

BRUMMAGEM BRASS

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To misquote Macaulay, Brummagem is, as every schoolboy knows, a corruption of Bermingham, a word of Saxon origin, whose literal meaning is “the homestead of the sons of Berm”. Spelt in the Domesday Book as BERMINGEHAM, the ‘e’ following the ‘g’ signifies the latter as soft, so that the pronunciation becomes Berminjam which, spoken quickly, easily becomes Bremijam or Brummagem.

But, whatever its derivation, and that given above seems the most plausible, the word itself, associated as it was with poor, worthless imitations of good quality goods, became one of reproach. Yet, in a way, it was a tribute to the ingenuity of the Birmingham workmen whose skill in producing dies for medals was equally capable of producing the dies for base coins. So much so, that in the 17th and 18th centuries, Birmingham became specially noted for this kind of manufacture, well expressed in a contemporary poem:

“The wretch that stamped it got immortal fame;
Twas coined by stealth, like groats at Birmingham.”

This reputation for counterfeiting was not confined to coining: it was also common in the buckle trade in which large quantities were made of a white alloy, bearing some slight resemblance to silver, popularly called “soft tommy”, the workmanship being on a par with the material

“Brass “itself can be defined in three ways. Universal as applied to the alloys of copper and zinc, parochial in the North country sense of “where there's muck, there's brass” and national in its meaning of impudence. In case it might be thought that only the first two meanings could apply in Birmingham, it would be as well to quote from a matrimonial advertisement which appeared in a Birmingham newspaper of 1825.

“A respectable tradesman, 30 years of age, with a good income is in want of a wife. His object being to marry one of pure heart and unaffected manners, the less intercourse she has had with the seniors of her own sex, the better. No lady residing in Birmingham or its environs need apply, the Advertiser having seen them all !”

‘And this even before the days of the penny-farthing!

But, for the purposes of this Presidential Address, I propose to deal mainly with the first definition of brass, maybe touching lightly on the second in passing and completely ignoring the third.

‘The manufacture of brass was first introduced into England, all previous supplies having been imported chiefly from Germany, by Queen Elizabeth I in 1565, when she granted a patent to Christopher Shutz, a native of Saxony, in partnership with William Humfrey, her "Say" Master of the Mint, to have exclusive right of getting “calamine’ stone and working brass.

Shutz is described as “a man of great cunninge in ye mixed metalle called latten or brasse, alsoe in apting, *manuring* and working ye same into alle sortes of battereye wares, caste worke, and wyres’.

'The value of this monopoly may be gauged from the fact that from 1529 onwards a series of statutes had been passed prohibiting the export of brass, copper, bell-metal and latten (a term for a particular type of brass), these metals being urgently needed for national defence.

This method of making brass by the cementation of copper with calamine (zinc carbonate) persisted till 1738. The "battereye" is, of course, the process of flattening ingots of metals into plates by means of hammers moved by water power. The name is still preserved in the Birmingham Battery and Metal Company.

In 1565, German prospectors discovered copper ore in Cumberland and German workers were imported to exploit it. The company was formally incorporated in 1568 and was known as Mines Royal, calamine having been found in Somerset in the Mendips in the meantime. A works was set up in Bristol to manufacture brass, known as the Bristol Brass Company, and that city remained the home of the brass trade for nearly a century.

Since Birmingham had no natural facilities, other than fuel and casting sand, calculated to make it the headquarters of the brass trade, and both copper and zinc came from a distance, the reasons for its present pre-eminence must be sought elsewhere. Undoubtedly the most potent factor has been, throughout the ages, the availability of skilled labour.

Known as a metal-working locality since the days of Henry VIII, Birmingham was also the home of many lorimers and there seems little doubt that one of the first uses to which brass was put in this town was as decorative enrichment to saddlery. The early styles of finish in both brass and iron were identical so that the introduction of brass needed no radical change in the methods of Birmingham metal workers.

