

0 2.5 5 7.5 10 cm

THIS METHOD OF ANCHORING THE THREAD INSTEAD OF KNOTTING IT - IS USED BOTH TO CONNECT THE THREAD TO THE NEEDLE AND WHEN STARTING 'SEWING AND ALSO WHEN 'KNOTTING ON' A NEW PIECE OF THREAD TO CONTINUE A LENGTH OF SEWING. THIS TECHNIQUE WAS ALSO TO "TIE OFF" THE THREAD WHEN SEWING WAS COMPLETED

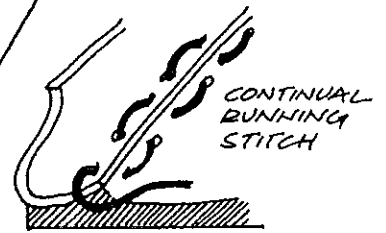
--- ORIGINAL LINE OF PATTERN POSSIBLY A REPAIRED AREA ON THE ORIGINAL SHOE.  
ANOTHER SUGGESTION IS THAT IT IS A FLAP INSERT.

HEEL

SWEDISH MODEL

UPPERS  
SIZE 7  
(BAGGY  
RIGHT  
FOOT)

CROSS SECTION



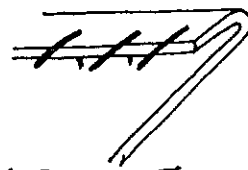
METHOD INVOLVES SEWING ONLY THROUGH THE THICKNESS OF THE SOLE DIFFICULT - BUT WATERTIGHT.

TOE (POINTED)

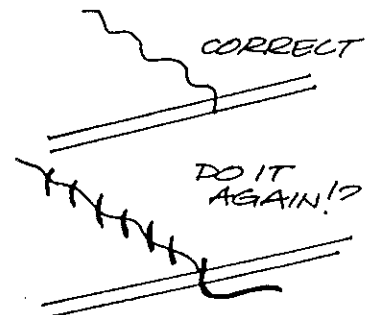


CROSS SECTION

SOLE BUTTS UP AGAINST UPPERS SAME TECHNIQUE AS ABOVE.



DRESSED EDGE SEWING ONLY THROUGH THE SURFACE OF THE LEATHER.



BUTT ALL SEAMS TOGETHER. NO HOLES THROUGH THE SURFACE OF THE LEATHER.



the head  
omb with  
sembling  
vere also



Fig. 1

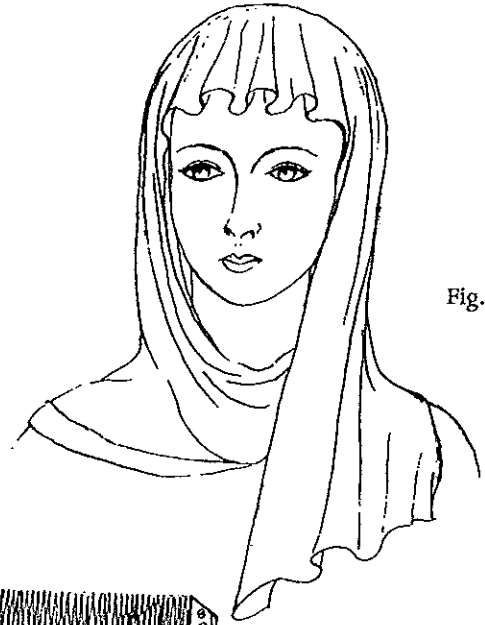


Fig. 2

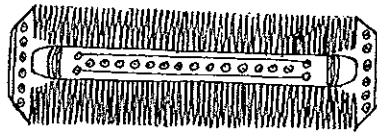


Fig. 3

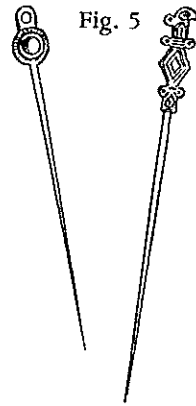
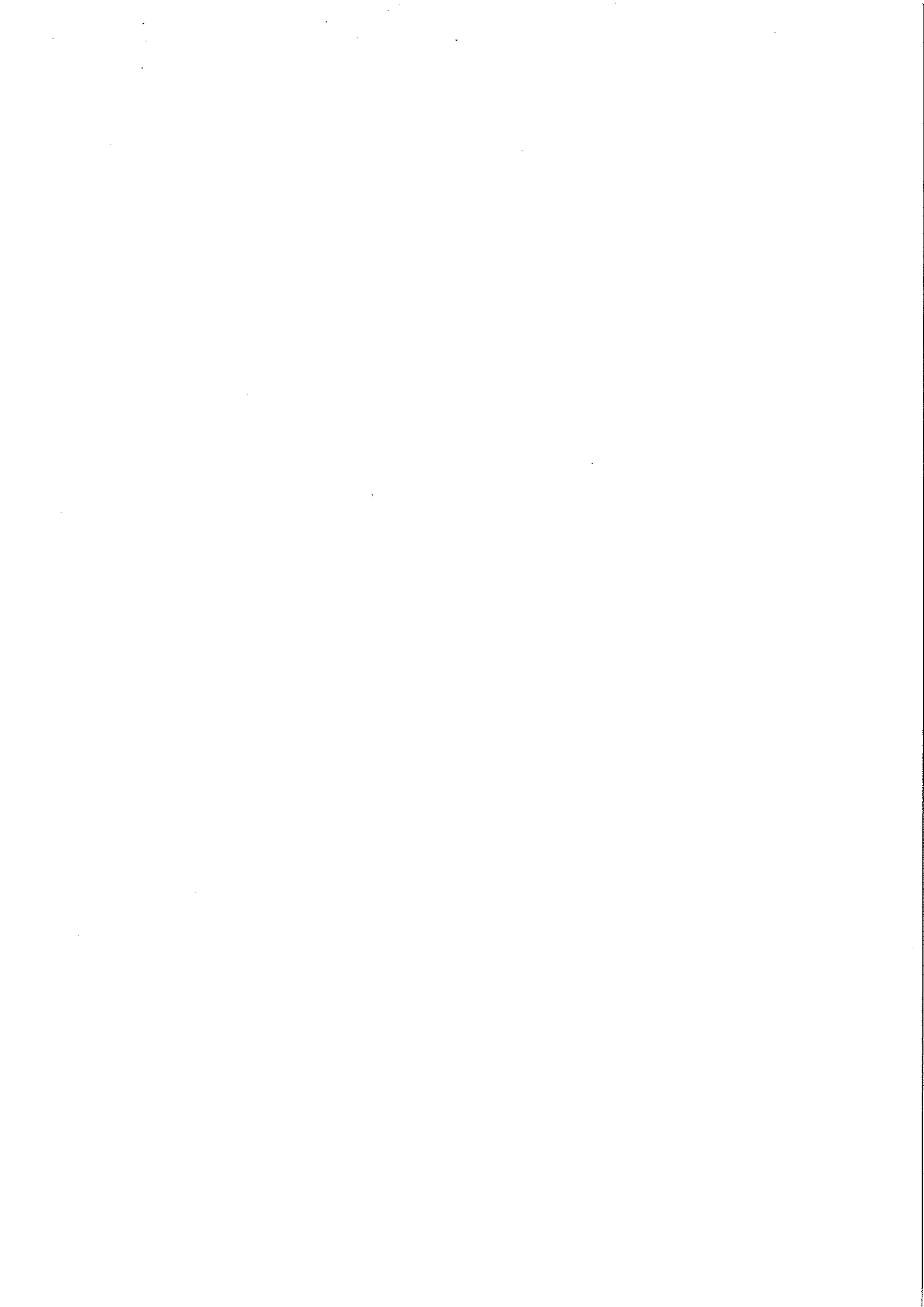
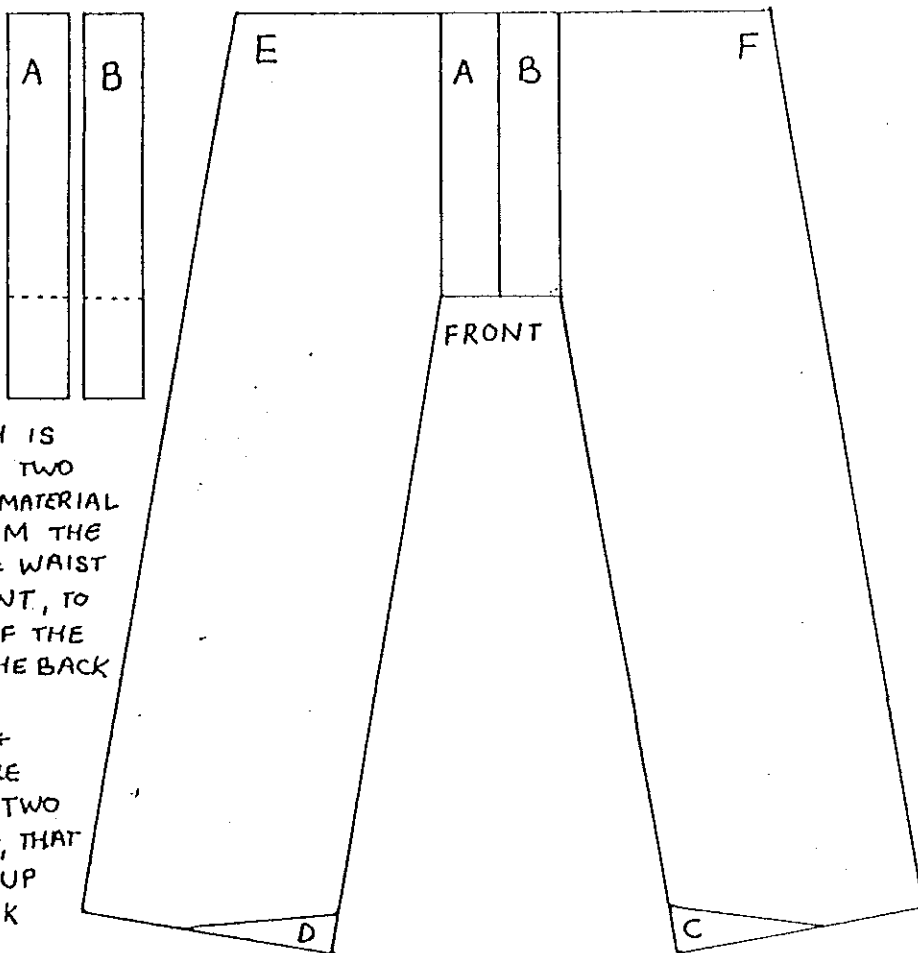


Fig. 5



Fig. 4

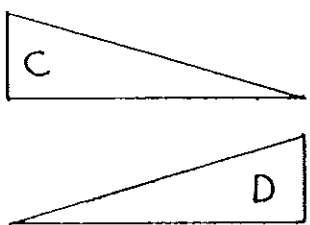




THE CRUTCH IS FORMED OF TWO STRIPS OF MATERIAL RUNNING FROM THE TOP OF THE WAIST AT THE FRONT, TO THE BASE OF THE SEAT AT THE BACK STRIPS A&B

\* \*

THE LEGS ARE FORMED OF TWO PIECES E&F, THAT ARE SEWN UP AT THE BACK



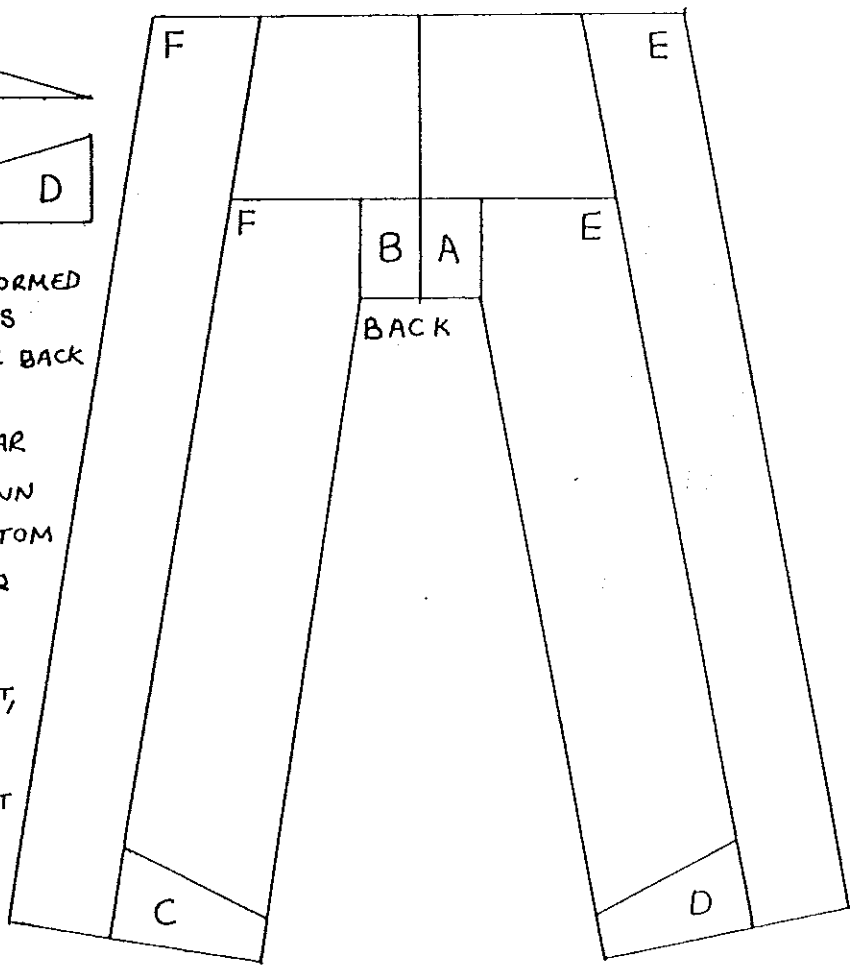
THE SEAT IS FORMED OF TWO PANELS SEWN IN AT THE BACK

\* \*

TWO TRIANGULAR PIECES ARE SEWN IN AT THE BOTTOM OF THE TROUSER LEGS ; C&D

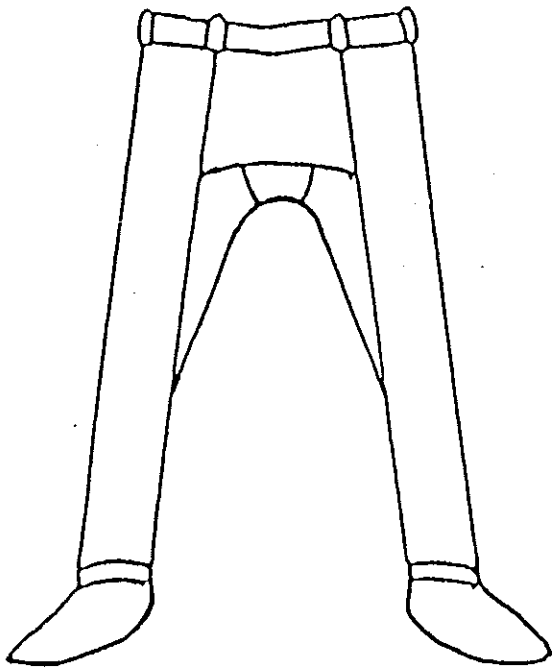
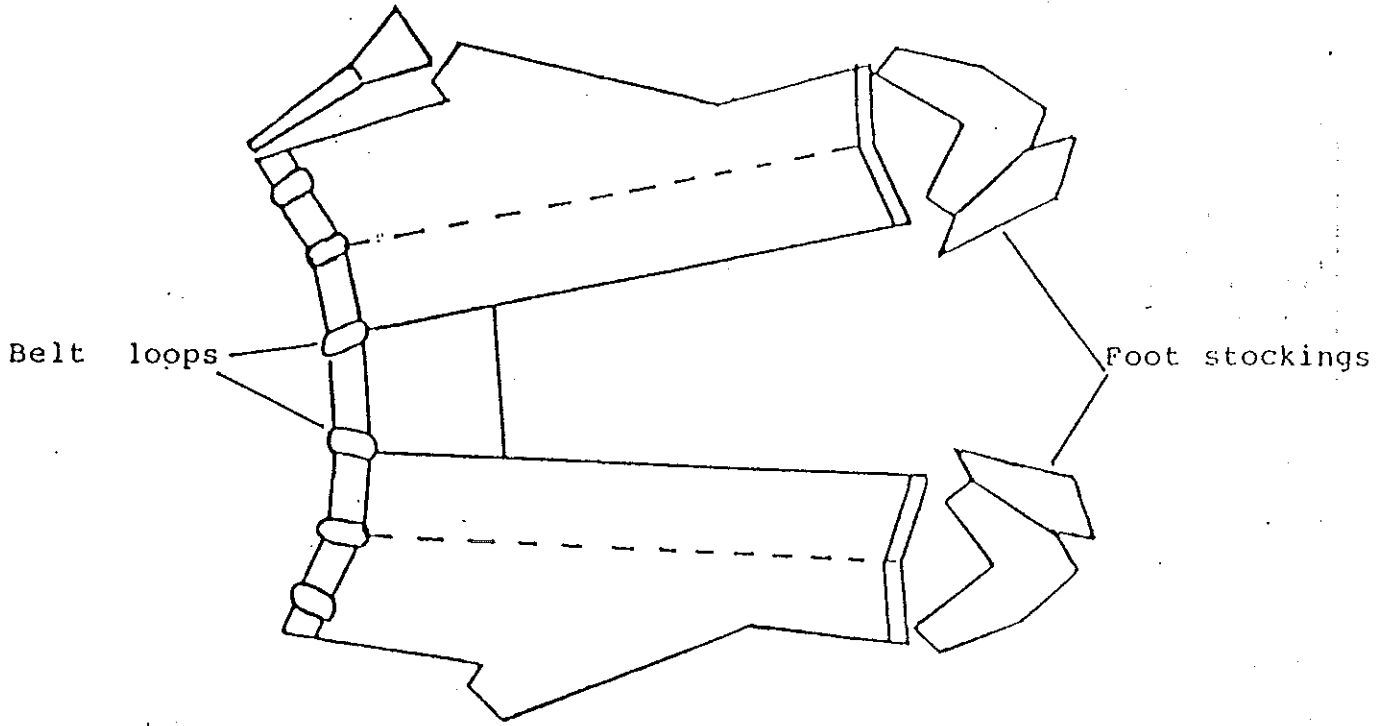
\* \*

VARY THE WAIST, CRUTCH, LEG-LENGTH AND DIAMETER TO FIT THE INDIVIDUAL

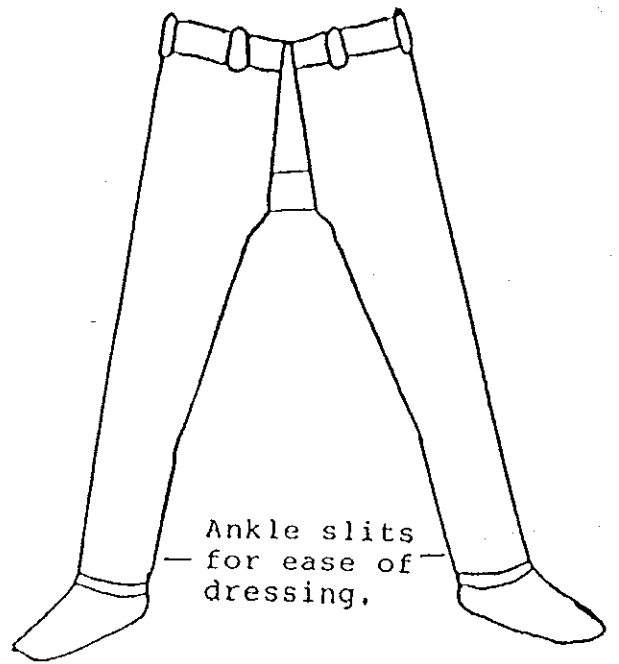


Viking age trousers.

Fragments from Haithabu would suggest that Viking trousers were similar to Migration period trousers from Thorsbjerg.



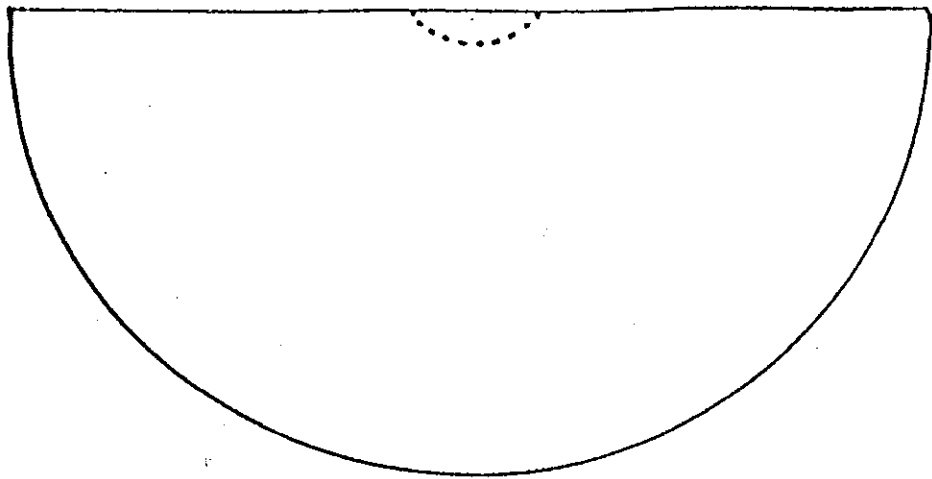
Back



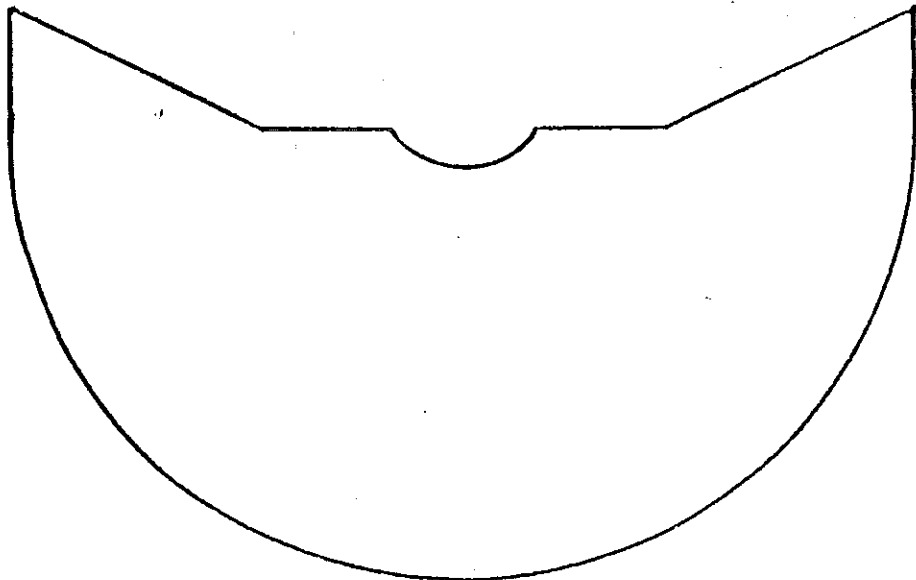
Front

Trousers from Thorsbjerg I.  
Migration period, German.  
After: Von Inga Hagg,  
Ausgrabungen in Haithabu.

