A Viking Arm-ring of Unusual Design

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Fig 1: Clasped silver arm-ring, author's project (left) and unprovenanced auction house piece (right)

From the auction listing:

"Northern Europe, Viking or Norse culture, ca. 8th to 11th century CE. A stunning bracelet comprised of three strands of high-grade silver (97% silver) wire, each with a thin pre-twisted cord surrounded by two thick cords. The strands are twisted around each other to form the body of the bracelet, and the termini are hammered and flattened to fuse the individual components. One terminal depicts an abstract serpent head - replete with a triangular head, hammered eyes and stippled decorations, and an upward-curled snout - and the other has dozens of stamped triangles and circular dots as well as a latch hook. Covered in lustrous patina, this is an elegant, wearable piece of Viking jewelry! Size: 3.125" Diameter x 3" H (7.9 cm x 7.6 cm); size (wrist opening): 2.5" Diameter (6.4 cm); quality of silver: 97%; total weight: 64.5 grams."[1]

https://www.invaluable.com/auction-lot/exceptional-viking-silver-twisted-wire-bracelet-6-48b-c-1044dce992

[1] Piece sold for $2300 at auction

Introduction

The Scandinavian peoples of the latter half of the Early Middle Ages, 700-1000 CE, greatly prized silver and gold. Much of their material wealth, when not tied up in livestock and agriculture, was held in silver[2]. However, they did not initially have much use for coins, preferring to operate primarily on weighed bullion[3]. In fact, the famed Muslim traveler, Ahmed ibn Fadlan[4] (who is played by Antonio Banderas in the 1999 historical action film The Thirteenth Warrior[5]) said of the Vikings in the area of the Volga River:

"*The man, if he possesses ten thousand dirhams, has a neck ring made for his wife. If he has twenty thousand in his possession, then he has two neck rings made for her. And so, his wife receives another neck ring with the addition of each ten thousand dirhams…*[6]"

Any cursory inspection of Viking era hoard find pictures quickly shows that these arm- and neck-rings took many forms: one rod, twisted to show striations, two or more wires twisted together, two or three wires twisted together with smaller twisted pairs inlaid in the creases, pairs of wires twisted one way, then several of those pairs twisted together in the opposite direction, both with and without a center core wire (often referred to as "plaited"), and simple round rod[7].

It is important to remember that these items made of round rod and wire were also considered hacksilver, that is, wearable money. They would be broken by bending, chopped up with chisel or axe, or otherwise parted up to be used as currency-by-weight as needed. This is clear from the thousands of twisted fragments found in various hoards.

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[2] "By the 9th century, silver formed the backbone of the entire Viking economy." https://www.lifeinnorway.net/viking-economy/

[3] "Initially, the Vikings used "hacksilver" as money – broken jewelry, cut up coins and ingots traded by weight." https://coinweek.com/ancient-coins/coinweek-ancient-coin-series-coins-of-the-vikings/

[4] https://en.wikipedia.org/wiki/Ahmad_ibn_Fadlan

[5] https://en.wikipedia.org/wiki/The_13th_Warrior

[6] Ibn Fadlān's Account of Scandinavian Merchants on the Volga in 922 Cook, Albert Stanburrough. The Journal of English and Germanic Philology, Vol. 22, No. 1 (Jan., 1923), pp. 54-63. University of Illinois Press Stable: 1923. This quote raises interesting questions itself: were neck rings only worn by women? Does that mean that arm-rings were only worn by men? If true, was this the case with the Rus Vikings around the Volga, or in other places? This has interesting implications for portrayals of Vikings by reenactors.

[7] I am deliberately ignoring hammered, flat, and stamped arm-rings here; they are of entirely different construction and have been thoroughly discussed by me in earlier projects - refer to my blog for more information on these types of hacksilver.

The Cuerdale Hoard[8] contains examples of all the listed types:

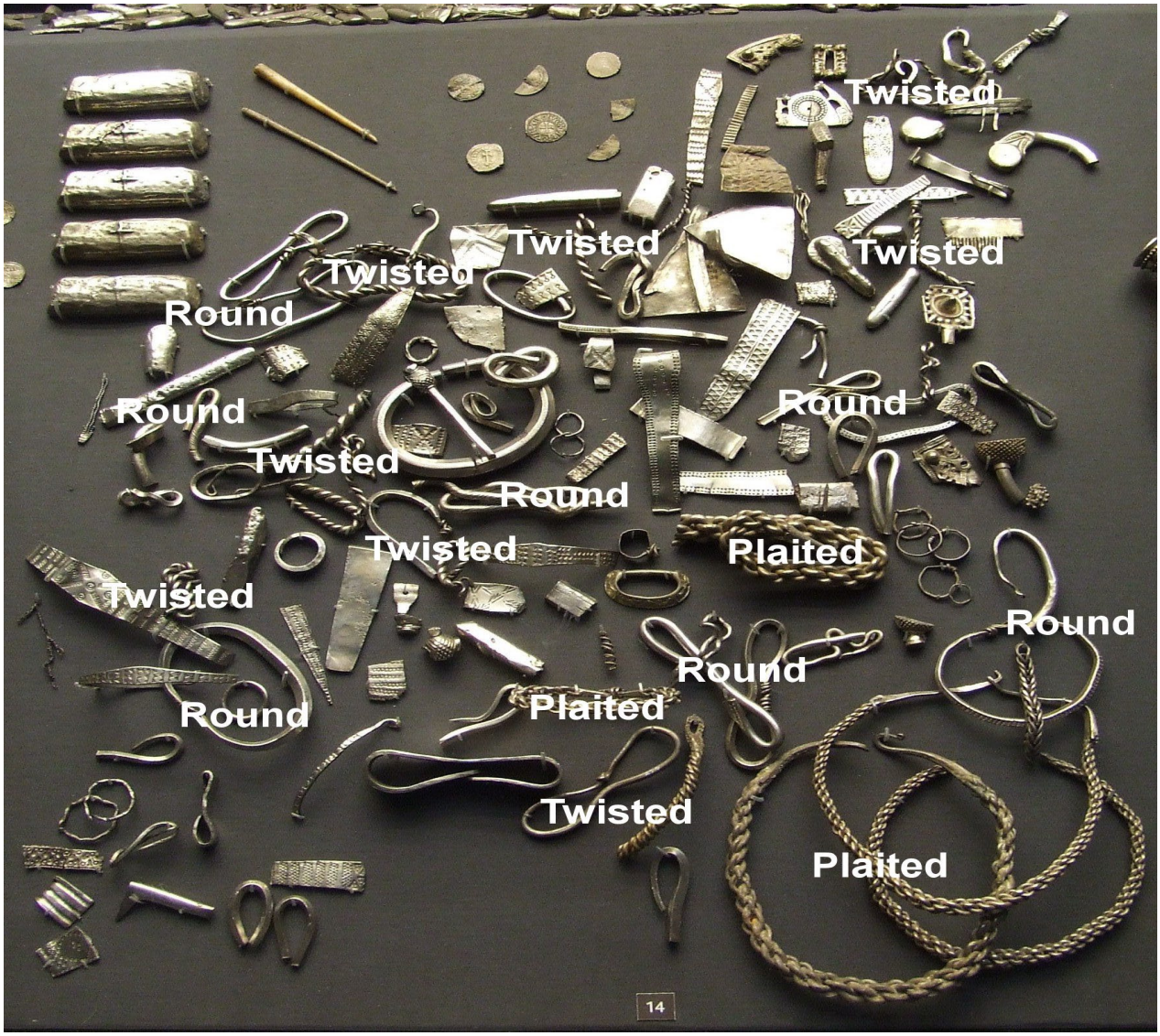

Fig.2: Selection of silver items found in the Cuerdale hoard

[8] https://en.wikipedia.org/wiki/Cuerdale_Hoard#/media/File:Cuerdale_hoard_viking_silver_british_museum.JPG

This twisted wire construction method was not limited to neck-rings (though it is nearly the only construction method for those; they are almost never found in flat-band forms), it is also found in arm-rings, although less commonly, such as this gold arm-ring in the Historiska Museet, the Swedish History Museum in Stockholm, Sweden[9]:

Fig. 3: Gold arm-ring from the Swedish History Museum in Stockholm, Sweden

The Viking peoples used stamped decorations extensively on their metal goods. Stamped metalwork in the form of jewelry and hacksilver currency are found in many discovered hoards, including the Spillings Hoard from Sweden[10], the Silverdale Hoard near Lancashire, UK[11], and the Galloway hoard found in Scotland[12].