Even before canals and railways, Birmingham had attained a place of eminence in the industrial world despite the fact that Wolverhampton, Walsall and Wednesbury were nearer to the sources of coal and iron, and transport (even in those days) was a problem. One important reason for this is that Birmingham was free from the restrictions of incorporation and possessed neither charter nor craft guilds so that numbers of Dissenters, men of strong character, forbidden by the Acts of Uniformity of 1662 and 1665 from "inhabiting in corporation", settled in the town, bringing with them their several skills.

The historian Hutton records that "the people were a species I had never seen; they possessed a vivacity I had never beheld; I had been among dreamers, but now I saw men awake". The vivacity might, of course, have been due to the fact, also recorded by Hutton, that "workmen used to boast of their guinea a day and I have known an apprentice earn for his master 15/- in one day".

Two forces drove the people of Birmingham towards the manufacture of small and varied articles in the making of which brass and copper were eminently satisfactory. First, after the Restoration of Charles II, the reaction against Puritanism created a demand for new fashions in which artistic goods were largely used. This demand was protected by legislation, in that an Act of 1662 prohibited the importation of foreign buttons, so encouraging the makers of metal buttons that by 1685 Birmingham buttons were becoming well known and by the beginning of the 18th century were being exported to France. Transport problems also tended to make the people of Birmingham produce articles in which skilled labour was a very important element.

The manufacture of buckles (introduced into Birmingham from Walsall), buttons, locks, guns and various small articles of steel, brass or copper was thus well established before 1686, there being evidence that brass locks were manufactured in Birmingham as early as 1647.

The first brass house was opened in 1740 by Turner in Coleshill Street. The older companies were unsuccessful in their attempts to ruin the new undertaking, which nevertheless was forced to enter the combination a few years later. Supplies were obtained from the Bristol Brass Battery Company in the form of ingots, battery work and rolled brass, and from the Cheadle Copper and Brass Company, who established a copper smelting works near Warrington in 1717, followed by a works near Cheadle in Staffordshire (the forerunner of Thos. Bolton & Sons Ltd.). Up to 1830 all brass in these works was made by the old process of cementation.

Two disadvantages which prevented the growth of the industry for some years were the lack of water power to drive battery and rolling mills and the appalling state of communications. 'With the opening of canals, these latter were greatly improved and the invention of the steam engine solved the problem of power. The "fire engines" were soon installed in Birmingham, the first in 1760 by Tingey in Water Street (afterwards acquired by G. F. and P. H. Muntz), then by Phipson's Mill in Fazely Street (later Clifords) and, of course, at Soho, by Boulton.

'Some idea of the growth of the trade can be gathered from the fact that in 1780 there were 104 button makers, 23 brassfounders, 26 bucklemakers, 29 die sinkers, 26 jewellers and 46 platers listed in a local trades directory.

That Birmingham was originally a user of brass rather than a producer is evident by the fact that in 1780 a long letter from a correspondent signing himself "Bristol", whom, it later transpired, was Peter Capper (no doubt one of the founders of Capper Pass and Co.) appeared in the local newspaper urging Birmingham men to make their own brass. Action soon followed, public meetings were held, a committee appointed and subscriptions opened to fill 200 shares of £100 each, which was deemed a sufficient capital to establish a new brass works. Each proprietor of a share was pledged to purchase one ton of brass annually. Works were immediately erected on the banks of the canal, a new manager was appointed at an annual salary of £150 and, according to Hutton, "the whole was conducted with the true spirit of Birmingham freedom". Incidentally, these works, the Birmingham Metal Company, gave the name to Brasshouse Passage.

The new venture found it difficult to obtain supplies of copper from the primary producers and also faced the opposition of long-established brass merchants who, as soon as the new works were completed, reduced their price from £89 to £56 per ton. In spite of this, the new firm flourished and declared a profit of 23% on the total capital in 1789.

In 1783 the merchants and manufacturers organized opposition to a petition by the brass makers that the Acts prohibiting the export of brass should be repealed. They were successful, in that though the Bill was passed by the House of Commons, it was thrown out by the Lords.

In the same year manufacturers were still experiencing difficulties in obtaining supplies of copper and brass at the right price—a situation still not unknown to-day. So much so that a Committee of consumers examined a plan drawn up by the great Matthew Boulton himself for "securing a constant supply of copper and brass, upon as good terms as the nature of the trade will permit".