CLOAKS

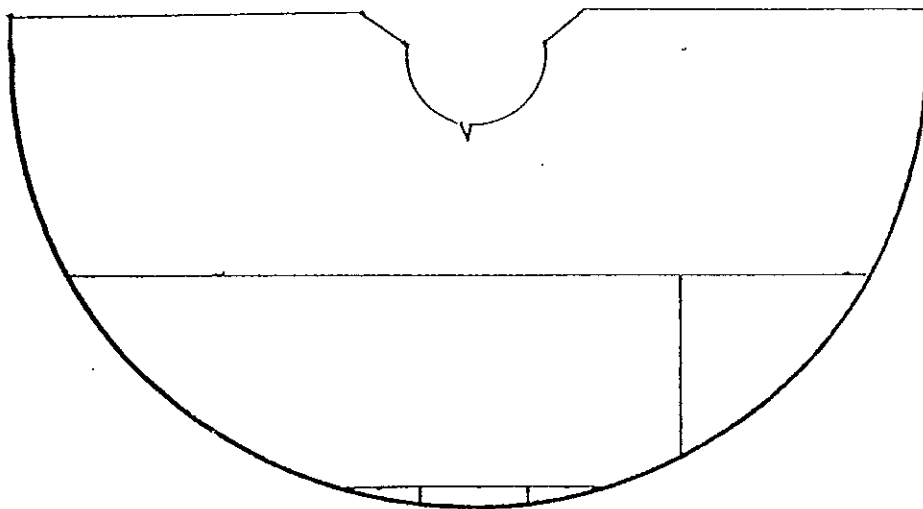


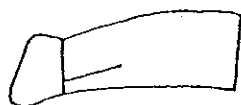
European - used by both sexes from 6th century onwards. The neck cut out came a little later.



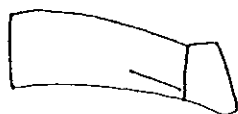
After I. Brooke, English costume of the early Middle Ages.

Anglo-Saxon 12th-13th century other cloaks up to and including this period were square, rectangular and oval.

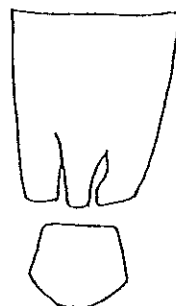




Right sleeve



Left sleeve



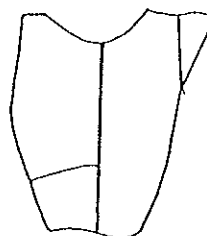
Right sleeve plan



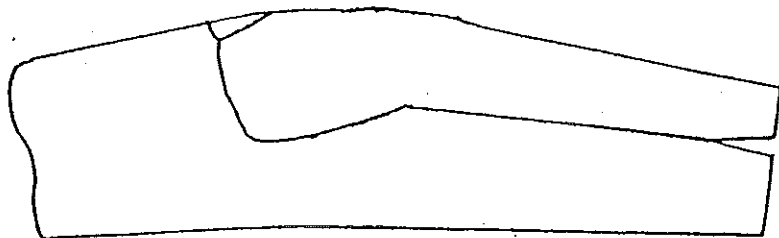
Right sleeve



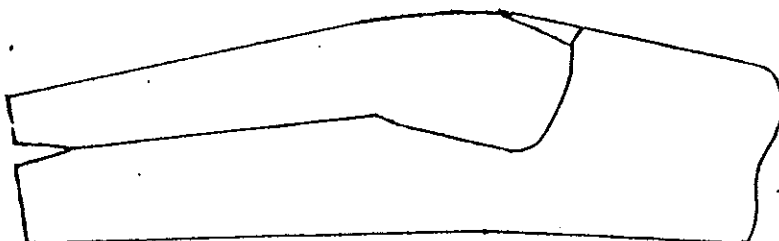
Left sleeve



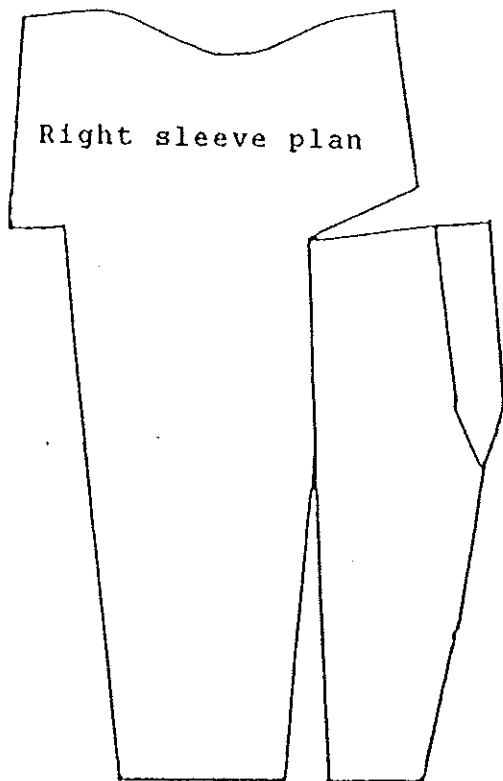
Left sleeve plan



Right sleeve



Left sleeve

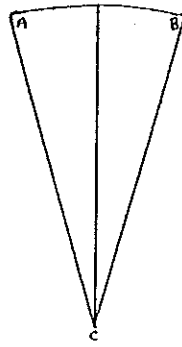


Right sleeve plan

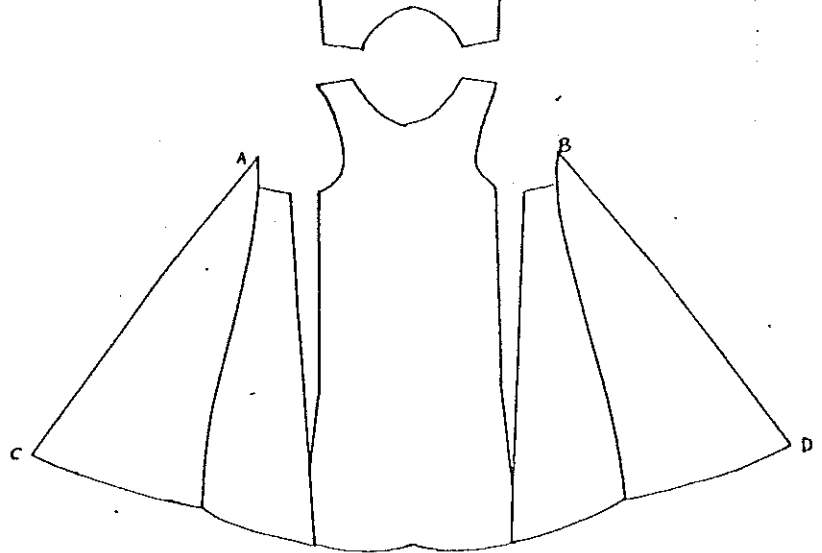
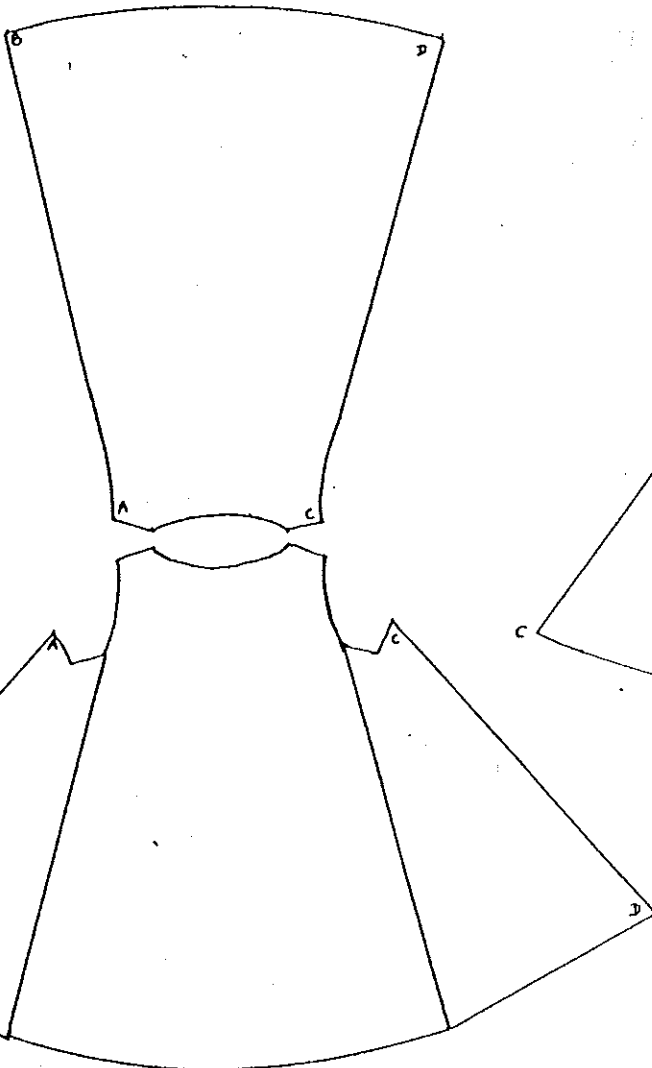
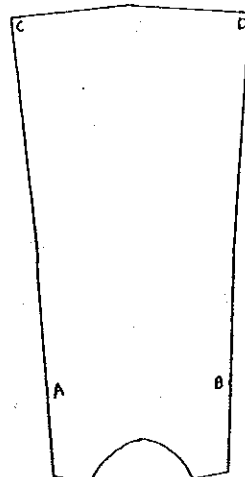
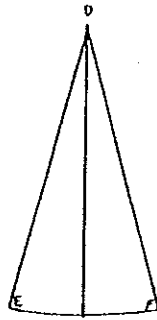
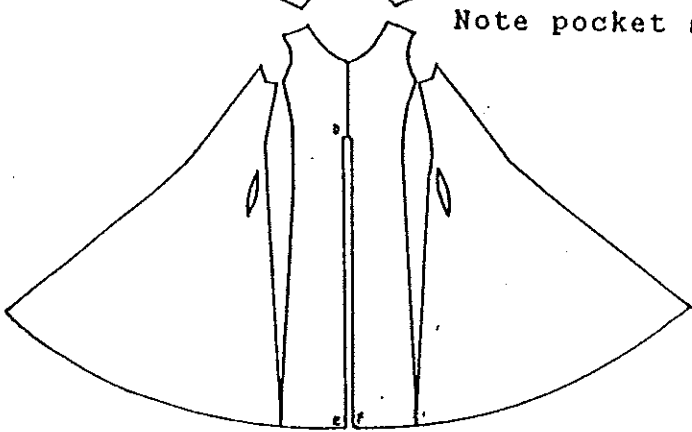


Probably Greenlandish C.1300.

C12



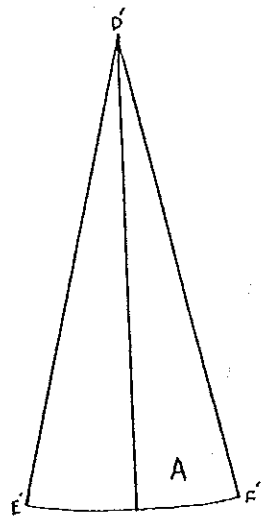
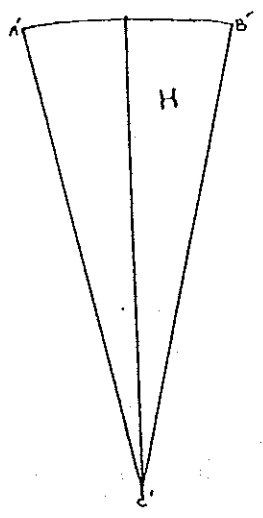
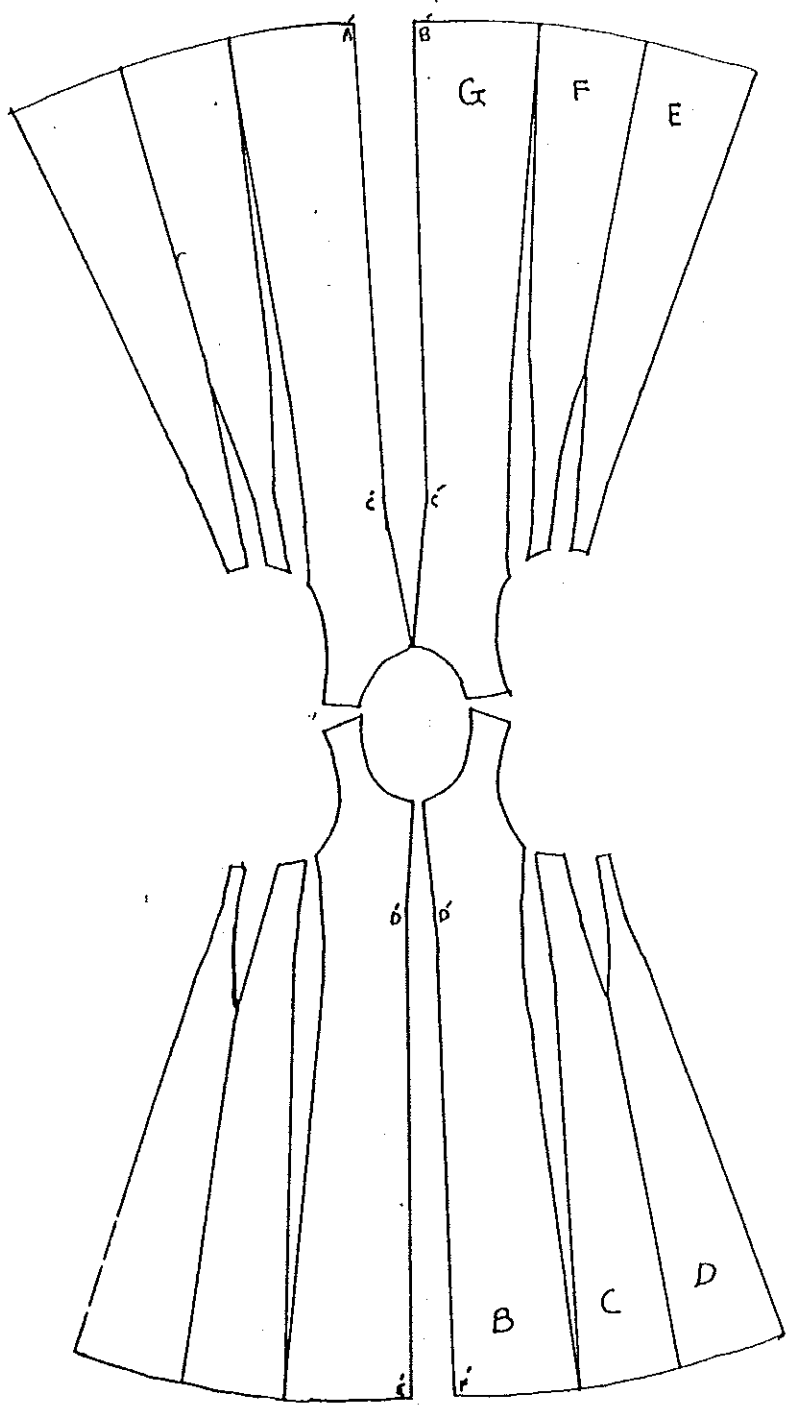
Note pocket slits.



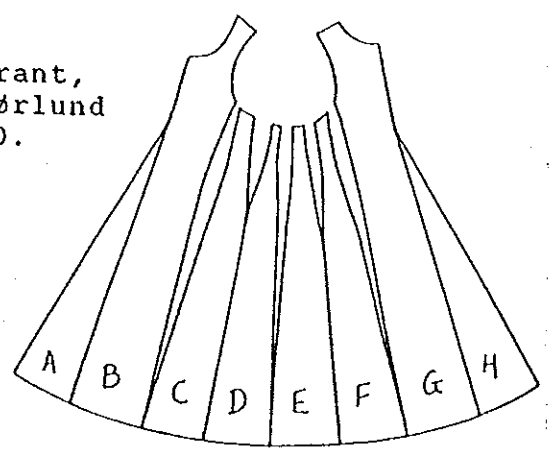
After: Von Inga Hagg  
Ausgrabungen in Haithabu.

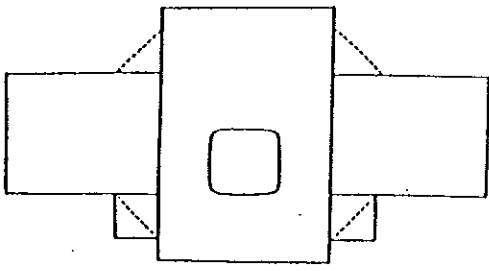
Medieval womans  
kyrtle from Herjolfsnes.  
Greenlandish C.1300.

C11

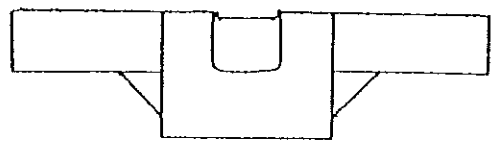


Armpit Quadrant,  
after Poul Nørlund  
Scale 1/20.

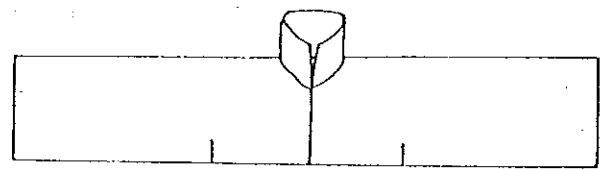




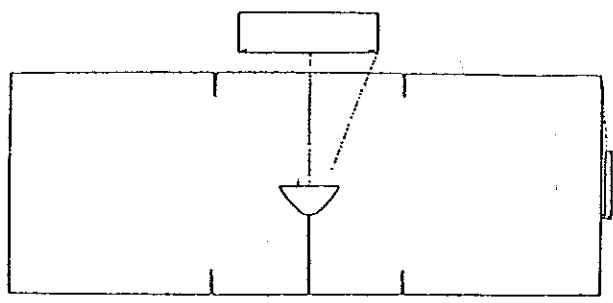
Oplod ( short bodice ) from Als. Danish C. 1200? Plan, scale 1/20. After: M.Hald, Ancient Danish Textiles.



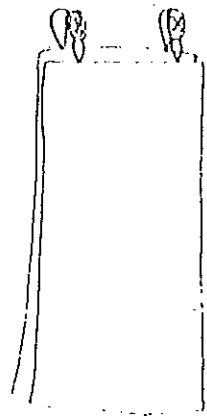
Als oplod. Front view.



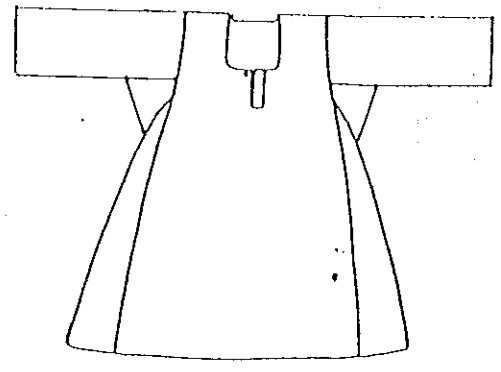
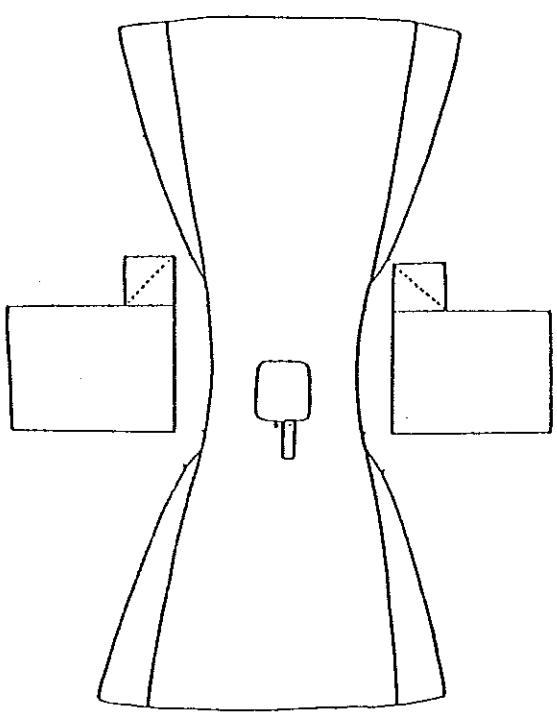
Scania oplod. Front view.



Oplod of linen from Scania. After: S.Svensson.



Oplods were probably worn in conjunction with an apron at the front and back, (above) at the front and back, (above) suspended at the shoulders and secured at the waist.

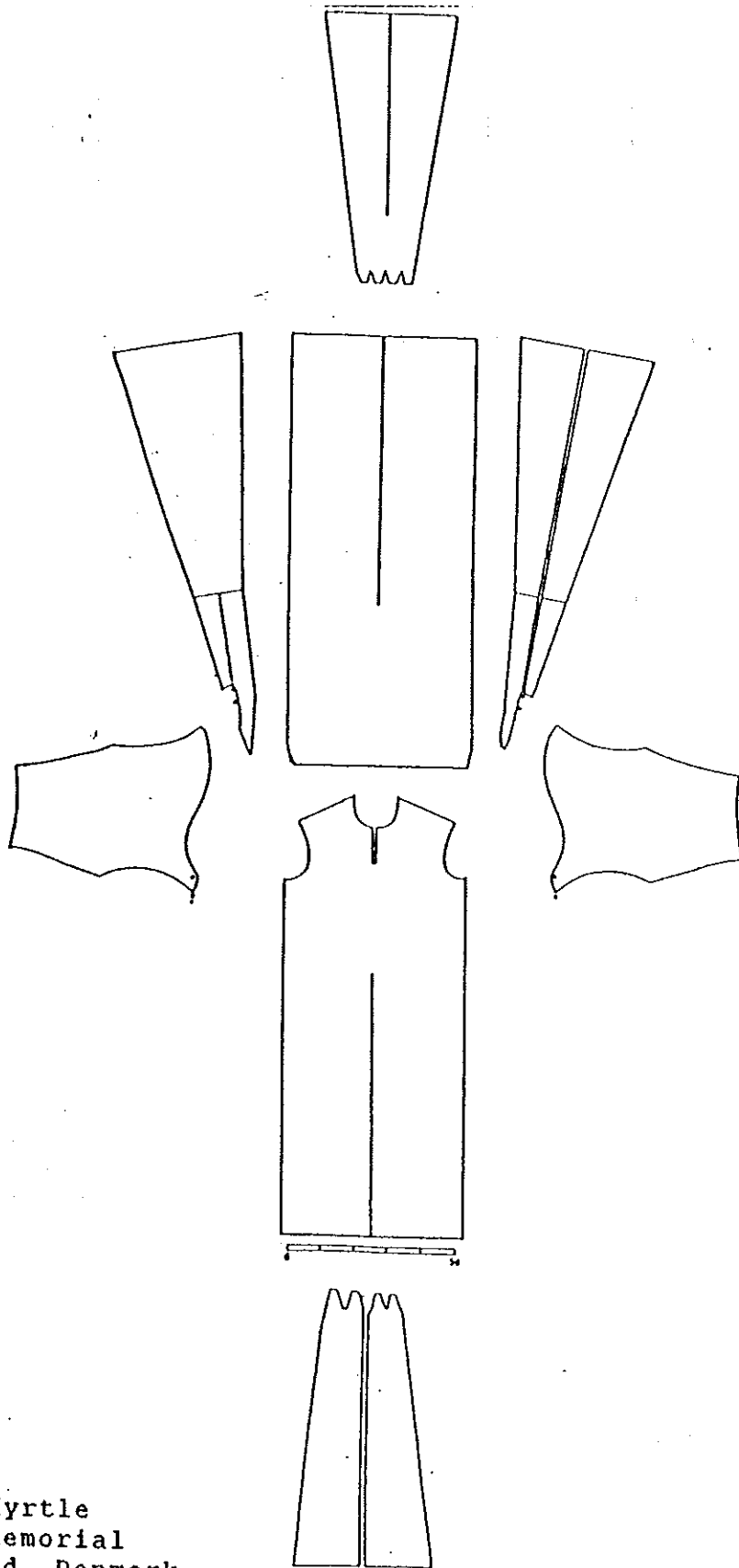


Als kirtle. Front view.

