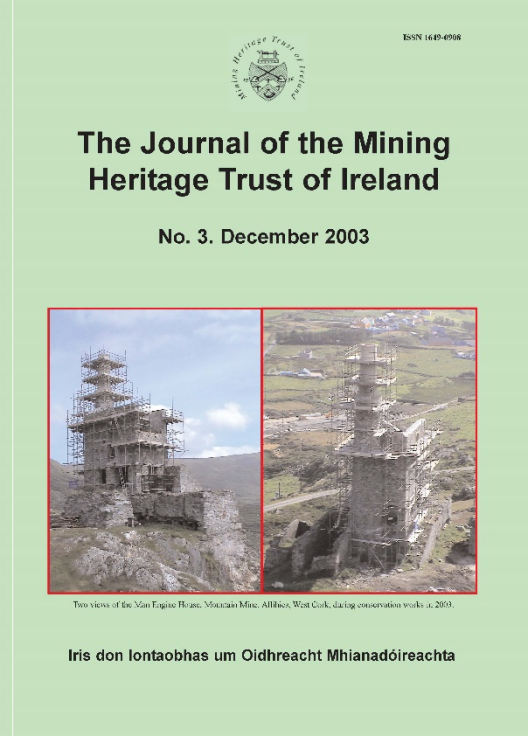

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THE BATTLE OF THE TOKENS, 1789-1799: THE HIBERNIAN MINING COMPANY V. THE ASSOCIATED IRISH MINE COMPANY

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Abstract: This article presents an introductory review of the history and background to the production of copper token coinage by two Irish Mining Companies during the late 18th Century. *Journal of the Mining Heritage Trust of Ireland*, **3**, 2003, 41-54.

BACKGROUND

Today, we take for granted the coinage in our pockets, and it is consequently difficult to imagine that, in past times, commercial activities in Ireland and Britain were frequently afflicted by acute shortages of coins - particularly low vale coinage. Petitions to Parliament to supply more coins are documented as long ago as 1380, and again in 1404 and 1444, though shortages became even more severe from the 18th Century onward, especially after the start of the "Industrial Revolution", conventionally taken to be 1760 (Selgin 2002). The industrialisation process marked, at least in Britain, one of the most profound changes in human population occupations, from a largely agricultural economy, in which less than one quarter of the population depended upon money wages in the mid-16th Century, to, by the end of the 18th Century, a largely industrial occupation economy in which more than three quarters of the population depended upon money wages.

Successive Governments failed, however, to respond to the resultant demand for coinage. This particularly applied to low value, primarily copper based coinage as, amongst other reasons, this was considered an improper metal for coinage to bear the regal image, which instead was largely restricted to gold and silver coinage throughout the 17th and 18th Centuries (Doty 1986; Selgin 2002). Official halfpenny and farthing copper coins (but not penny coins which were not issued until 1797), nominally containing their full value of copper metal, were manufactured by the Royal Mint from 1672 onward, but very erratically, and never in sufficient quantities to satisfy demand (Selgin 2002). This not only resulted in widespread and substantial counterfeiting of official copper coinage, but also stimulated the systematic production of commercial copper coinage from 1787 onward - the second instance of such production.

Commercial copper coinage, as distinct from official coinage issued by the Royal Mint, was produced in three distinct periods in Britain and Ireland: between about 1649 - 1672, 1787 - 1797, and 1811 - 1820 (Doty 1986, Selgin 2002). Unlike official coins, the commercial coins bore their issuers identities, and were issued, most commonly, in denominations of a "farthing", (¼d), a "halfpenny", (½d) and, less frequently, as a "penny" (1d) [1]. Each phase of commercial coinage issue was terminated by Royal proclamations declaring them illegal, the first phase by 4 proclamations between 1672-1674, although such coins continued in use in Ireland up to 1679; the second phase by a 1797 proclamation; and the third and final phase by an 1817 Act of Parliament (Doty 1986, Selgin 2002). It is the commercial coinage of the second phase which is most relevant to this article, and accordingly the primary focus from hereon. However, readers interested in the history of coinage, production details etc, are strongly referred to either of the primary references cited above, and/or the references cited therein, particularly by Selgin (2002).

In contrast with the small, rather crude and locally made, and circulated, merchant tokens [2] issued during the first phase, second phase tokens issued between 1787 - 1797, were generally of much higher quality, and larger and heavier. They were most commonly issued in the denomination of a halfpenny, with penny coins common early in the period and farthings towards the end. The coins were also generally thicker, which offered the opportunity for incorporating edge inscriptions, most frequently indicating where they might be redeemed, though plain edge coins appeared later in the period. They were commonly produced by steam-powered presses, unlike the first phase coins, which were produced initially by hand stamping, and later by screw press.

Thousands of different tokens were struck during this period, and very widely counterfeited, initially to satisfy the insatiable demands created by the Industrial Revolution, but later for general circulation purposes, for political and social commentary, and, from 1794 onward, for collectors. Indeed the very first token collectors catalogue [3], published in 1798, dates from just after the end of this phase. However, the standard reference vol-

1 1d = Euro 0.0053; based upon the conversion of 1 Irish pound, containing 240 pennies = Euro 1.269738, when the Euro was introduced in 2001. Note, however, that in the late 18th Century, a shilling was reckoned to contain 13 Irish pennies, or 12 English pennies.

2 A *token*, or, more fully, a "*fiduciary token*", is defined as a coin, usually made of base metal, in which the face value is substantially greater than the value of the metal of which it is made (Selgin 2002). This difference made them particularly susceptible to counterfeiting, and contrasts with a "*full-bodied*", or full value coin, generally made of gold or silver.

3 "*An Arrangement of Provincial Coins, Tokens, and Medalets Issued in Great Britain, Ireland, and the Colonies*", by James Conder, and after whom 18th Century tokens are frequently known as "Conder" tokens, especially in the USA.

The PARYS MINE COMPANY
The Associated Irish Mine Company (Cronebane, Ireland)
Hibernian Mine Company (Ballymurtagh, Ireland)
Castlecomer Colliery (County Kilkenny, Ireland)
The Macclesfield Copper Company [Roe and Company]
Cornish Metal Company (Cornwall)
The Priestfield Collieries & Furnaces of Samuel Fereday (Bilston, Staffordshire)
Bewicke Main Colliery (County Durham)
Percy Main Colliery (Northumberland)
Gwennap Copper & Tin Mines (Scorrier, Cornwall)
Dolcoath Copper & Tin Mine (Dolcoath, Cornwall)
West Wheal Fortune Mine (Ludgvan, Cornwall)
The Rose Copper Company (Redruth, Cornwall)
The Birmingham Mining & Copper Company (Redruth, Cornwall)
Devon Mines (Tavistock, Devon)
Alloa Colliery (Clackmannanshire, Scotland)
The Ironstone, coal and lead mines of Iron Master John Wilkinson (Shropshire & North Wales)

***Table 1. List of mining companies which produced commercial coinage between 1787 - 1797. Irish mining companies highlighted in bold, including Roe and Company, of Macclesfield, Cheshire, on account of the pivotal role it played in establishing token production in Ireland. Derived from: Mining memorabilia* - http://www.mining-memorabilia.co.uk/Tokens.html**

ume for 18th C British and Irish tokens is "The Provincial Token Coinage of the 18th Century", by Dalton and Hamer (1996), first published in 1910, and revised and reprinted in 1918, 1990, and 1996.

While commercial enterprises of many different types issued tokens during this phase, several mining companies were not just prominent coin producers (Table 1) - one in particular, the Parys Mine Company, Anglesey, Wales, initiated the entire process. And as the development of that mine, and its associated token production, is directly connected to subsequent developments in Ireland, it is appropriate to consider first a brief history of mining at Parys Mountain, as well as the operations of one of the mine operators, Roe and Company of Macclesfield, Cheshire.

PARYS MOUNTAIN, ANGLESEY, WALES

The modern era of historic developments on Parys Mountain date from 1761. That year, an Alexander Fraser [4], acting on behalf of the landowner, Sir Nicholas Bayly, discovered remains of presumed ancient (possibly Roman) copper working at the Cerrig y Bleddia farm on the eastern part of Parys Mountain (Selgin 2002). The prospect was obviously considered favourable, as by the following year, three shafts had been sunk on the prospect. Subsequent disappointing results dampened enthusiasm, and by 1764 Bayly agreed to lease the operations to William Roe, of Roe and Company, Macclesfield, Cheshire, at a royalty of 8% of ore produced (an history of this company is provided in a subsequent section, entitled "Roe and Company, Macclesfield").

