

Brass Basins and Bowls from a Single Nuremberg Workshop, Around 1500-1580

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Ten years ago, I was asked by Åke Appelgren, the Rector of Lövestad Parish, Sweden, to examine the inventory of base metal objects in his four churches in the southernmost county of Skåne ('Scania'), a Danish county until 1658. Several brass "christening bowls" in his care were of unmistakable Nuremberg type and had engravings with various dates marking donations to churches often by the Mormand family, local landowners of old Danish peerage (*Fig. 1*).

Although they varied in size and decoration, these basins had clear distinguishing features. Detailed

photography and close measuring revealed that they must have come from the same workshop. The survey was widened to include many churches in the rural deanery, later to neighbouring dioceses and counties and eventually to areas in Denmark and Norway.

This paper uses this survey to update previous research into these often misunderstood basins. A general history of the basins will be followed by an explanation of groupings evident in the survey. The survey sheds light on manufacturing methods which will also be explained.

Nuremberg Basins

Nuremberg basins are known under many names in the English language such as alms dishes, rosewater dishes, christening bowls or just 'bowls'. The plainer types in the survey were probably used as serving vessels, while large and elaborately decorated ones, possibly together with a ewer, were for finger washing at the high table.

They were made over a long period using more or less the same manufacturing method and were important to the Nuremberg brass industry. The highly skilled craftsmen making them were called basinmakers (Beckenmacher) or basinsmiths (Beckschlager/Peckschlager). Their techniques can be classified as an early form of mass production as the basins moved between work stations. Their artistic merit therefore is perhaps not particularly high. However, the highly developed manufacturing methods, techniques and general skills employed by the workshops, especially concerning the decoration, can only be revealed and appreciated by comparing a large number of basins from the same workshop.

The heavy gauge of the brass used means the survival rate of the basins is good. Many have been lovingly scrubbed, washed and polished over the past five hundred years destroying finer details. The undersides, however, are quite different. They do not show the same detail as was once admired on the front but the contours are often very sharp making it possible to reconstruct manufacturing methods used, although the exact sequence of operations may remain a mystery. It is now impossible to say what percentage of the production of any brass-smith's shop in Nuremberg was sold undecorated as selective survival has distorted statistics.

It should be noted that parallels can be drawn between this larger group of brass buffet basins and similar but more elaborate silver and pewter examples. Pewter basins with low relief (for obvious mould-release reasons) appeared in France in the second half of the sixteenth century, the moulds designed for repetitive casting by master medal engravers such as François Briot. This pewter mould engraving skill spread to Nuremberg, where the engraver and pewterer Caspar Enderlein from Basle designed and engraved similar intricate moulds. The brass 'hammermen' of Nuremberg could not compete with the repetitive casting of pewter basins which is probably one reason that the old brass-smithing industry disappeared in Nuremberg within a couple of decades.

Early sources

Several key sources of information on Nuremberg basins were written during the nineteenth-century. Dr. Hans Stegmann writing in 1899 suggested that the brass-smiths, who manufactured these basins exclusively, probably from the late fourteenth century, were in sharp decline by the late sixteenth century. He also suggests that the general 'Rotschmiede', or brass founder crafts, took over this manufacture and that "by

1635 the demise of the brass smith was near."¹

Another early researcher, Dr. C.G. Rehlen of Nuremberg, published in 1855 a history of the trade with a second edition published in the following year, including 'crafts' ('Handwerk') in the title.² The scope of his work was such that little guild detail from scores of trades and crafts mentioned was cited and usually only the year of foundation of each 'brotherhood'. The earliest mention in Rehlen's Nuremberg sources of the brass smiths' craft is the year 1360 and of the brass founders (Rotschmiede) the year 1405. Other dates were culled by Rehlen from the books of Nuremberg freemen ('Bürgerbüchern'). Basin makers (Beckenmacher) are mentioned in 1373 and mould makers ('Former') in 1471.²

Crafts in Nuremberg

From the fourteenth to the early seventeenth century Nuremberg was one of the most important craft centres in Europe. It was a Free City (Freistadt) ruled directly by the Emperor and not by Electors or the Kings of Bavaria. The city was then as now a Protestant island in the Catholic sea of Bavaria and it is thought that the greater religious freedom in this and other Free Cities had a positive influence on the development of crafts here.

Nuremberg was governed by a Council consisting mainly of important families of merchants who achieved their riches and power chiefly from exports. An insurrection by craftsmen in 1348-9 led to the short-lived formation of guilds. Its suppression within a year, supported by the Holy Roman Emperor Charles IV (who then resided in Nuremberg), led to the return of the Council which now regulated each craft with detailed ordinances. Thirty years after the insurrection the Council invited eight Masters of selected crafts to join the council. Against twenty-six patricians on this Council of thirty-four members they were always in a minority but it was nevertheless regarded by the crafts as a great honour to serve.

In 1490 the Council formed a supervisory authority for the sole purpose of dealing with all matters concerning the crafts. This authority was called the 'Rugamt' which can be translated as the Nuremberg 'Crafts Council'. Their purpose was not only to oversee the various ordinances issued by the main Council but they were also authorized to deal initially with disputes between craft Masters and similar matters.³

In order to receive Mastership (and freedom) in Nuremberg, brass-smiths had to present masterpieces in front of a group of council members called 'the Five' (die Fünfherrn). They also had to take an oath that they had produced these pieces themselves.⁴ Another interesting fact concerning the brass-smiths (and also other crafts) of Nuremberg is that it was a 'closed shop' from 1493. No apprentices were allowed other than those born to burghers of Nuremberg. The scarcity of such apprentices in 1618, presumably also coupled with the upswing of the Nuremberg industry in general, meant that the catchment area was increased to include the Greater Nuremberg area.⁵ This, alas, did not affect



Fig. 1 Basin,
Norum Church, Sweden,
Diam: 450 mm; rim: 60mm
(Photo: Christer Andersson)



Fig. 2 The back of the basin at Lövestad Church, Sweden, showing the Fall, version I. Early in the survey all central motifs were measured with similar fix-points as those indicated with white dots in order to establish the identical dies used and also the identical method of after-chasing. The motifs show the absence of detail on the back, but also the pattern of small circles (dots) and straight or curved lines indicating the secondary punching by hand after re-heating with the use of a range of ball punches and chisels, both straight and with a radius, into the female die. The obligatory Adam and Eve fig leaves were struck from the back with special punches, also used as extra branches in other positions.

the brass-smiths' craft as there was only one such workshop left in Nuremberg in that year. Nuremberg never recovered after the Thirty Years' War and lost its position as a leading craft centre.