That the Matthew Boulton plan was not a complete success can be gauged from the fact that in 1790 it was proposed to establish a company for the purpose of raising copper ore, an unlimited sum to be subscribed by manufacturers and 'consumers of copper and brass, in shares of £100 each. The title of the new 'company was Birmingham Mining and Copper Company and it was hoped that the plan would prove very beneficial to the Birmingham manufacturers by preventing as much as possible the monopoly and arbitrary price of such essential articles as copper and brass. Support for this scheme was forthcoming from "a friend to the manufacturers of Birmingham" writing in the local journal in that it 'would confer that independence in respect to so essential an article as copper

is to your manufacturers, that you all ardently wish for - it would act as a new invention in mechanics, which by facilitating your different operations, enables you to sell your articles upon such terms in foreign markets as to astonish your competitors'. So successful did this venture prove that it was shortly followed by the foundation of the Rose Copper Company, the predecessor of the Birmingham Battery and Metal Company Ltd. with smelting works at Swansea and the Crown Copper Company who smelted at Neath.

It is of interest to note that in those days trade had its peculiar method of gaining publicity. Thus a Mr. Durnell advertised himself as "the real manufacturer of Dutch Tea Urns and Block Tin Plate Kitchen Furniture". Unfortunately, this claim was rather questioned by a rival concern whose advertisement appeared underneath and who "as lovers of truth and enemies of puffing would be extremely glad to know where his real manufacturing is carried on, having never had the pleasure of seeing it".

This, of course, implied that the works did not exist and was in no way connected with the resolution of Birmingham manufacturers in 1786 not to admit any strangers Whatever into their workshops in future, a custom which many of us will remember lasted until comparatively recent times.

Correspondence in Aris's Birmingham Gazette was then, as now, a much favoured method of airing grievances. Thus, in 1791 we find a certain J.H. enquiring whether "in consequence of a recent advance of £5 per bar on brass, as well as the rise of tin, spelter, brass wire, etc. it is not absolutely necessary that some steps should be taken to relieve the manufacturers of white metal buttons, who are thereby very 'much injured?'" Next week another correspondent, signing himself a manufacturer, asked "some person, conversant in the copper trade to favour them with the reason for the late advance in the price of copper." A more thoughtful letter on the same subject, addressed to the manufacturers of Birmingham who are consumers of brass is worth quoting in full.

"The price of brass has risen within the last 8 months £10 per ton and a very respectable proprietor of copper works has hinted that there is every probability of a still further advance. In this case the manufacturer has no possible redress without materially deranging his business by making an alteration in his discount, this at all times proves vexatious to the merchants and injurious to the manufacturers. If however, by a union of sentiment and interest among the principal consumers a plan could be devised to keep the market of this necessary article permanent, it must be allowed on all hands to be a most desirable circumstance. The writer hereof, therefore, earnestly suggests it to the consideration of those interested how far an extension of the brass works already established in this town may be eligible, or publicly beneficial, or whether the establishment of a new works, on a more extensive scale than either of the present, so as to have for its object the making of a quantity of brass (including the produce of the works now in use) equal to the consumption of the whole town, be not a desirable plan to adopt in the present instance."

The letter ends

"As the process of making brass has long ceased to be a mystery, all objections on that head are completely obviated."

A later letter from "A consumer of brass" claims that the grievance would be found not to originate with the makers of brass but with the makers of copper, whose prices had risen in the same proportion.

About this time great consternation was caused in one of the important trades using brass; a change of fashion threatening to banish the far-famed buckle. The practice of tying shoes was declared to

be “unmanly, absurd and ridiculous” and a deputation waited upon the Prince of Wales with a petition in which it stated:

“The buckles trade gives employment to more than 20,000 persons, numbers of whom, in consequence of the prevalency of shoe strings and slippers are at present without employ, almost destitute of bread and exposed to the horrors of want. It is in great measure owing to the two valuable manufactures of buckles and buttons that Birmingham has attained her present importance.”

