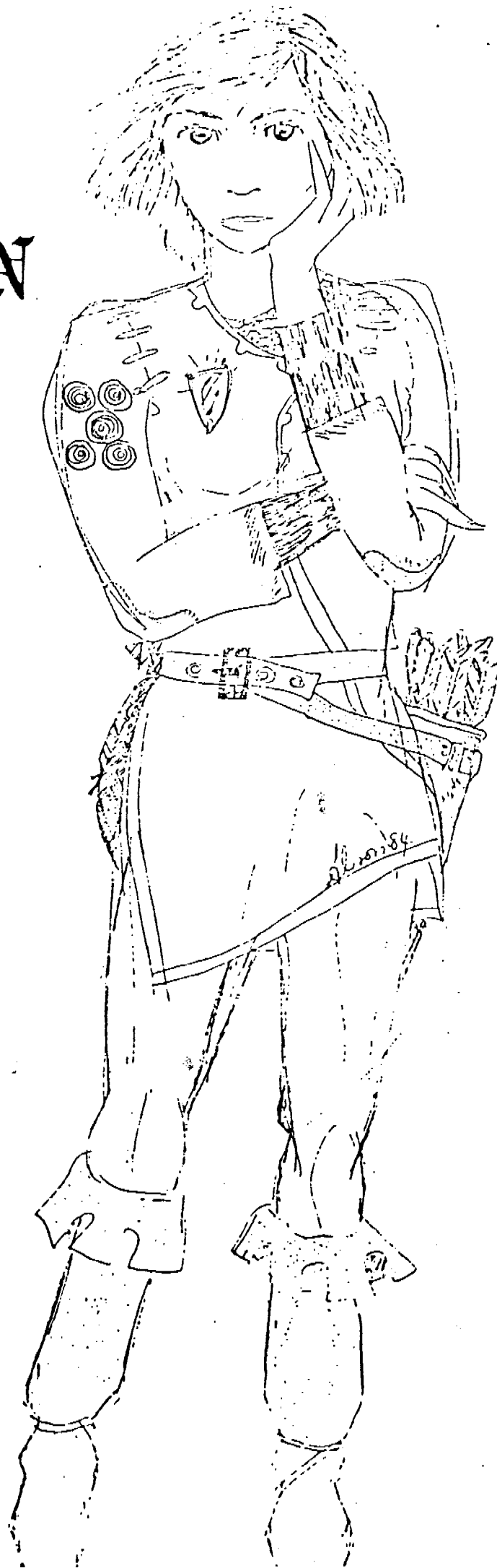


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EDITORIAL POLICY

"THE VARANGIAN VOICE" is a whenever I get my act together, extremely unofficial newsletter of the New Varangian Guard.

Whenever possible, sources have been listed, and all care taken to ensure credit is given where it belongs.

Should at some time a readers knickers get in a knot because a date may be wrong, a name misspelt, or some other error made...be assured, no harm was intended....

OFFICE BEARERS:

Master of Arms.....Michael ) 43 Victoria Street, East Hawthorn,  
Secretary ..... Alison ) PH. 82 6304  
Money Bags .....Frenchie ) 1 Henry Street, North Balwyn,  
Sergeant at Arms.....Rob ) PH. 83 62903  
Contact Point.....Spears Length preferably, or contact 03 826304  
Editor.....Steve ) PH. (054) 75 2971 68 7268

Articles are submitted by anyone interested enough to do so, if you do not like what's in it.....put in something better. Mailing address: P.O. Box 31,  
MALDON, 3463.

Thanks to Alison for Artwork.

FOR SALE

one two handed sword, fine two edged weapon.  
blade well hardened and tempered. in excellent condition.  
Battle worthy to suit warrior proud.

One single handed sword beautifully made, together with red and black scabbard.

VGC. well ballanced. has bitten many taswegians and new south welshmen and is still lusting.

Contact Rob 1 henry street nth balwyn 8362903

## SHIELDS

### Some Idle Speculations

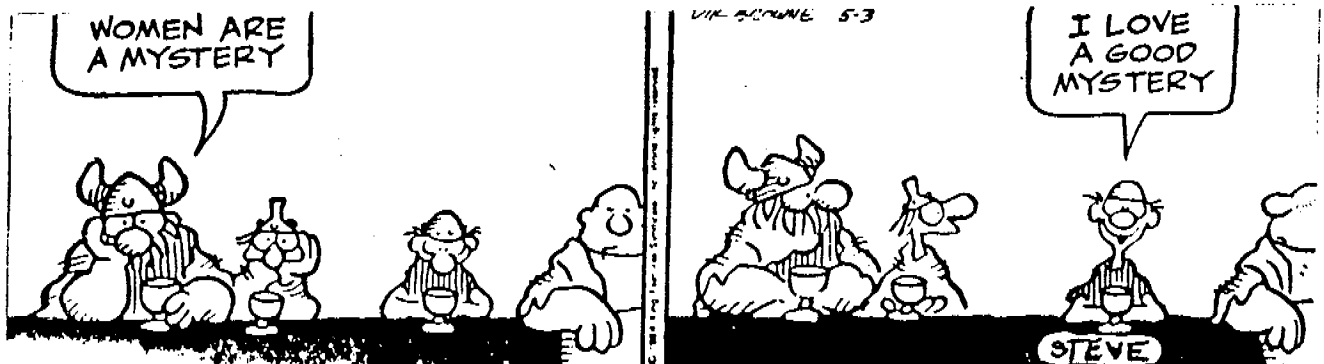
Robert Graves in his book the "white Goddess" suggests in his reconstructed "Battle of the Trees" by Talisen, an Eighth Century poet or bard, that the timber from which the shields of the Welsh, Irish, in fact the Celtic peoples was, silver poplar, a tree common to the Victorian treescape. Oakeshott in the "Archaeology of Weapons" page 95, tells us of the remains of shields found in a bog at Thorsbjerg, South Jutland, made of several thin boards between a half inch and a quarter inch thick, the centre ones being the thickest. They ranged in size from 42½" diameter down to 21" diameter. The fittings were mainly bronze, but some were of iron. So from these two sources, it should be possible to reconstruct shields of about the Eighth Century fairly accurately.

WANTED: Photos of Maldon 85 and past events. Contact Steve, your friendly editor.

Woe! Woe! and lamentation - the videos have been stolen and the likelihood of them being recovered is zero.

The Annual General Meeting will be held on FEBRUARY 8, 1986 at 4pm at 1 Henry Street, North Balwyn. Everyone should attend. We will be going for a restaurant meal at the Mongolian Barbecue afterwards. See you there!

GUARD EXCURSIONS: A half-way meeting with the VRS in March at Dunkeld. There will be a General Guard camping weekend at Cathedral Mountain in April. Also, there will be cross country skiing (in costume) on August 31. (Snow permitting).



Hi! It's me again. How come none of you people out there send me copy for the Voice? I'm supposed to do it all am I? Produce interesting articles for you to read Voice after Voice, ad infinitum? Well you only get out of it what you put into it, you know, or don't you?

Well, a lot has happened in the last six months - Rob and Angie have tied the knot; Joanne and Frenchie have jumped the besom; the Viking age Knorr arrived in Sydney and left; New Hedeby has folded. The Maldon Contingent has been having armoury workshops in an effort to get a few more people outfitted and we hope to start some training sessions shortly.