The 'guilds' of the various Nuremberg crafts cannot therefore be compared to the well established and sometimes very early Germanic guilds, although they worked to similar rules and ordinances.

The Survey

While most basins in the survey have a church provenance they originally decorated private homes for a generation or more before being donated. Some have engraved dates recording the donations as late as the 1680s.

Approximately three hundred basins and bowls in two hundred churches and eight museums comprised the survey. Detailed measurement of the backs of the decorative elements suggests approximately one hundred of them were made in the same workshop, probably over three or more generations of owners. All the examples from this workshop had a plain ('raw') edge and were made of brass of a substantial thickness of 0.7mm to 1.1mm. Their diameters varied from 243mm to around 700mm.

Not included in the survey were examples with a rolled edge which were made of a much thinner material, probably hammered thinner with the use of water powered planing hammers. Such basins with similar/identical decoration to the ones in the survey should perhaps have been included but as very few of this specific kind have been found in Scandinavia, I believe them to have been made later, perhaps during the late sixteenth or early seventeenth century and by another of the many brass crafts in Nuremberg, the brass founders (Rotschmidt). Although the engravers supplied identical dies for the decoration of these basins, they do not follow the manufacturing technique laid down in the rules affecting the brass-smiths' craft

quoted by Stegmann.⁶

One distinguishing feature of all basins from this workshop is the central medallion holding a small number of different motifs including the Fall of Man and the Annunciation, identically executed and all within a circular frame of around 169-171mm. The exception is the Habsburg double headed eagle motif, which is in a slightly larger frame of 185mm. Double text sections have not been recorded together with the Habsburg eagle motif from this workshop. A secondary circular frame of 231-233mm can be found on basins with two different text circles.

This particular workshop used a small range of forming tools (dies) holding the following central motifs:

- The Fall of Man, Version I (Fig. 2)
- The Fall of Man, Version II. There are several versions of this mediaeval Fall II motif depicting Adam and Eve with slender arms and legs, but only one of them was used by this workshop.
- The Annunciation
- The Grape Carriers (the Canaan 'spies')
- The Habsburg double headed eagle
- The Gadrooned Boss. This appears to have arrived late during this workshop's period.
- Rarer motifs such as 'Mary and child in Splendour' (Ribe Cathedral, Denmark)

Other features are the distinctive secondary motifs used to decorate the bottoms of the basins and, in the case of the stag and hound motif, the rim. The 'horror vacui' style of decoration meant that these secondary, circular motifs were gradually added with the increase in diameter of the basins themselves.

The basins are rarely if ever marked by the brass-smiths. Several hold other marks, probably those of merchants. Several basins similar to the ones in the survey but with a rolled edge have makers' marks, however. These marks are typical of the marks used by the many and various brass-founders, researched and published by Lockner.⁷

Figs. 3-5 GROUPINGS:

Two basins and one bowl from the workshop with identical central motif of The Annunciation, approximately to scale

Fig. 3: Basin of GROUP 1A

Diam. 410mm

Single text band

(Jörlanda Church, Sweden)



Fig. 4: Bowl of GROUP 1B

Diam. 316mm

(Picture courtesy of the Trustees of the Victoria and Albert Museum, M2674-1931)



Fig. 5: Basin of GROUP 2:

Diam: 640mm

10 stags and hounds individually drop forged around the rim (but not evenly spaced), and 6 surrounding the central motif. (Historiska Museet, Stockholm acc. No. SHM821)



Groupings (Figs. 3-5)

There are two clearly defined groups of basins manufactured by this workshop.

1. Small with Plain Rims

These can be divided into two groups themselves:

1A: Shallow Basins with two or sometimes three rows of sharp-struck, hand punched, smaller motifs and symbols. The diameters of the basins range from 343 to 583 mm with an average size within the 390 to 460 mm diameter range. A distinct range of sizes probably followed the measurement standard in Nuremberg at the time (Fig. 3).

1B: Deep Bowls with narrow rims sometimes with a single row of punched symbols (Fig. 4).

2. Large with 'Stag and Hound' Decorated Rims

These have more elaborate, repetitively struck, drop-forged decoration to the rims of the stag and hound motif, separated by a stylised tree trunk, oak leaf and acorn and a landscape background to the left. This motif was repeated between nine and twelve times on a single rim depending on the diameters of the basins. The diameters of these larger and more elaborate basins in the survey range from 553 to 700 mm (Fig. 5).

The rims of Group 1A. are slightly narrower than those of Group 2. A mean average from the former group is between 27-32% of the diameter of the basins and for Group 2, 30-36%, based on measurements from some fifteen examples from each group.

For a range of examples from the survey and to see comparisons within groups, see the Appendix.

Manufacturing the Basins: Dies and Punches

The dies into which the central motifs of the basins were stamped were made by specialist engravers. This was a medieval craft in Nuremberg (*Formenschneider*) serving many other crafts.⁸ Whereas Nuremberg was famous for a great variety of important crafts, Aachen during this period was famous solely for brass production. Engravers probably did not play such a prominent role which may explain the absence of decorated brass basins attributable to Aachen.

It is likely that these highly skilled engravers were responsible for the manufacture in iron of the dies holding all the various central motifs in negative form containing all the detail. In order to explain dies for pressing (which also applies to moulds for casting) it is important to note that a depression in a *female* die or mould half will show as a raised section in the finished pressing or casting. Corresponding iron *male* dies (punches) or mould halves would have protruding parts in order to produce corresponding negative depressions into the female dies.