The Prince promised utmost assistance by his example and influence and assured them that the mode of tying the shoes should not be adopted by any person in his household. But even though the Court News in 1794 conveyed the fact that H.R.H. the Prince of Wales “now always wears both in his morning and evening dress, engraved fancy white and yellow metal buttons; the unmanly shoe string will henceforth be thrown aside for the buckle”, the buckle was doomed. Not even the favour of the “first gentleman in Europe” could prevail against the dictates of fashion

Forty years later, the button makers themselves laboured under the delusion that Royal patronage could change the decrees of fashion and appealed to the King and nobility to wear plain metal buttons in place of covered ones.

The high price of copper still continues to engage the attention of manufacturers so much that in March, 1792 a deputation waited on the Prime Minister who “paid every attention to the plans submitted to him by the deputation and promised that the subject should have his serious and immediate consideration.”, a formula that does not seem to have changed much with the passing of the years.

Button manufacture, too, seems not to have been without its trials and tribulations, manufacturers binding themselves in 1792 to discountenance such iniquitous practices as making ungilt buttons as gilt, and silvered or other white buttons as plated, when in fact not so. Such was the skill of Birmingham mechanics in counterfeits that many instances are recorded of prosecution for making and selling gilt buttons not up to standard. The Button Association even found it necessary to recommend an easy means of trying the quality of gilt buttons.

“Dissolve two tea spoonsful of common salt in about a tea cupful of the blackboil for cleaning buttons ; this liquid will not immediately discolour buttons, if gilt is up to standard, but every bare part will become black as soon as wet; if slightly gilt, will be speckled’.

That this must have been a widespread practice is evidenced by the fact that Matthew Boulton himself took the chair at the meeting on the matter and delivered the following words:

“As an old button maker, allow me to advise my brethren to make excellence rather than cheapness their principle of rivalry. It perhaps may be difficult to distinguish the difference of shade in gilt buttons between one penny per gross higher or one penny per gross lower, and yet a repetition of such small abatements will soon bring back the ruinous trade of gilding without gold. Let the maker say what he will, the buyer may be assured that the reduction of quality will always keep pace with the reduction of price.”

The reports of these and similar meetings show how careful the chief manufacturers were to preserve the integrity of their trades.

Even in 1799, the high price of copper continued to exercise the minds of manufacturers. Thus a general meeting of merchants and manufacturers “learned with pleasure that His Majesty's

Ministers are determined to bring forward some effectual measure for reducing the present exorbitant and high price of copper, for preventing excessive fluctuation therein, so detrimental and distressing to the trade of the Kingdom in general." The same meeting recorded its appreciation of the patriotic and generous conduct of the Birmingham Metal Company, the Birmingham Mining and Copper Company and the Rose Copper Company in having agreed to continue the prices of copper and brass to the manufacturers for three months, and hoped others would follow their example.

In June, 1802 a bill was brought forward in the House of Commons to permit the importation of copper after a time to be limited, to prohibit the exportation of copper to any place within the limits of Europe and to alter the duties now payable to 5s. 3d. on every hundredweight of copper imported. Commenting on this, Aris's Birmingham Gazette had this to say:

"The attention of the legislature to the interests of general industry can in no case be more necessary and useful than the copper trade, where the operation of large capitals, and the long practice of avaricious finesse and cunning is bloating a few persons with riches, while the useful and laborious manufacturer is starving, or 'committing his family to the care of an already over-burthened parish. The population of Warwickshire is as useful as the population of Kent and the monopolizer of hops is not the only enormous capitalist whose steps should be watched by the Government"

Labour Relations

'The relationship between management and men in those far off days was, to say the least of it, somewhat curious. Contrast, for instance, the humble appeal for more wages by workmen in the white metal button trade in 1807 which ends "whatever advances you may think proper to favour us with will be most thankfully received and gratefully acknowledged by your humble servants" with the present-day attitude of workers, say, in the motor trade. Consider, too, the announcement in 1829 that "the voluntary abandonment by the Master Cockfounders of this town and neighbourhood of the practice of deducting a per centage in settling with their journeymen at the close of each week, is an example which deserves the imitation of other manufacturers."

