit of an underestimate, however the total number listed by Bergne is 25.⁽³⁾

A printed version of the letter inviting David Ramage to the coinage trials can be found on page 20.

VWhite-Hall the 14. June 1651.

Mr. DAVID RAMAGE,

T Hese are to authorize you, to make some patterns as broad as a shilling, a half-crown, a twenty shillings peece of gold, in a mill; and if you can doe it with letters about the edge, or other wayes, according to Queen Elizabeths patterns of mill-money, or any other modell or peece you are to make, That so the Committee of the Mint may see your severall peece, and thereupon consider what is fittest to present to the Councell of State, for the more handsome making of the monies for the honor of this Common-Wealth.

James Harington.
Tho. Chaloner.

This is several weeks after the trial, so the date must be in error. It also mentions lettering about the edge according to *Queen Elizabeths patterns of mill-money*. This must also be in error, as no coins of Elizabeth's reign have edge lettering. This may be a corporate mis-remembering as Mestrelle and the Elizabethan moneyers would have been aware of the French edged coins (see below).

The reply of the Moneyers begins on page 21. After stating that the mint workers had produced pieces with edged letters as good as Blondeau, they went on to accuse Blondeau of counterfeiting, as he had made coins outside the Mint, in a house in The Strand, with the Commonwealth design and also had made plated copies of halfcrowns, shillings and sixpences, for which act of treason, he should be hung drawn and quartered. Thus all of Blondeau's instruments and tools were seized and taken to the Tower.

The Moneyers' reply continues (pages 22-23) with a letter dated 28 Febr. 1650. *To the right Honorable Sir James Harrington, one of the Councell of State, Chairman for the Committee of the Mint. The humble Proposition of the Provost and Moniers of the States Mint in the Tower of London.* Here the costs of making hammered coins are stated and also the higher costs that would be incurred if milled coins were to be made in the same fashion as in France.

On page 24 - *The eight of May 1651. The right Honorable the Committee for the Mint did order us the Moniers to make our tryall the States Arms as upon 20. s. piece, the motto about the edges, Truth and Peace; the same in silver for a half crown, the motto about the edges, Truth and Peace, and some of the same peeces to have a graining about the edges with/out motto, and to present them the third of July 1651. to the right Honorable Sir James Harrington, being Chair-man for that Committee*

And before any determination of what the State would conclude on; Peter Blondeau a French man hath dispersed a false and scandalous Paper both at Westminster and at the Exchange in London and beyond Seas, in dishonor of the monies of the Nation; and charging the Officers and Moniers of the Mint with making monie contrary to their Indenture; a charge so false and scandalous, that hath inforced us the Provost and Moniers to reprint the said Blondeau's Paper, and to give a short answer to the untruths and absurdities in it:

On pages 25-29 appear detailed replies to Blondeau's accusations *The Provost and Moniers Answered to the Objections of Peter Blondeau* is . . . including details of the Trial of the Pyx, for fineness and weight. Comments on clipping and melting as well as foreign exchange. The quality of their patterns and costs of manufacture

Page 30 begins another section where the moneyers reiterate their claims that *Peter Blondeau, seeing he escaped so long with/out punishment, and without our calling him to a legall accompt, both for his first libell and for his counterfeiting of shillings, sixpences and halfcrowns.* An analogy is drawn with the milled money of Elizabeth's time, without naming Eloi Mestrelle, who was also ultimately hanged for counterfeiting. Blondeau had admitted he knew several methods for silvering false coins. This is followed by a suggestion that the laws are tightened on transporting and adulterating coins.

On pages 33-41 *The Officers of the Mint in the Tower of London, whose names are hereunder written, in pursuance of the directions of the Honorable Committee of the Navie, in relation to their Order dated the third of December present, do humbly conceive, and Certify as followeth.* Here nine detailed charges are made against Peter Blondeau dated 8th December 1652. Along with a summary of the costs of the coining trials. This last is in the name of Thomas Violet and the request for payment for the costs of the coining trials appears with the names of the Mint Committee followed by the names of the 59 Moneyers and 51 labourers working at the Mint on 27 January 1652

The following sections will look in detail at the edges of hammered and machine made (milled) shillings dating from the 1651 trials and afterwards.

