

STAFFORDSHIRE ENGINE TURNED POTTERY - 1760-1780

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The application of the complex engine turning lathe to the decoration of English cream and redware pottery is a seemingly rare occurrence in the history of the potters art, and may be considered unique to the Staffordshire Potteries. This form of decoration which combines simultaneously the rosing and the pumping movements of the lathe, which I will refer to as the 'rose and crown' combination, appears to occur only within the lifespan of one individual, working between 1760 and 1780. This article is an attempt to locate his workshop and describe in detail the precision made products.

The name Wedgwood has for many years been linked with engine turned pottery, but it should be noted that no marked examples within the above time span, from this factory, appear to have survived. On 18th June 1763, in a letter to Josiah Wedgwood, William Cox, later to become Wedgwood's personal assistant, wrote from Aston Hall near Birmingham, the home of Sir Charles Holte, 6th and last Baronet, the following reference:

I have been endeavouring to get some knowledge about the Engine Lathe turning. I have not been able to get sight of one, nor don't feel I will unless under some particular agreement. I have been recommended to one Richards whom I have waited upon twice he agrees that he will make one that shall well answer your purposes, and instruct me in the use of it for £45 or guineas, and I have it and one compleat (sic) in two months time for he says as soon as we can agree I shall see the whole. Whether this will not be more hazardous that if we could see Mr Taylors first I leave to your consideration, but if your letter to him could provide me that privilege I should be glad of it. If you have any mind to agree with Richards let me know how far you approve his terms, and I will endeavour to know his character in this situation.¹

1. Ann Finer and George Savage (Ed), *The Selected Letters of Josiah Wedgwood*, London, 1965. Letter from William Cox later to be Josiah Wedgwood's personal assistant, dated June 18th, 1763. All the following Wedgwood quotations are taken from this important archive comprising approximately 1300 letters. The Wedgwood Archives, Keele University, Staffordshire.



Plate 1. Green glaze Whieldon? Dinner Plate, circa 1758-1760.



Plate 2. Green and yellow glaze. Whieldon Wedgwood Teapot, circa 1759-1760.



Plate 3. (above left) Bird spout, brown glazed coffee pot, circa 1760.

Plate 4. (above right) Bird and masked spout, silver coffee pot hall marked, London, 1753. Maker, John Snijf.



This letter shows that Wedgwood was aware of the art and mystery of ornamental turned pottery and had asked Cox, his employee, to investigate the availability and workings of the lathe in Birmingham, then a major centre of the metalworking industry. The letter gives us two potential lathe makers/owners, Richards, presumably a manufacturer, and, by the use of the prefix, Mr Taylor, a gentleman or manufacturer and possible owner of an existing Richards lathe. The proposed cost at £45 or guineas is high and Richards was presumably not prepared to disclose the lathe's complexities until a deal had been concluded. Wedgwood claims, in his *Commonplace* book, that he first introduced engine lathe turning into the potteries in 1763, however from the above correspondence, at this date, neither he nor his agent were familiar with the workings of the more complex combined ornamental and rose turning lathe, although he may well have already purchased a Richards lathe for simple engine turning.

On the 28th May 1764 Wedgwood writing to his partner Thomas Bentley, states:

...Have sent you semple [sample] of one hobbyhorse (Engine Turning) which if Miss Oates will make use of she will do me honour; this branch hath cost me a great deal of time and thought, and must cost me more and am afraid some of my best friends will hardly escape. I have got an excellent book on the subject in French and Latin; have enclosed one chapter which if you can get it translated for me it will oblige me much....

The book in question was Plumier's *L'Art de Tourner*, probably the revised 1749 edition, written in French but still not fully comprehended by Wedgwood. As an astute businessman it is unlikely that Wedgwood saw a commercial opportunity in the possibility of making complex engine turned pottery. Plumier, writing in the original edition of 1701, acknowledges that his book would be of use to those engaged in manual trades, but was mainly devoted to describing those machines and techniques useful to amateurs for personal amusement in



producing ornamentally turned works of art in their leisure time. Writing to his brother John in London, over a year later on the 6th July 1765 Wedgwood states:

I should be very proud of the honour of sending a box of patterns to the Queen, amongst which I intend sending two setts of Vases, Cream colour, engine turned, and printed, for which purpose nothing would be more suitable than some copper plates that I have by me...

