

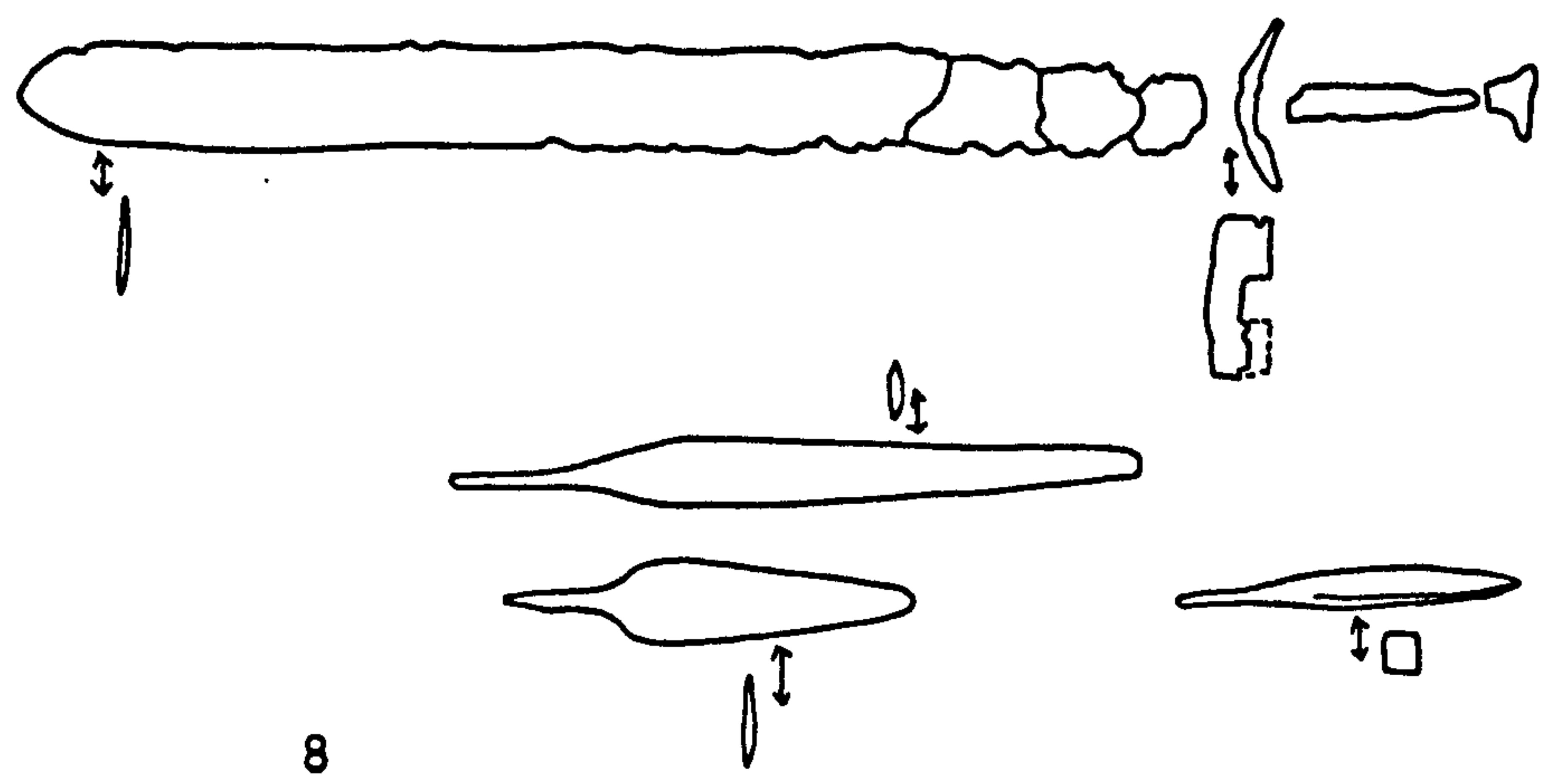
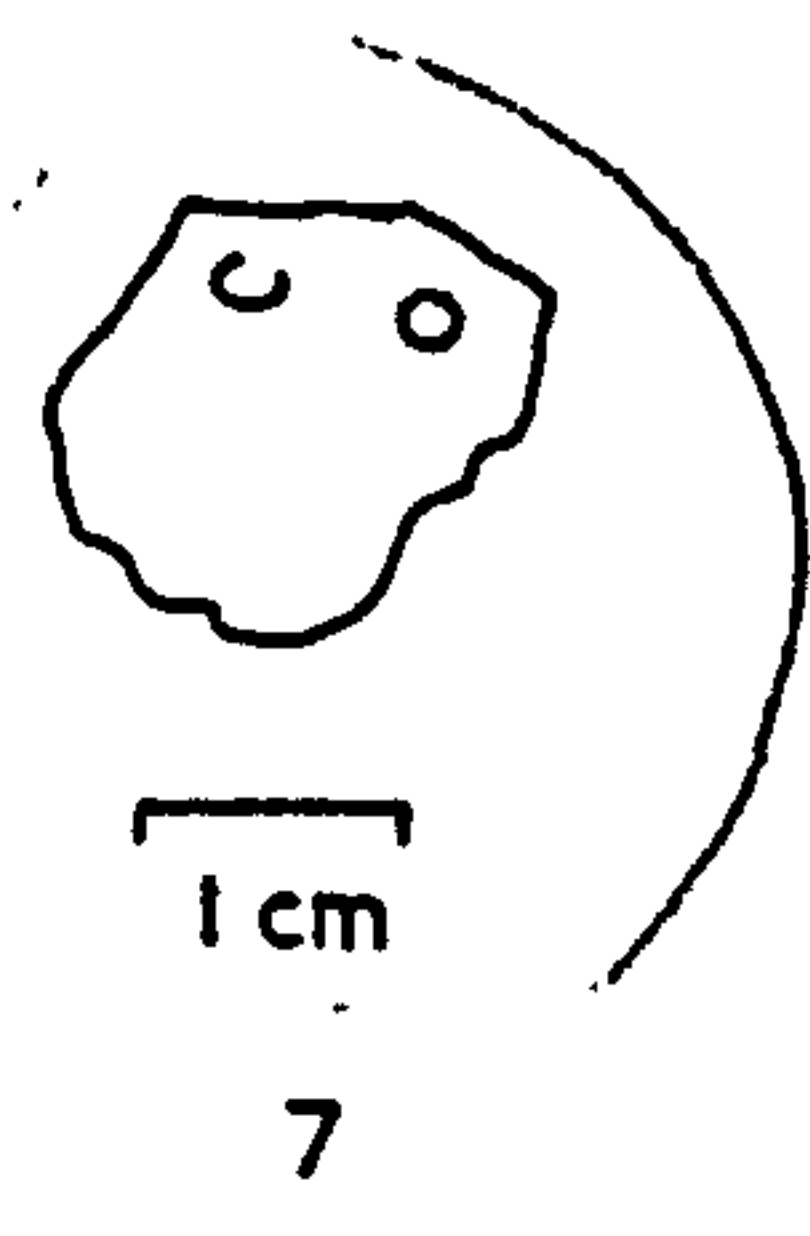
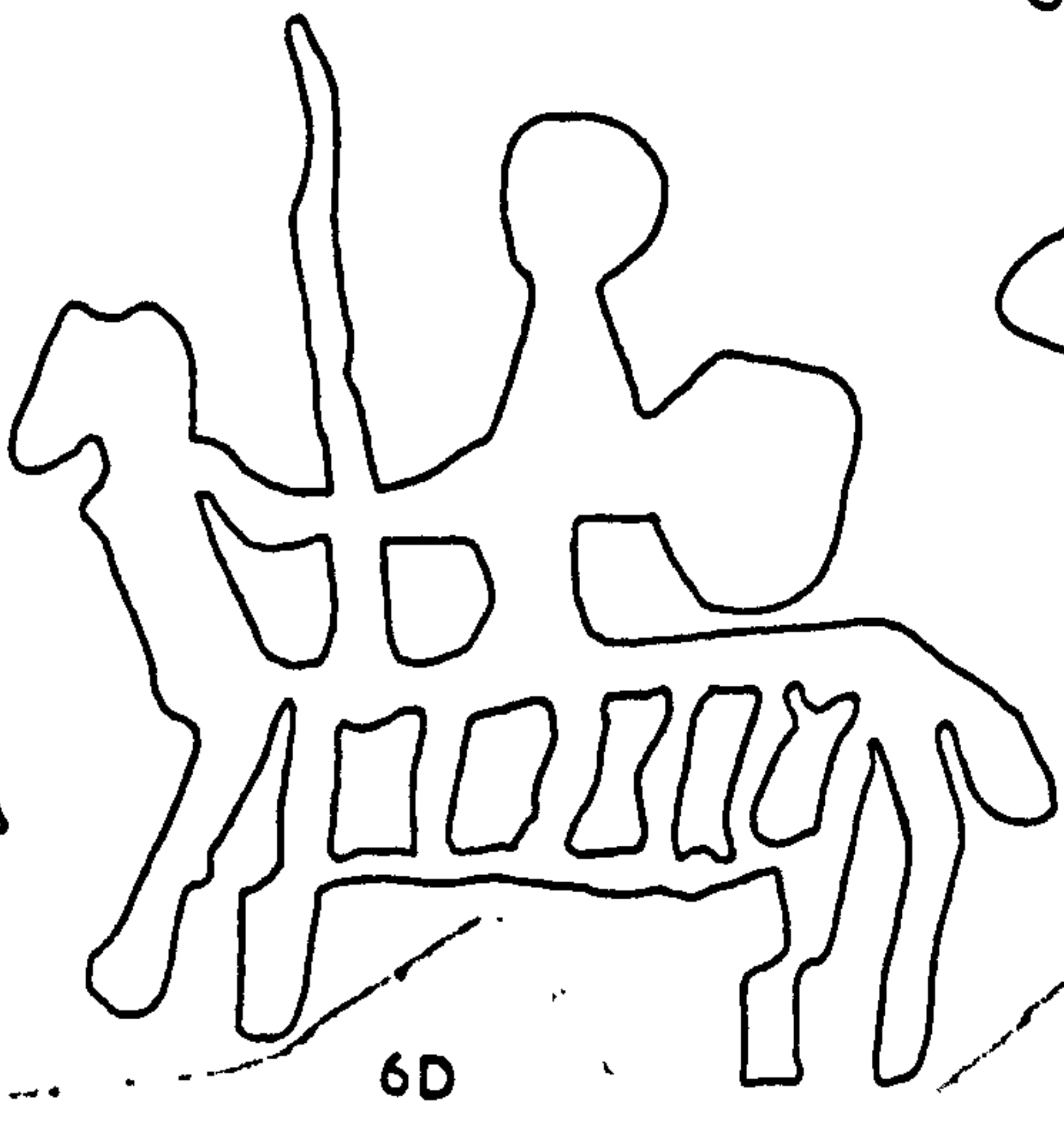
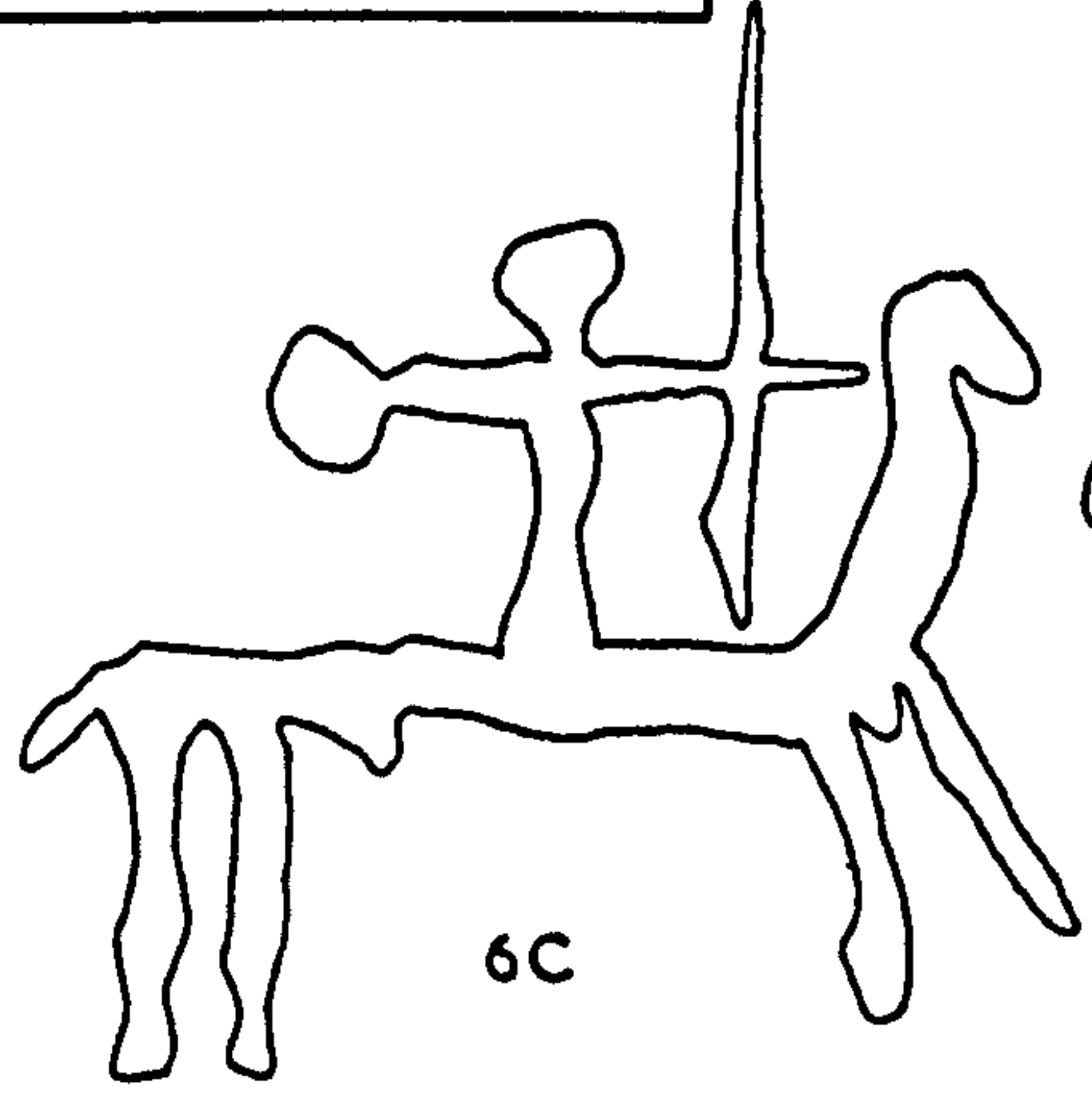
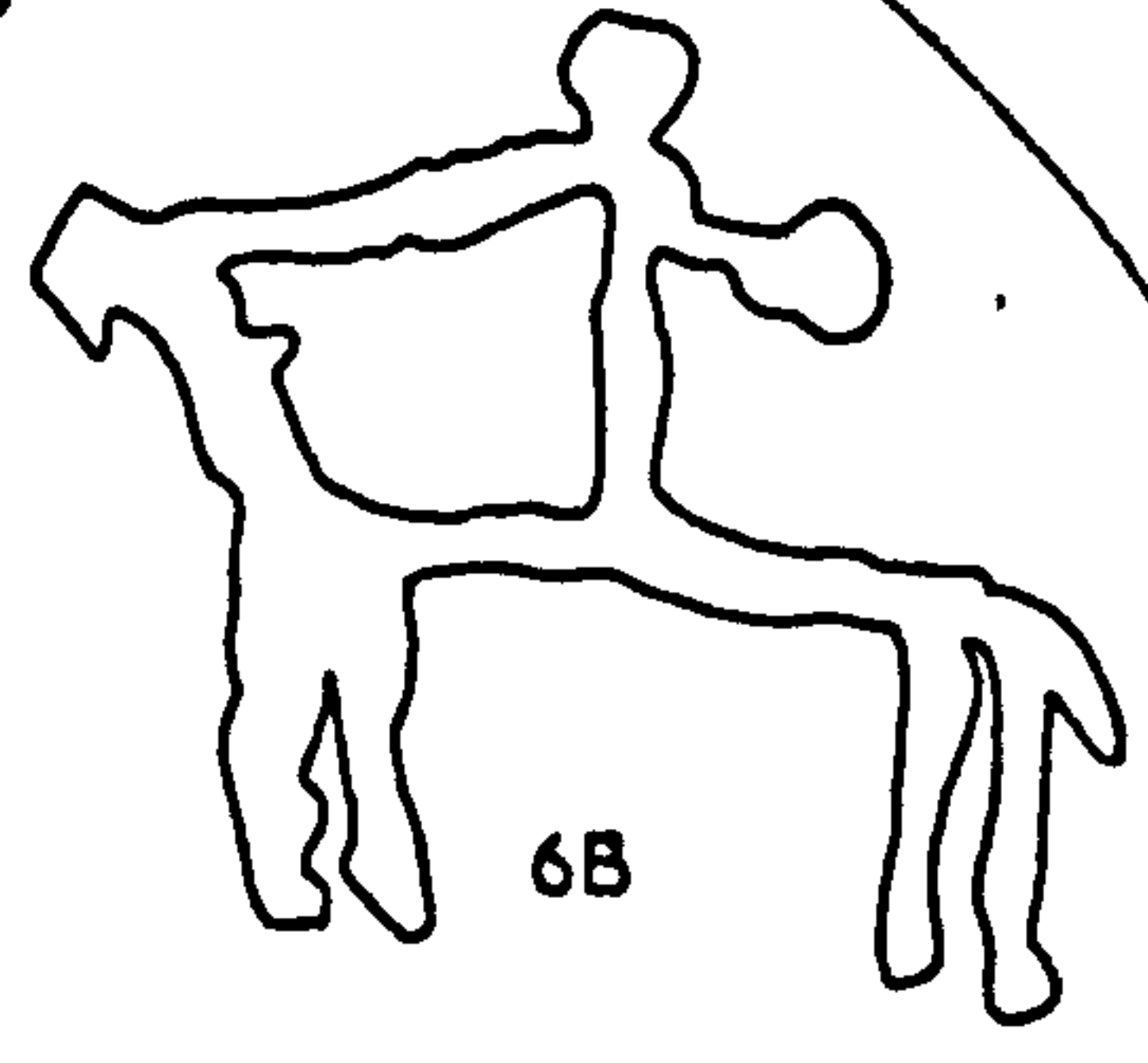
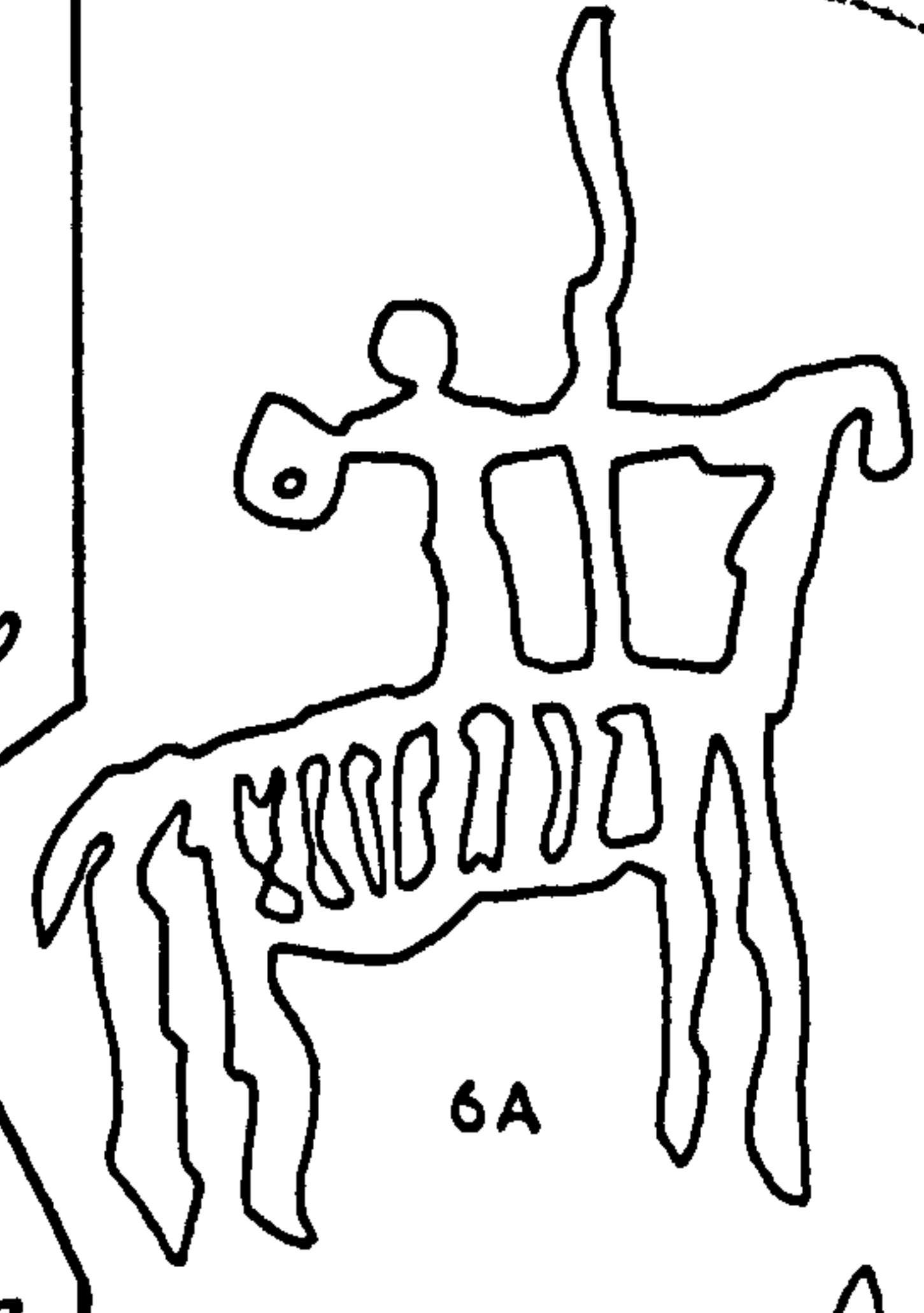
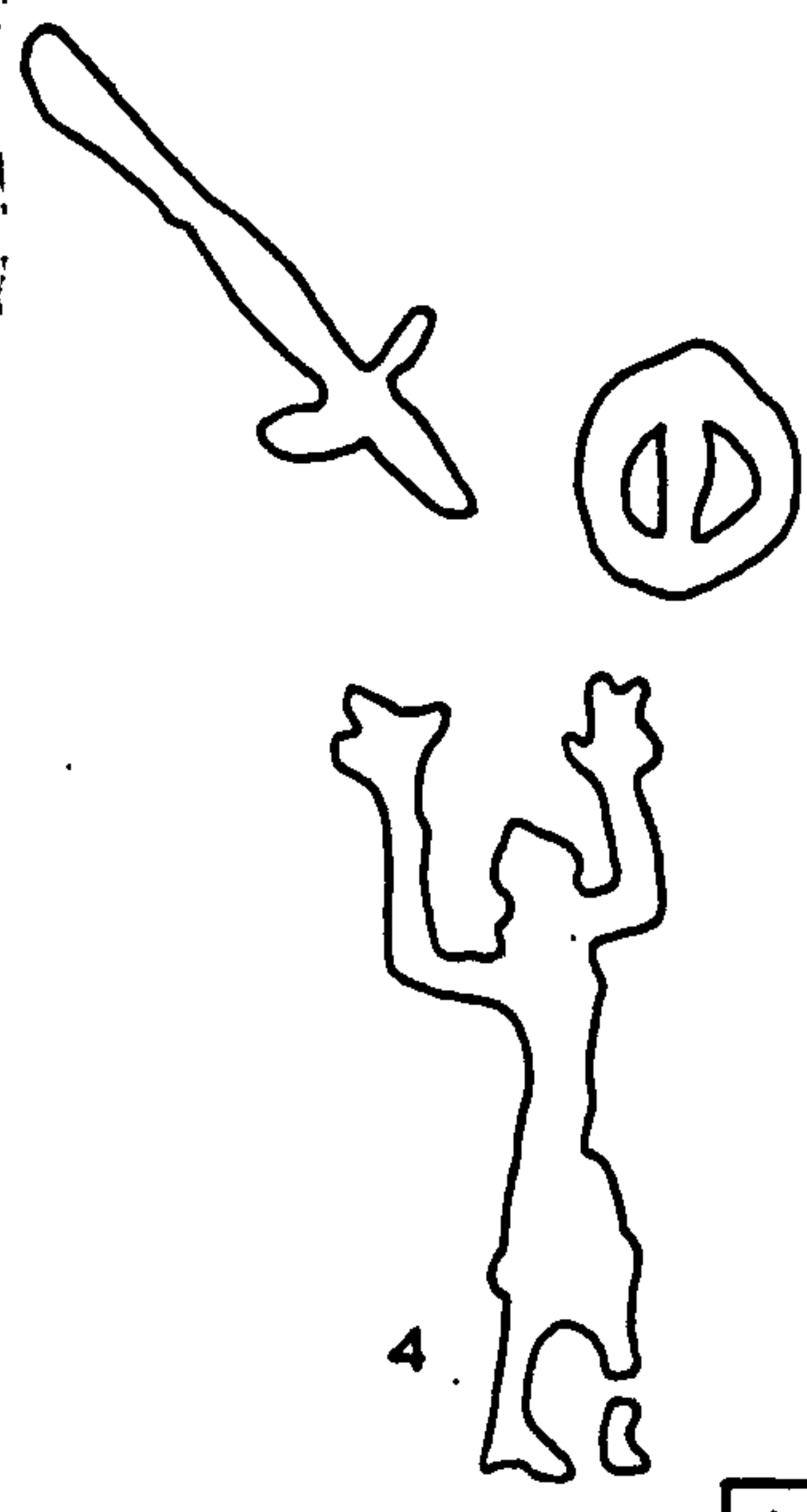
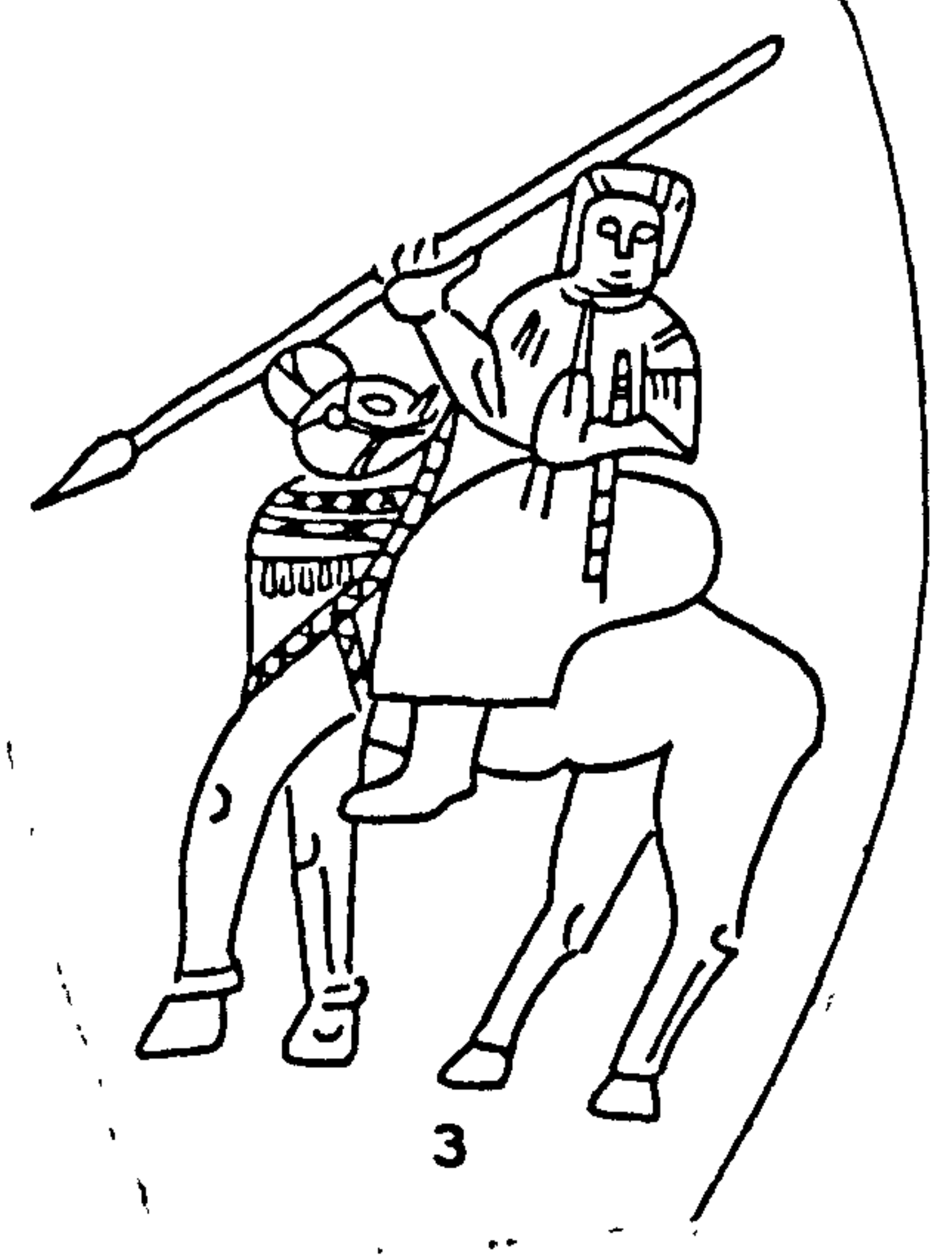
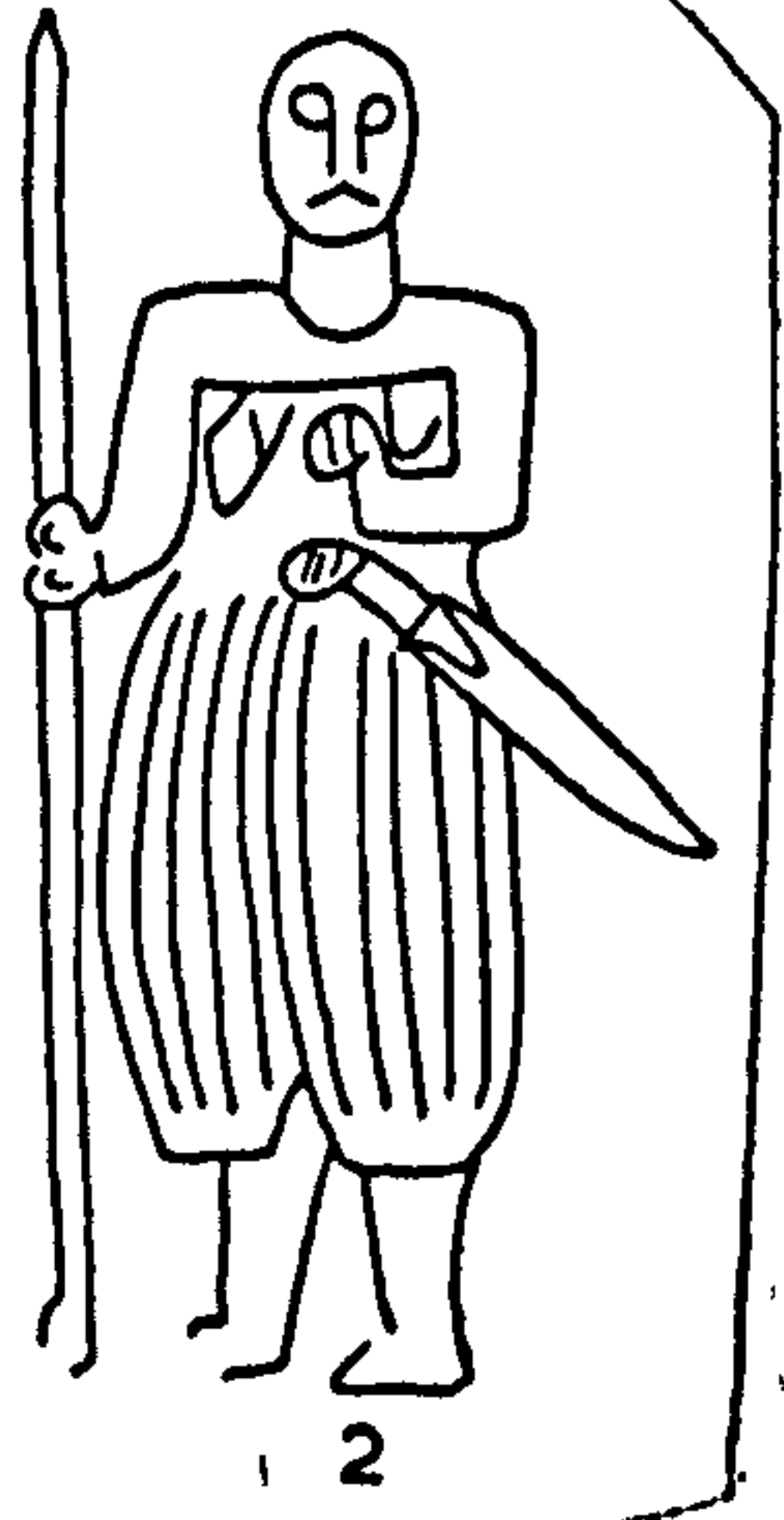
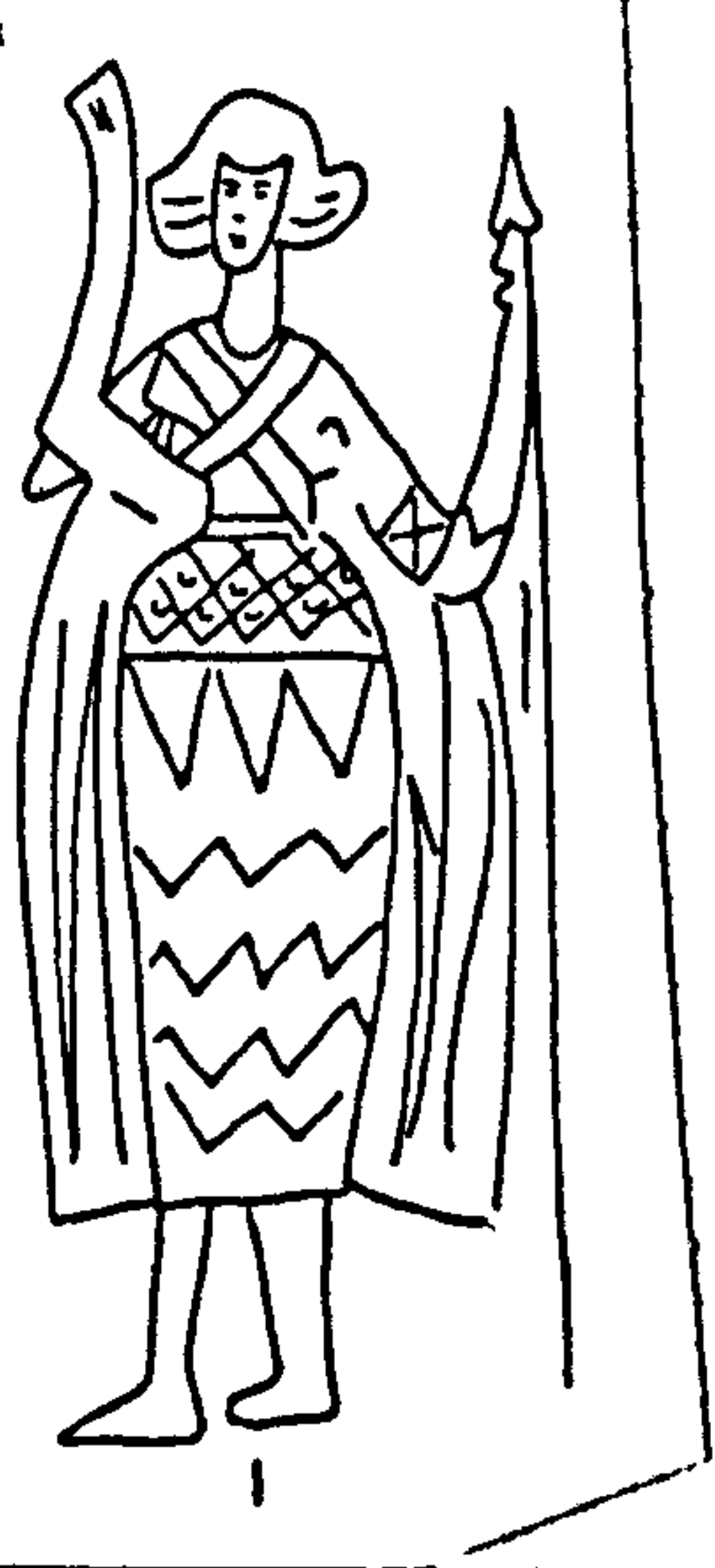
THE MILITARY TECHNOLOGY OF CLASSICAL ISLAM

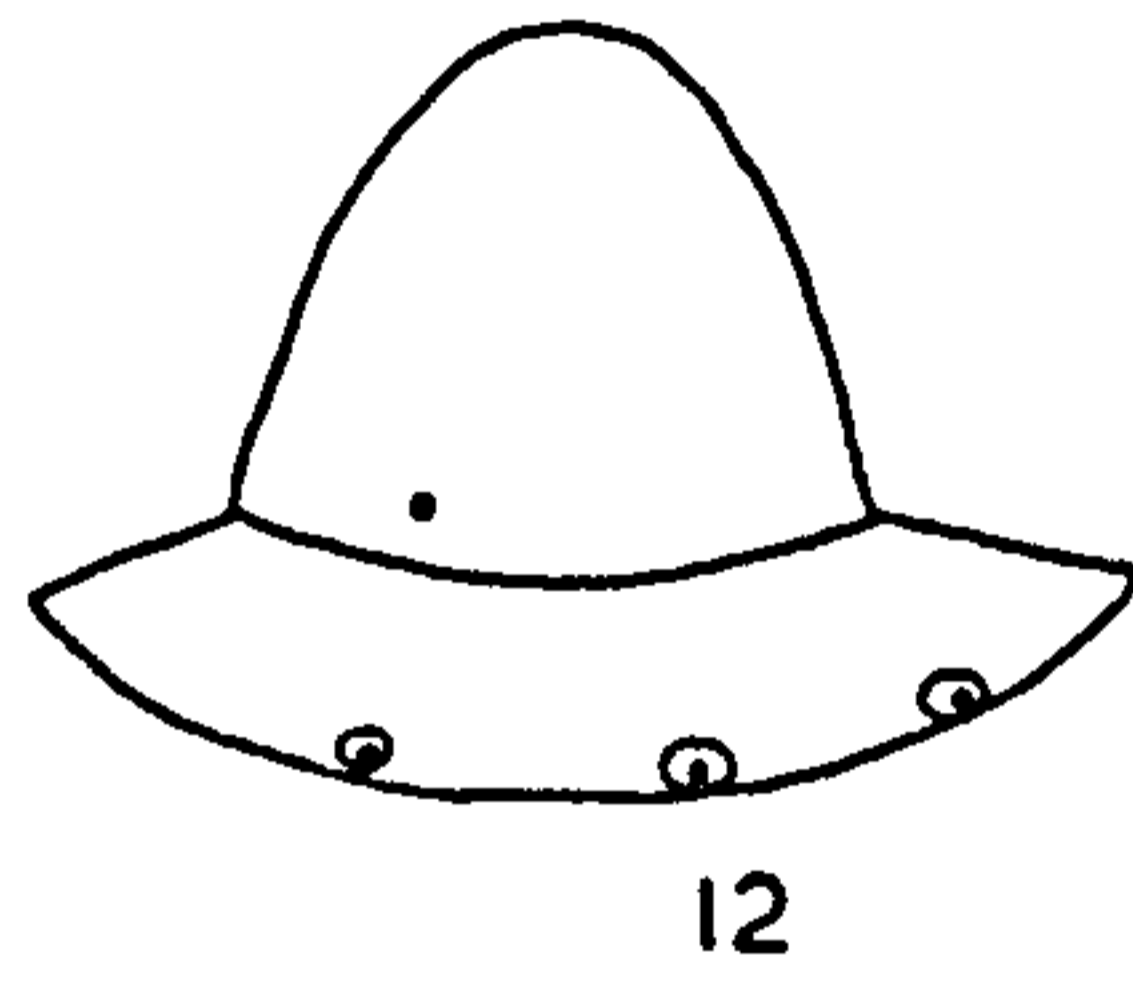
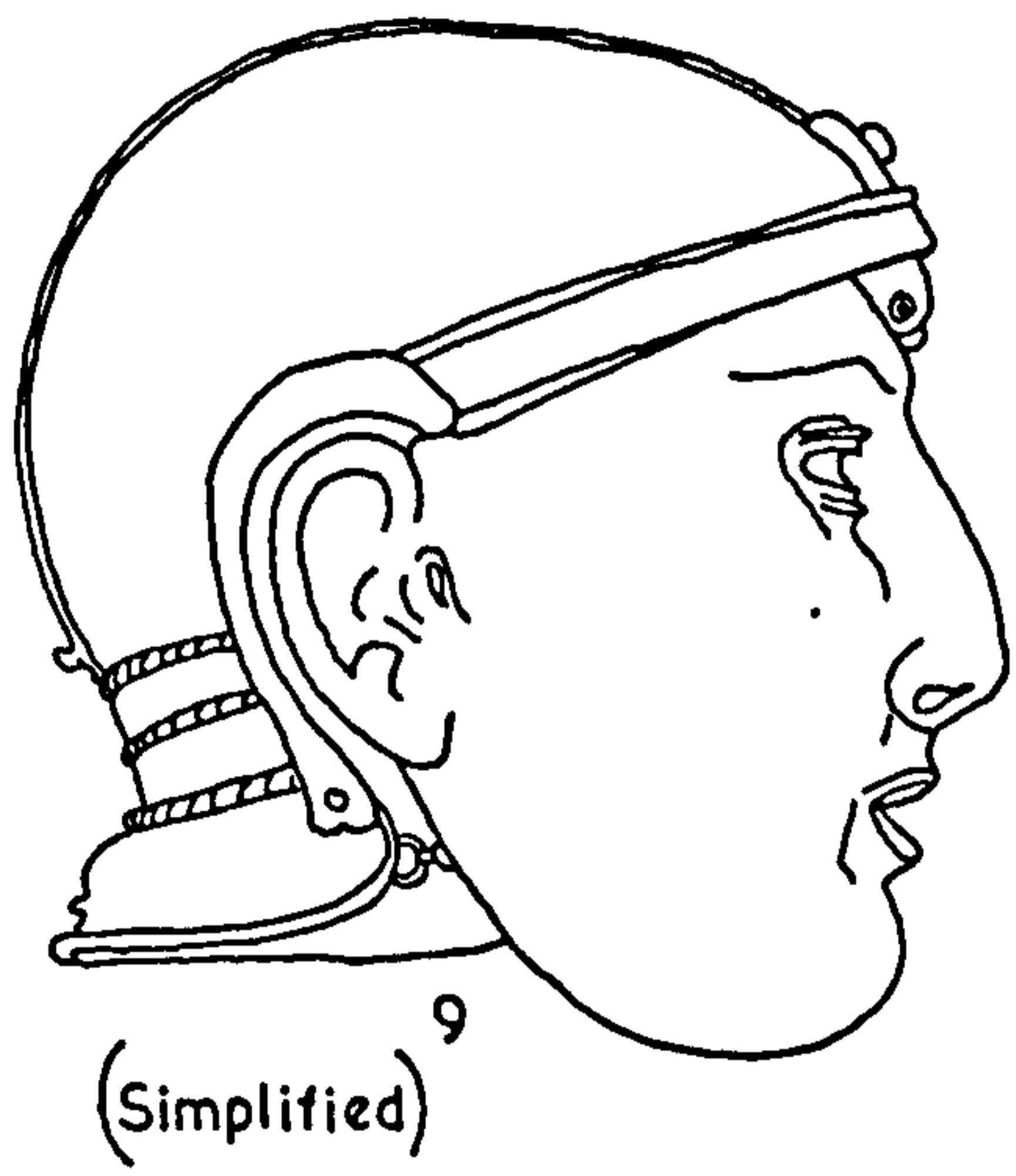
VOLUME III

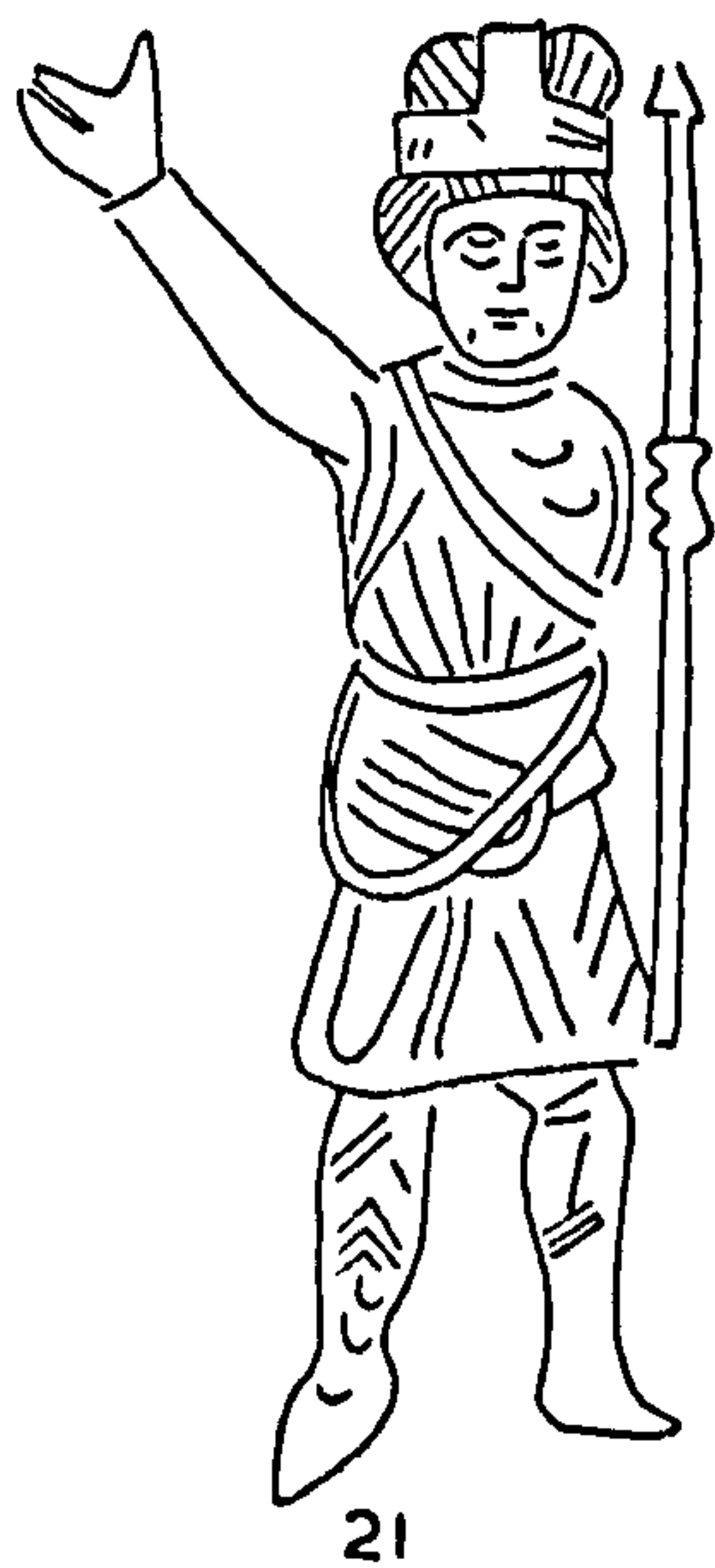
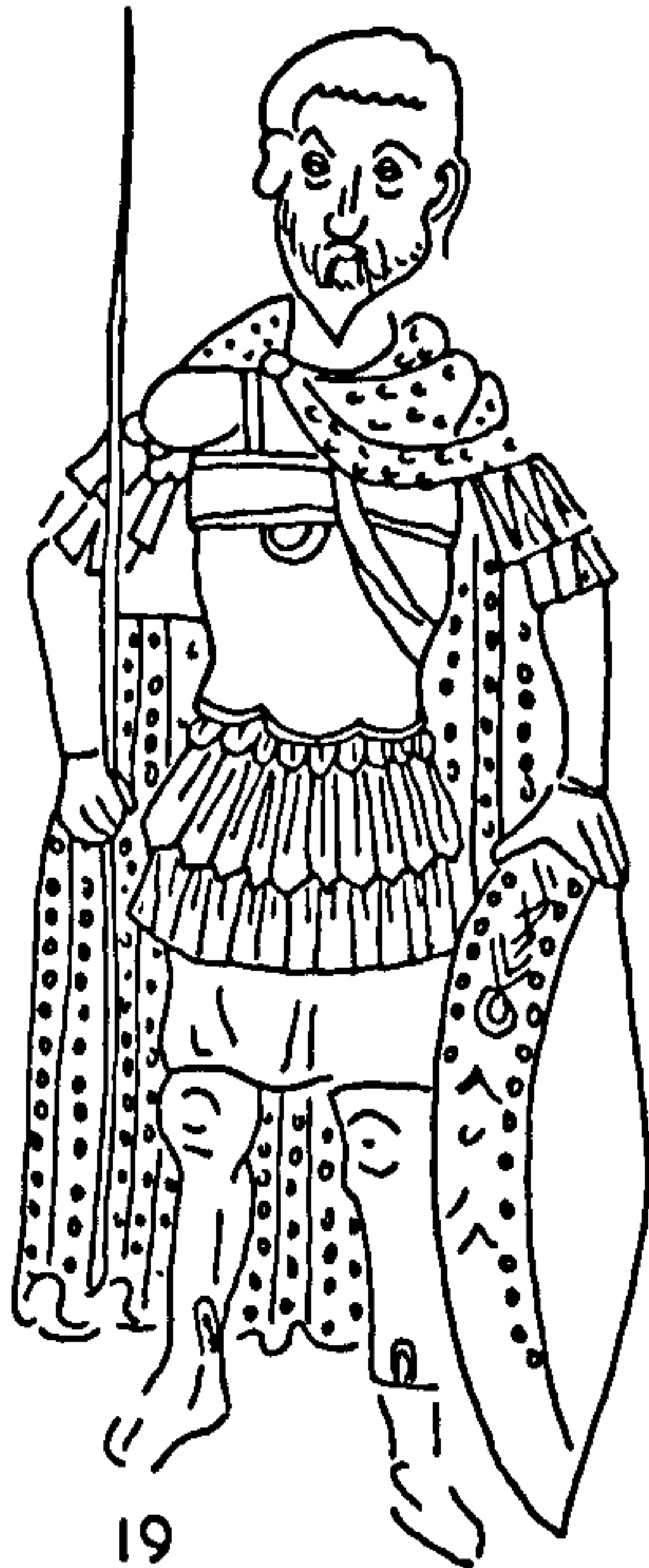
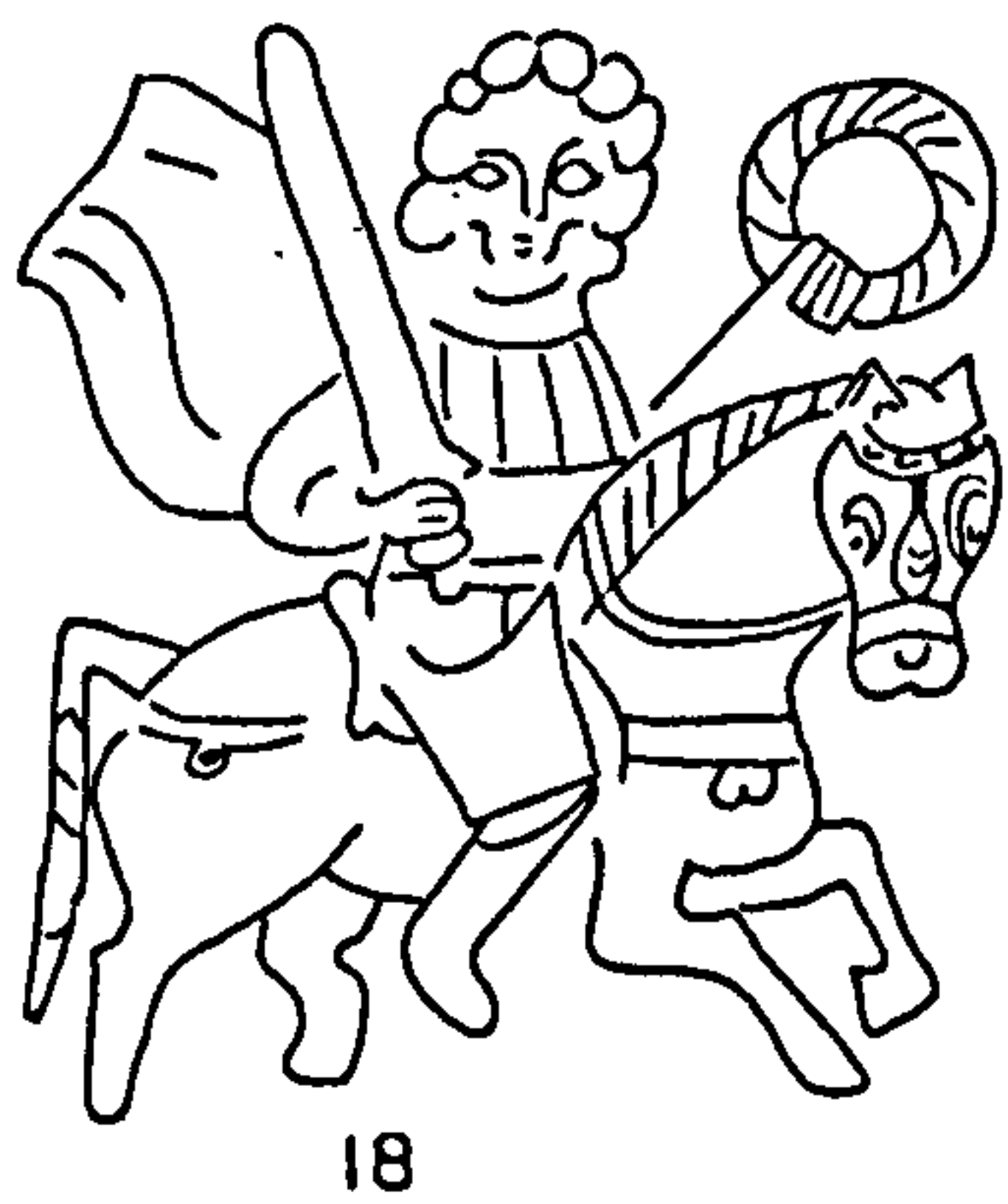
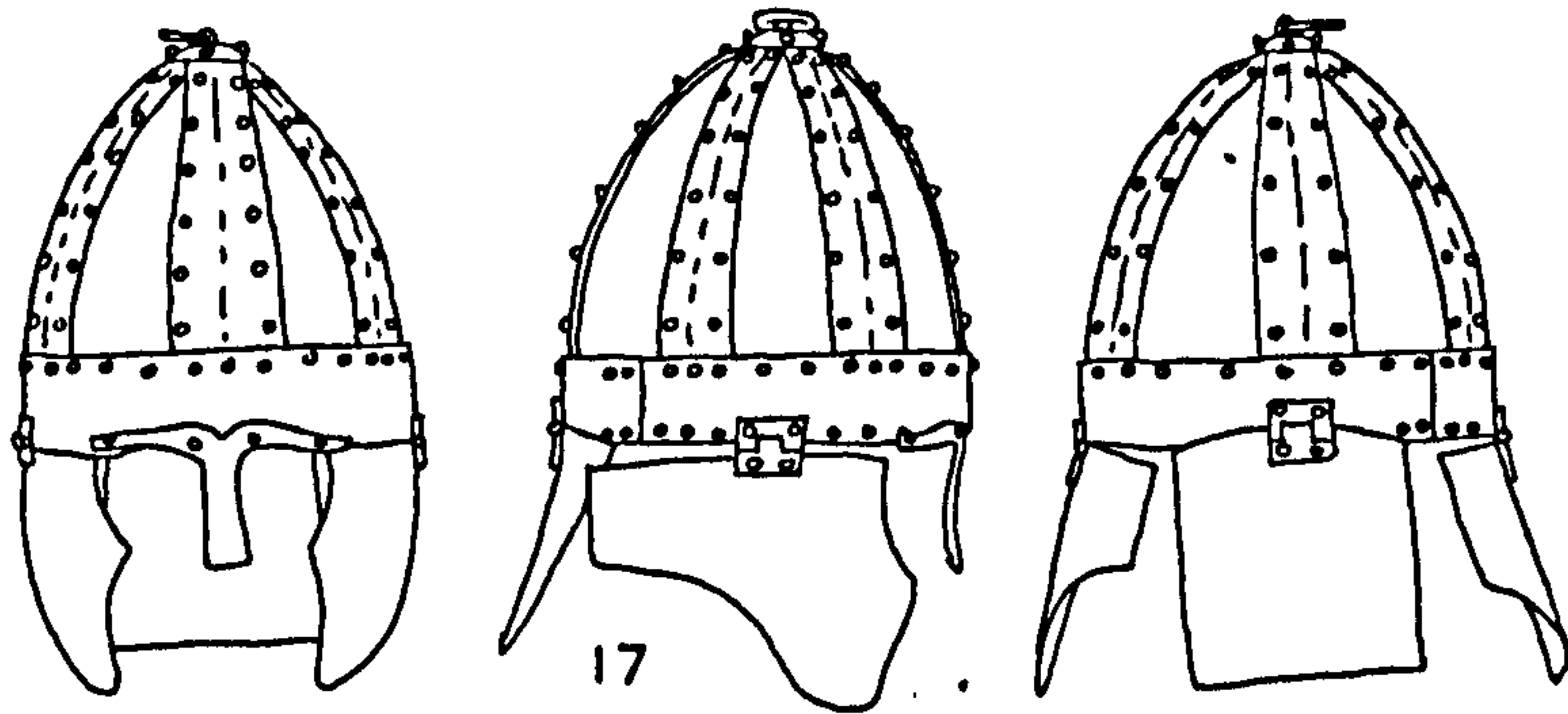
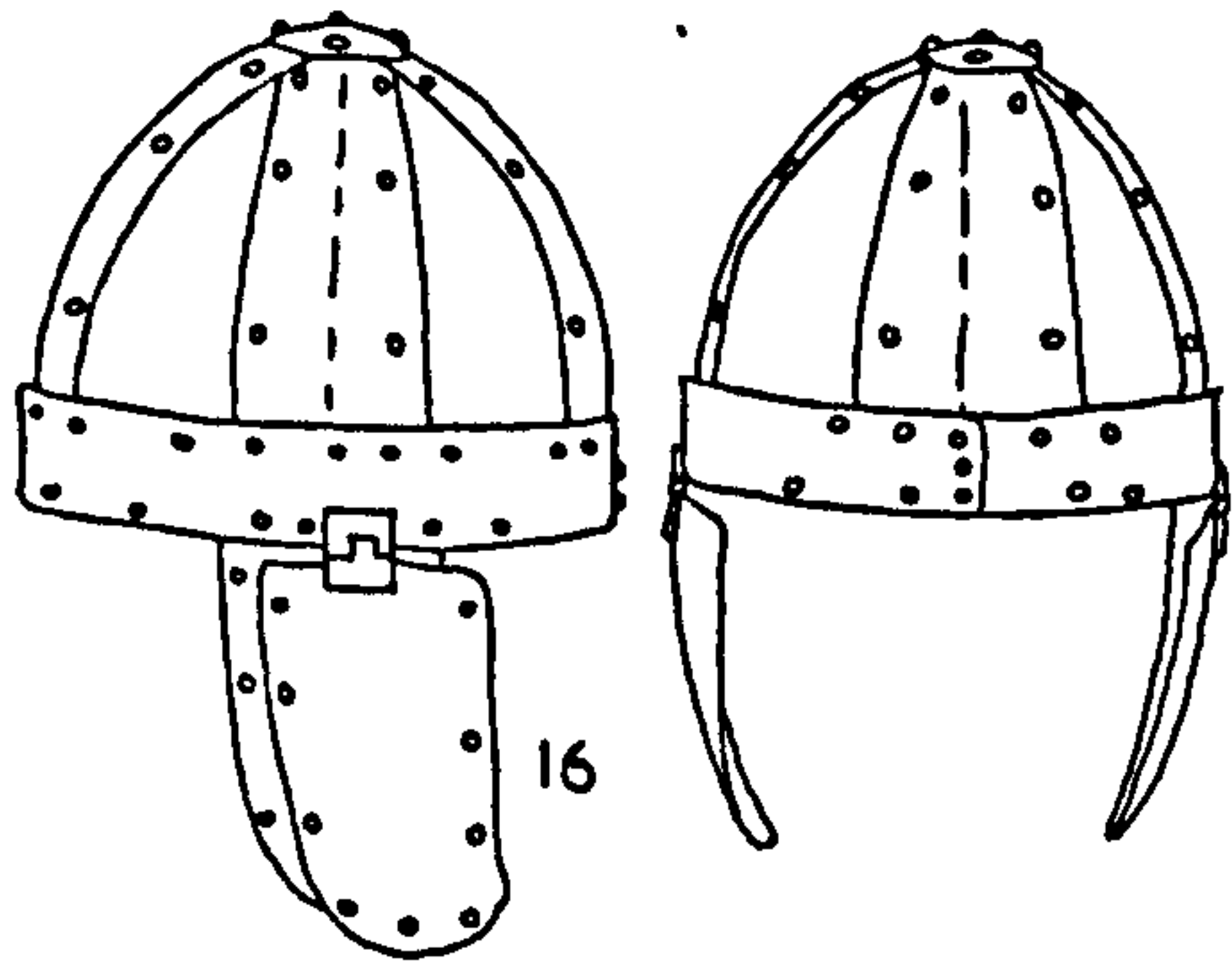
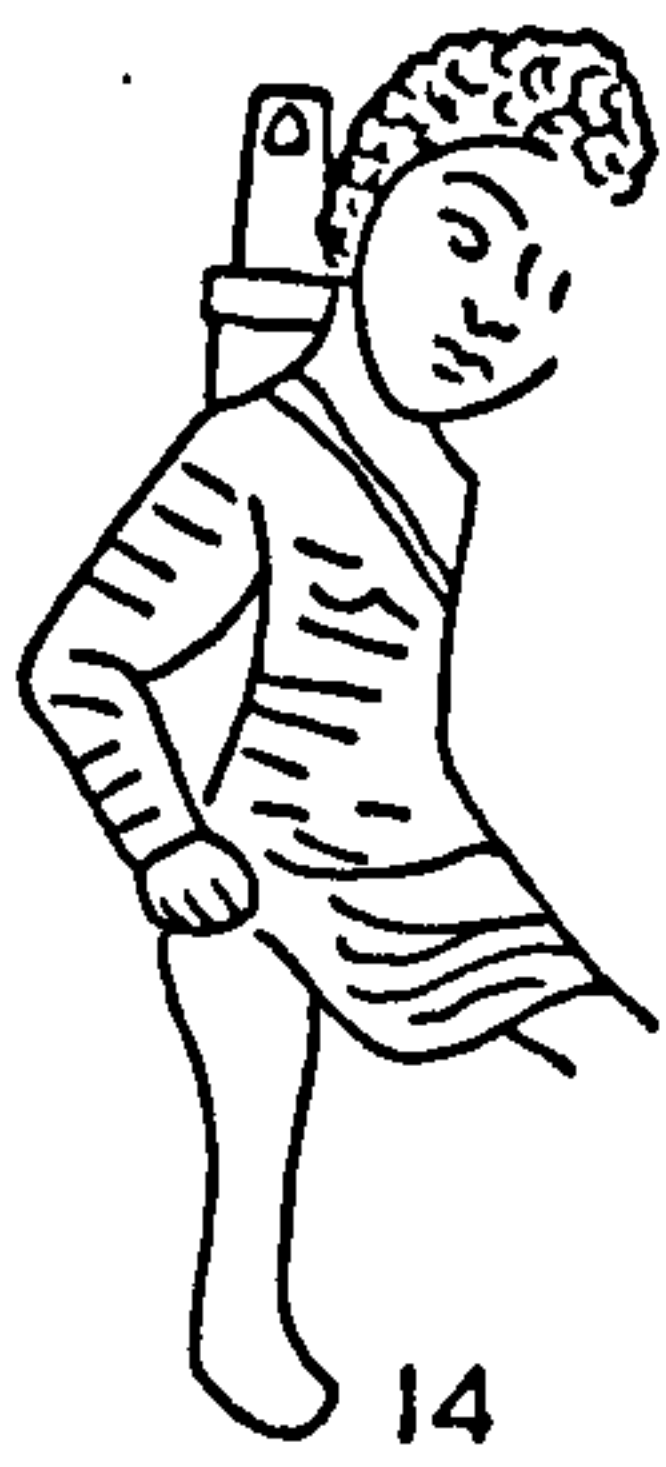
David Nicolle

Thesis presented to the University of Edinburgh  
for the Degree of Doctor of Philosophy  
1982



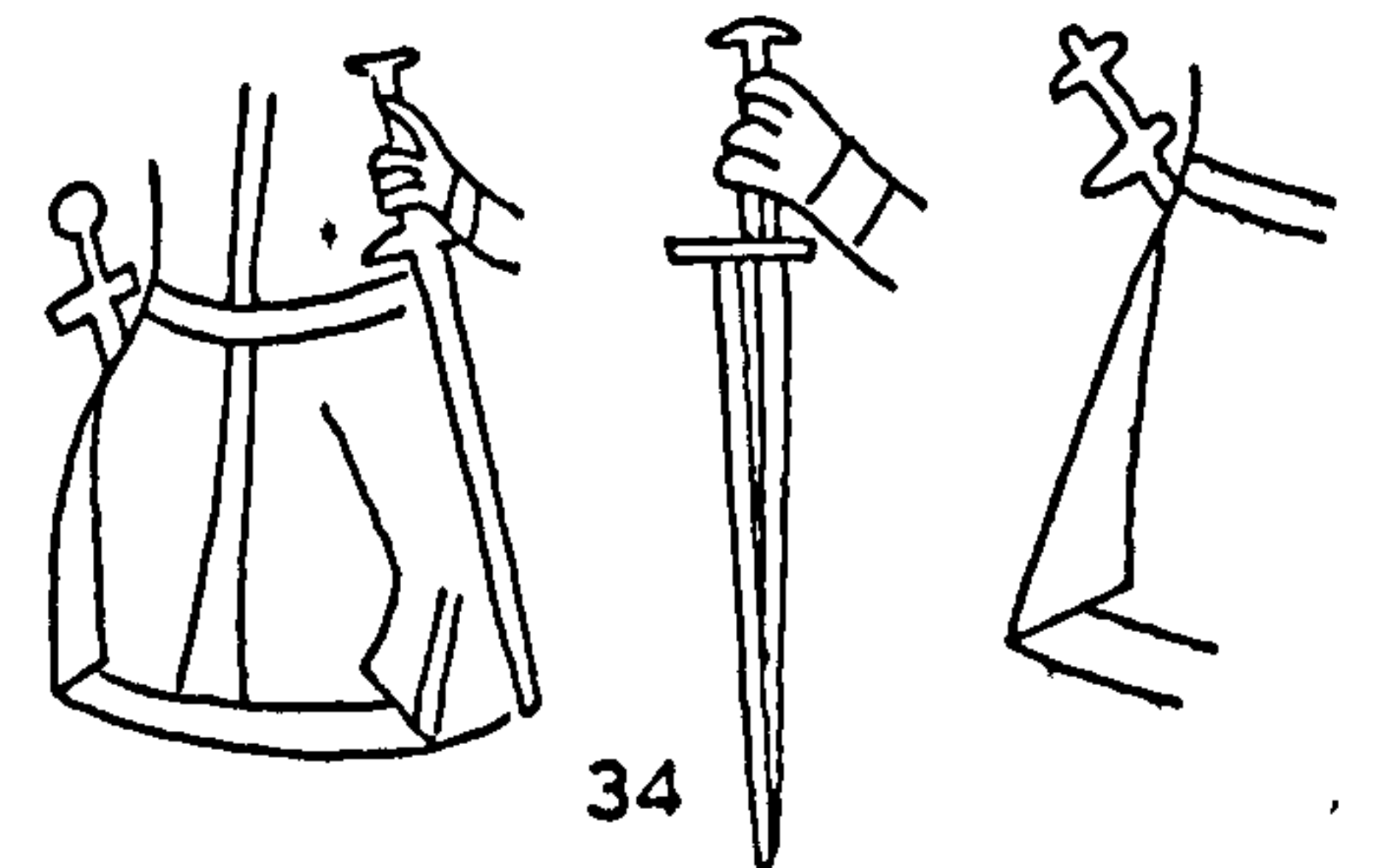
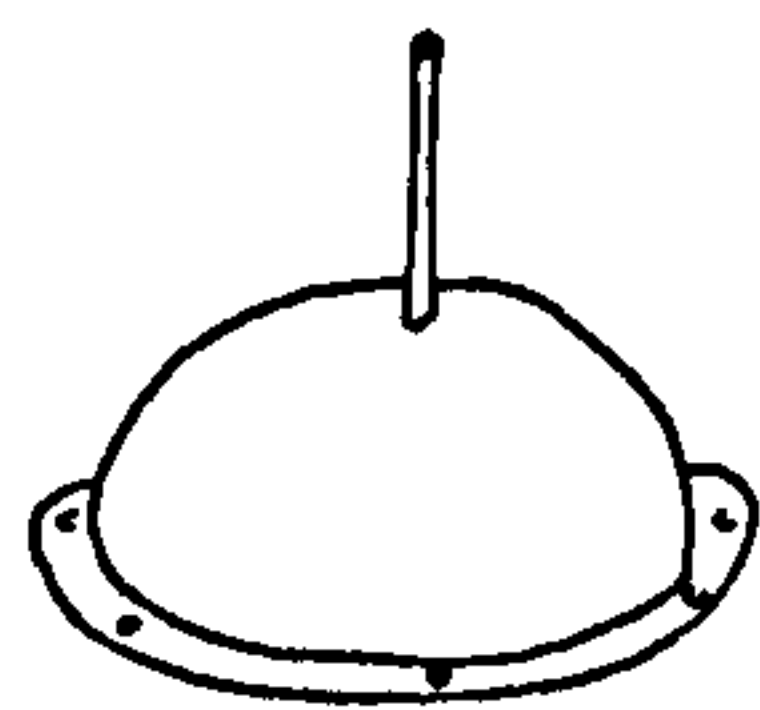
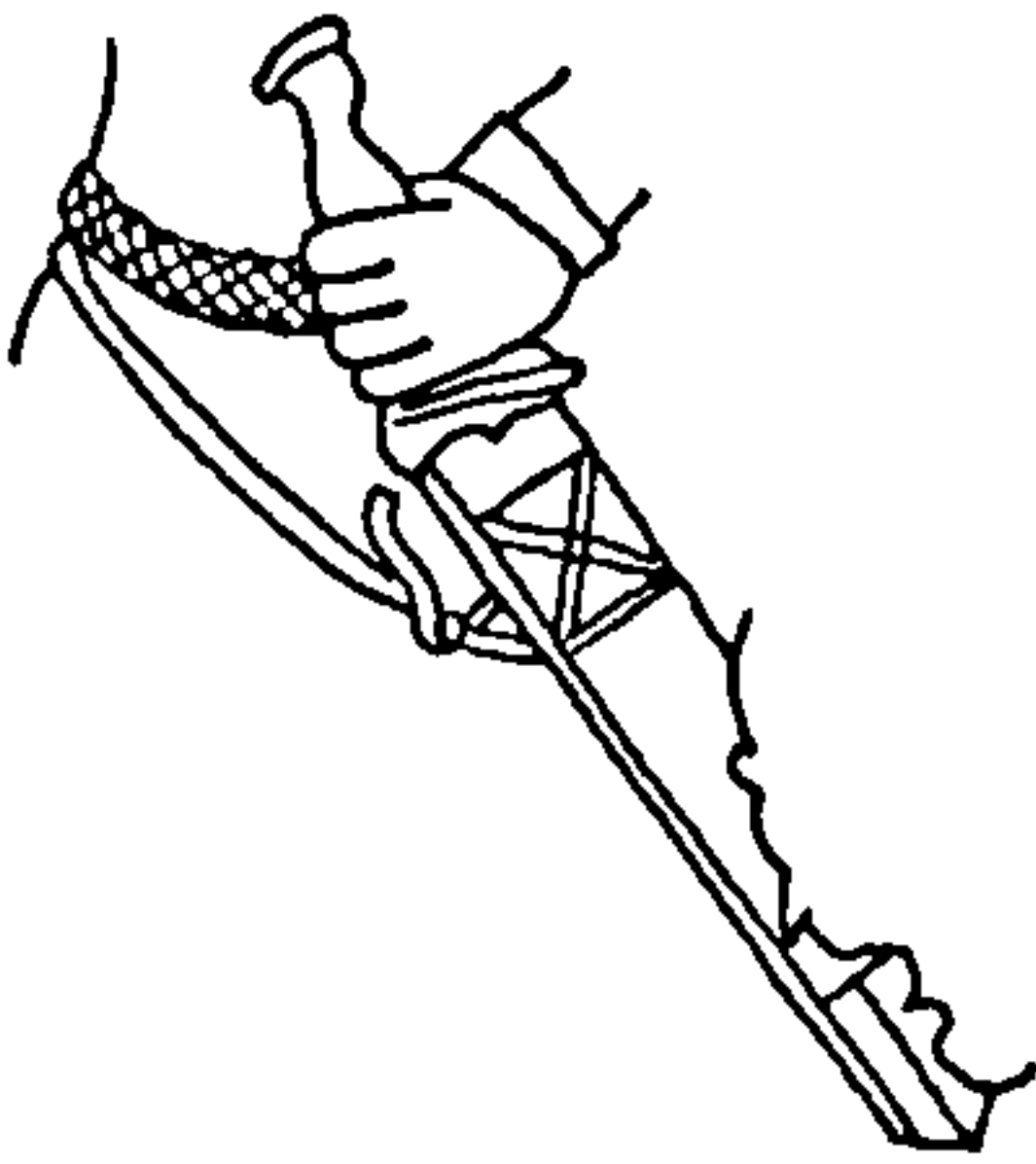
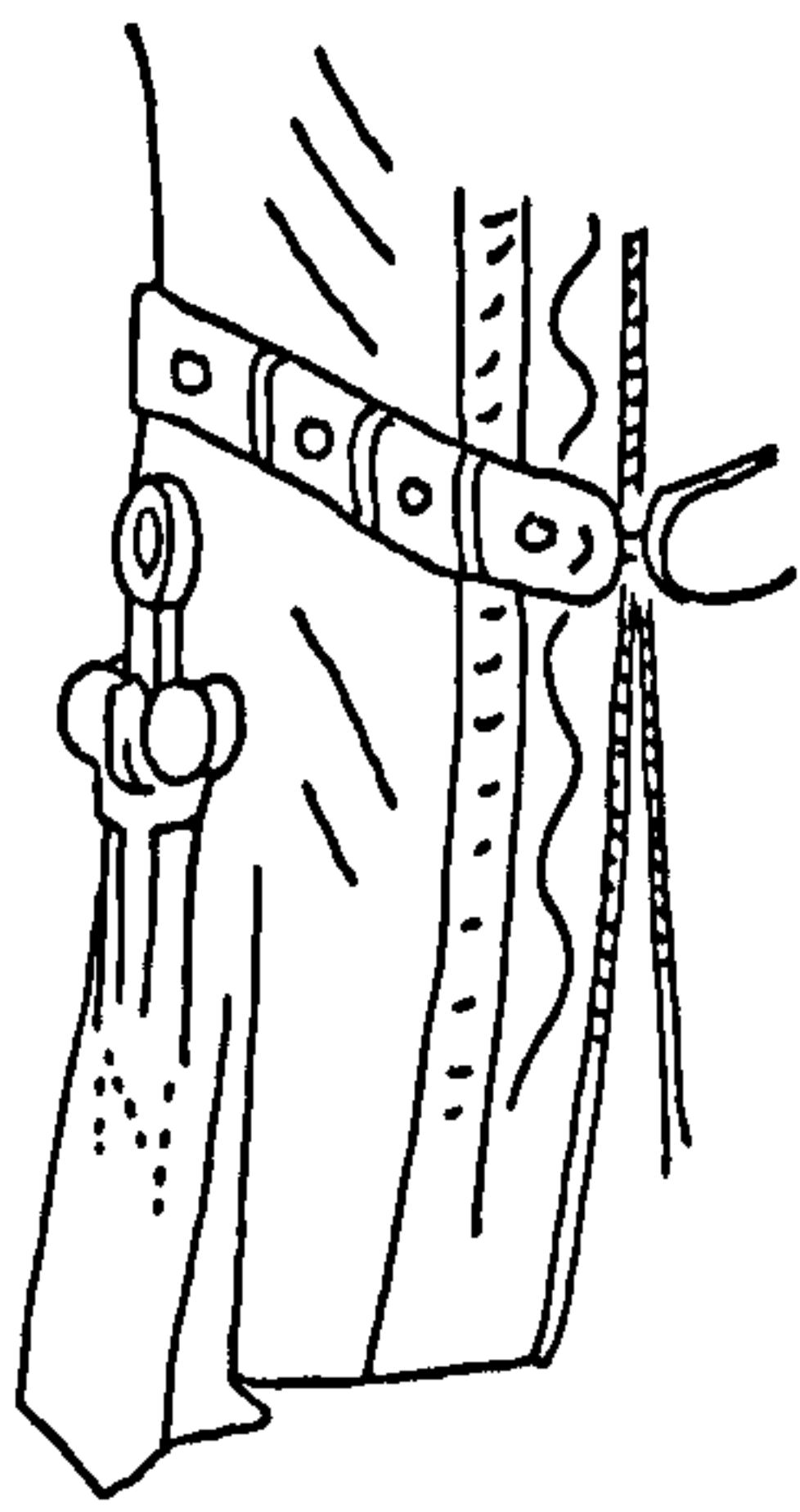
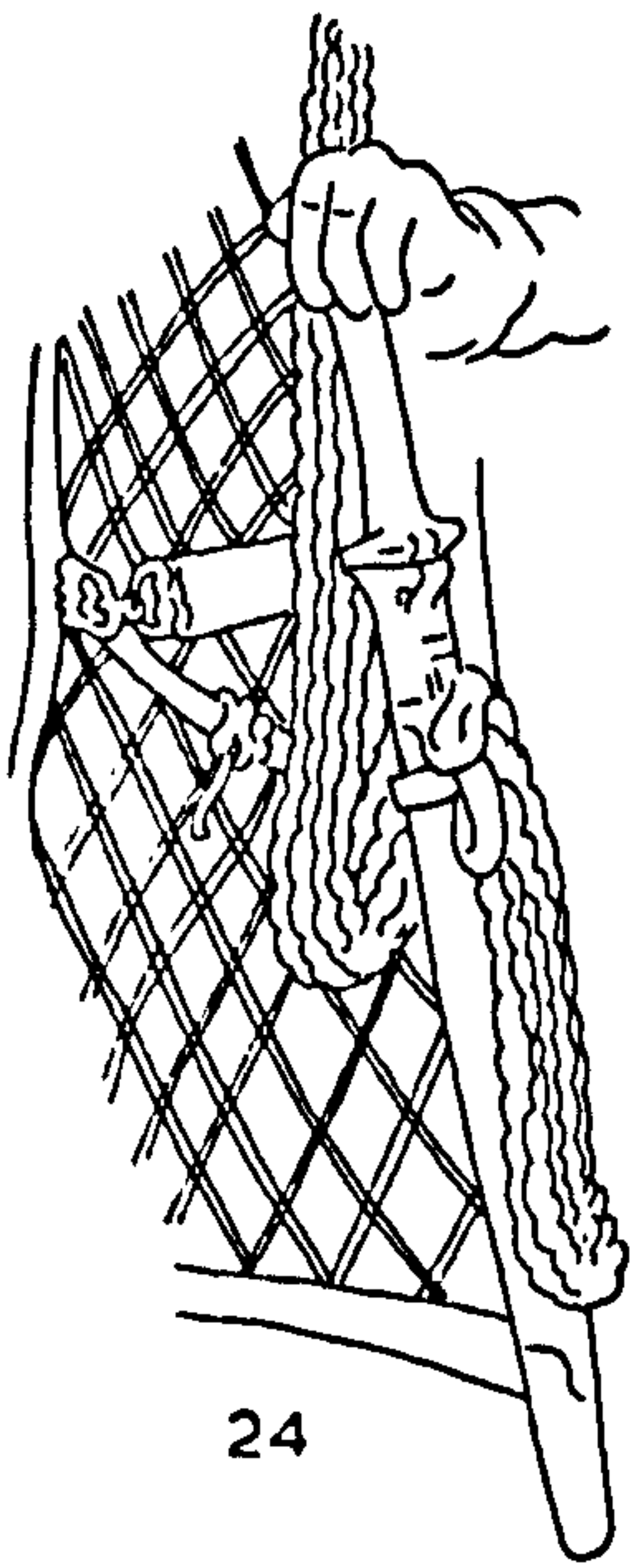


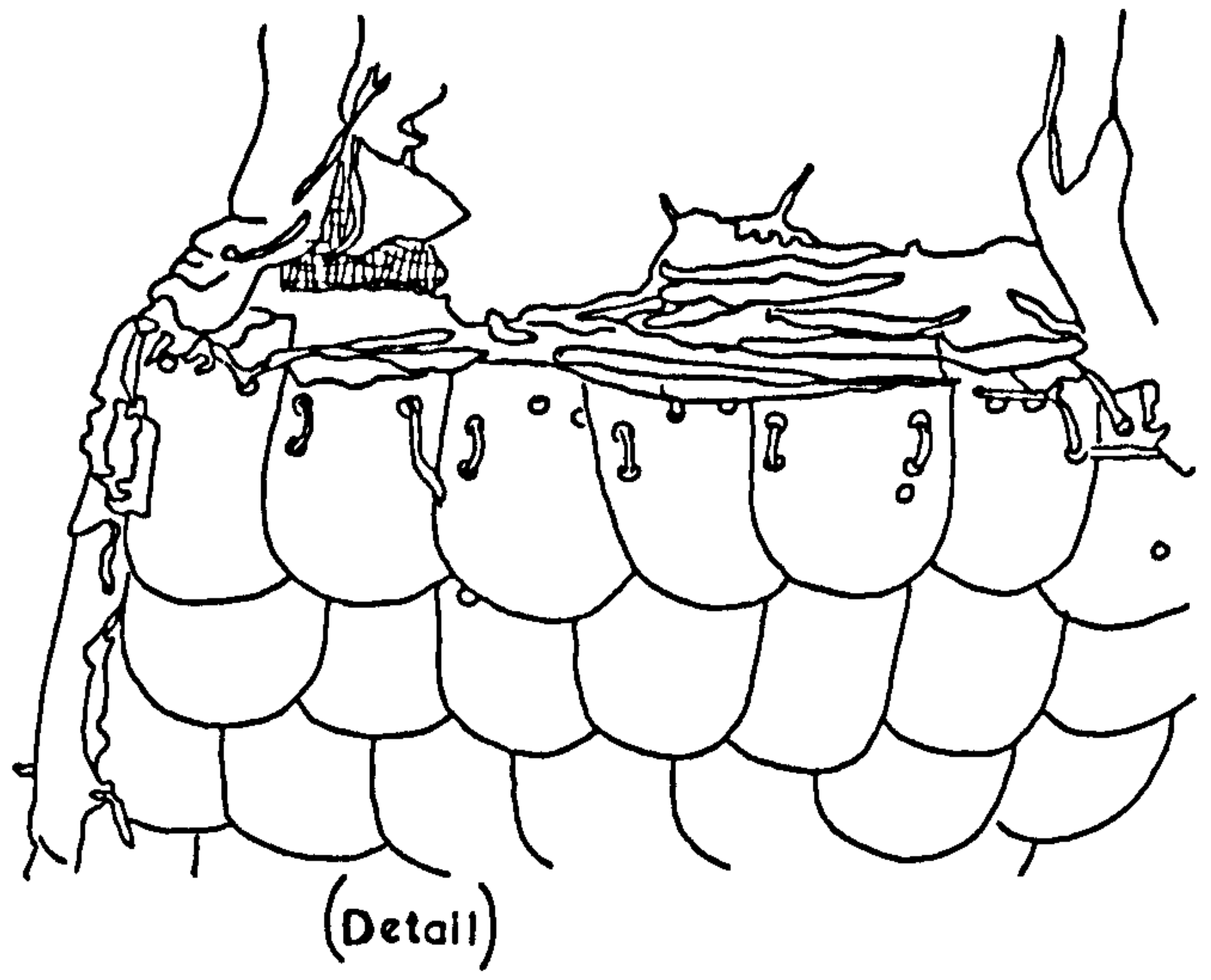
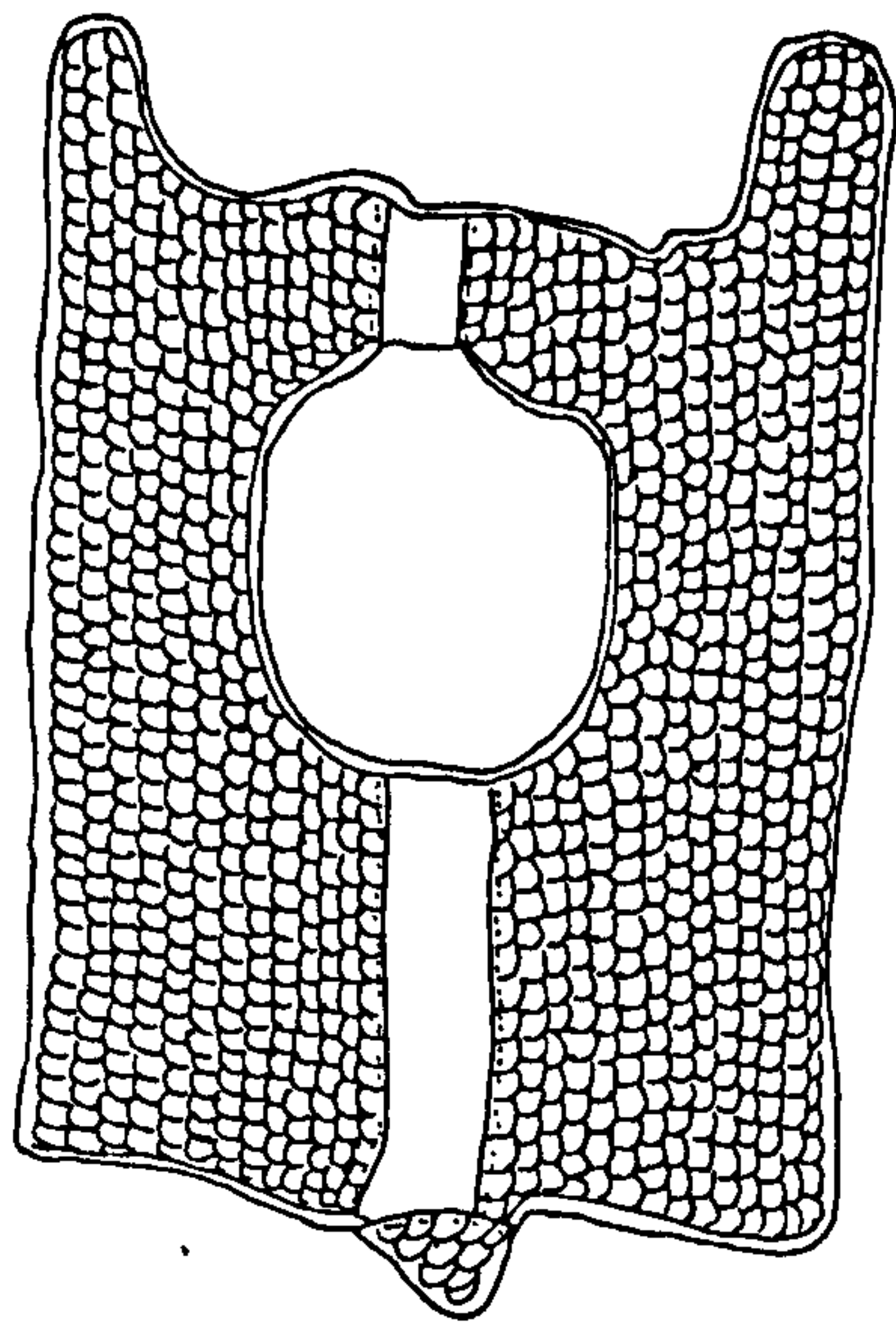




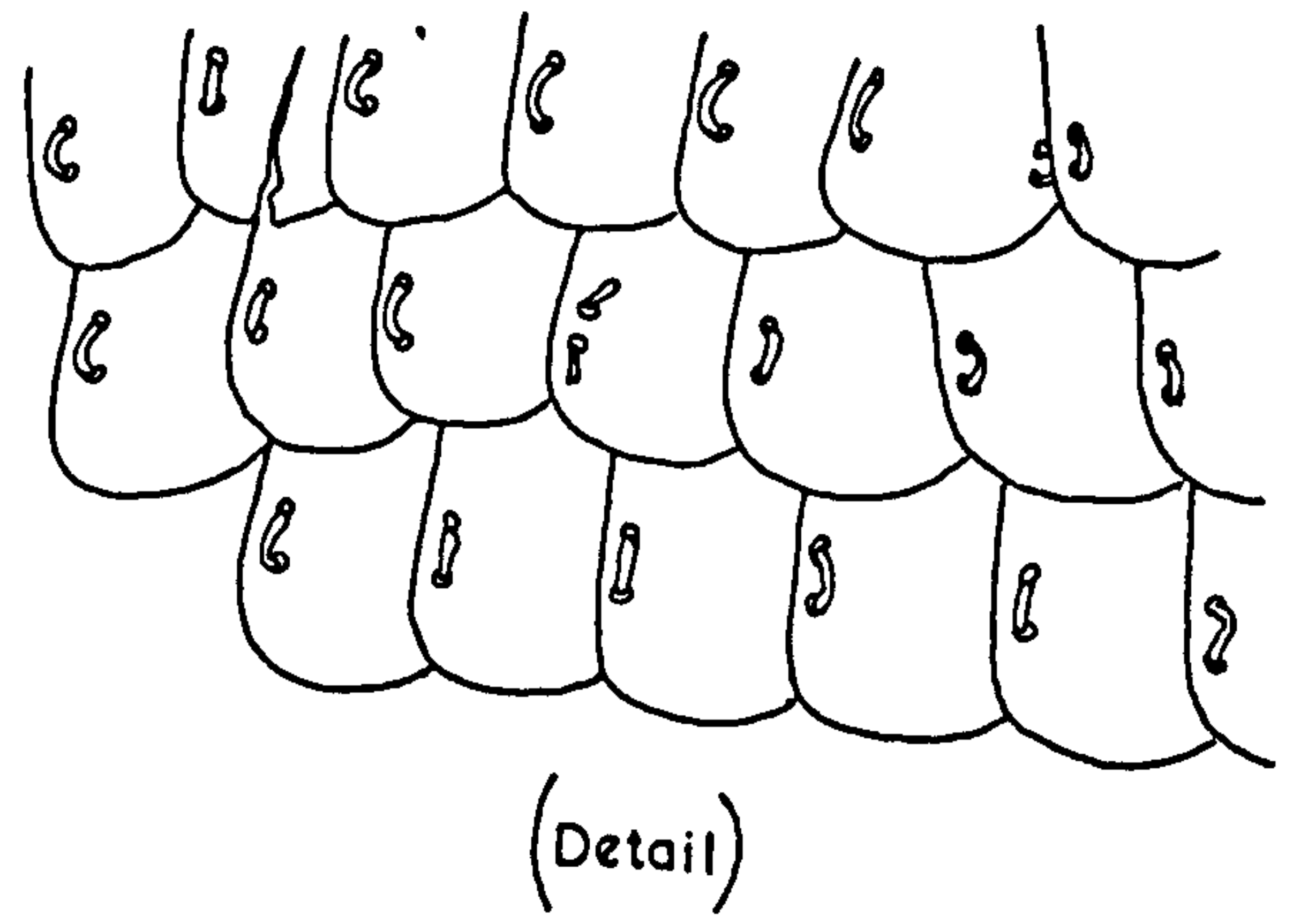
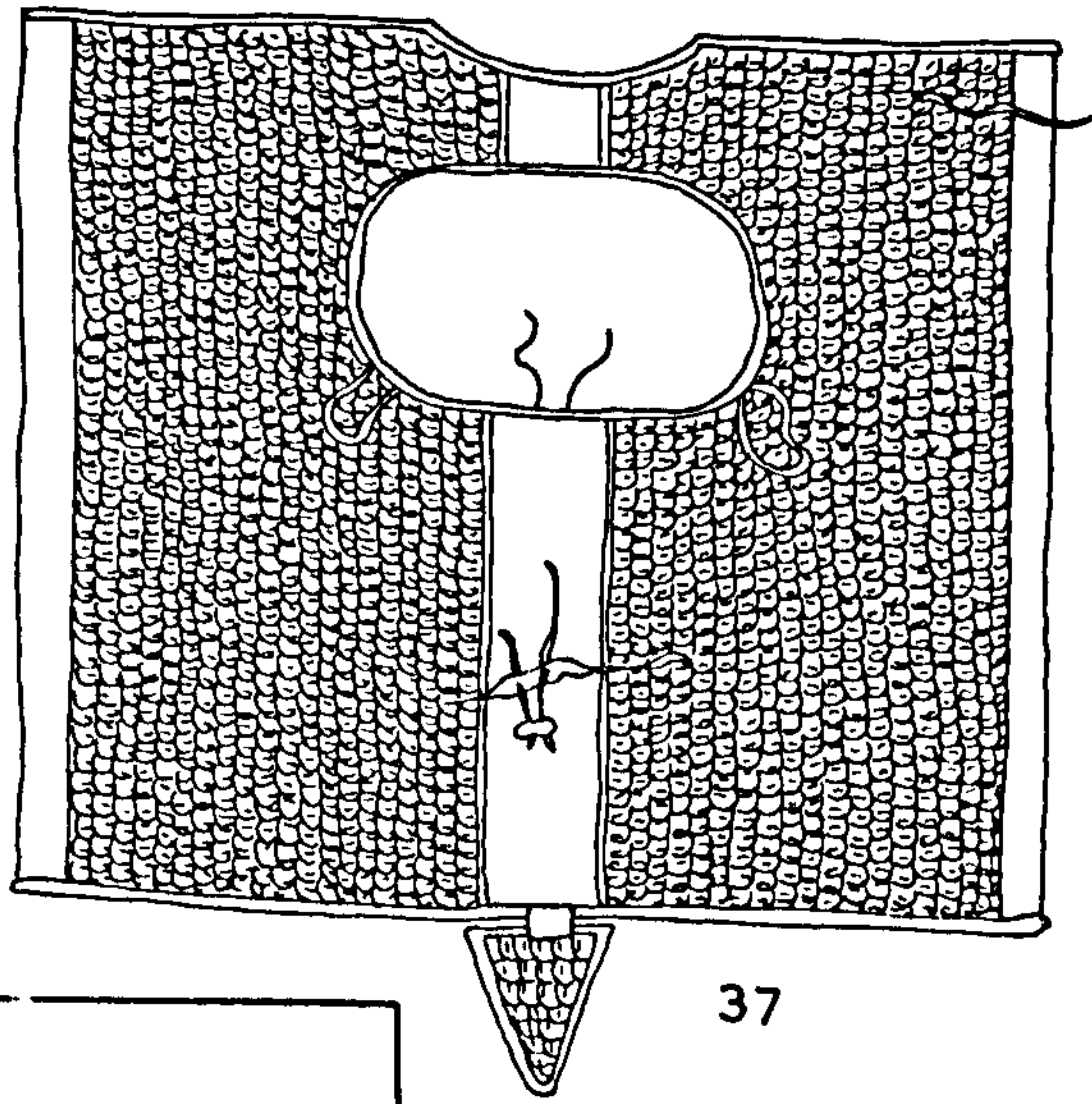


23

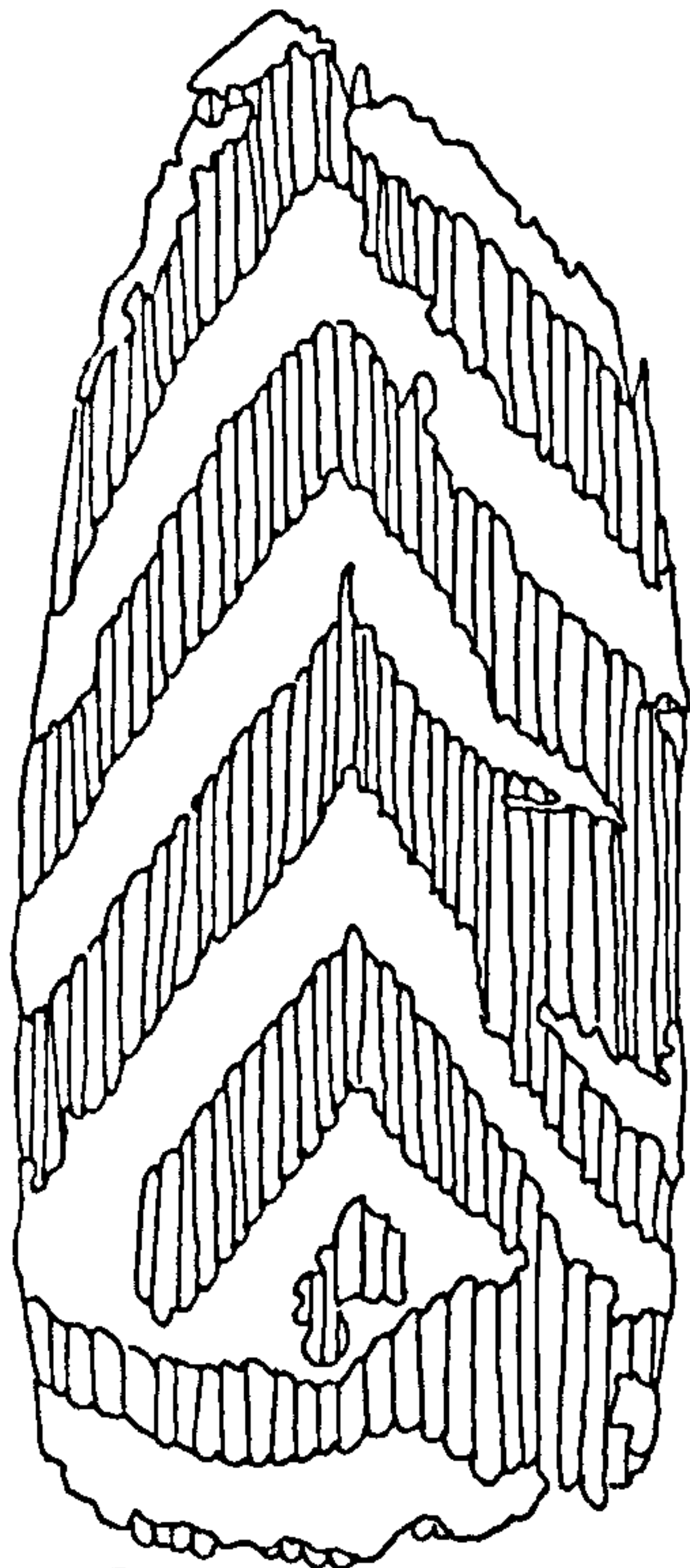




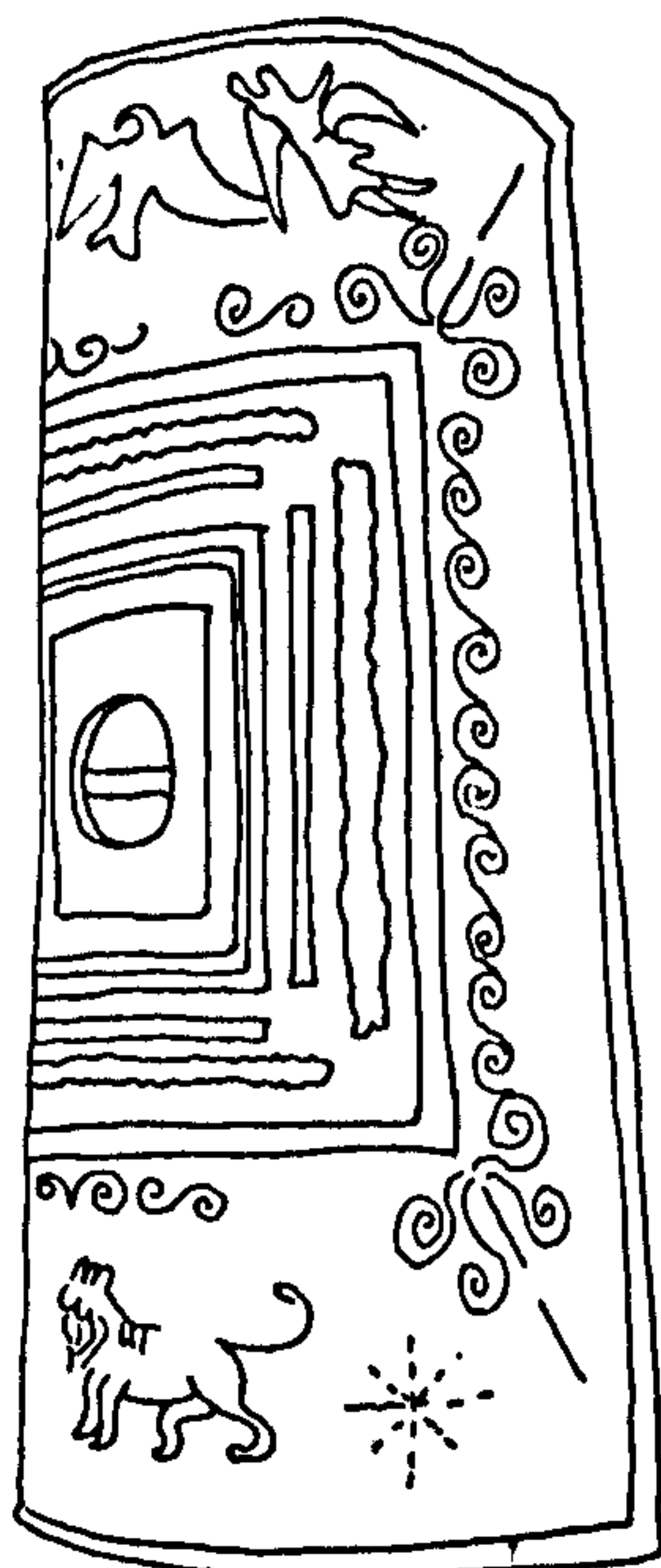
36



37

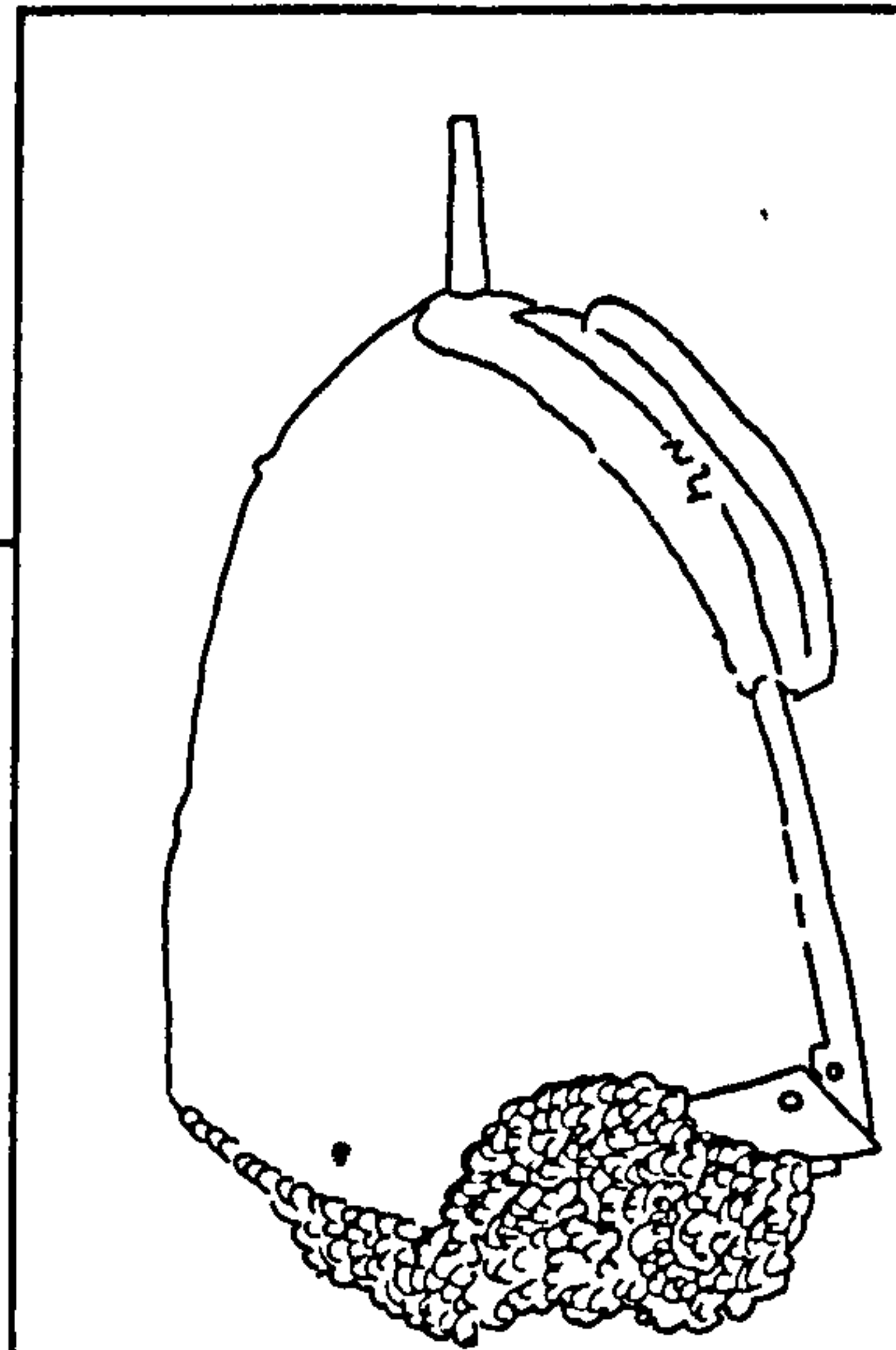
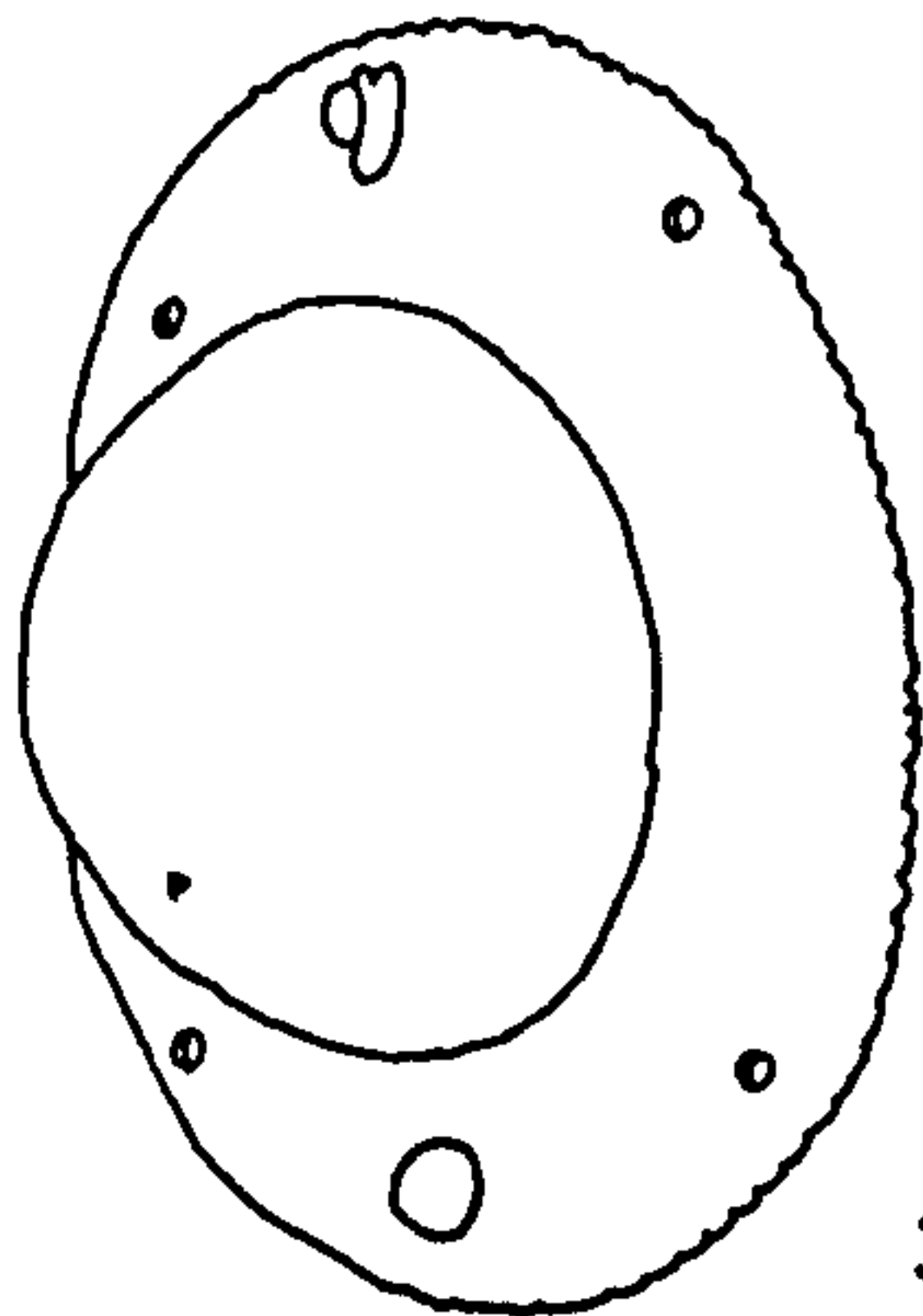


38

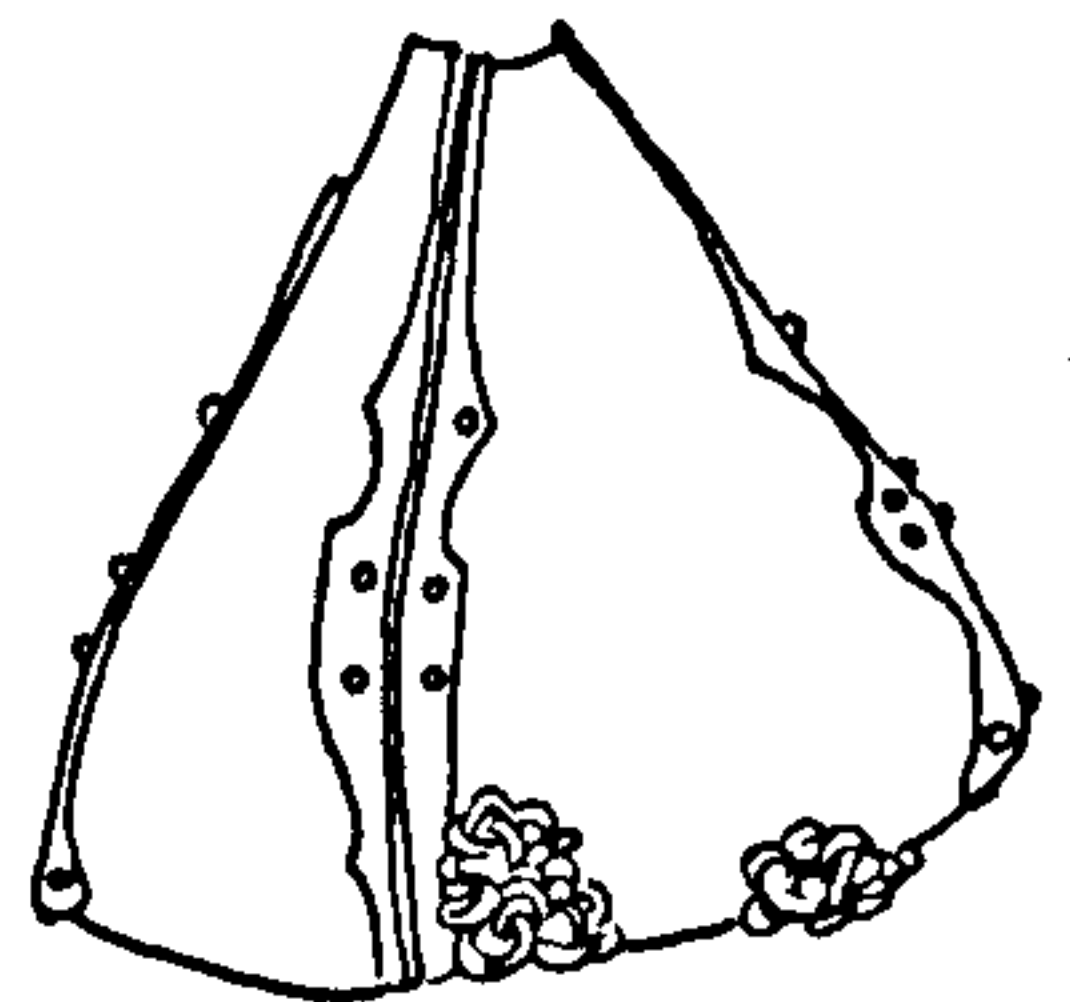


(Simplified)

39



40



41



42



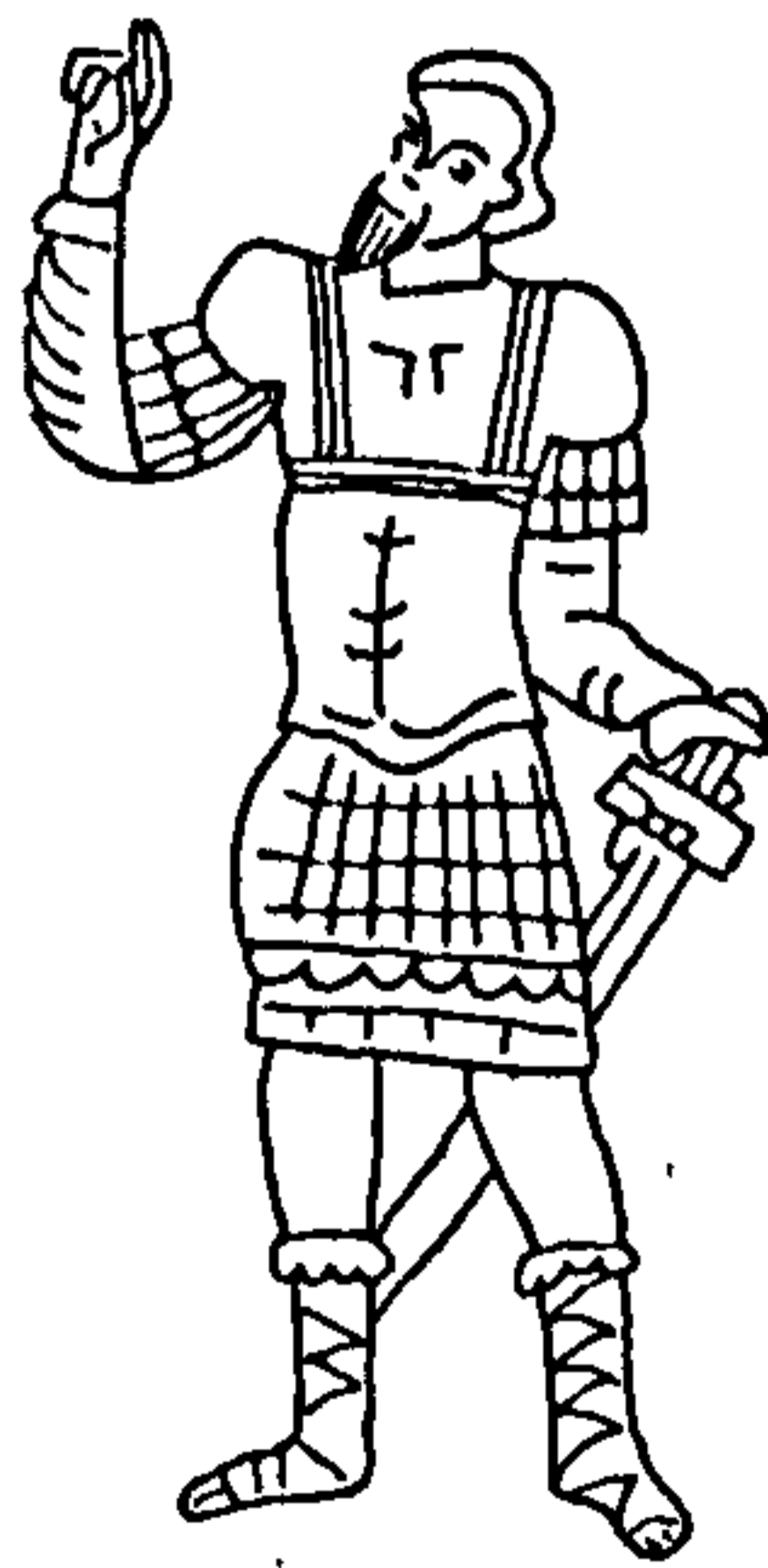
43



44

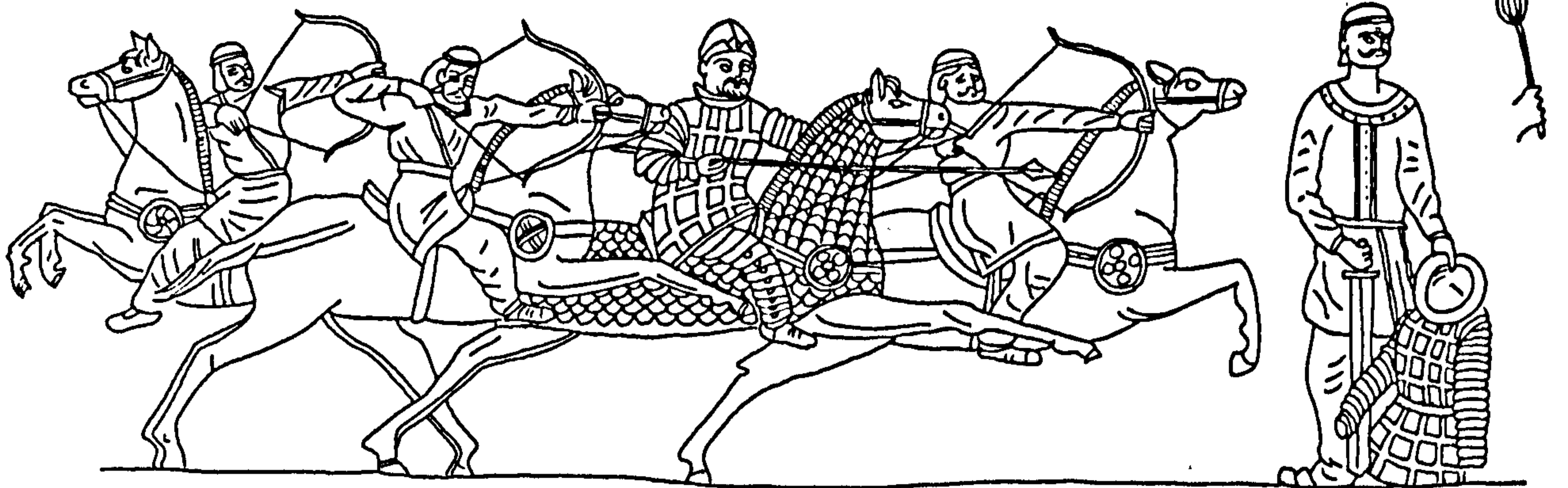


45



46

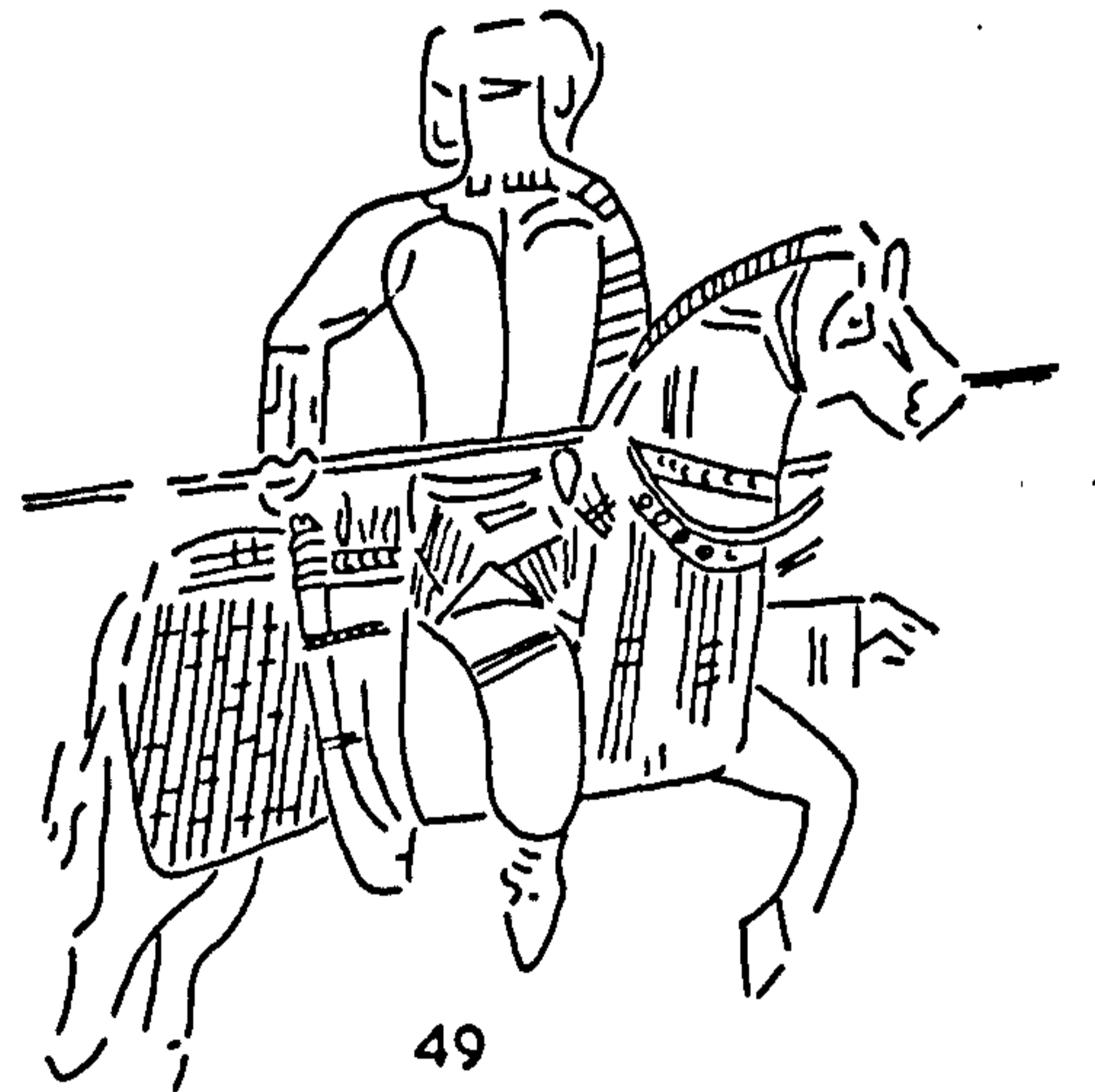




47



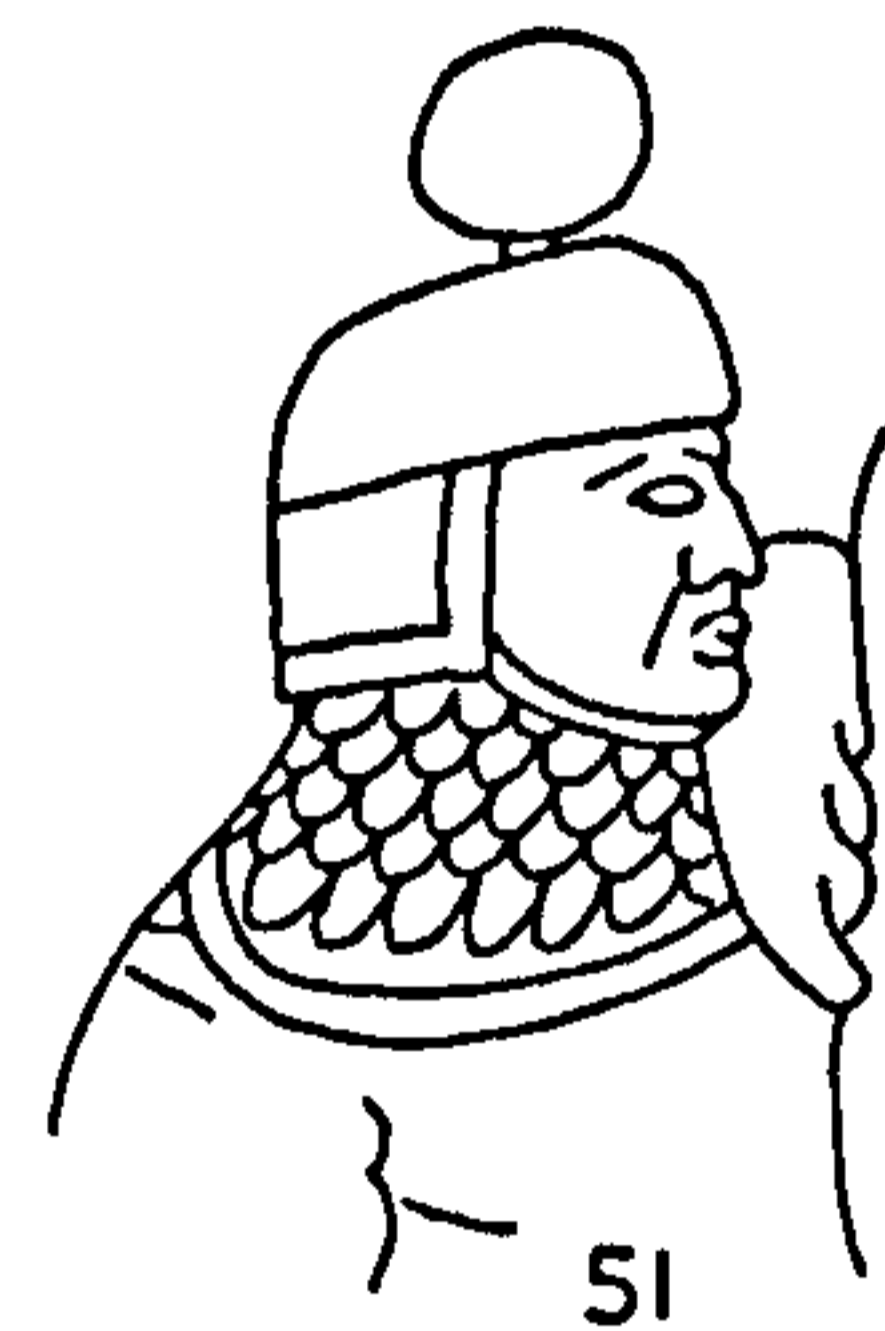
48



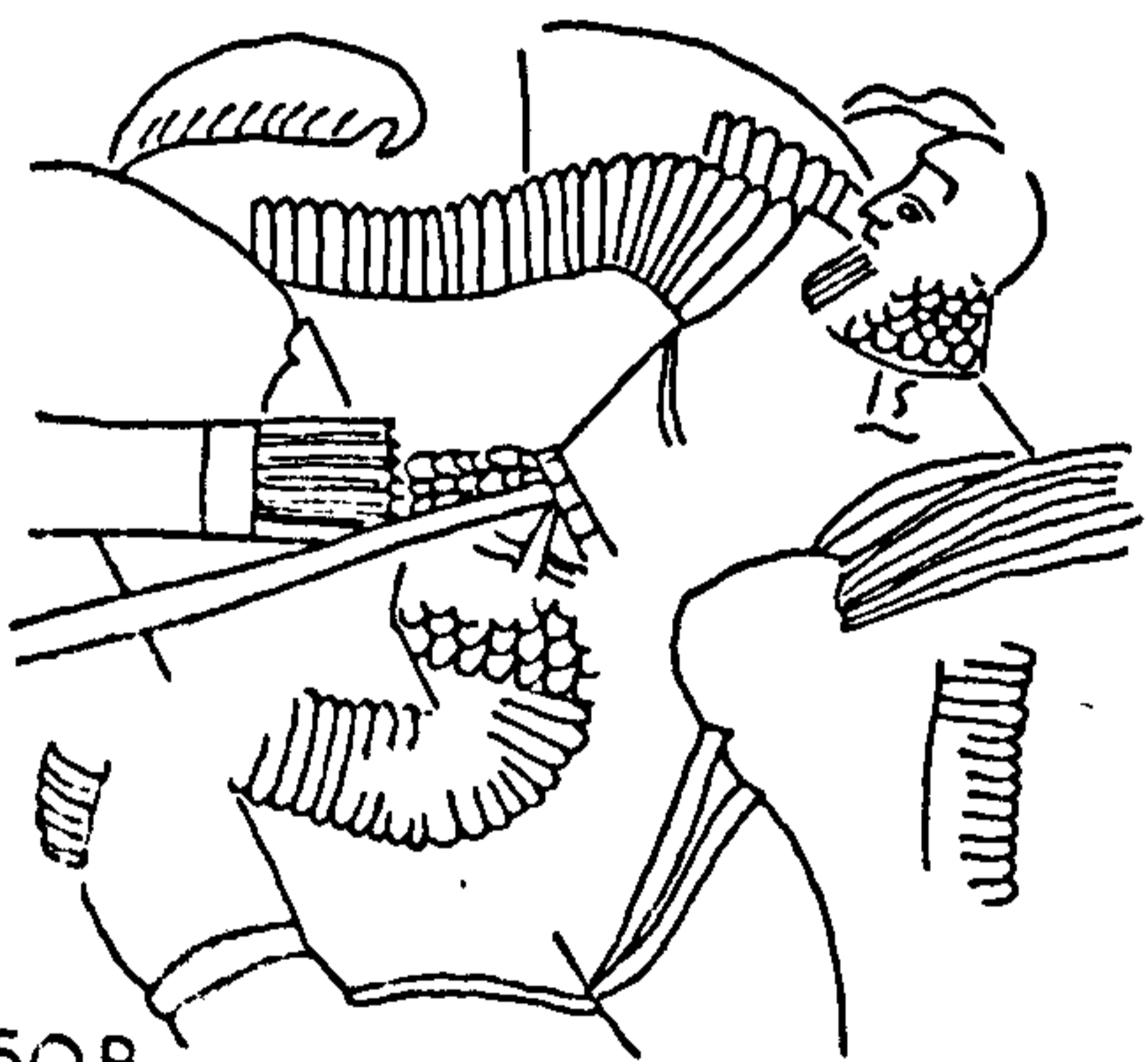
49



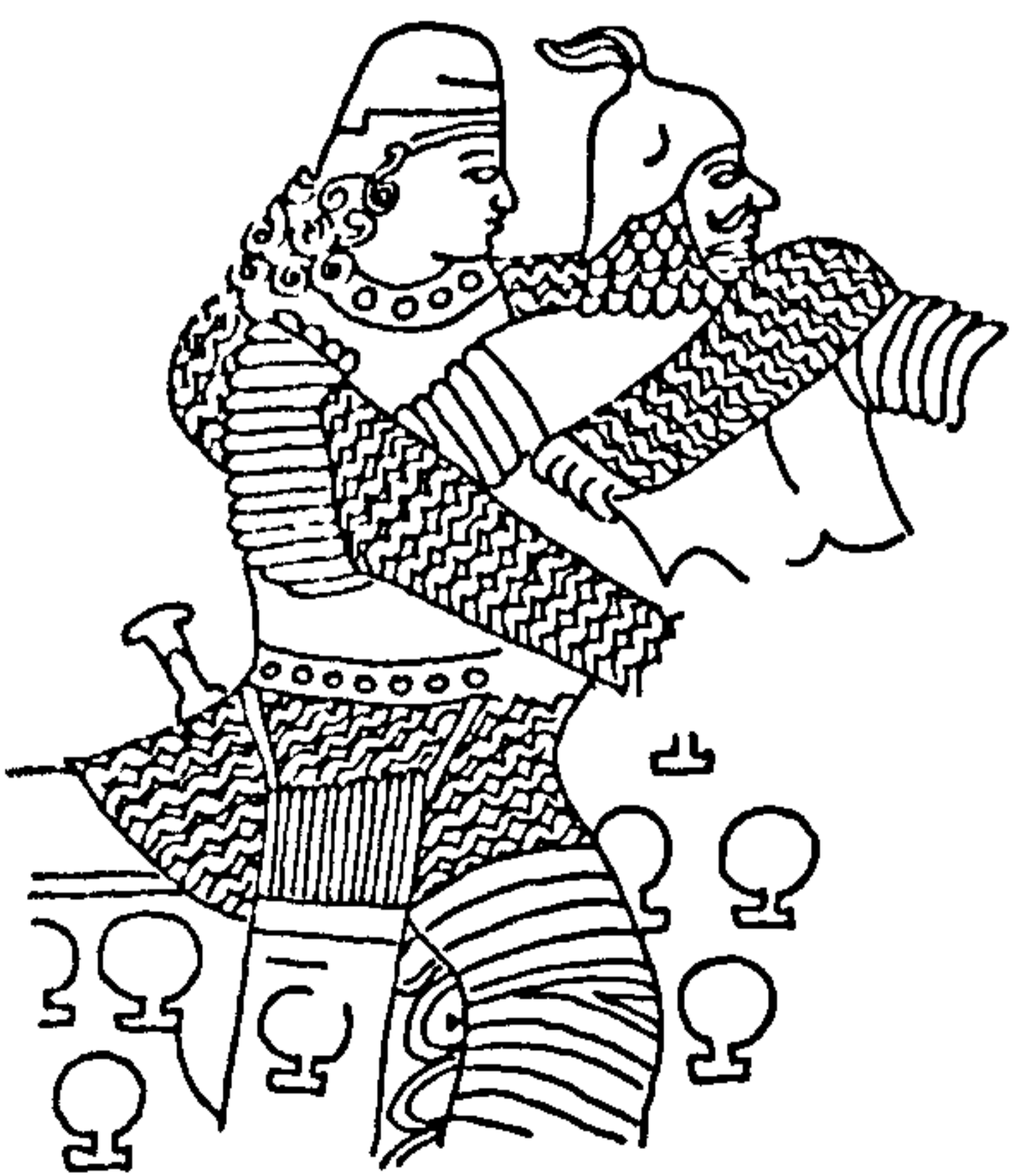
50A



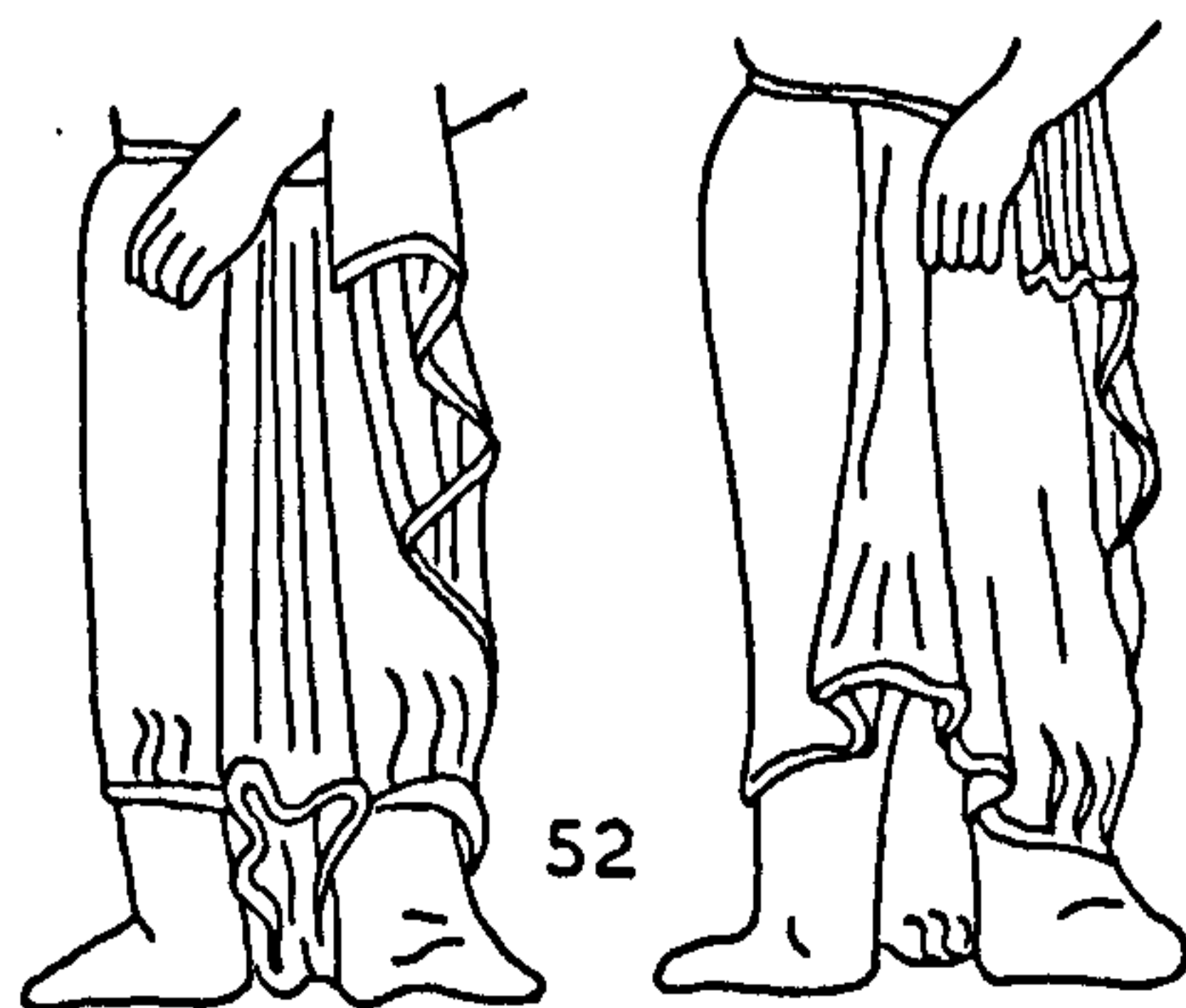
51



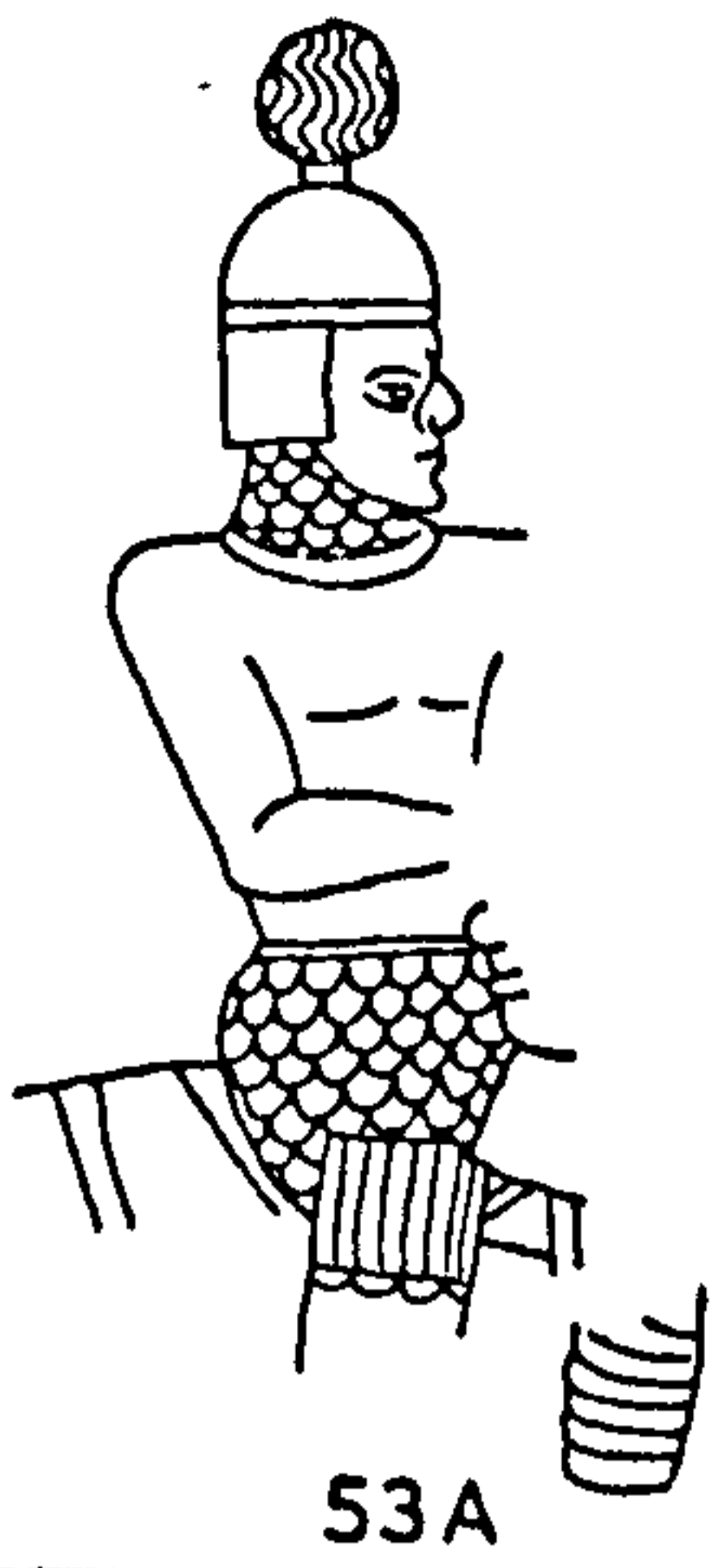
50B



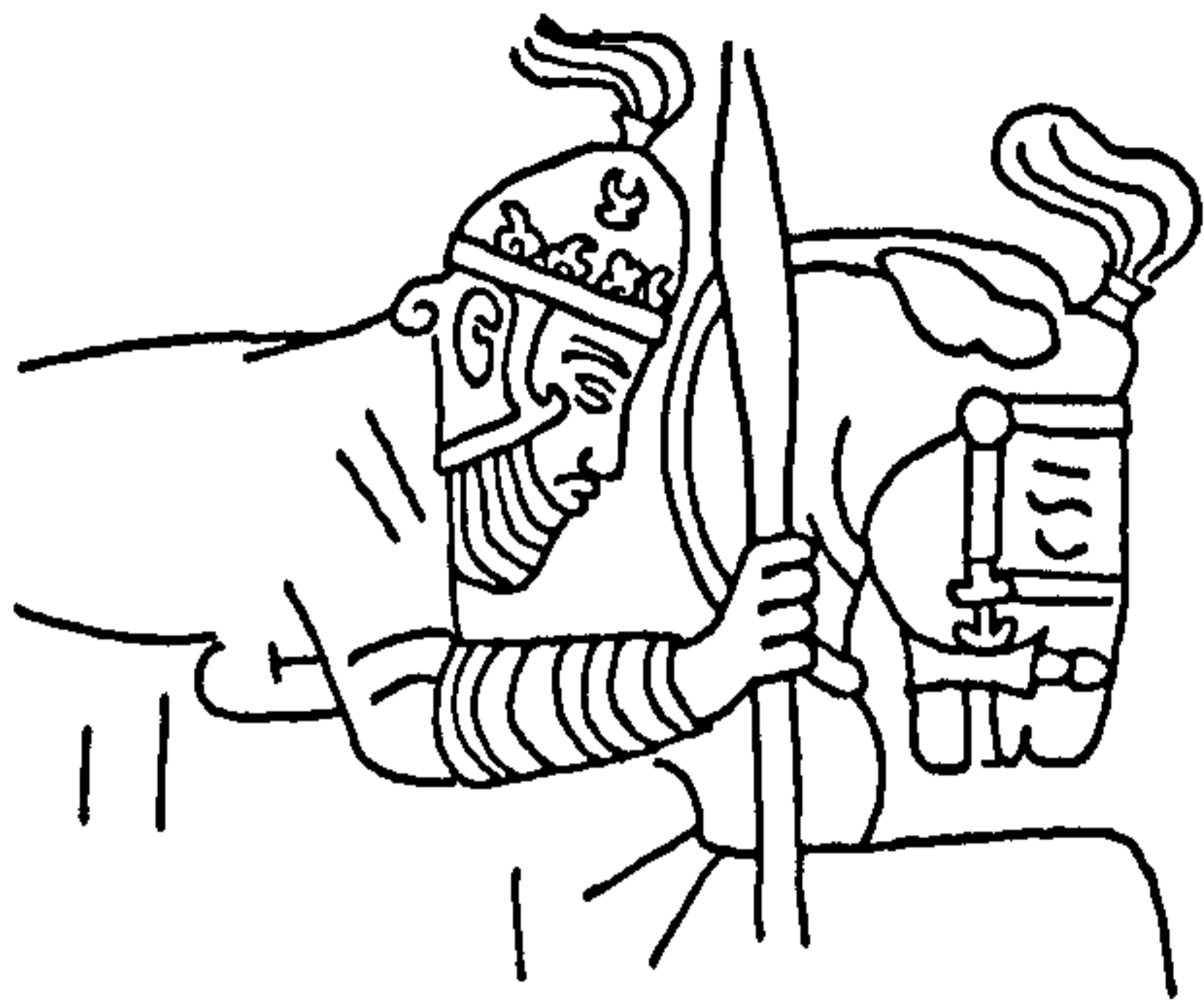
50C



52



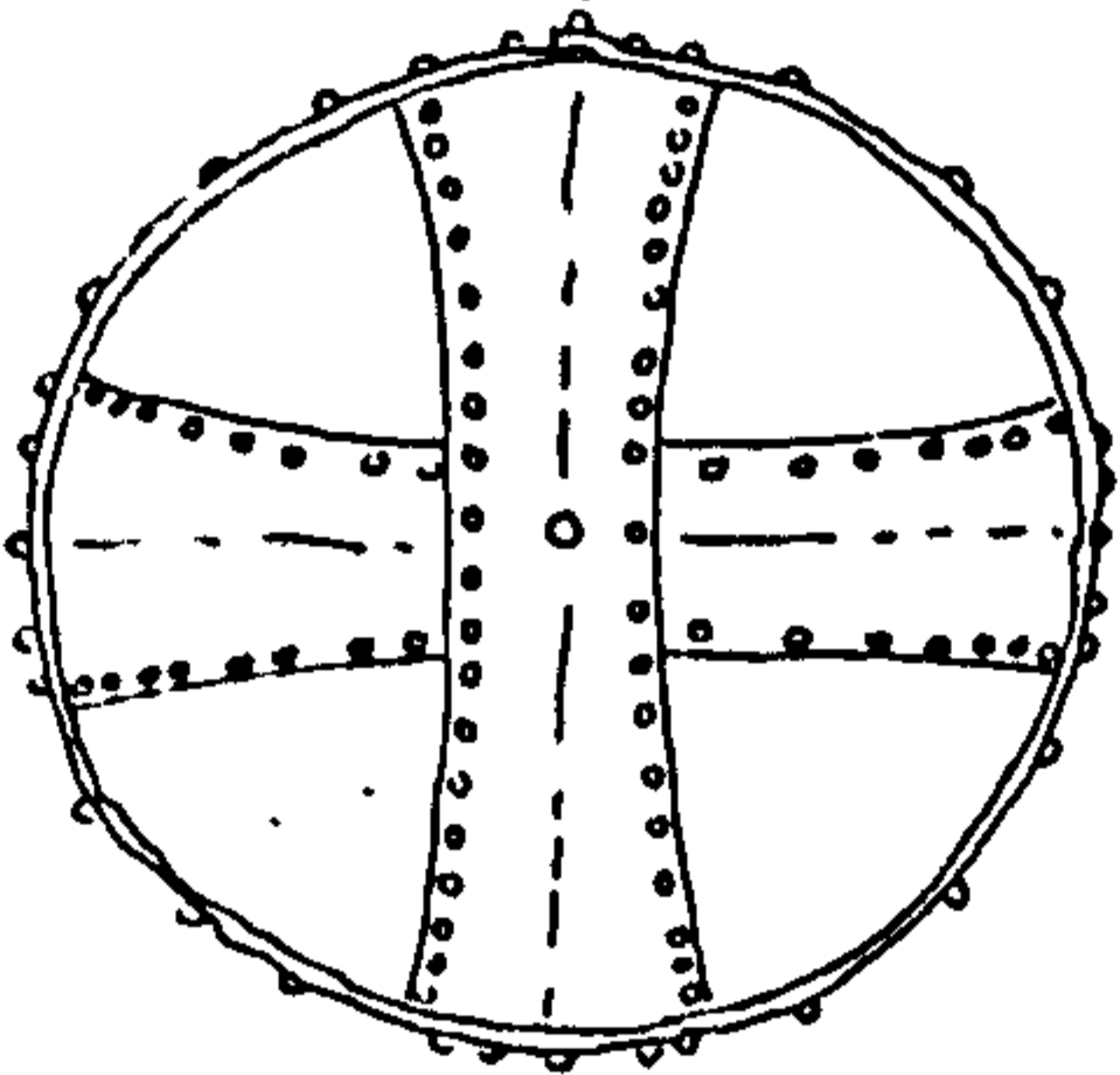
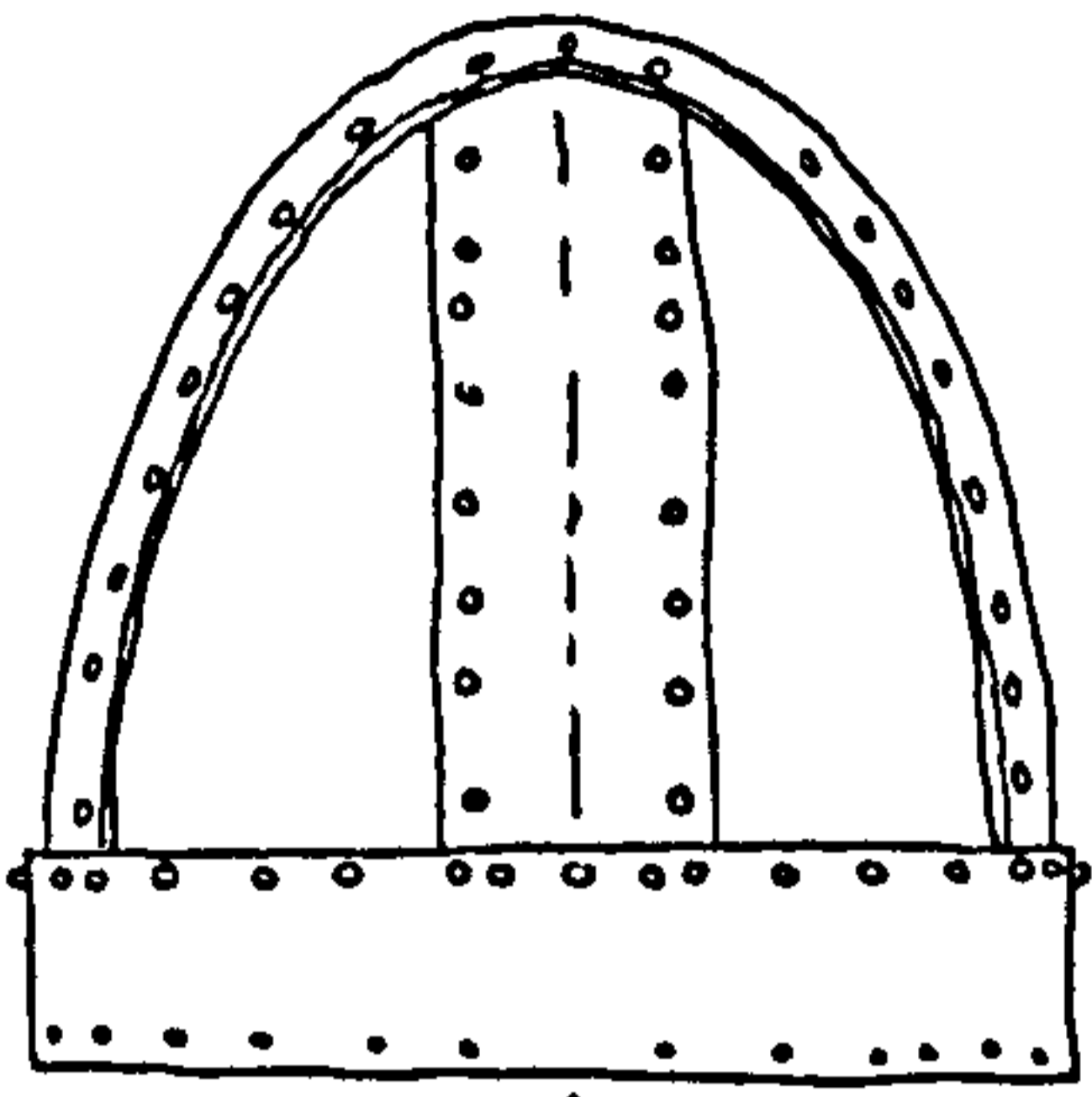
53A