Initial, and costly, efforts by Roe and Company to develop the Cerrig y Bleddia prospect were obviously little more successful than those undertaken by Bayly, and by early 1768, the company was in despair of ever retrieving its investment. One final effort was mounted early that year, and, just when it was about to be abandoned, a major copper ore deposit, of what was to become known subsequently as the *Mona Mine*, was discovered - on March 2nd, 1768. Although that deposit was put into production very rapidly, exploration continued apace, and in 1769 the continuation of the deposit was discovered beside and beyond the northwestern boundary of the leasehold area. Notwithstanding that Bayly owned a 50% undivided moiety of the lands covering the western part of Parys Mountain, Mary Hughes, the heir of the co-owner, a man named Lewis, objected to the encroachment of prospecting beyond the original lease area (Selgin 2002). The dispute entered litigation, and throughout the process, which was finally resolved in 1778, Mary Hughes and her clergyman husband, Edward Hughes, were represented by Thomas Williams, a local solicitor. Williams was a shrewd operator, as, by as early as 1774, he had formed the *Parys Mine Company* in partnership with Edward Hughes and a London banker, John Dawes (to whom Bayly had leased his moiety shares), and by 1778 he had acquired full control of the original Lewis moiety (Selgin 2002). Williams's business interests expanded rapidly, ultimately to encompass copper warehouses in London, Birmingham, and Liverpool, and smelters in south Wales and Lancashire, from which interests he acquired the sobriquet, the "Copper King".

Not so fortunate were Roe and Company. Despite their successful development of the Mona Mine deposit, they were unable to renew the lease when it expired in 1785, which passed, no doubt to their intense chagrin, to Williams, who, from then on, had undisputed control of what was then the worlds largest copper mine (Selgin 2002). This was an enormous operation, at the time employing over a thousand miners and perhaps as many again in associated businesses owned by Williams. Profitable the enterprises undoubtedly were, but they generated at least one very significant problem - how to pay the workforce.

In 1780, Williams had established extensive steam driven rolling mills and other processing facilities at Greenfield, near Holywell in Flintshire (Selgin 2002), and by 1786, 31 smelting furnaces had been erected at Amlwch Port. He had also established a business partnership with John Westwood, initially to gain access to his patented cold-rolling techniques to apply to manufacturing copper sheeting and nails for sheathing the wooden hulls of Royal Navy ships. But Westwood also had experience with manufacturing medals, an expertise which presented Williams with the opportunity to combine that knowledge with copper produced in his mines and mills to manufacture coinage to pay his workforce. That process started in 1787 with the production of what are arguably the most aesthetically beautiful token coins ever produced - the "Druid Tokens" (Fig. 1).

[4] Alexander Fraser claimed to be the fugitive Master of Lovat, Beaufort, Scotland (Selgin 2002). He reputedly fled Scotland by sea in 1692, after murdering a bagpipe player. He was shipwrecked on Anglesey, where he settled and lived for the remainder of his life. He died in 1776, age 116.

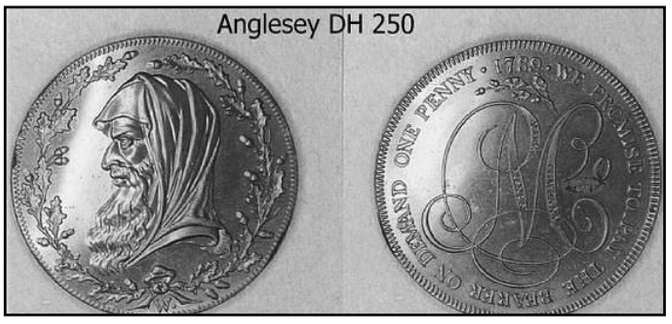

Figure1. A one penny Druid Token. Image from: http://www.conderclub.homestead.com/whatis.html

DRUID TOKENS

The first "Druid" tokens were produced in late February 1787, under the overall supervision of John Westwood, using dies engraved by John Milton (Selgin 2002). They were most likely struck at Greenfield, using "blanks" cut at the same works. All tokens carried a face value of one penny (1d), and contemporaneous reports note that not only were the dies beautifully conceived and executed, the tokens contained virtually their full face value of copper (Selgin 2002). Even though the latter assertion is not correct [5], use of the tokens expanded very rapidly, not least because they bore face and edge inscriptions which provided for their redemption in London and Liverpool, as well as Anglesey. The popularity of the coins was such that greater production capacity was soon required, and, consequently, production was moved to new, larger facilities at 9 Great Charles Street, Birmingham in June 1787 (Selgin 2002). The Birmingham mint was managed by JohnWyatt, while the dies, for both penny and half penny tokens, the latter introduced in 1788, were engraved by John Gregory Hancock. The total production at Birmingham, between mid-1787 until the plant was sold to Matthew Boulton (1728-1809) two years later, in March 1789, is estimated to be about 250 tons of penny tokens, and 50 tons of halfpenny tokens (Selgin 2002), equivalent to about 9 million penny tokens and 3.5 million (½d) halfpennies (Dalton and Hamer 1996). The change of ownership did not, however, mark the end of the production of Druid tokens. The Parys Mine Company placed an order for production of a further 30 tons of tokens with Boulton in July 1789, and Dalton and Hamer (1996) describe and illustrate penny and halfpenny tokens with inscribed dates up to 1791, and farthings up to 1796. Those dated 1790, and which bear the title "Anglesey Mines Penny", were apparently manufactured by Williams in London, using dies engraved by Wilson (Dalton and Hamer 1996). Most of the halfpenny tokens, bearing the dates 1788-1791 inclusive, were struck from dies produced by Hancock (Dalton and Hamer 1996) - possibly in the mint established by Westwood and Hancock in Birmingham in 1789 (Selgin 2002).

Sadly, only a fraction of all the tokens ever produced survive, as many were melted down during the 1790s and early 1800s when the value of copper increased dramatically [6].

The style and design of this whole group of tokens is typified by the example illustrated in Figure 1: on the obverse side, a Druid's head; and, on the reverse, the cipher of the Parys Mine Company, "PMCo", and the date and the inscription "We promise to pay the bearer on demand One Penny". All, as previously noted, also bear an edge inscription, most commonly, "on demand in London Liverpool or Anglesey".

Dalton and Hamer (1996) list, describe and illustrate a total of 217 distinct primary varieties of genuine penny tokens. These are distinguished principally by variations in the number of acorns in the wreath surrounding the Druid's head on the obverse, and, on the reverse, the shape and placement of date numerals relative to letters in the inscription. They also list a total of 40 counterfeit varieties, which bear dates between 1784 and 1791; and 9 undated "mules" [7].

The main series of halfpenny tokens closely resembles the penny in style and design, other than bearing the obverse side inscription "The Anglesey Mines Halfpenny", combined with a wide variety of edge inscriptions. A total of 151 primary varieties are recognised, and distinguished on the same basis as the penny tokens, with date inscriptions from 1787 to 1792 inclusive, and 1794 (Dalton and Hamer 1996). A separate series of 7 primary varieties bears the inscription "The Paris Miners Halfpenny", all dated 1791. Seven varieties of "farthing" or more commonly, "half halfpenny" tokens, identical in all respects to the Anglesey Mines Halfpenny, are also recorded, bearing the dates 1788, 1789, 1791 and 1793.

Amongst the many different halfpenny and farthing token varieties, some bear designs and/or inscriptions with an Irish association. These include 6 "Paris Miners" or "Anglesey Mines" halfpenny and farthing tokens, all dated 1791, which bear the edge inscription "payable at Cronebane or in Dublin"; an undated farthing bearing, on the reverse, the seated, allegorical figure of "Hibernia"; and one token, which lacks any inscribed value, bearing a Druid bust on the obverse, and the arms and inscription of the "Associated Irish Mine Company" (AIMC) with the date 1793, on the reverse. The reference to the AIMC, and payable at Cronebane, is particularly significant as both reflect developments undertaken in Ireland, not by the Parys Mine Company, but by their displaced, erstwhile rivals at Parys Mountain, Roe and Company of Macclesfield.

5 The tokens, produced at a rate of 16 tokens per pound of copper, contained exactly 1 ounce of copper, although copper was then valued at only 9d per pound. Hence the intrinsic value of the token was just a little more than a halfpenny (0.56d).

6 Copper metal maintained a fairly constant value of between £68/tonne and £82/tonne throughout the period 1770-1789, but then started to rise significantly, from £84/tonne in 1790 to £127/tonne by 1799, reaching an all time 19th Century high of nearly £190/tonne in 1805 (Schmitz 1979). This dramatic, but temporary, surge in values was directly related to the influences and impacts of the Napoleonic Wars (1793-1815), in particular the demand for copper sheeting for Royal Navy warships (Selgin 2002).

7 A "mule" is a hybrid variety of token which combines an obverse or reverse design struck from a genuine die, with completely different obverse or reverse designs and/or face or edge inscriptions from other genuine dies.

ROE AND COMPANY, MACCLESFIELD

By the time they acquired their lease on the eastern part of the Parys Mountain in 1764, Roe and Company was a very successful silk and button manufacturing and copper mining company based in Macclesfield, Cheshire (Smith 1998). The company was founded by Charles Roe (1715-1781), who had, by 1743, established his first water powered silk mill in Macclesfield [8]. He followed this with the establishment of the Macclesfield Copper Company (MCC) in 1758, in partnership with others [9], to manufacture a variety of copper products, as well as brassware [10]. In the same year he acquired leases on the Coniston copper mine, which he worked intermittently up to 1795, as well as the Alderley Edge mine, which he operated up to 1768 (Smith 1998). However, even by 1763, there were indications that the ore supply from the latter mine was starting to decline, and this induced a search for an alternative supply, culminating with the initiation of negotiations with Sir Nicholas Bayly for a lease, not on Parys Mountain, but on another mine at Penrhynn-ddu, in Caernarvonshire (Dalton and Hamer 1996). Bayly, however, only agreed to grant that lease on condition that they also took a lease on the Cerrig y Bleddia prospect at Parys Mountain, to which they agreed reluctantly in 1764.