From this letter it may be noted that he was instructing his brother to send designs to Queen Charlotte engraved and printed from copper plates. He may have considered this method of presentation more likely to impress, rather than drawings. To tempt her he included an engraved rendition of his proposed cream coloured engine turned vases, as yet unmade, for he continues: 'I can adapt the Vases so that the designs and they will appear to be made for each other, and intended for Royalty, nor must you hint to the contrary.'

Creamware Vases in sets are known,² but the attribution to Wedgwood rests with this letter which I suggest has been misinterpreted; Wedgwood was in fact sending drawings of engine turned vases to be engraved in London, the resulting printed design to be submitted to Queen Charlotte for her approval. Should the idea be accepted he would then turn the Vases to match the designs, the concept of engine turned pottery being unique to the Potteries.

Nearly two years later on February 16th, 1767, Wedgwood was writing to his partner Bentley in Liverpool, having sent him his copy of Plumier:

You will readily conceive which of the machines may, or may not be applicable to a potter, you will likewise come at the Technical Terms by referring to the plates and the recollecting what you saw of my lathes...

Plate 5. Teapots of various sizes and colour glazes, 1765-1780.

2. J.G.V. Mallet, edited by Du Boulay, *The Treasure Houses of Britain*, 'Item 424 The Creamware vases at Saltram House, with yellowish glaze, possibly imitating engine turned ivory.... The attribution.... rests mainly on Wedgwood's letters...' By 1771 he was suffering embarrassment '... 2 x Orfords Cream Colour, Engine lathed and gilt, such as you have now Stowed in the Garret out of the way, and such a situation Mrs Boulton has promised me for hers when we send her Better.'