I hope everyone had a good time at mid-winter feast. We catered for 40, served 46 and still had food over, but not only but also we made a profit, so guard funds look pretty good at the moment. A person who was there to photograph the event was disappointed in only one thing and that was bottles, cans and casks and I don't think it's too much to ask and that's for everyone to keep these articles out of sight on the floor, under the table. The whole show is then much more visably enjoyable. Suitable vessels for on the table are pottery bottles, large jugs containing wine or ale, known as ewers were in use for hundreds of years right through our periods of interest. Also, in your bottle shop are wine bottles with the shapes of history, usually Italian or Spanish, sometimes covered in basketwork sometimes not, but all basically inexpensive. Stormhold the Melbourne SCA used four winds for one of their events on the 17th and 18th August. People from Melbourne, Sydney and Perth attended. Various activities were staged including combat archery which I took part in. This was a lot of fun and not as dangerous as it would seem, being hit on the legs where there was no protection was not as painful as some sword blows I have received. I was the last alive in the fort, though mortally wounded, also I accounted for one knight and two archers - these both being head shots at 65 yards and 40 yards respectively - the knight at about 20 feet. A quest was held with a prize which was a lot of fun for spectators as well as participants. Anyone wanting more details of this can ask me and I will tell you verbally as it would take too long to write down. All in all, the weekend was a success with the SCA wanting to use four winds again in the future.

If anyone wants to put adds in the Voice offering services or items for sale, do so by all means because if I get enough copy, I'll produce the Voice more frequently.

At a date to be decided, there will be a weekend of combat, games and feasting at four winds. Fort battles, combat archery, mellee's, dance, games, treasure hunt - these are just a few things we'll be doing. The banquet will be a sit down affair - no bottles, cans or casks on the tables. The menu will be made up from the following list. Soup - lentil or onion, tarts on ember day and cheese and spinach tart, baked snapper, roast shanks, roast meat, blanc manger and for dessert, Applemoy. Servitors will be required as well as some kitchen staff. As it will in all probability be warm, swimming and aquatic games will be happening I'm sure. So gird up your loins and tell Michael if you are coming so we know how many to cater for.

That's all for now - your servile editor.

# ORDER OF THE CENTAUR.

The Order of the Centaur is a loose fraternity dedicated to rediscovering and dispersing information on Ancient and Medieval military and civilian equestrianism.

In its martial aspect the Order is devoted especially to those practices that do not fall within the Chivalric tradition, and directs its attention to the practices of such folk as the Horse, Magyars, Turks, Mongols, Byzantines, pre-conquest Saxons and so on, pursuing activities such as mounted archery and javelin throwing, tent-pegging, mellee-ing etc.

Membership of the Order may be divided into the following grades.

First- Owns own horse(s), armour for self and horse, and has passed previous rank trials, and is competent to mellee.

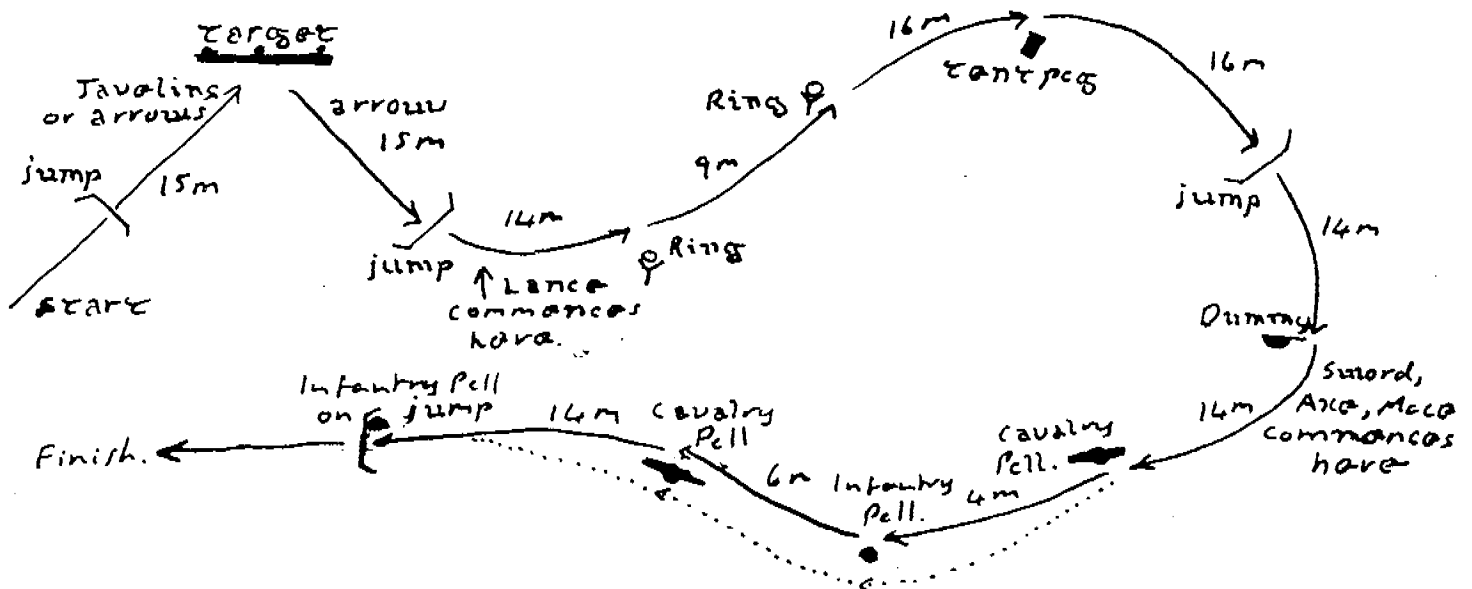
Second- Has completed the set course in full armour, at full speed and with a good score.

Third- Has completed set course with jumps, unarmoured and with a good score.

Fourth- Has completed set course unencumbered, on the flat at any pace. Must display a general knowledge of horse care, training and limitations.

Probationary- In training. Has not yet attempted the set course.

The set course is based upon the Lance, sword and pistol competitions that are still held regularly in Britain, modified to return it to medieval techniques. It may be as follows...



The set course would be scored thus.... For each arrow 2 points, for each javelin 4 points, for each ring carried on the lance 4 pts, struck, but not carried 2pts. For striking the peg 2pts, for lifting the peg 4. For lodging the lance firmly in the dummy 4 pts. For striking the first pell well, 2pts, for striking the second and third pells well, while passing with them on the shield side 4 pts, weapon side 2 pts. For striking the last pell well while jumping 6 pts. This gives a total of about 40 points, and the judges have up to 5 points to award for general horsemanship, and 5 for good weapon handling.

Dropping any weapon means disqualification, as does missing more than one jump.