As fate would have it, the latter prospered after the major discovery made there in 1768. In the same year, the MCC established two copper smelting facilities in Liverpool, as well as a colliery in Wrexham subsequently (Smith 1998). The Liverpool smelting facilities were eventually closed in 1794, as by about 1790 they had acquired an alternative, and more economic smelting facility at Neath Abbey, in south Wales. This they continued to operate until it was taken over by the Cheadle Copper and Brass Company in 1811 (Smith 1998). In 1787, two years after losing their lease at Parys Mountain, the MCC acquired a lease on the Cronebane copper deposit at Avoca, Co. Wicklow (see below).

MACCLESFIELD TOKENS

Given their established copper and brass manufacturing capacity, it is not surprising that Roe and Company soon took an interest in manufacturing copper tokens as a business opportunity. They did not, however, establish their own minting facilities, instead contracting their coinage production to John Westwood and John Gregory Hancock, who founded a mint in 1798 to service the contract, awarded in March 1798. The contract provided for the production of 42 tons of tokens, at a cost of £36-10-0 per ton, using copper "cake" to be supplied by Roe and Company. The tokens were intended for use at the company's operations in Macclesfield, as well as at Cronebane (Selgin 2002). Priority was given to minting tokens for the latter enterprise (see below), which was undertaken, not by Westwood, but by the Soho mint of Matthew Boulton, under a sub-contract agreement. Boulton commenced minting, but soon suspended it, as Westwood had, by then, fallen into financial difficulties. Though the Westwood and Hancock minting company soon recovered from these problems, Roe and Company had, in the meantime, recovered the Macclesfield token dies (engraved by Hancock) from Boulton, and transferred them to an anonymous London coiner, who produced the first ton of Macclesfield tokens in 1789 (Selgin 2002). The following year, however, Roe and Company reverted production back to Westwood and Hancock, with a commission for 25 tons of halfpenny tokens in March 1790 (Selgin 2002 [11]).

Macclesfield tokens were minted in each of the years 1789 - 1792 inclusive, with those produced in 1789 differing in design from those minted in subsequent years. All were halfpenny tokens, other than for a single variety of a penny token (1790), and 7 varieties of farthings (1789 only) and half halfpenny tokens (1790-1792 inclusive), all minted by Westwood specifically for collectors.

15. *O*: As No. 18.

Figure 2. A Macclesfield halfpenny token. Reproduced from Dalton and Hamer (1996).

The distinct 1789 series tokens, commonly known as "Beehive" tokens, all bear, on the obverse, a cipher, "R&Co", surmounted by a beehive encircled by bees, and the inscription Macclesfield; and, on the reverse, a seated female figure holding a cogwheel, a turnscrew, the inscription halfpenny, and the date 1789 (Fig. 2). The beehive design apparently derives from a coat of arms, a representation of which is depicted on the memorial plaque to Charles Roe's widow, Rachel, in Christ Church, Macclesfield (Dalton and Hamer 1996). In similar vein, the seated female figure and cogwheel on the reverse, replicates the figure which surmounts the top of Charles Roe's memorial plaque in the same church. That same plaque also depicts a bust of Roe, which is replicated on the obverse of all tokens, of all values, minted from 1790 onward, surrounded by the inscription "Charles Roe established the Copper Works 1758". The obverse of the 1790-1792 series is identical to the 1789 series, other than for bearing the inscription "Macclesfield

[8] http://www.manchester2002-uk.com/history/victorian/maccsilkmill.html

[9] Dalton and Hamer (1996) list a number of individual partners, including a Brian and Robert Hodgson/Hodson, as well as William Roe, son of Charles Roe. Brian Hodgson (1740-1808) bought into the partnership in 1764, and subsequently transferred his 25% stake in the company to his son, Robert. An Edward Hawkins, a brass and copper merchant, and a brother-in-law of Robert Hodgson, is noted as a major partner in 1781 (http://www.39blythe.freeserve.co.uk/robhodg.html).

[10] The MCC established a completely new, water powered copper mill in 1763 to manufacture copper sheeting, utensils and wire as well as brassware.

[11] Dalton and Hamer, 1996, however, note that only 10 tons were produced that year, and similar amounts in 1791 and 1792).

Halfpenny", "The Macclesfield Penny" or "Macclesfield half halfpenny", depending upon denomination. Dalton and Hamer (1996) list 52 distinct varieties of genuine halfpenny tokens, distinguished, in the case of the 1789 series by the placement of bees relative to text, and/or the number of spokes in the cog-wheel and/or the number of threads on the turnscrew; and, for the 1790-1792 series, the position of buttons on Roe's bust relative to inscription text, and, on the reverse, the position of a lever behind the figure relative to inscription text. There are 14 varieties of counterfeit halfpenny tokens, most dated between 1790-1792, with two dated 1795 and 1796; and 7 varieties of "mules".

An Irish connection is provided by some of the counterfeit varieties, with two 1790 varieties bearing the edge inscriptions "Payable in Dublin or London", or "Payable in London or Dublin". More importantly, while most genuine halfpenny tokens bear an edge inscription "Payable at Macclesfield Liverpool or Congleton", one 1789 variety instead bears the inscription, "Payable at Cronebane or in Dublin" - a direct reference to the Roe and Company interests at Cronebane, through their company, the "Associated Irish Mine Company".

THE COPPER MINES OF AVOCA, CO. WICKLOW

Before considering briefly the mining history of the two mining companies in Co. Wicklow which issued tokens, it is appropriate to consider first the history of mining developments in that region prior to the token production era.

Cole 1922 (reprinted 1998) cites an historic reference which associates Avoca, or its alternative spelling of Ovoca, with the "Oboka" recorded by Ptolemaeus about 150AD. If this association is valid, and in the absence of any other plausible reason for such an ancient documentary record, then it could indicate that mining, an endeavour of great import to the Roman Empire, was reasonably well known in this part of Ireland by that time. But it is not until nearly 1,600 years later that the next documentary records allude to mining in the district, when Griffith (1828) notes that *Cronebane*, on the east bank of the Avoca River (Fig. 3), was discovered and worked more than a century previously - i.e. during the early 1700s. It was certainly a substantial operation by 1752, as Henry (1753) notes that about 500 men were employed at the mine at a wage of 8d per day, in contrast to *Ballymurtagh*, on the west bank of the Avoca river, which he notes to be disused at that time, a result ascribed to differences between Mr. Whalley and the Company. Prior to that, it had, apparently, been very profitable. Fortunes can appear to change rapidly, as by 1755 Ballymurtagh is noted to have been very successfully worked for copper (Holdsworth 1857); and that it was re-opened by Mr. Whaley in 1868 at about the same time that a smelting works was established in the nearby port of Arklow (Fraser 1801). Further changes occurred in 1787, the year when the two mines were divided between two different companies with very different origins, one, the Associated Irish Mine Company (*Cronebane*), primarily English, the other, the Hibernian Mining Company (*Ballymurtagh*) primarily Irish. This division sowed the seeds for bitter rivalry, not least during the period of the 1798 rebellion (see below).

ASSOCIATED IRISH MINE COMPANY : CRONEBANE MINE

The Associated Irish Mine Company, with offices at 184, Great Britain Street (now Parnell Street), Dublin (Dalton and Hamer 1996), was established in 1787 by Roe and Company as the operational vehicle for their Cronebane and Tigroney mine leasehold interests, which they acquired from John Kyan that year, two years after losing their lease at Parys Mountain. Kyan had apparently purchased both Cronebane and Ballymurtagh mines (see below) from a Mr. Whaley [Whalley], possibly in the late 1770s or early 1780s, and adopted the name Hibernian Mining Company from the name of a previous mine venture. By 1787, Ballymurtagh appeared to offer the better prospects and consequently, when approached by Roe and Company, Kyan decided to sell Cronebane and retain Ballymurtagh. Dalton and Hamer (1996) note the following directors of AIMC at the time of its formation: Abraham Mills [12] (later Chairman), **William Roe, Robert and Brian Hodgson**, Thomas Weaver the Elder, **Edward Hawkins** [13], Thomas Smith, Charles Caldwell and Brabazon Noble.

