

Volume 28 Issue 04 April, 2016

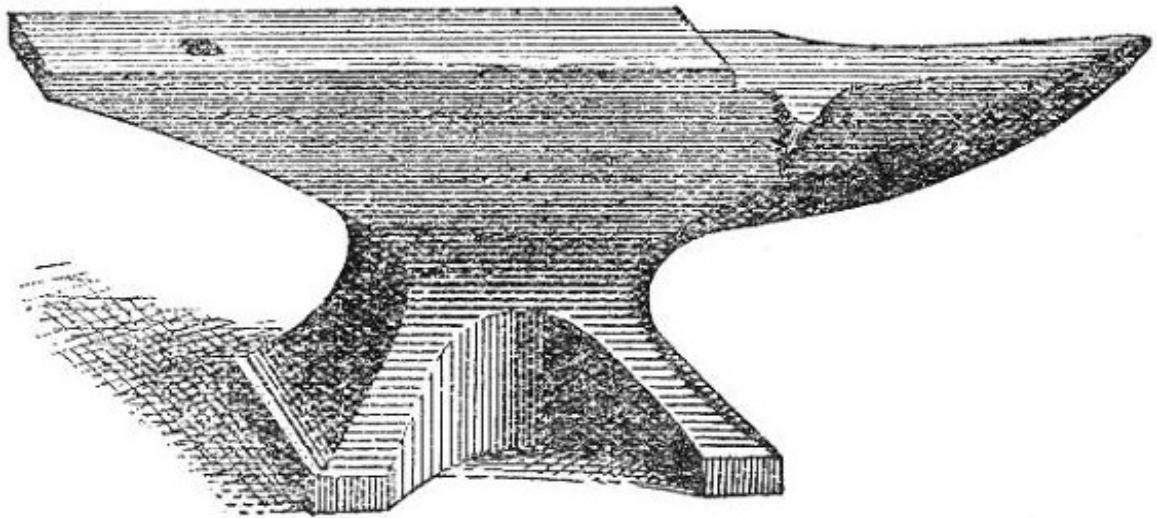


FORGE

Dedicated to the revival of the King of Crafts

Vancouver Island Blacksmith Association
www.viblacksmiths.com

THE ANVIL



Current Events:

Blacksmith Course
April 2, 9, 16, 23, 30 and
May 7, 2016 from 8:30 am
to 5:00 pm
Spring Days May long
weekend, May 21 to 23.

2016 Executive

President: Neil

Gustafson

VP: John Archer

Secretary: Charlie Low

Treasurer: Norm Norby

Editor: Brody Smith

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Secretary's Report

By: Charlie Low

April 2016

Show and Tell:

Charlie L brought in a damascus kukri, with 108 layers of L6 and 1095 in a Ferry Flip pattern, made under the tutelage of Dennis Gillette. Willy brought in an aluminum bronze anvil made at Heritage Acres for Neil. D brought in a billet of damascus made from the remains of about 10 previous knives, and a santoku. Photos will be in june newsletter.

Financial:

New Members:

Peter Burrage and his son Cliff, Saeko Yabe, a visiting student from Japan, and Ryan Stad.

Old business:

There is still a need for things to sell at the fair. There is a list on our website of suggestions. Things that are always needed include mini horseshoes and dice.

Neil was considering suggestions for demonstrators for Caniron. Benoit was suggested, and there is a thought that women smiths should be given serious consideration. Old guys should also be considered, with names mentioned including Clifton Ralph and John Adolph.

It was suggested that the Spring Days Fair, on the May long weekend, be considered production days.

Jake James' demo will likely be the last weekend of May or one of the first two in June.

There will be a need for nice stuff to show at the art gallery at the fair in September.

Charlie D would like the trailer put in the rabbit barn for cleaning, rust removal and painting.

There being no new business, we adjourned.

New Business:

Neil told us how the class is going. Yesterday we made tongs from $\frac{3}{4}$ inch round stock, and used them to hold $\frac{3}{8}$ round for welding into chain links.



Have something you would like added to the newsletter Email it.