## A NOTE ON A MEDIEVAL SWORD

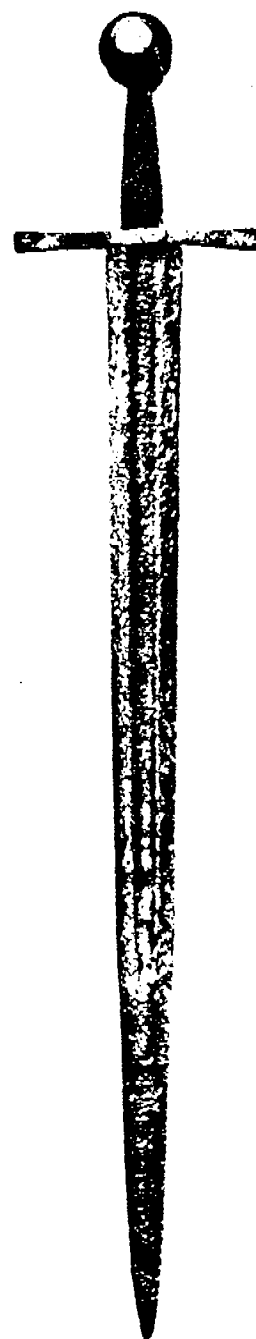
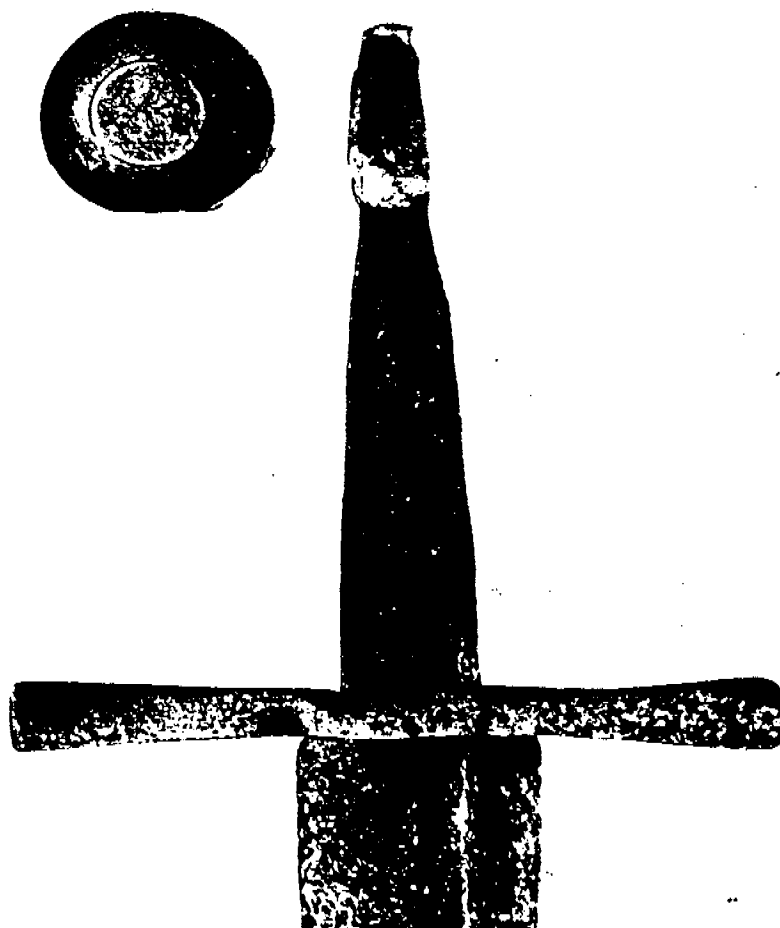
By HAROLD L. PETERSON

Most sword pommels of the early 14th century are found firmly affixed to their blades or else as individual objects that have long had a separate identity. For this reason the discovery of baked clay on the tang and within the pommel of such a sword in the writer's possession raises some question about the frequency of using this substance to assure a tighter fit. The sword on which this interesting find was made is of the form which R. Ewart Oakeshott has classified as Type XIV with a date of approximately 1300.<sup>1</sup> It is relatively short with evenly tapering blade, and the fuller extends partway up the tang. The wheel pommel is brass. Originally there was a pyramidal washer, the marks of which still show on the top of the pommel, but this has disappeared.

The tang, at some relatively recent date, snapped off at the top of the pommel, right at the base of the washer, but the various elements of the sword have remained together (except for the washer) and this happenstance has accounted for the preservation of the baked clay on the tang and inside the pommel. An examination of the accompanying photographs (Pls. XXIII, XXIV) reveals that the upper portion of the tang which was enclosed by the pommel is coated with a baked reddish clay for the extent of its length within the pommel. The inside of the pommel also contains a layer of the same baked clay. The depth of this layer is difficult to determine because of its location, but it does not seem to be the remnant of a core from the original casting. The clay on the tang and within the pommel bears every evidence of being ancient, and this raises an interesting question: was it a fairly common practice to solidify the pommels on such swords with a baked clay filler? If any reader knows of a 14th century sword tang similarly coated or of a pommel that still holds a remnant of such a clay filler, the writer will be grateful for the information.

### NOTE

1. R. E. Oakeshott, *The Sword in the Age of Chivalry*, London, 1964, pp. 53-5.

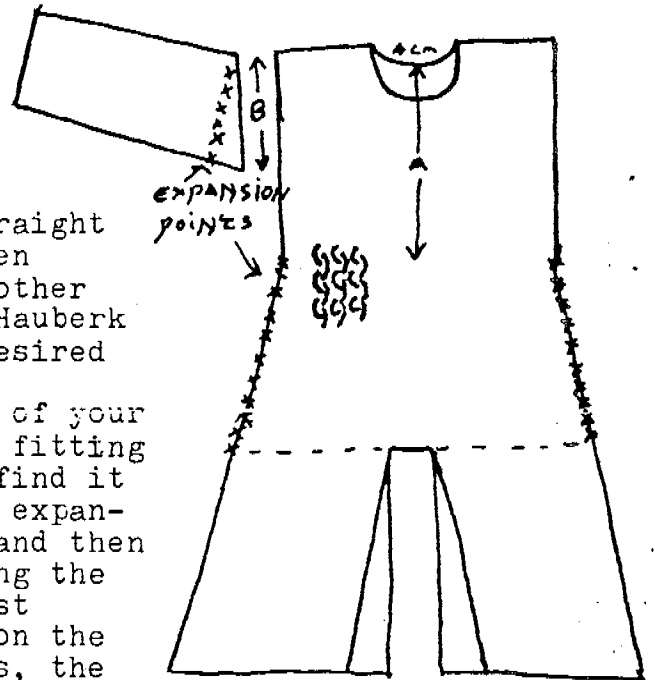


# ON FITTING AND TAILORING MAIL.

The first step is to take three measurements. The circumference of the chest over your gambeson. The length from the base of the neck at the back to the waist, and to a little below crotch height.

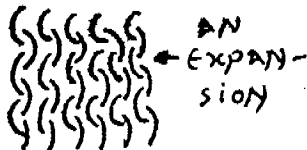
For a pull-over shirt add 15 cm to the chest measurement, and knit a straight tube from shoulders to the waist. Then continue putting expansions in every other row down to the crotch level. For a Hauberk continue straight from then to the desired length.

Take measurement "D" from the sleeve of your gambeson. This should be quite close fitting for the sake of ease of movement. I find it easier to knit a flat piece with the expansions making a point in the middle, and then link it up the outside after attaching the sleeve to the body. I find this almost eliminates holey armpits. Depending on the style of shirt, and your inclinations, the sleeves may tapered down to the elbow. This is more difficult and only works well with small links. Disperse the contractions consistently over the whole area of the sleeve.



For a Zardyyat, or front opening coat style, only add 5 cm to the chest measurement, proceed as above and then open down the front.

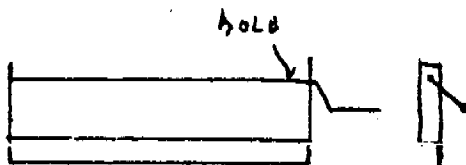
This is three rows.



SLEEVE →  
x = EXPANSION  
• = CONTRACTION



The coarsest mail was made in Russia, with links up to 2.5 cm in diameter. More usual in both Europe and the Middle East were links ranging from 6 mm to, at most, 15 mm. A usual weight for a thigh-length shirt is no more than 13.5 kg. The most durable mailshirts are made from spring steel, or spring washers. The latter, being flat, are better suited to Middle Eastern or Russian mail, where-as European links were invariably round in section. Such rings may be bought manufactured from Spring companies, or homemade on a winding jig and cut by hand. In this latter case effort is reduced by buying annealed spring-steel wire ("Range Two"). This necessitates taking the finished garment to a specialist Heat Treatment company, and getting it hardened to 45 to 48 Rockwell. Range 2 wire may be obtained in small to medium quantities from Gerrard Springs. A good size for rings of about a centimeter diameter is 1.6 mm.