The Shillings of 1651

There are four main types of shilling dated 1651 as illustrated below

- Obv. **•THE COMMONWEALTH•OF•
ENGLAND•** i.m. sun. Around a
wreath of palm and laurel and shield
of St. George.
Rev. **•GOD•WITH•VS•1651**
Around a shield of St George and the
Irish Harp and **•XII•**
Details. 32.4 mm, 5.869 g. **Normal issue**,
slightly irregular edge. 125%.



- Obv. **•THE COMMONWEALTH•OF•
ENGLAND•** i.m. sun. Around a
wreath of palm and laurel and shield
of St. George.
Rev. **•GOD•WITH•VS•1651**
Around a shield of St George and the
Irish Harp and **•XII•**
Details. 32.4 mm, 6.050 g. **Fine Work Issue**,
circular flan, smooth edge. 125%.



- Obv. **THE•COMMON•WEALTH•OF•
ENGLAND** i.m. mullet. Around a
wreath and shield of St. George.
Rev. **GAVRDED•WITH•ANGELES•
1651** i.m. mullet. Around a shield of
St George and the Irish Harp held by a
winged angel.
Details. 32.3 mm, 6.310 g. **Ramage Pattern**,
grained edge. 125%.



- Obv. **•THE•COMMONWEALTH•OF•
ENGLAND•** i.m. sun. Around a
wreath of palm and laurel and shield
of St. George.
Rev. **•GOD•WITH•VS•1651**
Around a shield of St George and the
Irish Harp and **XII**
Details. 26.4 mm, 6.046 g. **Blondeau Pattern**,
grained edge. 125%.



The Normal issue, even with this unclipped specimen, has a slightly irregular edge, leaving it open to clippers and is already 3% underweight which is more than expected for that level of wear. The Fine Work issues are made using carefully prepared dies with very well laid out lettering and symmetric designs and well centred on a very round flan. The pattern pieces display significantly better designs, fonts and layout than the Normal and Fine Work issues and also have the new milled edge. The Ramage pattern has his characteristic mullet initial mark and font, especially the letter A which has a very pronounced slope at the top, both typical of many seventeenth-century tokens. By using a smaller diameter and maintaining the weight, Blondeau had a thicker flan edge to which to apply the graining.

Grained Edges

The first edges applied to coins appeared in France in the 1550s when Aubin Olivier used collars to confine the blank as it was struck in a screw press.^(4,5) As the blank expanded its edge took the impression of the collar. This was a very slow process. Collars with which metal bands (either blank or containing the graining or lettering) were used by the Mint to create the edges of some patterns, proofs and medals in the 18th century.⁽⁶⁾

In the 17th century it is speculated that Blondeau used an edging method similar in principle to what is now called a Castaing machine. Jean Castaing was a French engineer who developed the device shown below. Castaing developed the device in 1679, proposed it to the Paris Mint in 1685 and it was used for the edges of all gold and silver coins in France after 1686.