This list does not begin to take into account the stamped items from hoards found in modern-day Western Europe (such as the Hoen Hoard[13] and the Spillings Hoard), all of which contain similar amounts of similarly decorated items, as well as on Baltic items found in Latvia (Kalniņš, 24) and Lithuania (Volkaite-Kulikauskiene,

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9 https://mis.historiska.se/mis/sok/fid.asp?fid=110592

10 https://en.wikipedia.org/wiki/Spillings_Hoard

11 https://lancashirepast.com/2014/05/13/silverdale-viking-hoard/

12 https://en.wikipedia.org/wiki/Galloway_Hoard#/media/File:NMSGallowayHoard4_PF1034117_674x900_96dpi_(cropped).jpg

13 https://commons.wikimedia.org/wiki/File:Cultural_History_(historisk)_Museum_Oslo_VIKINGR_Norwegian_Viking-Age_Exhib_02_Hon_Hoard_(Hoenskatten)_Gold_treasure_875-900_(1)_Neck_arm_rings_Frankish_jewelry_Arabian_coins_w_loops_Necklace_glass_beads_Roman_gemstone_English_ring_882.jpg

214), and Rus items from Kiev and Novgorod, making this form of decoration ubiquitous throughout Viking lands in the 9th-10th centuries.

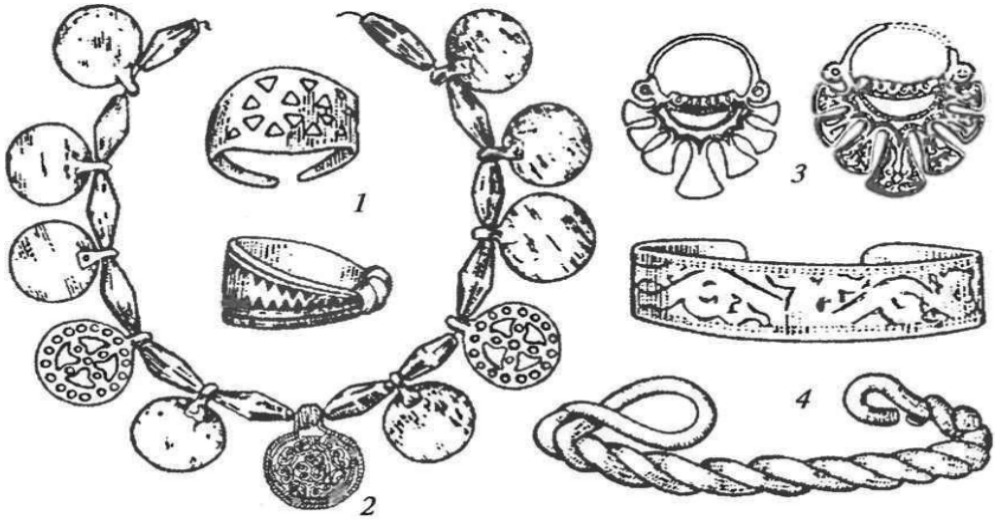


Fig.4: Sketches of Kievan Rus grave finds, including two rings (items #1 above) with stamped Viking decorations[14]

The Vikings were also clearly not the only people to use stamps to decorate metal, however, they are the only people to do so with such relentlessness and determination. Most other cultures exhibit a mix of stamped, engraved, and cast decorations; the Vikings rarely mixed methods. Generally, Viking things are cast, or stamped - seldom both. Other European peoples, before the Vikings, felt no such compunctions. Take, for example, this 4th century Finnish neck-ring with cast zoomorphic terminals and small triangle stamping along the edges of the terminals, from well before the Viking age:

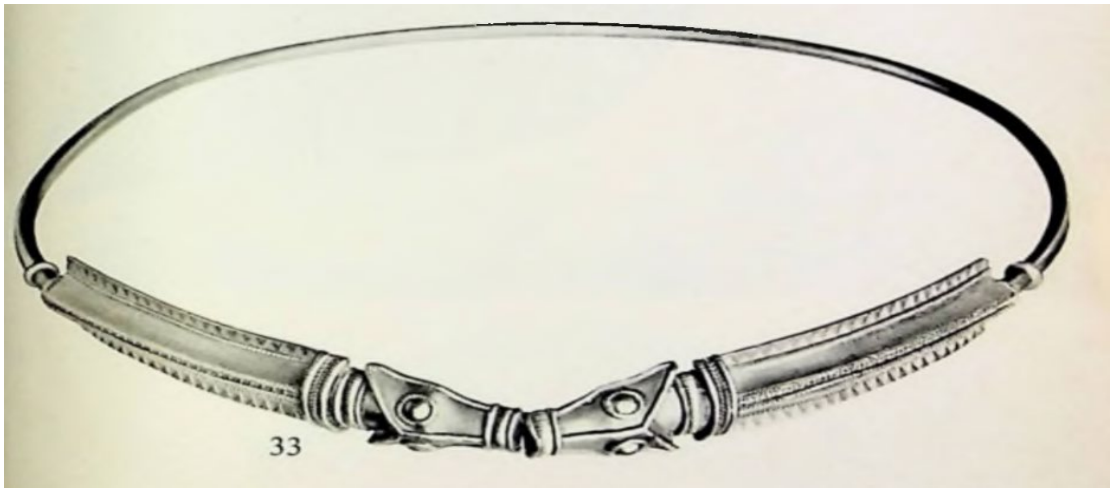


Fig. 5: Gold neck-ring with animal-head finials, 4th century AD, in the National Museum of Helsinki (Kivikoski, PL33)

[14] https://arheologija.ru/drevnyaya-rus-po-arheologicheskim-dannyim/

The Vikings were certainly not the first peoples to use stamped decorations on metal; the first use of stamps on metal was actually on currency. The first use of stamping on metal we have evidence of are the Lydian coins from the 7th century BCE. The Lydian one-third stater coin, stamped on both sides[15], is also the first known stamped coin. Use of minted coinage made with stamps quickly spread around the Ægean, Asia Minor, and Persia[16]

My entry:

Fig.6: Clasped silver arm-ring made by author

The unprovenanced arm-ring I have tried to recreate here is, however, especially unusual. It consists of six large wires, twisted into pairs, and twelve thin wires, twisted into six pairs. This is a fairly normal arrangement (some extant pieces have up to six pairs of twisted wires plaited together) except for the zoomorphic finials. While quite common in earlier Anglo-Saxon and Celtic jewelry, this is a design element virtually unknown in Viking hacksilver. I

[15] https://en.wikipedia.org/wiki/History_of_money#/media/File:BMC_06.jpg
[16] https://en.wikipedia.org/wiki/History_of_money

am unaware of any other examples of hammered (as opposed to cast) artifacts incorporating an animal head.