An homemade coiling jig. Angle-iron base with up-rights welded on. The crank is made of a single piece of rod of the appropriate size with an hole drilled in the end. The end of the wire is inserted into

this hole and you crank with one hand and guide the wire onto the rod with the other. Wear a leather glove on this hand!

GoodLuck! **ALVERIC**

# Recipes

## LAYMUNIWA

[for 4 persons]

Chicken with lemon.

<i>3 lb chicken</i>	<i>½ pt mutton stock</i>
<i>3 medium onions</i>	<i>½ tsp cinnamon</i>
<i>½ lb leeks</i>	<i>½ tsp ground coriander</i>
<i>½ lb carrots</i>	<i>tsp chopped mint</i>
<i>½ lb aubergines</i>	<i>2 pieces chopped ginger</i>
<i>tsp salt</i>	<i>2 oz ground almonds</i>
<i>juice of 2 lemons</i>	<i>tsp dried mint</i>

Wash aubergines, make ½-inch-deep slits lengthwise and rub in salt. Leave for 30 minutes, then slice and fry in oil until partly cooked. Slice onions and add to stock. Add aubergines, chopped leeks and chopped carrots to stock. Joint the chicken and add this also, together with the spices and chopped mint. Simmer gently for 40-50 minutes. When almost cooked, add the lemon juice, the ground almonds and the dried mint. Continue to simmer until liquid is slightly reduced and beginning to thicken.

Arabic recipe-book, 13th century

## DEVONSHIRE VENISON

<i>1 roasting joint of venison</i>	<i>Stock</i>
<i>Seasoned flour</i>	<i>Fresh herbs</i>
<i>Butter or dripping</i>	<i>Stuffing using thyme and parsley</i>

Soak the venison in cold salted water for 30 minutes, and then drain and dry it well. Cut the meat in thick slices and dust them with seasoned flour. Fry in butter or dripping until brown on both sides. Put the slices into a casserole and cover with stock which has been lightly thickened with flour. Add a good pinch of fresh herbs, cover and cook at 325°F, 170°C, gas mark 3 for 2 hours. Add small balls of any favourite stuffing flavoured with thyme and parsley and continue cooking for 30 minutes.

## APPLEMOY

<i>1½ lb dessert apples</i>	<i>2 oz almonds</i>
<i>½ pt milk</i>	<i>½ oz ground rice</i>
<i>pinch saffron</i>	<i>2 lbs honey</i>
<i>salt</i>	

Peel and core apples; stew in medium saucepan with saffron in ½ pt water until soft. Add almonds to milk, warm gently and stir in honey and ground rice. Add puréed apples to this, and season with salt. Adjust thickness - it should be very thick - by adding more ground rice if necessary.



## NEW FOREST VENISON ROLL

<i>900 g/2 lb venison</i>	<i>1 tablespoon chopped parsley</i>
<i>225 g/8 oz fat bacon</i>	<i>2 eggs</i>
<i>1 onion</i>	<i>Stock</i>
<i>Salt and pepper</i>	
<i>175 g/6 oz soft white bread-crumbs</i>	

Mince the venison, bacon and onion and add salt and pepper, breadcrumbs and chopped parsley. Beat the eggs and add to the other ingredients. Add sufficient stock to bind. Flour a pudding cloth or foil and place the mixture on it in a long roll, wrap up, tie the ends with string or twist to secure, and boil for 2½ hours. Serve with brown gravy and cranberry or quince jelly. Rowanberry jelly is also good with this dish.

## VENISON IN ALE

<i>1.35 kg/3 lb stewing venison</i>	<i>2 tablespoons black treacle</i>
<i>225 g/8 oz Demerara sugar</i>	<i>500 ml/1 pint beer</i>

Dissolve the sugar and treacle in the beer. Put the well-hung meat into a stewpan or casserole, cover with the liquid, put on the lid and bring to the boil. Simmer gently for 2 hours.

## CABBAGE

[for 4 persons]

<i>1 cabbage</i>	<i>½ pt beef or mutton stock</i>
<i>½ lb bone marrow</i>	<i>2 oz brown breadcrumbs</i>
<i>pinch powdered saffron</i>	<i>½ tsp salt</i>

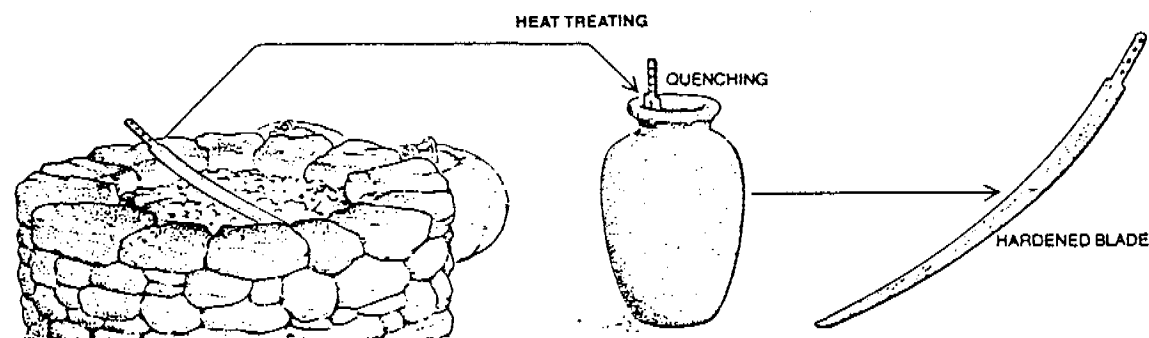
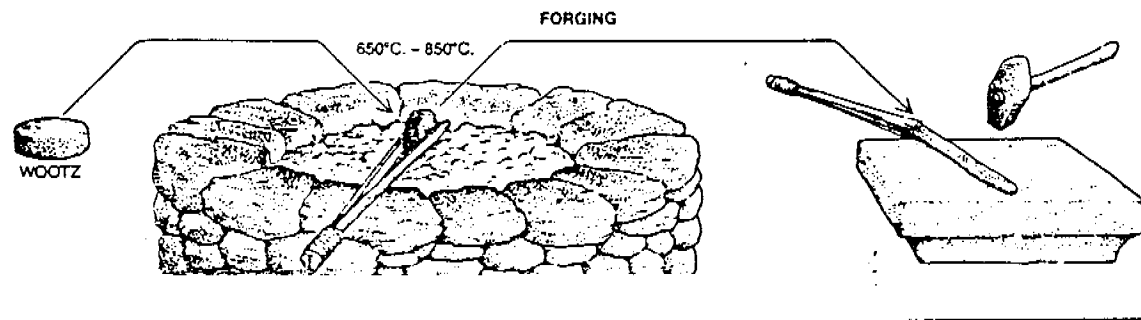
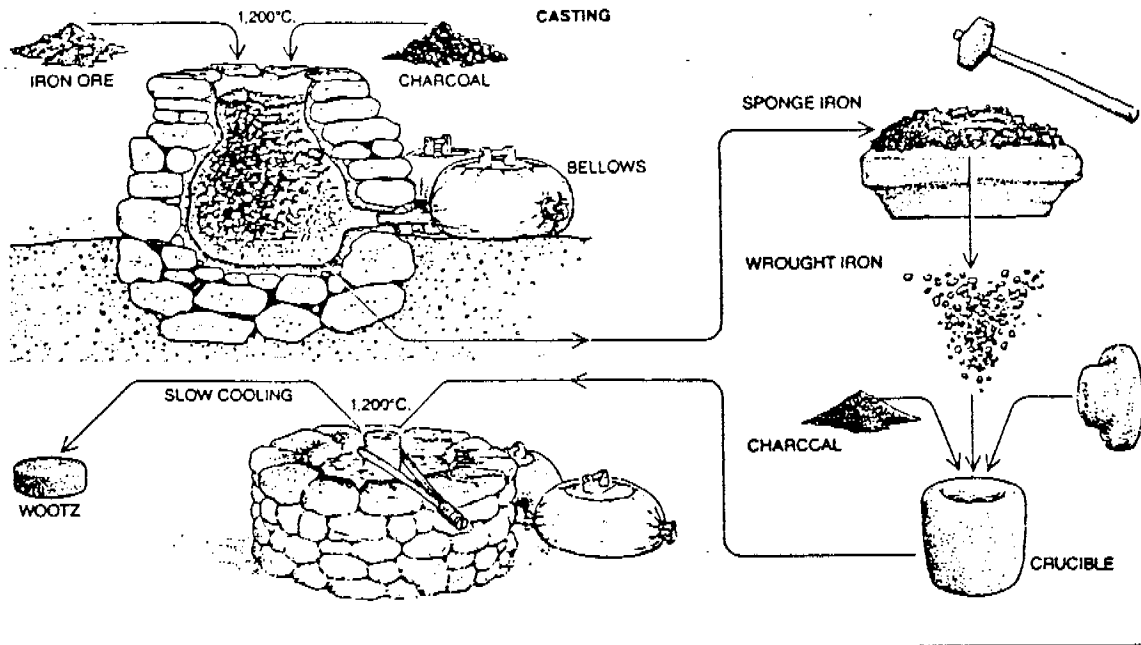
Clean, wash and parboil the cabbage in 1½ pts water in a medium saucepan. Press out the water on a chopping board, and put back in the saucepan with the beef stock and bone marrow. Bring to the boil and simmer for about 5 minutes. Add the breadcrumbs, saffron and salt, and simmer for a further 2 minutes.