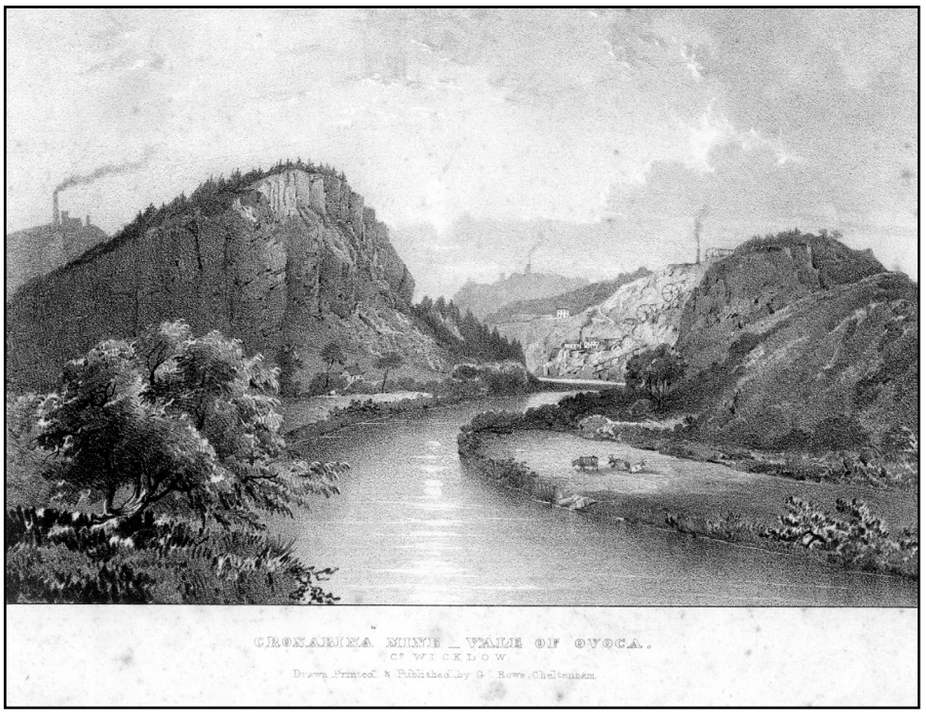

Figure 3. A c. 1820 - 1830 view of the Avoca River, looking north, showing the Tigroney/Cronebane Mine workings on the right hand side of the valley, with the Ballymurtagh Mines, largely out of sight, on the opposite bank. Reproduced from Coffey and Morris (2002).

A nearly contemporaneous reference (Fisher 1795) notes Brabazon Noble as a Director, but also names an I.P. Scot in addition to unnamed English gentlemen, from which distinction we may presume that Noble and Scot were both (Anglo/)Irish.

Kyan's decision was most unfortunate, at least from his perspective, as, early in 1788, AIMC discovered a very rich lode on the Cronebane property, which they proceeded to develop very rapidly (Smith 1998). The first shipment of ore to their Neath Abbey smelter was dispatched in 1794 (Smith 1998), and from that year, until 1812, a George Blood (1760 - 1840), of Montpelier Hill, Dublin, is recorded as Secretary and Accountant of AIMC (Burkes Irish Family Records 1976, Todd). The Company was incorporated by Act of Parliament in 1798 and operations continued until closure in 1808 (Smith 1998). Selgin (2002) notes that the AIMC invested £40,000 in developing the Cronebane mine between 1787 and 1797, and were rewarded with outputs averaging 1000 tons of ore annually. However, "Mineral Statistics" (Hunt 1848) notes a total production of only 534 tons of copper ore in 1808, and none for any of the years from 1804, the year records commenced, to 1807.

CRONEBANE TOKENS

"Cronebane" tokens formed a significant volume of all Irish tokens during the 1787 - 1797 token production phase, an inference which may be drawn from the sheer number of both genuine and counterfeit varieties documented (Dalton and Hamer 1996). They were issued in the denomination of a halfpenny only, and all bear the date 1789 only. All genuine varieties bear, on the obverse, a representation of the head of St. Patrick, with a crozier, and the inscription "Cronebane Halfpenny"; and, on the reverse, the AIMC coat of arms [14] surmounted by a windlass, the date 1789, and the inscription "Associated Irish Mine Company" (AIMC: Fig. 4).

It has been noted previously that Roe and Company gave priority to the minting of Cronebane tokens by Westwood and Hancock in March 1789 (Selgin 2002). That order was, however, sub-contracted to the Soho mint [15] of Matthew Boulton, as Westwood and Hancock were still in the process of acquiring coining presses, and, at the same time, becoming increasingly indebted to their financier, John Hurd, a business partner of Boulton (Selgin 2002). The agreement provided for Boulton to strike the coins on edge-marked blanks provided by Westwood,

Figure 4. An Associated Irish Mine Company, Cronebane halfpenny token (DH17). Actual diameter = 29mm. Weight 12.445 grams (0.43934 ounces - Avoirdupois)

using dies engraved by Hancock (Doty 1986), in return for just under half the production cost agreed with Roe and Company (£18-0-0 of the total agreed contract cost of £36-10-0/ ton: see above also). It was further agreed that all payments from Roe and Company would go direct to Boulton, for him to retain his portion, and to remit the balance to Hurd. Production of the Cronebane tokens most likely started in mid-1789, in so doing acquiring the unique distinction of not only being the first coins to be struck at the Soho mint, but also the first coins to be struck anywhere using steam powered machinery (Selgin 2002).

By September 1789, Boulton had shipped nearly 20.75 tons of Cronebane tokens, equivalent to 1,674,815 coins [16], to Roe and Company, along with an invoice for £756-8-3 (Selgin 2002). The latter eventually only paid half this amount, for that portion due specifically to Boulton, as the other portion, due to Hurd, was left to be recovered from the estate of Westwood, who had gone bankrupt by the end of 1789. There is, however, no mention of any further or alternative orders for Cronebane tokens, which could only have been produced between September and December 1789, so the figure cited could well represent the overall total of AIMC coins ever minted. The volume, while substantial, is significantly less than that of the far more prolifically produced Druid penny and halfpenny tokens.

Dalton and Hamer (1996) list a total of 31 known varieties of AIMC Cronebane tokens, distinguished from each other, on the obverse, principally by the position and/or style of ribbons on the crozier, and, on the reverse, the alignment of the windlass handle and date numerals relative to border text (Fig. 5). All

[12] Cole 1922/1998, records a Mr.Mills as one of the owners who revived the mine in 1787. This might suggest that he was a partner or associate of Whalley/Whaley during the previous phase of operations, possibly negotiating his interest therein into a stake in the AIMC pursuant to the change of ownership.

[13] Names of individuals highlighted in **bold** have been noted previously as directors of the Macclesfield Copper Company - see footnote 5 above.

[14] The coat of arms was adopted as the logo of the Mining History Society of Ireland when it was established in 1996, and it has been retained on conversion to the Mining Heritage Trust of Ireland (see depiction on front cover of this Journal). Patterson (1903) provides the following heraldic description: "Vert on a chevron argent, between two shovels, in saltire in chief, and a bugle-horn in base, three pickaxes; crest, a windlass; legend "Associated Irish Mine Company". He further notes that there is no record of how the arms originated, perhaps from a company seal, as there is no record of a grant of arms, or who designed them.

[15] Construction of the mint building began in April 1787 and was largely complete by November 1788 (Selgin 2002). It was designed to be equipped with coining machinery driven by a ten-horsepower rotary steam engine. By early 1789, only one coining press was operational (Selgin 2002).

[16] A genuine token in the possession of the author [DH17, in good to fine condition, Fig. 4], weighs 0.43934 ounces. Applying this weight to the exact production total cited by Selgin (2002), 20 tons, 14 cwt, 1 qtr, 25 lbs, 2ozs, which is equivalent to 742,738 ounces, yields a slightly higher total production figure of 1,690,577 coins.

bear the edge inscription "payable at Cronebane Lodge or in Dublin". There are 3 counterfeit varieties which bear the AIMC inscription, one with the date 1796.

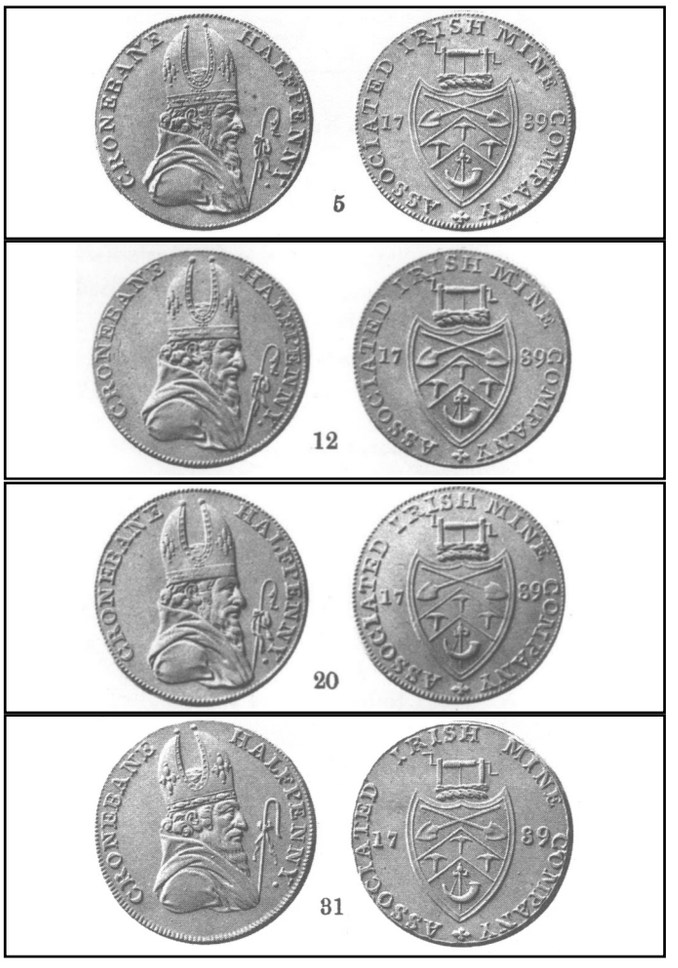

Figure 5. AIMC Cronebane token varieties (DH = Dalton and Hamer variety number, here and all subsequent figures): DH5, DH12, DH20 and DH31. All images from Dalton and Hamer (1996).