The *male* dies were engraved for the central and other motifs but without any details. This is clear from a close study of the back of all the drop forged motifs. It is also noticeable from studying the backs of many later 'identical' motifs, such as the stag and hound, that the male die became progressively more advanced with time, holding much more detail than was the case with the earlier examples from the single workshop survey (Figs. 6-8).

Both die-sections were case-hardened which is the reason they survived the drop-forging and after-chasing (hand-punching) of the central and other motifs on



several thousand basins.

It was, of course, possible for the engraver to sand-cast and hand-finish identical dies for any Nuremberg brass-smith who could afford them, which is perhaps the main reason for identical umbo motifs appearing on brass basins from different workshops. It would improve the production capacity of any workshop considerably if they owned two identical dies of the most frequently used central motifs such as the Annunciation. If such was the case, the Master could pass-on such basins to the hand finishing 'department' who held a replica of the die and go on to drop forge the next basin on top of the 'original' die. A spare female die holding the most frequently used motifs would also assist the flow of production when dies were sent to the engraver for restoration.

The fact that the engravers worked to order is witnessed by the fact that the various circular borders were included in the dies as a technical 'holding' feature for the brass basins themselves during decoration by the brass-smiths. These carefully measured and hammered circular frames of fixed diameters were produced before any other decoration took place.

These specialist engravers probably supplied

several firms of brass-smiths judging by the coincidence of the 170mm border found on many recorded and measured basins not included in this survey. This suggests a succession of both brass-smiths, brass-founders and engravers to carry on the tradition until the end of the period. Somewhat later in the sixteenth century, the Nuremberg engravers also played an important role in the development of engraved moulds used by the pewterers for repetitive casting of objects with motifs in relief.

The engravers also manufactured the various egg, wreath of thorns and floral border sections, and the stag and hound motif used by this workshop. The small punches (Fig. 9) were probably mass produced by these same engravers. Lockner suggests that, "these steel punches were individually made ... and absolutely identical punches could not be made by such means".⁹ The engravers could indeed manufacture such punches 'identically' by engraving a negative example of each punch in rod material and case harden it as a 'master'. By heating a similar blank rod, they would simply strike the end of the red-hot rod with this negative hardened master and produce any number of each motif as a positive punch for sale after de-burring and hardening.



Fig. 6 top. The front of an early example of the stag and hound motif with only the bulk of the figures contained in the male die. After-hammering was done from the back into the female die but some chasing from the front with various chisels is also evident here. (Photo: Lunds Universitets Historiska Museum, Acc. No. 3170.)

Figs. 7-8 centre and bottom. The reverse of two examples of the stag and hound motif. The upper version (Fig. 7), from a basin manufactured by the workshop in the survey (Billinge Church, Sweden), illustrates the low profile of the motif held in the male section of the die and the corresponding substantial after-chasing by hand into the female die following a strict punching pattern. The later version, not from the workshop in the survey, at the bottom and right (Fig. 8) (V&A Museum, M.347-1924) shows the stag with antlers, legs and also the hound now included in the male section of the die in detail. Comparatively little after-chasing was required here apart from some accentuating with a round punch.

Fig. 8a right. Front of dish from Fig. 8 (Picture courtesy of the Trustees of the Victoria and Albert Museum, M.347-1924)



Above.

Fig. 9 Hand punches mostly used to decorate the rims of the less expensive Group 1 basins in two or three rows with the use of one single pattern punch per row.



Manufacturing the Basins: Brass-Smiths' Work

According to Stegmann's research into the Nuremberg Court books, manufacturing was achieved in three steps. While it must be remembered that research has advanced since Stegmann published his famous articles, his statements and quotes culled from early archival sources are of course as true today as they were in 1899:

1. The Production by the Brass-Smiths of the Calamine Table Brass

This followed carefully specified guild ordinances (*...mussten dasselbe selbst brennen und giessen*).¹⁰ This general procedure of producing calamine brass appears to be better explained in Swedish than in German sources, based on the calamine brass production in Sweden by Aachen workers from around 1570.¹¹

The brass smiths could not buy 'tables/ingots' but had to "burn and cast them" which suggests a very large operation. This ordinance from 1535 was no doubt a way of keeping competition out. The table brass ('ingot') cast between the casting stones was then hammered to a thickness of around 1mm and cut to approximate basin size and the future front of the basin shaved and polished with 'knives' (polishing steels).

During this period Hans Lobfinger (1510-1570) invented "the art of plaining brass plate ('Blatten') so beautifully and evenly as was hitherto only possible in wood."¹² A 'plain' is a cutting tool and during this period such a method of stock removal and polishing in brass was not possible. Lobfinger's machine was perhaps instead a water powered method of speeding up the hand polishing of brass plate by mechanical means.

Due to the absence of detailed workshop descriptions in Nuremberg, Stegmann appears to have taken it for granted that all work by the brass-smiths to reduce the thickness of the brass table-ingots and also the general working of the brass objects themselves took place with hand held hammers. This is a romantic notion typical of Stegmann's times, but not at all the

case. Rehlen on the other hand gives the dates of the appearance of water powered hammers inside and just outside the city walls in 1522 and a description of a brass founders' water-powered mill (Rothschmiedmühle) in 1550. Rehlen assumes that this mill was used for the sole purpose of "turning, grinding and polishing" brass. As the mill had no less than 21 waterwheels by 1550 it is, however, more reasonable to assume that it had water power available to serve many more operations! Twenty-one such waterwheels constituted a major industrial enterprise and can be favourably compared to the later Skultuna Brass Manufactory that was established in Sweden some 60 years later and modelled on the Aachen brass works.

Each drive shaft from these 21 waterwheels could easily be geared to serve more than one spindle and it is therefore likely that more than one lathe alone was powered by any one such wheel. So important and secret was this mill at the time (and also 'into our time' according to Rehlen in 1855) that the showing of it to a stranger rendered the culprit a severe 'penitentiary' punishment (Zuchthausstraffe). The City of Nuremberg actually owned the mill and each brass-founder/turner had to invest 400 Gulden for a lifetime use of this facility.¹³ The addition of cams on a spindle-wheel powered from the main shaft (an early medieval development) could and no doubt would also have powered a large number of hammers.