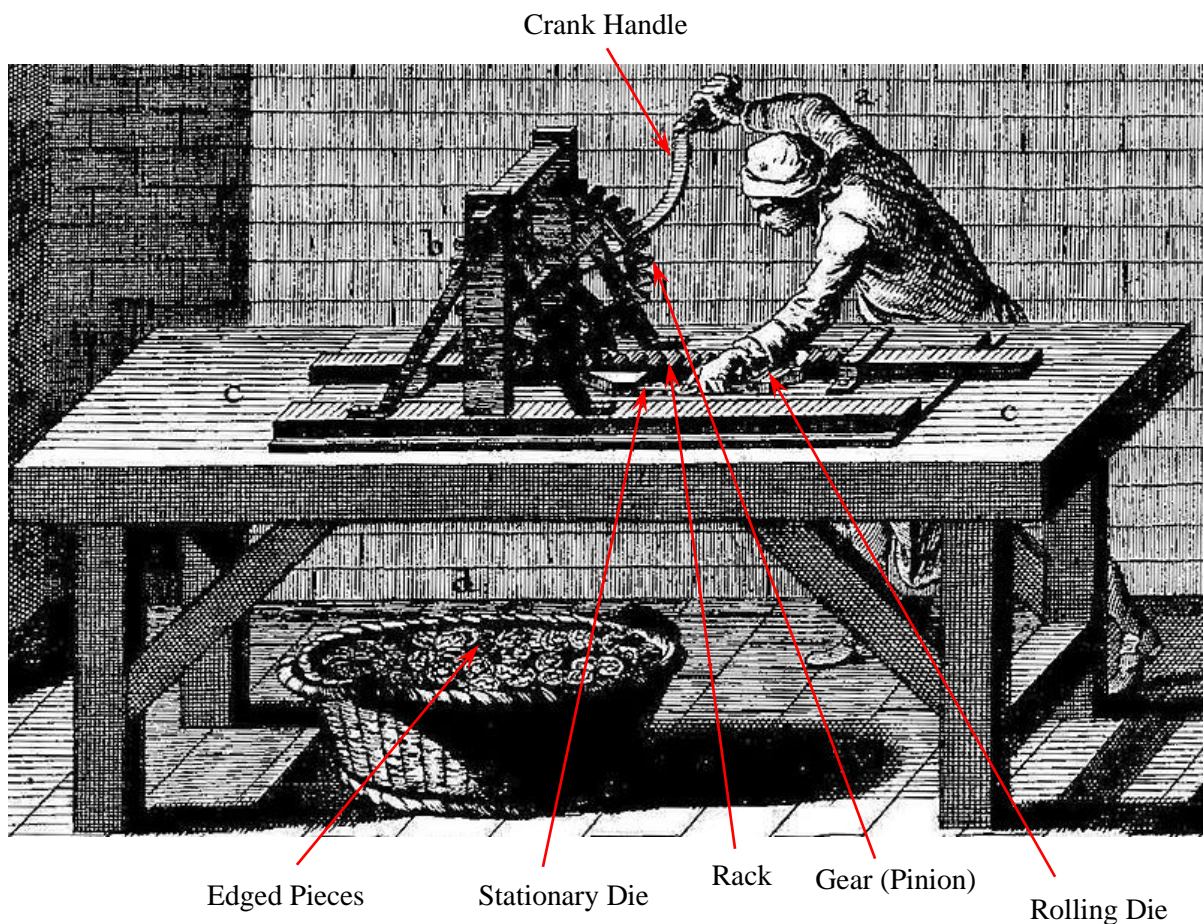


Fig. 1. Castaing machine for applying edges to coins.⁽⁷⁾

The blank is rolled between two parallel grooved metal dies, each containing half of the edge design. Thus if the blank isn't exactly the correct diameter, signs of overlap in the edge designs can be seen 180° apart on the edge. Sometimes the overlap is just visible at one location, and rarely there is no sign of overlap.

The ANA Money Museum has recreated a Castaing machine, and the figure below contains frame captures from a video of the machine being used.⁽⁸⁾ The first obvious difference between the early drawing and the reconstructed device is the diameter of the pinion gear. Whilst the edging dies are only in contact with and working a small part of the edge, the forces involved are still quite large.

The edge was usually applied to the blanks before striking so that the edge was slightly upset (thicker) and ready to take the impression of the raised beading around the edge of the obverse and reverse dies.

