

## NUMBERED STRIKINGS OF VICTORIAN BRONZE COINS, 1860-68

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In 1925 Henry Garside described two pennies of 1867, a halfpenny of 1867 and a halfpenny of 1868, each with a pair of numbers scratched on the obverse.<sup>1</sup> In 1960 C.W.Peck<sup>2</sup> was able to increase the number of such coins to eighteen pennies, four halfpennies and six farthings, all dated between 1860 and 1868, while in 1970 Dr Stewart<sup>3</sup> added another penny, dated 1863, to bring the total to twenty-nine pieces.

The numbers appear on the obverse either side of the royal effigy or in the form of an improper fraction in the field in front of the queen's face. They are roughly scratched into the surface and there can be no doubt that they were added to the coins after striking. In the opinion of Garside, the first number is that of the obverse die in use during the year in which the coins were struck and the second number that of the reverse die, leading him to conclude that the numbered coins were the first impressions from the dies and were the pieces submitted to senior officials at the Mint for approval before coinage with these dies was allowed to proceed. Peck repeated this explanation, even though in the case of two farthings of 1864 with the same pair of numbers it obliged him to suppose that 'the first trial was temporarily mislaid, necessitating a second'.<sup>4</sup> It was left to Dr Stewart to cast doubt on Garside's theory, pointing out that the scratched numbers fell a long way short of the enormous quantity of dies required during a period of extraordinarily high production of bronze coin.

Seventeen of the twenty-nine pieces are in the British Museum and examination of them reinforces the doubts expressed by Dr Stewart. There is nothing obviously superior about the quality of the striking and, though well preserved, the coins do not have the appearance of specially struck trial pieces. Indeed, of the seventeen coins, at least twelve have been struck from dies that are either cracked or clashed; on some the cracks are extensive, while one of the farthing dies appears to have clashed more than once. Such defects are clearly incompatible with first impressions from new dies and the best that can be said of the coins is that they appear to be ordinary pieces taken at random from a production run.

An alternative explanation is therefore required and Dr Stewart made a decisive step in this direction by demonstrating that the scratched numbers fall into obvious series (Table 1). Quite simply, the greater numbers are continuous throughout regardless of denomination while the lesser numbers are consecutive within separate series for each denomination. There is, it is true, a slight inconsistency at the beginning, when the greater number looks to be repeated, but between 1863 and 1868 the sequence holds up remarkably well.

Dr Stewart could not, however, explain the purpose of the numbers. He recognized that the scratched pieces could not be coins set aside for the Trial of the Pyx at Goldsmiths' Hall since the Trial was restricted to gold

TABLE 1

*Numbered Strikings of Victorian Bronze Coins, 1860-68*

Date	Penny	Halfpenny	Farthing
1860	40/40	-	-
	63/63	-	-
1861	99/99	-	-
	-	102/102	-
1863	222/126	-	-
	223/127	-	-
	228/132	-	-
1864	-	-	233/8
	-	-	234/9
	-	-	236/11
	237/134	-	-
	239/136	-	-
	240/137	-	-
	-	312/118	-
1865	345/207	-	-
	351/213	-	-
	-	-	374/20
1866	476/299	-	-
	482/305	-	-
	486/309	-	-
	-	-	514/41
1867	542/329	-	-
	543/330	-	-
	550/337	-	-
	569/356	-	-
	582/369	-	-
	-	593/174	-
1868	-	598/178	-

and silver and did not include bronze. Nor did they appear to him to relate to output, some 350 million bronze coins having been struck by 1868; moreover, for 1862, when roughly a third of this total quantity had been produced, no numbered coins at all apparently survived. On balance Dr Stewart felt obliged to conclude, though perhaps without much enthusiasm, that the numbered strikings were to be connected in some way with the usage or output of certain dies or groups of dies.

It seems to me that Dr Stewart was right to consider output, and if two

simple but vital corrections are made the relationship can be shown to be much closer than he thought. The first point concerns the way in which output is to be measured. It is normal these days to think of millions of pieces but with eighteenth- and nineteenth-century copper and bronze it is in fact more sensible to think in terms of tons. Throughout the eighteenth century, for example, this was how output of copper was expressed, the deliveries of new coin from the moneyers into the mint office always being recorded as a weight. In the nineteenth century output was similarly considered in terms of weight and it is no accident that annual production was regularly an exact number of tons. Since the bronze coins were simple fractions of an ounce there was no difficulty in converting the weight of a particular denomination into numbers of pieces or face value.