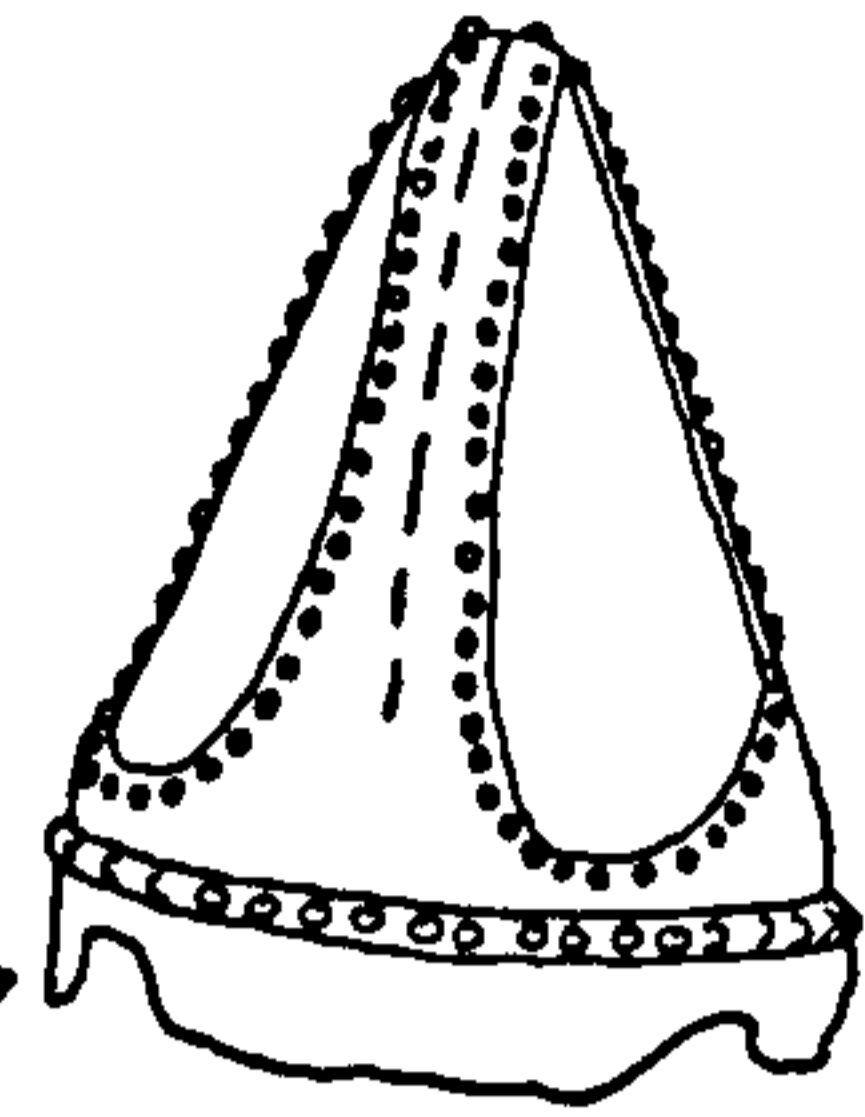
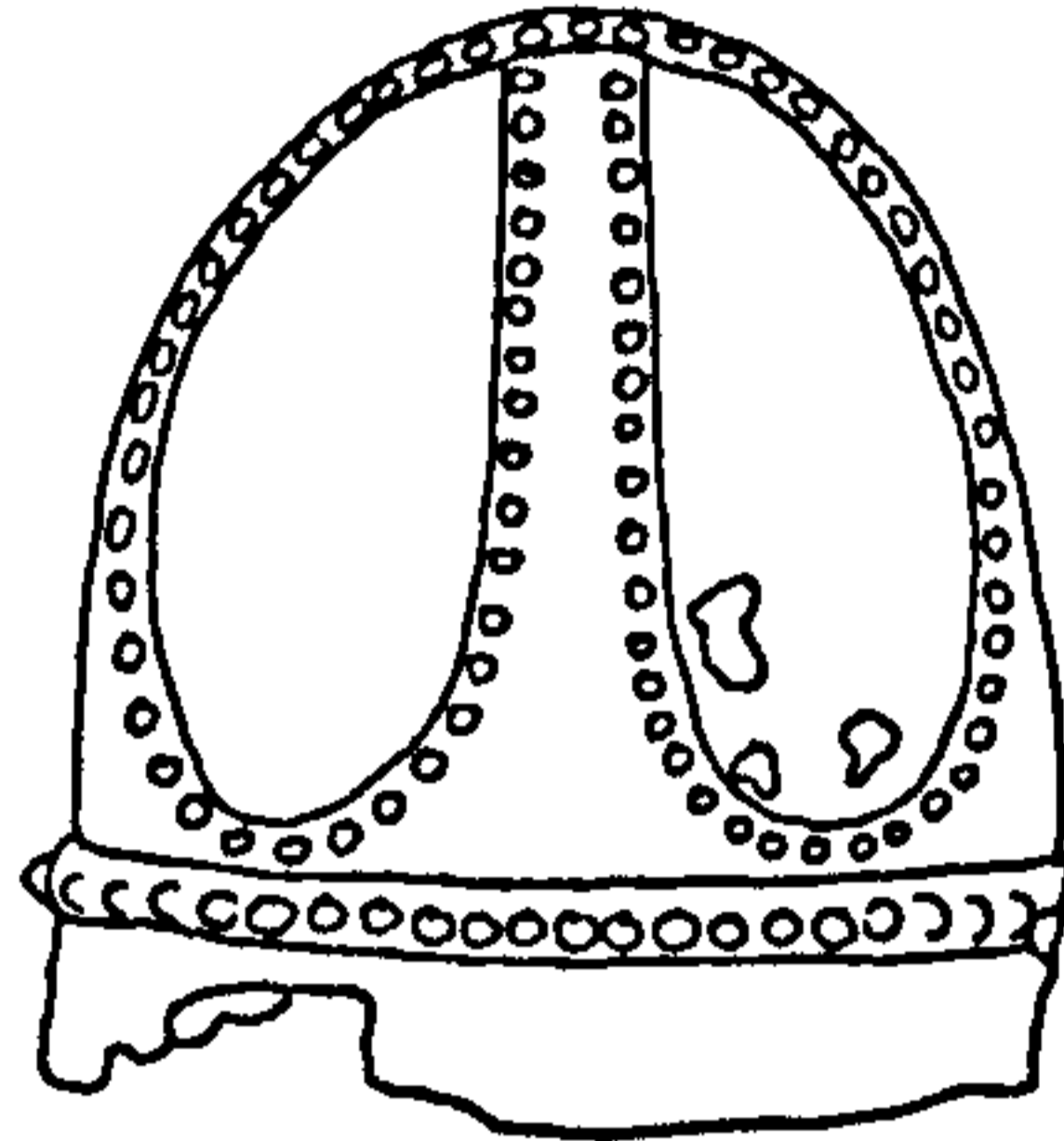
53B



54



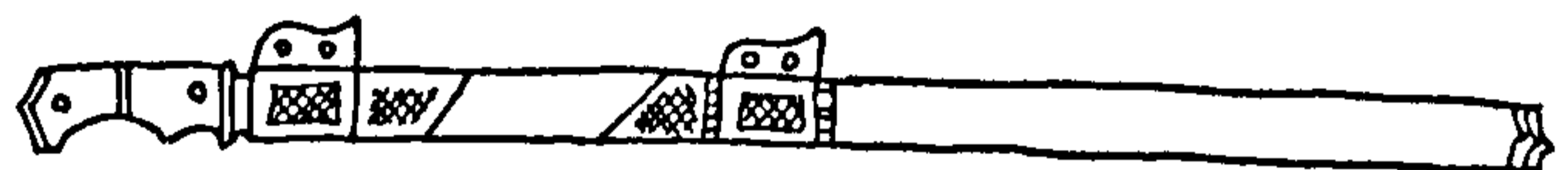
55



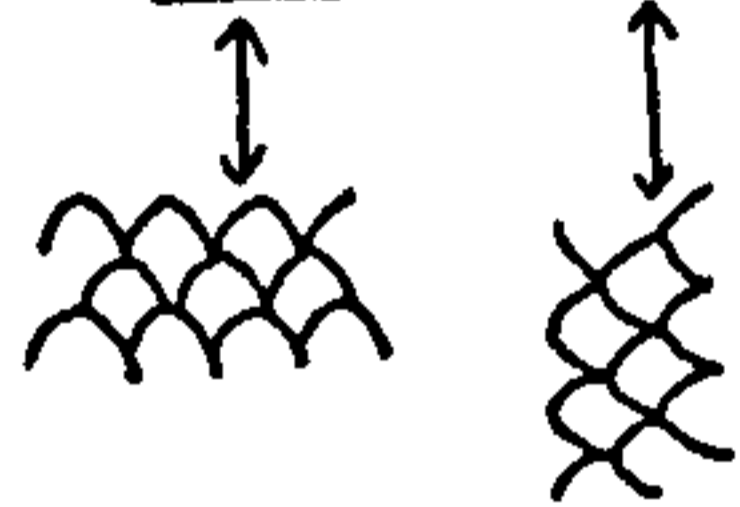
56



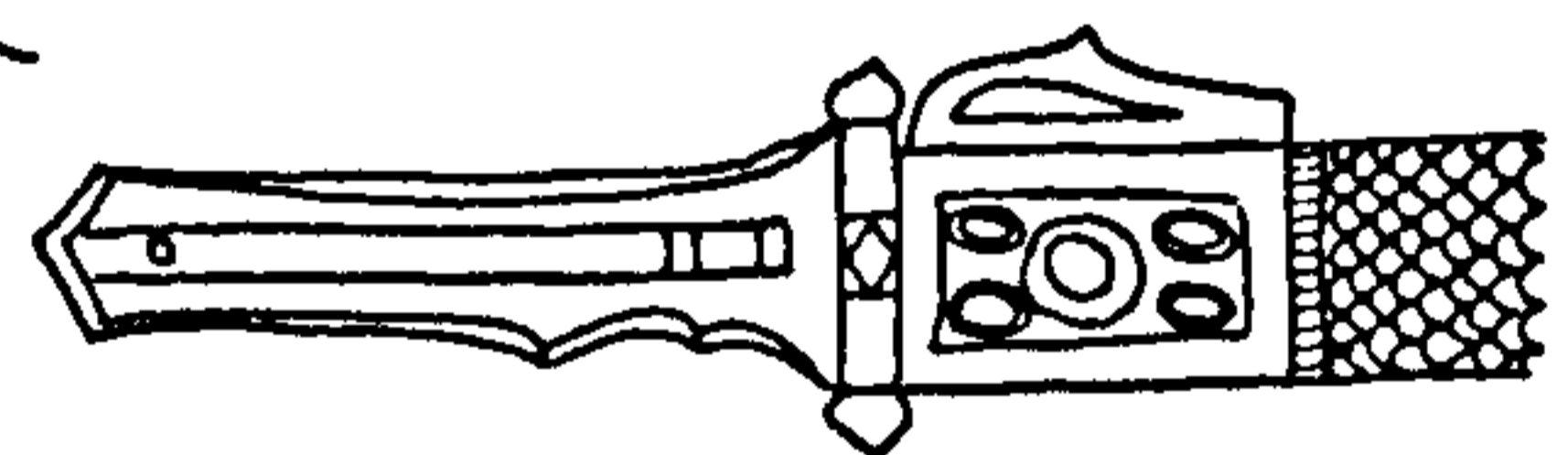
58A



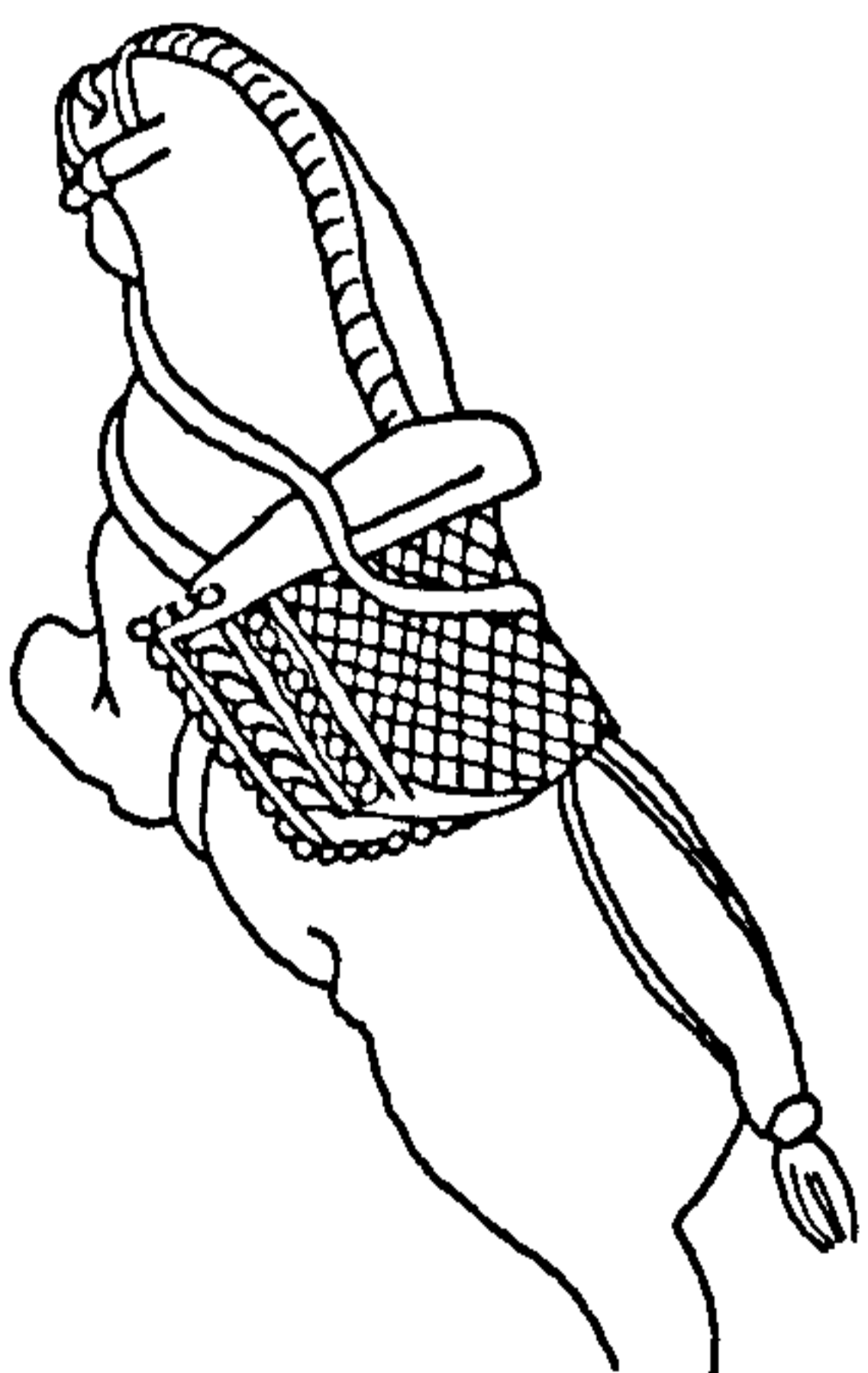
58B



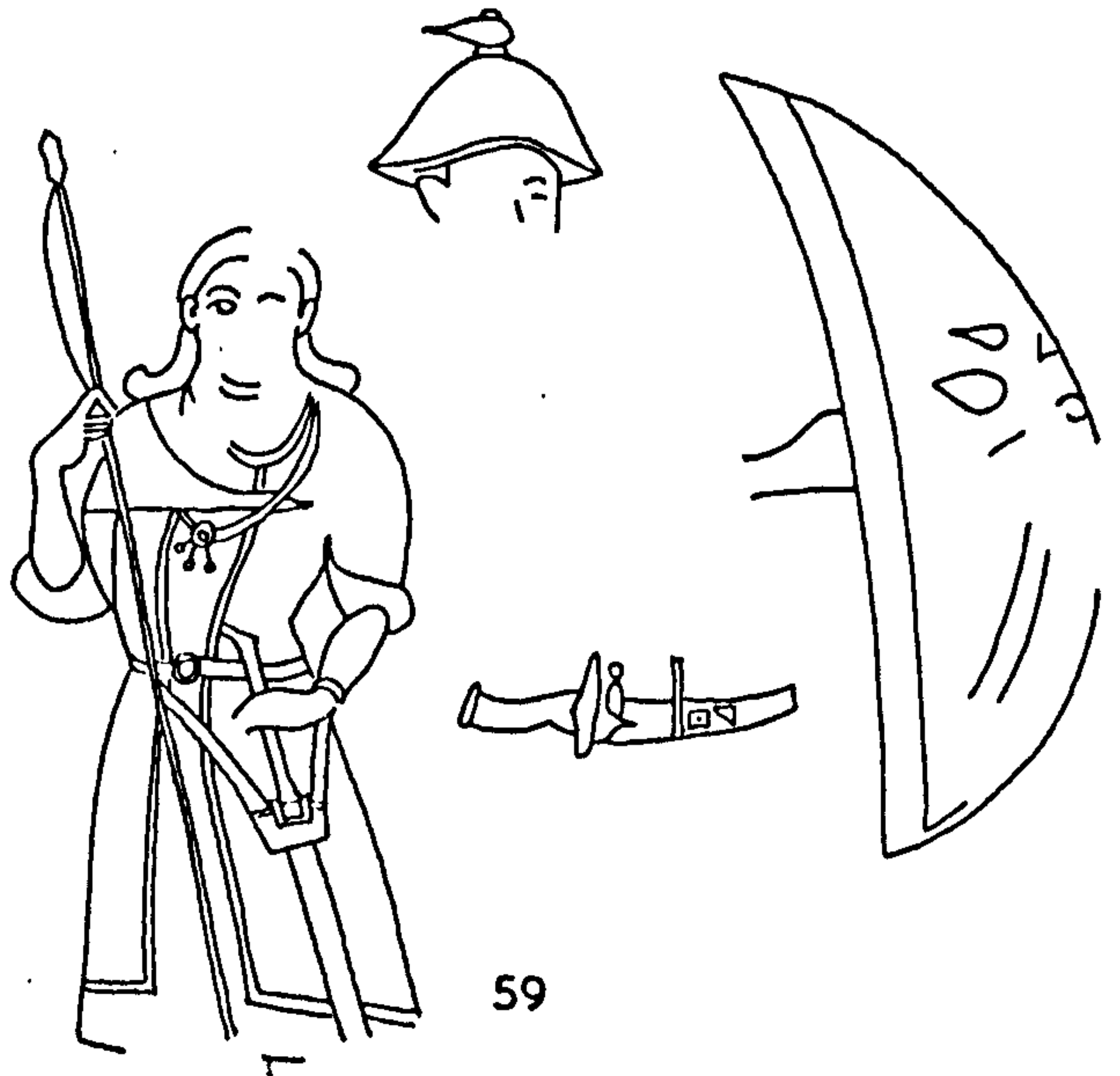
58C



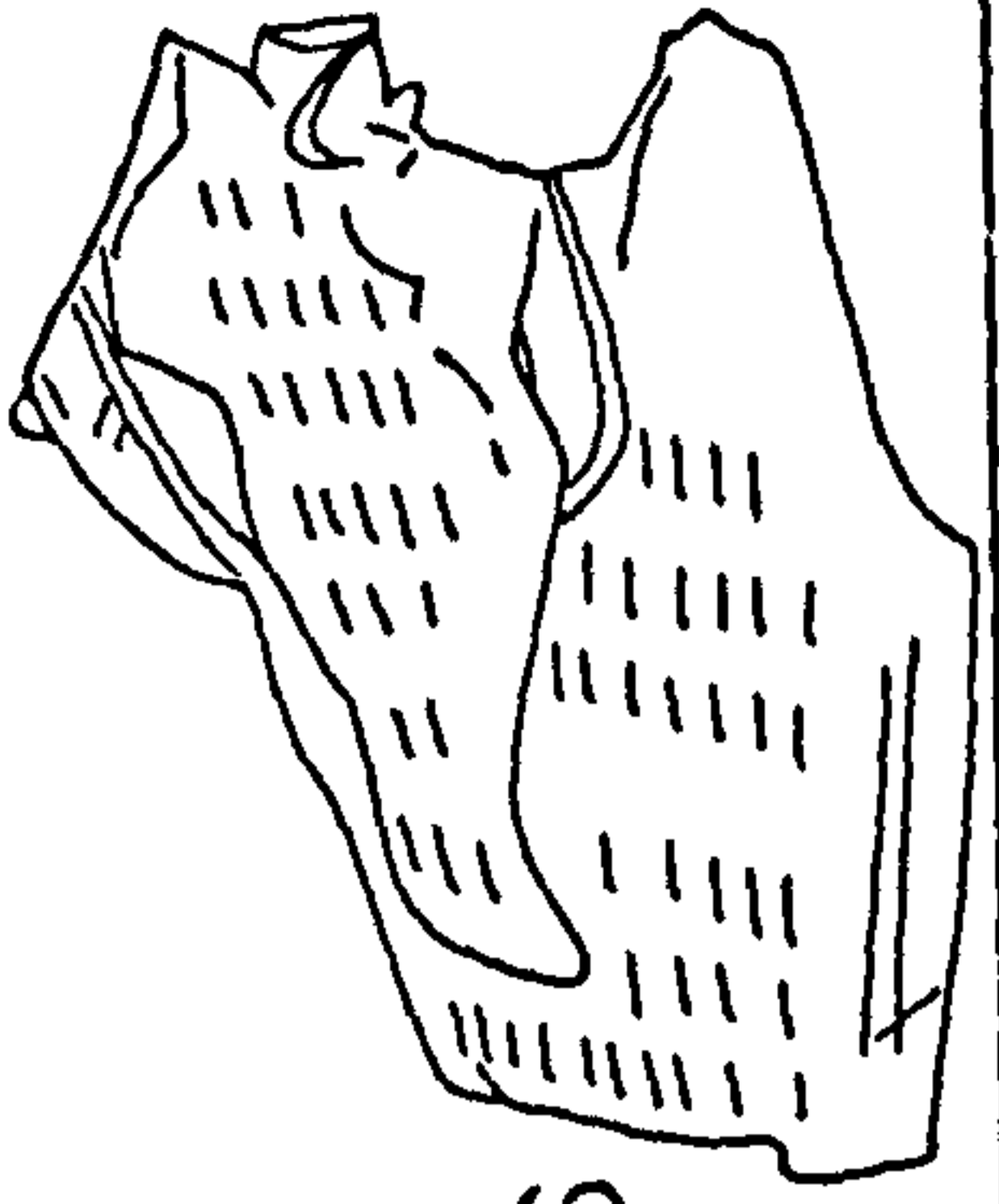
58D



57



59



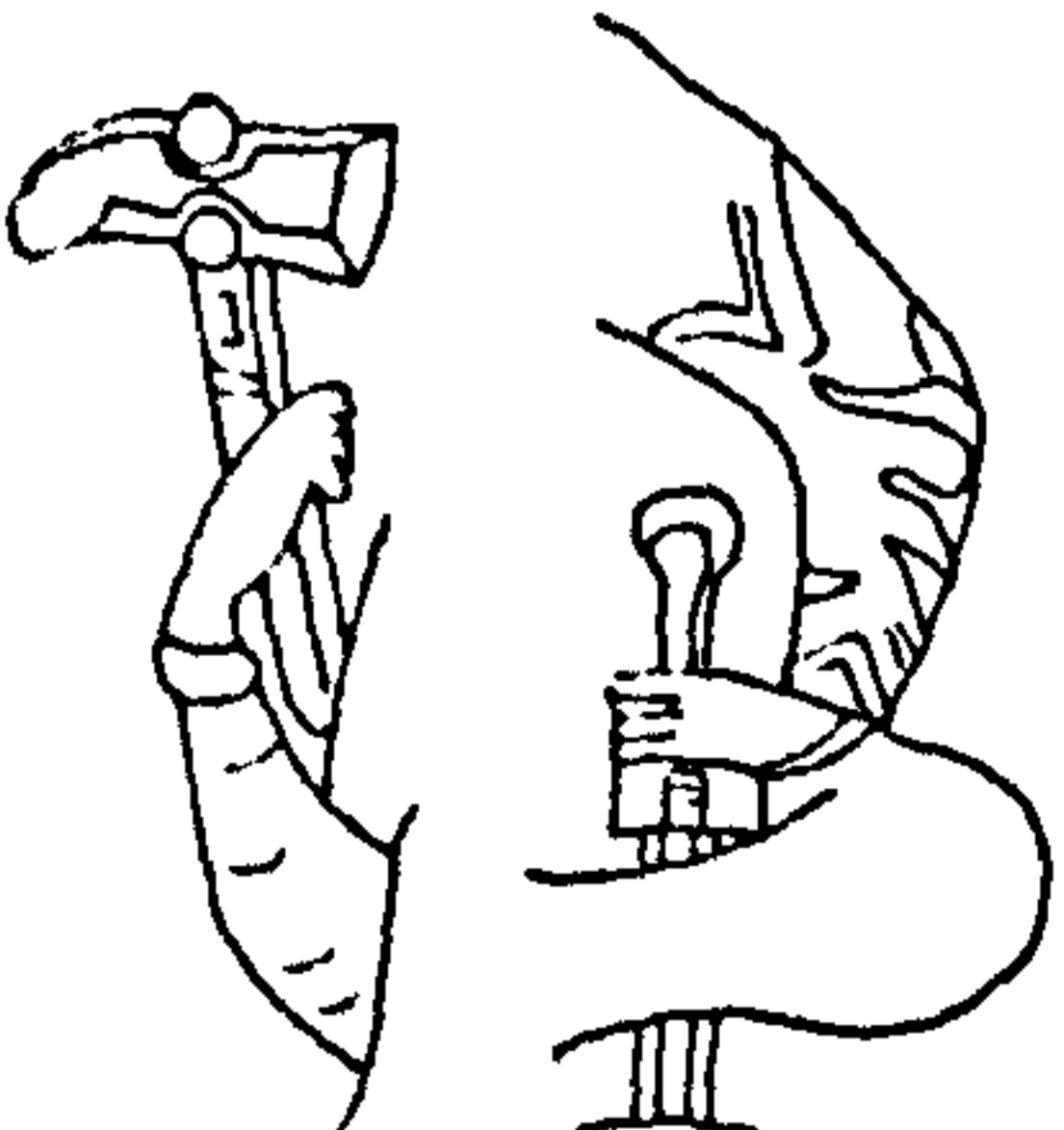
60



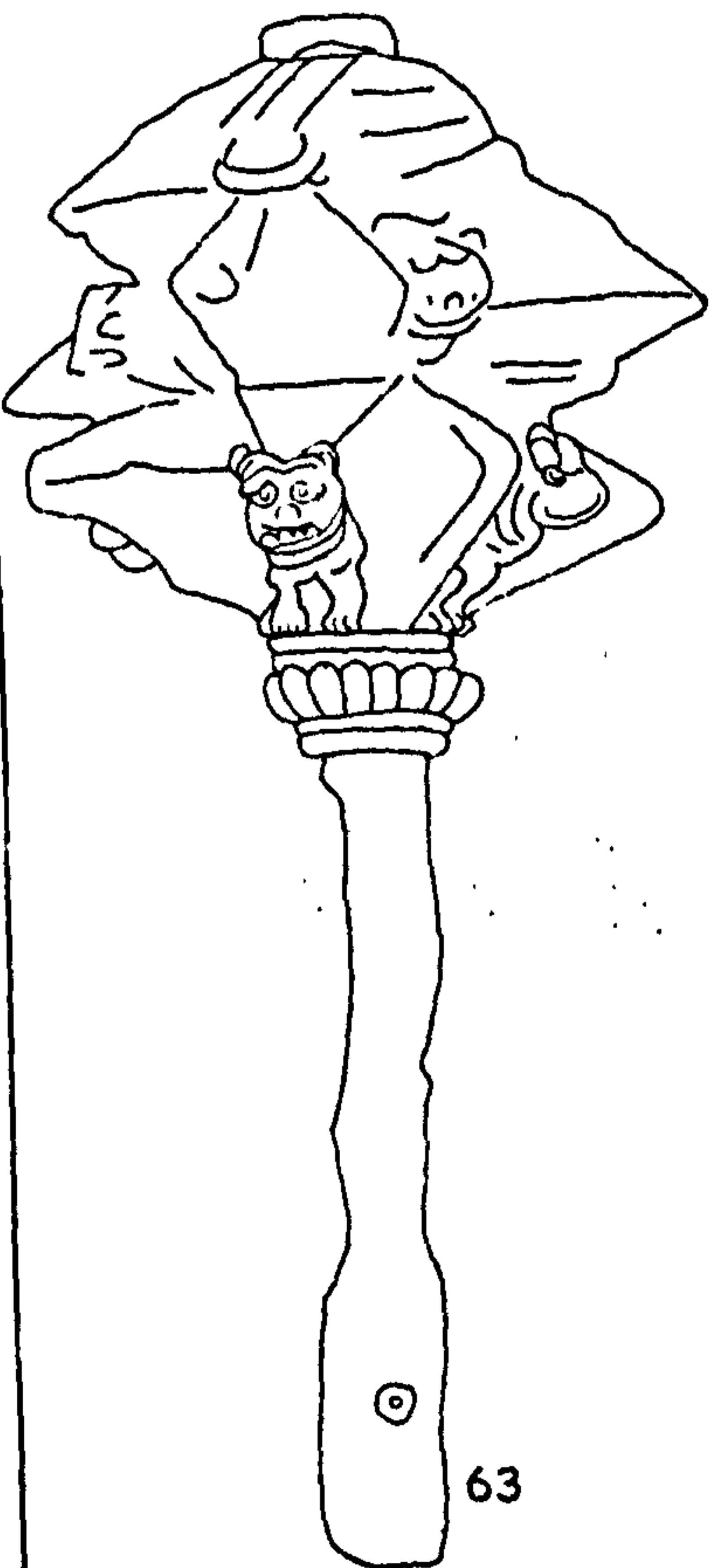
61A



61B



62



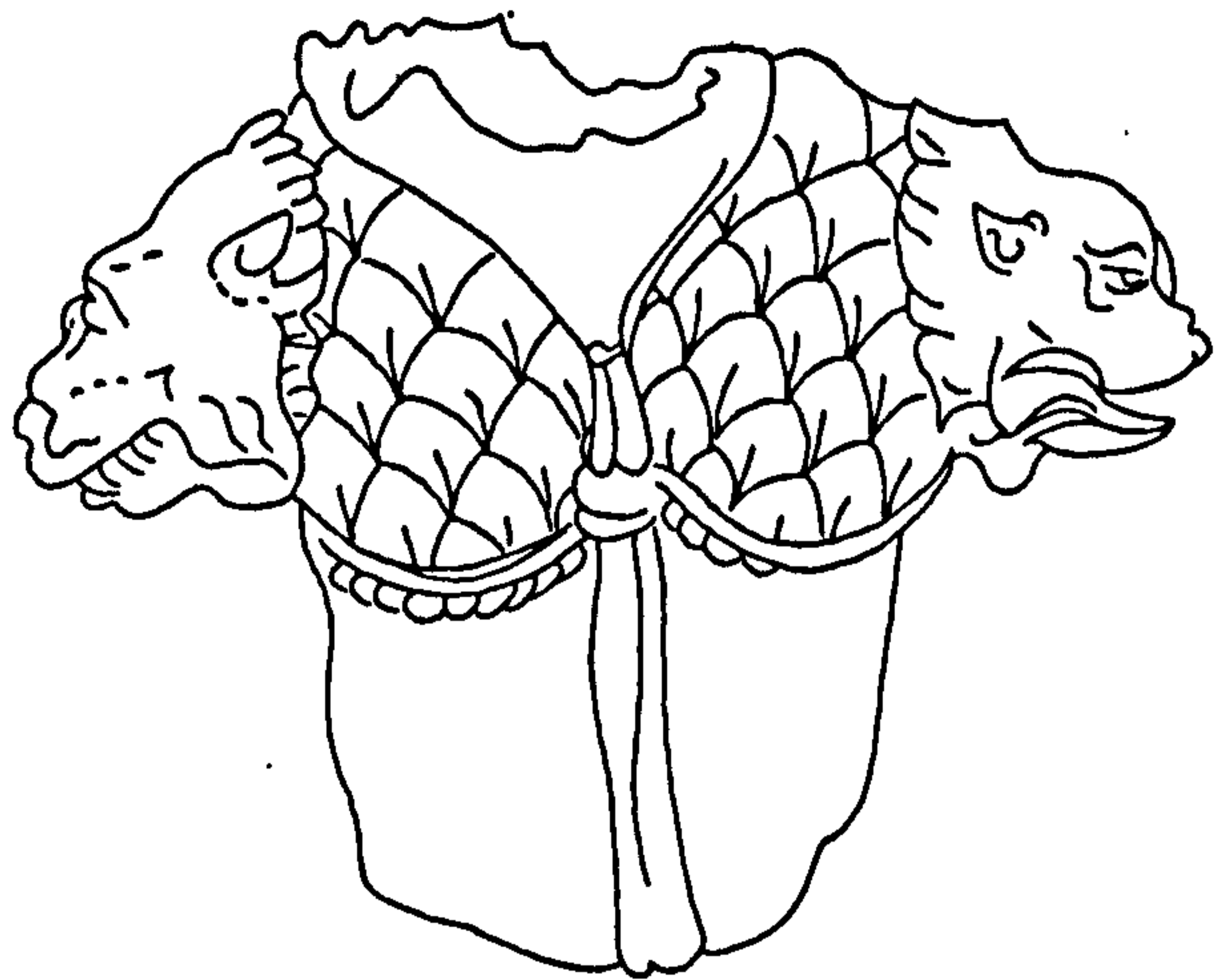
63



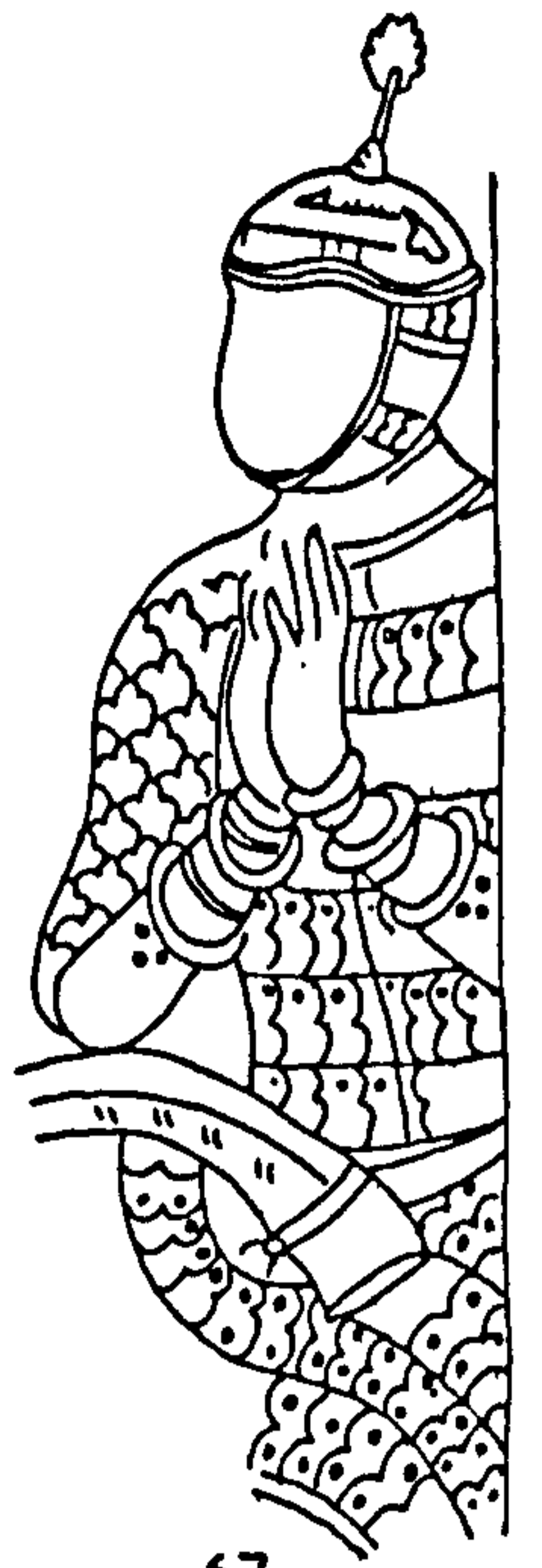
64



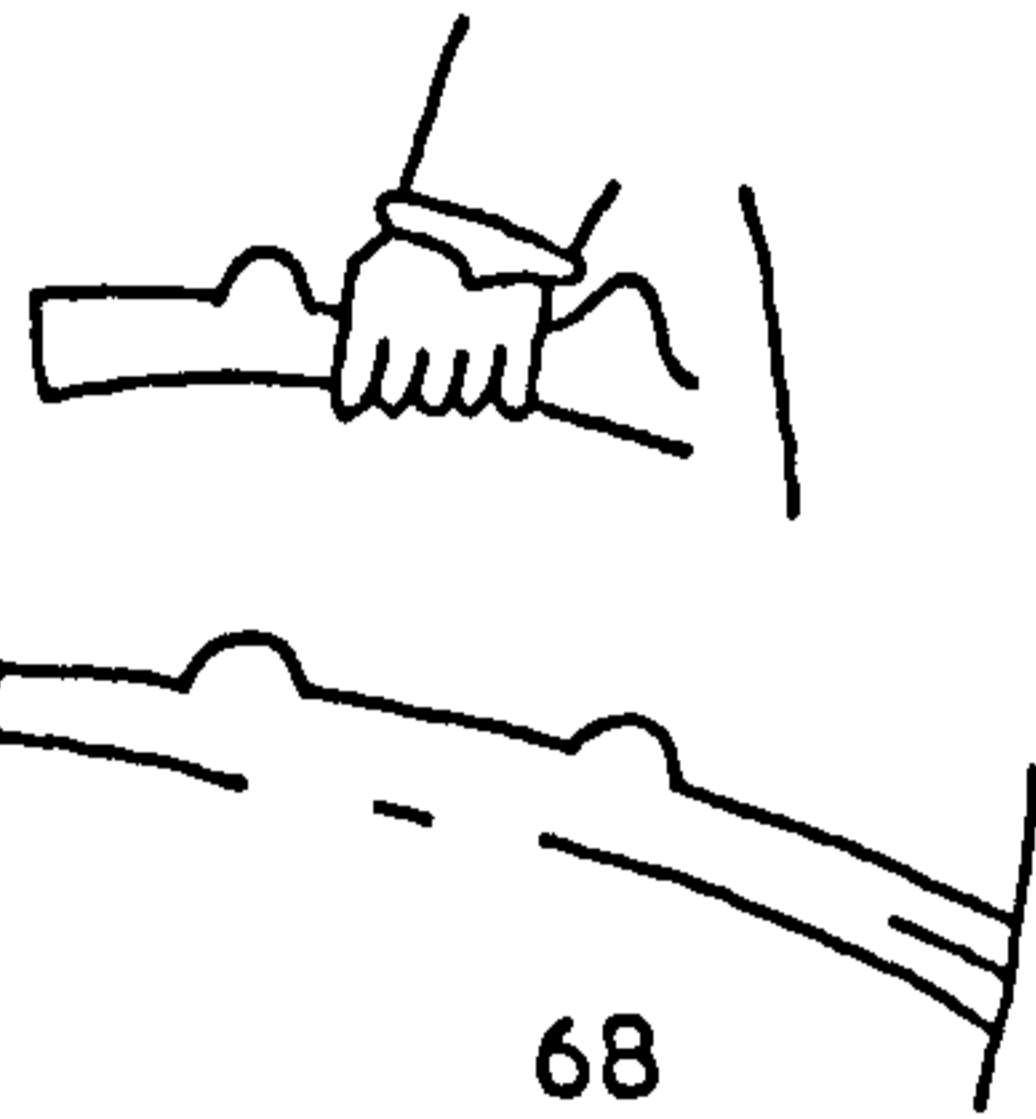
65



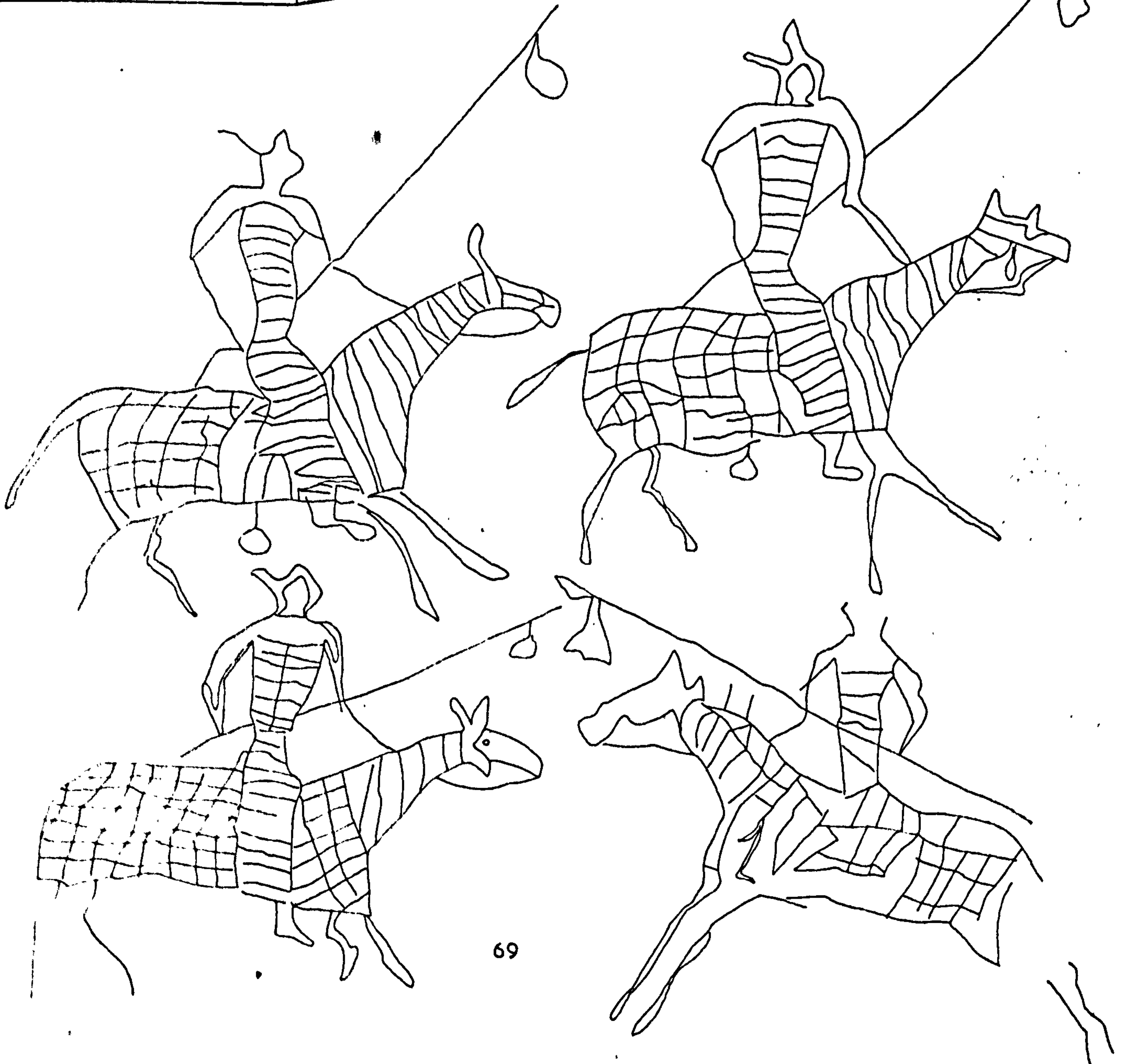
66



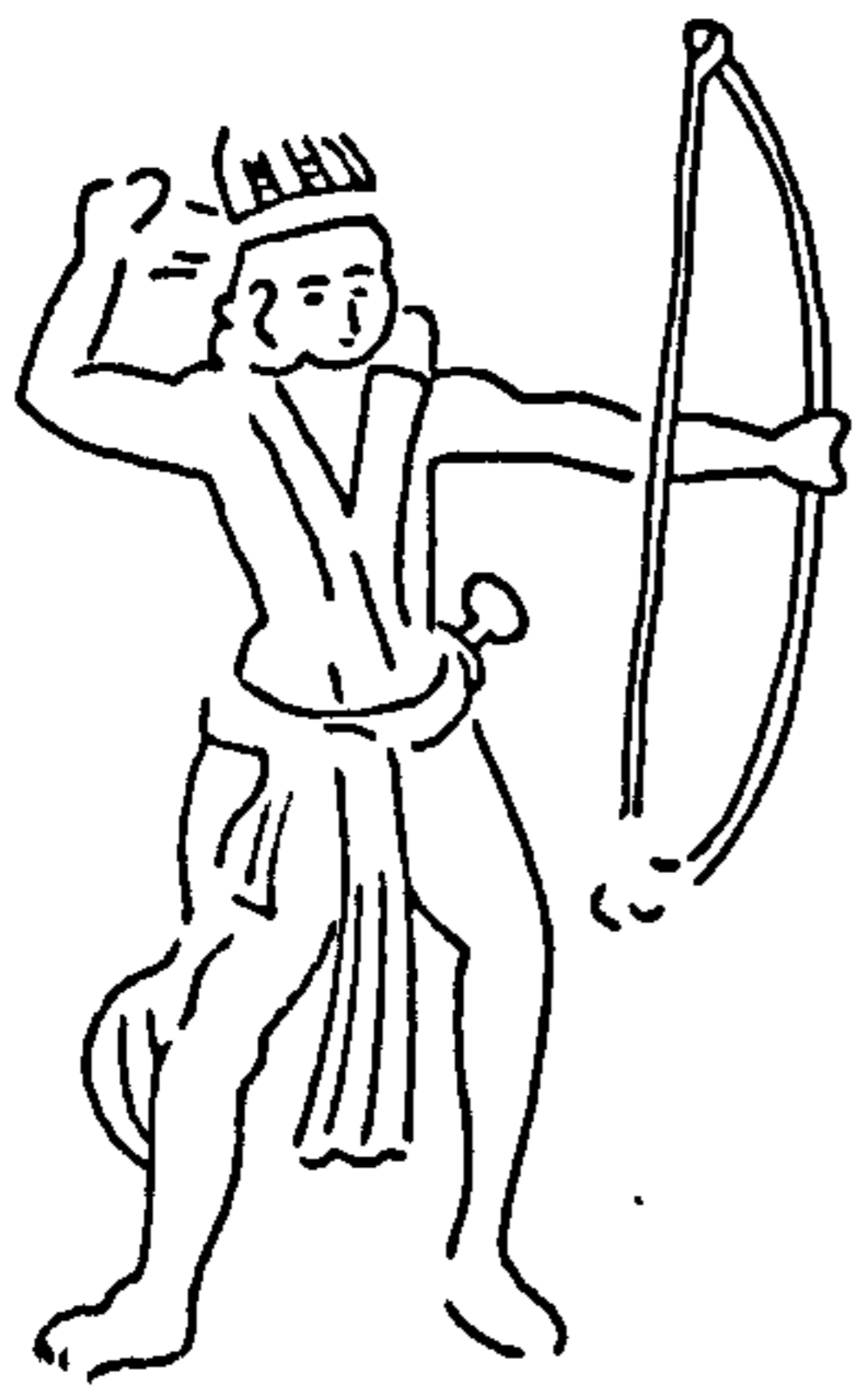
67



68



69



70



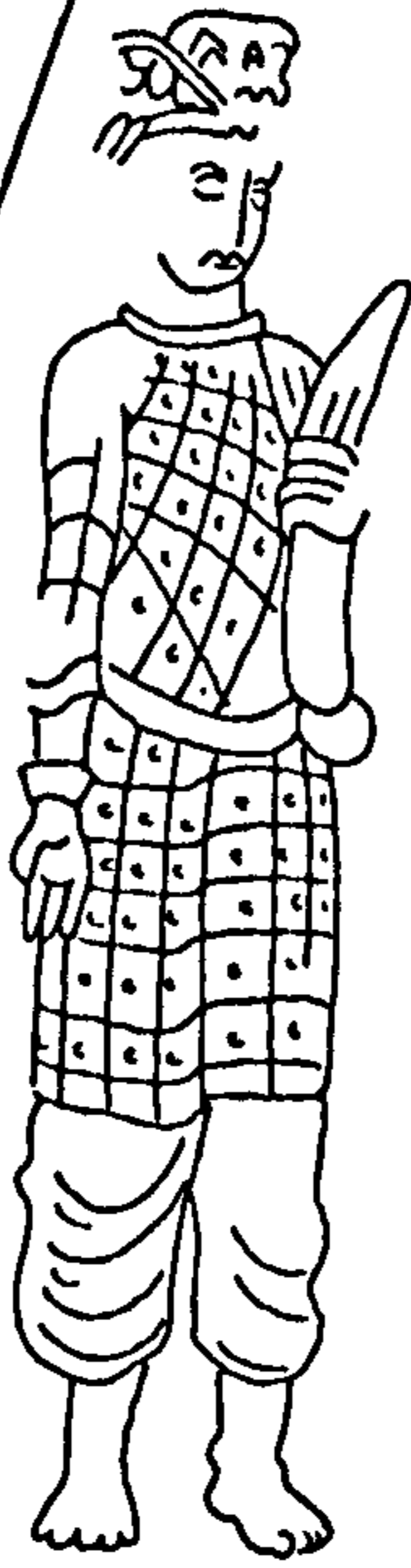
71



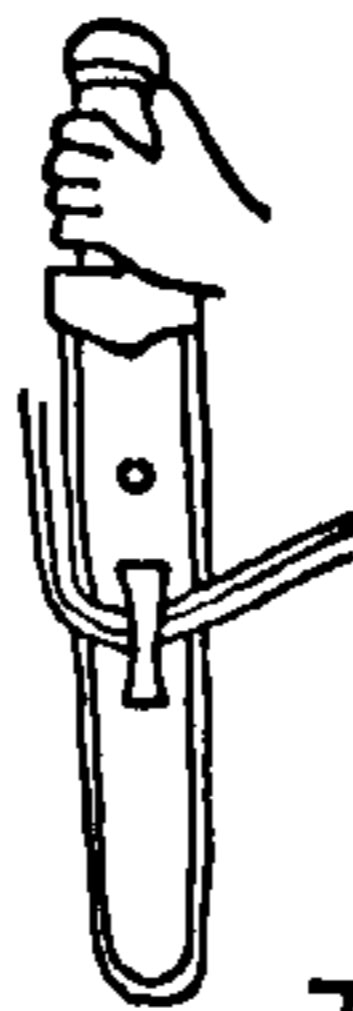
72



73



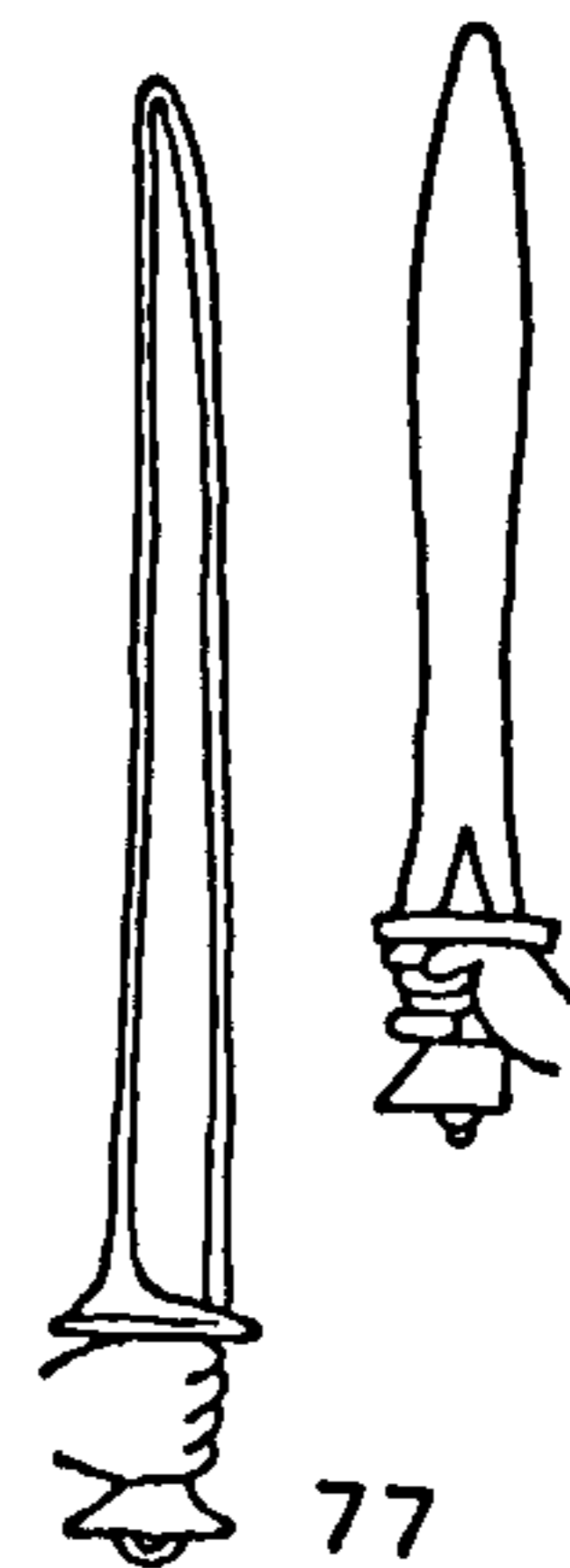
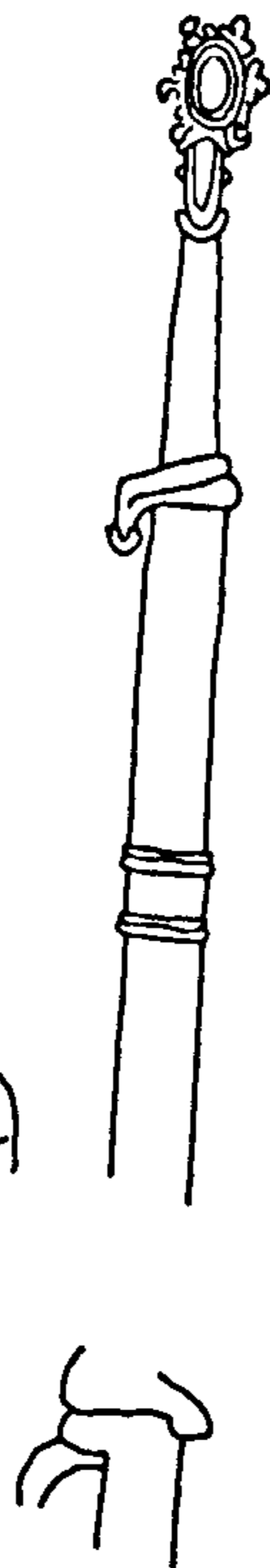
74



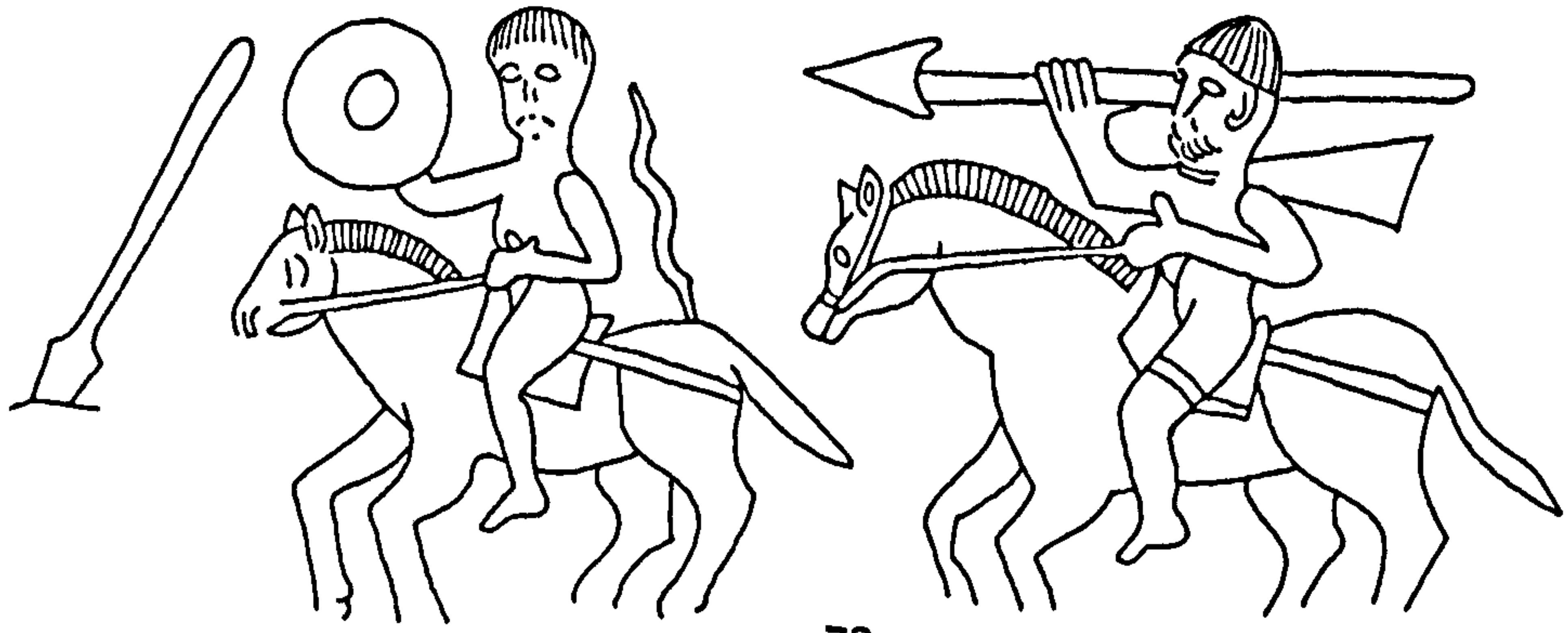
75



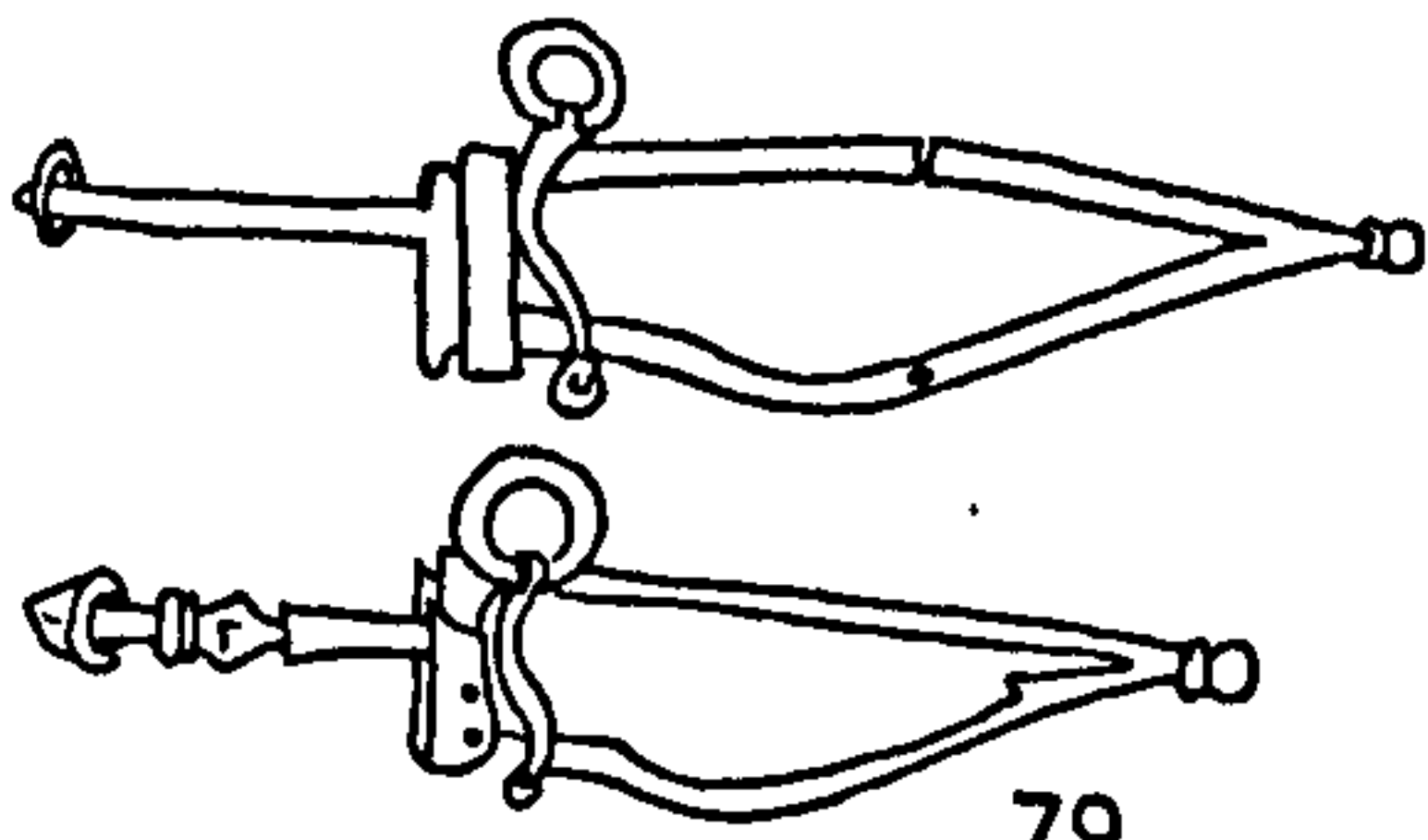
76



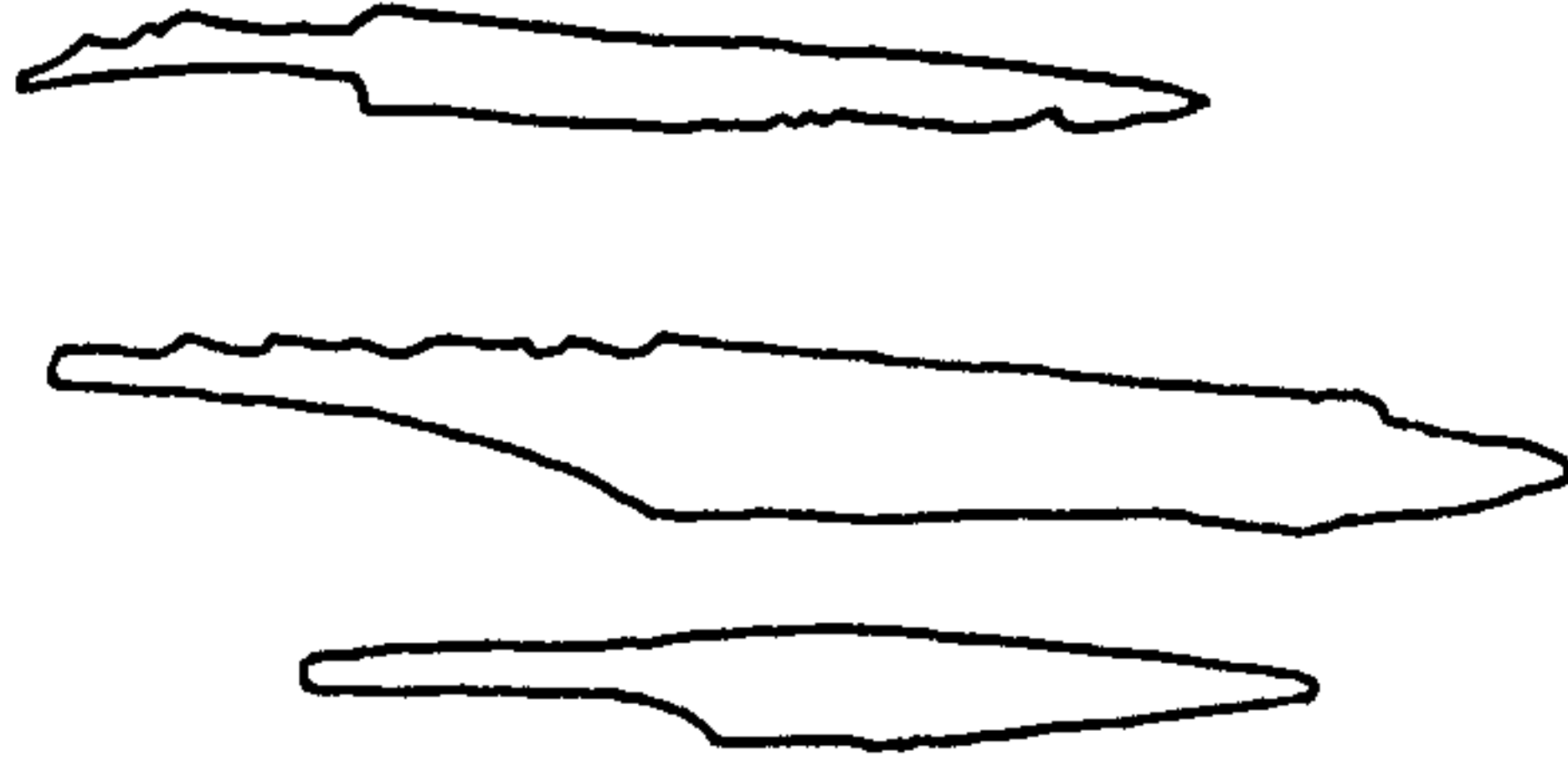
77



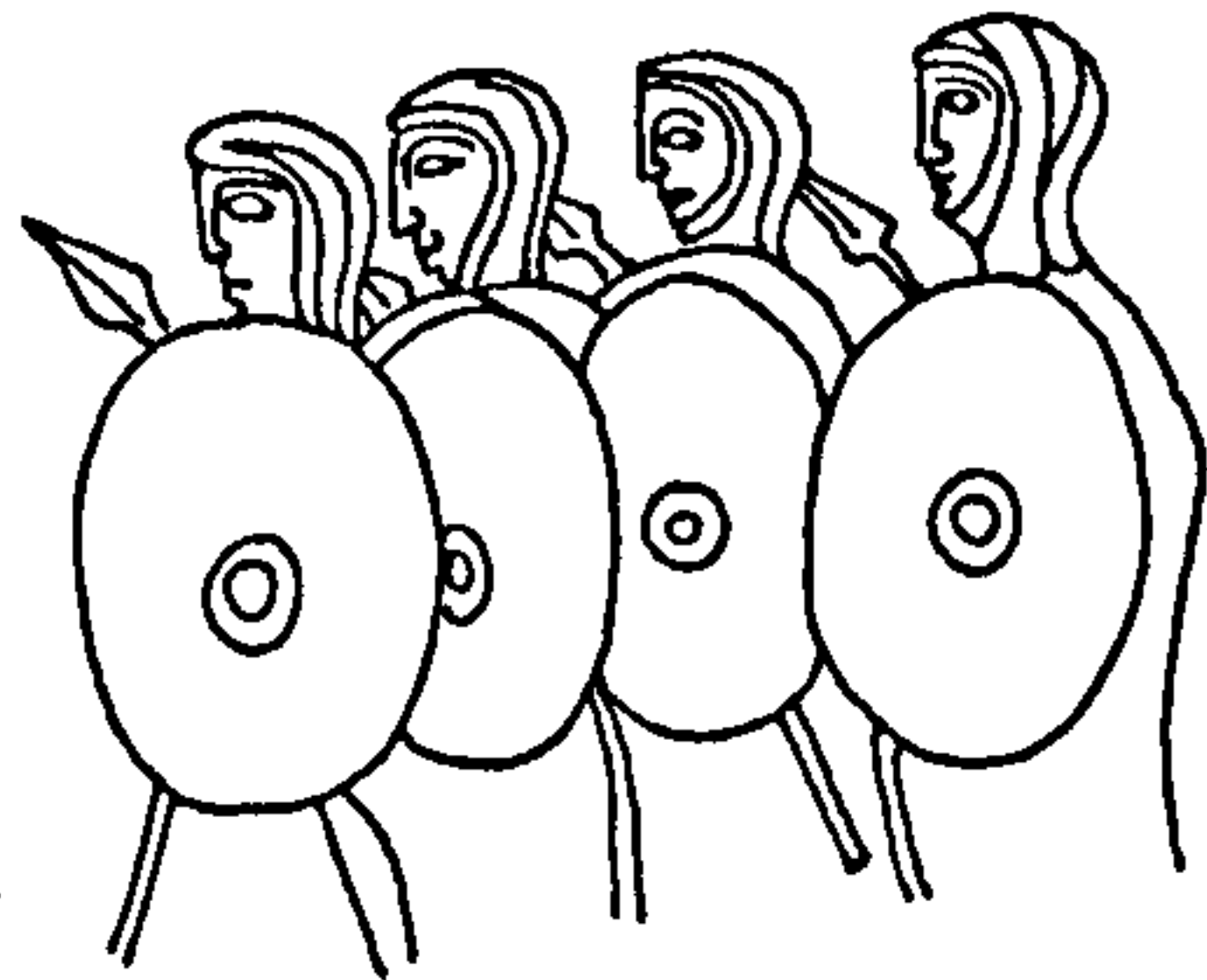
78



79



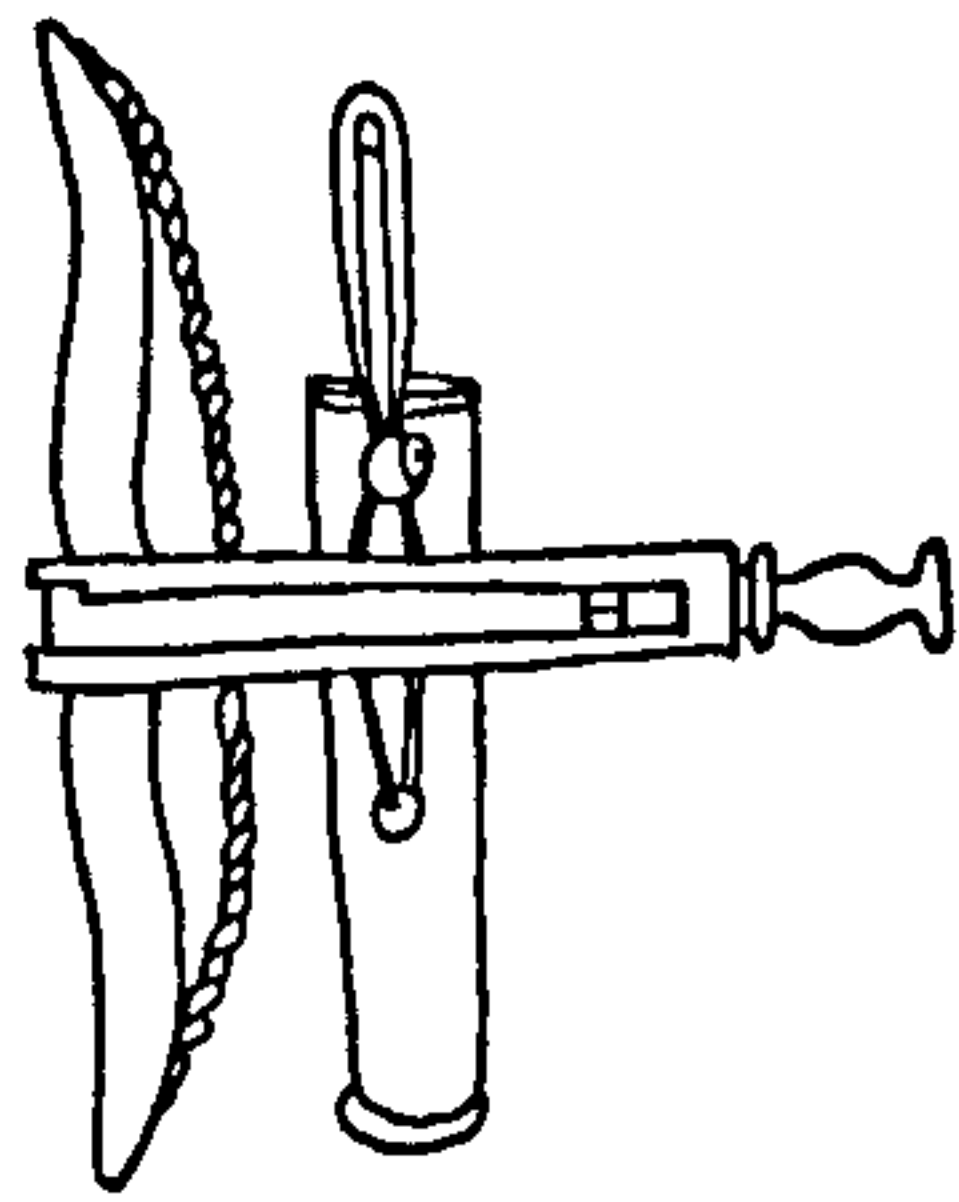
80



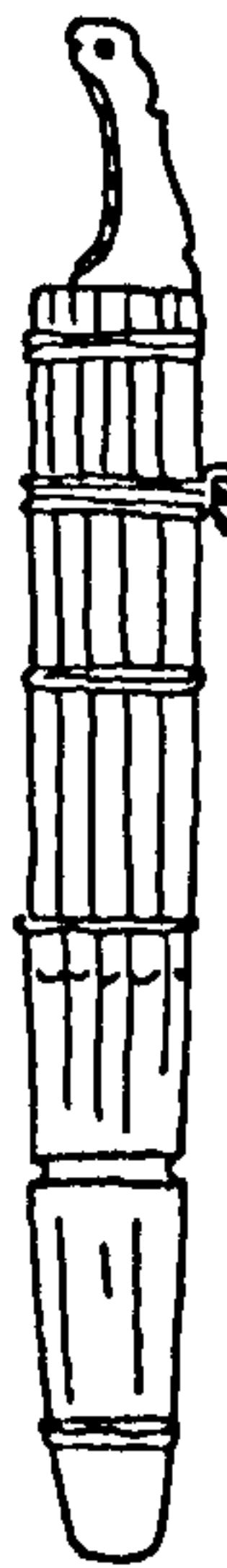
81



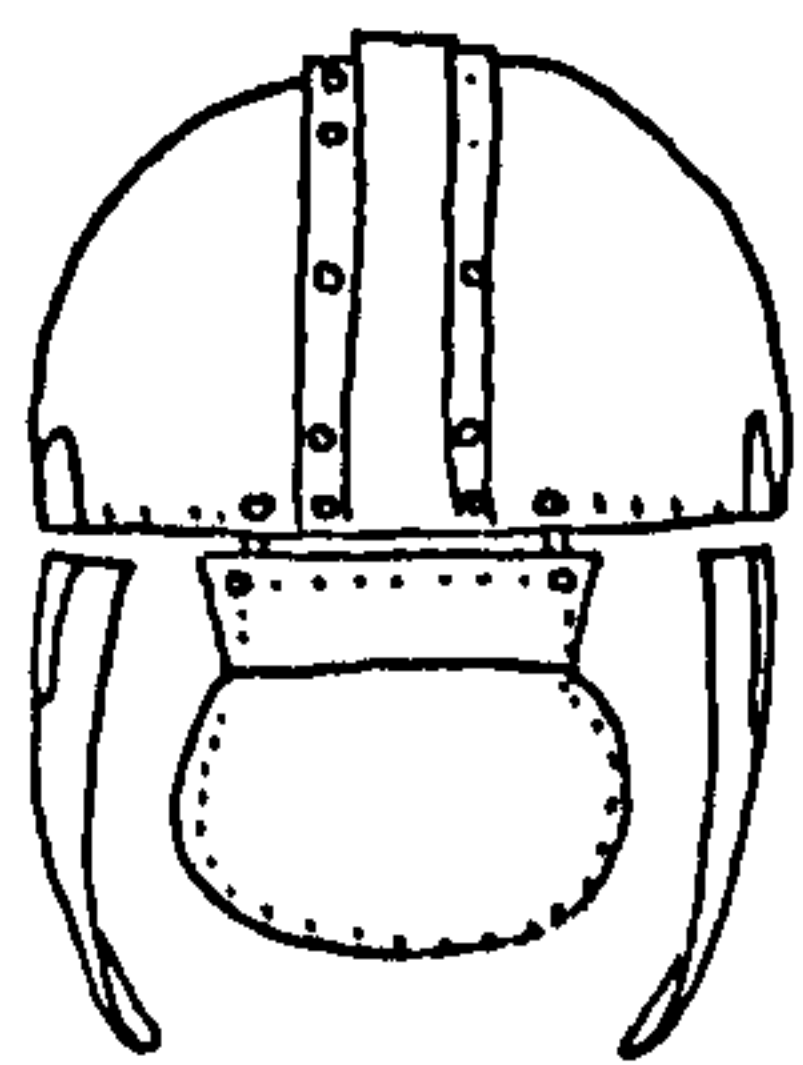
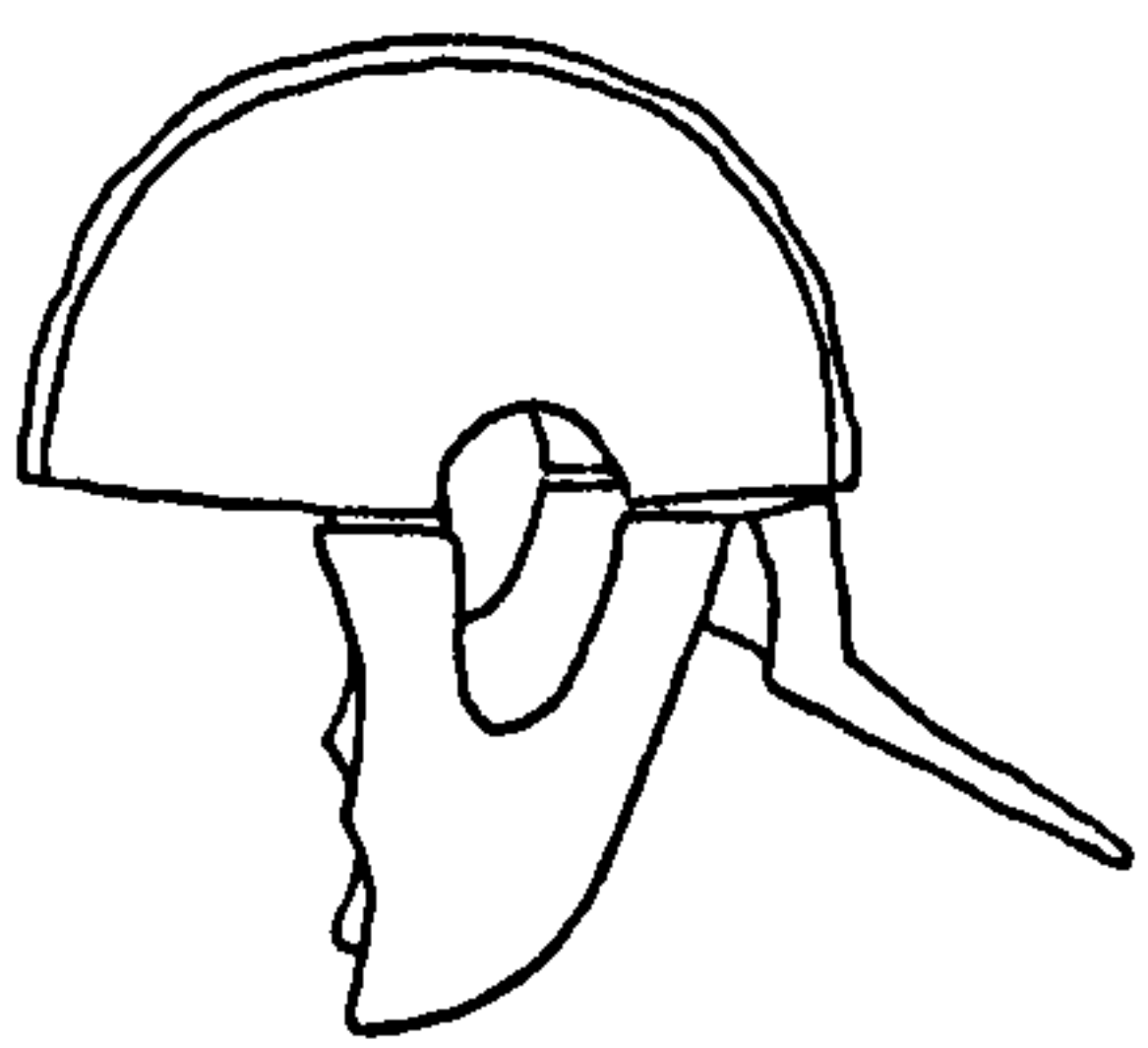
82



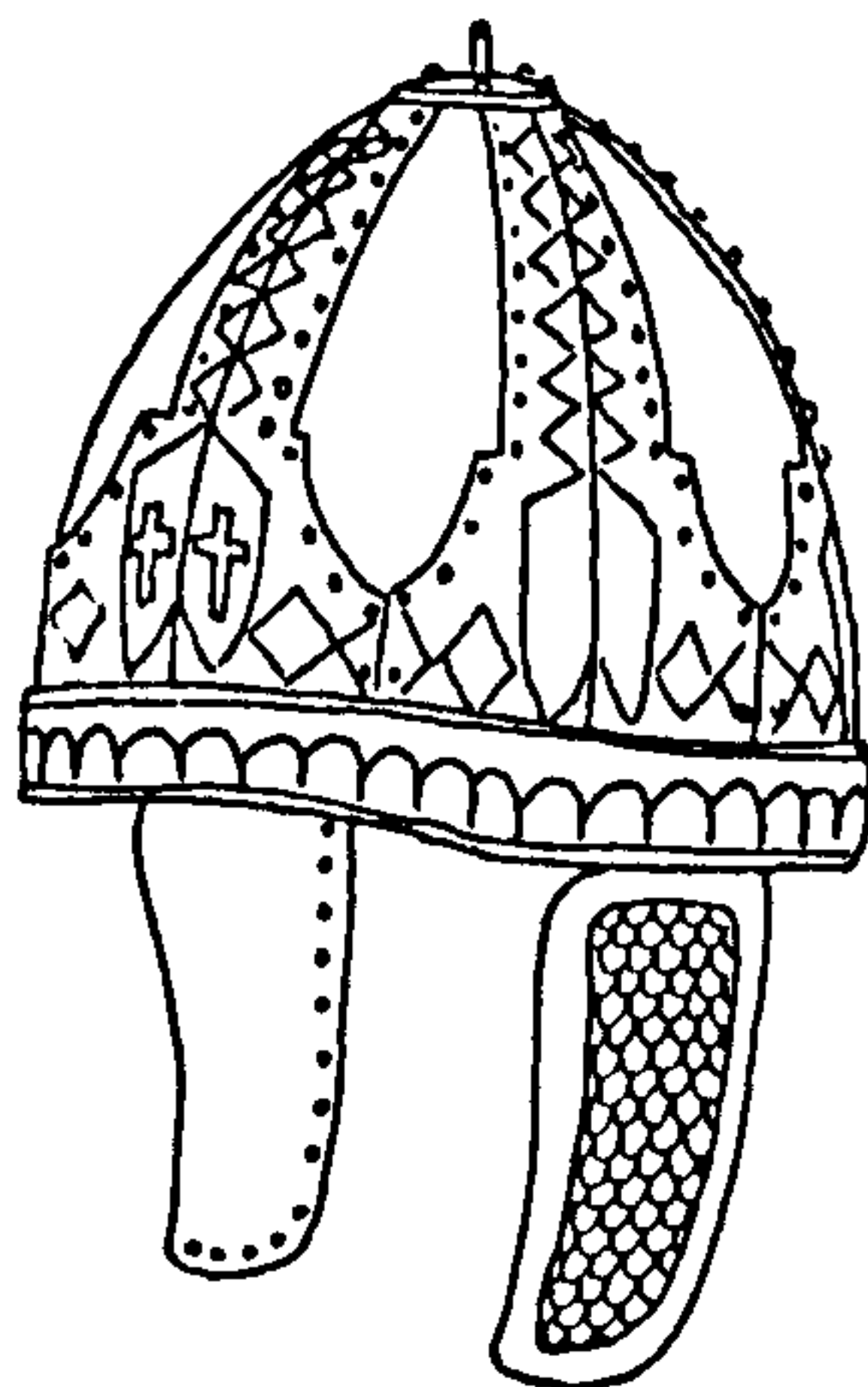
83



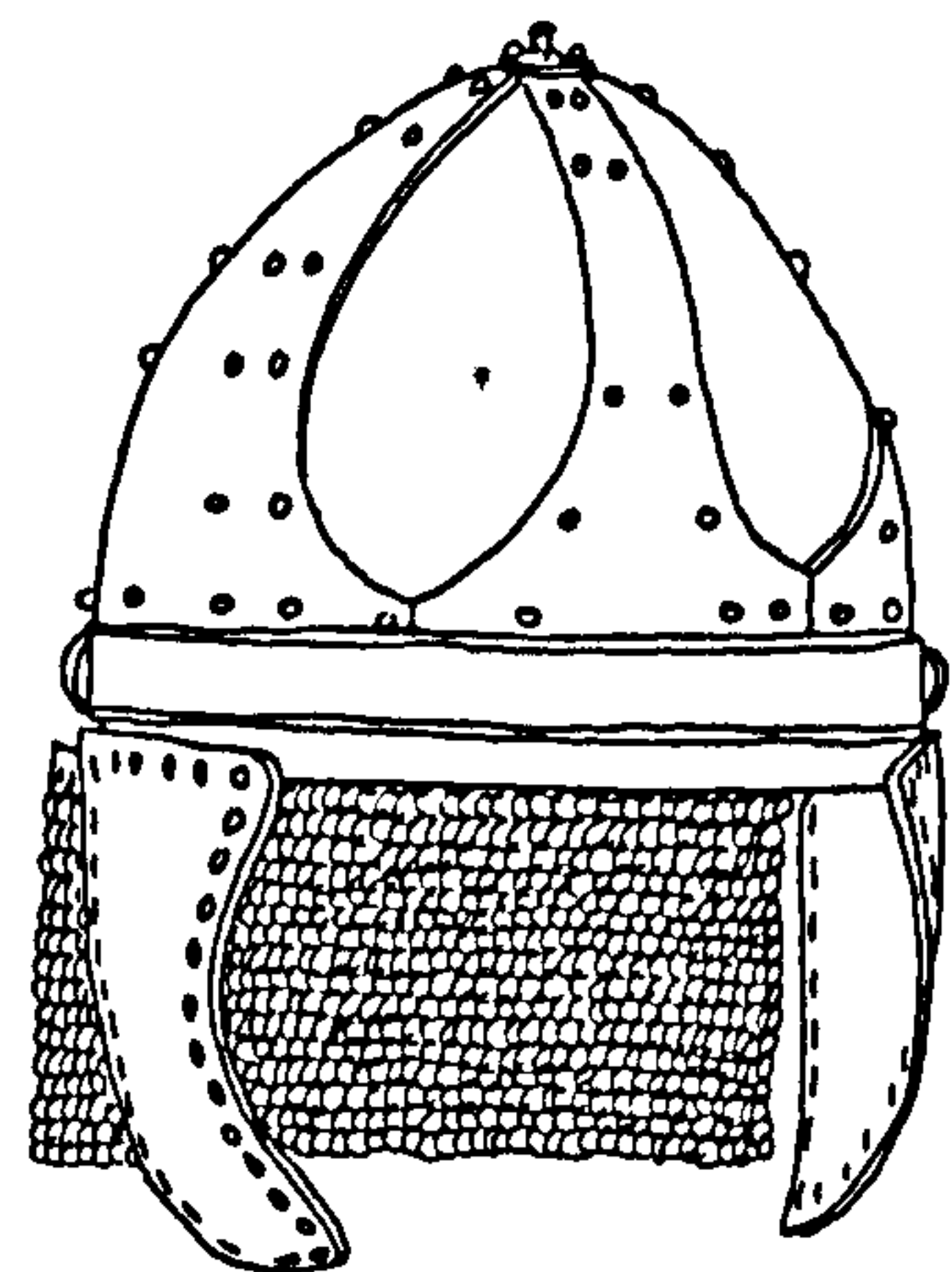
84



85

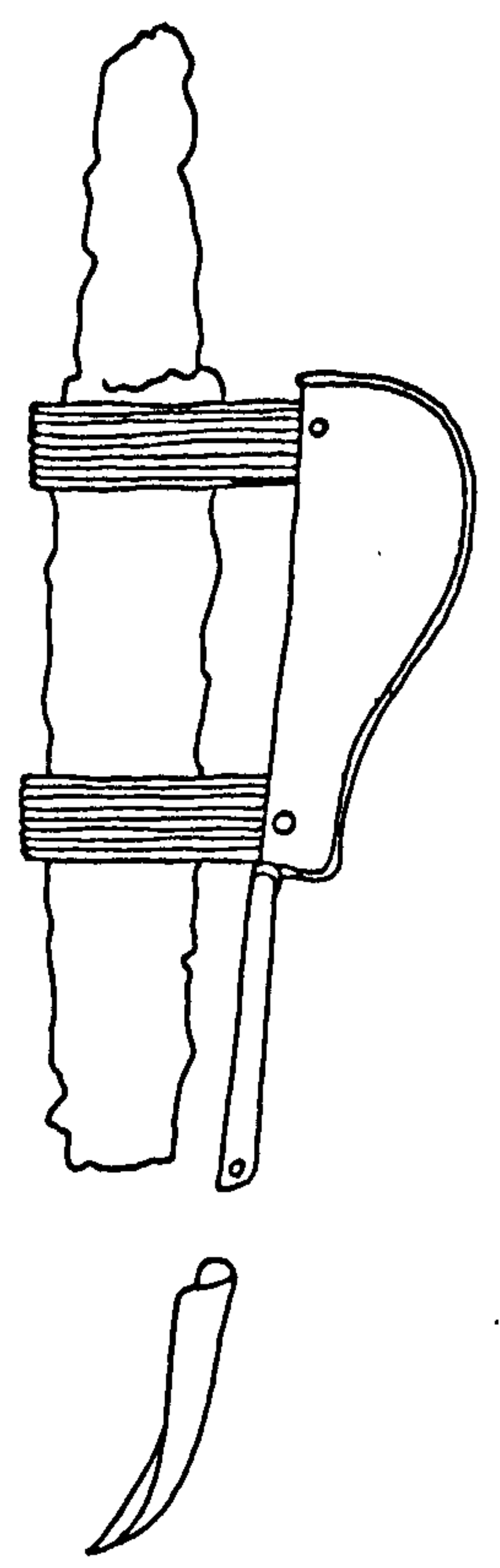
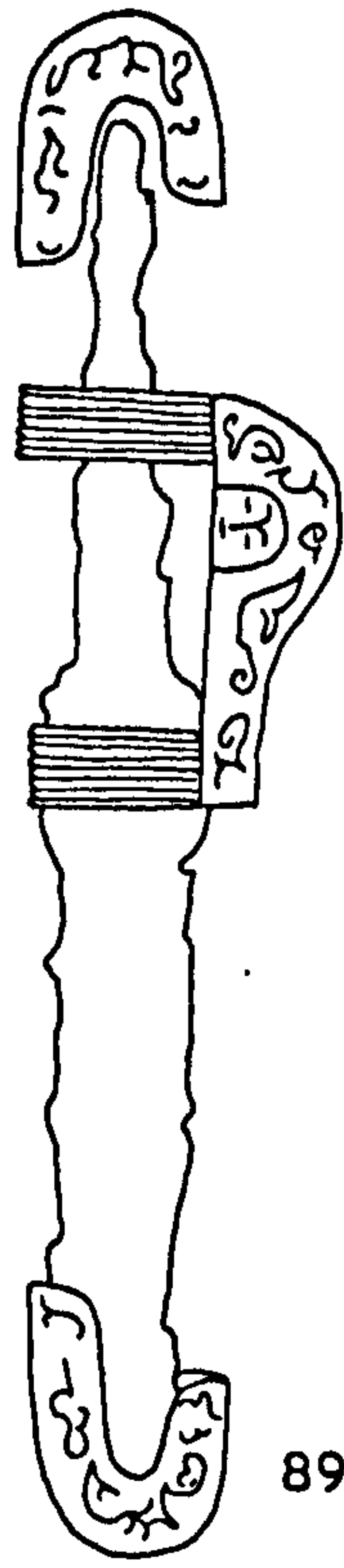
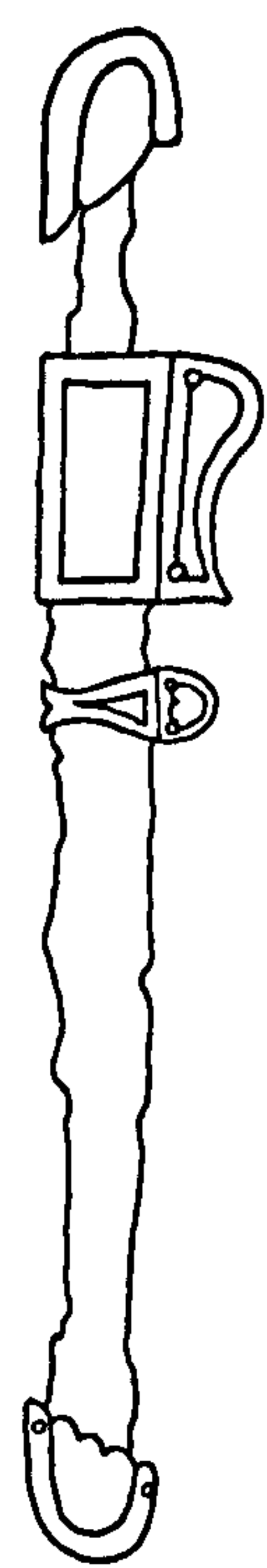


86

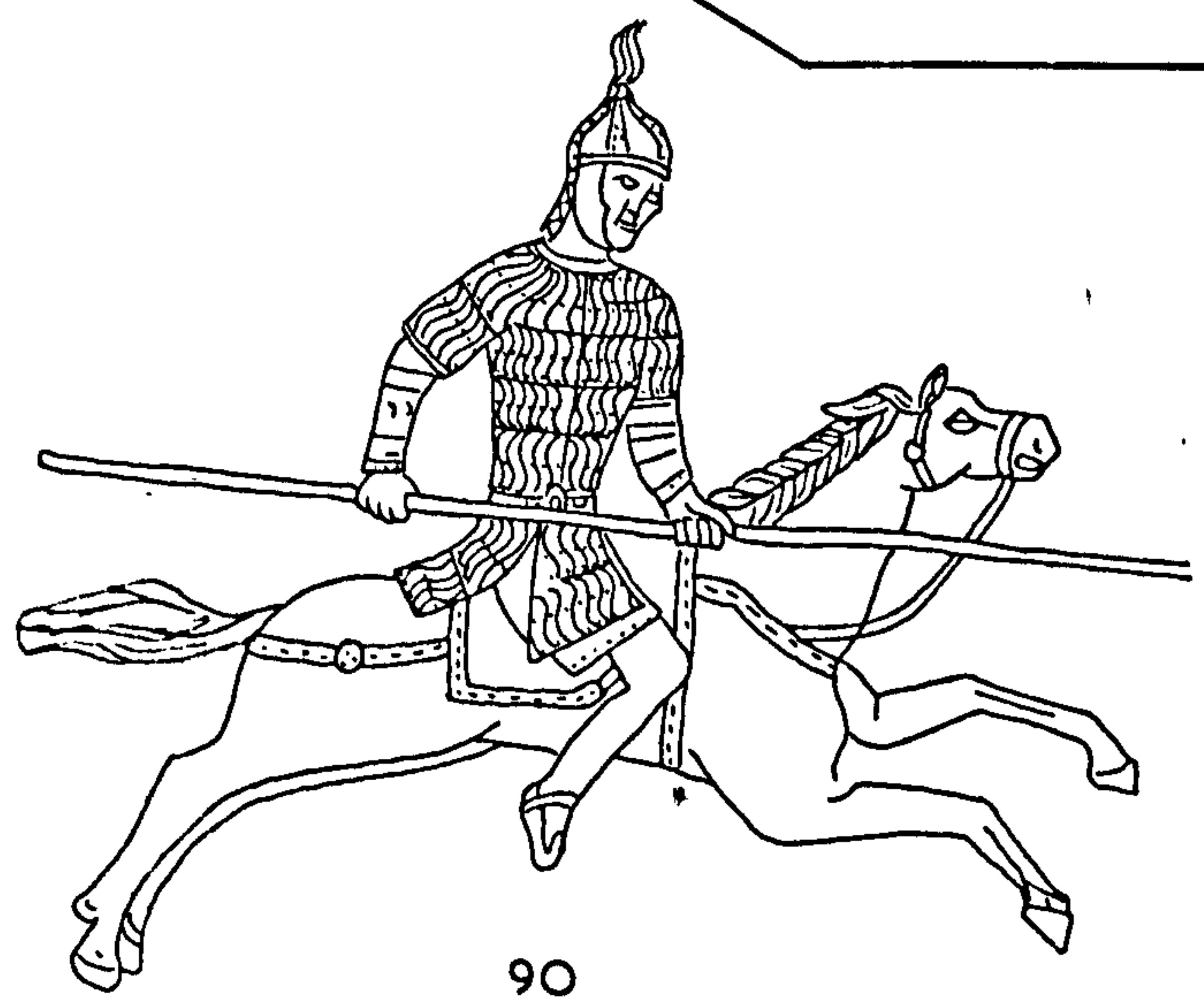


87

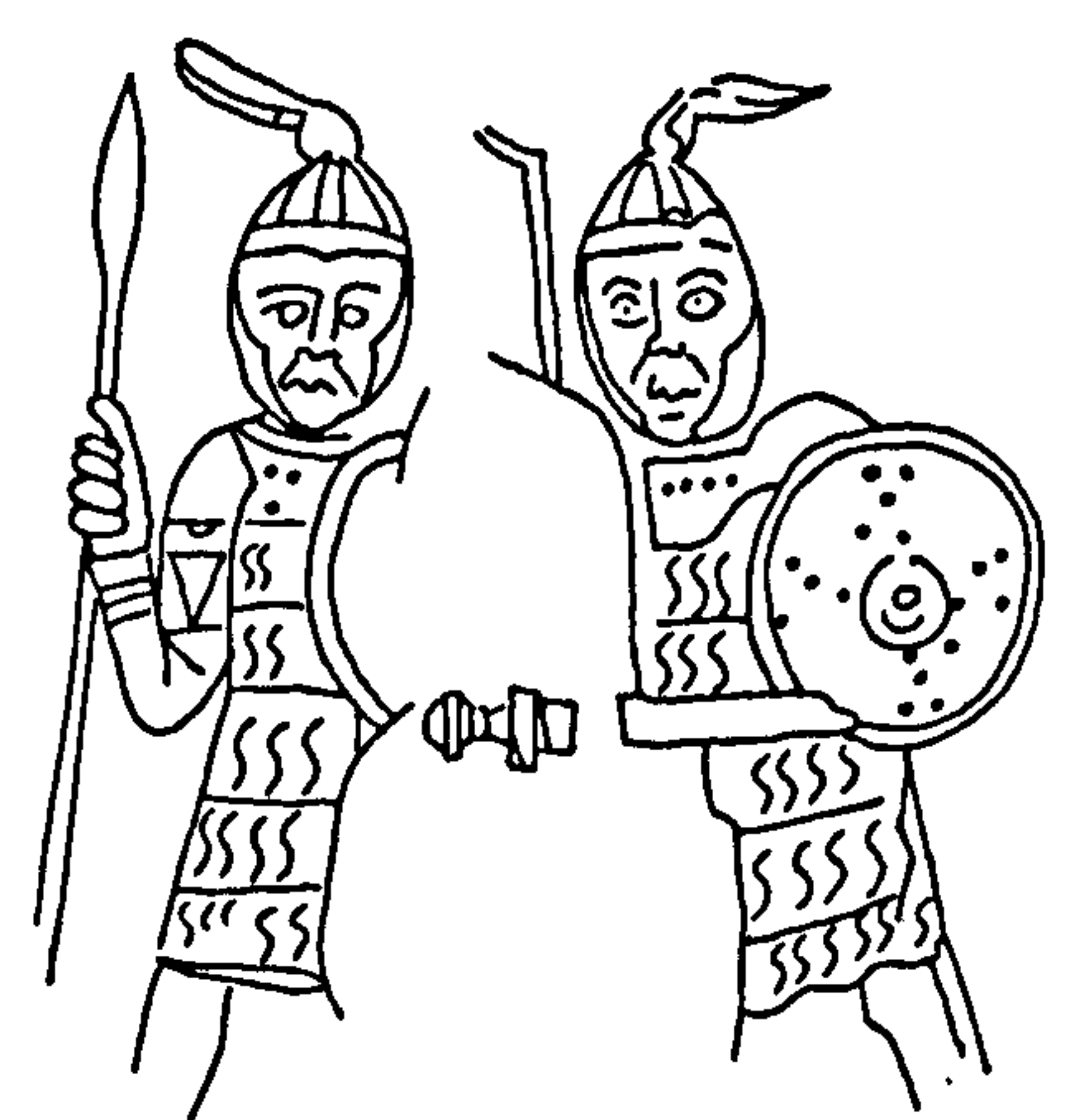
88



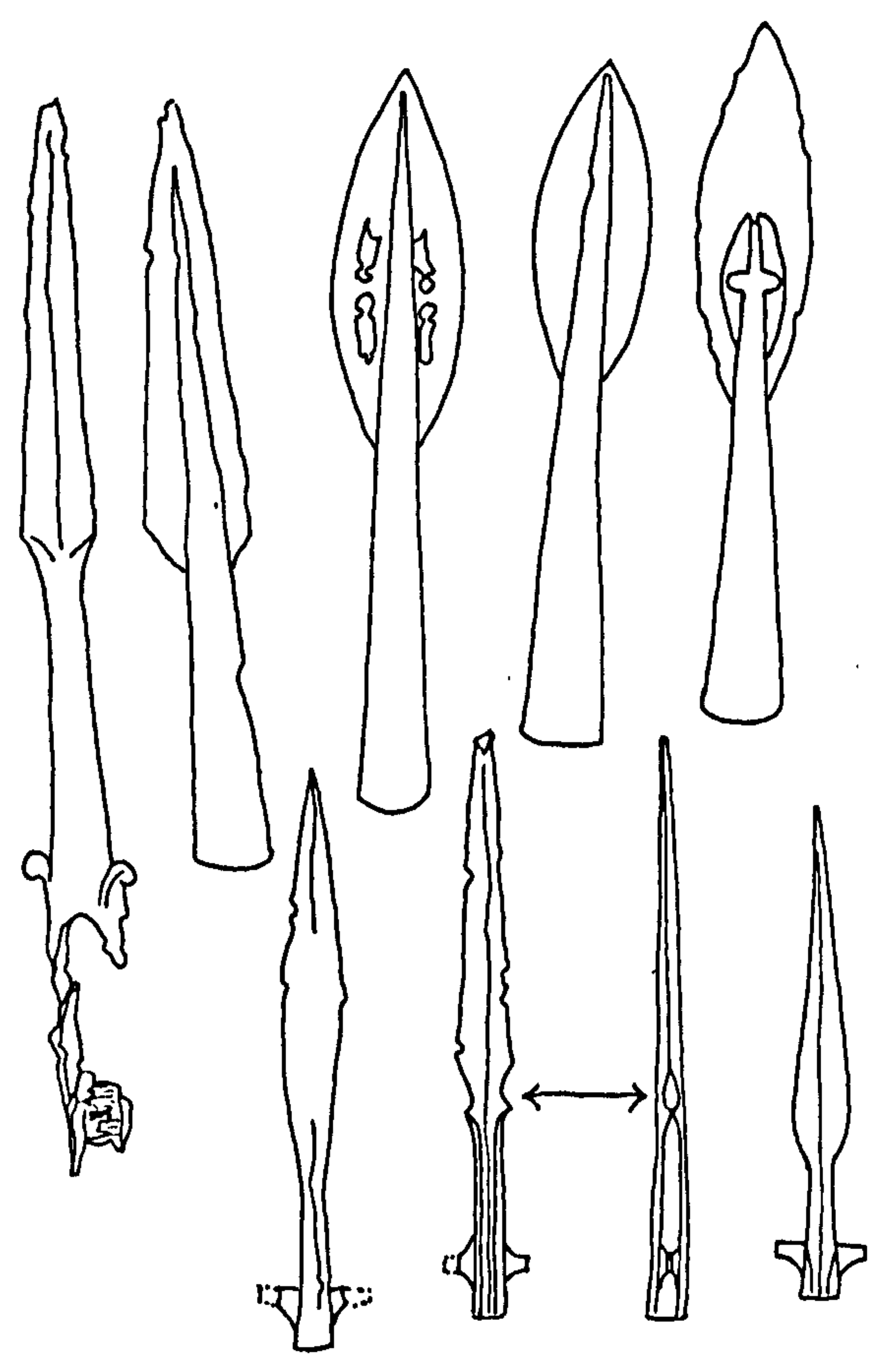
89



90

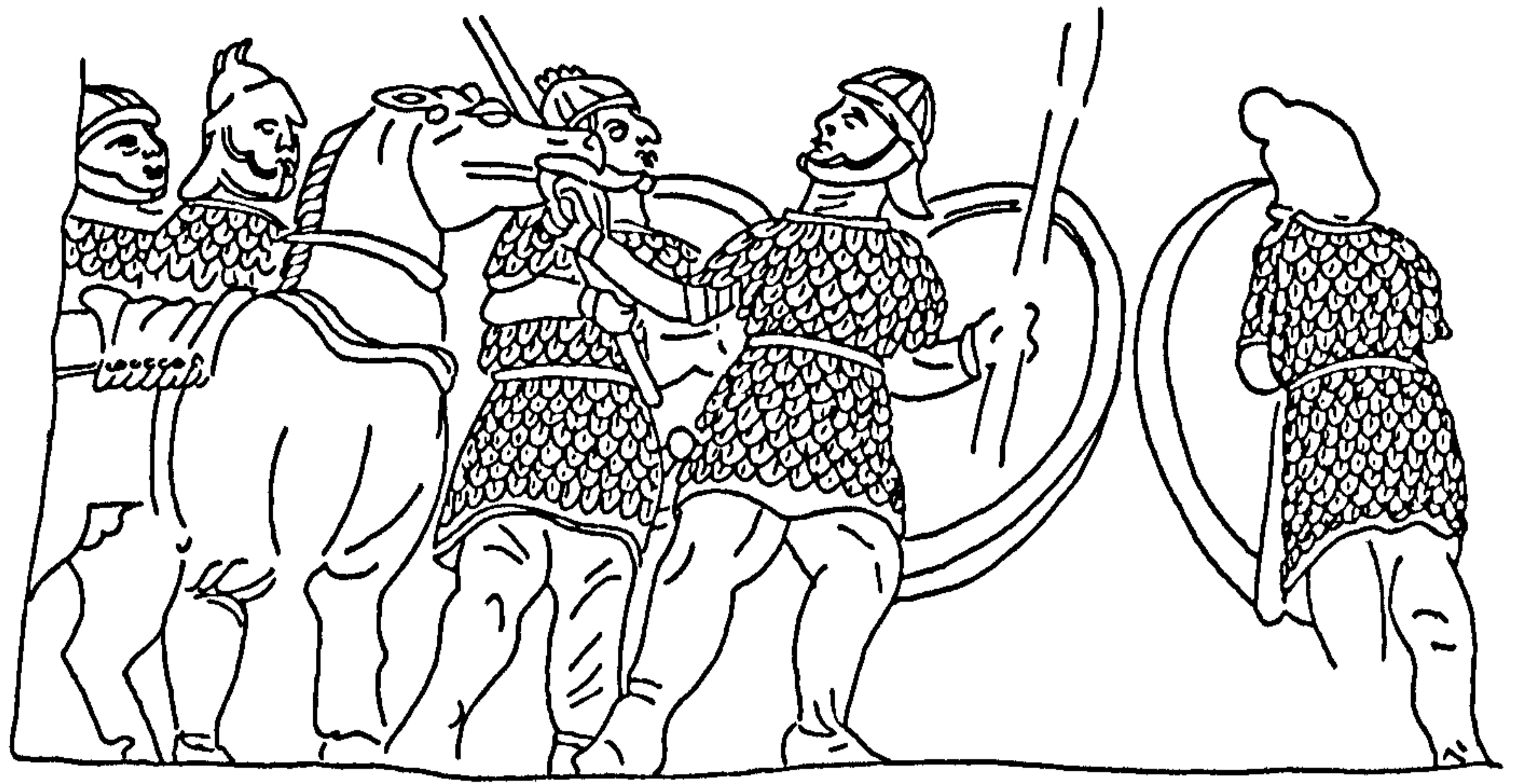


91



92

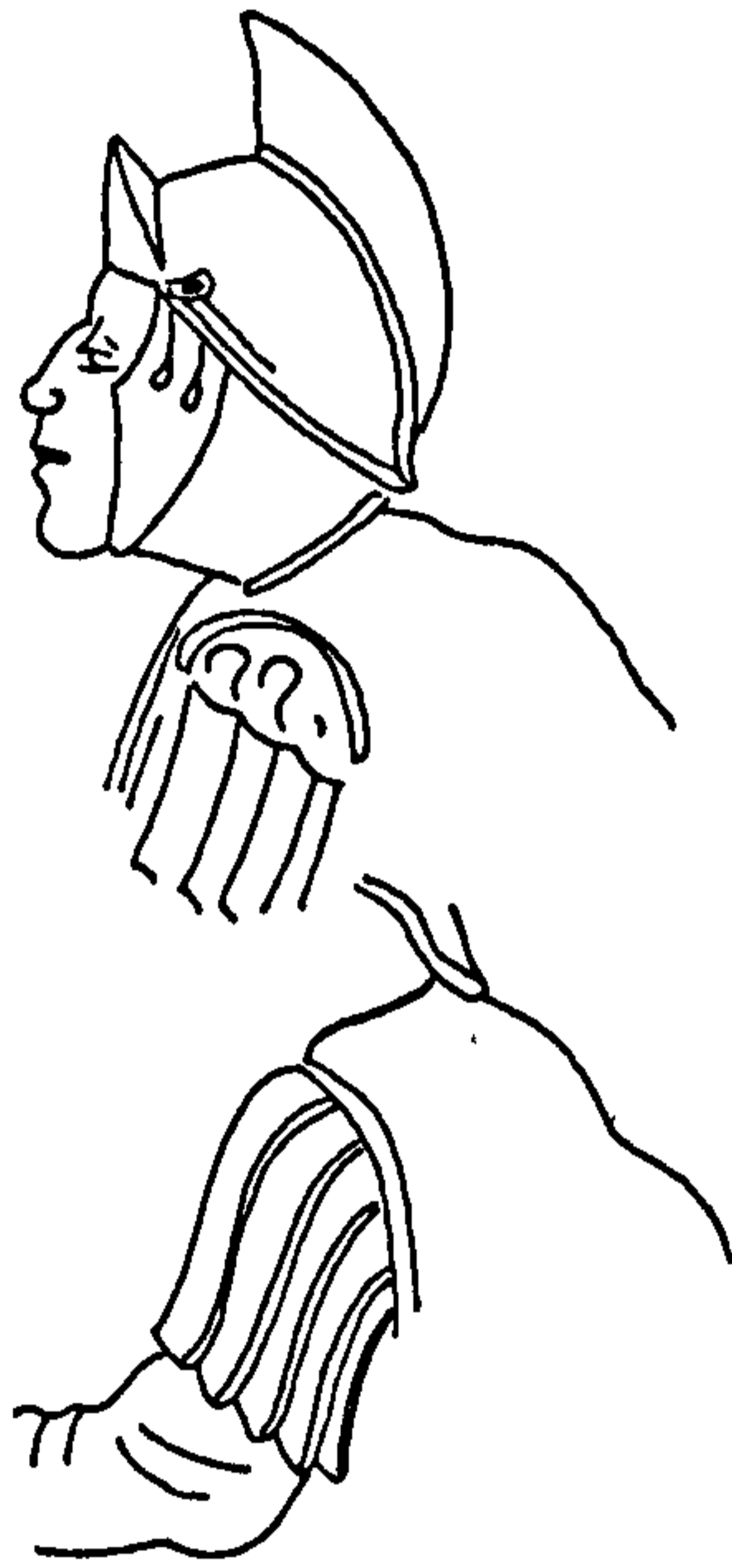




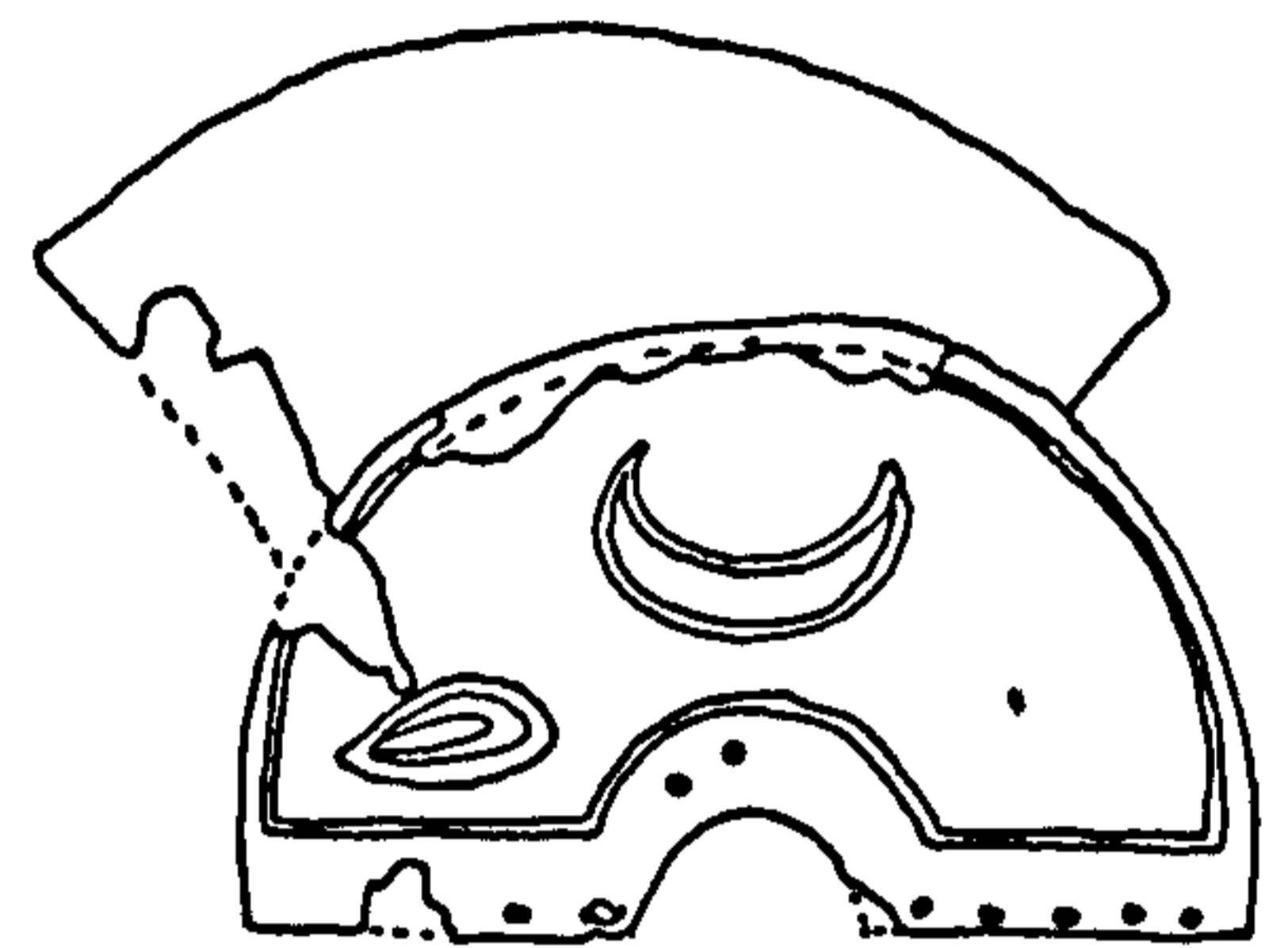
93



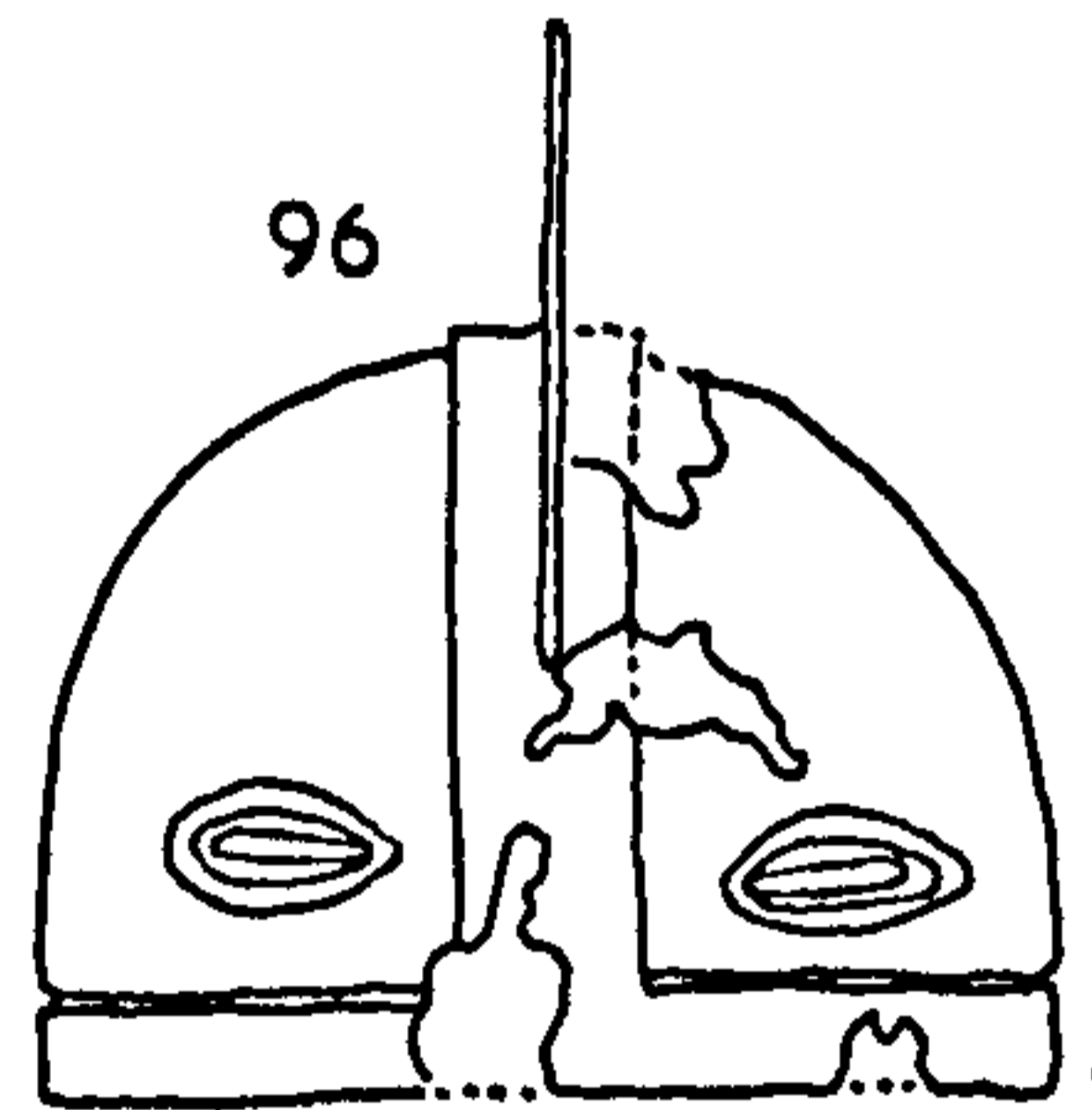
94



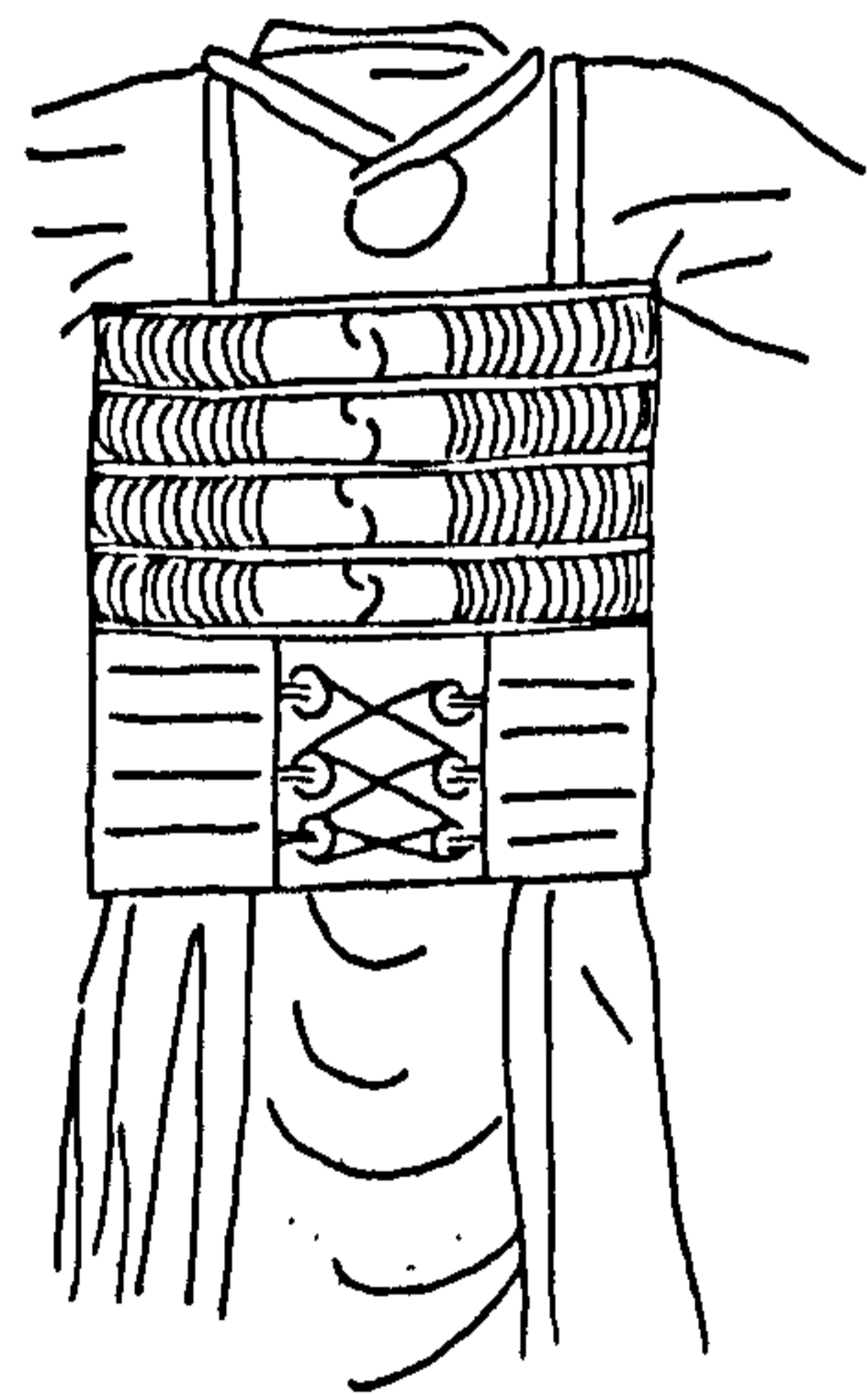
95



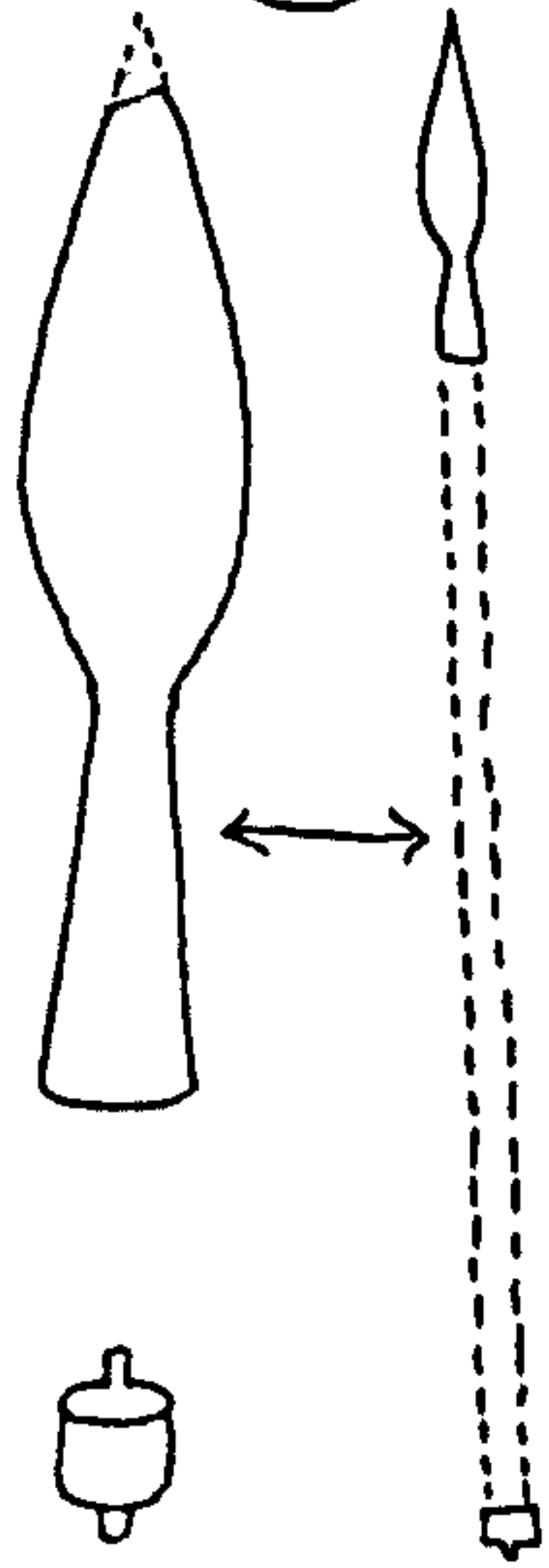
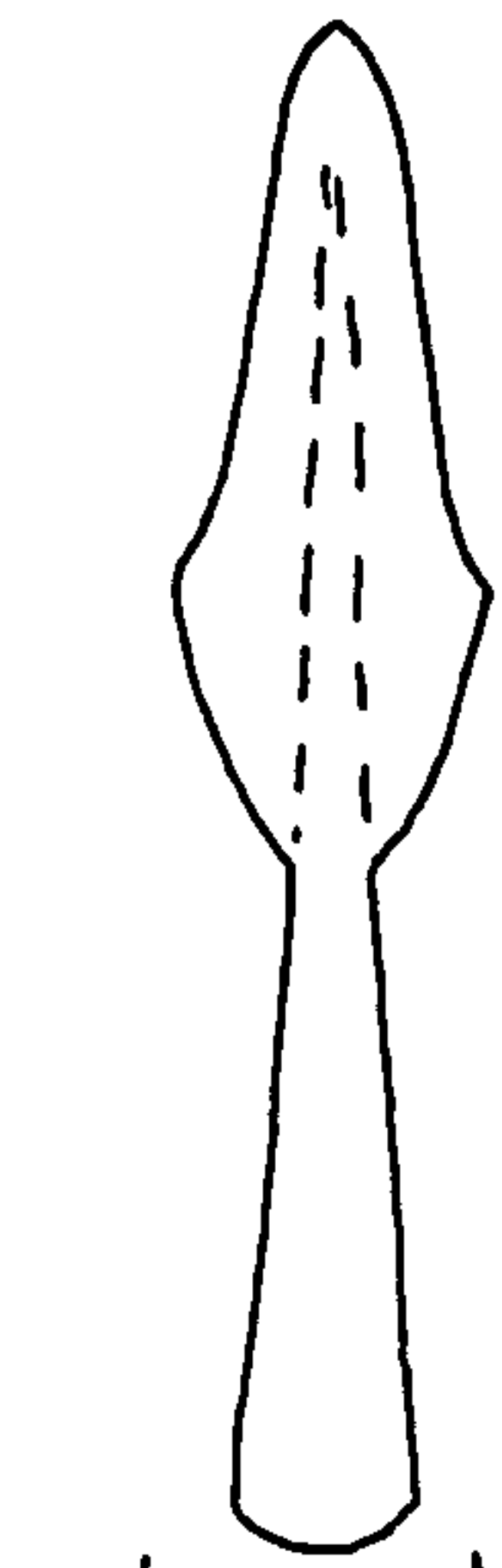
96



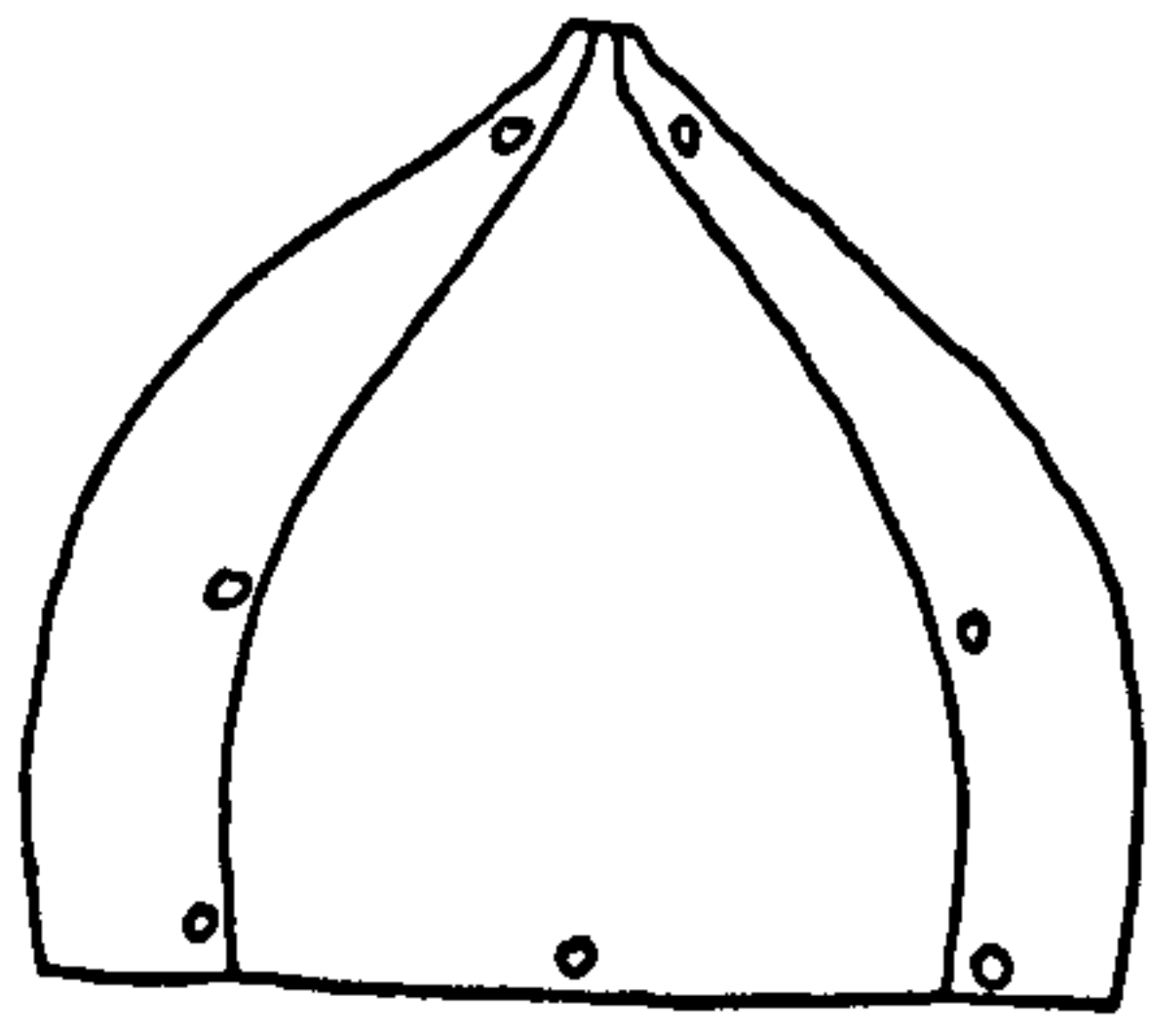
97



98

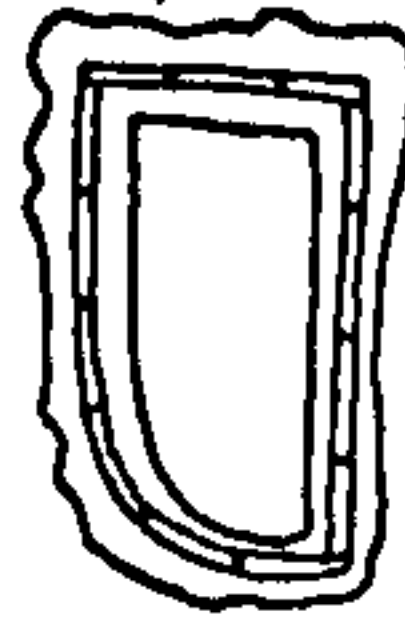
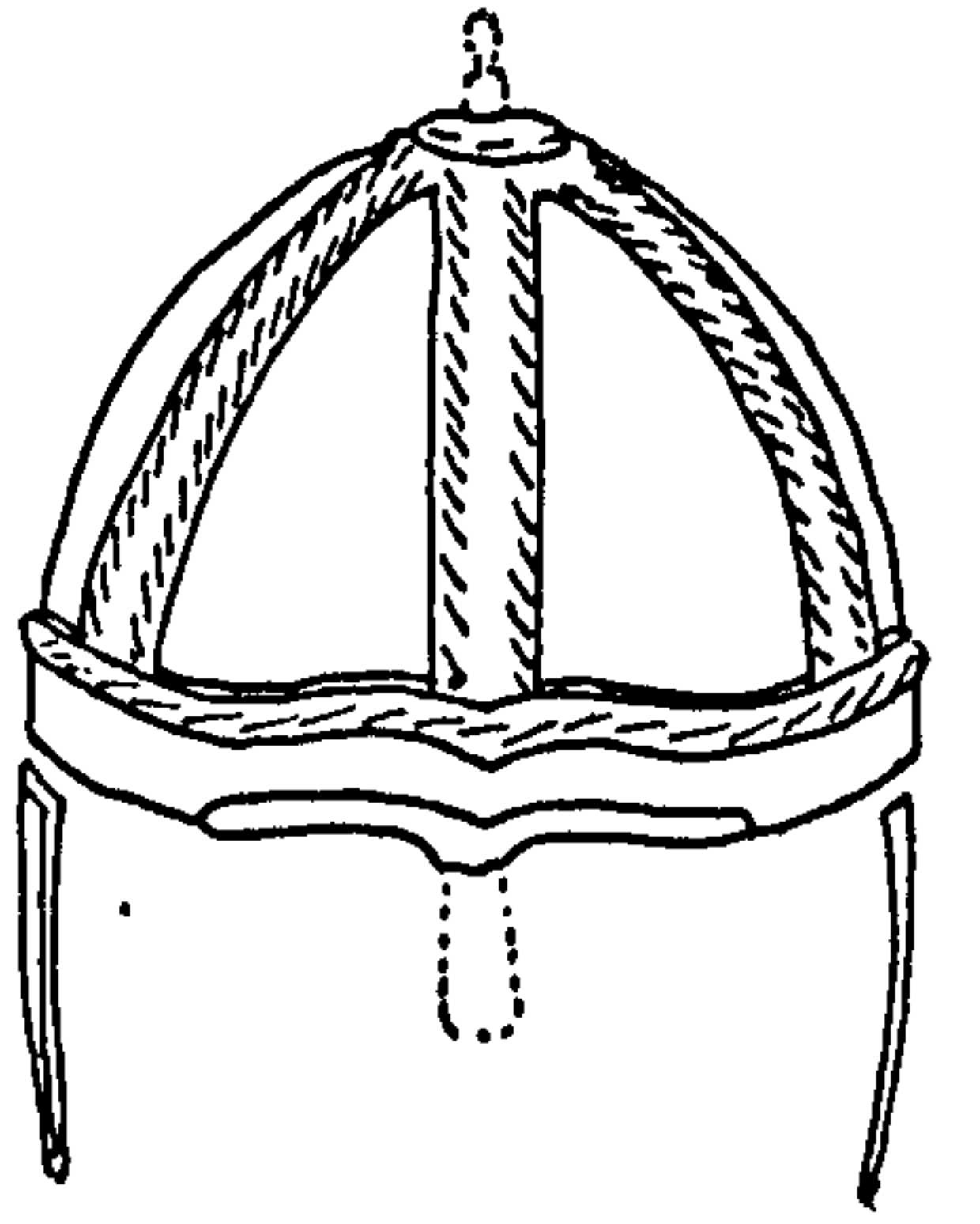
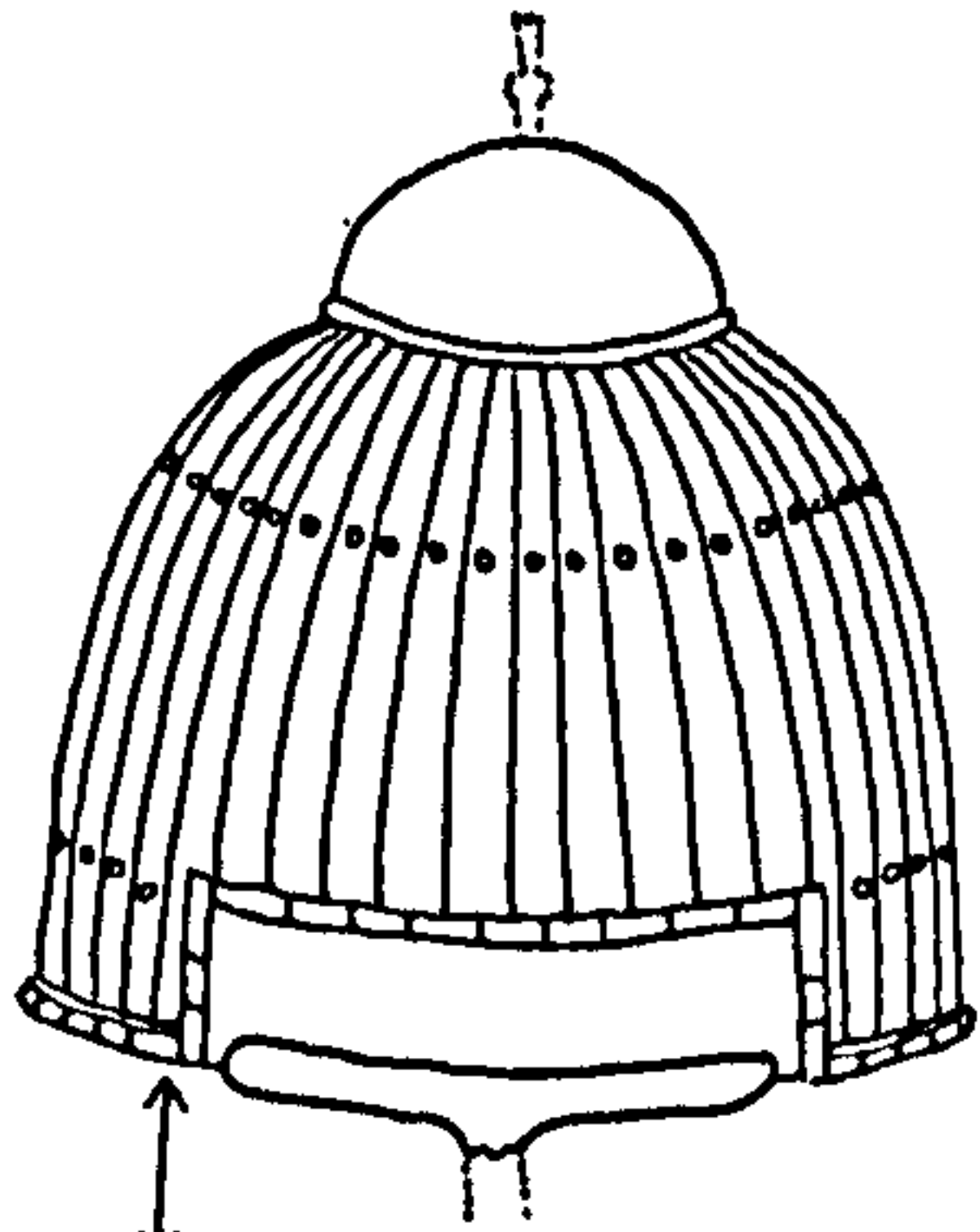


99

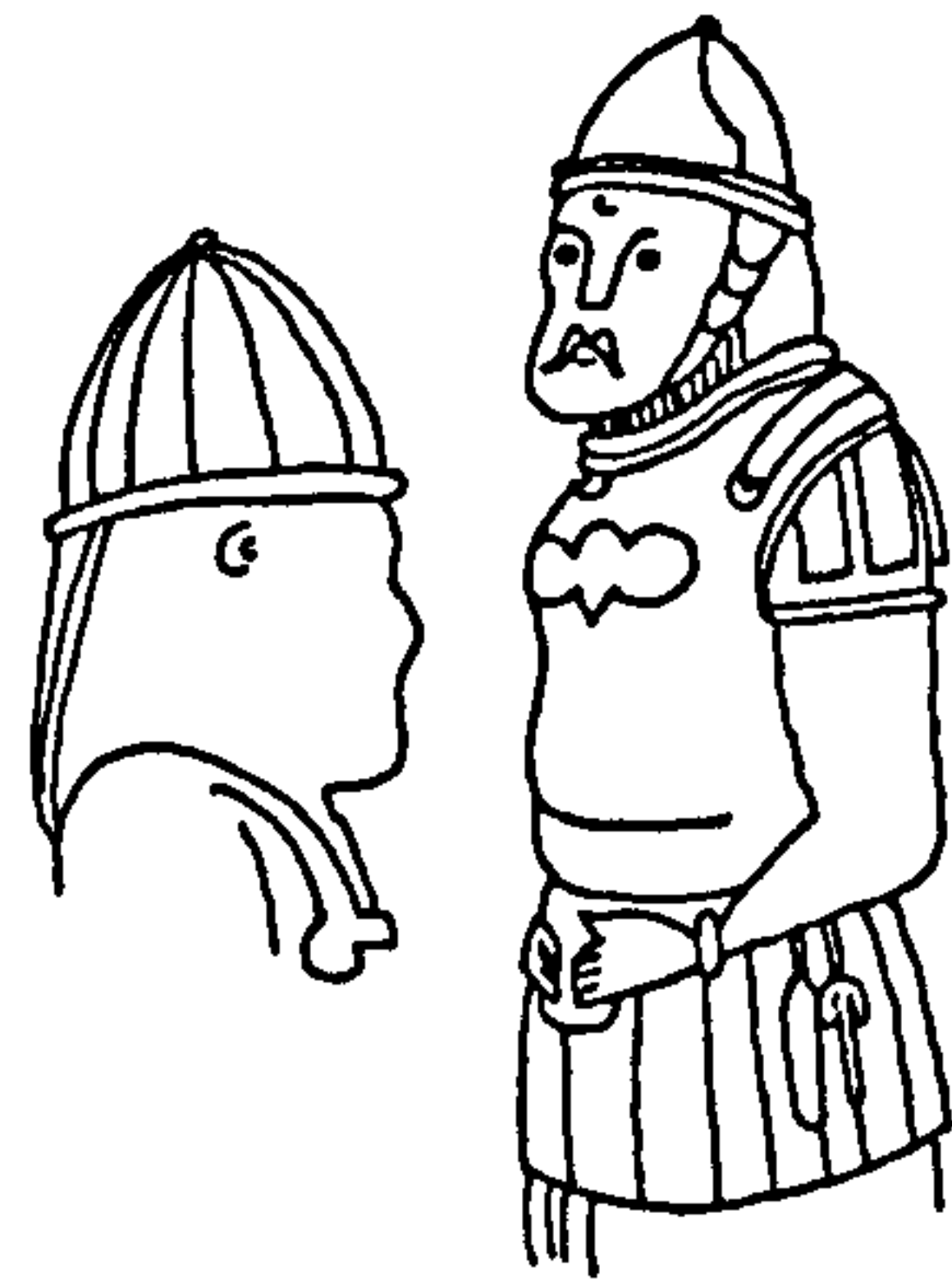


(Decorative band)

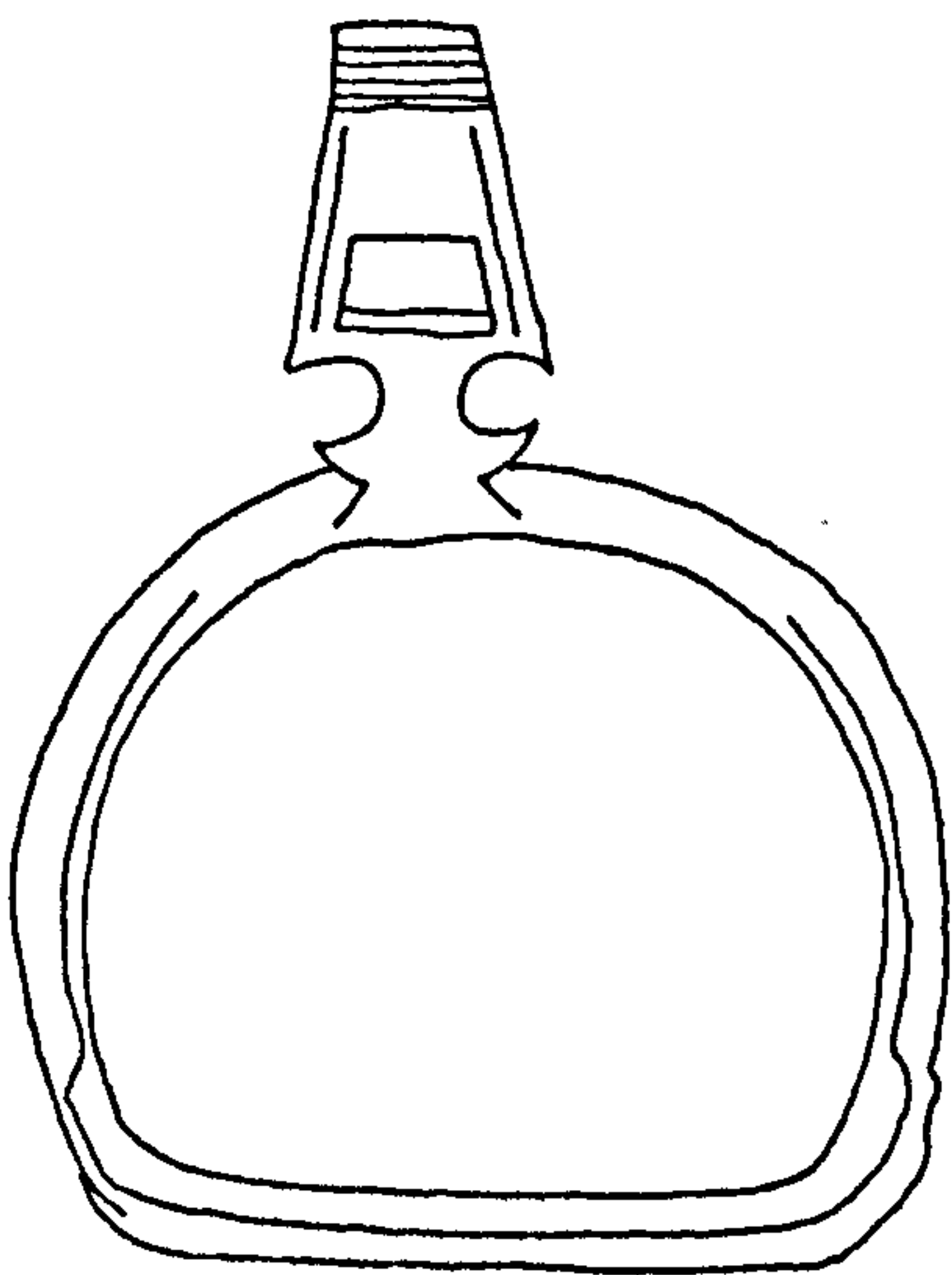
100



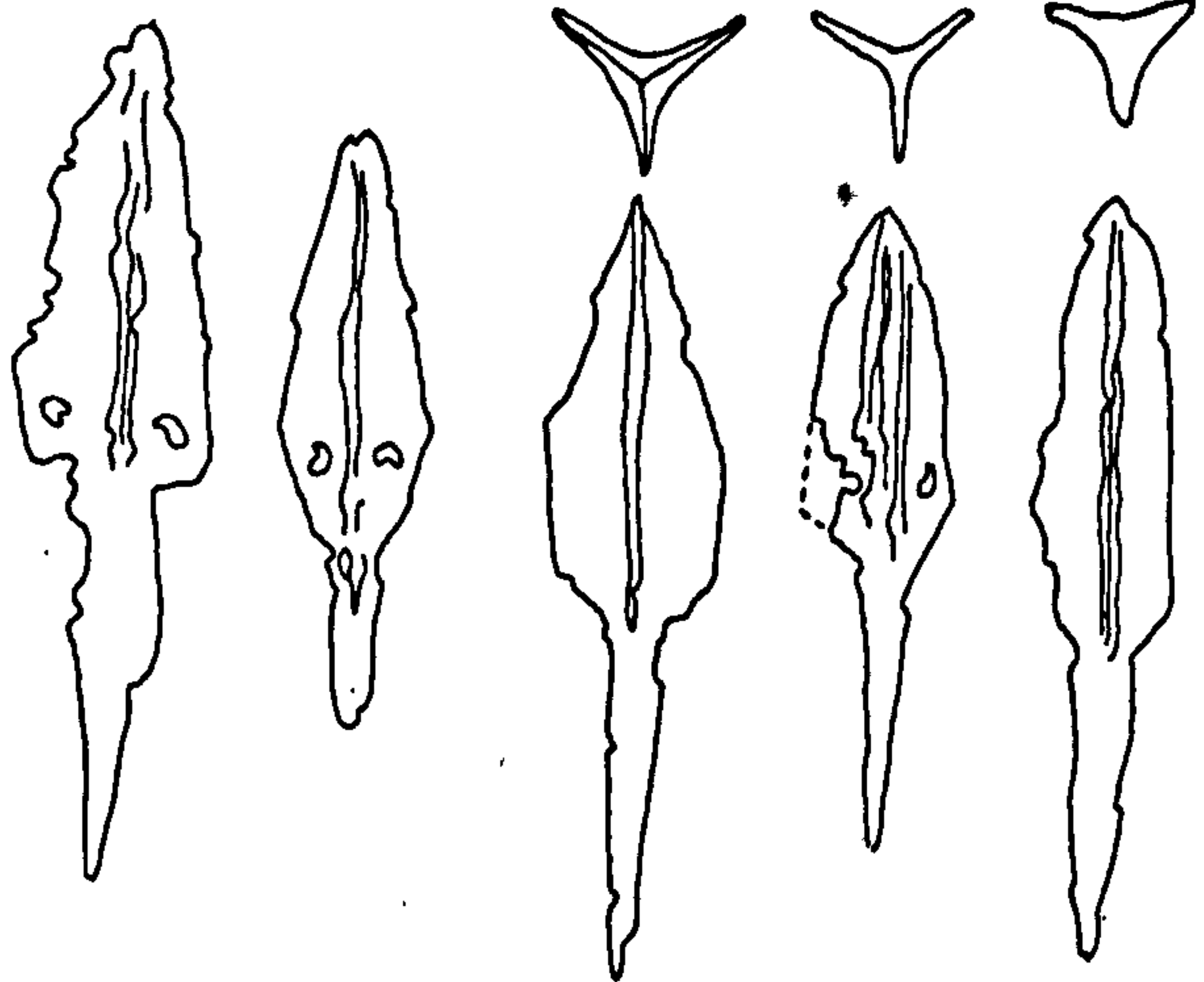
101



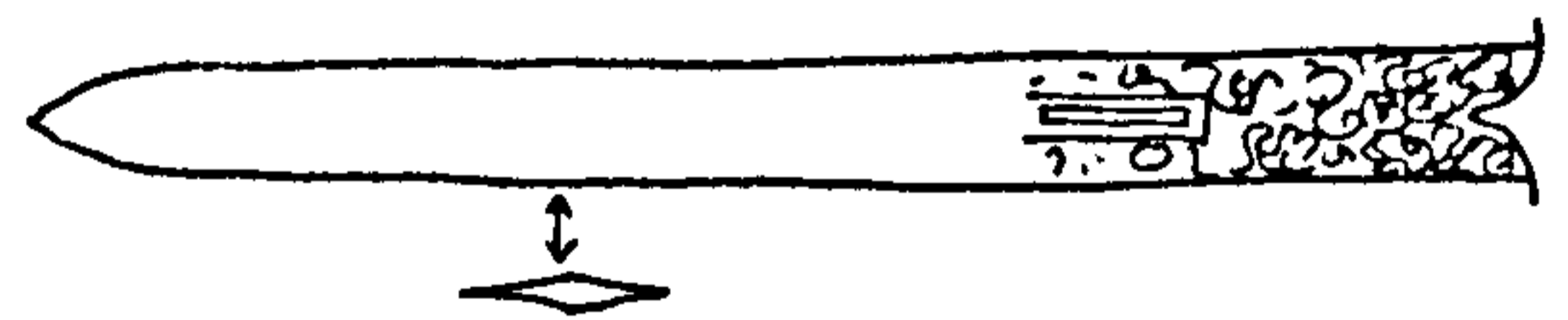
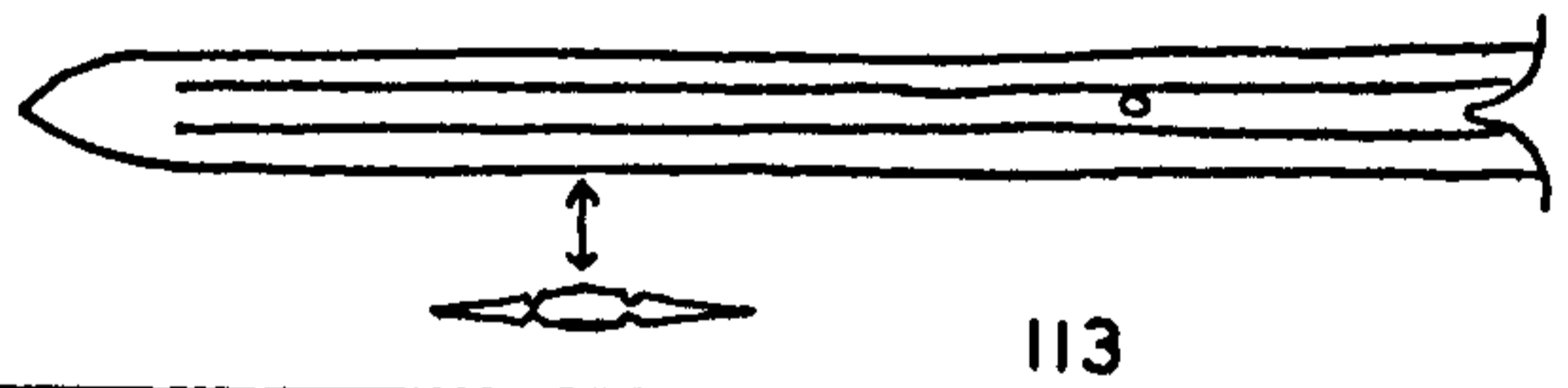
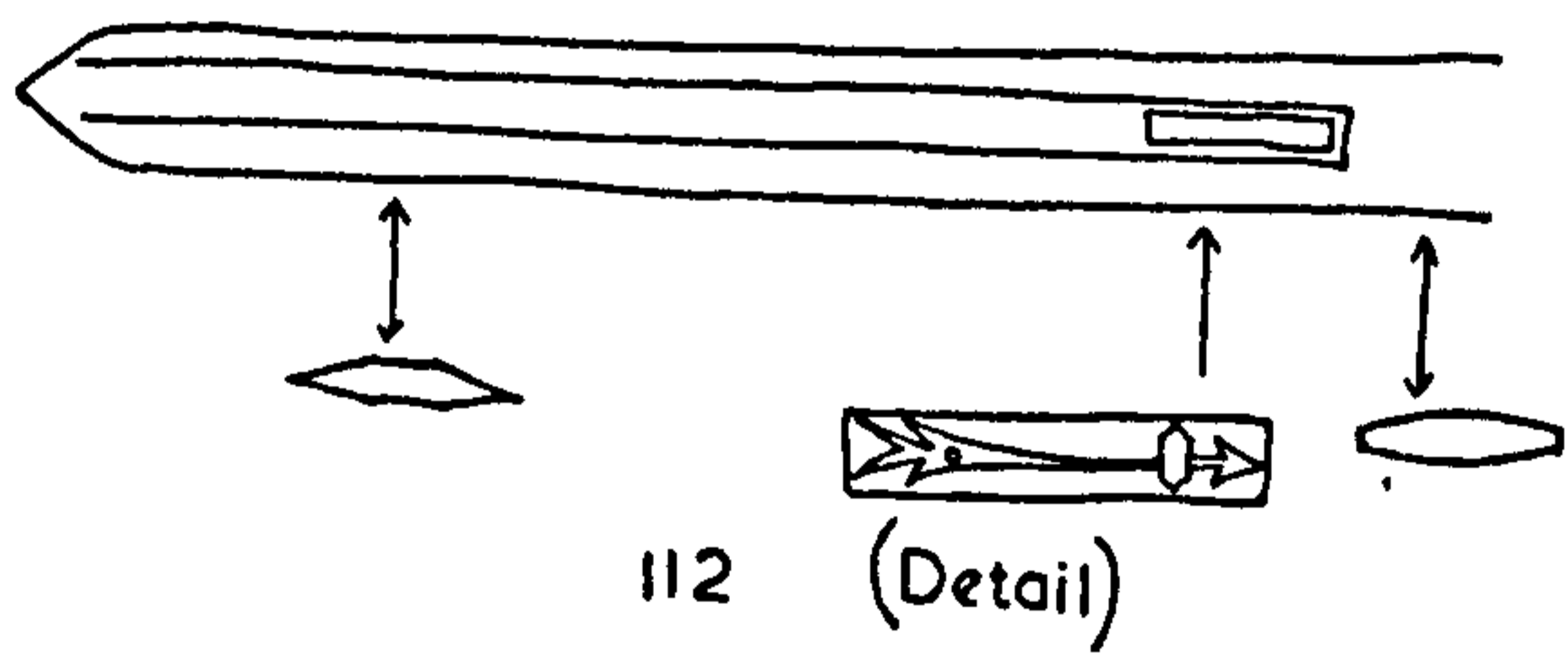
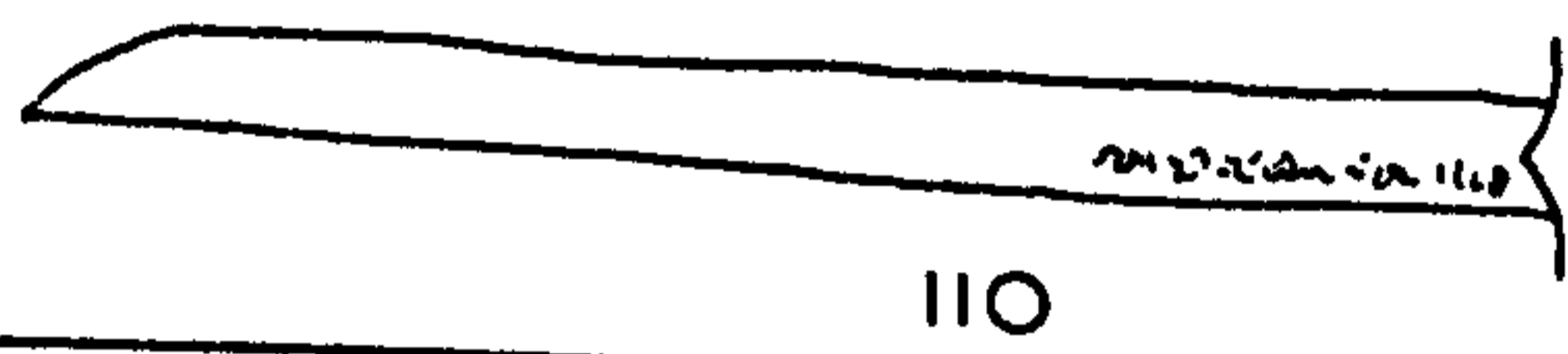
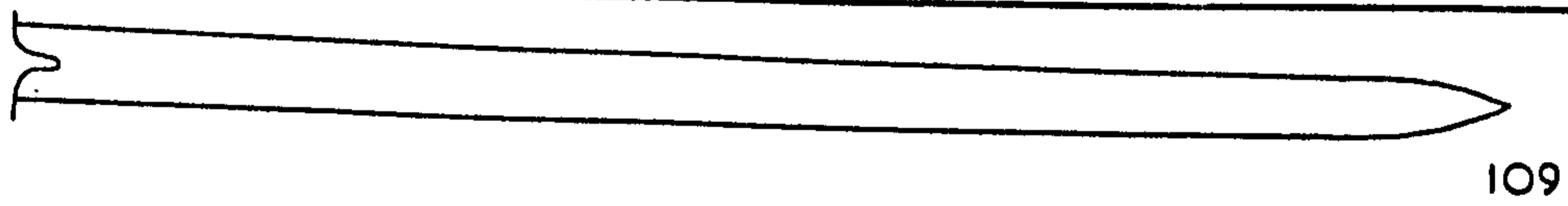
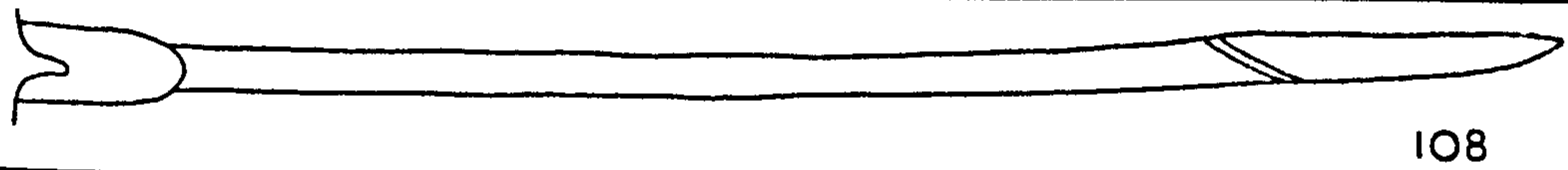
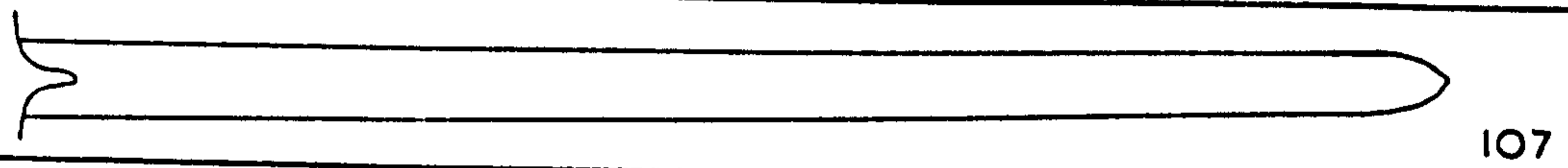
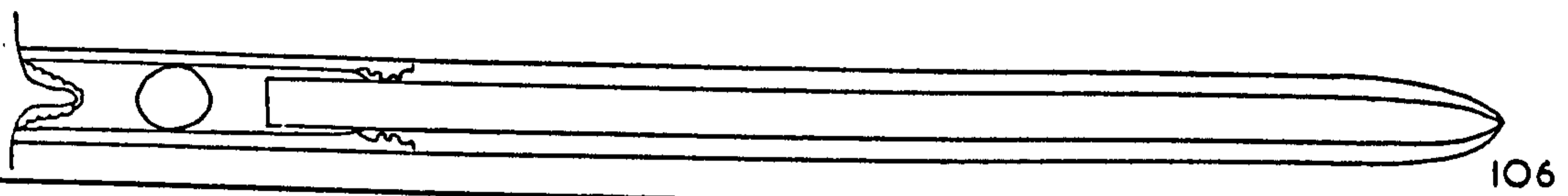
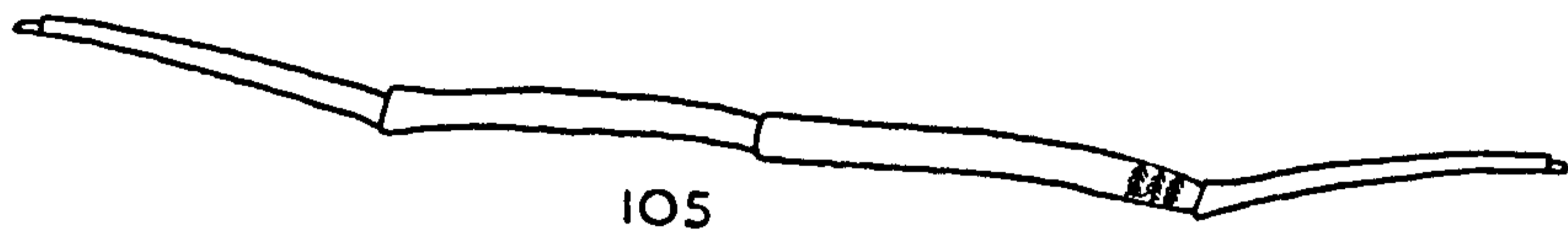
102