In addition, most pieces of stamped Viking hacksilver found have been imprinted with only one stamps' imprint. Rarely, the smith used two stamps for decoration, and in a very few pieces, three stamps are evident. Nothing has been yet found with more than three different imprints that I am aware of. This piece has three distinctly different stamp imprints: a small circle-dot, a small triangle-dot, and a large circle used for the eyes. That alone makes this piece remarkable and unusual, if not unique by itself.

Contemporary Viking finds with similar design elements:

These pieces, found in Norway[17], the Isle of Man, and England near Leeds, show typical clasp arrangements, wire twisting, and decorative stamping, common on Viking neck- and arm-rings.

Fig.7: A plaited Norse arm-ring with clasp and stamping[18]

[17] https://lysefjorden.com/halsring-av-solv-arkeologisk-museum/

[18] https://www.uis.no/en/museum-of-archaeology

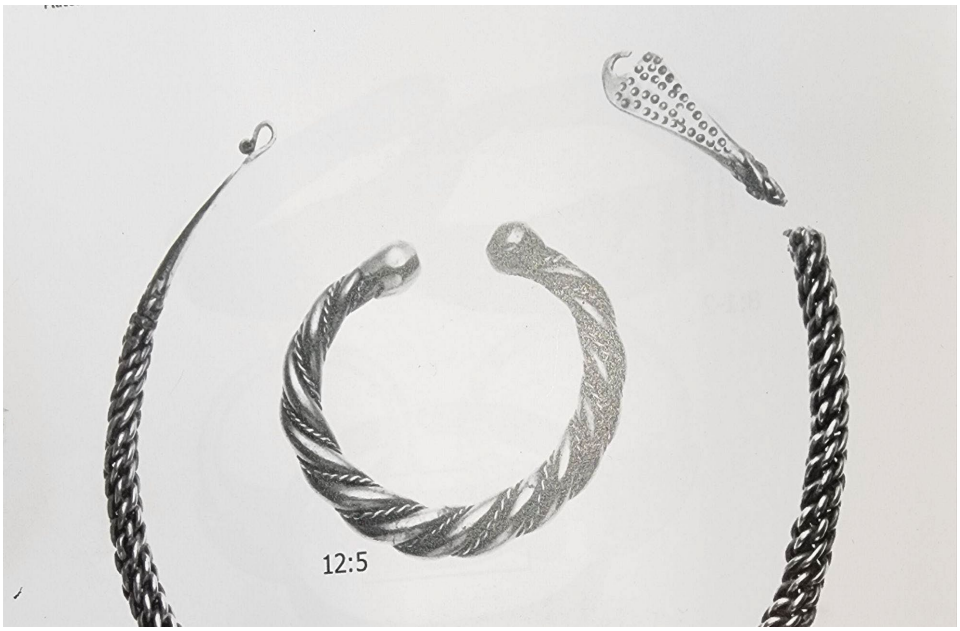


Fig. 8: Plaited gold arm-ring with blob finials, and plaited silver neck-ring fragments with clasp, Ballacamaish, Isle of Man find

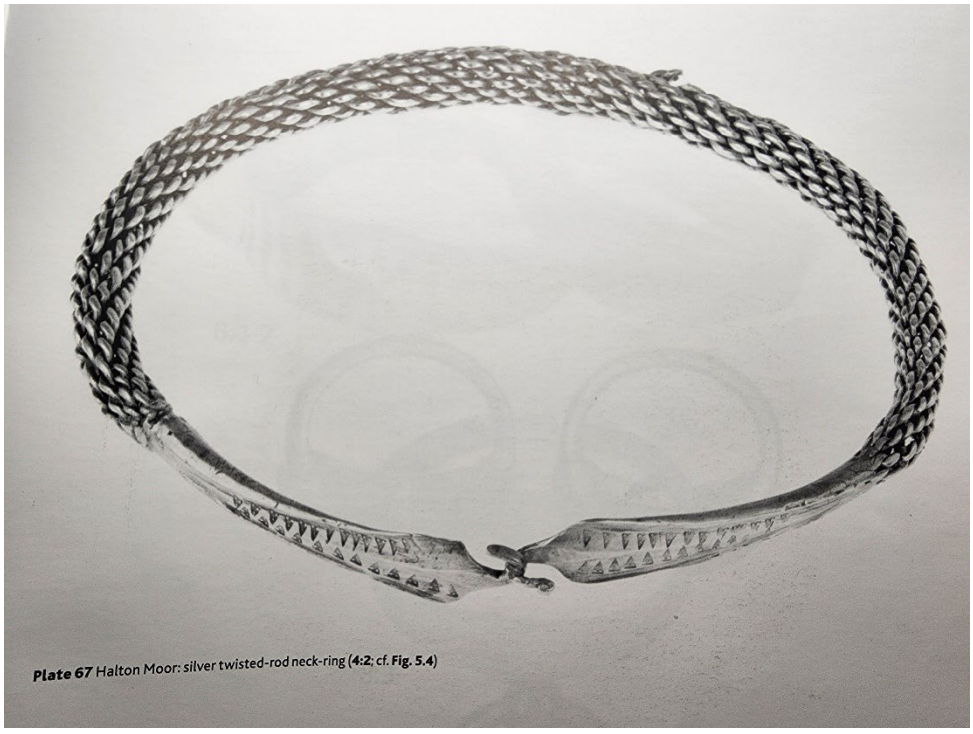


Fig.9: A plaited silver neck-ring from Halton Moor with clasp and stamping (Graham-Campbell)

Unfortunately, there are nearly no details available about the piece I recreated. It was sold in a private auction in January 2019, and the only information available about it is listed in my introduction. We do not know where it was found, when it was dated to (often an end date for a Viking find is determined by the dates of the Arabic coins found in it), or what else it was found with. We do know the following physical characteristics of the piece:

- 3.125" Diameter x 3" H (7.9 cm x 7.6 cm)
- 2.5" Diameter wrist opening (6.4 cm)
- quality of silver: 97%
- total weight: 2.28 oz (64.5 grams)

Interestingly, the auction house listing fails to accurately describe the other characteristics of the piece:

“comprised of three strands of high-grade silver (97% silver) wire, each with a thin pre-twisted cord surrounded by two thick cords”

This is incorrect. The arm-ring is composed of six wires divided into three twisted pairs. Each twisted pair is twisted together with two smaller twisted pairs. Each “strand” of the twist therefor consists of six individual wires, four small and two large, twisted into three pairs (two small and one large). The three strands of six wires are then twisted together in the opposite direction from their individual twists.

The following edited photo illustrates this:

Fig.9: Illustration of correct number of strands in extant piece

The silver content of the piece is approximately correct. Metallurgical analysis of Viking-age hoards shows that hacksilver is typically between 95% and 98% pure silver; in modern terms, this is better than sterling silver (92.5% silver) but not as good as fine silver (99.9% silver). One tell-tale of modern forgeries of silver antiquities is that a metallurgical analysis will show 0% gold content in forgeries. Extant pieces always show trace amounts of gold in the non-silver remainder, but modern silver always has that gold content removed; gold is too valuable to leave mixed into silver like that. Without a better analysis it is impossible to tell this.