Womans Kirtle from Als. Danish C. 1200? Plan, scale 1/20. After: M. Hald, Ancient Danish Textiles.

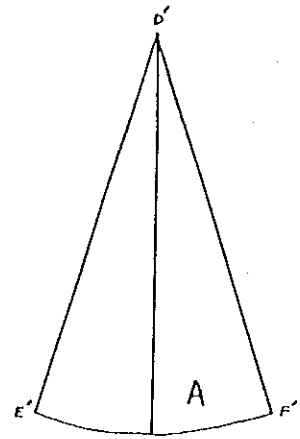
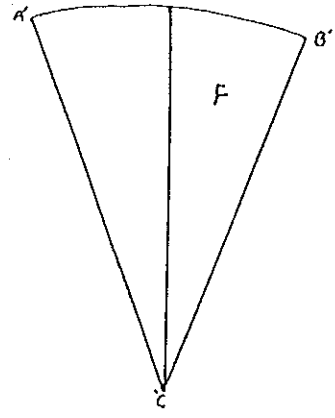
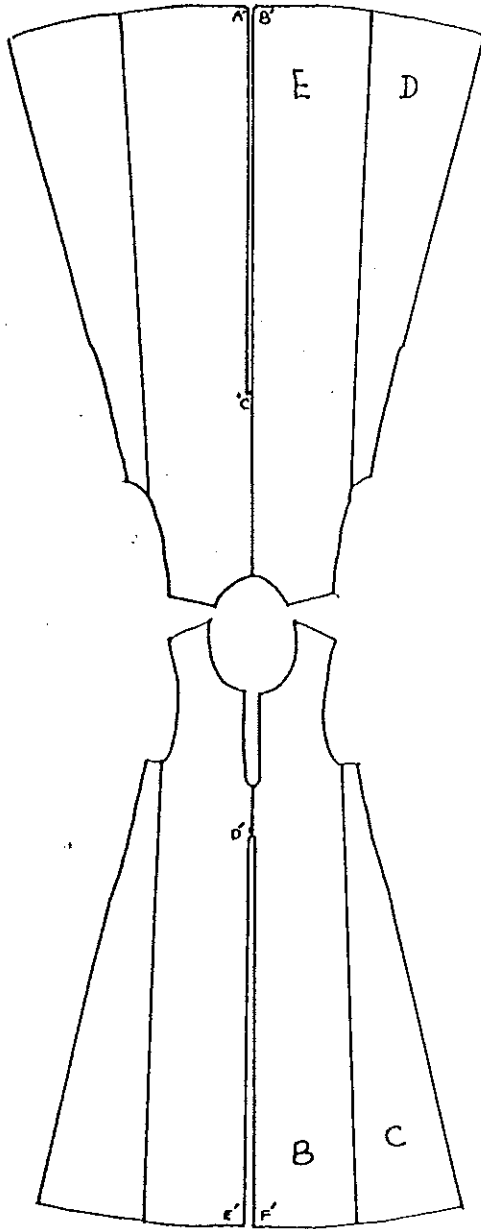
from Moselund,  
Danish C. 1300?

C9

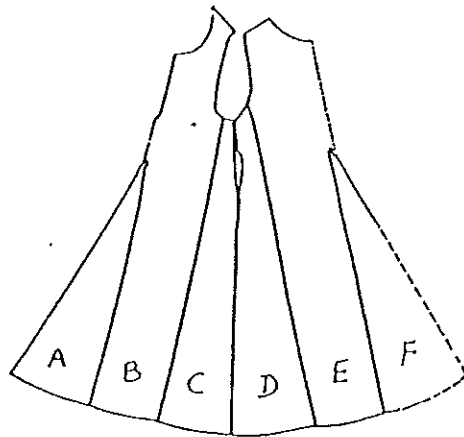


A comparative Kyrtiler  
from a Viking memorial  
stone. Hunnestad, Denmark.

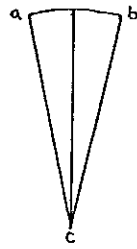
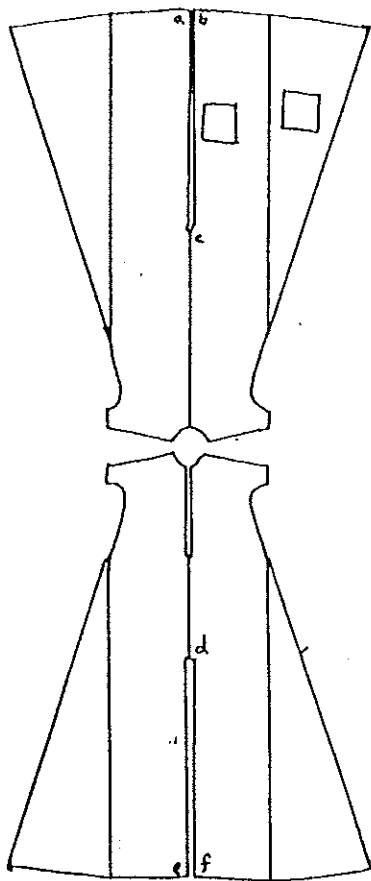
Note the slits front and back,  
despite the gores at the front,  
back and sides. After: M. Hald  
Ancient Danish Textiles.



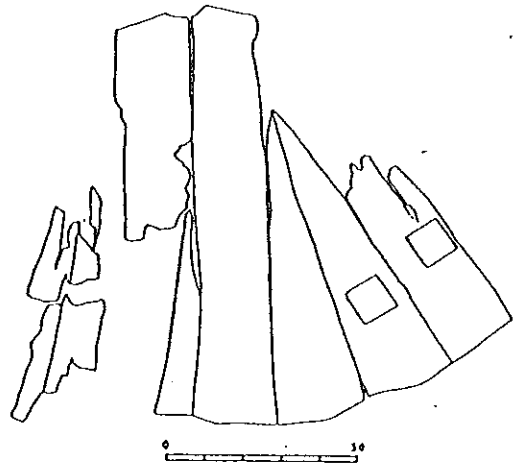
A Contemporary  
garment on one  
of the Lewis Chess  
men. C. 1200.



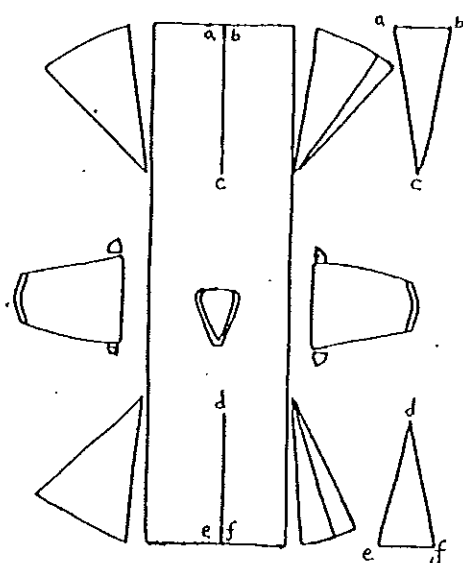
Armpit Quadrant,  
after Poul Nørlund  
Scale, 1/20.



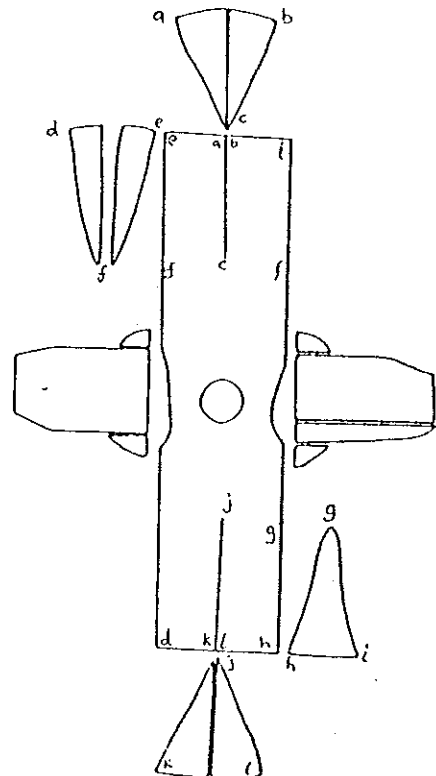
Fragments of the Ronbjerg Mose kyrtille  
Danish C. 1200 ? ( After M. Hald  
Ancient Danish Textiles. )



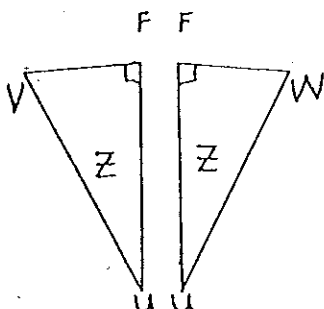
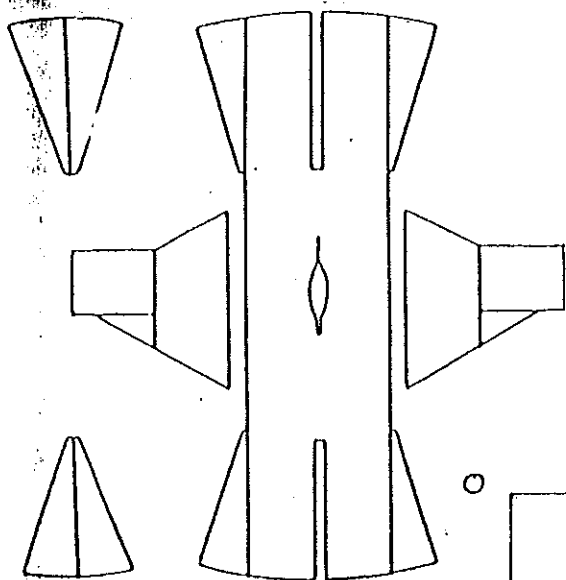
Reconstruction of the Ronbjerg Mose  
Kyrtille. ( After R. Scott. )



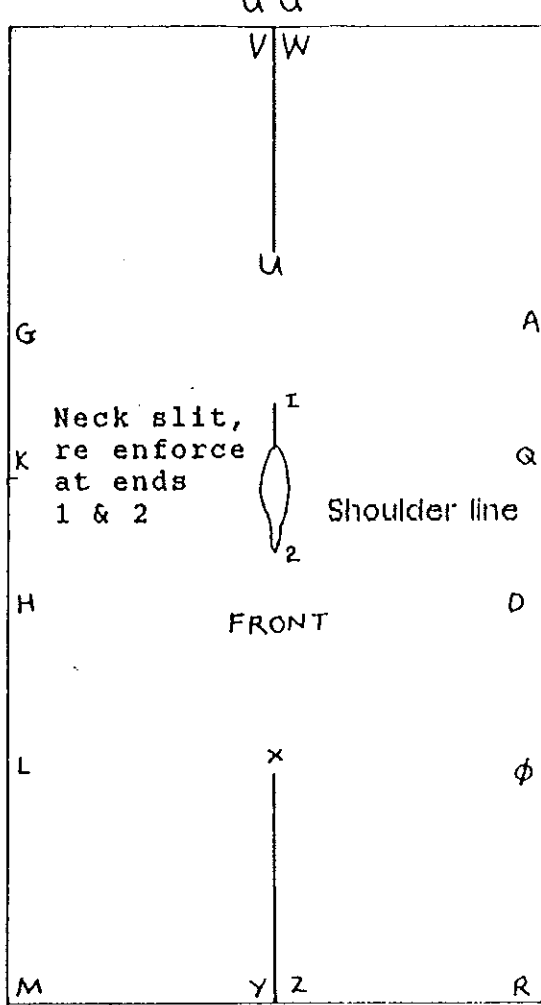
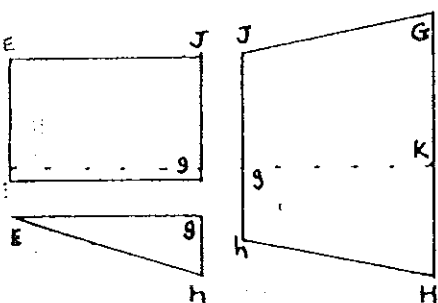
The Skjoldehamn kyrtille  
Norwegian C.1300.  
( After A. M. Fentz KUML 1989 )



The Bocksten Mans Kyrtille,  
Swedish C.1200.  
( After A. M. Fentz KUML 1989. )



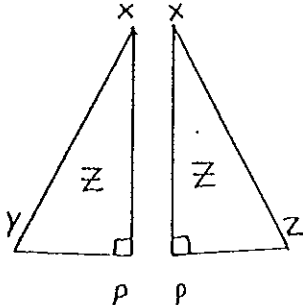
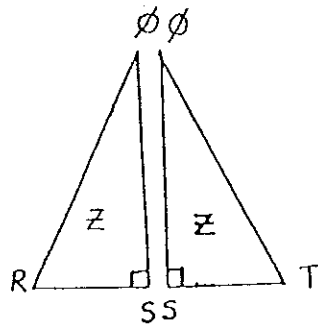
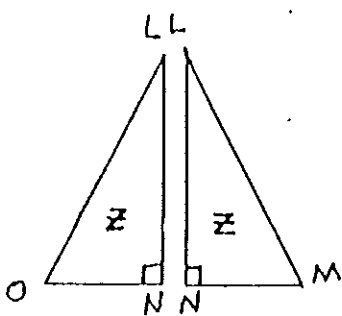
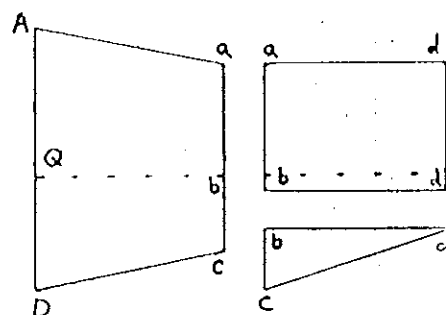
Scale, 1/30.



Neck slit,  
re enforce  
at ends  
1 & 2

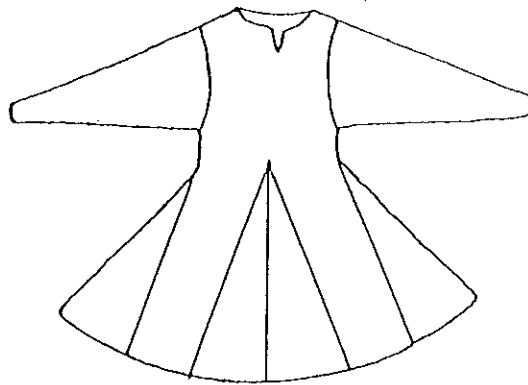
Shoulder line

FRONT

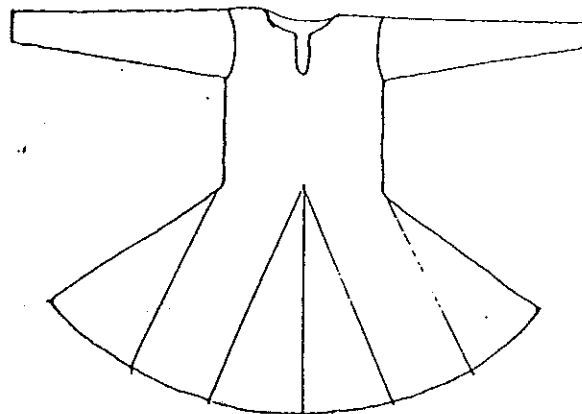
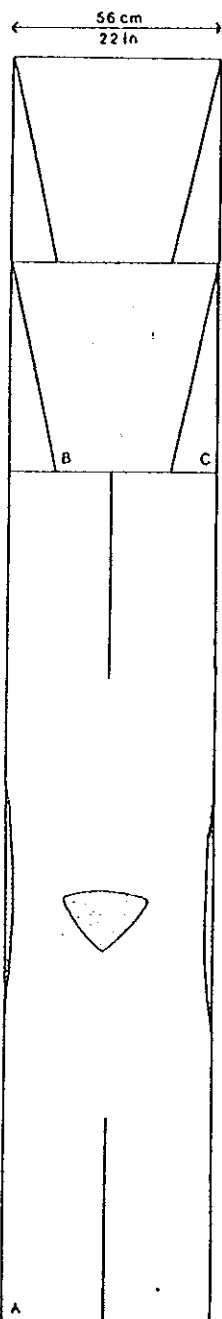


Vary the following dimentlons  
to fit the individual:

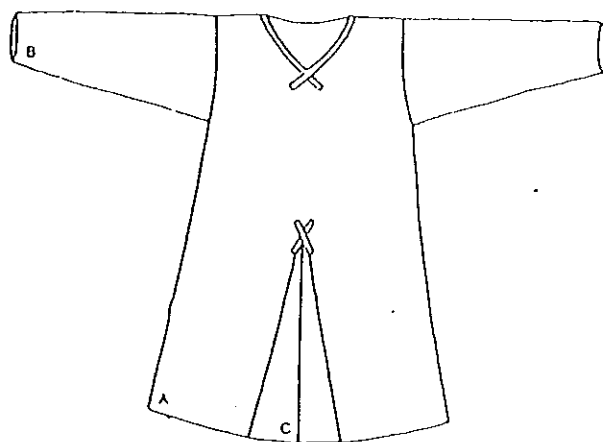
- \* Neck slit 1-2
- \* Shoulder width K-Q
- \* Length K-M ( below the knees )
- \* Fore arm E-g
- \* Upper arm g-K
- \* Cuff E-E ( fairly tight)
- \* shoulder to waist K-L
- \* Sleeve widths G-H & J-h  
should be wide enough  
to facillitate dressing.
- \* Gusset triangles Z  
should be wide enough  
to allow a full stride to  
be taken.



Saxon short tunic  
with Norman influence,  
C. 1000-1100 AD.  
( After I. Brooke,  
English Costume.)

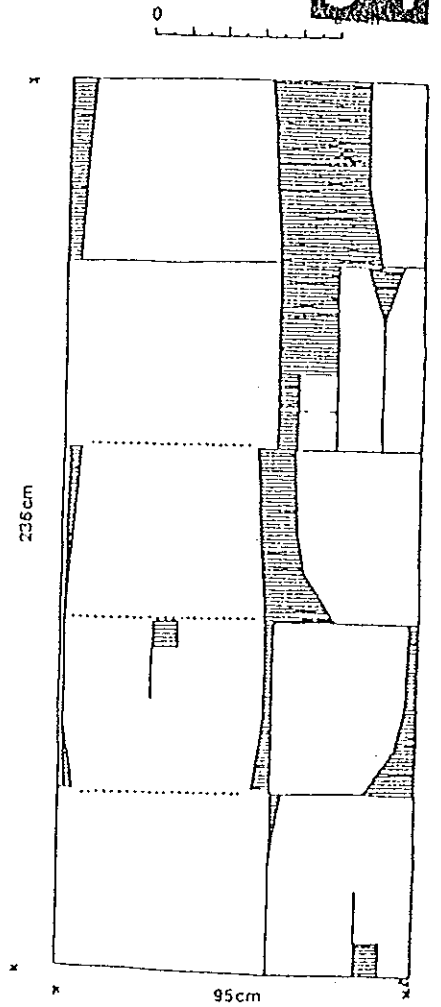
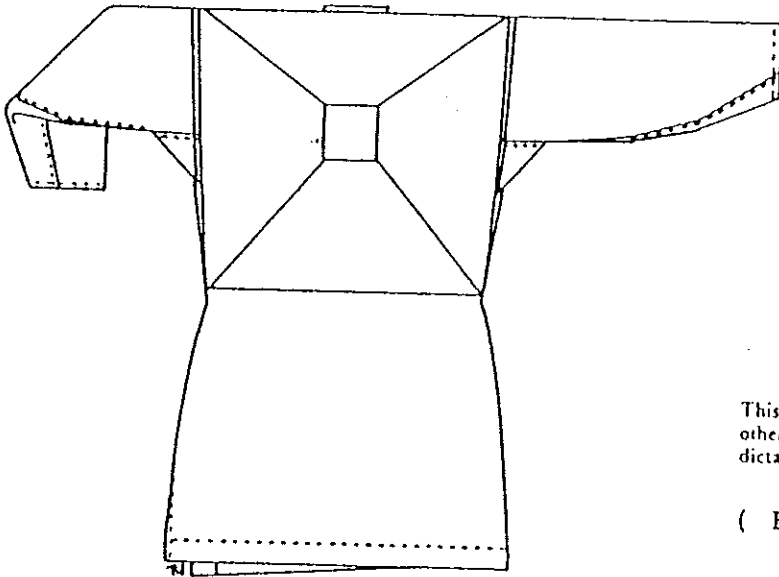
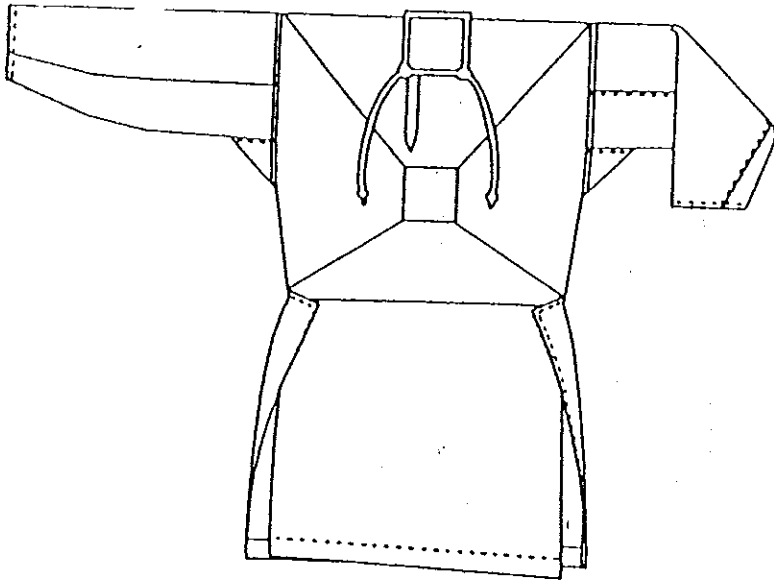


Saxon Male long tunic,  
C. 1000-1100AD,  
( After I. Brooke  
English Costume.)



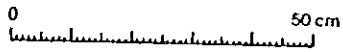
French Male tunic,  
C. 1200. Linen,  
Said to have been  
worn by St. Louis.  
( After D.K. Burnham  
Cut My Cote.)





This suggested reconstruction shows the poncho and the other shirt parts folded out on the warp. The placement is dictated by the size of the parts and the respective selvages.

( From A.M.Fentz, KUHL 1989 ).



Joseph's coat from MS Cotton Claudius B iv



Comparative kyrtles from contemporary sources.