The 'marching order' of the brass founders in Nuremberg (and elsewhere) appears to have been junior to that of the traditional and important brass-smiths. It is therefore logical to suggest, and also perhaps obvious, that this craft too would have had access to similar water powered plants elsewhere around the city.

2. Work in the Lathe

The turning of the future back of the basin against a flat wooden block mounted in the lathe could have taken place at this stage. All basins in the survey show

Fig. 10 *left*. Basin with steep sides and an abrupt meeting of sides and base, not possible to achieve by simply spinning into the last. (Jörlanda Church, Sweden)

Fig. 11 *right*. Remnants of lead underneath a perfectly kept basin in Lövestad Church, Sweden



clear turning marks and the centre hole that held the brass plate in position in the lathe but also often stretching marks, indicating that the forming took place after turning.

The blank and the flat wooden block were now removed from the lathe and another wooden block or last put in its place. This last had the final bowl shape pre-turned into the wood and the brass blank was well secured across the last. When the lathe had the correct speed, the Master started carefully to press the brass into the bowl-shaped last with the aid of a highly polished ball-shaped spinning steel which was frequently dipped in animal grease.

Many of the basins and also most of the narrow rimmed bowls in the survey have a much steeper angle between bouge and bottom than was possible to achieve solely by spinning into a last. There is clear evidence from many of the bowls that they had been chased with a chisel against an anvil after the basic forming (Fig. 10). This 'line' around the inside base of the bowls, sometimes double-struck in places, can be seen through a magnifying glass and will catch a probing fingernail. This general method of secondary forming necessitated time consuming re-heating to soften the brass.

3. Decoration.

Stegmann's general descriptions based on ordinances have been elaborated upon here, but descriptions below are chiefly based on a close analysis of the decoration of many basins in the survey.

Stegmann suggests that the female die was covered with a sheet of lead before the press-work started.¹⁴ Such a coating would have been applied to prevent actual damage to both brass and die during the press-work. This coating would probably have prevented the finer detail from the die forming in the brass. There is clear evidence on several undamaged basins in the survey of a lead coating having been instead applied to parts of the underside (back) of the basins themselves (Fig. 11). These lead remnants are, however, more difficult to explain and defend than the ordinance

version quoted by Stegmann, although such infills are known from chased brass sections on other objects where the lead secured a too thinly chased section.¹⁵

Drop-Forged and After-Chased Decoration of the Central Motifs.

Once the plain and undecorated basins had been formed and annealed they were 'delivered' to the brass-smiths. The circular frames only, surrounding the main central motifs of each basin were now chased or pressed into the brass before any decoration took place. It must be remembered that the brass-smith covered the female die with the upturned basin and that he therefore worked 'blind'. Precise bench-marks and holding keys were therefore essential.

After carefully positioning the upside down basin on top of the female die with the help of the circular frame, the male die was then also carefully lined up on top of the basin - a mis-alignment here would ruin the die. A hammer was then raised above the dies and dropped down on the male die to form the basic impression.

The basin was then delivered for after-chasing when it was again carefully placed on top of the female die. A large variety of punches and chisels were used for this work. The backs of basins show how this work was done with the use of several ball-punches of varying size and also with straight, curved and rounded chisels (Figs. 12 - 14). So closely does the punching pattern on the same motifs follow each other that it is obvious that the workmen followed a strict formula for striking the punches.

As the brass basin covered the female die, the worker could therefore not see on the back of the basin the positioning of the sometimes intricate detail he wanted to chase into the die. It is therefore likely that some kind of punching-master or screen was available for each motif, holding the holes and slots for the various punches and chisels in the position the workman was required to punch them. This master screen was perhaps again based on the important central circle as a basic holding guide.



Fig. 12 *above*: Front and back of the bird symbolizing the Holy Ghost in the Annunciation motif, showing the bird almost entirely hand-chased into the female die following the striking pattern explained in the text (Lunds Universitets Historiska Museum, acc. No. 3172)



Fig. 13 *left and below left*: The backs of two basins with the Annunciation motif. The female die holding this complicated motif with little undecorated space contains several sections with the motif in very low relief and with no corresponding reasonably detailed male die section early in the period.

This example (*left*) shows a successful initial drop of the male die which produced the required low relief detail on the front without secondary hammering with the exception of the pulpit and wings in these low profile areas (Lunds Universitets Historiska Museum, Acc. No. 3172).

This example (*left*) shows a considerable amount of hammering, obliterating most turning marks. On this motif, the flowers rising from the basket, the floor, the wing-pens of Gabriel and also the decoration of Mary's pulpit and the bible pages are in very low profile. (Tomas Helander collection).



Fig. 14 *right*: Gloriously detailed front of a pristine but late example in the V&A collection not included in the survey. This shows the fine detail possible using the Nuremberg method of striking and after-chasing into a female die. The die held the detail of a basket rather than a plain 'mortar'-looking container for the flowers usually found. Dating is difficult, but around 1590-1630 would be logical and the makers perhaps members of the Nuremberg 'Rotschmiede' craft. (Courtesy of the Trustees of the Victoria and Albert Museum, M.341-1924)

Drop-Forged and After-Chased Secondary Decoration

The decorative tradition during the period the basins were made left no available surface area untouched with the exception of the bouge, and this too was sometimes chased to produce diagonal folds. Bottom-decoration not achieved with the aid of motifs inside and just outside the die-holding circles presented problems with even spacing of the various motifs on the outer sections of the basin. The varying diameter sizes of the bottoms of the bowls also presented problems with the choice of the actual mixture of outer circular motifs to be used.

The smallest basins of Group 1a and b only allowed space for the central motif, often surrounded by a narrow band of individually struck stars or oak leaves for example. With the increase in diameter of the basins a text band was added and on still larger basins this text was surrounded by a second circular border of 230mm diameter required for technical and production reasons.

(a) The Stag and Hound Motif

This is found on all Group 2 basins from this workshop - and on none from Group 1. The original artist who drew this motif depicted the hound biting the chest of the stag which shows all the signs of terror. Not only does his mouth express distress with the ears pointing back, the artist has also drawn the antlers to point backwards to illustrate the horror of a chase.