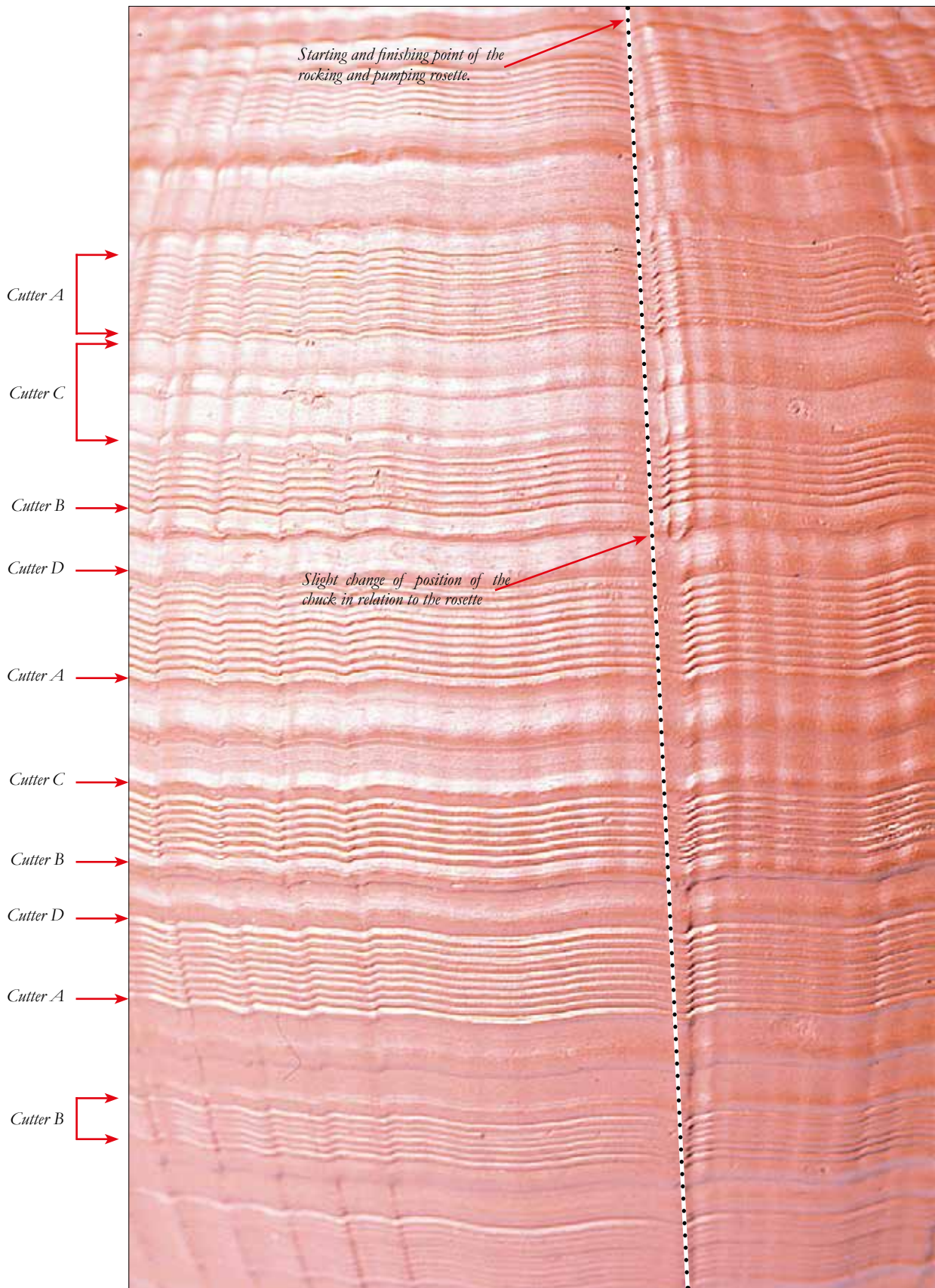


Plate 6. Four differently reeded cutters are used on this section of a circular teapot.