Arcingbrody@gmail.com

A Brief History of Viking Spear Design and Use

Contributed by Dick Smith

From the Blacksmith Guild of the Potomac

When people think about Viking age weapons, typically they think of the battle axe. However, the second choice, for someone who could not afford a sword, was not an axe, but rather, a spear. During the Viking age, spear heads took many forms. The photo to the right (1) shows a modern reproduction, typical of the late Viking age. Photo two shows an 11th century spearhead, while photo three shows a 10th century spearhead. Earlier spearheads were about 20cm (8in) long, while later ones were as long as 60cm (24in). Photo four shows an assortment of Viking era spear heads, illustrating the variations in size and shape.

Some spear heads, including all those in the photo above, had "wings" on the head, useful for a variety of tricks. These are called *krókspjót* (barbed spear) in the stories.

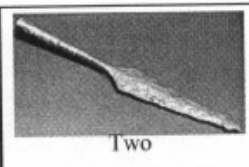
The spearheads were made of iron, and, like sword blades, were made using pattern welding techniques during the early part of the Viking era (five). They were frequently decorated with inlays of precious metals or with scribed geometric patterns (six). The heads were fixed to wooden spear shafts using a rivet. The shaft and head had a combined length of 2-3m (7- 10ft) long, although longer shafts may have been used. A passage in chapter 6 of *Gisla saga* suggests the spear shaft was long enough that a man's outstretched arm could touch the rivet (seven). The diameter of the shaft was typically 3cm (about an inch). A strong, straight-grained wood such as ash was used. Rivets on surviving spear heads are surprisingly small. There are examples in the sagas of spear shafts reinforced with iron. In chapter 40 of *Vatnsdæla saga*, it is said that *Ingólf's* spear had a broad blade and a shaft reinforced with iron.

Many people think of the spear as a throwing weapon. One of the Norse myths tells the story of the first battle in the world, in which *Oðin*, the highest of the gods, threw a spear over the heads of the opposing fighters as a prelude to the fight. While spears were certainly used that way during the Viking age, there's a disadvantage to throwing one's weapon away in a fight. Not only do you lose your weapon, but you risk having your opponent pick it up and use it against you if you miss. Worse, your weapon may be caught in flight and flung back at you, a trick used on several occasions by *Gunnar* (e.g., *Njáls saga* chapter 54). Despite these risks, the sagas are filled with examples where spears were thrown, such as chapter 145 of *Njáls saga*. Spears were also used with "throwing strings" (*snærisspjót*) for longer reach, such as in chapter 24 of *Reykðæla saga* og *Víga-Skútu* where *Skúta* shot a spear across a river ford, killing *Bráundur*.

A passage from chapter 48 of *Grettis saga* suggests that the rivet could easily be removed. *Grettir* arrived at *Þorbjörn's* farm, *Þorodstaðir*, to take revenge on *Þorbjörn* for his killing of *Grettir's* brother, *Atli*. After *Grettir* arrived at the farm, he sat down and removed the rivet to prevent *Þorbjörn* from throwing the spear back at him. The head flew off when *Grettir* threw the spear. After killing *Þorbjörn*, *Grettir* searched for the head, but couldn't find it. According to the saga, the spearhead was found in the marshland behind the farm centuries later.



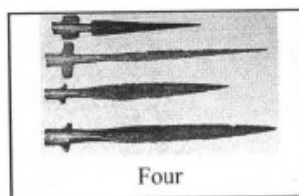
One



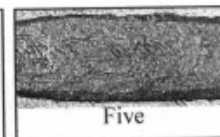
Two



Three



Four

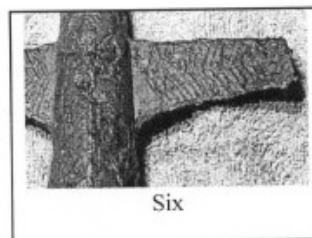


Five

Editor's Note:

ð as in *Oðin* represents a hard 'th' sound.