There is another very noteworthy series of Cronebane tokens, which are virtually identical in all respects to the AIMC series, other than for bearing the inscription "Associated Irish Miners Arms" (AIMA; Fig. 6) in place of "Associated Irish Mine Company", and for bearing a far wider variety of edge inscriptions. The quality of many of this series is of a standard comparable to that of any of the AIMC type, though some are more poorly struck, and, on others, the quality of some of the obverse engravings is poor. Edge inscriptions are extremely variable. Apart form reference to Cronebane and Dublin, other locations include Cork, Belfast, London, Liverpool, Bristol, Hull, Anglesey, Birmingham, and Lancaster, as well as specific premises such as the "Black Horse Tower Hill", "Thomas Ball, Sleaford" and "I. Simmons, Staplehurst". Dalton and Hamer (1996) note 20 different varieties, 12 dated 1789, 5 undated and 3 dated 1794 or 1795 (Fig. 7).

Waters (1954), Seaby (1970) and Dalton and Hamer (1996) all consider that the AIMA series of tokens are forgeries or counterfeits - a view entirely consistent with their much lighter weight than genuine AIMC tokens (see footnotes 17 and 18, and captions Figs 4 and 6). However, there is some evidence to suggest that the tokens might instead be genuine. Patterson (1903), citing the records of the Irish Antiquarian, Dr. William Frazer, MRIA, then stored in the National Library, Dublin, asserts that while the AIMC series were designed by Hancock of Birmingham, "..others were probably by Dröz, and were manufactured by the Soho mint." This is a most interesting statement, as it provides one of the few clues to where and by whom the AIMA series, and or other varieties, might have been produced.

Figure 6. An Associated Irish Miners Arms, AIMA, "Cronebane" Halfpenny (DH44a). Actual diameter = 28mm. Weight: 9.138gm (0.32233 ounces - Avoirdupois)

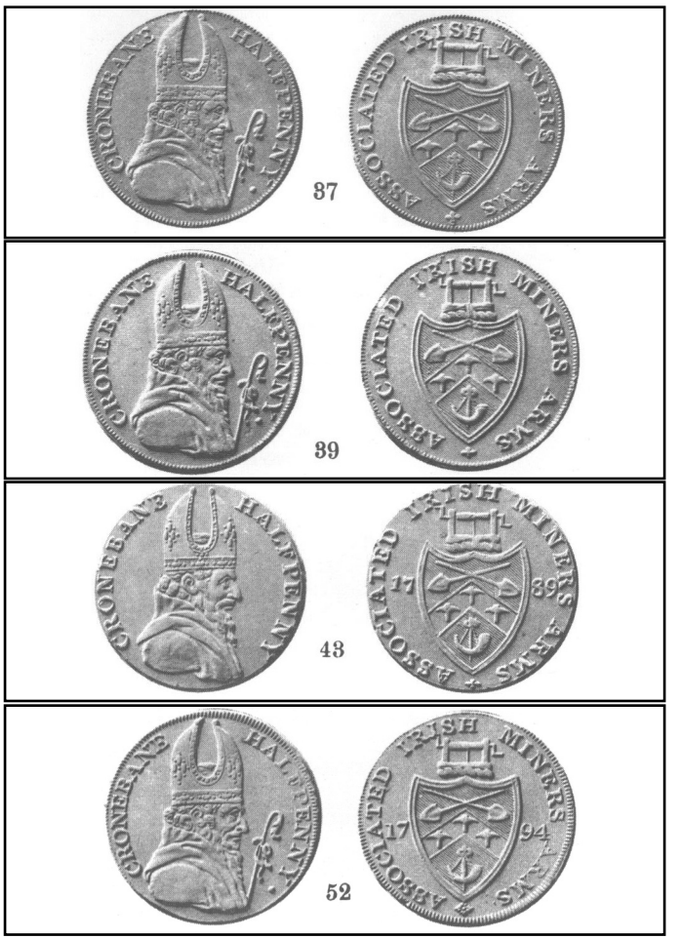

Figure 7. A selection of AIMA "Cronebane" halfpenny varieties: DH37 (undated), DH39 (undated), DH43 (1789) and DH52 (1794). All images from Dalton and Hamer (1996).

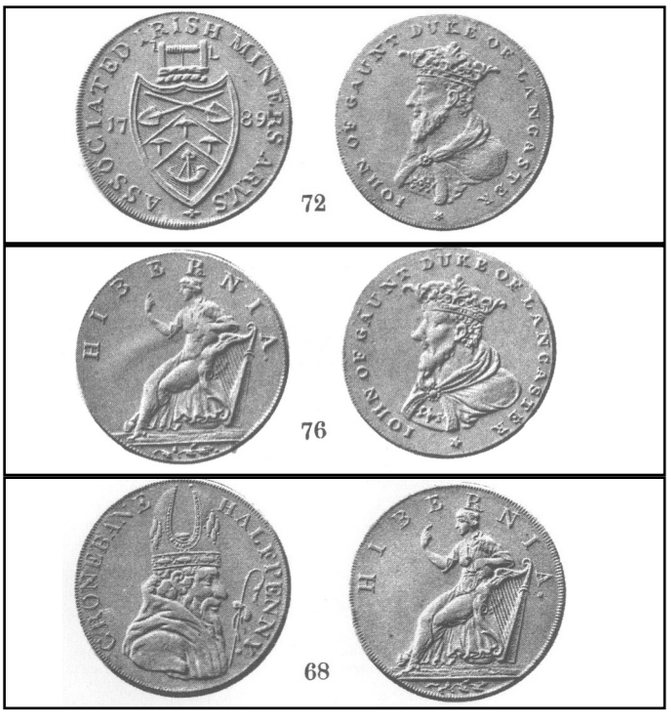

Figure 8. Obverse and reverse views of two types of "John of Gaunt" counterfeit varieties: DH72 (AIMA obverse) and DH76 (Hibernia obverse), top row; and, bottom, DH68, Cronebane halfpenny obverse with Hibernia, reverse . All images from Dalton and Hamer (1996).

Jean-Pierre Droz was a well known Swiss die engraver and inventor who, in 1786, was working as an engraver in the Paris Mint (Selgin 2002). He had invented a coining press which was able to simultaneously strike both face designs, as well as edge inscriptions, and this capability had been demonstrated to great effect in the production of the "Ècu de Calonne". This achievement was known to Matthew Boulton, and his business partner, James Watt, who, while on a business trip to Paris in December that year, visited Droz at the Mint, saw the press in operation and obtained samples. The following year, 1787, they engaged Droz to produce both die patterns for regal copper coinage, as well as to supply and install the coining presses upon which to produce them. Despite Droz vacillating and dithering, he eventually moved to the Soho mint full time in March 1788, but again largely failed to deliver upon his promises and undertakings for much of the rest of the year (Selgin 2002). The increasingly fractious relationship between Droz and Boulton eventually came to a head in March 1790, culminating with Droz' dismissal in July of that year, although subsequent legal proceedings, relating to transfer of dies and other materials, dragged on until 1791 (Selgin 2002). Droz returned to Paris, to continue what became a very distinguished career, and died in 1823.

Selgin (2002) does not indicate whether or not Droz produced any coins during his sojourn at the Soho Mint between March 1788 and July 1790, even though accounts of the legal proceedings allude to several dies. His time there spans the 1789 period of production of both AIMC and AIMA Cronebane tokens, and so it is entirely conceivable that he might have produced some Cronebane token dies comparable to, but distinct from those engraved by Hancock - and that these might then have been struck in the mint using the same presses used for the production of the AIMC series under contract. If so, then this might explain the very variable edge inscriptions, as it is conceivable that edge marked blanks being produced for other genuine tokens could have become mixed in with the normal Cronebane/Dublin marked blanks.

Another 18 largely individual style "mules" are also known (DH57 to DH77). These, most commonly, combine the St. Patrick obverse side bust, with a wide variety of reverse side engravings (e.g. DH68, Fig. 8), or the AIMA reverse with other obverse designs (e.g. DH72, Fig. 8). Two of these include the bust of John of Gaunt, Duke of Lancaster (Fig. 8, DH 72,76), a design which is primarily associated with an entirely separate series of tokens, the "Lancaster halfpennies", produced between 1791-1794. Some of the latter are noteworthy as they bear the edge inscription, "payable at Clougher or in Dublin".