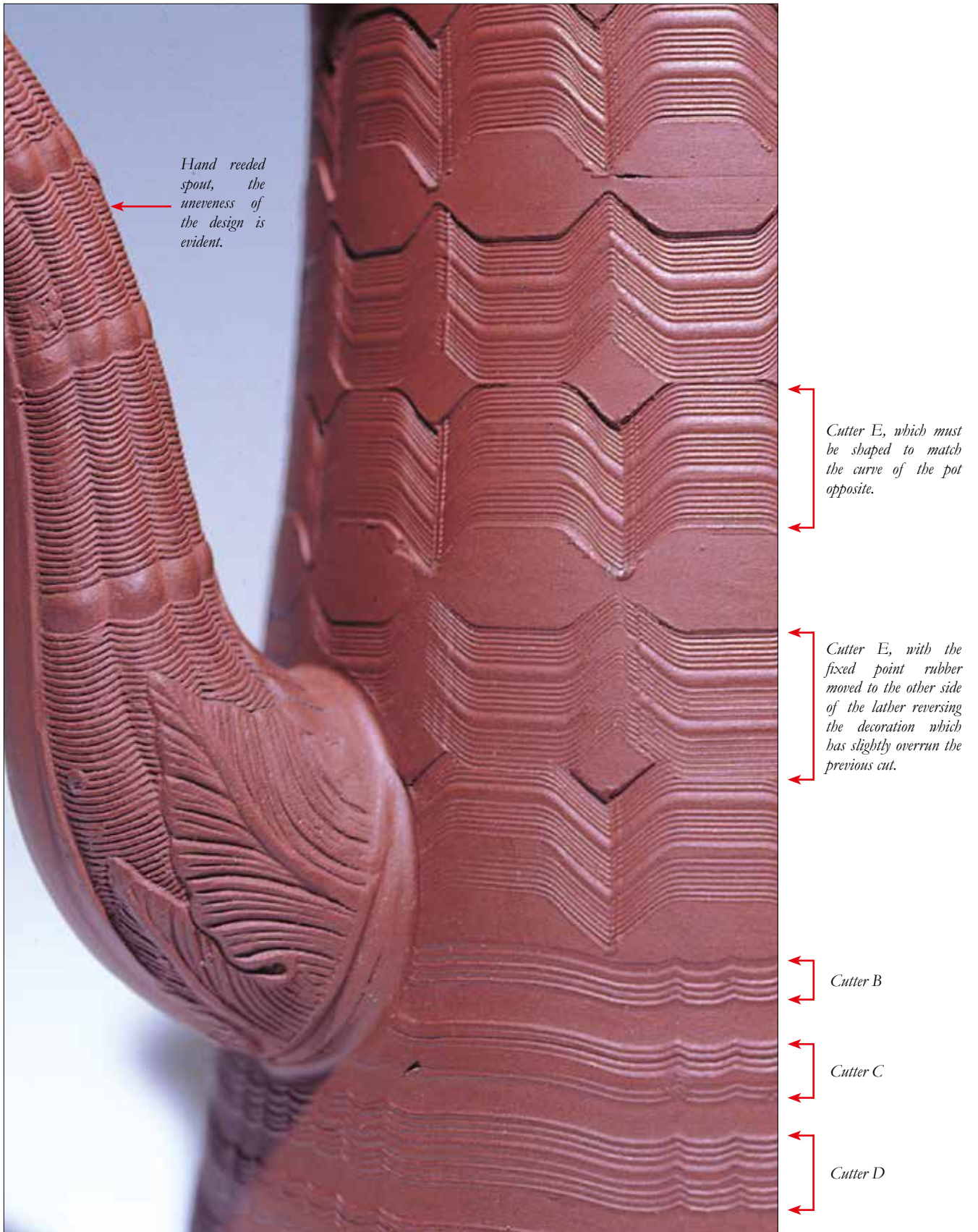


Plate 7. Combined geometric and wavy line decorated coffee pot. circa 1770.

3. John Wyke of Liverpool, *A Catalogue of Tools for Watch and Clockmakers* (Reprint 1977) With an excellent introduction, discussing Wedgwood and his tool purchases.
4. Alan Q Morton and Jane A Wess, *Public and Private Science, The King George III Collection*, Science Museum, 1993. This important but little known collection of instruments contains a barometer, page 226, an elliptical trammel, page 377 and a micrometer, page 390, all by Finney.

Wedgwood purchased his tools from the Liverpool tool manufacturer John Wyke.³ Wyke was a member of a dissenting religious sect known as the Octagonians named after the Octagon Chapel, on Temple Court in Liverpool, designed by Joseph Finney and founded by Wedgwood's partner Thomas Bentley. Finney was a mechanical genius, clock maker and instrument maker to George III.⁴ He was capable of manufacturing any form of complex mechanical machinery and doubtless it was he who was to be consulted on ornamental lathes. Finney's brother in law was John Whitehurst of Derby also a clock and instrument maker, a member of the Lunar Circle and friend of another member, Matthew Boulton. Later in the same letter Wedgwood writes:

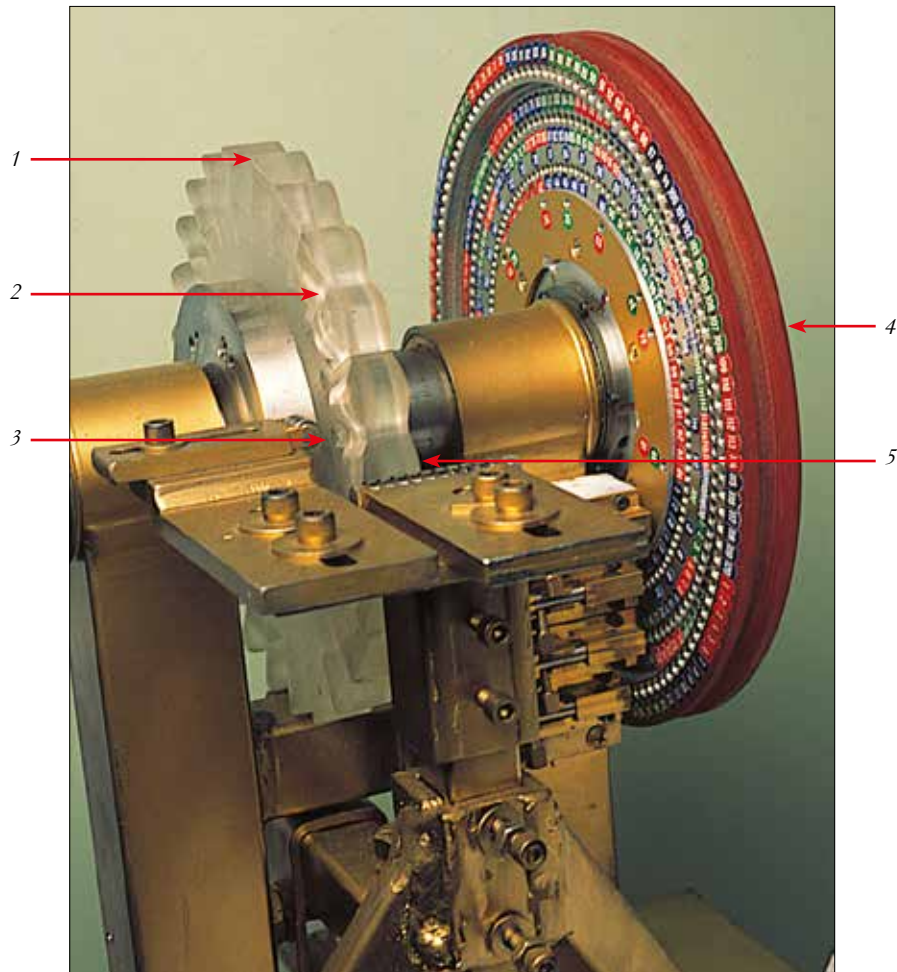
But I sat down to tell you in three lines what progress we had made in Engine-Turning, we make constant use of the rose and crown motion separately but have tryed very little what effects maybe produced by combining them.