The other important point about output is that the Royal Mint was not the only mint which produced bronze coin during the early 1860s. The replacement of the old copper coins, begun in 1860, was a very large undertaking and quite beyond the resources of a Royal Mint already heavily occupied with the production of gold and silver coins. A major part of the work, some 1720 tons of pennies, halfpennies and farthings, was therefore put out to tender and a contract for this quantity was awarded to James Watt & Co on 3 September 1860.<sup>5</sup> It was not in the event a happy choice and Watts were indeed so slow to get under way that a small supplementary contract for up to sixty tons had to be placed on 17 December 1860 with Heaton's, an efficient and well-run firm which probably ought to have had the main contract. Heaton's small contract seems not to have been carried out in its entirety since by the spring of 1861 Watts had overcome many of the problems and had got into their stride. Their vast contract for 1720 tons was finally completed, according to Ansell, by the striking of a bronze penny at 9.00 a.m. on Thursday, 11 June 1863.<sup>6</sup>

Thus in the period to which the scratched coins belong, 1860-68, three mints were involved in the production of bronze coin: the Royal Mint, Watts and Heaton's. Unfortunately, separate output figures for the three mints are not given in the published accounts and, as so often, the unpublished Mint records are not as helpful as they might be. Sufficient clues exist, however, to provide a perfectly adequate picture (Table 2). Two of the mints,

TABLE 2

*Production of Bronze Coin in Tons, 1860-68*

Period	Royal Mint	James Watt	Ralph Heaton
November 1860 - March 1861	104	74	32
April 1861 - March 1862	28	730	9
April 1862 - March 1863	33	813	-
April 1863 - December 1863	36	103	-
January - December 1864	42	-	-
January - December 1865	138	-	-
January - December 1866	117	-	-
January - December 1867	79	-	-
January - December 1868	41	-	-
Total	618	1720	41

Watt's and Heaton's, did not strike bronze coins after 1863 and cannot therefore be responsible for the scratched coins after that date. These later coins must be Royal Mint pieces and this has suggested that perhaps all the numbered strikings emanate from the Royal Mint and that in attempting to match the scratched figures to output only the production of the Royal Mint need be considered.

While slight difficulties about the Royal Mint's figures still remain, it can be asserted with some confidence that the breakdown by denomination may be summarized as in Table 3 and this, in turn, suggests a possible

TABLE 3

*Royal Mint Output by Denomination, 1860-68*

Denomination	Output in Tons
Penny	375
Halfpenny	182
Farthing	61
Total	618

correlation with the series of numbers described by Dr Stewart. He demonstrated that the greater number was continuous throughout regardless of denomination: the highest number so far recorded is 598 on a coin of 1868 and this corresponds well with a total output of 618 tons by the end of 1868. As regards the individual denominations, to which Dr Stewart would attribute the lesser number of each pair, the correlation becomes still more convincing. For pennies the highest number recorded is 369, as against a total production by the end of 1868 of 375 tons; for halfpennies 178 as against a production of 182 tons; and for farthings forty-one as against sixty-one tons.

It is not an entirely perfect match but this would probably be too much to expect. For one thing there remains a slight uncertainty about the precise output of the Royal Mint during this period. For another, there is the smallness of the sample, only twenty-nine pieces instead of the six hundred or more which might perhaps be possible. Then there is the difficulty of knowing whether the whole of the 1868 output should be included or whether the numbering system was brought to an end during the course of that year. There is the difficulty, too, of working from the assumption that the date of a numbered coin is the same as the year in which it was struck. Given all these difficulties, the correlation between the Royal Mint's output in tons and the scratched numbers in fact holds up remarkably well.

But of course the correlation does not of itself provide an explanation of the purpose of the scratched numbers. They can scarcely have been required to measure output and it may well be that the link with output is an accidental consequence of the numbering system. Nevertheless, the possibility of a link suggests that it is worth looking again at the Pyx. It is certainly quite true, as Dr Stewart pointed out, that bronze coins are not submitted to the Trial of the Pyx at Goldsmiths' Hall, but this is a formal Trial, intended as an external and independent check on the Mint. It is therefore additional to all the tests and inspections, to the internal pyxing, carried out within the Mint before coins are issued to the public. These internal tests apply to bronze as well as to gold, silver and cupro-nickel

and I believe that it is these internal pyxing arrangements which offer an explanation of the scratched coins. That is to say, the numbered coins were the sample pieces taken from each delivery of coins from the coining department to the mint office and which prior to assay were given the scratched pair of numbers to identify them with the delivery from which they were taken.

It would be helpful if a detailed record survived of all the deliveries of bronze coin into the mint office between 1860 and 1868. The surviving Mint records, however, are sadly deficient and they do not even appear to contain an indication of the average size of a delivery. Judging from the gold and silver records, deliveries were likely to have been maintained as far as possible at a constant figure and perhaps it may not be unreasonable to suggest that for bronze this figure may have been a ton, made up of forty journeys of fifty-six lbs. each.

The absence of a full record is a handicap but on the other hand there is the evidence of the numbering system itself, with its two figures, one of which normally relates to total output and the other to the output of the individual denominations. Some time ago Mr E.G.V. Newman told me that when he was chemist and assayer of the Mint this was precisely the numbering system which was used for internal pyxing of groups of related coins. It is, indeed, the system still in use at the Royal Mint and Table 4 shows the start of the current sequence for United Kingdom bronze coins, which began on 1 January 1982 and which will continue until 31 December.