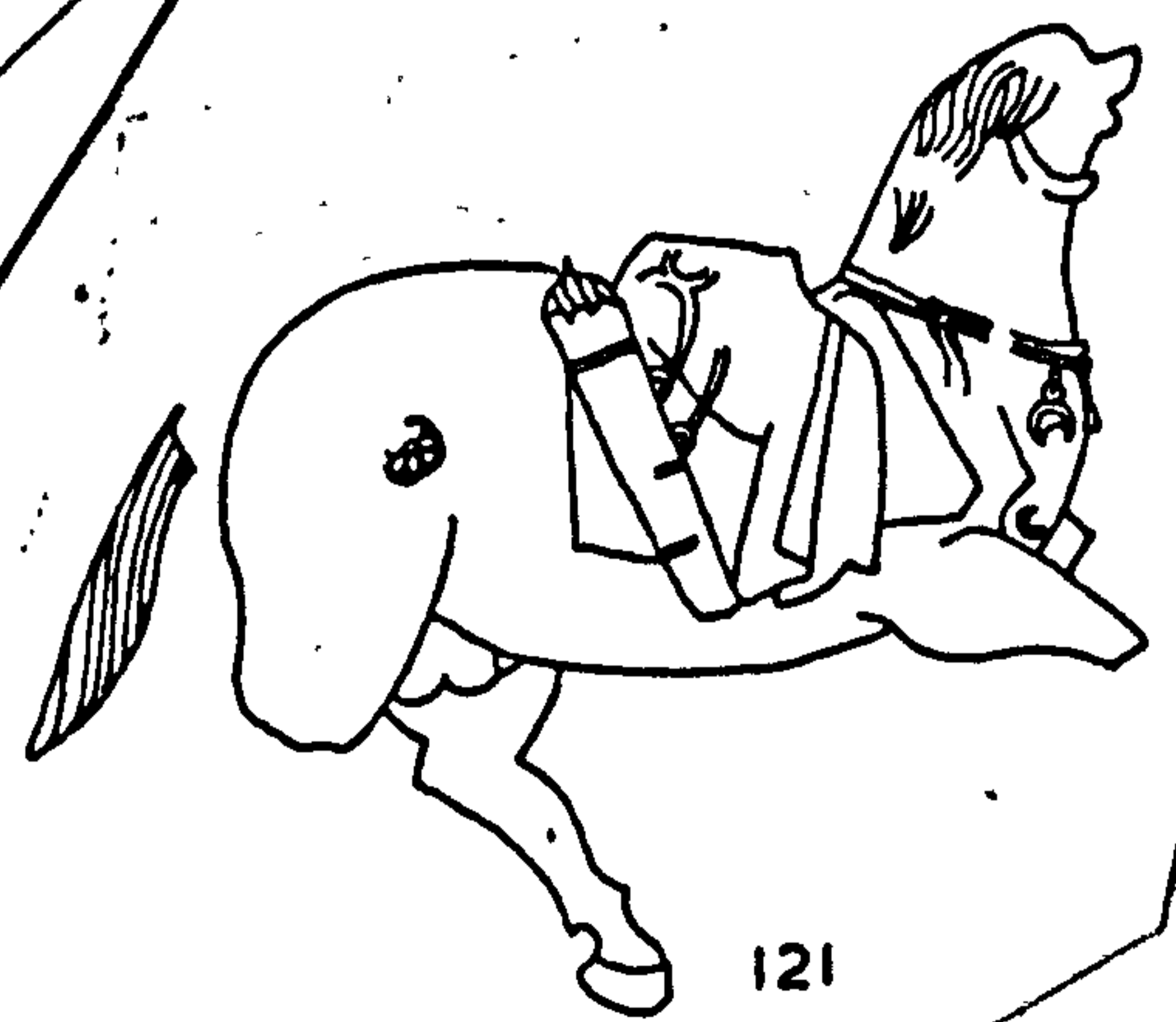
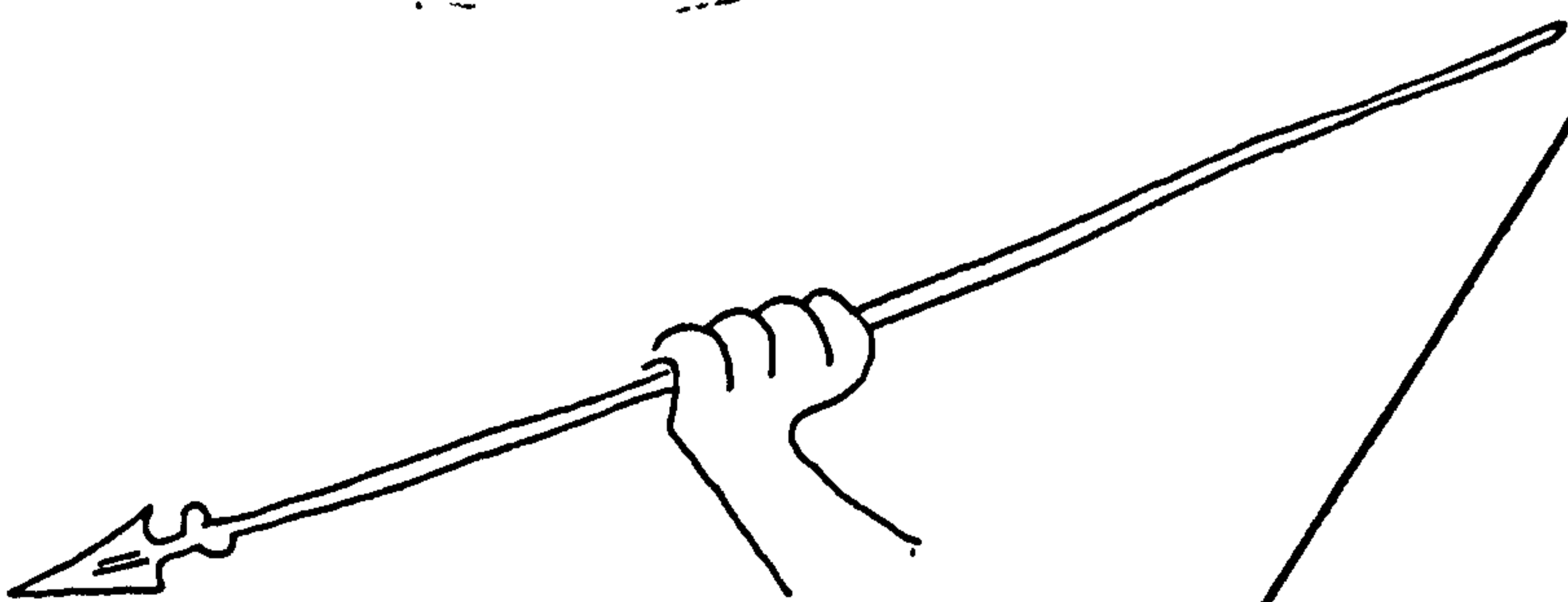
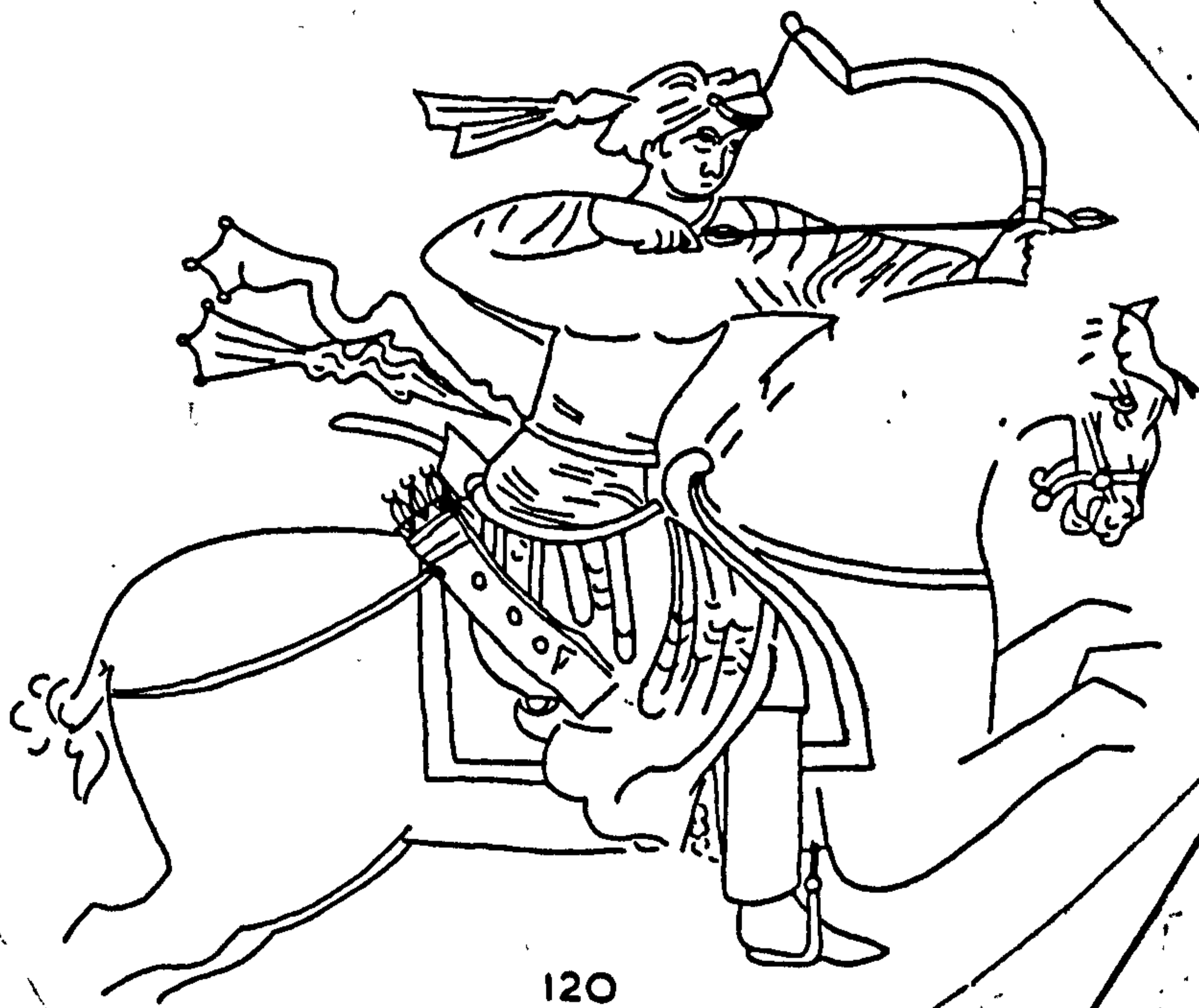
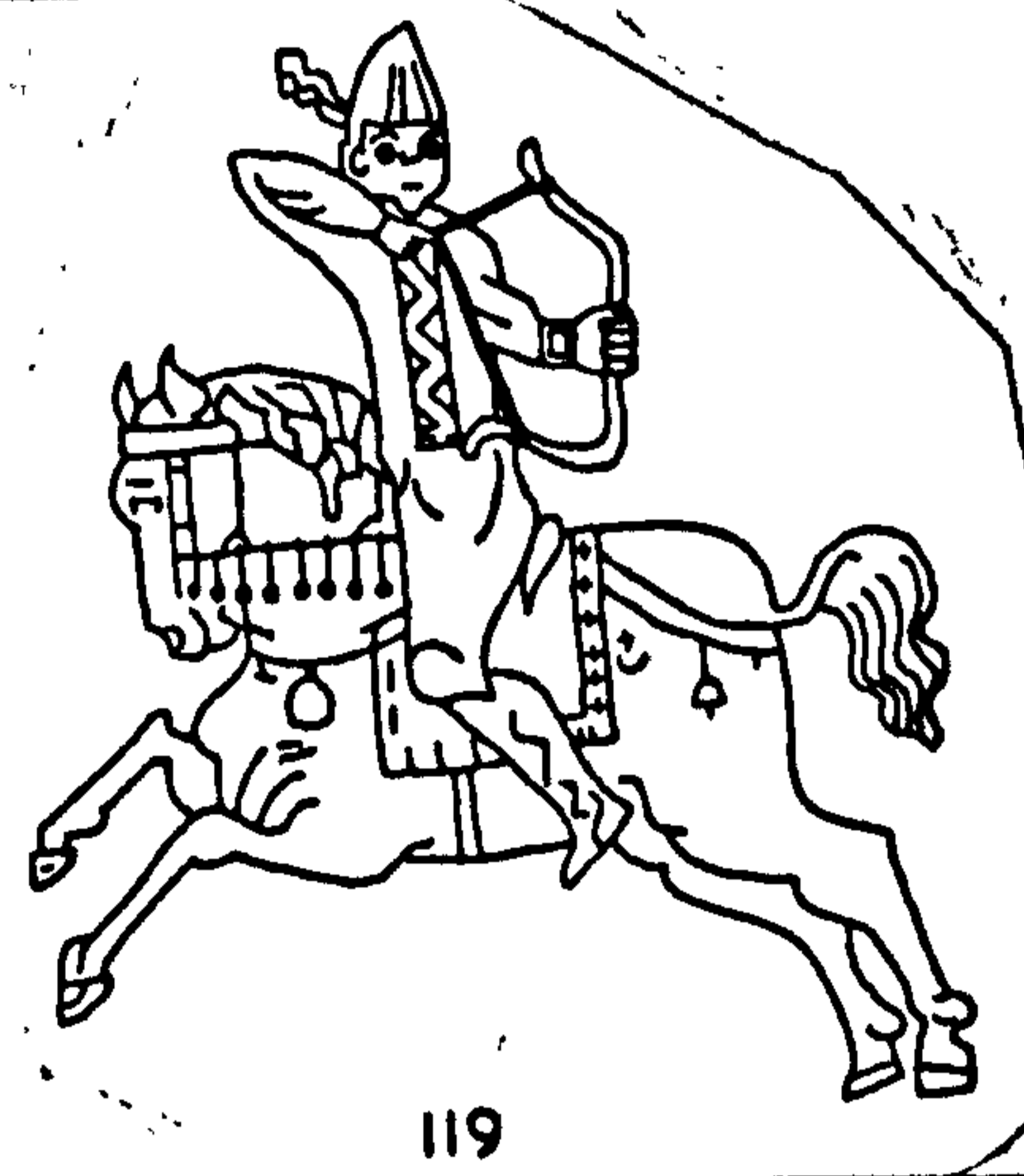
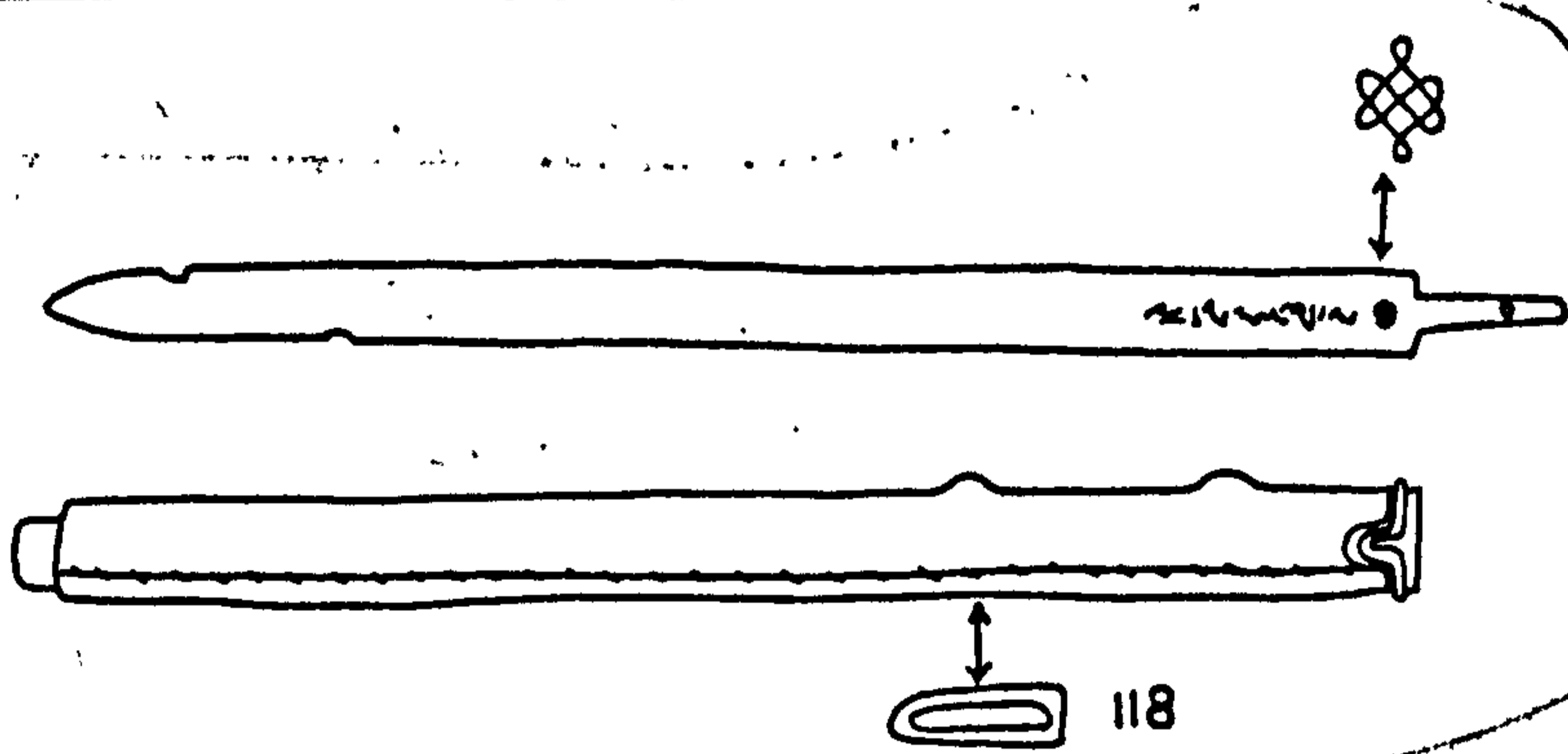
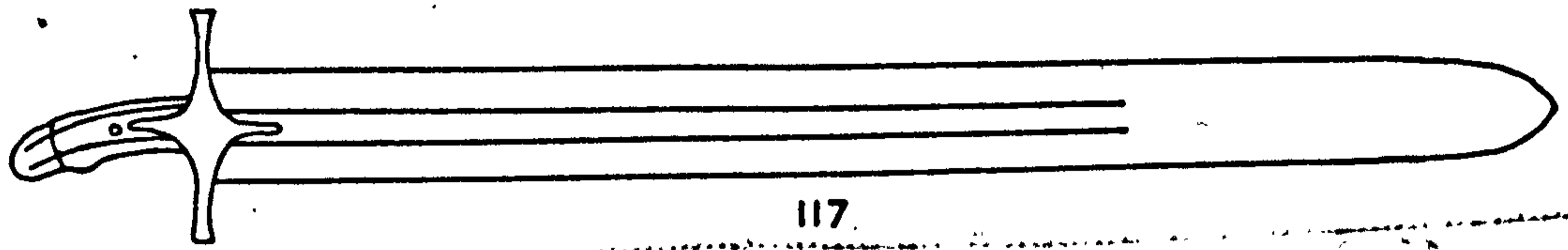
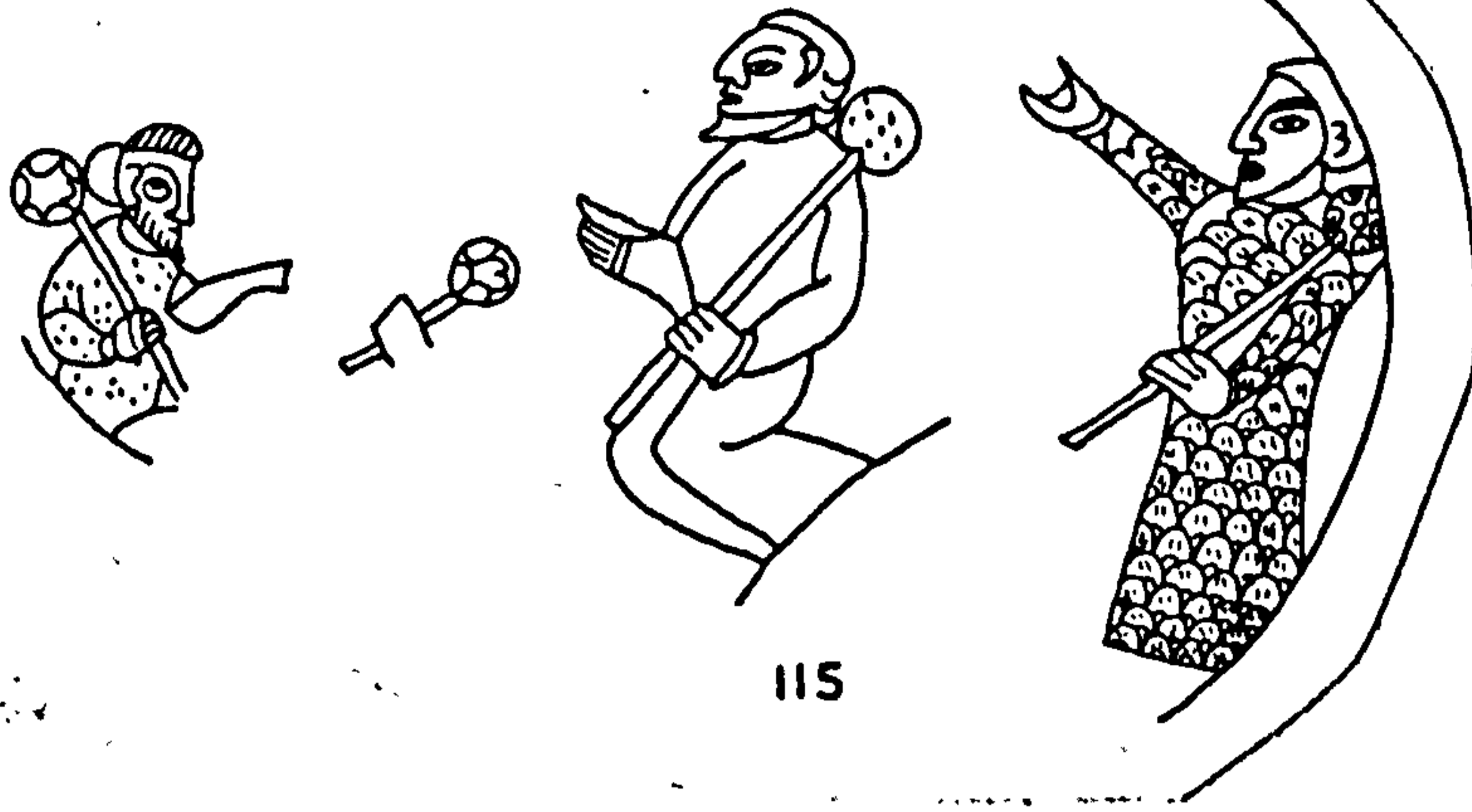


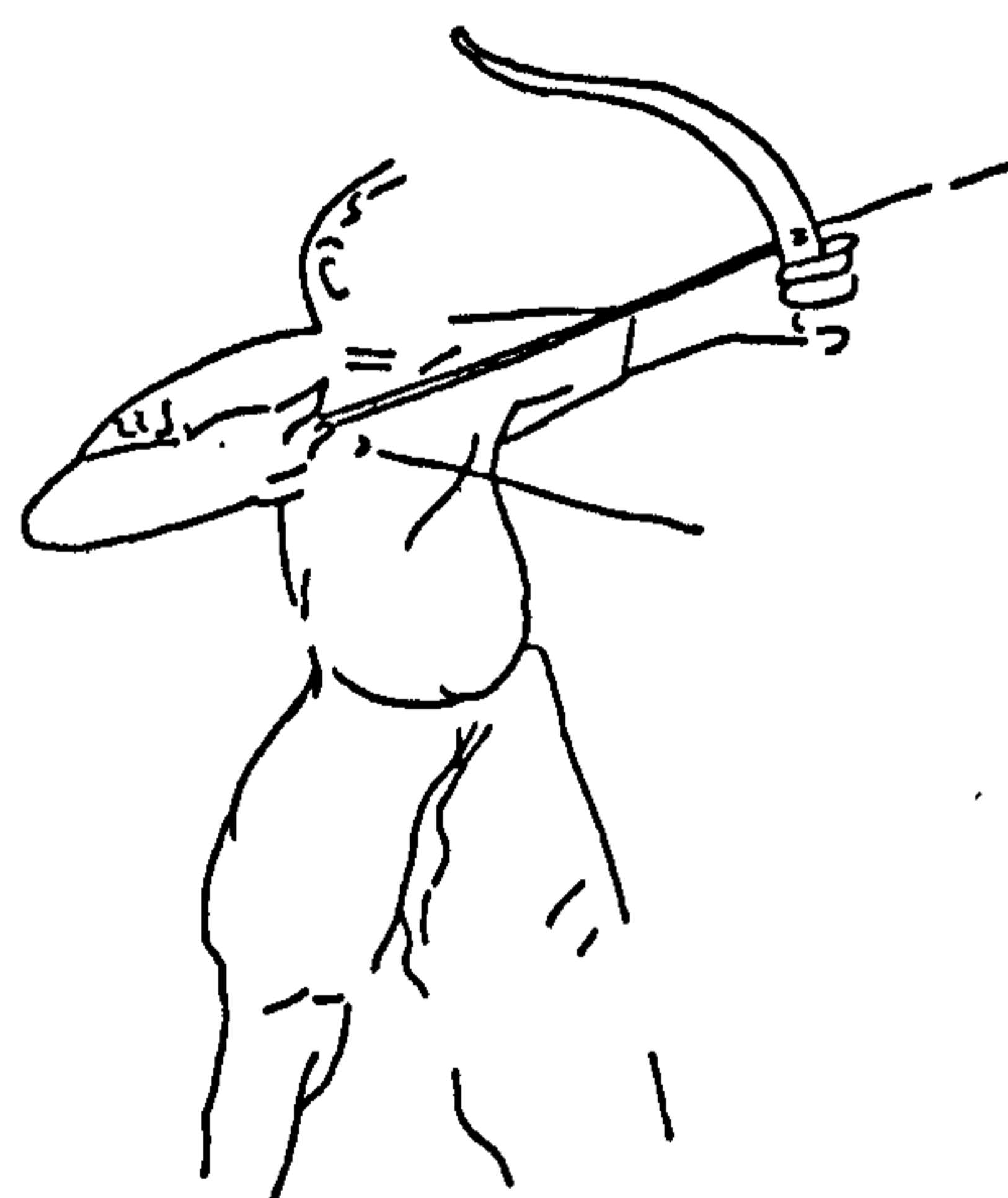
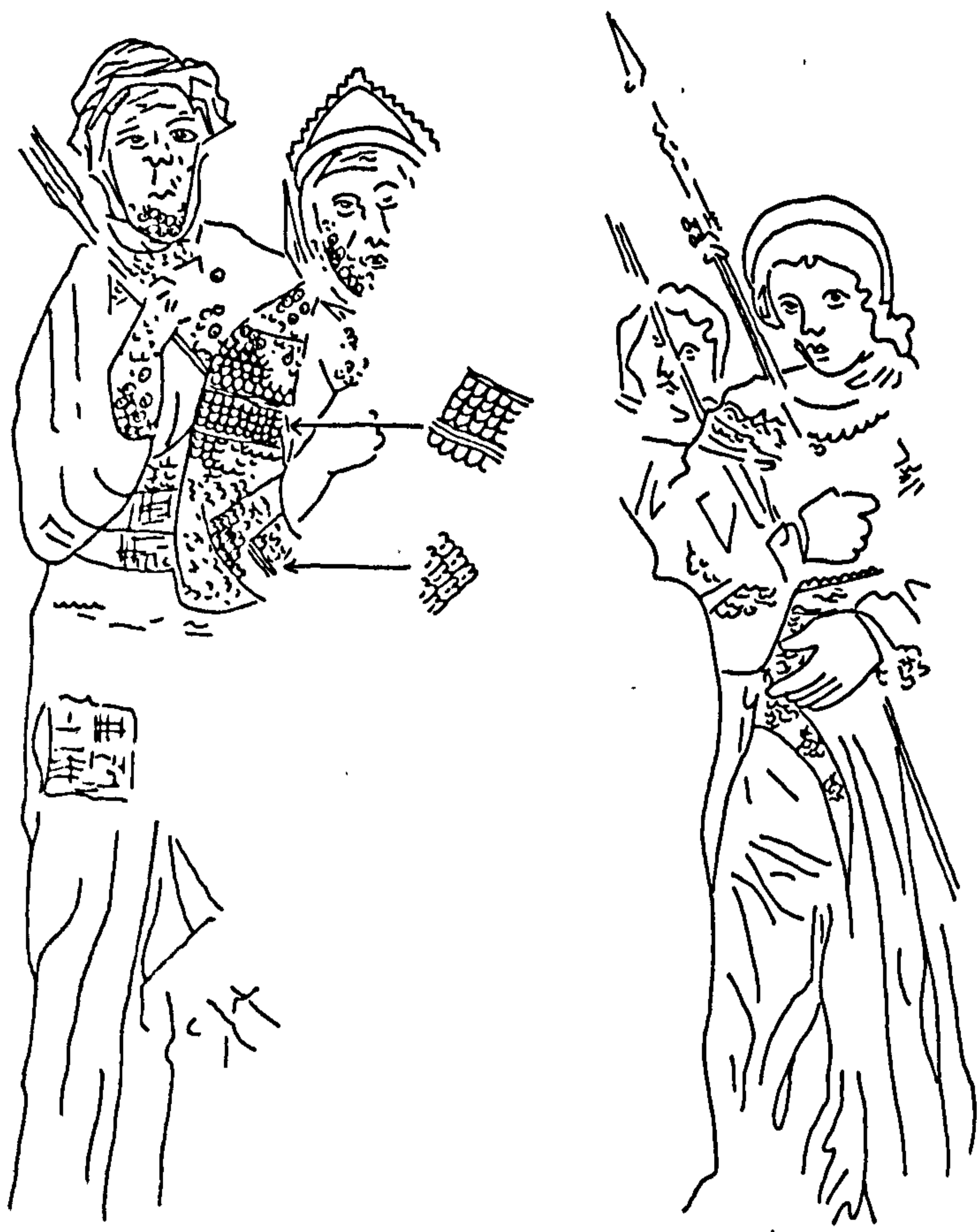
103

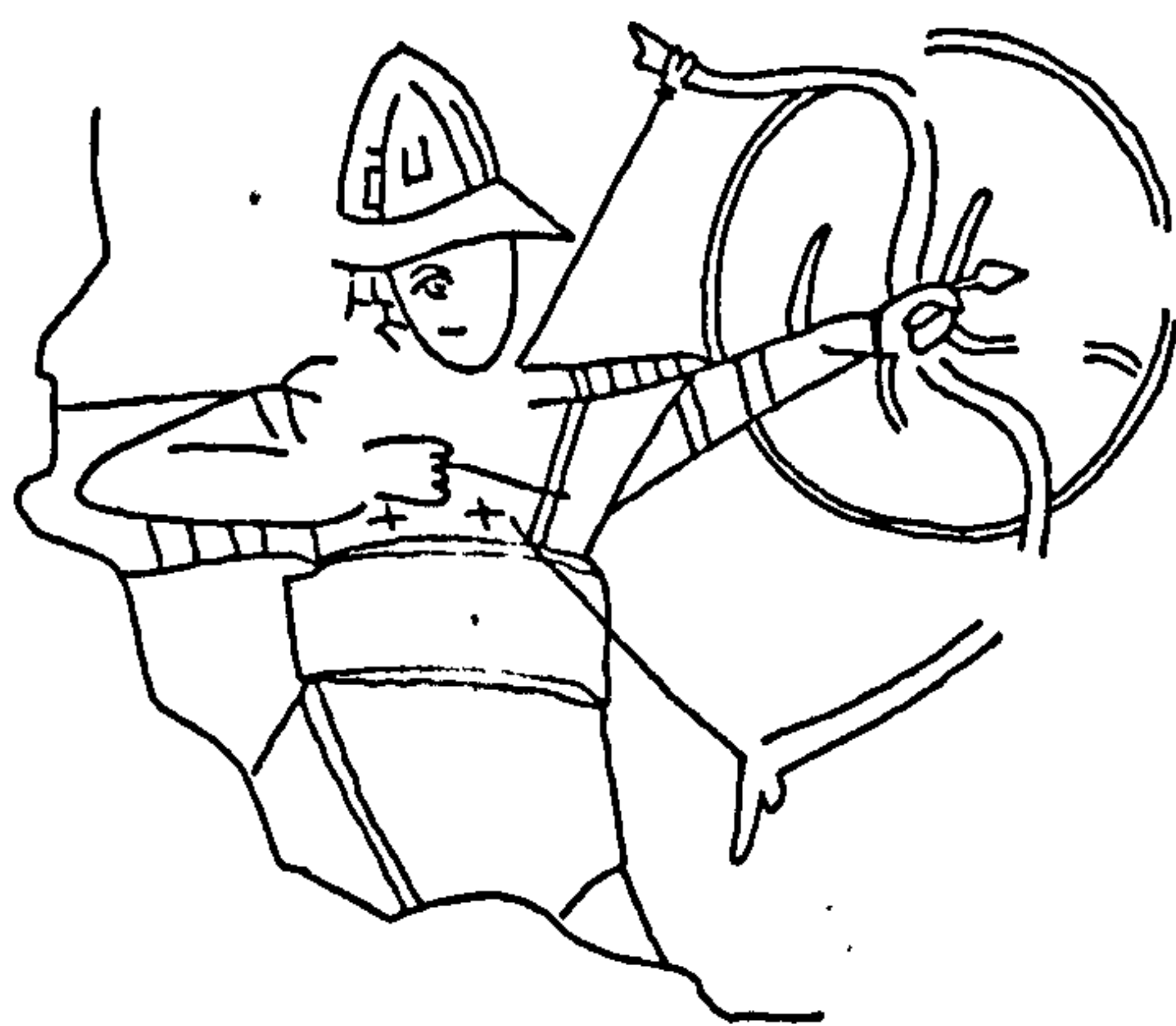
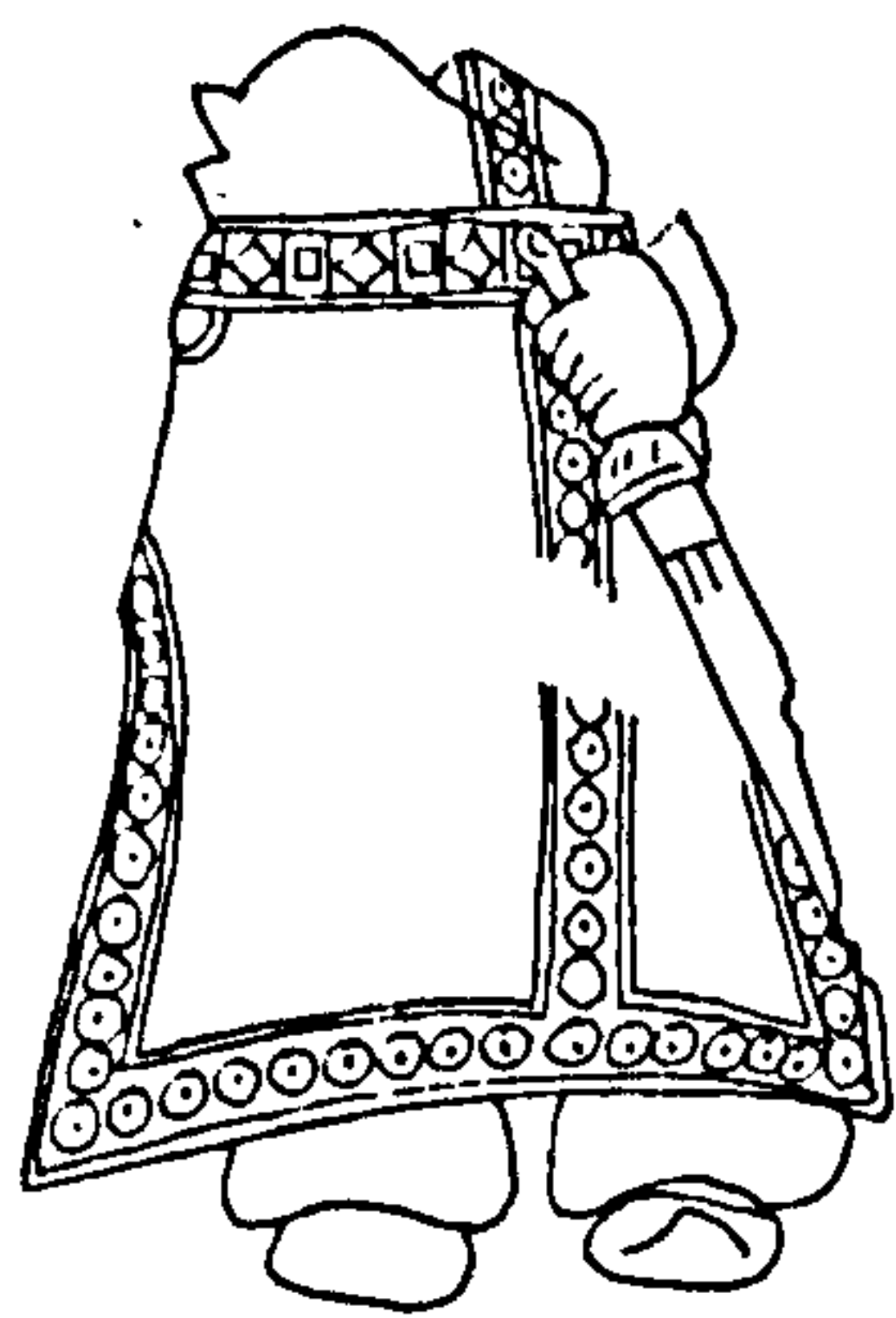
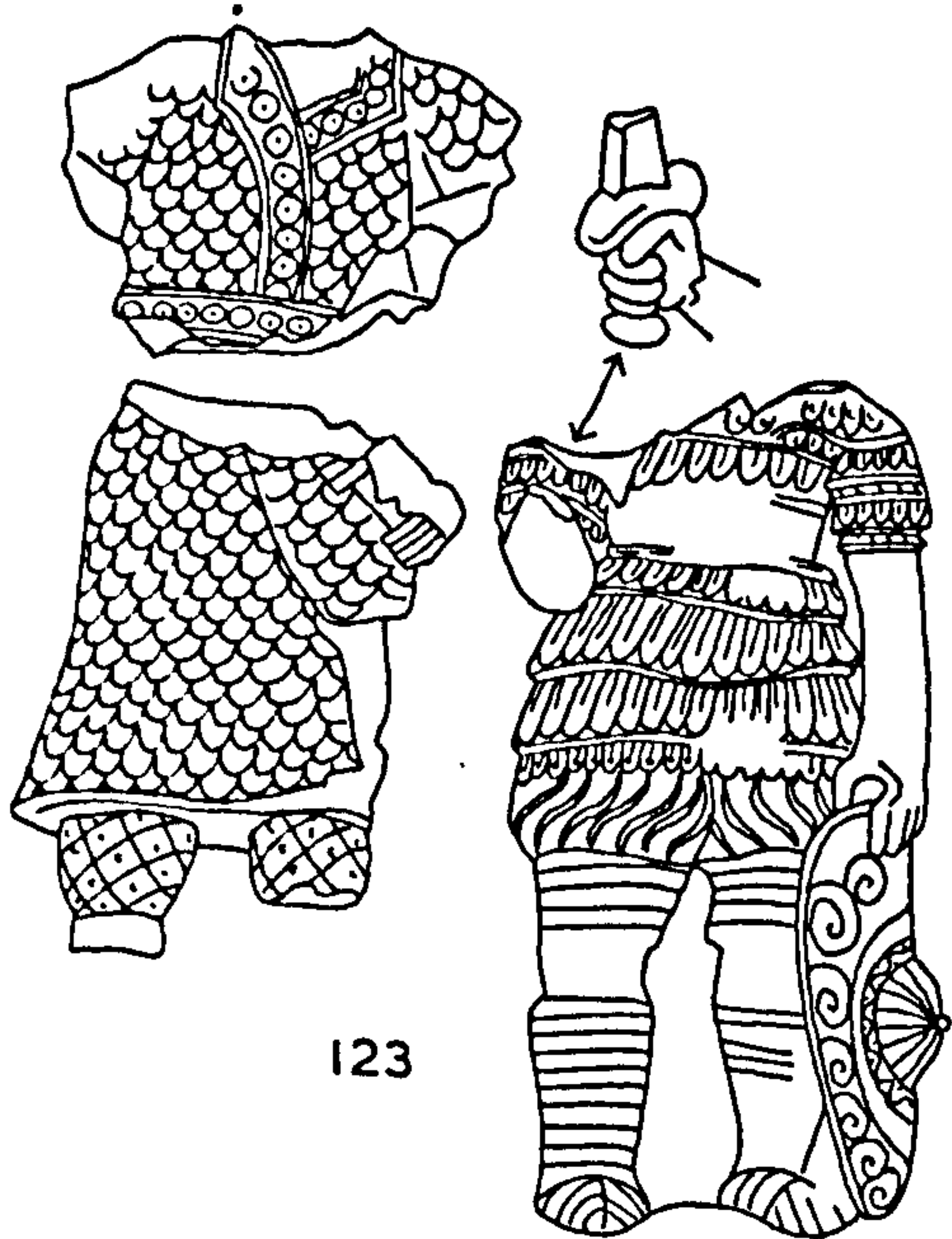


104







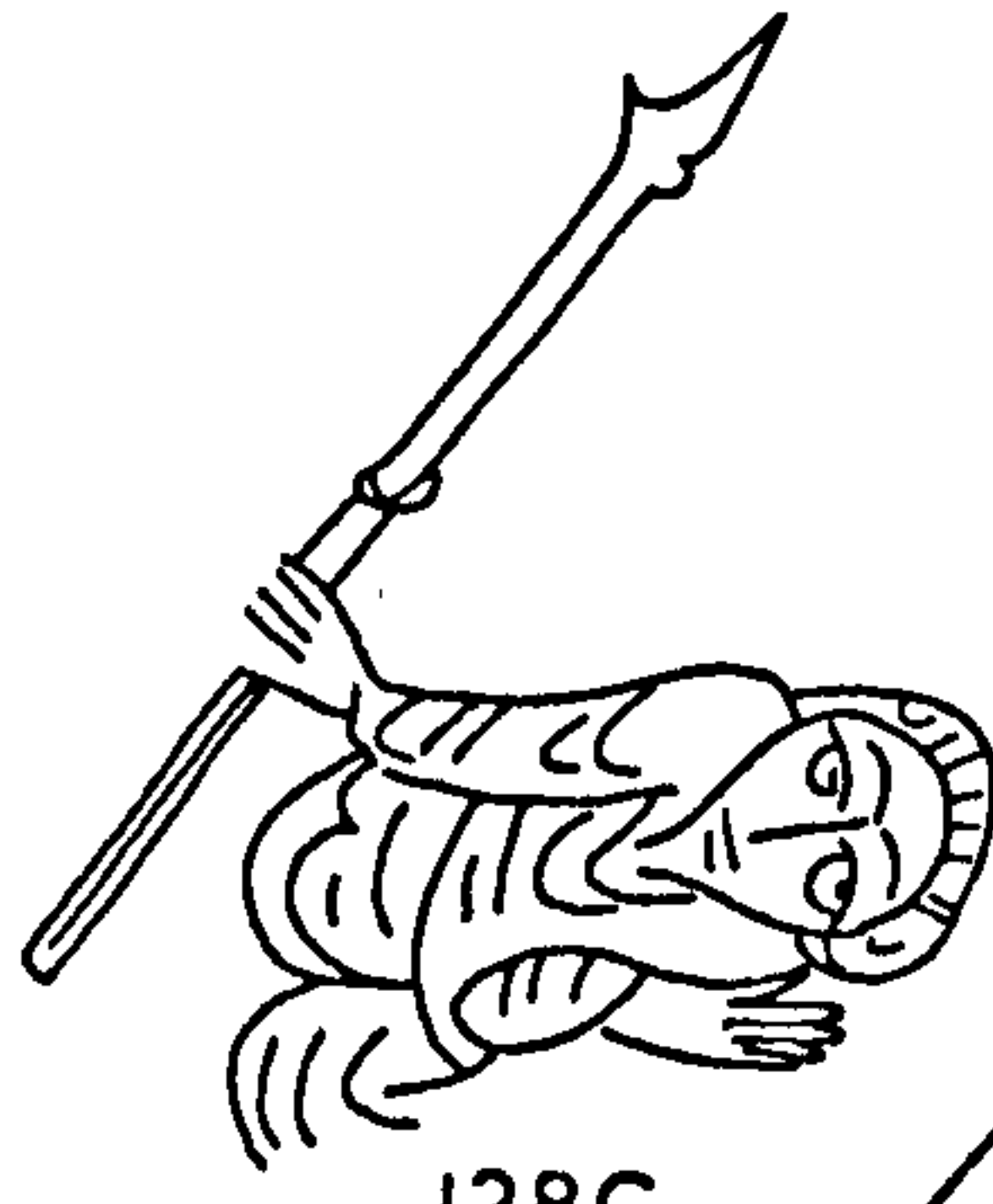




128A



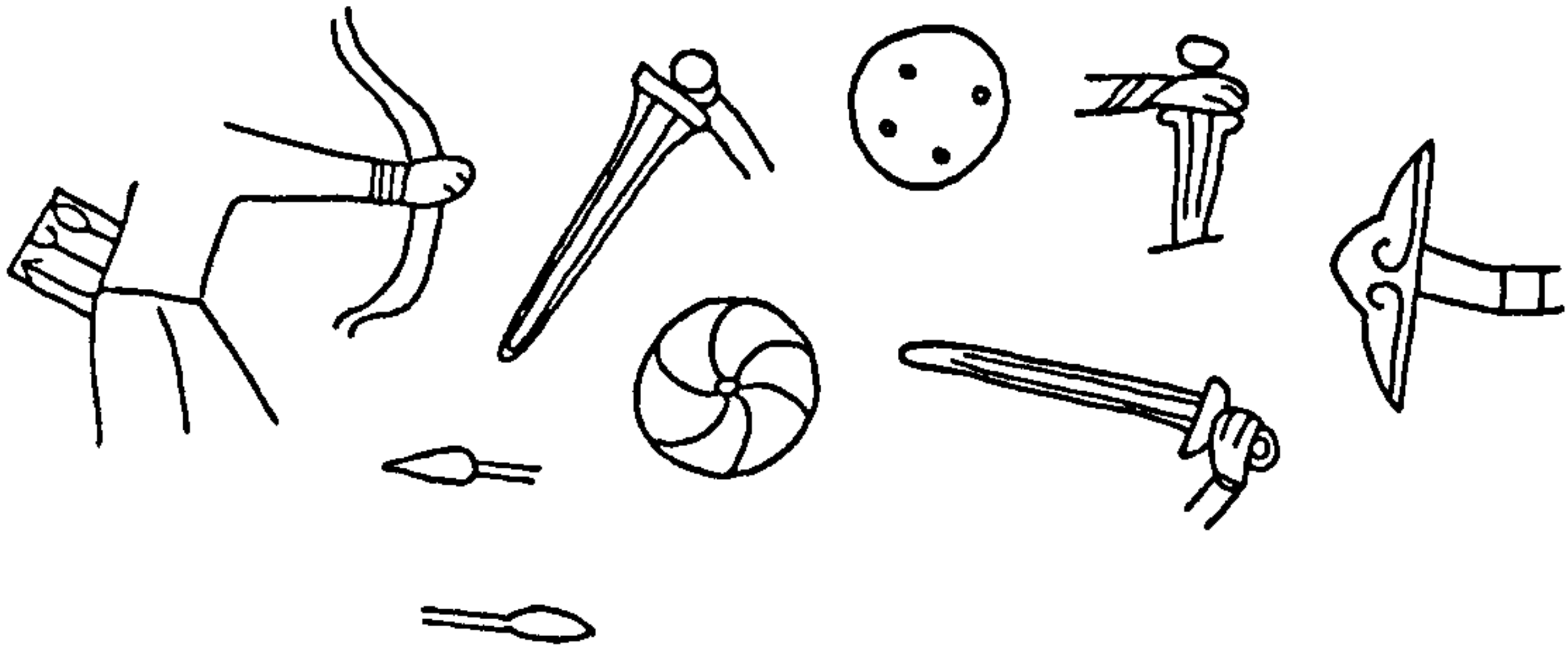
128B



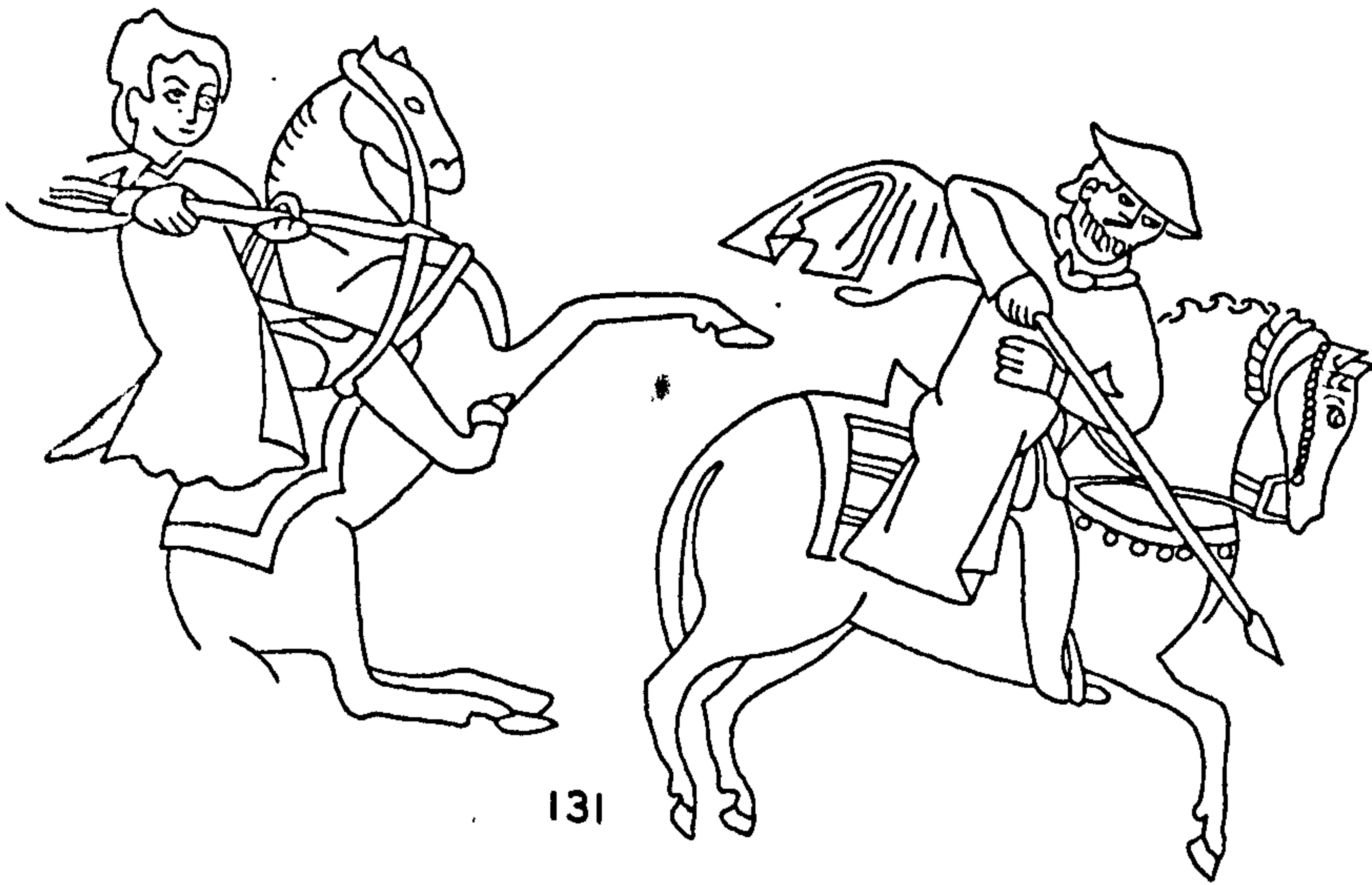
128C



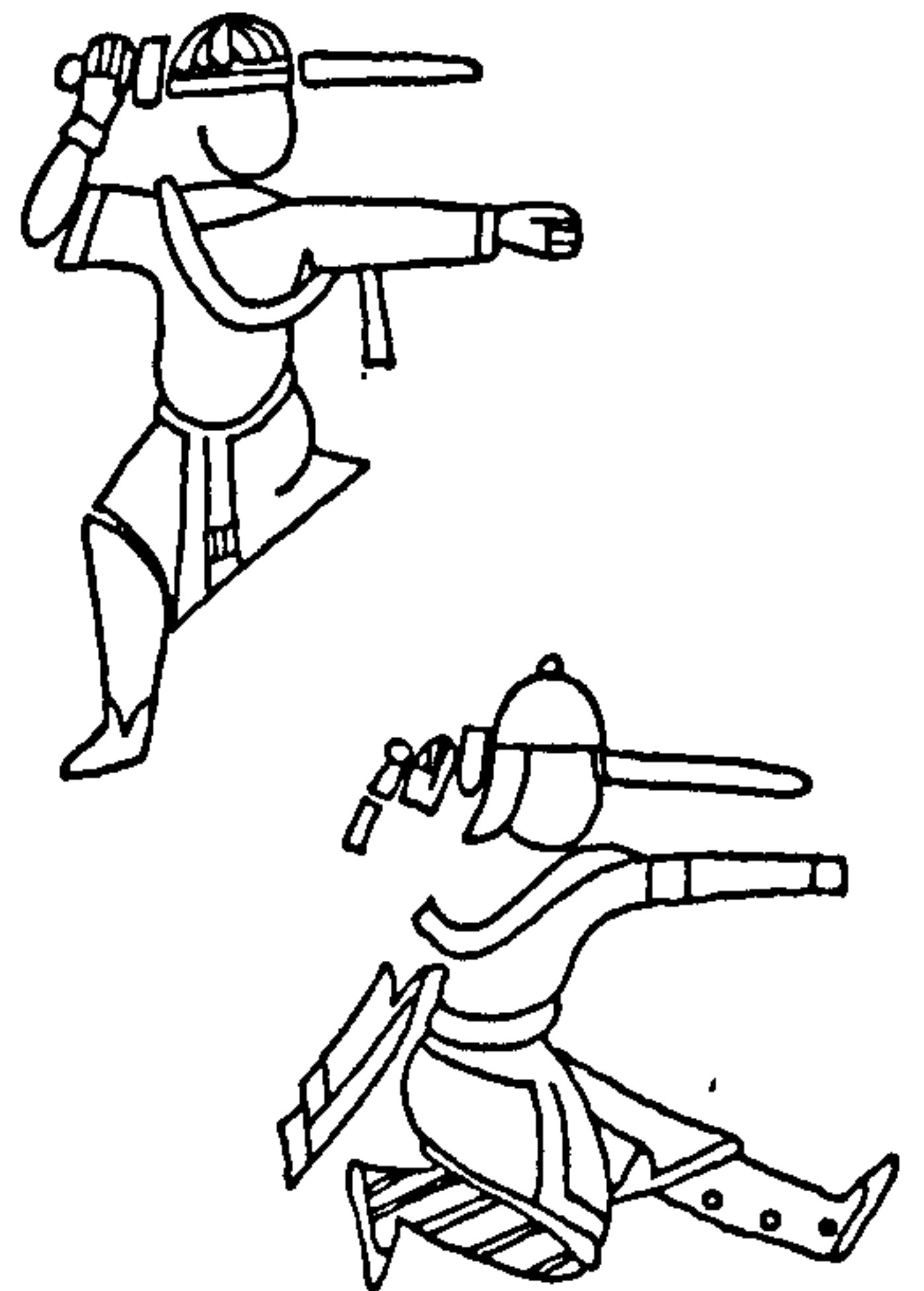
129



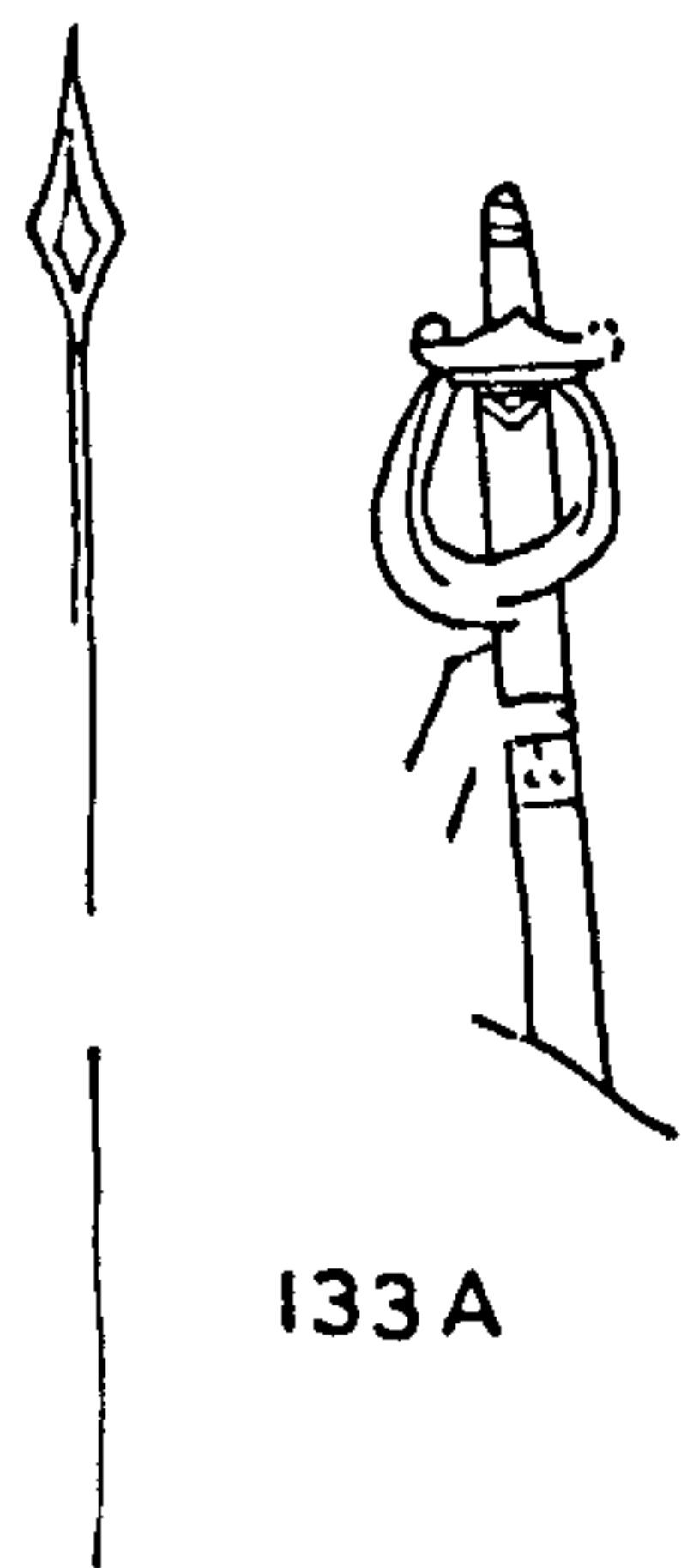
130



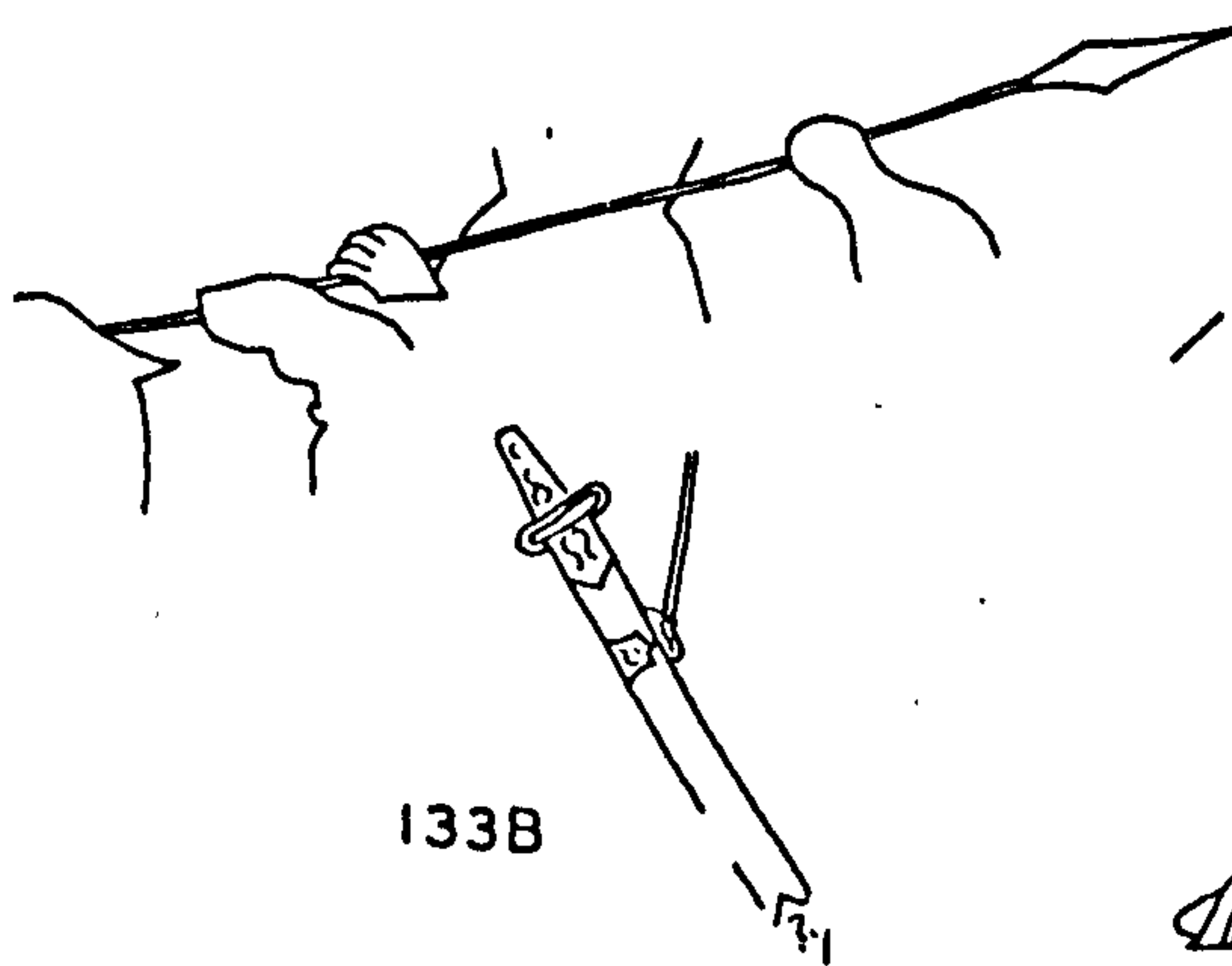
131



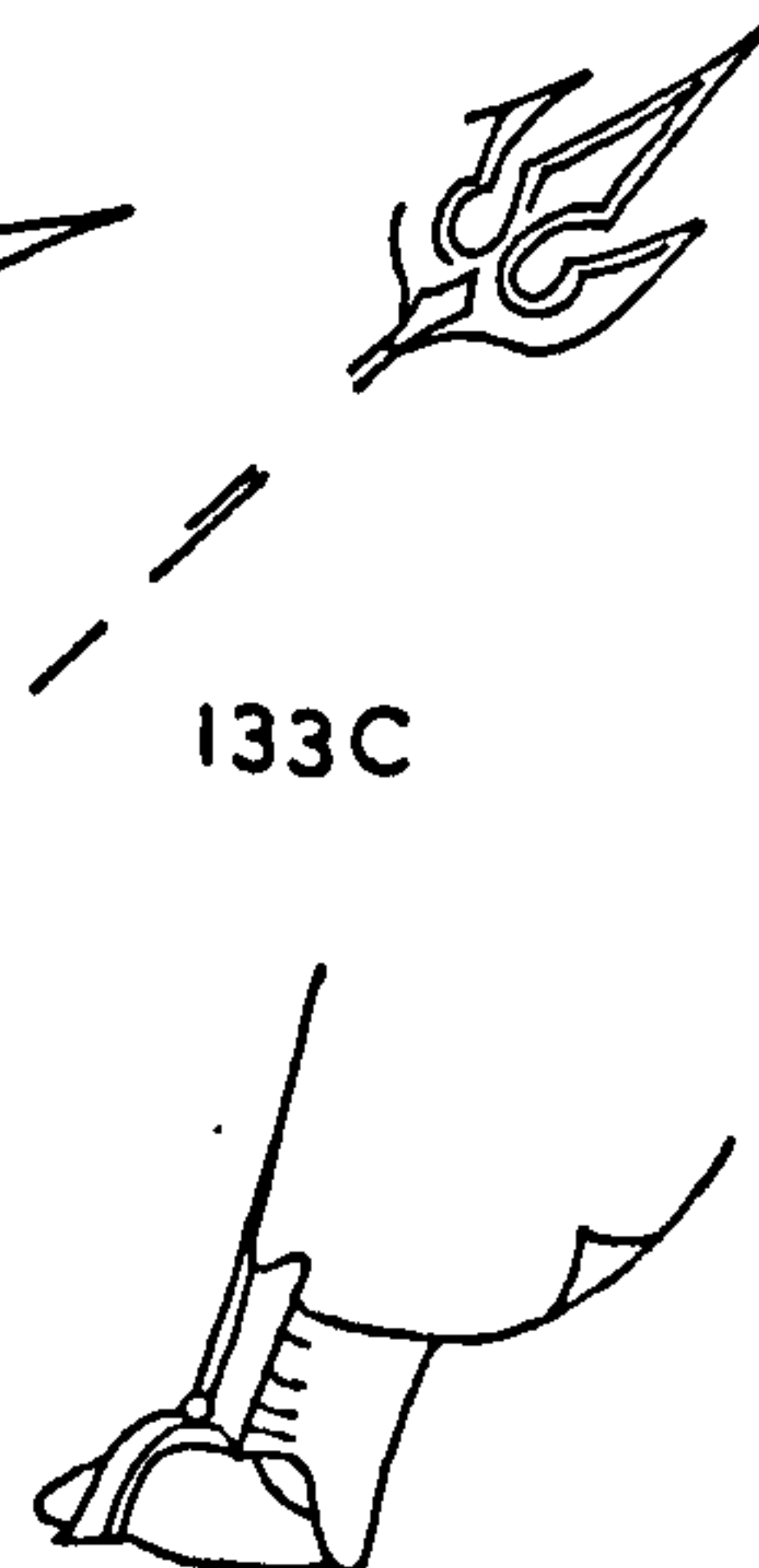
132



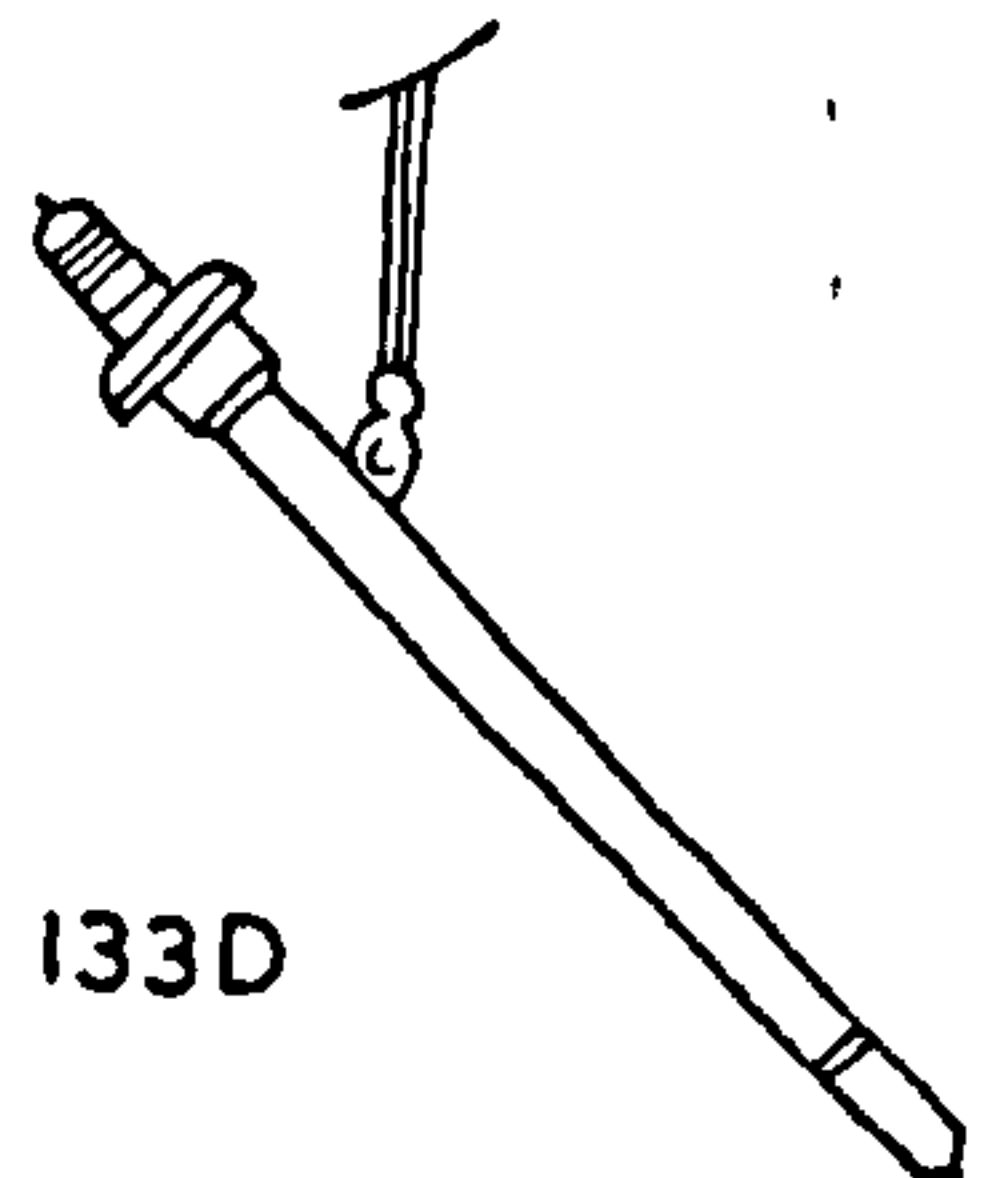
133A



133B



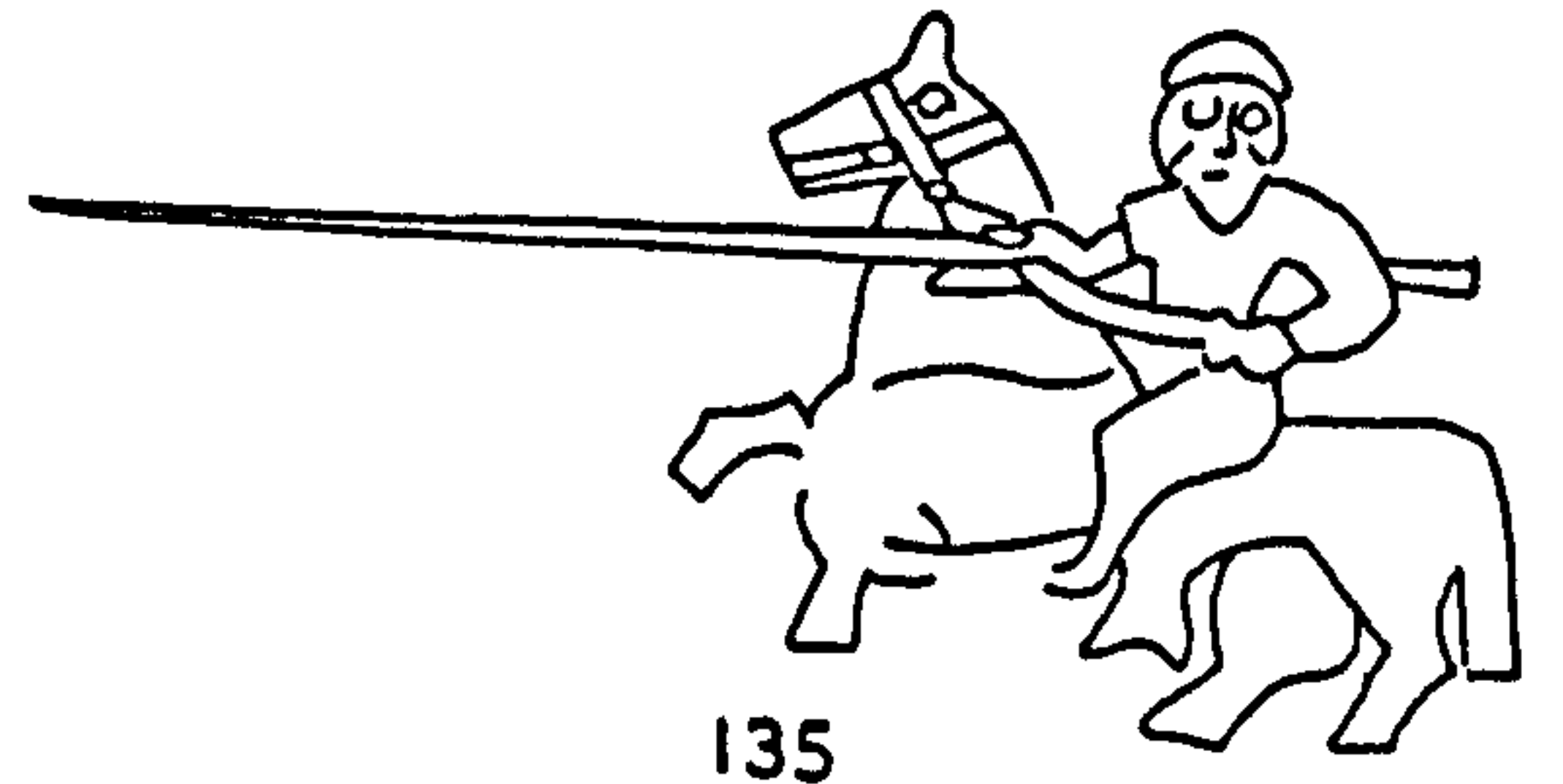
133C



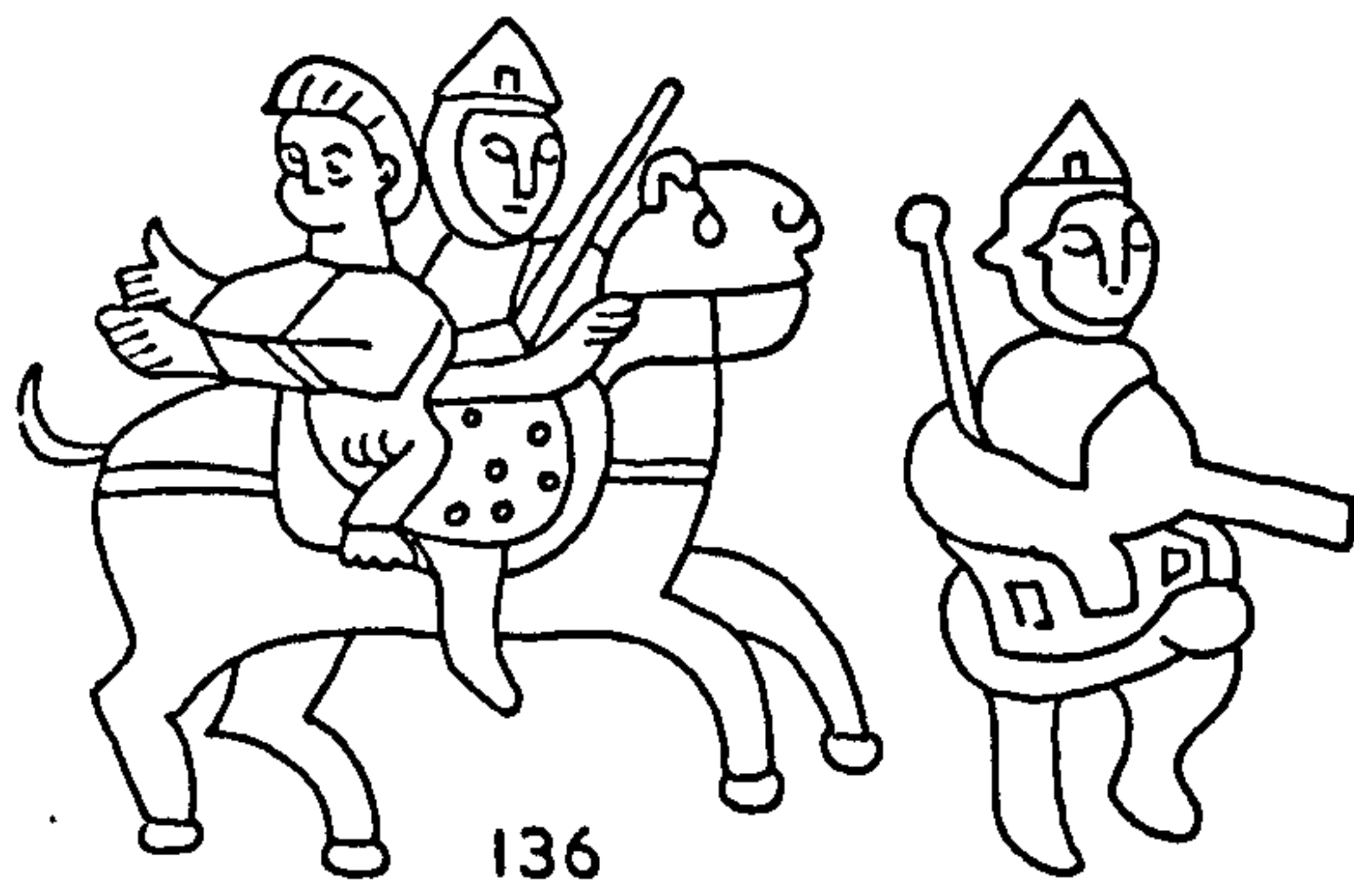
133D



134 UJ



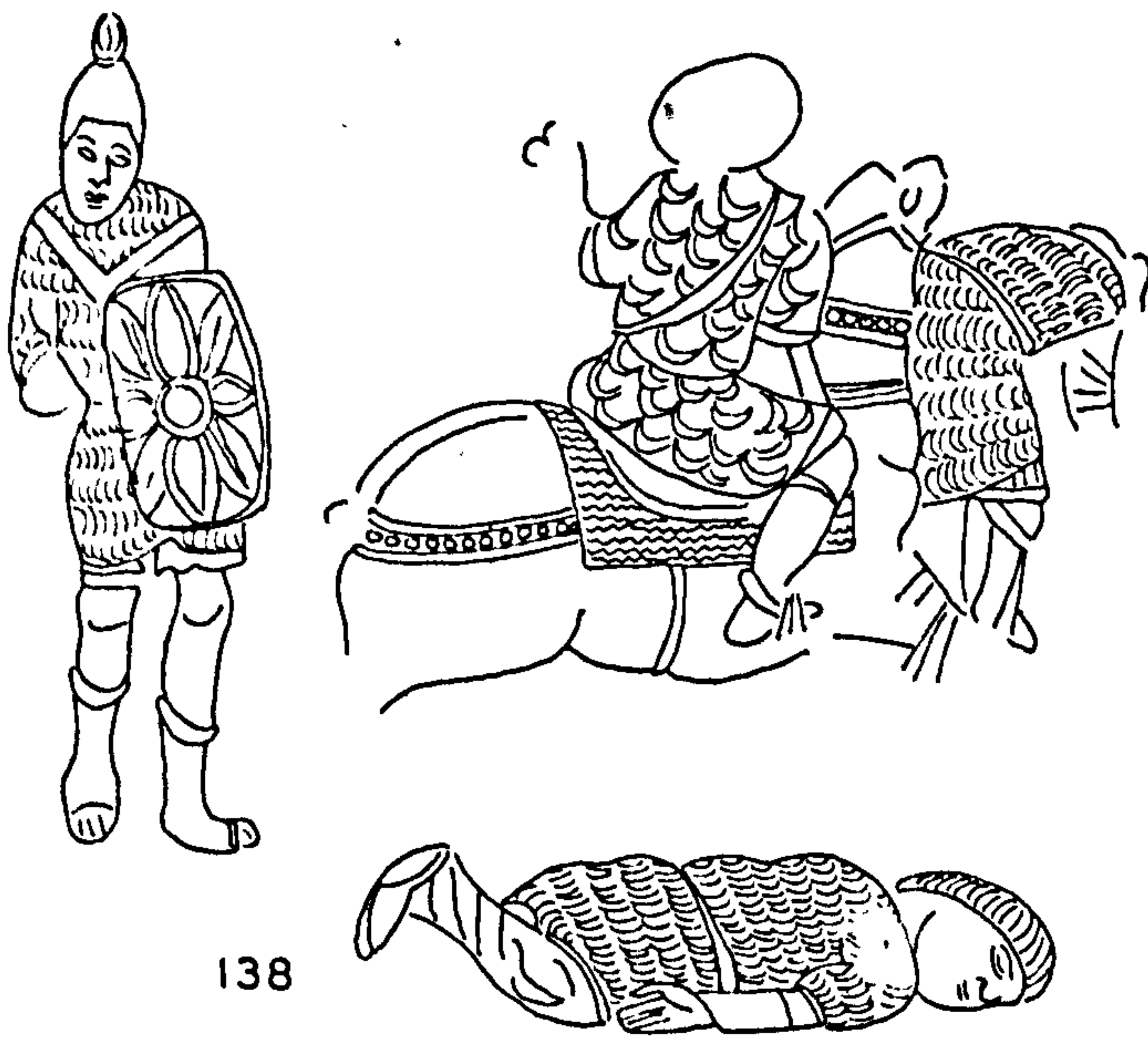
135



136



137



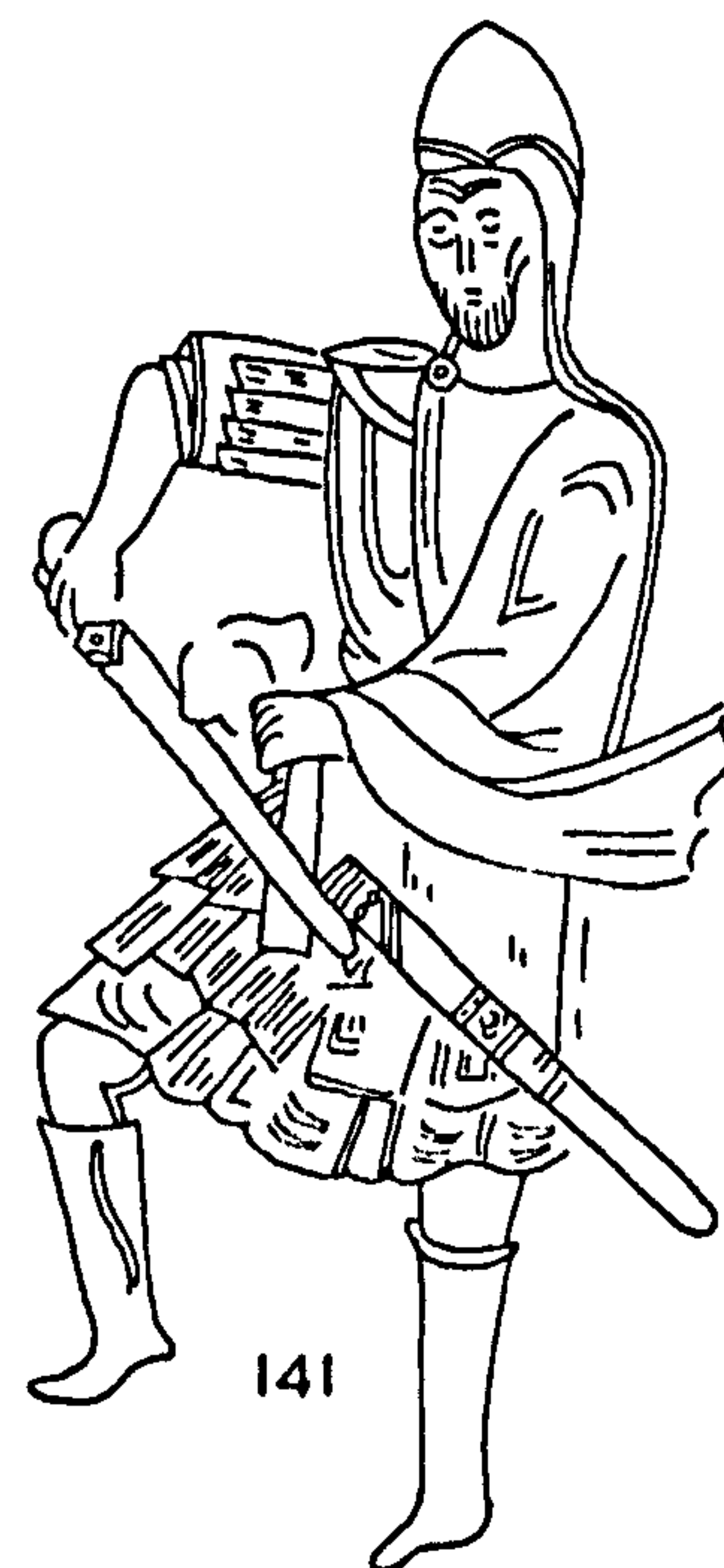
138



139



140



141

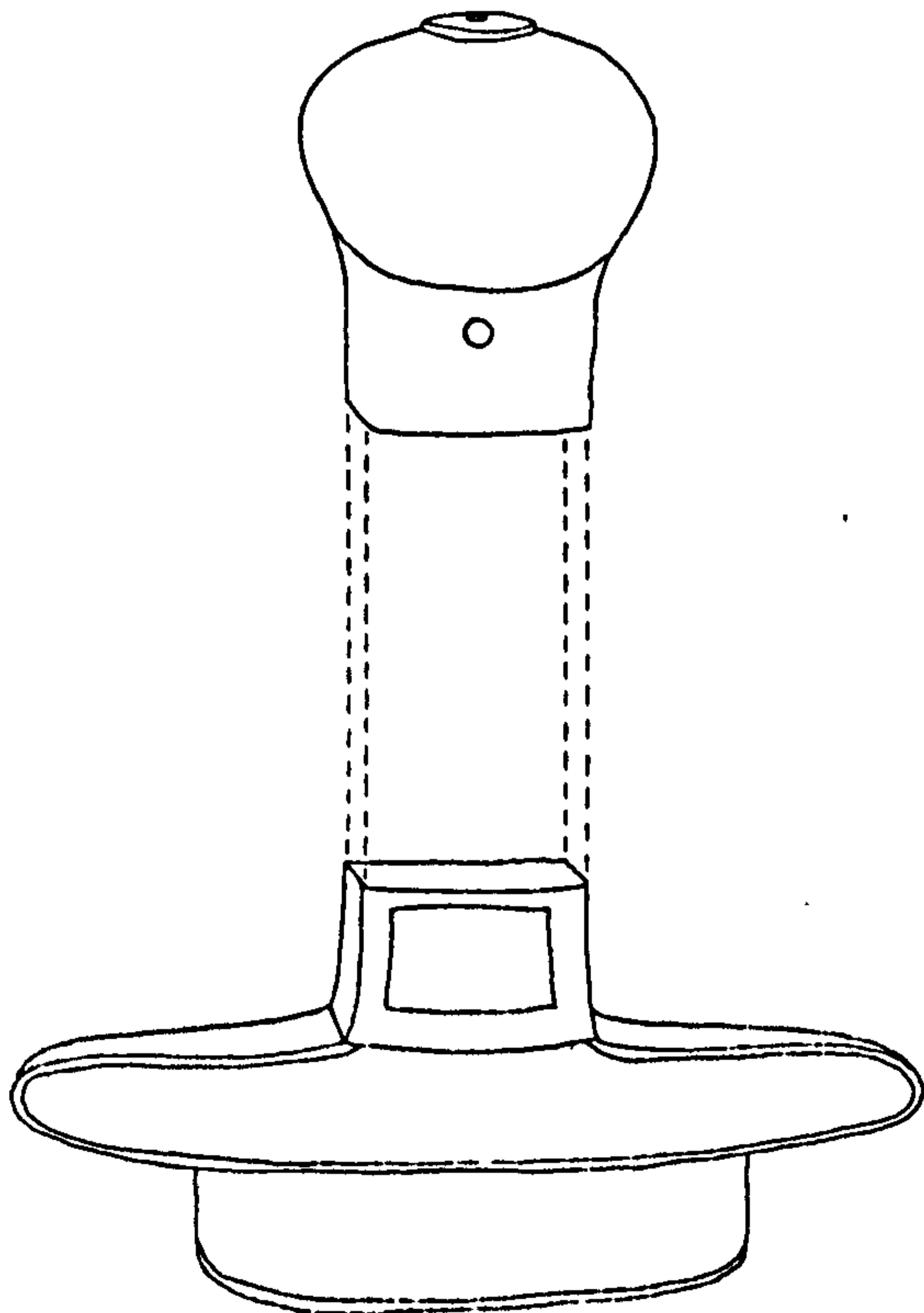




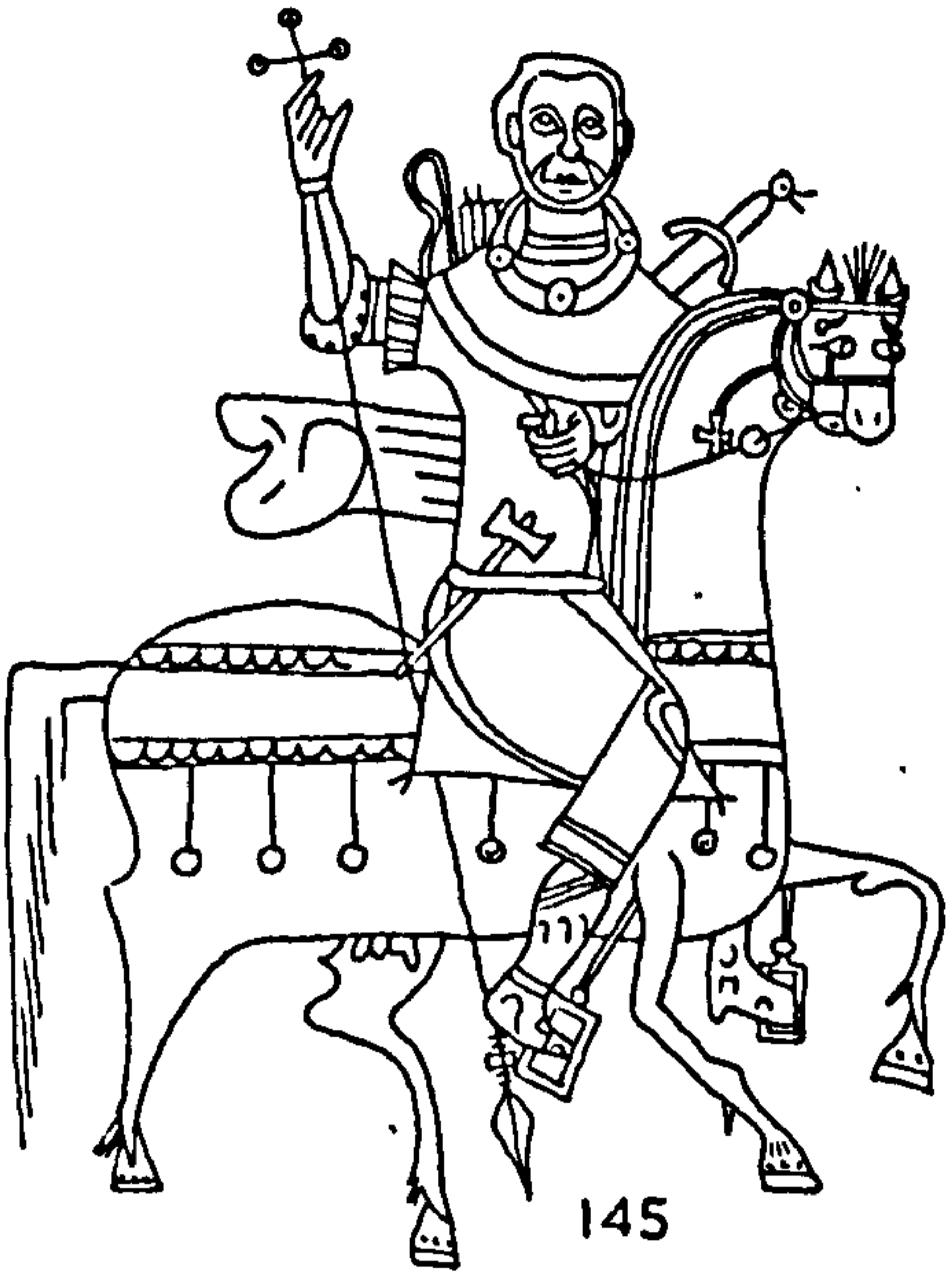
142



143



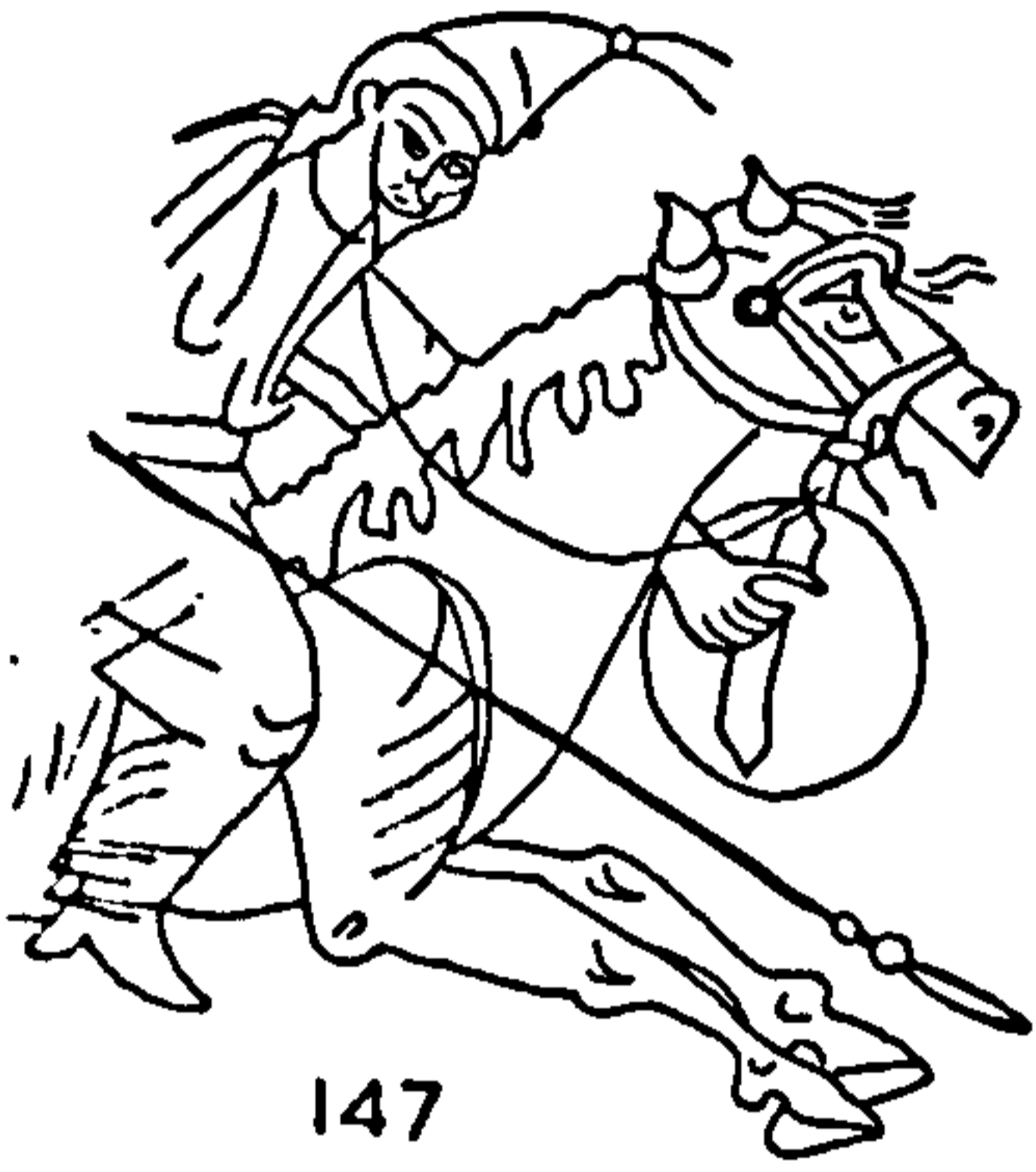
144 (Simplified)



145



146



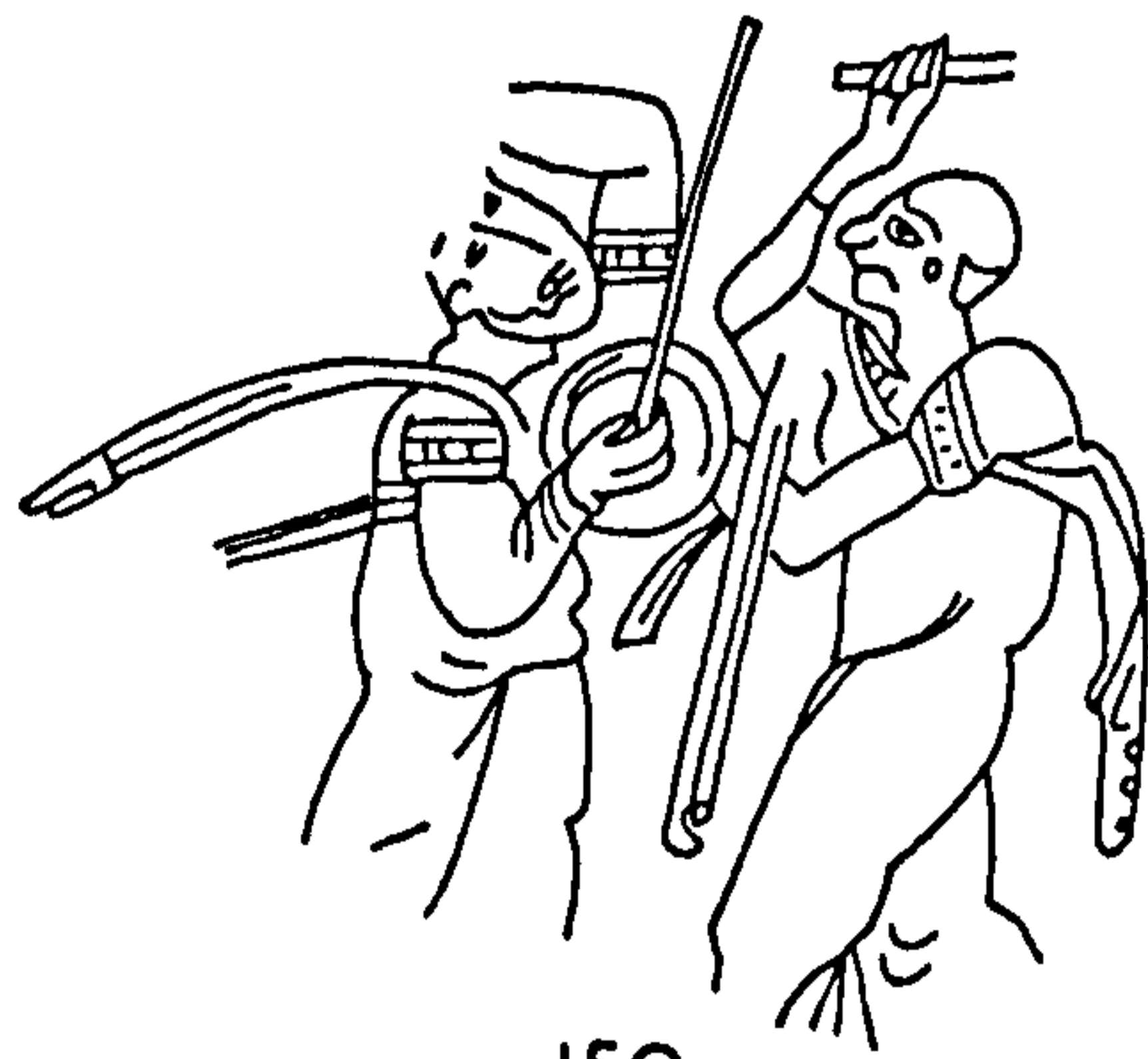
147



148



149



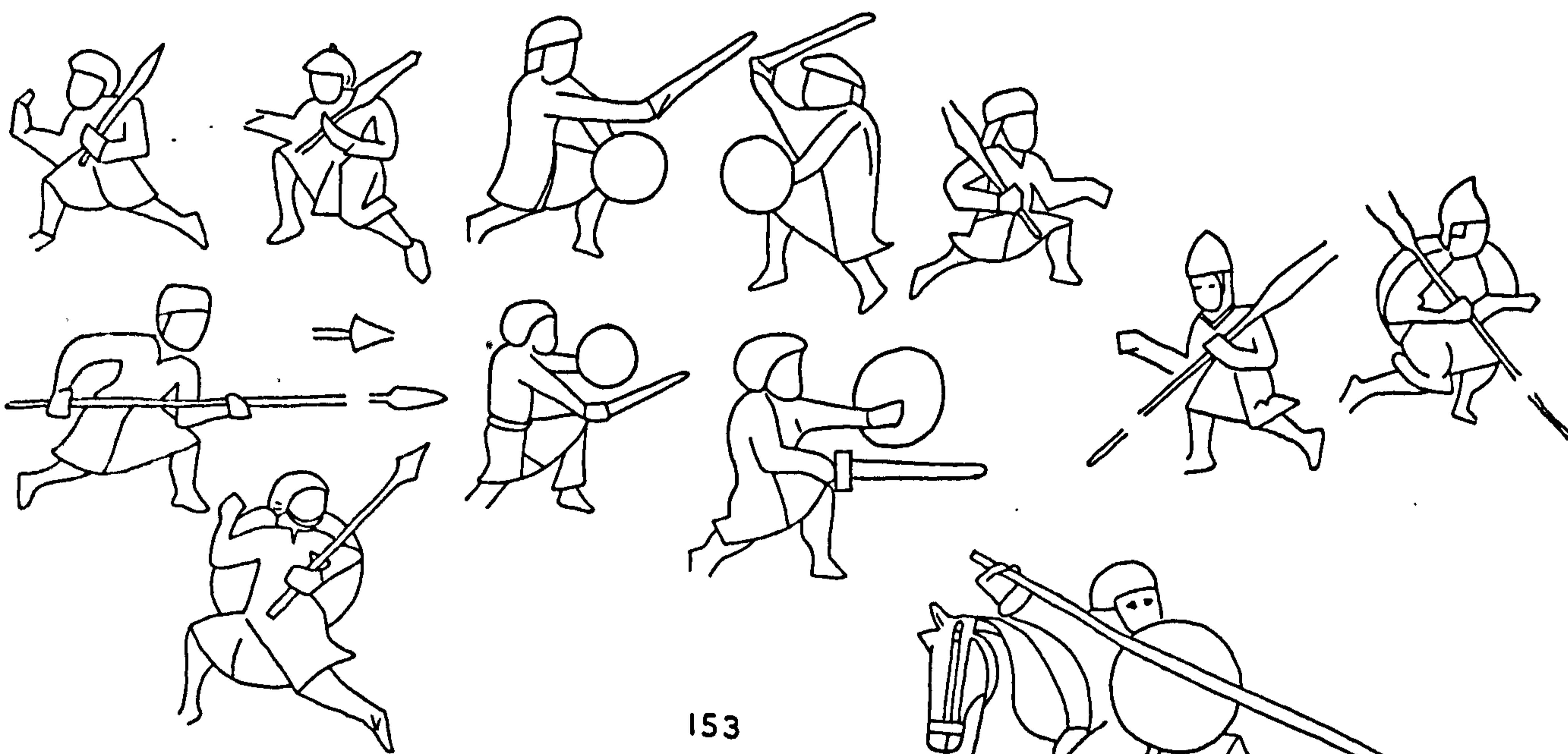
150



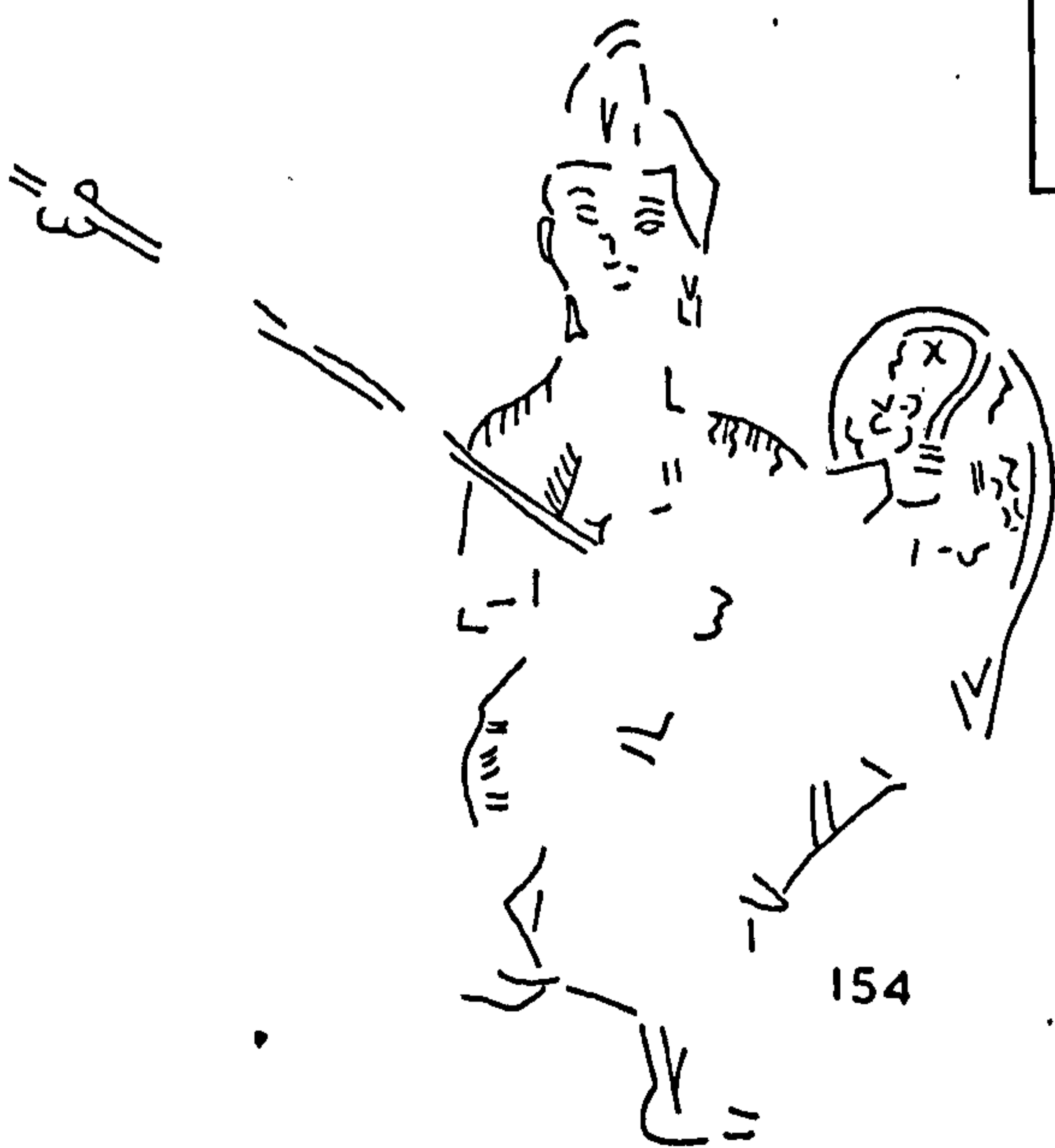
151



152



153



154



155



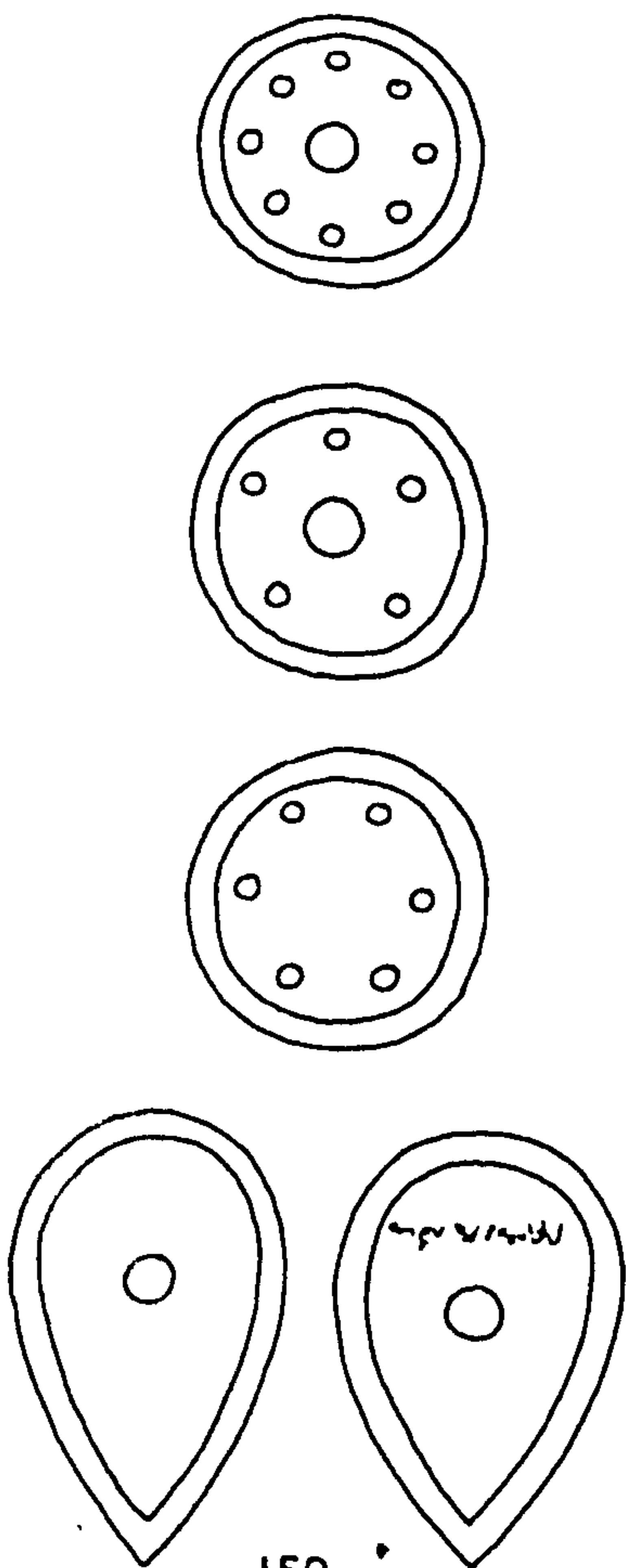
156



157



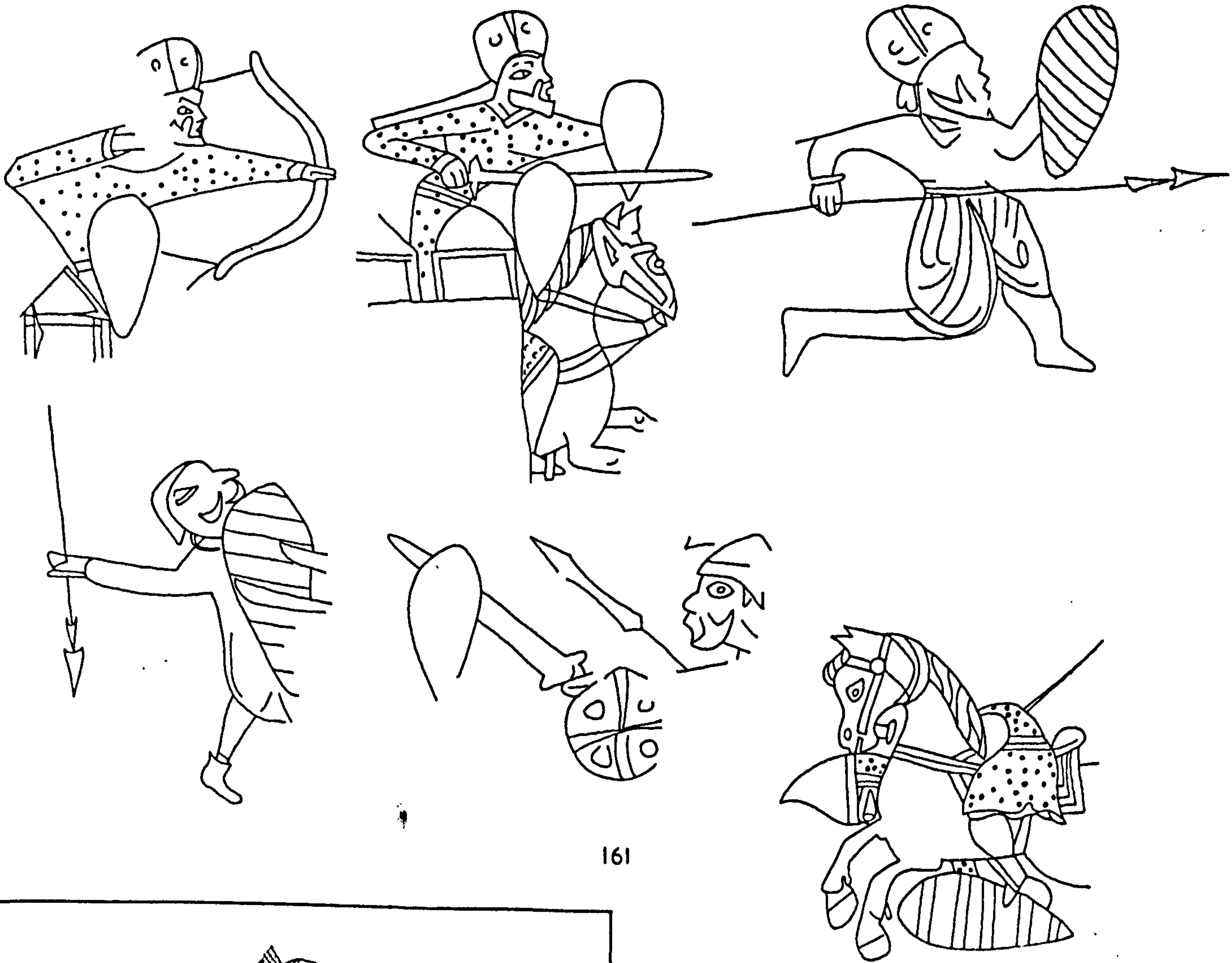
158



159



160



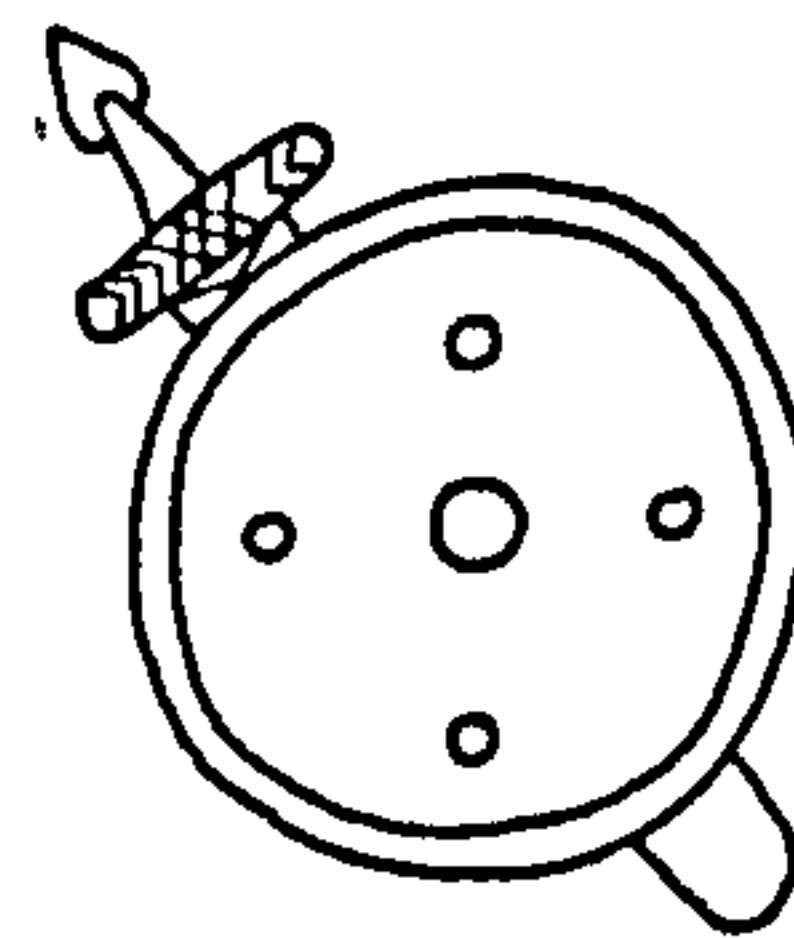
161



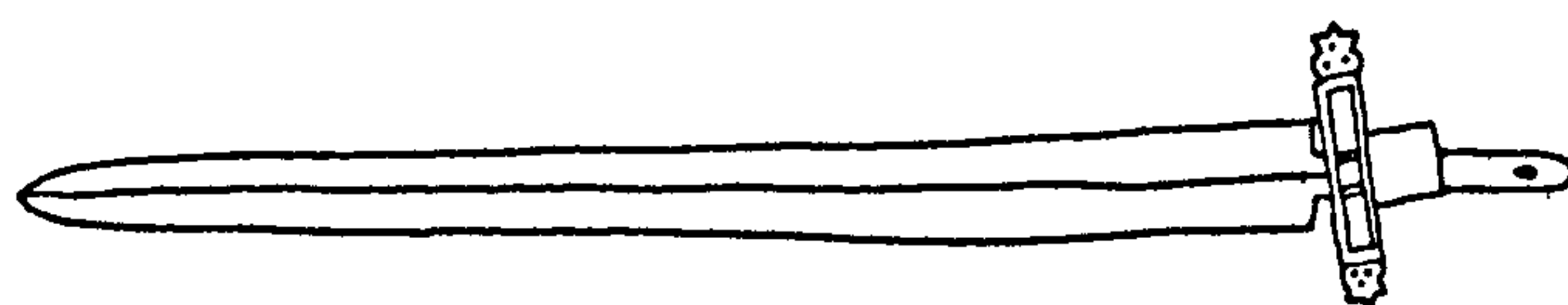
162



163



164



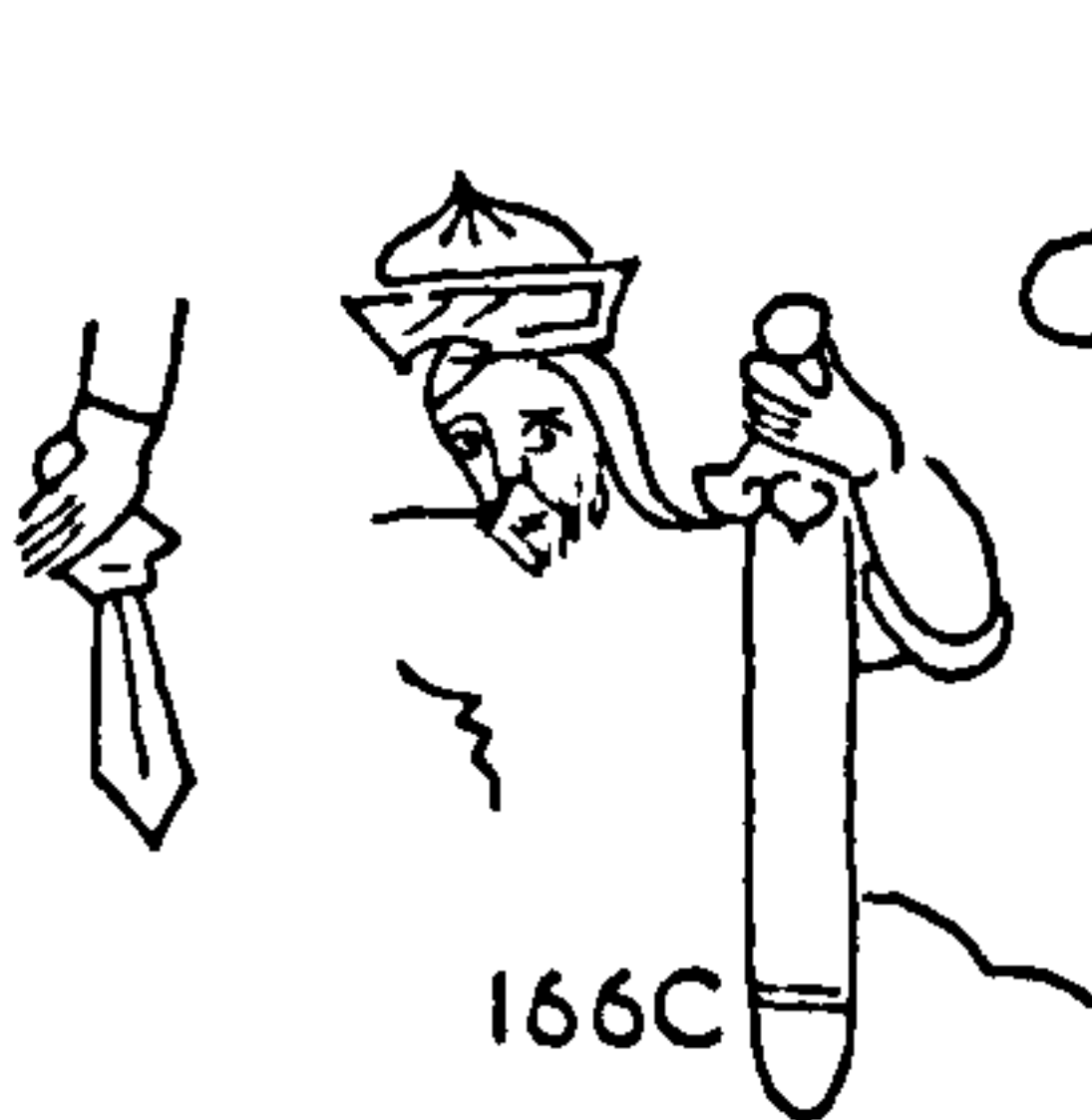
165



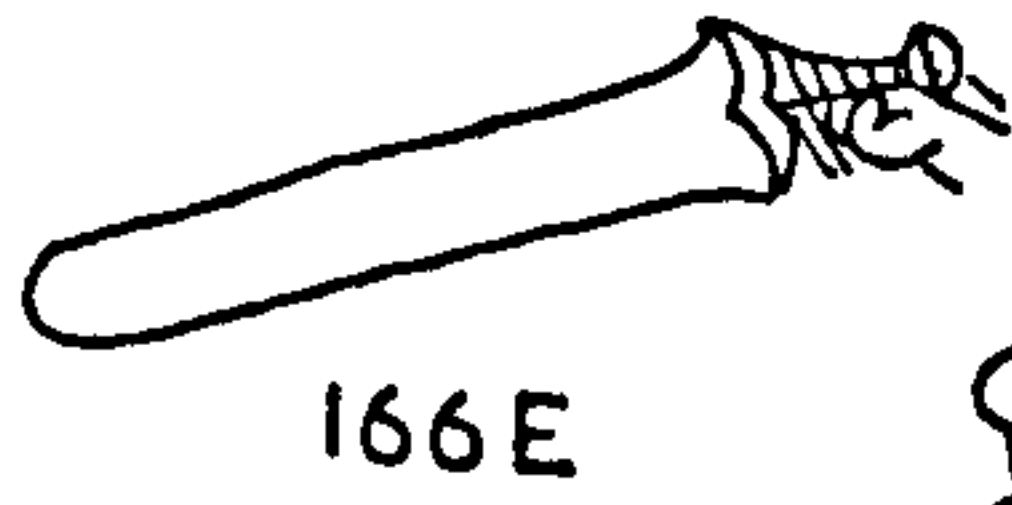
166A



166B



166C



166E



166F



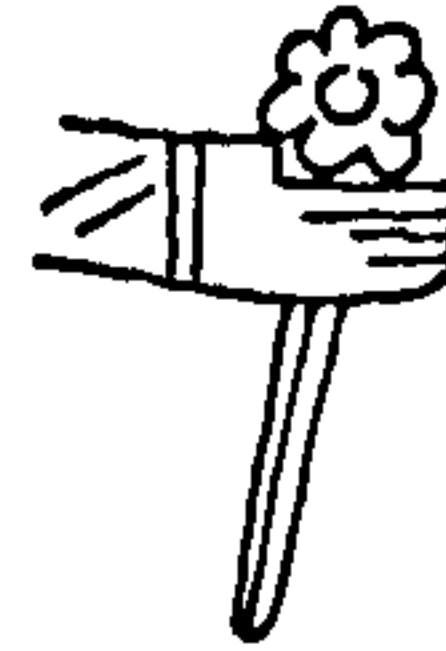
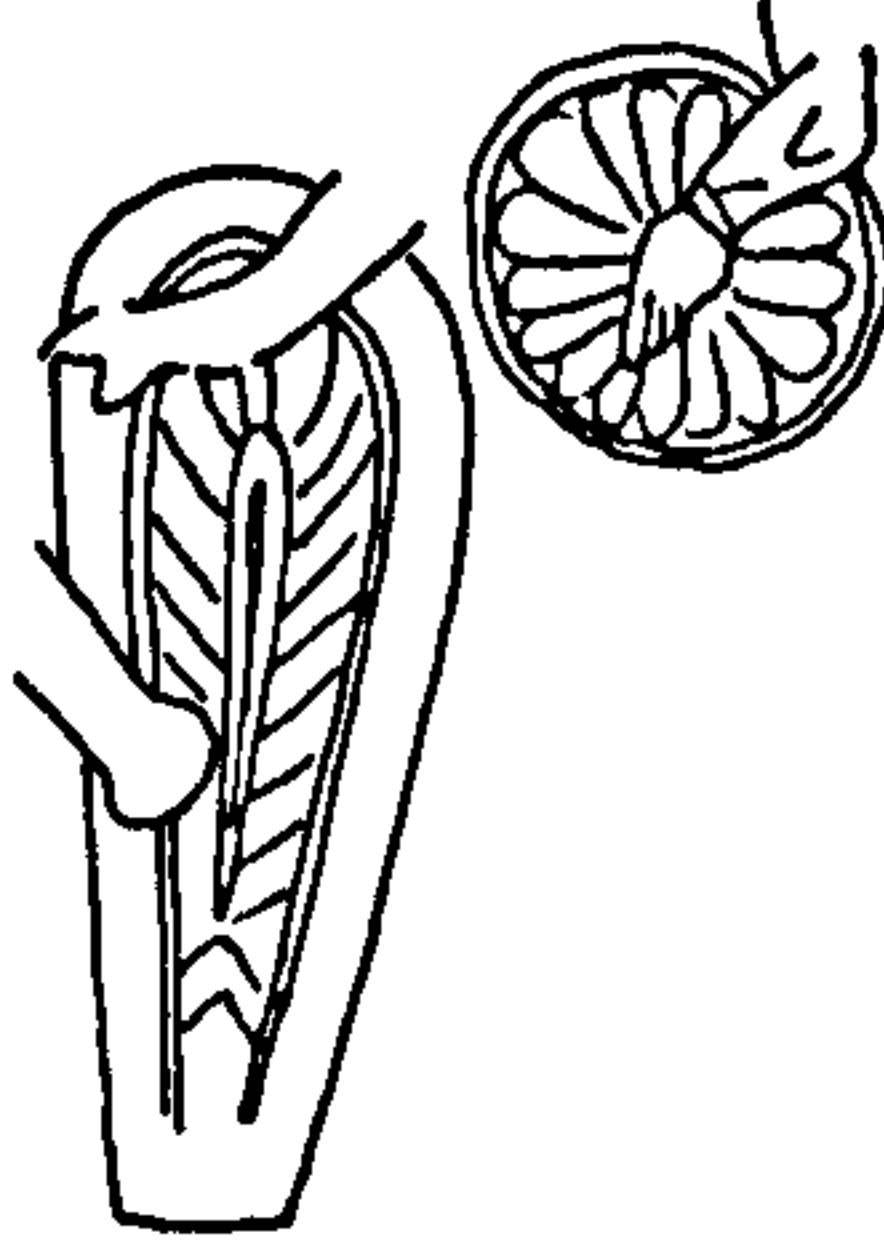
166G



166D



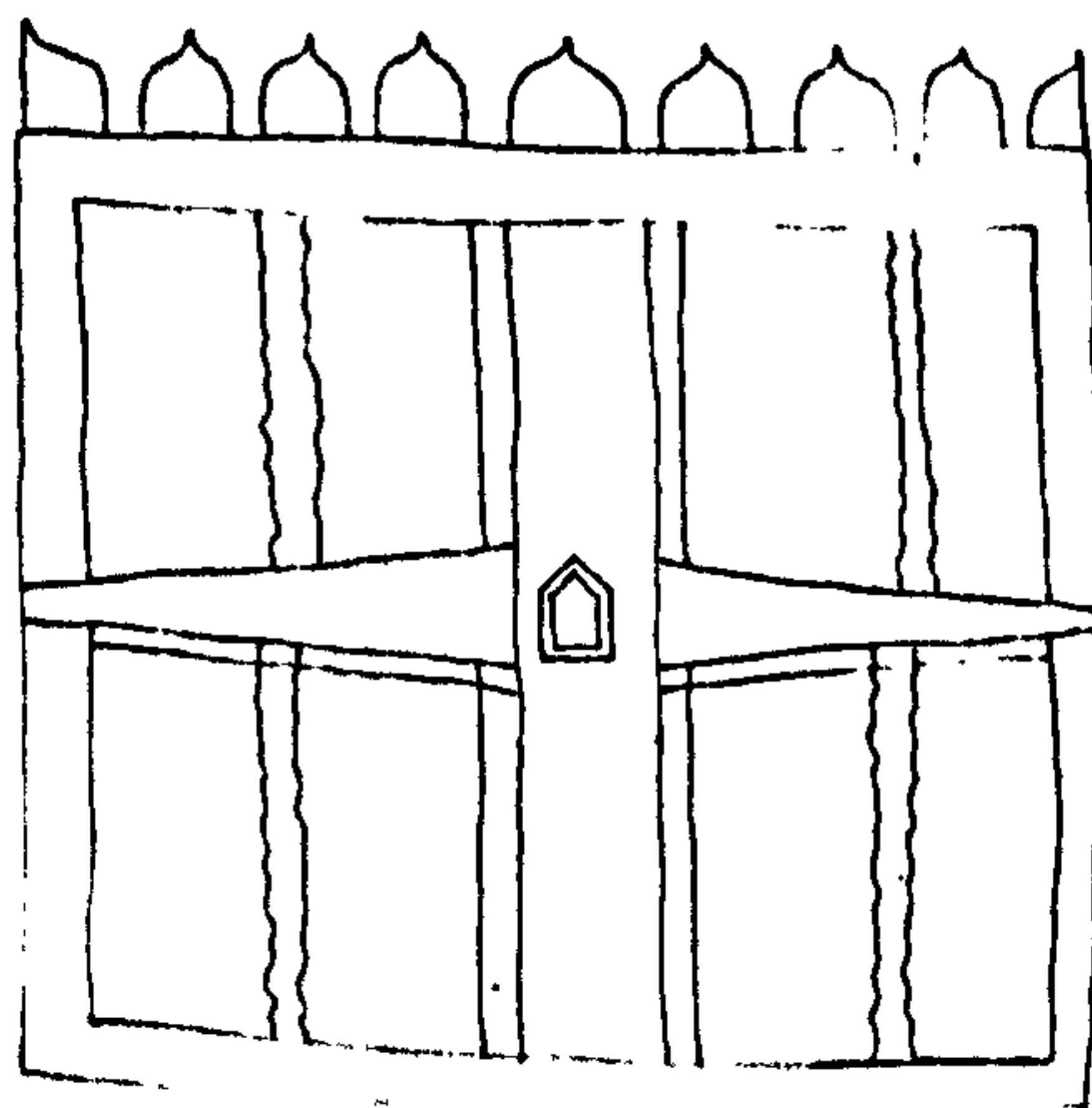
166H



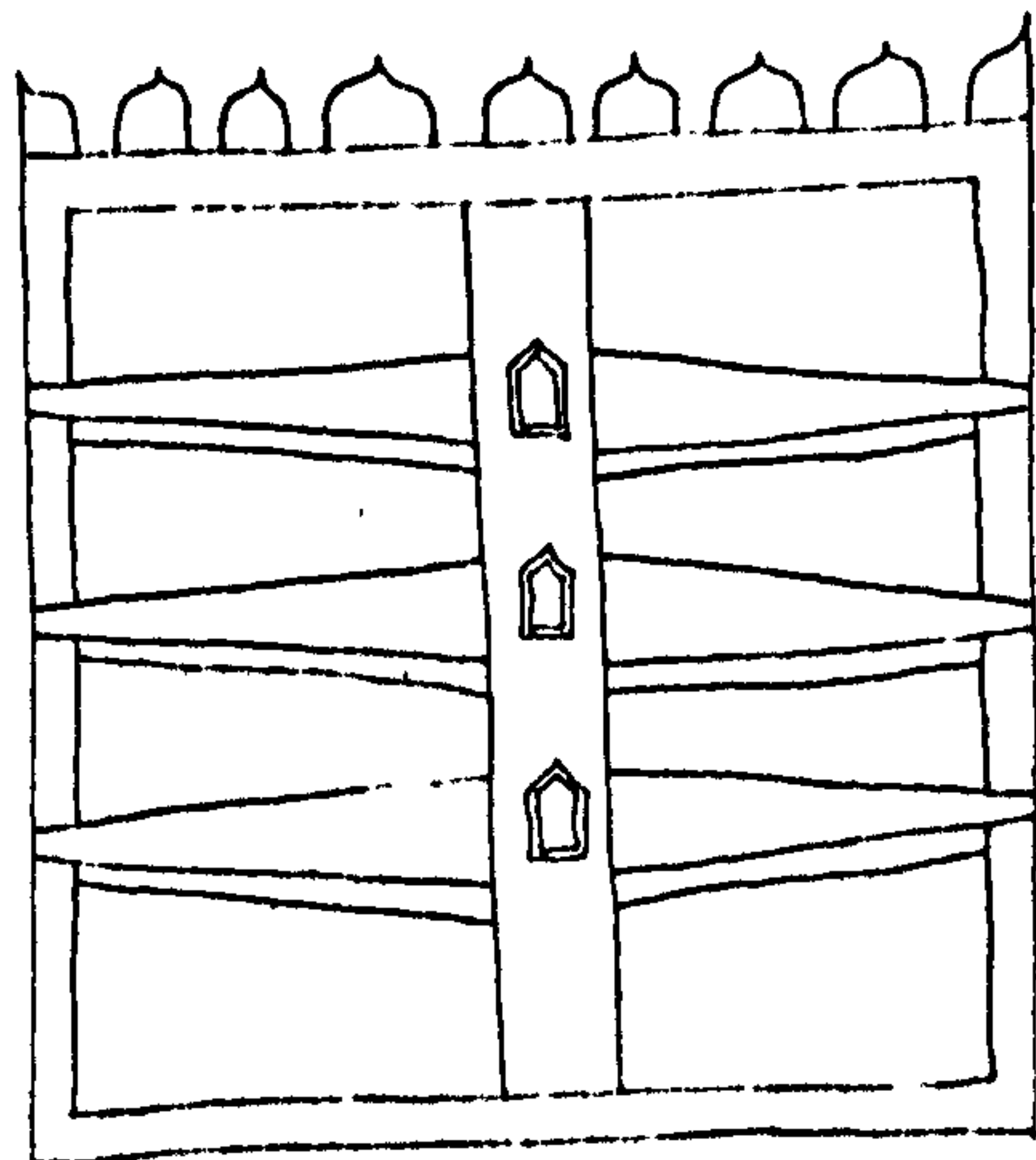
166I



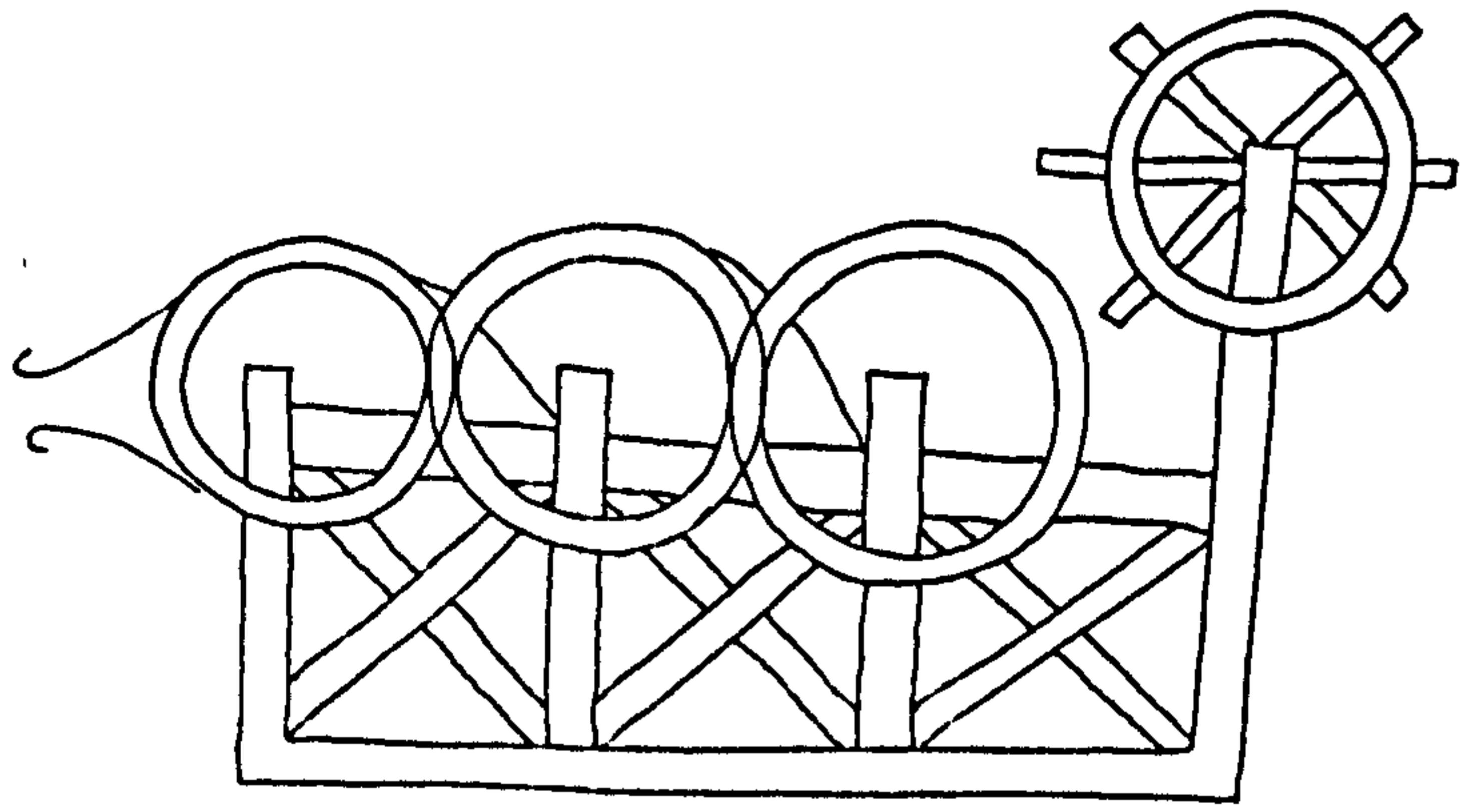
166J



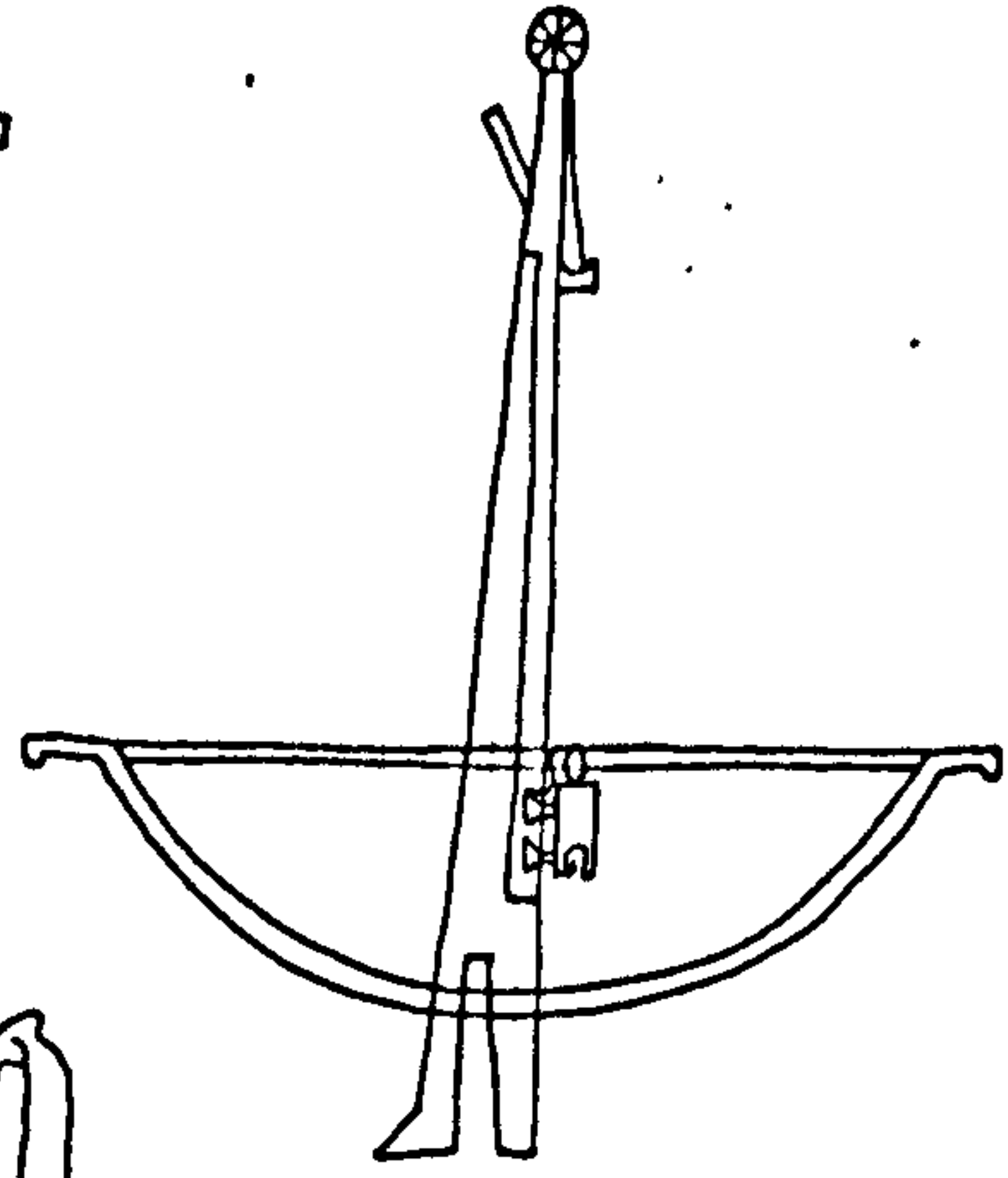
167A



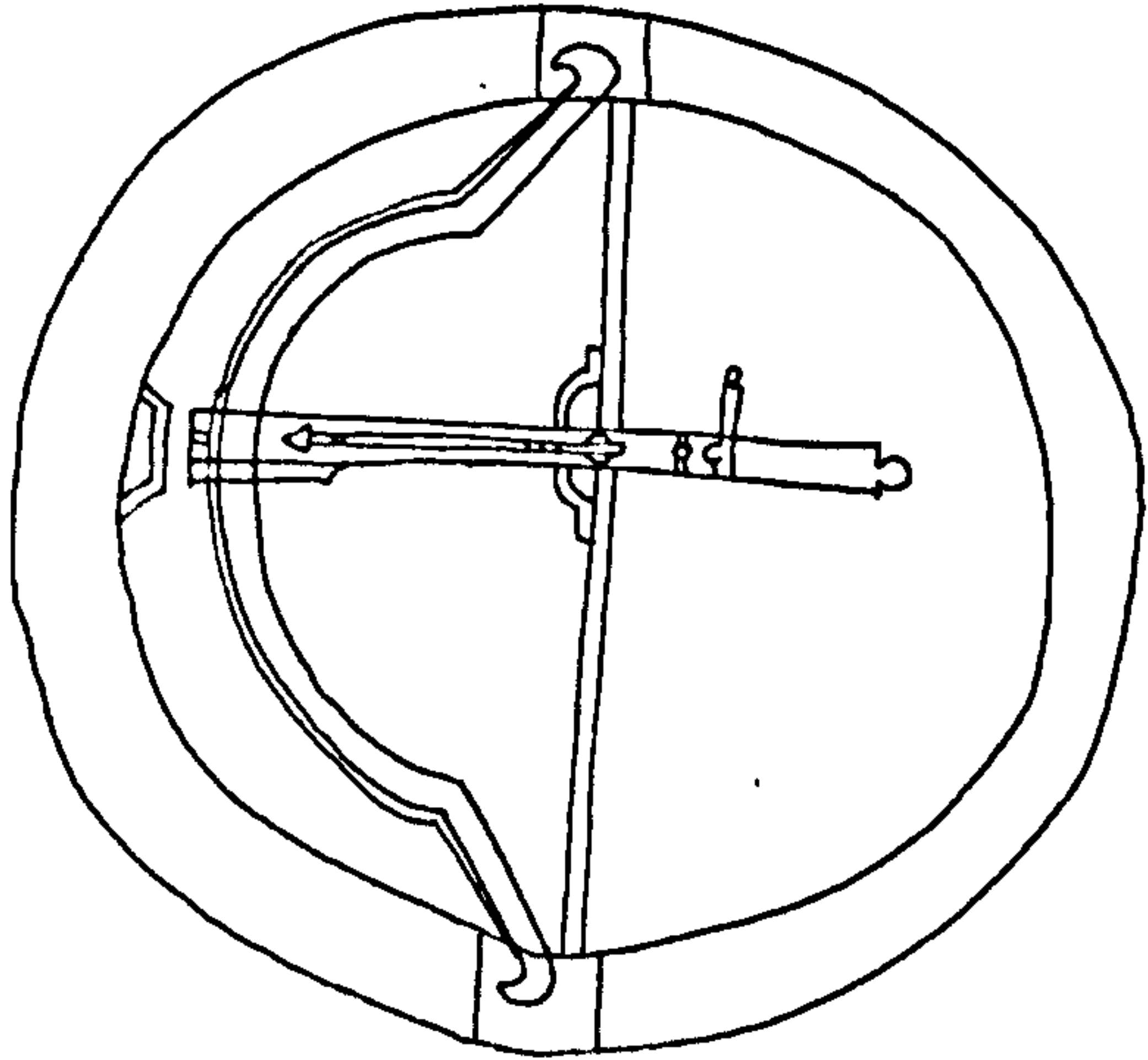
(Continued)