It is this combination that produces a distinctive three-dimensional effect, the 'rose and crown' combination, as opposed to the two-dimensional appearance of work using one movement alone, either rosing or pumping.

Within three months Wedgwood had visited Boulton in Birmingham, presumably as a result of an introduction from Finney via Whitehurst and he was able to write to Bentley now in London:

Plate 8. Simple model of a pumping and rocking action. If all the motions are working together the object to be decorated is revolving, being pumped and being rocked all at the same time.

1. Revolving rocking rosette
2. Revolving crown rosette pumping
3. Fixed point for pumping rosette
4. Pottery object is chucked to this plate which slowly revolves
5. Fixed point for rocking rosette.



At Birmingham I saw a Lathe executed upon the plan of that which is full of Rosetts, and every Rosett had a projection from the edge so and for a Crown motion; the whole was most completely finished, and the Person for whom it was made hath at present no use for it. I am spend a day or two with him [Mr Boulton] and intend to ask him if he would like to part with it. He is I believe the first - or most complete manufacturer in England, in metal. He is very ingenious, Philosophical and Agreeable.

My comments on this letter are, that it would appear that this is the first time that Boulton and Wedgwood had met and from his enthusiasm it was the first time Wedgwood had actually seen a rose engine ornamental turning lathe, as distinct from a lathe to be used solely for engine turning. Further on in the letter he states: 'There is a vast difference betwixt the spirit of this man and the great Taylor'.

I suggest that this was the Mr Taylor referred to in Wedgwood's previously cited correspondence of June 1763 and that he was in fact Boulton's great competitor. John Taylor a leading Birmingham manufacturer of metalwork, who would have been well acquainted with lathes.

On 19th November 1767 writing to Thomas Bentley in London, Wedgwood notes:

We have got another Lathe up (the third) and I have committed a sad robbery upon my works at Burslem to furnish it. I have taken James Bourn to Etruria! The only tolerable turner of Good things I had at Burslem, and he is far superior to Abram at Vases. I would not have parted with him from my works at Burslem for a great deal on any other account for we have not one Engine Turner left there now. Poor Burslem - Poor Creamcolour. They tell me I sacrifice all to Etruria and Vases!

From this letter it would appear likely that Wedgwood had acquired Boulton's Rose Engine Ornamental Turning Lathe, which had been installed in the new

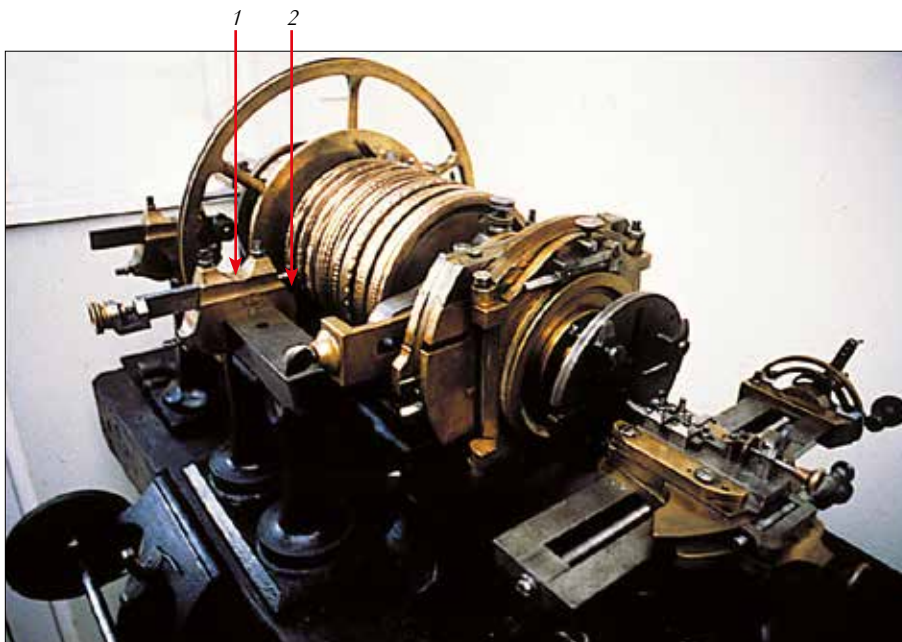


Plate 9. A late 18th Century Rose Engine fitted with pumping and rocking rosettes.