þ as in *þrandur* or *þorkell* represents a light 'th' sound.
J's are 'y' as they are in Ger-



Six



Seven

Text and photos reprinted from:

the Viking Historic Organization.
<http://www.hurstwic.org>



More commonly, the spear was used as a thrusting weapon. It provided a means to inflict injuries from a distance. This capability was used to advantage in mass battles. Norsemen, as a rule, tended to avoid mass battles, primarily because they weren't as good at them as other Europeans of the time. But, if a mass battle were necessary, men lined up, shoulder to shoulder, with shields overlapping. After all the preliminaries, which included rock throwing, name calling, the trading of insults, and shouting a war cry (*æpa heróp*), the two lines advanced towards each other. When the lines met, the battle was begun. Behind the wall of shields, each line was well protected. But once a line was broken, and one side could pass through the line of the other side, the battle was essentially over. Terrible damage could be done from behind, and the battle usually broke down into armed melees between small groups of men. But before a line broke, while the two lines were going at each other hammer and tongs, the spear offered some real advantages. A fighter in the second rank could use his spear to reach over the heads of his comrades in the first rank and attack the opposing line. *Konungs skuggsjá* (King's Mirror), a 13th century Norwegian manual for men of the king, says that in the battle line, a spear is more effective than two swords.

When the line broke, stories say that people would sling their shields over their shoulders and use the spear two-handed. In this mode, the spear has even more reach, since the fighter can bring his hands way back towards the butt end of the spear. In a thrust, the spear shaft can slide so that both hands are at the butt end of the shaft, allowing the spear to reach the full extent of the shaft in a lunge (left). Also, two handed, the spear provides the combatant with enough leverage to lift his opponent up off his feet, impaled on the tip of spear. Þórólfr did just that with Earl Hring in chapter 53 of *Egils saga*. In chapter 45 of *Grettis saga*, Þorbjörn knocked loudly on the door at Atli's farm, then hid. When Atli went to the door, Þorbjörn rushed up holding his spear in two hands and ran Atli through. When he took the blow, Atli said, "Broad spears are in fashion these days," and fell dead.

I used to think that the spear, despite its advantage of reach, was slow, compared to a weapon like the sword. I have been shown otherwise. A spearman can keep a swordsman very busy, flicking the point from face to belly and back again, while staying out of range of the sword. However, a spearman would need to be wary that anyone armed with a sword didn't find his way past the point of the spear. Once past the point, the swordsman would have every advantage. The stories say that fighters armed with swords had the ability to cut a spear shaft in two with their sword, rendering the spear useless. For instance, in chapter 31 of *Finnboga saga ramma*, as Jökull thrust at Þorkell with a spear, Finnbogi cut the spear shaft in two with his sword. One approach that seems to work well when a swordsman faces a spearman is for the swordsman to adopt the inside ward with his shield, inviting an attack.

When the spearman thrusts, the swordsman can move to outside ward, deflecting the thrust. The swordsman steps in behind the shield, and places himself in a perfect position to lop off the head of the spear. From here, the swordsman is well situated to control the shaft of the spear with his shield as he closes the distance to attack the spearman. This approach fails, however, if the spearman does the kind of lunge thrust illustrated above on this page. The spear is fast enough that the spearman can recover and set the point on the other side of the swordsman's shield, ready to impale him if he moves forward to cut at the shaft. A spearman might also respond to the swordsman's attack by shortening his grip, bringing his spear under the shield, and attacking the other side. One response to a spear thrust is to jump over it. In chapter 146 of *Brennu-Njáls saga*, Kári jumped up as Lambi lunged at him with a spear. Kári landed on the spear shaft, breaking it. Spears were occasionally used for other purposes as well. In chapter 16 of *Reykðæla saga og Víga-Skútu*, Steingrímur and his men were battling Áskell and his men, who were on a bank above the frozen river. Helgi used his spear shaft to vault over the ice and up onto the bank where Áskell and his men were fighting. It didn't do him much good, since Háls killed him immediately. We know little of the details of how spears were used in the Viking age. Some of the later medieval fight manuals teach techniques for staff weapons that can be adopted to Viking age spears, but we don't know if those techniques were used in the Viking age.

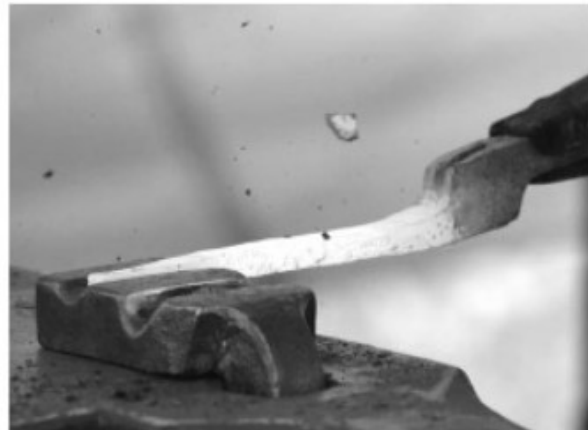
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PETER ROSS PLIERS DEMO