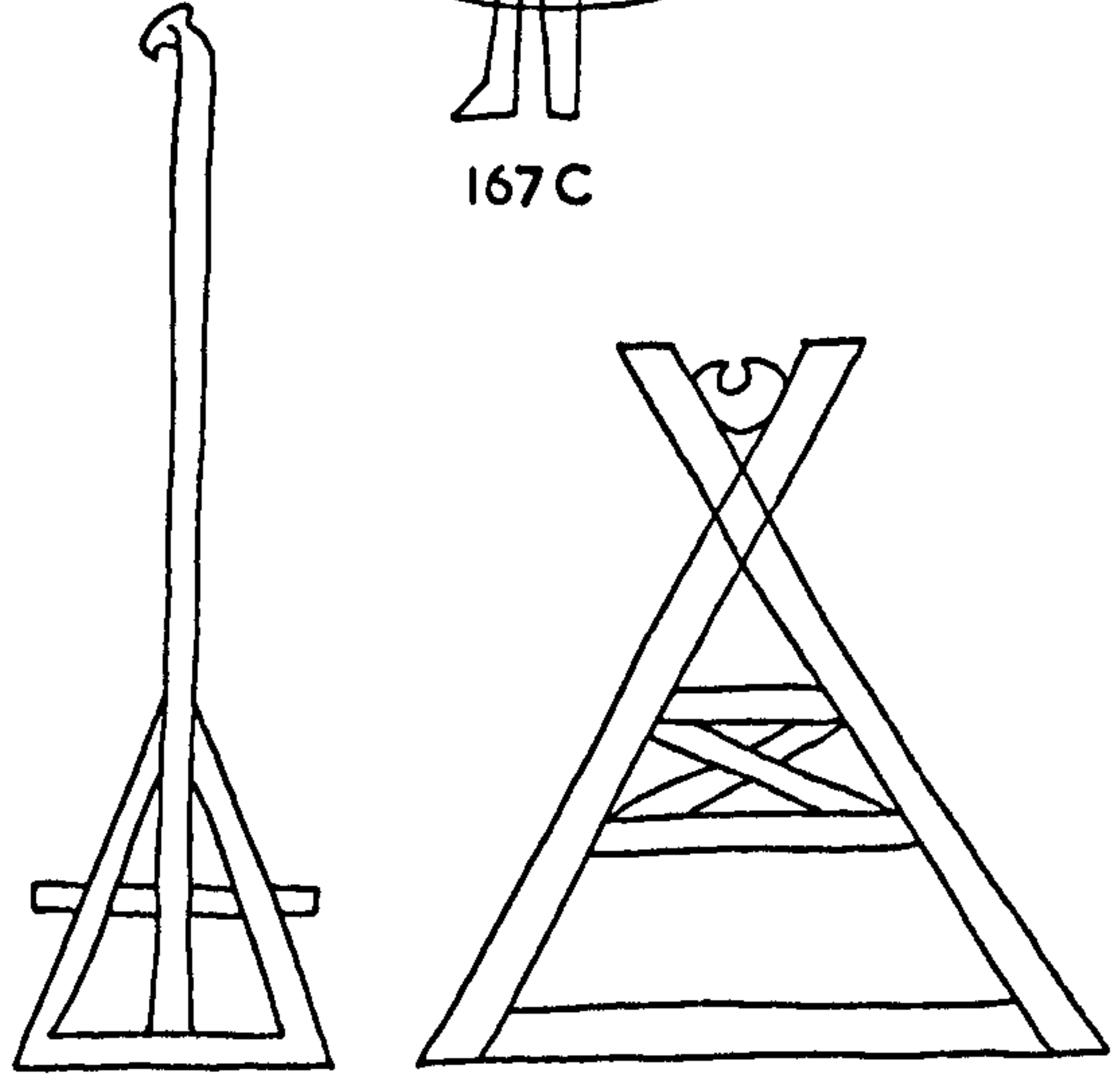
167 B



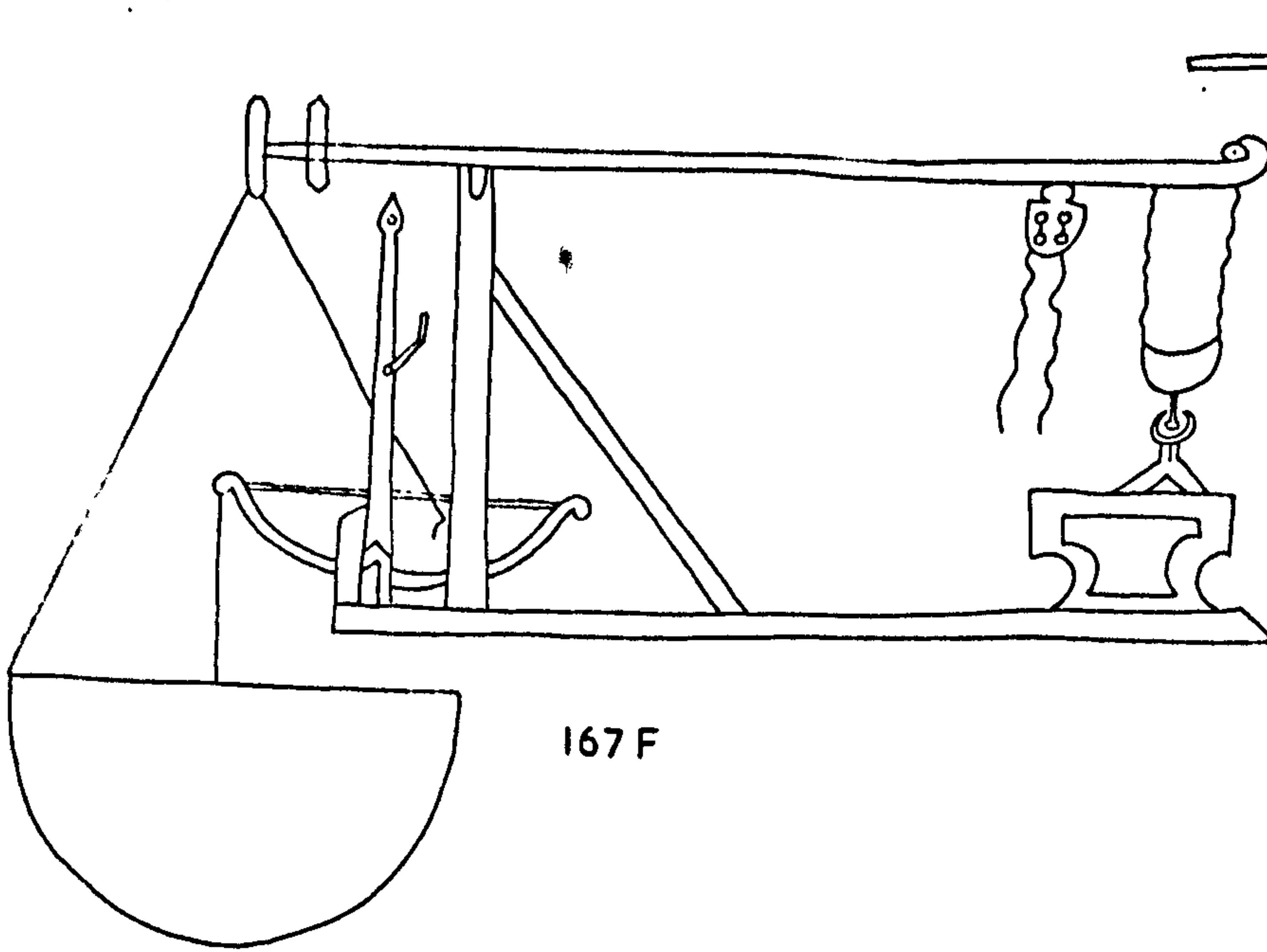
167 C



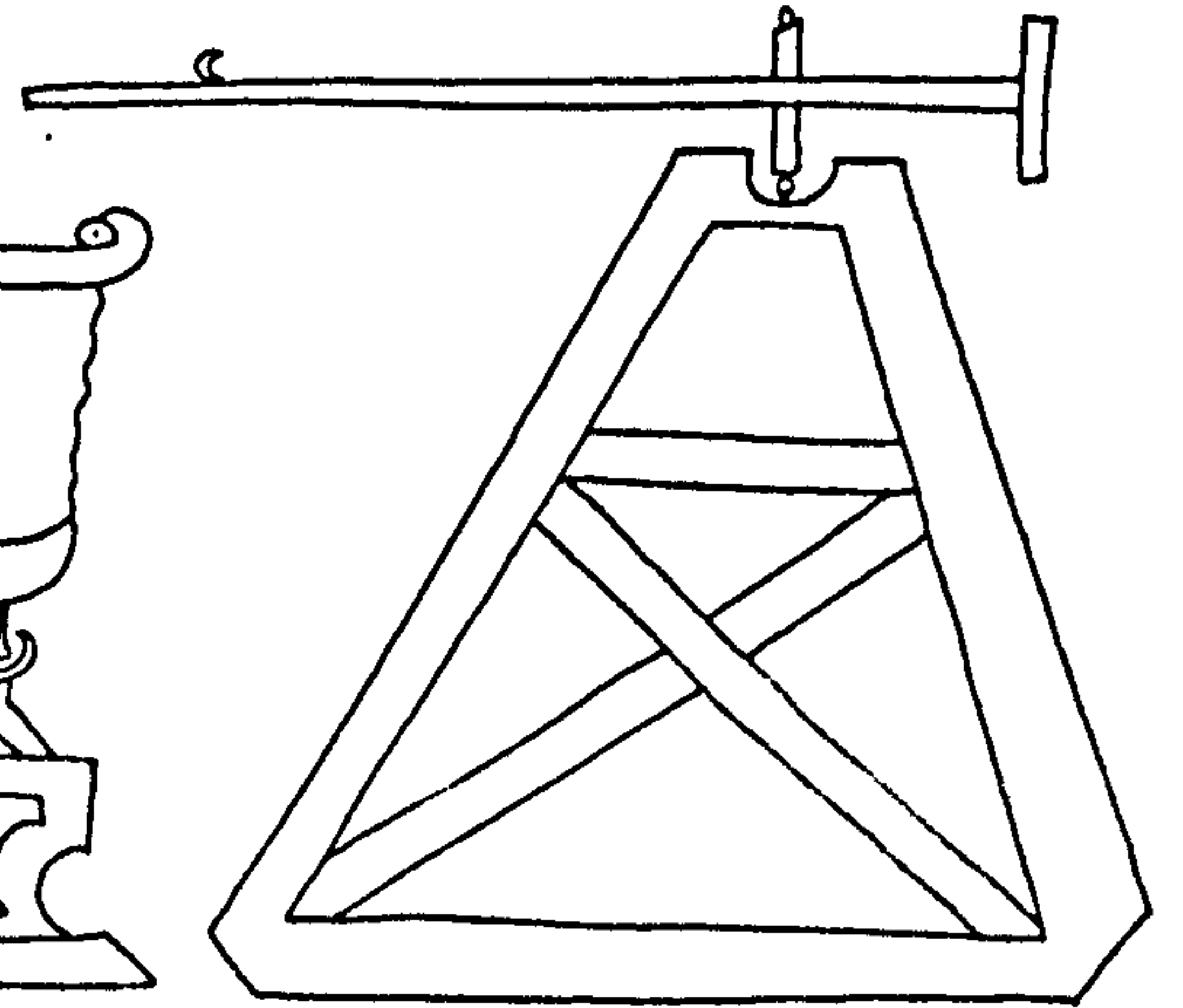
167 D



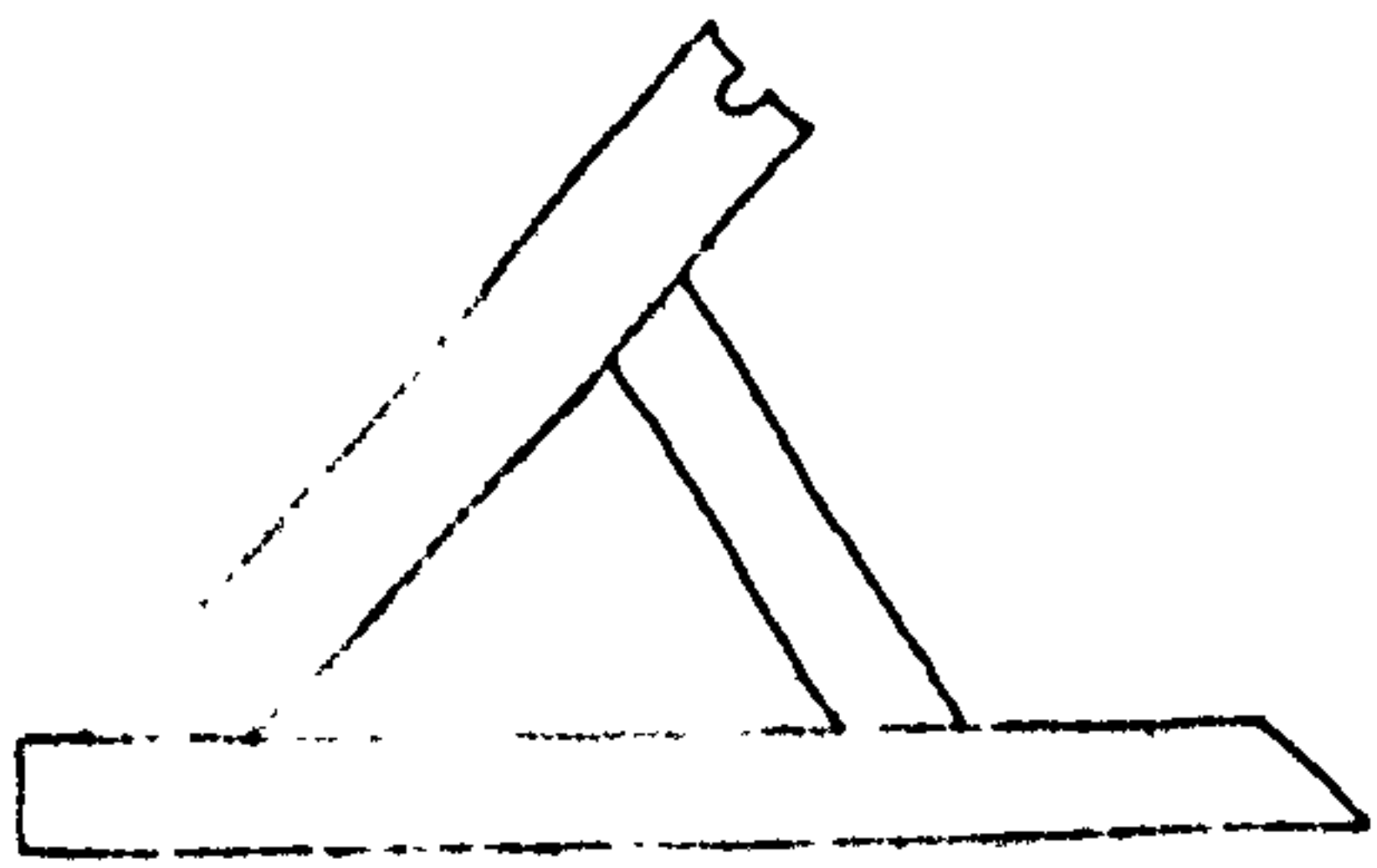
167 E



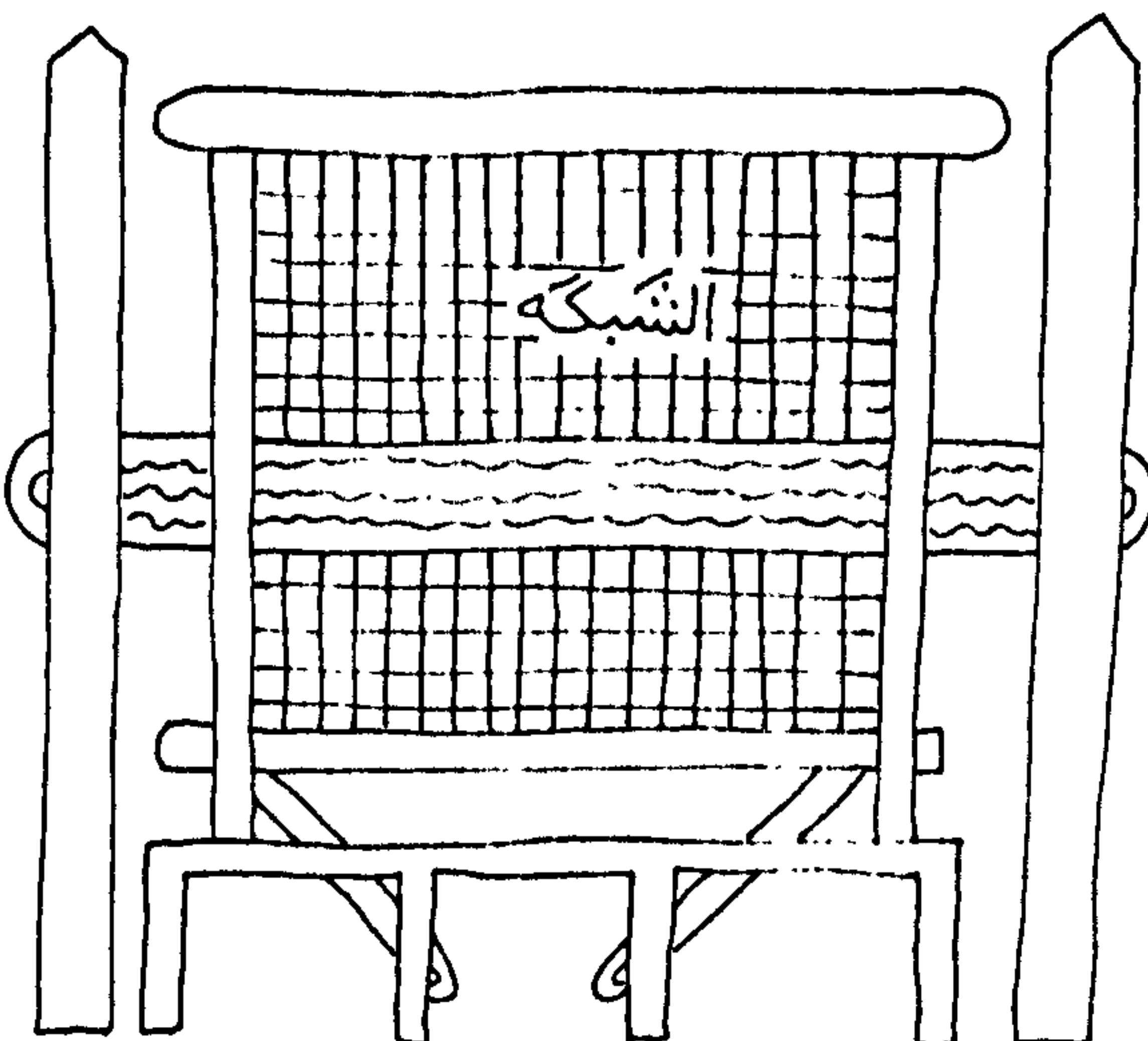
167 F



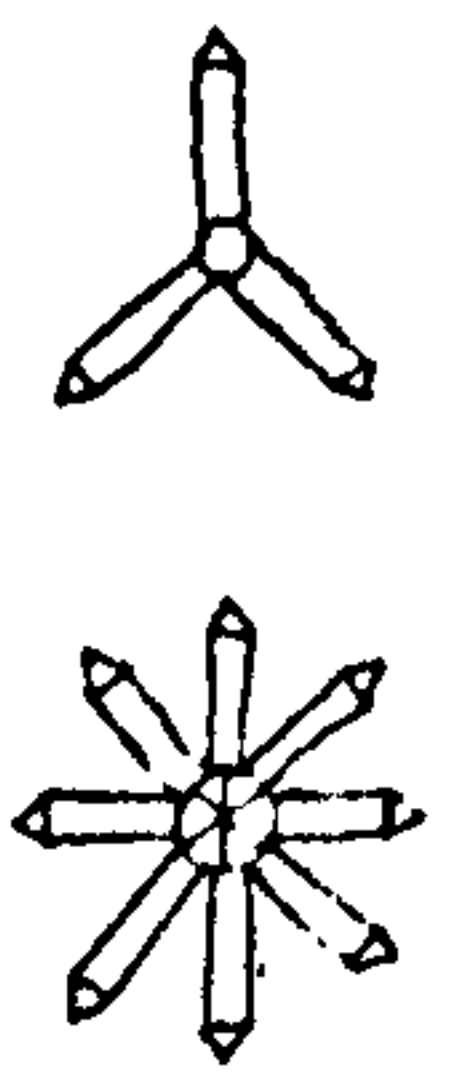
167 G



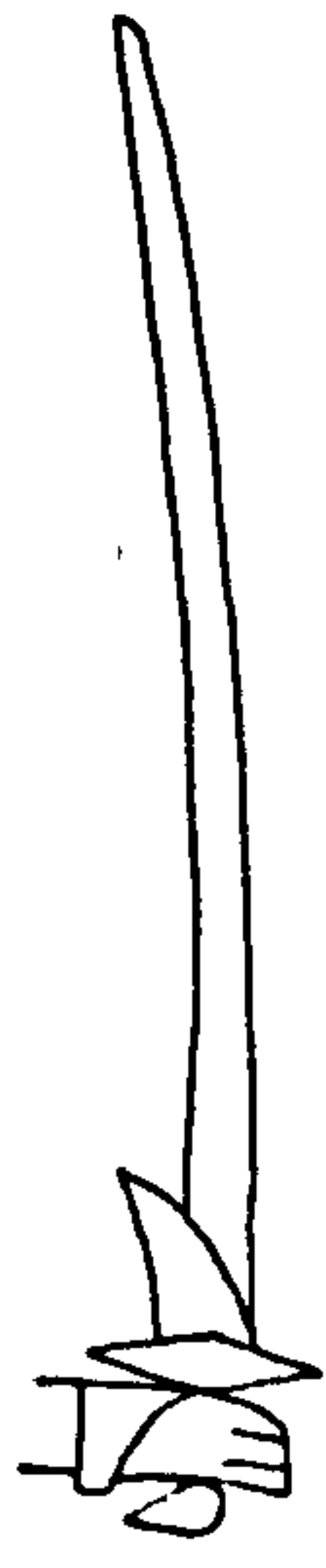
167 H



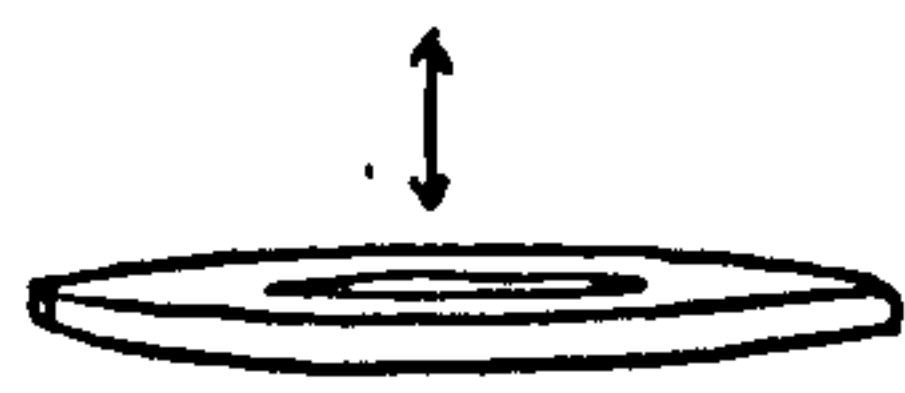
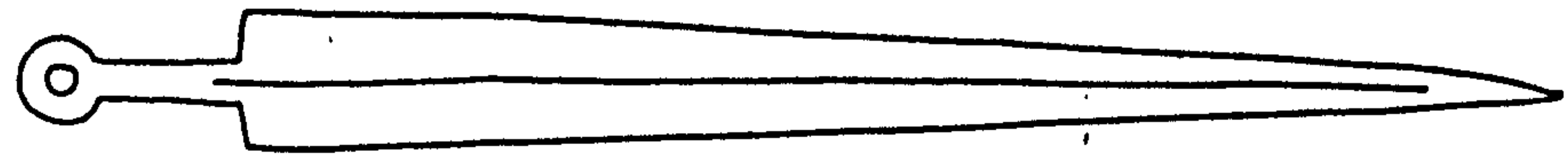
167 I



167 J



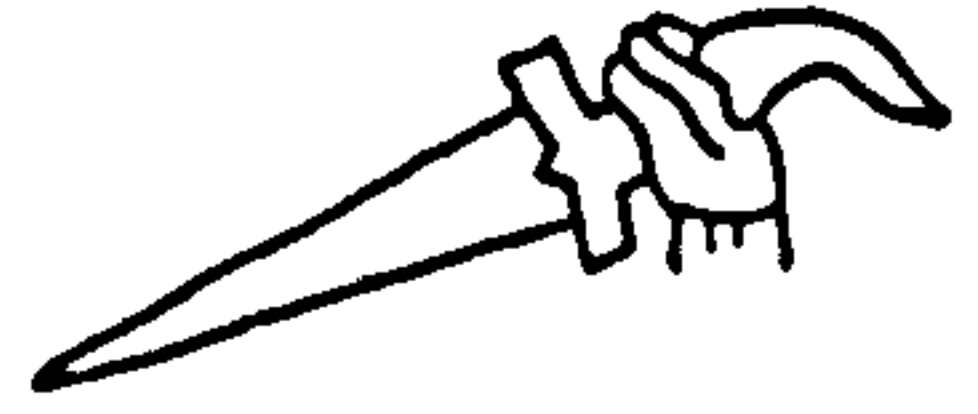
168



169



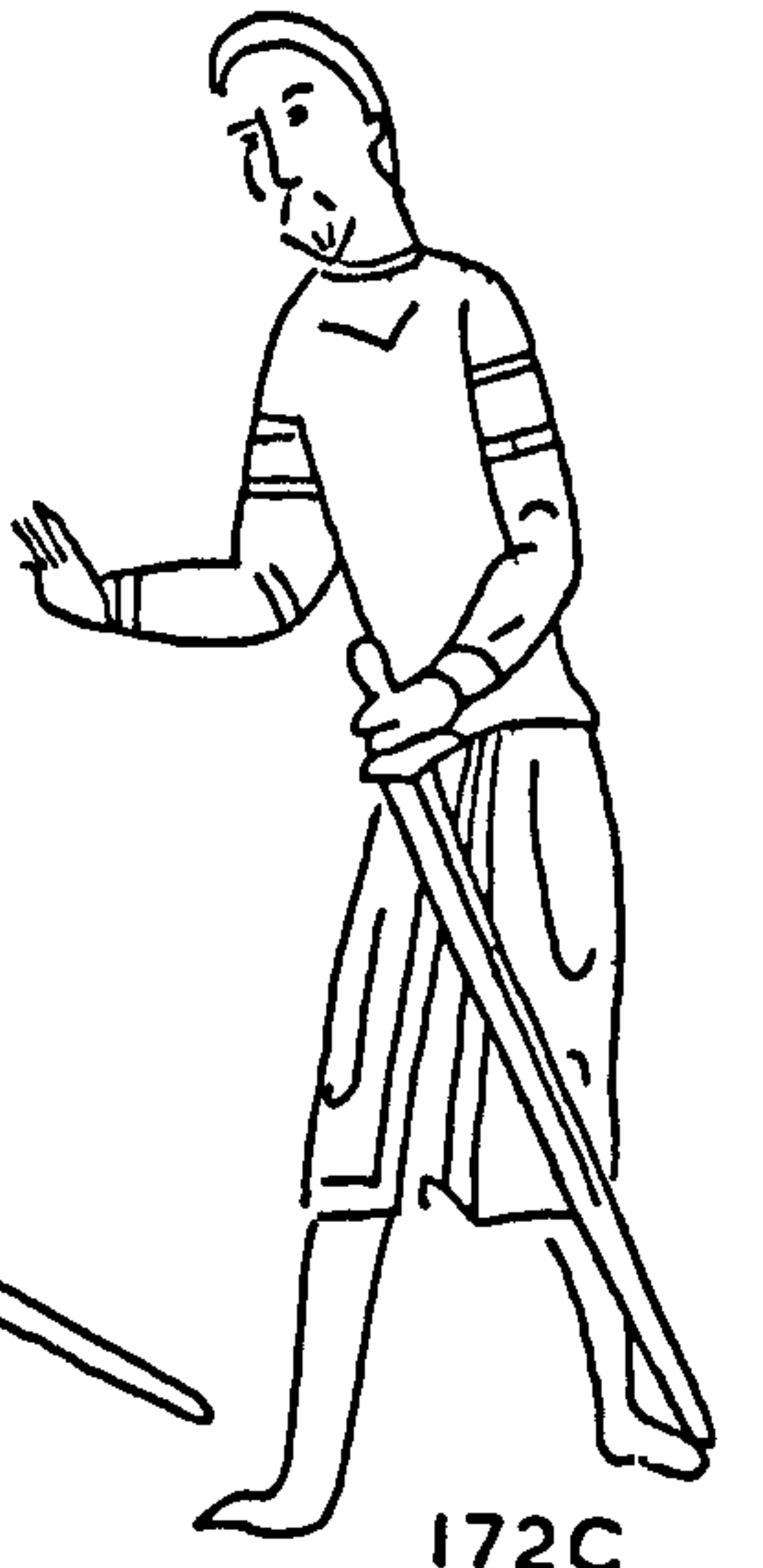
170



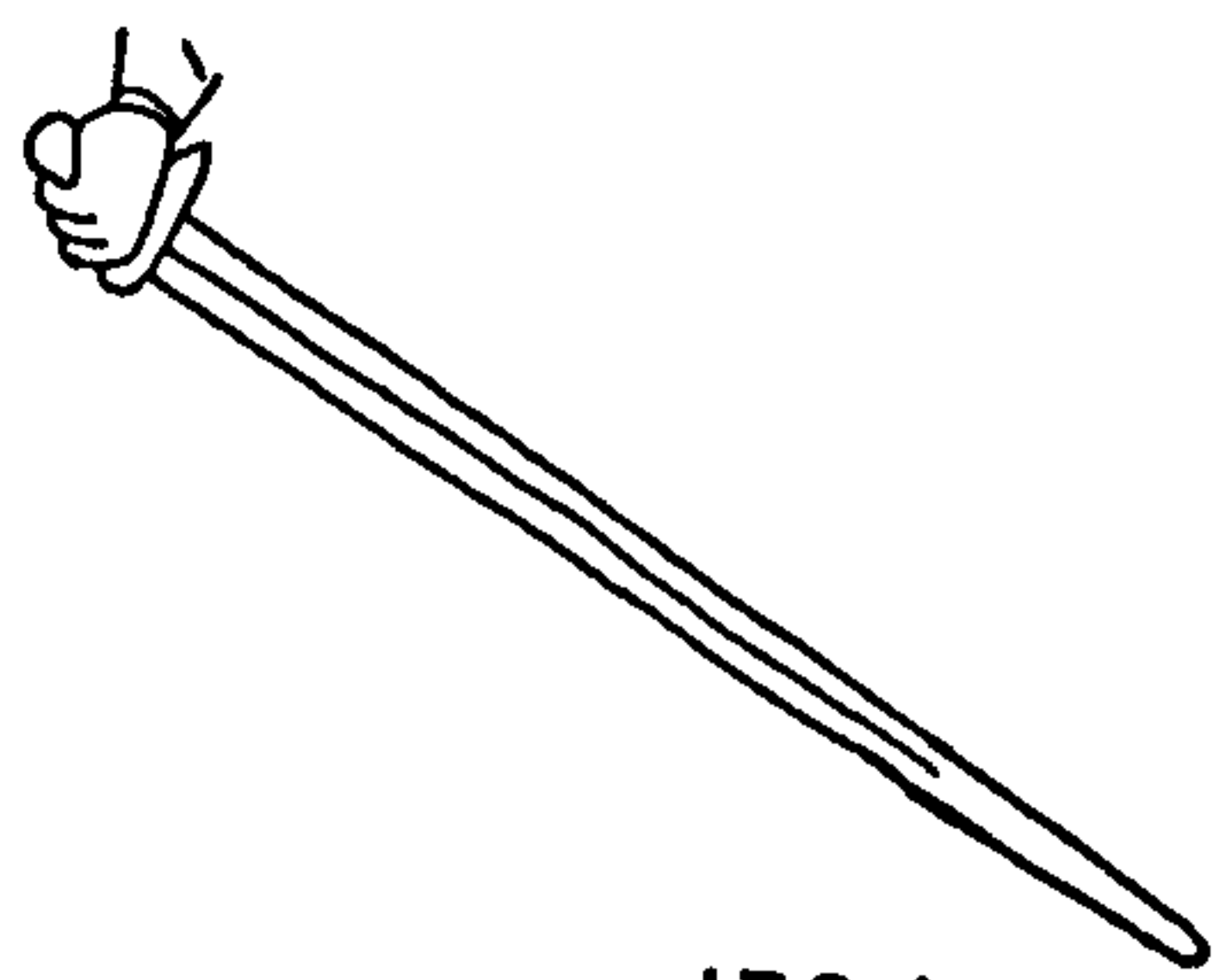
171



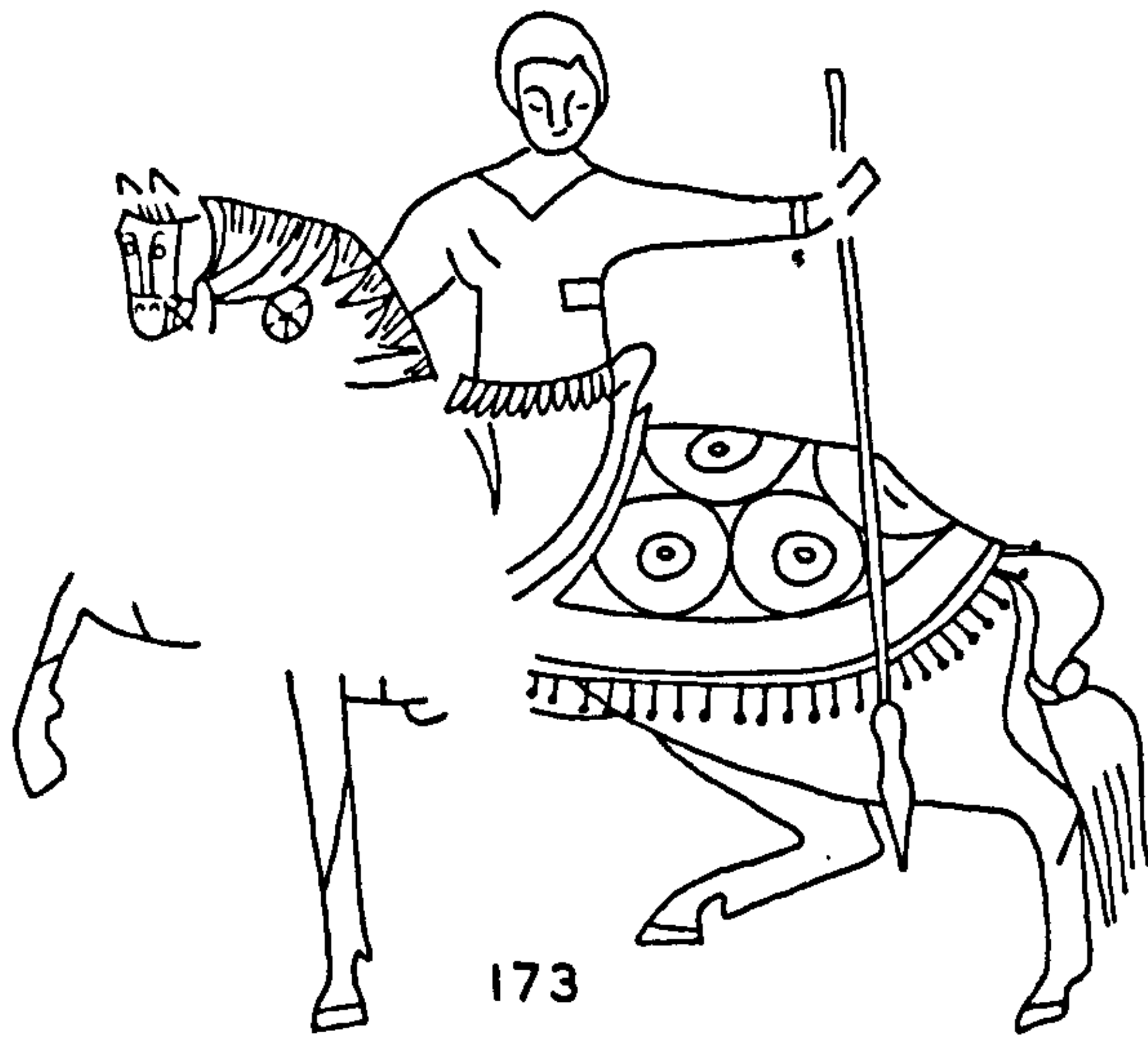
172B



172C



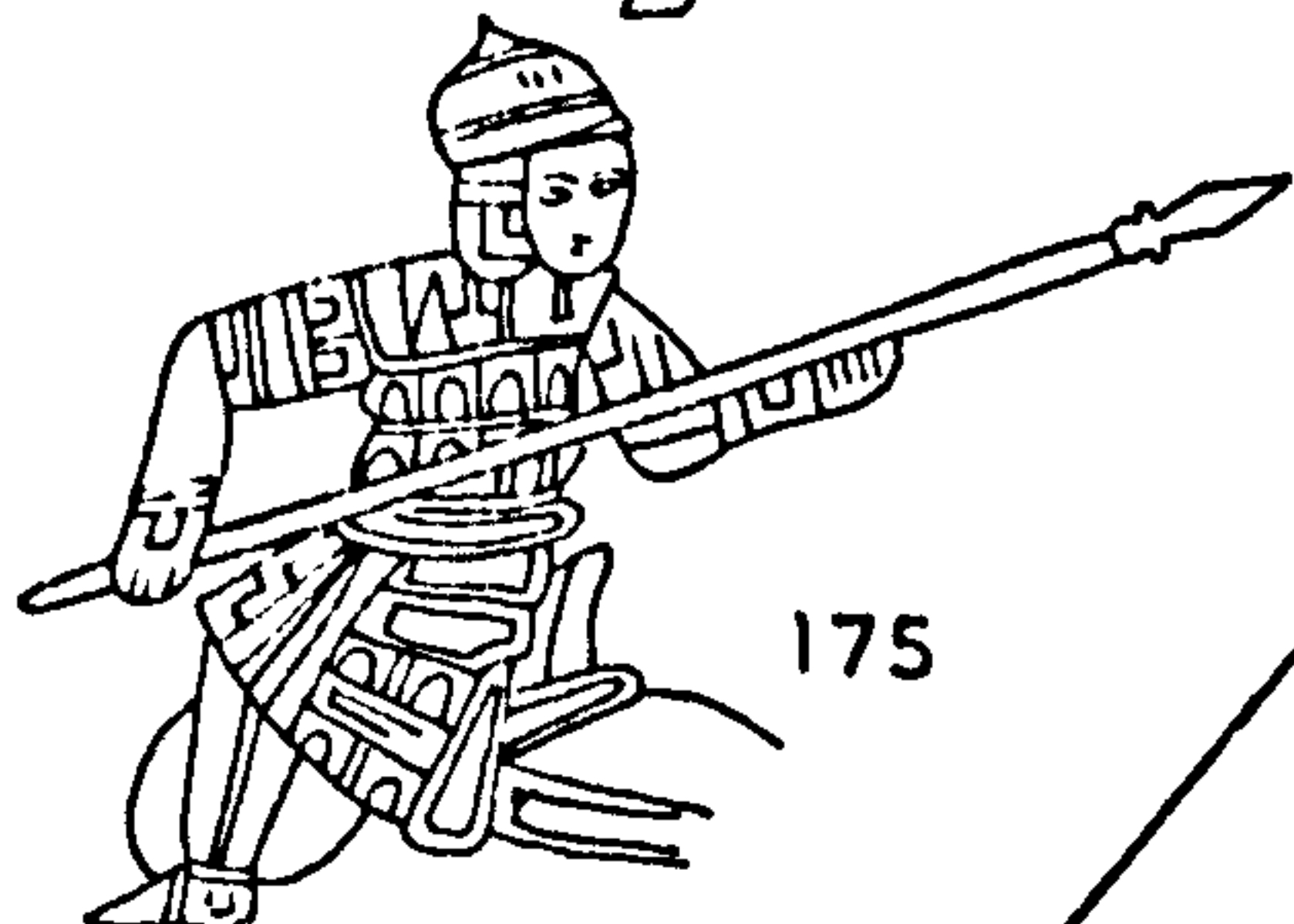
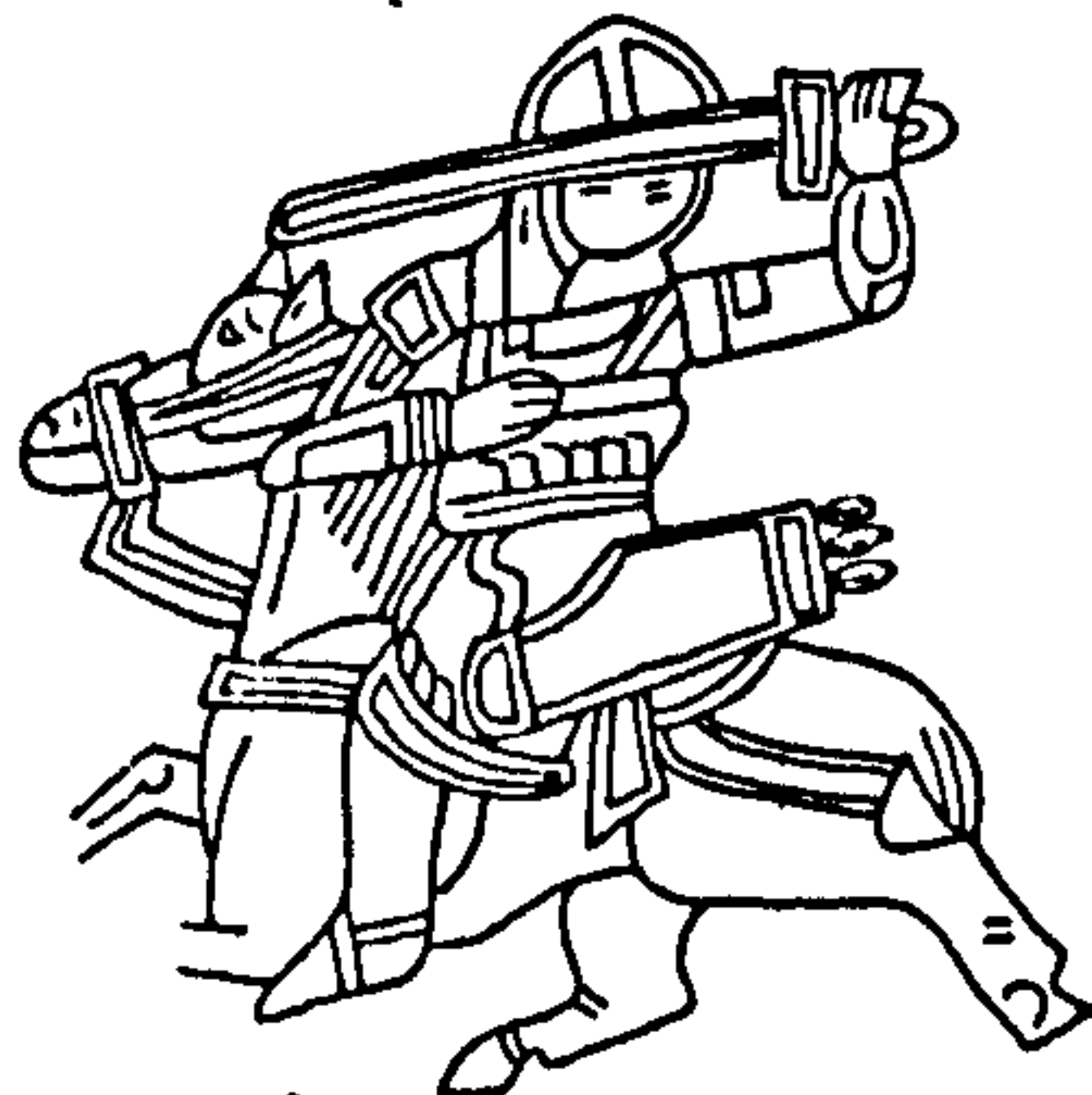
172A



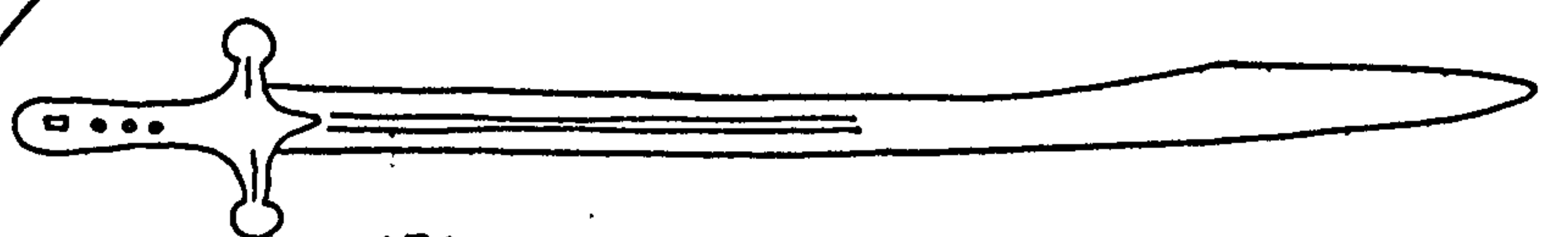
173



174

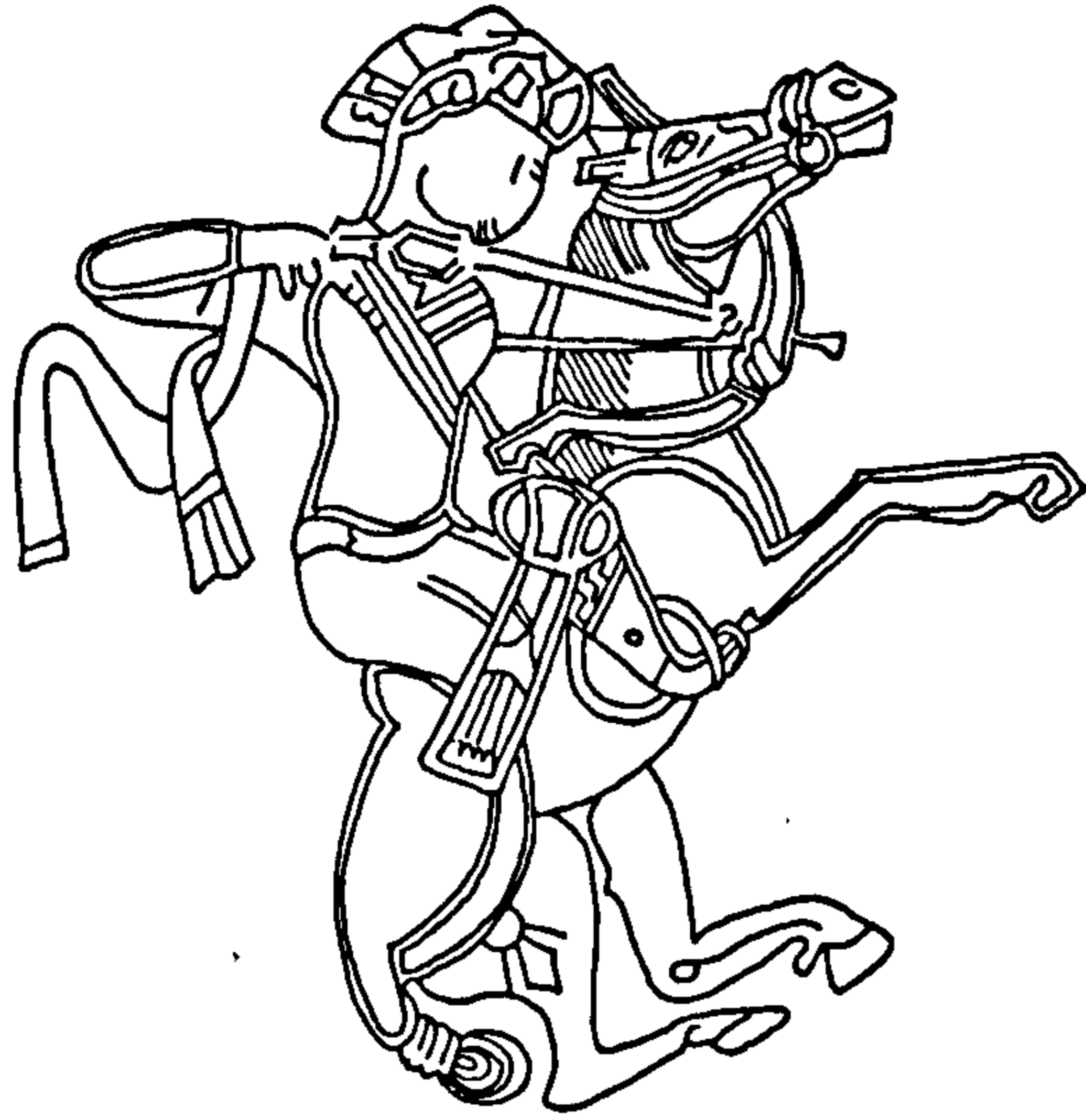


175



176





177A



177B



177C



177D



177E

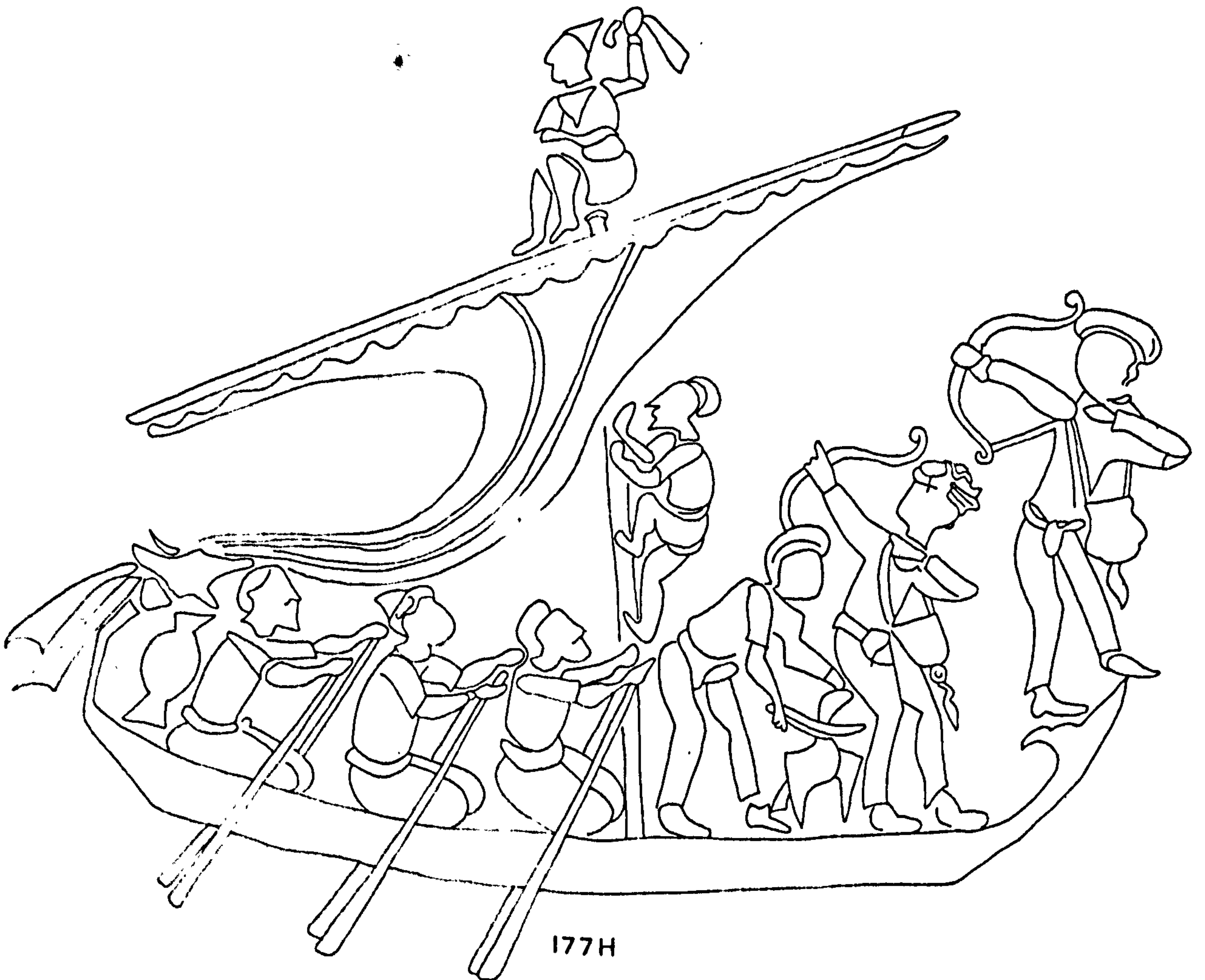


177F

(Continued)



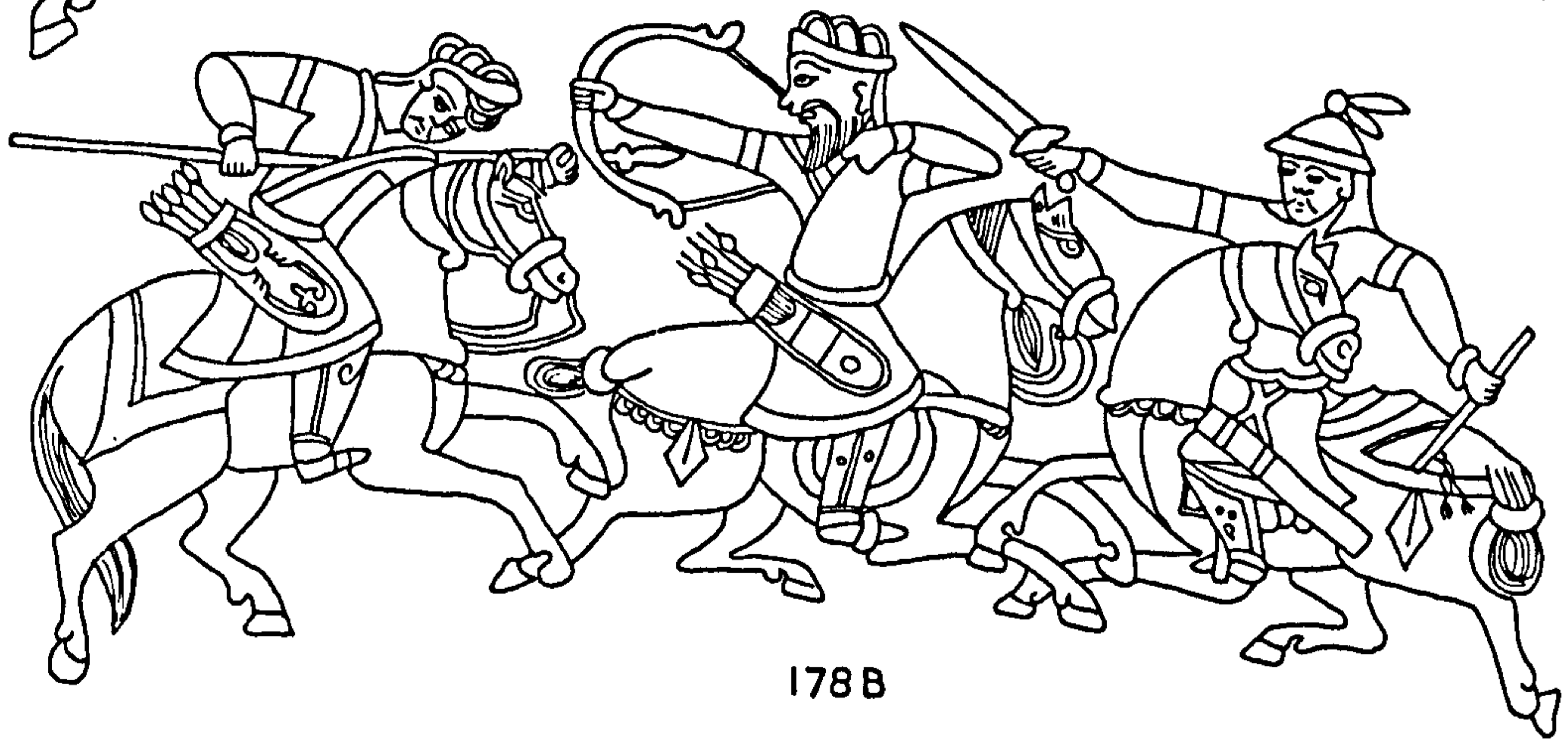
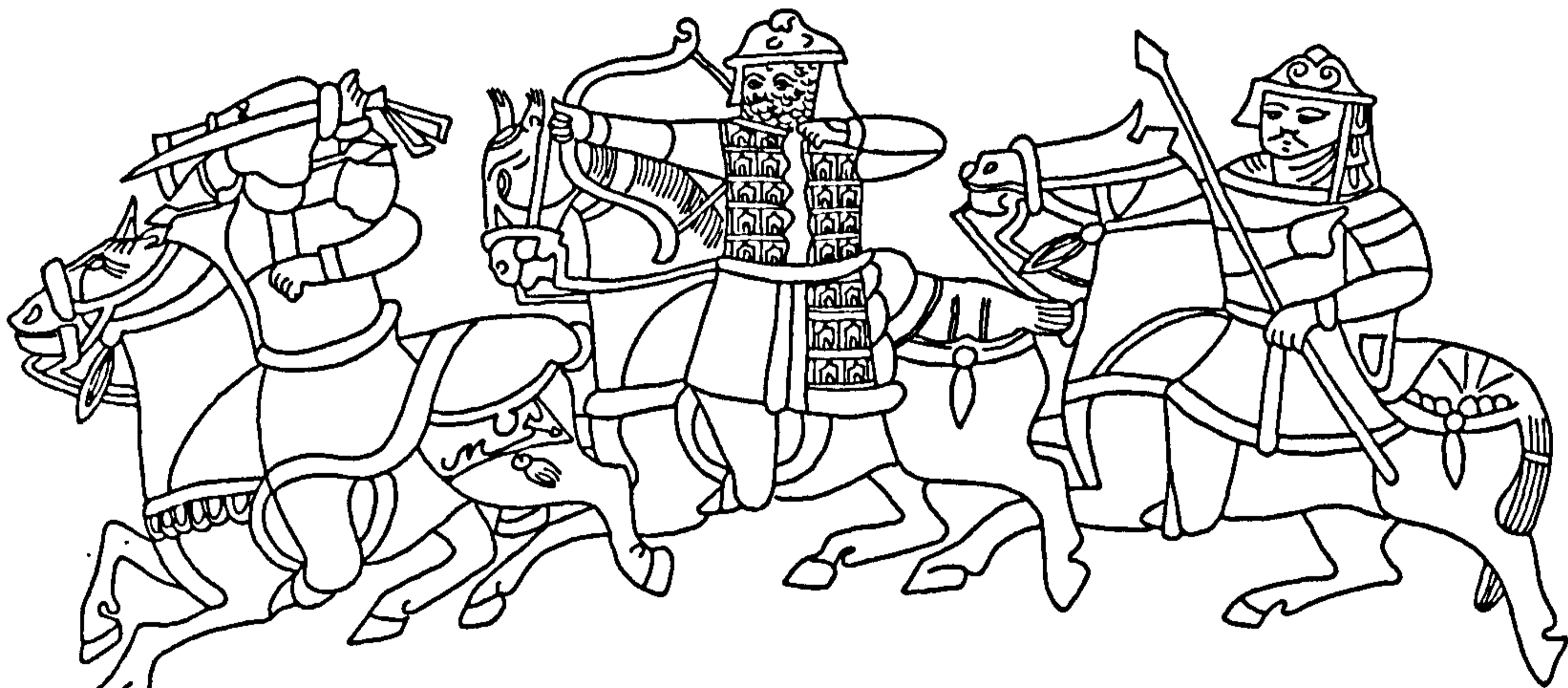
177G



177H



178 A



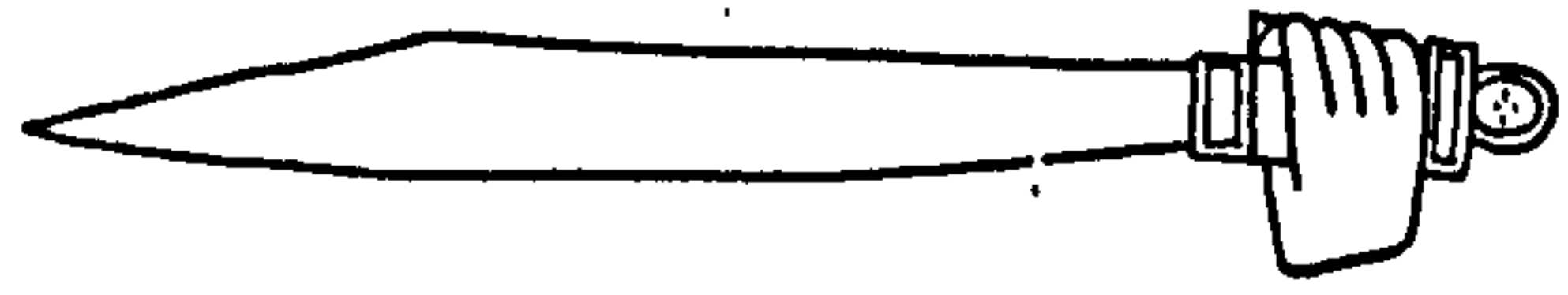
178 B



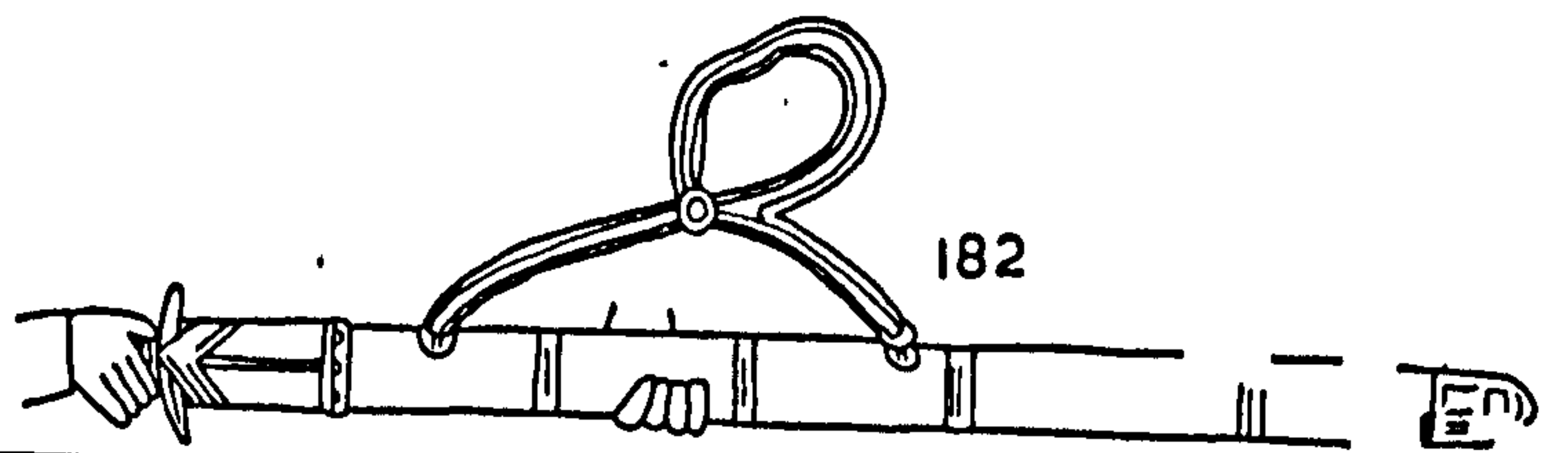
179



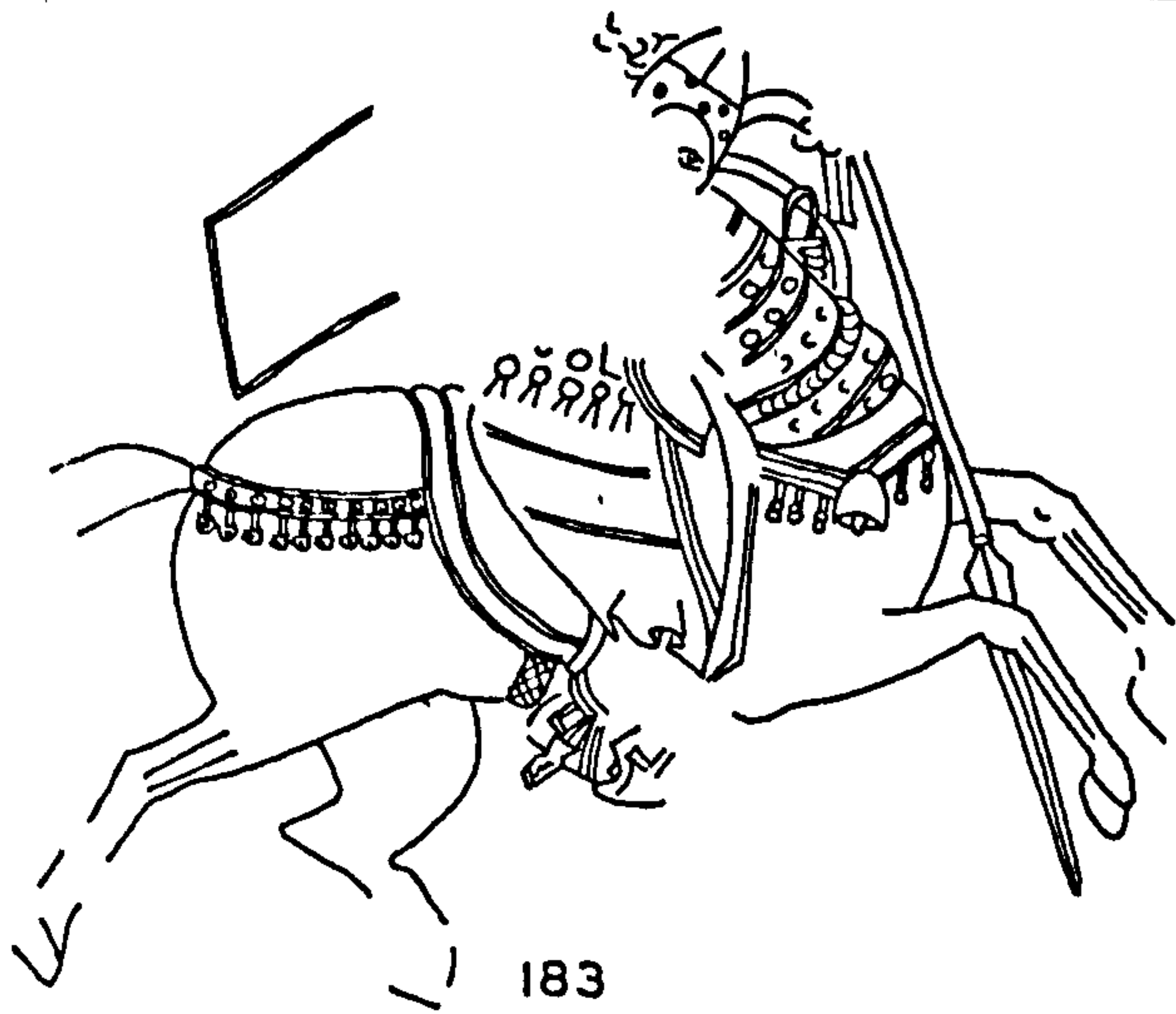
180



181



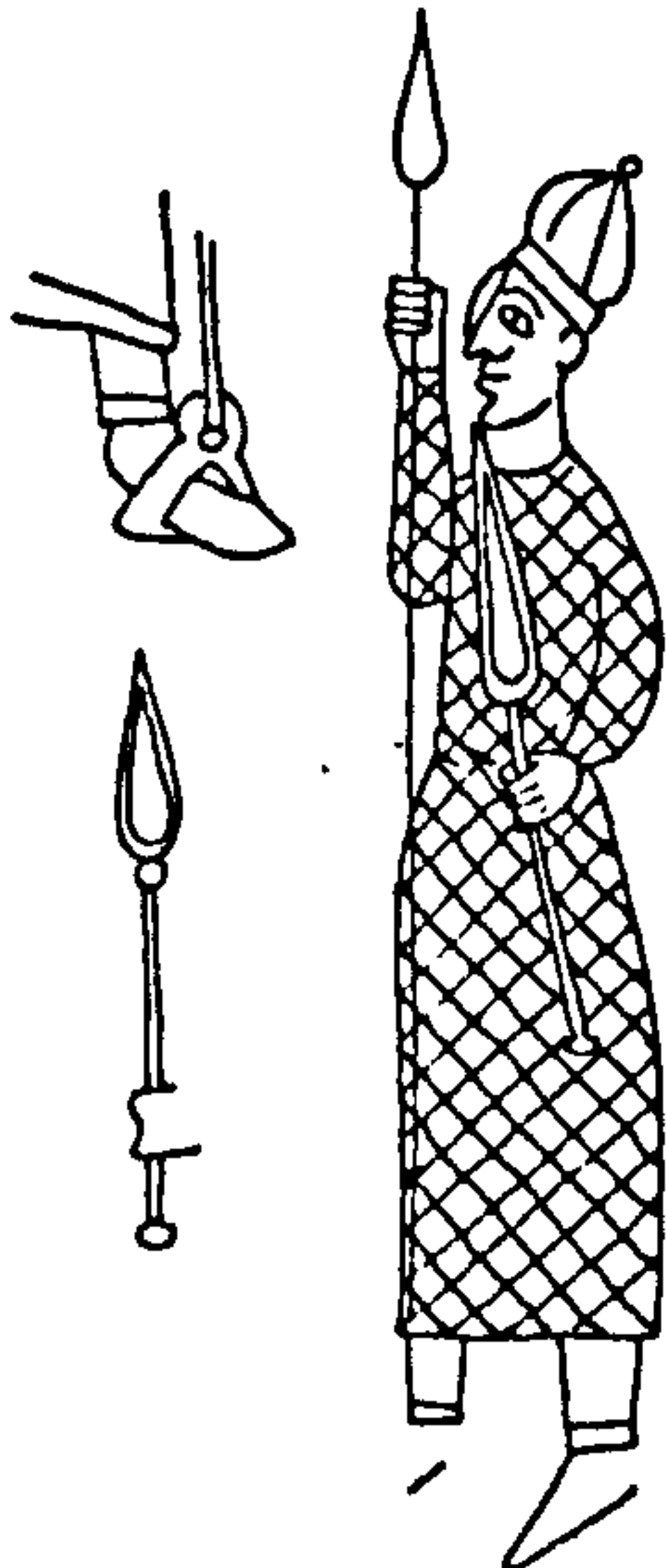
182



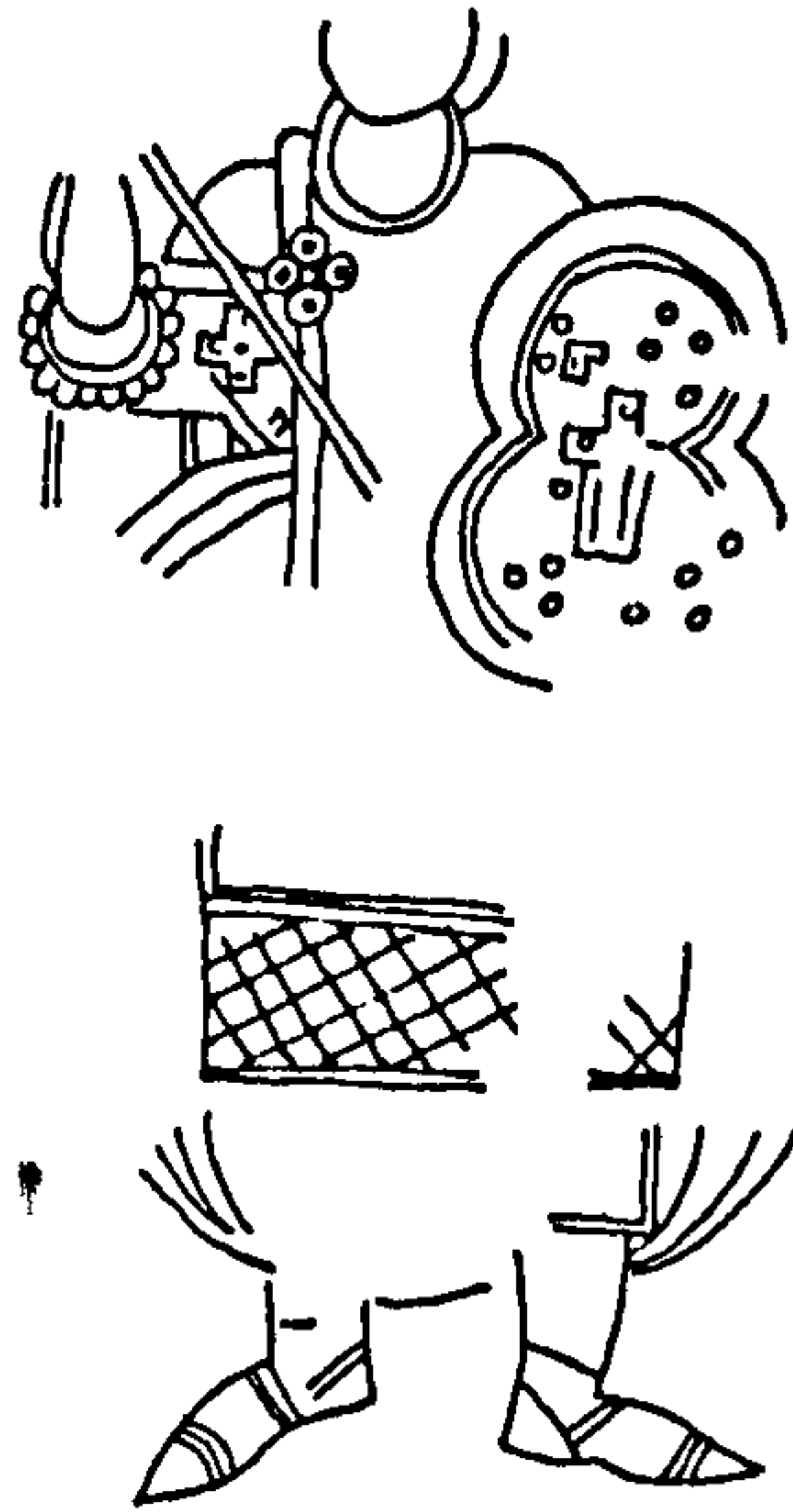
183



184



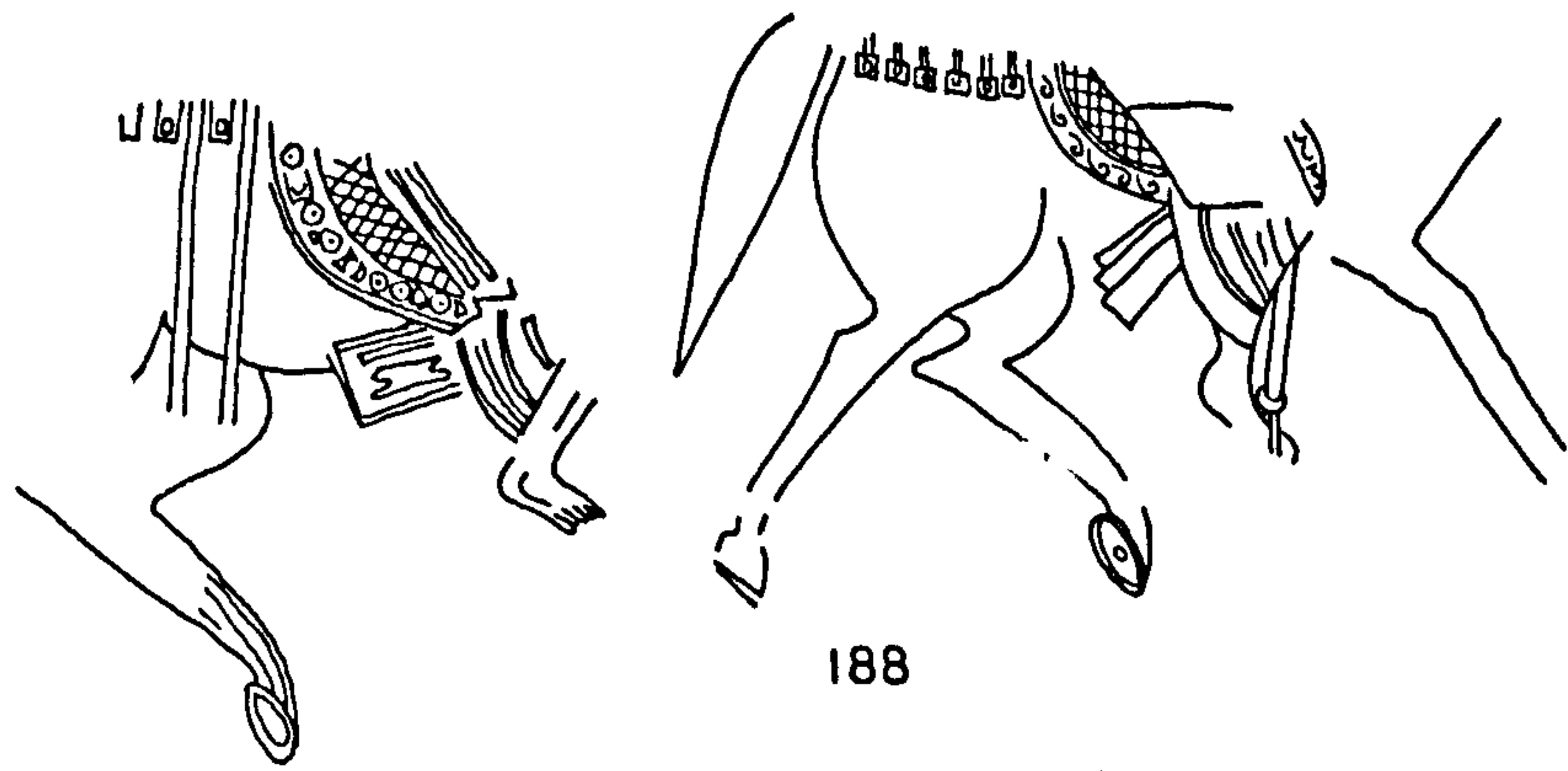
185



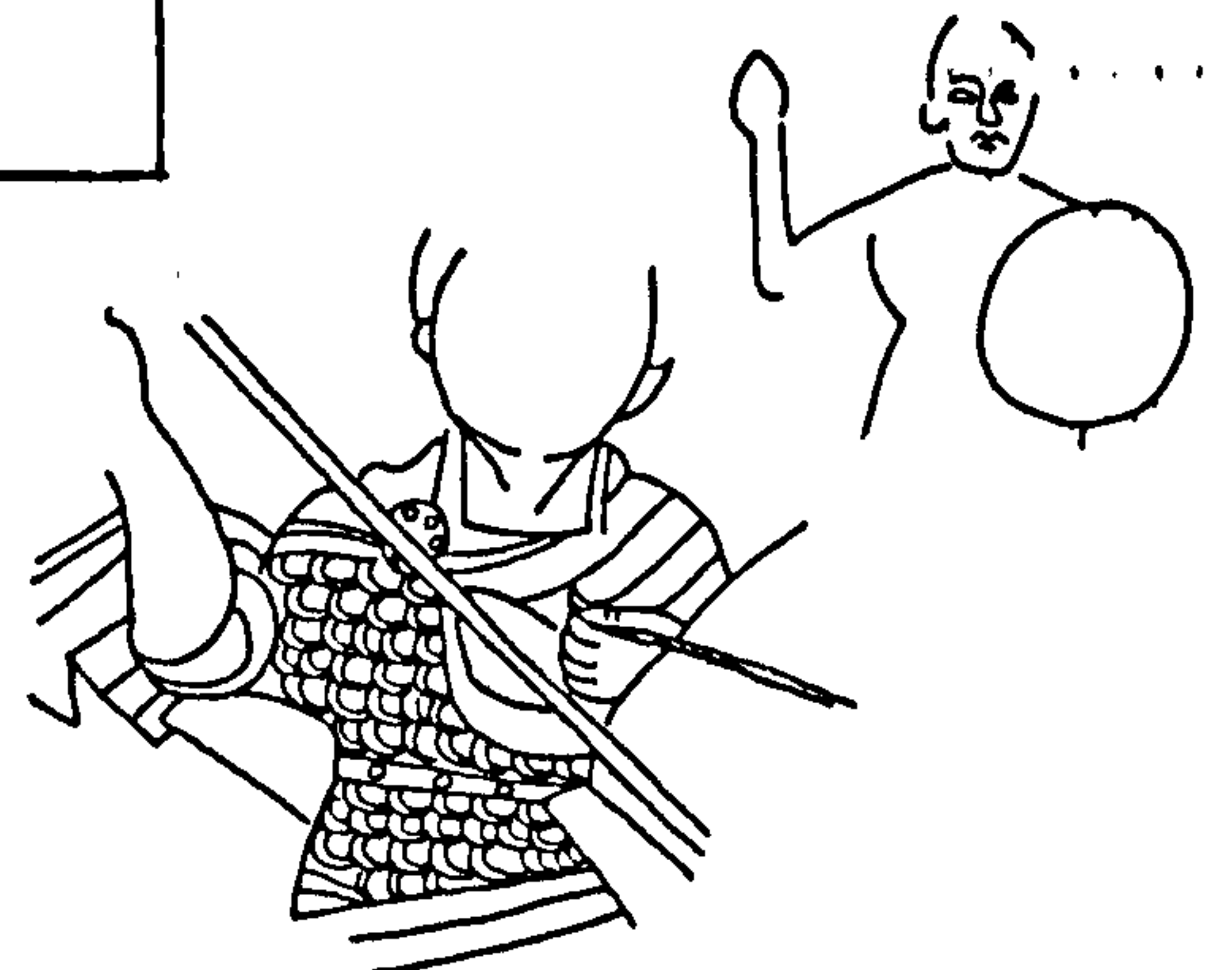
186



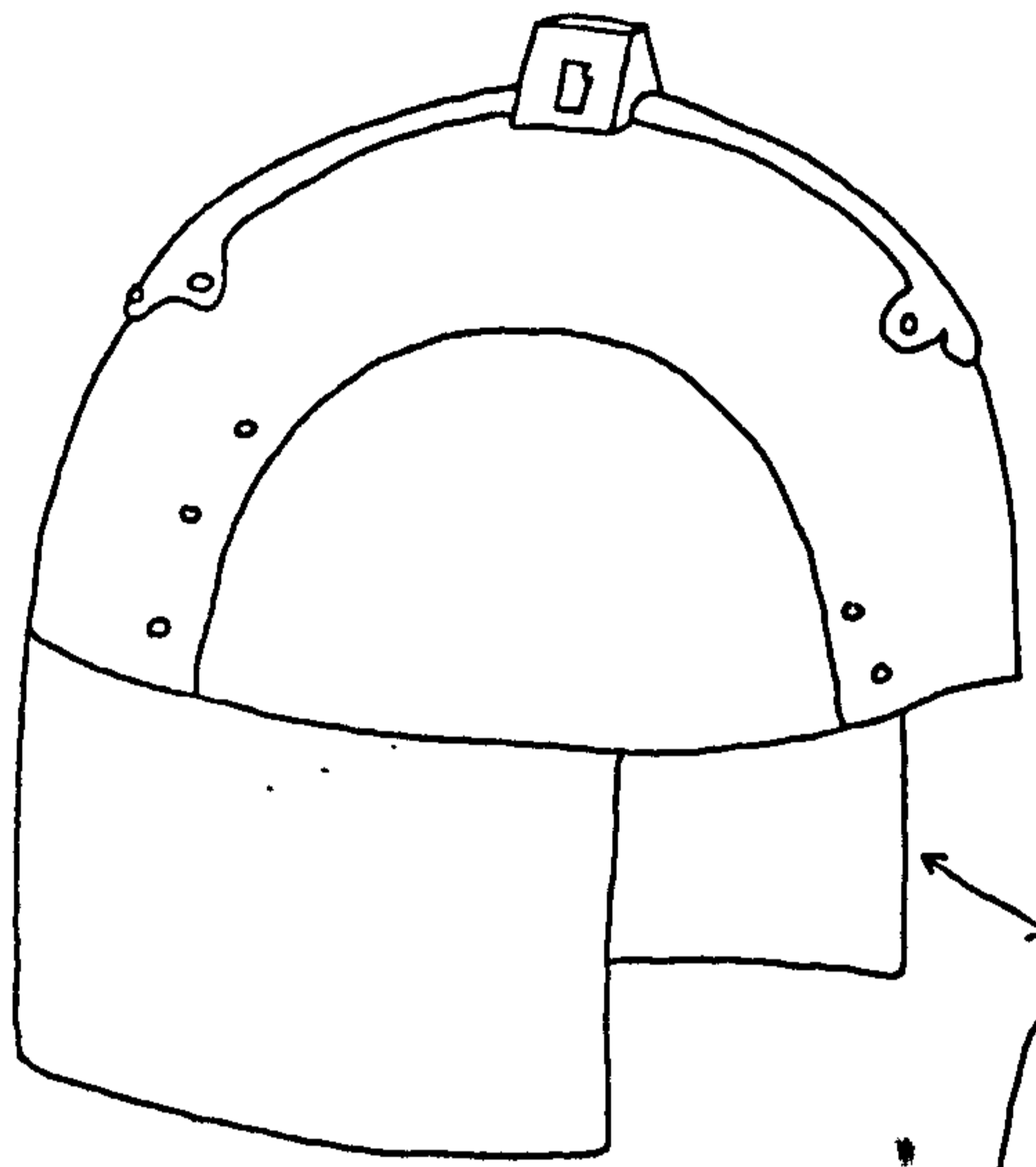
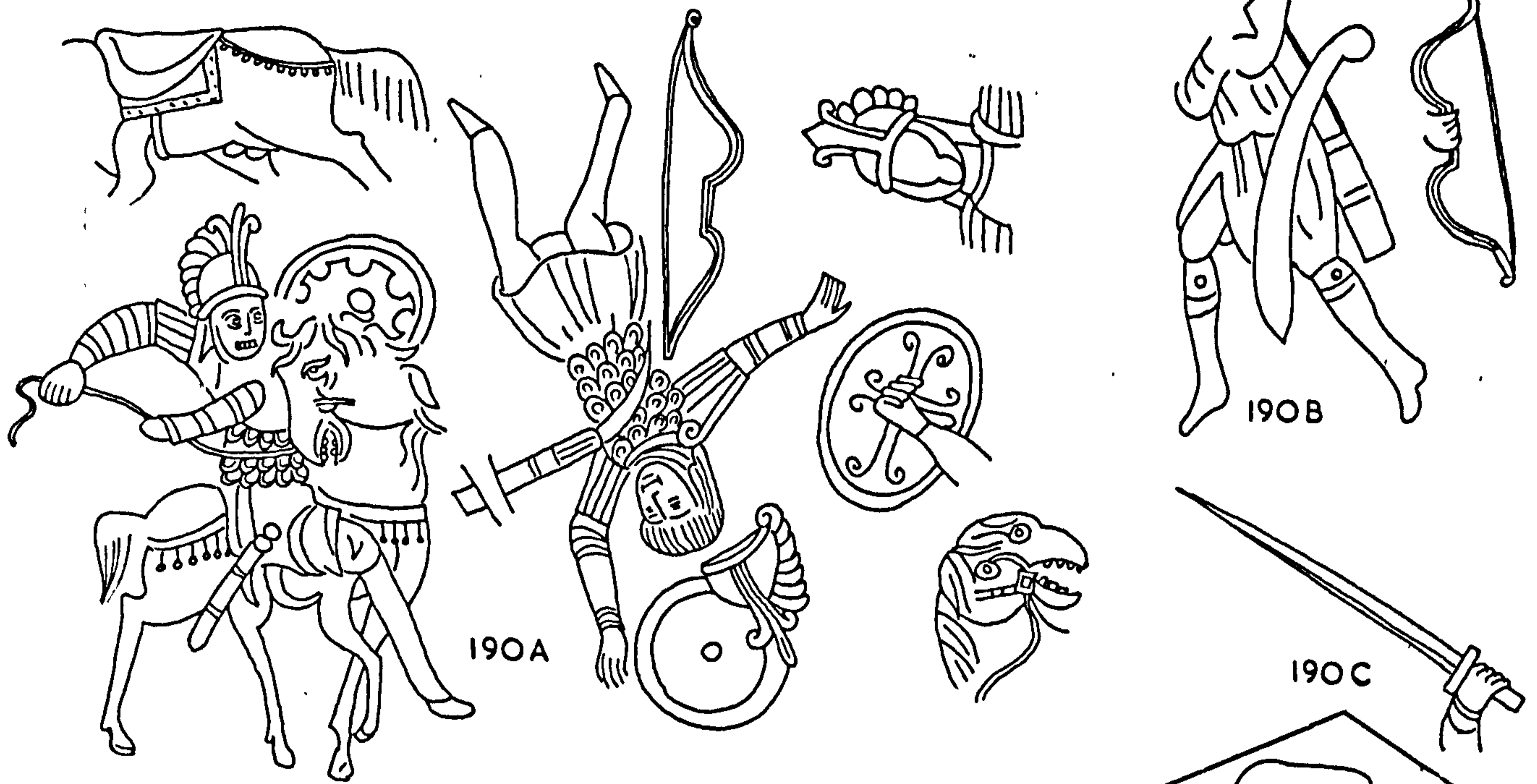
187



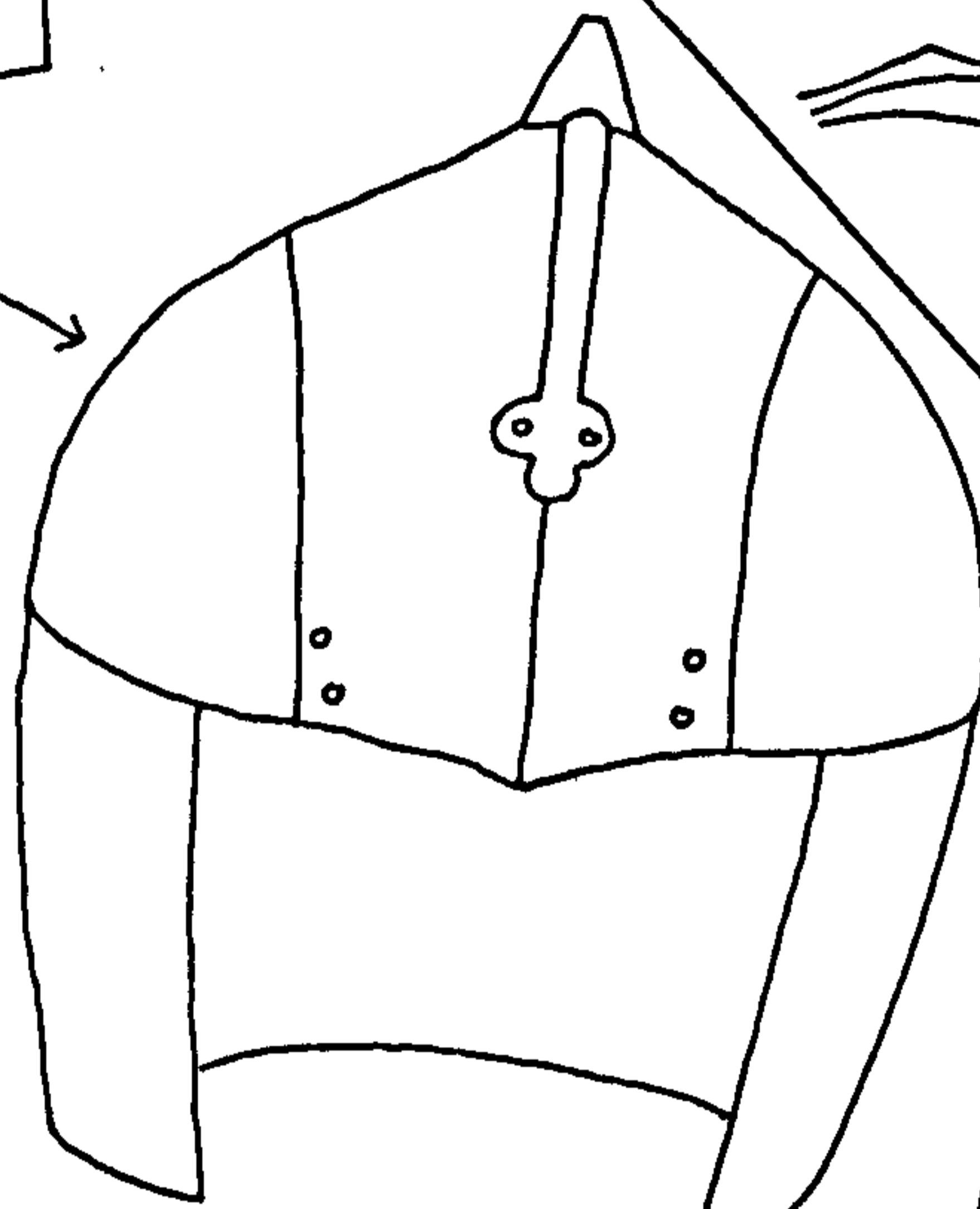
188



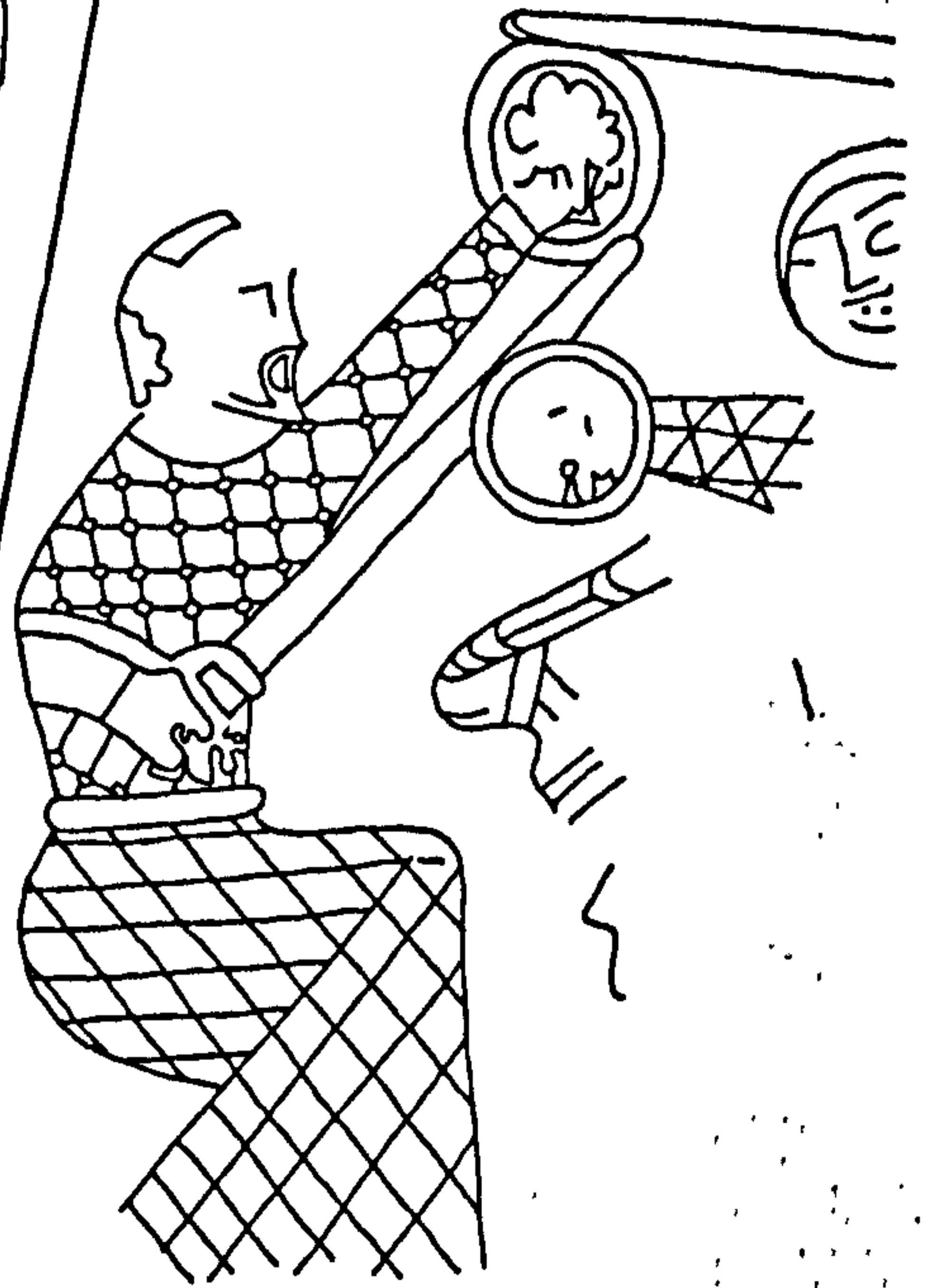
189



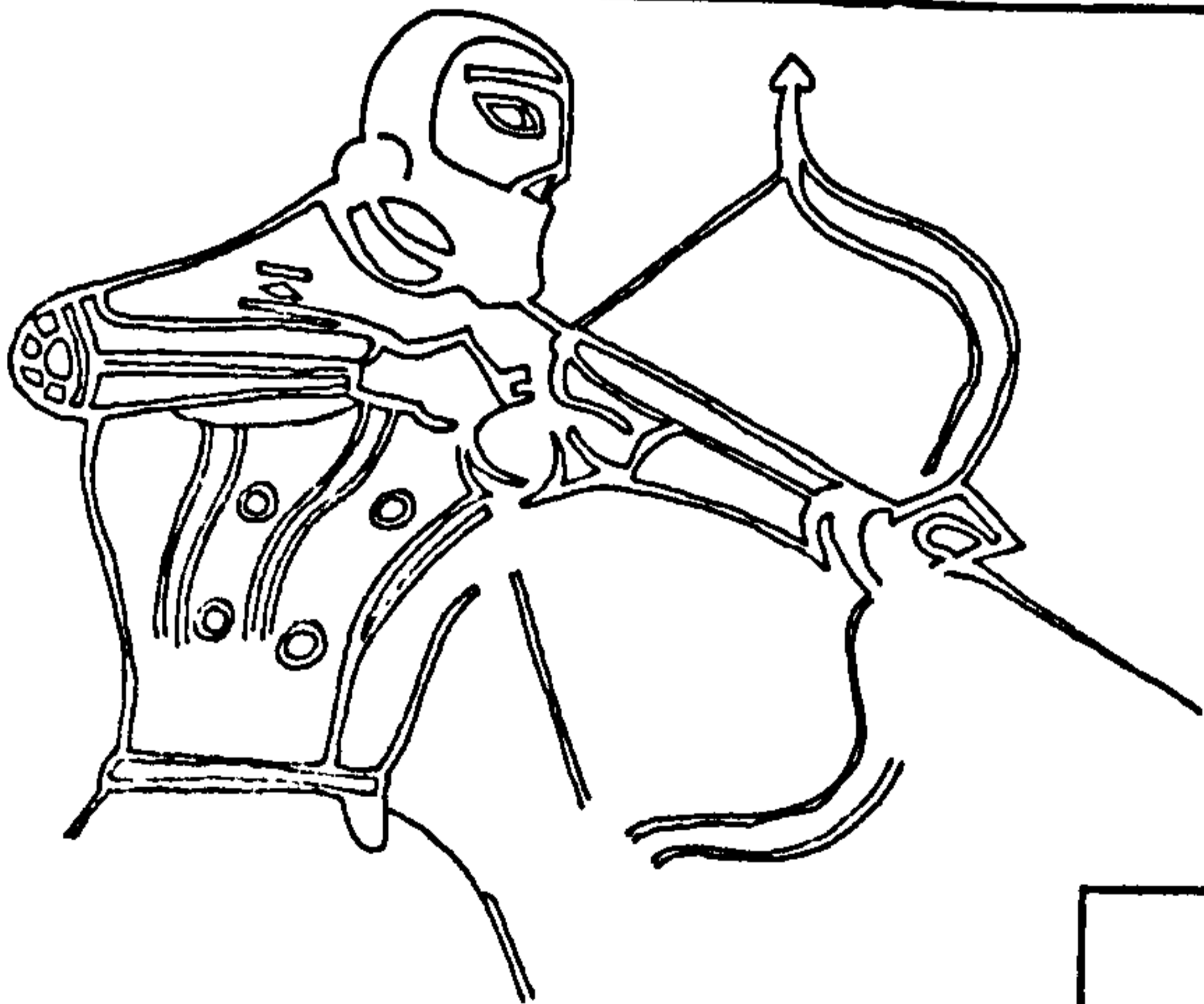
191



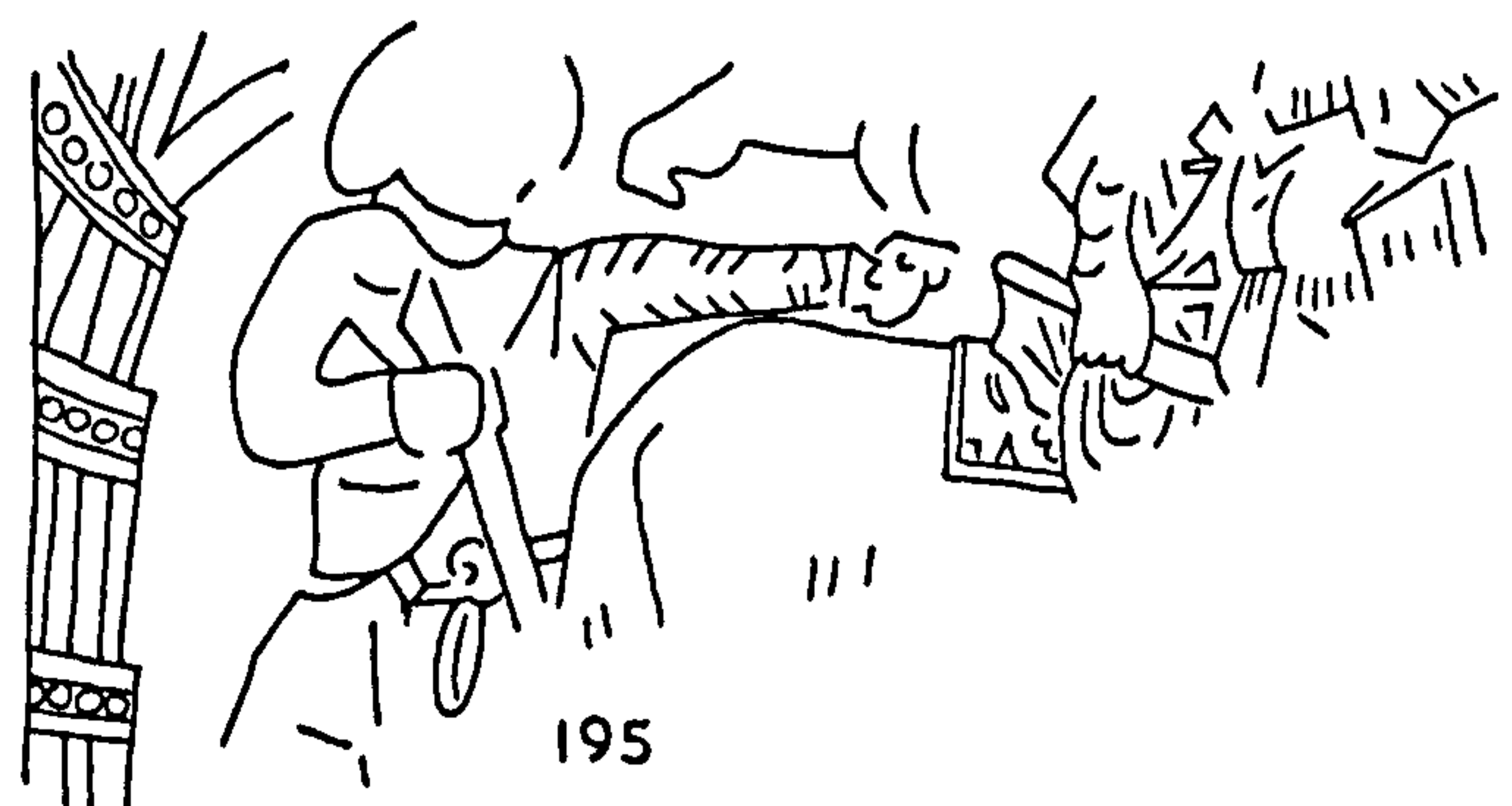
192



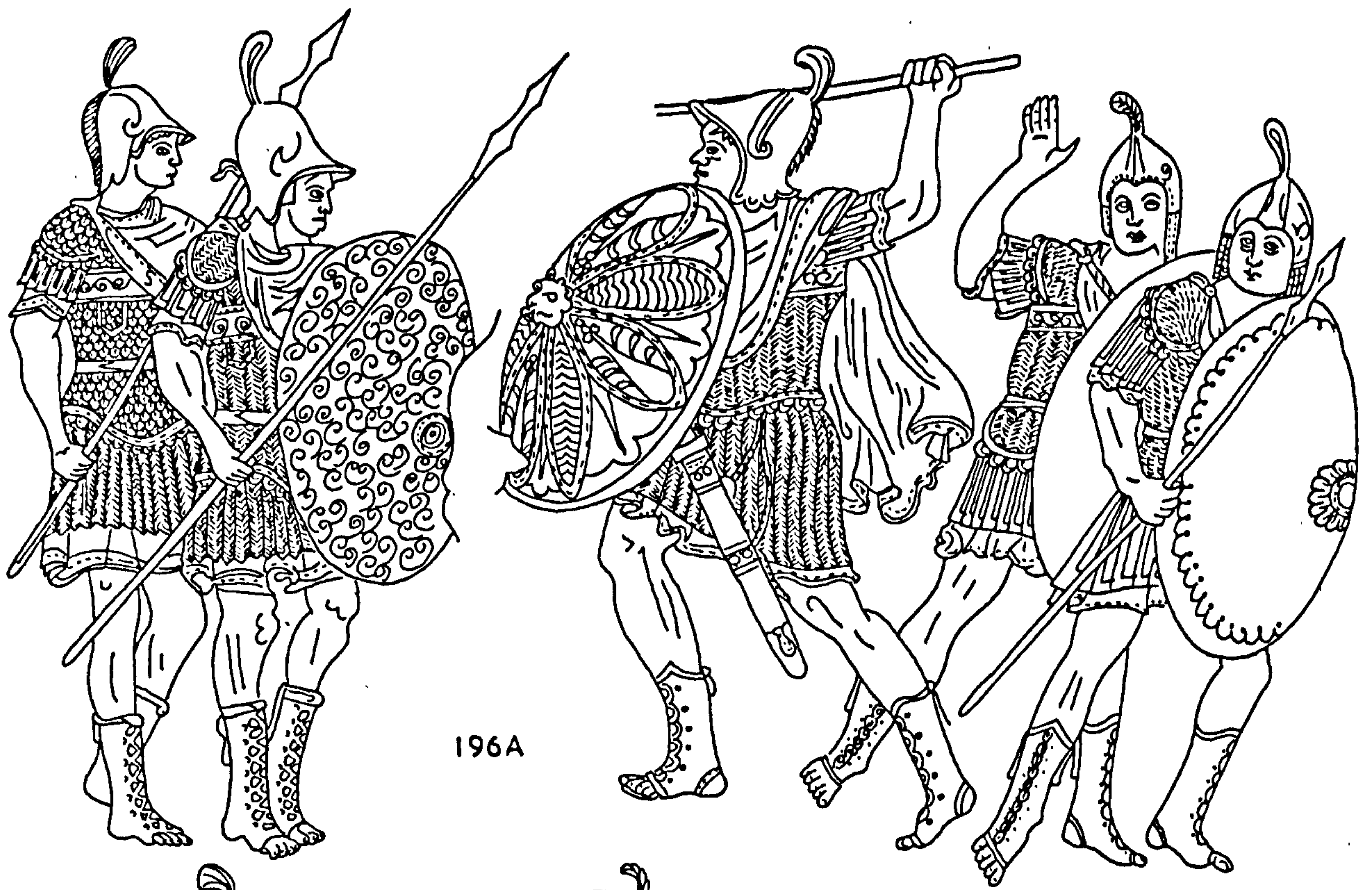
194



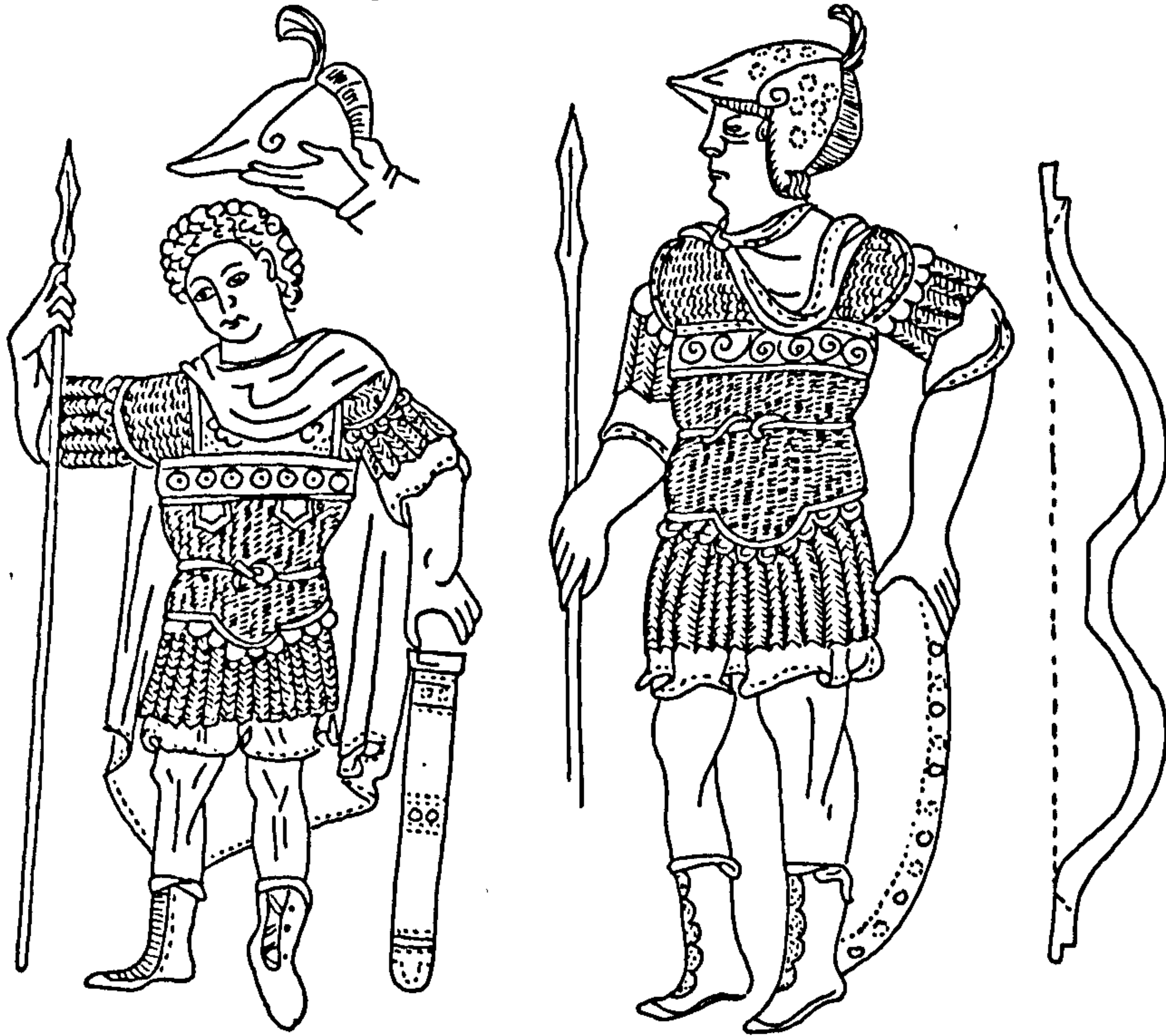
193



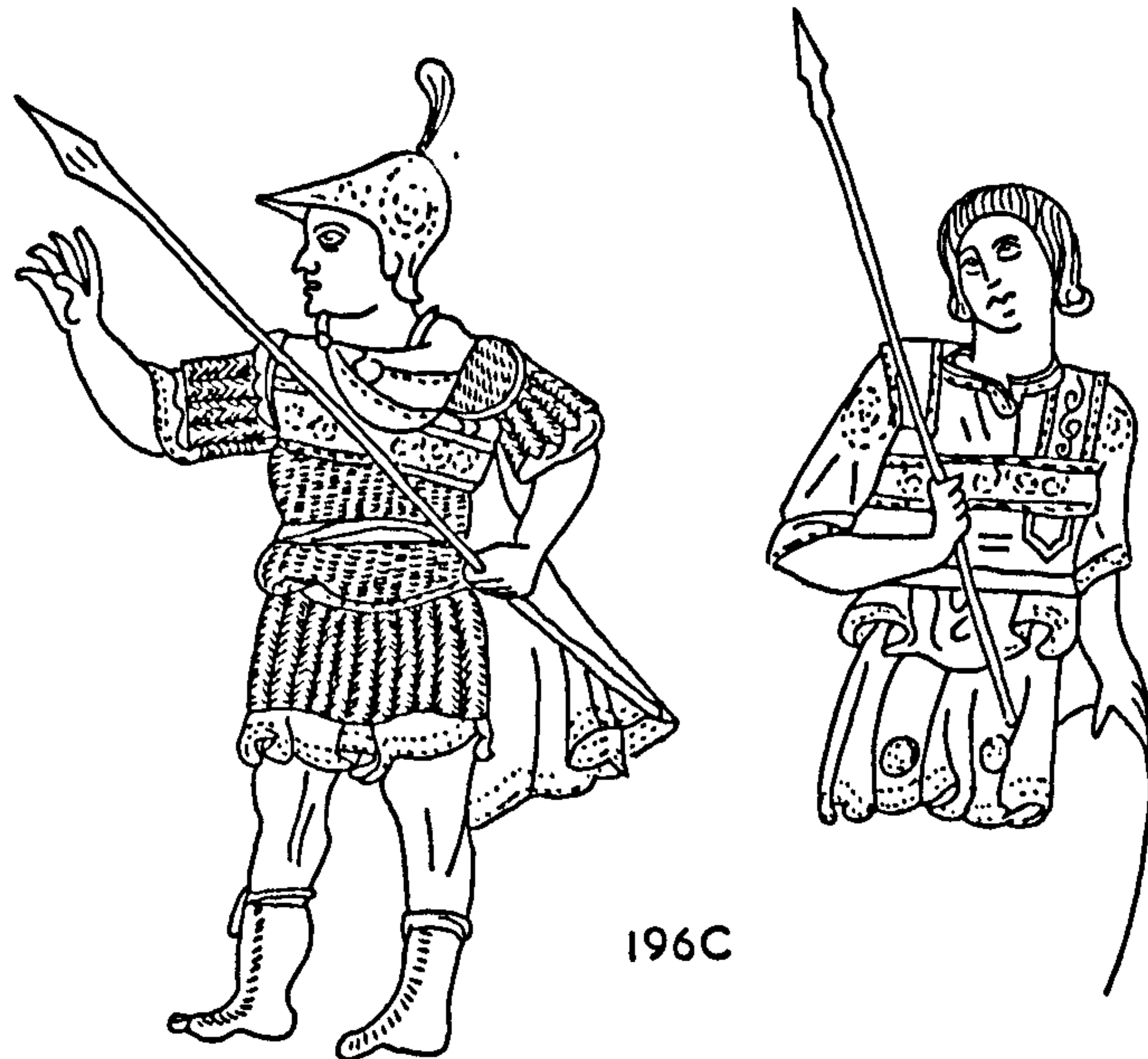
195



196A



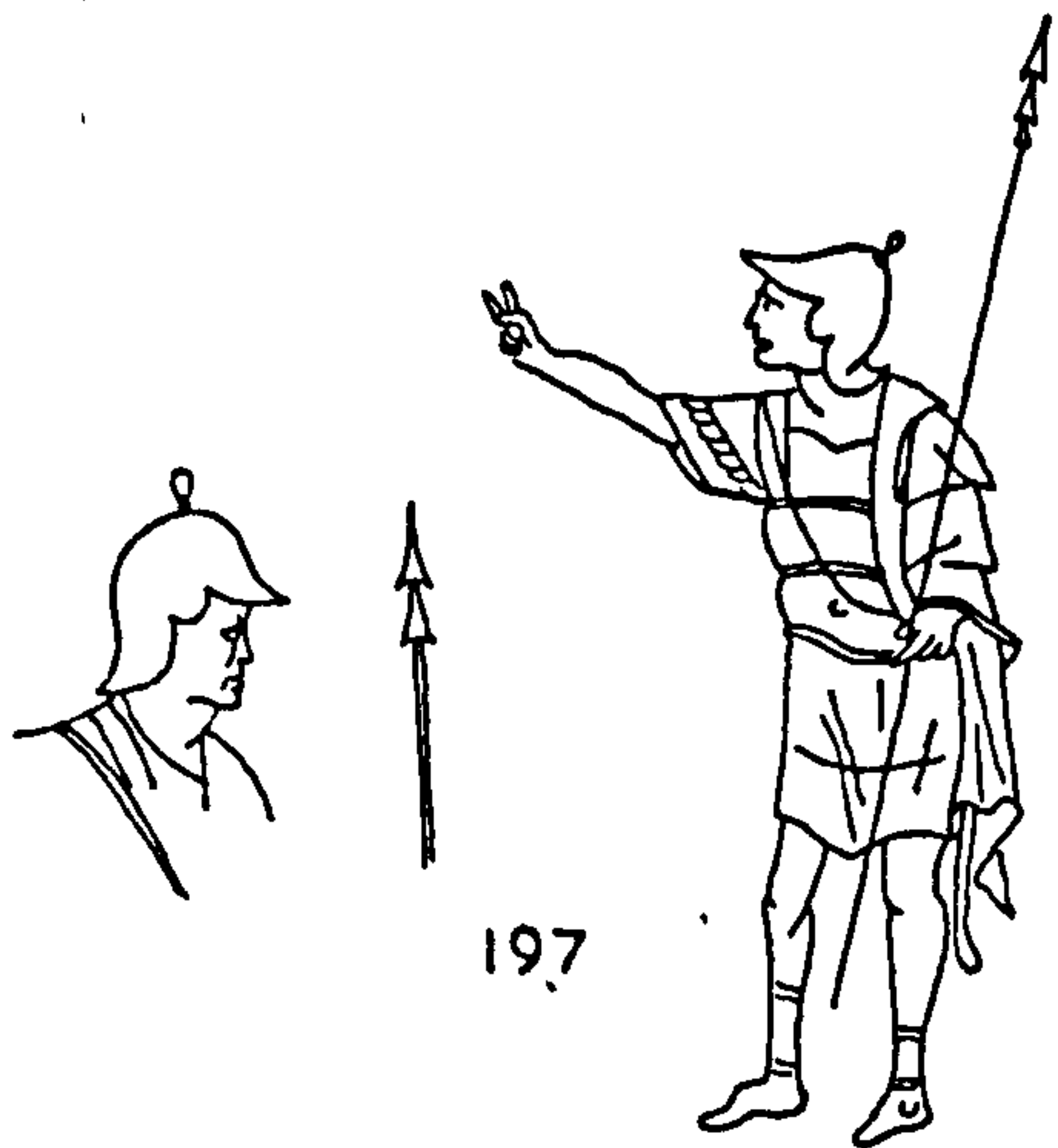
196B



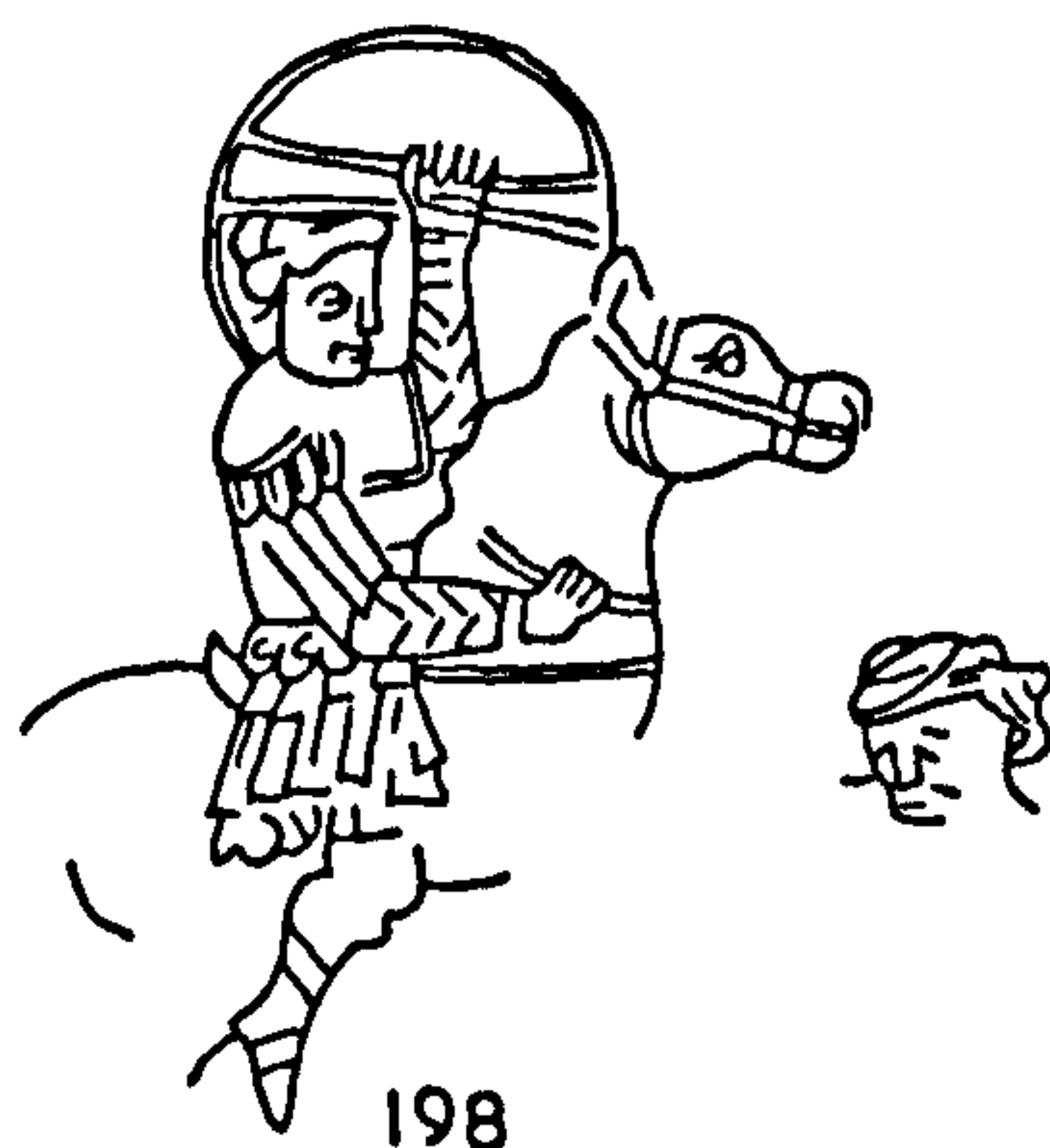
196C



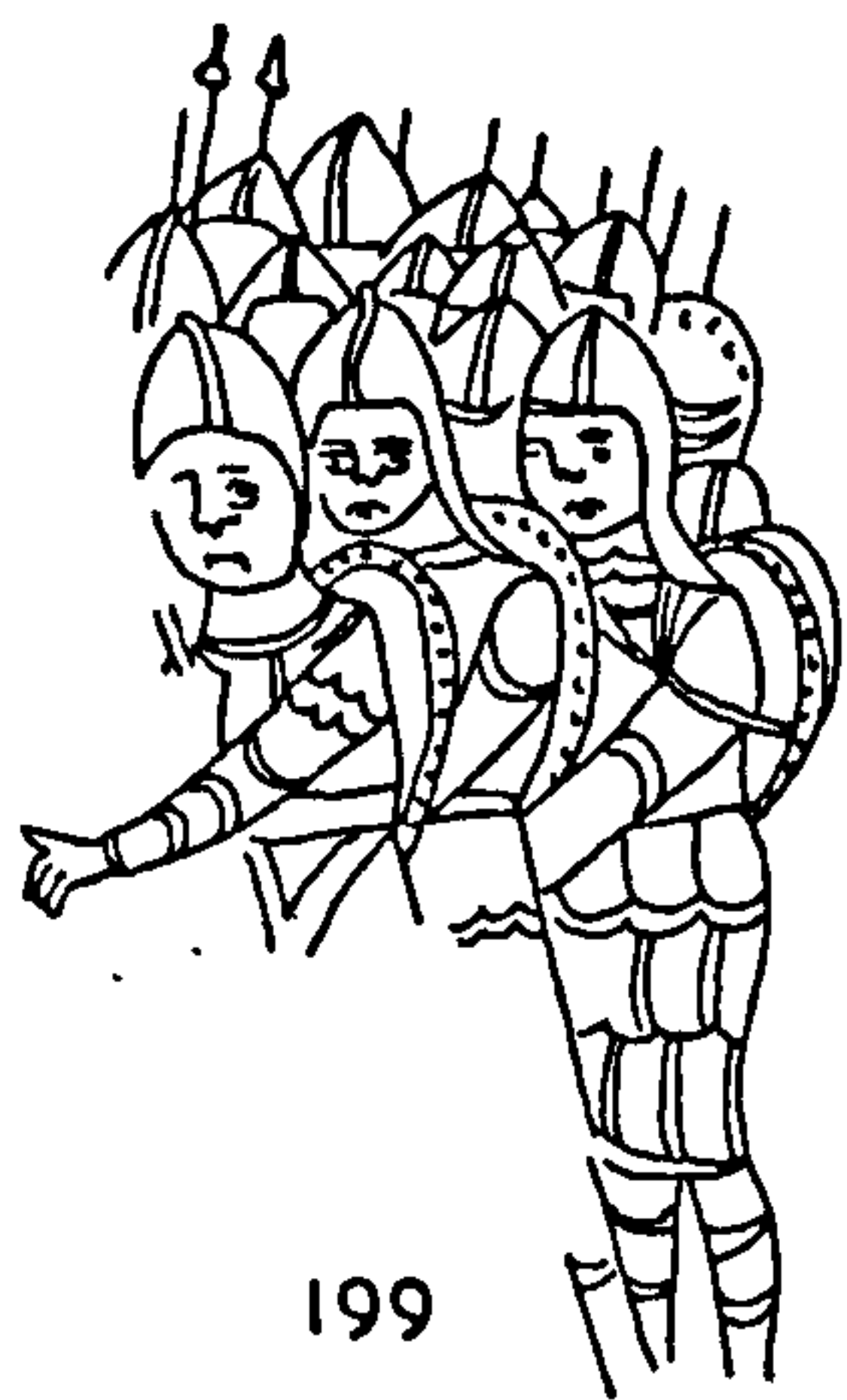
196D



197



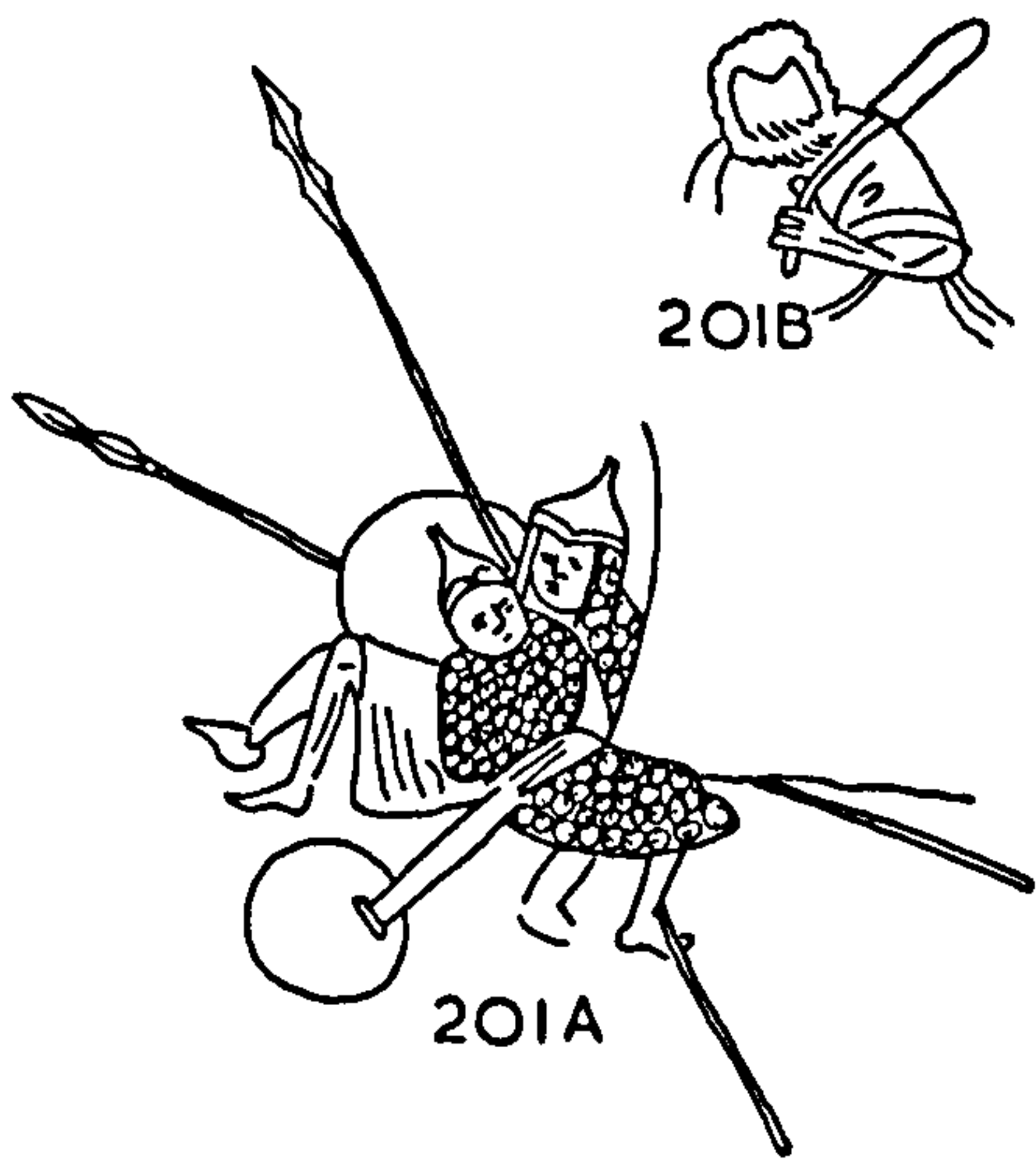
198



199



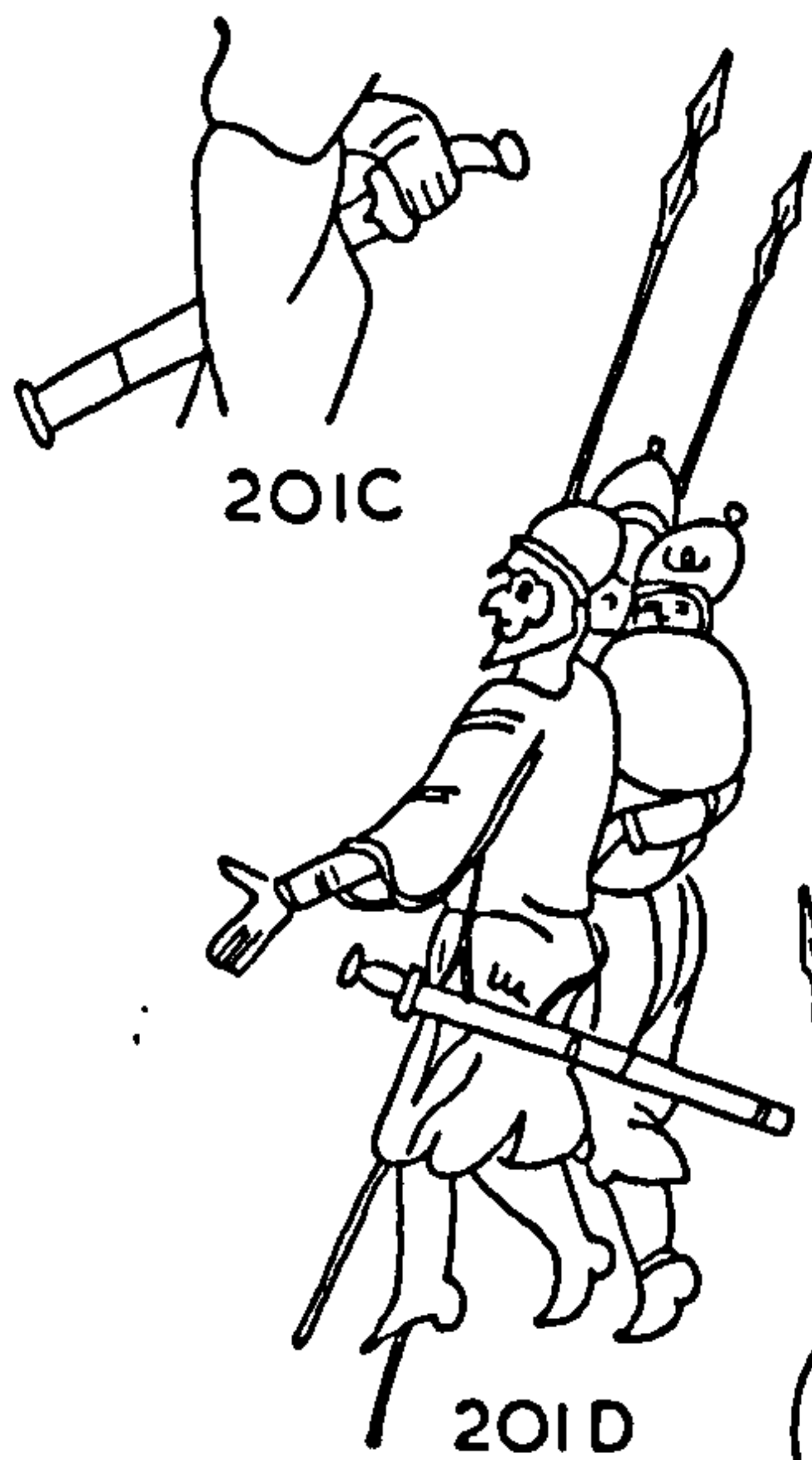
200



201A



201B

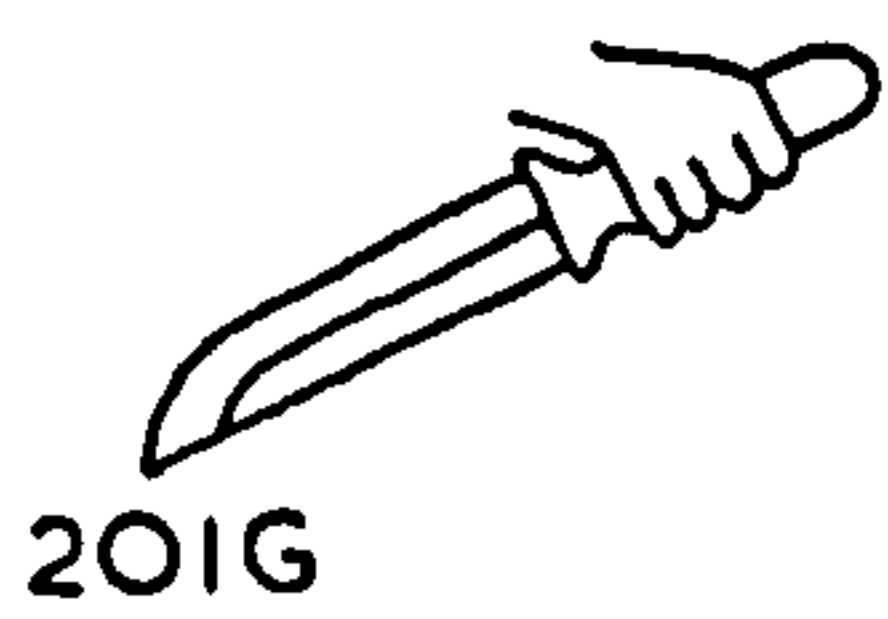


201C

201D



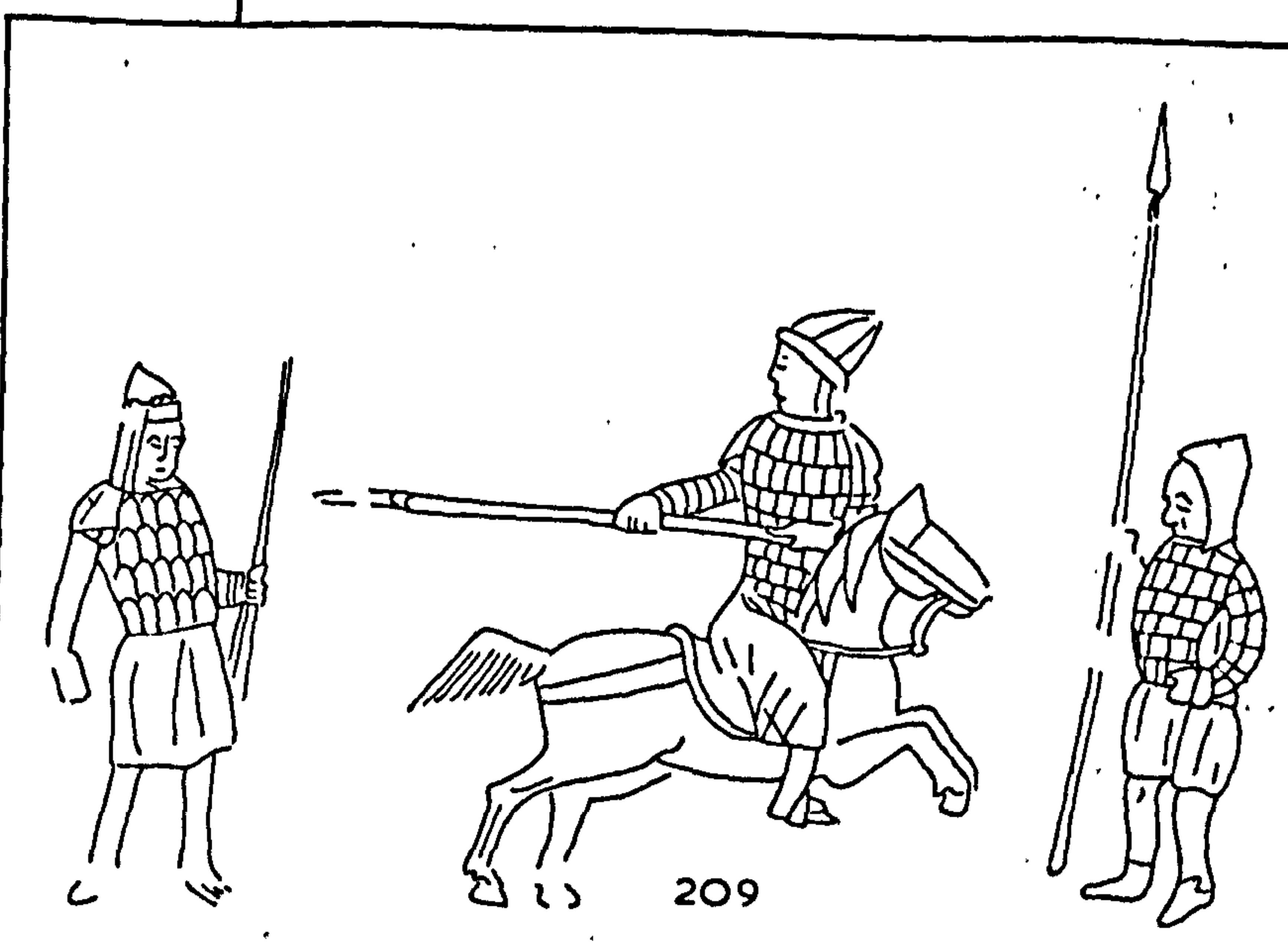
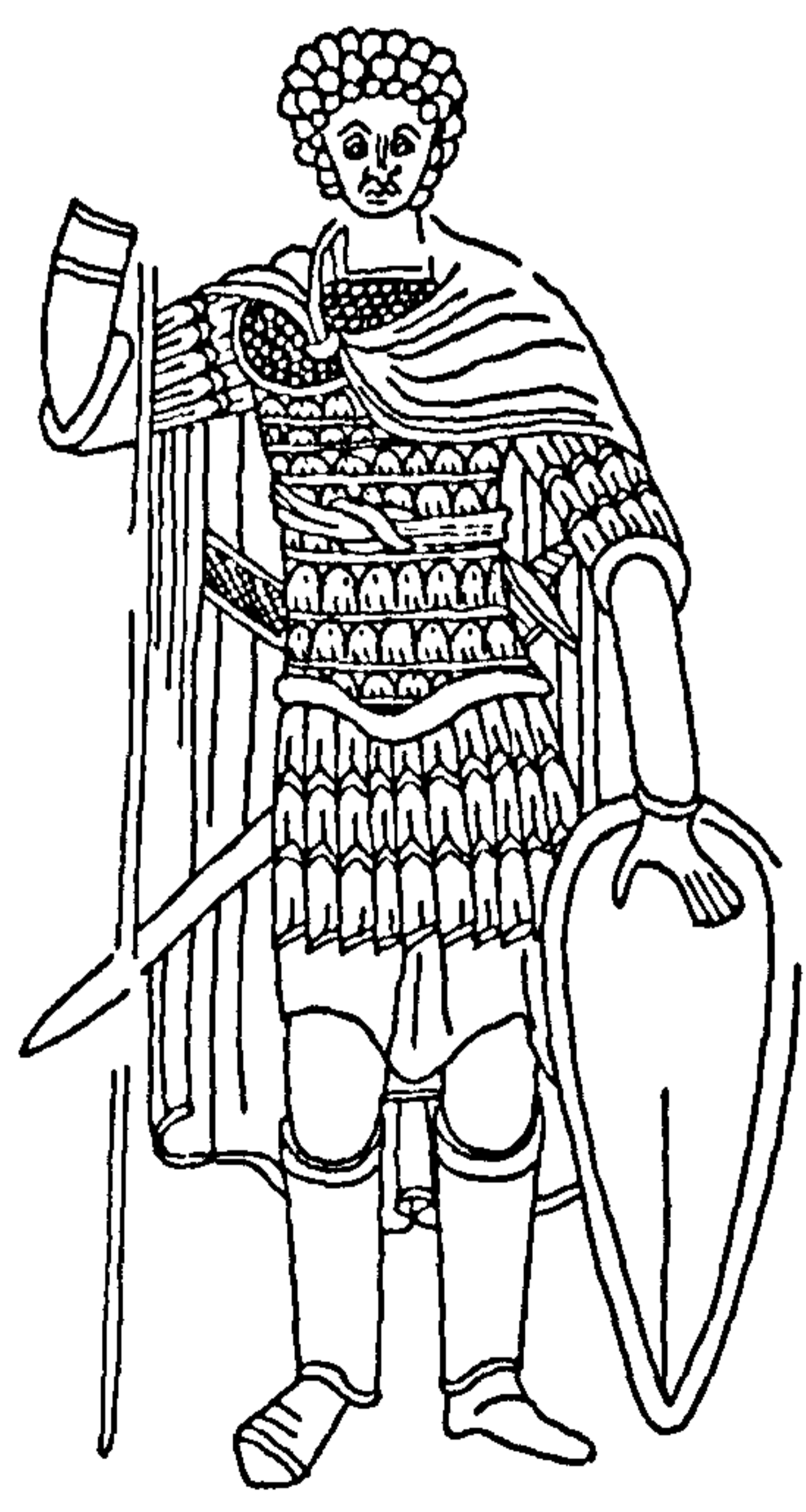
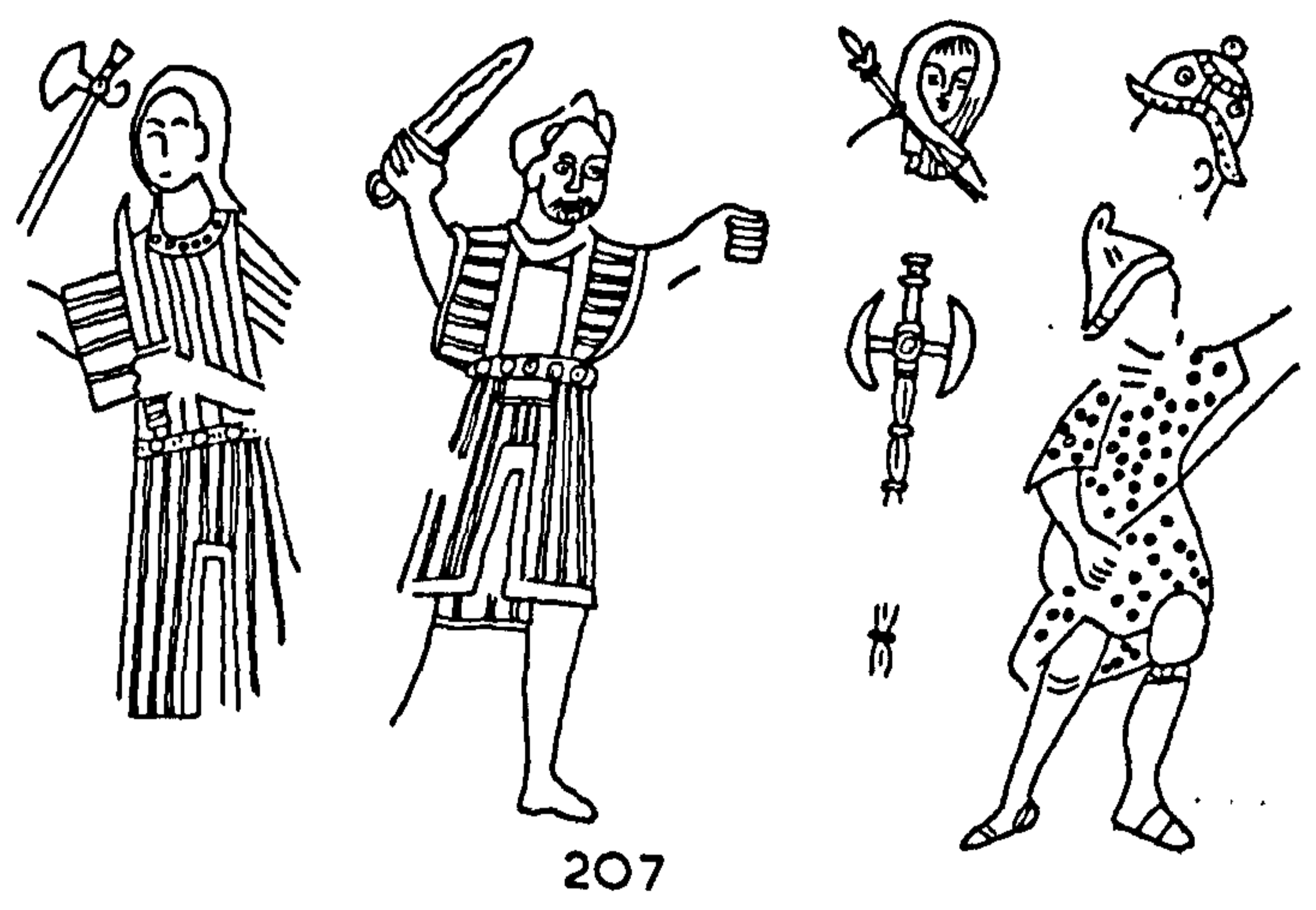
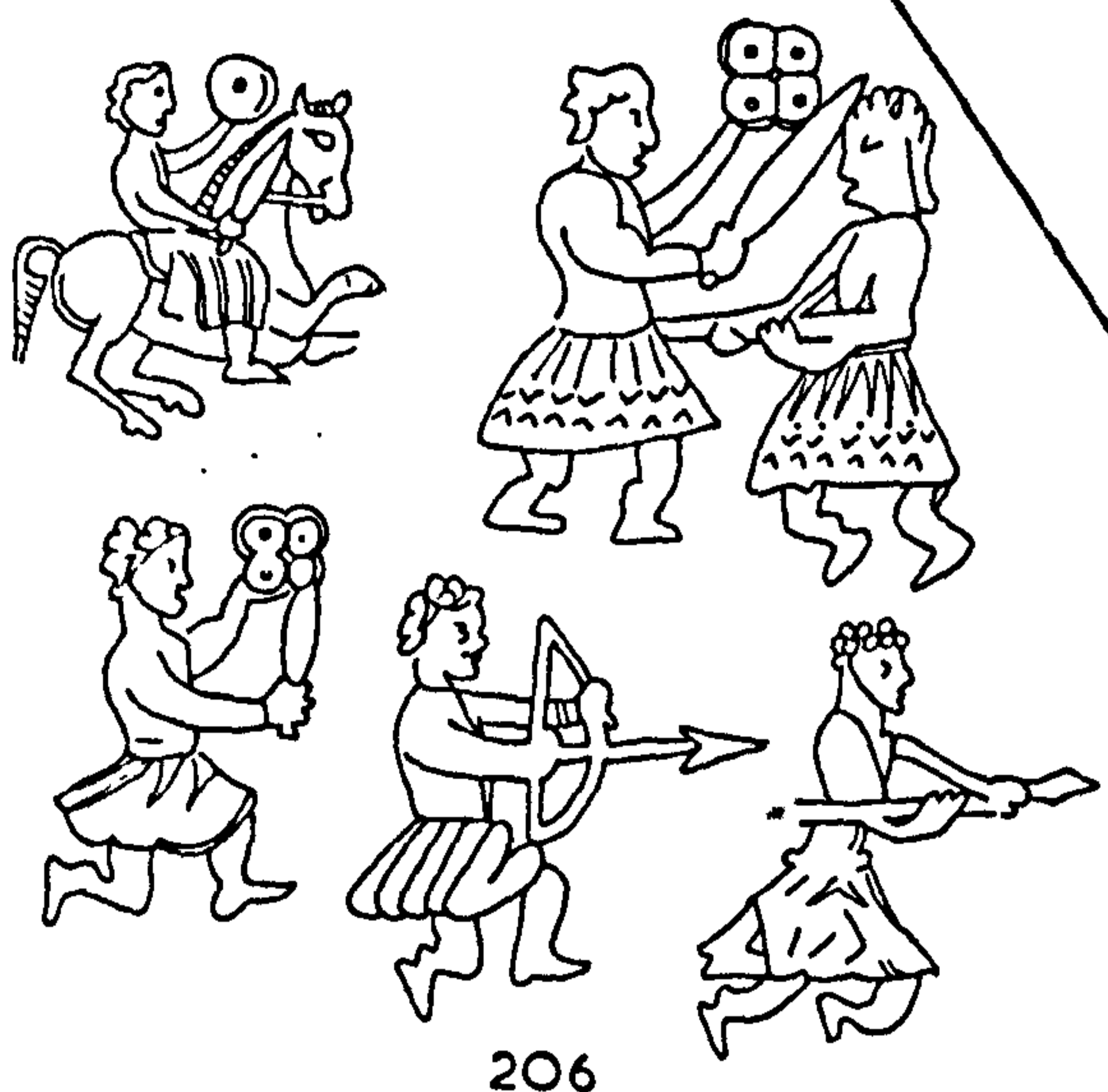
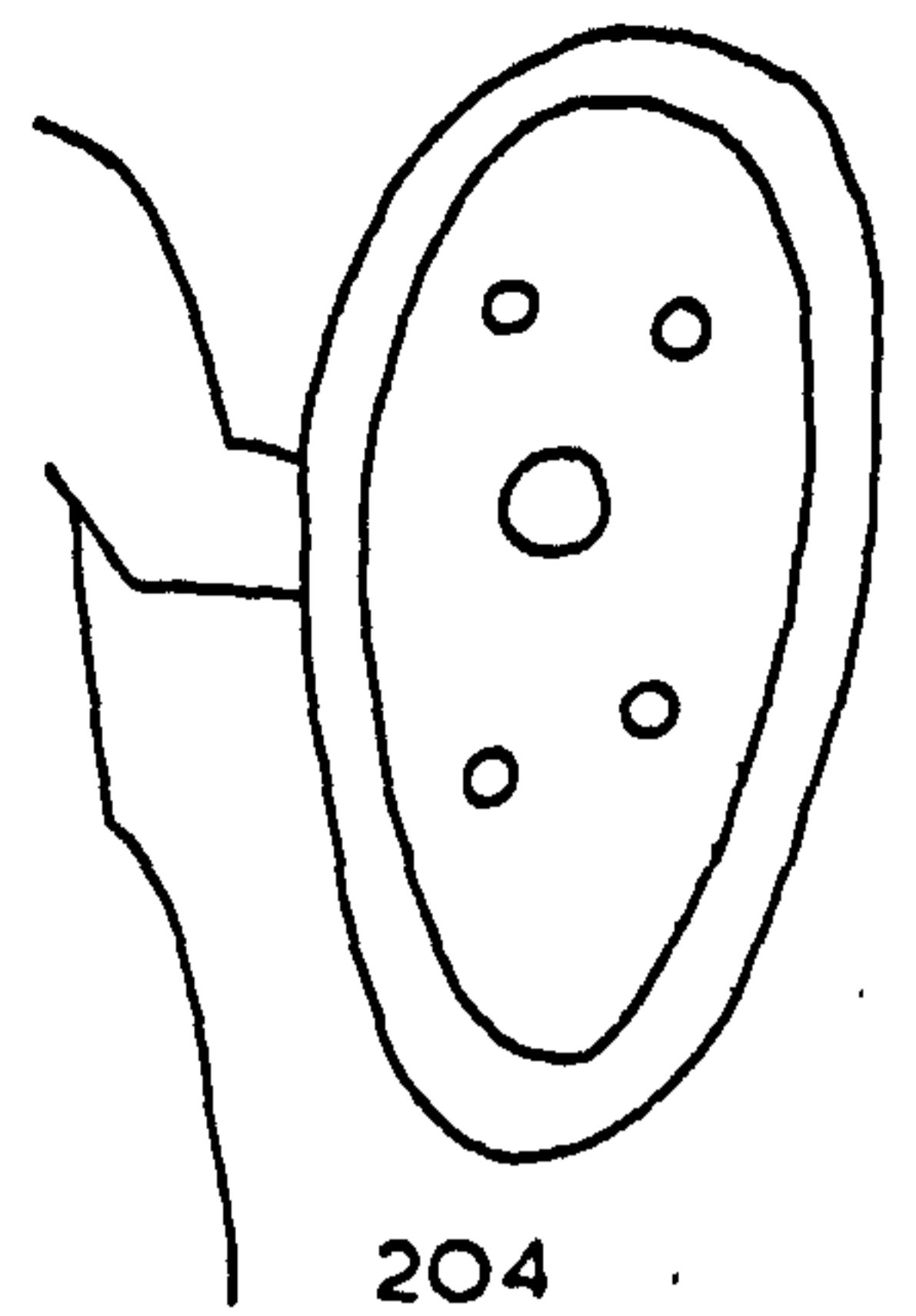
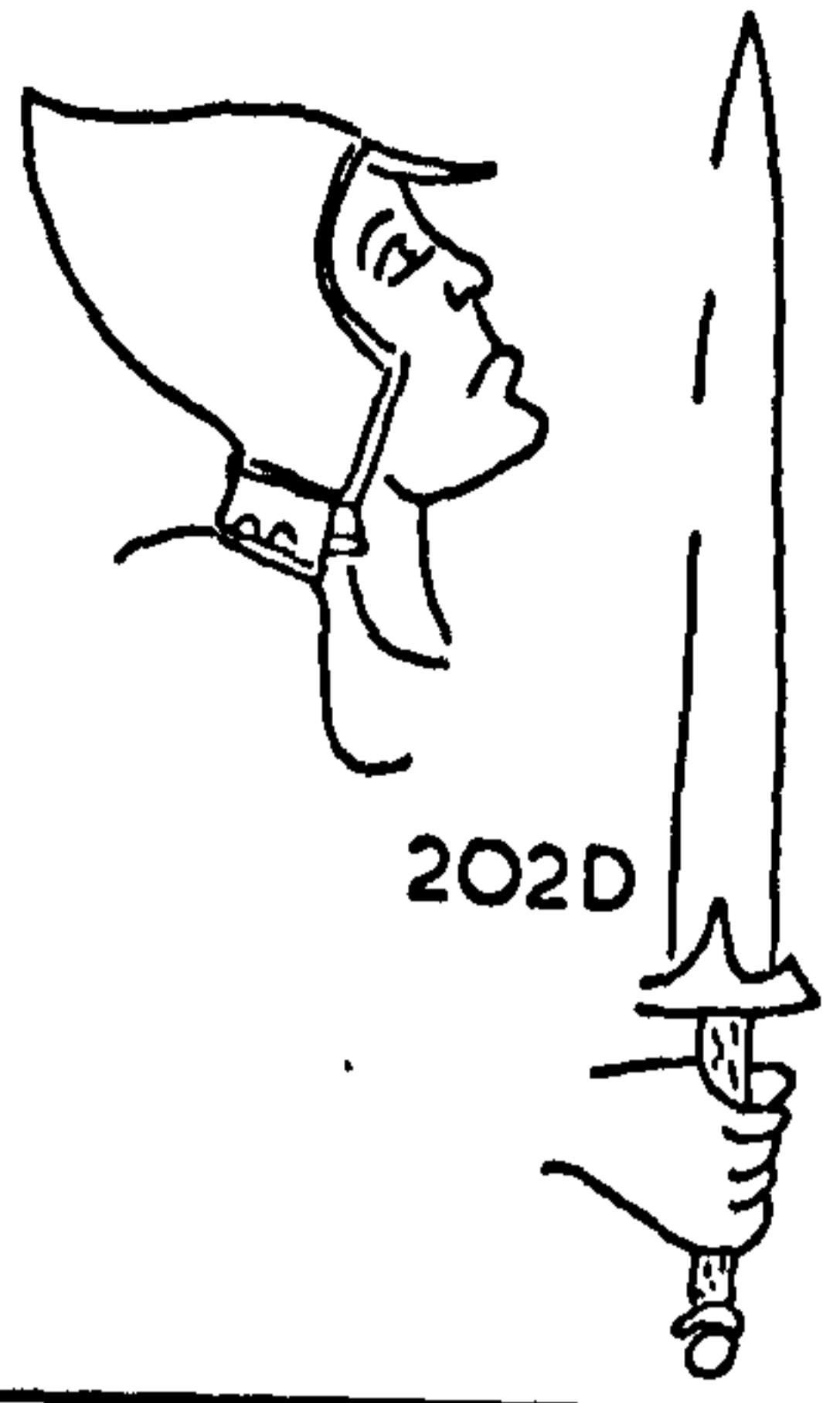
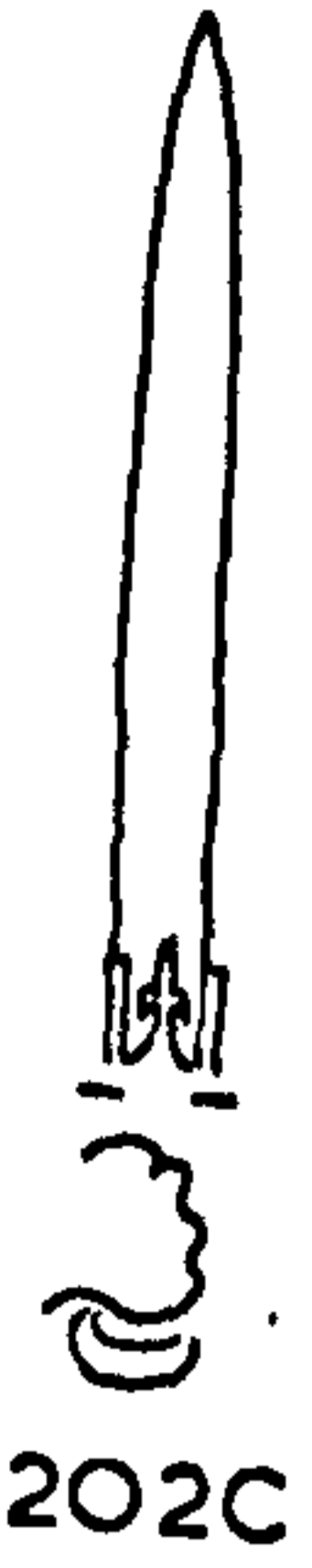
201E