Waters (1954) states that all these "mule" varieties (DH57 to DH77) were produced, for sale for "general circulation[18]", by either Thomas Prattent, a London based copper engraver and coin dealer, or by William Lutwyche, of Birmingham. He more specifically ascribes varieties DH60-62 and 66-67 to Prattent, from which it may be inferred that other "mules" were produced by Lutwyche. The sole exception is variety DH65, which bears the unique inscription "Cronebane New Mine", which he postulates may have been produced by another manufacturer.

The appearance of AIMA series token obverse and reverse designs on different "mule" varieties (Fig. 8, DH 68 and DH 72) might indicate that at least some of the AIMA series tokens were produced by Lutwyche, as the latter obviously had genuine AIMA token dies in stock to use in the production of the "mules". Waters (1954) advances a similar argument in the case of some HMC "mules" (see below). However, if this interpretation is correct, then this conflicts with Patterson's (1903) assertion that other tokens were produced in the Soho mint (see above), unless there was some sort of manufacturing cooperation and/or sub-contracting arrangements between the two mints.

Waters (1954) notes an overall total of 31 genuine, 24 forgeries and 20 mule varieties of Cronebane token dies.

[17] A second AIMA token in the possession of the author, DH 46b, in extremely fine condition, weighs 9.553gm (0.33697 ounces - Avoirdupois)

[18] Waters (1954) notes that many manufacturers produced irredeemable tokens for bulk sale to any individual or company wishing to purchase and use them for "general circulation". He further notes that such coins were produced at the rate of 46 tokens/pound, 5,152/hundredweight, and 103,040/ton, at a manufacturing cost of £150-0-0/ton compared with a face value of £214-3-4/ton - a very handsome profit margin of £64-13-4/ton for the manufacturer. The weight per token, at 0.34783 ounces - Avoirdupois, is very similar to, but slightly greater than the two examples noted above. A "John of Gaunt" token, DH 76, Fig. 8, in very fine condition, in the possession of the author, weighs 9.743gm (0.34367 ounces - Avoirdupois).

THE HIBERNIAN MINING COMPANY : BALLYMURTAGH

Ownership of the Ballymurtagh mine was acquired by John Howard Kyan, most likely sometime before 1780, and in 1783, and again in 1785, he sought Parliamentary grants to undertake smelting, both attempts being unsuccessful. When precisely the name "Hibernian Mining Company" was adopted for the Ballymurtagh mine is uncertain, though most likely it originated in the early 1780s, by the adoption of the name of a previous enterprise. Dalton and Hamer (1996) state that the company was formed in 1790, and adopted the name of an old copper mine that had been stopped "since the time of the rebellion".

The principal partners in the enterprise were Turner Camac, Chairman; John Howard Kyan [19], who had sold Cronebane to the AIMC in 1786; and John Camac. John and Turner Camac were brothers, two of eight children of John Camac [20] originally from Lurgan, Co. Armagh (W. Chatterton Dixon, *pers. comm*. 2002). Turner Camac, born about 1750, served as an officer in the Bengal army from 1768 until he resigned in 1779, with the rank of Captain.

The company was incorporated by Act of Parliament in 1792, though operations at Ballymurtagh had ceased by 1800 (Smith 1998), when the company capital was £100,000 (Dalton and Hamer 1996). Another, totally unrelated "Hibernian Mining Company" was established in 1824 with offices in London (Cowman 2001).

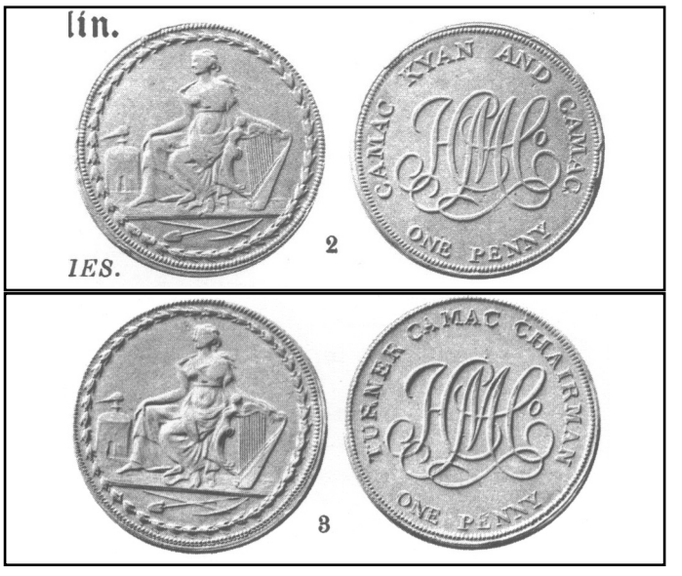

Figure 9. HMC penny tokens, DH2, Camac Kyan and Camac type, left; and right, Turner Camac Chairman type, DH3.

HMC TOKENS

The rivalry between the two companies was manifest in many ways (see below), not least in the issue of tokens by both companies, leading Cowman (1994) to remark upon the relatively paltry number of token varieties issued by the AIMC, in comparison with a proliferation of varieties issued by the HMC. The HMC tokens were issued in the denomination of a halfpenny only, except for two undated, and very rare penny tokens (Fig. 9). The halfpenny tokens may be divided into two distinct series, with further sub-division in one instance:

- a "**Camac Kyan and Camac**" series, with two sub-series, variously dated between 1792 and 1799.
- and a "**Turner Camac Chairman**" series, bearing the date 1792 only.

Both penny tokens, though undated, but probably 1794, as both bear obverse designs identical to that of the 1794 series of halfpennies, also reflect this primary level distinction, one referable to the Camac Kyan Camac series, the other to the Turner Camac Chairman series (Fig. 9).

Most numerous of the **Camac Kyan and Camac** type is the first sub-series, which bear the dates 1792, 1793 or 1794 (Fig. 10). The 1792 suite depict, on the obverse, a seated female figure holding a harp and facing to the left, with the date below, and surrounded by the inscription "Incorporated by Act of Parliament"; and, on the reverse the cipher of the company "HMCo" surmounted by the inscription "Camac Kyan and Camac", with the denomination, halfpenny, below (Fig. 10). All bear an edge inscription, most commonly either "payable in Dublin or at Ballymurtagh" or "payable in Dublin or Ballymurtagh". Dalton and Hamer (1996) define a total of 145 varieties, distinguished in the first instance by the number of strings in the harp (which vary between 5 to 14), and thereafter by the position of the head of the figure and the upper loop of the "C" of "Co" relative to the surrounding text inscriptions.

The 1793 suite is distinctly different in design (Fig. 10). The obverse depicts a seated, crowned female, facing to the right, and holding a harp on one side, with a still on the other. Some varieties also include a crossed axe and shovel below the figure (e.g. DH246 shown), and all include a surrounding text inscription "payable at Dublin or Ballymurtagh". The reverse resembles the 1792 reverse, except that the text "one halfpenny" is arranged in a convex arch over the date (Fig. 10), in a few instances enclosing also the text "Mossop. F" (e.g. DH246 shown). A total of 16 varieties are distinguished, again principally by the number of strings in the harp.

The 1794 suite differs yet again (Fig. 10). The obverse depicts a seated, uncrowned female figure, facing to the left and holding a harp on one side and a still on the other. The figure is surrounded by a garland of leaves, with the date set below the figure. The reverse design is essentially the same as that of the 1792 suite. 18 varieties are distinguished, again by variations in the number of strings in the harp, and, as with the 1793 series, other details such as the position of the loop of the "C"

[19] John Kyan Jr. (1775-1850), son of John Howard Kyan, who died penniless in 1804, is credited with the discovery of the process of "kyanisation" a process for impregnating timber with bichloride of mercury to preserve timber.
[20] A John Camack admitted to the Freedom of the City of Dublin in 1717 might or might not be the same person as John Camac Sr. (W. Chatterton Dixon. *pers.comm*. 2002).

Figure 10. HMC Halfpenny tokens: 1792 - DH30 (six string harp) and DH170 (12 string harp); 1793 - DH246; 1794 - DH255. All images from Dalton and Hamer (1996).

of "Co", and the point of the still relative to text or leaf garland position.

The second sub-series is defined by a suite of tokens which contain numerous variations in text inscriptions, spellings and dates (Fig.11; DH174 to DH226). The latter generally range between 1792 and 1799, though one variety even bears the date 1972 (sic). Many bear the obverse side inscription "Incorporated by Act of Parliament" but with many different spelling variations (e.g. "inorboratd by Barliament", "Incorporated by an Act", "parlrment", "Parlerment", "Incoporeted", "pncorpirtad by act of Prcliamrnt" etc), others the legend " "Industry has its sure reward". Reverse side inscriptions are equally variable mainly reflecting outlandish misspellings of the names of the founding partners, e.g. "Canac Kran and Canac Palfplnny", "Camak", "Kian", "Kamuk", "Grmac Kran and Grmac", "halfready" etc. Some bear the inscription "for the good of the public(k)" as either an obverse or reverse inscription. As a group of 52 varieties, they are all very poorly executed and crudely produced, and this, taken in conjunction with the numerous spelling mistakes and extremely variable edge inscriptions, where present, leaves little doubt that most, if not all of these are counterfeit pieces, though Dalton and Hamer (1996) do not classify them as such. Waters (1954) suggests that four tokens in this series (DH174-DH176, and DH179, all dated 1792) might be genuine, the remainder all forgeries.