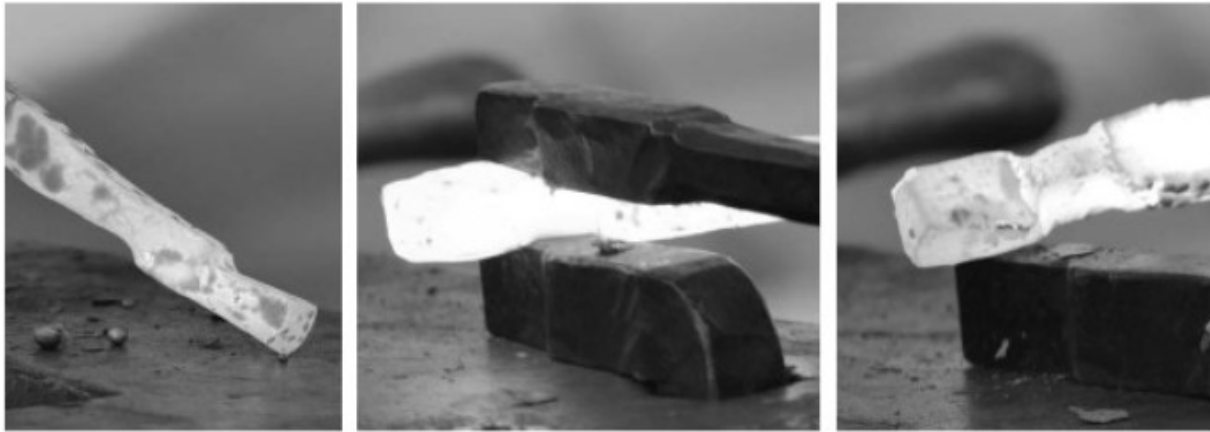
PHOTOS AND DEMO NOTES BY JIM GUY



SPECIAL, 2015.]

THE HAMMER'S ARC

17



THE HAMMER'S ARC



Day 2
Peter Ross
Pliers

Box Joint Pliers



May 16

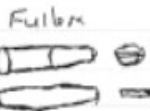
Tooling

- must fit each other
specialized fullers
DRIFT for slot width
must match fuller

Why Box Joints? —
when twisting, prevents
Rocking of Joint



Slit punch
DRIFT



Round bottom fuller



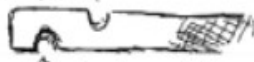
Round Swage (for handles)

Material

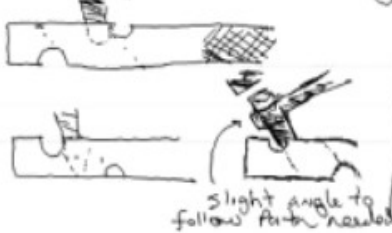
1/2 x 1 mild steel

Slotted Leg

Fuller less than 1"
1/2 the width of Bar



cut slot (splitter is 1/16" wide)
will make a offset cut
so that you chisel vertically



slight angle to follow form needed

Process over wood



slit & drift this
area will lengthen the
Jaw



will be slightly
smaller than
Finished Jaw

Drift &
fin. Fuller
must match
this

THE HAMMER'S ARC

[SPECIAL, 2015.]

DRIFT



continue from both sides until cleaned up & the DRIFT passes THRU.



Forge Jaw



cut off bar



Draw out Rings



shape Rings



inside is flat outside round

Other half

- start with the same material used for the other half.
- Forge it square (biggest square you can get)



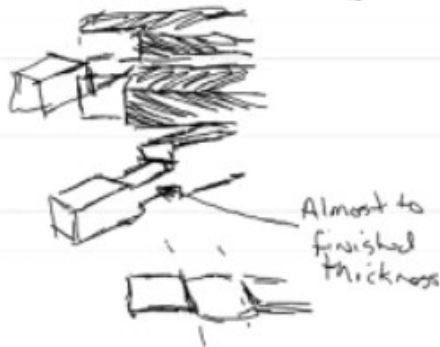
Forge Double off Set.