201G



201F







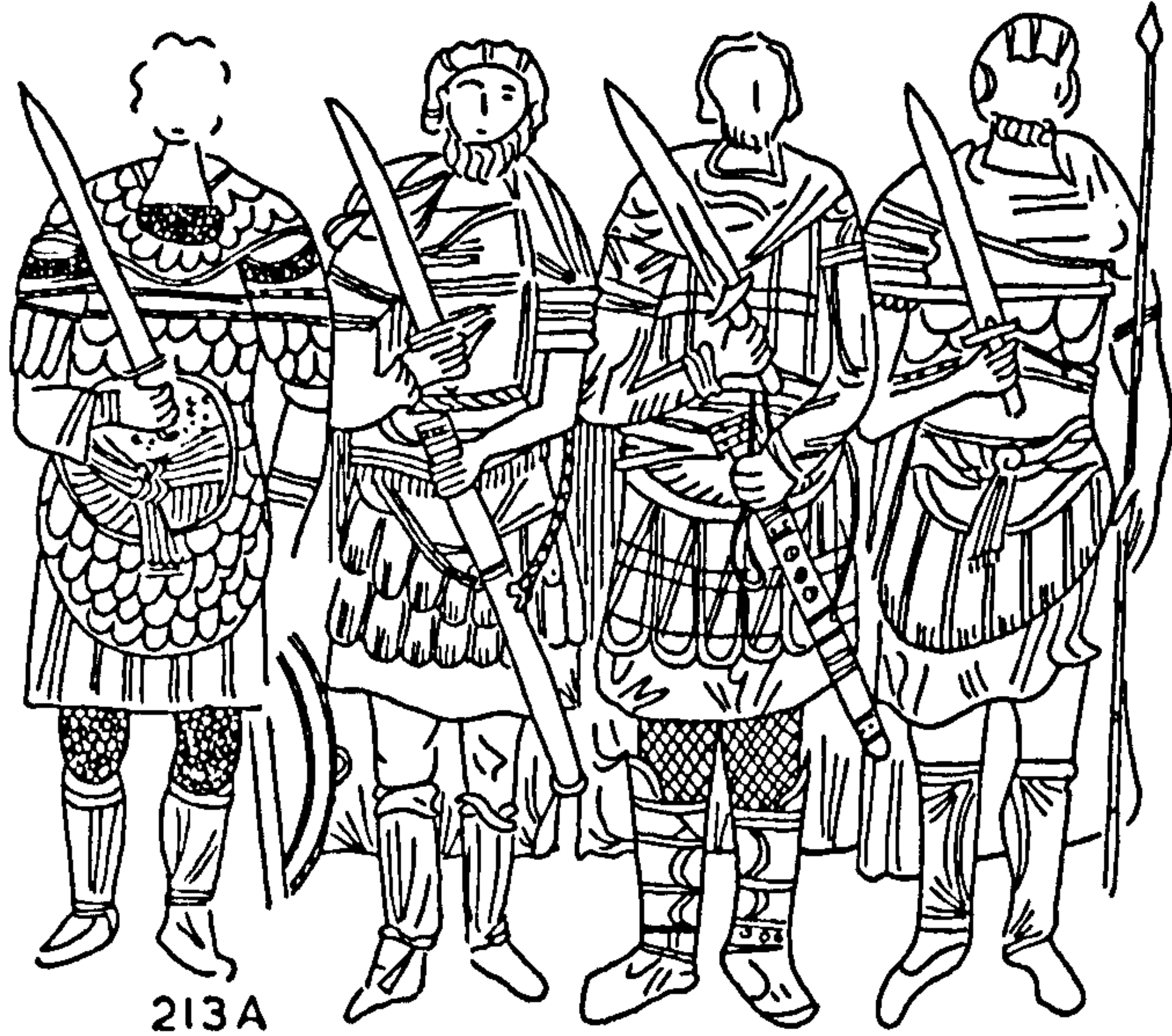
210



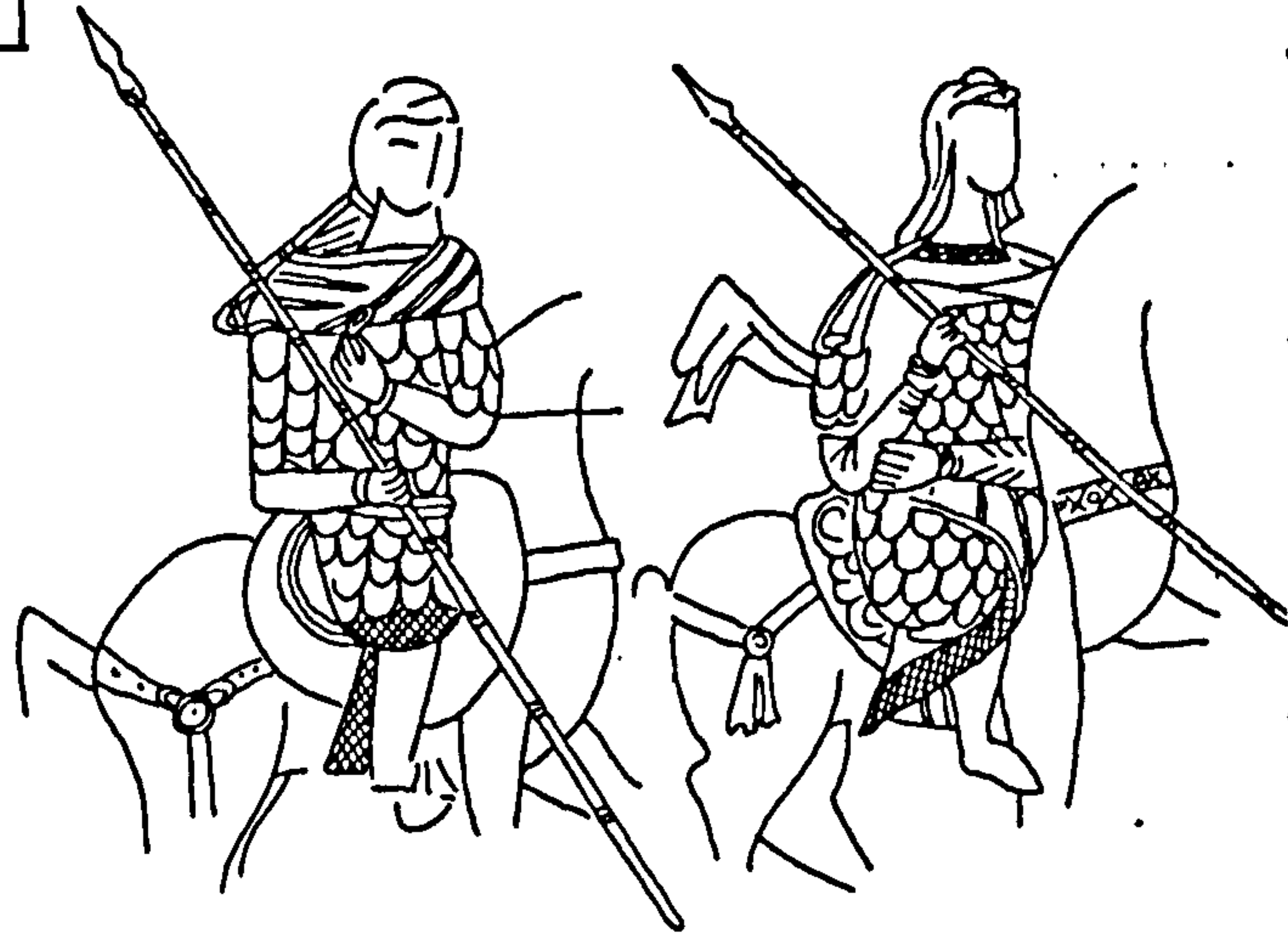
211



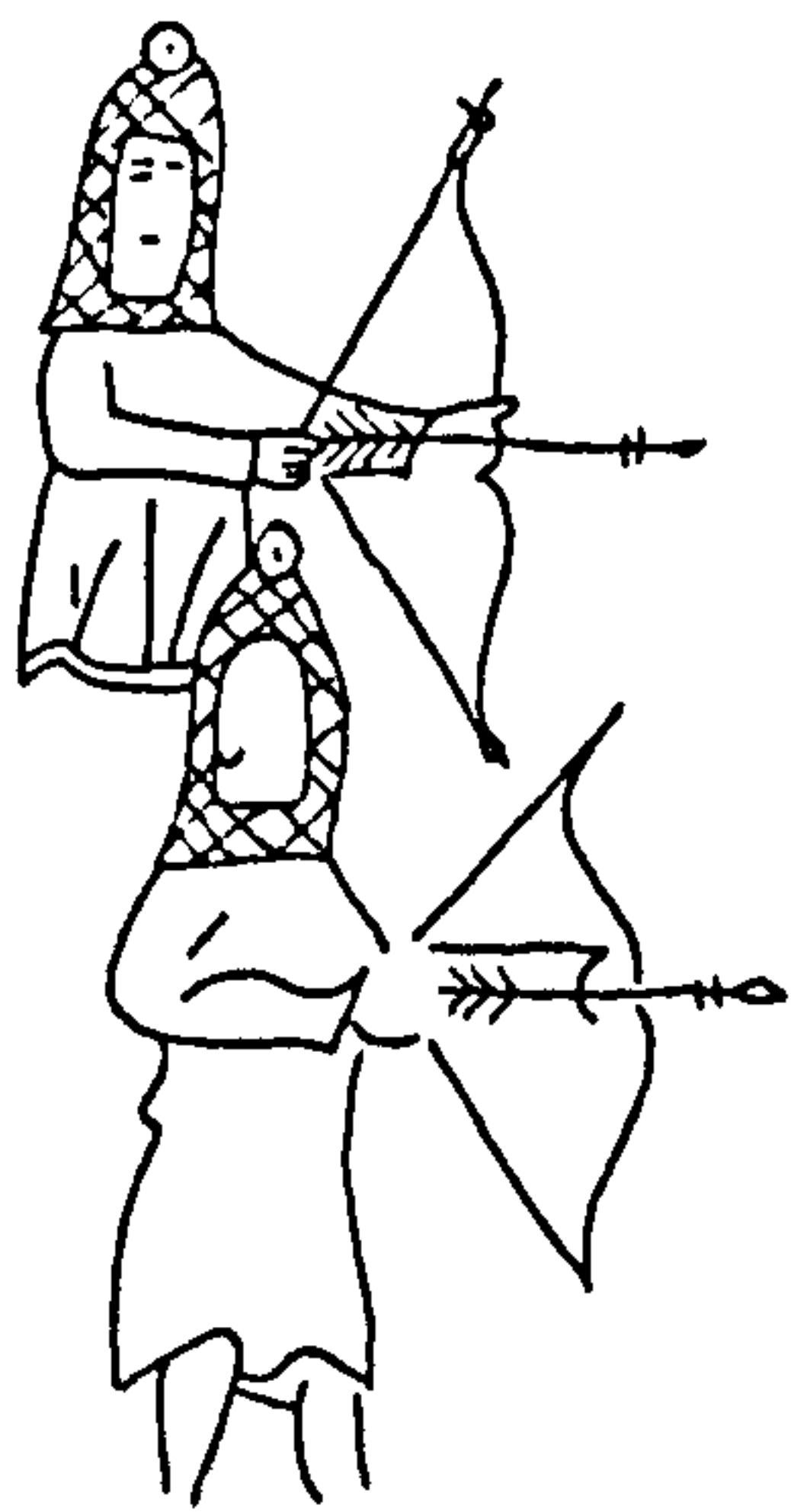
212



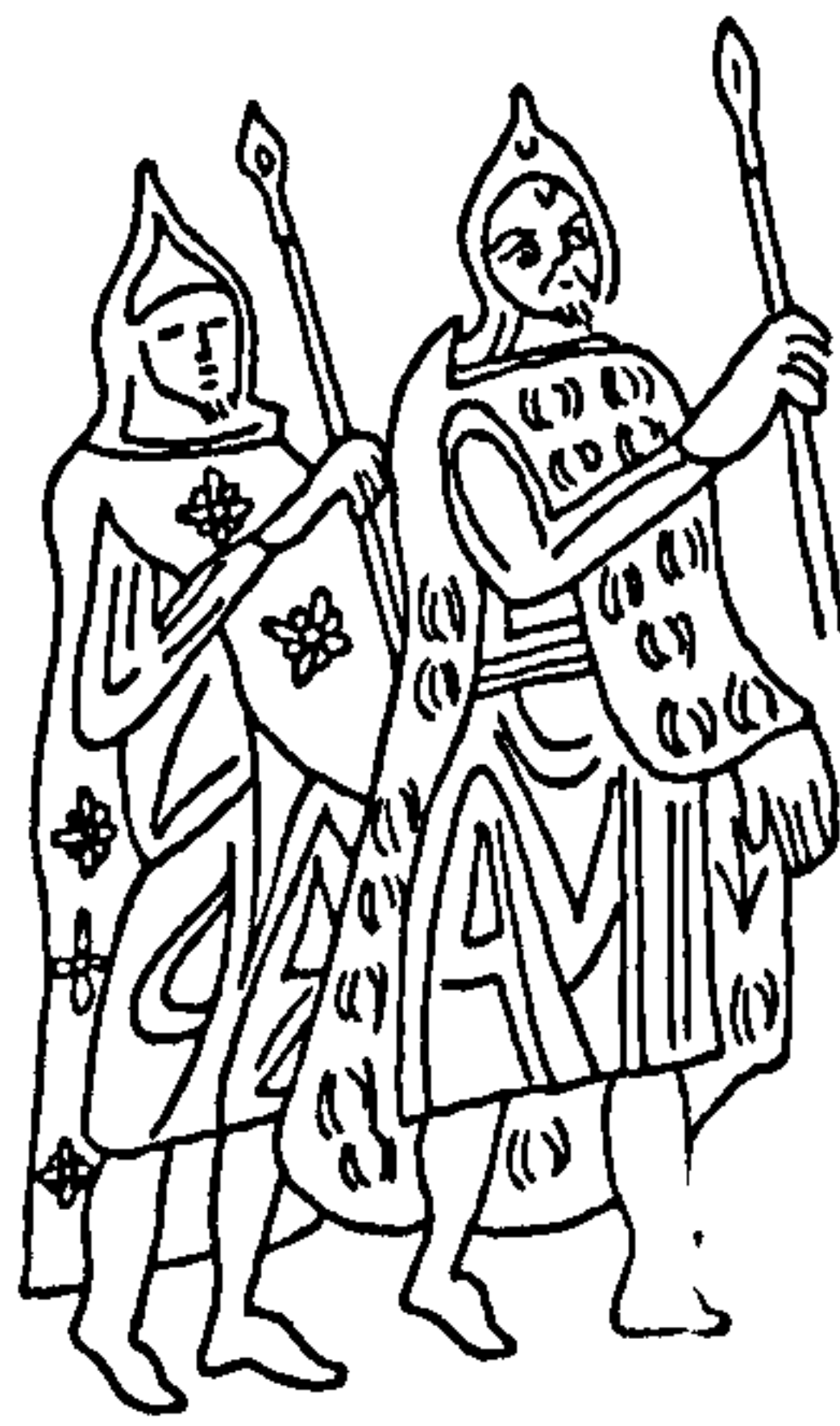
213A



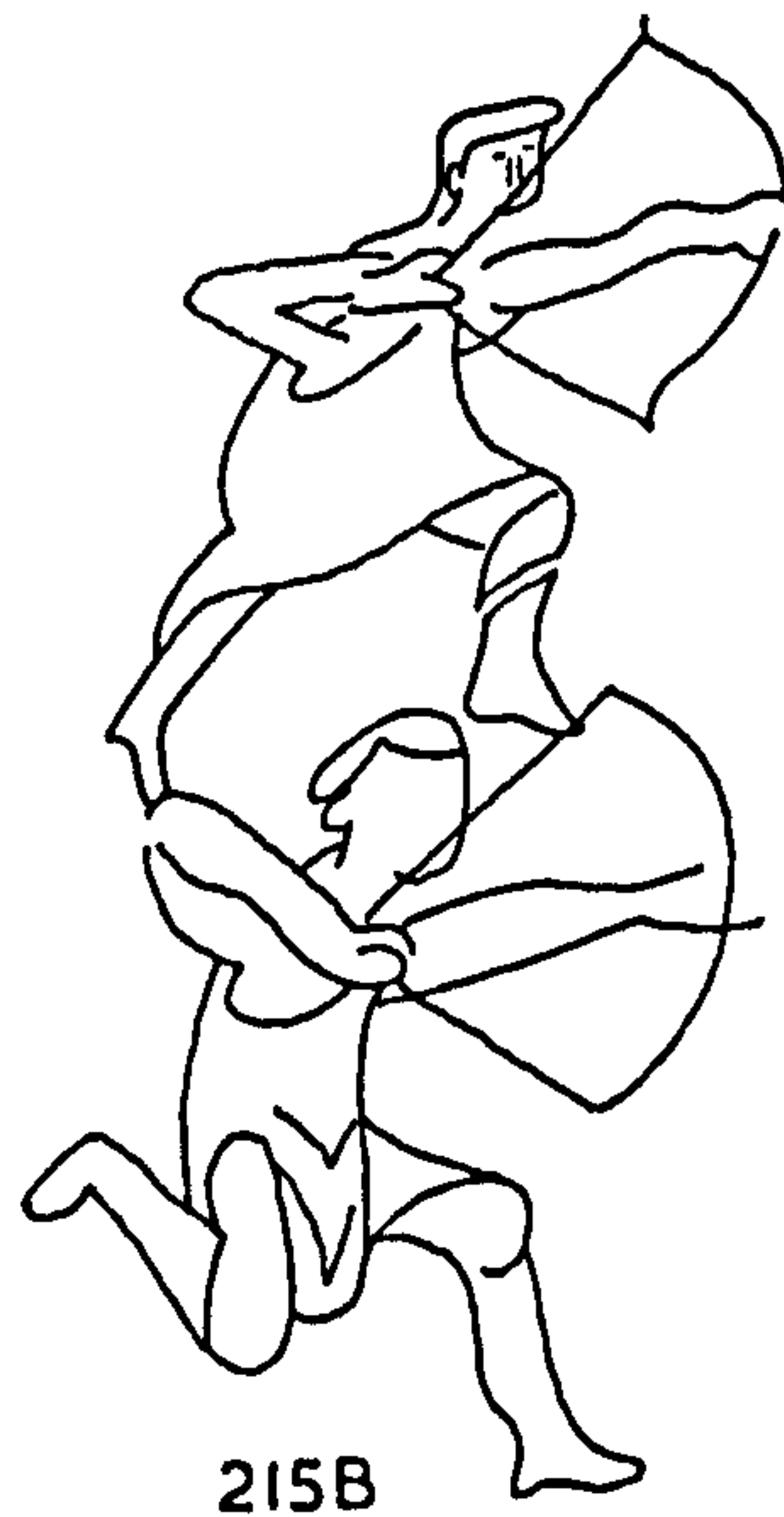
213B



214



215A



215B



216B

216A



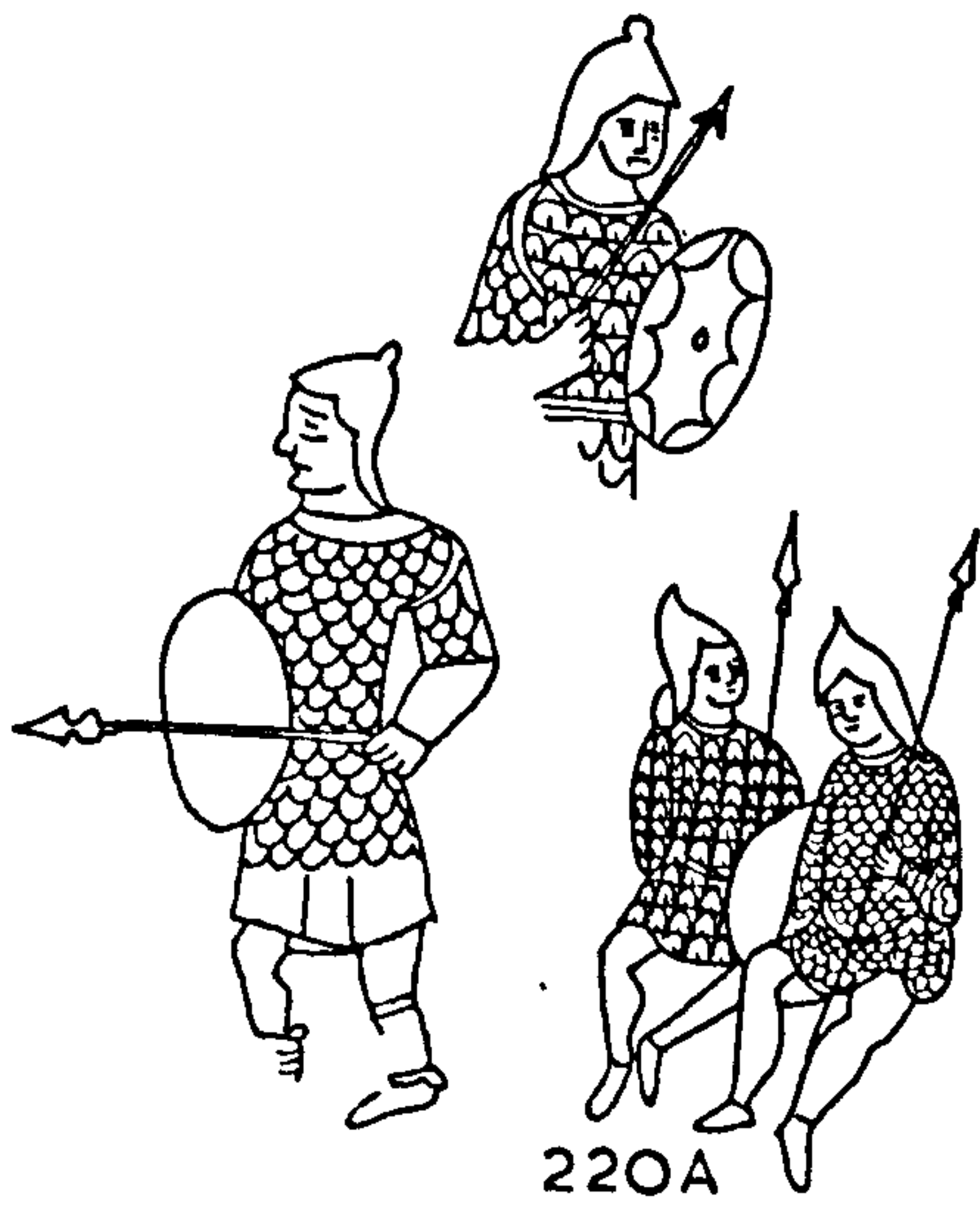
217



218



219



220A



220B



221

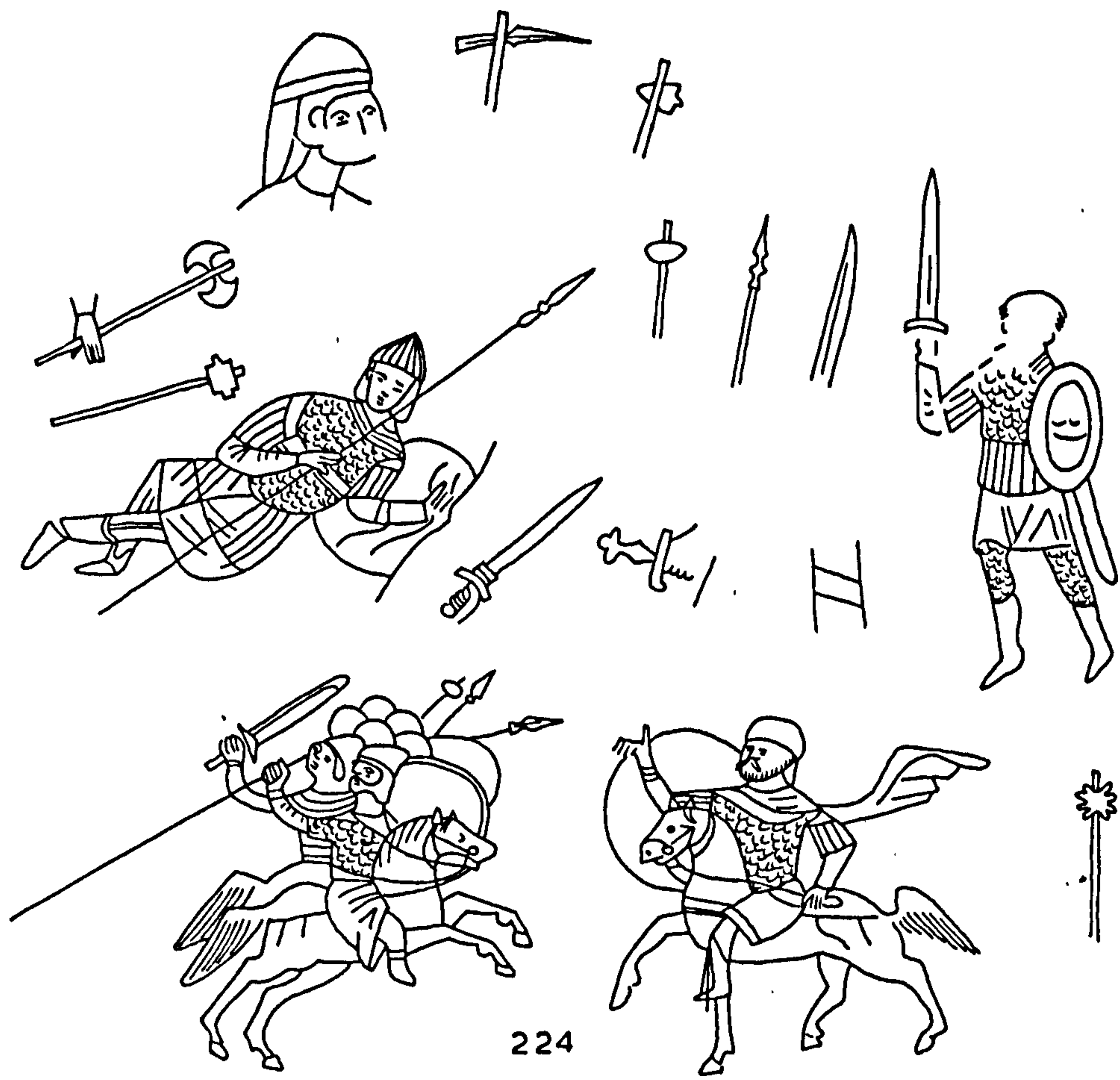


222



223





224



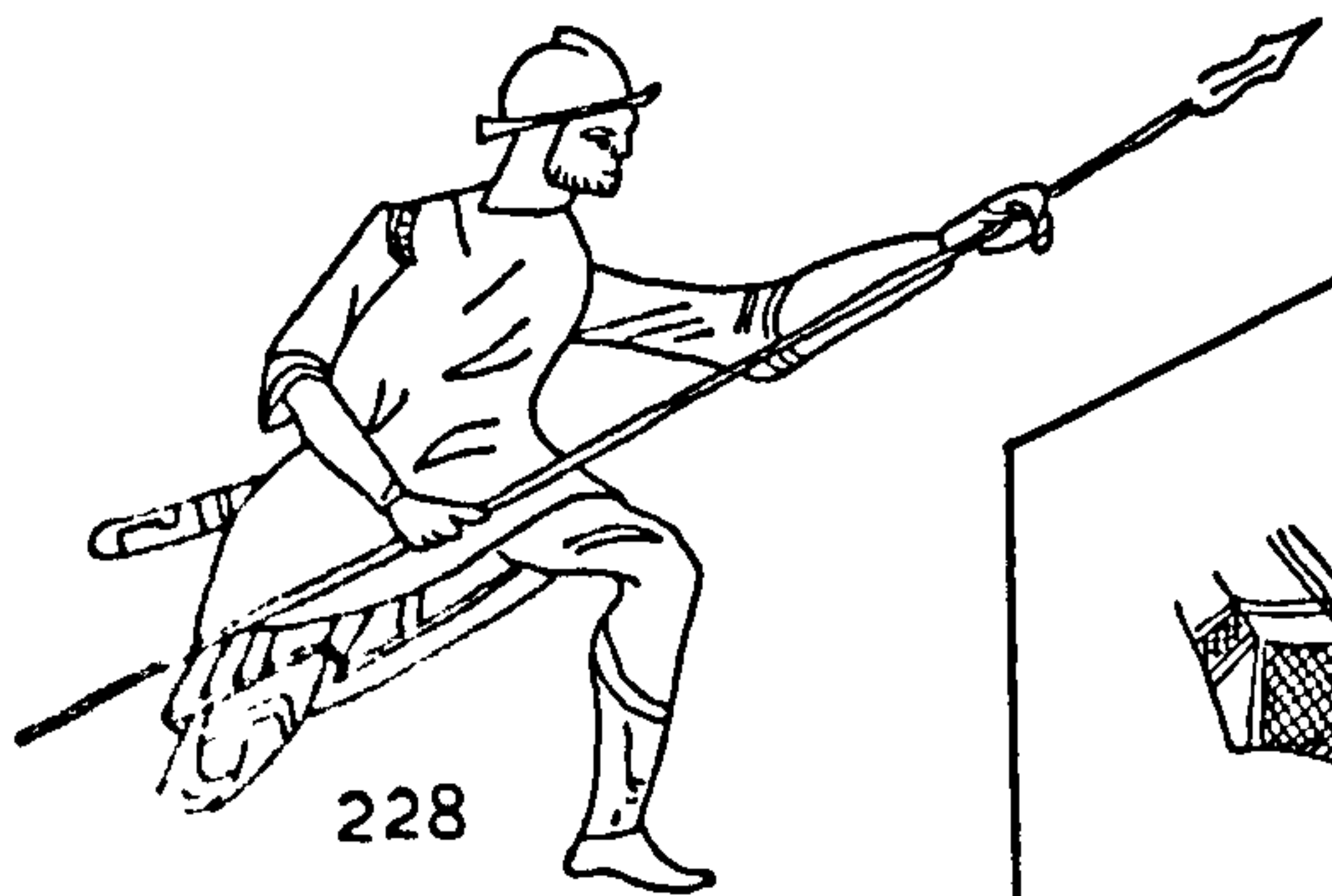
225



226



227



228



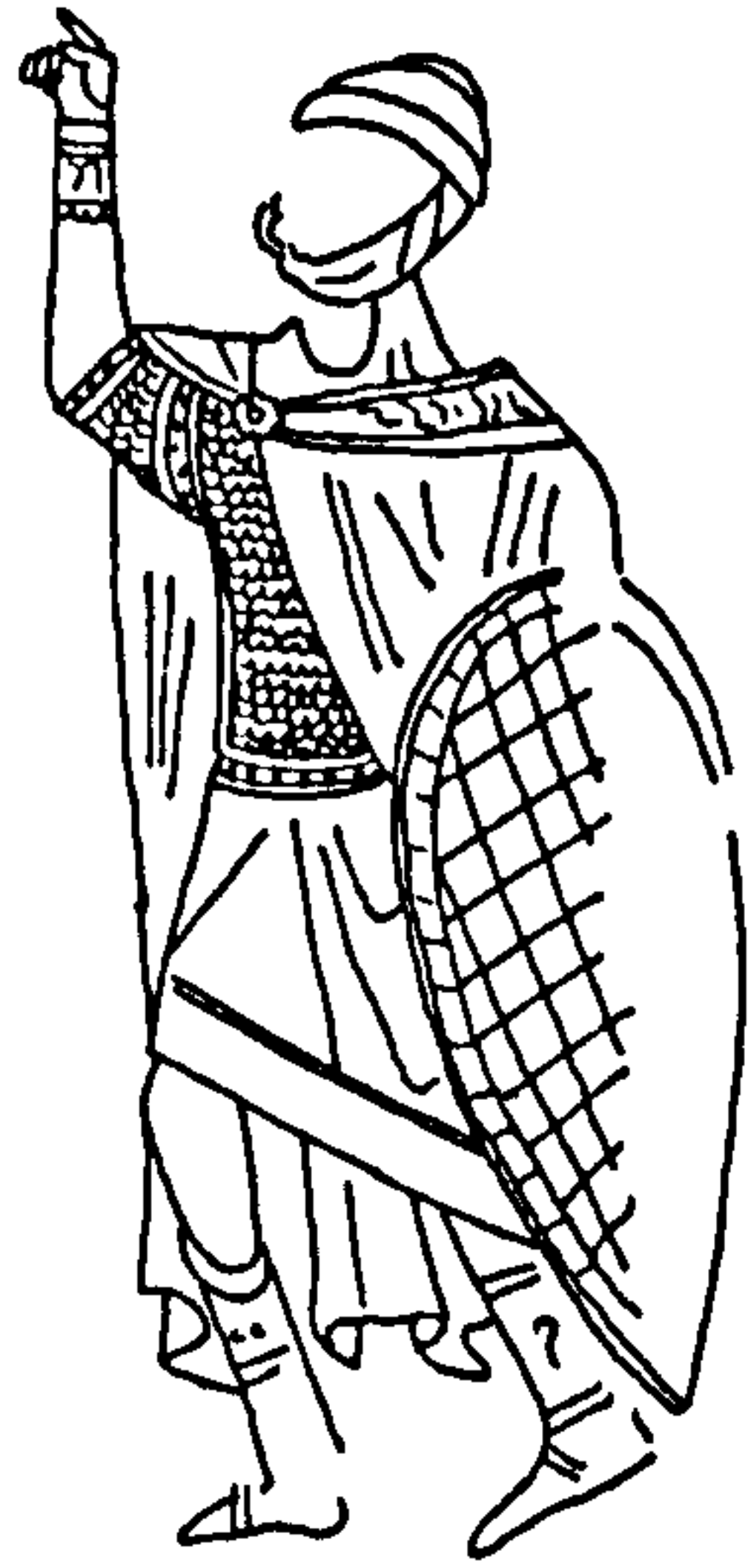
229



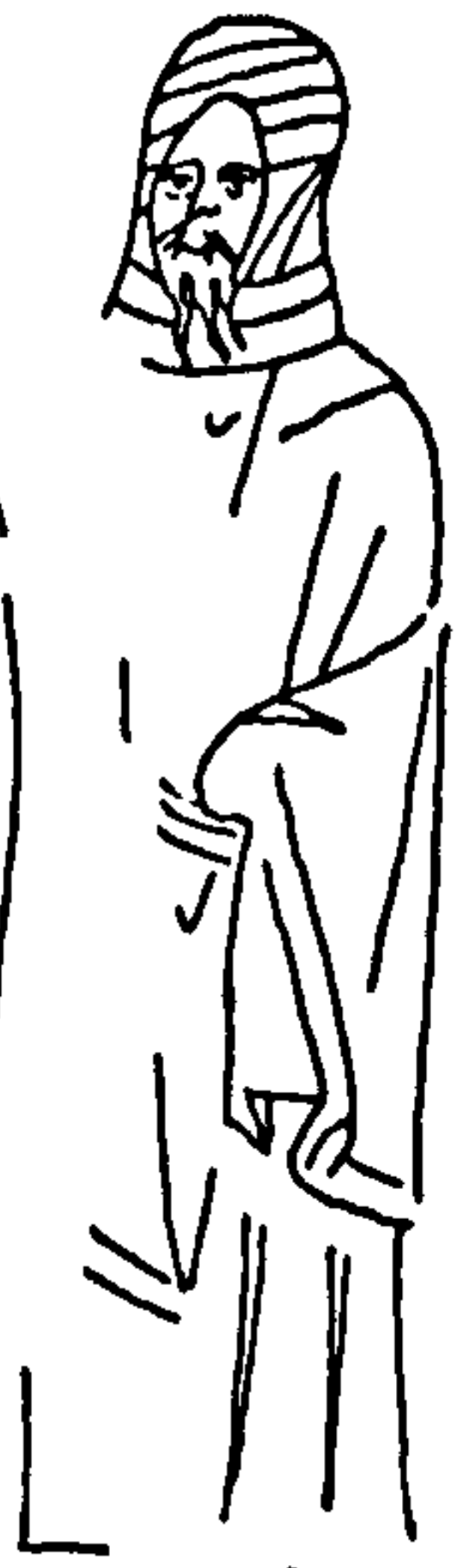
230



231A



231B



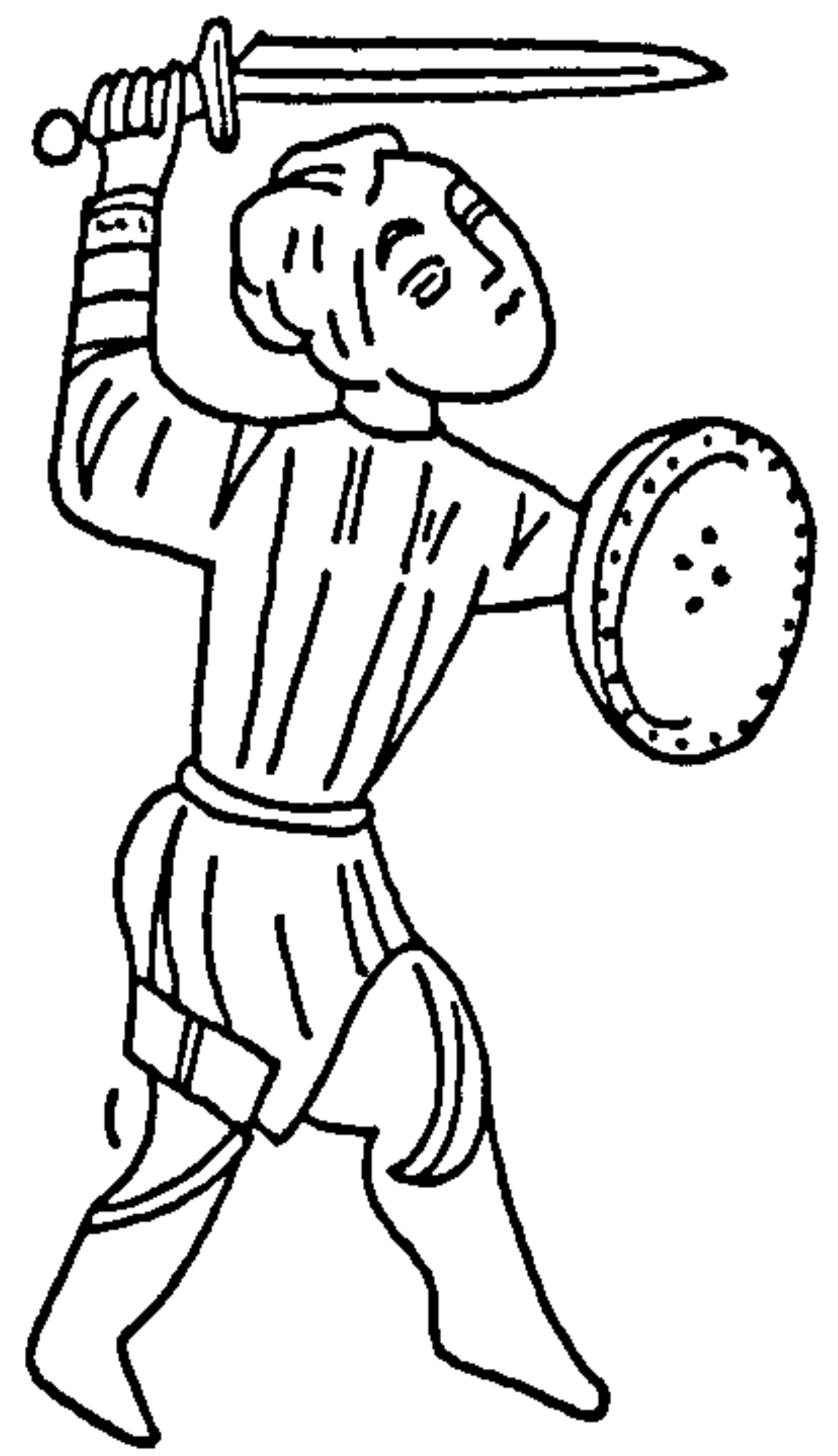
231C



231D



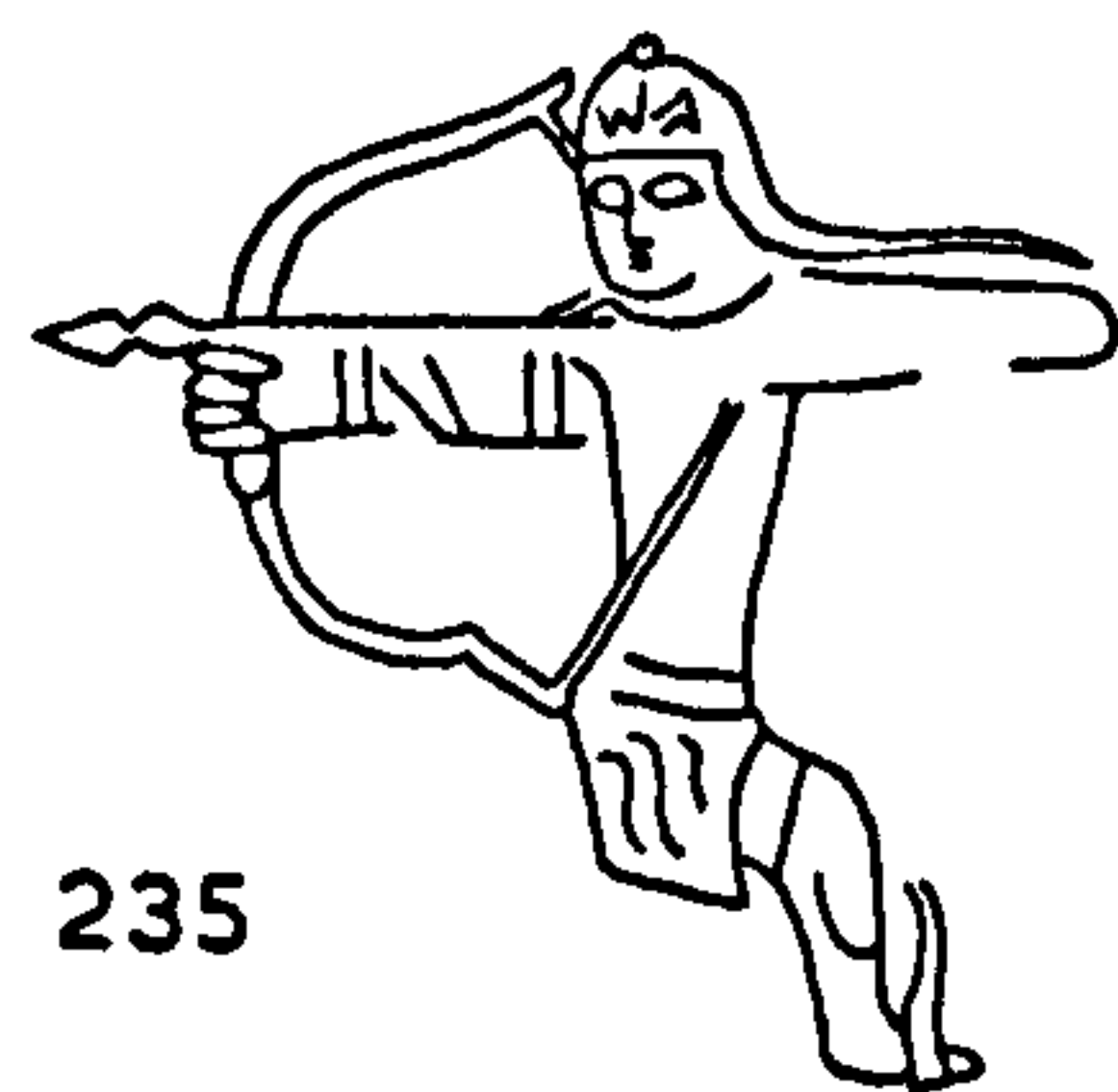
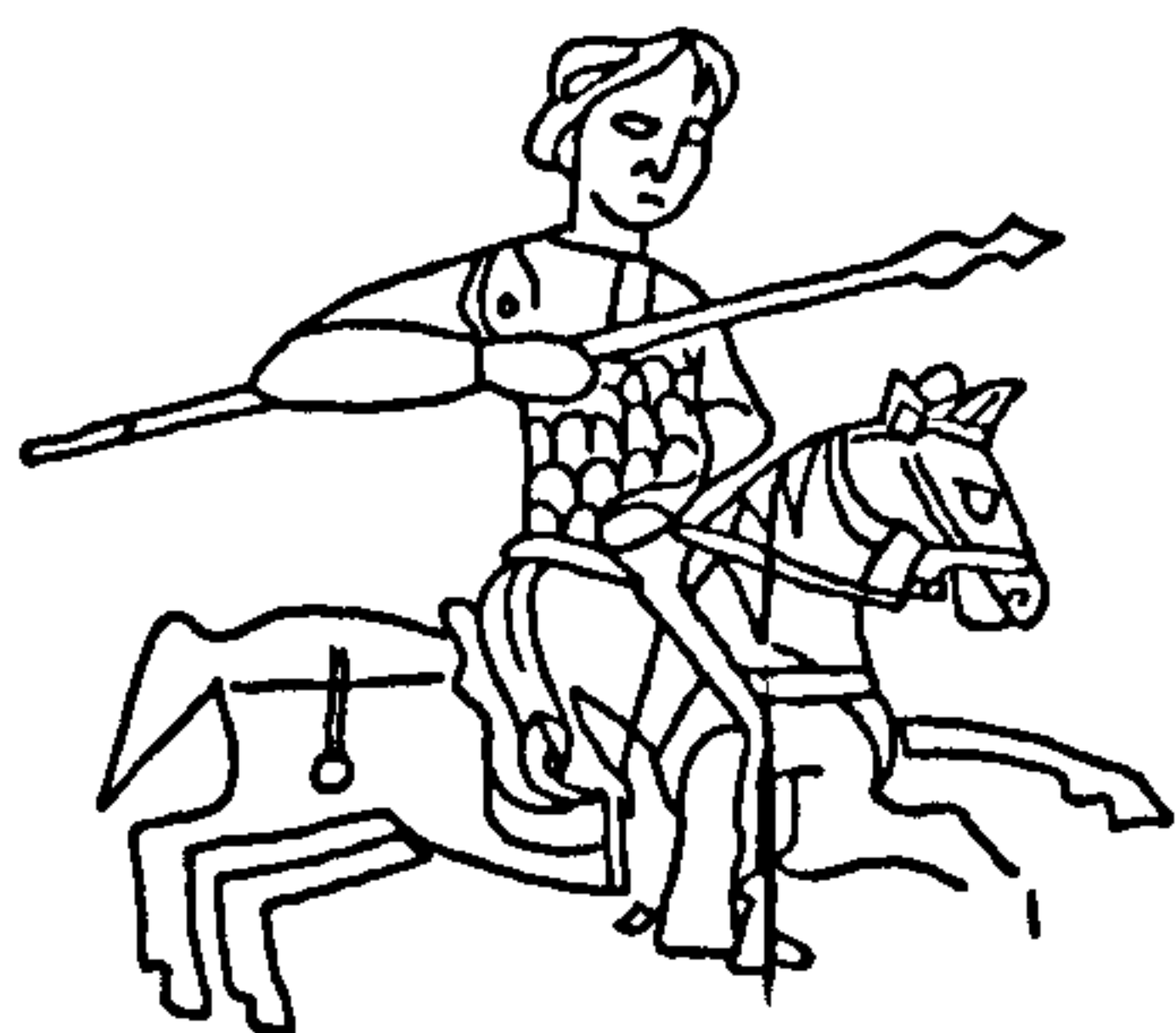
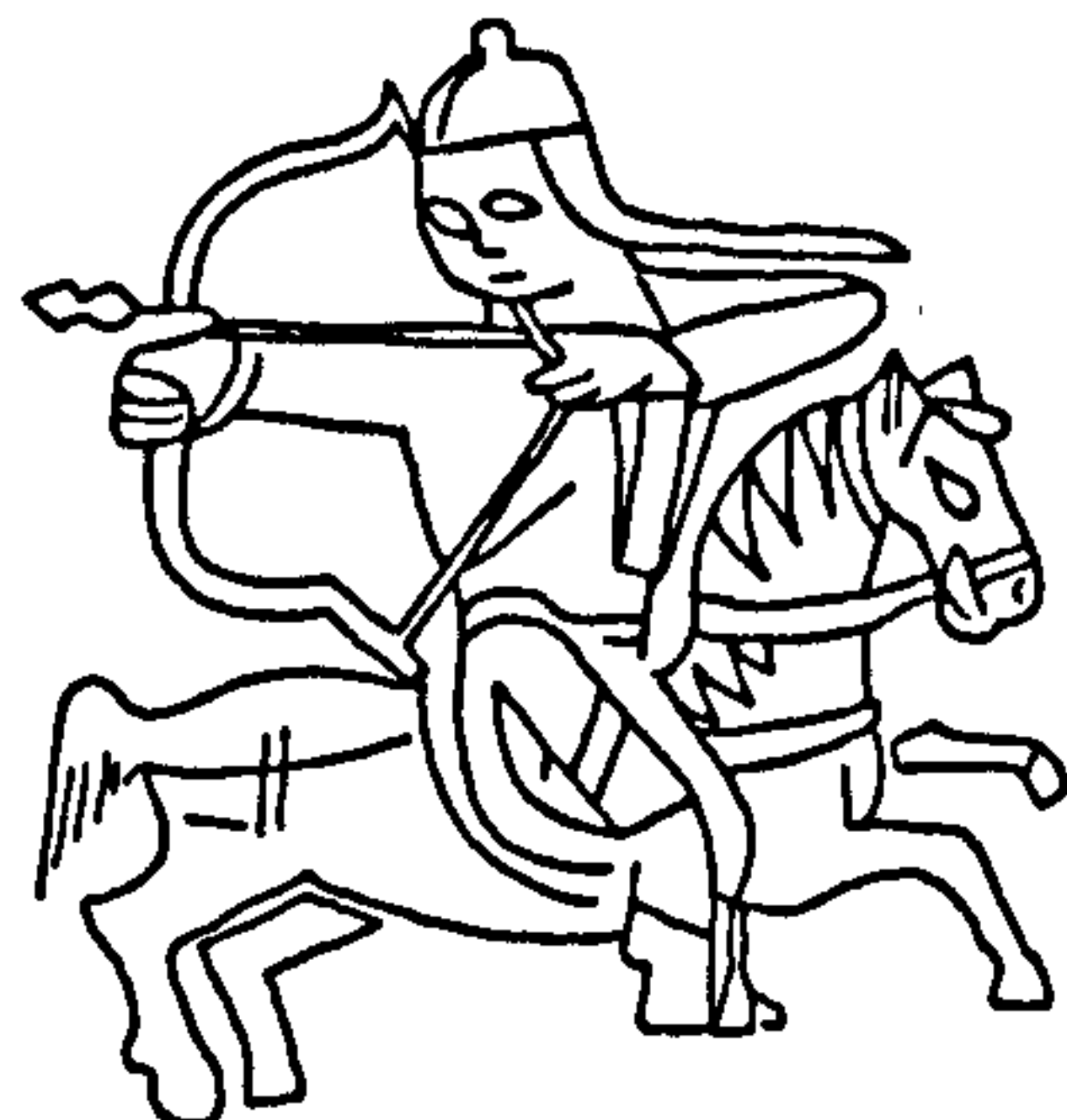
232



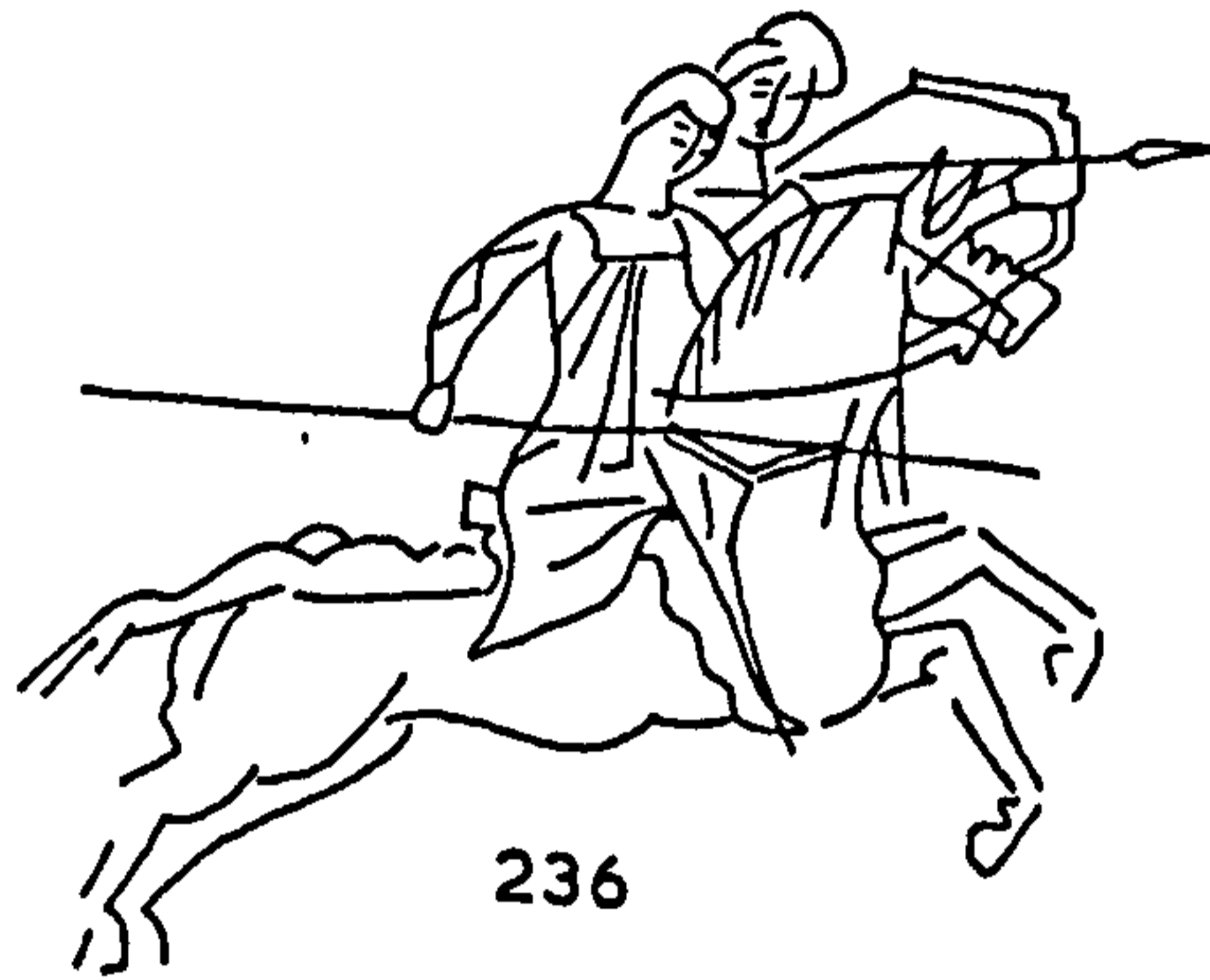
234



233



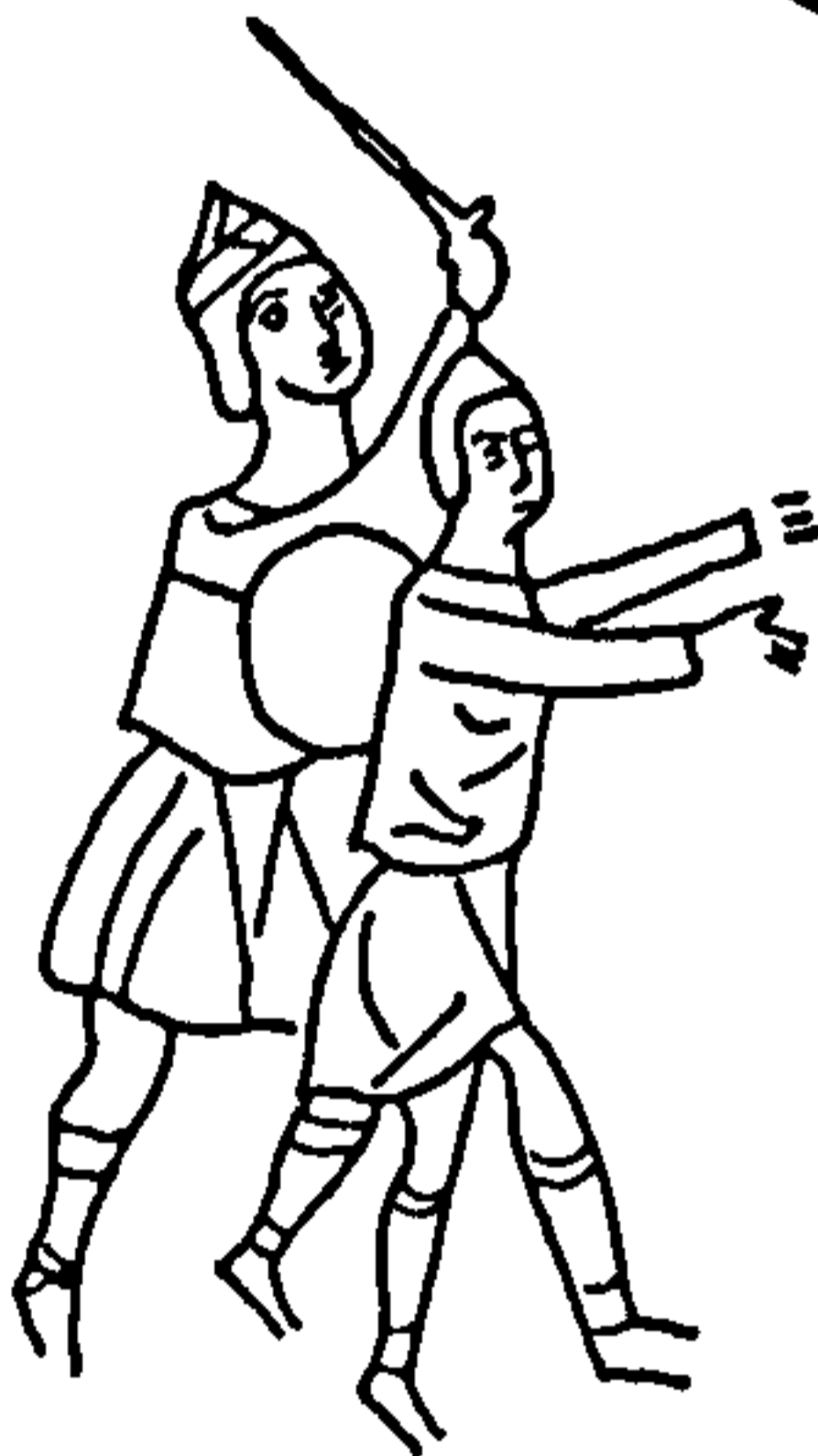
235



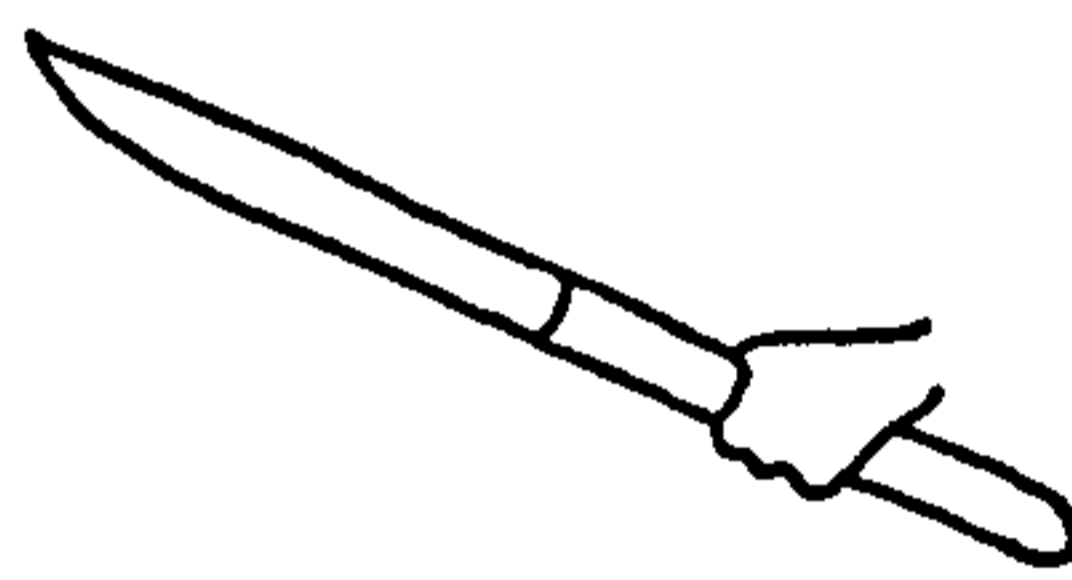
236



237A



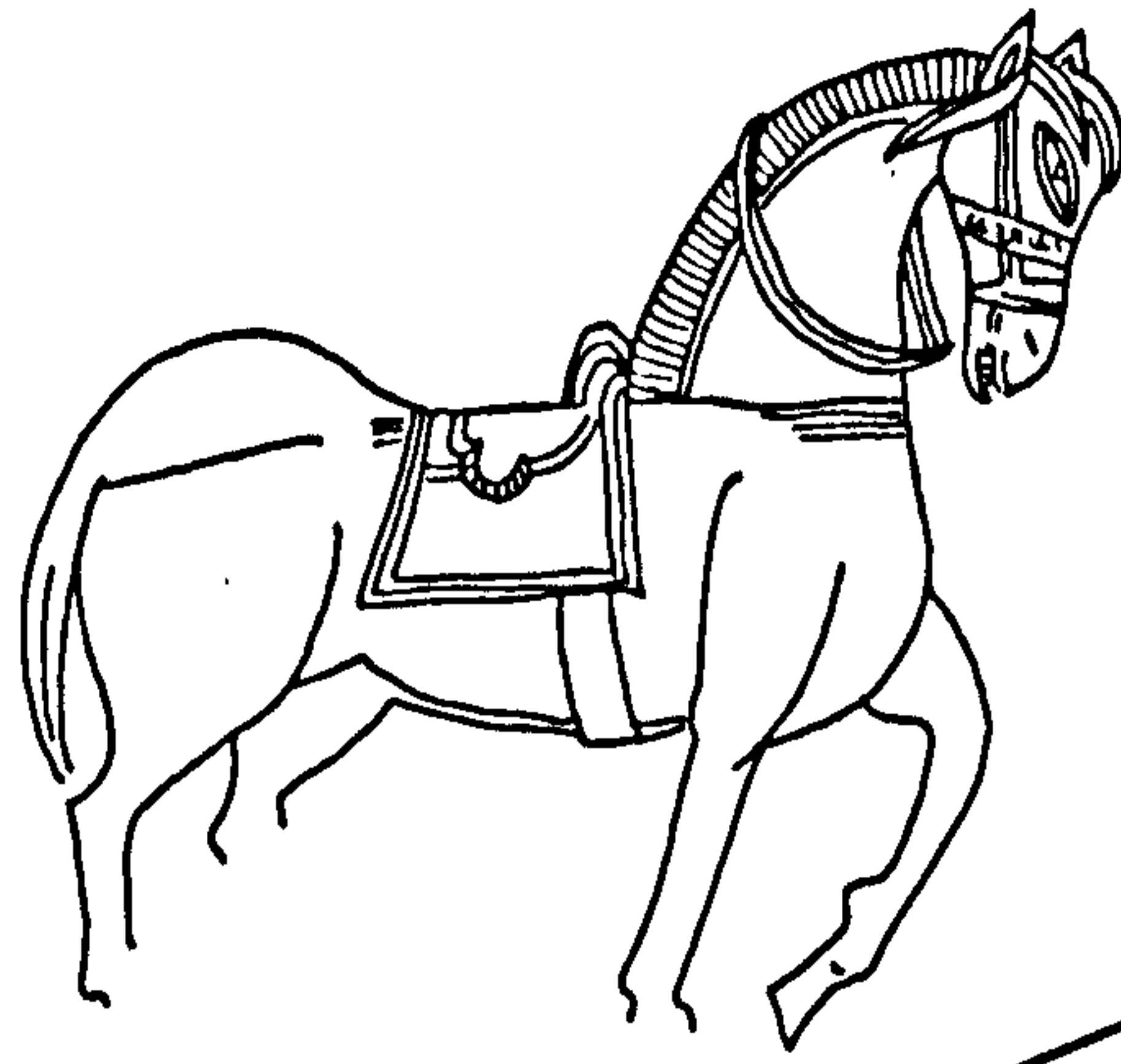
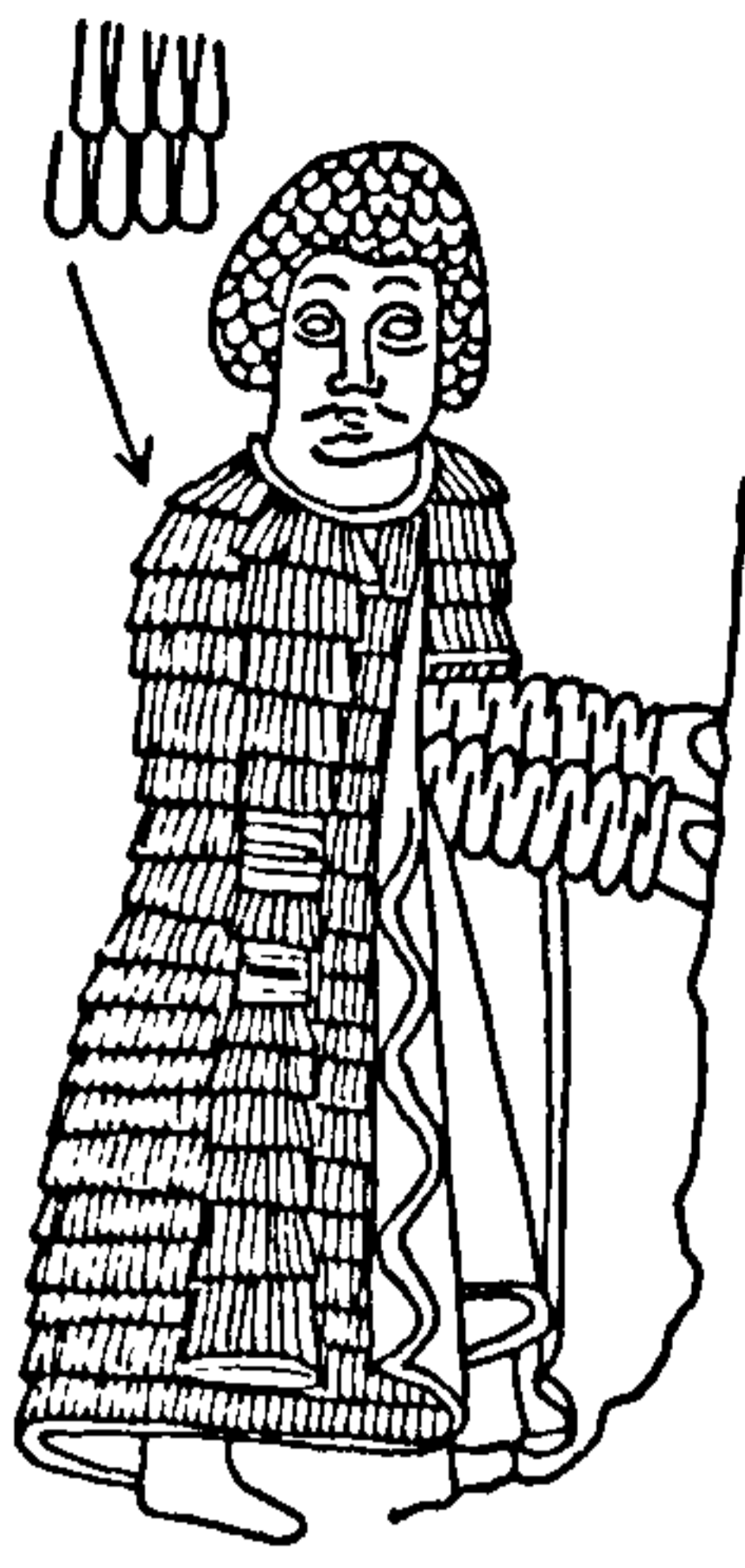
237B



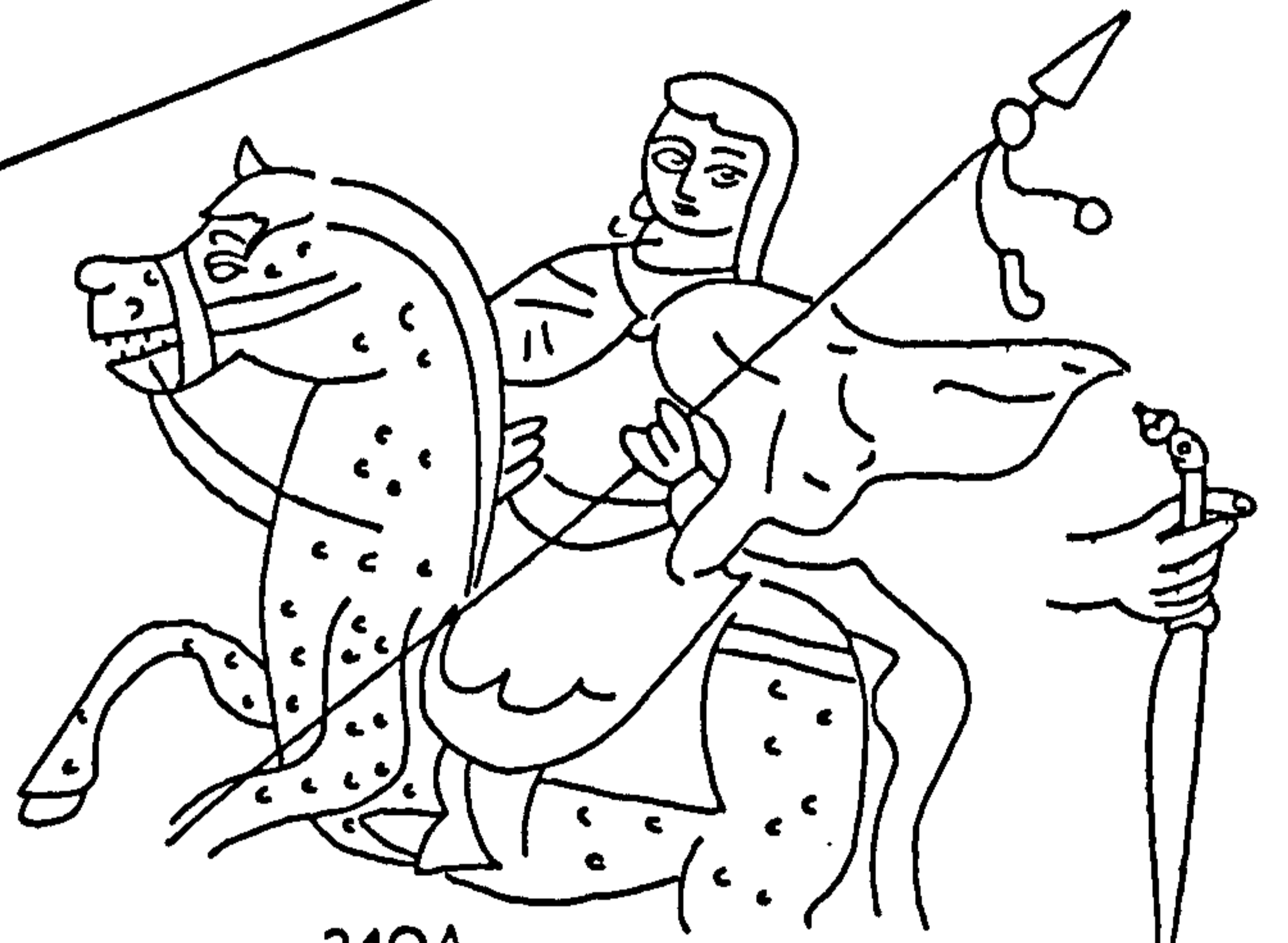
237C



238



239

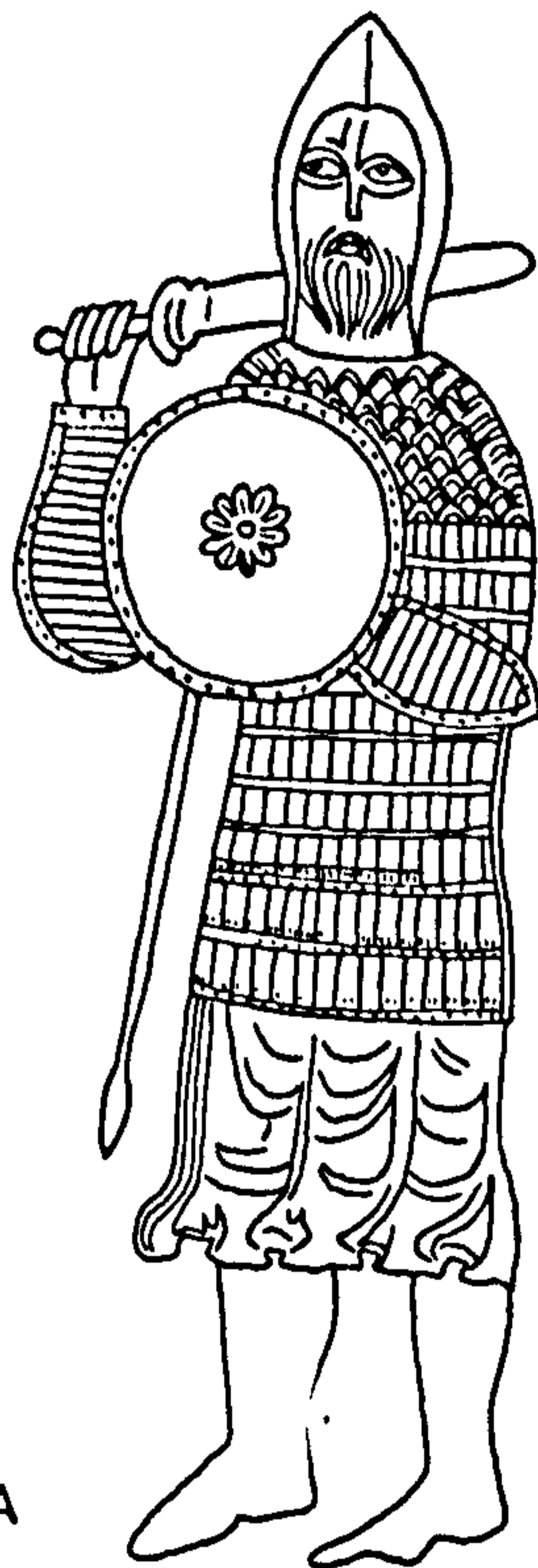


240A

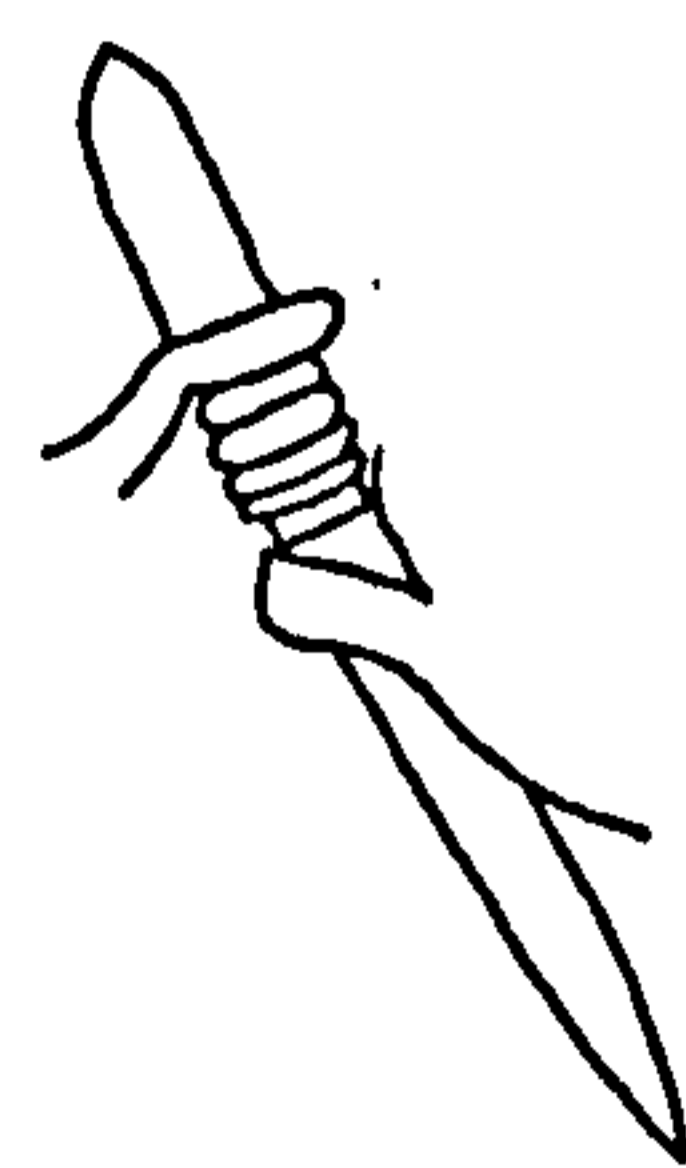
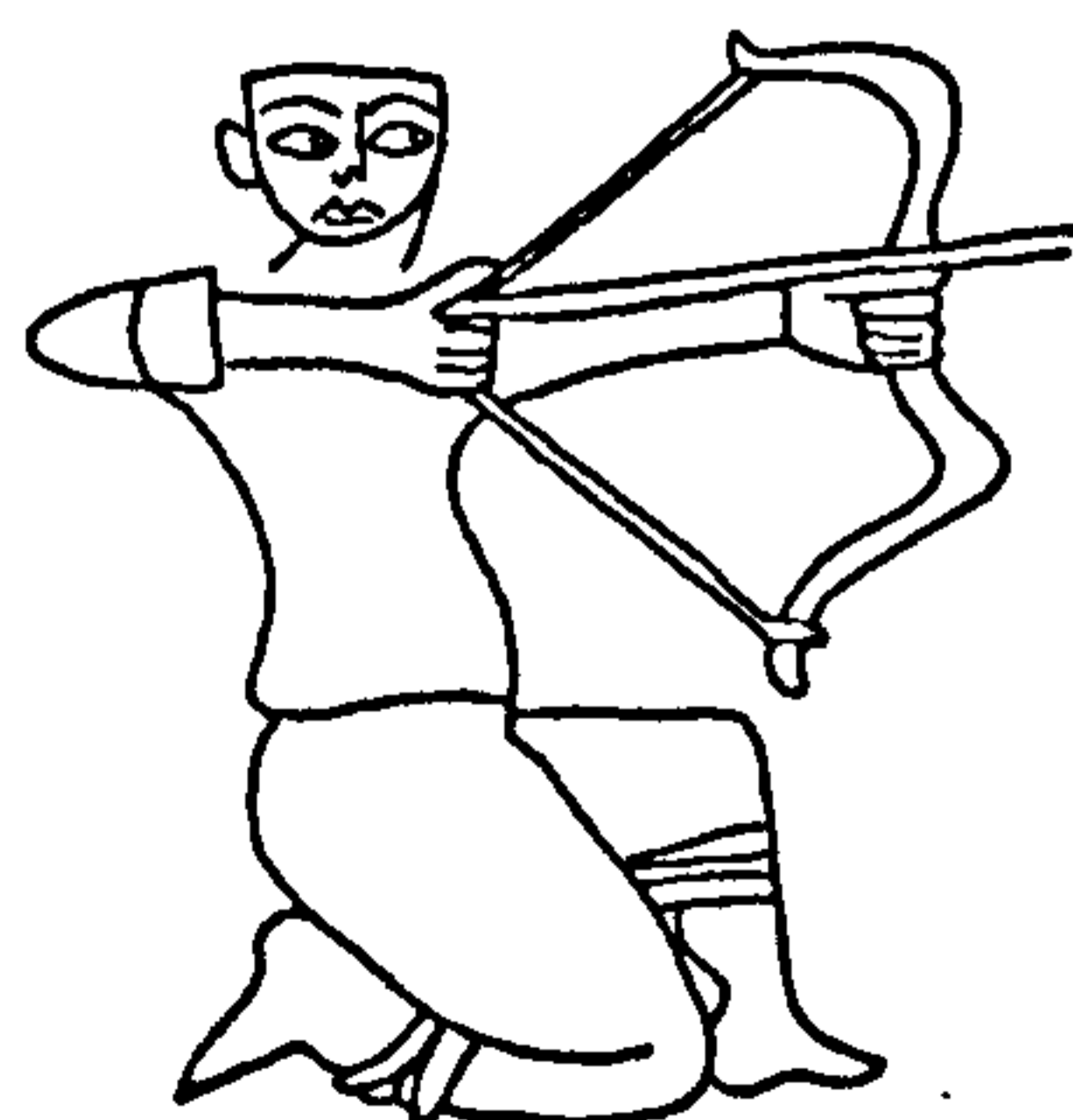
240B



241A

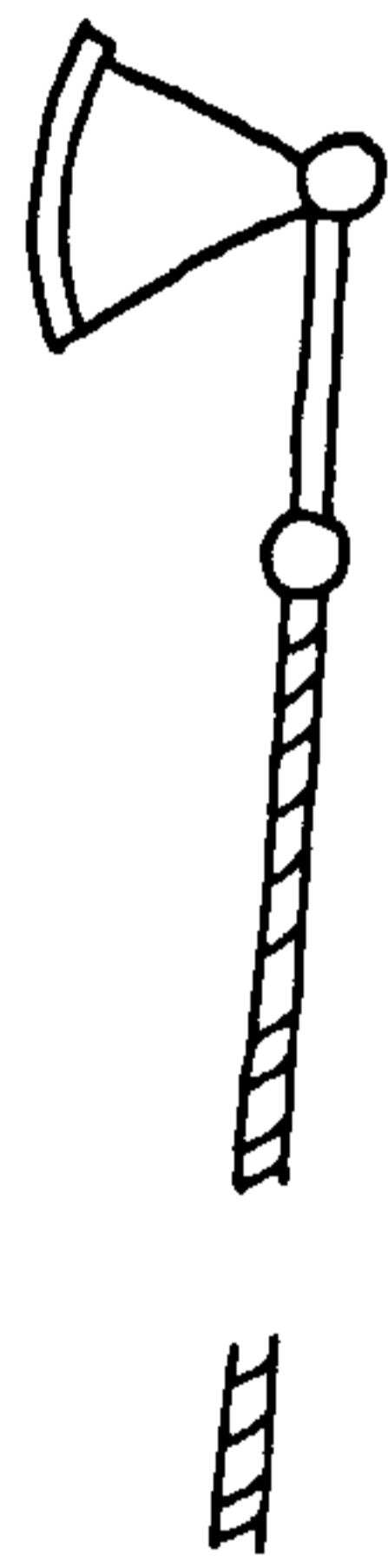
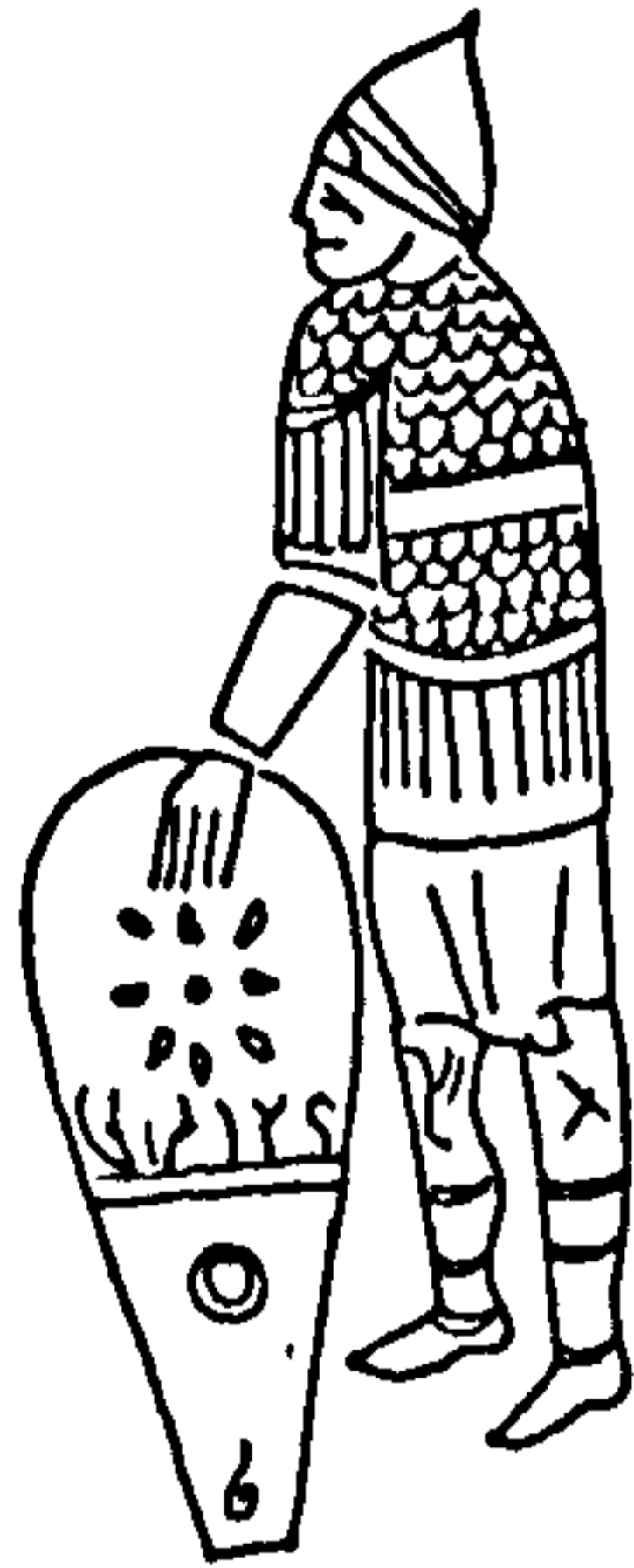
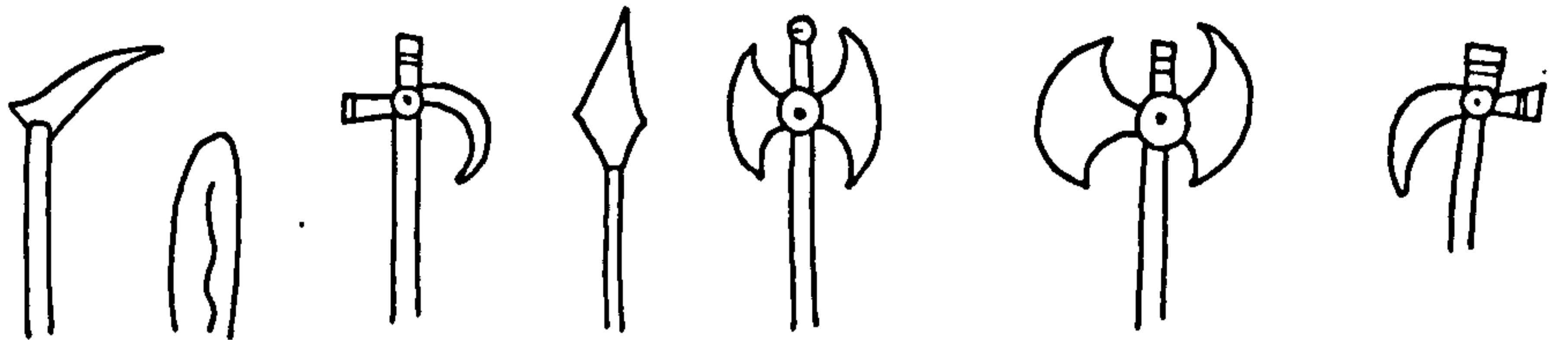
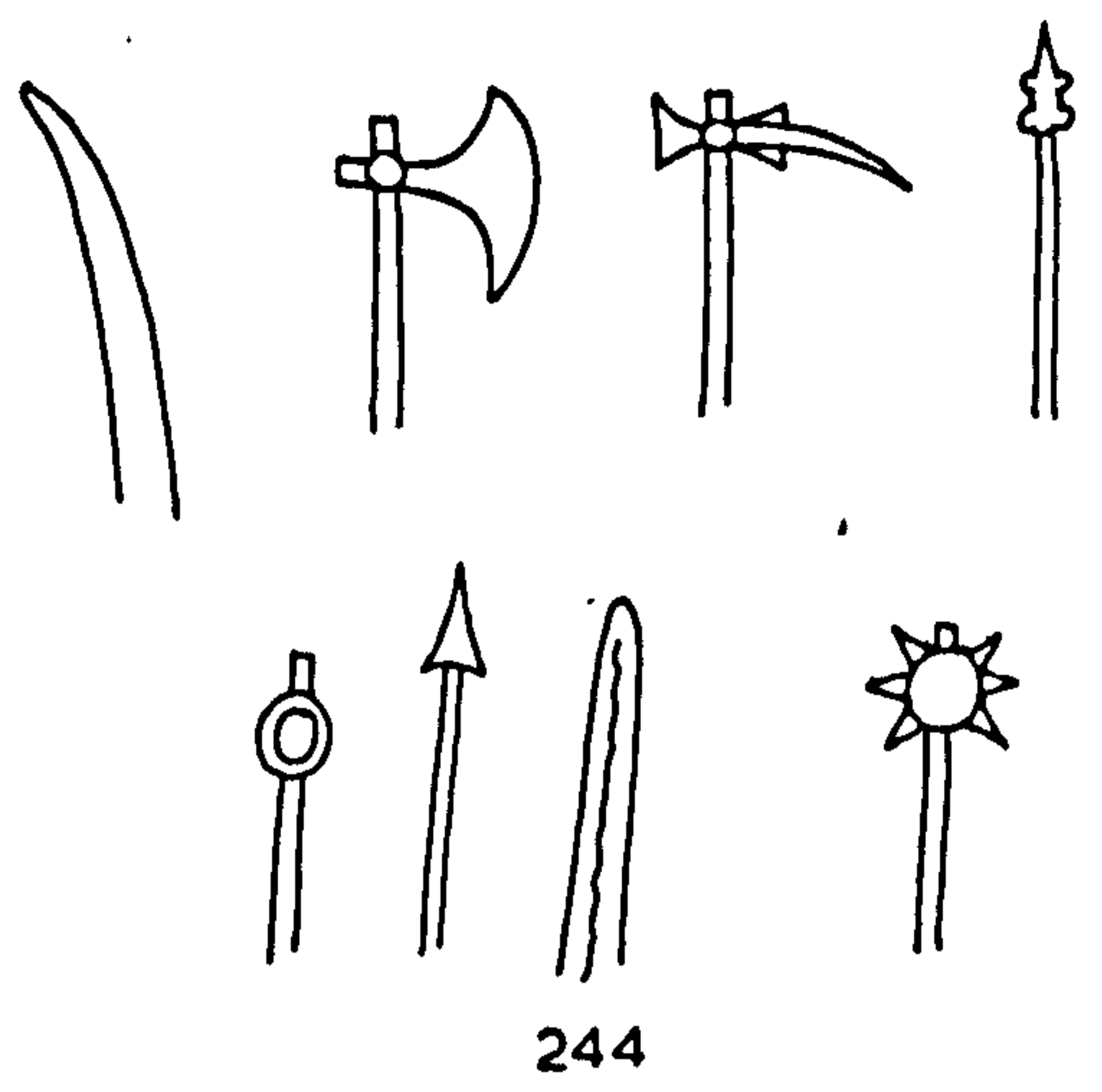
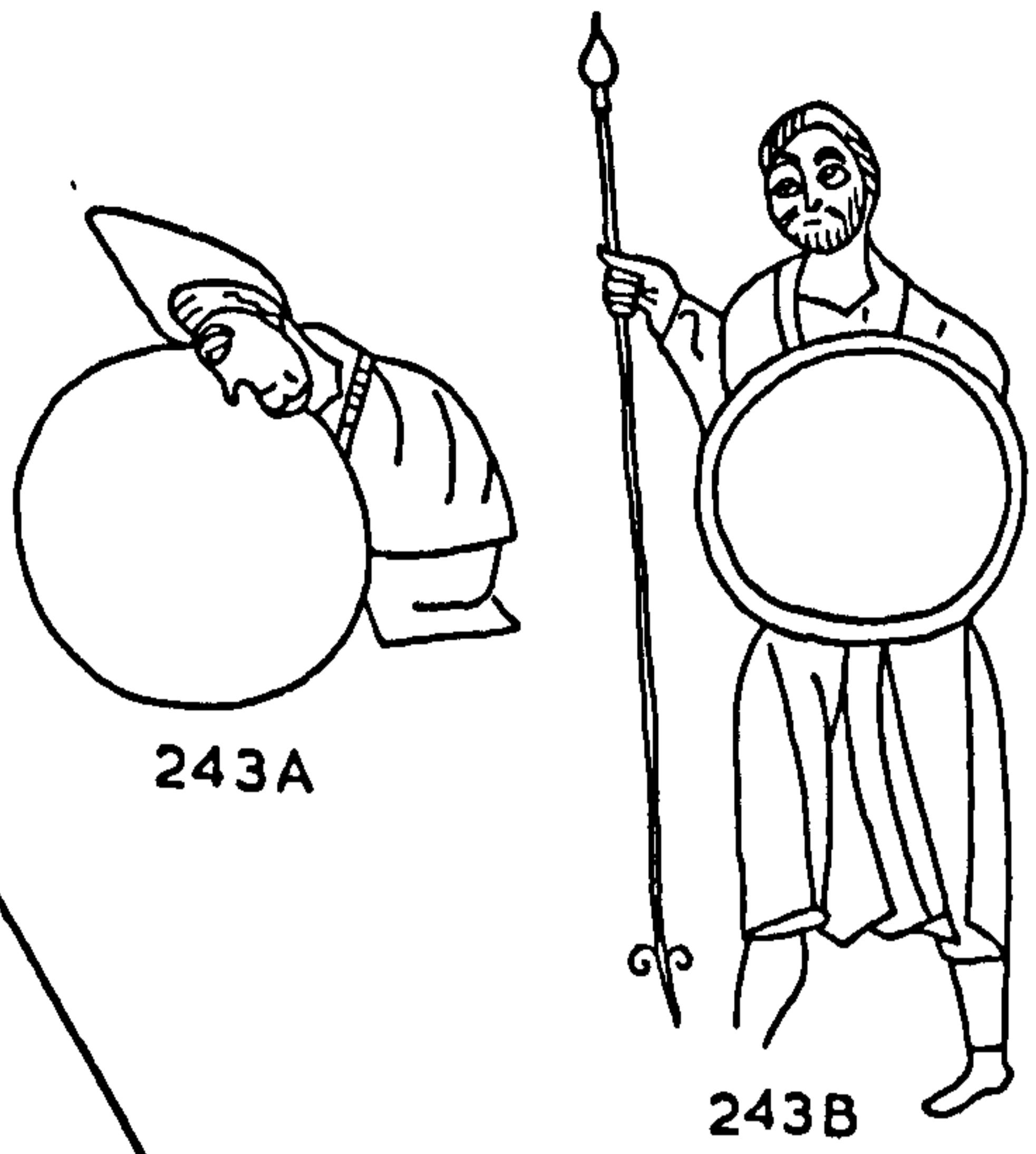


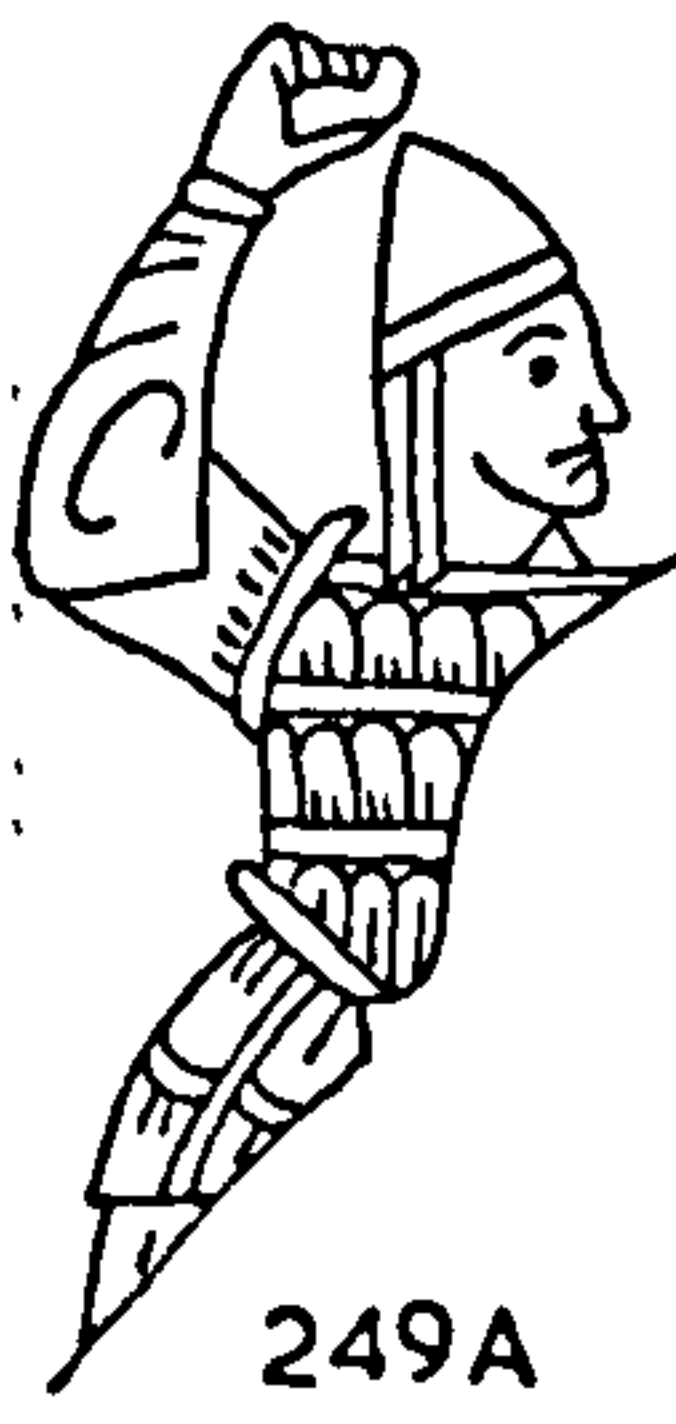
241B



241C







249A



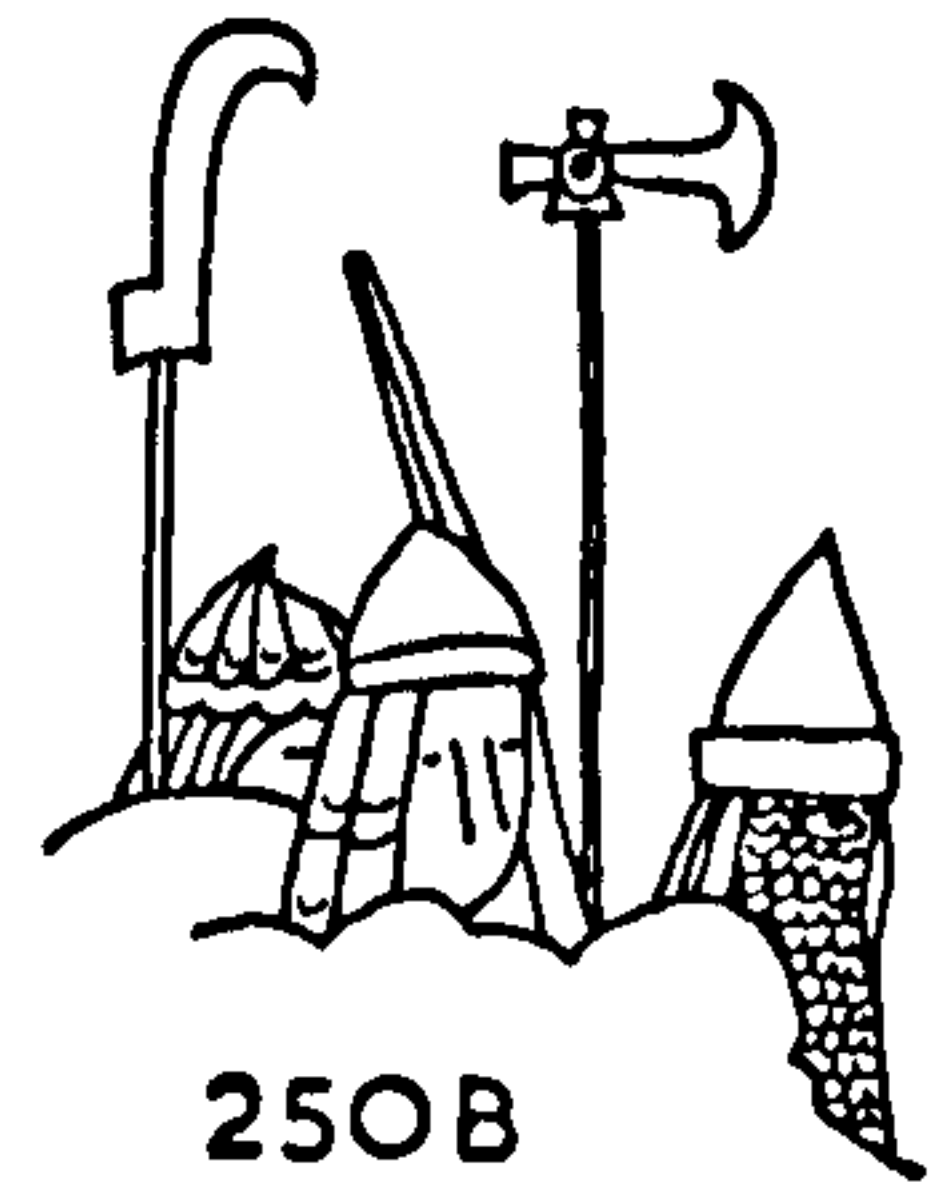
249B



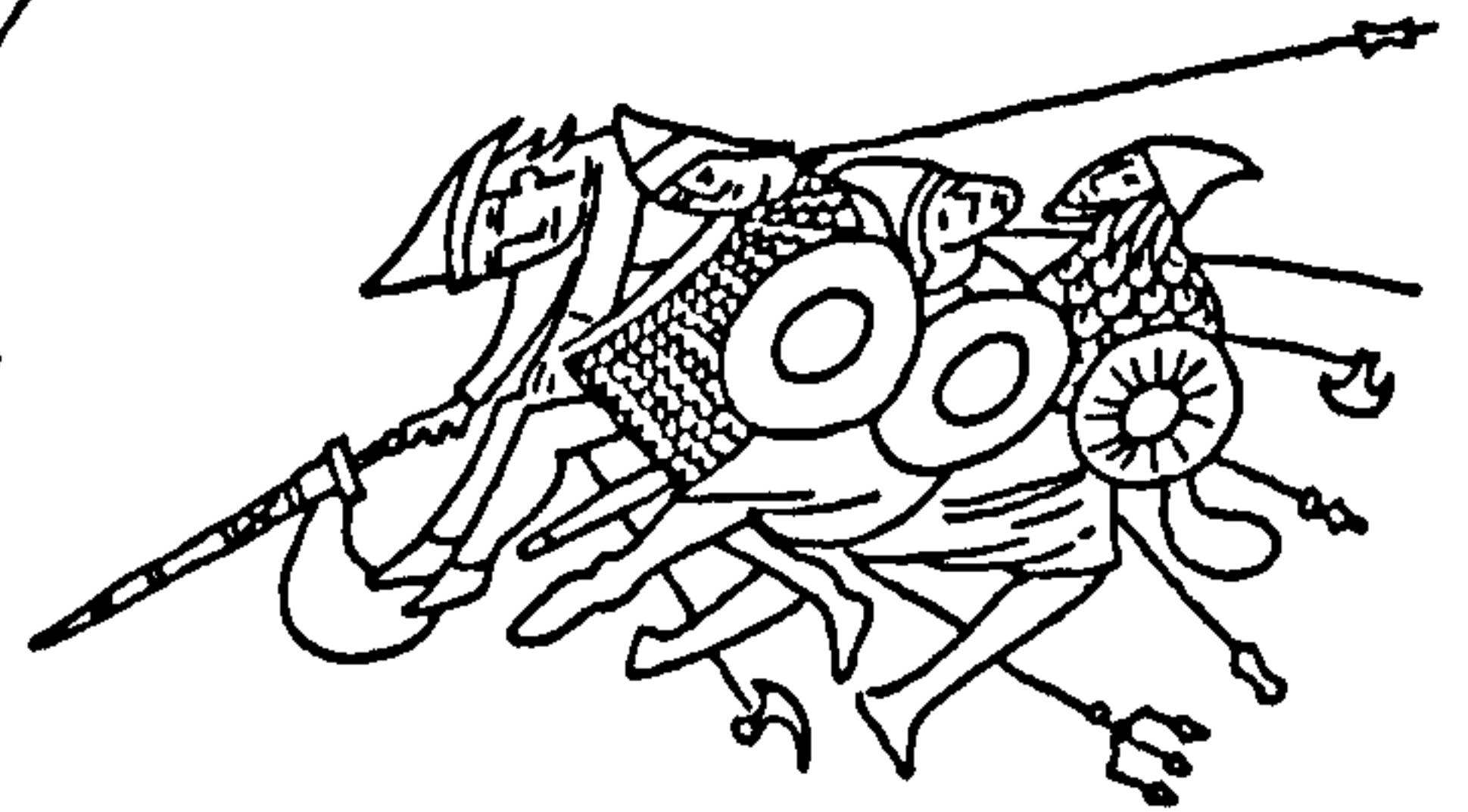
249C



250A



250B



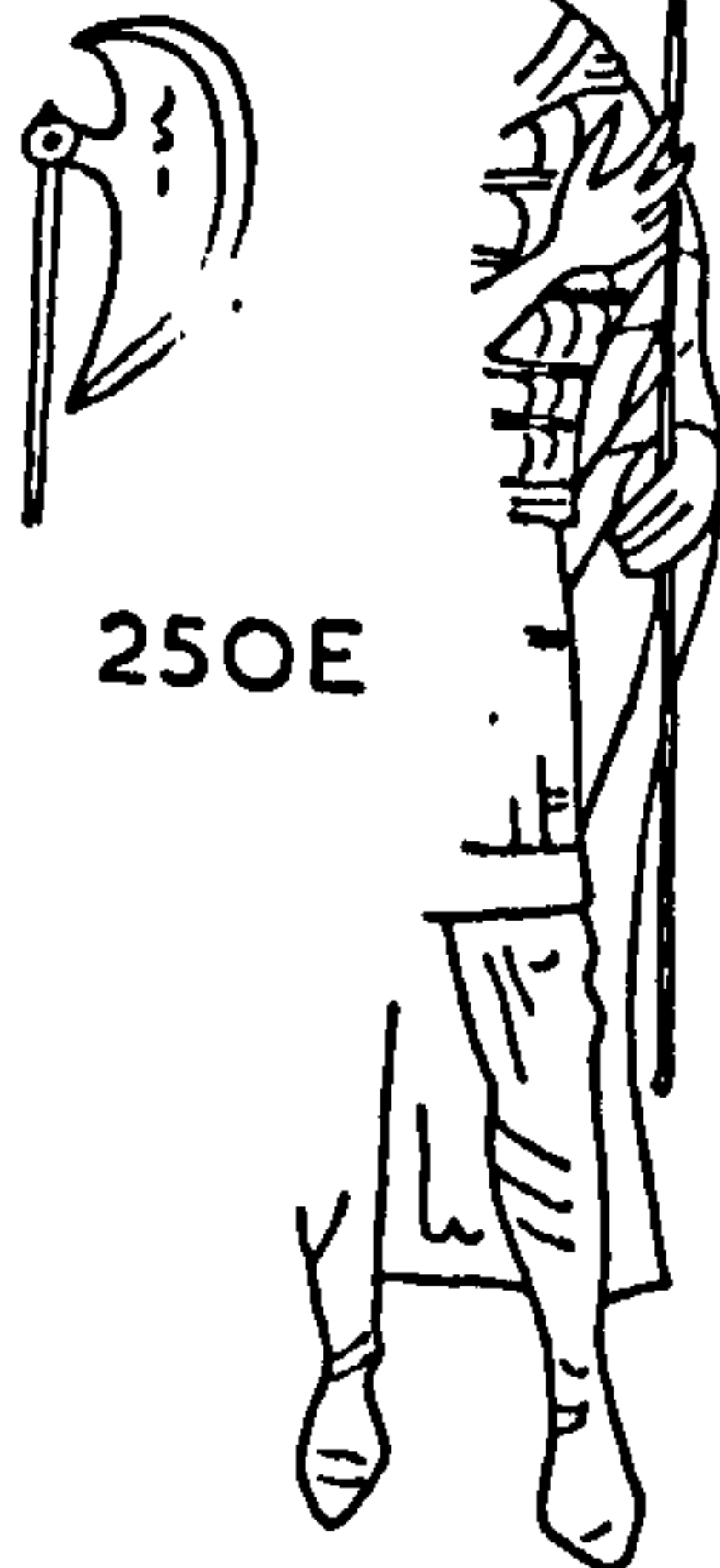
250C



250D

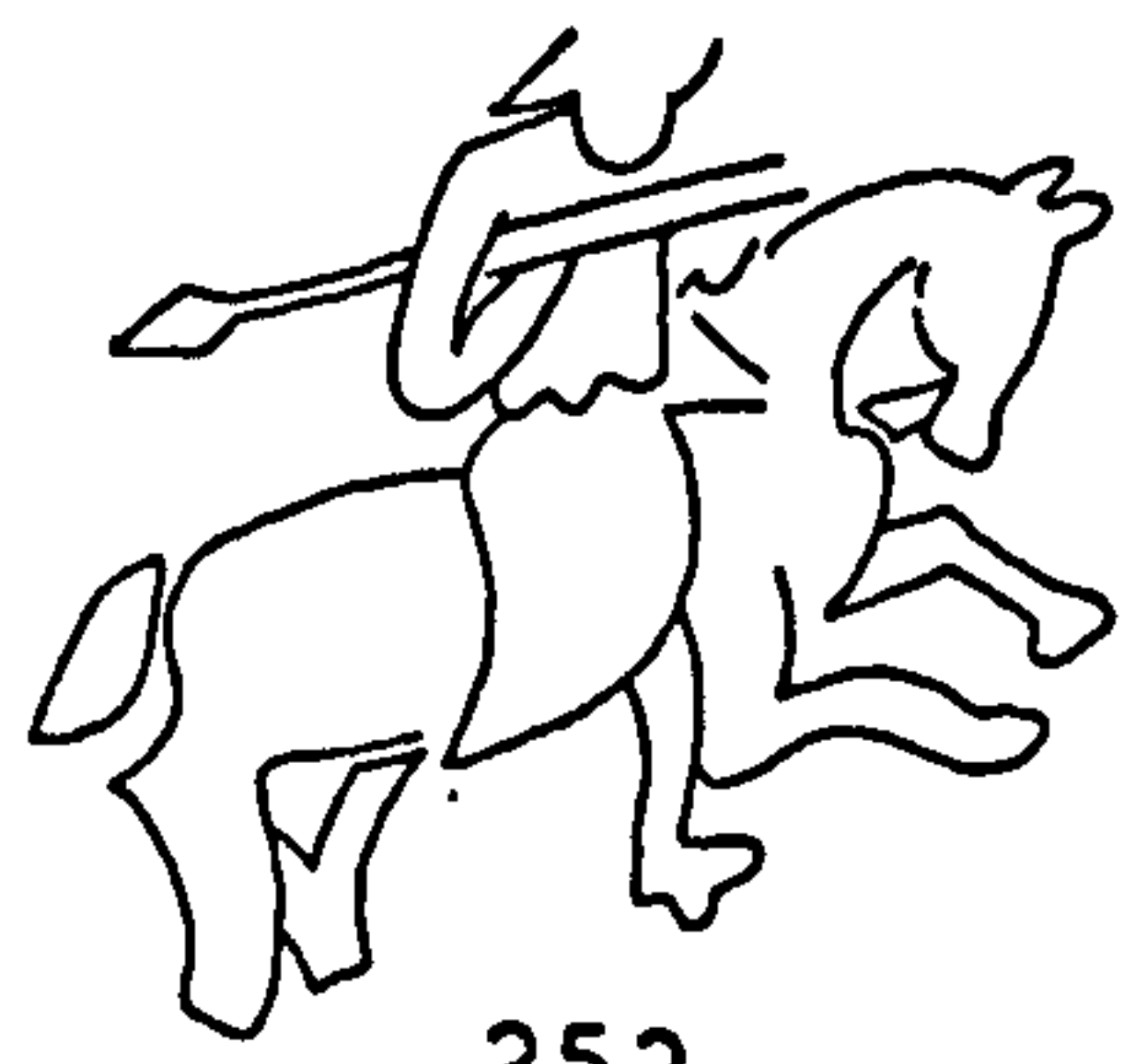


250E



251

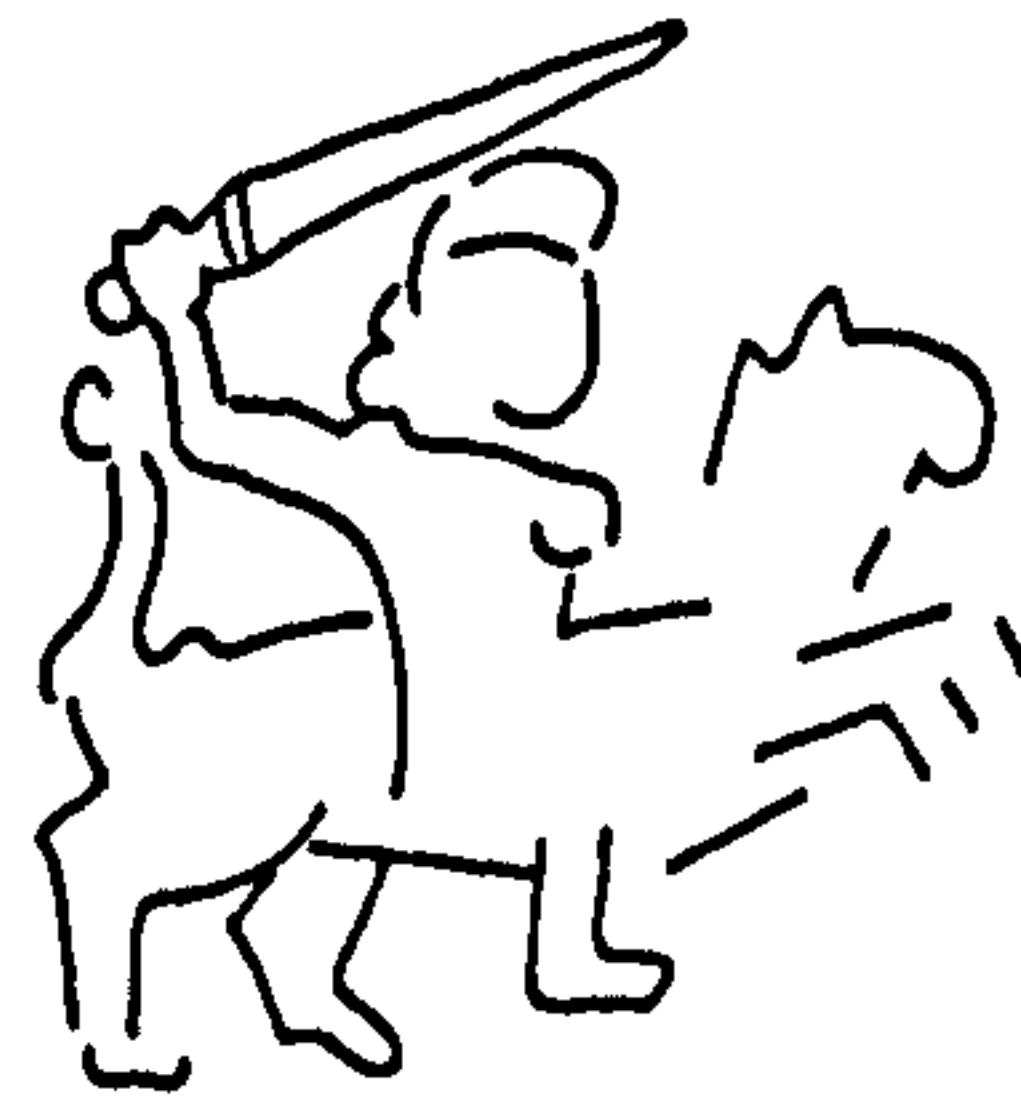




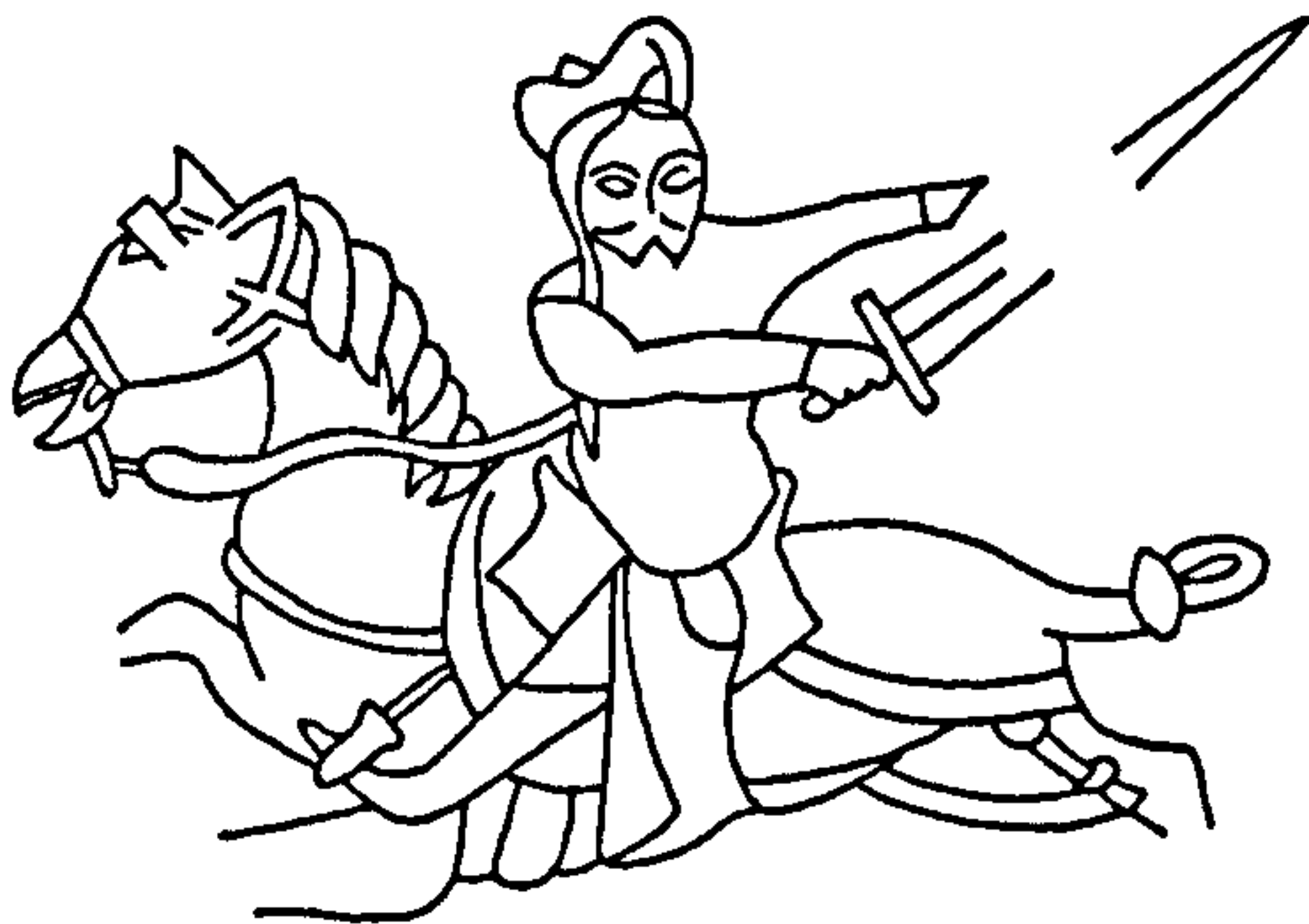
252



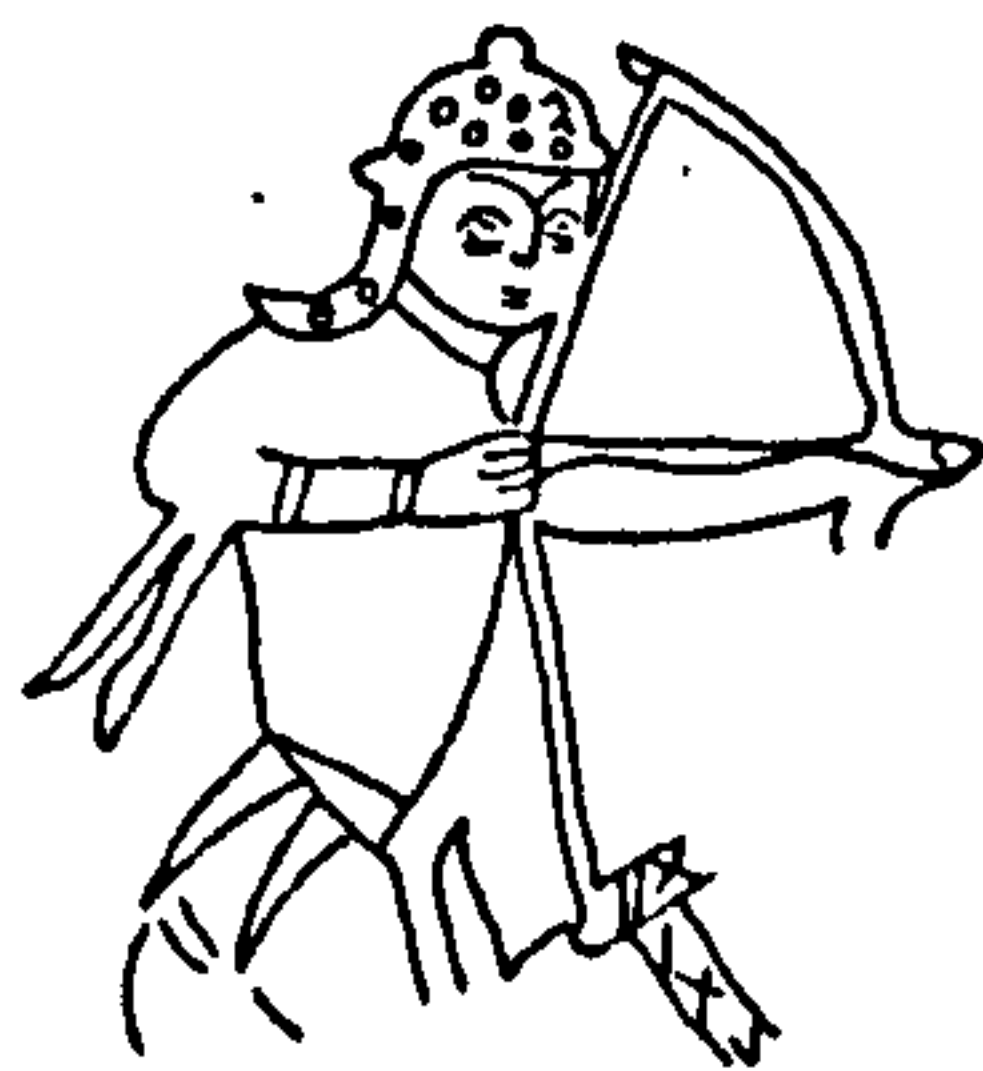
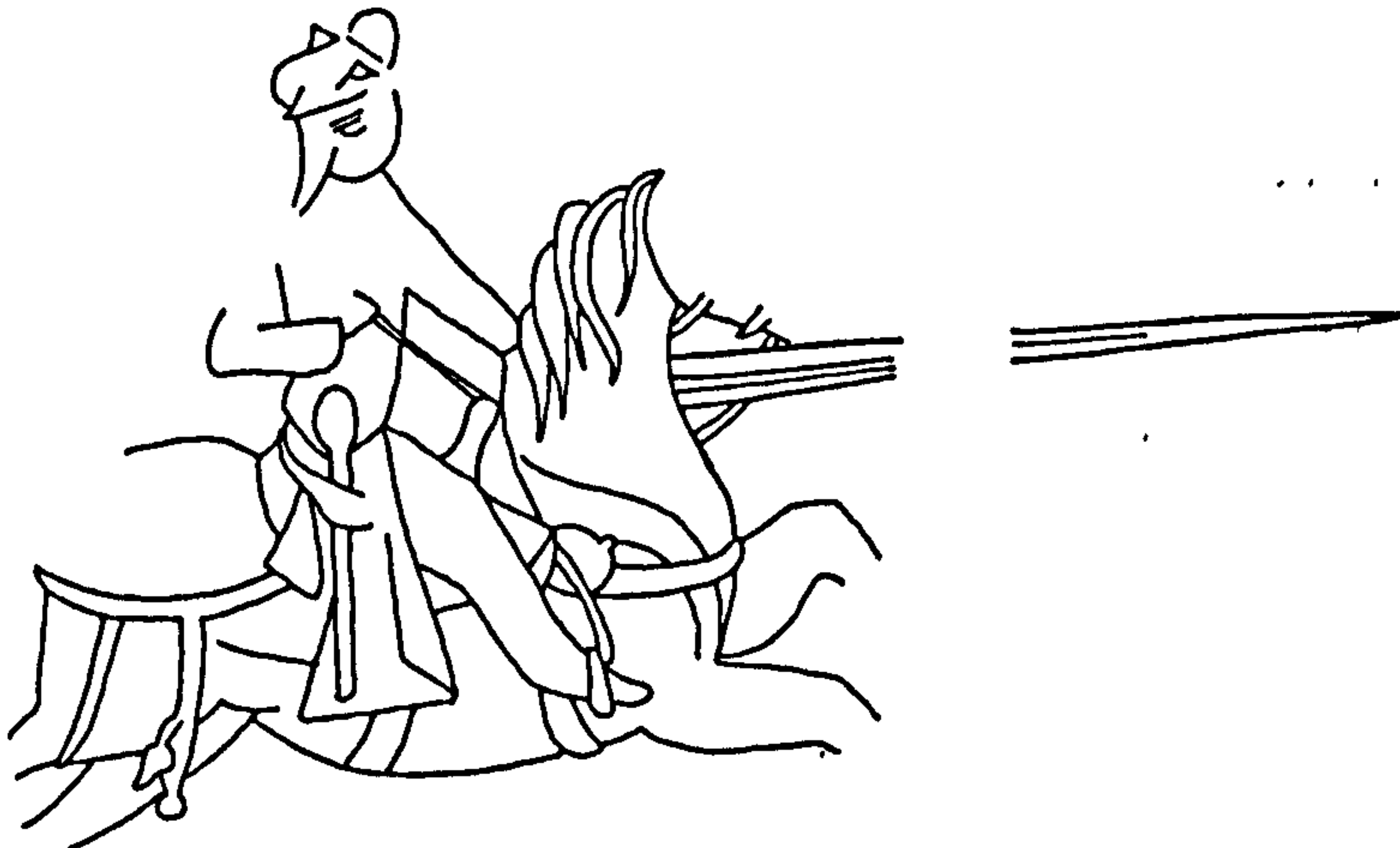
253



254



255



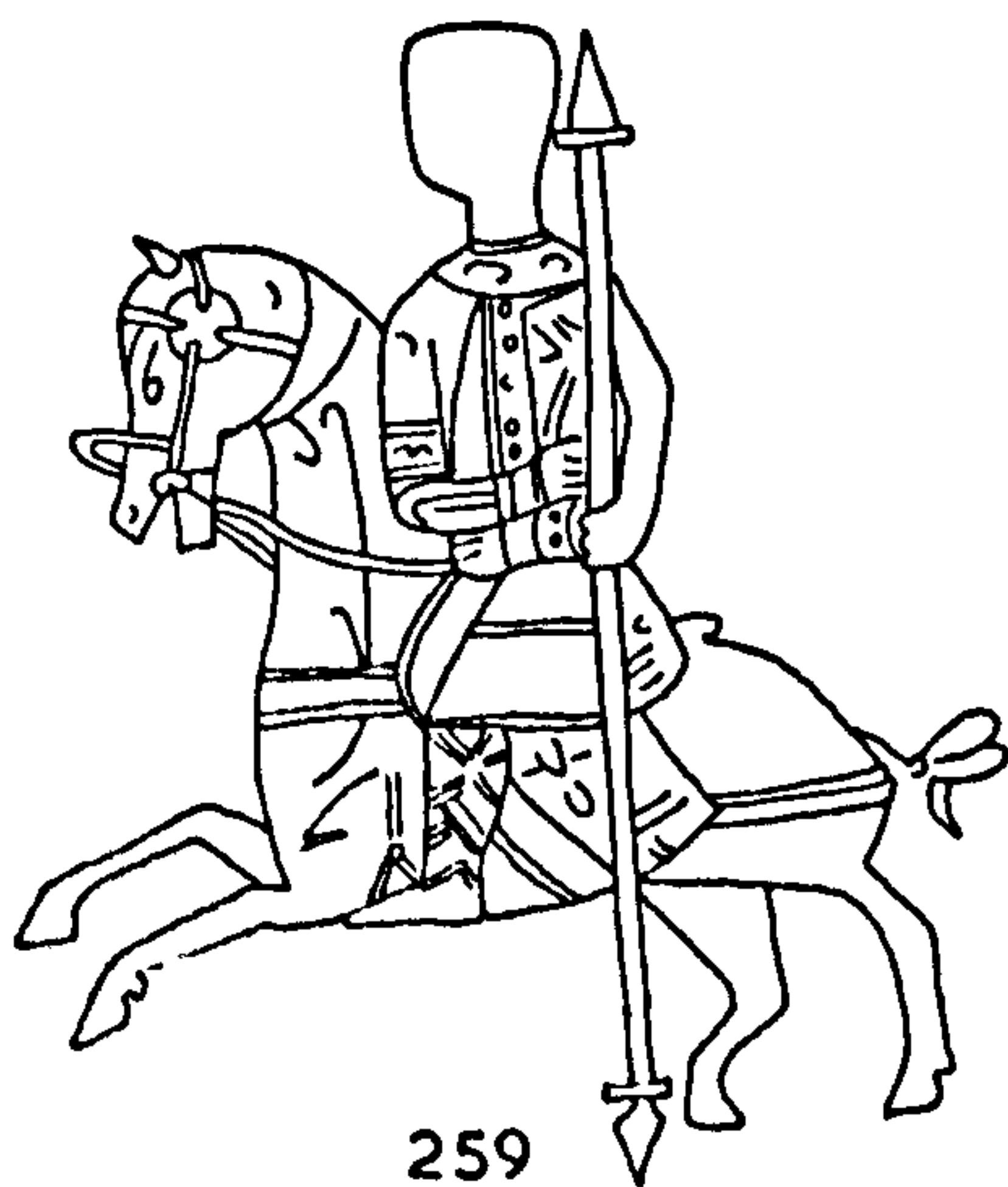
256



257



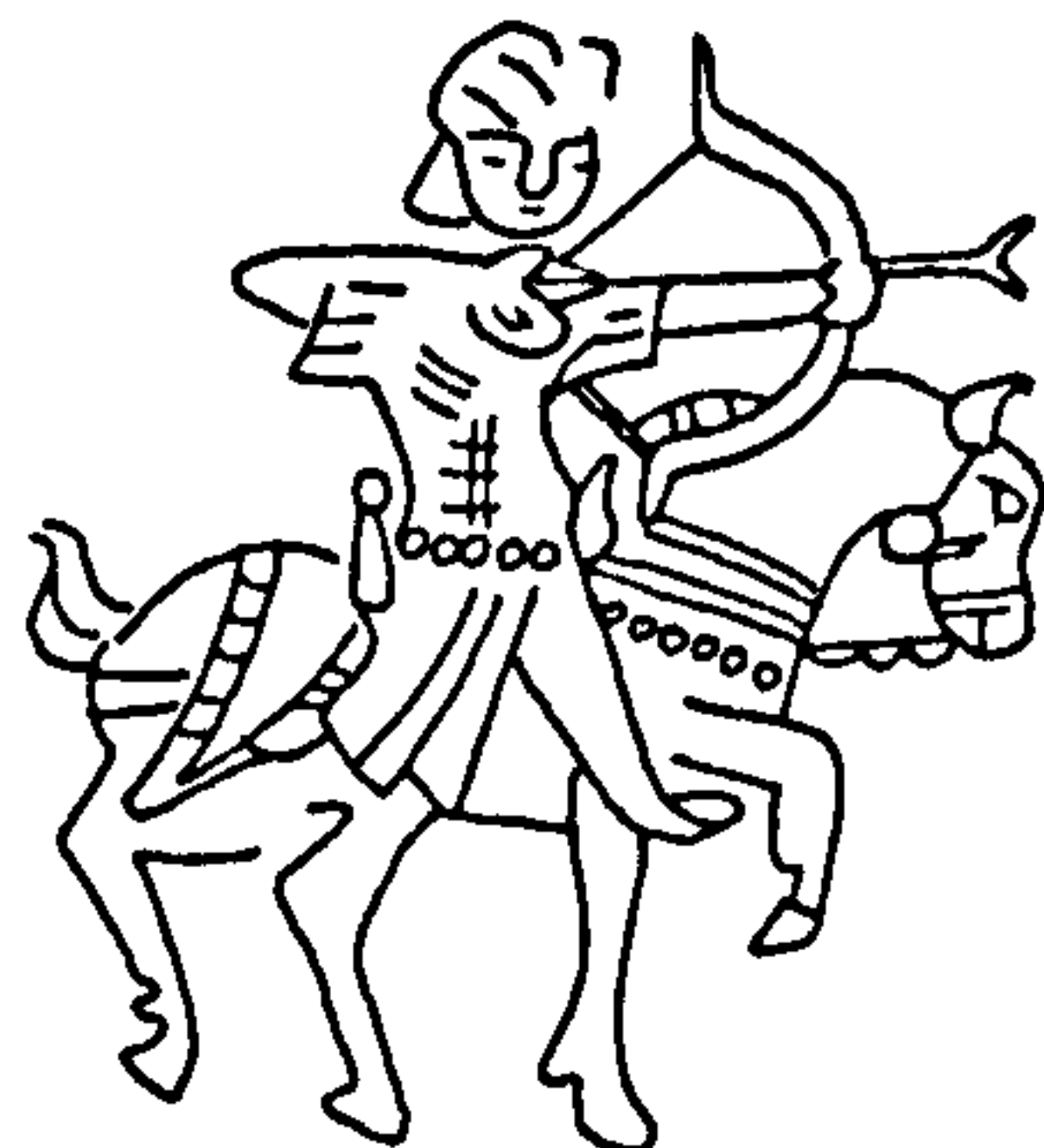
258



259



260



261



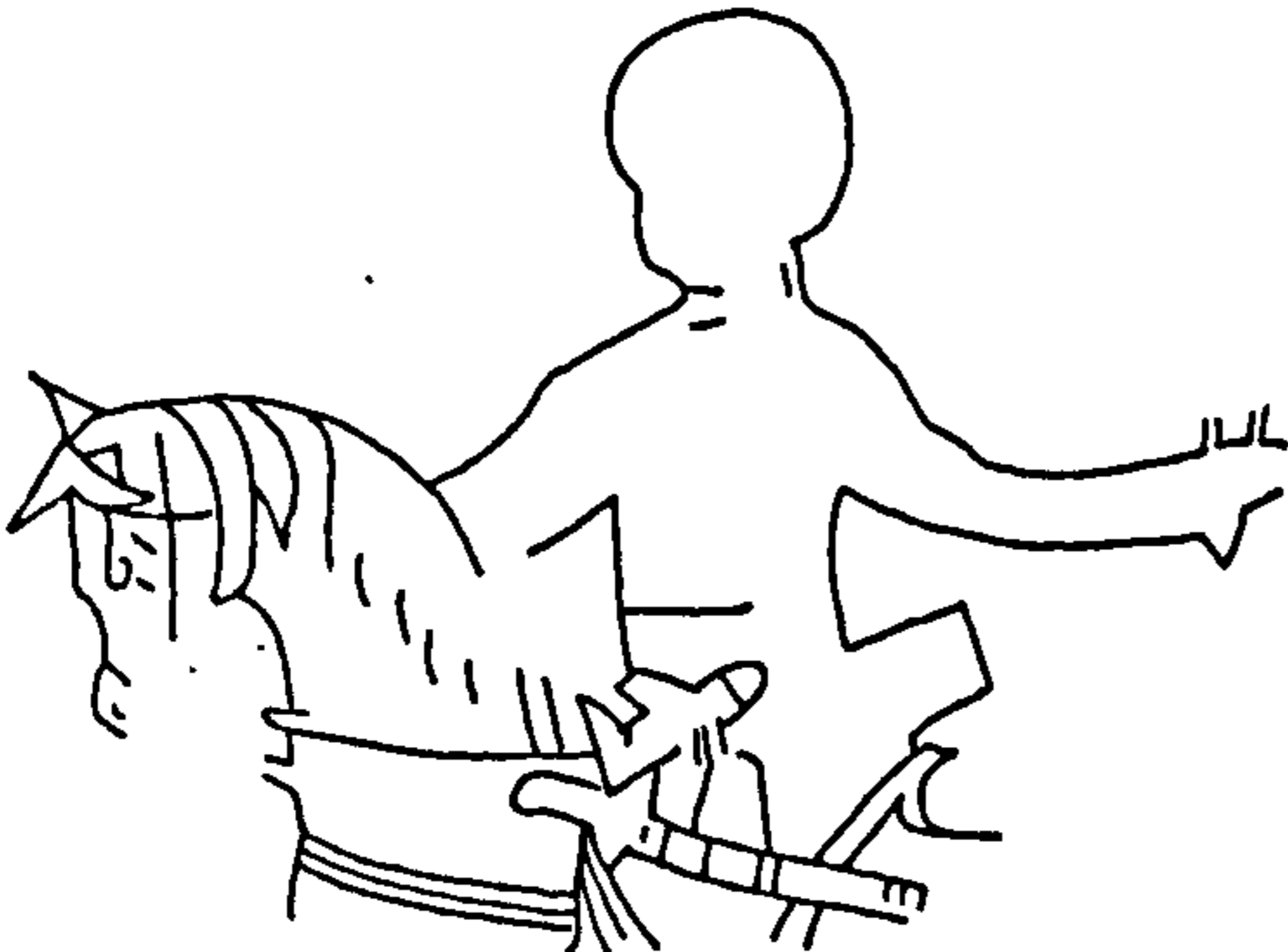
262A



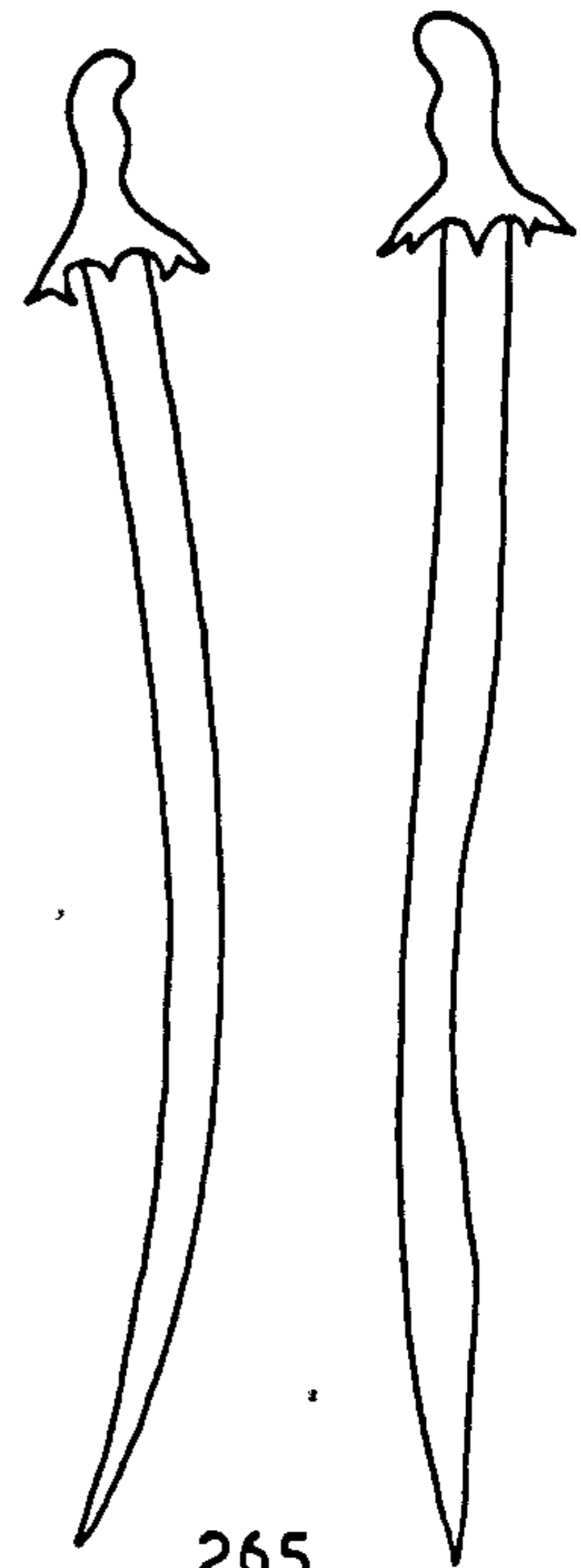
262B



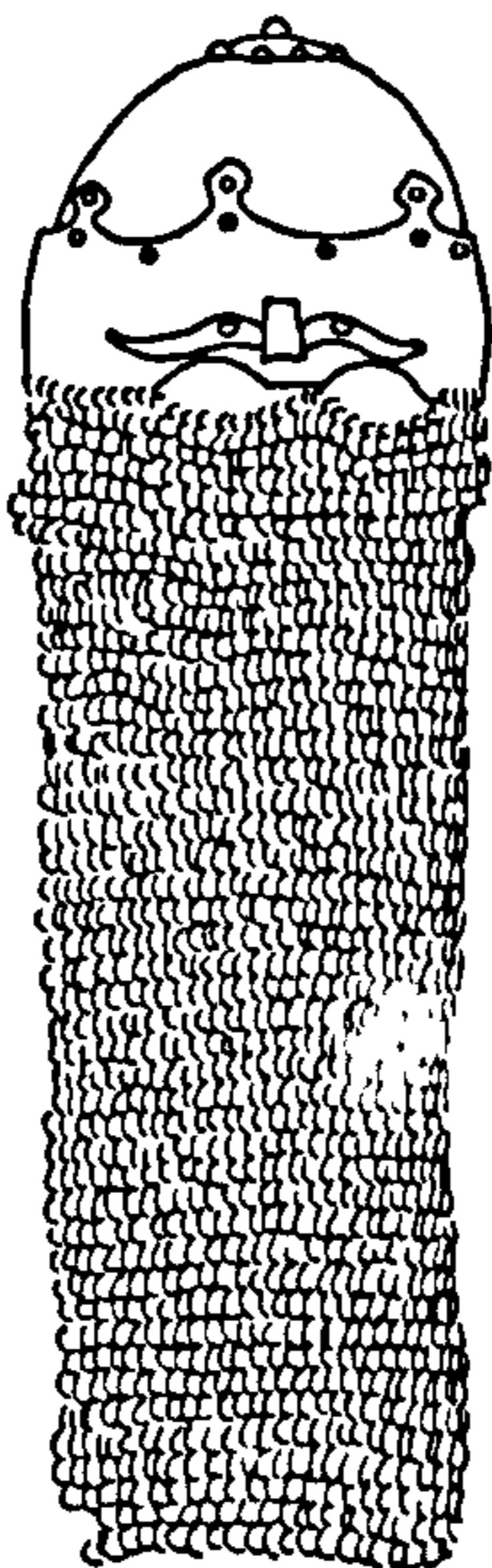
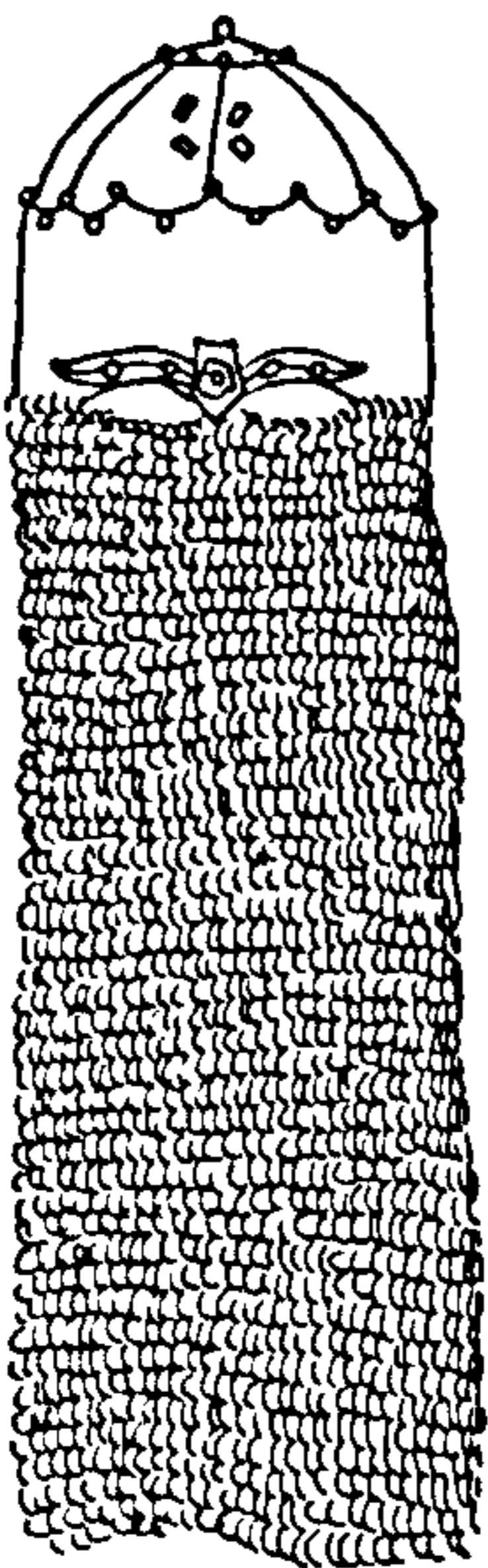
263