c. 1430





# DAMASCUS STEEL



**TYPICAL MANUFACTURING PROCEDURE** for a Damascus sword began with the casting of an ultrahigh-carbon steel, called wootz, in Indian foundries. Iron ore and charcoal were mixed and heated to about 1,200 degrees Celsius in a shallow stone hearth. The iron was reduced (stripped of oxygen) by reactions with carbon from the charcoal, and it acquired a spongy consistency. Impurities were expelled from the sponge iron by hammering; the result was bits of wrought iron, which has a low carbon content. The carbon content was then increased by heating pieces of wrought iron with charcoal

in a clay crucible, which was sealed to prevent the iron from oxidizing again. When a sloshing sound indicated the presence of some molten matter, the crucible was allowed to cool slowly in the furnace. Wootz was widely traded in the form of cakes several inches in diameter. Near Eastern smiths forged a Damascus blade from an individual cake that was probably heated to between 650 and 850 degrees C; ultrahigh-carbon steels are ductile in that temperature range. The craftsmen hardened the finished blades by reheating them and then quenching them in water, brine or some other liquid.



# THE CROSSBOW AS A SURGICAL INSTRUMENT

by John Feilla

Through the technical advances improving its range and loading, the crossbow became a major weapon of the XIIIth century battlefields. Its popularity was essentially based on the following factors: accuracy, penetration and little need of training or strength (as opposed to the bow).

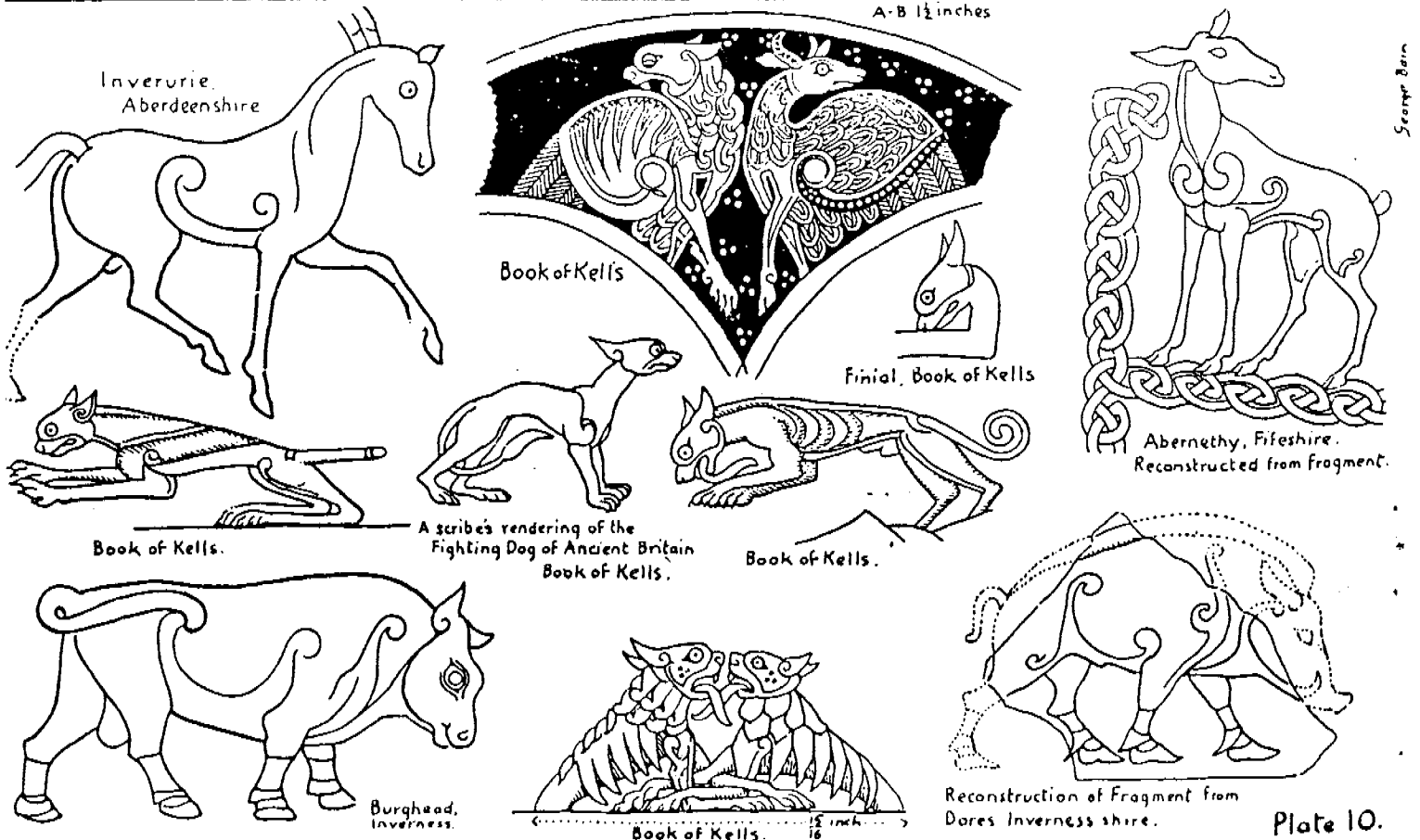
The main medical problems presented by crossbow wounds is one of deep penetration and embedment due to the high velocity of the quarrel at impact, especially in the range of 70-90 yards. The first mention of the crossbow used as a surgical instrument was made at the episode of the siege of Elche (South of Valencia) of the *Cantigas of Alfonso de Aragon*.