TABLE 4

*United Kingdom Bronze Pyxes, 4-6 January 1982*

Date	2p	1p	$\frac{1}{2}$ p
4 January	-	1/1	-
4 January	2/1	-	-
4 January	3/2	-	-
5 January	4/3	-	-
5 January	-	5/2	-
5 January	6/4	-	-
5 January	7/5	-	-
5 January	8/6	-	-
5 January	-	9/3	-
6 January	10/7	-	-

Before the end of January,  $\frac{1}{2}$ p production had begun and the sequence at that point is set out in Table 5. The identifying number is not, however, scratched on the sample coins required for assay, the modern generation of Mint officers being content to write it on the envelope which contains the ten pieces taken from each pyx.

If it is accepted that the numbered strikings of Victorian bronze coins are sample pieces taken for internal pyxing purposes, then two or three puzzling features of the surviving coins may be fairly easily explained. To begin with, the first four pieces repeat the higher number and while this would clearly not be quite as informative as the improper fraction which

TABLE 5

*United Kingdom Bronze Pyxes, 22-29 January 1982*

Date	2p	1p	$\frac{1}{2}$ p
22 January	-	29/7	-
22 January	30/23	-	-
25 January	-	-	31/1
26 January	32/24	-	-
26 January	-	33/8	-
26 January	34/25	-	-
27 January	-	35/9	-
27 January	36/26	-	-
28 January	-	37/10	-
29 January	38/27	-	-

appears on the later pieces it would nevertheless be sufficient to identify the pyx from which the pieces were taken. Nor does the survival of two farthings with the same pair of numbers call any longer for special explanation, since if current practice is anything to go by it would not have been necessary to assay all the sample pieces taken from each pyx. It would also explain the state of the coins themselves, the evidence of cracked and clashed dies being quite consistent with pieces taken at random from a production run. Finally, the absence of numbered pieces after 1868 may be attributed to changes in organisation and personnel following the death of John Graham and Thomas Graham in 1869 and the abolition of the non-resident assayers in 1870.

This is perhaps satisfactory enough but it may be that a proper understanding of the purpose of the scratched numbers will have some wider significance for the study of Victorian bronze coins. For one thing, in a period when three mints were at work, it may prove helpful to be able to identify some pieces from the years 1860-63 which can definitely be said to have been struck by the Royal Mint. More importantly, by enabling pieces of the various dates to be associated with cumulative output in tons, it may provide a welcome means of checking whether at that time the Royal Mint changed the date on coins punctually at the beginning of each new year. According to Sir John Craig<sup>7</sup> this was regular practice from 1854 but Michael Freeman's vast collection of pennies<sup>8</sup> suggested a continuing degree of flexibility, with more coins of some dates, such as 1868, and less of others, such as 1864 and 1869, than might have been expected from the mint-age figures for those years.

If anything, the scratched numbers seem to confirm the evidence of Mr Freeman's collection. Taking overall output first, a cumulative total of 220-30 tons was reached in 1864, but figures in this range occur on coins of 1863; 312 tons was reached in 1865, but the figure occurs on a coin of 1864; and 514 tons was reached in 1867, but the figure occurs on a coin of 1866. As for individual denominations, a total of 120-30 tons for the penny was not reached before April 1864, but figures in this range occur on coins of 1863; for the halfpenny, a total of 118 tons was reached in 1863, but the figure occurs on a coin of 1864; and for the farthing, a total of forty-one

tons was not reached until 1867 but the figure occurs on a coin of 1866. There is a need to be cautious in view of inadequacies in the surviving records but there may nevertheless be an indication here that the Royal Mint continued a flexible dating policy for bronze coins for a few years after 1864.

However that may be, I hope that we do at least now have an acceptable explanation for the scratched numbers. It is an explanation which is perhaps particularly satisfactory because it draws on the remarkable continuity in minting technique and practice which Professor Gaspar and I have found so helpful on other occasions.

#### NOTES

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1. Henry Garside, *British Imperial Copper and Bronze Coinage 1838-1925*, (Supplement, 1925), pp.5-6.
2. C.W.Peck, *English Copper, Tin and Bronze Coins in the British Museum, 1558-1958* (London, 1960), pp.421-25, 432-34, and 442.
3. Ian Stewart, 'Numbered Strikings of Victorian Bronze Coins, 1860-1868', *BNJ*, 39 (1970), 168-70.
4. Peck, p.420.
5. The main source of information on the introduction of the new bronze coins is PRO, MINT 8/36.
6. G.F.Ansell, *The Royal Mint*, third edition (London, 1871), p.163.
7. Sir John Craig, *The Mint* (Cambridge, 1953), p.323.
8. M.J.Freeman, *The Victorian Bronze Penny (1860-1901)*.