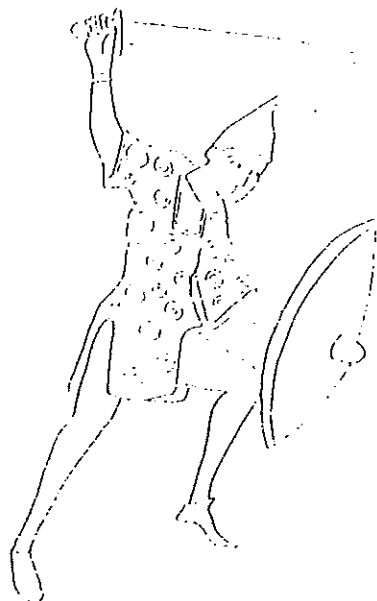
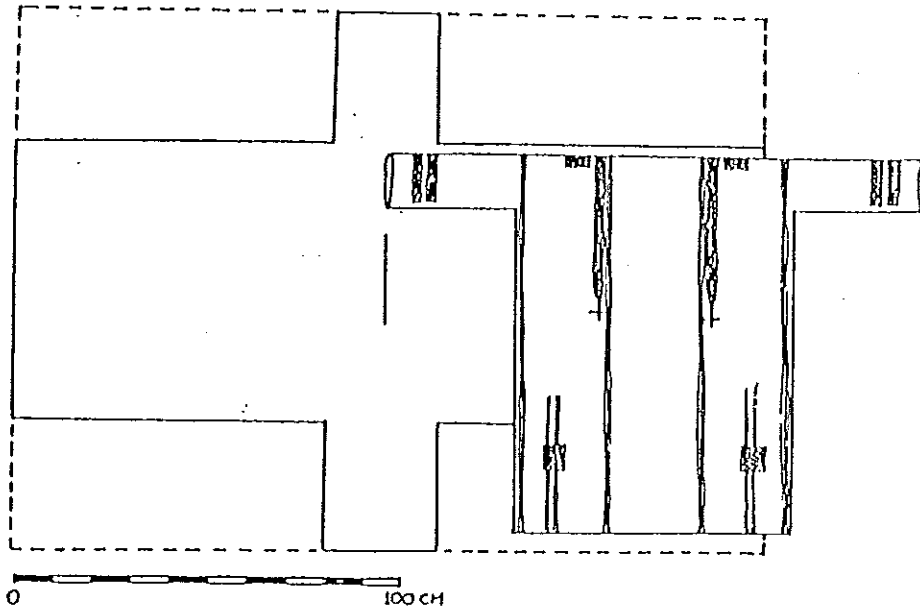
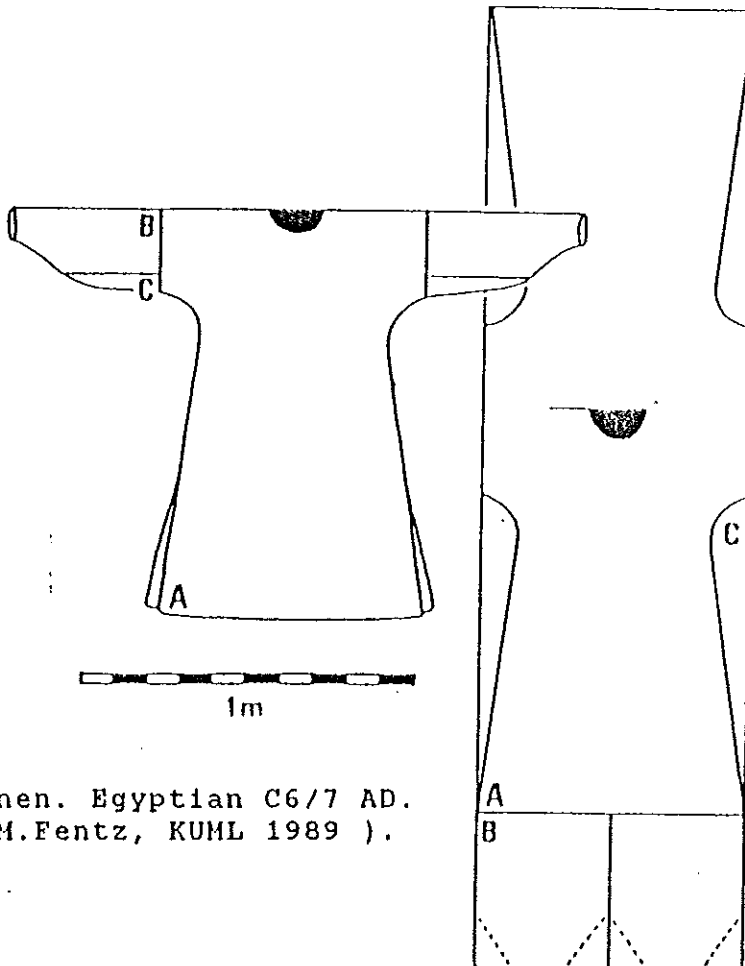


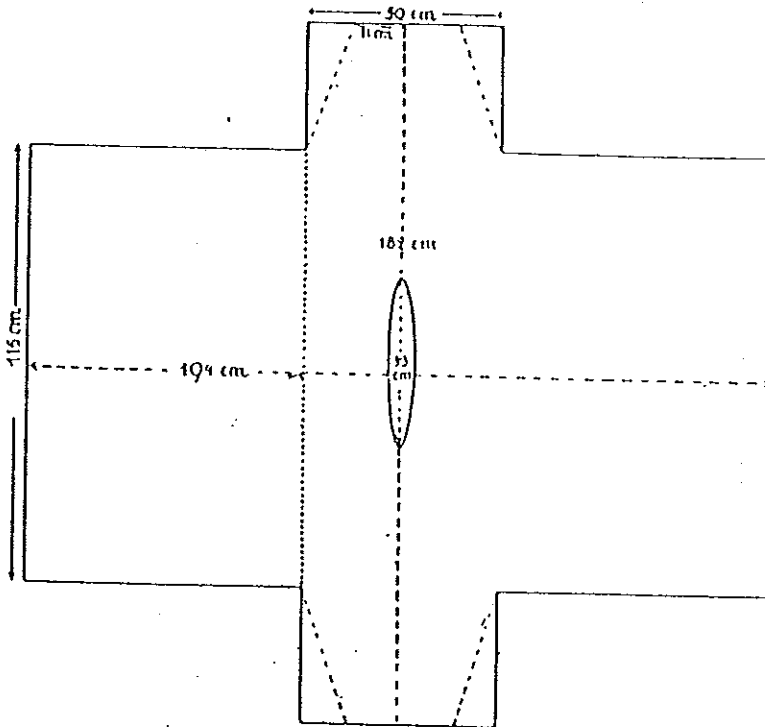
Figure from MS Douce 296



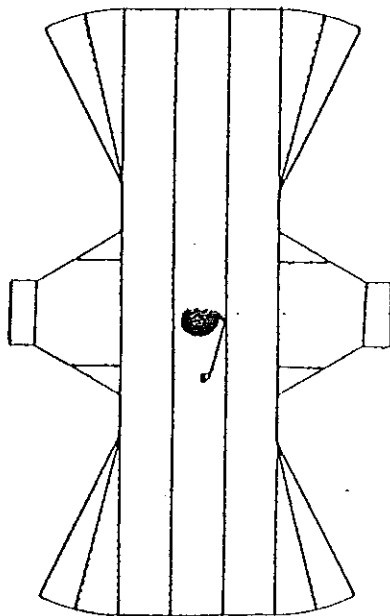
Tunic of linen in plain weave,  
with tapestry woven decoration  
in wool and linen. Egyptian. C5 AD.  
( From Af Mytte Fentz, KUML 1989 ).



Tunic of linen. Egyptian C6/7 AD.  
( From A.M.Fentz, KUML 1989 ).

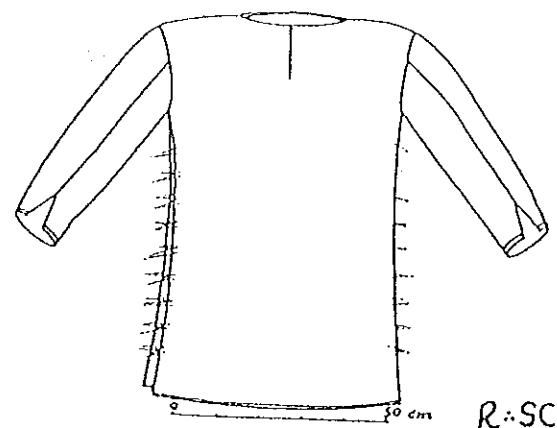
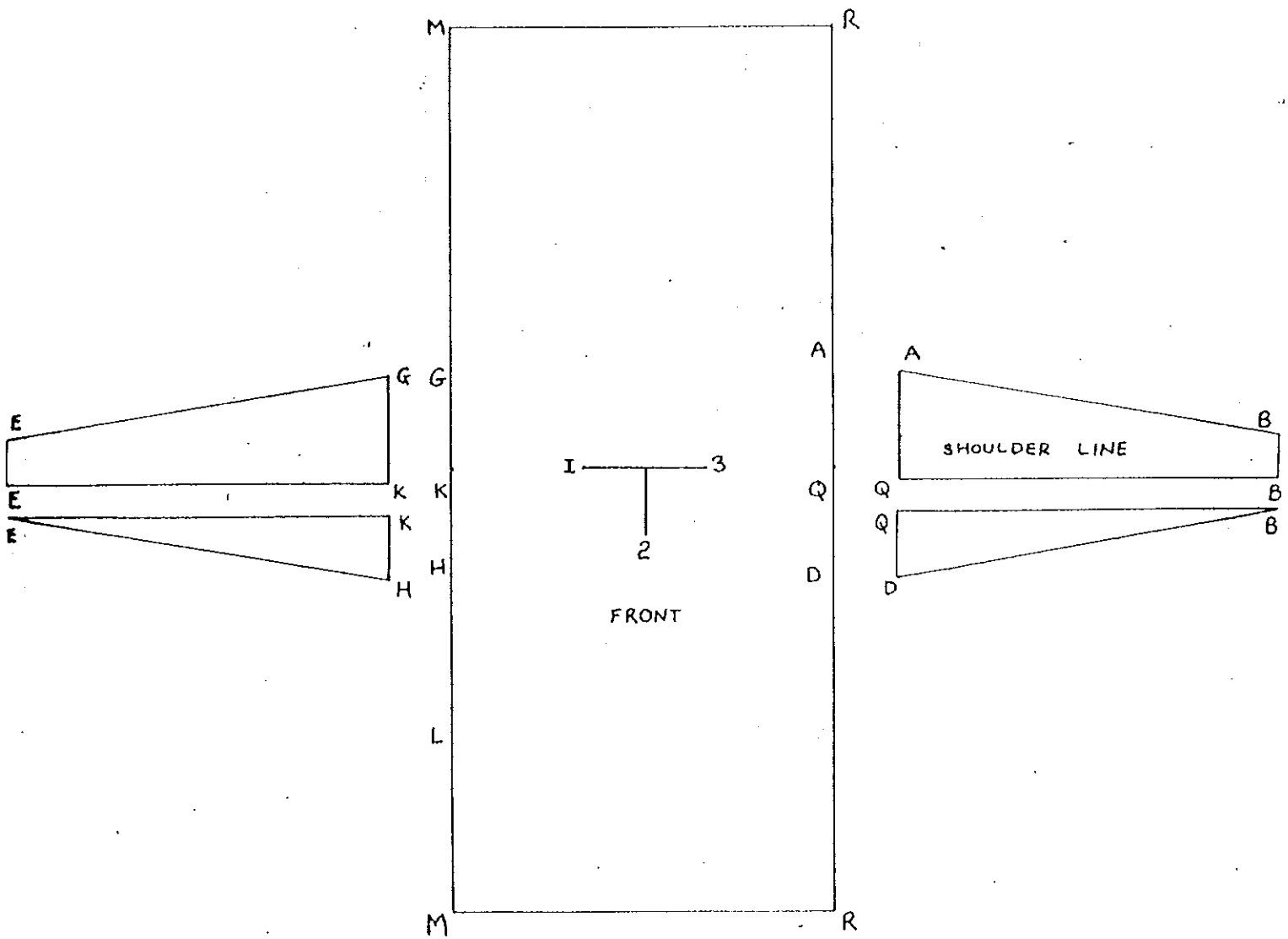


Tunic from Reepsholt Mose.  
East Frisian. C2/4 AD.  
( After H.A. Portratz ).



"Alba" from Castel S. Elia.  
Roman Campagna.  
( After J. Braun ).

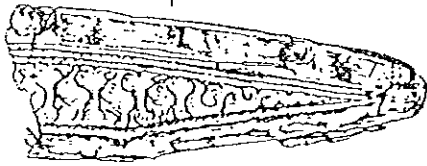
KYRTLE from THORSBJERG.  
 ( For comparative  
 purposes only ).  
 Migration Period.  
 ( From M. Hald, Old  
 Dansk Tekitilier ).



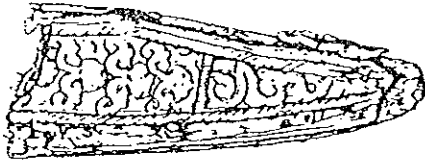
R. SCOTT  
 1988

ANGLO SCANDINAVIAN SCABBARDS FROM YORK II

FRONT



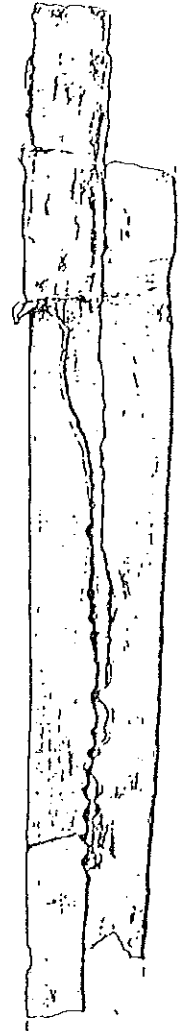
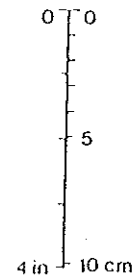
SECTION



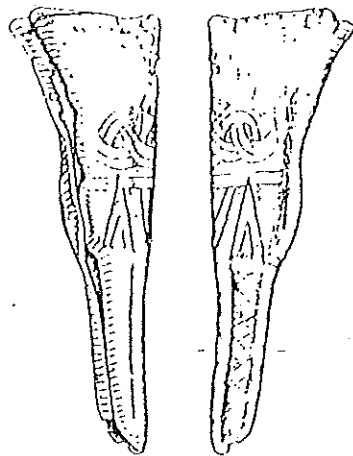
BACK

LATE FRAGMENT

(10/11 WITH IRON RIVETS

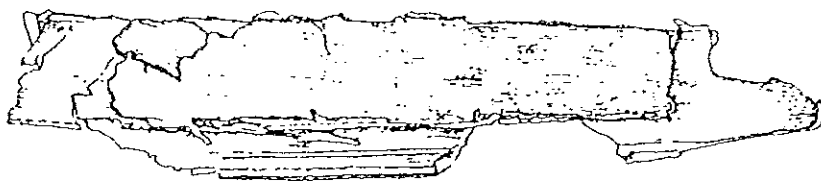


UNUSUAL  
HILTED  
EXAMPLE  
MAY HAVE  
HUNG NEAR  
VERTICAL  
LIKE THE  
HAITHABU  
EXAMPLES OR  
THE ONE FROM  
YORK (9/10 - OTHER  
SHEET.

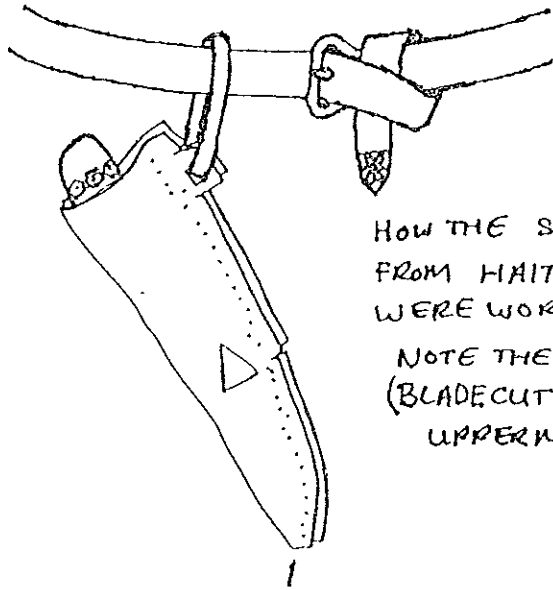


SECTION

FRAGMENTARY LEATHER  
SCABBARD FOR A  
SWORD OR SHORT SWE  
FROM THE BACK. NOTE  
THE BUTT STITCHING UP  
THE CENTRE OF THE  
BACK.

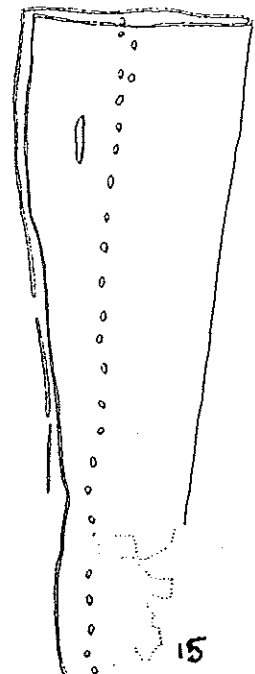
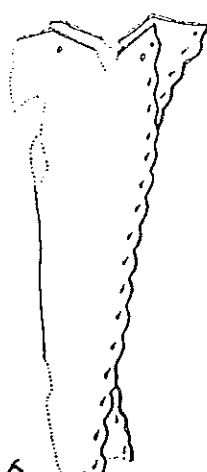
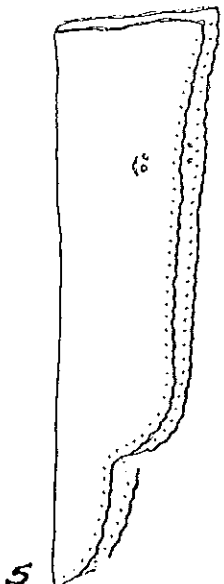
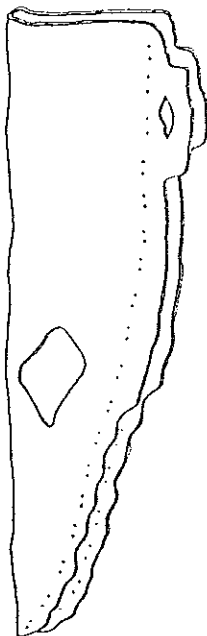
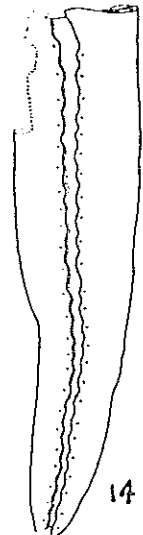
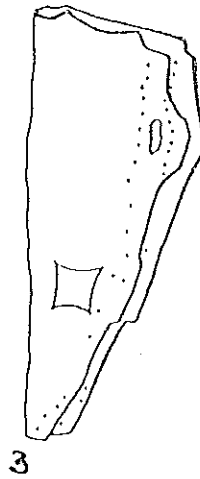
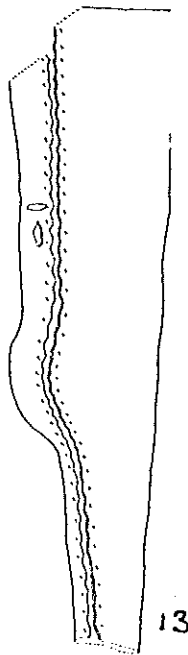
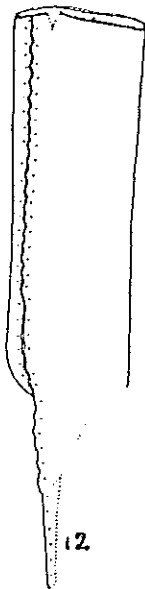
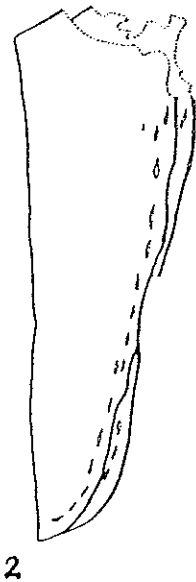


BACK OF A FRAGMENTARY SAX SCABBARD

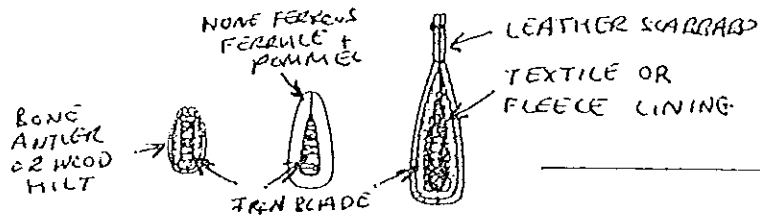


HOW THE SAXES  
FROM HAITHABU  
WERE WORN.

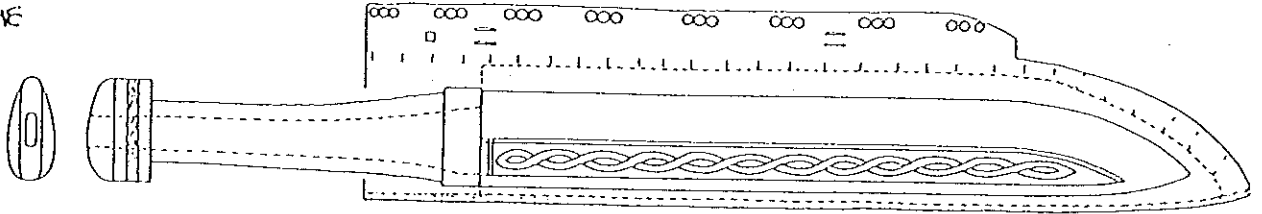
NOTE THE 'CUT-OUT'  
(BLADE CUTTING EDGE  
UPPERMOST.)



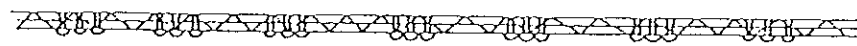
# A FRISIAN SAX AND TWO SCABBARDS



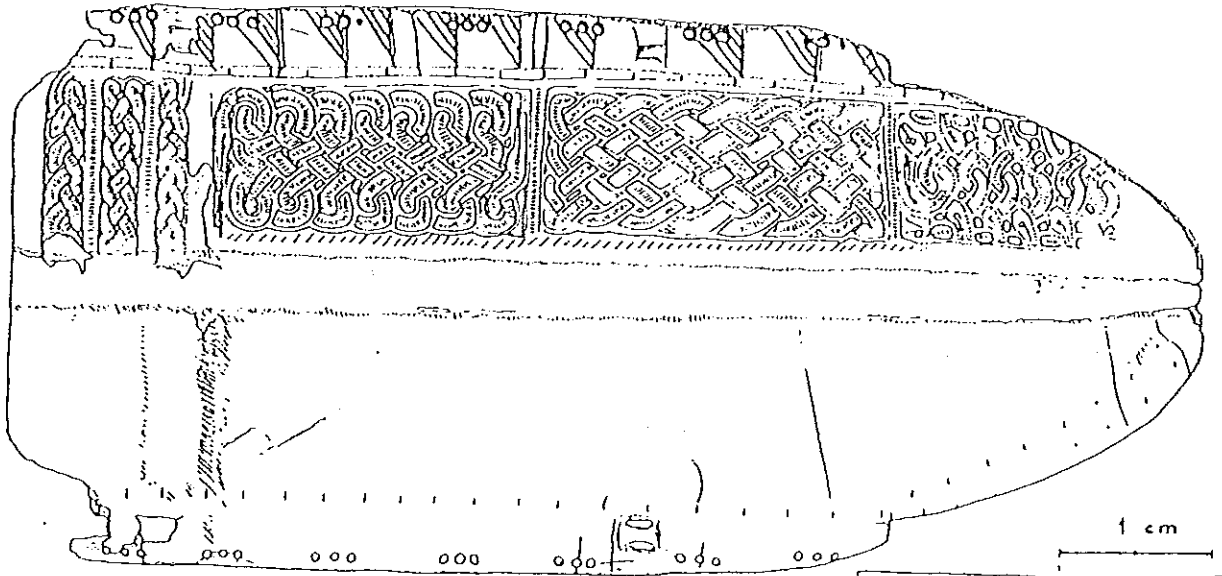
THE SAX IN THE SCABBARD - IRON BLADE UP, ACROSS THE WAIST - SUSPENDED FROM STRAPS WEADED THROUGH THE SLITS.