In the first illustrated panel episode we see a knight with a crossbow quarrel protruding from his neck, being attended by three physicians. In the second the failure of the surgeons to remove the bolt with conventional measures (forceps) is depicted, and bleeding ensues. In the third panel, a crossbow has been attached to a pillar close to the patient, its cord attached to the butt of the quarrel by means of a forceps. Evidently the surgeons intend to trigger the crossbow and fire the embedded bolt literally in reverse, freeing it by main force.

The second mention of this type of treatment is to be found in the first part of the *Chirurgie* of Henri de Mondeville, surgeon to Philippe IV the Fair, where, after describing half a dozen of forceps, he recommends using the firing *à rebours* of the crossbow as a heroic but effective method for it never failed according to him but once.

I assume that this technique was used as a last resort because of its highly traumatic potentials on tissues and blood vessels with catastrophic hemorrhagic complications. I imagine that although successful at dislodging the quarrel, the cure rate must have been exceedingly low. It remains interesting to note that a weapon of war could be turned to healing the damage it itself inflicted.

## Semi-realistical and mythical Animals from Scottish Stones and the Book of Kells.



# A VARANGIAN'S SONG,

By ALVERIC.

Then first we left old Iceland's shores  
Such yarns as we were told  
As now the streets of Miklagaard  
Were paved all with gold.  
So we took unto our ship,  
and sailed the ocean straight,  
It's a long way to Byzantium,  
But Glory was our Fate.

Chorus.  
With my shield slung o'er my shoulder,  
My broad-axe in my hand,  
I traveled the breadth of Byzantium,  
Like a true born Viking man.

Well, first we came to Gaardarike,  
The country of the Rus.  
And fierce as they were in defence,  
They weren't half as fierce as us!  
So we made off with their Gold,  
And continued on our way.  
It's a long way to Byzantium,  
But there were going to stay.

Chorus.

Then we came to the Magyars' realm.  
They're horsemen beyond compare,  
They fire their bows from horses back,  
A feat none else would dare.  
I bought a jewelled saddle there,  
And a thorough-bred so fine.  
But when I get to Byzantium  
Greater glory will be mine.

Chorus.

So at last we came to Miklagaard and  
The winebags took us in.  
It cost us all two pounds of gold,  
And made our purses thin.  
Yet soon the Emperor did die.  
The storehouses opened wide,  
and there I stood to take my pick  
Of the treasures that lay inside.

Chorus.

In time we went out on campaign,  
A searching for the Turk.  
It took us many a weary week  
To discover where they lurked.  
We fell upon them hand to hand,  
And laid them on the ground.  
Truely there is nothing like  
The thronged battle's sound.

Chorus.

Then, alas, Crusaders came.  
They pillaged far and wide.  
The Emperor was sorely grieved,  
He thought they were on our side!  
We harried them as best we could,  
In sooth, it went not well.  
In the battle of Dyrrachium  
Too many Winebags fell.

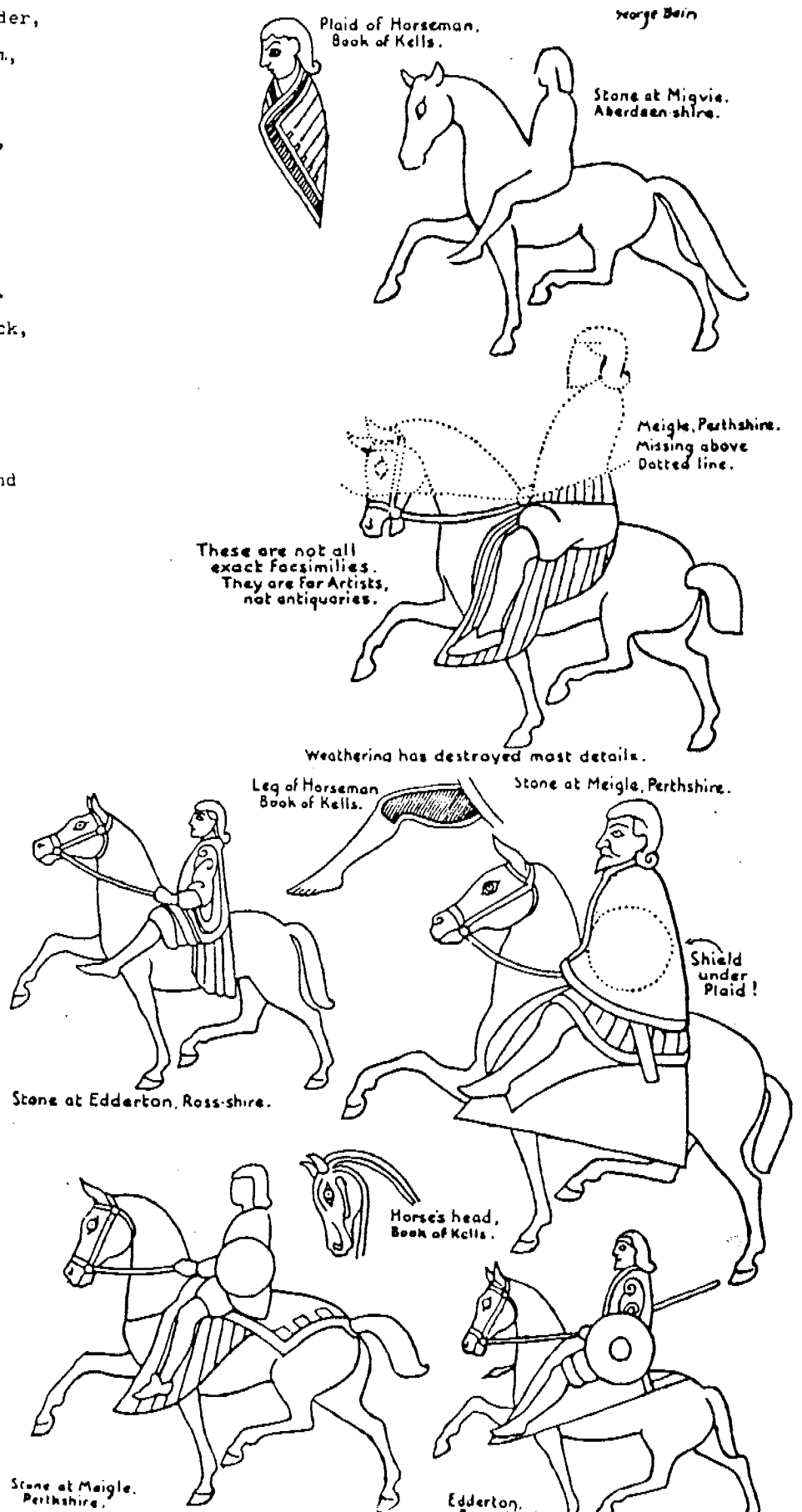
Chorus.

So now my chest is full of gold,  
And weary I do grow.  
I long to be at home again,  
Where Arctic waters flow.  
I came again to Iceland's shore,  
A man of great renown.  
Here ends my tale of my sojourn  
In Saint Helena's town.

Chorus.

End.

## The Attitudes of Horses in Celtic Art From the Pictish Stones of East Scotland and the Book of Kells.



THE OFFICERS BRANSLE (pronounced Brawl)

This is a very easy to do, lively dance that is lots of fun and can be quite hilarious. It was often danced to music that became faster and faster so that the dance invariably ended in complete chaos though this is not necessarily going to happen at Maldon.

To do the dance;

Form a circle, males and females in alternation, holding hands.

The dance is done basically to 8 counts.

Count 1-4 Double to the left.

Count 5-8 Same as above.

Count 1-4 Double to the right.

Count 5-8 Same as above.

Count 1-6 Six singles to the left.