- 1. Pumping point*
- 2. Rocking point*

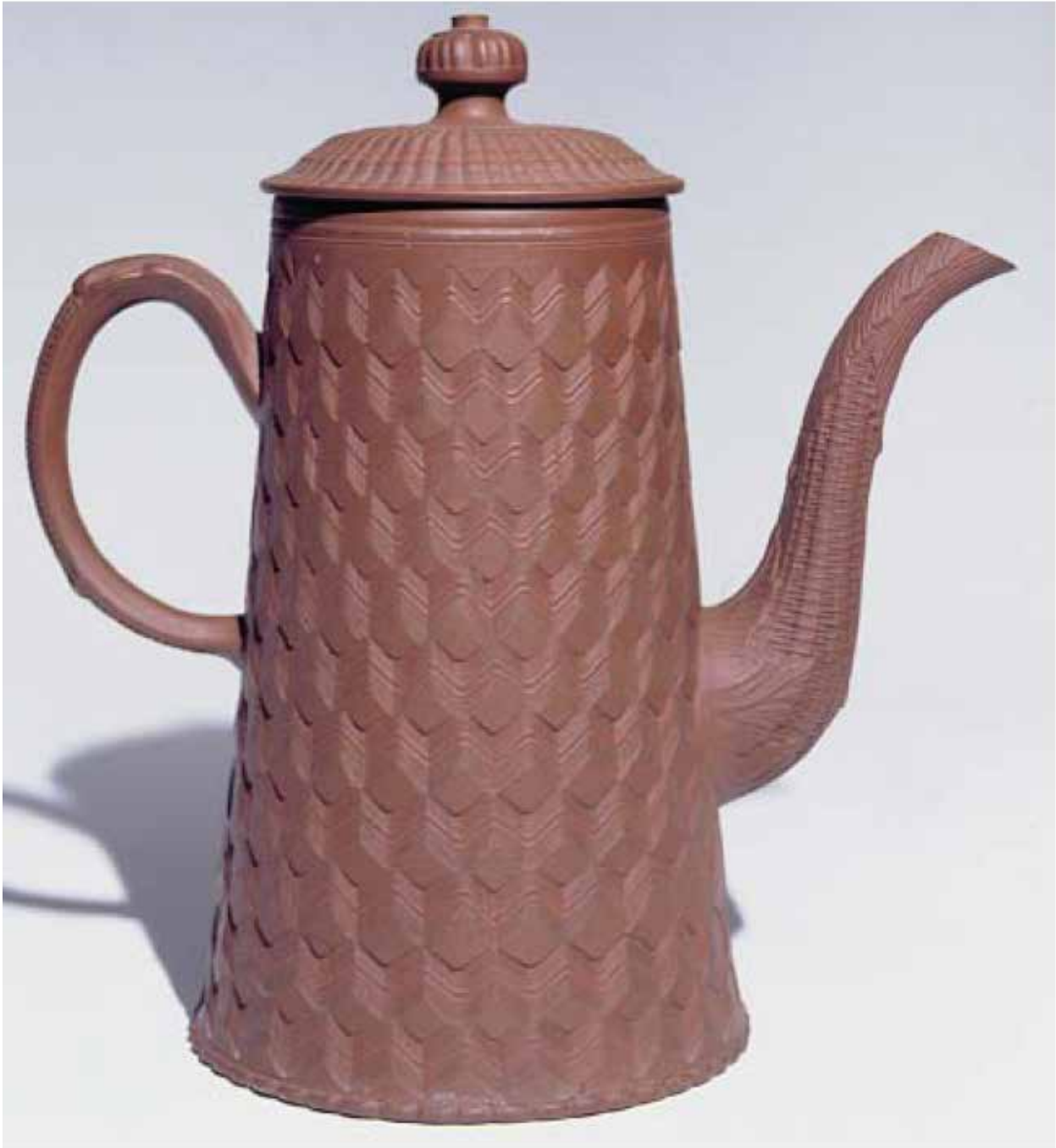


Plate 10. A fine straight sided domed coffee pot, with geometric decoration to the curved and tapered sides, unglazed, circa 1775.