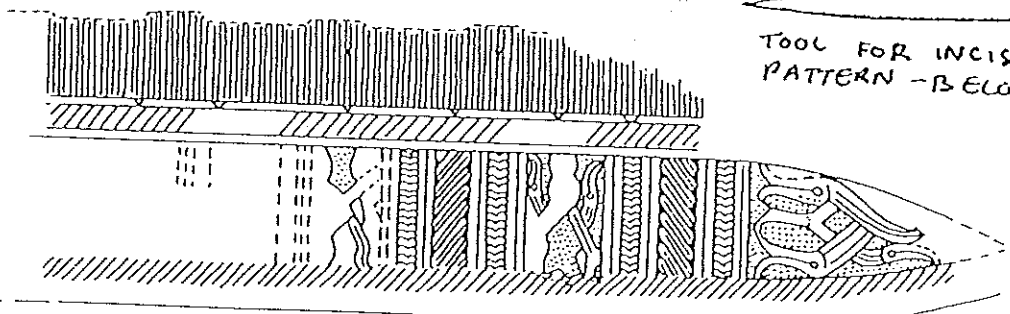
TOP SEAM, RIVETED + STITCHED



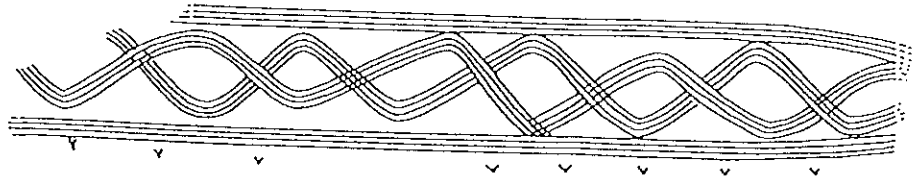
THE SAX FROM ENINGEN. NOTE THE PLAIN IRON + THE HEAVILY ORNAMENTED PATTERN



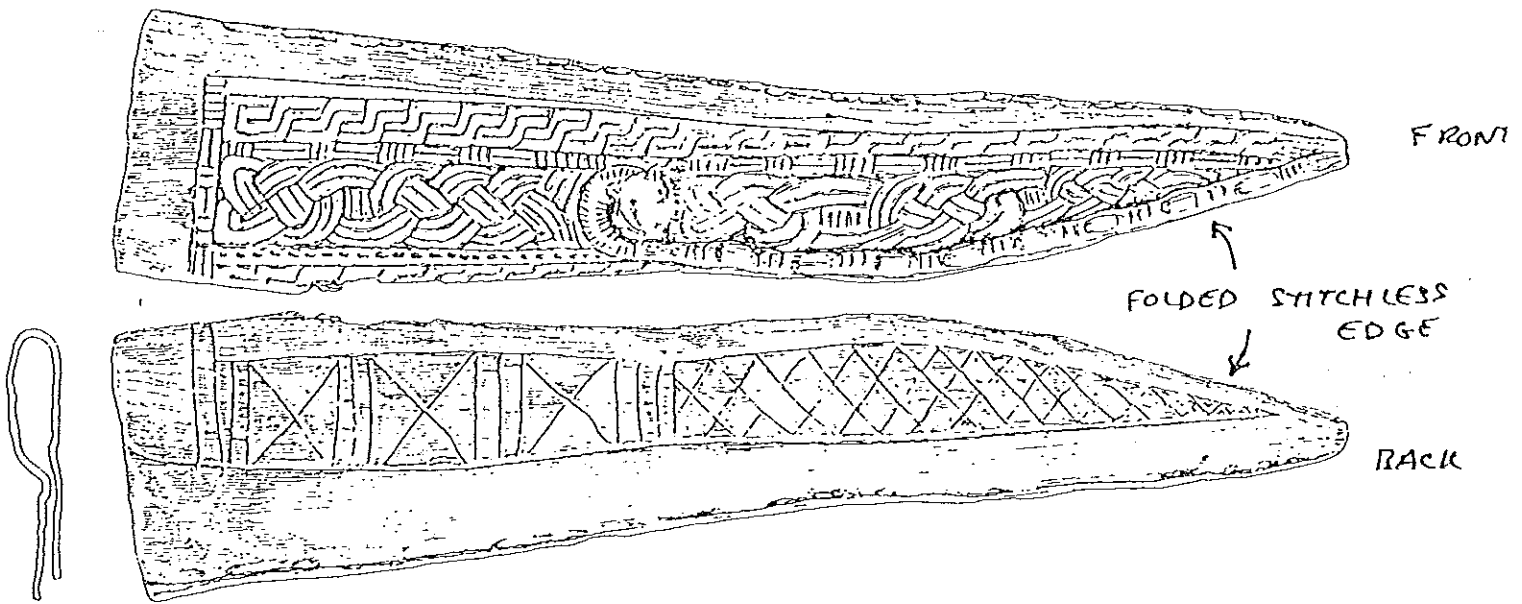
CROSS SECTION



THE SAX FROM USQUERT. NOTE SIMPLE DESIGNS FRONT AND REAR.

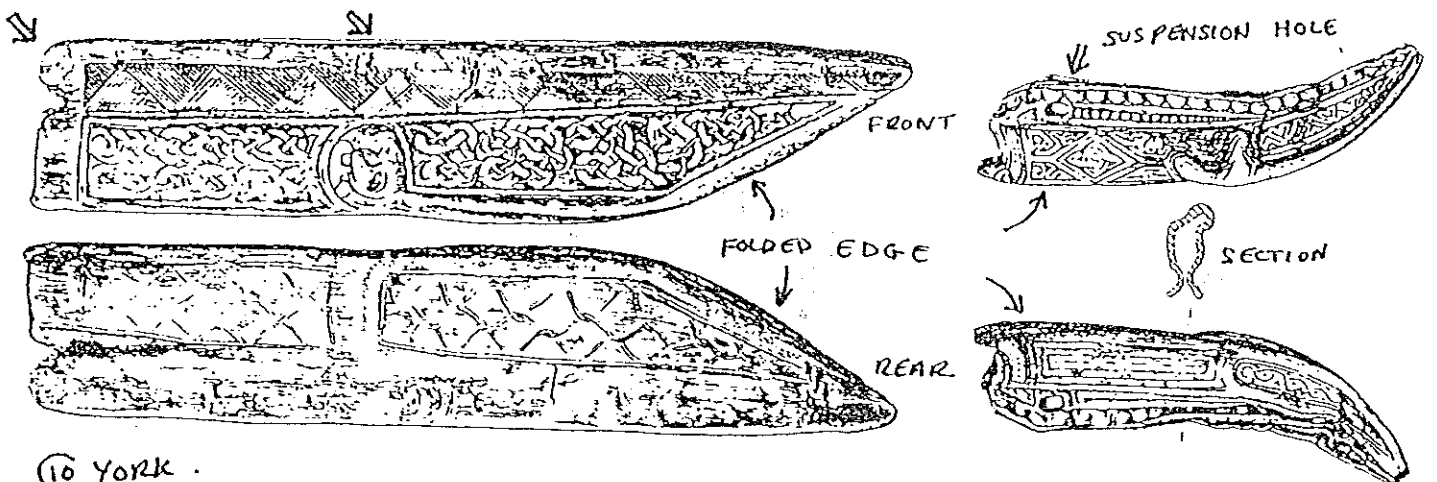


# ANGLOSCANDINAVIAN SCABBARDS FROM YORK

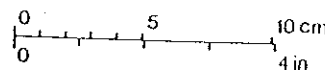


Decorated leather knife sheath. Tenth century.  
Length 34.5cm.

THE TWO LARGE SAX SCABBARDS FROM YORK (ABOVE + BELOW) APPEAR TO HAVE BEEN MADE OF ONE PIECE OF LEATHER, FOLDED ALONG ITS BOTTOM EDGE AND WITH THE NOSE PULLED IN, WHILST THE LEATHER WAS WET, THEREBY CREATING A STITCHLESS SEAM. THE TOP EDGE WAS JOINED BY A FOLDED RING OF METAL AND RIVETED. THE SCABBARD WAS SUSPENDED BY TWO LOOPS FROM THE BELT - ONE TO THE MOUTH OF THE SCABBARD, THE OTHER ALONG ITS LENGTH (ARROWED BELOW) NOTE ALSO THE EXAMPLE BELOW PROBABLY HAD A METAL MOUTH PIECE. SEE HOW THE DECORATION IS SPLIT INTO TWO MAIN PANELS - ONE REFLECTS THE BLADE, THE OTHER THE HILT.



© York

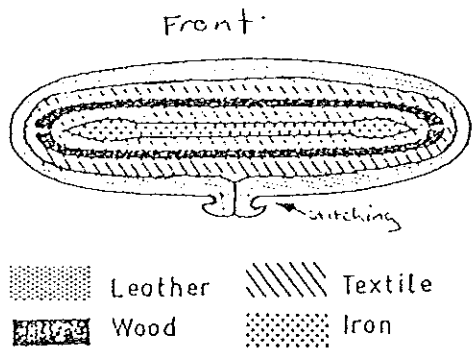


©-10  
YORK

THE THIRD SCABBARD HOUSED A CURVED BLADE AND HUNG (ANGLED) FROM A SINGLE LOOP TO THE BELT, A TECHNIQUE POPULAR IN VIKING HAITHARY

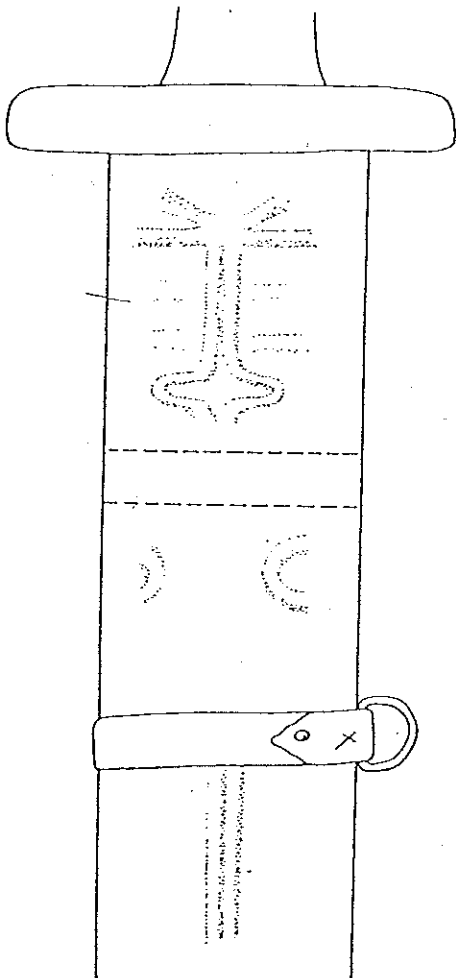


# Scabbard construction Knives Saxes + Swords.



Diagrammatic cross-section of the Ballateare sword and scabbard. Not to scale.

knife scabbards like that of the sword were hung vertically. Made of leather some, like that of the sword had wooden laths inside. The sword scabbard however only came up to the hilt (below) whereas the knife scabbard came almost to the end.



The ornament on the scabbard of the sword from Cronk Moor, Scale c. 1/2.

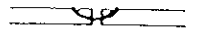
Details of the stitching on the scabbards.



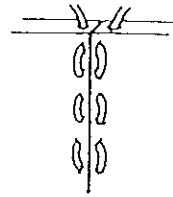
a. Awl holes are often angled



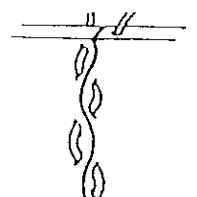
b. Flesh/grain stitch



Edge/grain stitch

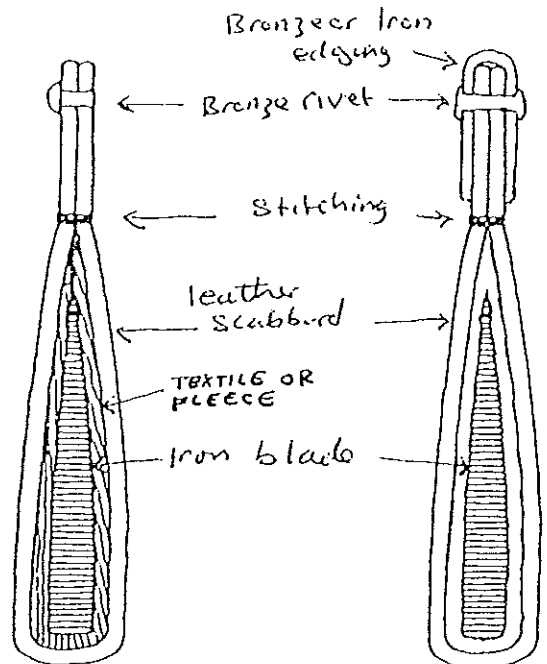


c. Double thread (butt seam)



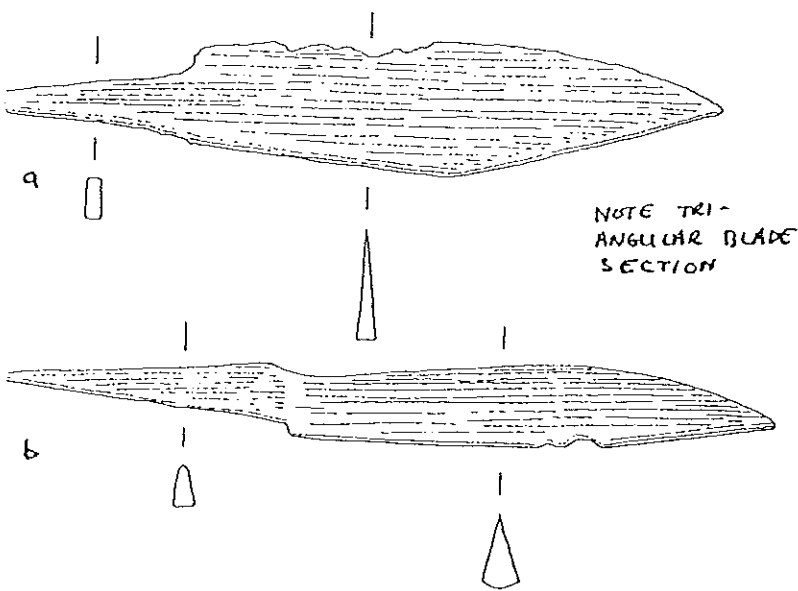
Single thread (butt seam)

Knives + Swords had seams up the back of the scabbard and hung vertically. Saxes were single edged weapons, they were hung almost horizontally with the seams and blade edges uppermost.

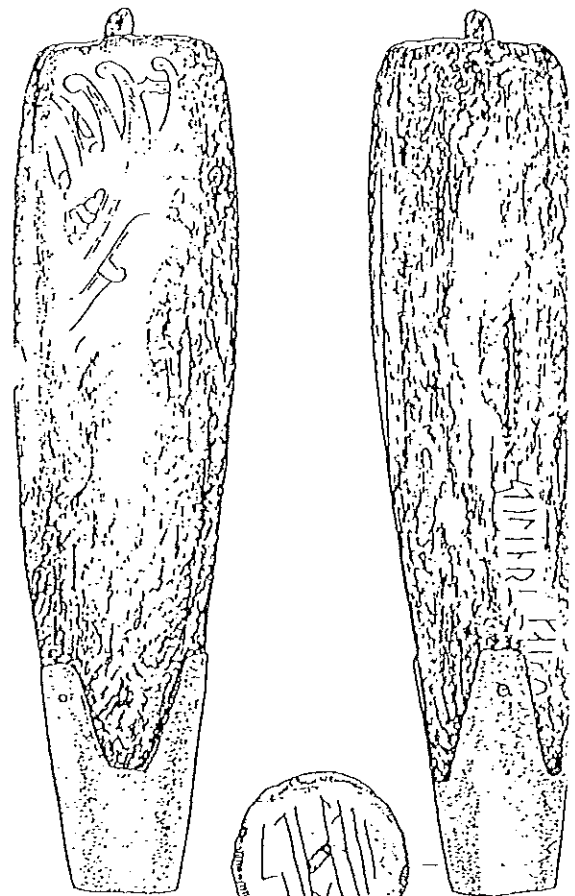


Section through the Arision Sax

SAXES AND SAX HILTS



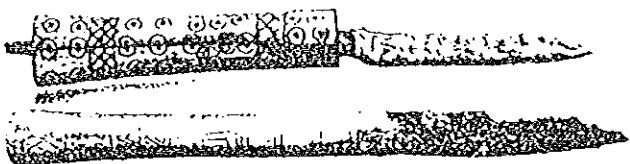
Viking Age iron knives. Length (a) 11.3cm (b) 10.5cm.



0 5cm



CHESTERTON SCRAMASAX

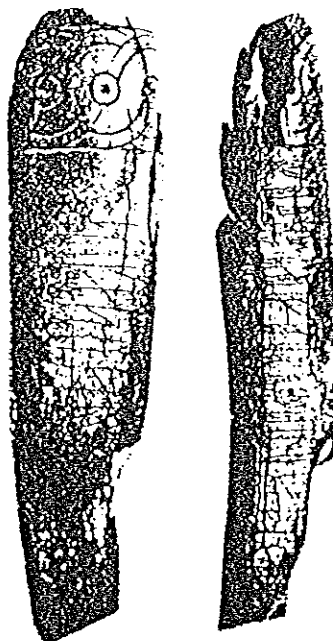


HILTED KNIVES FROM YORK.



SVENDBORG KNIFE, DENMARK

(RUNES ON THE HILT TELL US THAT IT BELONGED TO 'KARL', WHILST HIS FRIEND 'ARE' MADE THE HAFT).

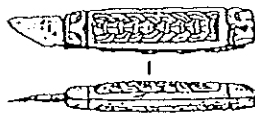


TWO VIEWS (LEFT) OF THE HILT FROM LINDHOLM - DENMARK. NOTE THE DOT-AND-RING DECORATION ALL THAT WOULD BE PROTRUDING FROM THE SCABBARD.

THE RUNES ON THE (DAMAGED) HILT TELL US THAT THE BLADE WAS POLISHED BY 'SINGASVEN' FOR HIS FRIEND 'THORFRID'.



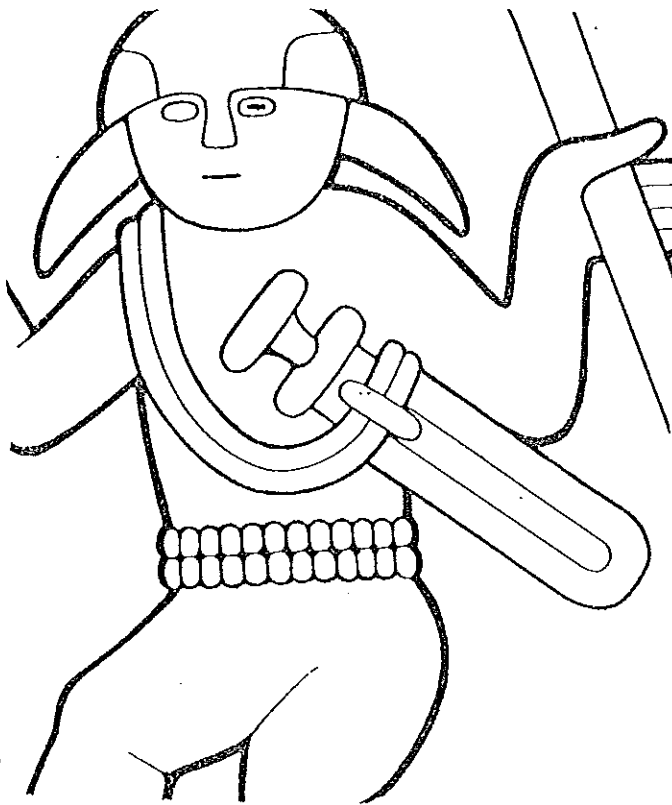
TWIN BLADED SWIVEL KNIFE



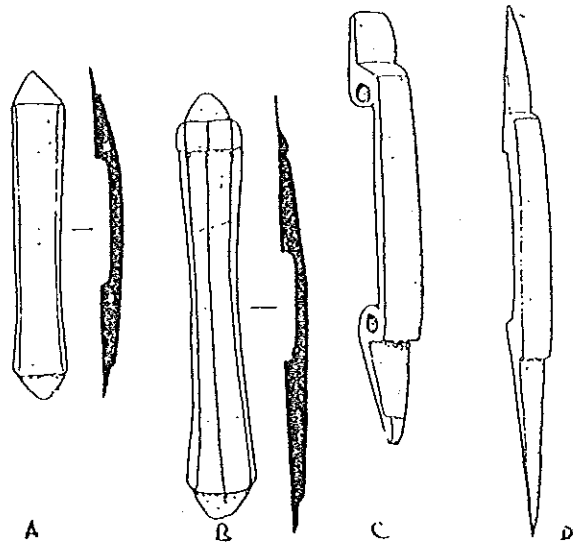
'STANLY KNIFE' TYPE KNIFE FROM Canterbury

Scabbard fittings

-SLIDERS + BUCKLES



FROM AVENDLE HELMET DIE.  
THE BALDRIC GOES THROUGH THE  
SLIDER, BUT IS NOT FIXED TO IT



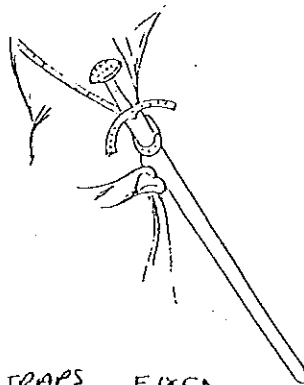
THE SLIDER WAS FIXED NEAR THE  
TOP AND THE FRONT OF THE SCABBARD.  
THE PROJECTING FEET AT EACH END OF  
THE SLIDER WENT UNDER THE LEATHER  
COVERING OF THE SCABBARD. ADDITION  
STRENGTH WAS PROVIDED BY  
WIRE (A) AND THONGING (C).

VIKING SLIDERS FROM :-

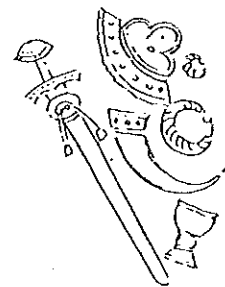
- A = WORMS
- B = NIEBERBEIHER
- C/D = VIMOSE.



SHORT STRAPS TO THE  
SIDE OR BACK. NOTE ONE  
ENDS IN A BUCKLE, THE OTHER  
A STRAP END. Saxen from the  
T. 11. 11. 11.

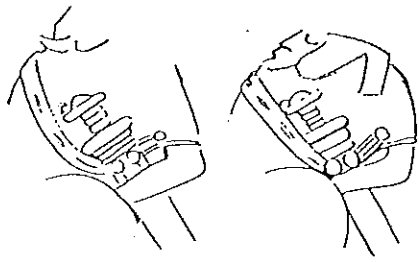


STRAPS FIXED  
TO THE BACK OF  
THE SCABBARD.  
FROM MS GOLIATH II  
(NOTE THIS DOES NOT  
ILLUSTRATE A SCABBARD  
RING).