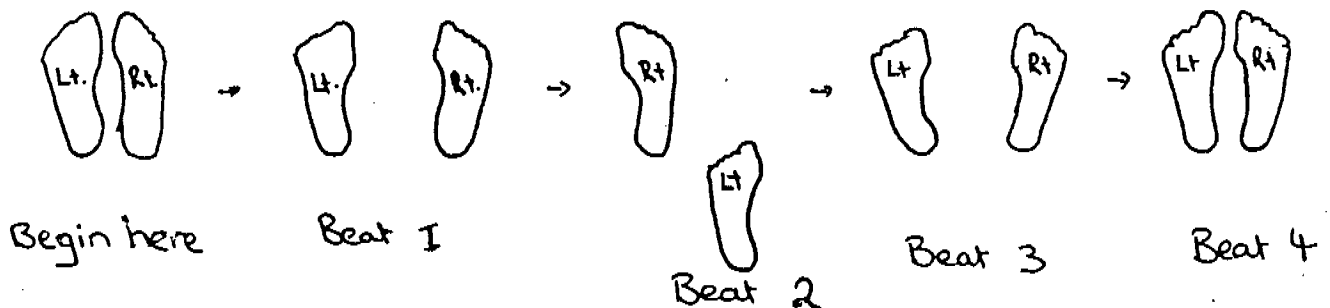
Count 7 Each female turns to the male on her left, places her hands on his shoulders and crouches slightly, getting ready to jump. Each male turns to the female on his right and places hands on her waist.

Count 8 Female jumps to the left, while the male lifts and guides her to his left.

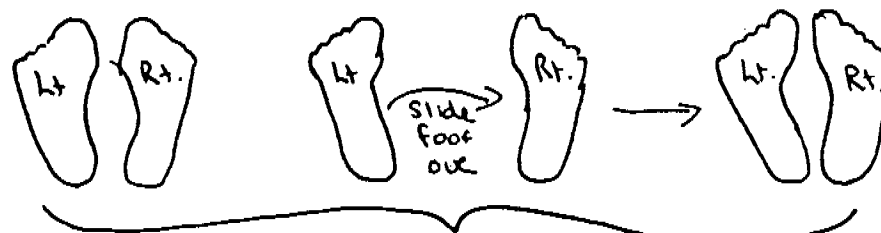
Count 1-4 This is the time given for the circle to reestablish itself before beginning again from the start. This is repeated for as long as the music lasts.

This dance is progressive; couples do not stay together.

A Double is done thus:



A Single is done thus:



## ARCHITECTURAL WROUGHT IRONWORK

WE have seen (Chapter I) that iron was smelted in Britain at an early period and how it was used by the ancient Britons for currency. Later on, Herodianus records that these same people used the precious metal, in the form of iron rings, for personal adornment and aggrandizement. Later still, when the metal became commoner, it was used extensively for more practical purposes, such as for tying chariot wheels, for weapons, and for household utensils and tools, as is proved by discoveries made at Wookey Hole and elsewhere. The use of iron for such functions increased under the Roman occupation, but died away considerably afterwards.

At the fall of the Roman Empire, at which time the whole of the Continent of Europe was inundated with barbarians, many civilized traditions, including the art of the metallist, were destroyed; they were, however, preserved, albeit in modified forms, in Northern Europe, which, by its geographical position, was isolated from the cataclasm. Soon the inhabitants of these parts, their power newly invigorated by the weakness of the rest of the Continent, their imagination fed on the ancient sagas and legends of their forefathers, set out by sea to raid and plunder foreign lands. And it so happened that Britain was subjected to wave after wave of such attacks. In time the raiders formed colonies on our coasts, intermarried with the natives, and so planted their traditions on British soil. The Northmen, and in particular the Danish Goths, were great metal workers, even their

princes priding themselves upon their skill as blacksmiths; so the trade, and subsequently the art, of the blacksmith, was given a new impetus by their arrival.

Little indeed survives of the work done in those earliest years, from the days before the Romans to the coming of the Danes. A Roman fire-dog, British daggers, a fragment here and there, are all we have to remind us of a flourishing trade and industry. Yet there is enough to indicate the broad facts, to enable us to see a certain roughly outlined development from the crude and rugged products of the aboriginal smiths of this island, up to more finely wrought pieces of later date, bearing signs of the influence of the Scandinavian settlers.

Of such pieces some of the more interesting are to be seen on the hinges and strapwork of church doors. Hinges have survived better through the ages than many other forms of architectural ironwork; the main reasons being that they were given special protection from rust by gilding, painting, or some other such covering, and that, by the usefulness of their function, they escaped the attentions of the ever recurring iconoclast.

The hinge served two main purposes. First, to enable the door to be properly opened, for which a good pivot and sufficient strength in construction were the most important desiderata. In the second place the hinge was required to strengthen the door, and for this it was desirable to spread it over as large an area of the woodwork as possible, in order to hold the planks together and reinforce them. Because of this, its main strap became elongated, divided, and wreathed into a variety of often beautiful and intriguing shapes, which, in the earliest extant examples, show an unmistakably Scandinavian influence. A church door at Stillingfleet in Yorkshire shows a swastika and a realistic Viking ship with a steer-board, which could be magical pagan symbols as far in spirit as could be imagined from that of the Christian church they embellish. And there is a curious strip fashioned like a chain-pattern border from the Book of Kells; and what appear to be two figures (they could represent Adam and Eve) standing by the remains of what once represented a tree. This strange mixture (the probable date of which is 1145) is of primitive overall

design, the ironwork being fitted over the wooden planks with little sense of balance or even construction. The same may be said of many other comparable hinges. But it is also true that some of this work showed an astonishing inventiveness of design, and a degree of finish that could hardly be excelled with the means at the smith's disposal at that time.

The Stillingfleet ironwork with its pagan symbols reminds us of the ferocious days when, so tradition says, the skins of flayed invading Danes were nailed to church doors, and it may be that such decorations as these—perhaps originally intended as antidotes for evil influences—were a reflection of Danish paganism in the mirror of Christianity.

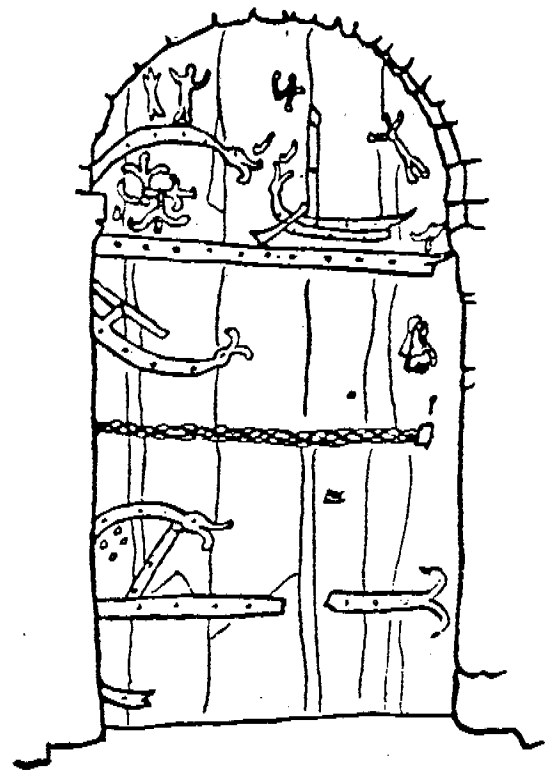


FIG. 23. Ironwork on door at Stillingfleet Church, Yorks

## LINEN CUIRASSES AND LINEN ARMOURS

Linon armour has been around since at least 1200 BC which is illustrated in a painting from the Palace of Pylos which shows several figures wearing linen greaves and one wearing a linen helmet reinforced with metal studs. The latest recorded date of it being used was early in 1204 AD during the seige of Constantinople