So what are we to think of this piece? Is it authentic? A fanciful forgery? From some other time or culture? If we assume it is authentic, it was almost certainly looted from a hoard find or a burial; such acts are criminal in all western European countries, and so the seller is unlikely to come forward with more information.

Entertainingly, there are now replicas of this piece being sold commercially[19]. This questionable modern reproduction can now be yours from a German website for the low price of €95.90!

Fig.10: Commercially-made replica arm-ring

Why is it questionable? Let us count the ways in which this is incorrect:

[19] https://www.vinland-shop.de/product/wikinger-armspange-bronze-vbr-35/

1. The terminals are cast and soldered on
2. The smaller wires are too large
3. The smaller wires are laid entirely incorrectly
4. It is copper alloy, not silver

Examination of other extant plaited pieces with smaller twisted pairs used as accents with larger wires shows that they are almost always twisted in with the separate pairs. See Figs.3 and 8 above, and:

Fig.11: Gold arm-ring from Ballaquayle, Isle of Man

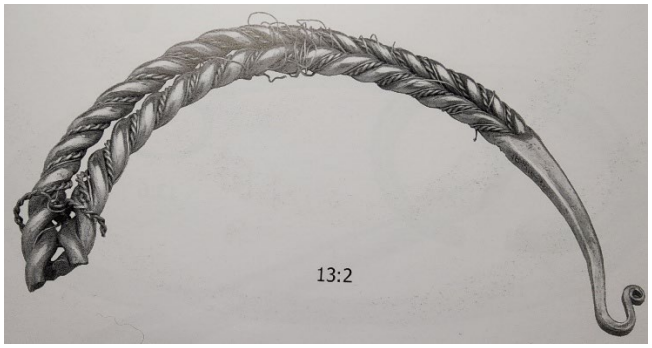


Fig.12: Silver neck-ring fragment from Ballaquayle, Isle of Man

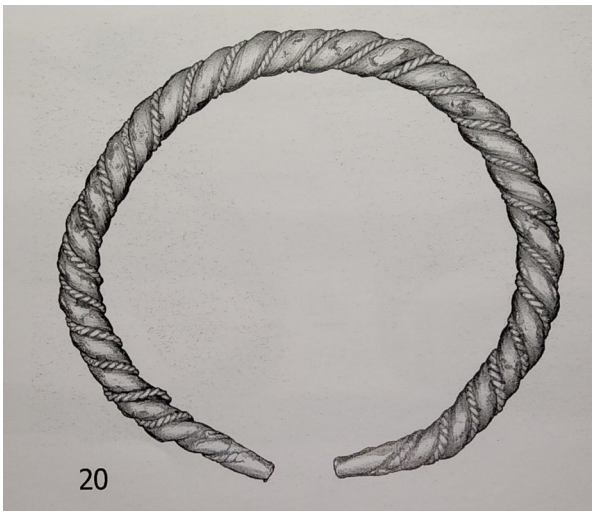


Fig.13: Gold arm-ring from Bucks, Wendover Dean, England

Fig.14: Silver arm-ring from Ballaquayle, Isle of Man

More Background on Metal Stamping Tools and Techniques

Sadly, it seems that only one of the tools used to make stamped decorations survived to present day - at least no more have been found yet that I am aware of. This makes some sense, as such a tool would likely have been hit repeatedly with a steel hammer until it was badly mushroomed on the butt end, then ground or sawn flat, re-hardened, and hit some more, until there was not enough of the tool left to safely hold. That stub would likely have been recycled - iron was not usually wasted. In his experimental archaeology book, *The Latgalian Treasures*, Daumants Kalniņš largely agrees, saying, "Tiny tools, used for ornamenting the surface of jewelry, were never found. If it happens and something like that is found, it is usually labelled (sic) as "rusty object of unknown application". After having lied (sic) underground for about 1000 years, the tiny punches and engraving tools have turned into miserable clots of rust. So, the only method is 100% relying on the traces of tools left on the surface of the artefacts. (sic)" (Kalniņš, 104)

The only surviving stamp tool I am aware of was found in the Mästermyr chest[20], along with a flattened ingot of lead metal (Arwidsson, 16) used as a small anvil to stamp on (using a steel tool against an iron anvil will blunt it rapidly). These stamping pads would be set atop the iron anvil for stability, the piece to be stamped would then be set on the stamping pad, the stamp placed, and struck sharply with a hammer. Additionally, the items labeled by Arwidsson as numbers 83, 104, and 105 could also be stamping tools, just too corroded to make out the fine details any longer. One end of each of these pieces shows evidence of mushrooming from repeated hammer strikes. However, they could also be chisels, rivet setters, or drifts. (Arwidsson, 17)

Fig.15: Iron tools of unknown use from the Mastermyr Chest - I suspect these could be decorative stamps. (Arwidsson PL8)

[20] https://en.wikipedia.org/wiki/M%C3%A4stermyr_chest

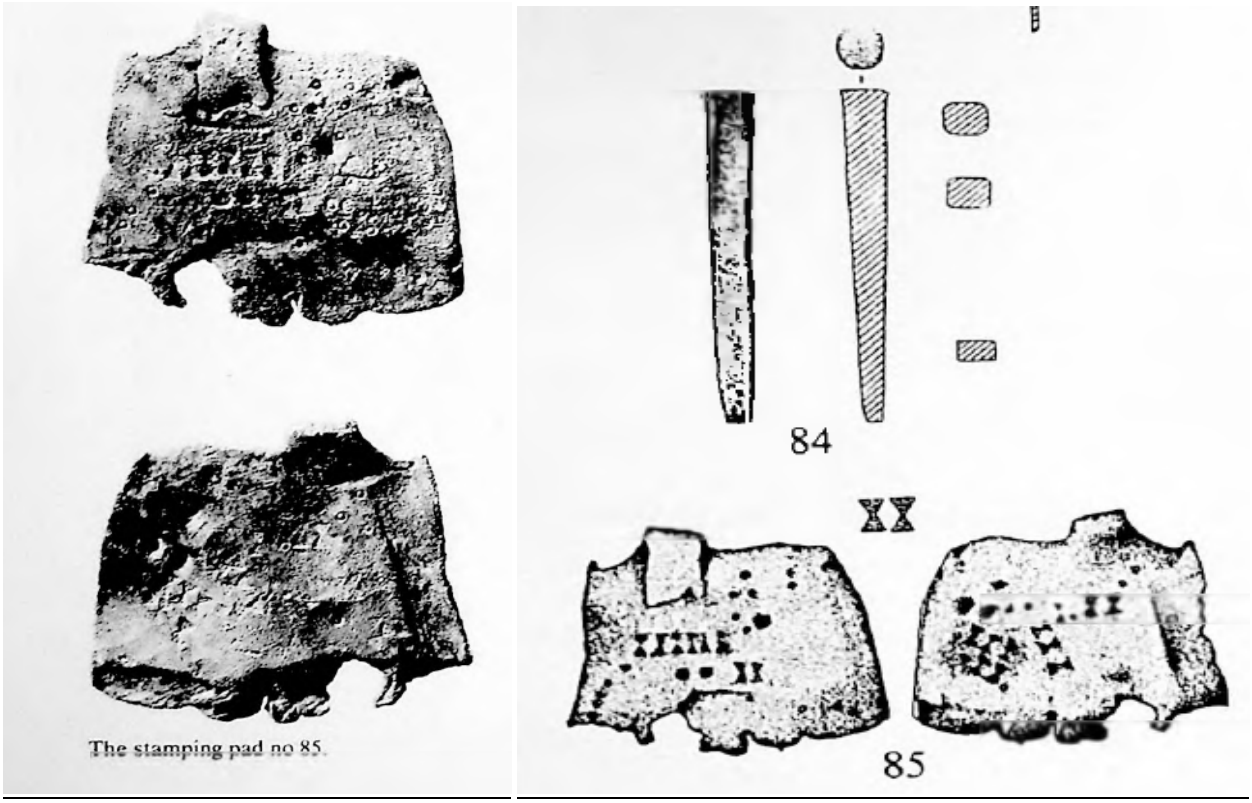


Fig.16: (Left) Lead stamping pad from the Mastermyr Chest, showing imprints of hourglass-shaped stamp. (Arwidsson PL10) - (Right) Drawing of decorative hourglass stamp and lead stamping pad from the Mastermyr Chest (Arwidsson PL22)