No technical spacing problems existed for the stag and hound motif contained as it is in a single die, the pattern of which was freely spaced around the rim and also around the outer periphery of the bottom of many basins. It was a simple matter of geometry to work out how many times the die should be used to fill the available space around the rims and bottoms of basins of various diameters without producing any unsightly overlaps.

Some mistakes were made, however, as can be seen on a basin in Lunds Universitets Historiska Museum (*Fig. 15*). At the end of the decorating process, when he was about to close the circle, the worker was





Fig. 15 Stag and Hound border motif with spacing mistake top left.

(Lunds Universitets Historiska Museum, Sweden, No. 3171)

no doubt embarrassed to discover that the space between two stags at 10 - 11 o'clock was too wide. The simple solution was to add another tree trunk, punched by hand with the use of the right-hand (tree trunk) section only of the stag and hound-die to fill this gap!

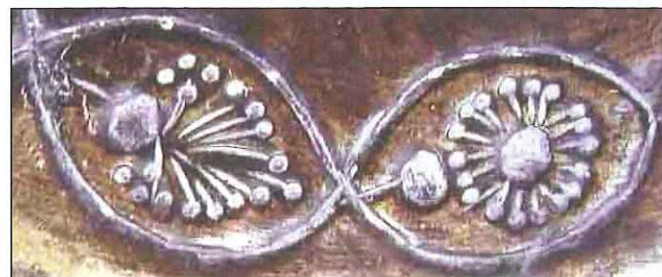
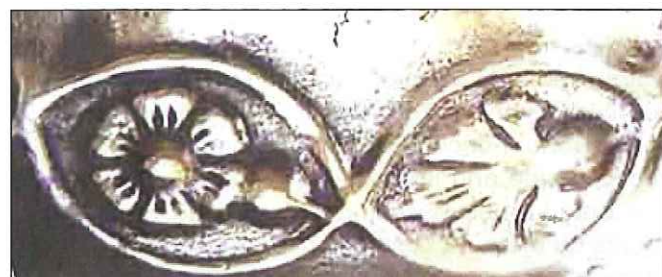
All basins in this group have a chased double reeding to the edge of the rims, the outer reeding with a punched decorative band of oak leaves and viewed from below a chased circular fillet. This 'compression' of the crystals of the metal on the very edge of these larger basins was done in order to stabilize the rim after the secondary punching-in of the stag-and-hound motif.

(b) The Floral Egg-Border

This was frequently used on basins of both groups and filled circular space not large enough to hold the stag motifs in the case of Group 2 basins (Fig. 16). Two sizes have been recorded. One female die held two ovals with two different flowers measuring, point to point, 125-126mm or 135-136mm.

The ovals are slightly off a straight line to help produce a 'reasonable' circle irrespective of the diameter of the design. These dies were probably initially drop forged around the periphery after a geometrical exercise to work out how many times would suffice to fill the space, usually 7-8 times.

The pattern should of course ideally meet point to



point to fill the circular space allowed, but mistakes were common (Figs. 17 - 18). Basins were not scrapped in spite of these faults - too much time and money had been spent on the basins at this stage.

(c) The Spray of Flowers

This rather wide motif comprises a spray of two stalks with leaves and flowers rising from a 'pod' with a single stalk pointing left underneath and can be found on seven basins in the survey.

This pattern was probably contained in a single die and was after-chased. This was the case with most motifs from the workshop. Depending on available space, the spray of flowers motif was struck between four and six times. Here again the calculations sometimes went wrong. More commonly this motif was spaced more sparsely retaining the symmetry (Fig. 19).

(d) The Wreath (Crown) of Thorns

This motif was perhaps designed to emulate Christ's crown of thorns and was used in two sizes. The reason for its scarcity was probably the fact that the engraver supplied the individual sectional die, again with a circular holding groove, but this time on the outside of the motif. This therefore required the brass-smith to produce yet another (and much larger) circular holding frame to secure the wreath section or sections prior to stamping (Fig. 20). The Annunciation basin at the History Museum in Stockholm has thirteen such sections, the basin at Torpa Slottskapell fourteen, Marstrand Church fifteen and Slagen Church sixteen sections. This decoration was perhaps more difficult and time-consuming to produce than was merited by the decorative reward! This is probably why a simple circle of oak leaves was often preferred with this simple pattern individually punched-in from the front of the basin to achieve a similar decorative effect.

Left column, from top:

Fig. 16 Front (above) and back (below) of a floral egg-border held in a single die, repeated around the base until the 'circle' was closed. Note the after-chasing into the die with ball and straight punches.

Fig. 17 Straight chisel marks used to join the oval sections where the even, symmetrical design of the pattern failed (Lunds Universitets Historiska Museum, 3170).

Fig. 18 A basin and detail, with poorly worked-out geometry to hold the egg border (Kropp Church, Sweden)

Right column, from top:

Fig. 19 Basin with floral spray motif and detail of reverse of motif (Picture courtesy of the Trustees of the Victoria and Albert Museum, M.349-1924)

Fig. 20 Front and back of the wreath of thorn motif on the basin at Slagen Church, Norway



(e) Inter-Locking Text Circles and Corresponding Grooves Hammered by Hand

Most basins and bowls of both groups with the exception of one or two of the smallest examples of Group 1a and 1b have one or two circles of text immediately outside the central motif. Both Gothic Minuscules, medieval Majuscules and also German black letter with text in both German and Latin have been recorded on basins from this workshop. The text immediately outside the central motif is almost invariably of a highly decorative, early Majuscule letter and the lettering much taller than the second row of text. The second row of smaller text, here usually with Gothic/Antiqua but sometimes with Gothic Miniscule lettering, only appears on basins with two circular frames (Fig. 21). The basins with the Habsburg eagle motif too were decorated with one (but never two) rows of text of the Majuscule kind immediately outside the larger holding frame.