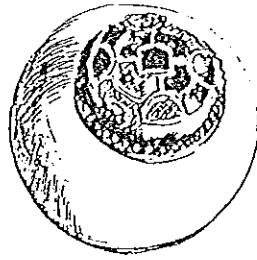


TWO SHORT STRAPS  
FIXED NEAR THE NECK  
OF THE SCABBARD, BOTH  
ENDING IN BUCKLES.  
FROM AN AIS MS.

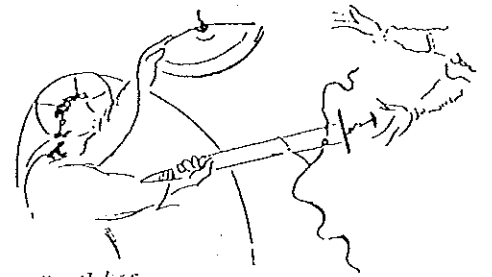
VENDLE + SAXON BALL FITTINGS & EARLY SAXON + VIKING SIDE STRAPS FOR SWORDS



TWO BALLS SECURE EACH END OF THE BALDRIC AT THE TOP AND FRONT OF THE SCABBARD. VENDLE - FROM HELMET PLATES



AN ACTUAL BALL FROM MEERSCHAUM IN COLOGNE, VENDLE PERIOD. THE BALL IS REALLY A GORIFIED RIVETHEAD.



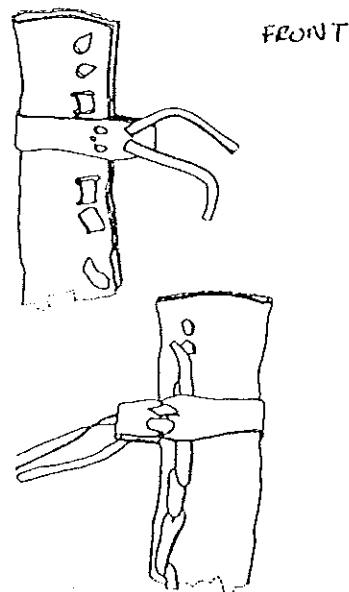
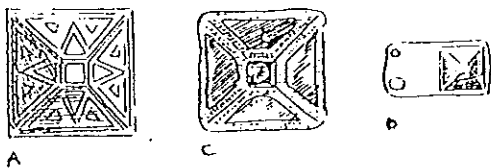
TWO BALLS ON A SCABBARD OF THE VIKING PERIOD. FROM THE VIKING PSALTER. NOTE HOW THE FIXING BALLS FOR THE BALDRIC ARE ANGLED ACROSS THE FRONT OF THE SCABBARD NEAR THE MOUTH LIKE THE BEST FITTED ONES.

LATE SAXON

SAXON / VENDLE



VIKING



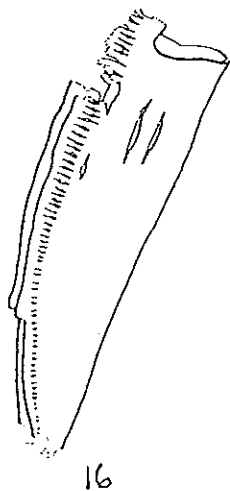
FRONT

NOTE HOW THE THONGING ON THE BACK SPLITS AND IS LOOPED THROUGH ITSELF.

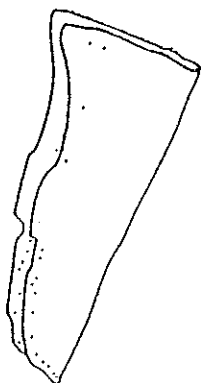
'PYRAMIDS' AS BUCKLE SLIDES FOR SWORD SUSPENSION LEADS.

A = FAVERSHAM B = SARRE C = BURNFIELD D = BULUCL. PLUS RECONSTRUCTED USE OF ETKH

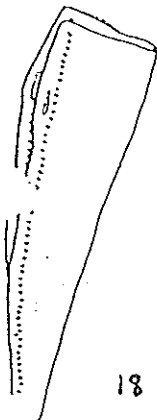
WE SEE THESE AGAIN ON SAX SCABBARDS



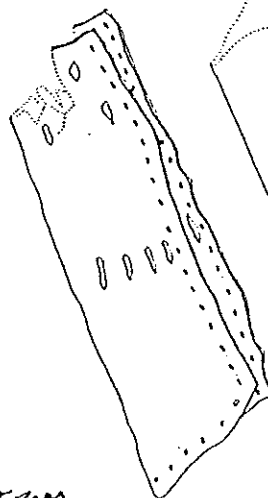
16



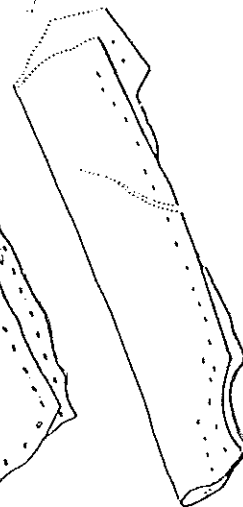
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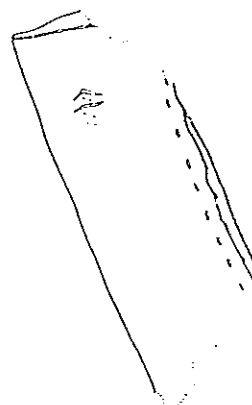
18



7



8



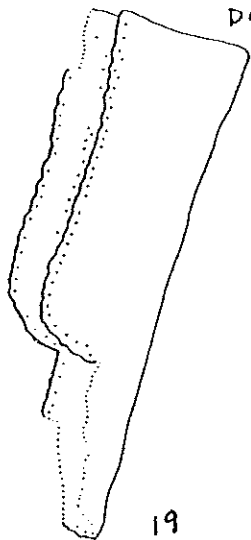
9

ALL THESE SCABBARDS ARE FROM VIKING HAITHABU. NOTE SOME ARE STITCHED, OTHERS TONGUED. IN ALL CASES THE BLADE HAD THE CUTTING EDGE UPPERMOST. DECORATION SEEMS TO HAVE

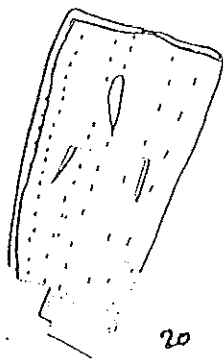
CONSISTED SOLEY OF SLITS AND CUT OUTS

12 to 22 = SCABBARD BACKS

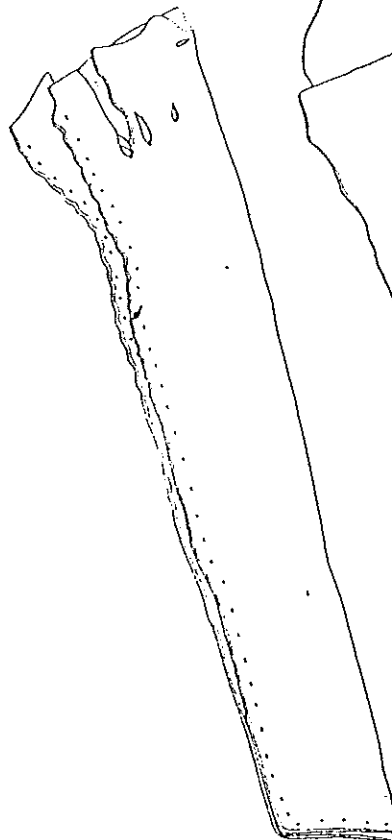
1 to 11 = SCABBARD FRONTS



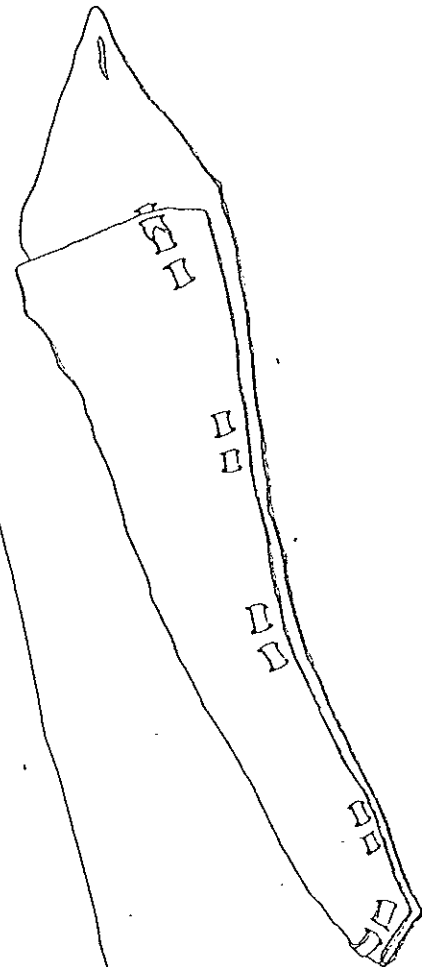
19



20



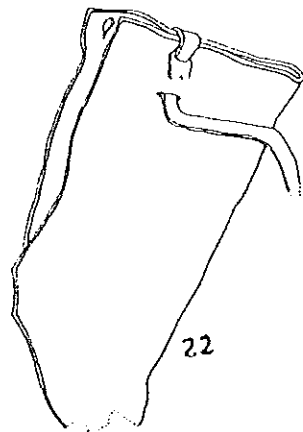
10



11



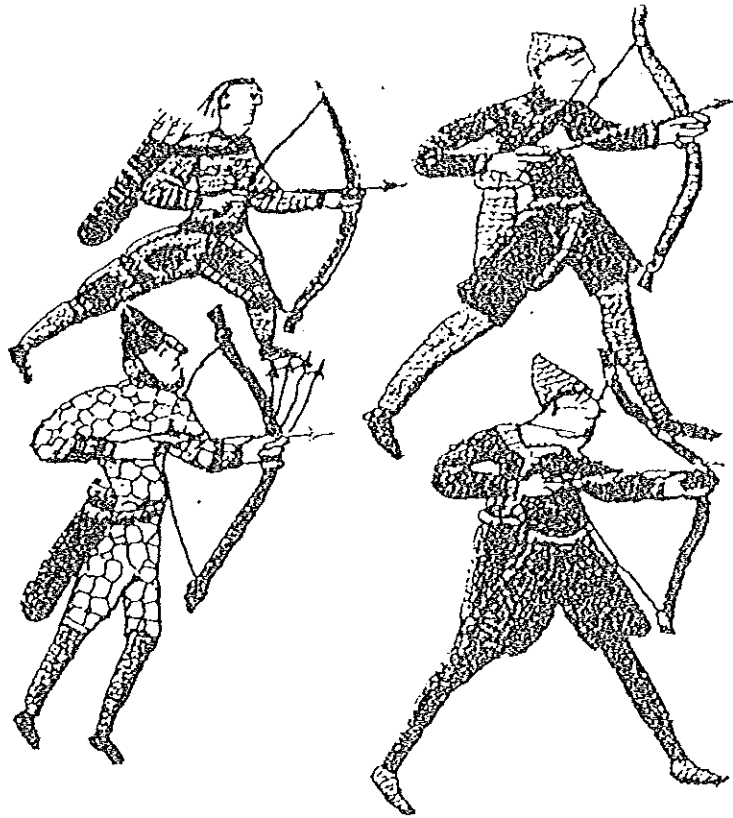
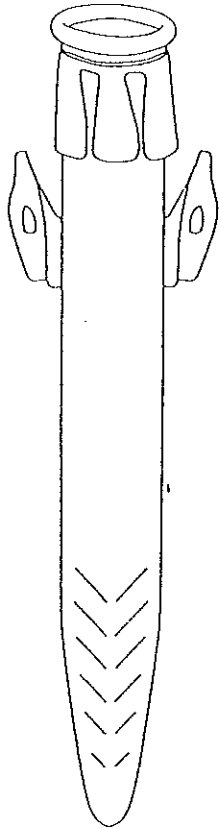
21



22

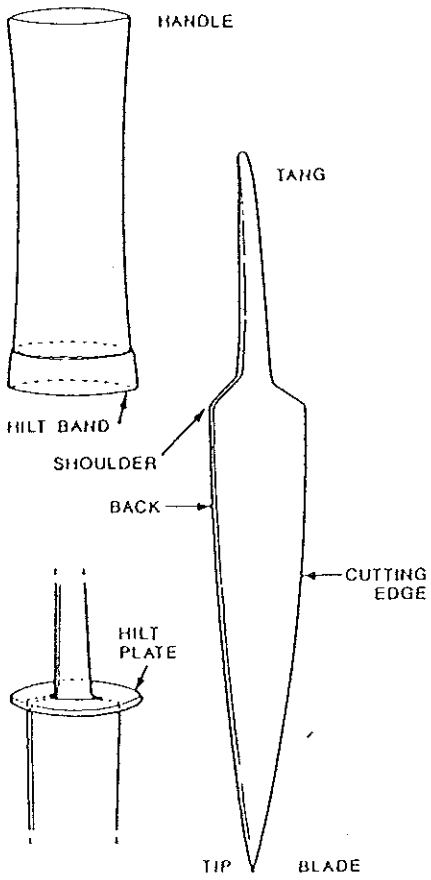
# QUIVER.

RECONSTRUCTED FROM FINDS AT HAITHABU  
AND THE BAYEUX TAPESTRY

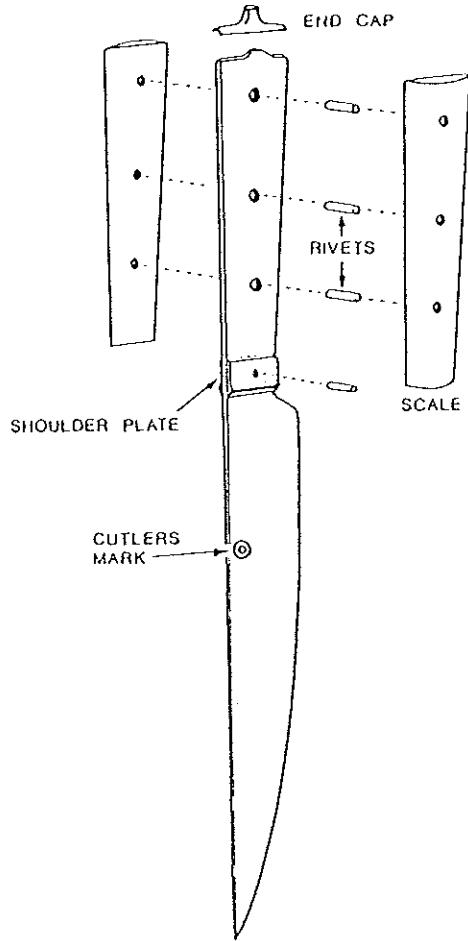


# Sword Sax + Knife construction techniques.

a) WHITTLE TANG



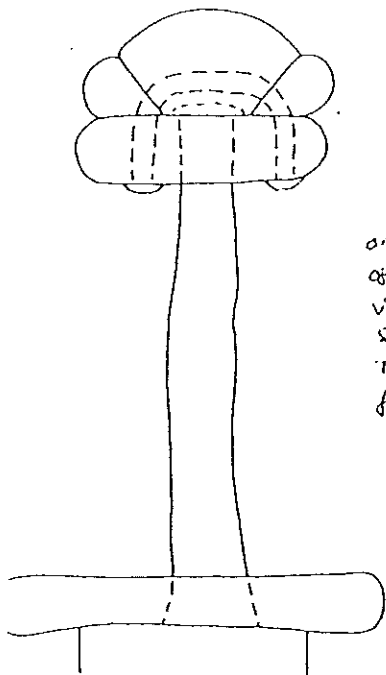
b) SCALE TANG



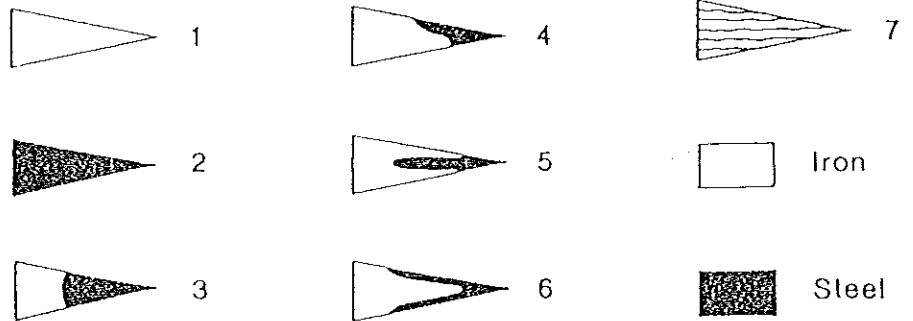
Note Scale tang came in right at the very end of the Viking period. Cutlers marks are medieval

The main components of a medieval knife:  
 (a) with whittle tang,  
 (b) with scale tang.

Methods of combining iron and steel in edged tools.



ONE METHOD of hilted Viking swords. This eg. from IOM.



Note the pattern welding in example 7.

Drawing of X-ray of Crook Mraz sword-hilt.

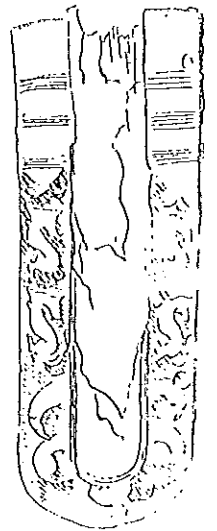
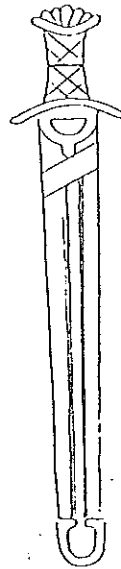
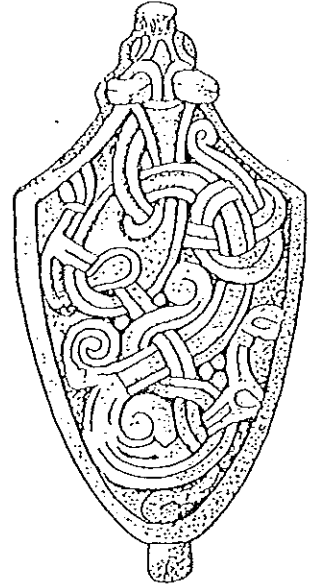
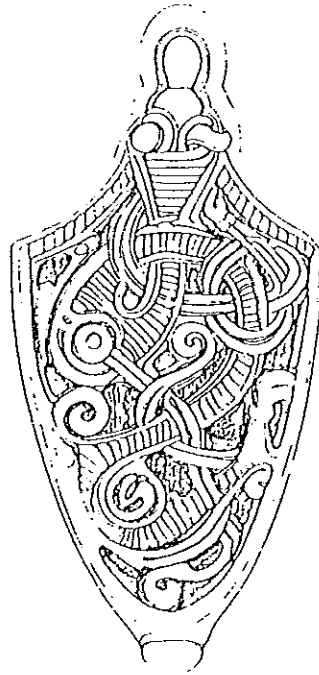
SCABBARD FITTINGS.

Chape of a sword  
scabbard from  
Hafurbjarnarstadir  
in felling style

from Danilovka, in the province of Sara



YORK CHAPE



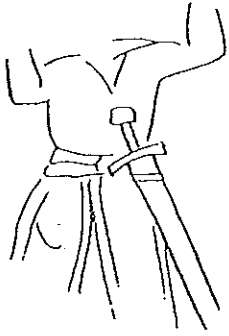
Back of Scabbard from an  
Ebbeson carving - Note  
LEATHER SEAM UP MIDDLE OF  
BACK OF SCABBARD, THE  
NORMAN style belt fitting  
near the top, the open  
back chape and mouth  
piece.

A VANDAL PERIOD  
CHAPE SIMILAR TO  
THE EBBESON  
CARVING from  
Brightampton.

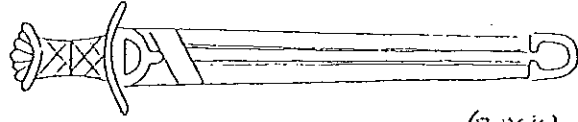


SWORD FITTINGS

- Norman style belt fittings



ON THE BAYEUX TAPESTRY  
THE FITMENT IS NOT CLEAR  
BUT APPEARS TO BE DIRECT  
ON TO THE BELT.



(BACK)

THE ERBERSTON CARVING- THOUGH DETAILED  
IS EQUALLY UNCLEAR. THE DIAGONAL STRIPE  
CORRESPONDS TO THAT ON THE BAYEUX  
TAPESTRY AND ALSO APPEARS TO COVER THE  
LEATHER SEAM SO PERHAPS THE 'STRIPE'  
IS ALTOGETHER SOCKET THROUGH WHICH THE  
RALDIR IS PASSED.



ON TWO OF THE LEWIS  
CHESS MEN (11) THE SEAMS  
WOULD APPEAR TO RUN UP  
THE FRONT OF THE SWORD SCABBARD.  
HOWEVER, THE DIAGONAL  
FITMENT STRIPES APPEAR  
SIMILAR (LEFT) TO THOSE ON  
THE TAPESTRY + CARVING (ABOVE)

SWEEP FITTINGS - SIDE SUSPENDERS. II VIKING PERIOD



NOTE THE BALDRIC  
FIXED ON THE FRONT OF  
THE SCABBARD WHILST A  
SECOND LOOP SLIDES  
FURTHER DOWN  
FROM THE UTRECHT PSALTER  
FRISIAN.

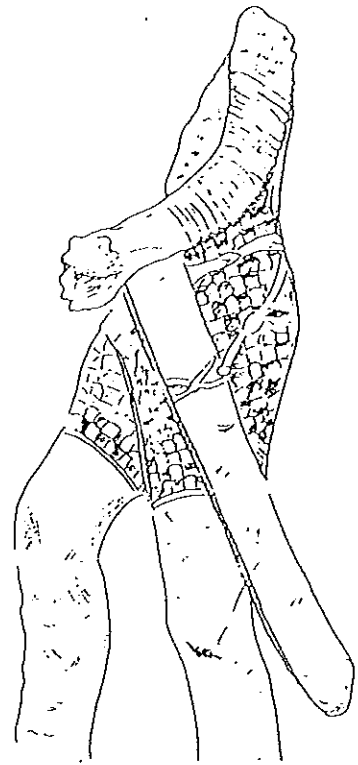
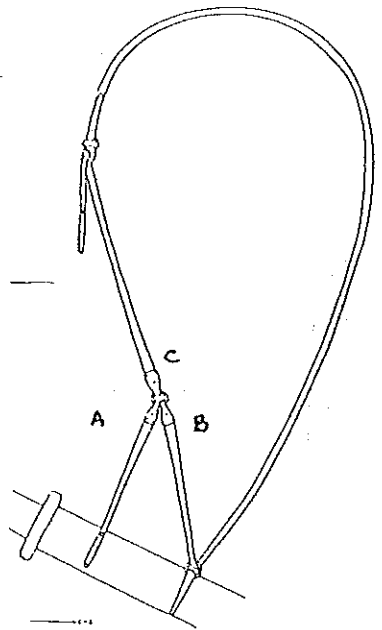


Figure from a stone frieze, Winchester  
SAXON

SPLIT SUSPENSION  
- TO THE BACK AT THE TOP  
TO THE FRONT LOWER DOWN

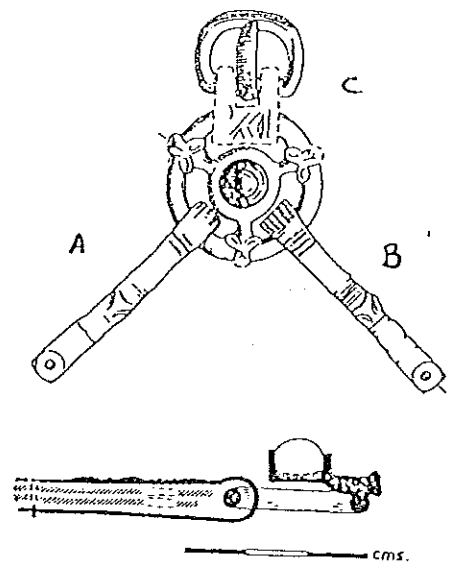


ANOTHER SPLIT  
SUSPENSION BUT  
WITHOUT A BALDRIC  
POSSIBLY THE STRAPS  
WENT STRAIGHT ONTO  
THE BELT.  
FROM LOTHAIR GOSPELS  
FRANKISH



Suggested sling for the Ballateare sword.