Welfare, too, was on a slightly different plane. Thus the Gazette for August, 15th 1791 reports the rejoicings at Soho Manufactory on the coming of age of Mr. Boulton's son.

"At one o'clock all the persons employed in the manufactory assembled within its walls, and were marshalled into regular corps, according to their respective trades, from whence they marched, two by two, preceded by an excellent band of civil and military music. First corps - one hundred young women mostly dressed in white, with blue ribbons. A corps of fifty engineers headed by Perrins in the character of Vulcan, bearing a working fire-engine on his head. Third-six corps of Buttoneers, 50 in each with the ensigns of their respective trades. Fourth - Two corps of Artists employed in the silver-plated and ormolu manufacture. Fifth (and this appeals to me most since I can visualise it happening with some of our distinguished Past Presidents) the workmen employed in the rolling mills, carrying an ensign composed of fillets of rolled metal of various colours, forming festoons, loosely playing, and which had a pretty effect. Sixth— a corps of Moneyers carrying a glass vase, filled with coin."

This latter reference to Moneyers is interesting as it does not seem generally known that in 1797 Boulton was empowered to execute a considerable copper coinage of penny and twopenny pieces. These were "struck" in steel collars not only giving a smoother edge but allowing the application of a gauge to detect counterfeits. It is also of interest that for the first time a relationship was possible between our measures, weights and copper money. Thus the twopenny pieces weighed 2oz. each

and eight of them measured 1 foot. The penny pieces weighed 1 oz. And seventeen of them measured 2 feet, and the halfpenny pieces weighed 1 oz. And twelve measured 1 foot.

In Boulton's own words,

"Hence every individual will have a set of weights and the means of detecting false ones and there is no doubt that the poor will be able to obtain a penny-worth for a penny, as sixteen of them weigh one pound, whereas most of the counterfeit halfpence are 84 to a pound."

Twenty tons of copper were used weekly at Mr. Boulton's Mint in making this coinage and from 1797 to 1805 Boulton coined under contract for the British Government, upwards of 4,000 tons weight of copper coin, amounting, at its nominal value, to nearly £800,000.

Copper Trade

Copper was still in the news at the beginning of the 19th Century, thus it was reported on October 31st, 1803 that "some persons of respectability are coming forward to establish a new copper company here, owing to the very scanty supply the trade of this town has lately had of copper". A week later the following statement "confirmed by several very respectable manufacturers who are themselves large consumers of that article" was published

"The two copper companies already established in this town are capable of smelting far more than sufficient to supply the manufacturers. The principal reason why copper has lately been scarce in Birmingham has been the very unusual scarcity of water in the Severn, which has almost put a stop to the navigation of that river for many months past. If other new companies were to be established for the purpose of opening new copper mines, the quantity of that article might be augmented, but the instituting of new smelting companies would not increase the quantity of copper one ounce; by increasing the number of bidders for copper ores it would, in all probability, increase the price, and certainly be productive of other serious evils, which persons unacquainted with that trade are not aware of."

Enough has been said to show that by the end of the 18th Century the brass and copper industries in all their branches, with the exception of copper smelting, were firmly established in Birmingham. The larger companies then turned their attention to producing standardized products such as copper and brass ingots, sheet and rods. These semi-manufactures were used by those brass and copper trades in which the product required a good deal of skill and individuality.

As Sir William Ashley wrote, "Birmingham men can justifiably take pride in the enterprise and independent spirit of their predecessors in the later decades of the '18th Century, who broke down the monopoly, first of the brass producers outside, 'and then of the copper producers, and effected this by means of combination 'among the manufacturers who needed their metals as materials."

BIBLIOGRAPHY

J. A Langford, "A Century of Birmingham Life"

H. Hamilton, "The English Brass and Copper Industries to 1800"

W. C. Aitken, *Avis's Gazette*, "Brass and Brass Manufactures"

G.C. Allen, "The Industrial Development of Birmingham and the Black Country".

W. J. Davis, "A Short History of the Brass Trade".