The Nuremberg engravers were again involved in the manufacturing of the sectional dies holding the lettering in various 'scripts'. These fixed diameter framing circles were used as holding keys to secure the iron dies holding the lettering. They were part of the engravers' technical solution for many brass-smiths in Nuremberg. The understanding of this 'die-interlocking' system is key to understanding the clever mass production aid the engravers and brass-smiths designed between themselves over the years.

The circles were instrumental in the exact positioning of the basins over the dies to produce the central umbo motif as was explained above. These 170mm and 185mm holding circles were also used by the engraver for designing and engraving in iron the various dies for text bands surrounding the central motifs, now to act as an inner rather than an outer holding groove. A second

circular frame of a fixed 235mm diameter around the inner text was similarly used to hold the smaller dies producing the second row of text.

The engraver probably sand-cast the circular outline of the various size text sections as a 'blank' in iron from a wooden last. This last and cast would have included the 170/185mm grooves on the inside to fit exactly the many central motifs he had already designed with this outer die-frame diameter.

The engraver now had a roughly cast, circular iron blank to work with. The engraver started with the rough criss-crossing of the whole of the face of the die as a means of 'surface preparation' prior to the start of the engraving proper of the text pattern. This style of surface preparation is frequently found also on professionally made iron moulds for casting in pewter. The criss-crossing pattern visually 'lifted' the engraved motif. The engravers cut into the material with mirror-turned lettering and the hand-hammered result on a brass basin was a protruding letter (Fig. 22).

The inner text impressions on the basins have a segment length of around 75mm and the outer a segment length of around 45mm. This indicates that the engraver cut the segments after engraving but before case hardening the dies. Such case hardening of a single large circular iron section with 'a hole in the middle' would have meant unavoidable distortions and twisting of the iron.

The 'early' Miniscule and Majuscule lettering appears to have repeats of seven or sometimes nine or even ten letters. The addition of one or two segments would perfectly close the somewhat larger 185mm diameter circle of the Habsburg eagle motif. The repeated pattern of letters around the circle of text illustrates that the brass-smiths only purchased enough segments to keep the basin steady during hammering. On some examples with



a single row of Gothic text with the smaller size letters surrounding the 170mm umbo motif the segments of text were larger and one such segment repeated four times closed the circle.

Hammering the brass basin by hand into iron dies to produce the lettering required frequent annealing. The dies would probably show signs of wear very quickly and it is probable that these dies too were regularly returned to the engravers for 'touching-up'. The engraver would then anneal the dies and re-touch them by sharpening the letters and removing material surrounding them (Fig. 23).

Before beating the lettering into the bottom of the bowls, the brass-smith had to line up carefully the cast iron sections of the text on the workbench so that the convex circle of the basin nested neatly inside the inner groove of all die sections. The brass-smith again worked 'blind' having covered the dies with his basin. The importance of the holding-circles for the rapid production of these intricate patterns should not be underestimated.

Sometimes hammering went wrong and a die section slipped from its holding circle (Fig. 24). As was the case with mis-calculated egg-borders, the production was too far gone at this stage for the basin to be scrapped.

Many learned attempts to decipher the writing have been performed over the years, especially in Germany during the late nineteenth century. Several basins have perfectly readable texts with German black lettering in either German or Latin with legends such as 'Got sei mit uns' (God be with us), 'Hilf Got aus Not' (May God help us in need), 'Maria hilft aus Not' (Mary helps the needy) and others, always repeated to form a circle. The problem has been instead to decipher the Gothic Minuscules and mediaeval Majuscules and also some of the difficult 'words' in Gothic/Antiqua German. It appears that linguists approached each basin with text bands as if the letters

were individually engraved which they were not.

Stegmann was probably the first to point out that the texts may have had legible beginnings but that the text bands as they appear on the basins were considerably "mutilated, garbled and corrupt". He states, "It gives a strange insight into the enormous time and effort this matter has claimed, in reverse proportions to the importance of it."¹⁶

It is perhaps more realistic, then, to ask whether the engraver had any understanding of the Gothic and medieval letters he was engraving. Was he perhaps just using texts from well worn manuscripts? Did he hand pick individual letters from these manuscripts for their decorative value and then scramble them?

The Merchants

The frequency with which basins from this single workshop is found in Scandinavian countries suggests that Nuremberg merchants were living in the area. 50% of the largest of the Group 2 basins are concentrated in churches around Ribe in Jutland, Denmark. Nuremberg was never involved with the Hansa Company and sought instead to by-pass its influence. The firms of merchants in Nuremberg were powerful already during the late medieval period and exported their brass, such as candlesticks and weights, all over Europe. Their remarkable nests of weights were produced to local weight standards throughout Europe, including a Swedish 'skålpund' set, which again suggests a close Nuremberg involvement locally.

There is, however, no factual evidence to support this idea. Such residency abroad was not uncommon, however. The Eastland Company, with a charter of privileges from 1579, had a monopoly on English shipping and trade on the Baltic. By the mid 1600s they

Fig. 21 far left: Gothic Majuscules below medieval Minuscules on a basin in Eftelöt Church, Norway.

Fig. 22 left upper: Majuscule letter decoration on a basin in the collection of Malmö Museum, Sweden, MM211

Fig. 23 left lower: Decorative Gothic Majuscules hammered into a Habsburg eagle dish. The punched dots between the letters obliterated the criss-crossed surface to produce a more 'expensive' set of dies for the brass-smiths to use. (Lunds Universitets Historiska Museum, Sweden, No. 3170)

Fig. 24 right: Basin with outer die segments slipped (Harlösa Church, Sweden)





had no less than thirty English and some Scottish merchant members based in Danzig to supervise the wool and other trades.¹⁷ Rehlen identified "respected firms of brass merchants" known as the 'brass gentlemen' (Messingherrn) and named one, the Kandler family, active from 1532.¹⁸

Some small initialled marks are occasionally found on Nuremberg basins in Scandinavia (Fig. 25). They do not relate at all to the brass founders' marks published by Lockner, but are instead probably merchants' marks.¹⁹ No makers' marks have been recorded during the survey.