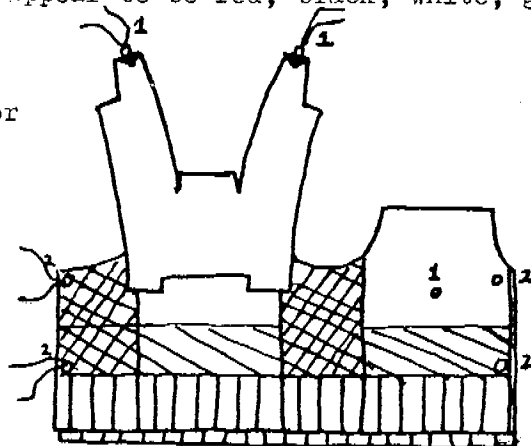
Essentially the linen cuirass is a stiff garment that is made in 2 or more peices of laminated cloth roughly 1/2 cm thick and is occasionally reinforced with metal scales or metal studs , sometimes the mid peice was made flexible by replacing the laminated cloth with scales of cloth(laminated) or of metal scales. As far as armour goes, laminated cloth isnt as strong as metal but is stronger than leather and when worn over mail has an excelent ability to protect against arrow penetration . An example of the strength of the laminated cloth is a recorded statement made by a Frankish Knight during the seige of Constantinople who killed a Byzantine officer wearing a cloth cuirass . The Knight decribed it as being "terribly difficult to penetrate", considering that the Knight had probably spent all day chopping through people wearing mail and lamellar, something that is "terribly difficult to penetrate" would be "terrible difficult to-penetrate" .



### CONSTRUCTION: Materials :

50M of fine cloth (the finer the cloth the stronger the armour) linen was used because it was on of the best cloths available the cheapest way to get linen is to use old linen sheets. Large amounts of glue possibly horse hoof glue or as the Crusaders recorded a mixture of red wine and salt ,but because of the wonders of modern science we have AQUADHERE which is perfect for the job and works best in 3:1 ratio of glue to water

Firstly soak several layers of cloth in the glue mix then press out all air bubbles and leave to dry evenly , then when the cloth is 1/2 dry curve into desired shape and leave to dry fully . Then cut the cloth to final shape and paint to waterproof , then trim edges with leather or thick cloth , popular colours appear to be red, black, white, gold and occasionally pink.

Basic pattern for a linen cuirass

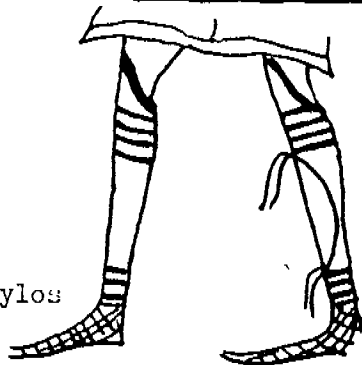


 Patched portions show areas sometimes reinforced with scales or replaced with scales.  


Studded fabric helmet from 1200BC Pylos.



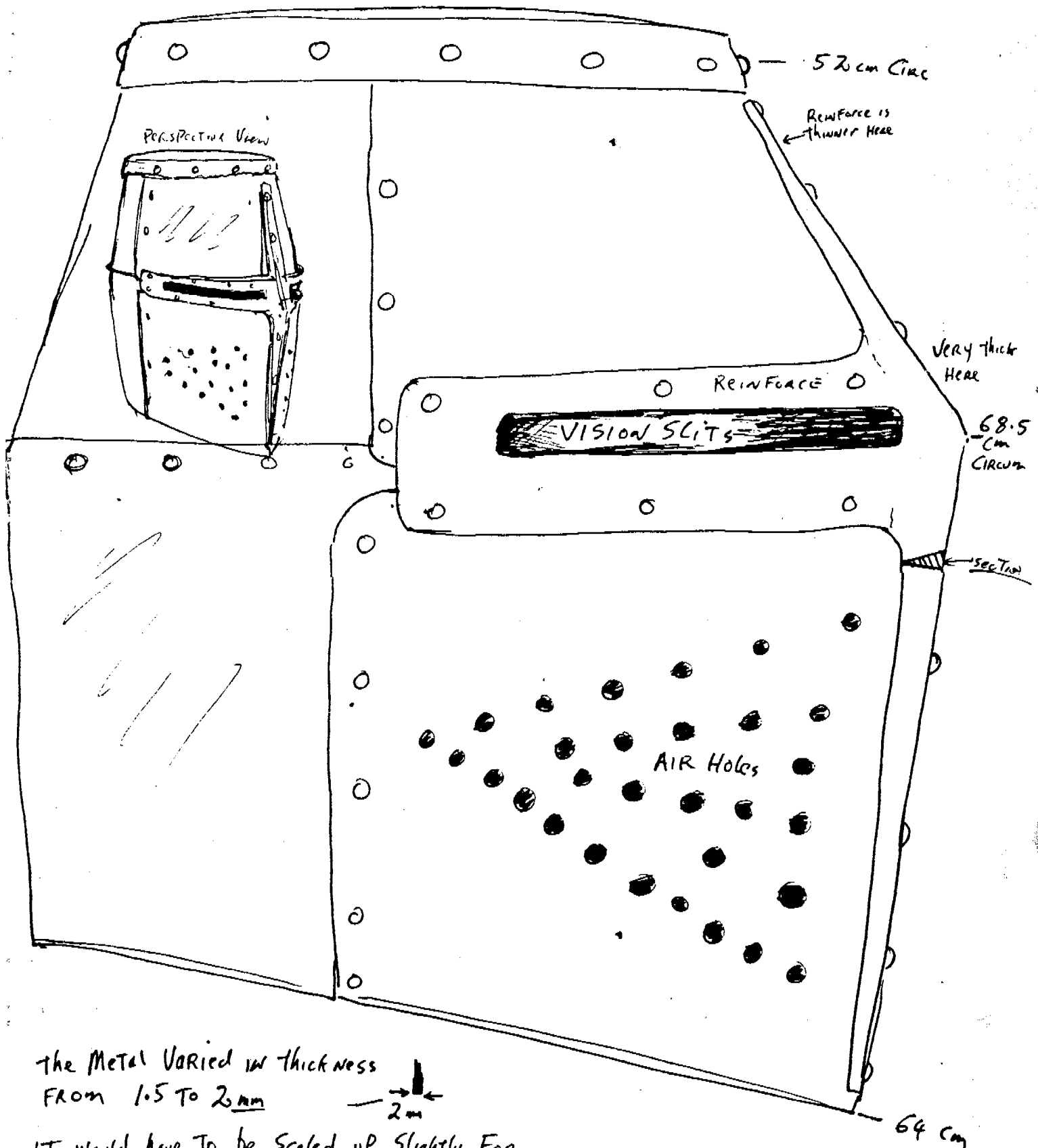
Linon greaves from Pylos



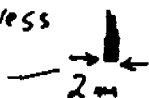
### REFERENCES

- "Warfare in the CLASSICAL WORLD" by John Warry
- "Men at Arms" Series
- "The Greek Armies" by Peter Connolly . PUB- MacDonald (This is is the best book to get information on patterns it has over 20 different styles)

Scale Drawing of 13th Century (Circa 1200-1250) Barrel Helm  
 Excavated at Schossberg bei-Dargen (Pomerania)  
 Traced from Original Drawing supplied by the late H. Russel-Robinson  
 Keeper of Armour Tower of London Armouries



The Metal Varied in thickness  
 FROM 1.5 TO 2 cm



IT would have to be scaled up slightly for  
 contemporary use no doubt.

D. Robinson 1993  
 courtesy Dave Robinson