factory at Etruria, to be worked by the one man: 'The only tolerable turner, James Bourn.' In July 1769 Wedgwood was still having real problems with his engine turning department. The earliest noted request for engine-turned ware was in July 1769 when Wedgwood, writing to Bentley in London states:

You both want Vases - you both want flowerpots, and you both want Engin'd ware of various kinds and we have but two turners and an half for both our works, and for all these things which would employ six or eight - Abram is turning flowerpots at Etruria ... We have a fortnights turning cut out, and the ware thrown, for all our engine Lathes, and without a single Vase, without them we can scarcely send off a single order.



Plate 11. (left) A selection of unglazed cream jugs showing the use of various wavy line spiked cutters applied to convex and concave surfaces. Each cutter if of any width will have to follow the curve of the body shape. Various dates 1760 - 1770.

Plate 12. (below) A complete engine turned unglazed tea service. L to R. cream jug, coffee pot, tea caddy, sugar/slop bowl, tea kettle/pot on stand with burner. They were not fired together as colour changes occur according to the slightest variation of firing temperature. They have been turned by the same hand between 1765-1770.



So after six years of effort with engine turned creamware, Wedgwood, by his own admission would appear to be unable to manufacture a commercial product on a regular basis. The reason for this could be that Wedgwood lacked a teacher, he being self taught in the art and mystery of ornamental turning and his workmen could produce only simple engine turned products.

In the sixteenth and seventeenth centuries ornamental turning was an art form patronised by the nobility throughout Europe but few examples of English work survive.⁵ Engine turning was later employed commercially by gold and silversmiths, for example, being used on watch cases as early as 1770⁶ and snuff boxes from around 1785, but the practice did not become widespread until the 19th century, under the influence of craftsmen like Breguet. It maybe argued that Wedgwood was among the few manufacturers to attempt the use of ornamental turning commercially in the 18th century, for other than engine turned pottery there are few British ornamentally turned objects of this period. The only other reference to engine turned pottery I have noted is also a cross over from metalwork to pottery/porcelain, Nicholas Sprimont, the silversmith and later owner of the Chelsea Porcelain Factory employed a Frenchman called Joseph Martin in 1759, termed in contemporary language a 'sur le tour a guillocher' (he worked a rose engine) who left Chelsea and went to Lambeth for a faience or pottery maker, called Jackson.⁷ It took the Holtzapffel family to reinvigorate

5. A Survey of Tudor and Early Jacobean Rose Turning, in *S.O.T. Bulletin* No 83 and *Treen* by Dr. John Levi (1998) Chapter on English Rose Turning Engine... (pages 28-37) written by John Hawkins.
6. *Britten's Old Clocks & Watches*, 9th ed. 1990 (page 179)
7. Bernard Dragesco, *English Ceramics in French Archives* (pages 10-17)



Plate 13. A wavy lined unglazed engine turned coffee pot with masked spout. The curved outline of the body shape when decorated using a wide cutter necessitates a change in the profile of each cutter used. A straight sided pot is a simple task in that the profile is constant.

8. David Barker, William Greatbatch, *a Staffordshire Potter*, Jonathon Horne, London, 1991. This excellent book lists Whieldon's apprentices and leads one to the conclusion that engine turned redware, attributed to the Leeds factory, was in fact fired by Greatbatch in his kilns.

ornamental turning and expand that interest with the manufacture of expensive lathes throughout the 19th century.

A far more prolific survivor is 'rose & crown' turned rather than simple engine-turned redware pottery, both glazed and unglazed, and I suggest that it was this product and its availability in the potteries from circa 1760 that spurred Wedgwood's interest.