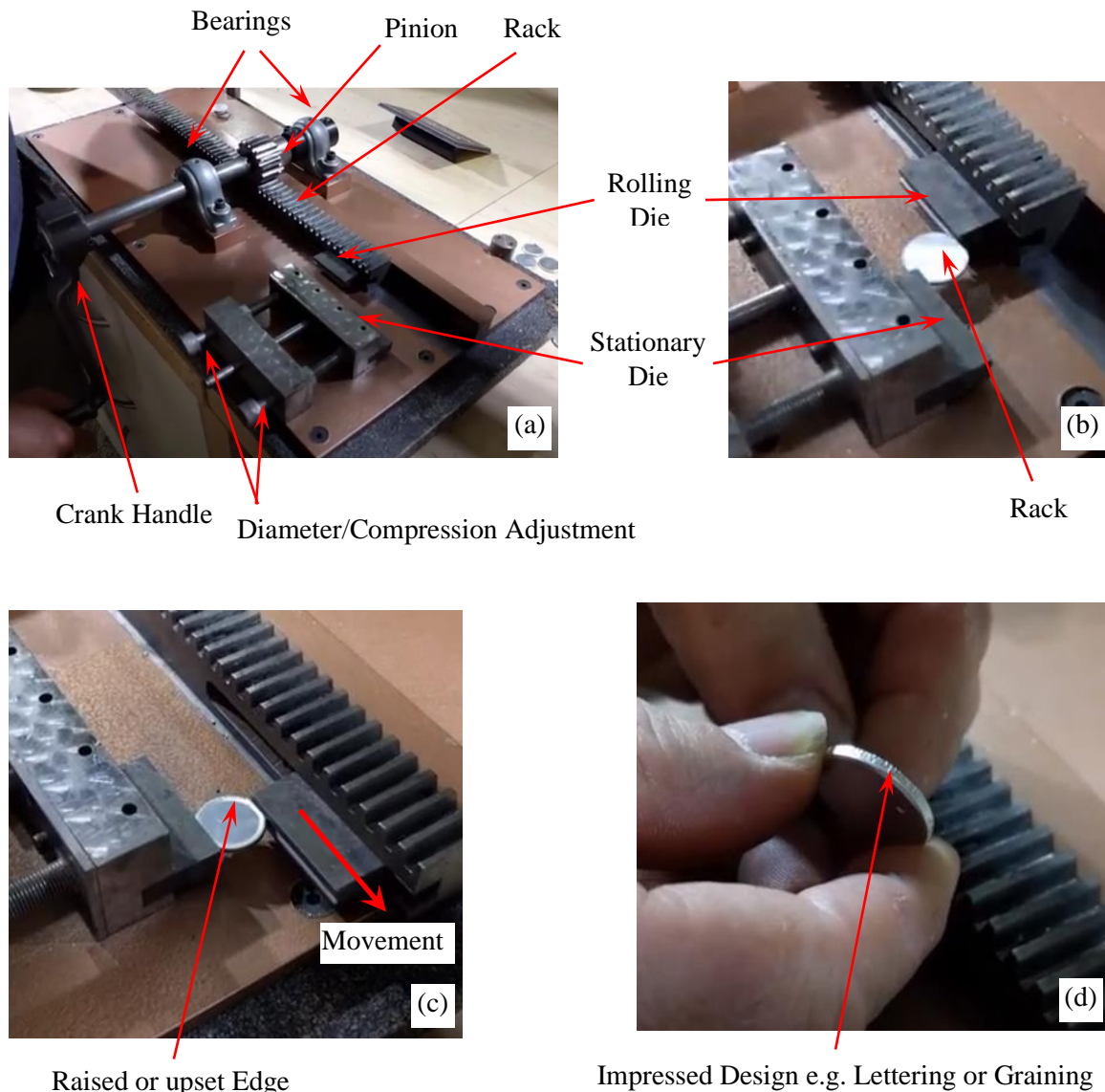


Fig. 2. Adding an edge to a blank using a Castaing machine⁽⁸⁾.

The main components are shown in (a) and a fresh blank is shown in (b), just wedged at the start of the two dies. The crank handle is turned, forcing the blank in between the dies, reducing its diameter slightly and upsetting the edge as shown in (c). Turning the handle a little further and the blank with its upset rim and edge design drops out. The supporting table would have had a hole in so that the edged blanks would just fall through into the basket below as shown in Fig. 1.

The figure below shows the edges of the four different types of shillings from 1651. The Normal issue coin has a slightly irregular edge with the odd nick and traces of the original shear marks. The Fine Work piece is much more rounded, but still shows some evidence of the shear marks. The edge of the Ramage pattern shows the graining, but also some distortion where the two ends of the graining don't line up. It is not obvious that this distortion is possible on a Castaing type machine. The Blondeau pattern clearly shows an overlap in the graining typical of when the edging dies overlap when using a Castaing machine.