Stamping tools are found in a variety of shapes; Graham-Campbell, in his book *The Cuerdale Hoard,* divides them into four categories for convenience: bar-shaped, triangular and related (including hour-glass shapes), ring-shaped, and miscellaneous (Graham-Campbell 142). This book contains a comprehensive study of all the stamped impressions found in the Cuerdale Hoard (the second-largest Viking-age hoard thus far found (Gotland being larger), containing more than 8,600 items of coin, bullion, jewelry, and decorative items), which I have placed pictures of in Appendix A.

Background on Silversmithing Tools and Processes

Silversmithing twisted and plaited Viking hacksilver from silver wire is largely the same today as it was a thousand years ago, involving silver, fire, hammers, and anvils. My tools today are perhaps more finely made, but they are identical in function and very similar in form to the tools found in the Mastermyr chest. I cast silver ingots in soapstone molds, hammer them into rough cylinders, then pull those through draw plates to make wire of smaller and smaller diameters, until I reach my desired size. Those wires are twisted and plaited clockwise, then the ends fused together with fire, then further twisted counterclockwise to plait them together. To finish, the melted ends are drawn out with round-faced hammers on rounded anvils into the desired size, sawn and filed into the desired shape, and struck with decorative stamps for visual interest and decoration.

Modern tools can make these processes faster, safer, or easier. I use gas torches instead of a charcoal forge. I can quickly twist wire using a bench vise and a drill or rotary tool. I can use a jeweler's rolling mill to evenly form ingots for drawing into wire – or even just buy commercially-made wire. Modern tongs, pliers, and vise-grips provide superior grabbing power and stability. My hammers are made of excellent steel and will never wear out. My files are perfect, fine, and uniform, and I have motorized polishing tools that give a perfect, even finish. My stamps are precisely made with power tools.

While I now use many of these shortcuts, I started with a chunk of soapstone I carved into a mold with a hammer and chisel, a firebrick, one small ceramic crucible, two hammers I re-faced (using one as an anvil), and a torch. Starting with these rough tools gave me an appreciation for the time and skill the Viking age silversmiths put into their products.

BIBLIOGRAPHY

Arwidsson, Greta. *Birka: Ii*. Stockholm: Kungl. Vitterhets historie och antikvitets akademien, 1986. Print.

Arwidsson, Greta, and Berg Gösta. *The Mästermyr Find: A Viking Age Tool Chest from Gotland*. Larson Pub. Co., 1999. Print.

Graham-Campbell, James, and Karen Hughes. *The Cuerdale Hoard: And Related Viking-Age Silver and Gold from Britain and Ireland in the British Museum*. British Museum Press, 2011. Print.

Kalniņš, Daumants. *The Latgalian Treasures: Witchcraft of the Ancient Jewelry-smiths.* 2015. Cesis, Latvia. Print.

Kivikoski, Ella. *Finland*. Frederick A. Prager, 1967. New York, New York, USA. Print.

Paterson, Caroline, Adam J. Parsons, Rachel M. Newman, Nick Johnson, Christine Howard-Davis, Anthony Dickson, Alan Lupton, Fiona McGibbon, Sharon Penton, and Rogers P. Walton. *Shadows in the Sand: Excavation of a Viking-Age Cemetery at Cumwhitton, Cumbria*., 2014. Print.

Pedersen, Anne. *Dead Warriors in Living Memory. A Study of Weapon and Equestrian Burials in Viking-Age Denmark, AD 800-1000: Catalogue*. Publications from the National Museum, 2014. Print.

Pedersen, Anne. *Into the Melting Pot: Non-Ferrous Metalworkers in Viking-Period Kaupang*. Aarhus University Press, 2016. Print.

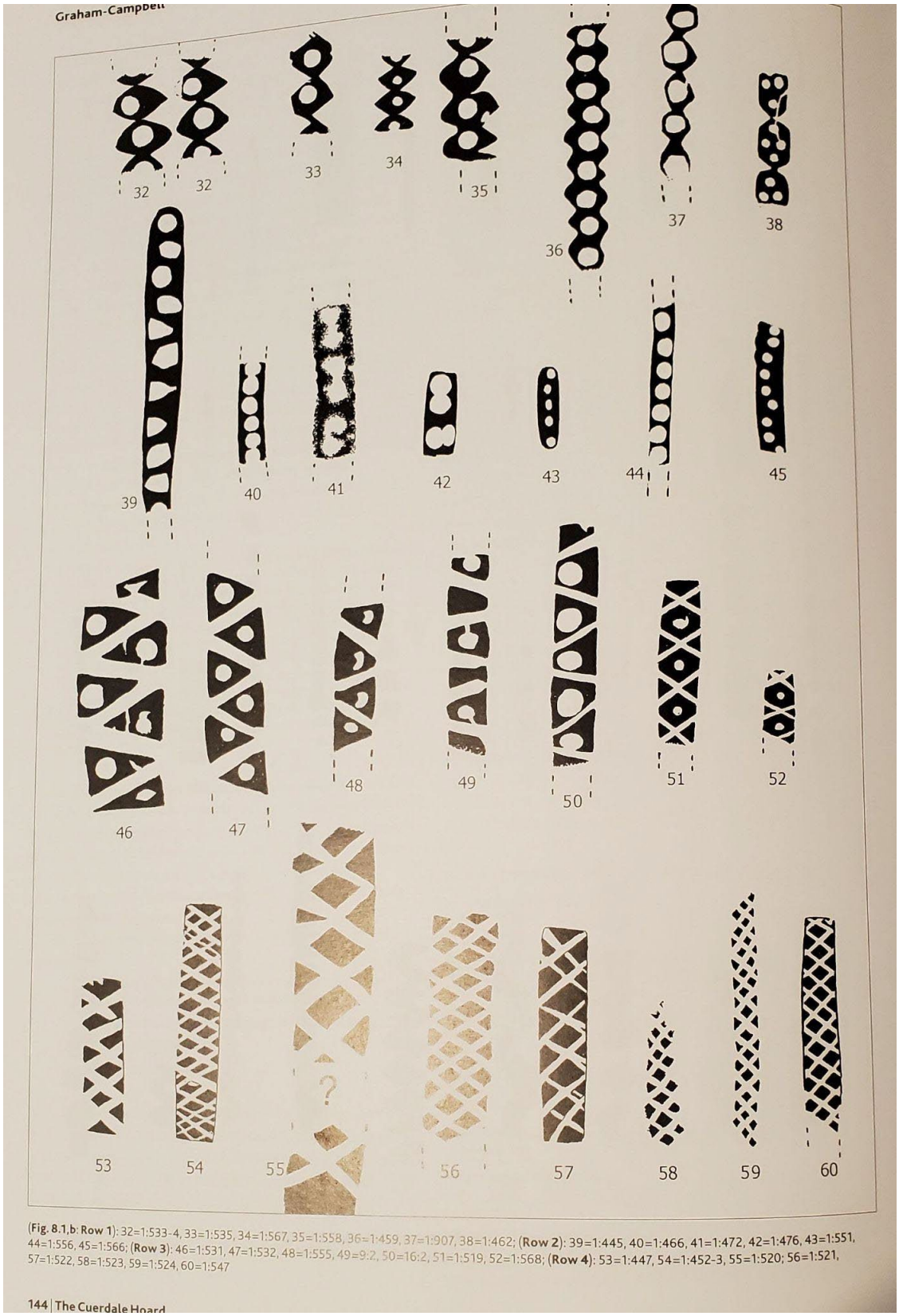
Thunmark-Nylen, Lena. *Die Wikingerzeit Gotlands: Ii*. Stockholm: Kungl. Vitterhets Historie och Antikvitets Akademien, 1998. Print.