Note the similarity with  
both the Frisian and  
Saxon side slings  
Also that on the Meax  
example above the lower  
loop along the baldric  
to 'slide'.



Bronze strap-distributor from Crook Moor.

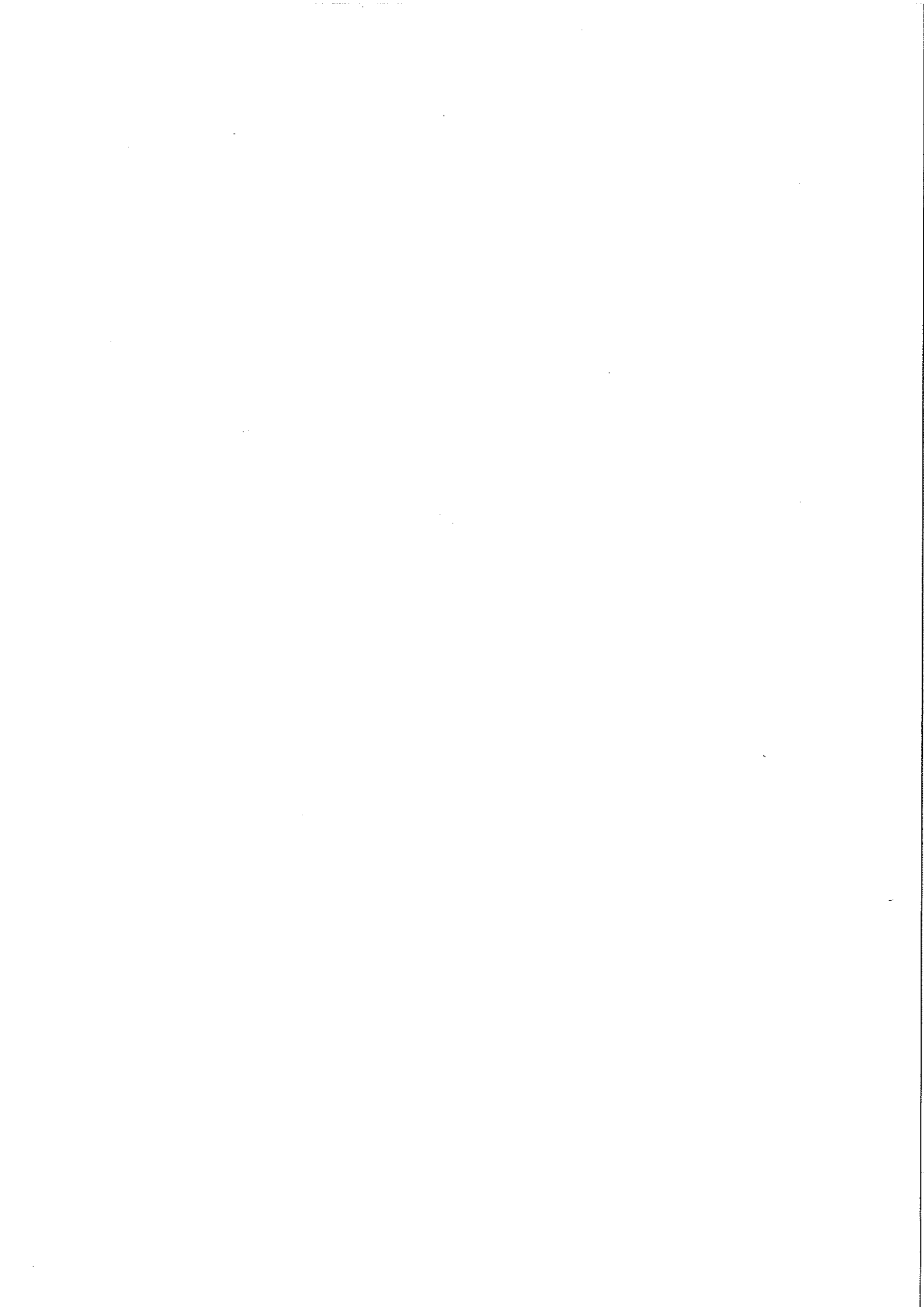
Note the similarities in  
the strap distributors in  
the two Norse swords.  
The Ballateare baldric appears  
to have joined high upon the chest  
whilst the Meax baldric had  
a buckle near the waist.

## References

- Book of "The Vikings in England Exhibition"
- Booklet of "Jorvik Viking information pack"
- T. Wise - Saxon Viking & Norman - Osprey
- H.R. Ellis Davidson - The sword in Anglo Saxon England - Oxford Univ. Press
- A. Mac Gregor - Bone, Antler, Ivory + Horn. - Croom Helm
- G.O. Crocker - Dress in Anglo Saxon England. - Manchester Univ. Press
- 2) M. Taylor - The Lewis Chessmen - B.M. Pubs.
- 1)+2) V.W.G. van Waateringe - Die Lederfunde van Haithabu - Neumünster
- 4) Gerhard Bersu - 3 Viking Graves in the Isle of Man.
- R. Hall - The Viking Dig - Bodley Head.
- J. Cowgill - Knives + Scabards - HMSO
- E. Moltke - Runes
- Magnus Magnusson - Viking Expansion - Bodley Head.
- A. Mac Gregor - The small finds from York - 17/3 - Ebor Press
- D. Tweedle - The small finds from York - 17/4 - Ebor Press
- J. Lindan - Myths + Legends of the Vikings - Bellerophon Books.
- 6) Twee Saxsheden uit noord - Nederland

### DONORS OF MATERIAL (THANKS TO:)

- 1) OLEG ZACHAROV 2) BOB DAVIES
- 3) JUSTIN FINLAY 4) DON FELTON
- 5) PETER ASHBY 6) GLENYS MORGAN



# OLD SOCK

Interim Vol 8 no2.  
by Penelope Walton.

7

Over the last few years a steady flow of leather boots and shoes from the

Coppergate excavation has passed through the trust's conservation laboratory.

While watching the treatment of this vast amount of footwear, I have occasionally

wondered what, if anything, was worn between the shoe and the foot - a question

given especial relevance in the present weather conditions. An answer to this

problem was finally provided in the last few weeks of the excavation with the discovery of a well-preserved group of textiles

in a 10th-century cess-pit, and we can now say that at least one of York's Vikings

wore woollen socks, or possibly stockings, under his (or her) boots.

The find consisted of an almost complete but well worn sock which appeared to

reach up only to lower ankle level (Fig 1). The toe and upper part of the foot are

still intact, but the heel has almost totally disappeared, with only a small area

of shaping indicating its presence. The side of the ankle has been torn, which

makes it difficult to measure the exact length of the foot, but it was probably originally 26-28cms long (modern shoe size 6½-7½); the breadth of the widest part, in

front of the ankle, is 11.5cms when flattened out. There is a second area of wear across the ball of the foot and it is clear that at some stage a rectangular repair was

stitched round the foot to cover this hole. Unfortunately only the stitching for this patch has survived, most probably because the repair patch was of a vegetable material,

such as linen, which decays much more rapidly than animal fibres in waterlogged deposits. The sewing thread, being of wool, as is the rest of the sock, survived in

excellent condition and marks the outline of the patch.

The technique in which the sock is made is well-known in Scandinavia and is usually known by either its Danish name *naelbinding* or the Swedish term *naelbinding*. These

literally mean 'needle-binding', although they are sometimes translated as 'looped needle-netting'. Naelbinding is worked with a needle with an eye large enough to take

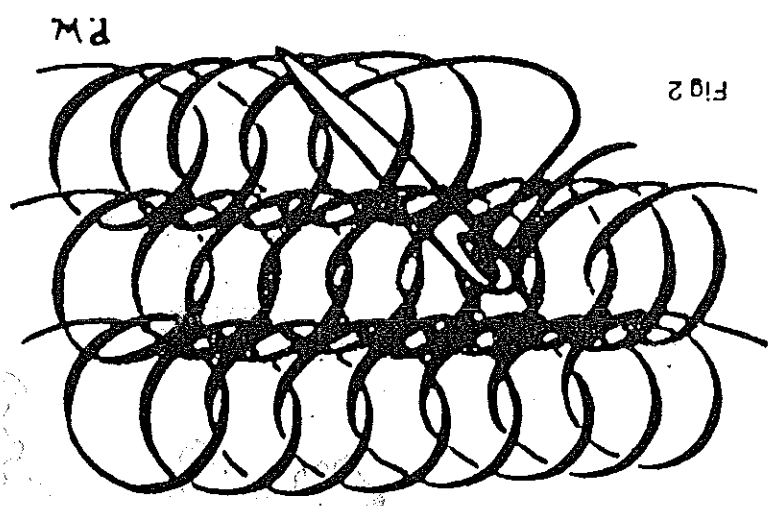
a fairly thick two-ply yarn (several bone needles suitable for this purpose have been

Although naelbinding is almost unknown in this country, it has a long history by no means restricted to Scandinavia, finds being recorded as far away as Peru and New Guinea. The earliest finds are a mitten from Asle Mose in Sweden, dated to the first few centuries AD, and a 4th-6th century AD sock from Egypt. From the Viking period there are finds of wool mittens from Finland and Iceland, and a 9th-10th-century silk cap (probably Arabian) from Antioch has been found to be worked in the same naelbinding stitch as was used for a panel of gold work in a 10th century fillet from Mammen in Denmark. There are medieval examples of wool naelbinding mittens from Sweden, Finland and Denmark, and other finer garments in various fibres from medieval France, Italy and Germany appear to be in the same technique, although this last group of finds have not been studied in detail or their method of construction positively identified. Naelbinding is still in use in several countries, mainly in Scandinavia but also, for

One advantage of naelbinding ---- the garment can be tried on regularly while it is being made and shaping added as it becomes necessary. The work can be finished at any stage, by tucking in the loose end, and it is therefore not impossible that the sock top, which ends just below ankle level, originally continued upwards into a stocking leg which has since been torn away: unlike knitting, for instance, the work does not unravel if a tear or broken thread occurs. The major disadvantage of naelbinding, when compared with other 'single element' techniques such as knitting or crochet, is that it cannot be worked from a continuous ball of wool, but has to have new, relatively short, lengths of yarn joined in at regular intervals. There were no obvious knots in the Copergate sock, so presumably the thread has been neatly spliced.

The work is started by making a series of these stitches round a central loop of thread at the toe and continuing in rows of loops, round after round. Where the shape requires an increase in the number of stitches in a row, two loops of the current row are worked into one lower stitch; similarly, to decrease, a lower stitch can be omitted. At the heel the row of loops turns back on itself several times to produce an elliptical gusset.

Found on the Copergate site). As can be seen from Fig. 2, which illustrates the particular stitch in which this sock is worked, the needle, held in the right hand, is inserted into the row below and then picks up the last two loops of the current row. It is then pulled through and the loop thus formed drawn to the correct size. This new loop is kept in place by the thumb of the left hand while the next loop is being worked.



# OLD SOCK

interim Vol 8 no2.

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A 7

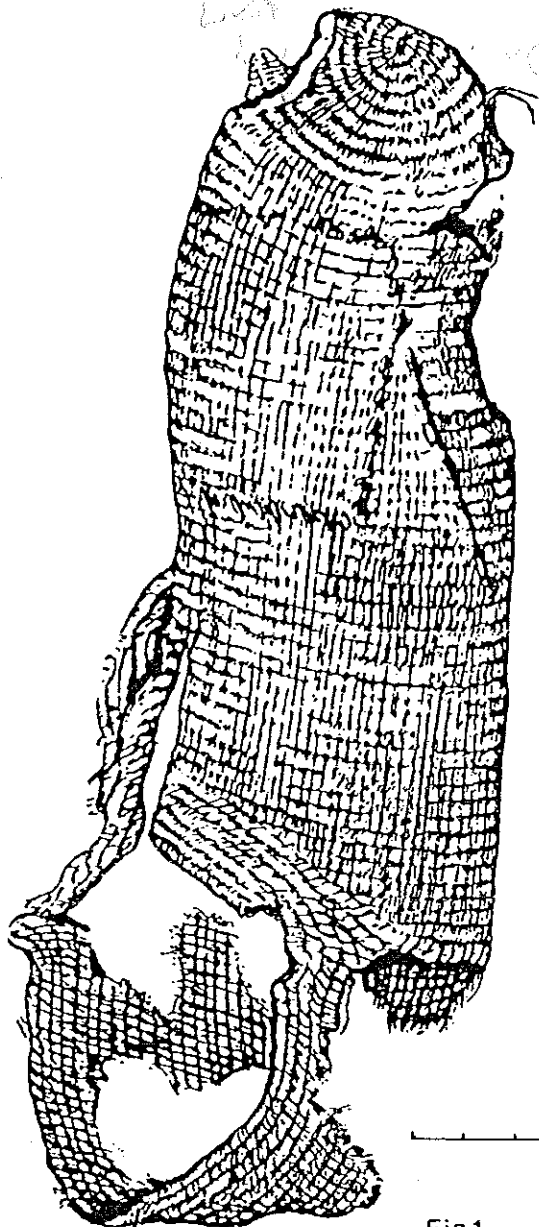


Fig 1

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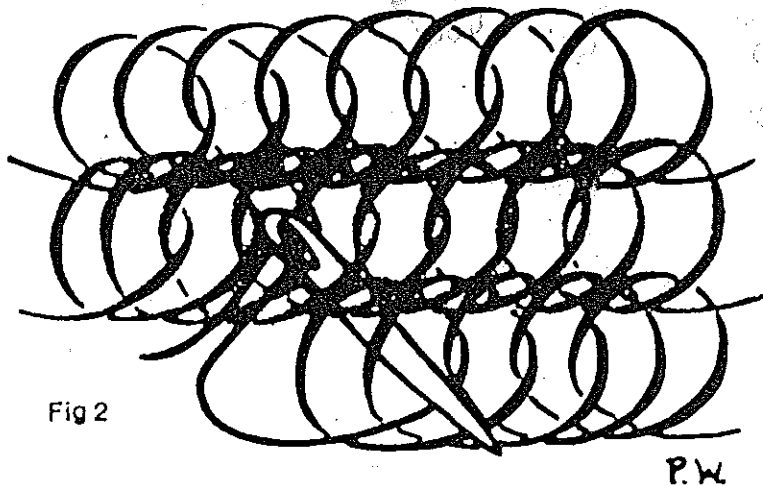


Fig 2

P.W.

found on the Coppergate site). As can be seen from Fig.2, which illustrates the particular stitch in which this sock is worked, the needle, held in the right hand, is inserted into the row below and then picks up the last two loops of the current row. It is then pulled through and the loop thus formed drawn to the correct size. This new loop is kept in place by the thumb of the left hand while the next loop is being worked.

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## **Anglo-Saxon Tunics: a brief study.**

Chris Huff. B.A. P.G.Dip.

This short piece is primarily designed to inform the reader of the style of Anglo-Saxon tunics, their construction and materials used, and a brief commentary upon their decoration. It will be immediately obvious that this work is male costume oriented, an admitted short coming which may be amended in a subsequent articles on Anglo-Saxon costume. I have used two main sources for the information below, that of Phyllis Cunnington's "A handbook of medieval costume" and C.R. Dodwells's "Anglo-Saxon Art - A new perspective". It is my hope that the reader may become interested in the subject of researching costume, and a comprehensive series of articles thereby published.

At present within the society there is a lack of understanding of the differences between Anglo-Saxon and Viking costume. It is conspicuous at any society event that a Viking and a Saxon look identical, with a few minor cosmetic differences. Both are clad in identically shaped tunics, with the ubiquitous and seemingly obligatory tablet braid decoration at the cuffs and the neck, and in extreme cases at the bottom hem, on the legs as gartering and on the sword as a peace-strap. The materials used are mostly wool of plain tabby weave, or linens of plain weave (cottons in extreme cases), which give the overall appearance of drabness, whilst furthering the myth that clothes in the medieval period were simple, coarse and largely plain. It is my contention that this myth needs to be shattered, in the way that the notion of wearing horns on helmets has been, by a demonstration of authentic Anglo-Saxon kit by the society to the public.

I do not propose to delve into the complexities of the standard Viking wear, if indeed anyone can propose a standard Viking costume when considering the geographical diversity and ethnic identities involved in the generic term Viking. Although I have a reference to a Dane in the reign of Edward the Confessor who was dressed in a sheepskin garment which stretched to his feet, who was considered to be "handsomely attired": the fact that he had the opulence of bracelets on each arm and a gilded axe may have influenced the Anglo-Saxon eye somewhat.

For the Anglo-Saxon however, being a geographically isolated and politically discrete culture, there are codes of dress to be observed for the individual to adhere to within that society. Furthermore there are styles of decoration and the methods of decorating the garments which are Anglo-Saxon and not Viking, and vice-versa.

The materials used in the construction of Anglo-Saxon garments varied according to the social position and wealth of the individual. An excellent work on the subject of costume in the Tenth to Eleventh Centuries, though by no means comprehensive of the field, is that by Phyllis Cunnington (1968). In this handbook the styles of the various elements of the Anglo-Saxon costume are given, with the proper terminology for the garments and clearly identified illustrations. The description of the tunic, is taken from this source, with some insertions of my own.

### The Anglo-Saxon Tunic.

The Tunic is worn over the undershirt, of linen or silk, and under the overtunic (Roc), of linen, silk or wool, and may be categorised in the following way.

#### **Length.**

- A. Short in length, to about the knee or slightly above, being on some garments slit at the sides to facilitate better mobility.
- B. Long, flowing, ankle length, ceremonial garments worn by the nobility on special occasions.

#### **Neck shape.**

- A. Large round aperture sufficient in size to allow the head to freely pass.
  - B. Smaller round shape with a slit at the front.
  - C. Square in shape, either large or with a slit.
- The slit has an area of decoration which is usually rectangular or triangular in shape, executed in silk and decorated.

#### **Sleeves.**

- A. Tapering down the length becoming close fitting at the wrist, and having many folds at that point. This indicates that the length of the sleeve was constructed to be longer than the arm.
- B. Loose and open at the wrist with the long tunics.

### **Decoration.**

This was in the form of embroidery at the neck, hem, sleeves and on the garment itself, the beauty of the embroidery was famed throughout Europe. There is little evidence that tablet braid was used to decorate Anglo-Saxon costume except on the poorest of garments.

The style was either a late Trehiddle or more commonly the emerging Winchester style with acanthus leaf predominating.

The embroidery was executed in silks, gold and silver wires and sometimes precious stones. Dodwell (1982) comments.

" On the whole, in Anglo-Saxon society, wealth and rank were indicated not by the style or fashion of dress but by its quality and by the costliness of its adornments."

The decoration of these garments took many forms and involved precious gems and metals. There are references to elaborate patterns, to stars, crescents and great circles in gold, to a chequering effect created by gems and gold and the ever present acanthus leaf in gold. Anglo-Saxon dress, for the wealthy, directly reflected that wealth.

### **Materials.**

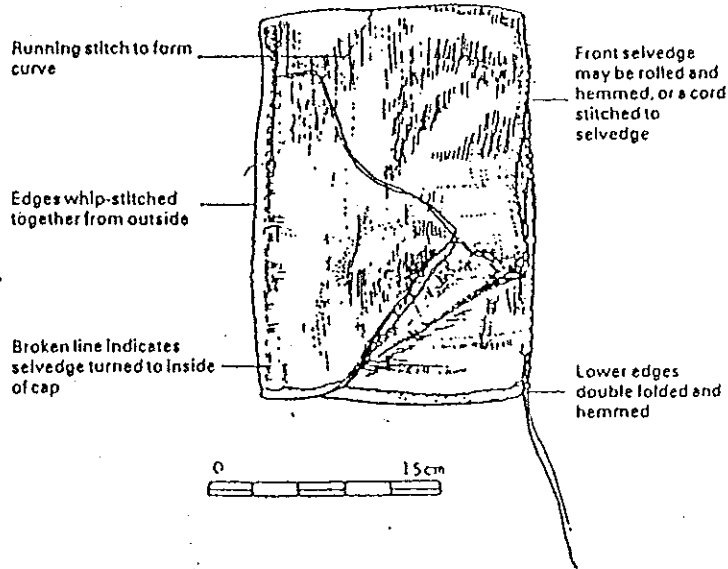
Wool was the material for the peasantry whilst the nobles utilised Linens and silks, using wool only for winter garments. Fur was also much evidenced for capes and stoles, linings to cloaks and trimmings to winter garments. The wealth of the individual dictated the quality of the fabric, the poorest contending with coarse wool, the affluent dressed in silk. Dodwell (1982) comments that.

"Imported silk, as we have seen, was used by the Anglo-Saxons for particularly costly garments and vestments. This must have added richness of colour and delicacy of texture to both. And also a much needed variety, for neither changed very much during the Anglo-Saxon period. .. the chief method of diversifying garments for those who could afford it was by decorative embellishments. Stripes and trimmings in purple and other colours gave variety to some of the secular garments. Others were enhanced by delicately embroidered patterns, which are often seen in manuscript paintings and drawings of the tenth and eleventh centuries. However, in the centres of wealth the enhancement common to both secular and religious attire was gold embroidery, supplemented on rare occasions by pearls and jewels."

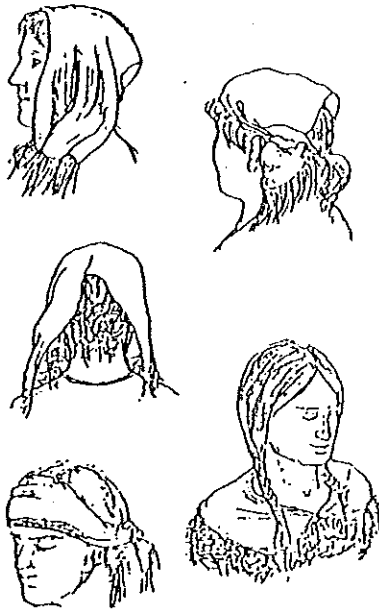
Whilst silk, both plain and woven with designs, was undoubtedly held in high regard by the Anglo-Saxons, the highest prize was a fabric called Purpura. Some have identified this as merely meaning purple in colour, however the evidence points to it being a fabric for there are references to red, white, green and black purpura.