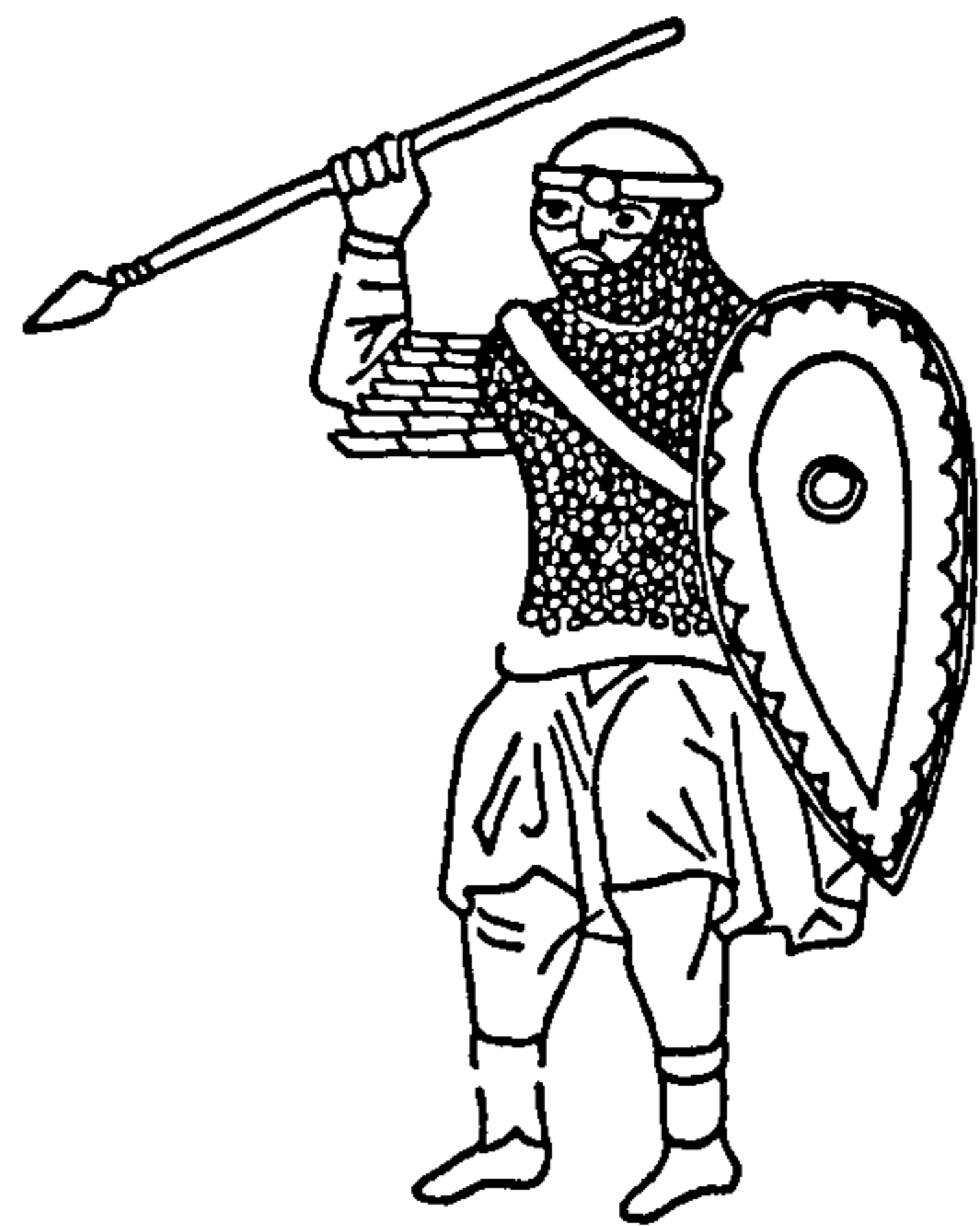
264



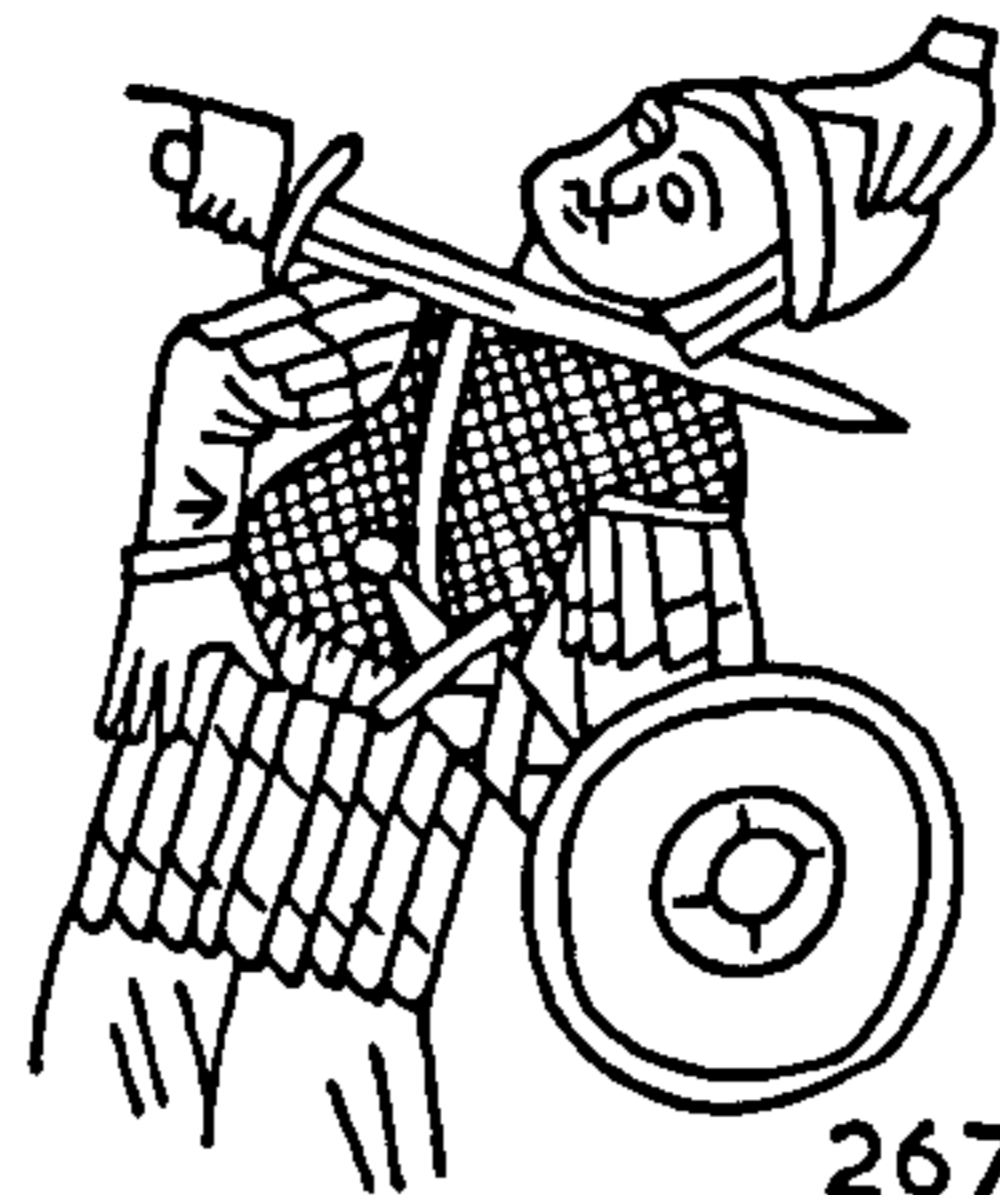
265



266



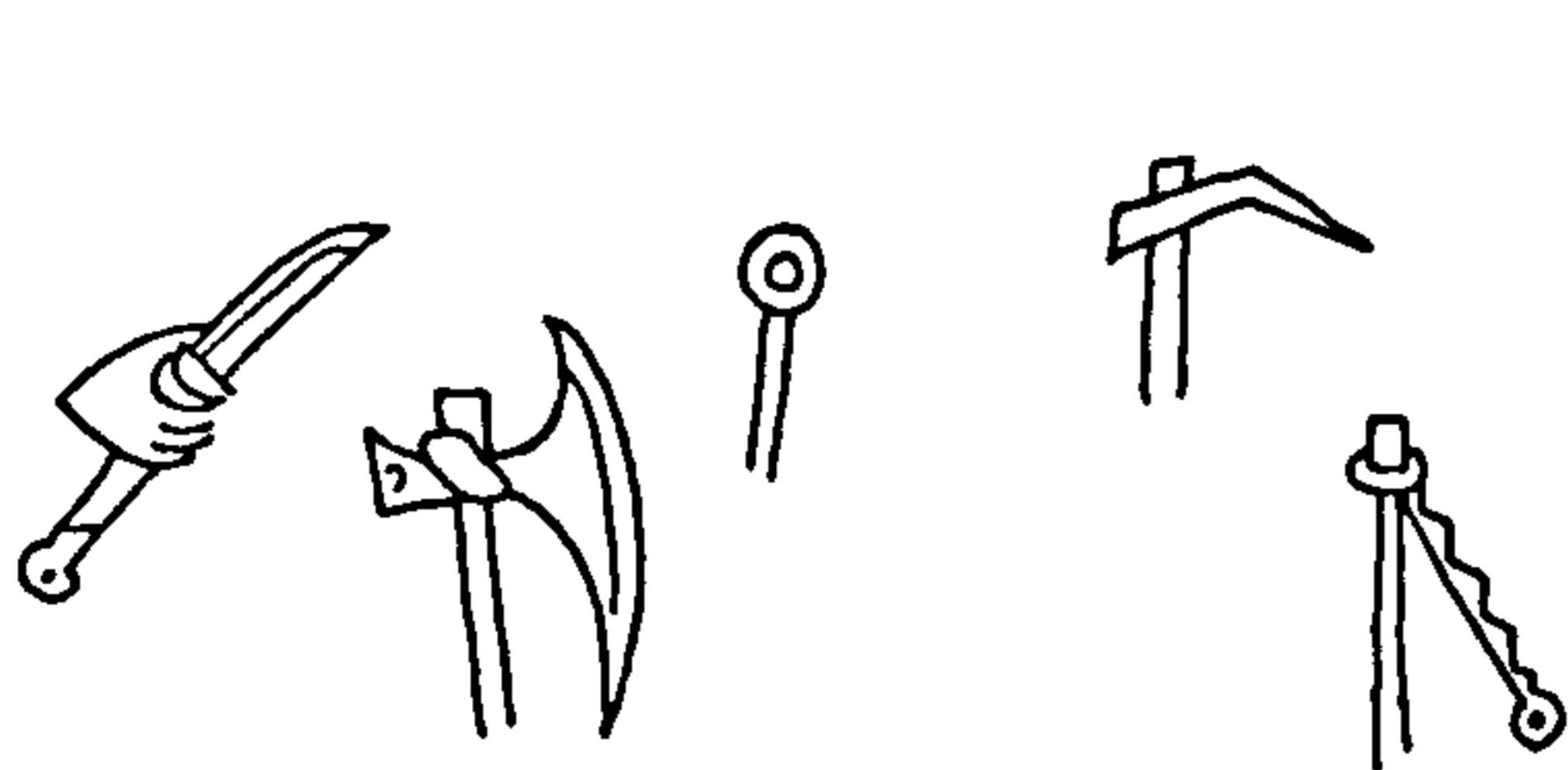
267A



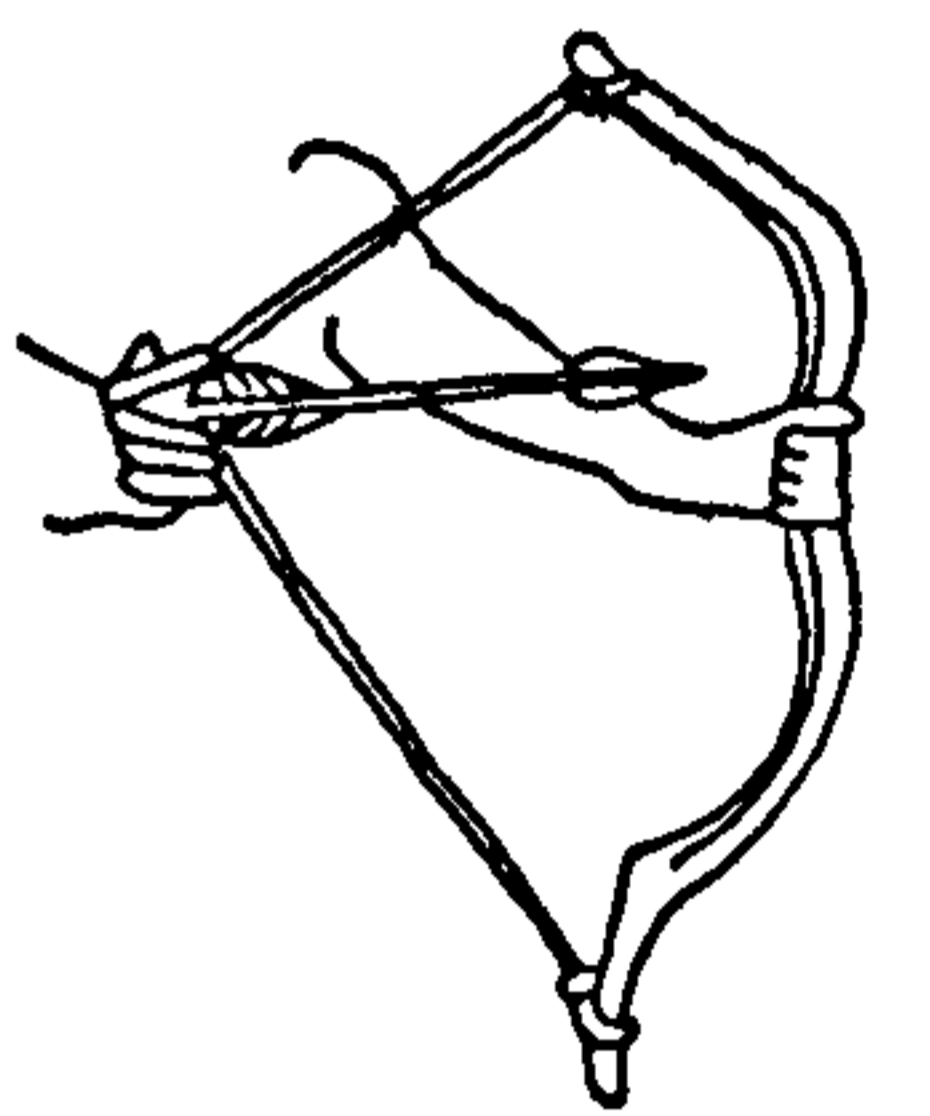
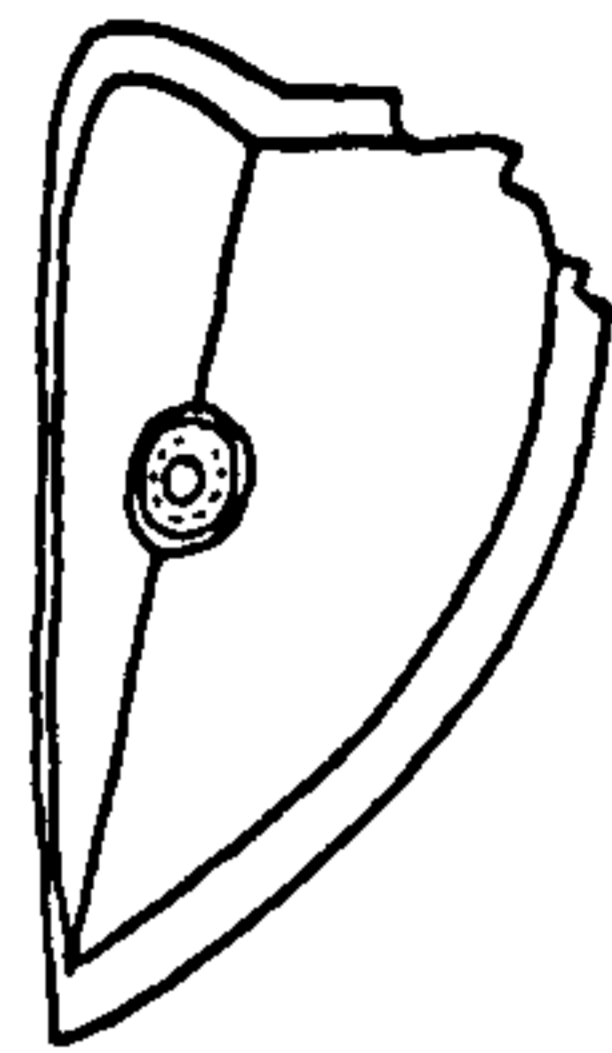
267B



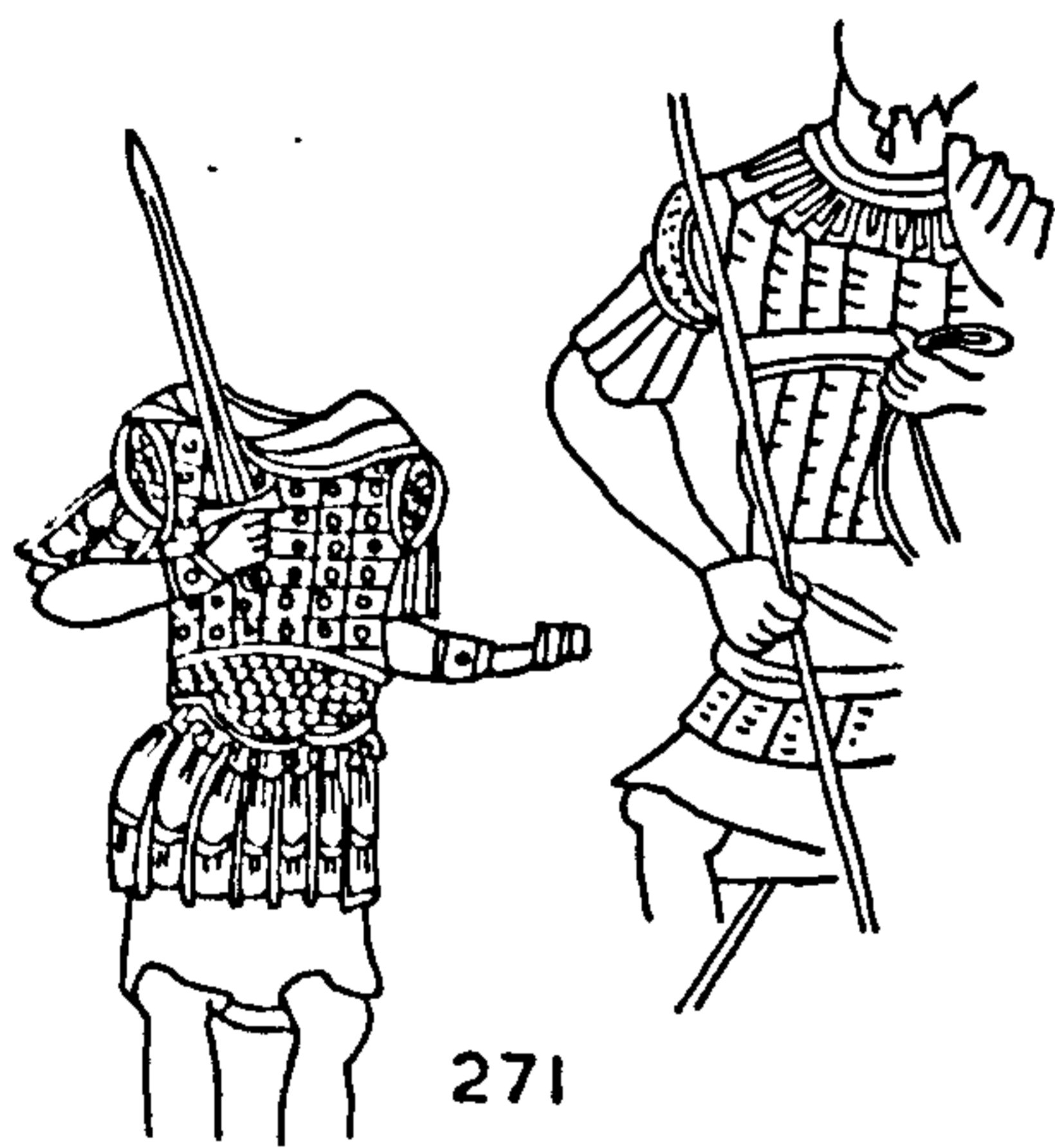
267C



268



269



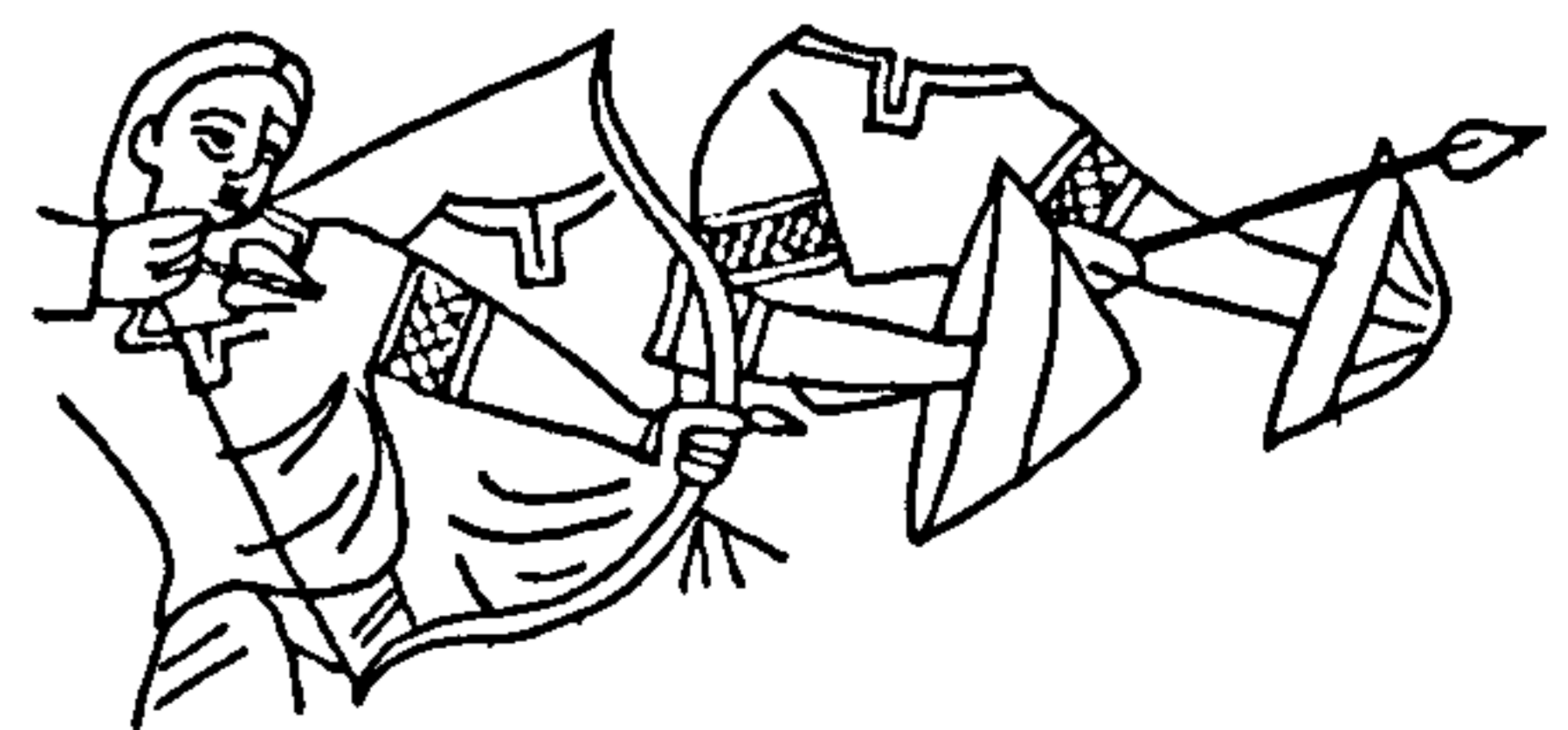
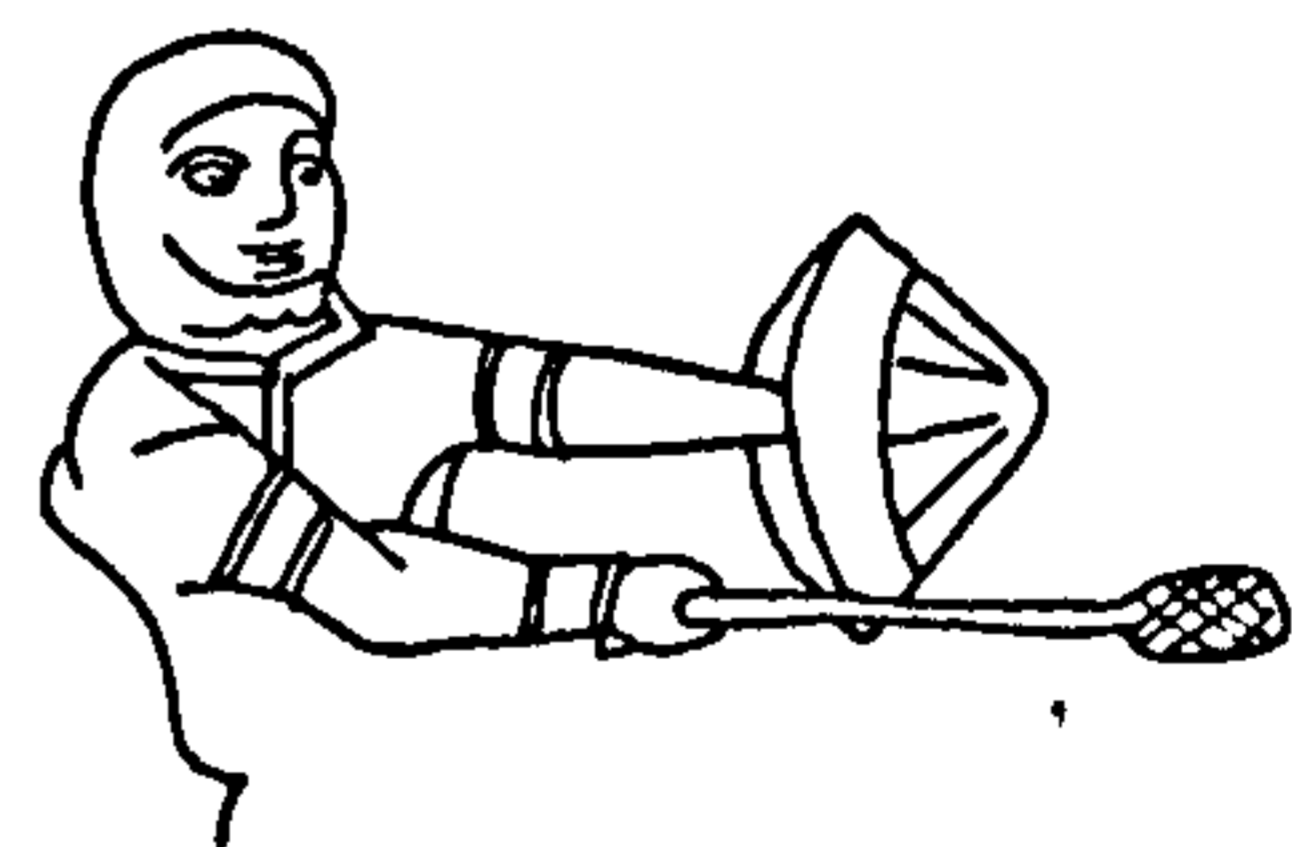
271



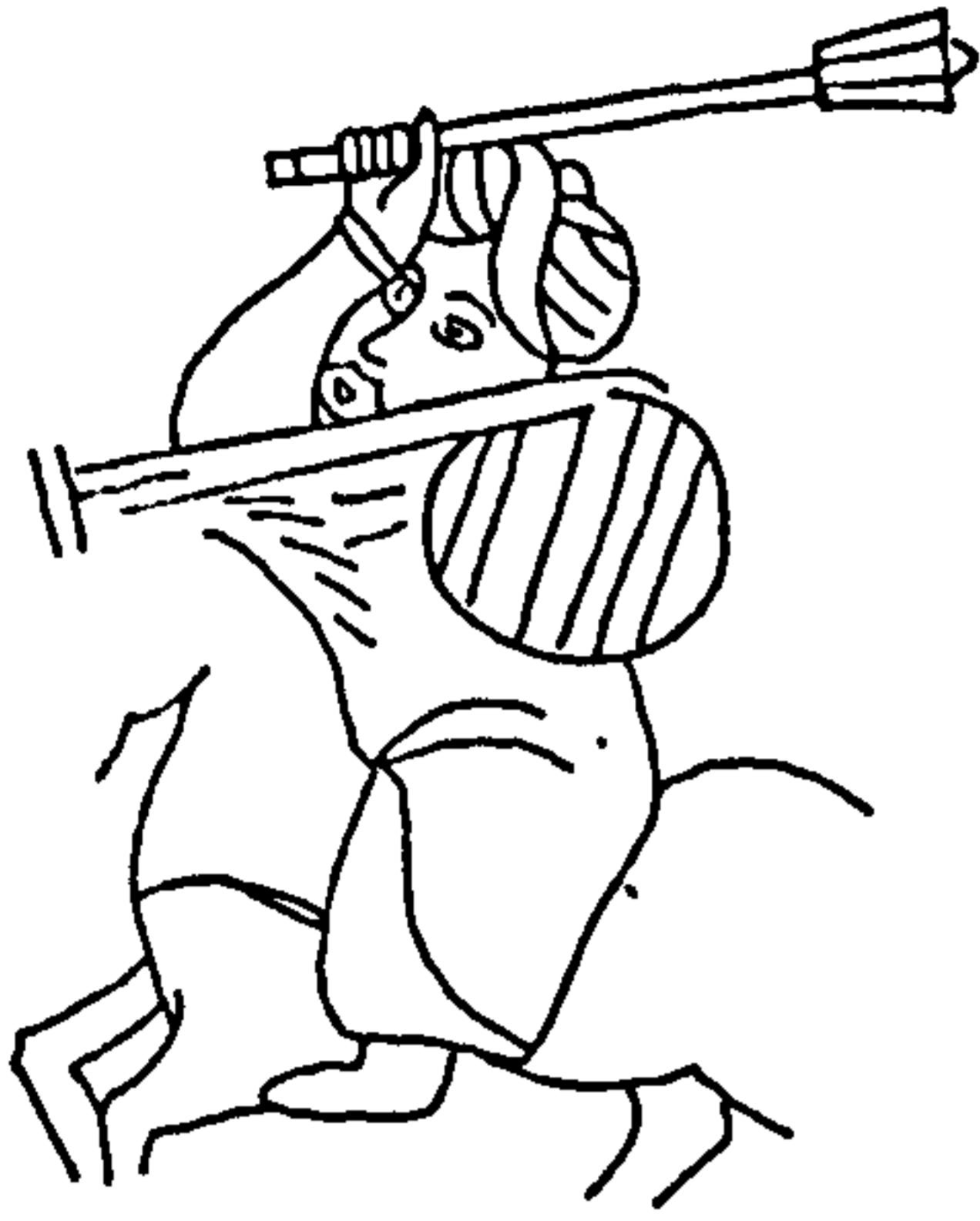
270



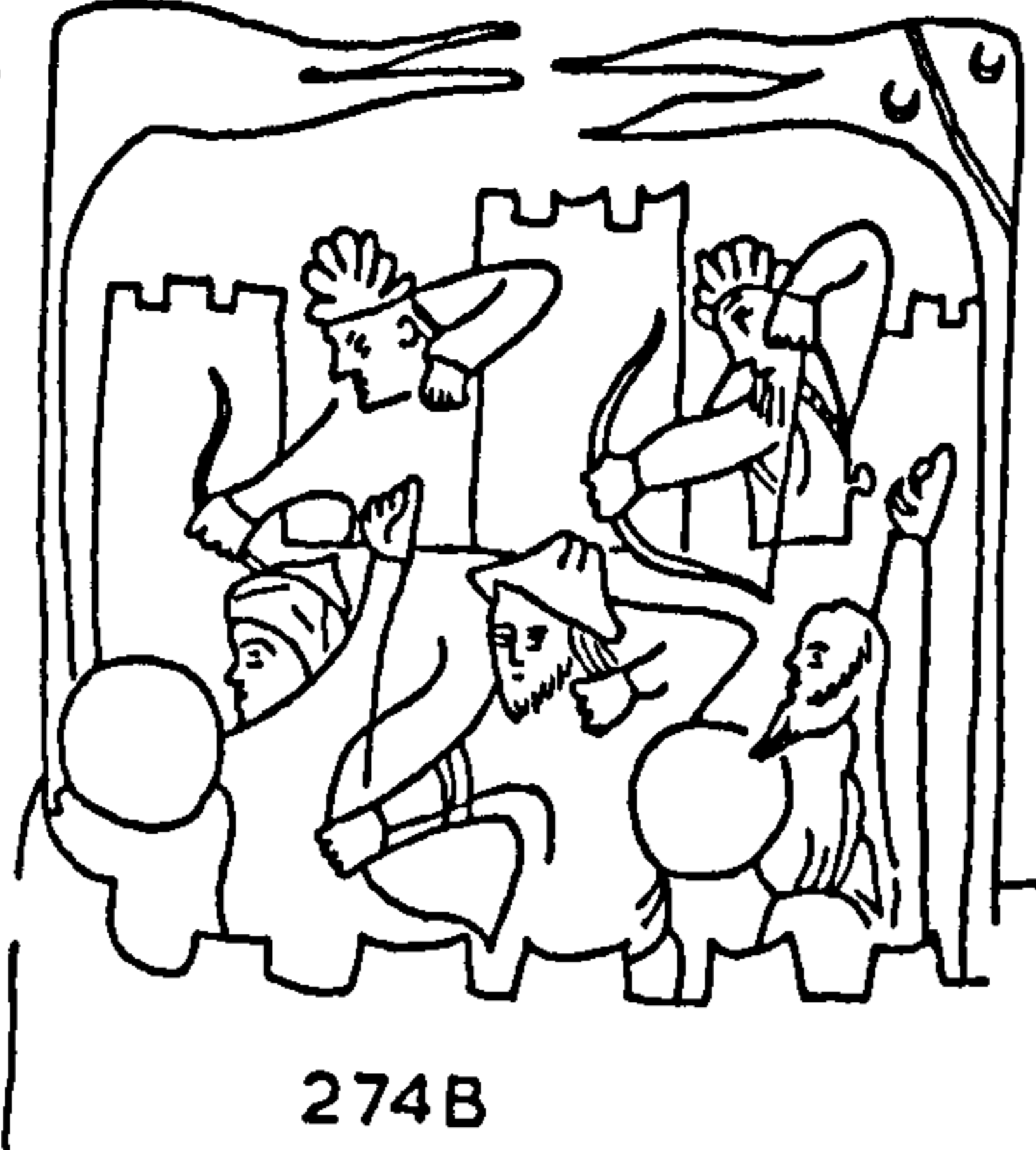
272



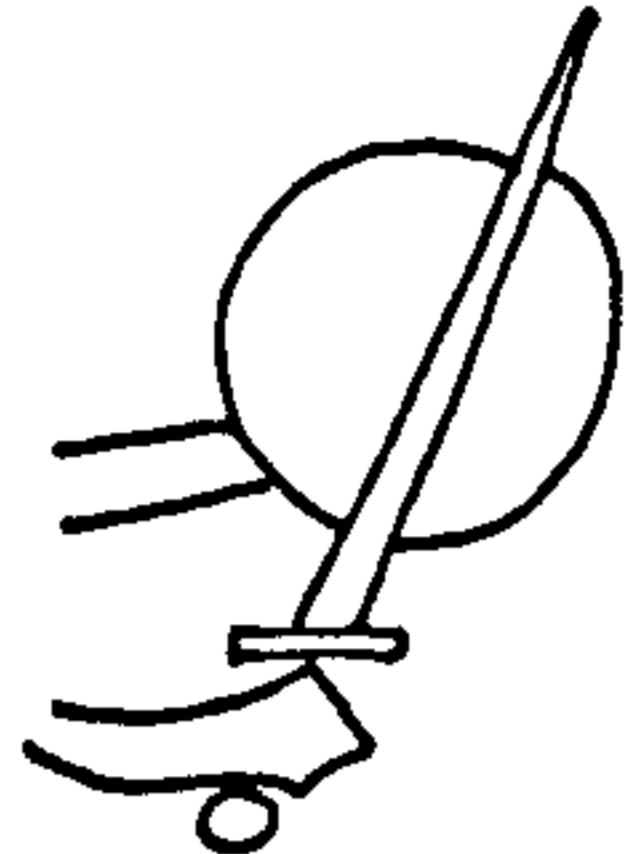
273



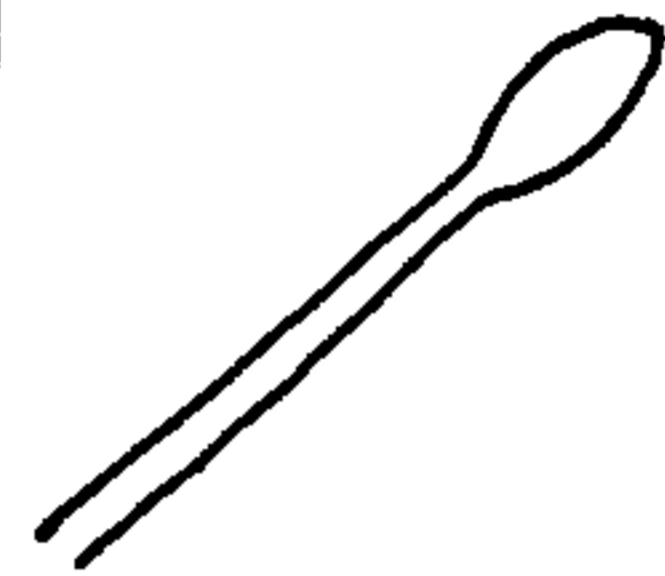
274A



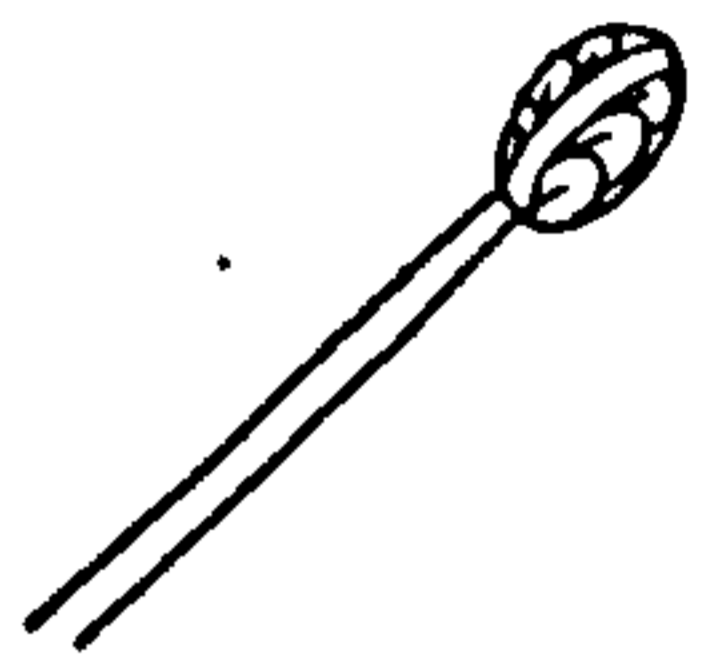
274B



275A



275C



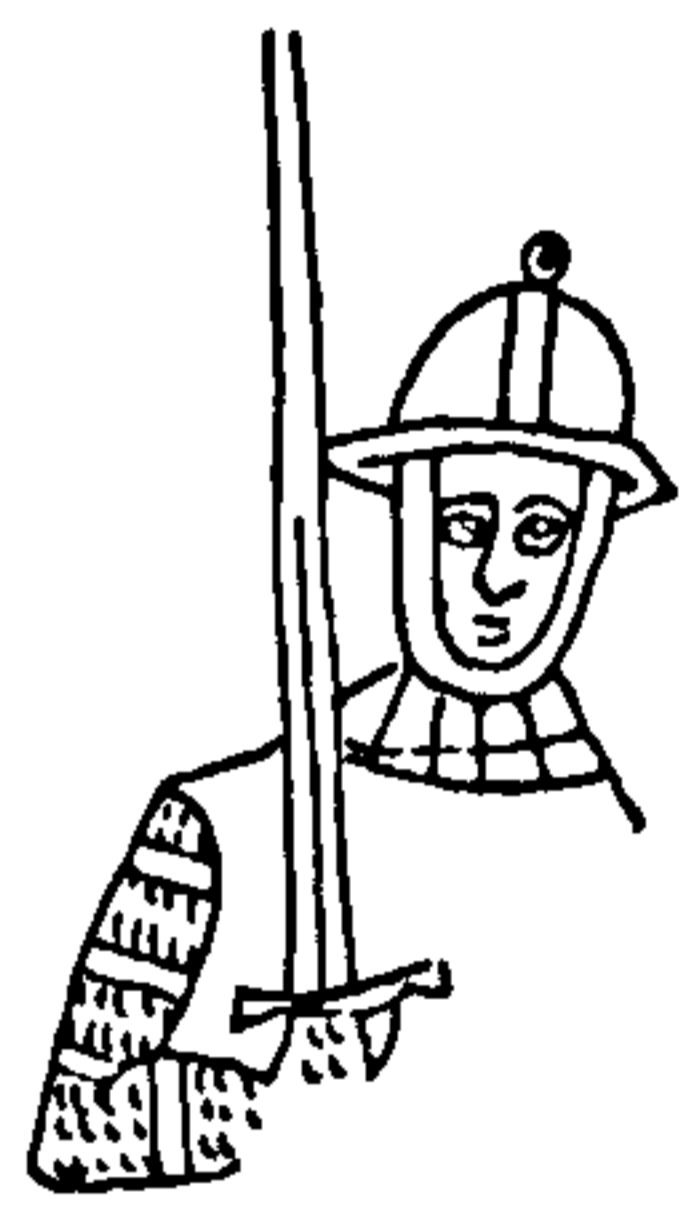
275F



275E



275I



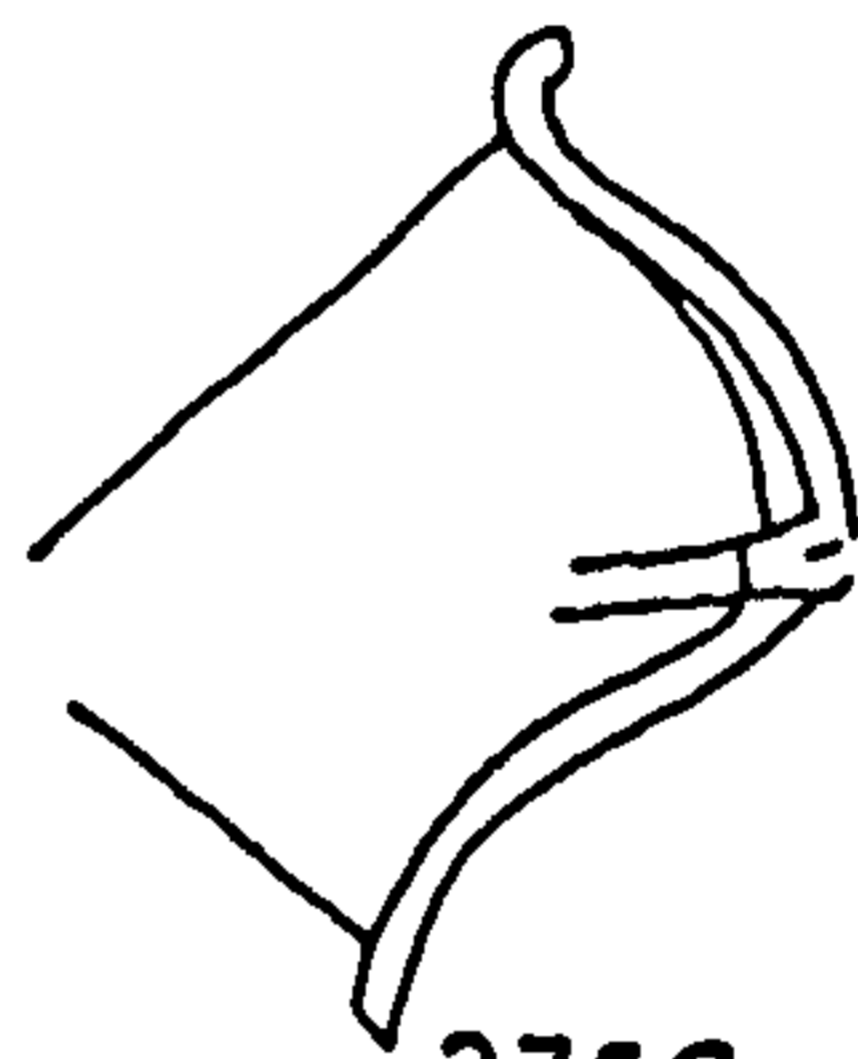
275H



275B



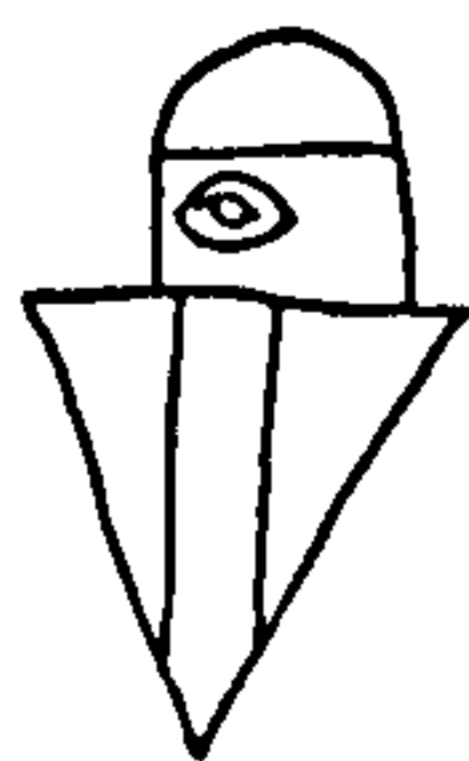
275D



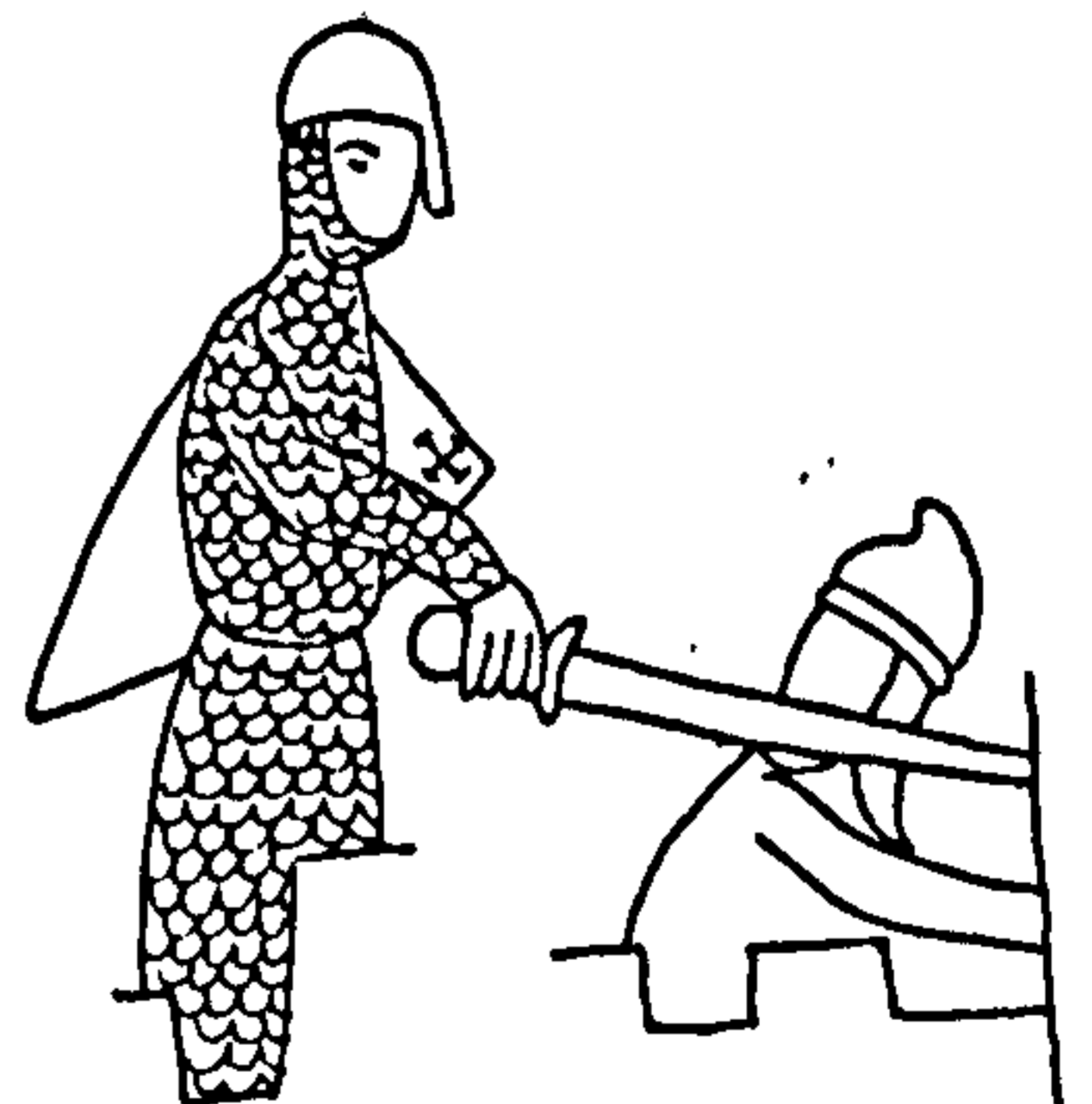
275G



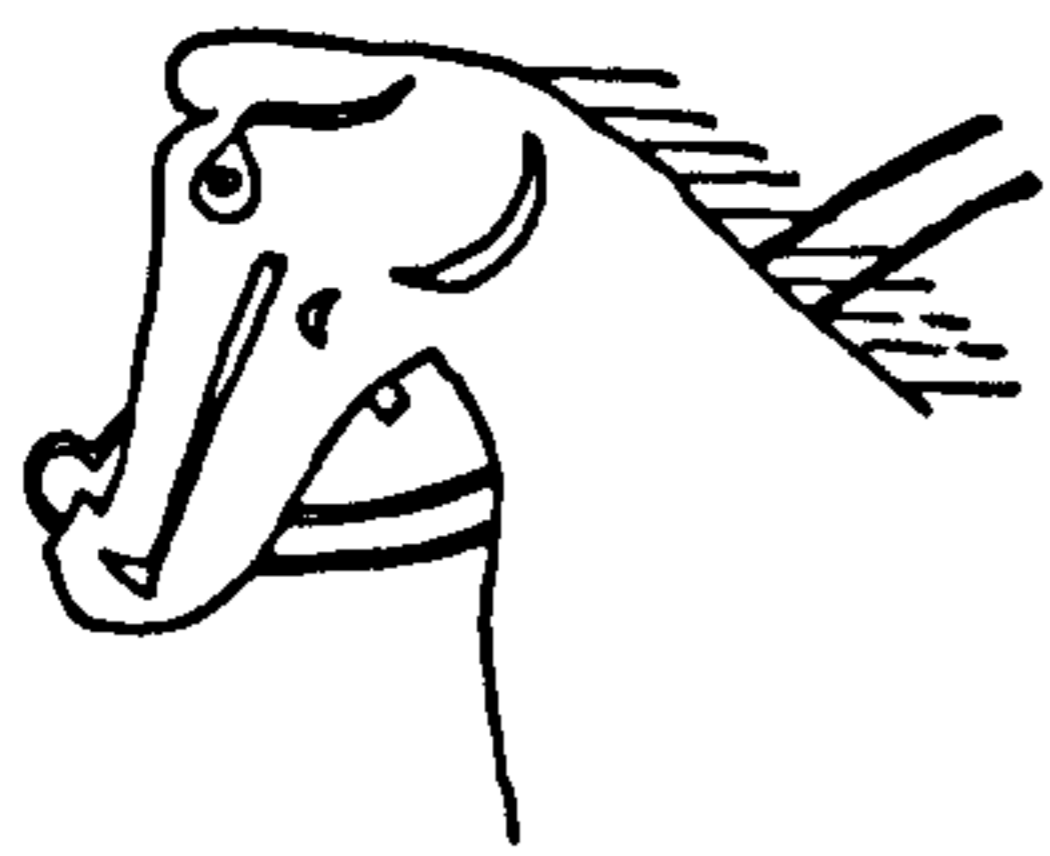
275J



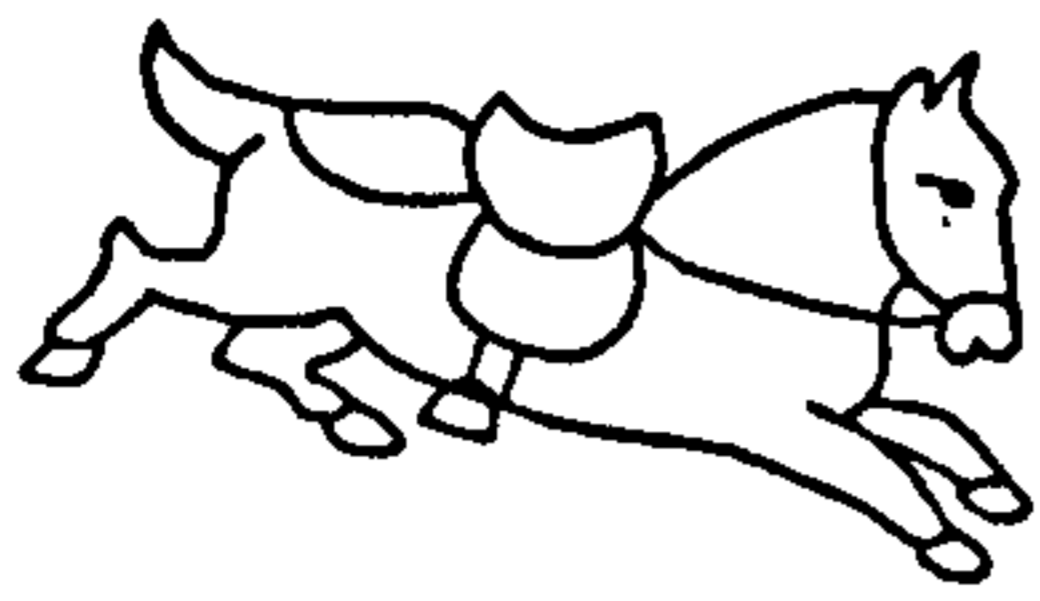
276A



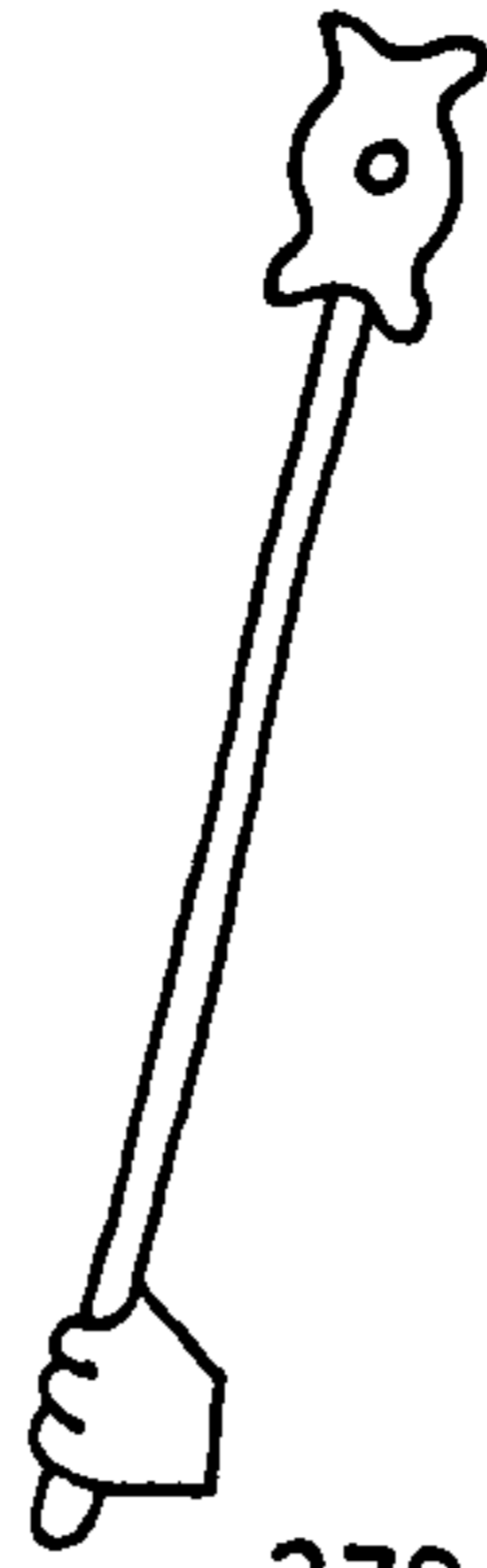
276B



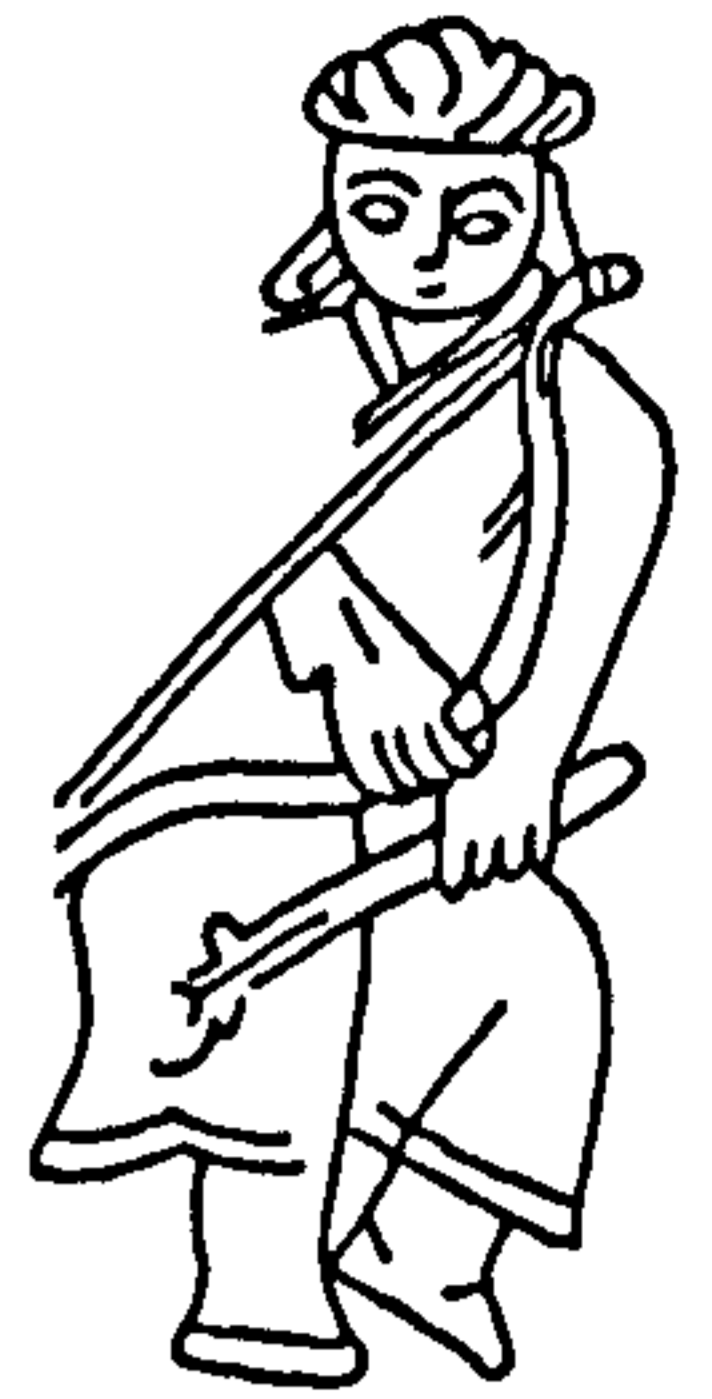
277



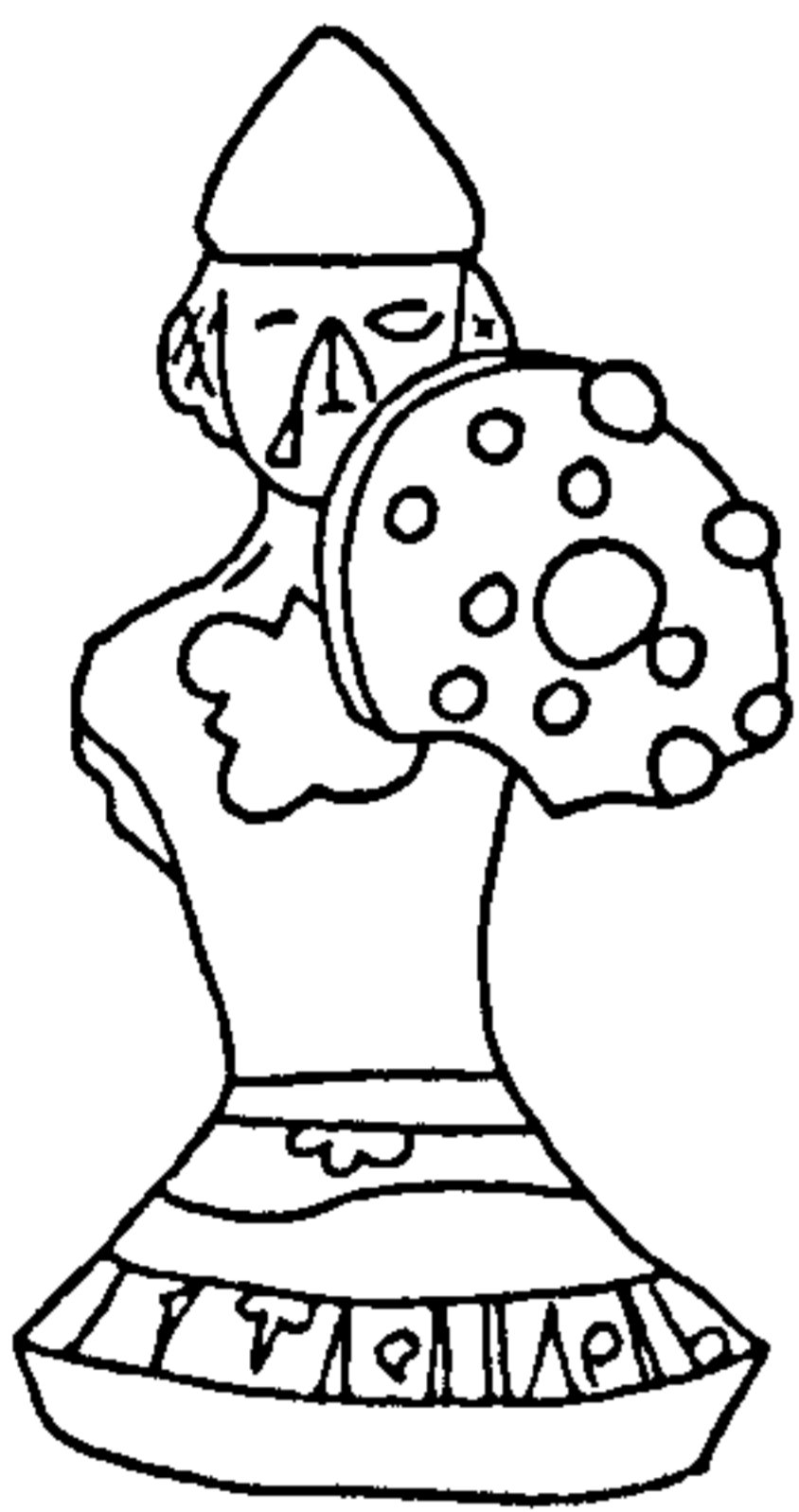
278



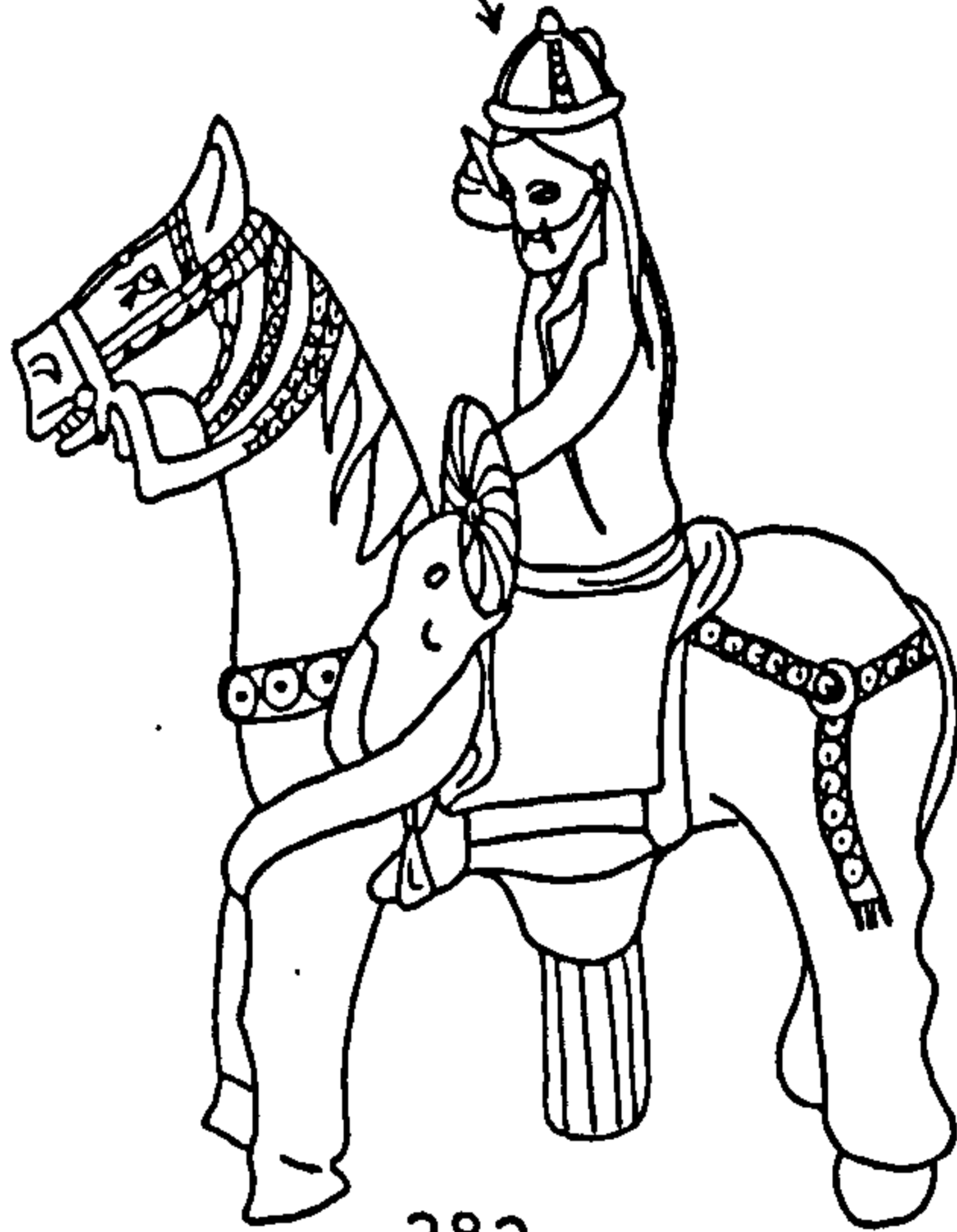
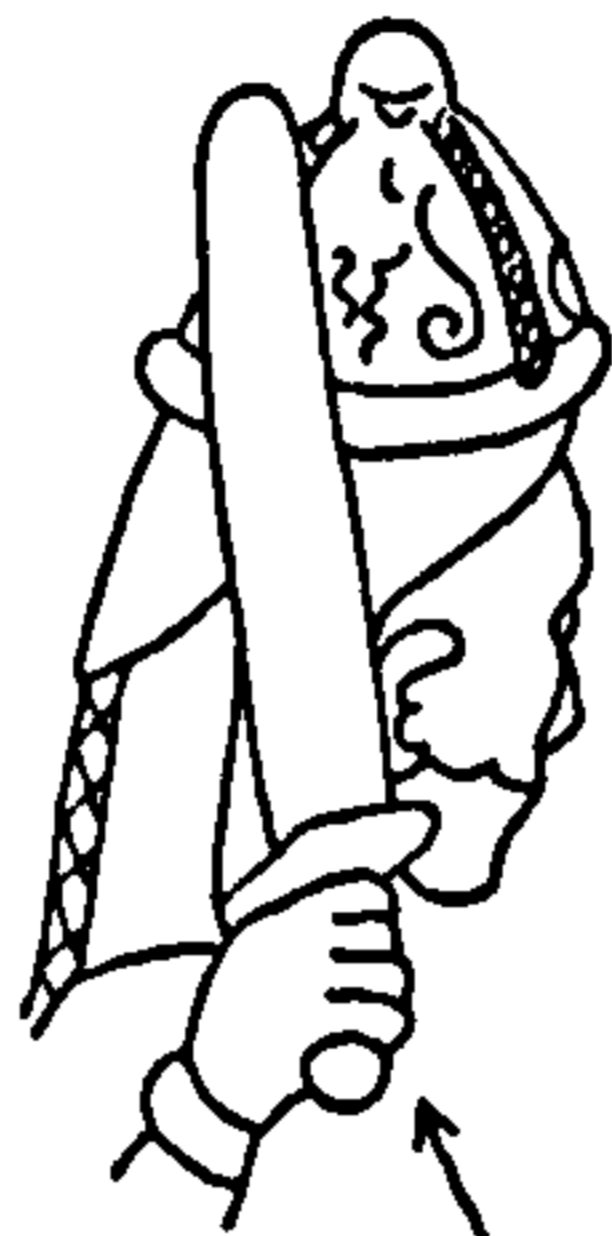
279



280



281



282



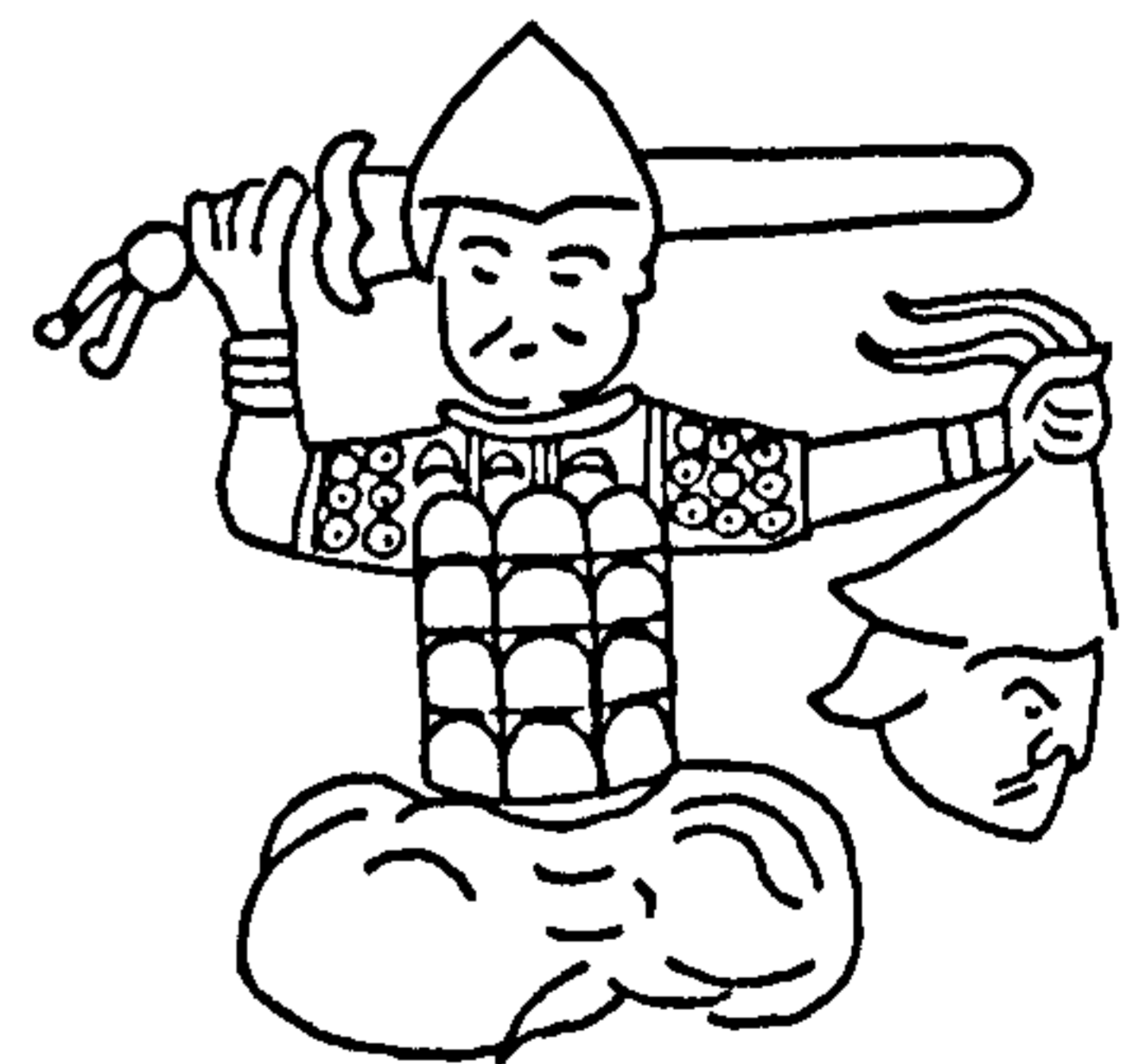
283



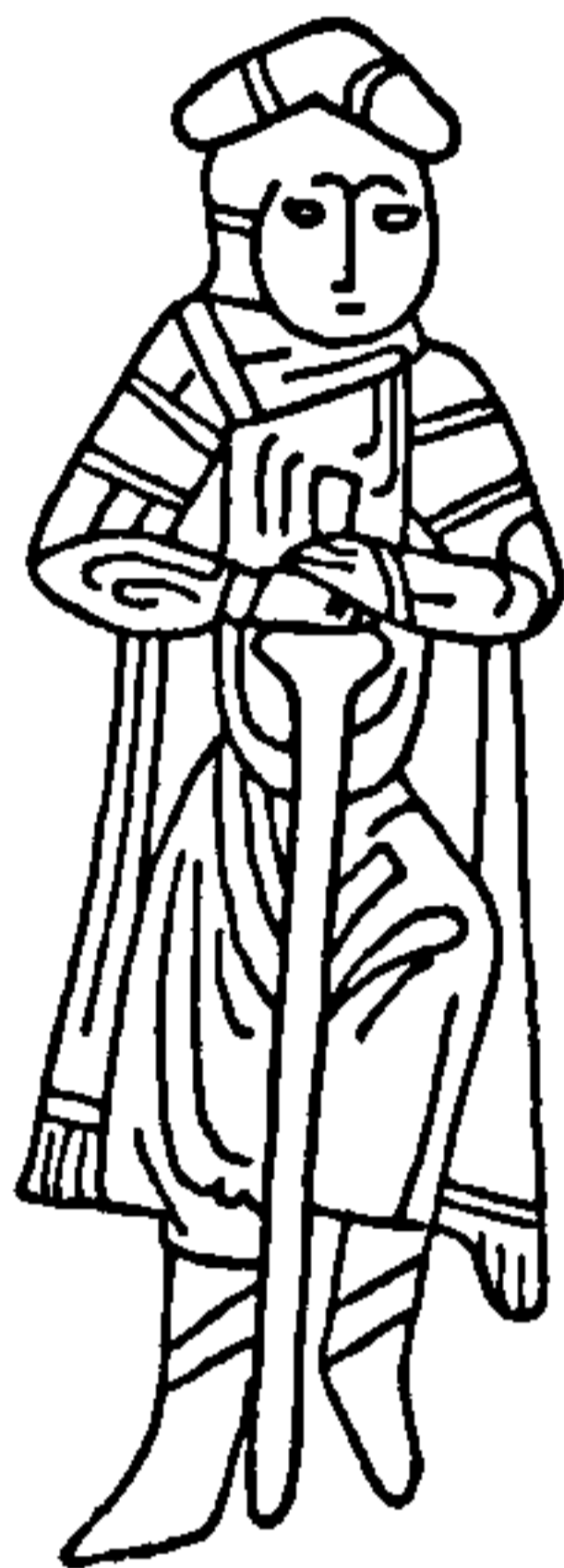
284



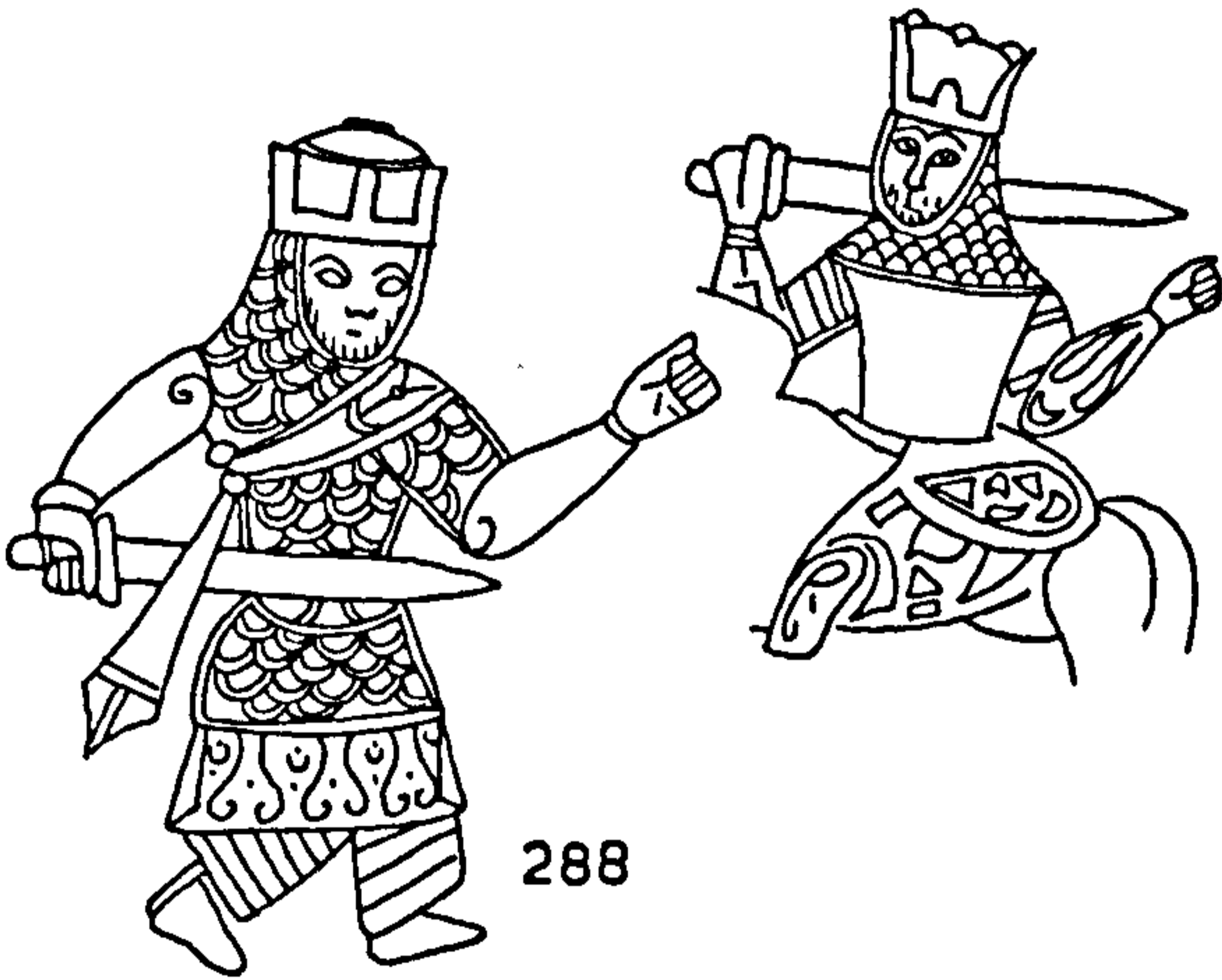
285



286



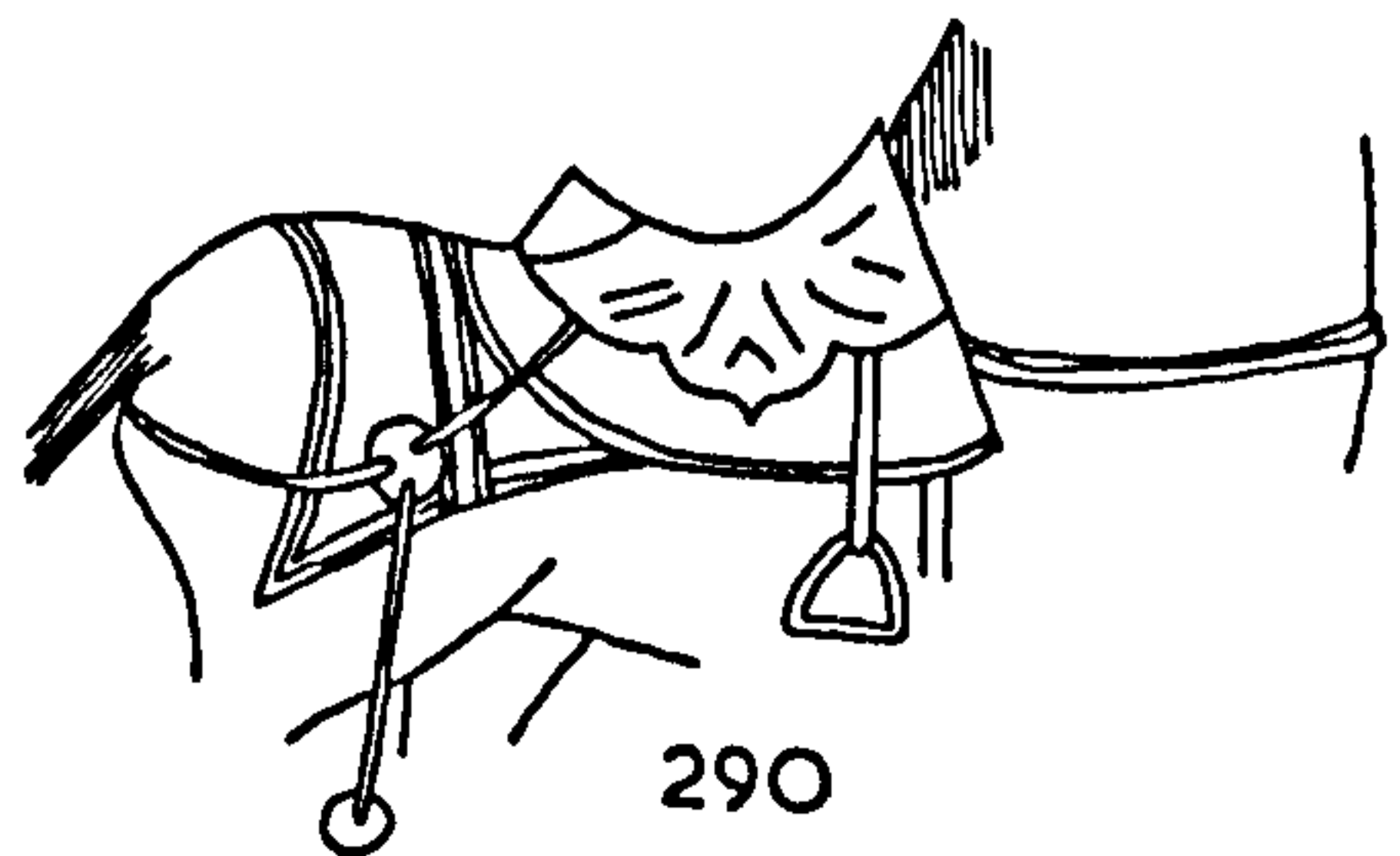
287



288



289



290



291



292A

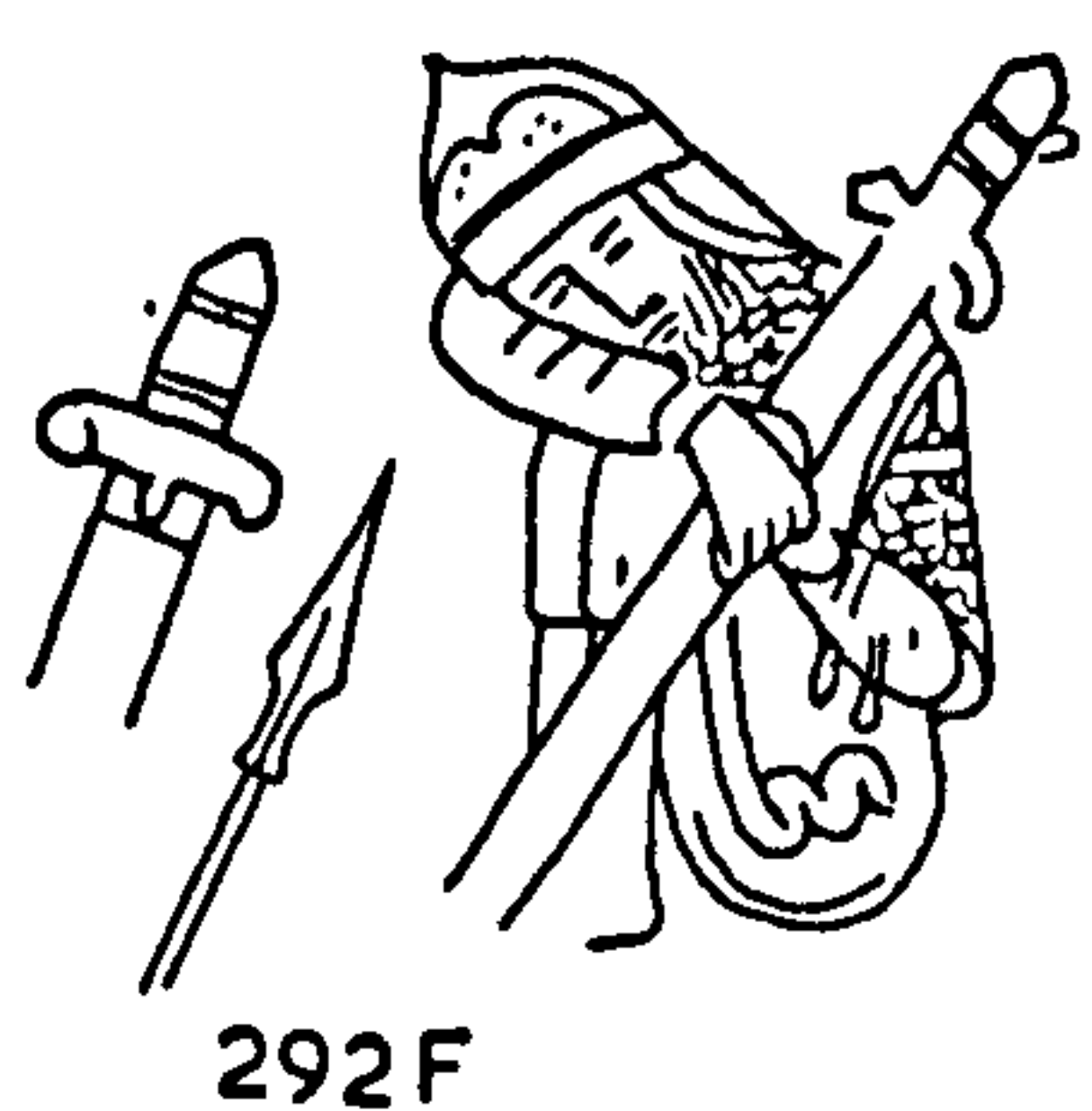


292B

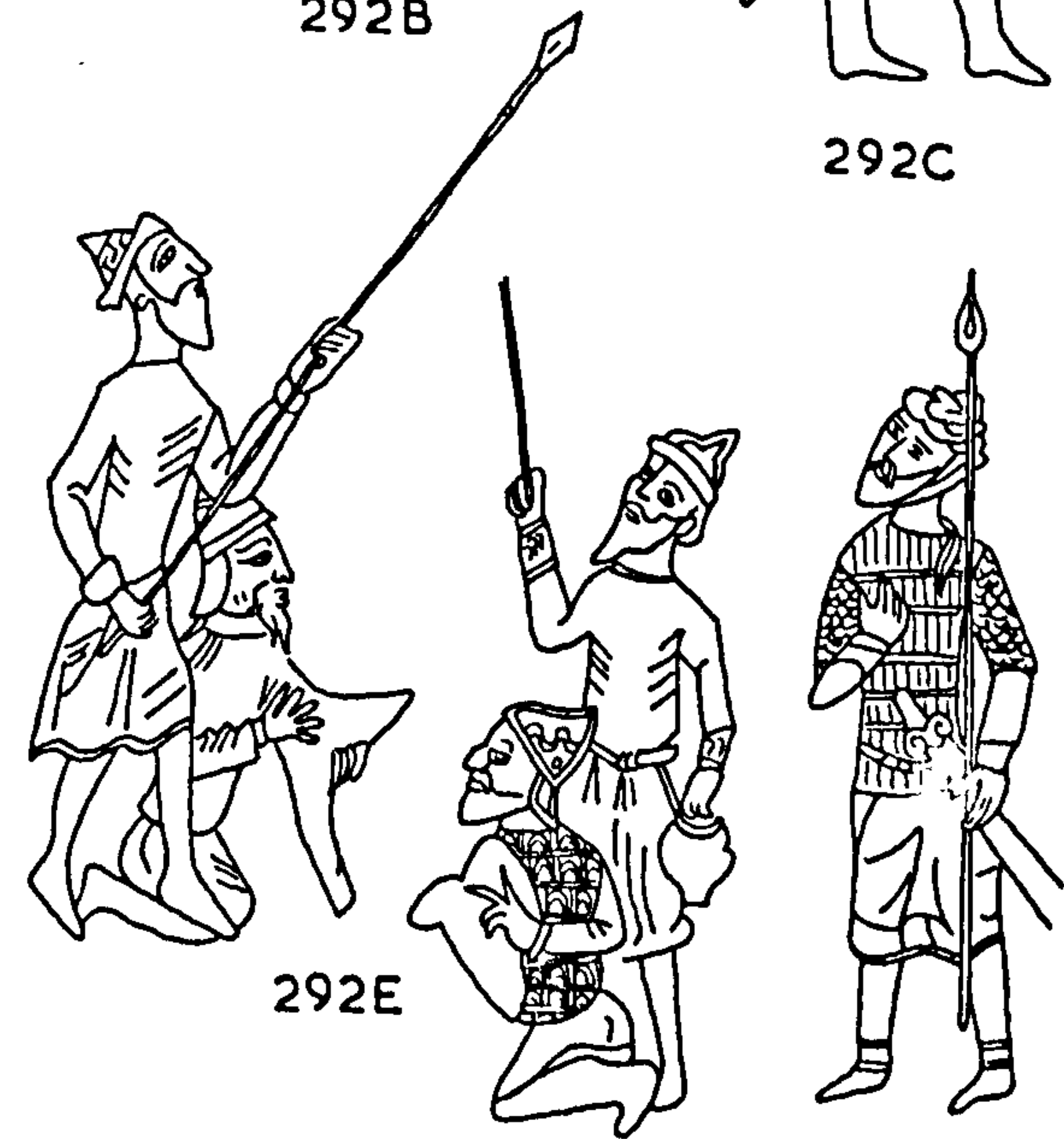
292C



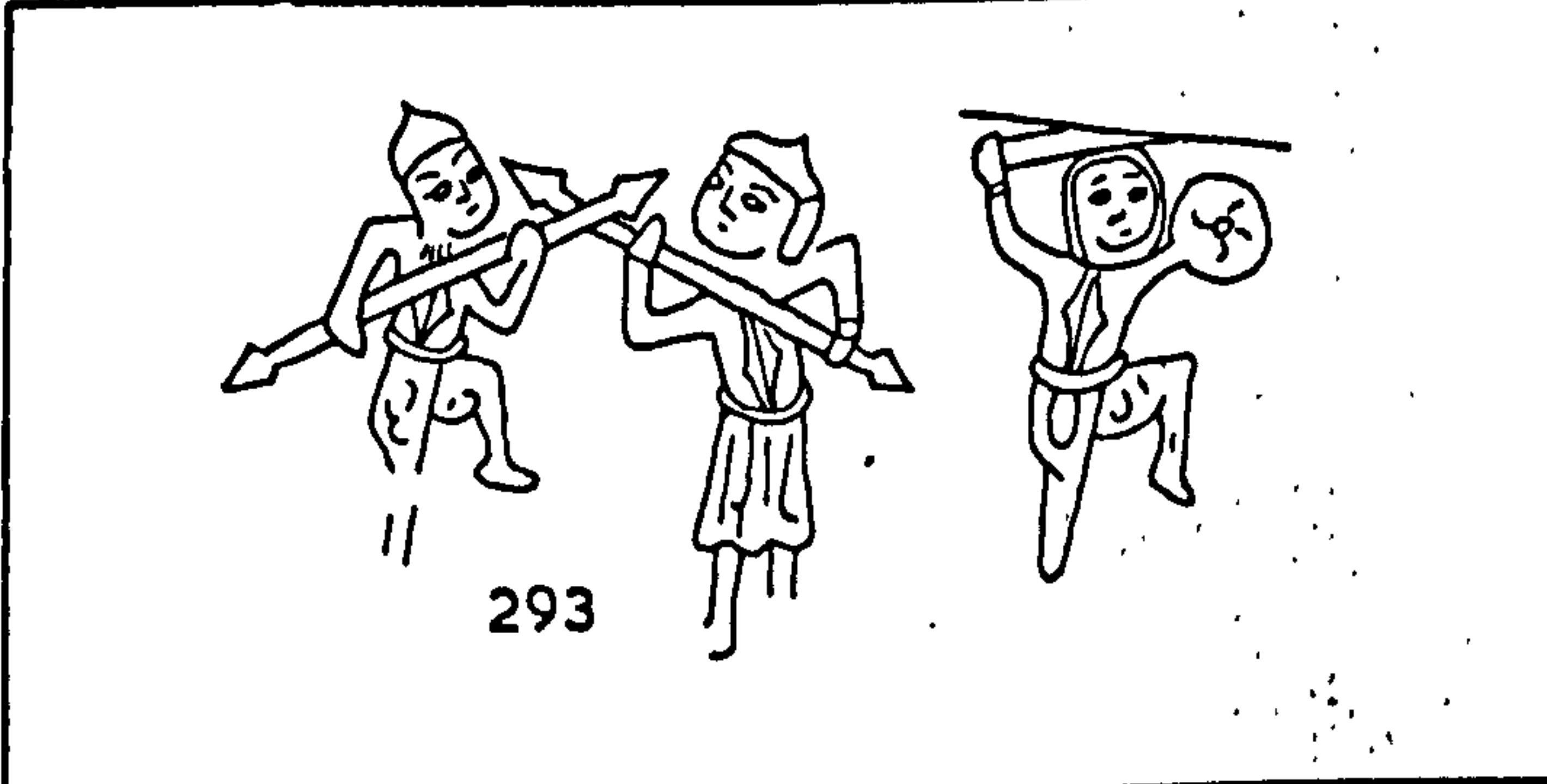
292D



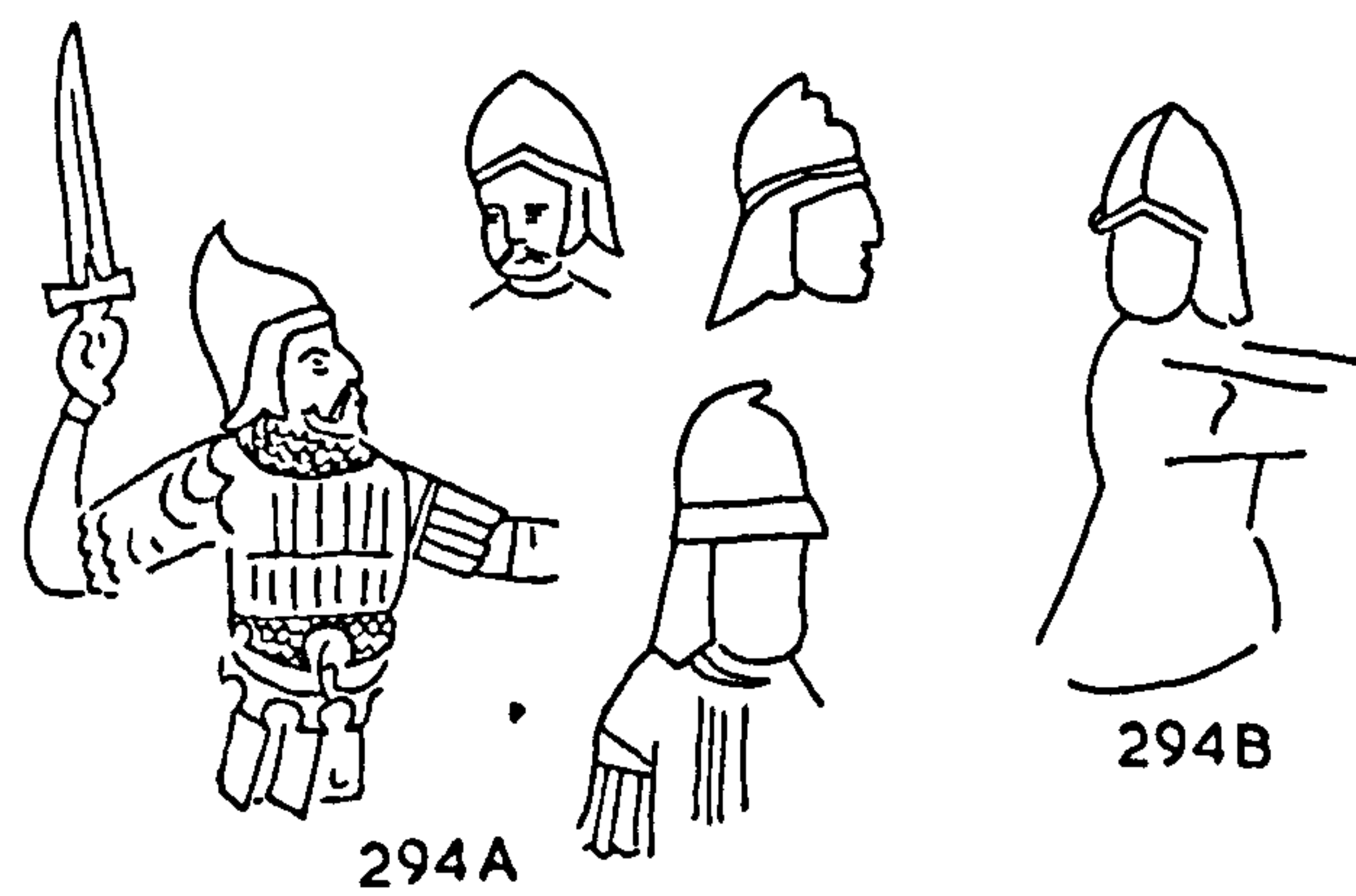
292F



292E

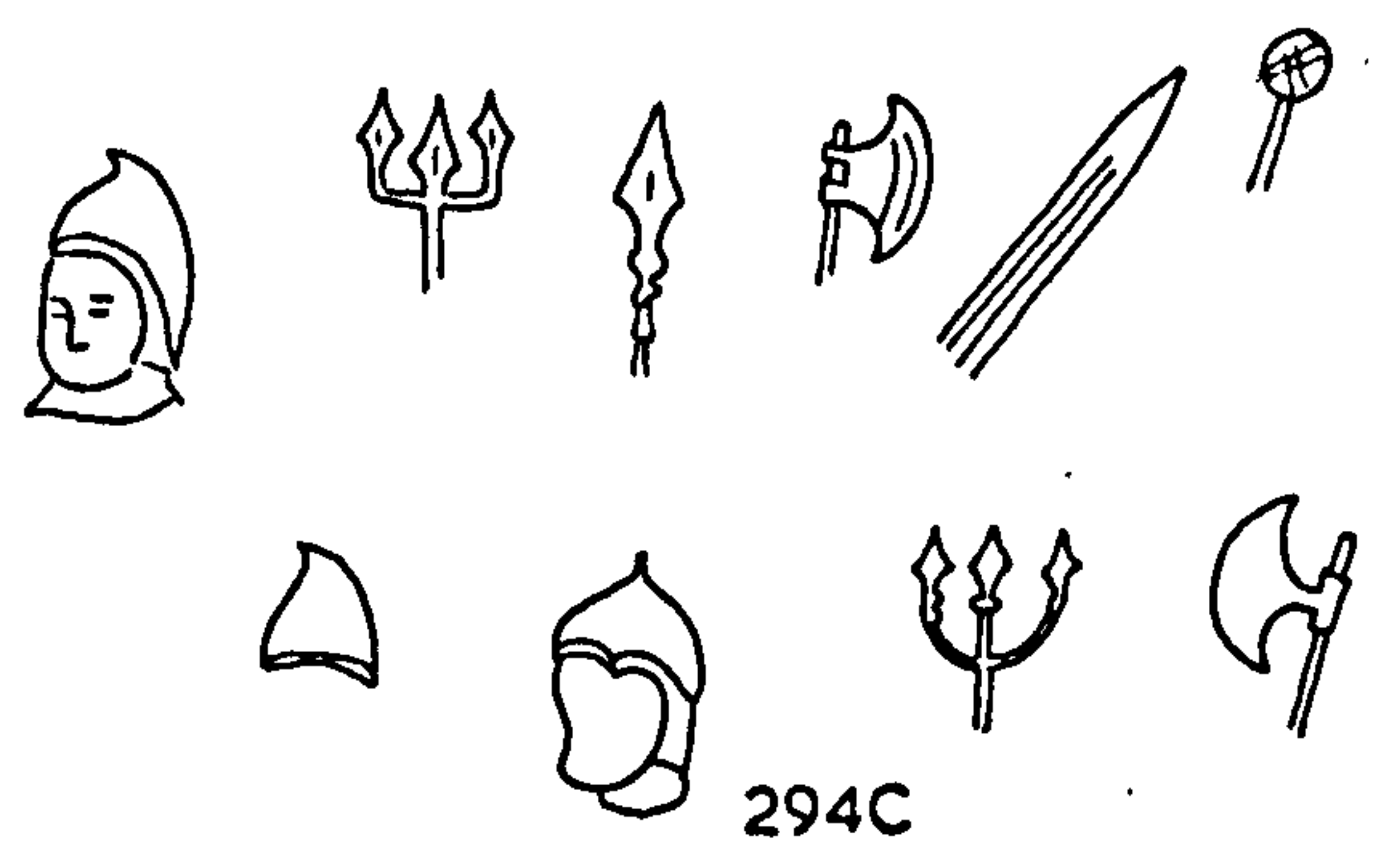


293

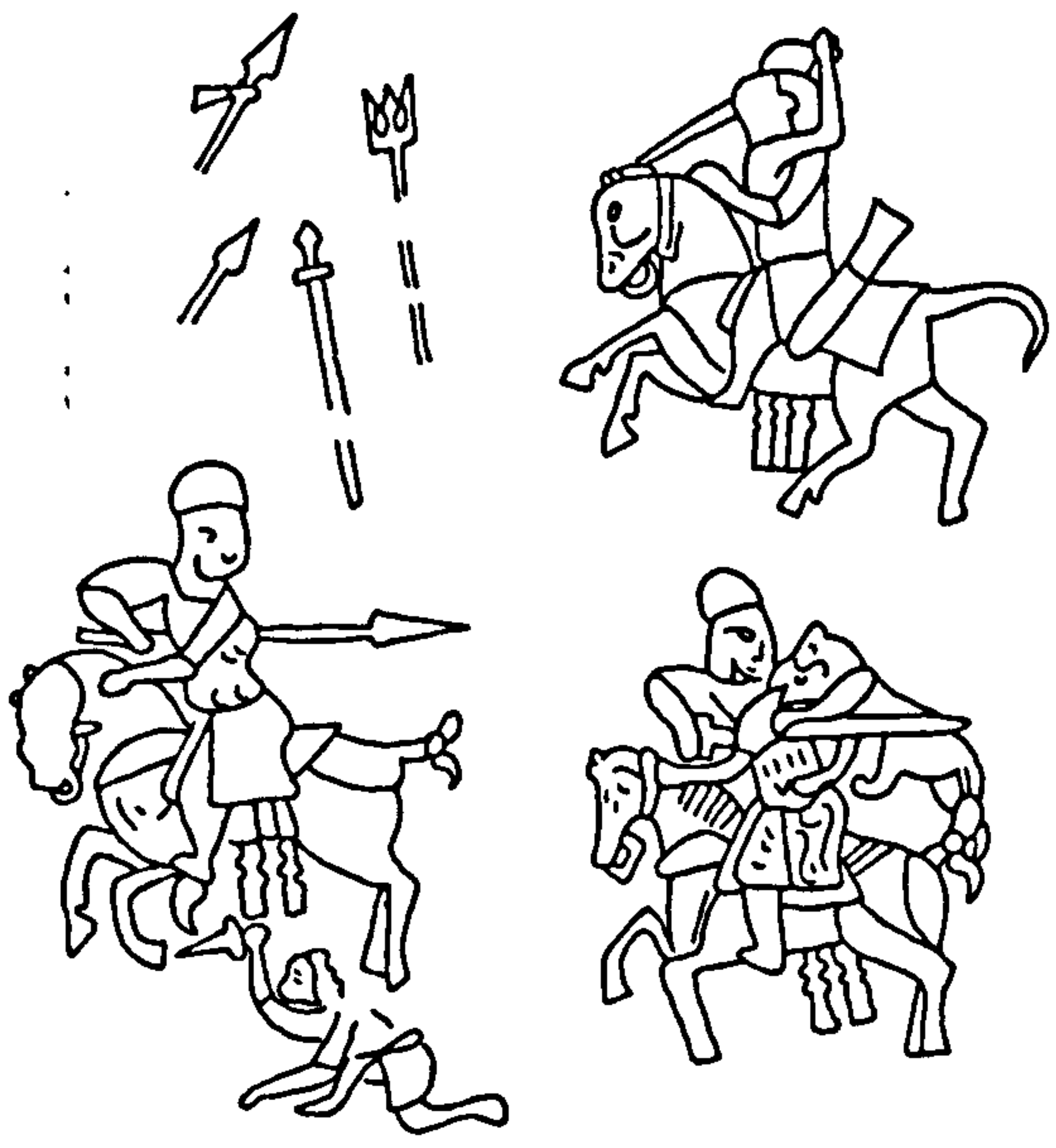


294A

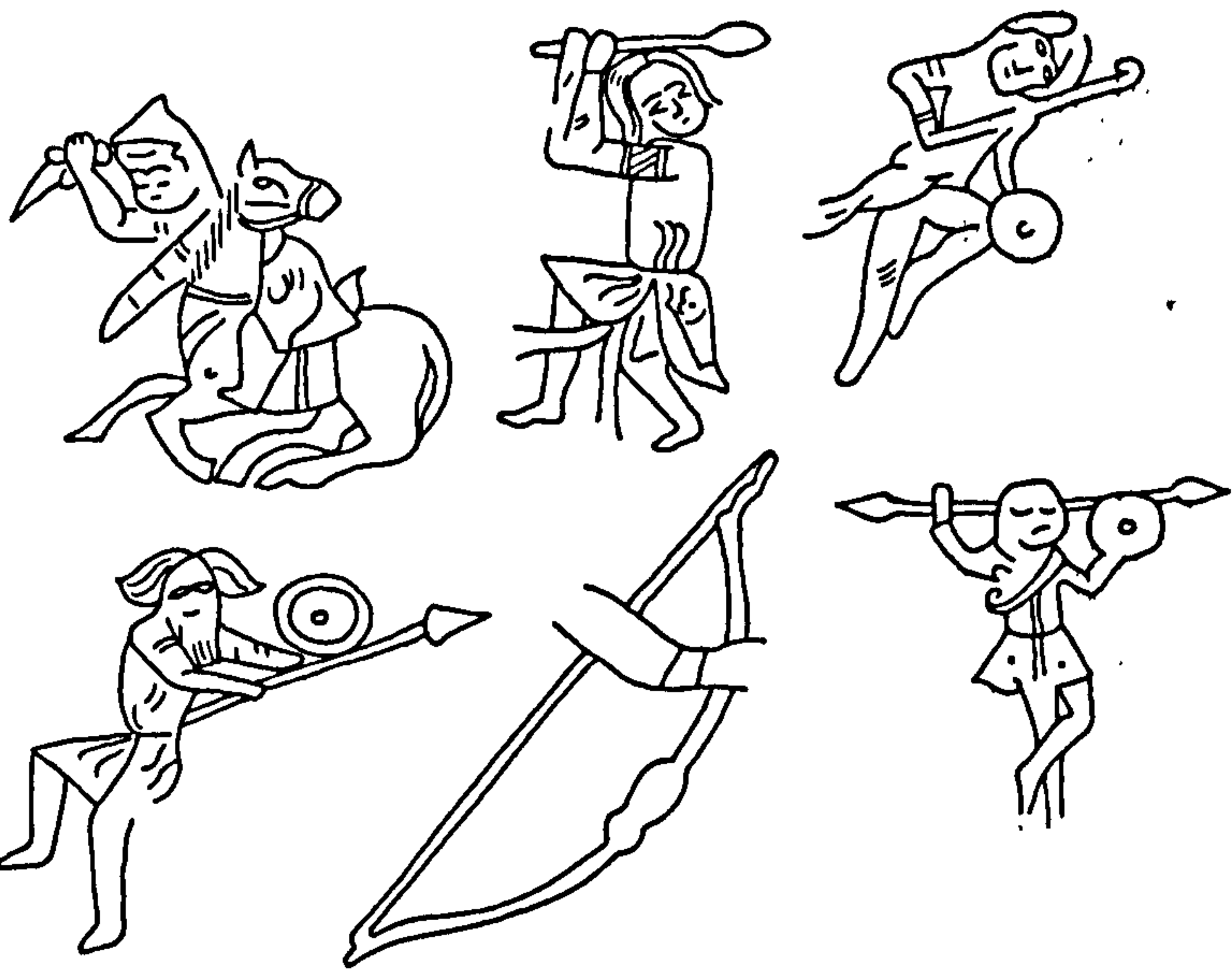
294B



294C



295



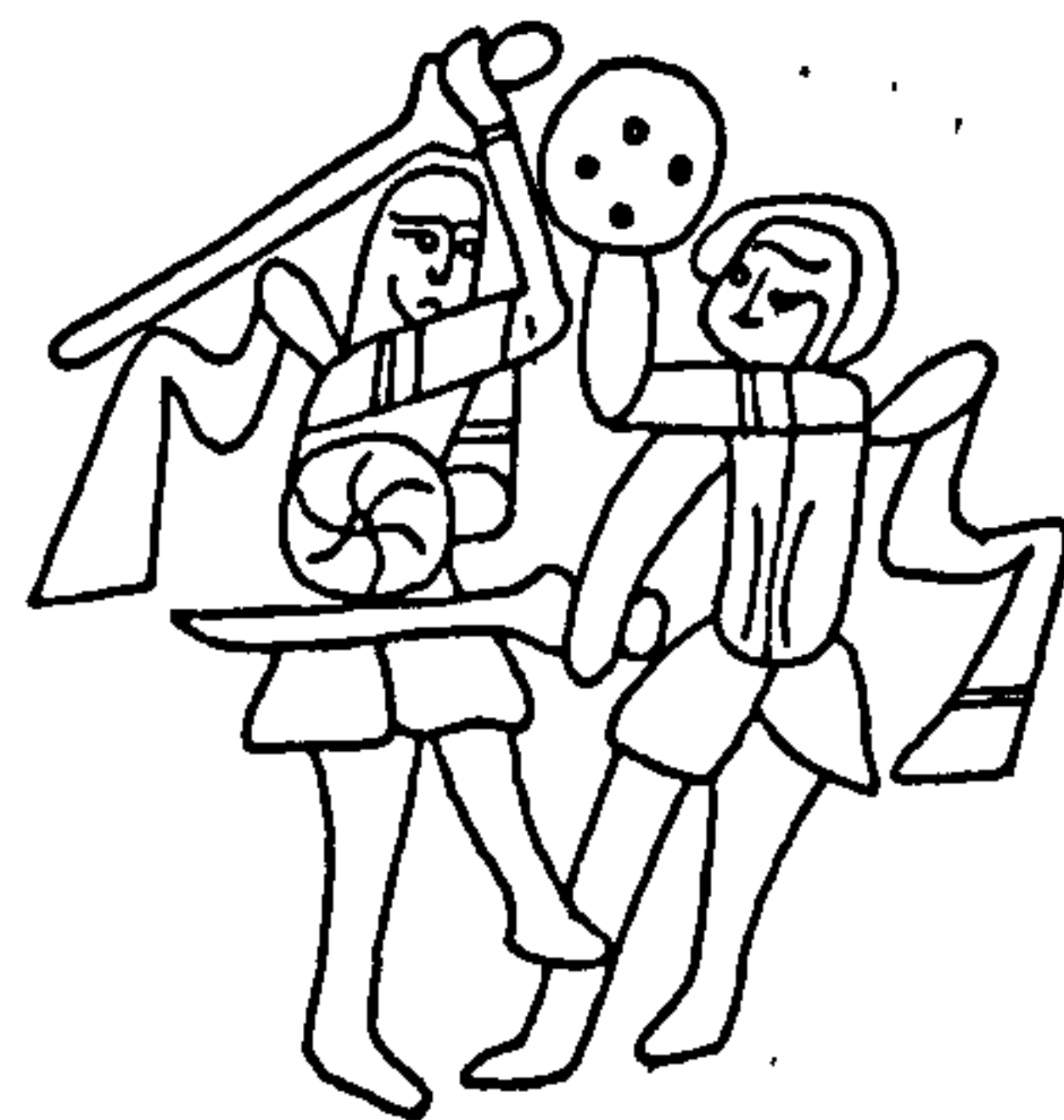
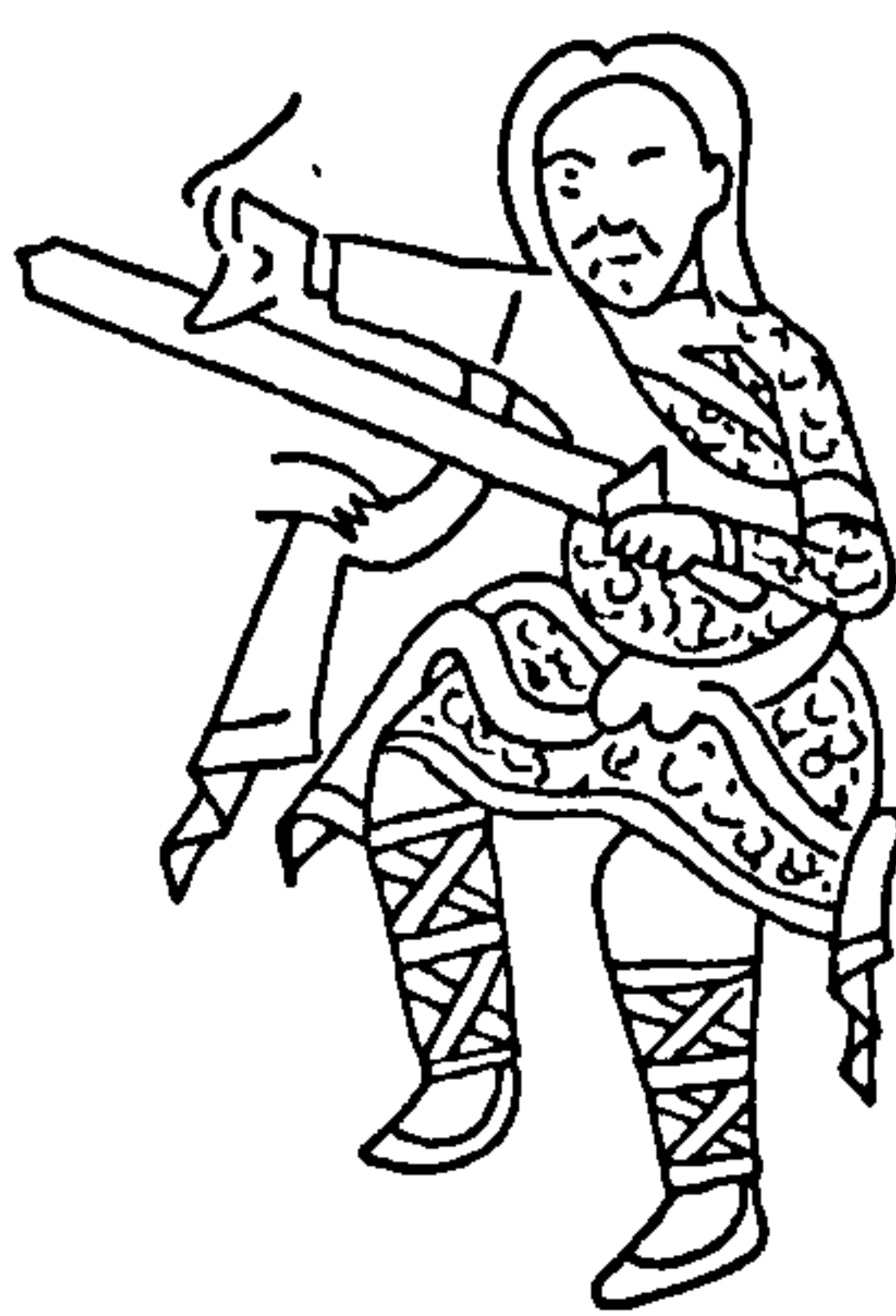
296



297

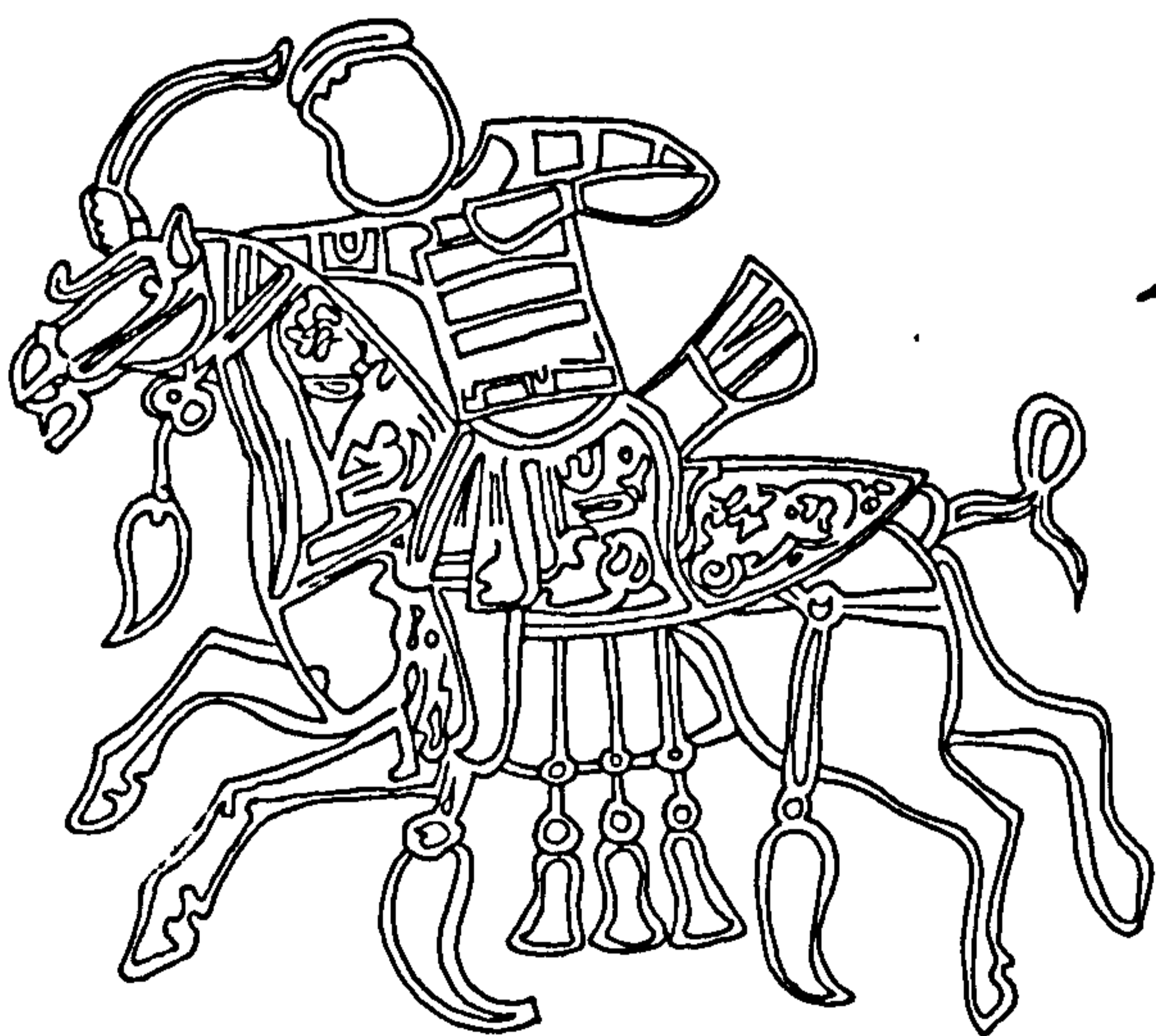
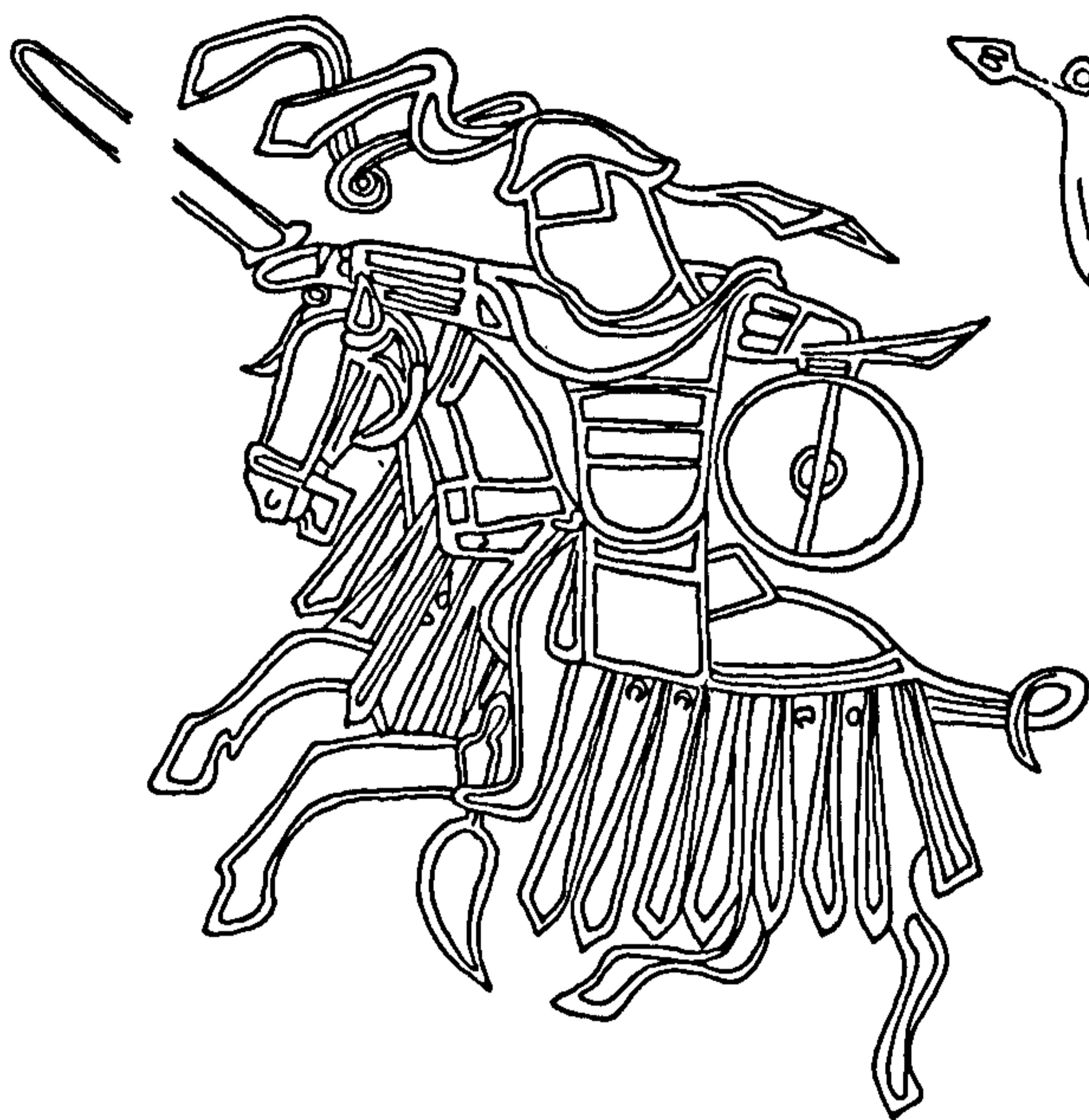


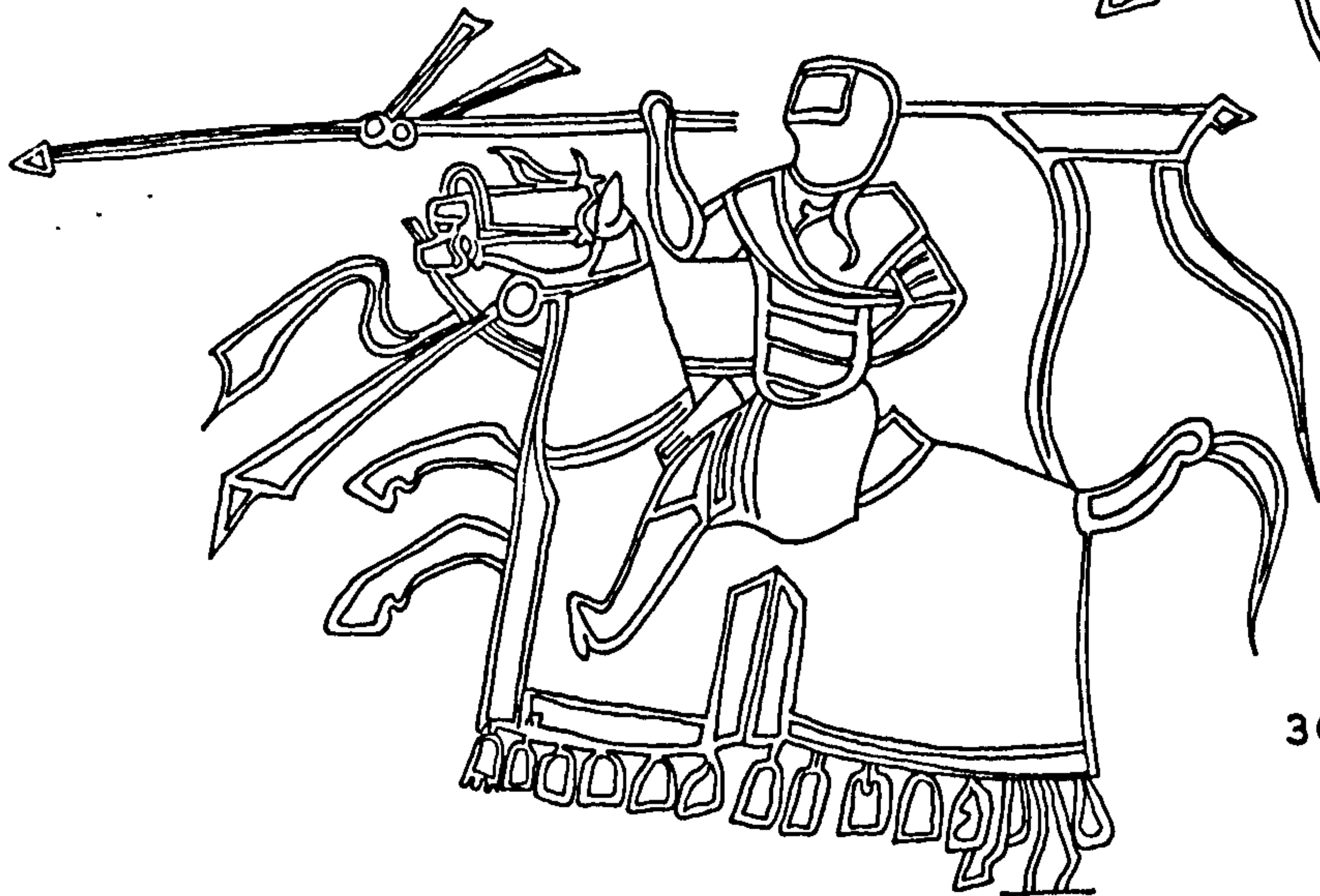
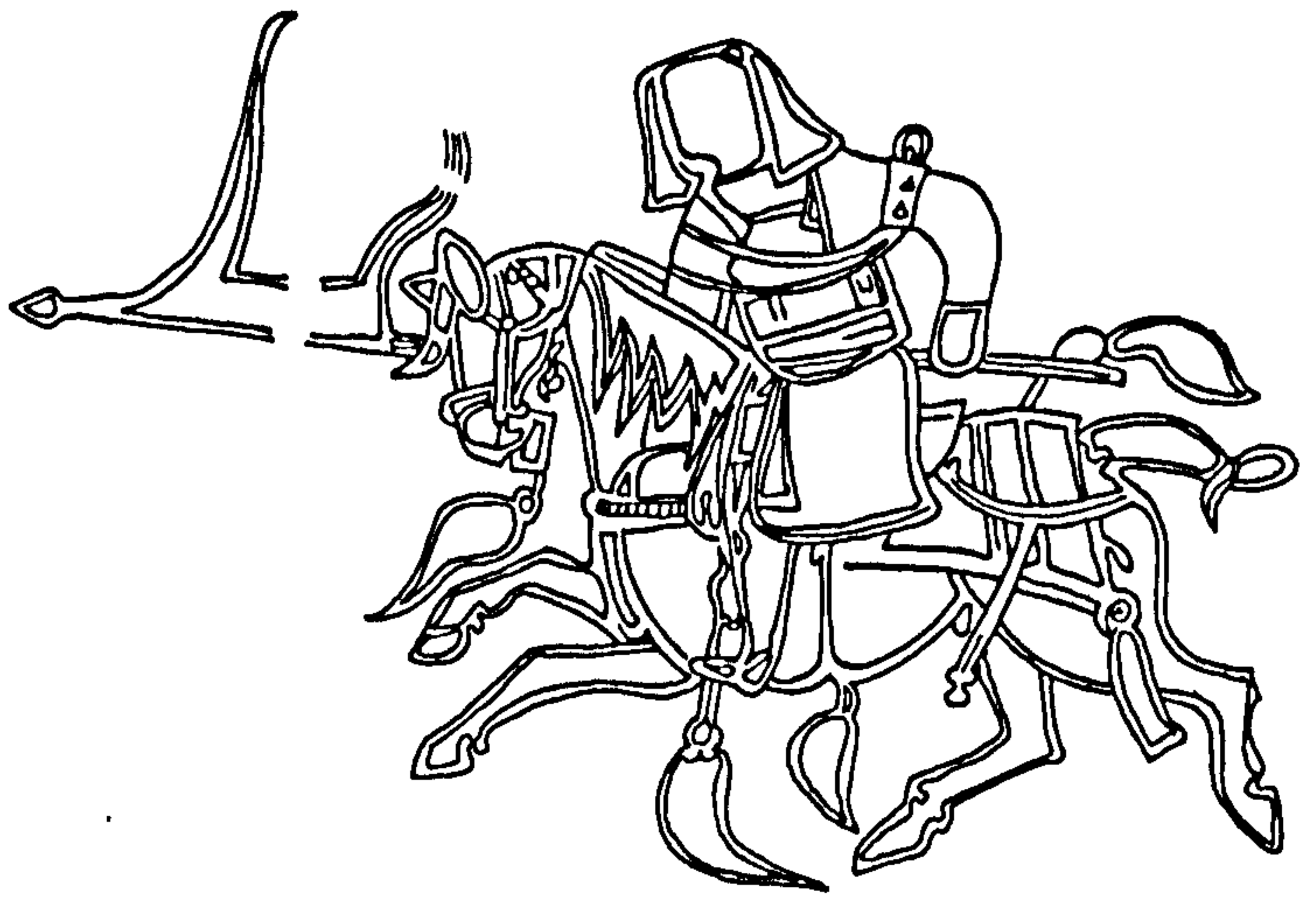
298



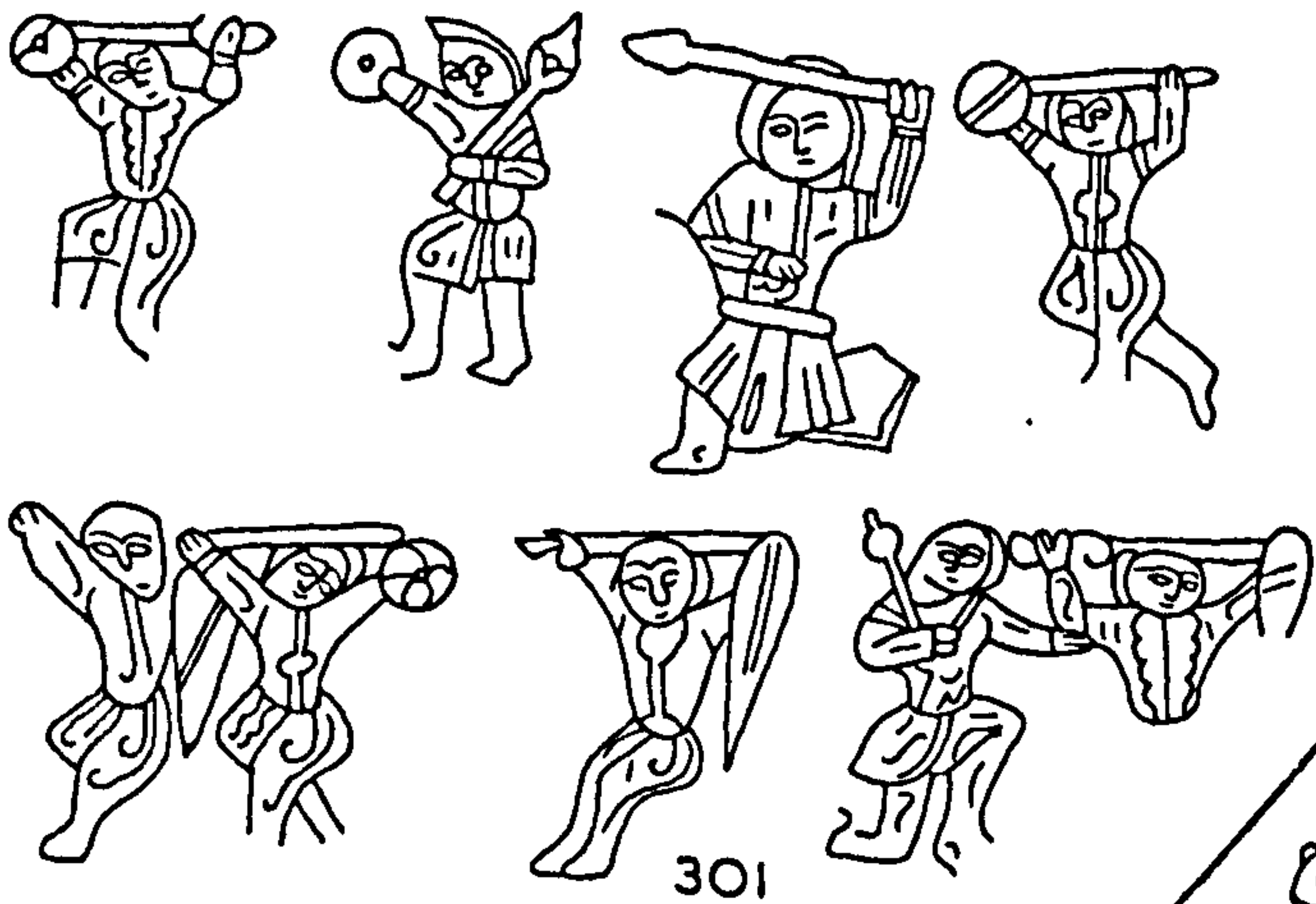
299



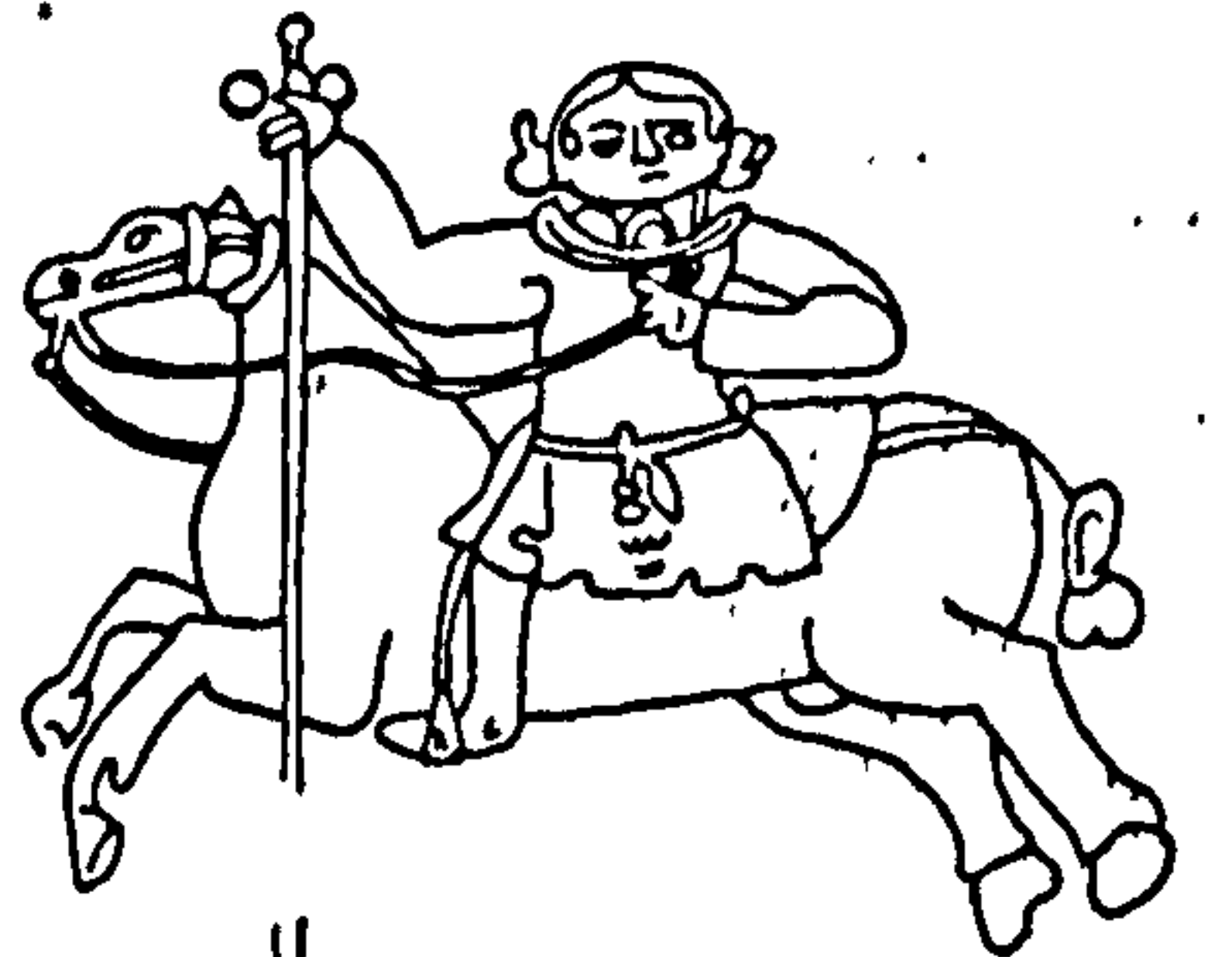




300



301



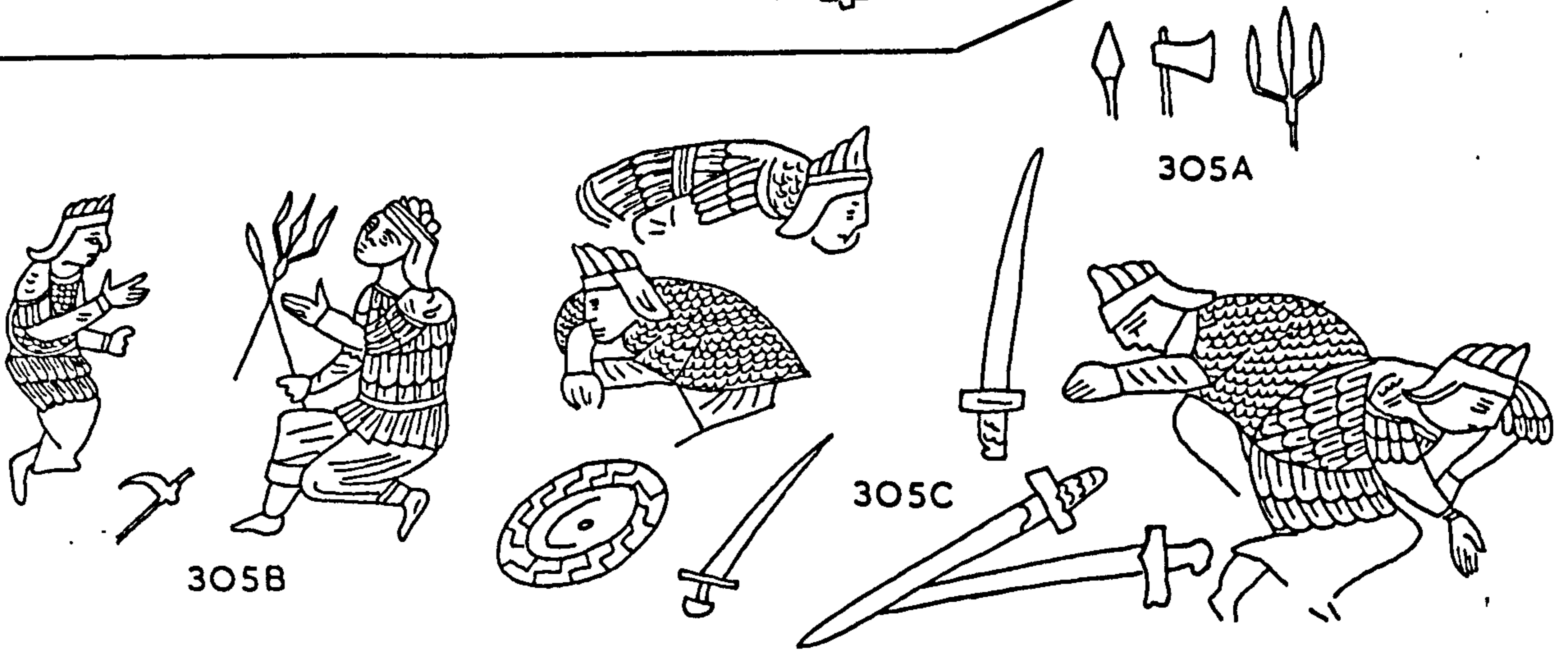
302



303



304



305A

305B

305C



306A

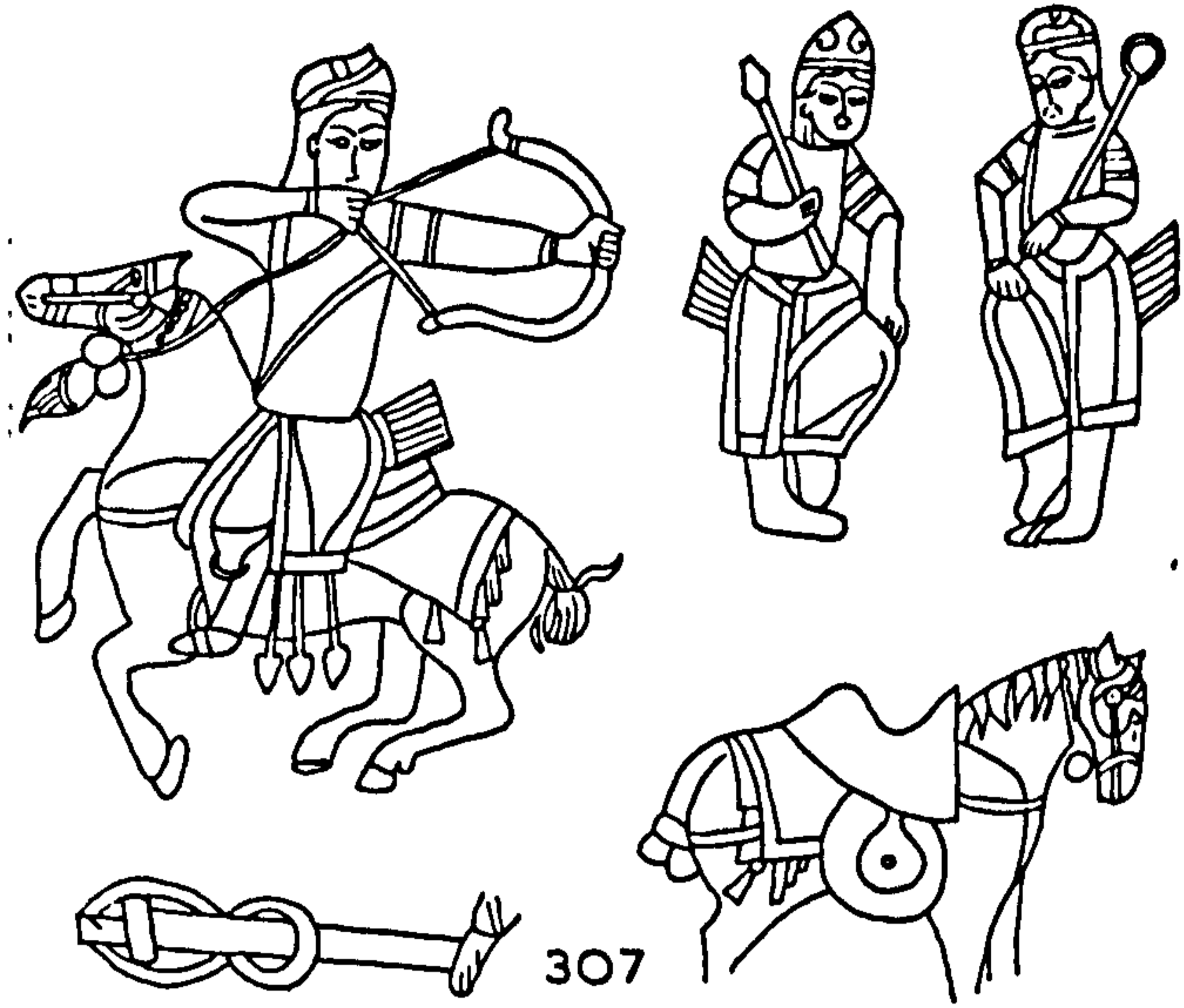
306B

306F

306C

306D

306E



307



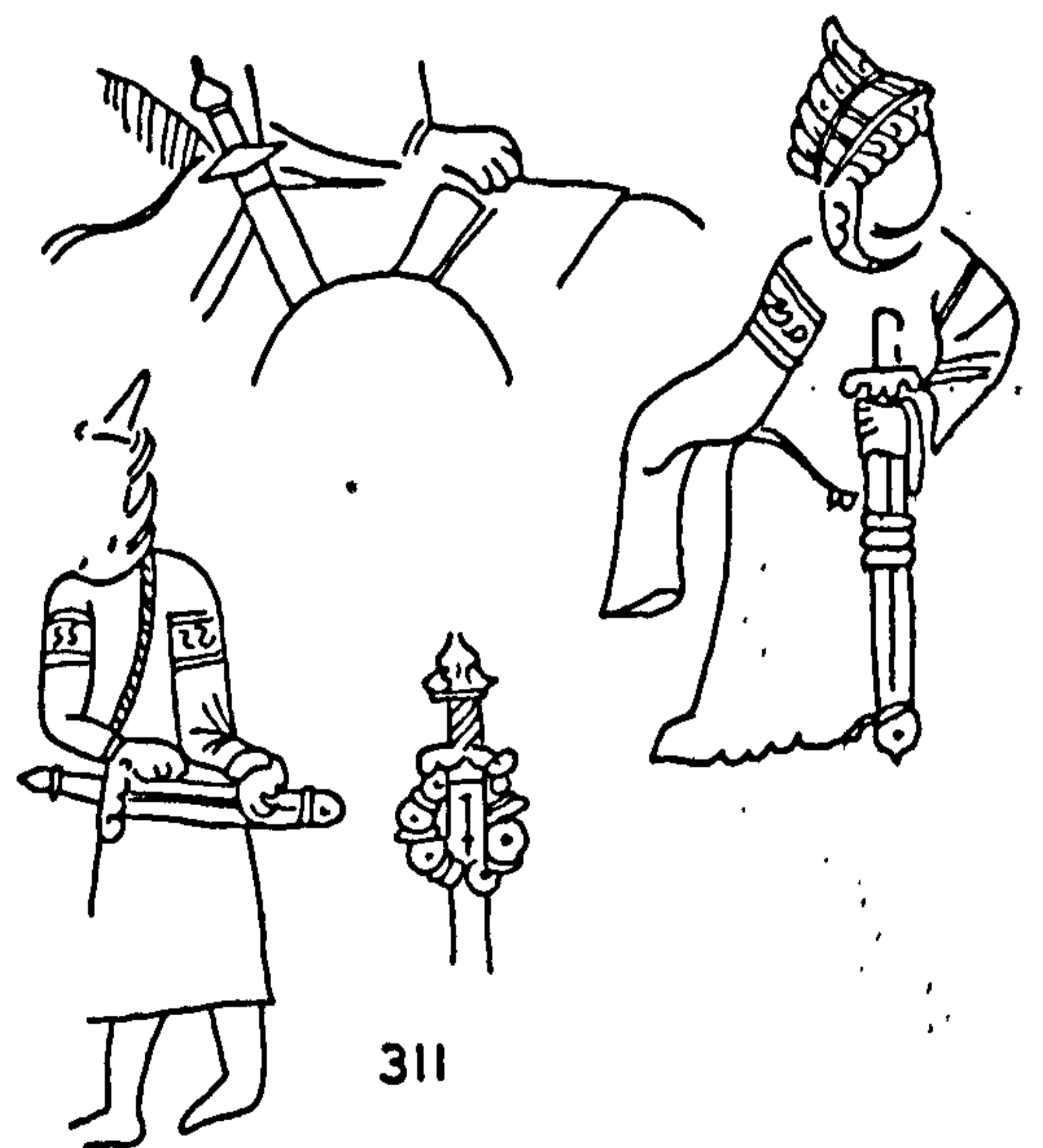
308



309



301

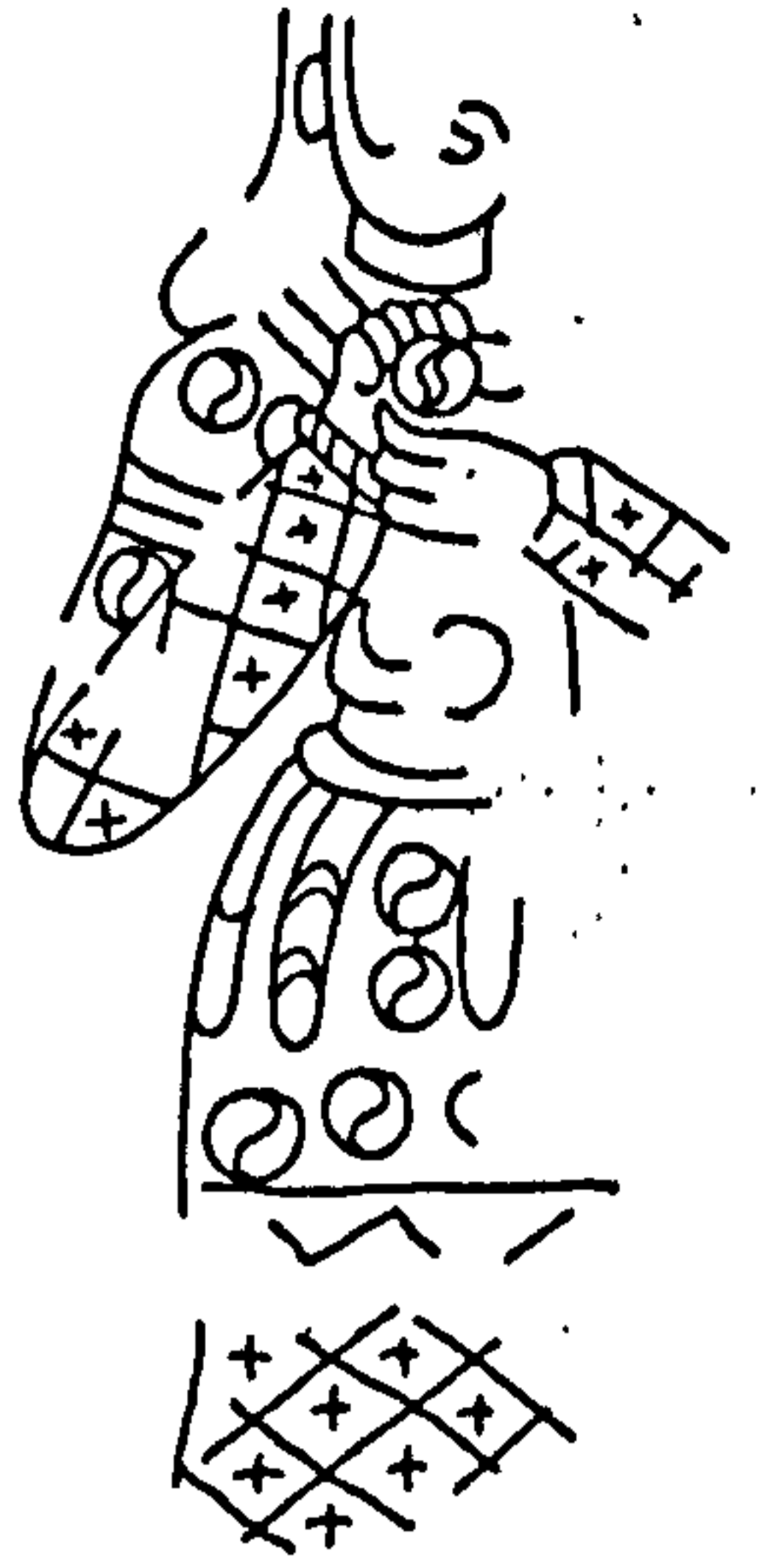
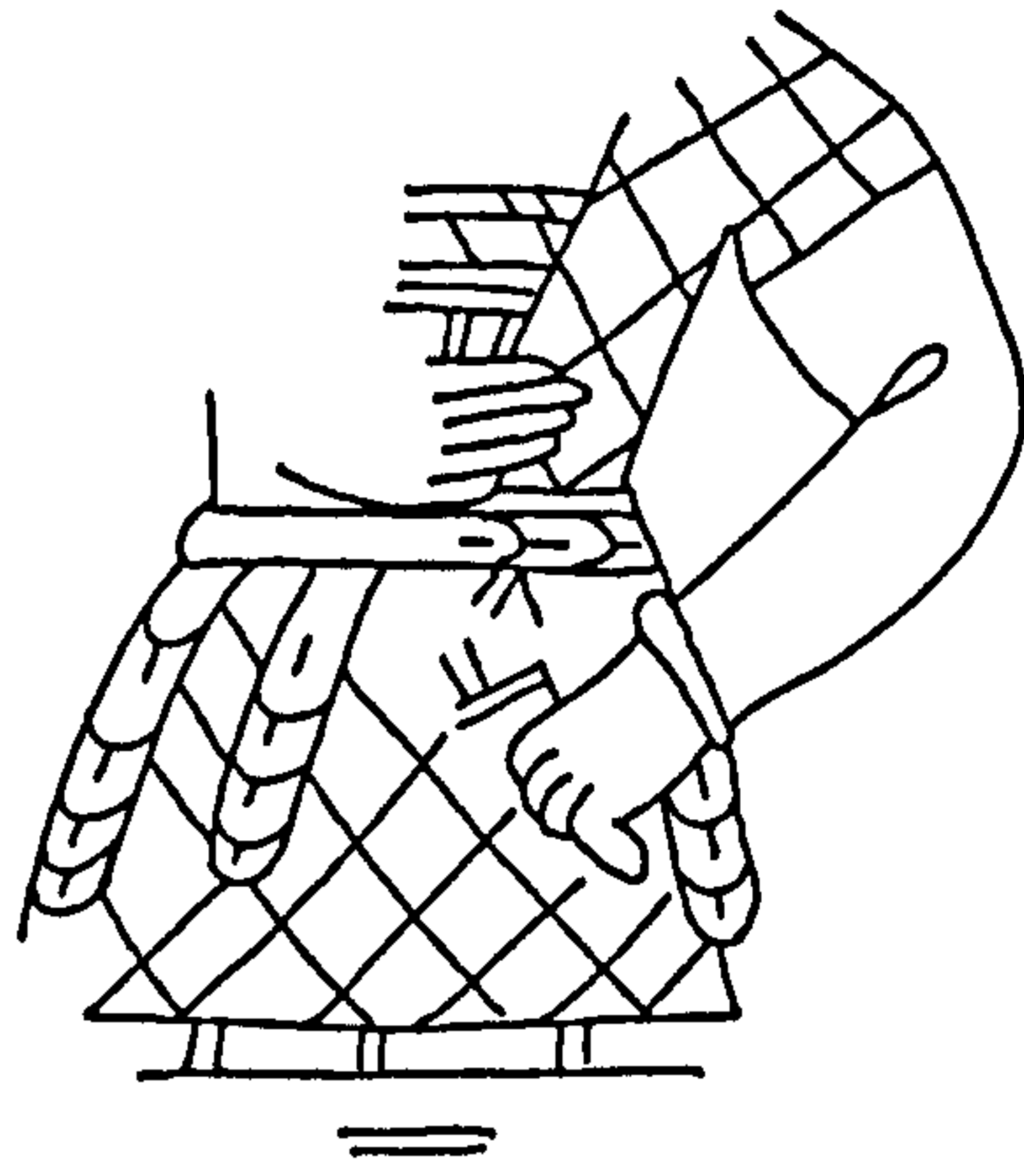