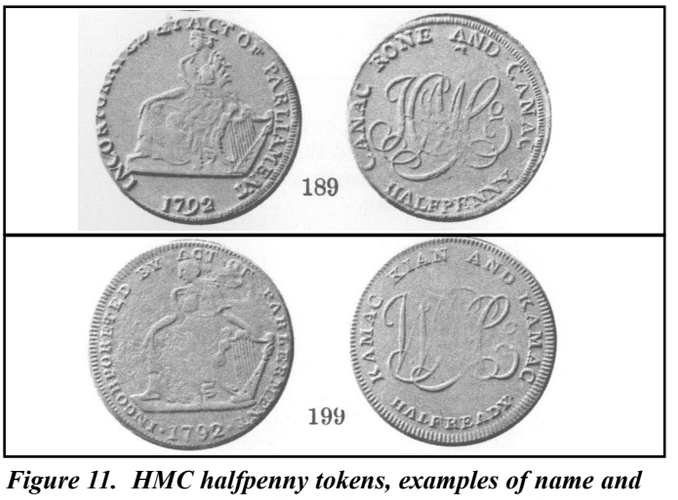

Figure 11. HMC halfpenny tokens, examples of name and spelling variations:DH189 - "*Canac Rone and Canac*"; DH199 - "*Incorperted*", "*Kamac Kian and Kamac Halfready*". Both images from Dalton and Hamer (1996).

The second main series of HMC tokens, Turner Camac Chairman, are all now very rare, some even unique, even though the class as a whole is represented by a total of 35 distinct varieties (Fig. 12). The tokens, all dated 1792 only, are, apart from bearing the inscription "Turner Camac Chairman", in the place of "Camac Kyan and Camac", otherwise virtually identical to those of the latter series and varieties are distinguished on the same basis. The only principal exception is one variety in which the name "Turner" is misspelled as "Turne" (Fig.12).

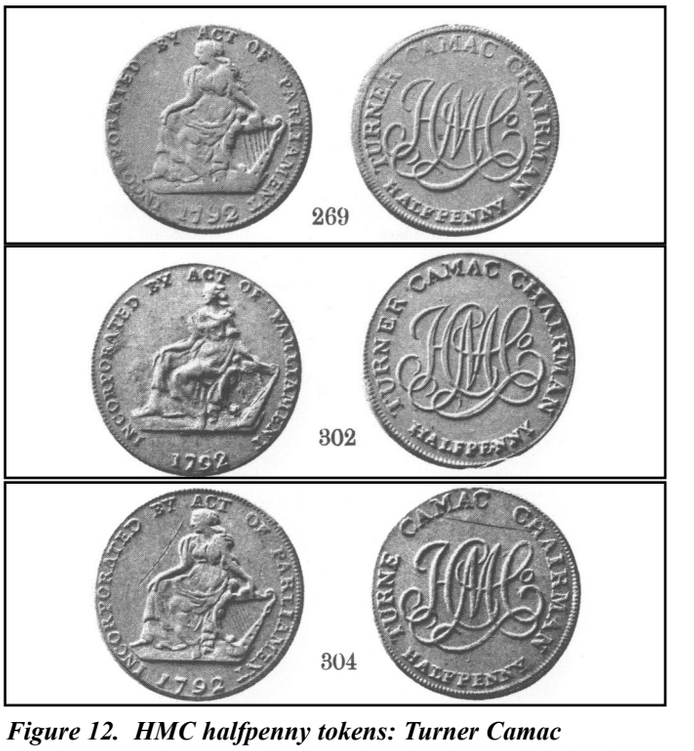

Figure 12. HMC halfpenny tokens: Turner Camac Chairman series: DH269 (six string harp), DH302 (twelve string harp), and DH304 (*Turne Camac*).

It is probable that most of the genuine HMC tokens were engraved and produced in Dublin, as Frazer (1893) notes that William Mossop Sr [21] was engaged by Camac, Kyan and Camac in 1793 to make their dies, and superintend ".. the practical working of their private mint", using copper from their Wicklow mines. Mossop undoubtedly produced some of the 1793 series, certainly the four varieties which bear the inscription "Mossop. F [22]" immediately above the date (Fig. 10, DH246; Dalton and Hamer 1996, DH245-247, 249), and probably all the others in the series. Mossop's relationship with HMC may have extended beyond just the 1793 series, as Frazer (1893) notes that Mossop returned to private die-sinking in 1797, after losing his appointment to HMC, and subsequent to the failure of that company. Whatever the exact order of these events, Mossop's association with HMC extended, at most, only over the period 1793-1797. It is therefore conceivable that he may have been involved with the production of the 1794 series of genuine HMC tokens.

The 1793-1797 period is also coincident with the production of most of the second sub-series of very crude Camac Kyan and Camac tokens described above. It is, however, difficult to envisage that a diesinker of the calibre of Mossop was involved with the production of such very crude coins. All appear to be the work of far less skilled, and possibly less well educated diesinkers in light of the grotesque misspellings. It is further conceivable, but entirely conjectural, that they may have been employed, directly or indirectly, by HMC to augment token production in the HMC mint, and perhaps in response to demand for such coins. Frazer (1893) notes that the overall production of HMC tokens was so prolific that they largely displaced the royal coinage and for several years halfpennies were widely known as "Camacs". If, indeed, all the crude tokens were produced in the HMC mint, and not just the few varieties noted by Waters (1954), then it is easy to imagine the sense of effrontery this must have presented to Mossop in his role as superintendent of the HMC mint - and perhaps contributed to his ultimate departure.

Waters (1954) asserts that at least some of the "mule" varieties of HMC tokens, specifically varieties DH227 to DH232, were struck at the Birmingham mint of William Lutwyche [23], using, in different combinations, genuine obverse and reverse dies from a genuine token variety (DH42). This, he suggests, could indicate that at least some of the genuine 1792 series HMC tokens series were struck at that mint, rather than in Dublin. Waters (1954) estimates a total, very approximately, of 208 genuine, 61 forgeries and 8 mule varieties of HMC token dies.

COMPANY RIVALRIES

Not surprisingly, given their different pedigrees, there was little love lost between the Irish owned and staffed HMC, and the English owned and managed AIMC, each operating on opposite banks of the Avoca river from 1787 through to the early 1800s (Fig. 3). Whatever about the ownership and management of AIMC, the composition of its workforce appears to be somewhat more cosmopolitan, with surnames of Welsh, Irish and Cornish origin all well represented in the names of surface and underground workers, though, curiously, there is no mention of obviously English surnames (Cowman 1994). Indeed it is noted that Welsh surnames are common amongst the earliest members of the workforce suggesting that some of these at least might have moved over to Ireland from Anglesey when Roe and Company had to abandon their lease at Parys Mountain. The Methodist chapel at Avoca also attests to either a Cornish and/or Welsh influence.

Cowman (1994) also draws attention to a possible expression of company rivalry, and perhaps sympathies, manifest in their respective token coinage. He notes the patriotic inscription, "industry has its true rewards" (Fig. 13), which adorns some of the presumed counterfeit HMC tokens, as already noted above, whereas a later, AIMC counterfeit token, produced in 1794, seems to be directed against the HMC, as it shows a lady holding scales of justice and the message "for change, not fraud" (Dalton and Hamer 1996, Cronebane varieties 63 and 64).

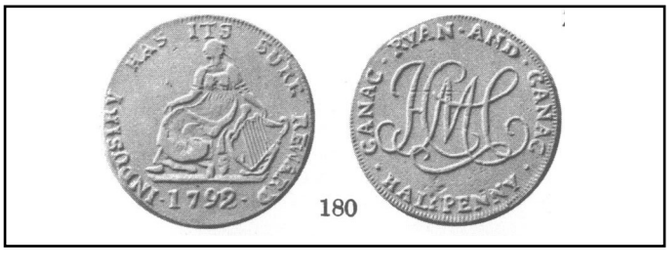

Figure 13. HMC Halfpenny token: DH180 - "Industry has its sure reward"

Use of tokens for such political, social or economic commentary is well documented by Dalton and Hamer (1996), so Cowman's (1994) interpretation has merit. Indeed, the speculation could be carried a stage further. The second sub-series of Camac Kyan and Camac tokens are so crudely produced, and some misspellings so gross, that, apart altogether from the conjectures already advanced above, it is conceivable that they may been produced deliberately to reflect poorly on the company. And if that was indeed the case, then what better suspect than

[21] William Mossop Sr (1751 - 1804) was a well known Dublin based medal diesinker and numismatist, who, along with his son William Stephen Mossop Jr. (1788 - 1827), also a noted medal diesinker, had his business premises at 13, Essex Quay (Frazer 1893, Waters 1954, Dalton and Hamer 1996). Mossop Sr. produced many very fine commemorative medals for, amongst others, the Royal Irish Academy (Cunningham Medal, dated 1776), the Armagh Observatory (1789), College Historical Society and Mossop Medals, University of Dublin (1788-1794), Bantry Bay Medal (1797), the Orange Association (1798) and the Dublin Society Medal (1802: Frazer 1893).