The qualities of the fabric are that it had the gleam of light, it was lustrous like silk but clearly different from ordinary silk, it was of more than one colour and it was a thick material. This is a perfect description of a material we have today; namely shot silk Taffeta

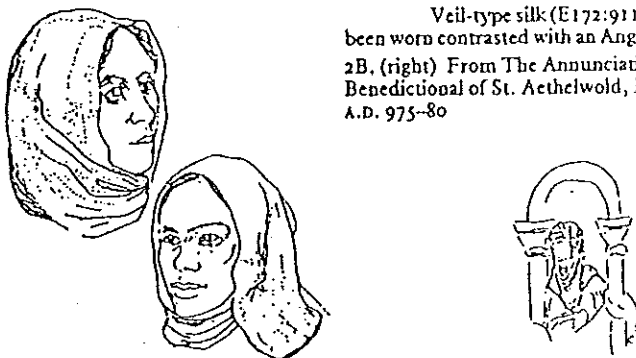
I hope to have demonstrated in this piece that there are obvious traits which identify the Anglo-Saxon costume, although I have only concentrated on the tunic. The materials of which, for the peasantry may be coarse in texture, plain, or rustically decorated with braids, whilst the wealthy within society wore exquisite fine materials, a costume adorned with silk, gold, silver or colourful embroidery decoration at the hems and on the body of the garment. Consider that William, according to the Histoire of Guillaume de Poitiers, upon returning to Normandy after the conquest paraded the costumes of the Anglo-Saxons, whereupon the Normans were much astounded by the opulence displayed and thought that they rendered worthless anything they had seen before. Such was the splendour and richness of Anglo-Saxon dress.



Details of generalized cap pattern, cloth folded double and stitched at back to form cap with average dimensions circa 450 mm x 160 mm.

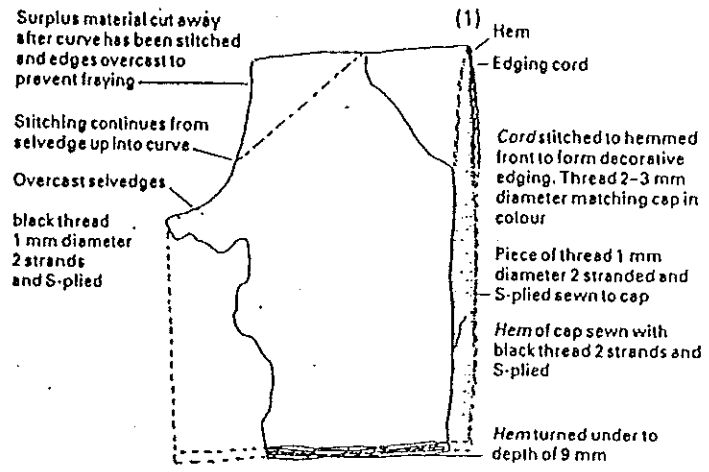


Different ways of wearing knotted silk scarf (E172:15348)

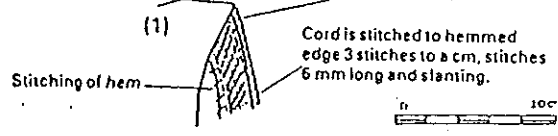


Veil-type silk (E172:9115) as it might have been worn contrasted with an Anglo-Saxon headcloth. 2B. (right) From The Annunciation from the Benedictional of St. Aethelwold, Bishop of Winchester, A.D. 975-80

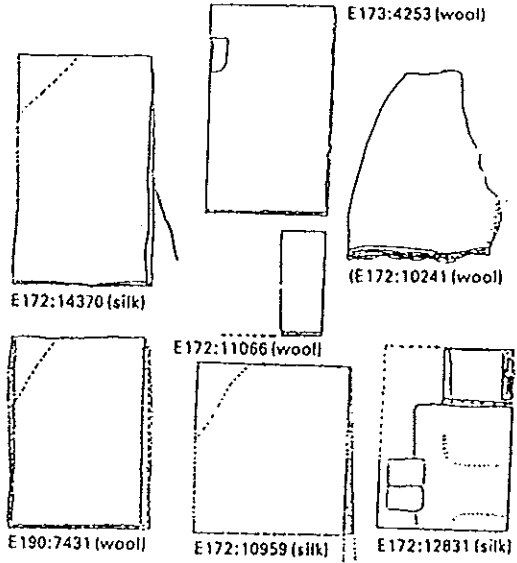
Reconstruction of Wool CAP formed by folding double a rectangular piece of open tabby weave originally circa 49 cm x 18.5 cm.



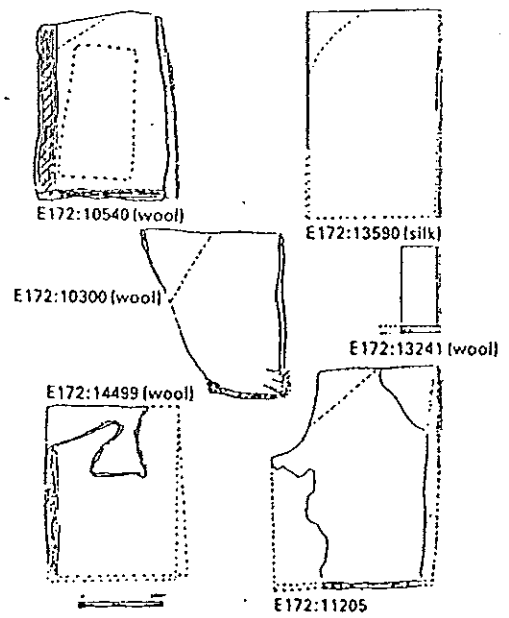
Self coloured cord very dark brown is made from six strands 1 mm each in diameter 2-plyed together, each strand being made of 2 threads S-plyed.



Possible ways of wearing lightweight silk cap E172:14370



Reconstruction of silk or wool cap.

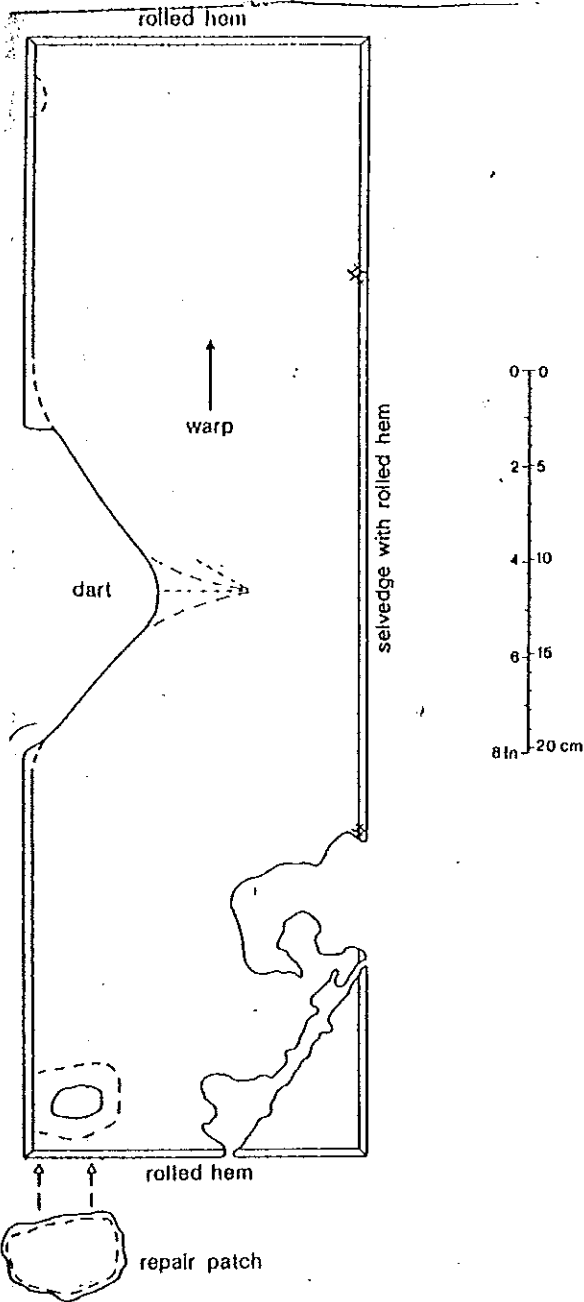


Scarf and band worn together as headcovering.

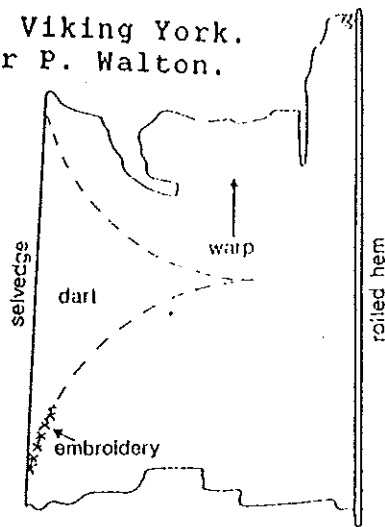
After E. Hecket, Textile history.

Wool and silk caps and cap fragments from Fishamble St. John's Lane, Dublin.

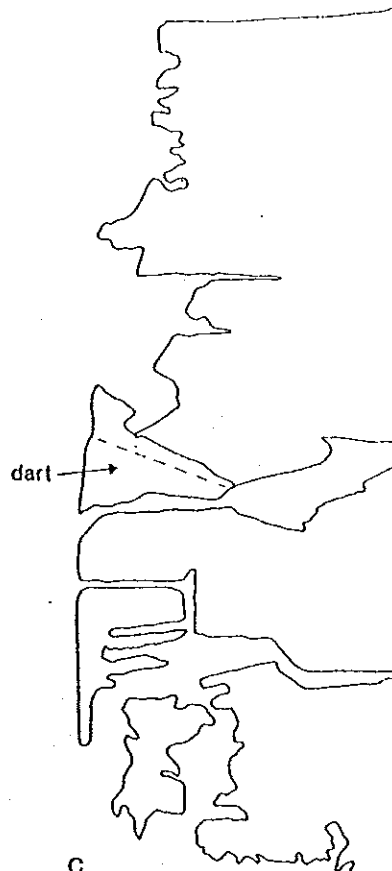
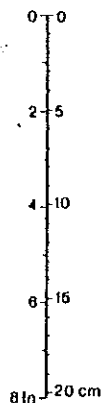
b) from Viking York.  
After P. Walton.



a) from Viking York.  
After P. Walton.



b



c

c) from Lincoln.  
After A. Muthesius

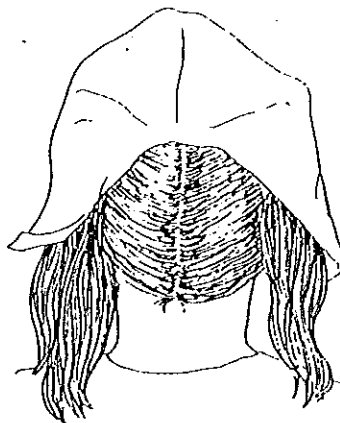
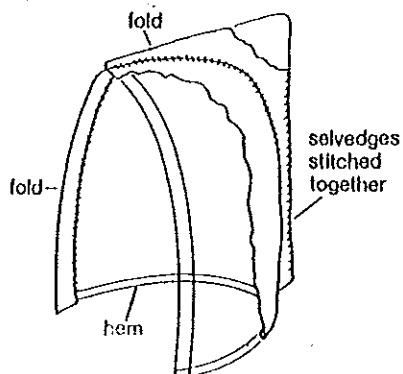


Reconstructions  
of the York cap.  
After P. Walton.



After P. Walton,  
Textiles, cordage  
and raw fibre;  
and G.O. Crocker,  
Dress in Anglo  
Saxon England.

Reconstruction of a child's cap,  
from Viking York. After P. Walton.



The Lincoln cap (after A. Muthesius)

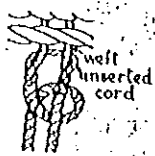
Reconstruction  
of the Lincoln  
cap. After A.  
Muthesius.

ORKNEY HOOD

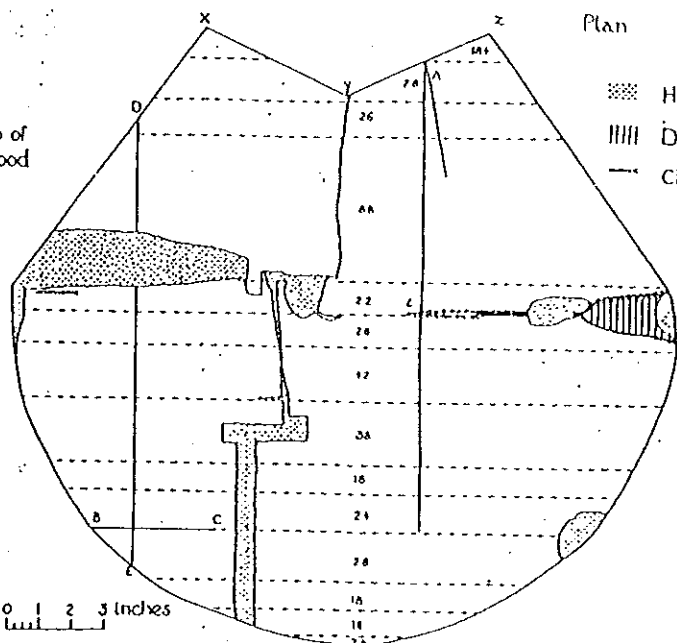


Embroidery

Thread joining top of upper band to hood

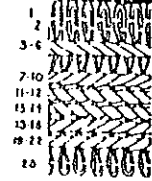


Knot at top of cord

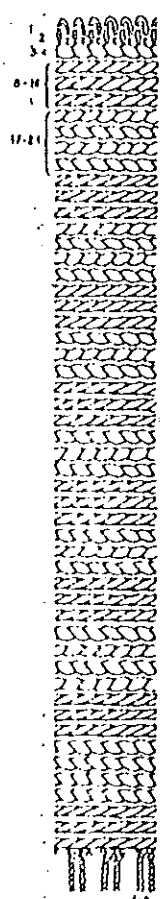


Plan

- Holes
- Darn
- Chain stitch



Upper band



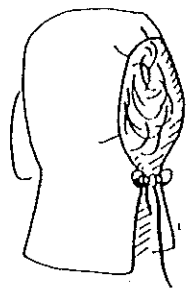
Lower band



Knot at bottom of cord



Thong



Modern Swedish Hilka or Flax, after Lindstrom.



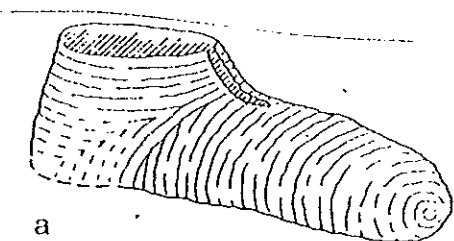
Hilka, after Odstedt 1953.

After P. Walton, Textiles cordage, and raw fibre; and S.Henshall, Early textiles in Scotland. PSAS 1951.

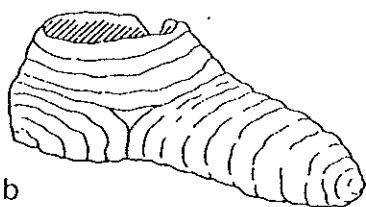


a

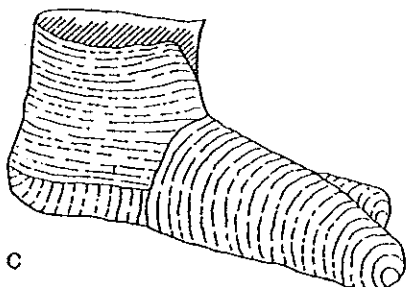




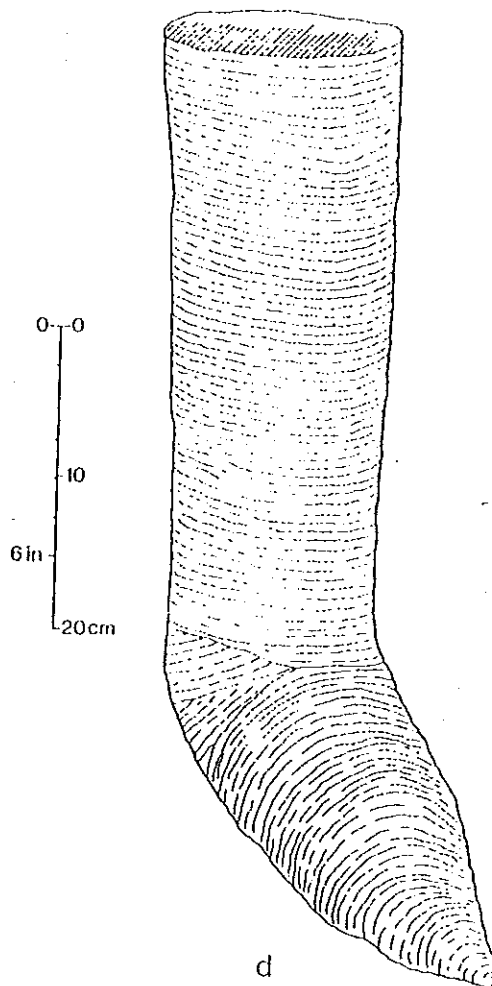
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b



c



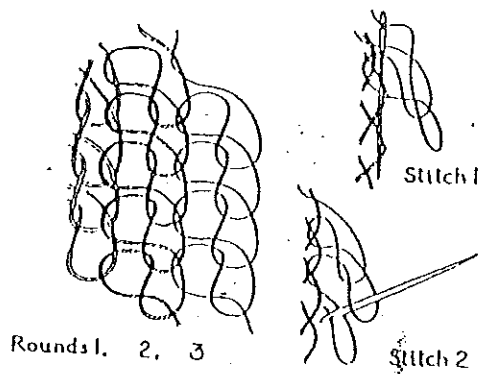
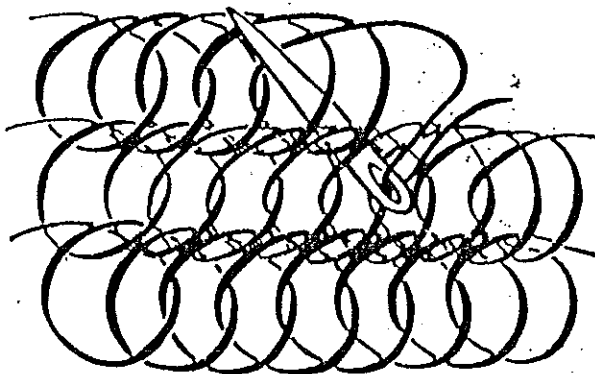
d

a) from Viking York.  
After P. Walton.

b) from Medieval Uppsala.  
Swedish. After Franzen 1963.

c) from C4-6. Egypt.  
After Burnham 1972.

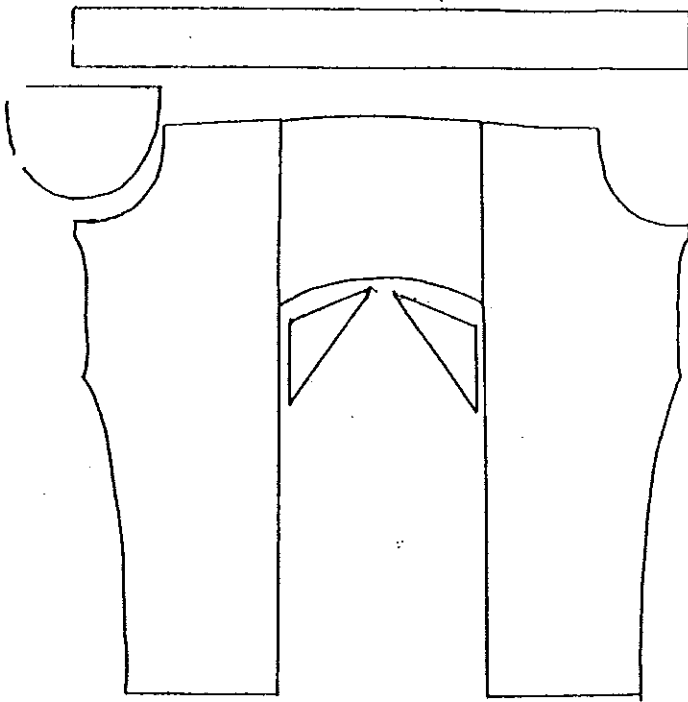
d) from C12. Delement.  
Swiss. After Schmedding 1978.



The York sock had been constructed using the above naalbinding technique. A thick needle, ( usually of bone ) worked the yarn round and round in loops. Shaping the sock was achieved by adding or reducing the number of loops in a row. The heel section was added as a separate piece, whilst all loose ends were sewn in.

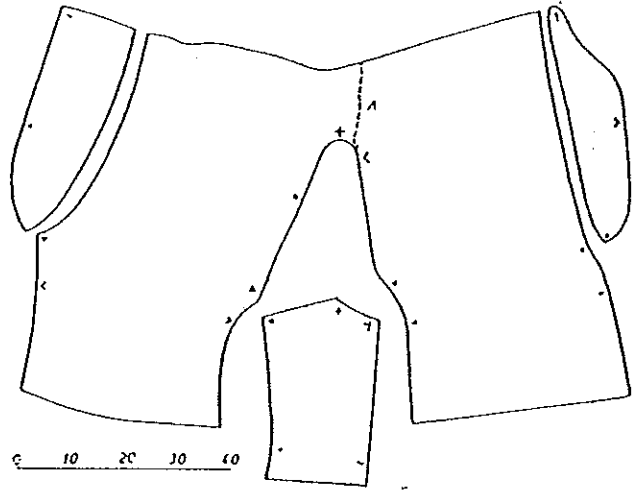
A similar technique of naalbinding was used on the Viking age hood, from the Orkney isles, above.

After P. Walton, Textiles cordage, and raw fibre; and S. Henshall, Early textiles in Scotland. PSAS 1951.

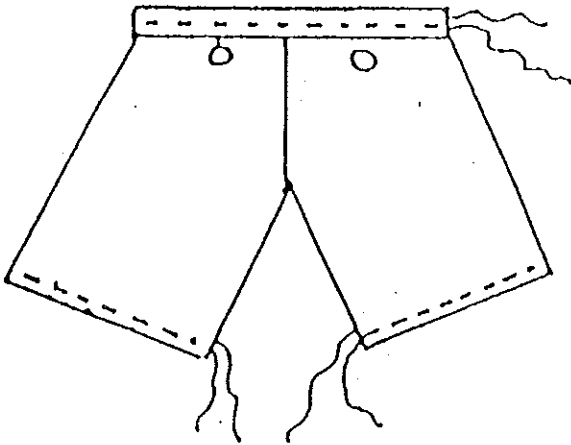


MH + RS  
0 5 10 20 30 40

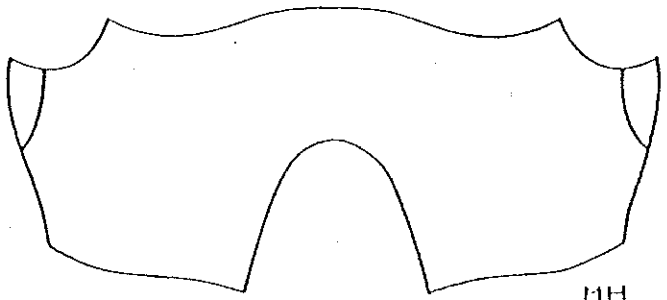
Damendorf trousers.  
Migration period.  
After M.Hald, Ancient  
Danish Textiles.



Daetgen trousers.  
Migration period.  
After M.Hald, Ancient  
Danish Textiles.



Saxon Breeches.  
English C.1100.  
After: M.G.Houston  
Medieval costume



Angmagssalik trousers.  
Polar bear skin.  
Greenlandish C.1300?  
After M.Hald Ancient  
Danish Textiles.  
Note the similarity  
to the Daetgen trousers.