Volkaite-Kulikauskiene, Regina. *Lietuviai IX-XII Amziais.* Vilnius, Minstis, 1970. Print.

Appendix A: Shapes of stamps found in the Cuerdale Hoard (Graham-Campbell pp 143-147)

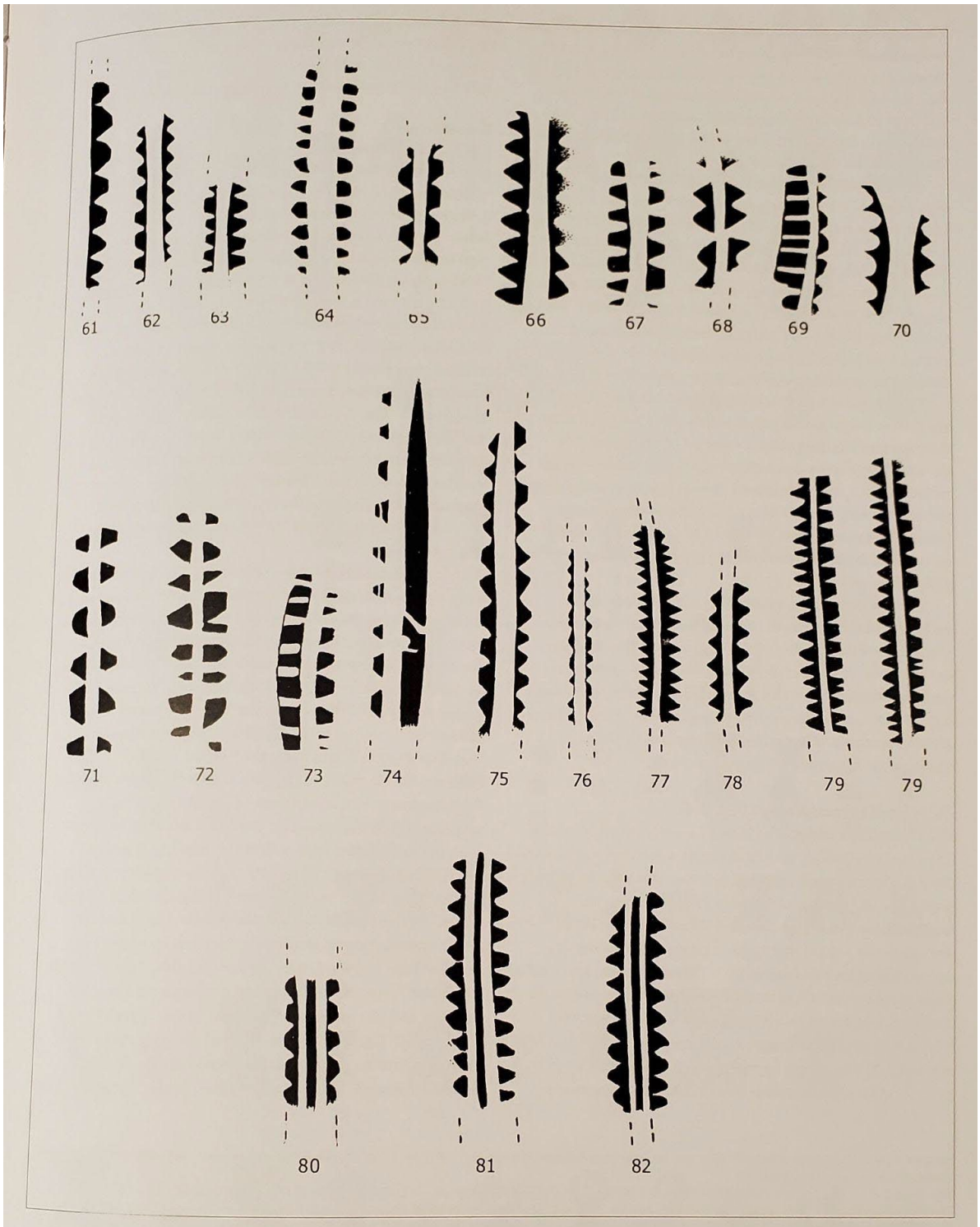
Figure 8.1 Compendium of 82 bar-stamps (scale 3:1)
Key: (Fig. 8.1,a: Row 1): 1=1:442, 2=1:479, 3=1:480, 4=1:481, 5=1:511-12, 6=1:539, 7=3:9, 8=1:419, 9=1:421, 10=1:423; (**Row 2**): 11=1:443, 12=1:518, 13=1:448-9; 14=1:473, 15=1:474, 16=1:487, 17=1:488, 18=1:491, 19=1:492, 20=1:493, 21=1:494, 22=3:10; (**Row 3**): 23=1:499, 24=1:513, 25=1:514, 26=1:516, 27=1:549, 28=1:550, 29=1:559, 30=App. Fig. 2.4,b, 31=8:1-2