311



312

313



314



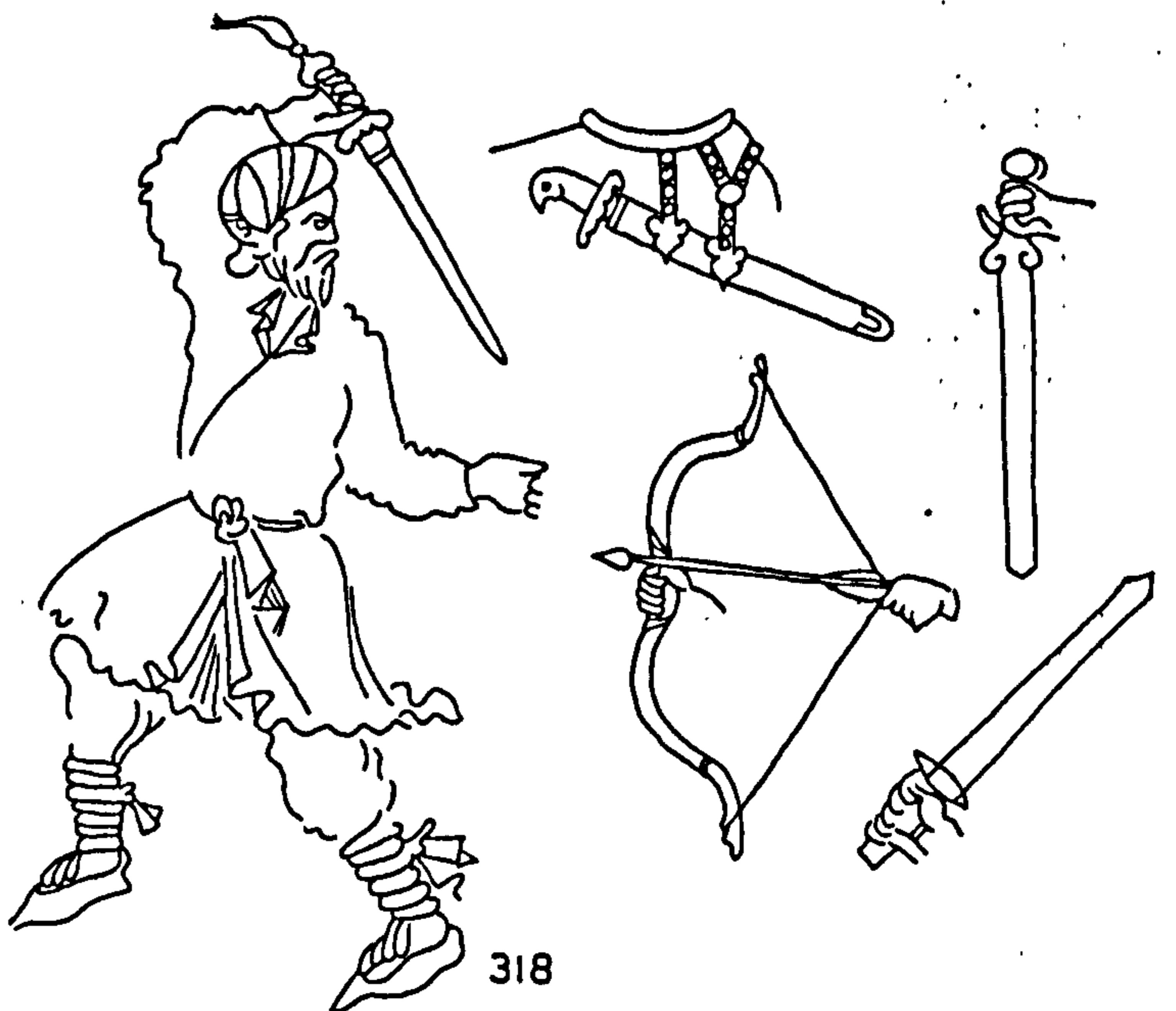
315



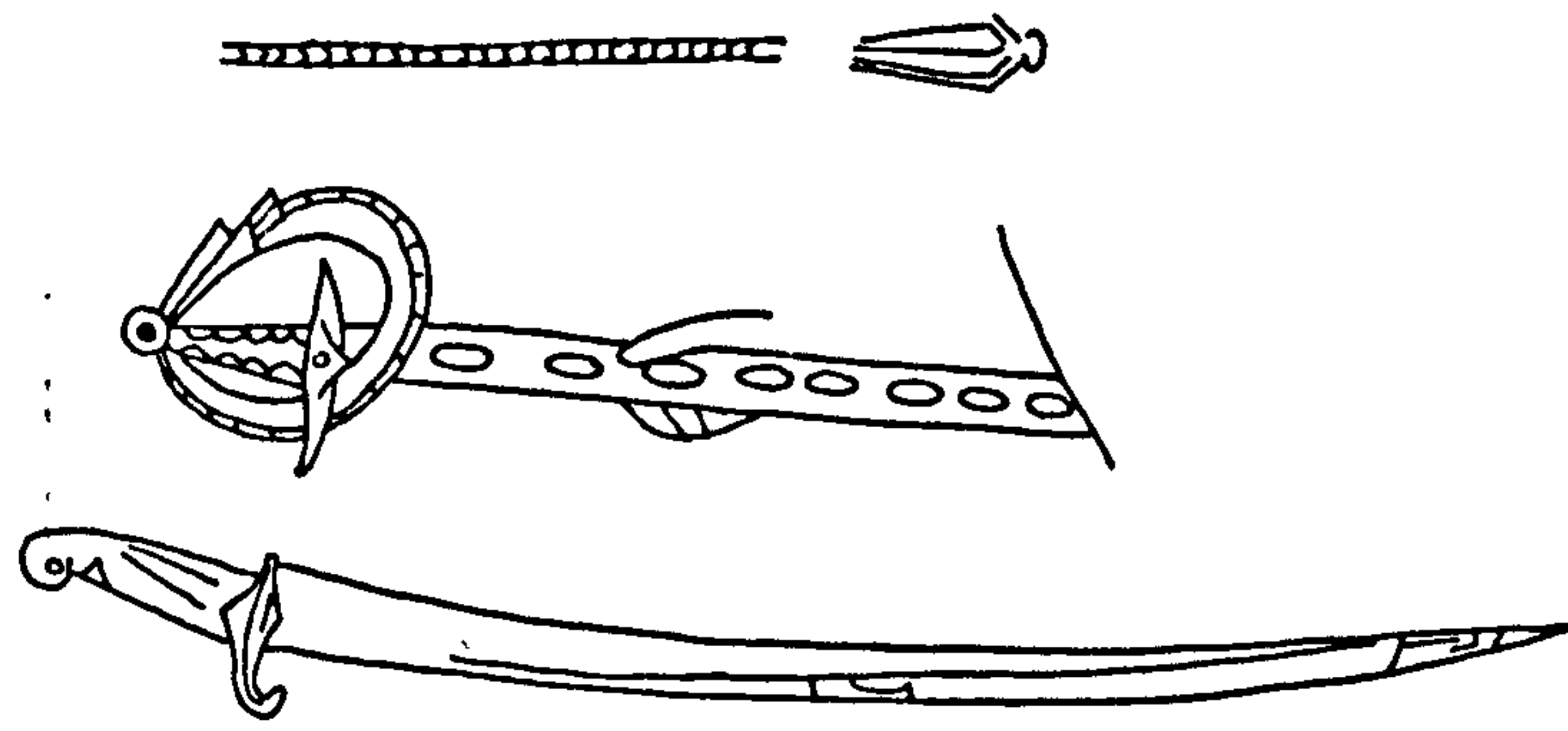
316



317



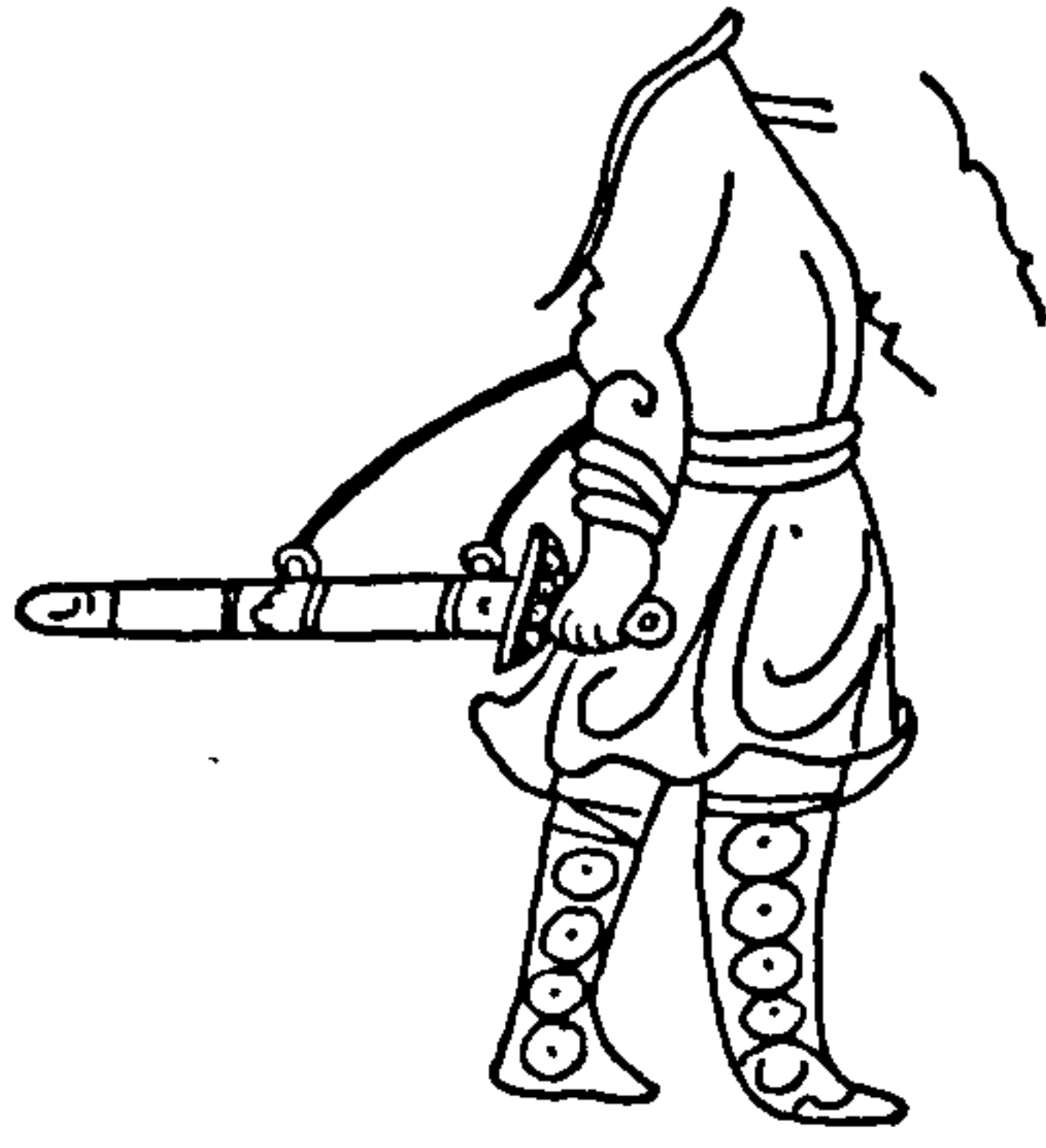
318



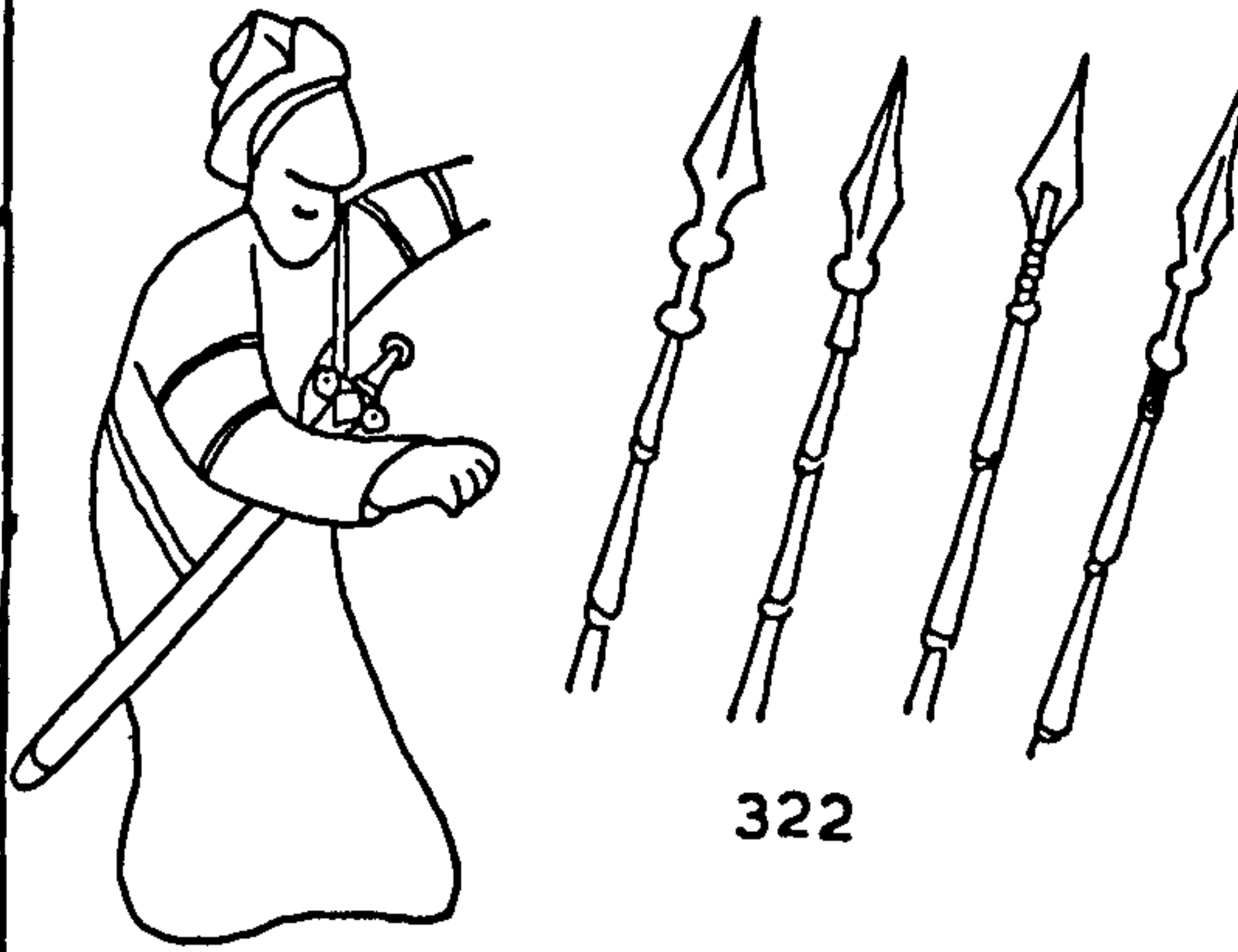
319



320



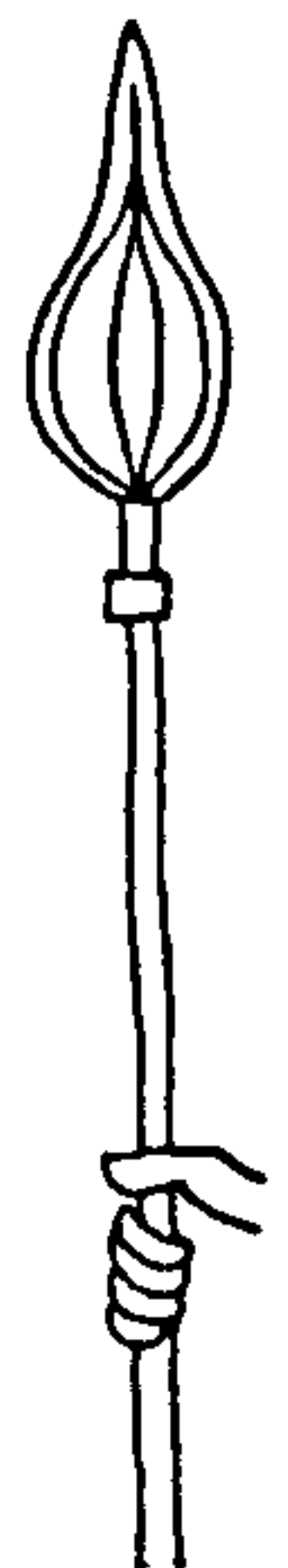
321



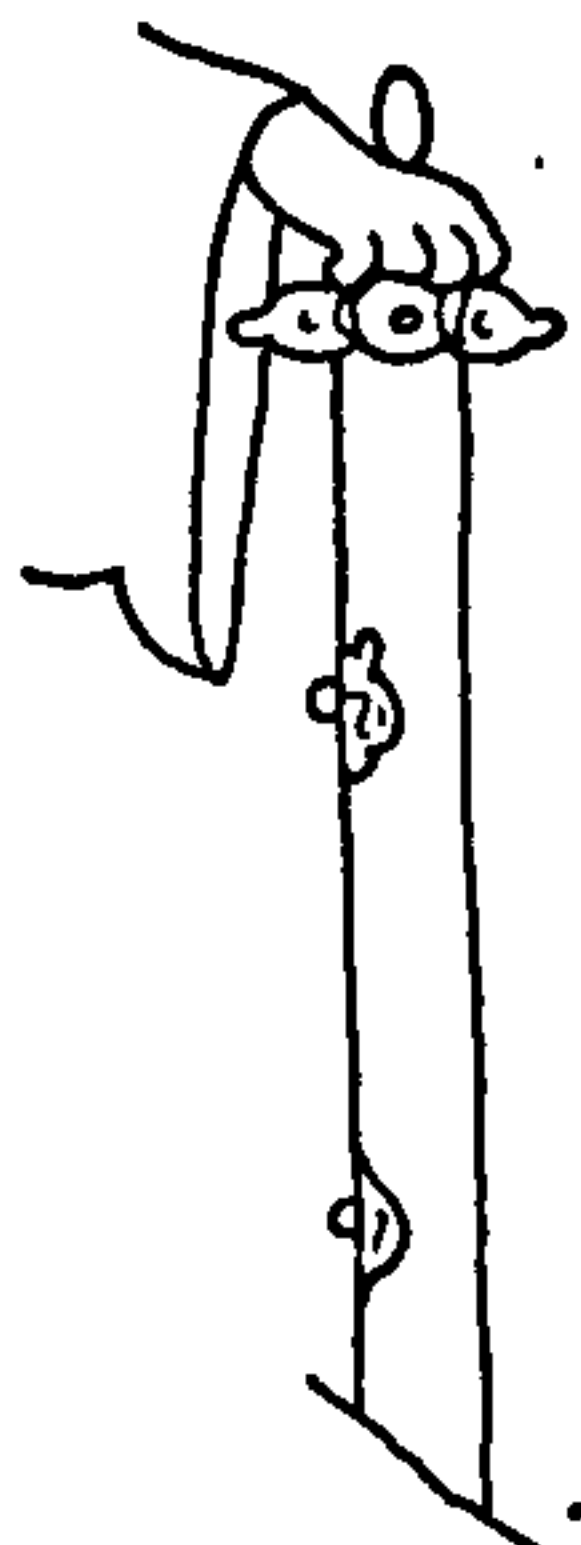
322



323



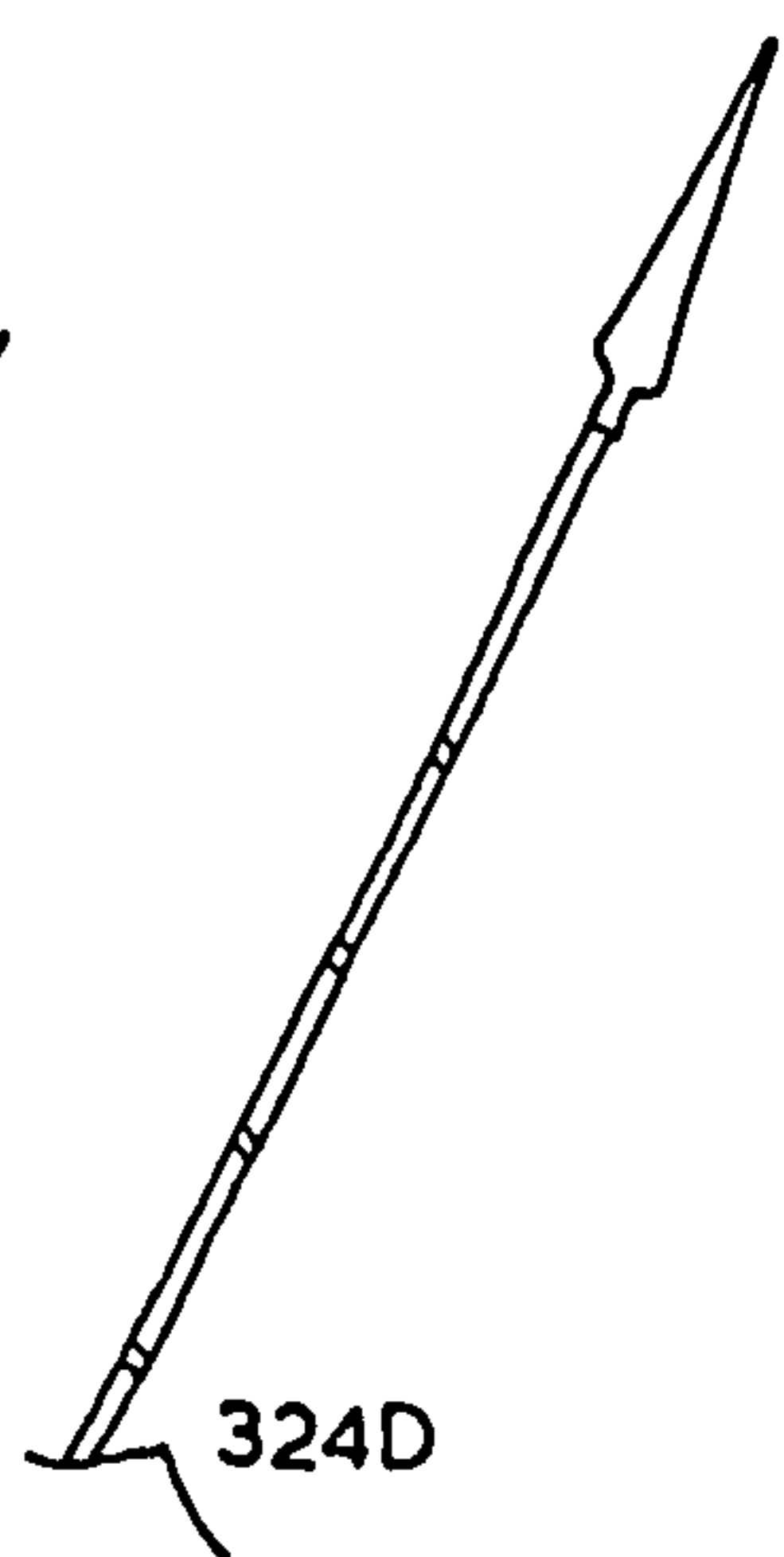
324 A



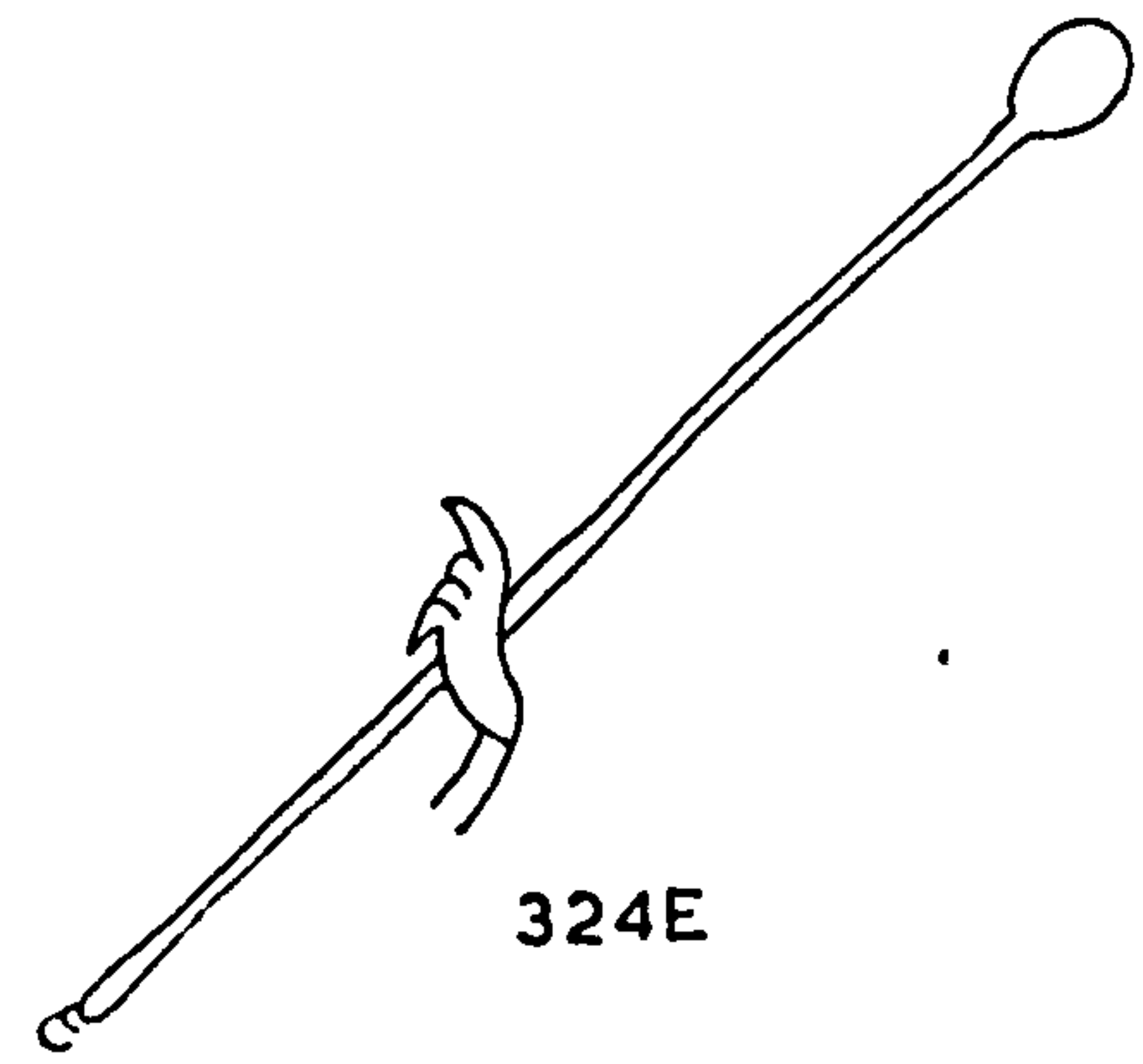
324 B



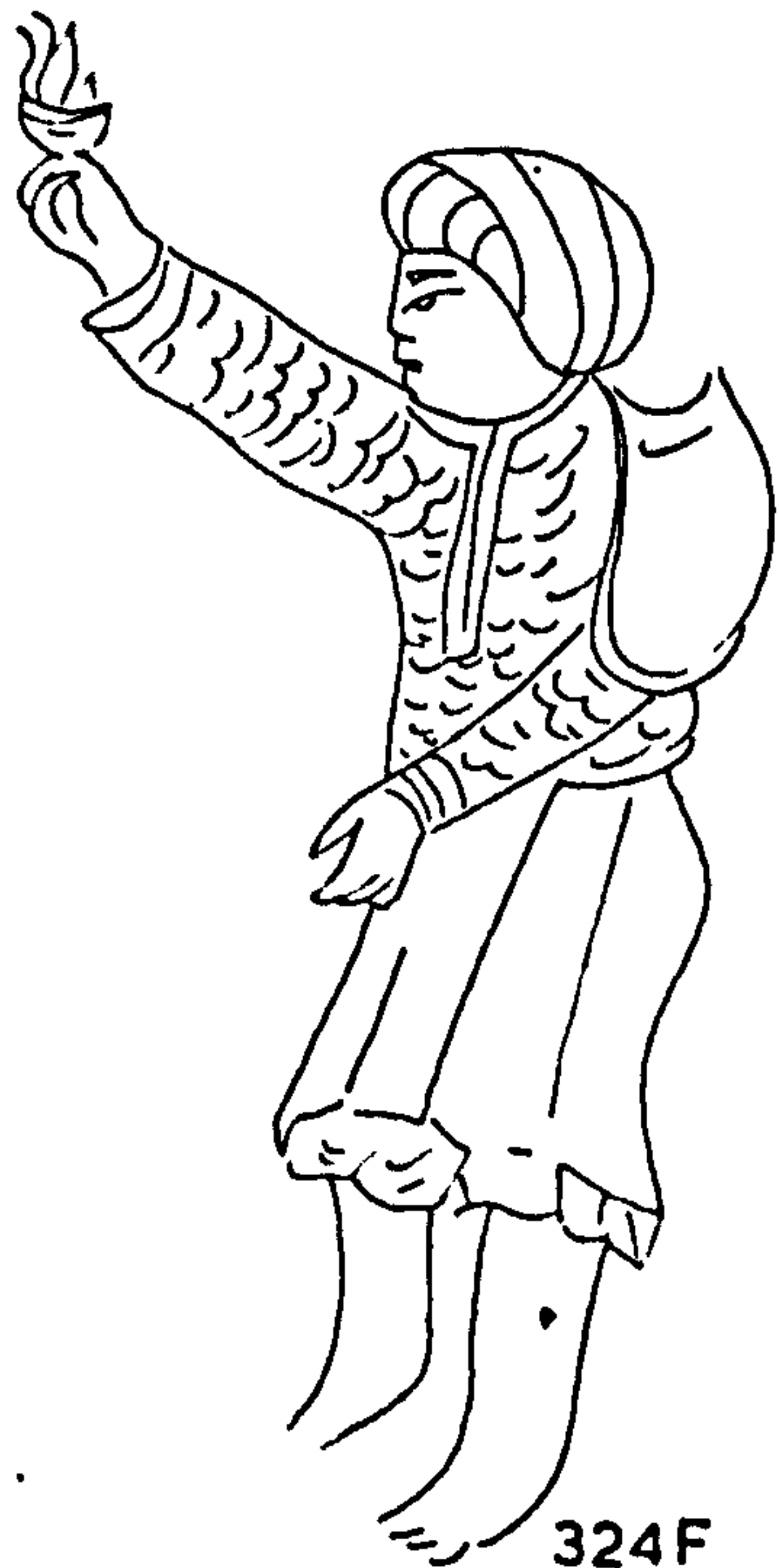
324 C



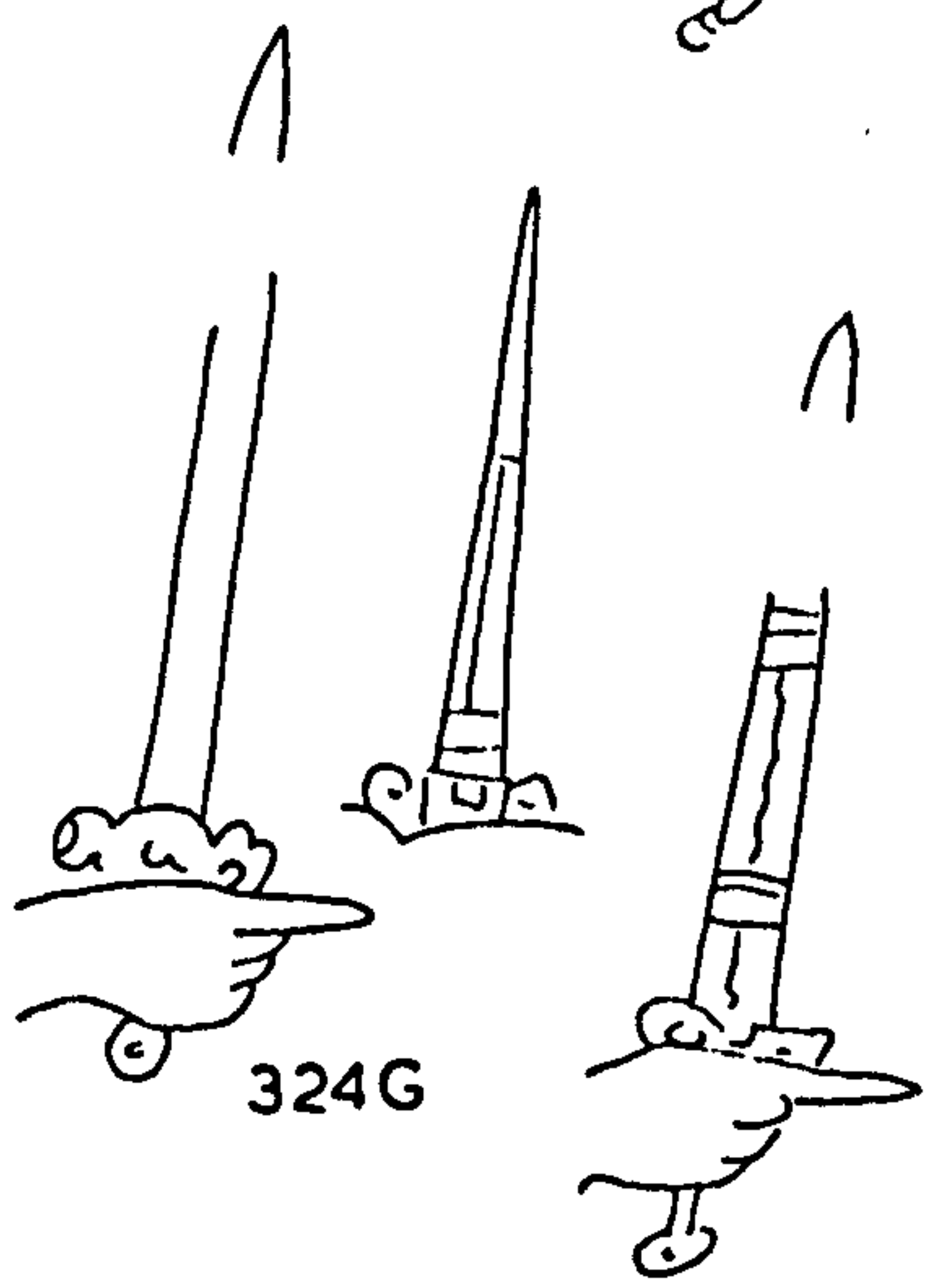
324 D



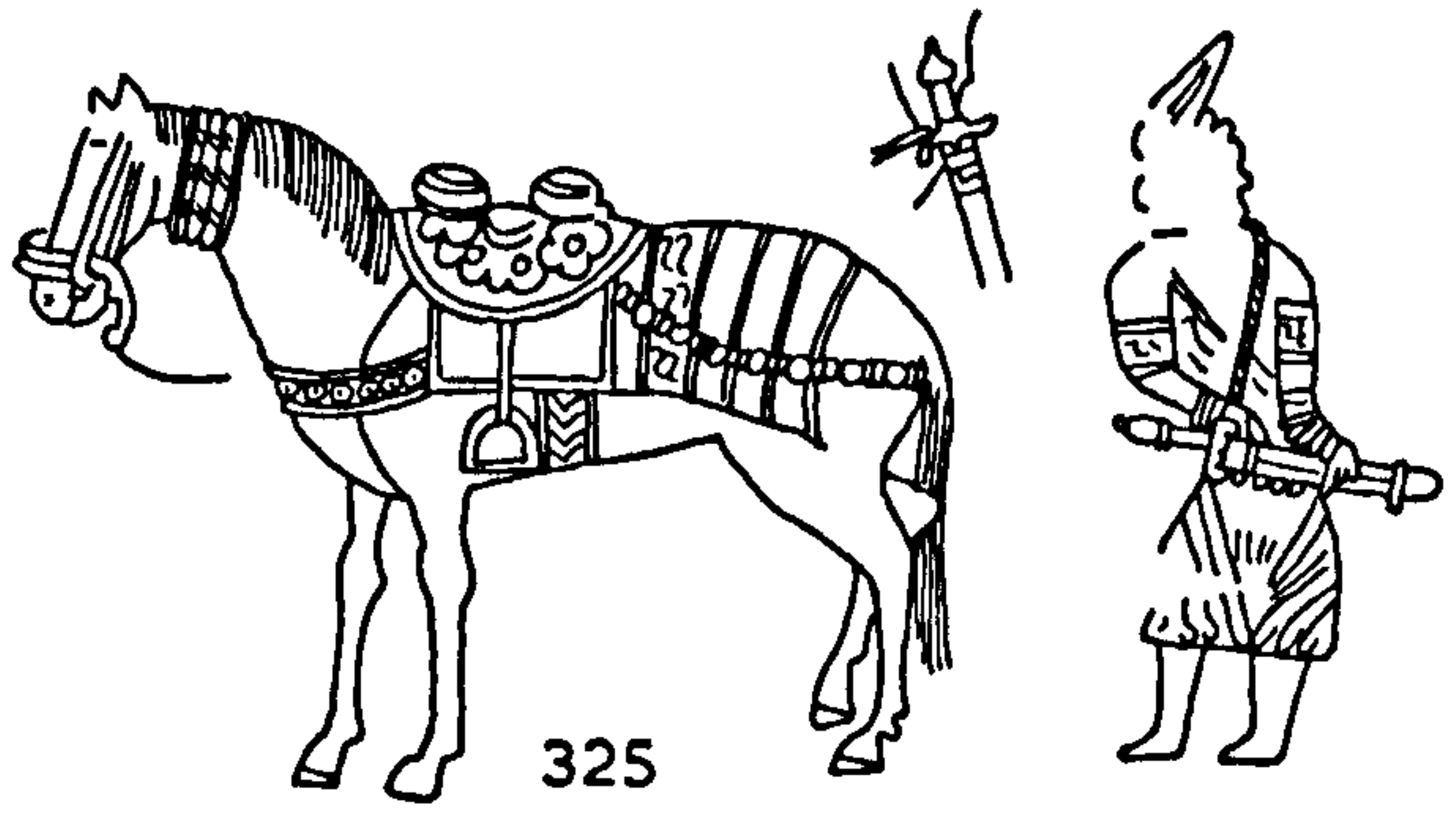
324 E



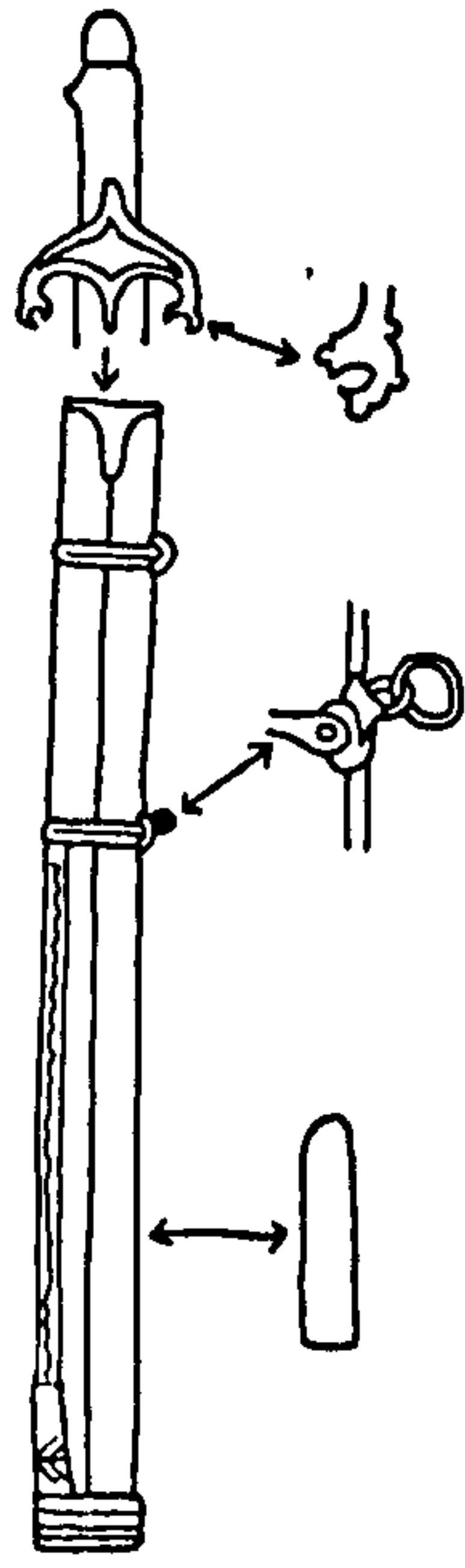
324 F



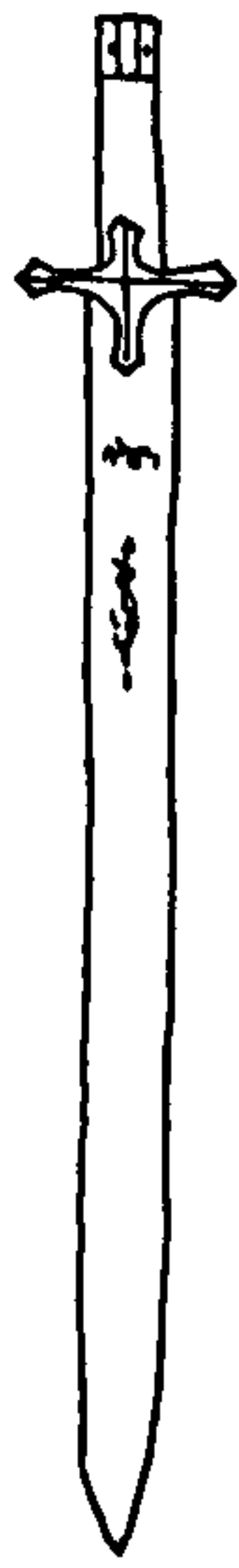
324 G



325



326



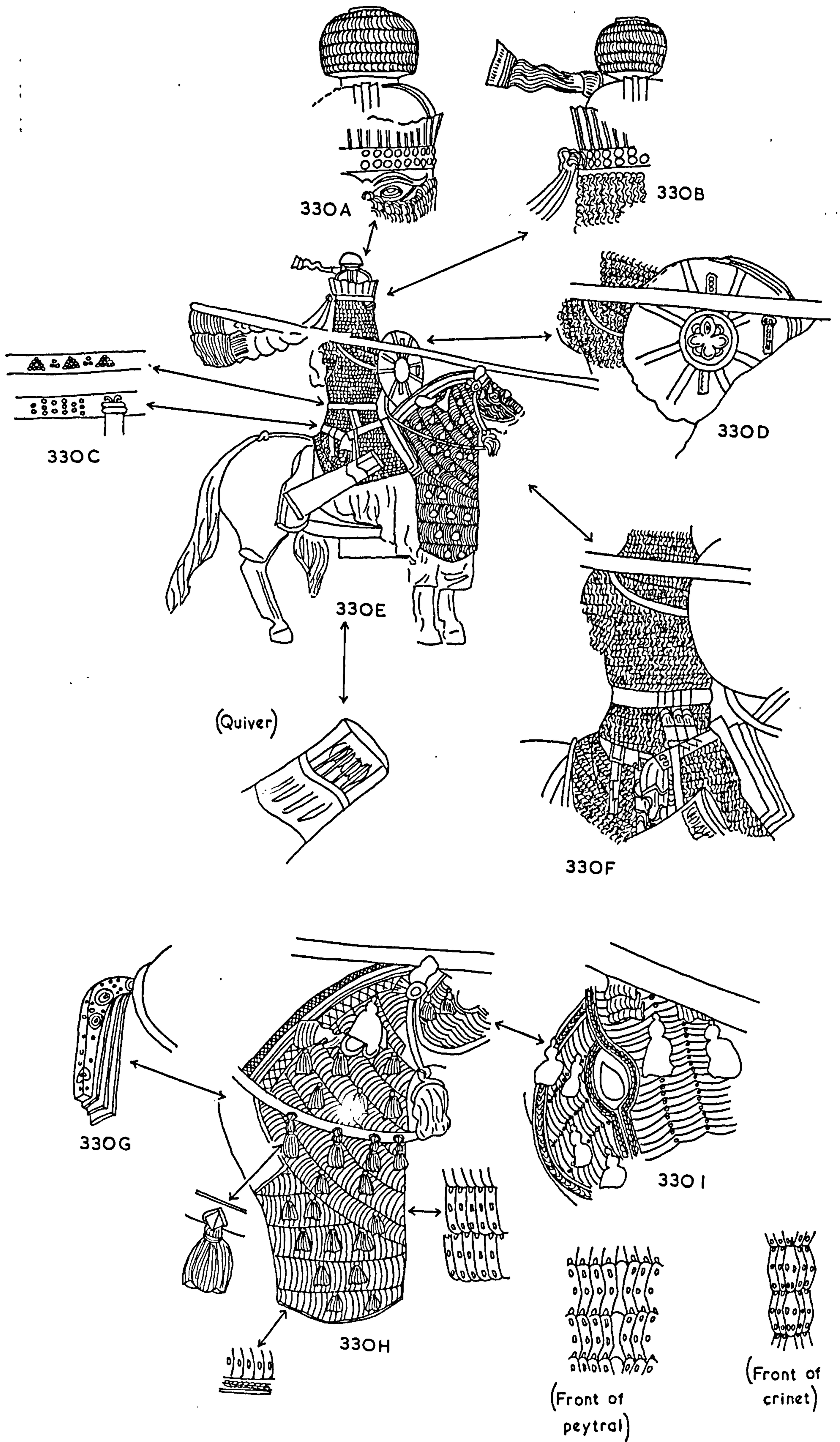
327



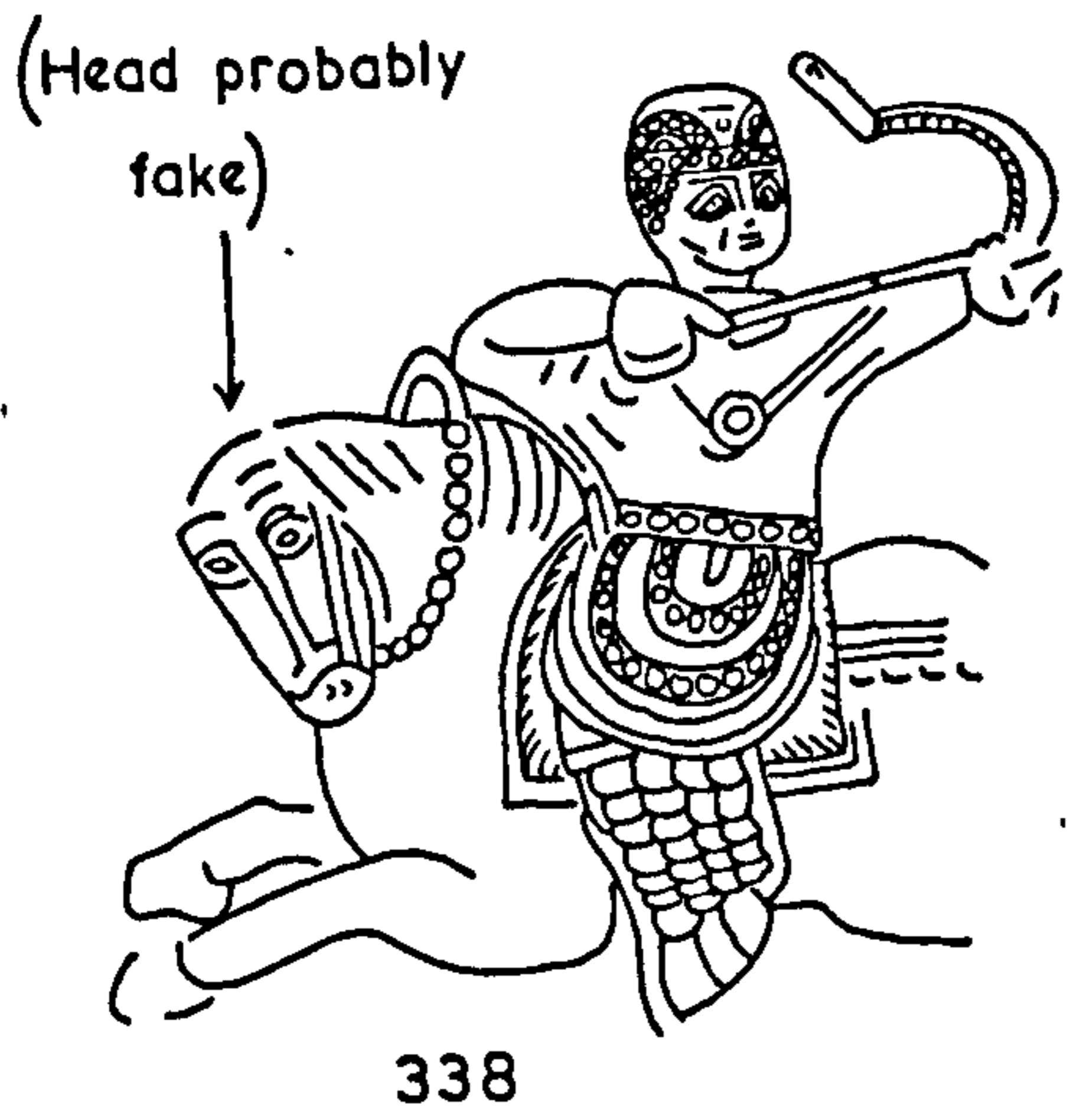
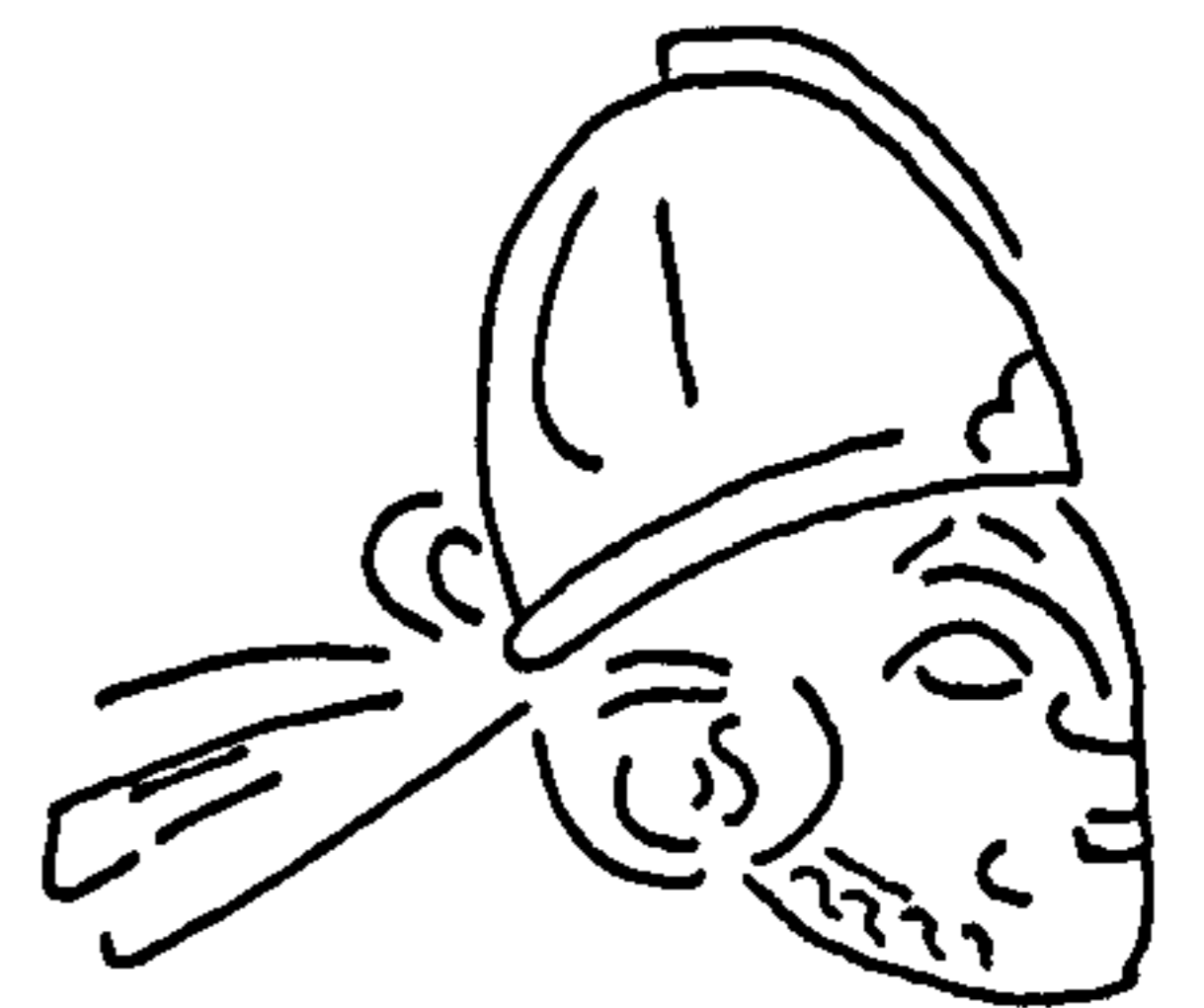
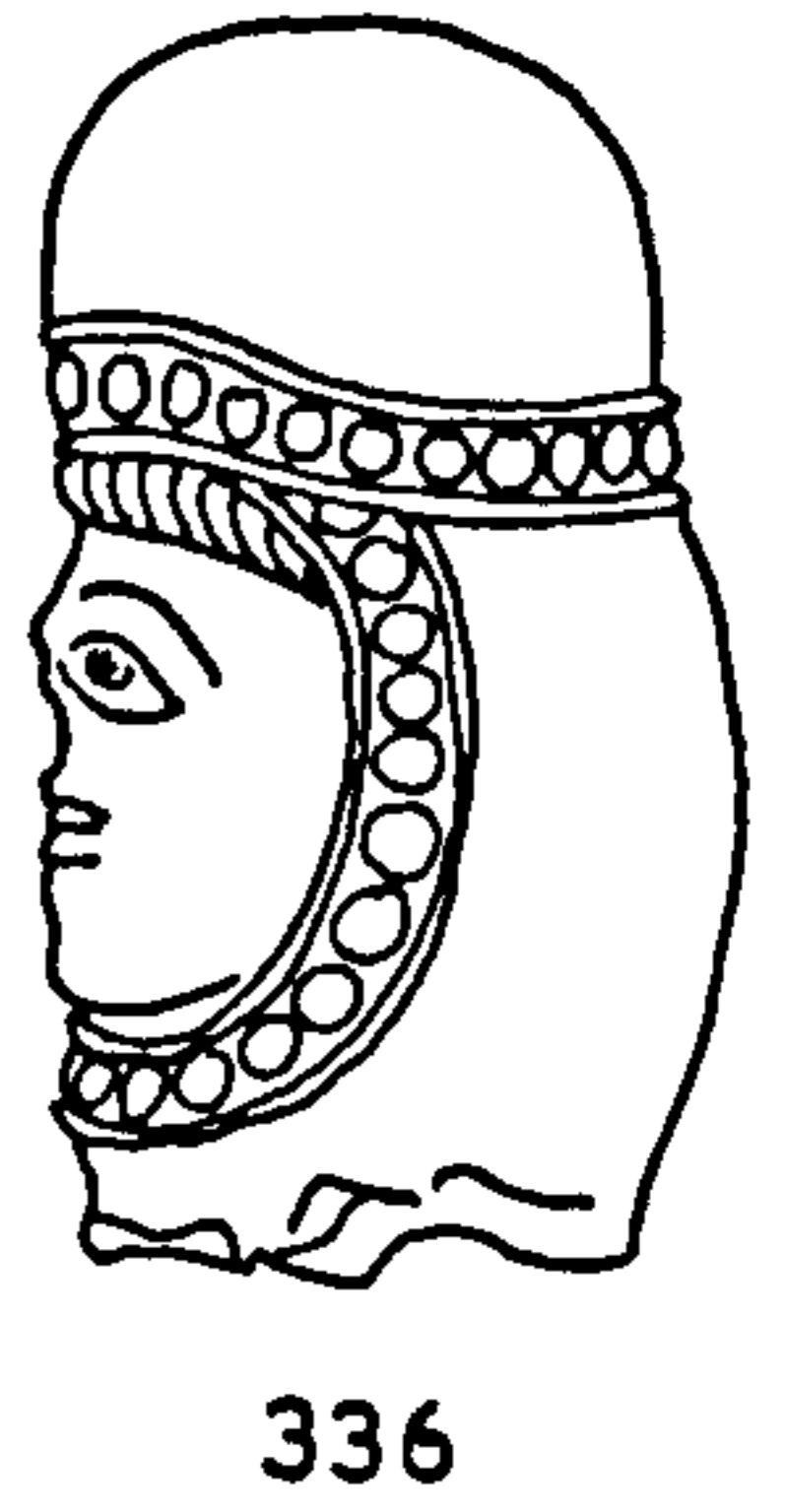
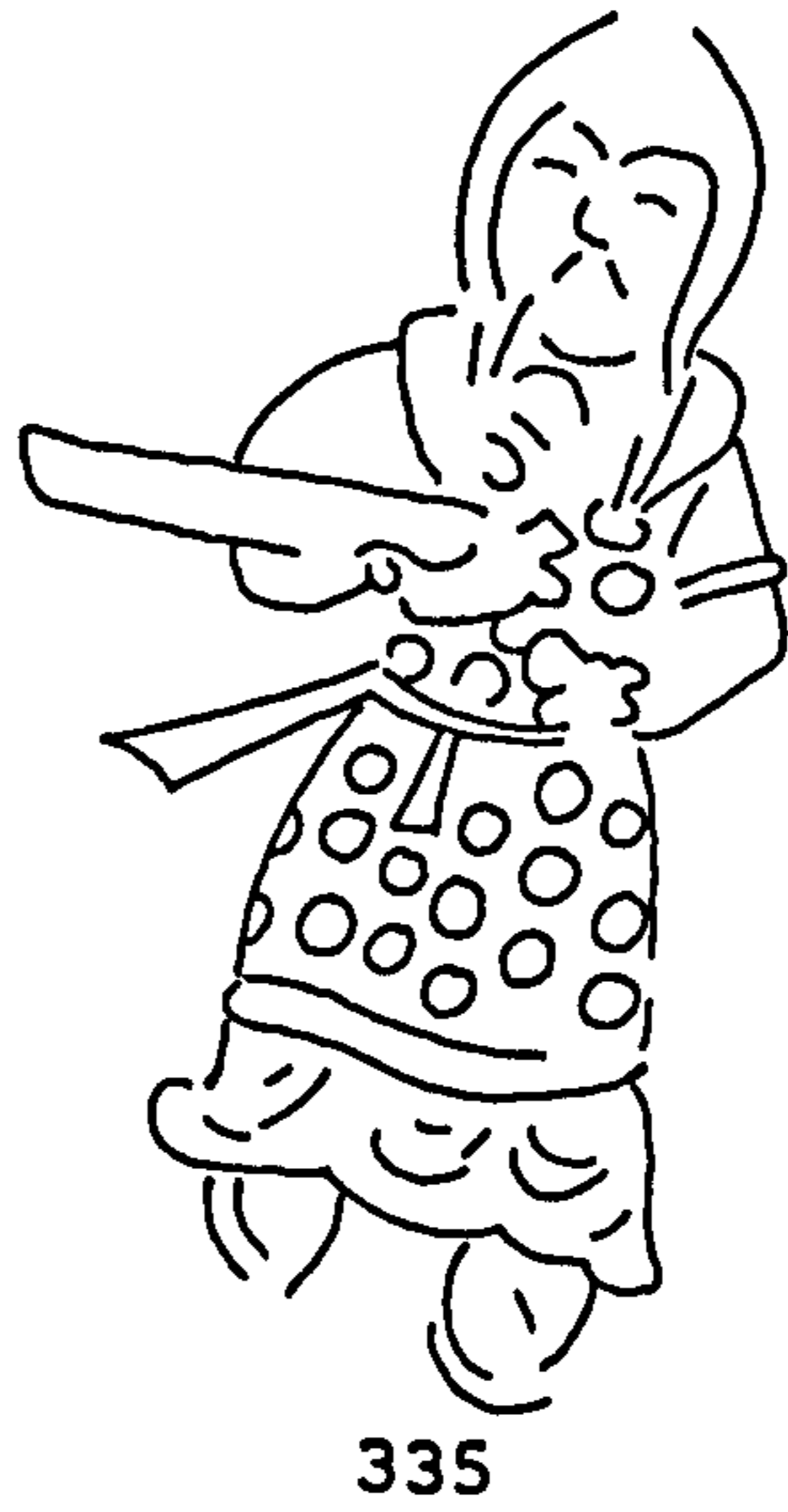
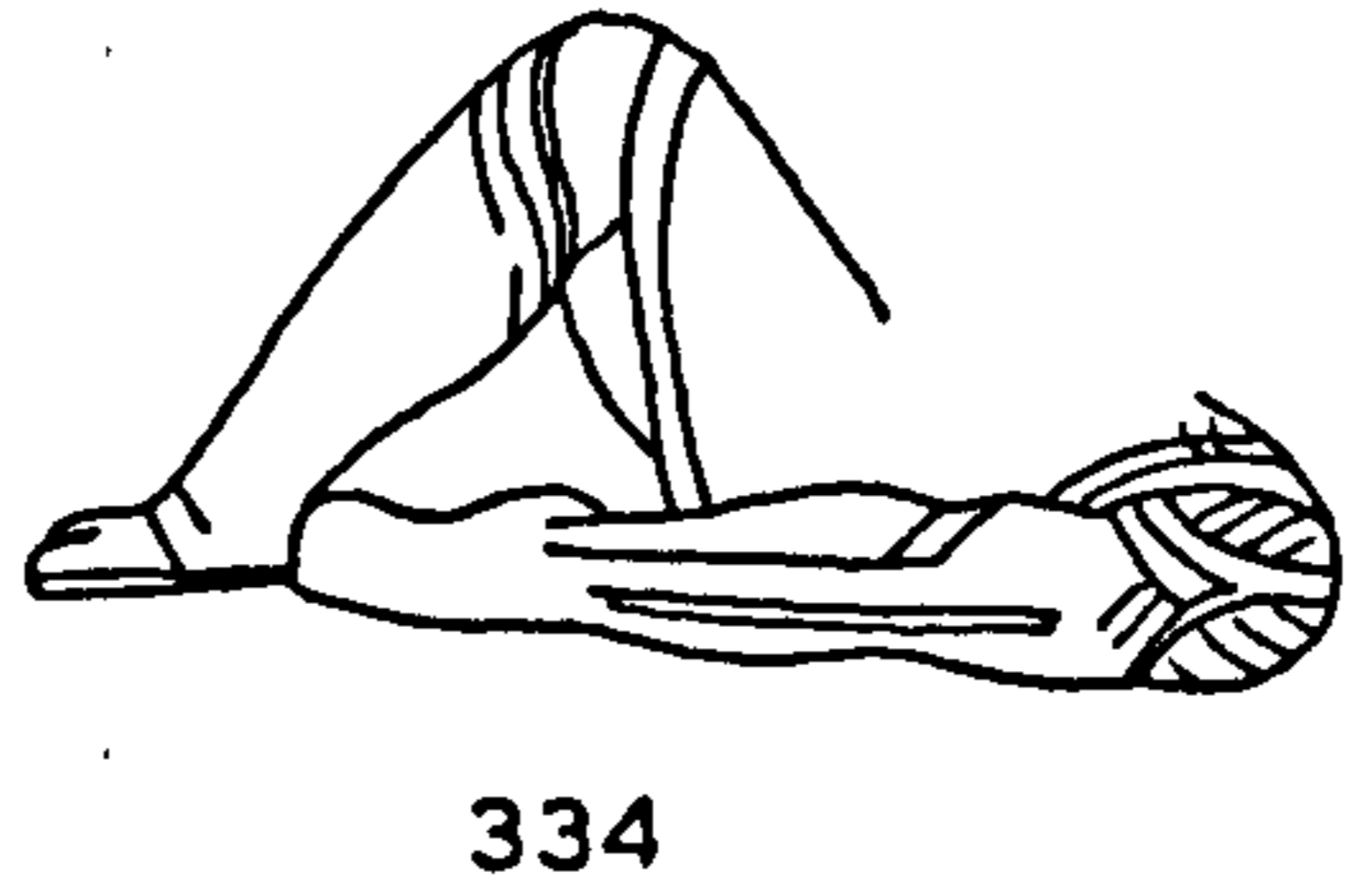
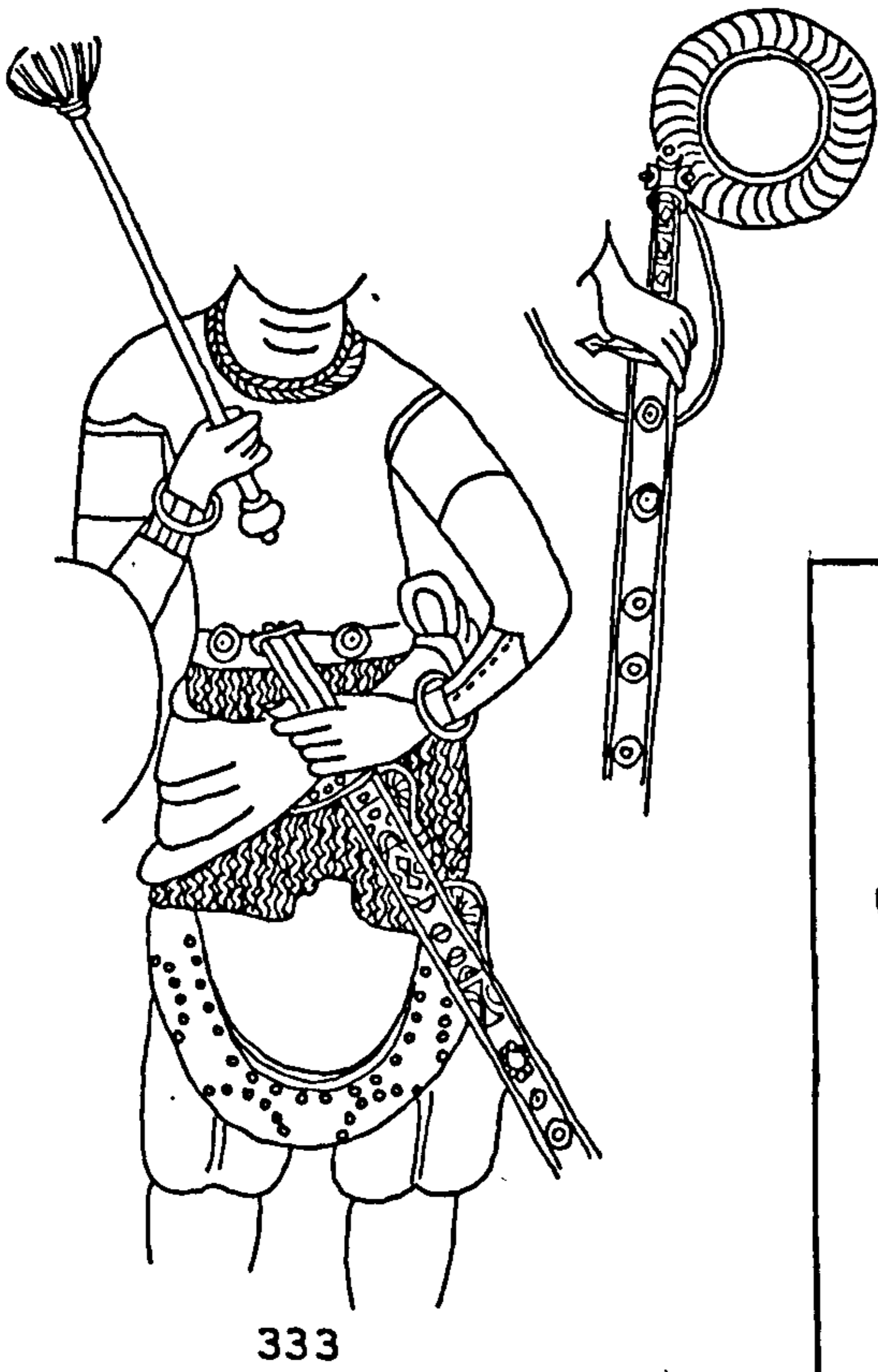
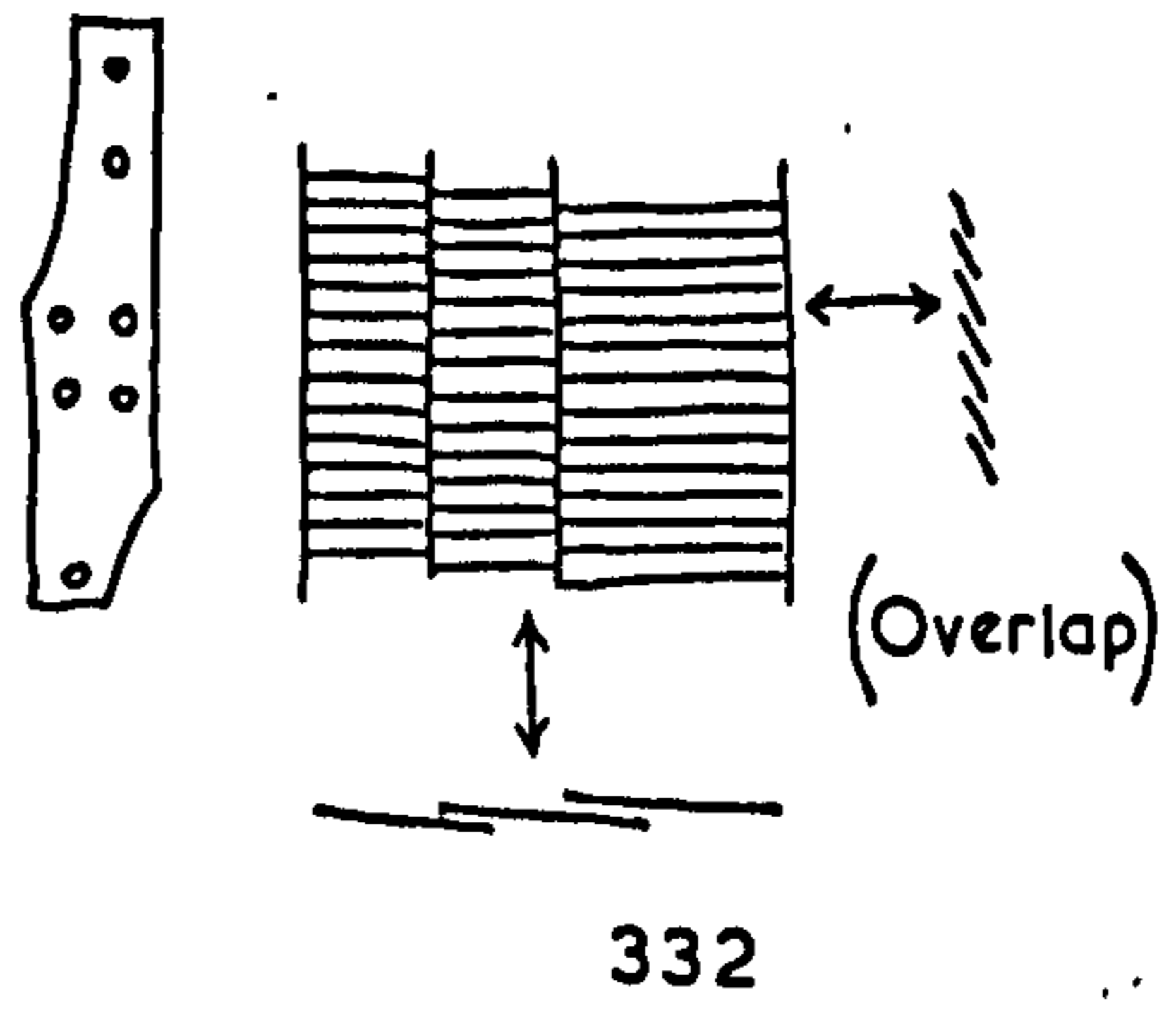
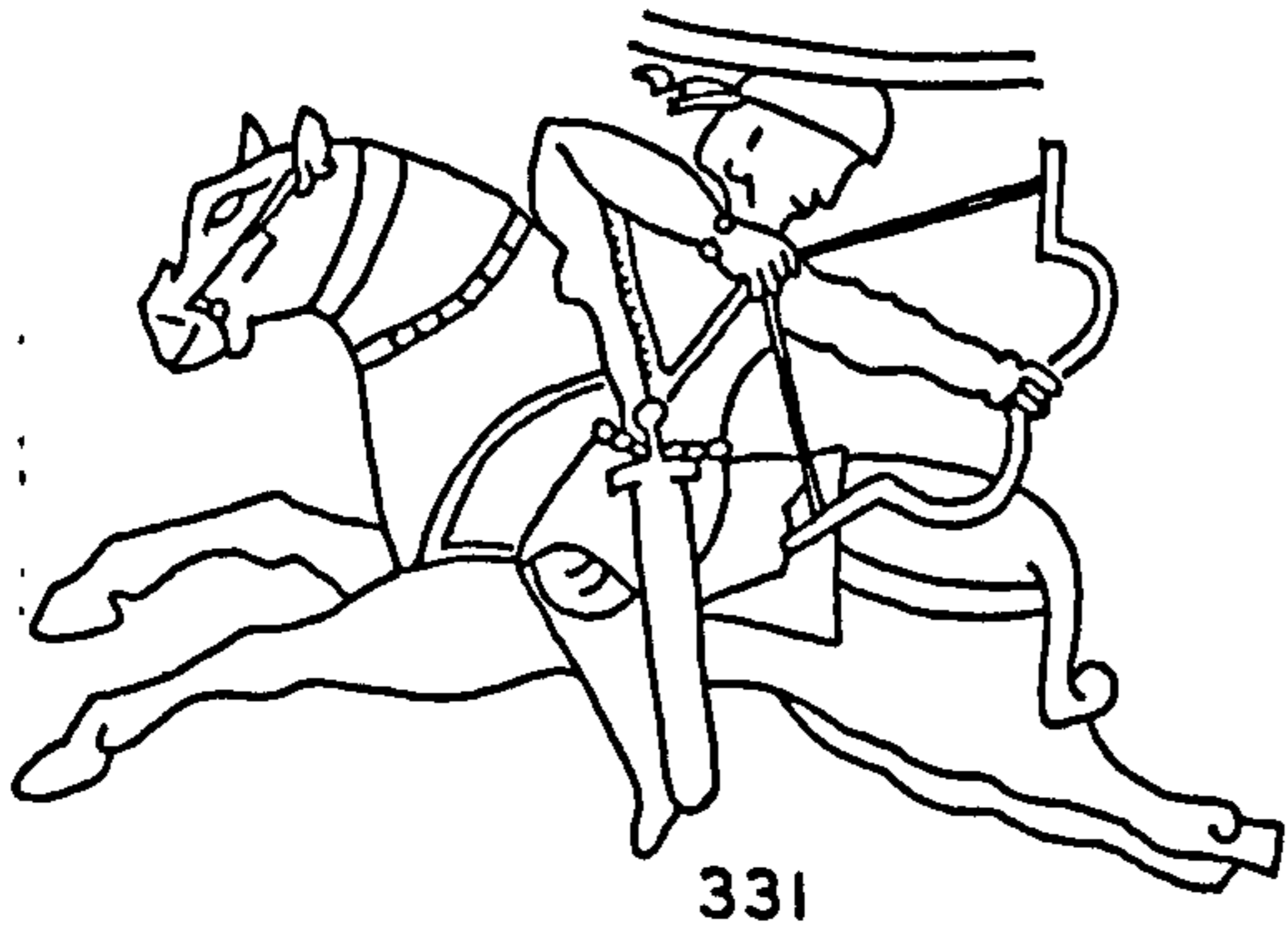
328



329





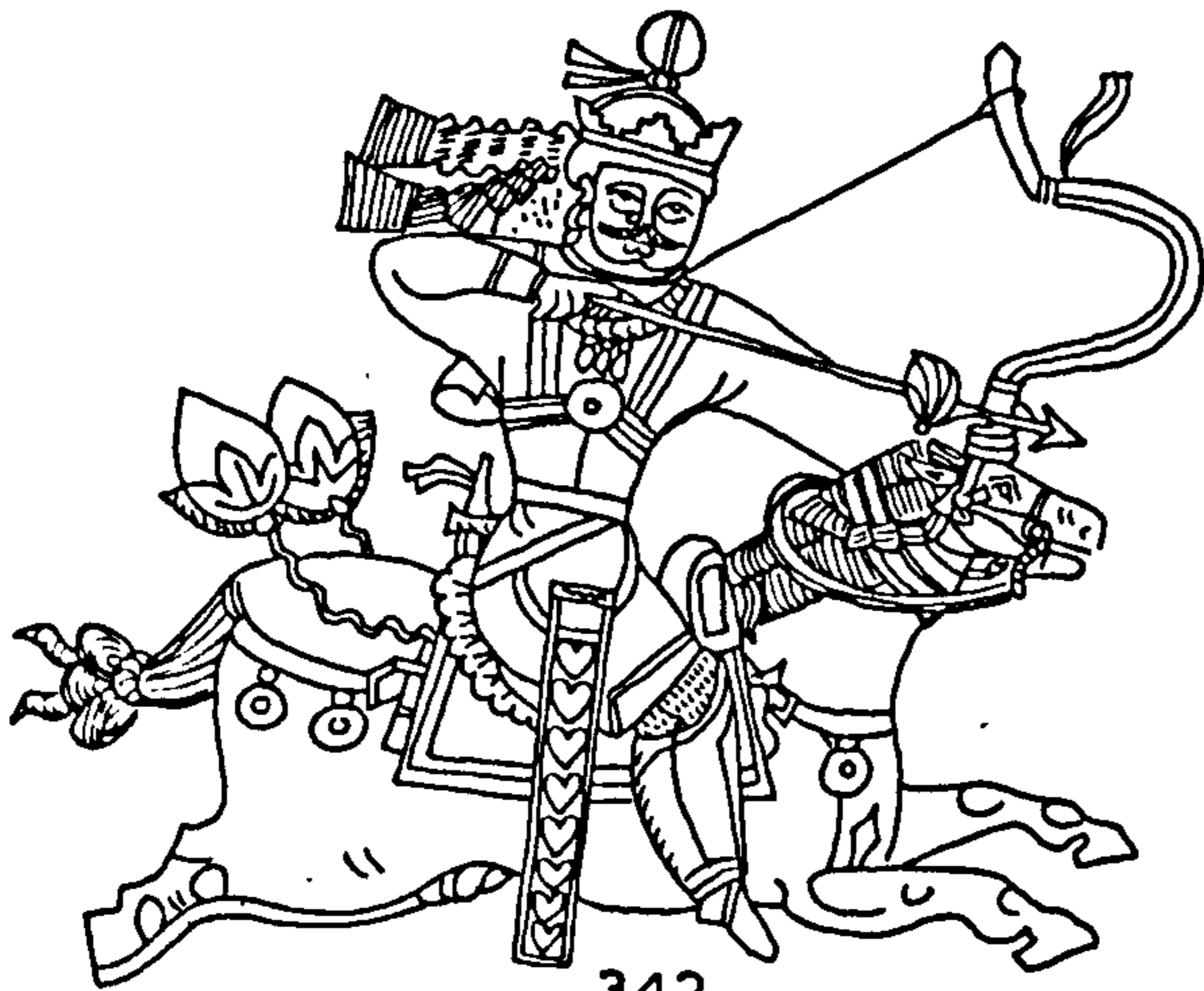




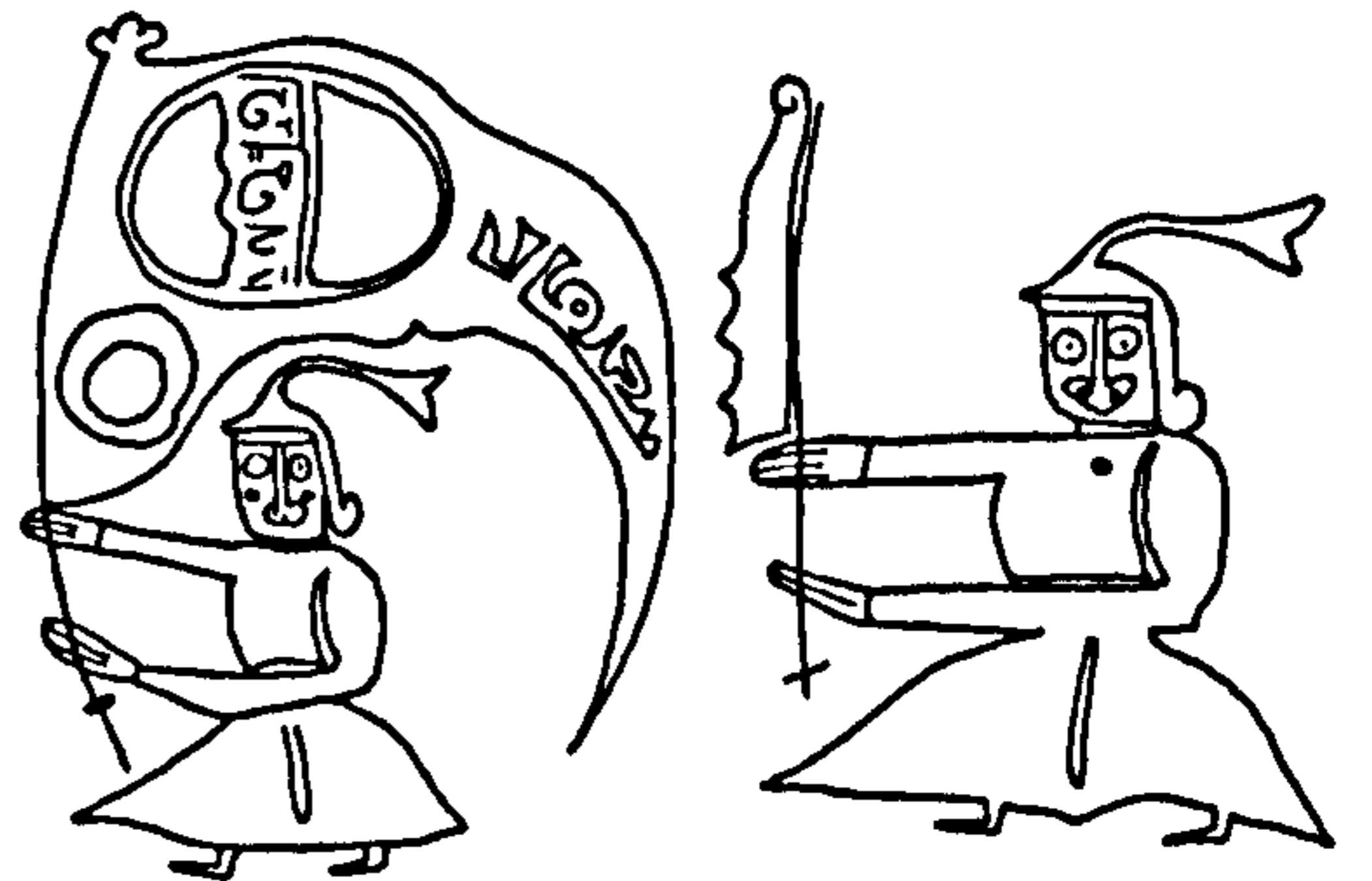
340



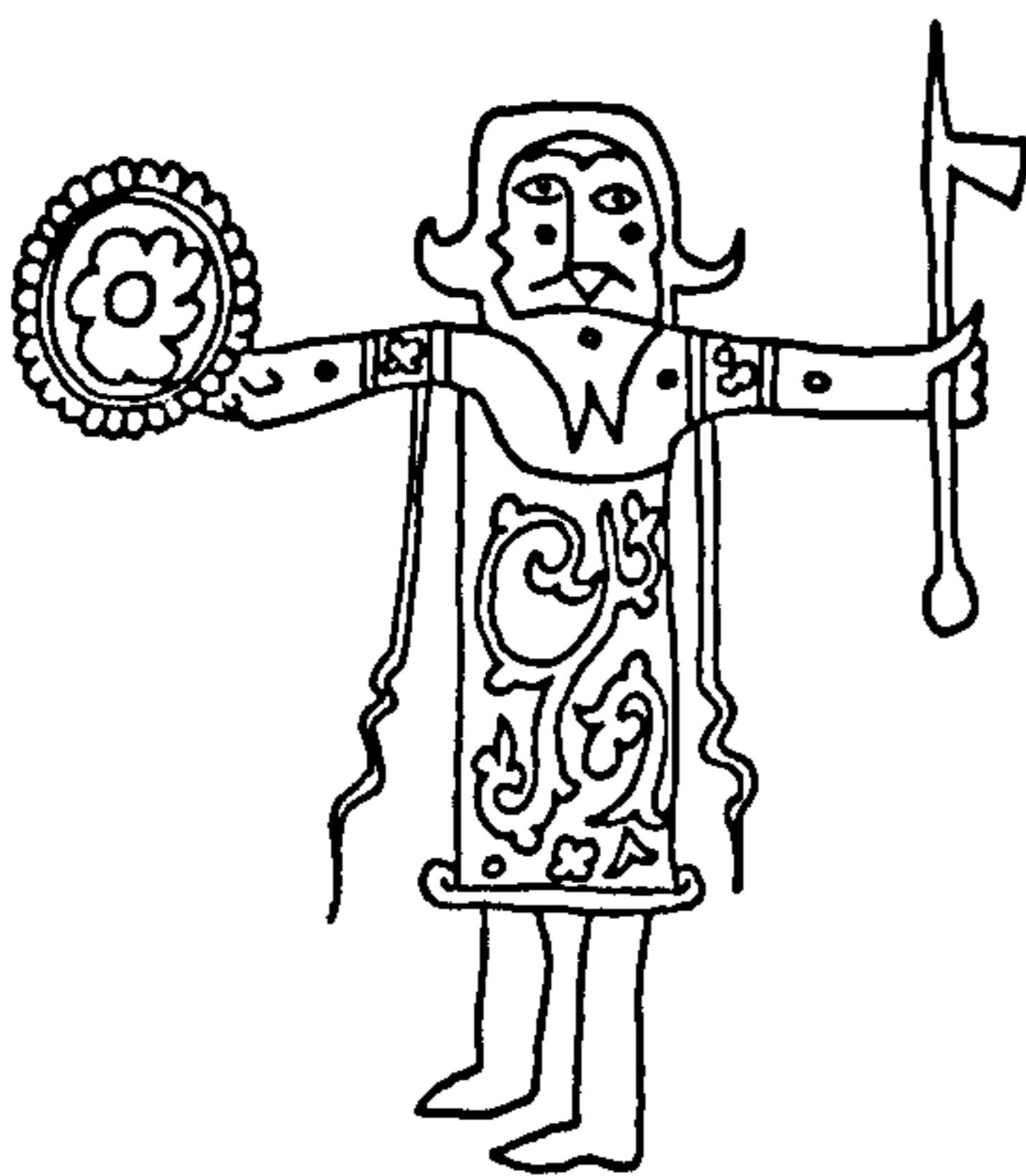
341



342



343



344



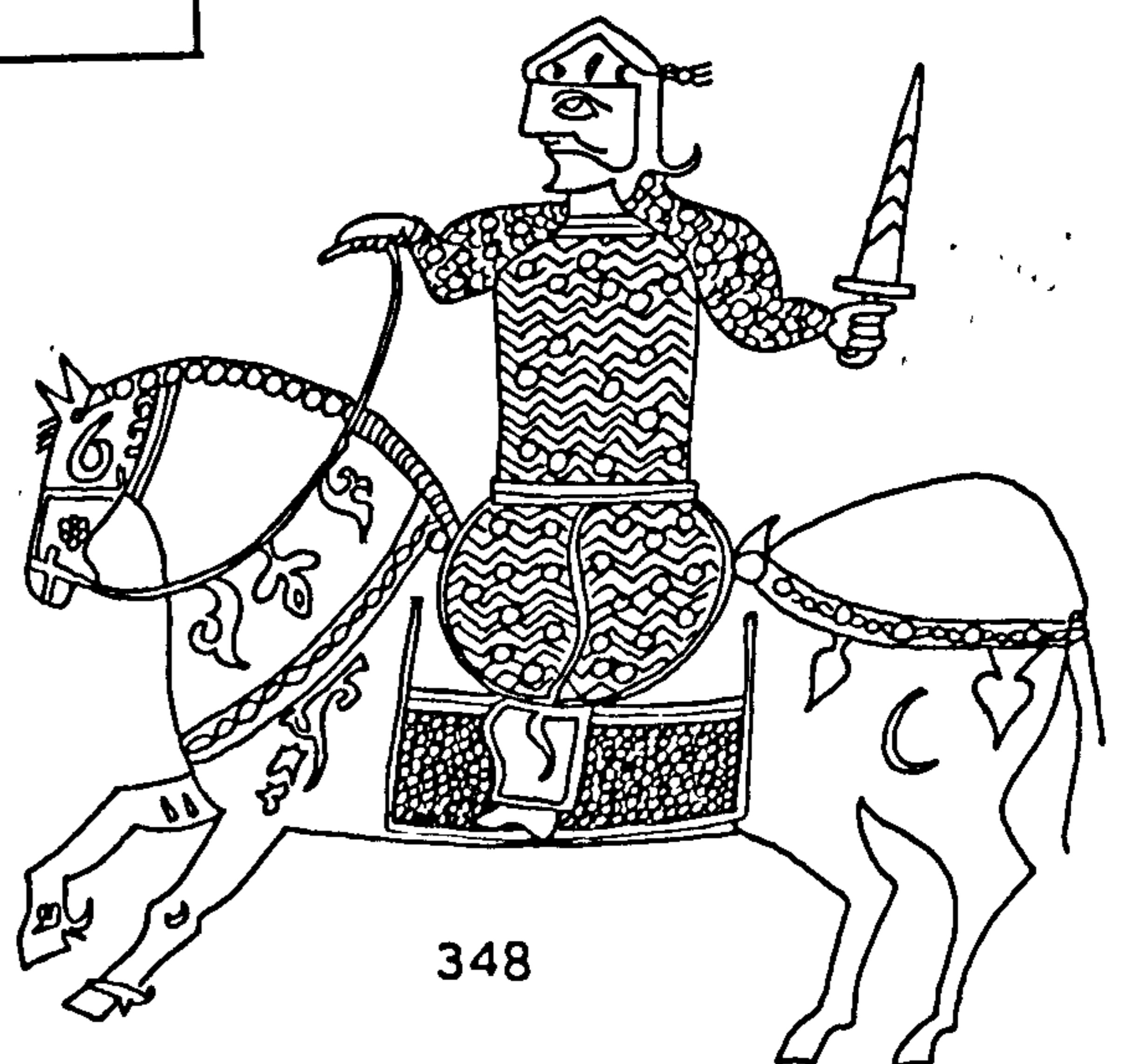
345



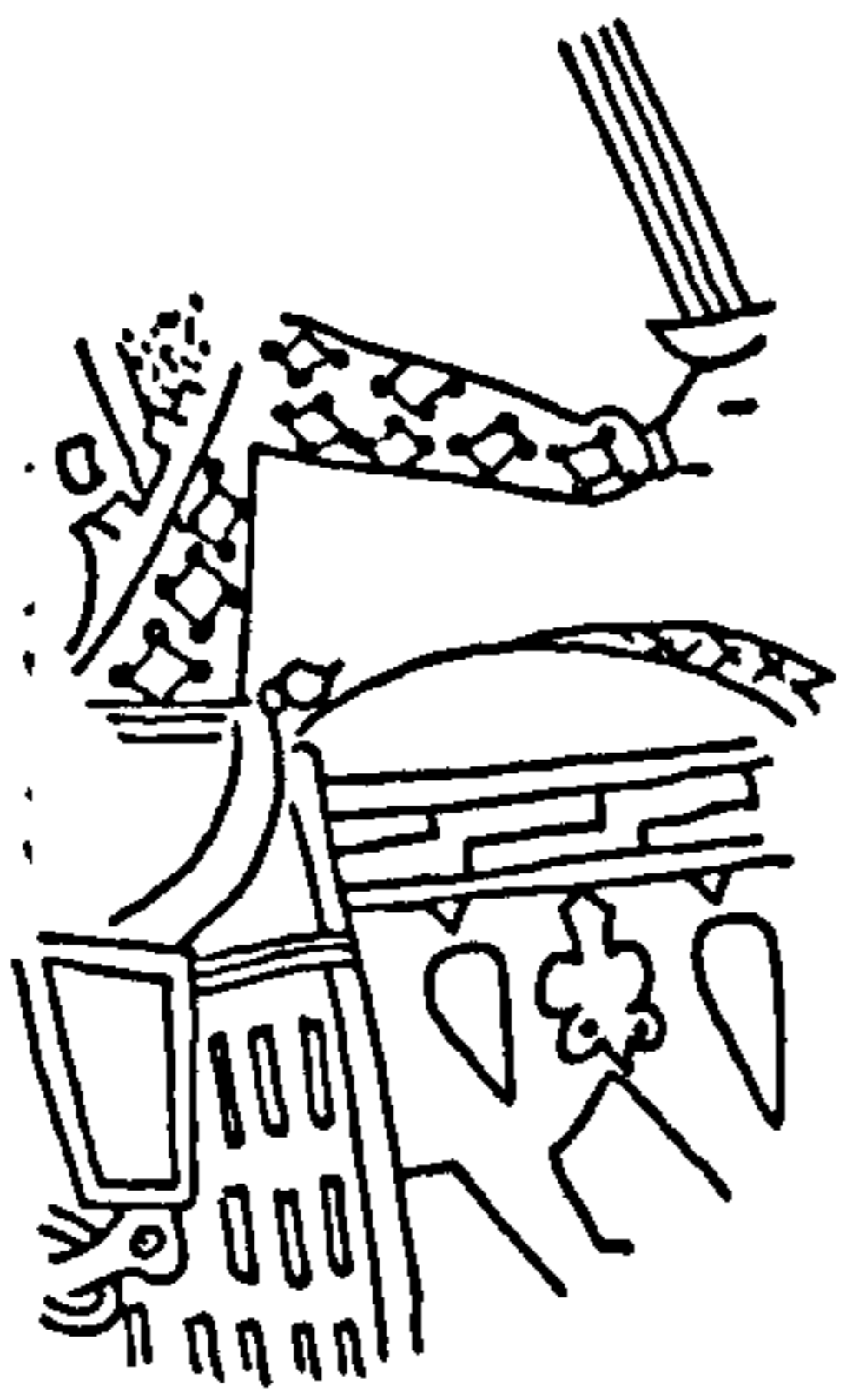
346



347



348



349



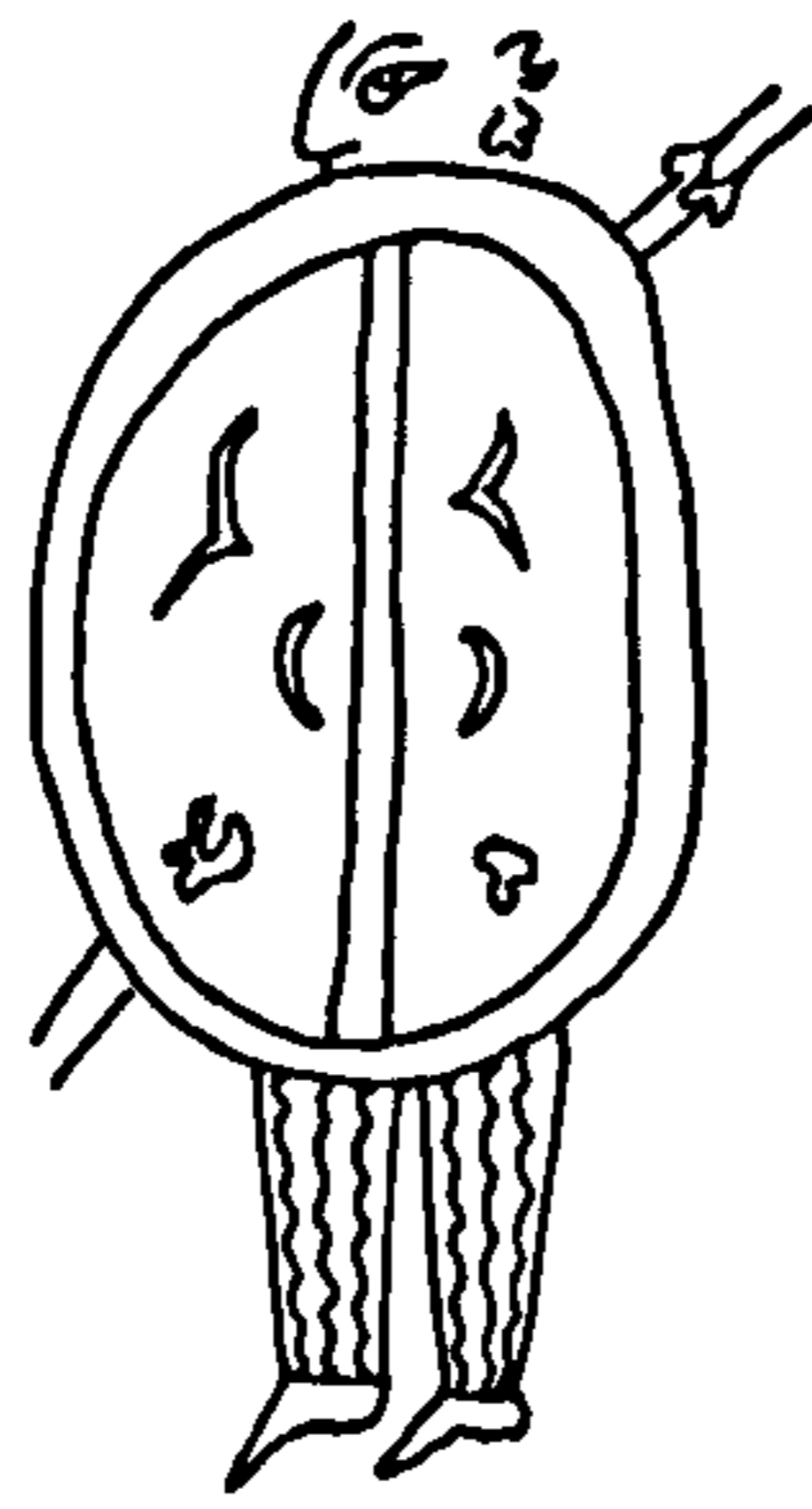
350



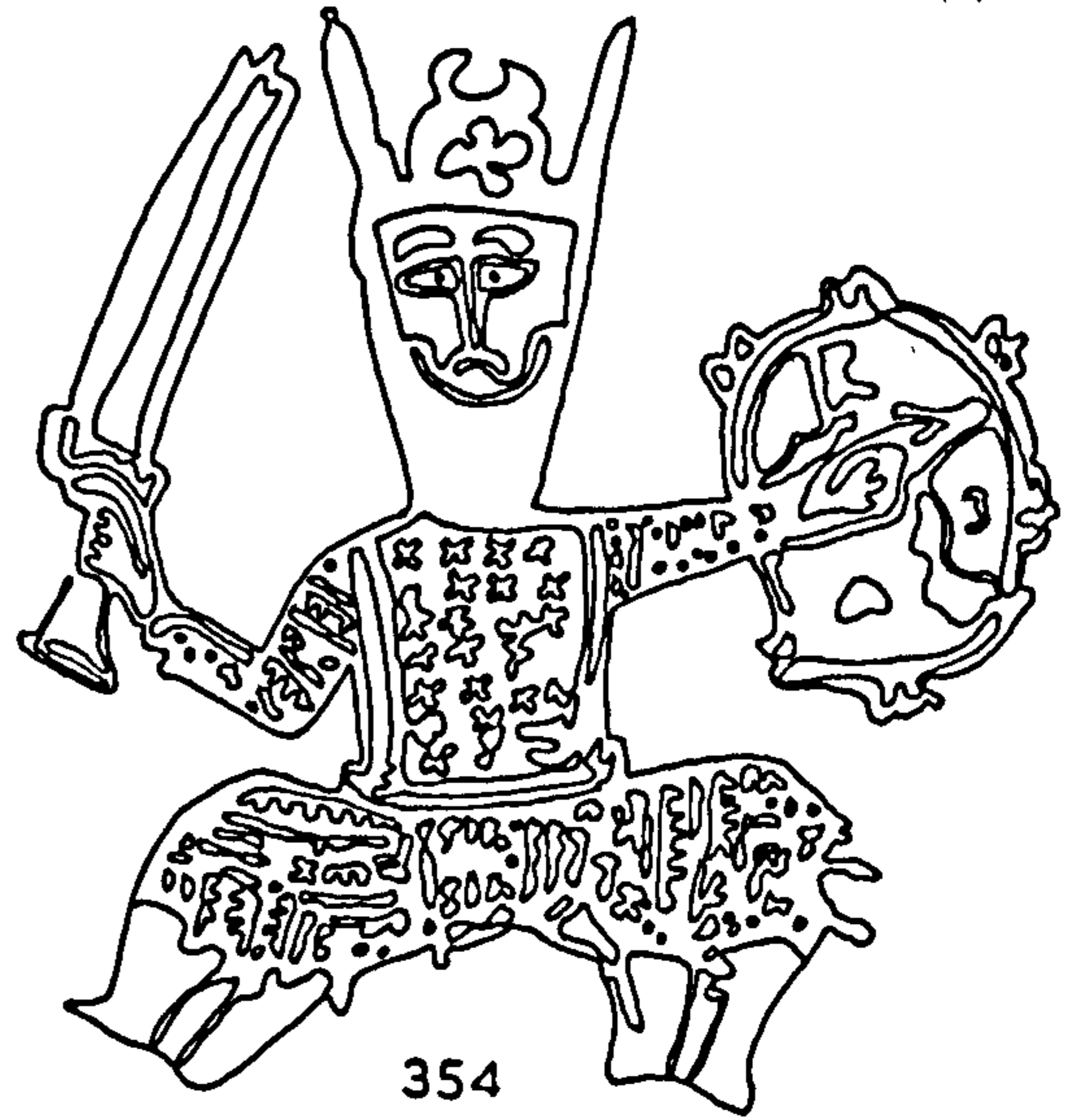
351



352



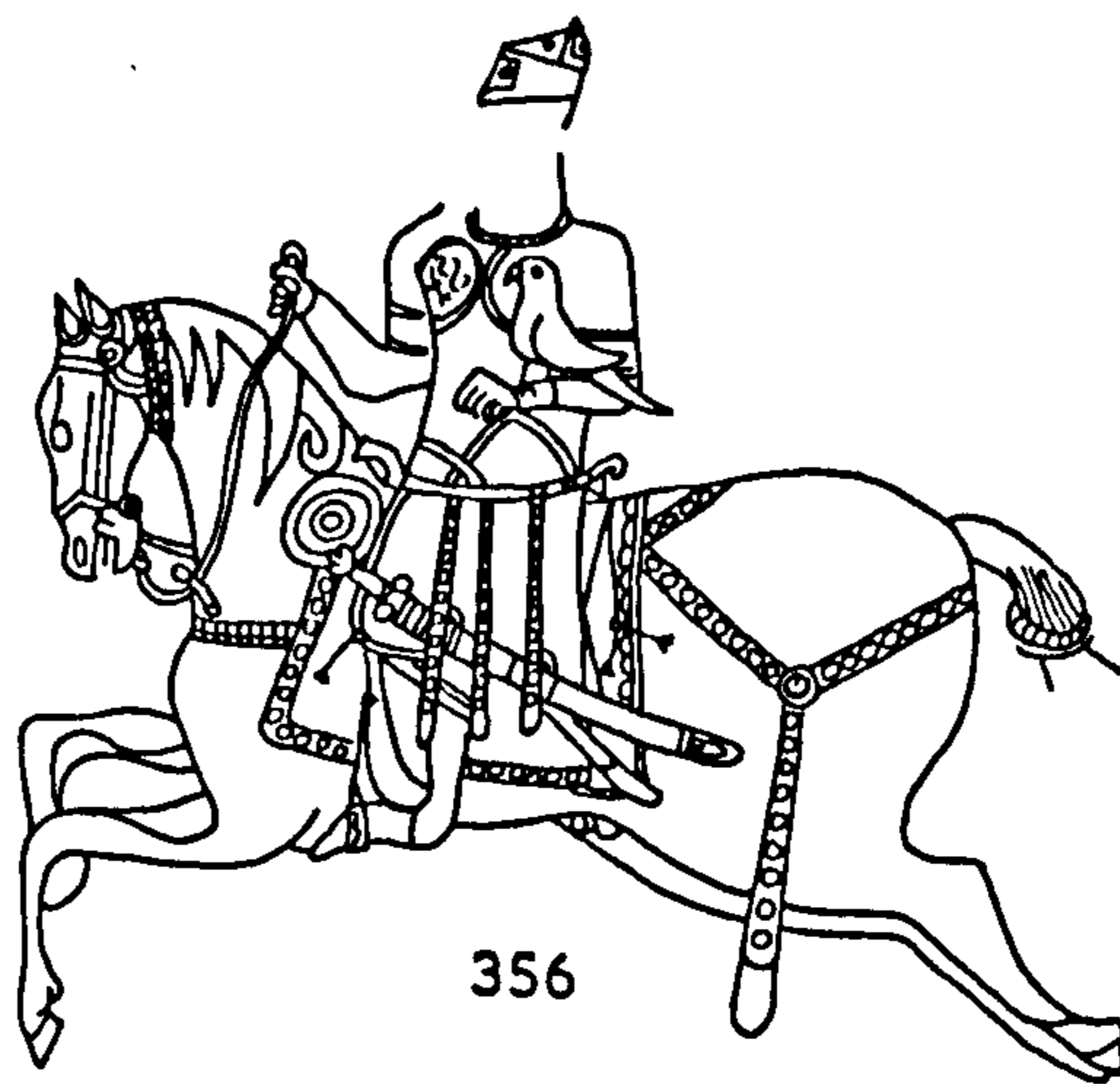
353



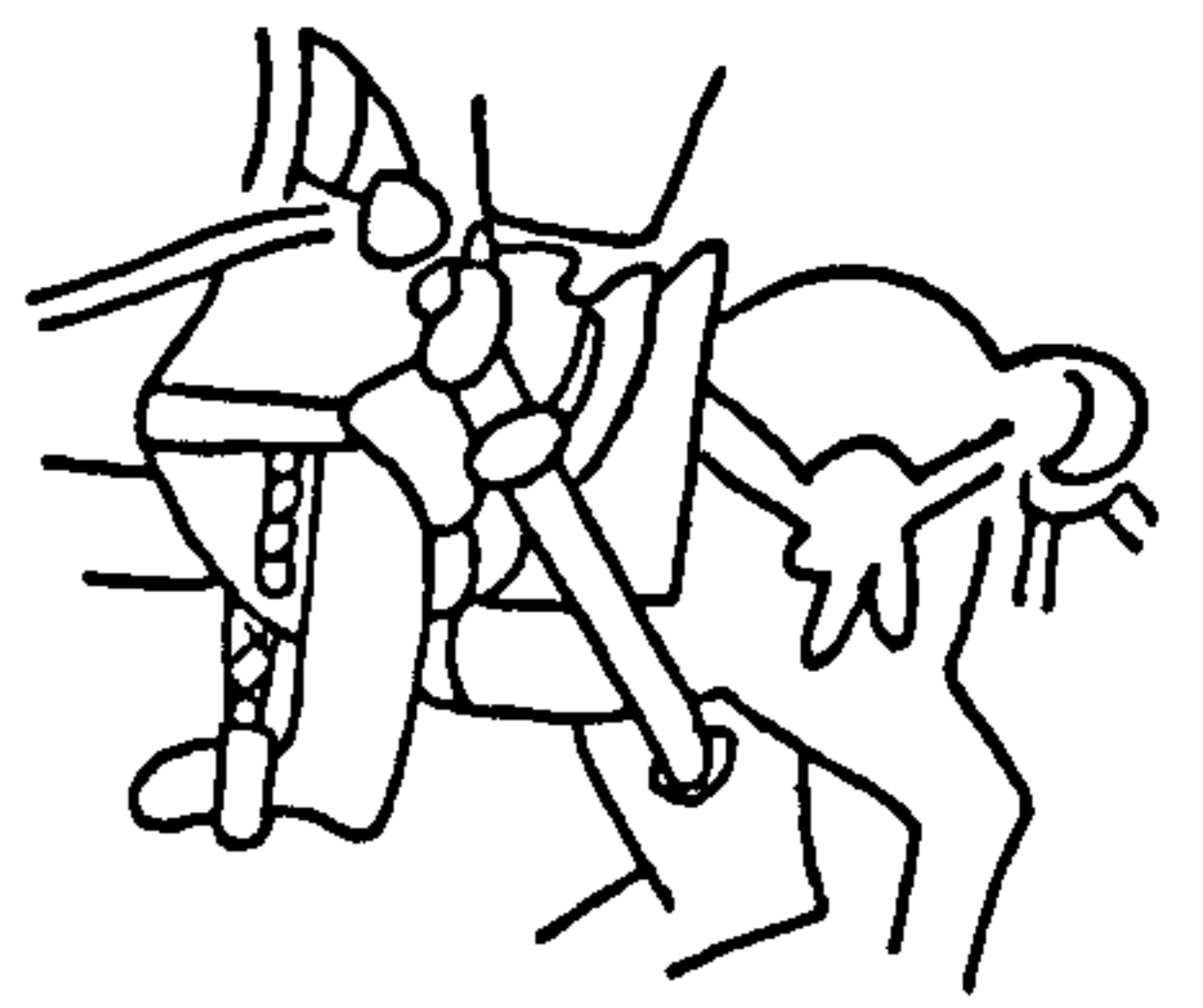
354



355



356



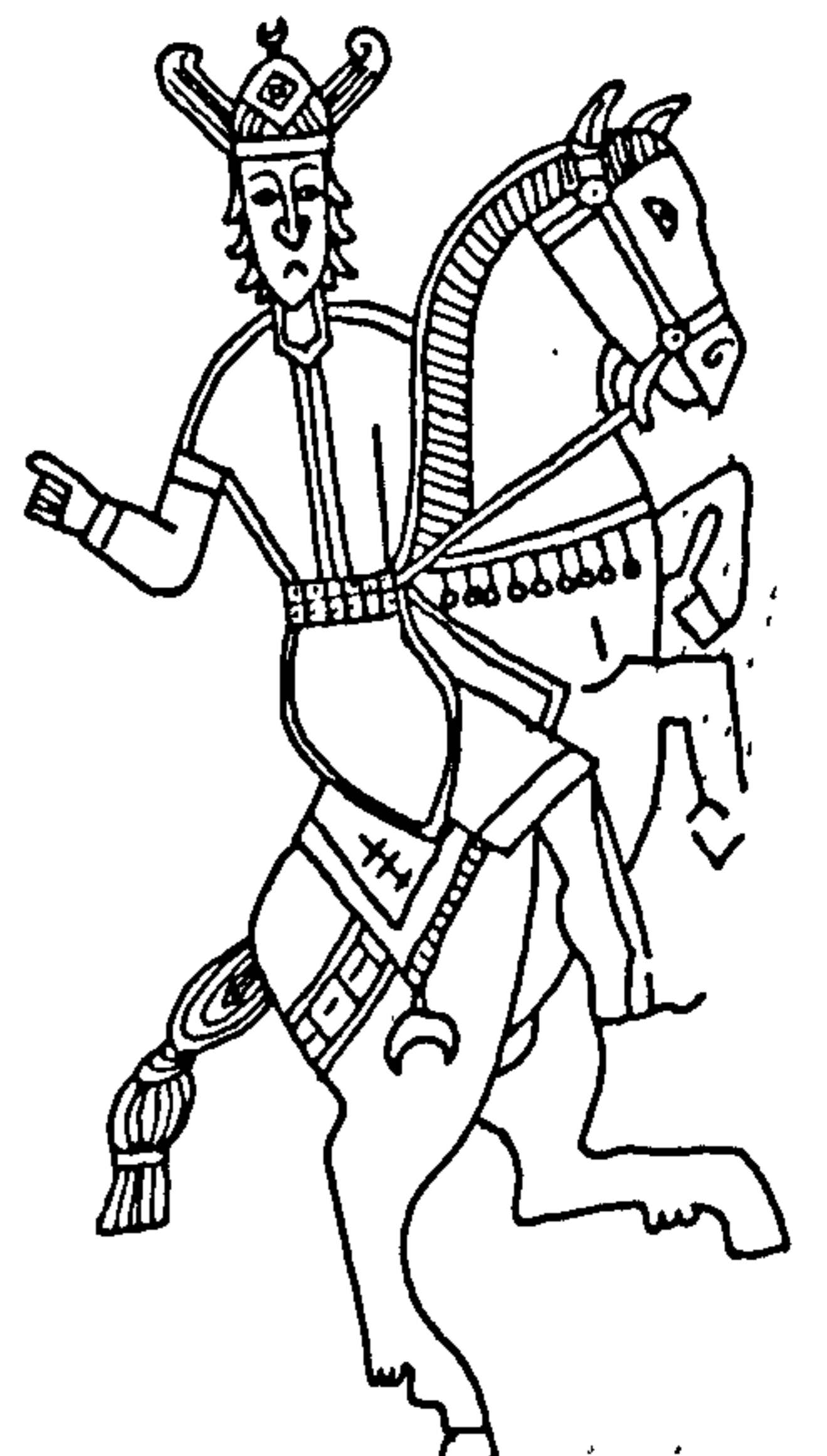
357



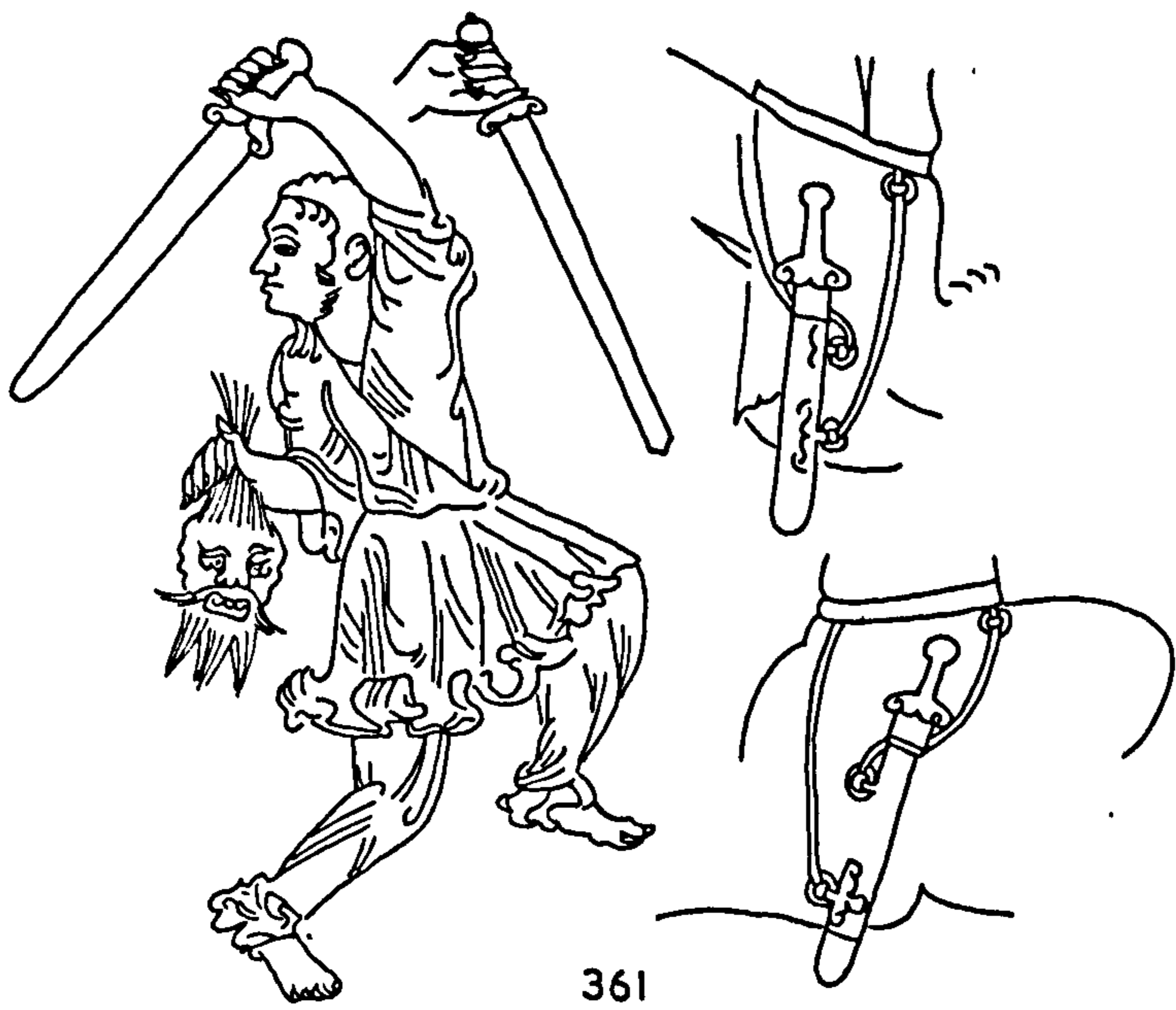
358



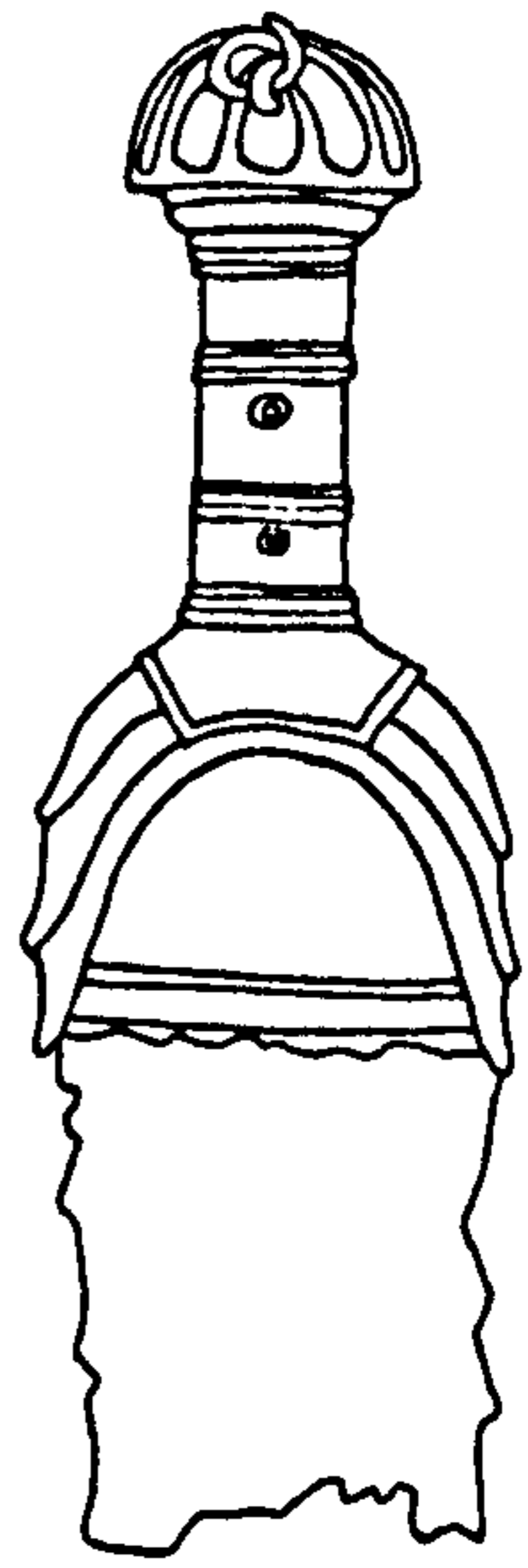
359



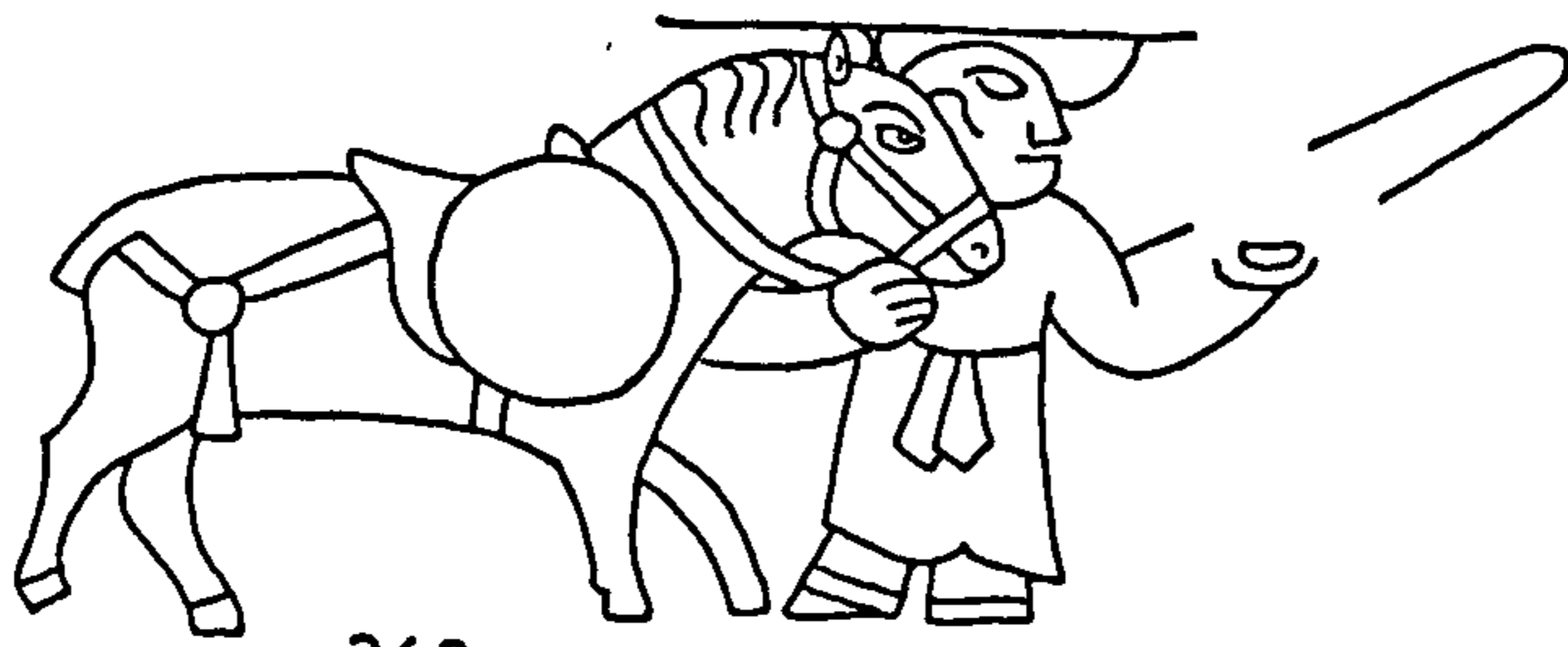
360



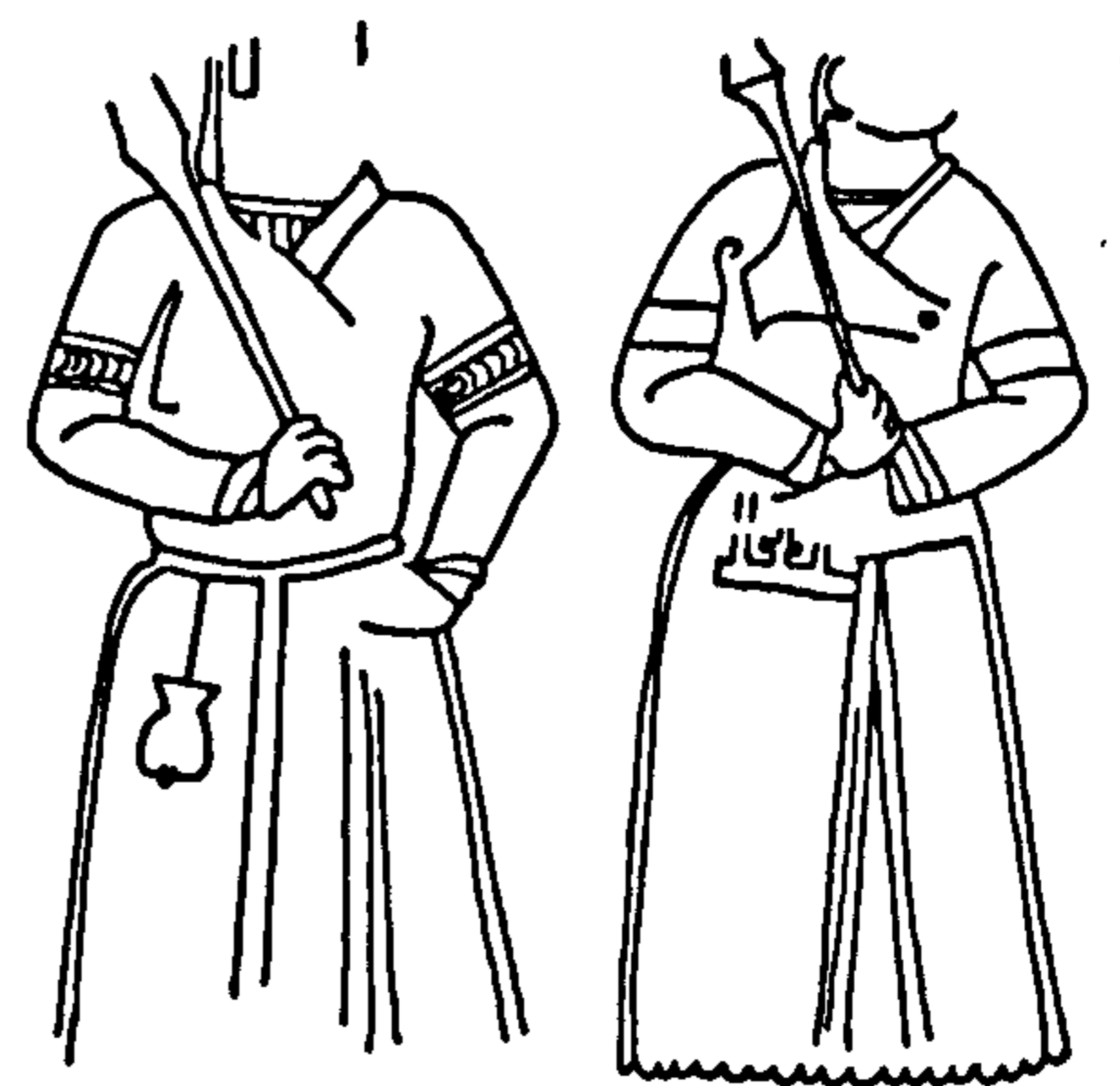
361



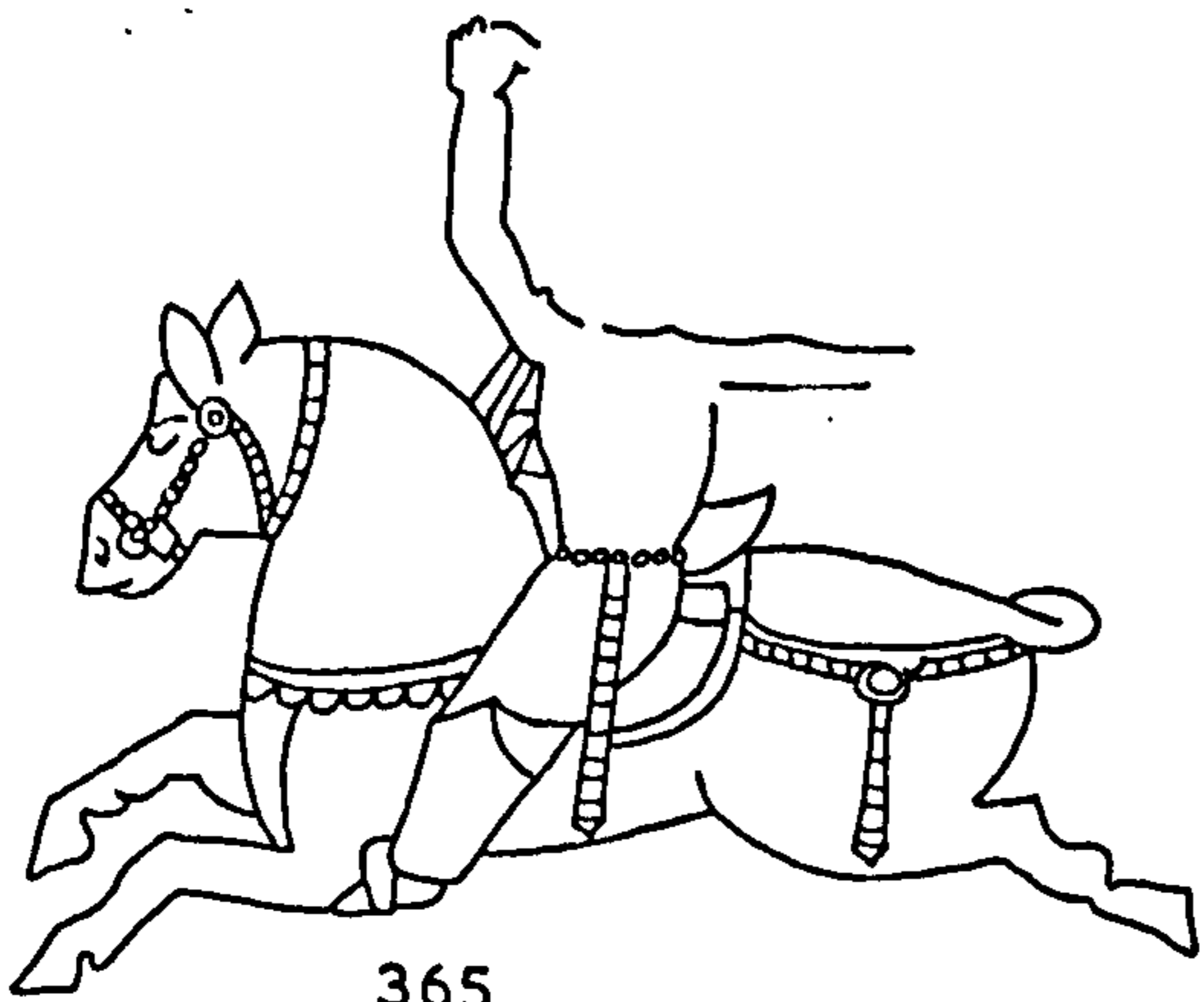
362



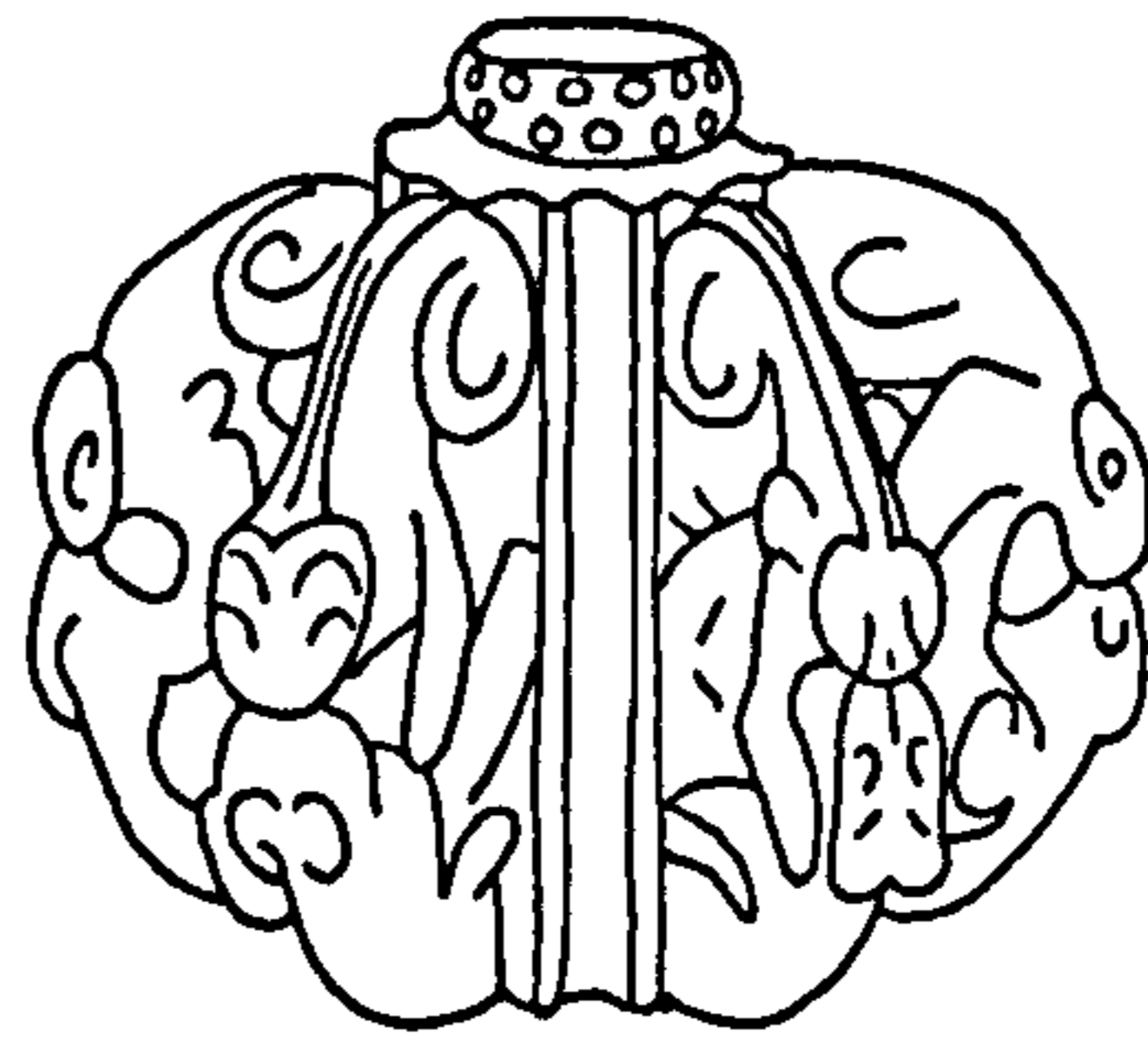
363



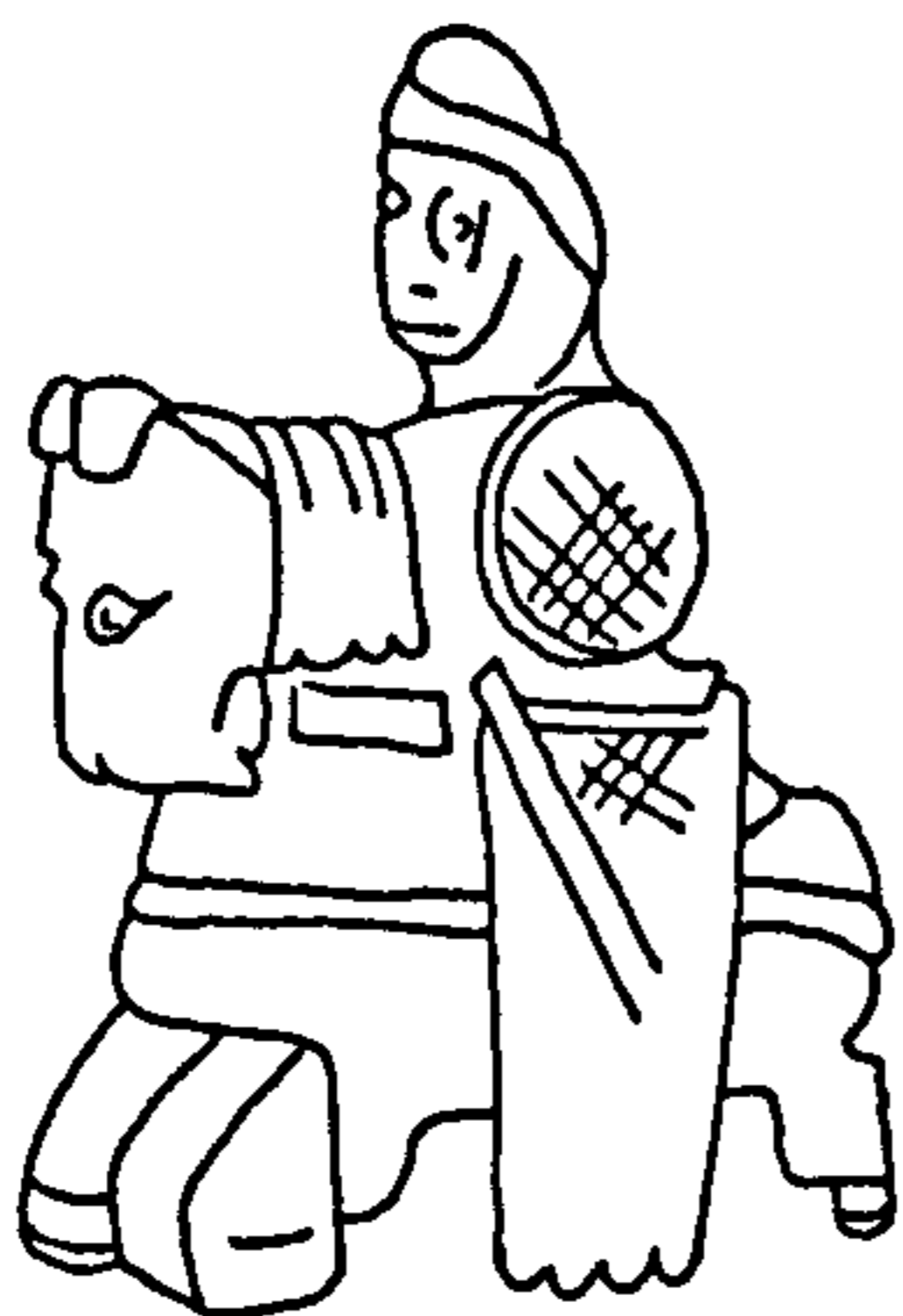
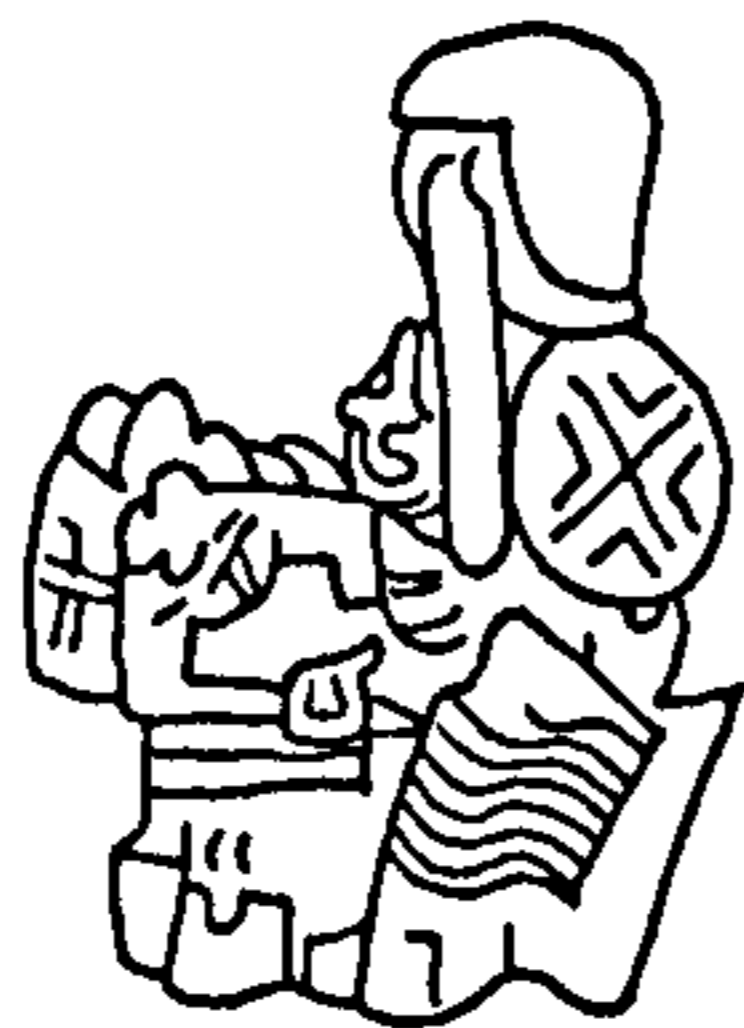
364