Thomas Whieldon (1719-1795) the great pioneer English pottery manufacturer, purchased Fenton Hall in 1749 and took Josiah Wedgwood into partnership in 1754. Pottery experts consider that the introduction of underglazed decoration derived from mineral colours, iron giving yellow and copper green, is a result of Wedgwood's experiments whilst a member of this partnership until he set up on his own in 1759. A small group of engine turned circular teapots, glazed in these segmented alternate colours exist, dating towards the latter end of this partnership, circa 1759. The Whieldon/Wedgwood partnership employed as apprentices William Greatbatch, John Barker and Robert Garner,⁸ Garner and Barker were later to go into partnership together in Fenton with Thomas Barker, John's elder brother. 'rose & crown' turned redware is found marked by two other Fenton manufacturers Thomas Astbury⁹ and Richard Myatt.¹⁰

The factories of Whieldon, Greatbatch, Barker, Astbury and Myatt all of whom fired from their kilns 'rose & crown' turned pottery are within a mile of each other between Fenton Vivian and Fenton. It would have been impractical for each small factory to have its own lathe and resident turner and it is most likely that only one of these firms would have been the source. It is only possible to speculate as to this source, the turner would have to have an intimate knowledge of potting, be rich enough to own a lathe and skilled enough to have the touch to create the seemingly impossible from wet clay. Whieldon, a Gentleman (he was so described on his second marriage certificate in 1758), later Lord Lieutenant of the County, who lived at the 'big house' Fenton Hall, leaving over 10,000 pounds at his death, was a possible owner of such a lathe, if not latterly, its operator. If this was the case, Wedgwood, whilst a partner in 1759 would have known of its existence and its owners interest, not to be outdone, his aim was to produce a similar product from this, a rich man's toy.

In Whieldon's case, the ownership of the lathe would have given the local potters access to an expensive and complex machine requiring a specialist operator. Red clay could be supplied leather hard and of even consistency, not too wet so that the parings would stick or too dry or the pot would break under pressure from the cutter. The product could not be polished as with ivory or wood, being decorated with a spiked cutter as a pattern maker rather than a gouge, while being turned at low speeds to avoid distortion before finally being transported over short distances to the purchasers nearby factory.



Plate 14. Straight sided teapots decorated using a cutter with a straight profile, unglazed, circa 1770-1780.

John Adeney has made a special study¹¹ of the wavy patterns found on engine turned Staffordshire red and creamwares between 1760 and 1780 and has noted the existence of only nine so called wavy patterns; i.e. only nine variations of the crown cam. He included in his study items from public and private collections, excavated shards from the waster sites of Greatbatch and Barker and examples marked by Astbury and Myatt also the attributed two-coloured Wedgwood/Whieldon wares. The similarity of these wavy patterns provides a strong indication that all these pieces could have been turned on the same machine, an important pointer to a single source of production. Furthermore, these patterns have been observed on Redware and Creamware, but not on basalt.

It is my opinion, that the 18th century Staffordshire potters ultimate aim in terms of perfection was an unglazed perfectly delineated mechanical masterpiece with no flaws; a great achievement when considering the properties of the material, compared with those of ivory or lignum vitae, which are consistently hard and able to support fine cutting without crumbling. Many engine turned pottery items must have been flawed, the flaw would have occurred usually during the final handling during the application of the spout and handle, prior to firing or during firing. Money and time had been expended on production, so, when feasible, the flaw would be concealed by the application of a dark thick lead glaze and the item subsequently sold.

Having collected over forty items of English engine turned pottery, of which a few are illustrated in this article, I have only one small criticism, that is, that nearly always the lids fit in a sloppy fashion. I can only assume that this is a result of the body and lid shrinking at a different rate on firing. Overall the production of cream and redware items from clay, turned 'in the leather' on a rose engine lathe, then fired in a kiln, at over 1,000 degrees F, is a great example of man's ingenuity, and one of the minor masterpieces of the 18th Century Applied Arts.

Acknowledgments

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9. The exact location of Thomas Astbury's factory in Lane Delph is unknown, *Black Basalt*, Diana Edwards, (page 112) the families origins are two miles north of Fenton in the village of Shelton. A survey of the following articles provides a history of Astbury and engine turned Redware. R.M. Price, *English Redware*, Published Apollo, April, 1968. R.M. Price, Some Groups of English Redware of the mid 18th Century, published *English Ceramic Circle Transactions*, Volume 4, part 5, 1959.
10. A survey of the following articles provides a history of Myatt and engine turned Redware. David Barker, A group of Staffordshire Red Stonewares of the 18th Century, published *English Ceramic Circle Transactions*, Volume 14, part 2, 1991. Rodney Hampson, Longton Potters 1700-1865, page 127, Richard Myatt, burial 30th June 1796, left under £5,000.
11. An address by John Adeney on, Incised and Impressed Decoration on Wedgwood. 34th Annual Wedgwood International Seminar, April 1989, Atlanta Georgia. This was a pioneer lecture, of great importance to the subject of ornamental turning particularly on Wedgwood Pottery.