In a document dated Thursday, October 8, 1612, written by H. W. Imhof, a member of the powerful Crafts Council, he takes the Nuremberg merchants to task (accusing them of self-advancement etc.) for electing to sell over this later period the cheaper basins produced by the brass founders rather than basins traditionally manufactured by the brass-smiths. It is therefore rather sad to conclude here, that the very merchants who originally and very successfully sold these brass-smith made basins all over Europe, were in the end of the period responsible for the demise of the craft as such.²⁰

The End Users

All basins from the workshop in the survey have religious motifs - the stag too (on its own) was a symbol of piety and devotion and a hunting scene symbolised

St. Hubertus, who was also the patron saint of metalworkers! As there was little secular decoration at all during this period, these basins were actually aimed at households that could afford them - donations to churches happened much later.

Jost Amman published a booklet of woodcuts illustrating the 'crafts of the World' in 1568.²¹ The illustrations are not only romantic but also sketchy and often misleading. His collaborator, who wrote most of the accompanying verses, was the Nuremberg Mastersinger, Hans Sachs. The mastersingers formed a 'guild' and their verses had to be written to formulae laid down by ordinances. This explains the low esteem in which they have traditionally been held and their poor survival rate. Sachs's effort with Amman's brass-smith woodcut does, however, give some important clues in respect of the end users (Fig. 26).

Very freely translated (and without any poetic ambition!), Sachs says that the "... basins are carried far afield, they are of all kinds; large but also small, hammered in good brass, punched with plants and flowers in bloom, first mirror plain then with a bowl, large ones for gentry and barber, also small for the common man."

There is no mention here at all about religious use but instead a suggestion that the basins were used by all classes of burghers, at least in Nuremberg at this time. The 'barber' comment is also interesting as it suggests a professional use. The barbers at this time were of course also heavily involved with blood letting, their trade also illustrated in another gruesome woodcut in the series by Amman.

Stegmann's description of the brass-smiths' workshop shown by Amman (and Christoph Weigel's later 1698 copper engraving) is very romantic. "In the background of the workshop is the kiln for the burning of the brass."²² He is here referring to the ordinance requiring the brass-smith to produce his own calamine brass mentioned above. This is neither a kiln nor an oven but

Fig. 25 above. The 'HS' mark. This is probably a merchant's mark and, like 'RS', is frequently found on basins in Scandinavia

Fig. 26 top right. "Der Beckslager" from Jost Amman's *Eygentliche Beschreibung Aller Stände auff Erden*, Frankfurt, 1568

Left and right.

Fig. 27 Basin from Tryde Church, Sweden, with details showing the inscription dated 1674 denoting the gift to the church by the Acheleye family, and the original wedding engraving by Erik Mogensen Mormand, around 1530

Fig. 28 The ownership engraving on a basin in the nearby Brösarp Church, near Tryde, of Erik Mogensen Mormand's son, Mogens Eriksen Mormand, and the donation year of 1599, thirteen years after Mogens's death in 1586



a simple blacksmith's forge with hand operated bellows. It would be impossible to produce brass in such a contraption as this was a lengthy process requiring a proper kiln with a good control of temperature. Neither would this be suitable for annealing brass products for similar reasons as no heat control would be possible.

Engraved ownership marks are frequent on church basins and often date a donation to a church. One such inscription on a basin in Tryde Church in the south of Sweden is especially interesting as it gives the exact date of the donation and also shows the arms of a much earlier owner (Figs. 27-28).

The elaborate inscription around the rim of the bowl states that the basin was "used for the first time as a Christening bowl in the home of the Acheleye family to Christen their son, Knud Erich, on February 4, 1664." The son sadly died as a youngster and the basin was donated "for the font here in their church" in 1674. This date is only 16 years after the county became Swedish - the Acheleye family was of Danish peerage and obviously related by later marriage to the original owner.

The earlier crudely engraved crest shows the 'moor's head' motif found in the arms of the Mormand family of ancient Danish peerage. The shield is quartered, and shows the arms of the two mothers' families which suggests that this basin was originally part of a wedding gift. Tryde Church is only a few miles from Lövestad parish where the Mormand family settled in 1575, having sold estates in Funen and Lolland in Denmark. The initials 'EM' belong to the founder of the Lövestad branch of the family, Erik Mogensen Mormand, who died "a very old man" in around 1575. He was therefore born around 1500 and the wedding (Erik's first of three) would perhaps have taken place in 1525-1530. This not only dates this basin, it also suggests that basins may have passed down several generations before their donation to churches.

Der Beckslager.



Ein Beckslager bin ich genannt/
Mein Beckn führt man in weite Land/
Allerley art / groß vnd auch klein/
Von gutem Messing gschlagen rein/
Gestempft mit bildwerck / gwechß vñ blü/
Eintheils jr Spiegel glatt auff kum/
Wie groß Herrn vnd Balbierer han/
Auch gring / für den gemeinen Mann.



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Acknowledgements:

I would like to thank the following for assistance in the preparation of this paper: Christer Andersson, Licentiate of Technology of Chalmers University of Technology in Gothenburg whose hobby over the past 30 years has been to visit and photograph inventories in churches in Sweden, Norway and Denmark (the total to date being 503 churches). It is only eight years ago that Christer was made aware of the single-workshop basins of this study, but he has nevertheless contributed with the majority of object photographs and measurements included in the appendix whereas the majority of detail photographs are by the author.

Thanks also to Tomas Helander and Magnus Green of Stockholm and Hans Gunberg of Nuremberg for special advice and in the case of Magnus for photographs of and permission to publish the basin collection at the History Museum in Stockholm. Museum curators have provided time and access to their collection: special thanks to Hampus Cinthio, Lunds Universitets Historiska Museum, Anders Rosdal, Malmö Museum, Heidi Henriksson, Nordiska Museet, Stockholm and Angus Patterson, Victoria and Albert Museum. Thanks also to the Reverend Åke Appelgren of Lövestad and all his colleagues and church wardens in Scandinavian churches.