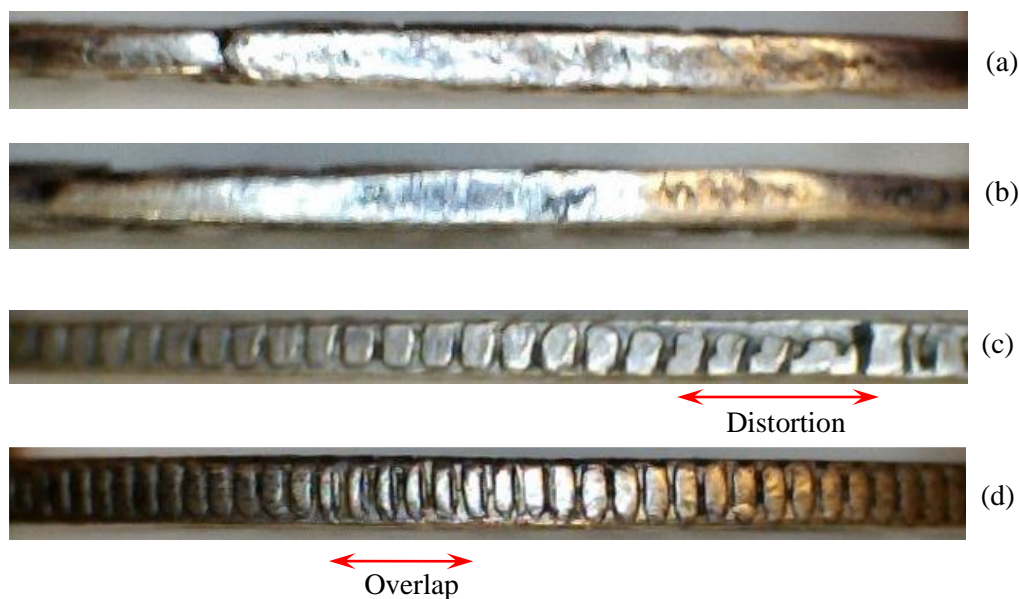


Fig. 3. Edges on 1651 shillings (a) Normal, (b) Fine Work, (c) Ramage and (d) Blondeau.

Figure 4 is a close up of one of the grains on the Ramage pattern, clearly showing that the grains do not span the full thickness of the coin but are discrete protuberances of metal with a shoulder that reaches to the edge of the coin. A similar effect can be seen on the Blondeau pattern where the individual beads have rounded ends and there is a small shoulder to the edge of the coin.