[22] Mossop Sr. included the inscription "Mossop" on many of his medals, " Mossop. F" on some (e.g. Dublin Society medal), and "Mossop Fecit" on one (Irish Ordnance Medal). It is clear that "F" in these instances, and in the 1793 HMC tokens, is an abbreviation for "*Fecit*" (Latin, "he (/she/it) made" [it]), as a shorthand inscription for "Mossop fecit", "Mossop (he) made" [it].

[23] Waters (1954) lists the names of 16 manufacturers in Birmingham, including Lutwyche, 5 in London and 1 in Sheffield. He also notes the names of 13 diesinkers in Birmingham, 5 in London and 1 in Sheffield. Droz' name is not listed amongst these.

the AIMC? The contrast between counterfeits of the two companies tokens could not be more obvious, as most of the AIMC counterfeit tokens are remarkably well produced - and obviously designed to appear credible and respectable. One "mule" token in particular, with the date 1794, bears a very obvious political message, the obverse bearing a rather poor imprint of the AIMA design, while the reverse depicts a dove carrying an olive branch, with a face inscription "united for a reform of Parliament" (Dalton and Hamer, 1996, DH69).

The evolution in the design of the genuine HMC tokens from 1792 - 1794, could equally reflect the evolving sympathy of the company (Fig. 10). Inclusion of the inscription "Incorporated by Act of Parliament" undoubtedly reflects a sense of pride in the corporate status granted in 1792, but by 1794, this notation had been dropped in favour of a garland of leaves. Equally curious is the depiction of the seated female figure. This is identical in the 1792 and 1794 series', even to the same rather languorous pose of her right arm, other than for the inclusion of a still in the 1794 versions. Both, however, differ significantly from the 1793 series, not only in the rather stiffer pose of the female's left arm, but, most importantly, by the inclusion of a crown on her head, a feature conspicuously absent in the 1792 and 1794 series'. These changes coincide with a manifest hardening in the republican sympathies of the HMC, as noted by Cowman (1994) and summarised below. In that context, it is easy to understand why the crown and reference to Parliament was quietly dropped, the latter to be replaced by leaves - perhaps as a symbol of peace?

Mossop's role, if any, in these subtle changes, is not documented. His political sympathies are equally unknown, though it is reasonable to conjecture that they were aligned with the establishment, given the nature and subject matter of many of his commissioned medals - not least the Orange Association Medal of 1798. And if that conjecture is indeed correct, then it could add a yet further dimension to help explain the loss of his appointment to the HMC by 1797.

Whatever about such dimensions, the rivalry between the companies reached its climax with the 1798 rebellion, when opposing loyalties and allegiances became very obvious. In the run-up to the uprising that year, both companies had raised, funded and equipped their own militias, both protesting that this was done as an act of loyalty to the Government. However, while there was no doubt that this was indeed the position of the AIMC and its militias, the same could not be said for the HMC, which was strongly suspected of sympathy for the cause of the "United Irishmen" (Smith 1998).

That belief was, in part, based upon the relationship between Kyan [24] and Esmond Kyan, of Wexford, a local leader of the United Irishmen, in addition to the suspected republican sympathies of the Camacs (Cowman 1994). Kyan and Camac had apparently provided employment in 1792 to republicans driven out of Co. Louth, and by 1796 they had established two militias, one, the Castlemacadam Cavalry, commanded by Turner Camac, the other by his brother James. Turner's previous experience as an officer in the Bengal Army was no doubt influential in this development, whatever about the military experience of his brother. However, by March 1798 it had become clear that members of both militias were actively involved in the United Irishmen, as HMC workers were reported to have engaged an *agent provocateur*, James McQuillan, alias James Collins, to ascertain the intentions of local Orangemen (Cowman 1994). Both militias were subsequently dissolved.

The AIMC was equally involved in military preparations. They had certainly established their own, Cronebane yeomanry by 1796, as in November that year, they spent £150-2-2, principally on uniform materials, a further £2-10-11 on a drum, and by December, they were importing arms through Wicklow (Cowman 1994). George Blood, Secretary and Accountant of AIMC (1794 - 1812), also served as a Lieutenant in the Cronebane Yeomanry (Burkes Irish Family Records). The initial stimulant for the establishment of the Cronebane Yeomanry was most likely related to military action to control activities arising on foot of the re-discovery [25] of gold nearby in 1795 or 1796, ultimately brought under control by the intervention of the Kildare Militia (Sullivan 1824, Hall and Hall 1853, Reeves 1971). The AIMC was then contracted by the Government to develop the prospecting on behalf of the State (Cowman 1994). The Yeomanry was largely inactive during 1797, though they did impose a mandatory oath of allegiance, which 40 of their own workers refused to sign.

The insurrection eventually erupted in May 1798, resulting in cessation of mining from then until the following September. The total value of lost production at Cronebane is estimated to have been about £60,000, in addition to wages totalling £377-11-2 paid by AIMC to miners while serving in the yeomanry, as well as related material costs (Cowman 1994). Operations must also have been disrupted later in the year, as the mines closed for 3 weeks in December because of lack of blasting powder, presumably due to security precautions. The actions of their Yeomanry obviously pleased the English shareholders of AIMC, as they saw fit to make special awards to some of its officers: a silver plate worth 50 guineas to Captain Mills, and plate worth 30 and 20 guineas to First Lieutenant Weaver and Second Lieutenant Blood respectively (Cowman 1994). The militia continued in existence up to 1808, and even though the mine reached its peak profitability in the early 1800s, production must have been affected, as miners were providing over 100 days service per year.

Given that the AIMC was actively involved in raising and financing armed militias in the 1790s, it is conceivable that the reference to "Miners Arms" on the AIMA series of tokens might

[24] An Irish folk ballad makes reference to "Kyan and the Shelmalieres" (named after an area south of Wexford), and the use of wildfowling guns in the 1798 rebellion (M. Kenny, *pers. comm*., 2003)

[25] Sullivan (1824) states that gold was first discovered "..between fifty or sixty years since..", i.e. about 1764-1774, consistent with a 1770 date noted by Reeves (1971).

be a *double entendre*, and/or a very pointed political comment. The obvious interpretation is that the reference merely relates to the depiction of the coat of arms on the reverse side of the series. But given the increasingly unsettled political times in Ireland in the late 1700s, the allusion to "Miners Arms" might instead or, in addition, refer to the arming of miners to serve in the AIMC yeomanry companies. Militarisation of AIMC miners was certainly established by 1794, coinciding with the dates of at least two varieties of the AIMA tokens, bearing the dates 1794 (Fig. 8, DH52) and 1795, and perhaps some of the undated varieties. However, the 1789 date born by most of this series of tokens pre-dates the currently known recorded history of the yeomanry companies. Nonetheless, it is conceivable, that, as the rival HMC was known to have employed Republican sympathisers in 1792 (Cowman 1994), the AIMC may have started to initiate military preparations about the same time, or maybe even earlier.

And was there a literal "Battle of the Tokens"? At some time during 1798, a band of rebels reputedly laid siege to a house occupied by an AIMC Yeomanry officer, who, to defend himself, loaded a blunderbuss and discharged it at, and dispersed those besieging him (N. Coy, *pers. comm*. 2003). His ammunition? - supposedly a load of Cronebane tokens.

FOOTNOTE

Apart from these two companies, the Castlecomer Colliery is the only other Irish mining company known to have issued tokens (in 1804; Seaby 1970). These now extremely rare and very valuable coins, were not minted as tokens, but instead are Spanish 8 *reale* silver coins of 1799, defaced with a countermark for the denomination 5s 5d, and bearing the legend "Castlecomer Colliery Yard". One of these coins sold for IR£2,400 when auctioned in Dublin in 1997.

Figure 14. IM Co, Drogheda token: DH2, "Incorporated by Act of Parlerment".

There is, however, one other curious series of halfpenny tokens, issued in Drogheda and bearing the dates 1792 and 1804 only, which may or may not have a mining connection. All these tokens (Fig. 14) bear the cipher IMCo on the obverse, along with the date, and, on the reverse, Hibernia with various text inscriptions such as "Incorporated by Act of Parlerment" (Fig. 14), "for the public good", "and "Leinster Halfpenny"(1804). Seaby (1970) includes these in a group of tokens categorised as "Spurious tokens of Fictitious Companies", but Dalton and Hamer (1996), suggest that the cipher may stand for the "Irish Mine Company". The authority for this interpretation is not stated, and no company of that name is, so far, known to have existed at that time. The most similarly named company is that of the "Mining Company of Ireland", MCI, although this company was not established until 1824, and there is no record of it ever having issued tokens (Cowman 2001). Waters (1954) suggests that they are just copies of HMC tokens.

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