Notes:

1. Dr. Hans Stegmann, *Zur Geschichte der Herstellung und Verzierung der geschlagenen Messingbecken*, Parts 1-2, Nuremberg, Mitteilungen aus dem Germanischen Nationalmuseum, 1899, pp. 11-16, part 1 & pp. 17-28, part 2. Stegmann's main archival source: the 'Pergamentcodex' for the period 1535 to 1618 with detailed craft ordinances for Nuremberg.
2. Dr. C.G. Rehlen, *Geschichte der Gewerbe*, Leipzig, Verlag von Otto Wigand, 1855; *Geschichte der Handwerk und Gewerbe*, Leipzig: Verlag von Otto Wigand, 1856. Rehlen's main archival source: the Books of Freeman ('Bürgerbüchern') from which he culled the earliest dates the various crafts are mentioned, 1373 in the case of basin-makers.
3. Dagmar Thormann, *Zunftzinn und Zunftsilber im Germanischen Nationalmuseum*, Nuremberg, Verlag des Germanisches Nationalmuseum, 1991, p. 17
4. Dr. Jakob Stockbauer, *Nürnbergisches Handwerksrecht des xvi. Jahrhunderts*, Nuremberg, 1879, p. 9.
5. Stegmann, *Op. Cit.*, pp. 392-3
6. *Ibid.*, pp. 12-15
7. Hermann P. Lockner, *Die Merkzeichen der Nürnberger Rotschmiede*, Munich, Deutscher Kunstverlag, 1981
8. Rehlen, 1855, p.16
9. Hermann P. Lockner, 'Beckenschläger-Schüsseln', *Weltkunst*, No. 22, November 22, 1996, p. 2956
10. Stegmann, *Op. Cit.*, p. 13
11. Jan A. Gadd, 'Skultuna Brass Manufactory, Sweden', *Journal of the Antique Metalware Society*, Vol. 15, 2007, pp. 2 - 19
12. Rehlen, 1855, p. 393
13. *Ibid.*, p. 393
14. Stegmann, *Op. Cit.* p. 18
15. *Ibid.* p. 18
16. *Ibid.* p. 16
17. R.W.K. Hinton, *The Eastland Trade and the Common Weal*, Cambridge University Press, 1959, p. 221-5. Two Scottish members, the brothers Adam and James (Jakob) Lyell are referred to by Hinton on p. 222. They and their father had their own warehouse in Stockholm from around 1630 (see Löfgren, Appendix No. 83)
18. Rehlen, 1855, p. 393
19. Lockner, *Op. Cit.*
20. Stegmann, *Op. Cit.*, pp. 13-14
21. Jost Amman, *Eygentliche Beschreibung Aller Stände auff Erden*, Frankfurt, 1568
22. Stegmann, *Op. Cit.*, p. 16

APPENDIX

Frequency of motifs in a sample of 92 basins in the survey, some illustrated below:

Type	Total	Annunc.	%	Fall I	%	Fall II	%	Kanaan	%	Eagle	%	Other	%
Group 1 a	52	26	50	13	25	6	11.5	5	9.6	1	-	1	-
Group 1 b	14	4	28.6	0	-	6	42.9	2	14.3	0	-	2	14.3
Group 2	26	15	57.7	4	15.4	0	-	0	-	6	23.1	1	-
Total	92	45	48.9	17	18.5	12	13.0	7	7.6	7	7.6	4	4.3

Group 1A: Basins and bowls with plain, punch decorated rims - arranged according to size



Högås Church, Sweden
Diam: 343mm



Sotheby's auction, London, 26.06.07
Diam: 362mm



Lövestad Church, Sweden
Diam: 394mm



Nordiska Museet, Stockholm
Acc. No. NM30.270
Diam 430mm



Historiska Museet, Stockholm
Acc. No. SHM 7325
Diam: 445mm; rim: 65mm



Historiska Museet, Stockholm
Acc. No SHM 23002.58
Diam: 478mm; rim 52mm



Marstrand Church, Sweden
Diam 530mm; rim: 58; bowl top: 415mm;
Text borders: 170, 230mm;
Ht text: I. 28mm, II. 14mm



Historiska Museet, Stockholm
Acc. No. SHM 4525
The Fall II, Diam: 560mm; rim: 63mm



Slimminge Church, Sweden
Diam 585mm; rim: 72mm; pair of egg border
ovals: 126mm point to point; umbo: 168;
text border: 230mm

Group 1B: Narrow-Rimmed Bowls



Kulturen Museum, Lund, Sweden
Acc. No. KM 25.290
Diam 254mm



Historiska Museet, Stockholm
Acc. No. SHM 2328-9
Diam: 259mm; rim: 16mm



Historiska Museet, Stockholm
Acc. No. SHM 2328.7
Diam: 295mm; rim: 17mm



Victoria and Albert Museum
Acc. No. M.2674-1931
Diam: 316mm



Tolånga Church, Sweden
Diam 377mm; rim 28mm



Victoria and Albert Museum
Acc. No. M.349-1924
Diam 409mm

Group 2: Basins with Stag and Hound Rim-Decoration



Slagen Church, Norway
Diam 553mm,
9 stags



Örsjö Church, Sweden
Diam 554mm,
9 stags



Vanstad Church, Sweden
Diam 577mm,
10 stags



Ribe Cathedral, Denmark
Diam: 583mm; rim: 70mm
With Mary with child in splendour,
10 stags



Lunds Universitets Historiska Museum,
Lund, Sweden, Acc No. 3170
Diam: 586mm,
10 stags



Billinge Church, Sweden
Diam: 593mm,
10 plus 5 stags



Uppåkra Church, Sweden, Bowl No. II
Diam: 593mm,
10 stags



Närunga Church, Sweden
(Photo: Lasse Heikura)
Diam: 607mm,
10 plus 6 stags



Vapnö Church, Sweden
Diam: 620mm; rim 104mm,
11 stags



Lunds Universitets Historiska Museum,
Lund, Sweden, Acc No. 3171
Diam: 661mm,
11 plus 6 stags



Lyngdal Church, Buskerud
(photographed in 1907, No. NF.25986-
0394, Norsk Folkemuseum, Oslo)
11 plus 7 stags



St Catharina Church,
Ribe, Denmark
Diam: 697mm; rim: 108mm,
11 plus 6 stags