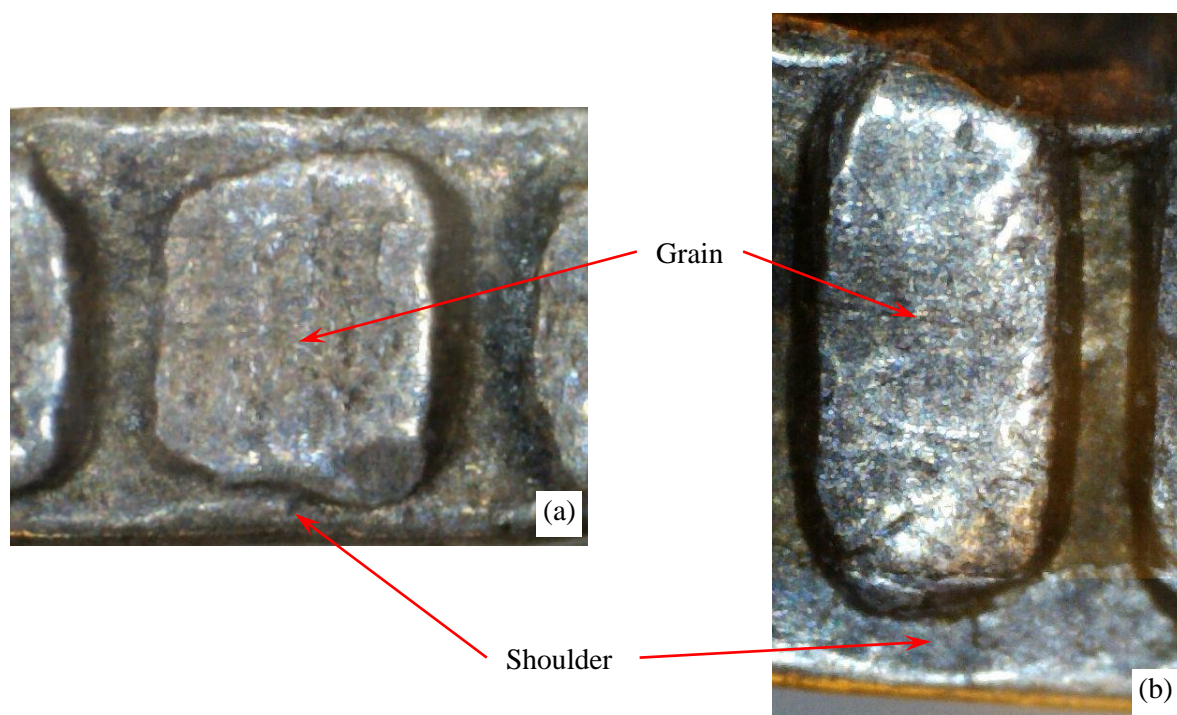


Fig. 4. Single edge grain from (a) Ramage and (b) Blondeau pattern shillings.

This feature would make counterfeiting very difficult as it requires a very specific tool to achieve the beads and the shoulders. However, as with all subtle anti-counterfeiting measures, a small amount of wear would remove the distinction and once the shoulder has worn, something resembling a bead could be added to the edge of a counterfeit, or a coin reduced by filing, using a simple file.

Figure 5 shows the edges of a few more early shillings showing the transition from upright grains to oblique grains after 1669.

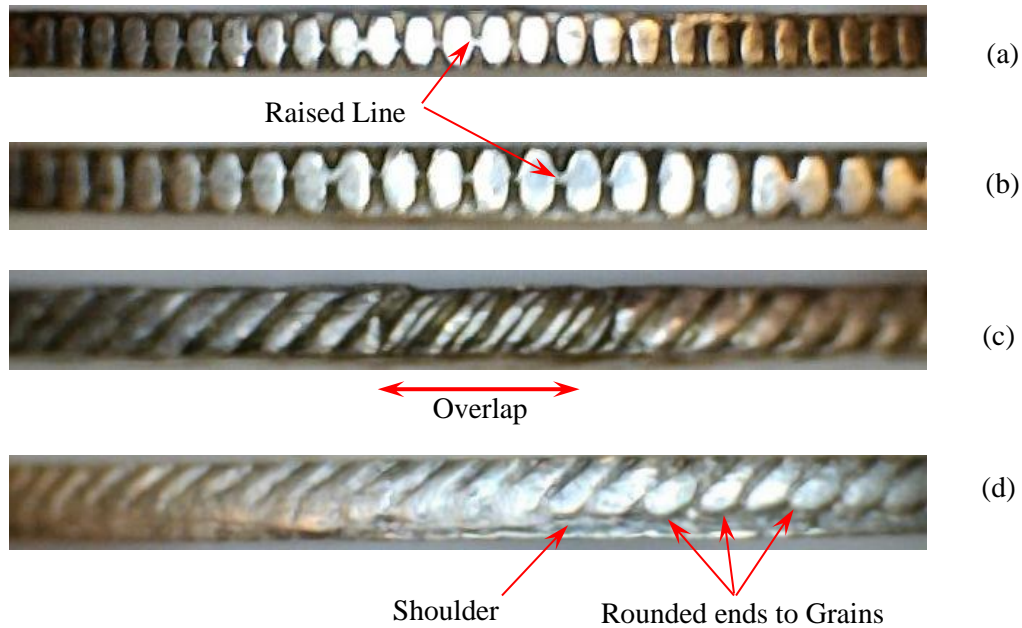


Fig. 5. Edges on later shillings (a) 1658 Cromwell, (b) 1663, (c) 1674, and (d) 1685.