Bar-shaped stamp shapes from the Cuerdale Hoard



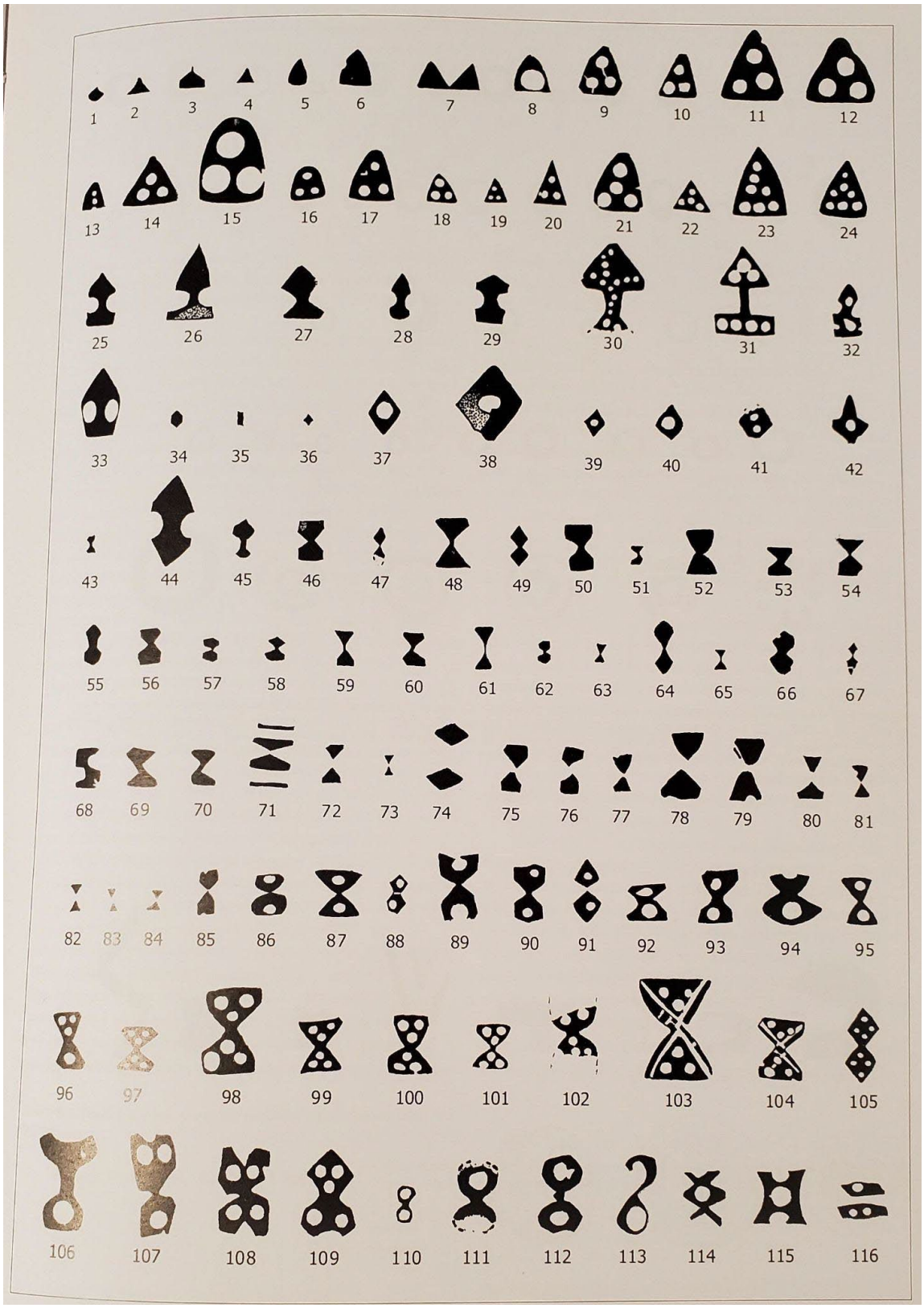
(**Fig. 8.1,b**: **Row 1**): 32=1:533-4, 33=1:535, 34=1:567, 35=1:558, 36=1:459, 37=1:907, 38=1:462; (**Row 2**): 39=1:445, 40=1:466, 41=1:472, 42=1:476, 43=1:551, 44=1:556, 45=1:566; (**Row 3**): 46=1:531, 47=1:532, 48=1:555, 49=9:2, 50=16:2, 51=1:519, 52=1:568; (**Row 4**): 53=1:447, 54=1:452-3, 55=1:520; 56=1:521, 57=1:522, 58=1:523, 59=1:524, 60=1:547

Bar-shaped stamp shapes from the Cuerdale Hoard



(Fig. 8.1,c: **Row 1**): 61=1:517, 62=1:485, 63=1:486, 64=1:489, 65=1:490, 66=1:496, 67=1:500, 68=1:502, 69=1:503, 70=1:504; (**Row 2**): 71=1:515, 72=1:525, 73=1:526; 74=1:527, 75=1:528, 76=1:529, 77=1:553, 78=1:554, 79=16:1 and 3; (**Row 3**): 80=1:498, 81=1:538, 82=1:560

Bar-shaped stamp shapes from the Cuerdale Hoard



Triangular and hour-glass stamp shapes from the Cuerdale Hoard

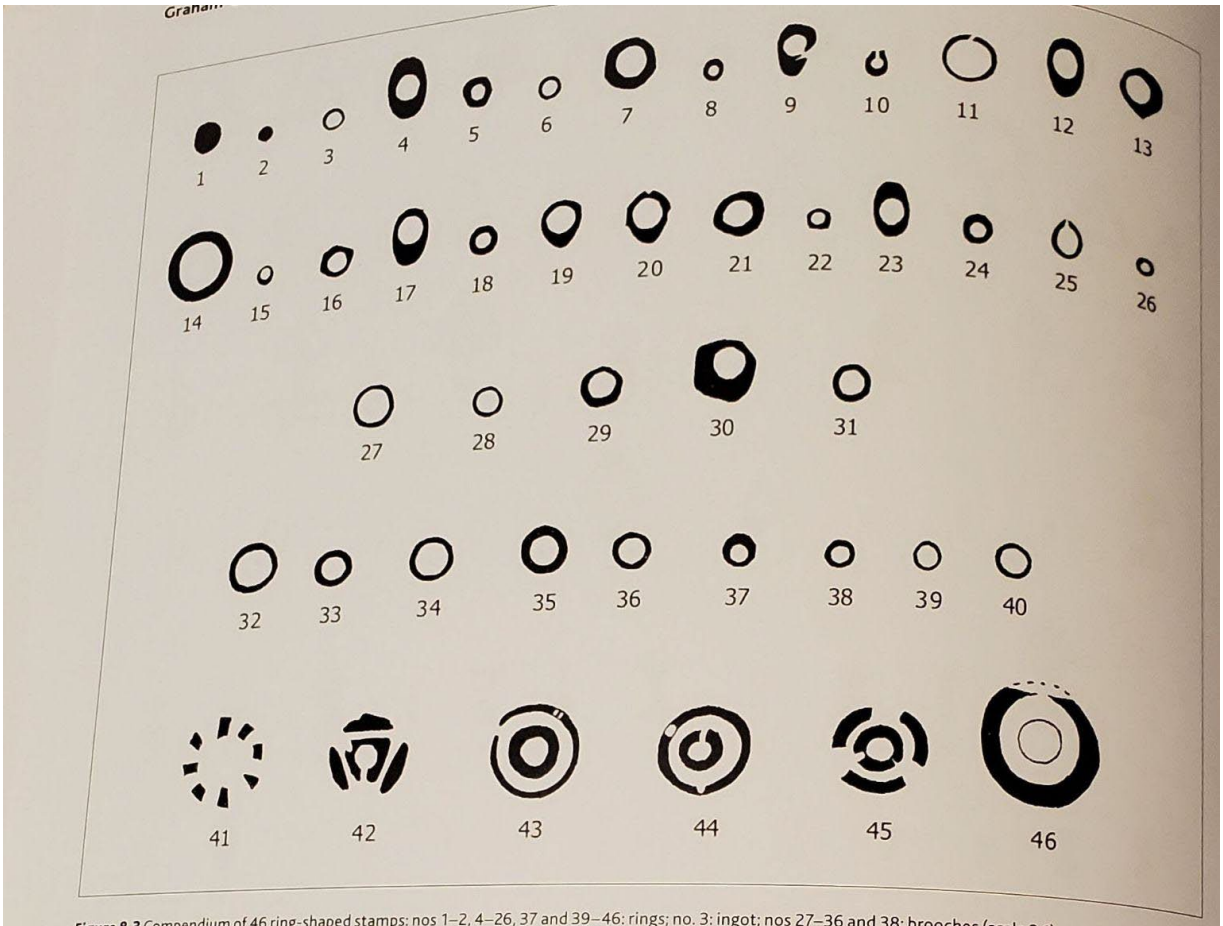


Figure 8.3 Compendium of 46 ring-shaped stamps: nos 1–2, 4–26, 37 and 39–46: rings; no. 3: ingot; nos 27–36 and 38: brooches (scale 3:1)
Key: (**Row 1**): 1=1:511, 2=21, 3=1:227, 4=1:374, 5=1:415, 6=1:417, 7=1:421, 8=1:423, 9-10=1:425, 11=1:426, 12=1:435, 13=1:438; (**Row 2**): 14=1:439, 15=1:444, 16=1:450-1, 17=1:468, 18=1:506, 19=1:508, 20=1:509, 21=1:510, 22=1:973, 23=1:903, 24=1:905, 25=1:911, 26=1:959; (**Row 3**): 27=1:995, 28=1:1,014, 29=1:1,015, 30=1:1,053, 31=1:1,062 (**Row 4**): 32-3=2:1, 34=2:2, 35=3:1, 36=3:3, 37=12:2-3, 38=13:7, 39=19, 40=36; (**Row 5**): 41=1:448-9, 42=1:446, 43=1:447, 44=1:452-3, 45=1:457, 46=3:9