THE HAMMER'S ARC

Fuller

narrow fuller to start



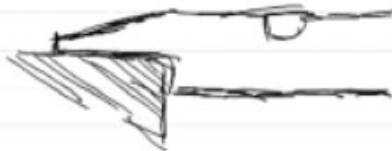
fuller @ angle

switch to larger fuller
+ finish

first fuller spreads it
this more works the sides



Forge Jaw



cut to length



Draw out Rains square

Swage Round



to fit

square



file edges + face
of bolster.

(NOTE: it's not a perfect
fit, yet)

Assembly

Heat slot half

Drift open



May have to knock off parts of other half



Fit one hot, one cold

~~Heat & clamp up shape~~



start separating

Bend in initial Reins in use



Finish Bending Reins

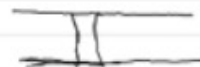


Pin the jaws

use 1/4" pin
use same steel as for the jaws

- The pin is not holding the jaws together.
- it's just a pivot for
- needs shear strength not tensile strength

- instead of counter sinking use a hammer to create tapers on both sides



SPECIAL, 2015.]

THE HAMMER'S ARC

23

Pins
center punch.
Can really be anywhere



Ream both sides



SALT LAKE CITY

CONFERENCE



**2016 ABANA
CONFERENCE**

JULY 13-16

education



abana.org/2016SLC

Vancouver Island Blacksmith Association Membership Application

Name: _____

Address: _____

City: _____ Prov/State: _____

Post/Zip Code: _____

E-Mail: _____

Phone: (____) _____

Regular Membership.....\$50/year

Members are required to sign a liability waiver. Make cheques and money orders payable to:

Vancouver Island Blacksmith Assoc.
1040 Marwood Avenue
Victoria, BC, Canada.

Artist Blacksmith Assoc. of North America Membership Application

Name: _____

Address: _____

City: _____ Prov/State: _____

Post/Zip Code: _____

Phone: (____) _____

Youth 18 and under..... \$20/year

Full Time Student.....\$45/year

Regular Membership.....\$55/year

Senior Citizen (Age 65+) ...\$50/year

Overseas Surface Mail\$60/year

Overseas Air Mail\$80/year

Contributory Membership....\$150/year

Educational Institution membership
\$250/year

Credit Card Payment.

Card No. _____

Visa Mastercard

Expiry Date: _____

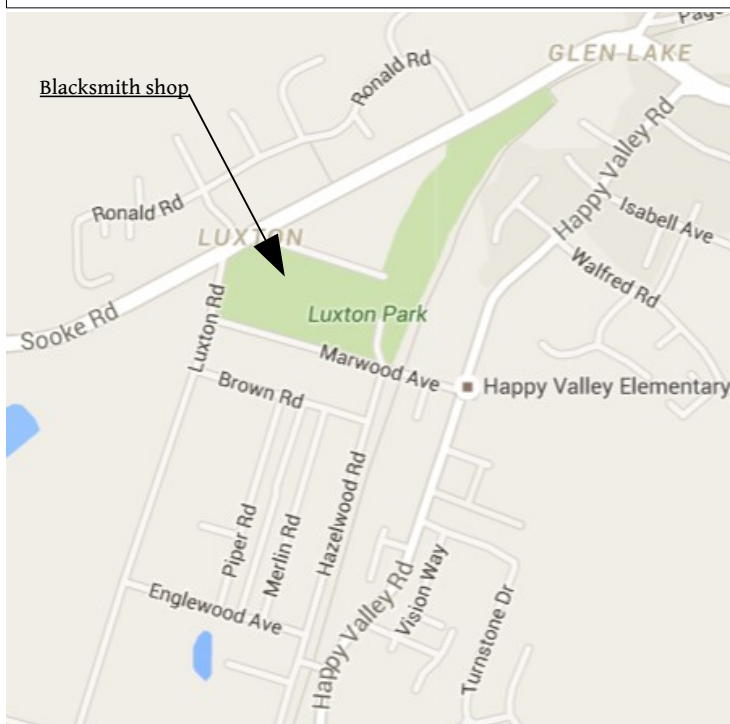
Signature: _____

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Email: centraloffice@abana.org



Have you seen something that you want to share or have something you would like to write. We are always accepting freelancers send in photos, upcoming events shoot me an Email:

Arcingbrody@gmail.com