The Cromwell (1658) and 1663 shillings both show the upright oval beads as seen in Blondeau's trial pieces and also show a distinct raised line between the beads. The purpose of this line is not obvious, but it would make counterfeiting the edge impossible without using the same tool. The 1674 edge shows the oblique milling and the effect on the graining when the edging dies overlap. The blank for the 1685 shilling must not have been properly aligned in the Castaing machine, leading to a portion of the graining being misaligned and clearly showing the rounded ends to the grains and the shoulder on the blank.

The figure below sketches the graining found on milled shillings after 1651 created using a Castaing machine.

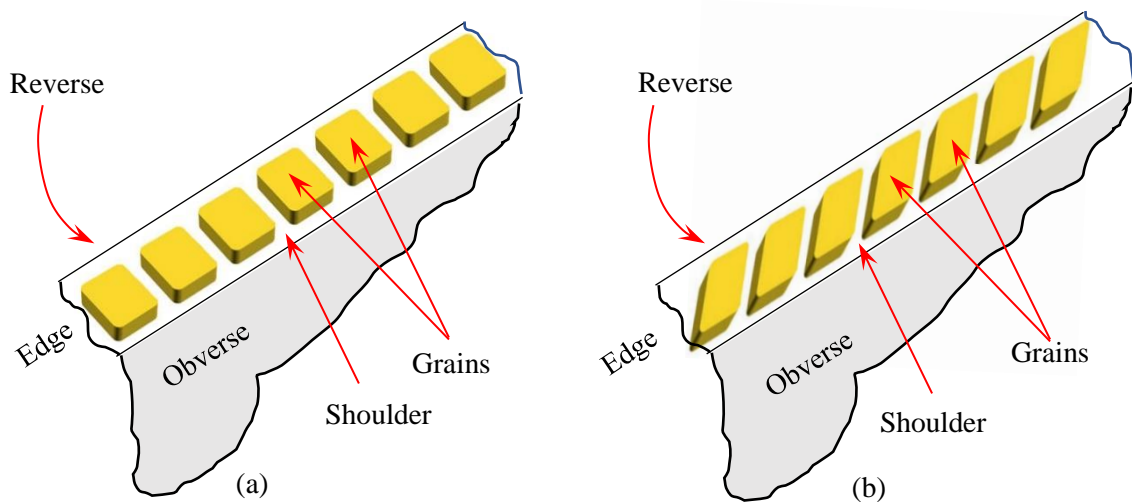


Fig. 6. Grained edges on 'milled' shillings (a) 1651, 1658, 1663-1668 and (b) 1669 onwards.

Discussion and Conclusions

The sections above have looked in detail at the *The answer of the Corporation of Moniers in the Mint* published in 1653, shortly after the coinage trials held between the established David Ramage at the mint and the newcomer from the French mint, Peter Blondeau.

Focussing on the grained edges, as specified in the remit of the trial, it is concluded that the edges of the Blondeau pieces were created using a machine similar to the well-known Castaing machine. The graining on the edge of the Ramage pattern has a different form to the Blondeau and subsequent grained edges and possible Ramage used a different method. The beads on both types are discrete with a shoulder reaching to the edge of the coin. I haven't seen this noticed before, though the slightest amount of wear will remove the shoulder and the grains will appear to reach across the full thickness of the coin.

At the trial Ramage could only deliver a few dozen pieces, and that was after considerable expense, whereas Blondeau appears to have easily produced around 300 samples. While the committee deliberated, both parties were still seeking payment over a year later.

Two publications in the name of Blondeau in 1653 made many accusations about the operations of the mint and moneyers. However, I have a strong suspicion that Blondeau's documents have at least the fingerprints of Thomas Violet on them and Mr Violet may have been playing a double game as part of his attempt to manoeuvre his way into the Mint.

Whilst Blondeau had an efficient method for edging coins, it would be another decade before it was applied on a large scale to the circulating gold and silver coins made at the Tower mint.

Towards the end of the reign of George III the pre-edging of the blanks was replaced by collars that impressed the edge during the striking process all in a single step.

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<https://www.youtube.com/watch?v=cLIITetETG0> taken at the ANA Money Museum
<https://www.money.org/money-museum>

First presented at the East of England Coin Day held at Cressing Temple, 10 September 2021. Many thanks to Brian Fergusson for permission to use screenshots from his YouTube video.