Figure 8.4 Compendium of nine miscellaneous plain stamps: nos 1–8: rings; no. 9: brooch (scale 3:1)
Key: 1=1:415, 2=1:416, 3=1:903, 4=16:1 and 3, 5=1:505, 6=34, 7=App. Fig. 2.4.b, 8=1:495, 9=13:7

Round and miscellaneous stamp shapes from the Cuerdale Hoard

Appendix B: Making my version of the unusual arm-ring[21]

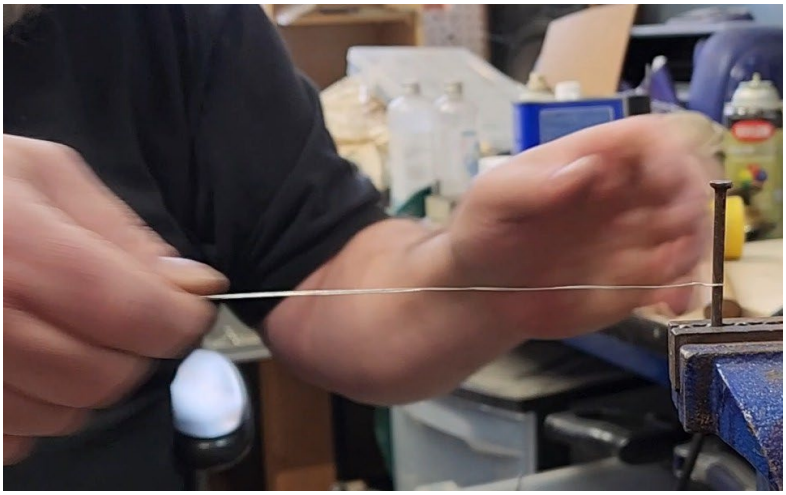
Based on previous examination of the artifact, I had determined that it was constructed in a fairly typical way: three pairs of clockwise twisted larger wires, with each pair surrounded by two pairs of clockwise twisted fine wires, then the three sections are plaited together in the opposite direction. The piece being fairly small, I began with six pieces of silver wire, about 14 gauge and 6" long, which were previously produced.

These were clamped in a bench vise in pairs, and twisted clockwise with a set of vise grips.

The pairs would now be heated to fuse (melt) them together at one end. The three pairs were bundled together with steel wire; steel wire is used by jewelers to hold non-ferrous metals in place, because steel wire will not melt at the lower temperatures used with gold, silver, etc. I used an 8oz ball-pien hammer to persuade the ends of the twists closer to each other. The technique for fusing that I use is to hold the piece vertically and apply heat straight down onto the area to be fused; this causes the melting silver to flow downward and form a homogenous mass.

[21] Photography in Appendix B courtesy Susan Verberg

Now the smaller interstitial pairs needed to be installed. These had to be constructed first, by clockwise twisting, just as the larger wires were. Much smaller gauge wire is used for these, however: about 24 gauge. I had 25 feet or so of this wire on-hand. I found the middle point and bent the wire there around a common nail clamped in a bench vise. Rather than twist this wire by hand (incredibly tedious), I grabbed the two loose ends in my rotary tool, set it to the lowest possible RPMs, walked across the room to keep the wire taut, and turned on the rotary tool. In about thirty seconds the twisting was done – you can tell when to stop because it will start to kink.



The smaller wire now being produced, I removed the steel wrapping wire from the now-fused larger twisted wire pairs. I pulled them apart slightly, and began applying the smaller wires to the cracks between each pair of larger wires. Each pair of wires forms two “valleys”, one on each side of the pair. To help visualize this, just hold up two fingers together. These are your larger wires. On both sides of those two fingers, where they touch, there is a valley. That is where the smaller wires go, and there is one pair of smaller wires for each valley.

Once

Once all six smaller pairs were installed, the three sections were gently bent back together. The fused end was clamped in a bench vise, and the three sections were twisted counter-clockwise with my hands to form the stereotypical plaited structure seen so often in Viking hacksilver.

The un-melted end of the piece was again wired tight with steel wire. Then the un-fused end was melted together, using the same vertical heat method as described previously. The piece was then flipped over and the other end received an additional application of heat, to fuse the smaller wires with the larger ones, so that both ends were each a mass of silver.

I now began to draw out the ends to form the clasp of the arm-ring. Using a hammer with a rounded face clamped in a vise as an anvil, and another hammer with a rounded face to strike glancing blows to the silver, squeezing it between the two, thinning and lengthening it. Between hammer passes, the piece needed to be annealed – heated to red hot then quenched – so that it remained malleable and did not crack.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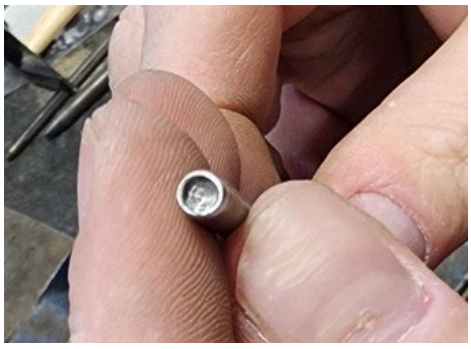
Now the clasp needed to be formed. The “head” was carefully formed with hammer blows, but the “tail” needed a hook that had to be sawn into shape with a jeweler’s saw. This saw is used while holding the piece on a wooden block with a “V” cut in it, so that both sides of the area being sawn can be supported.

The inside of the clasp was filed smooth to remove any rough edges or saw marks with a fine round file.

Decorative stamps were then applied to the clasp and “head” in the same manner as the original shows. A small “circle-dot” stamp, a small “triangle-dot” stamp, and a large open circle stamp were all used. As I did not have a large circular stamp made, I had to construct this tool myself (more information about making Viking decorative stamps can be found in my blog: https://snorri.blog/2019/04/27/viking-stamped-jewelry/) which only took a few minutes. All of these stamps are common Viking-era shapes, and many historical examples can be seen in Appendix A.



All the stamping now being done, I gently rolled the “nose” of the “head” of the clasp to form a catch. All that was now left was to bend the piece into a bracelet shape.

This was done by laying the piece over a round “horn” anvil and beating it with a rawhide mallet. The anvil I used is a replica of one found in the Mastermyr chest, made for me by Duke Andreas Morgan of Æthelmearc, along with another Mastermyr replica anvil seen on the table to the right in the below picture. Historically, these would be set into holes in the end of a hardwood log section, a “blacksmith’s stump”. As my stump is currently in use by other tools, I simply clamped my anvil into a bench vise and used it like that.

The only remaining step is some hand-polishing with a commercial polishing cloth.