365



366



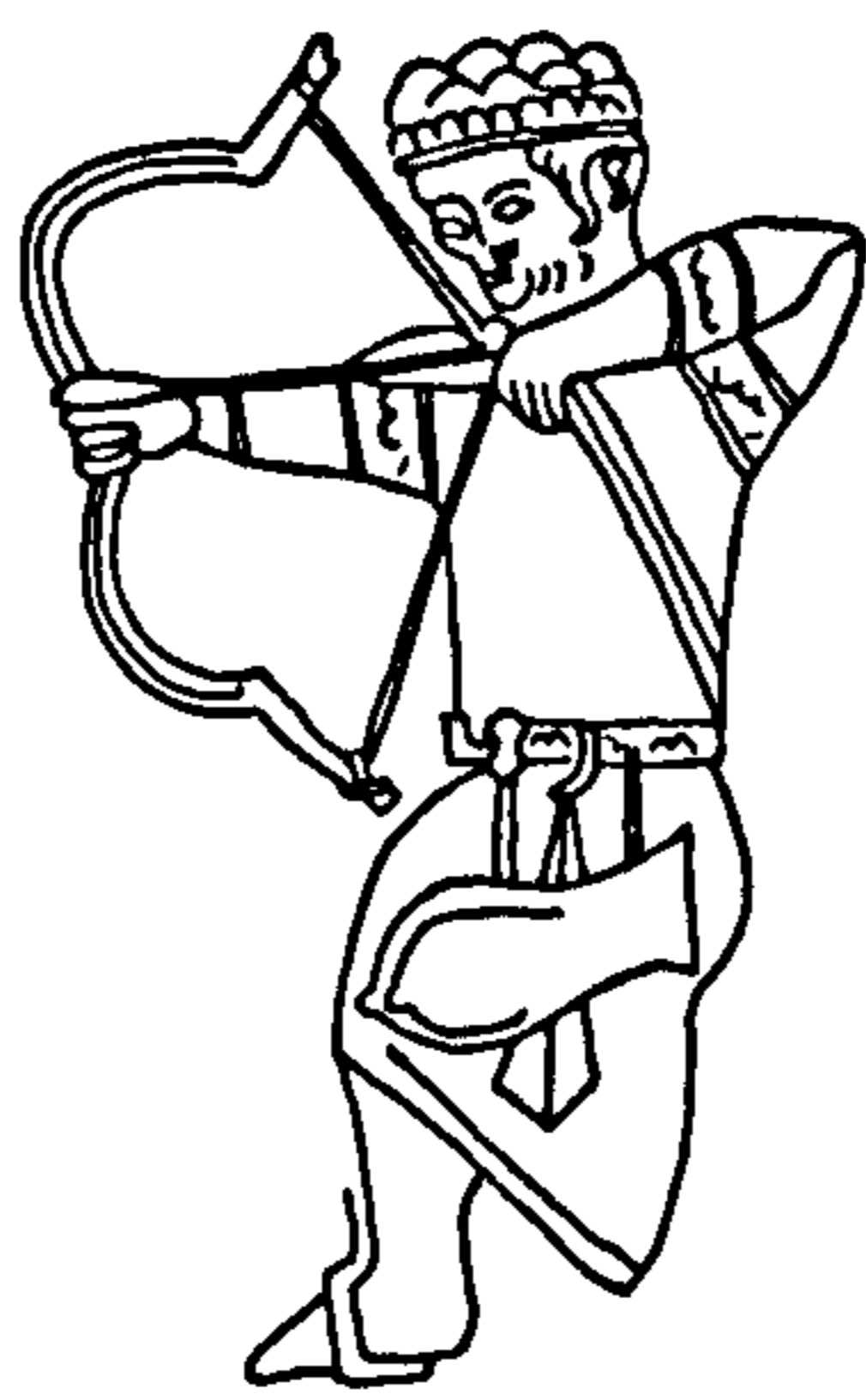
367



368



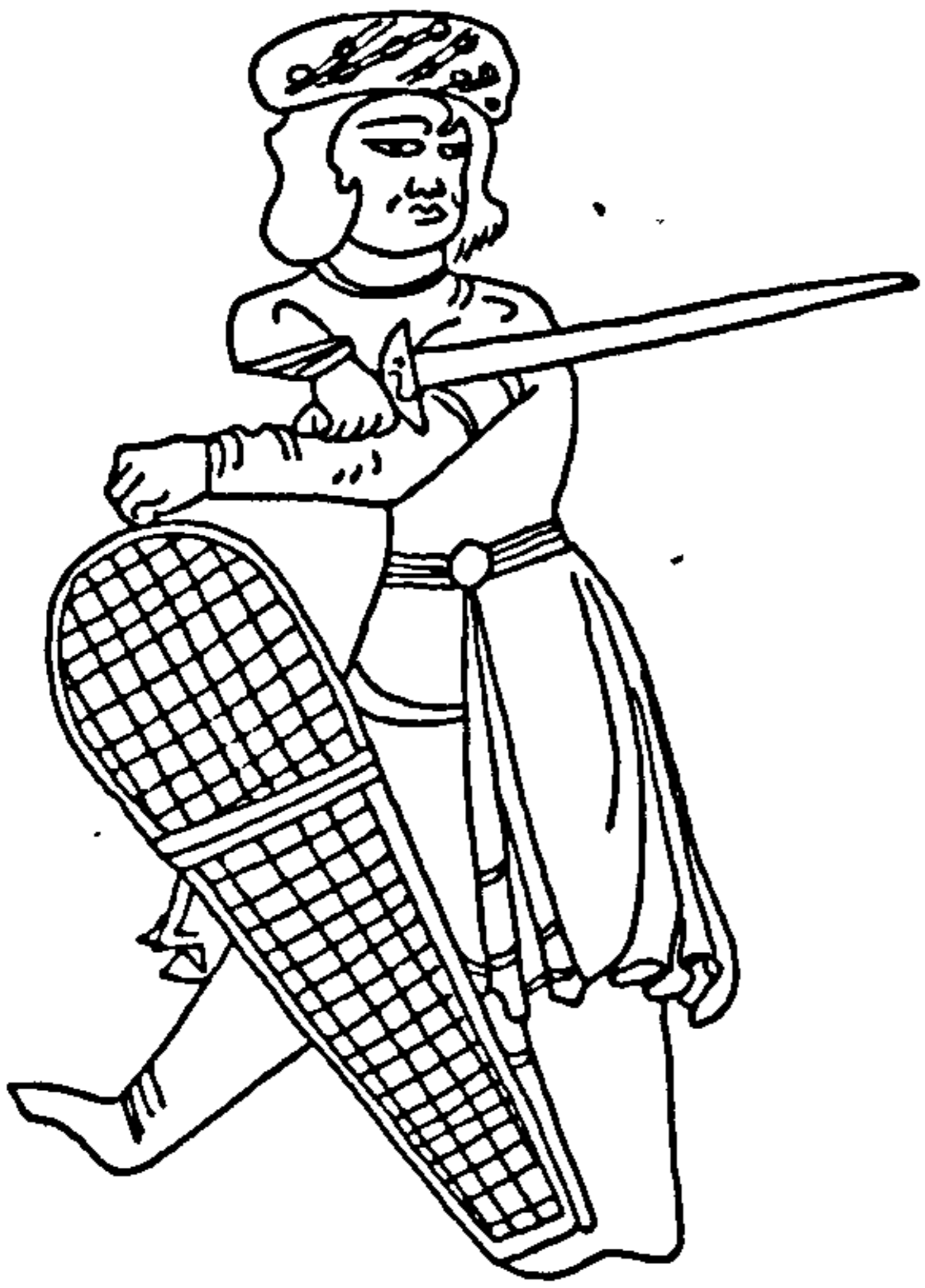
369



370



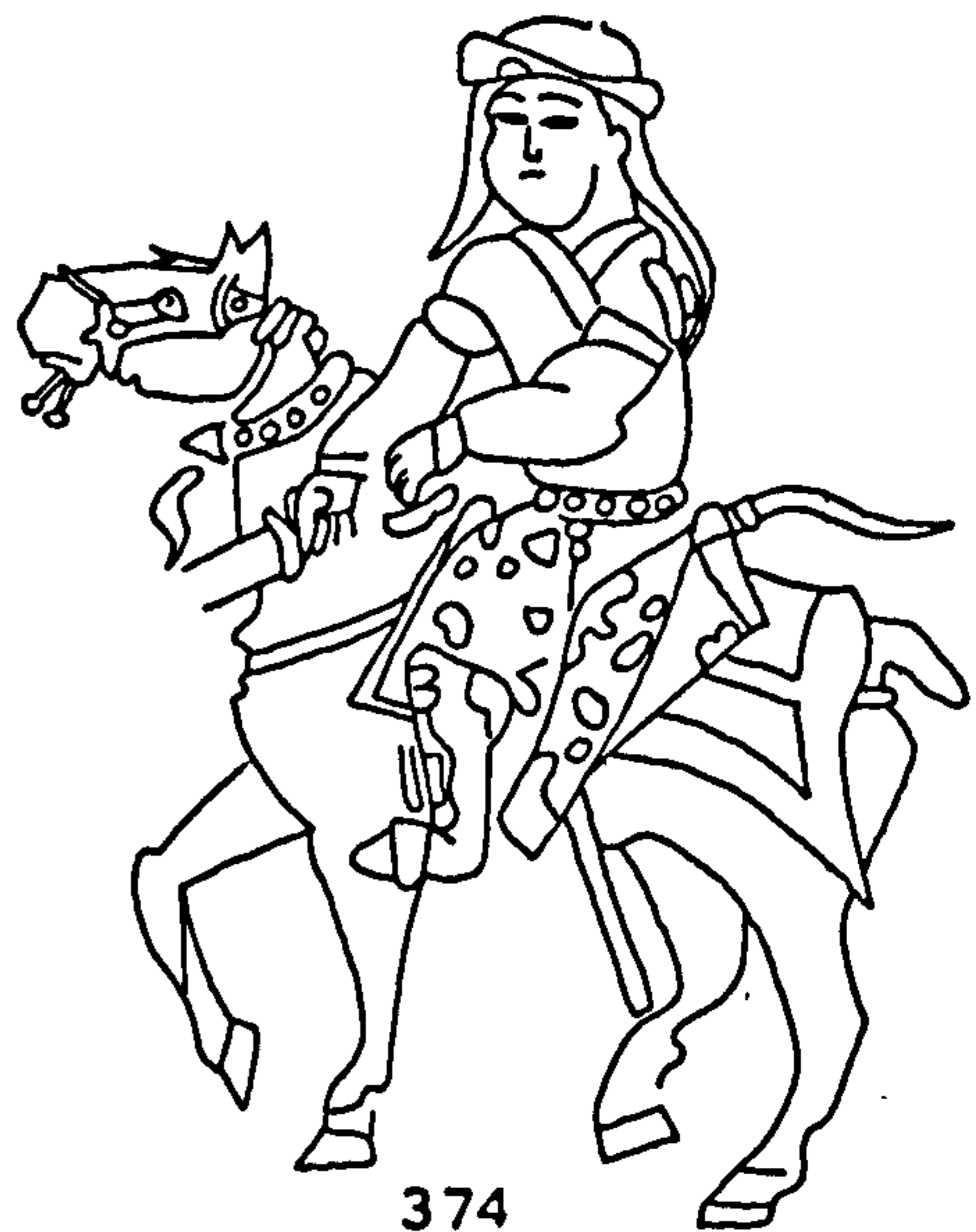
371



372



373



374



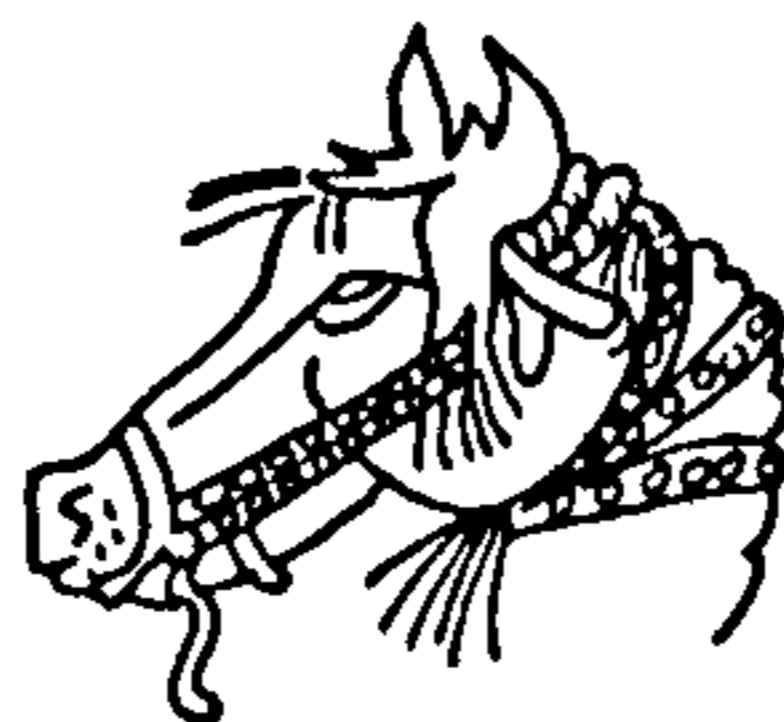
375



376



377

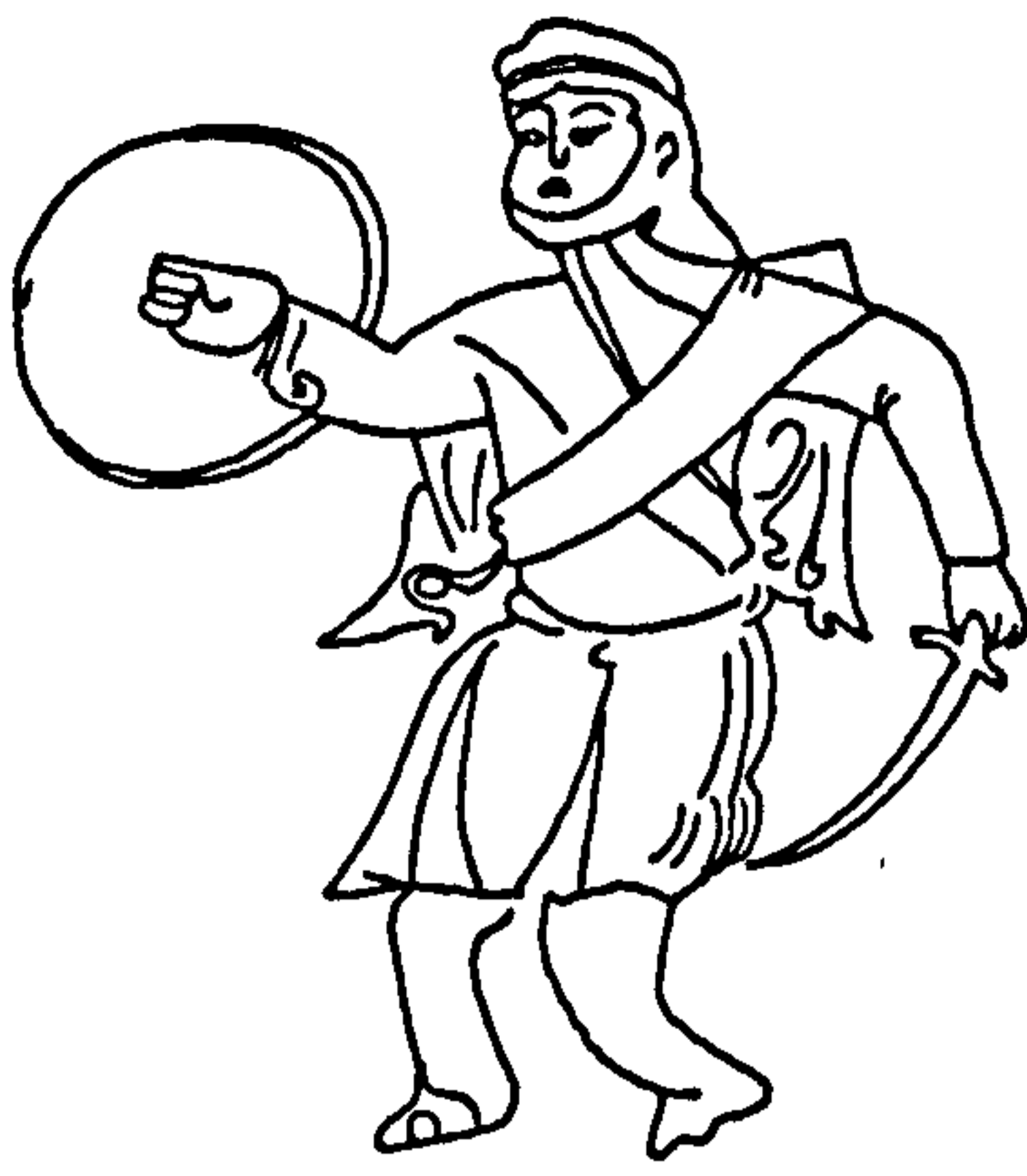


378

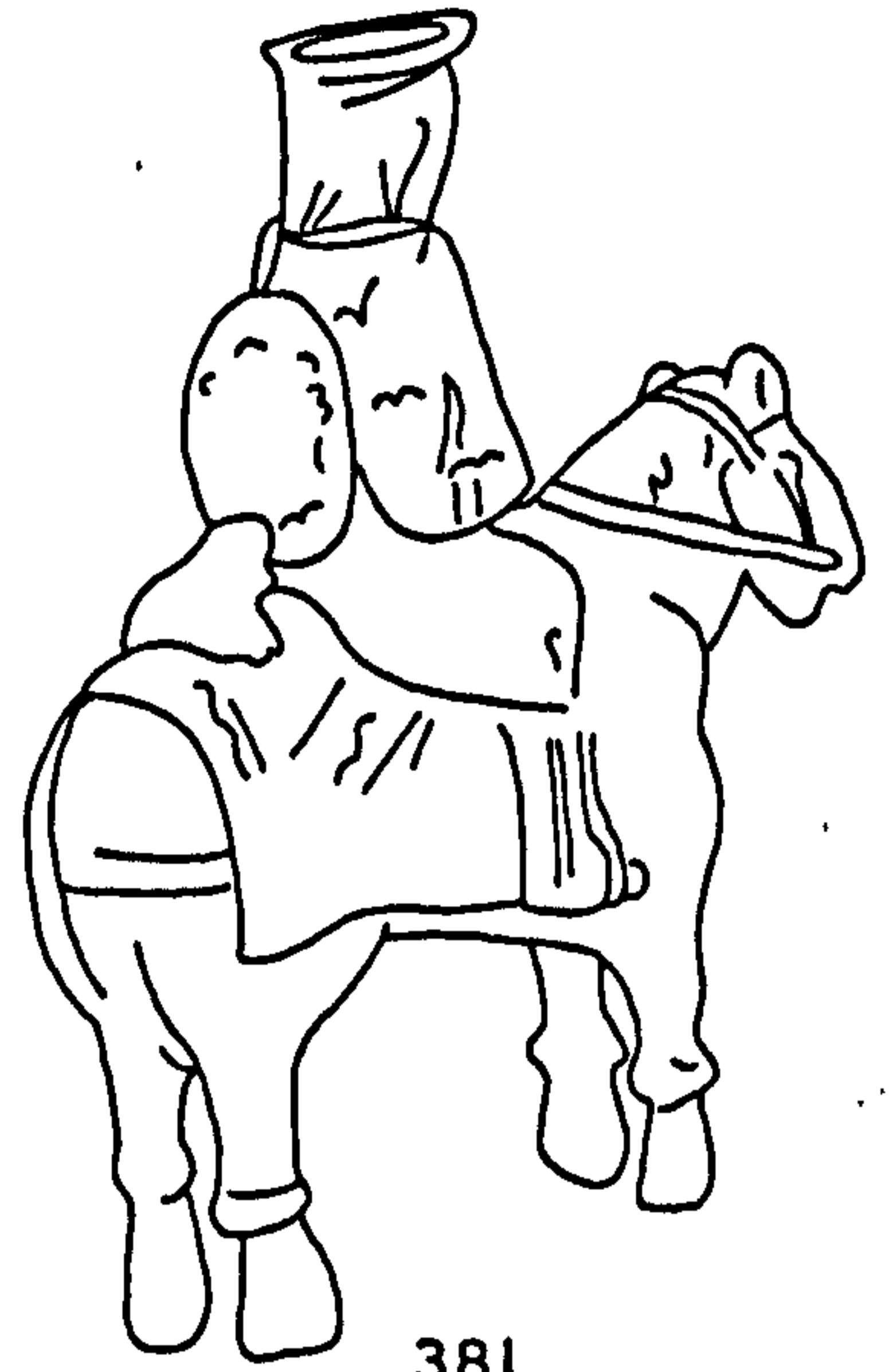




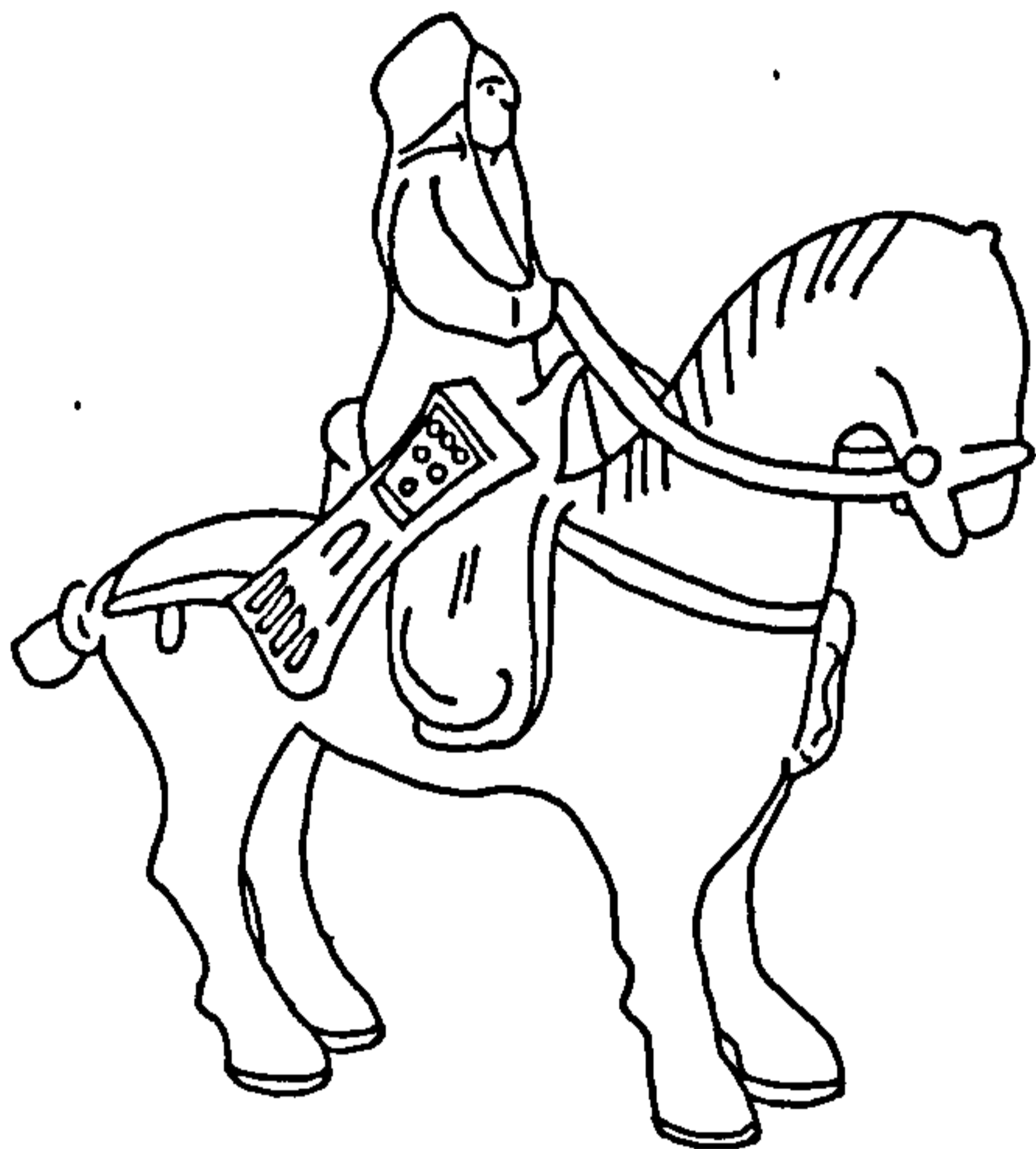
379



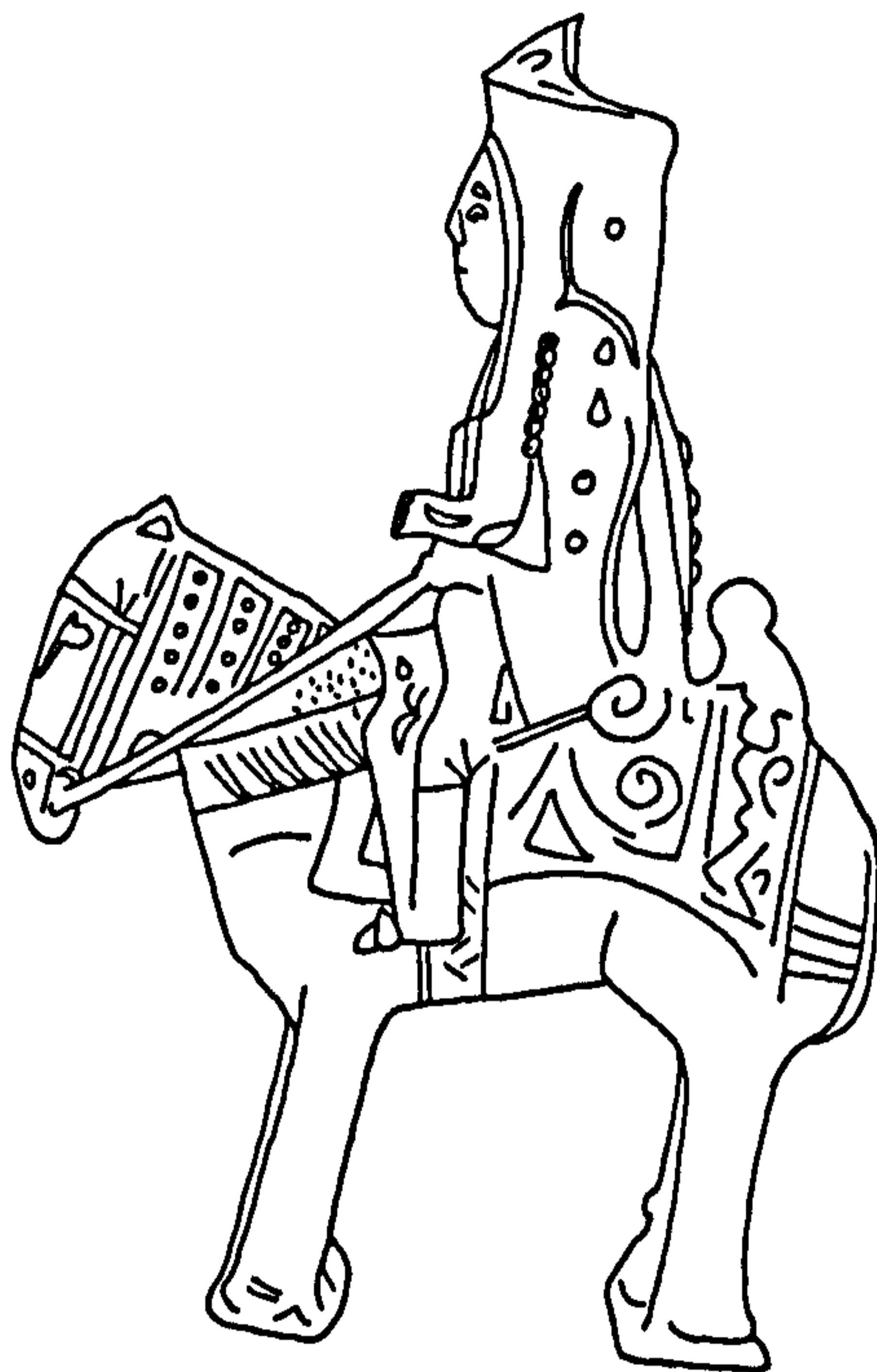
380



381



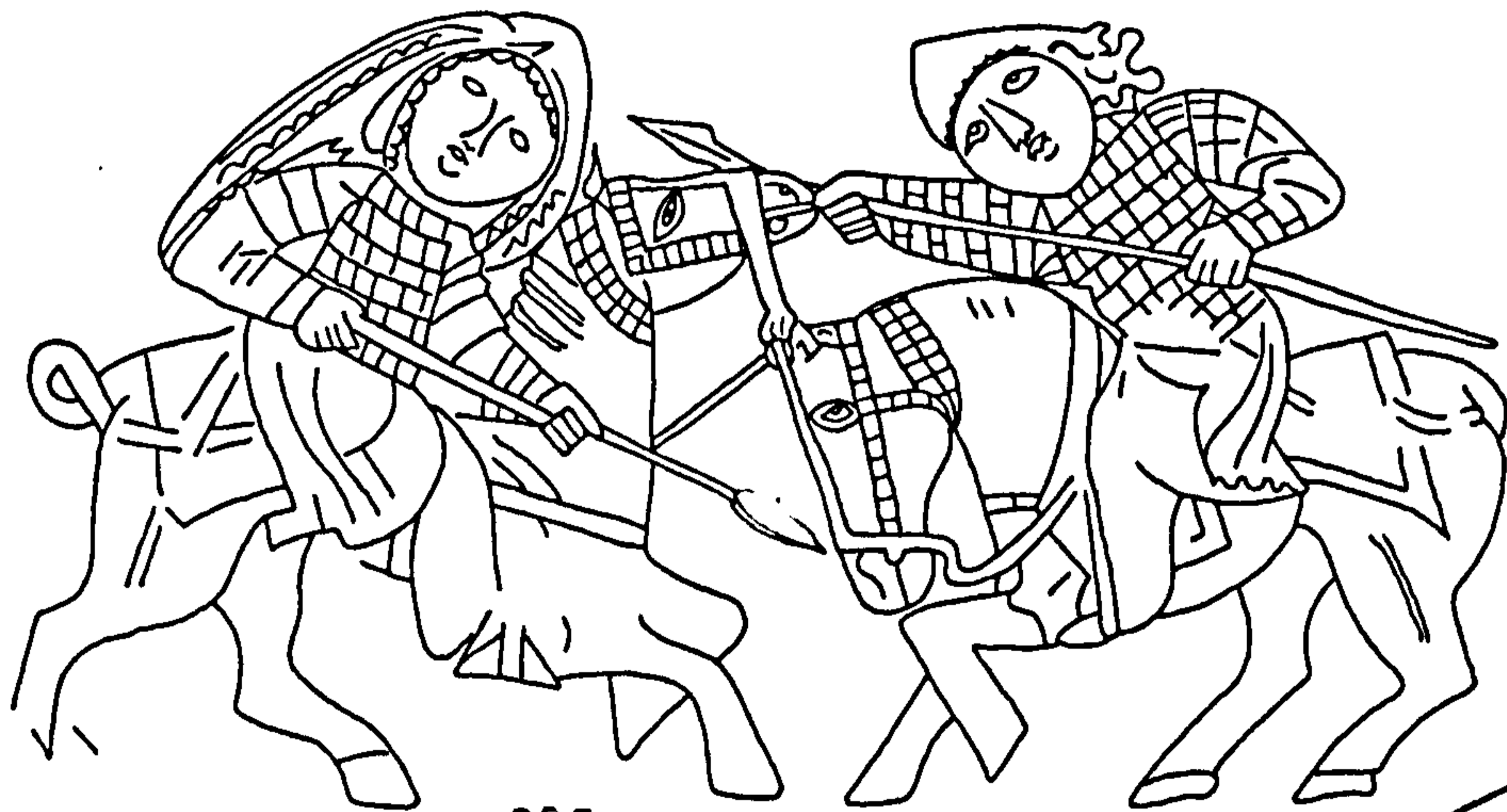
382



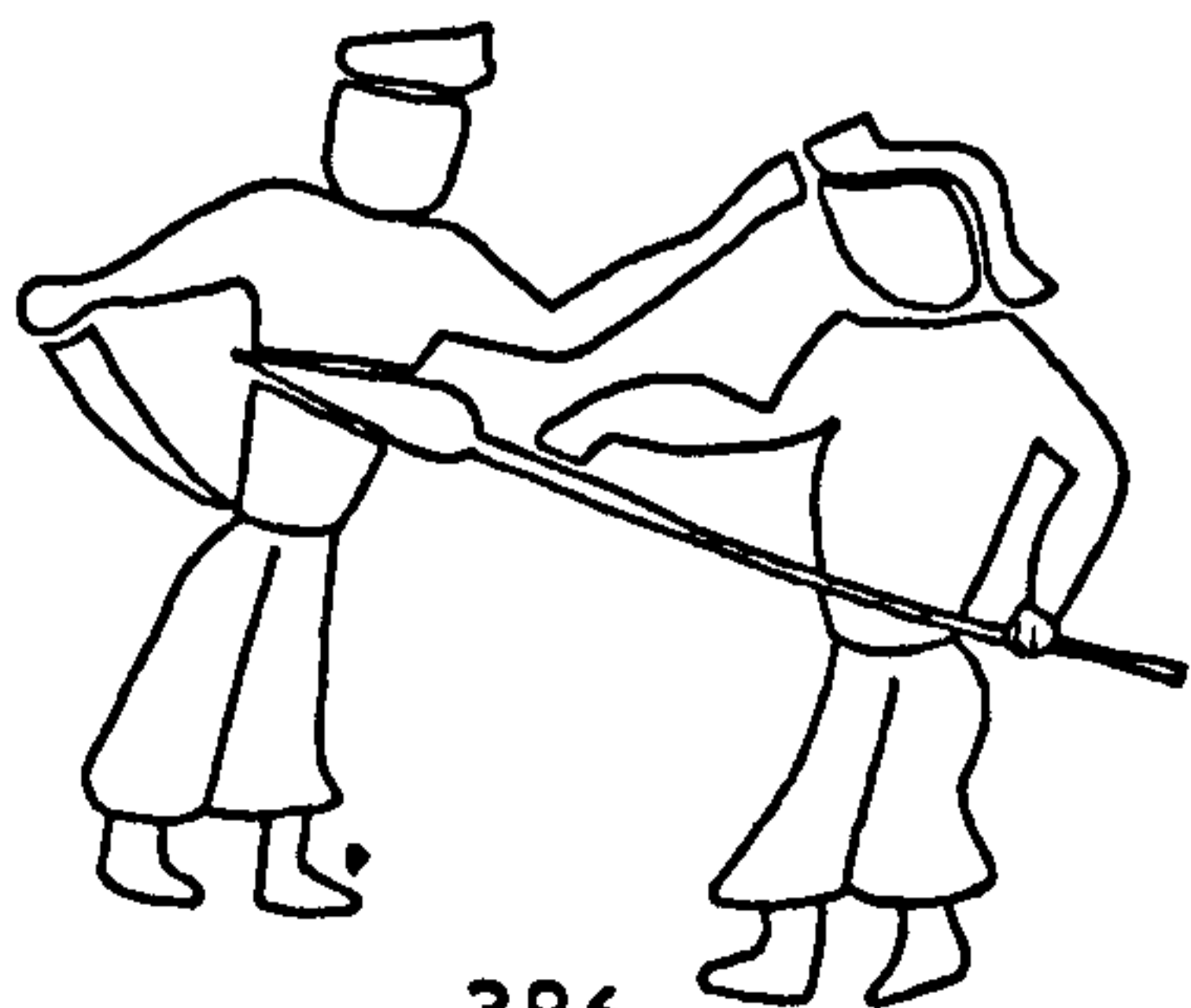
383



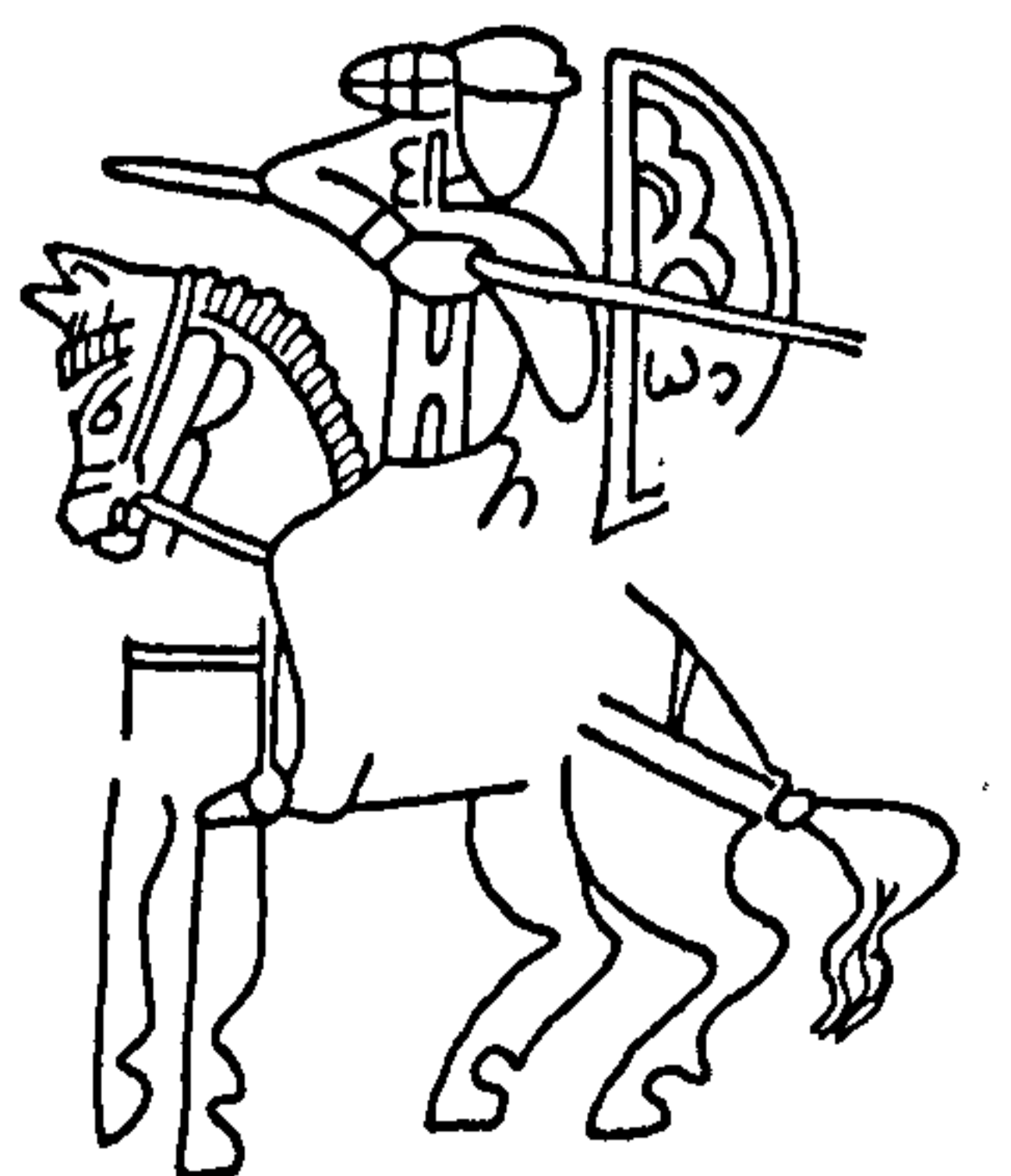
384



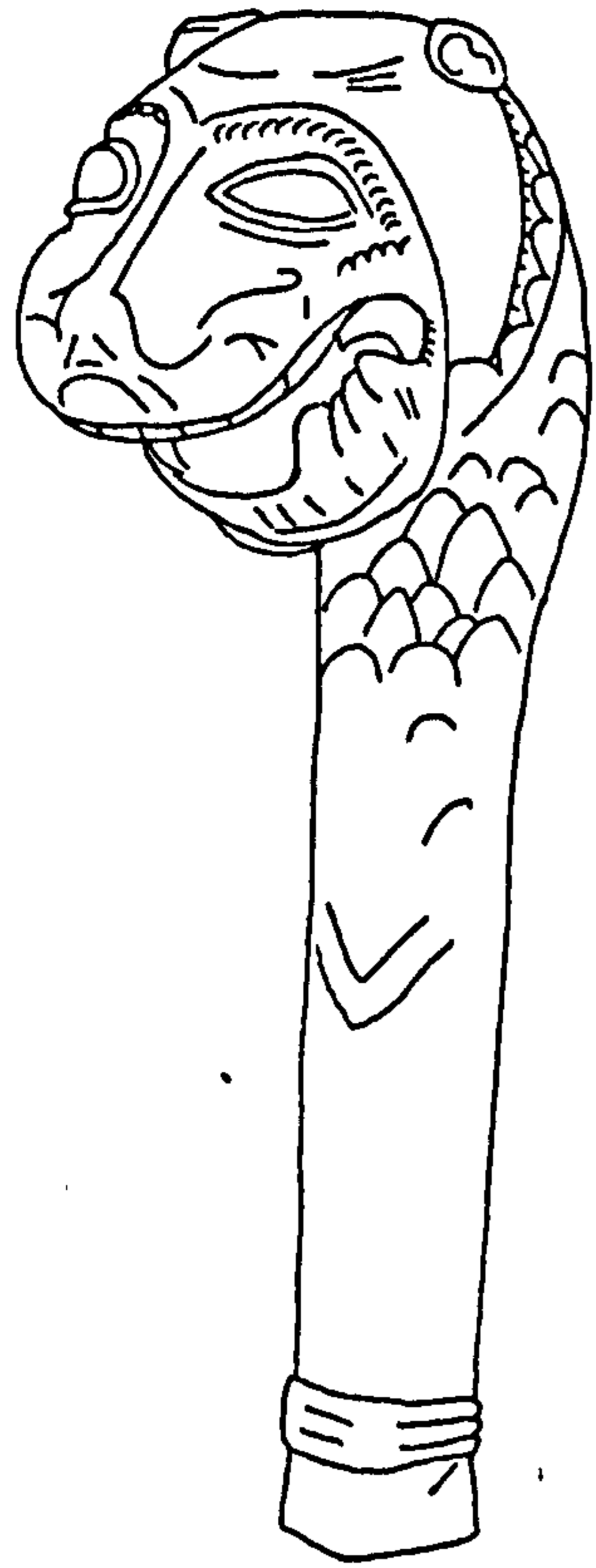
385



386



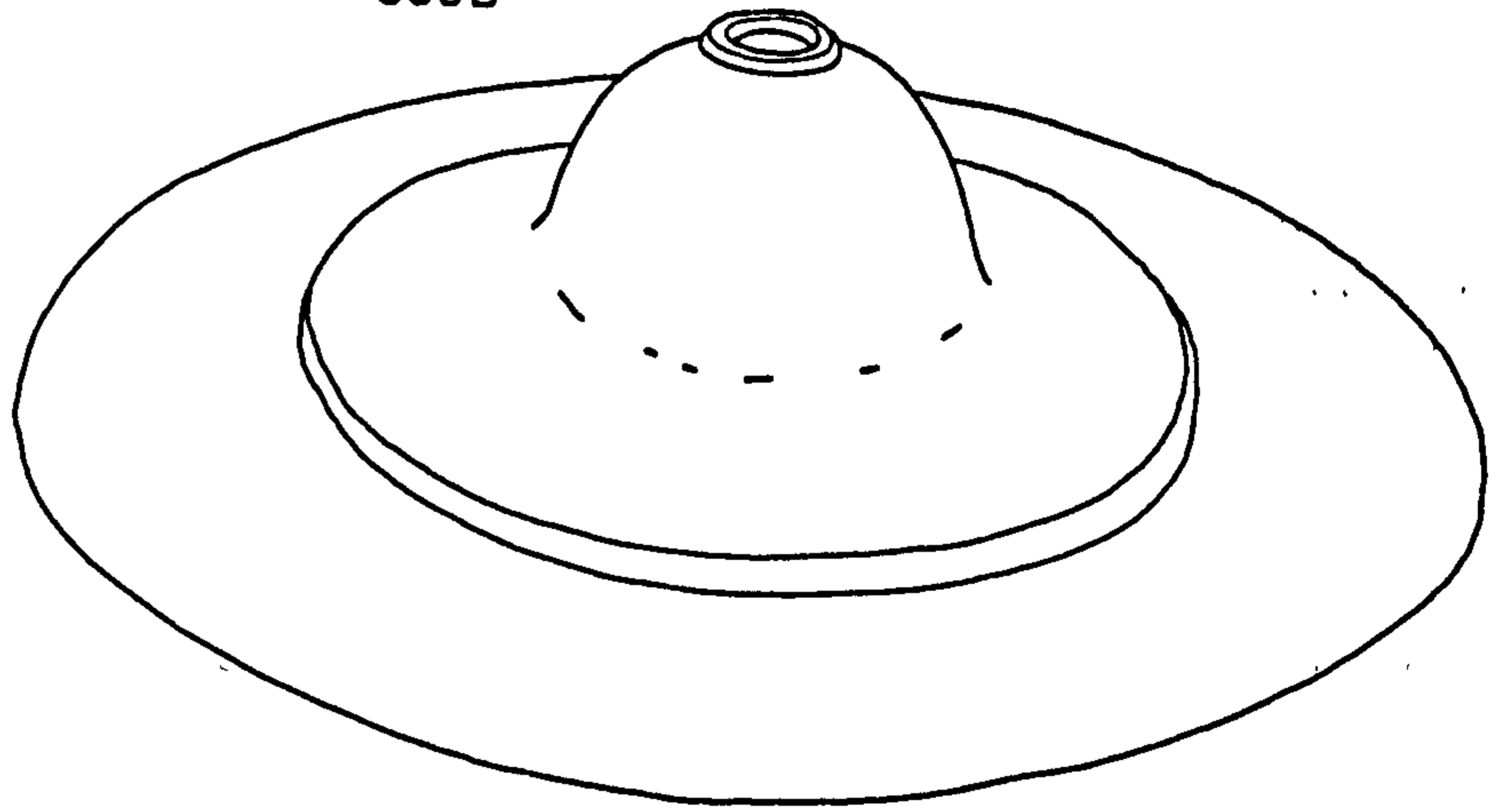
387



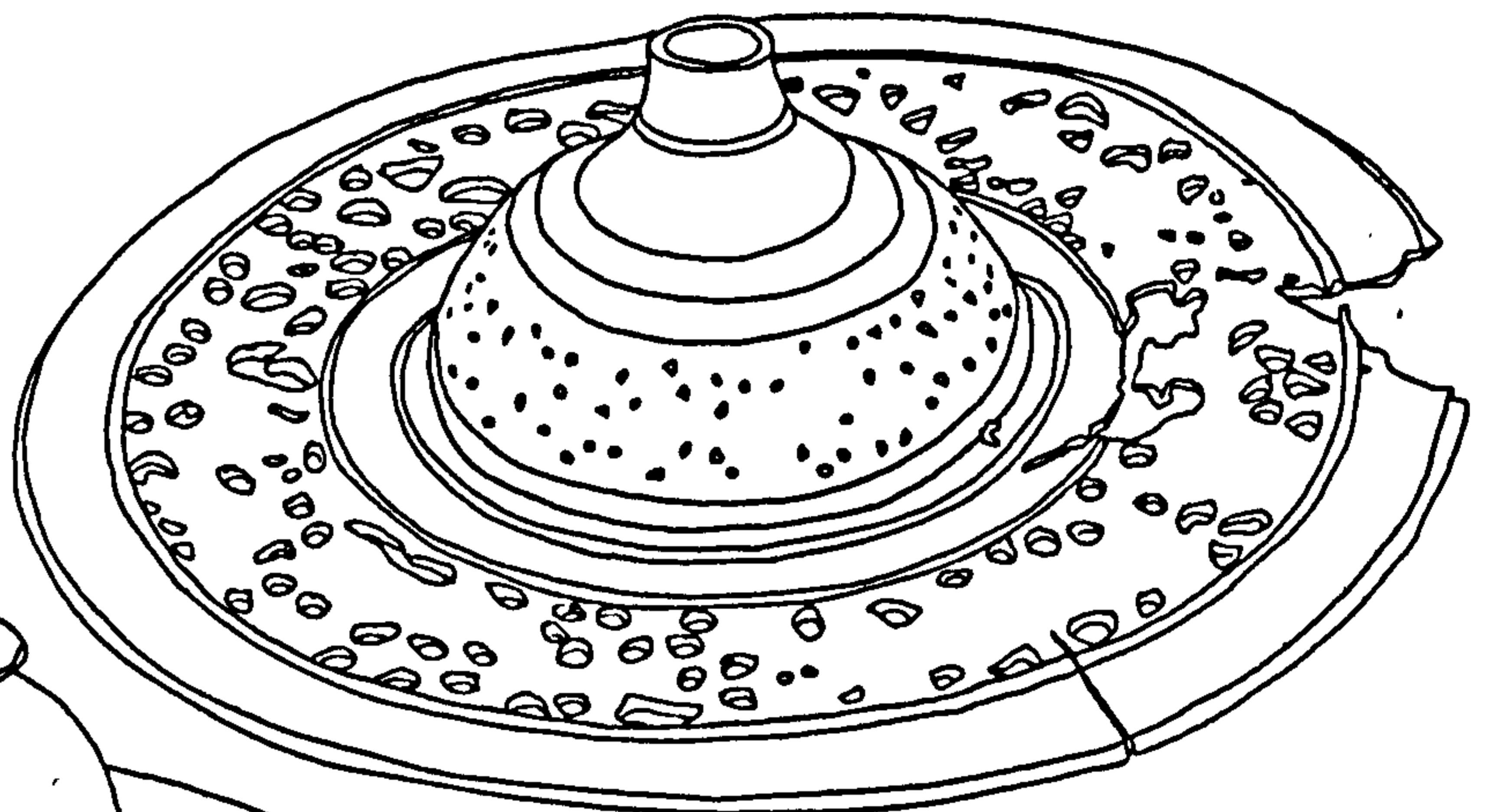
388A



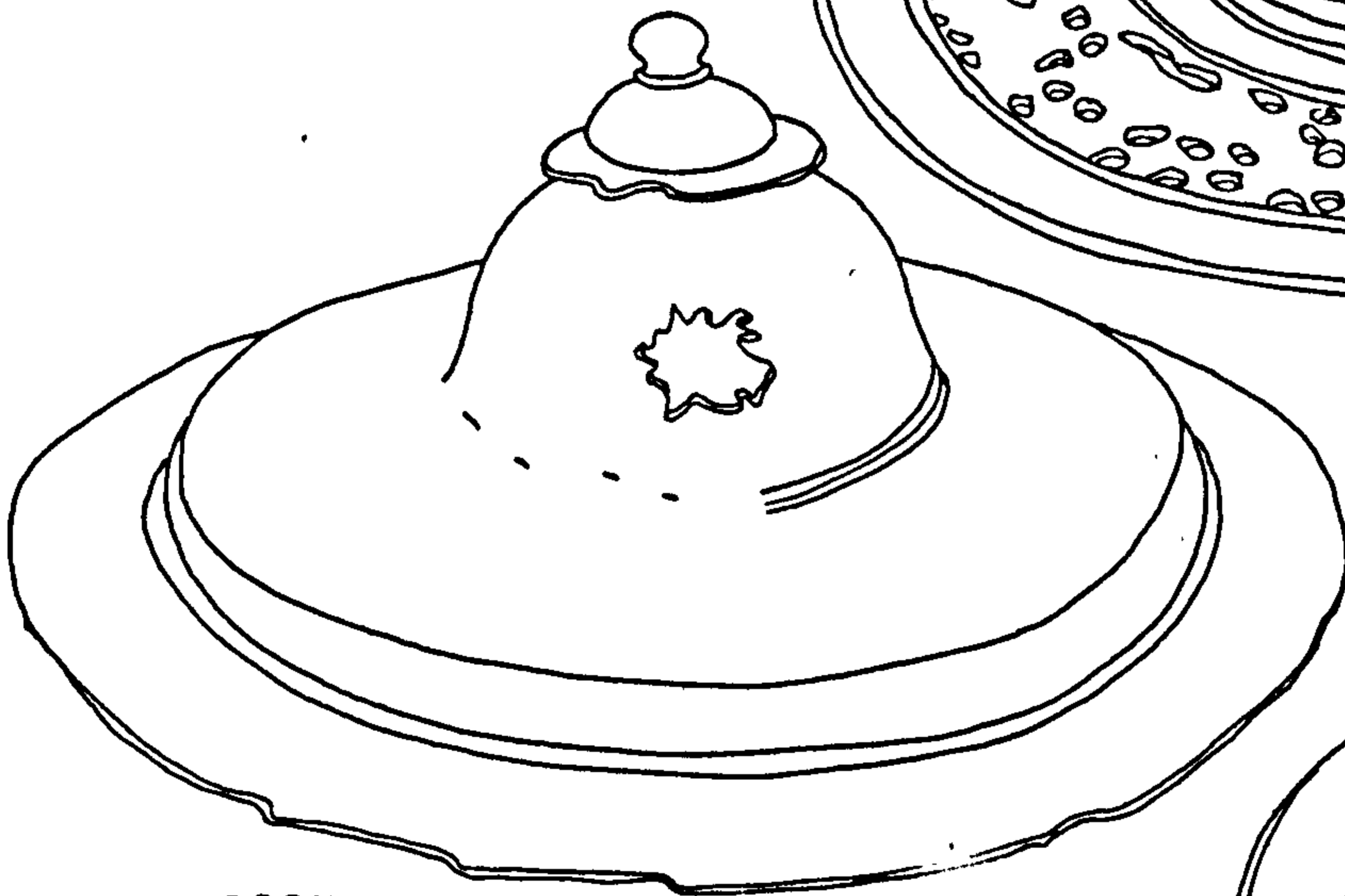
388B



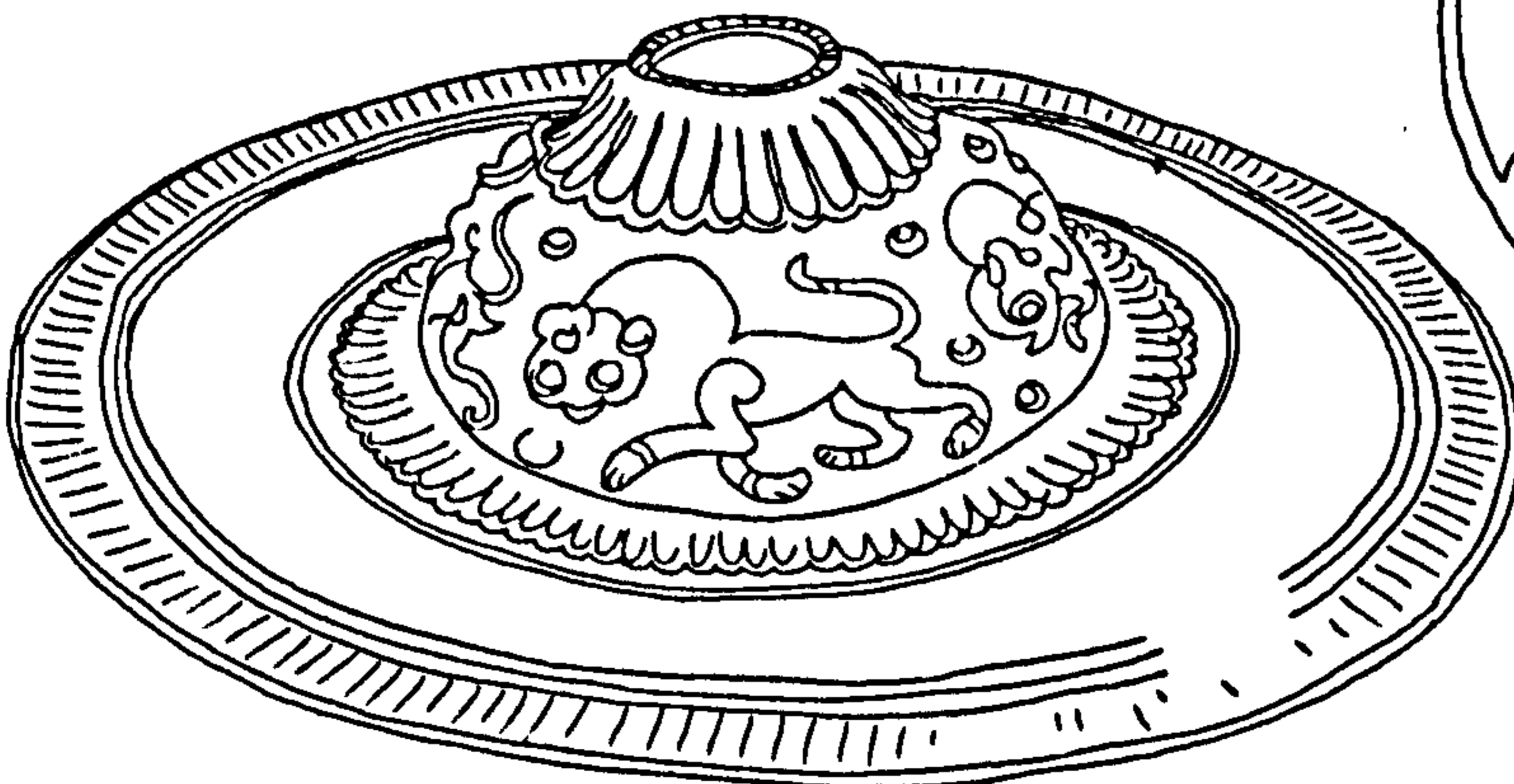
388C



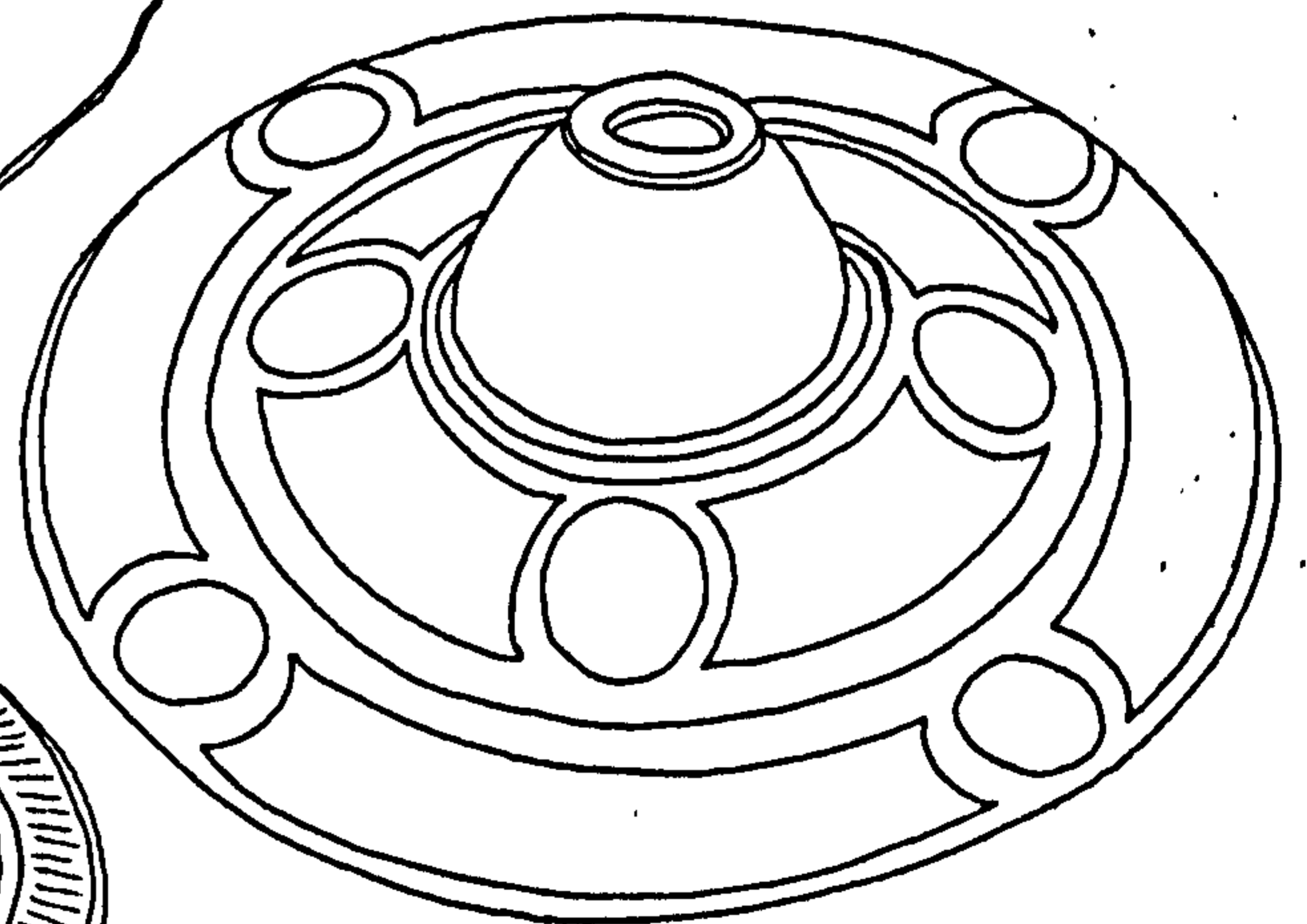
388D



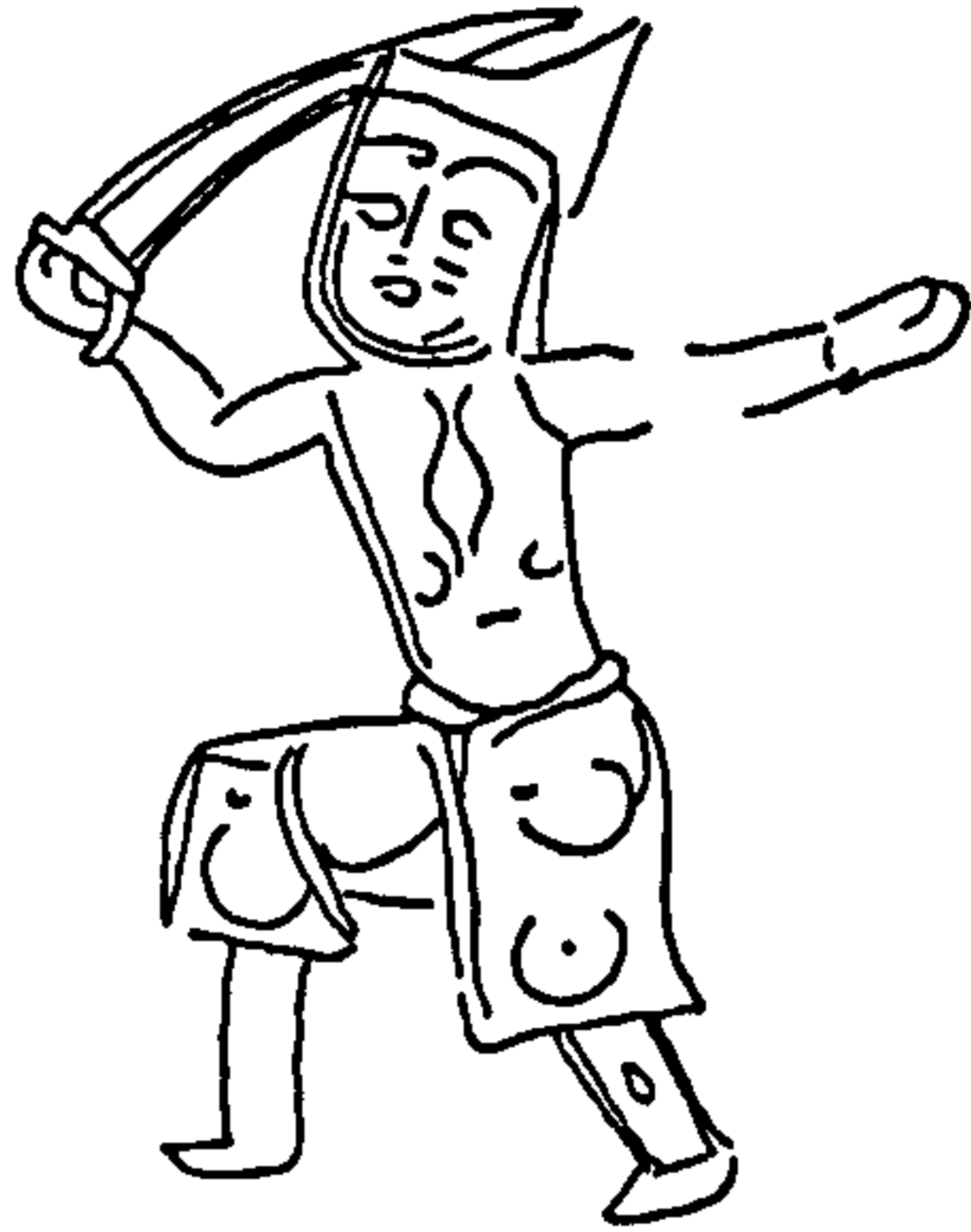
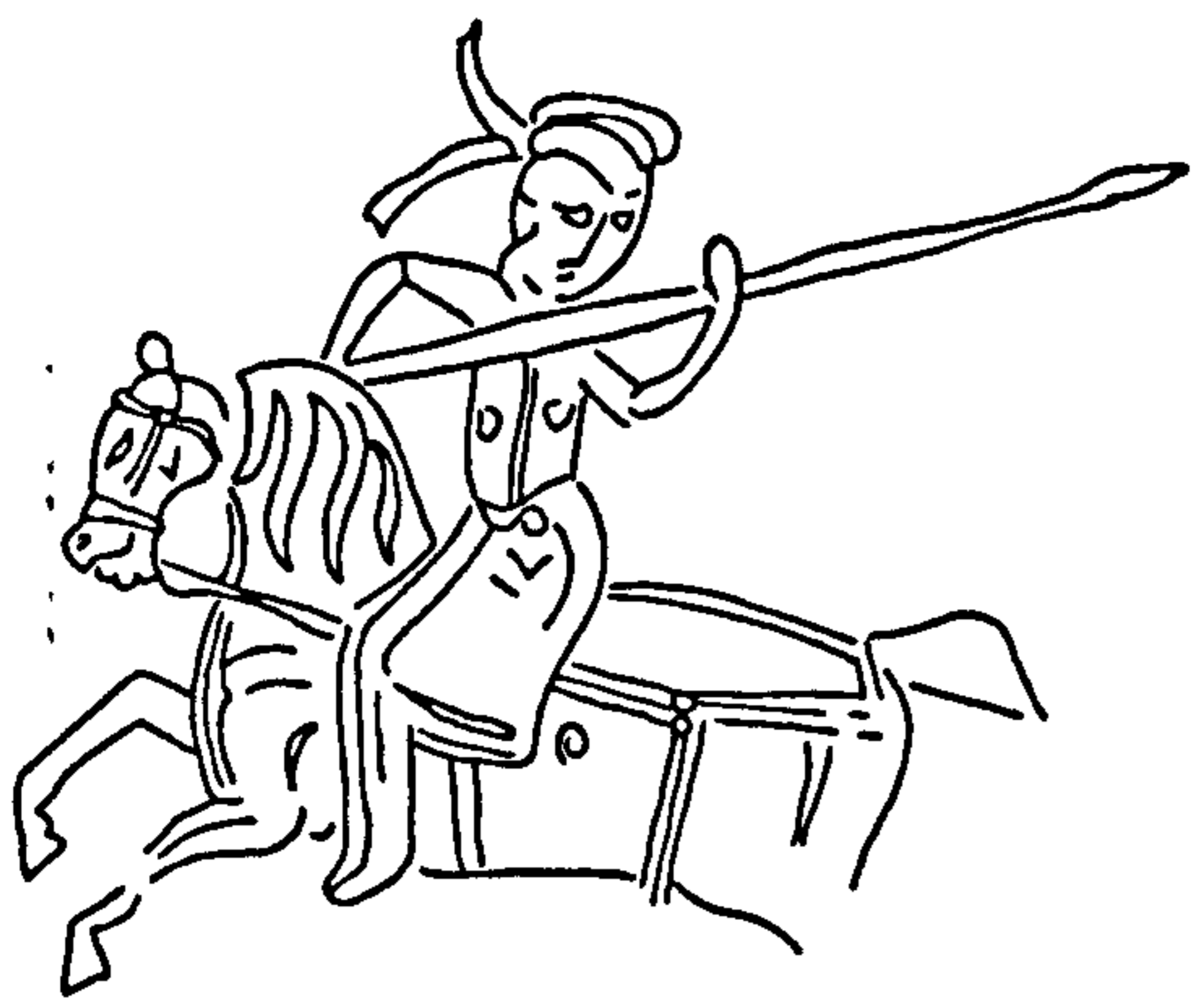
388E



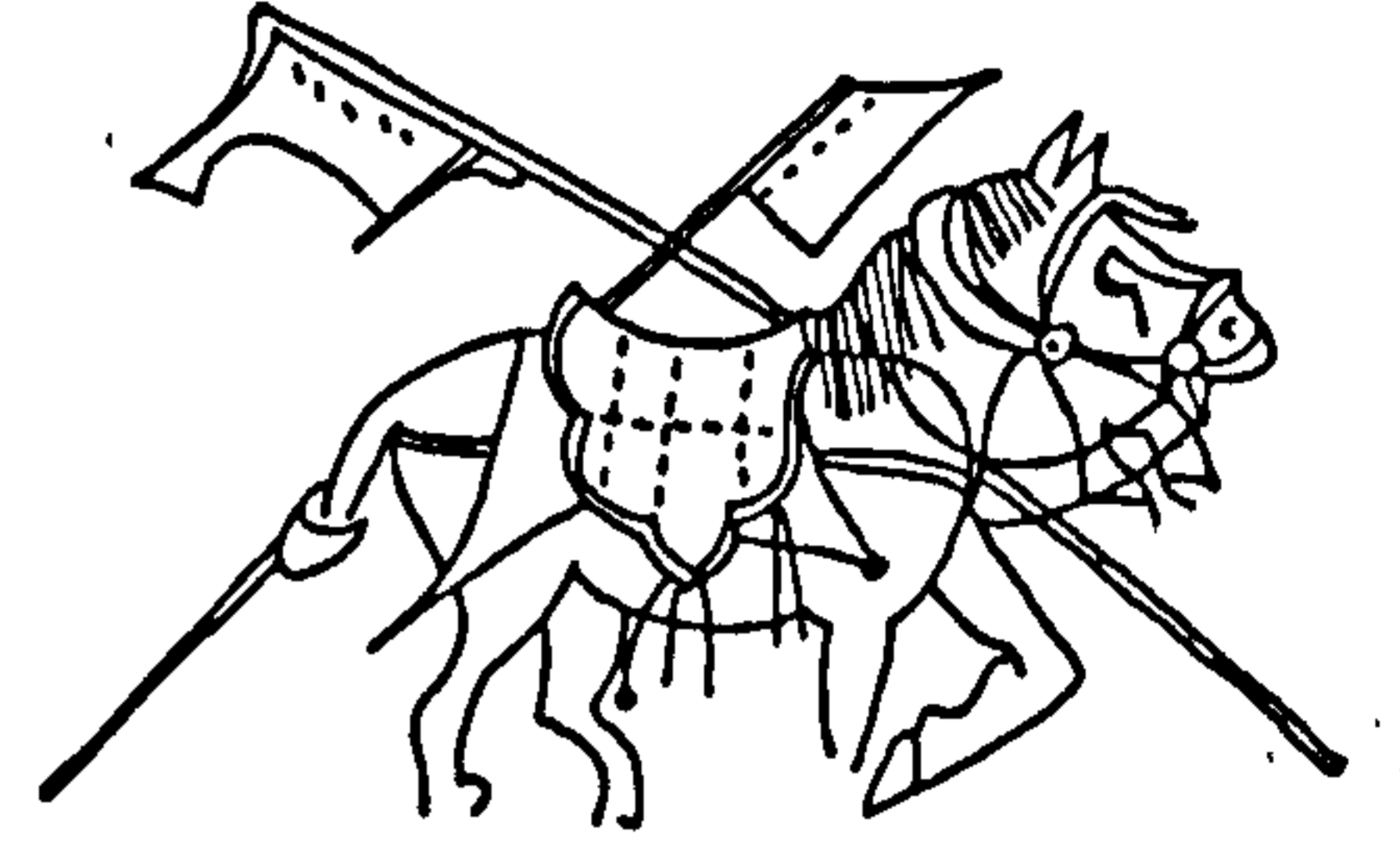
388G



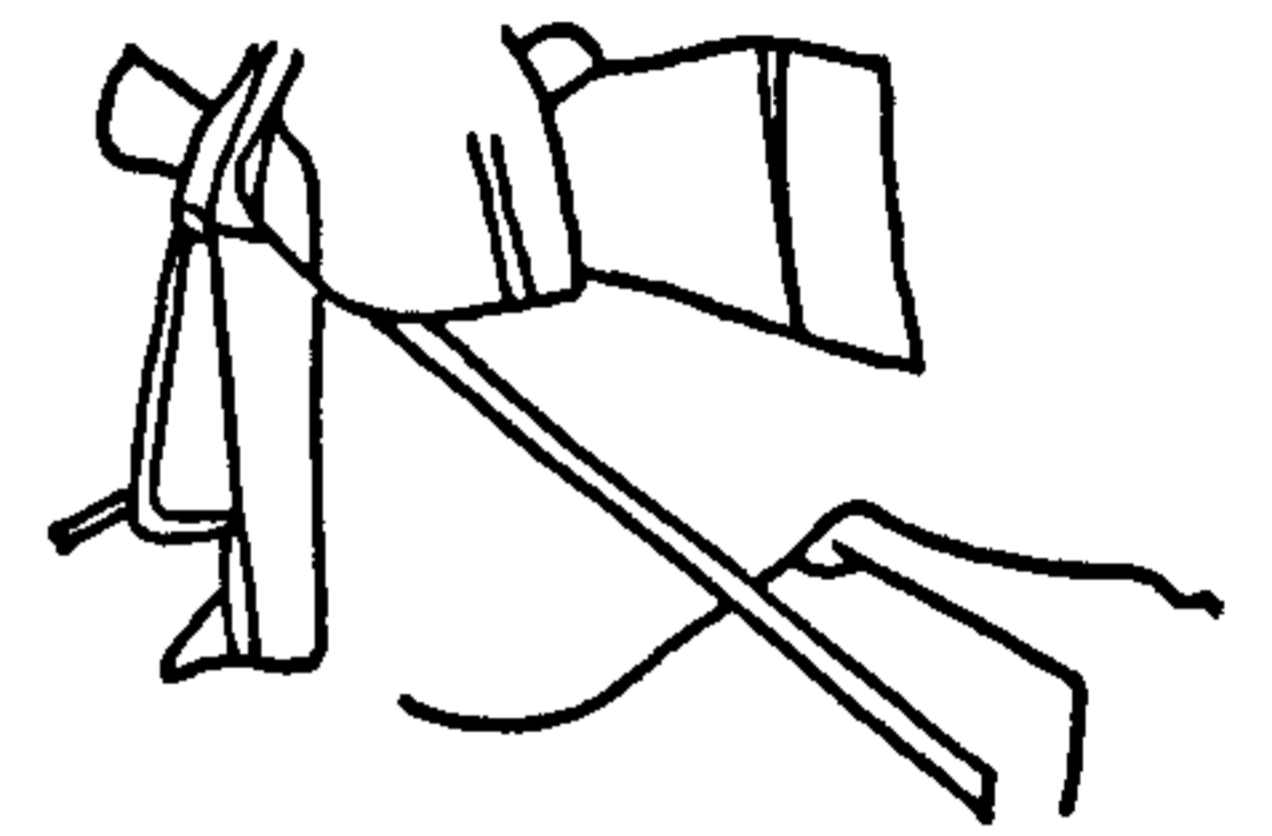
388F



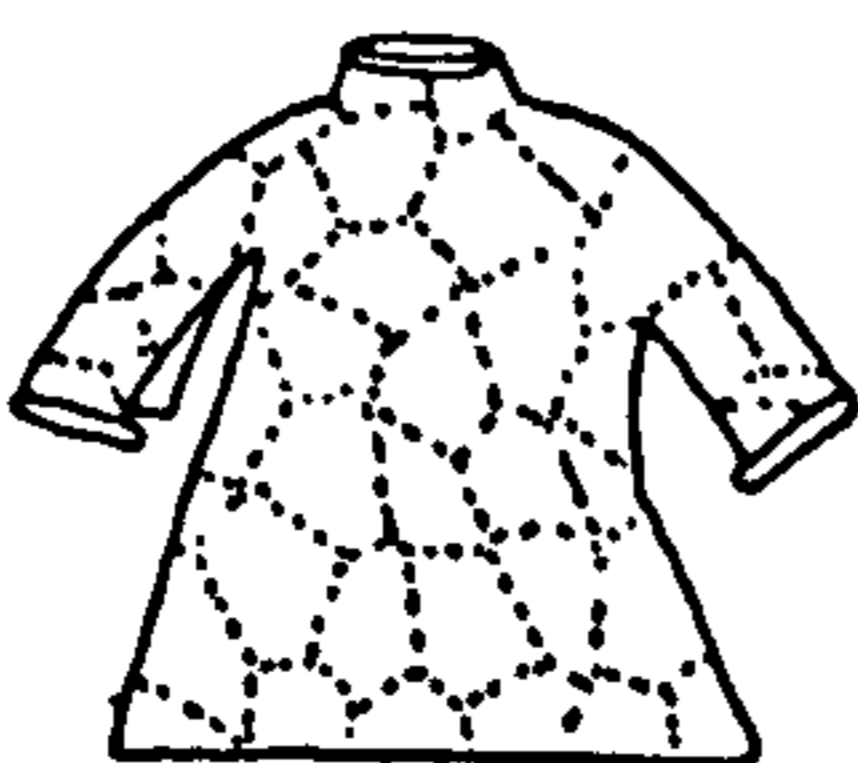
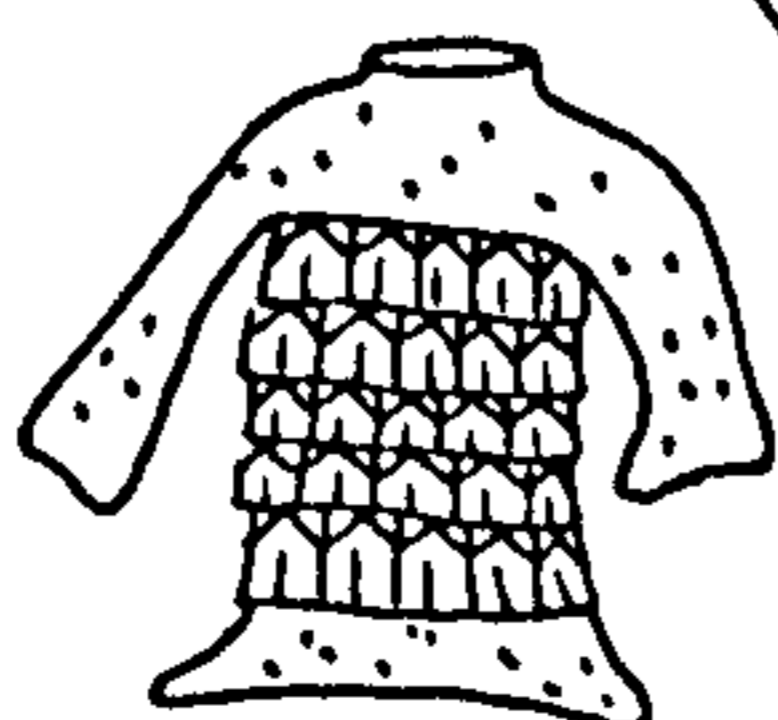
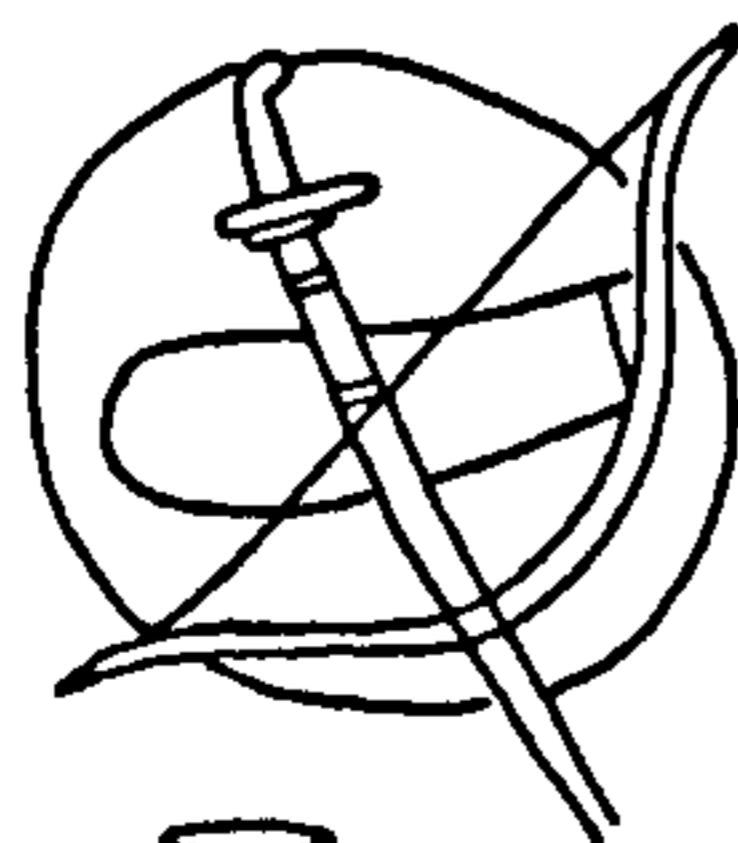
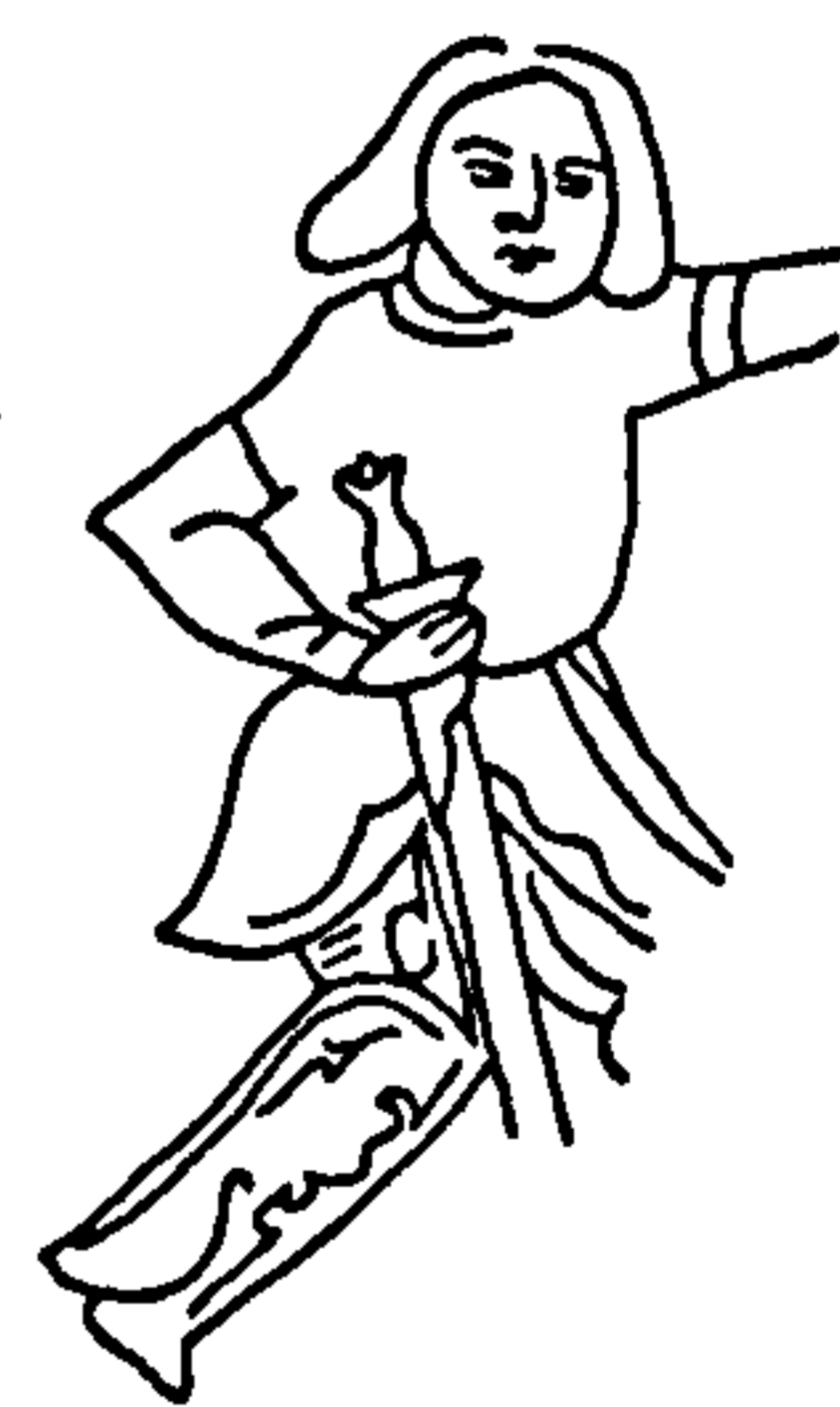
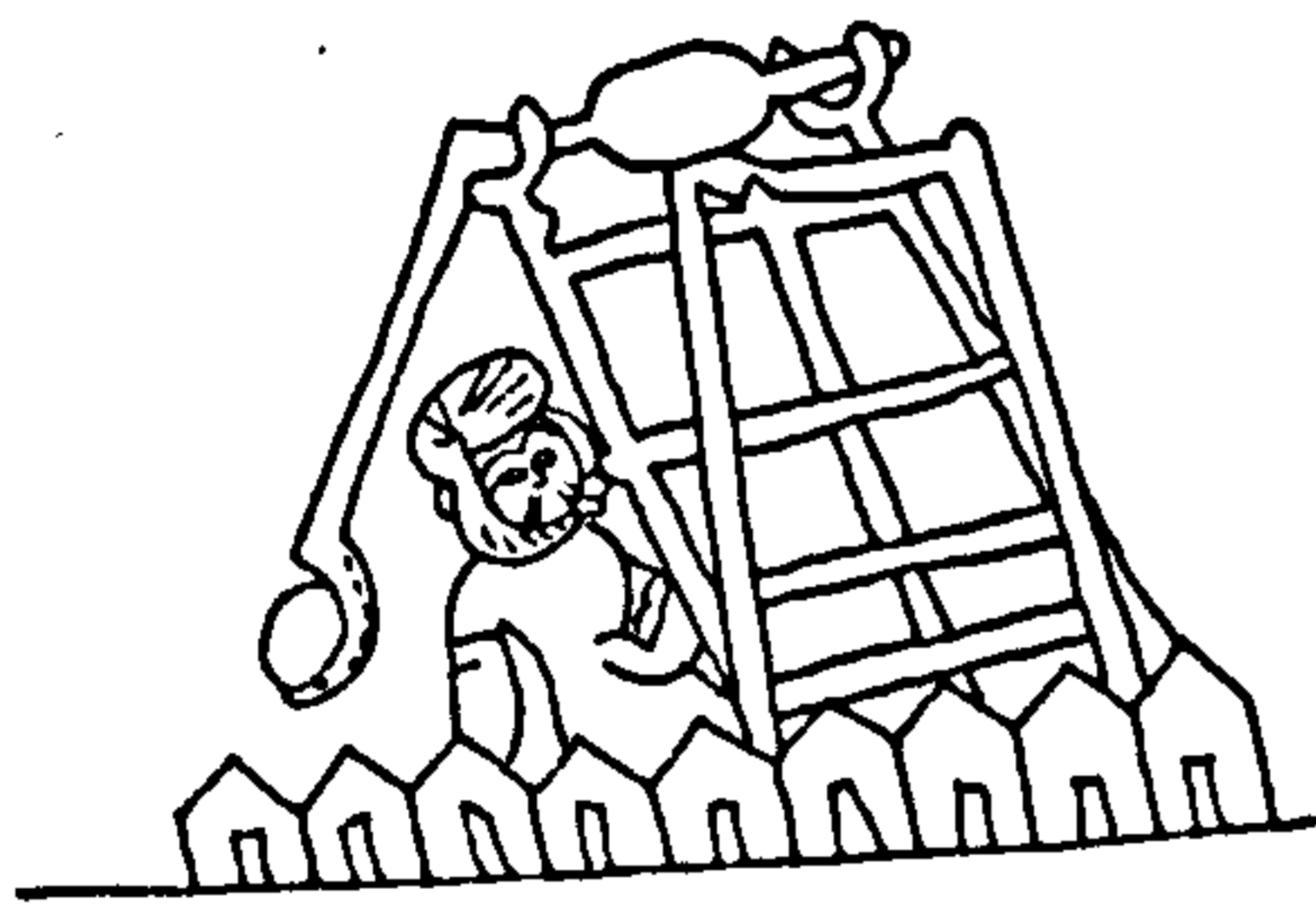
389



390



391

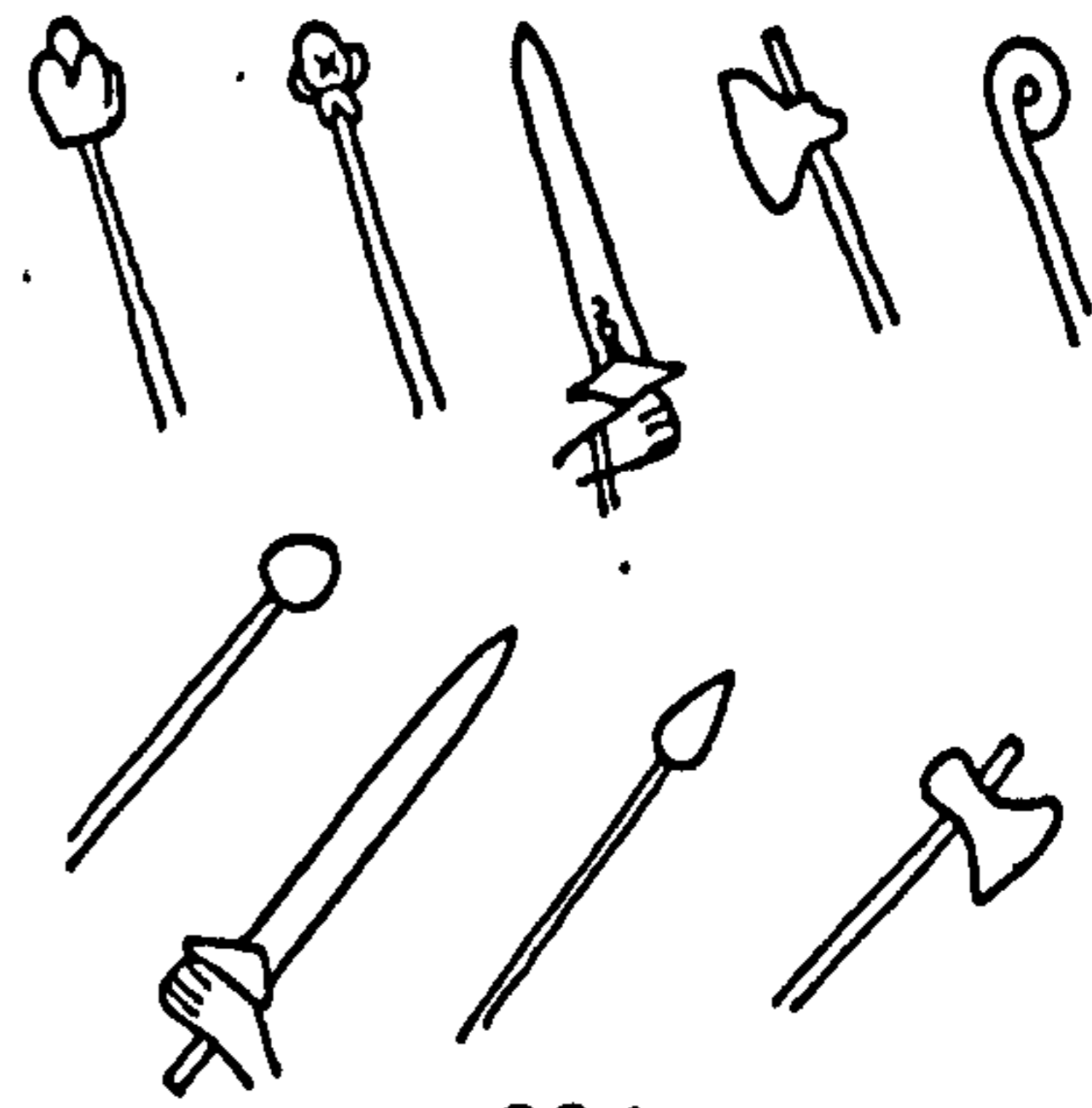


392

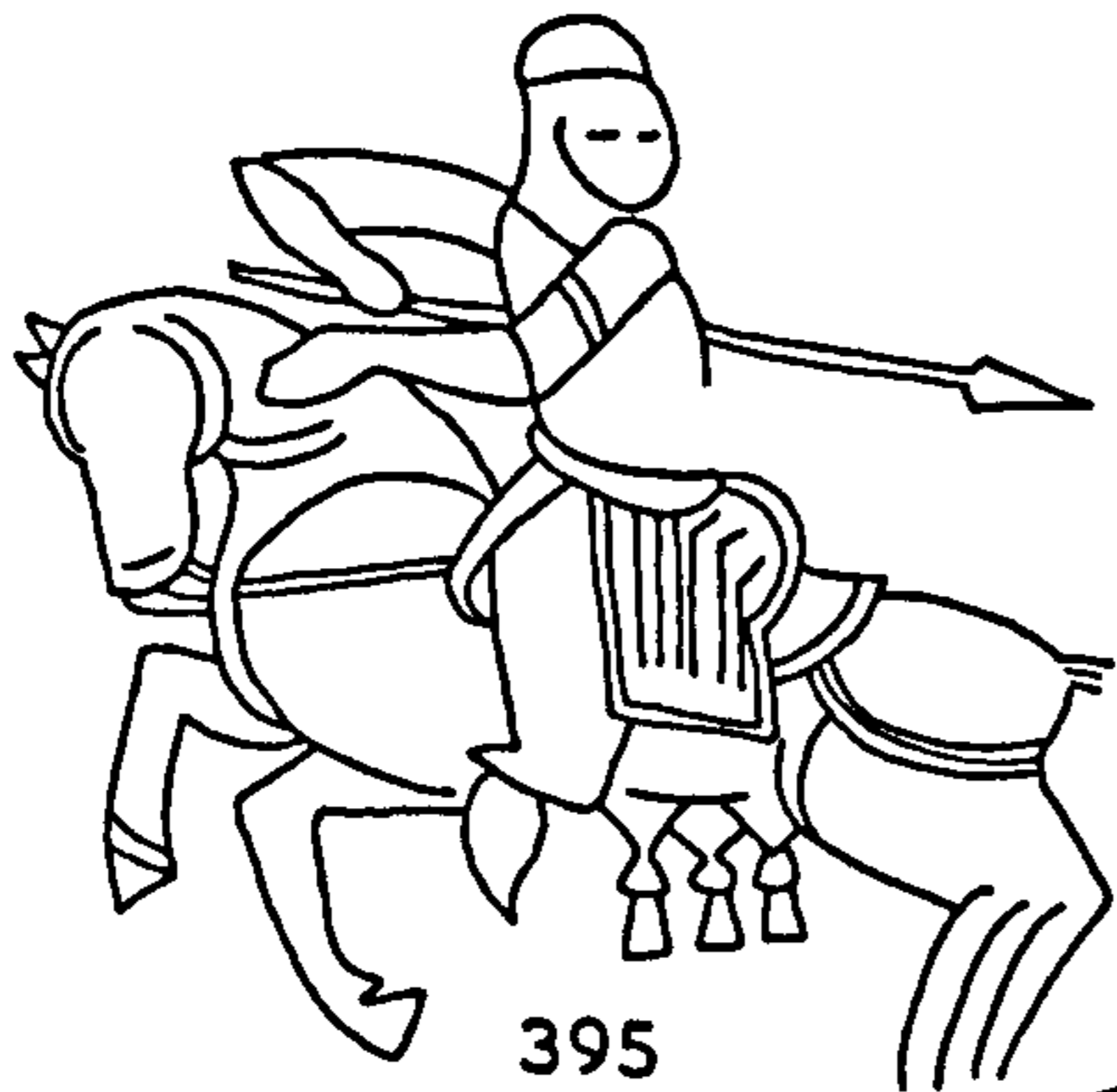




393



394



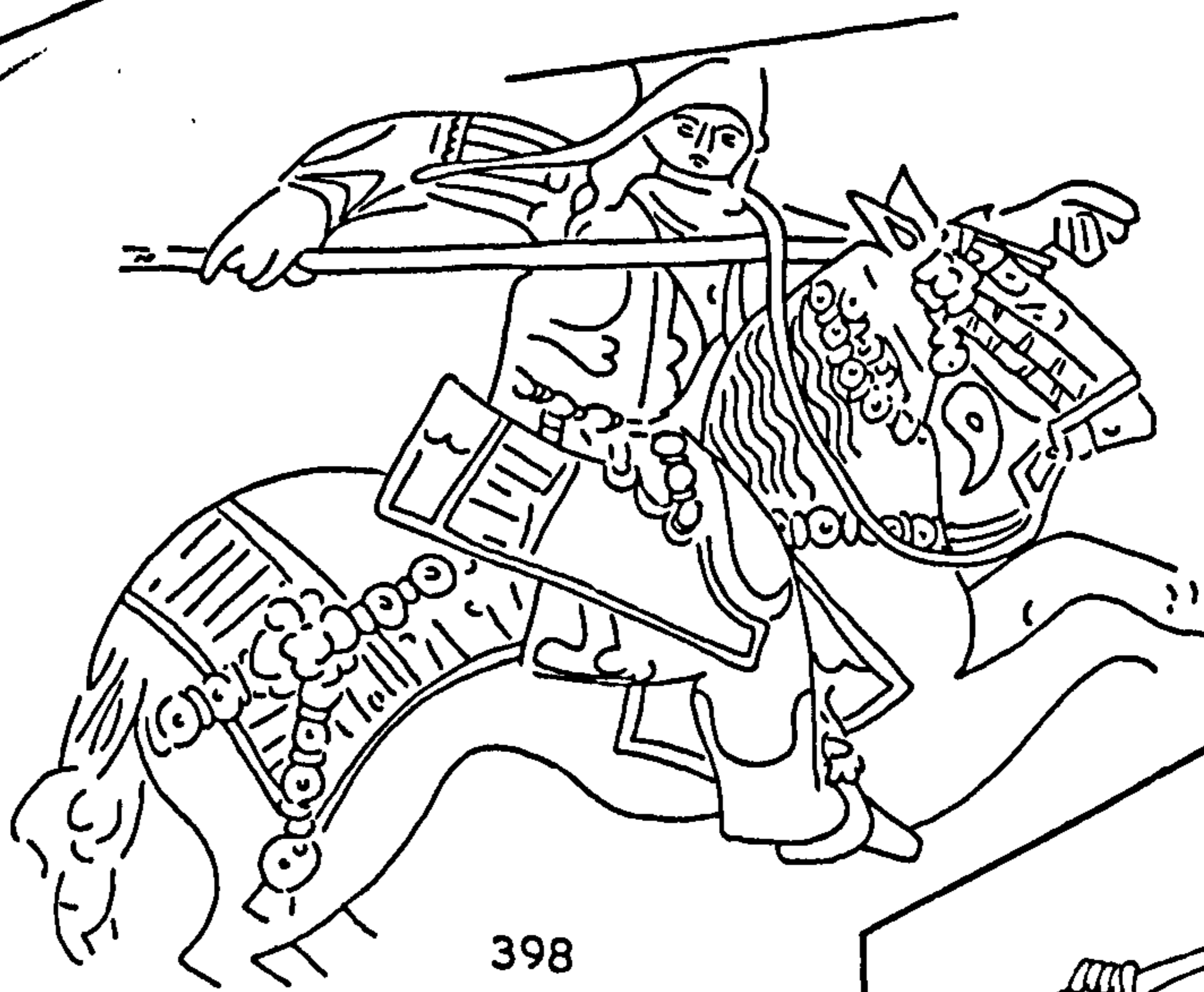
395



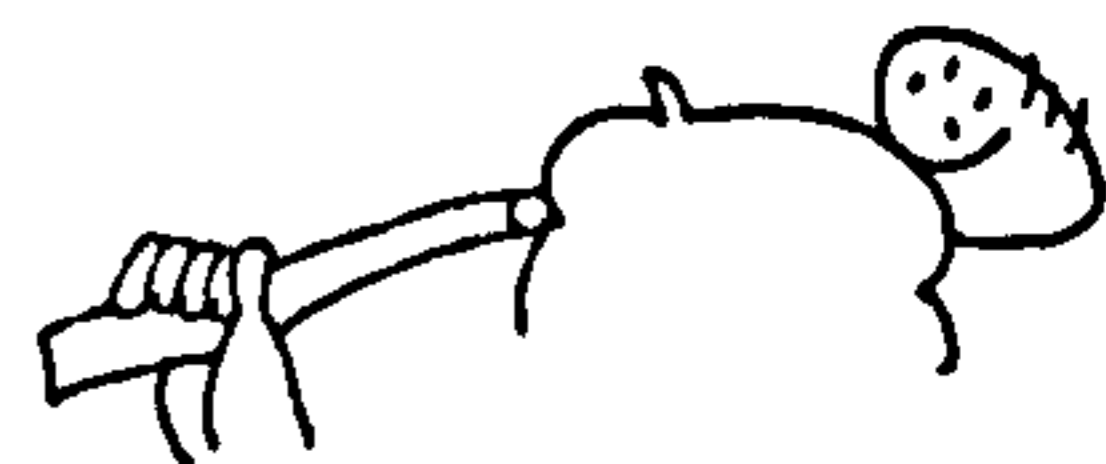
396



397



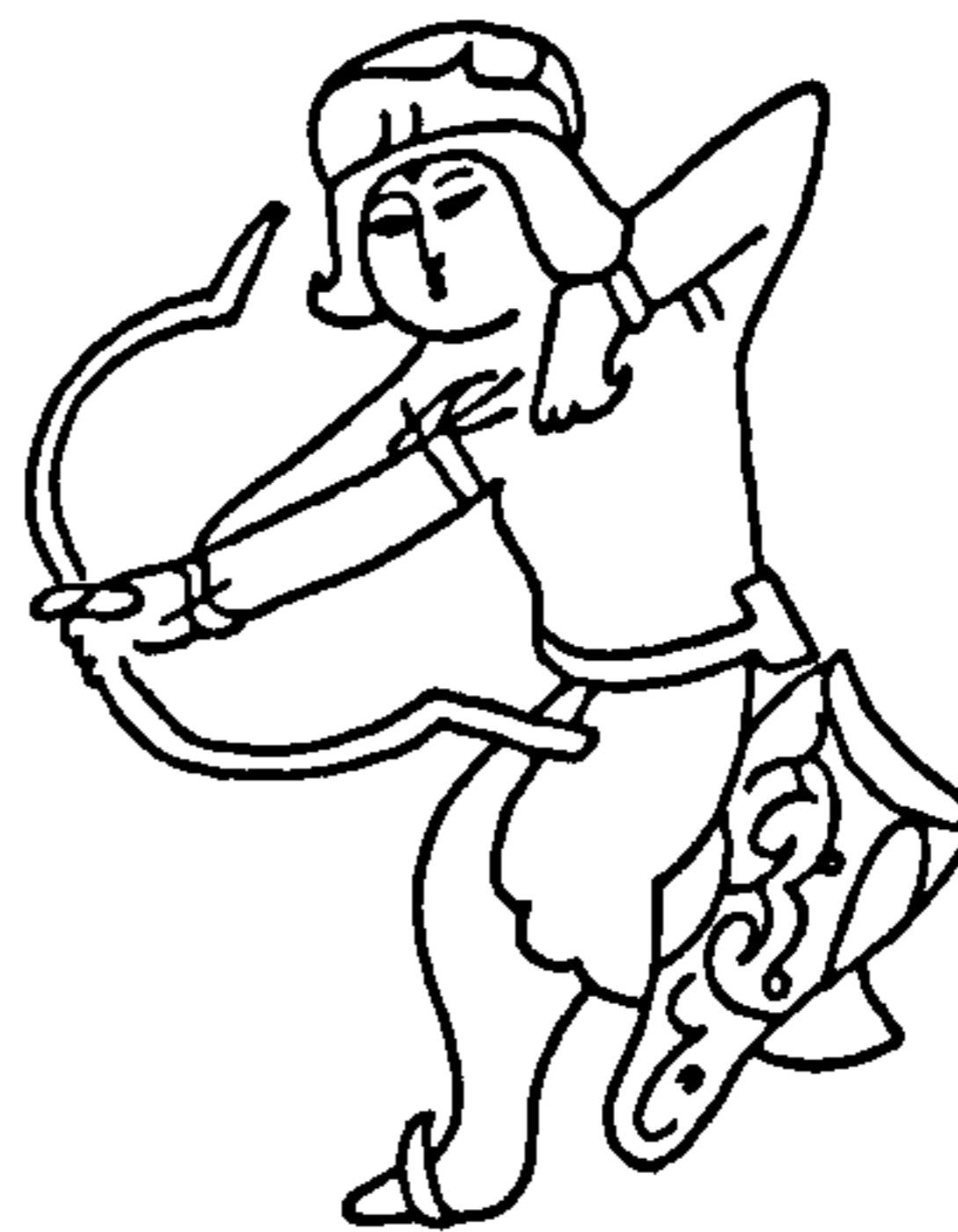
398



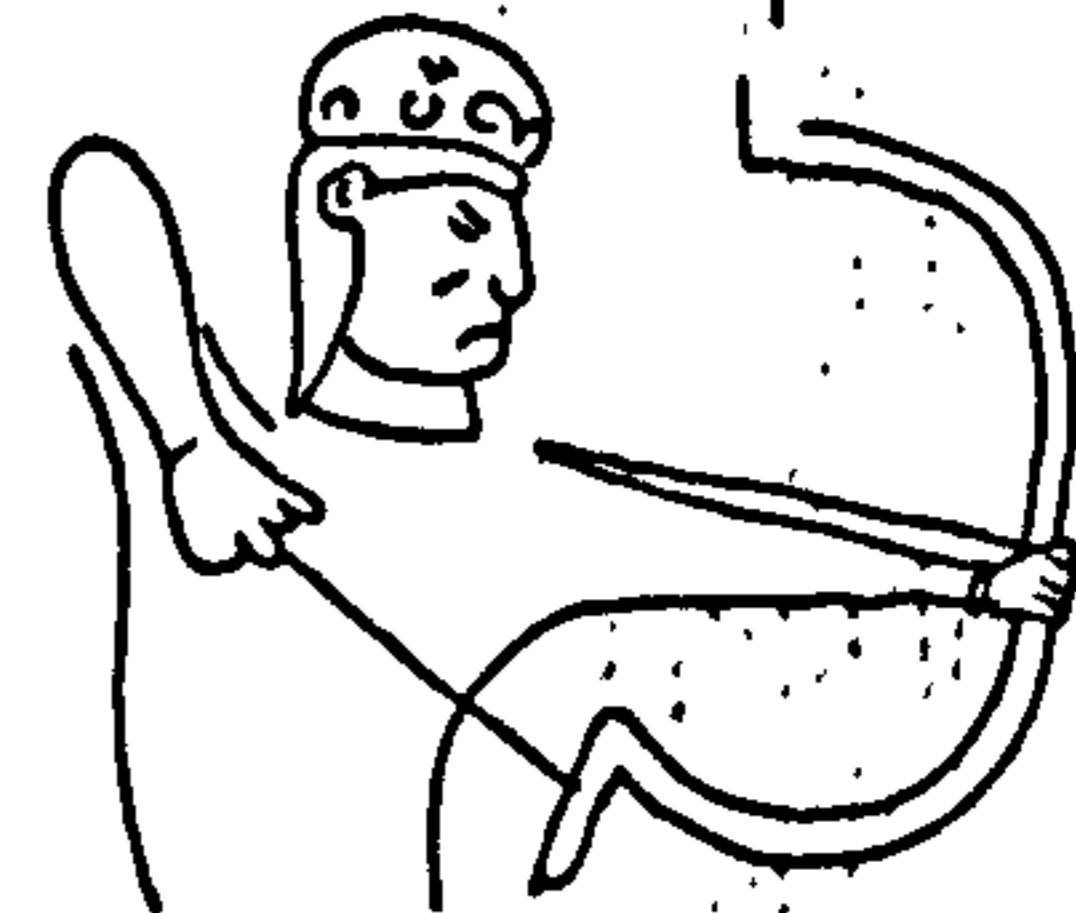
399



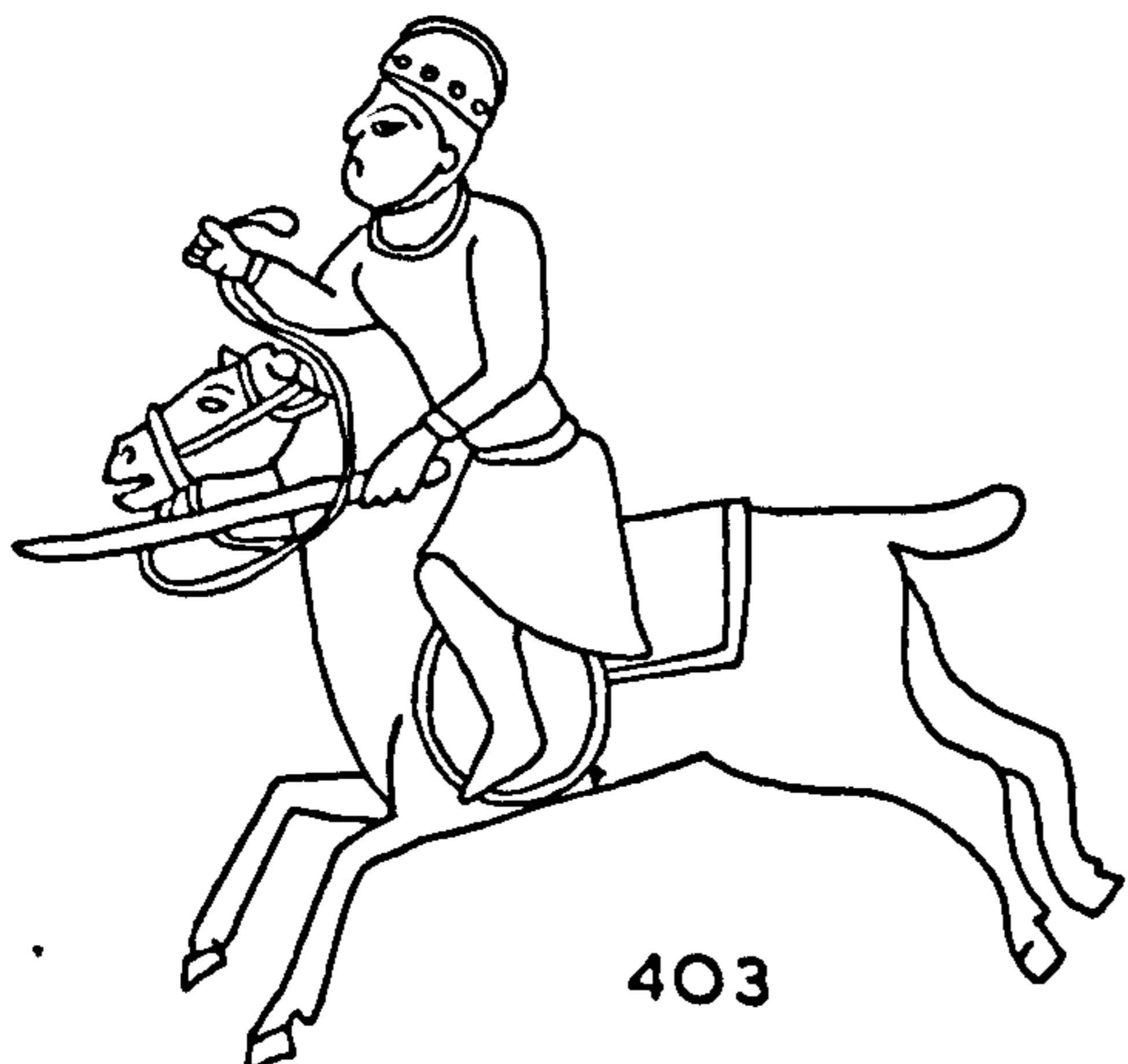
400



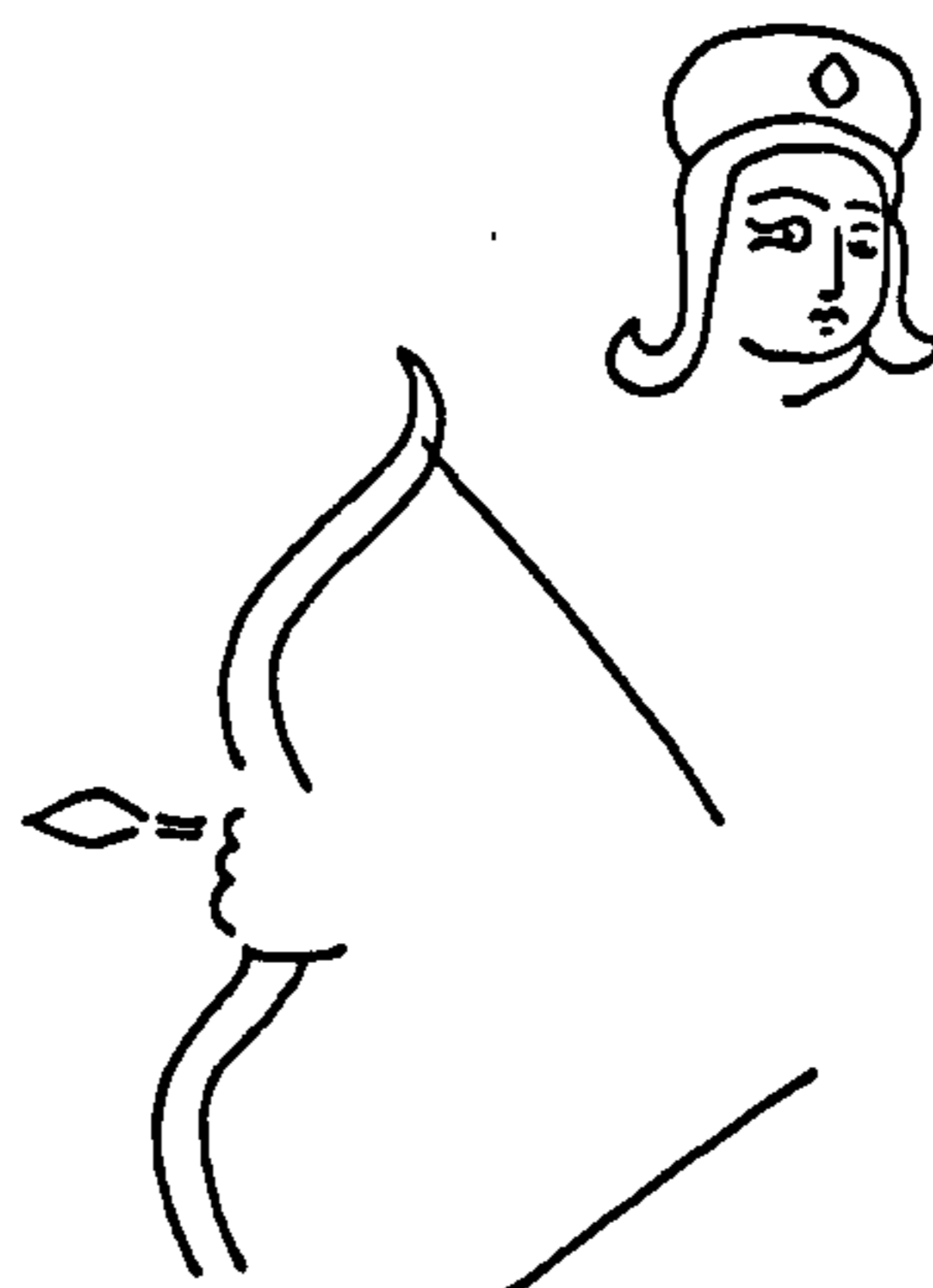
401



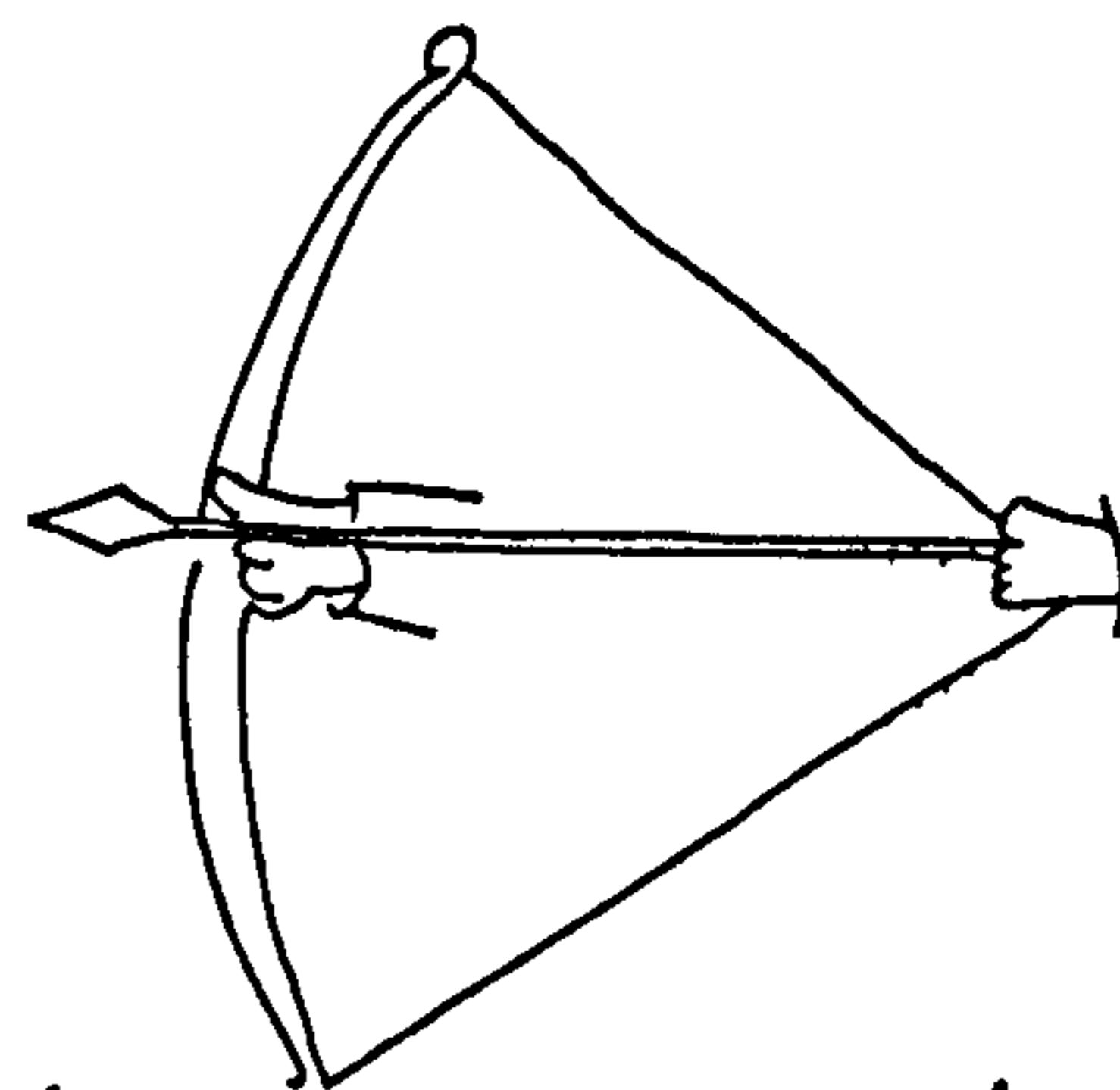
402



403

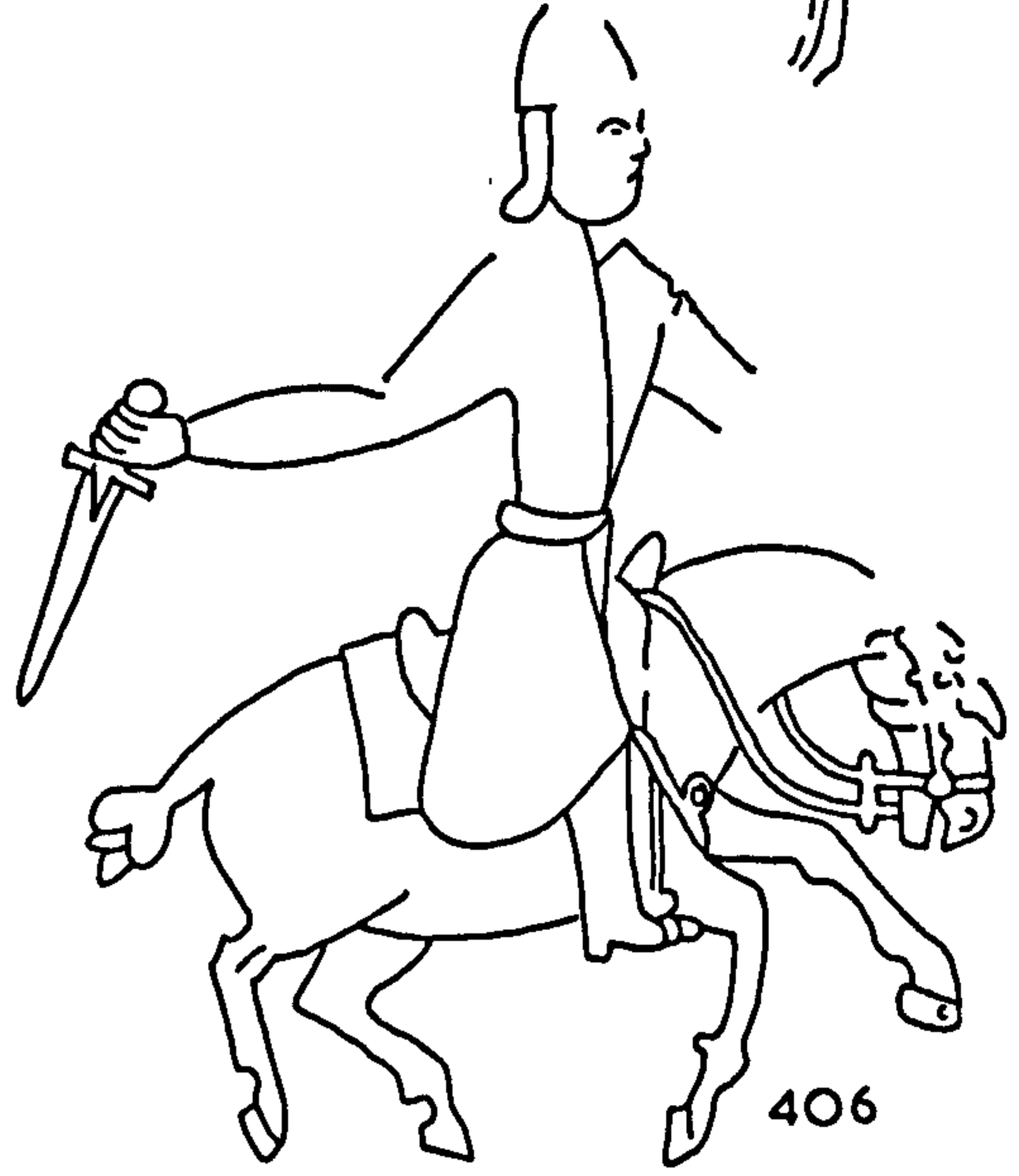
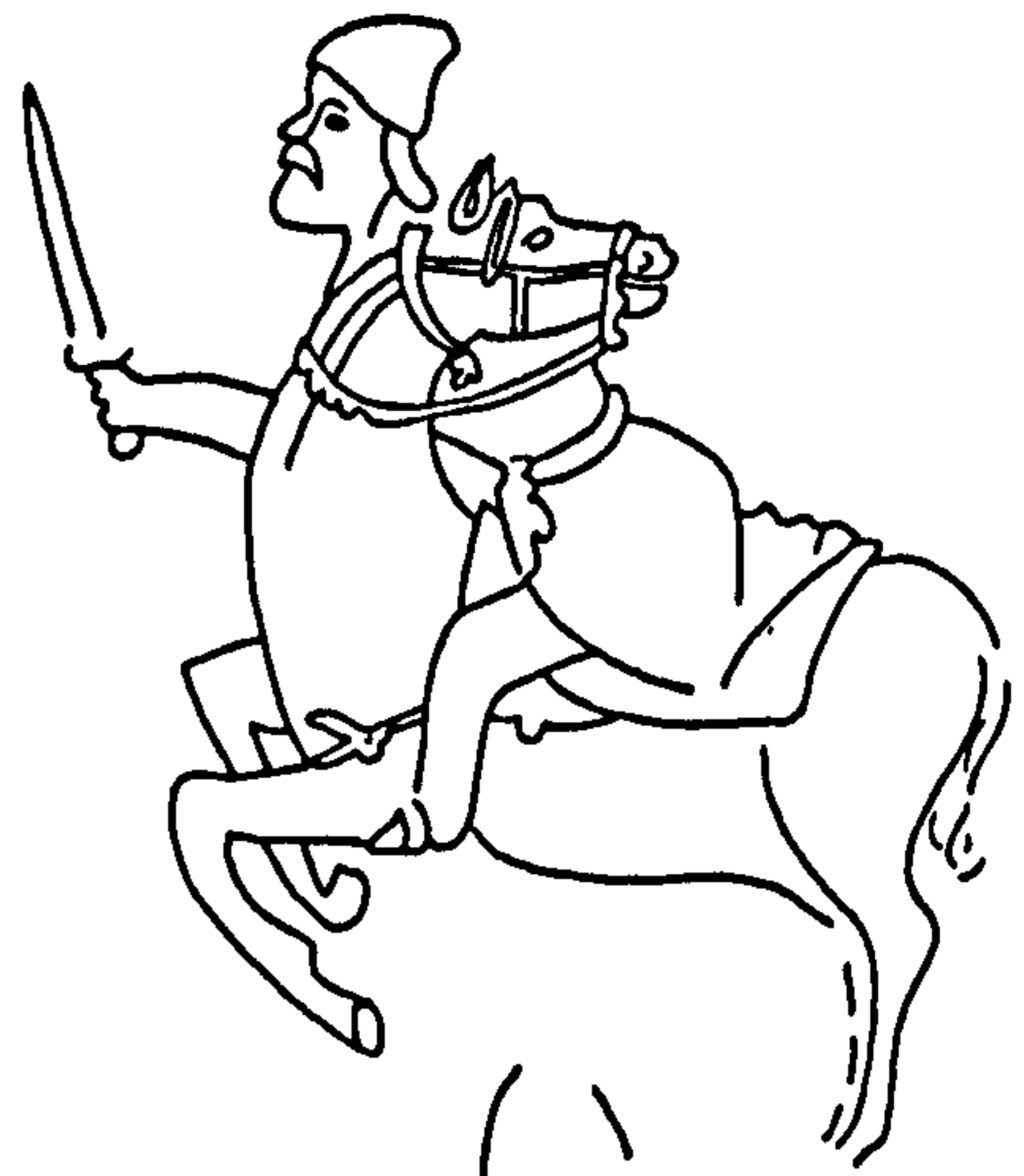


404

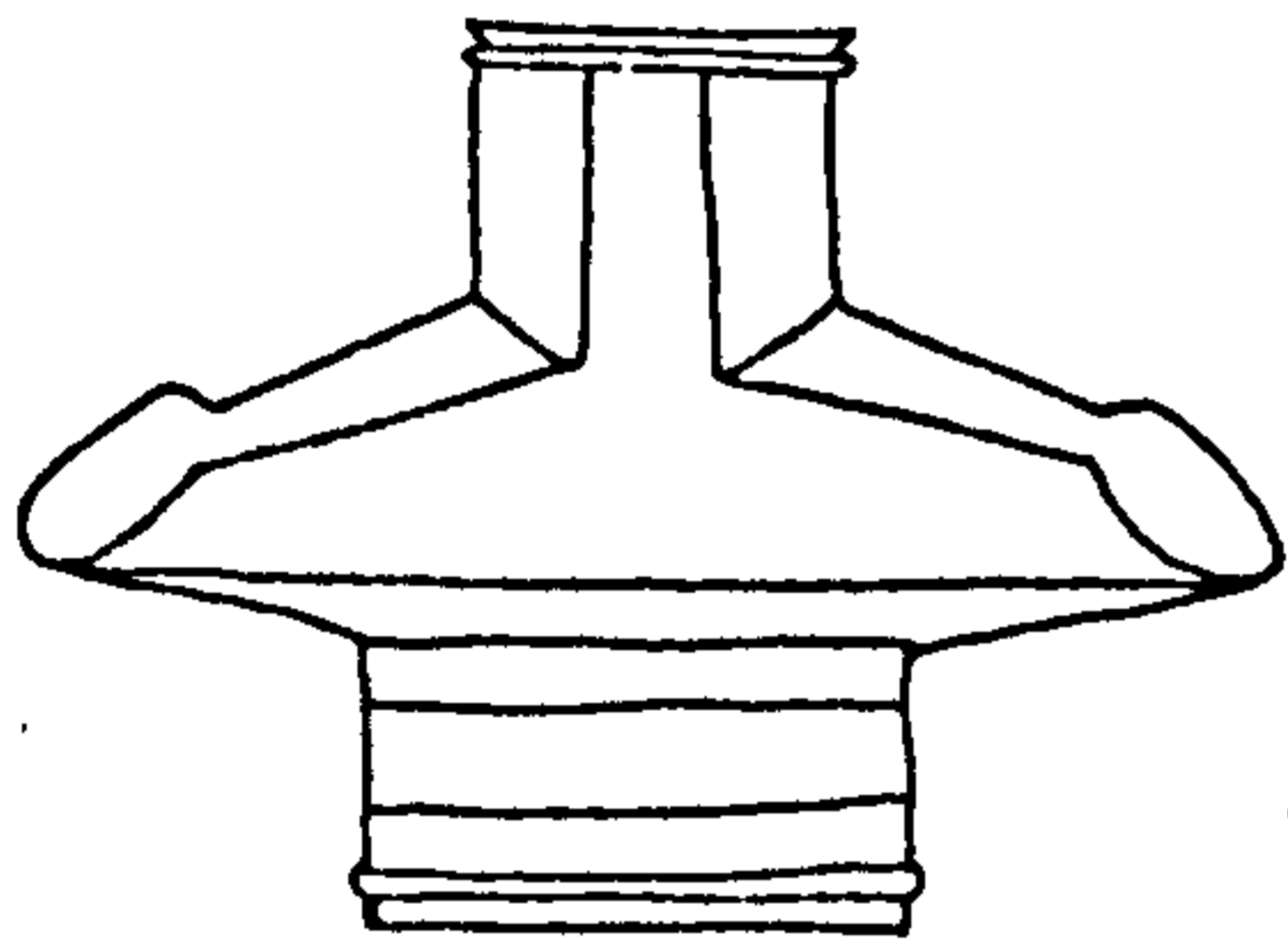




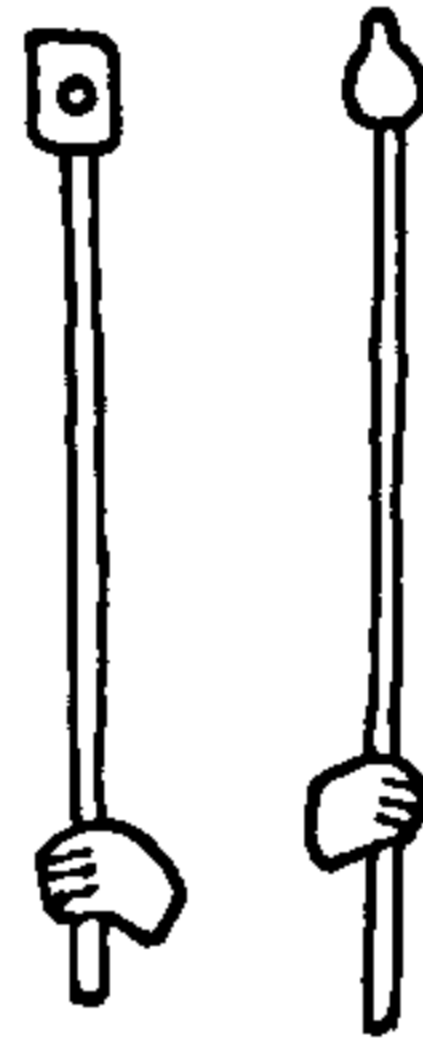
405



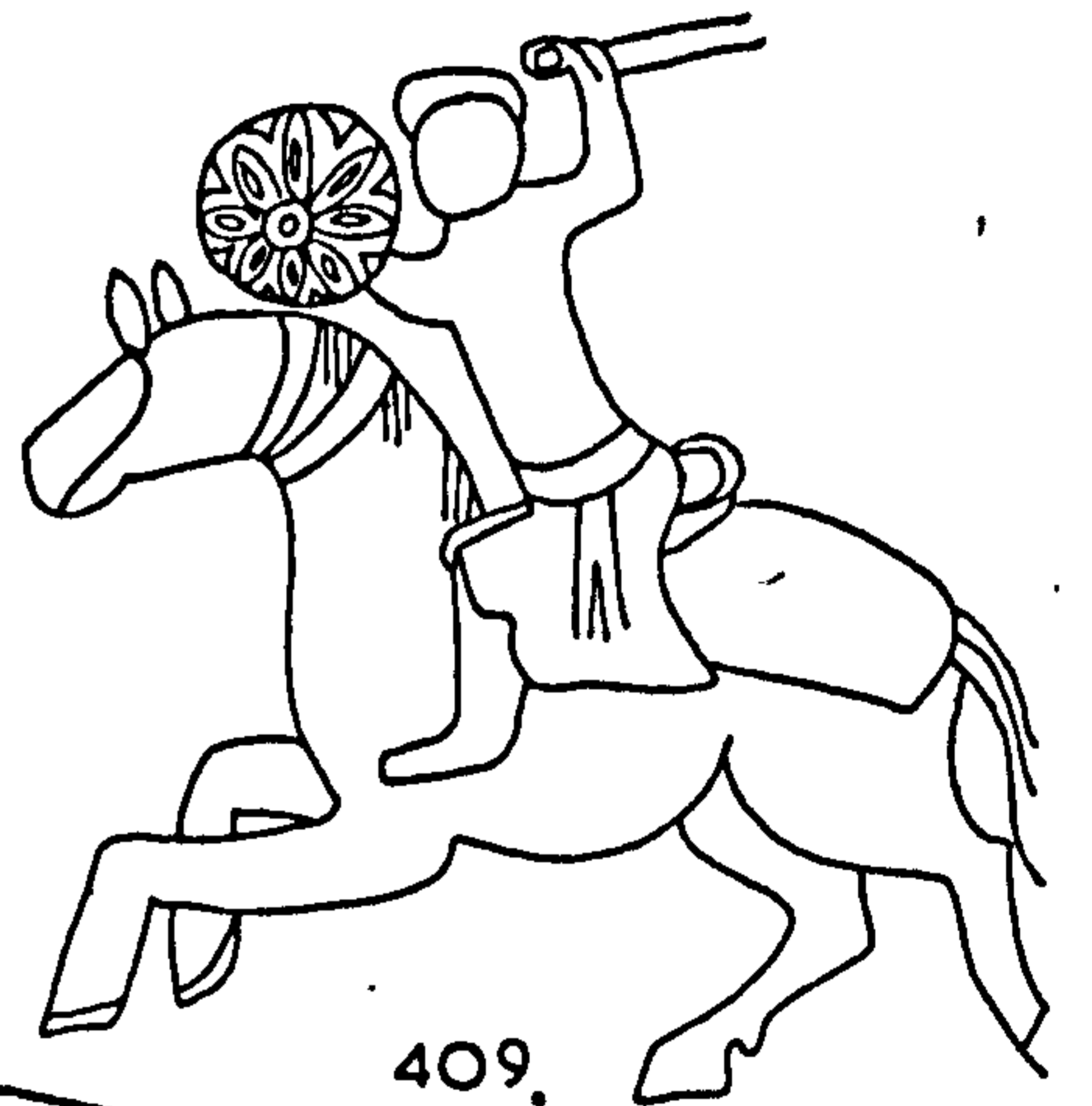
406



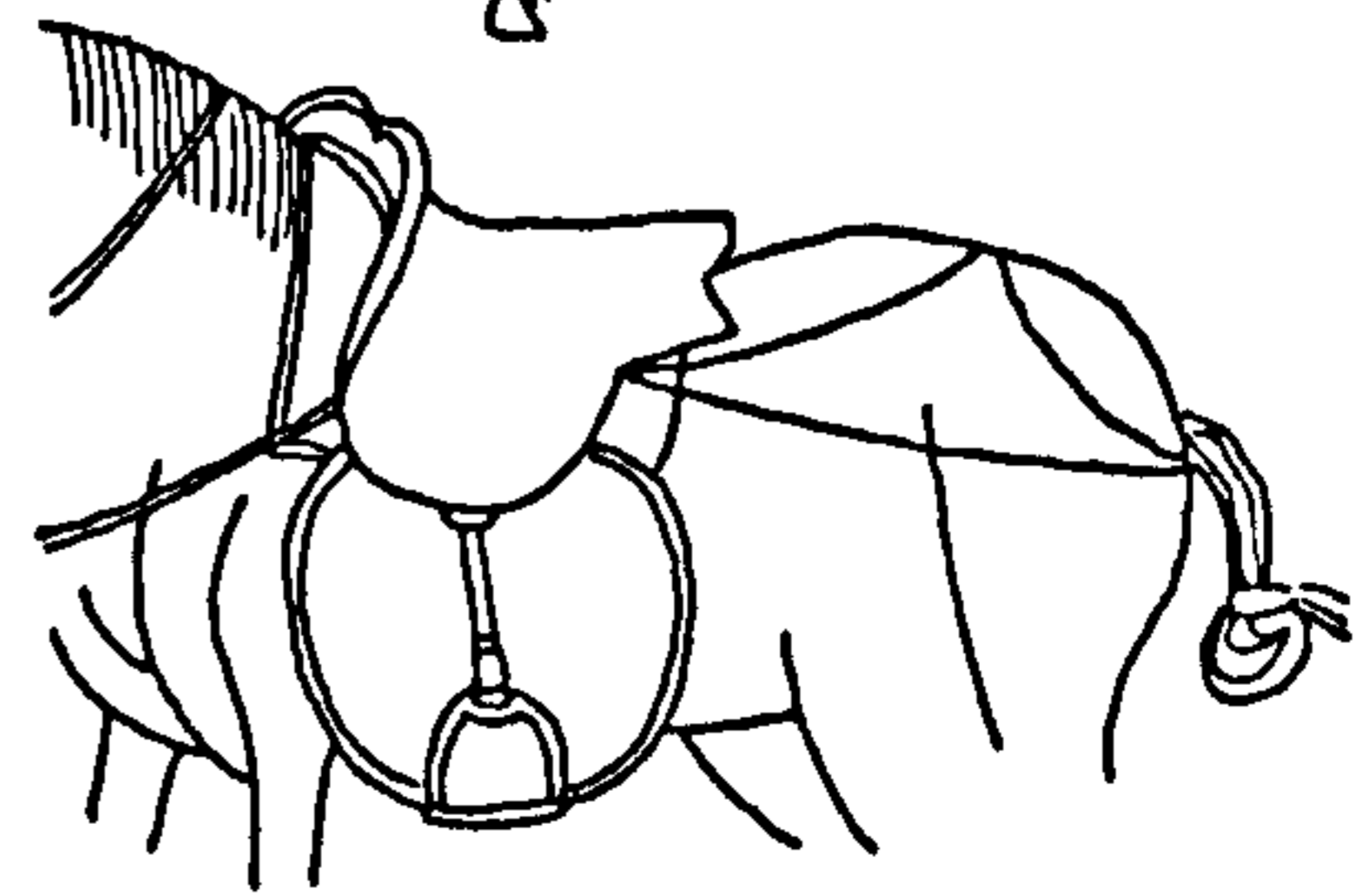
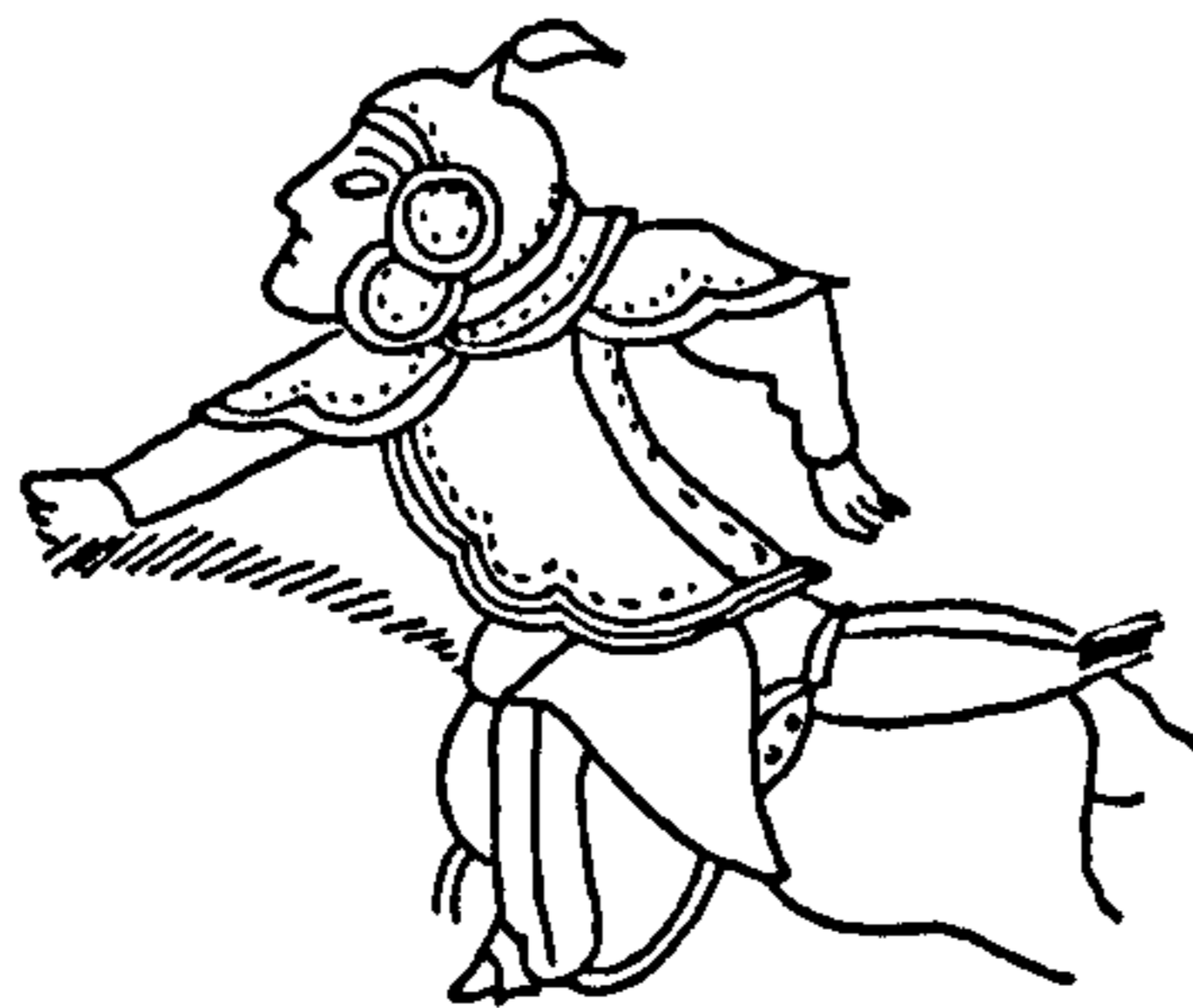
407



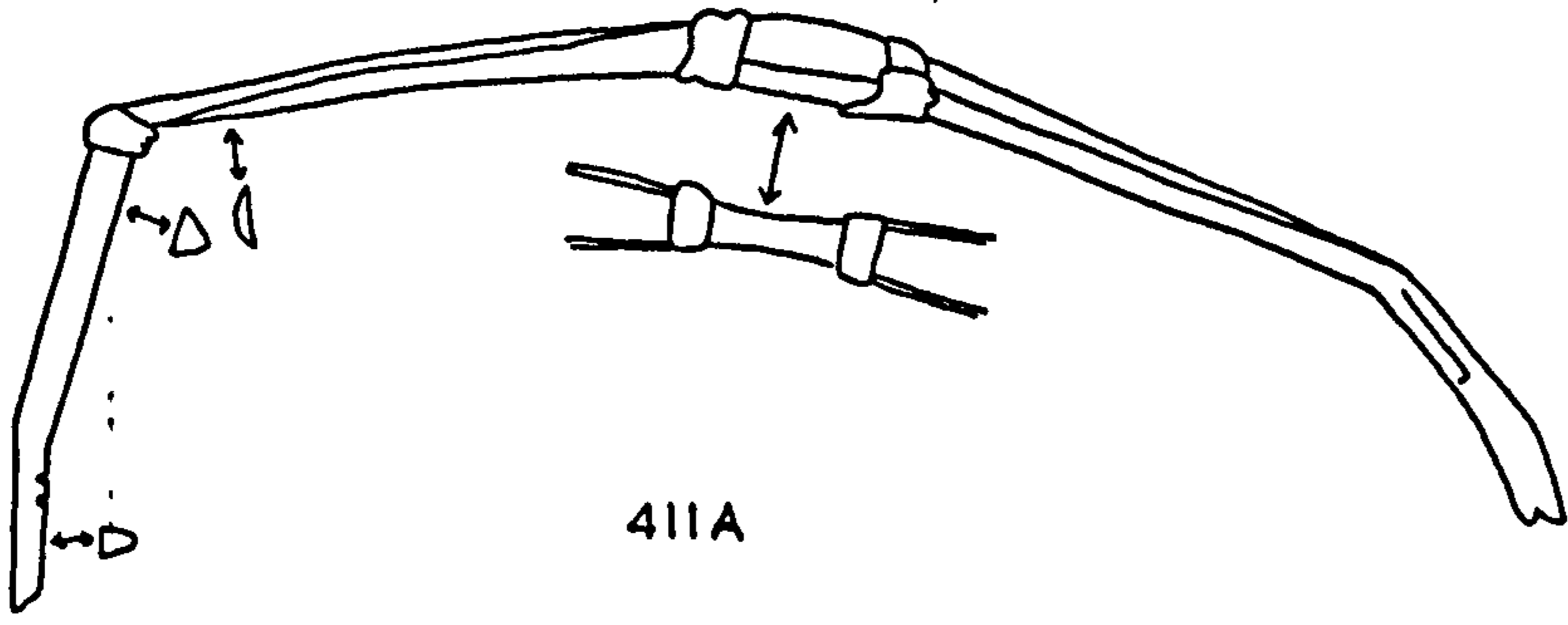
408



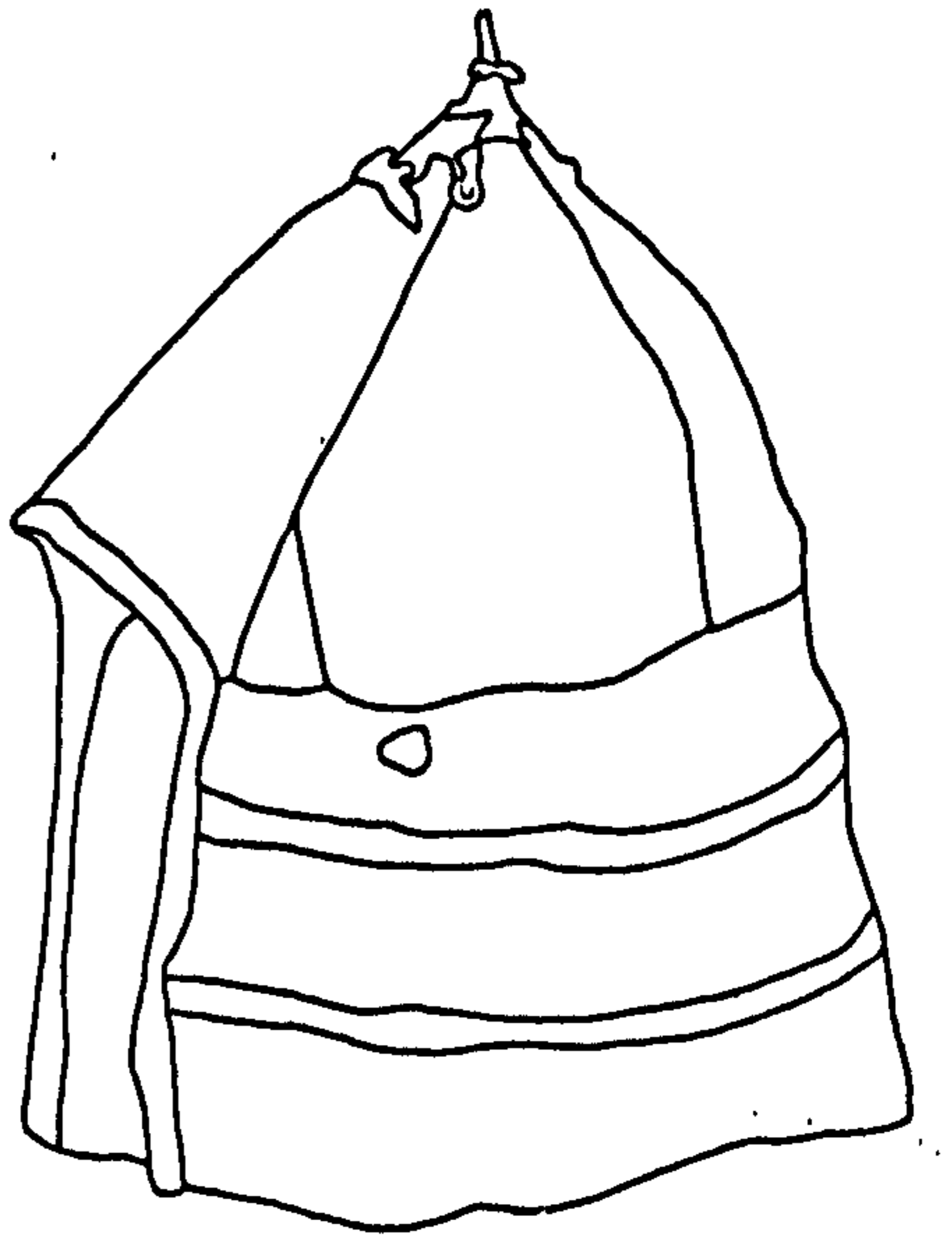
409



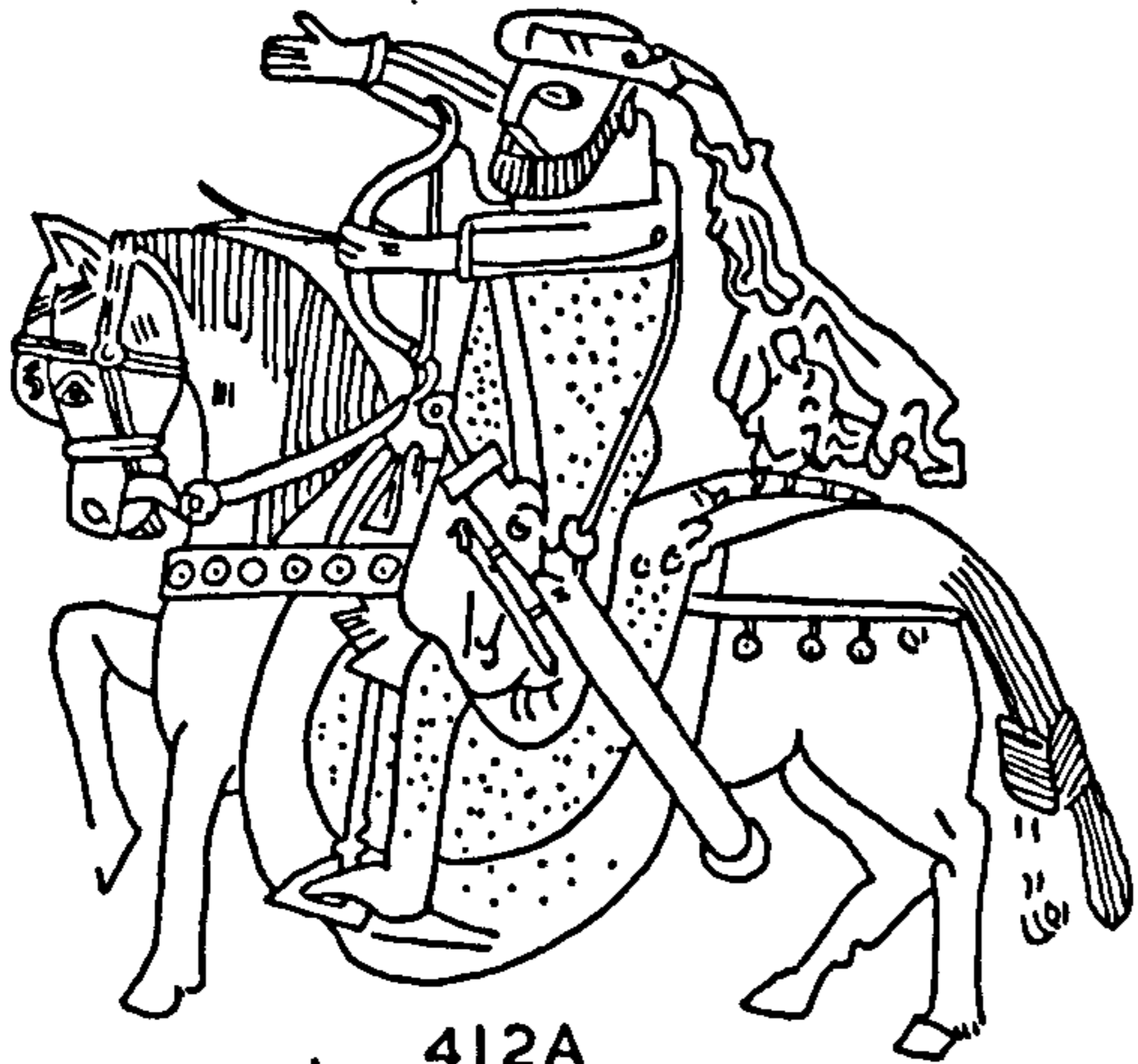
410



411A



411B



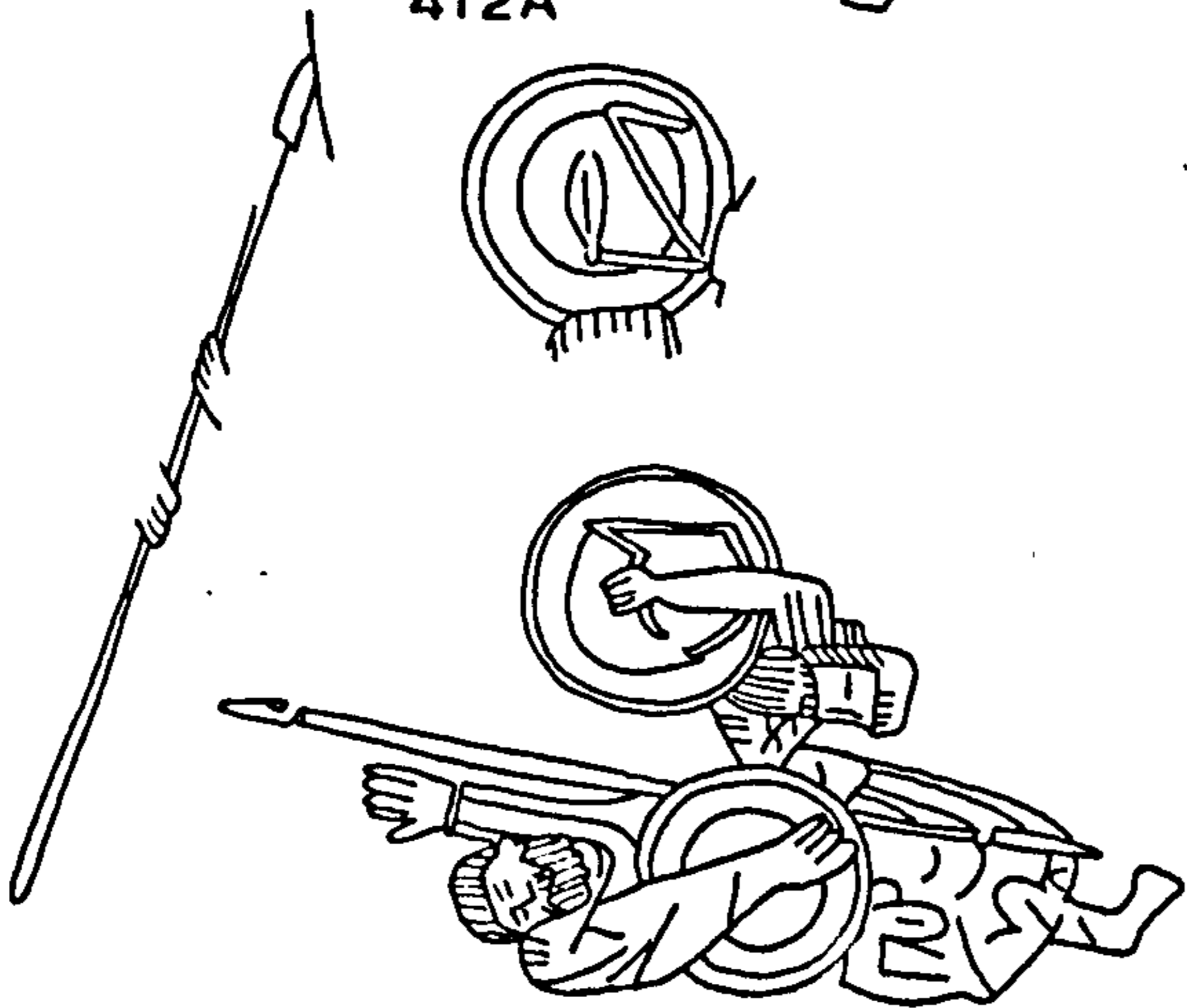
412A



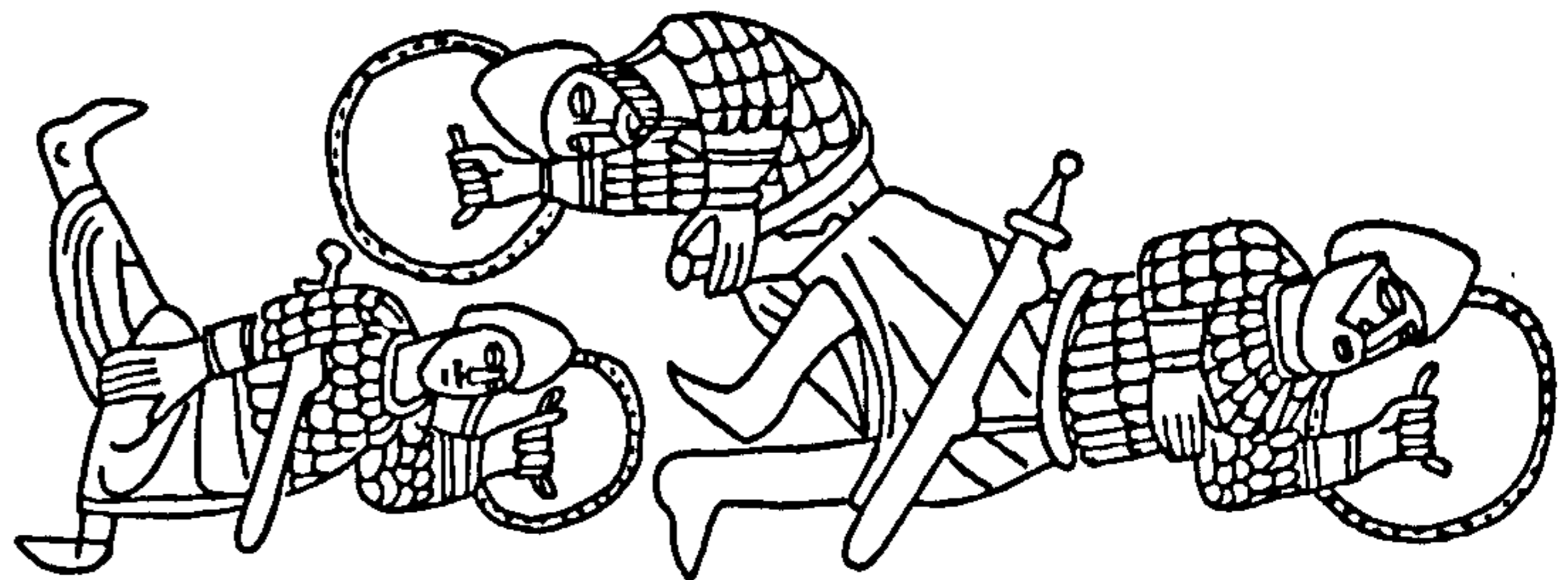
413



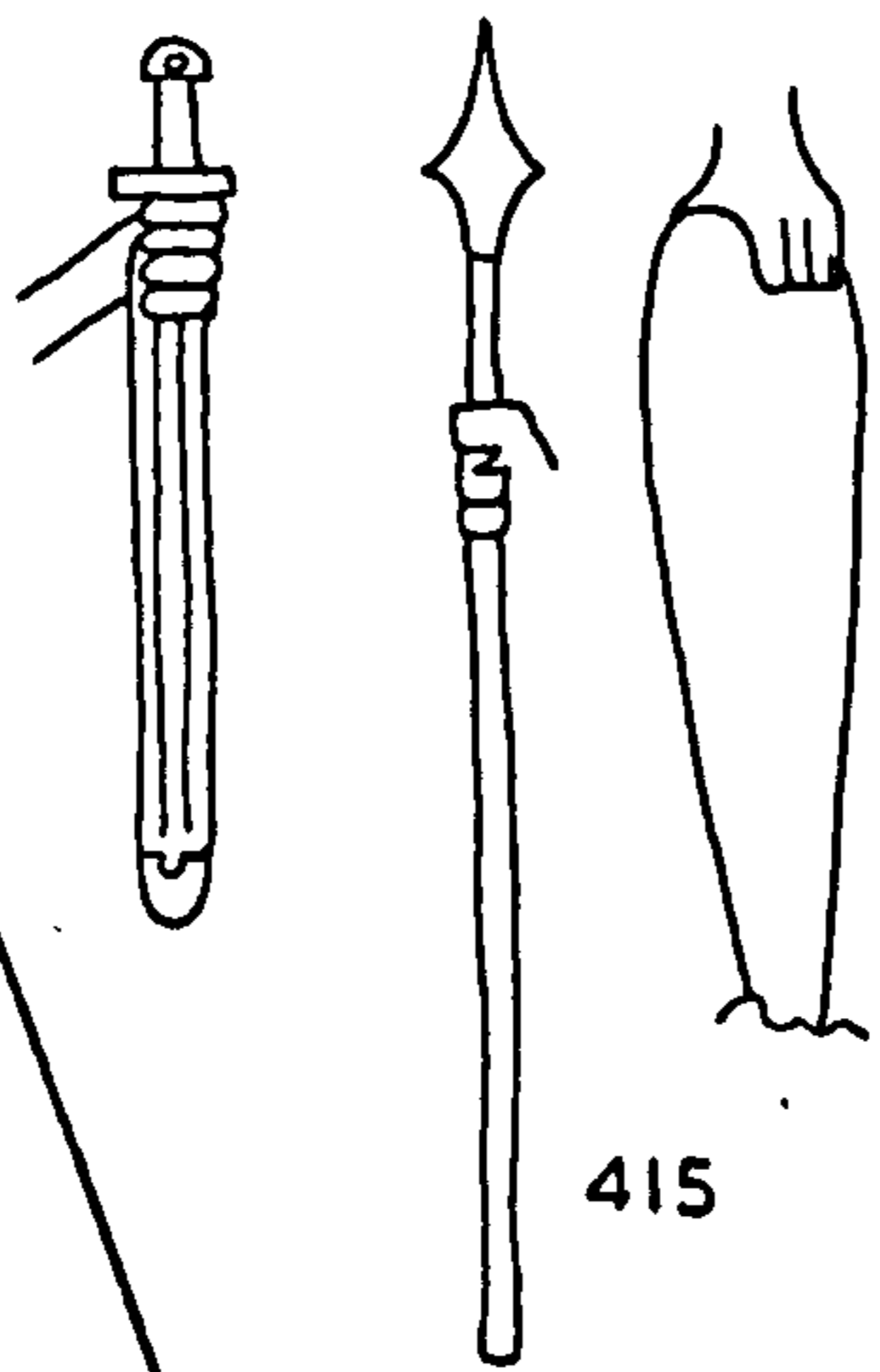
414



412B



416



415



417

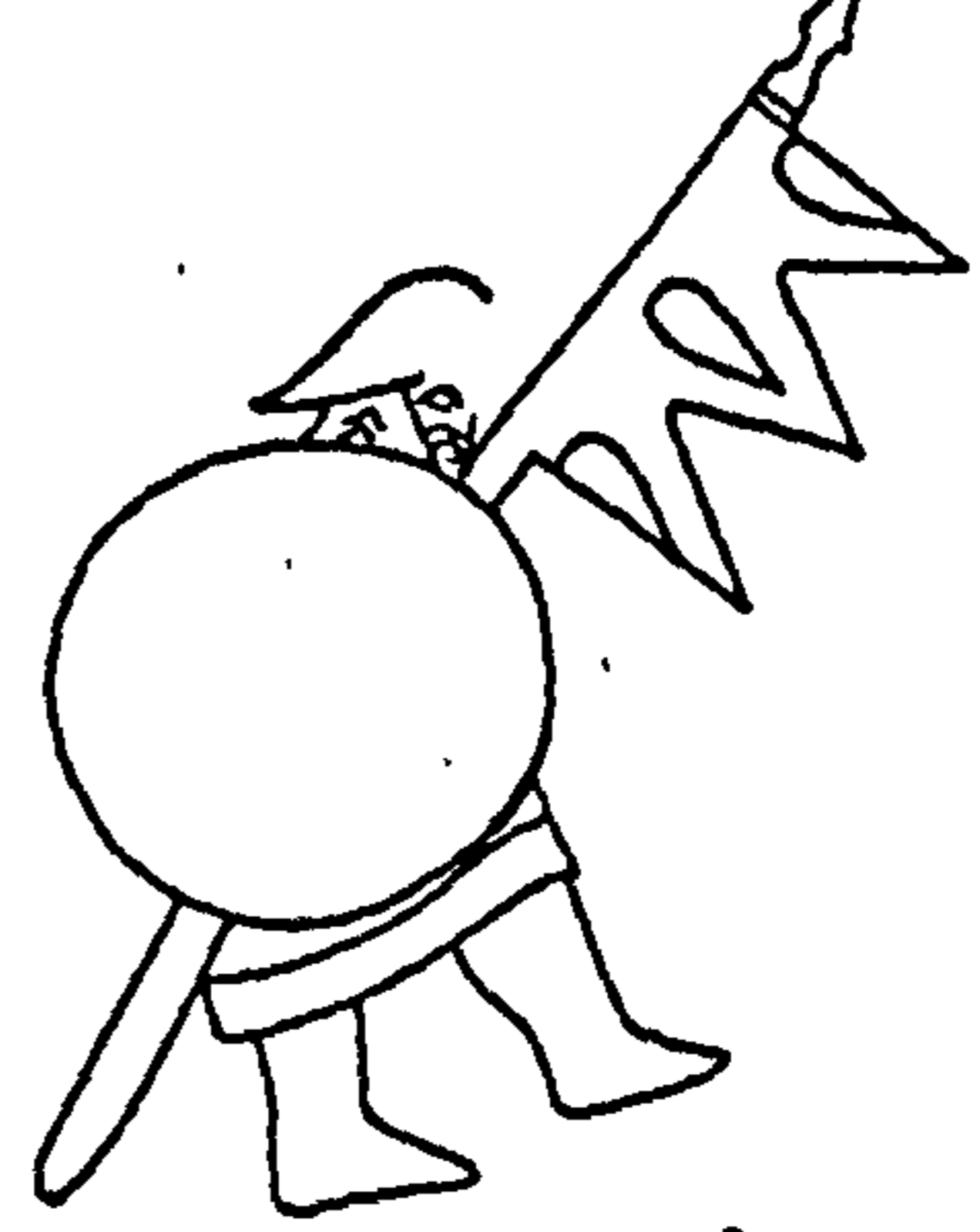


418

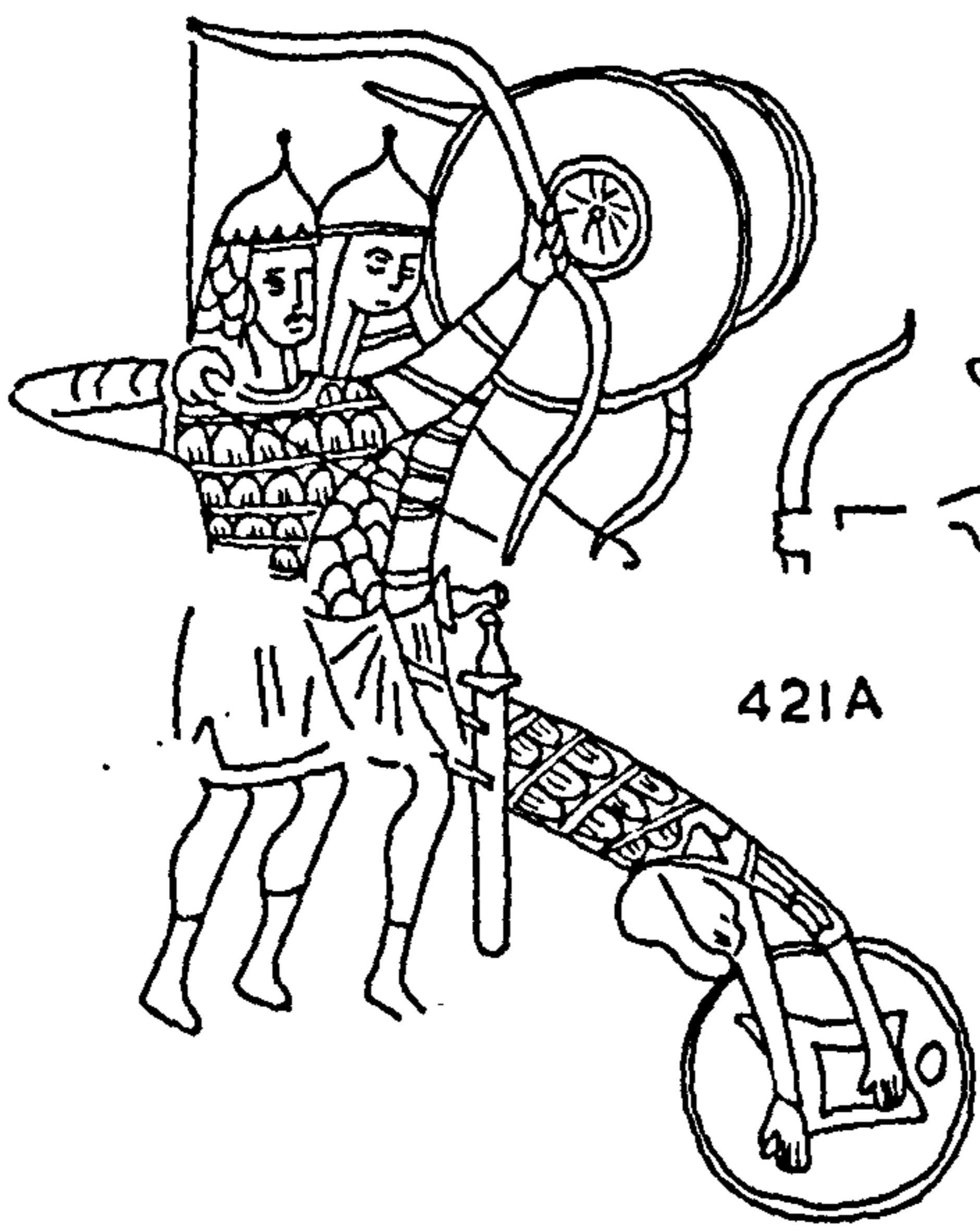




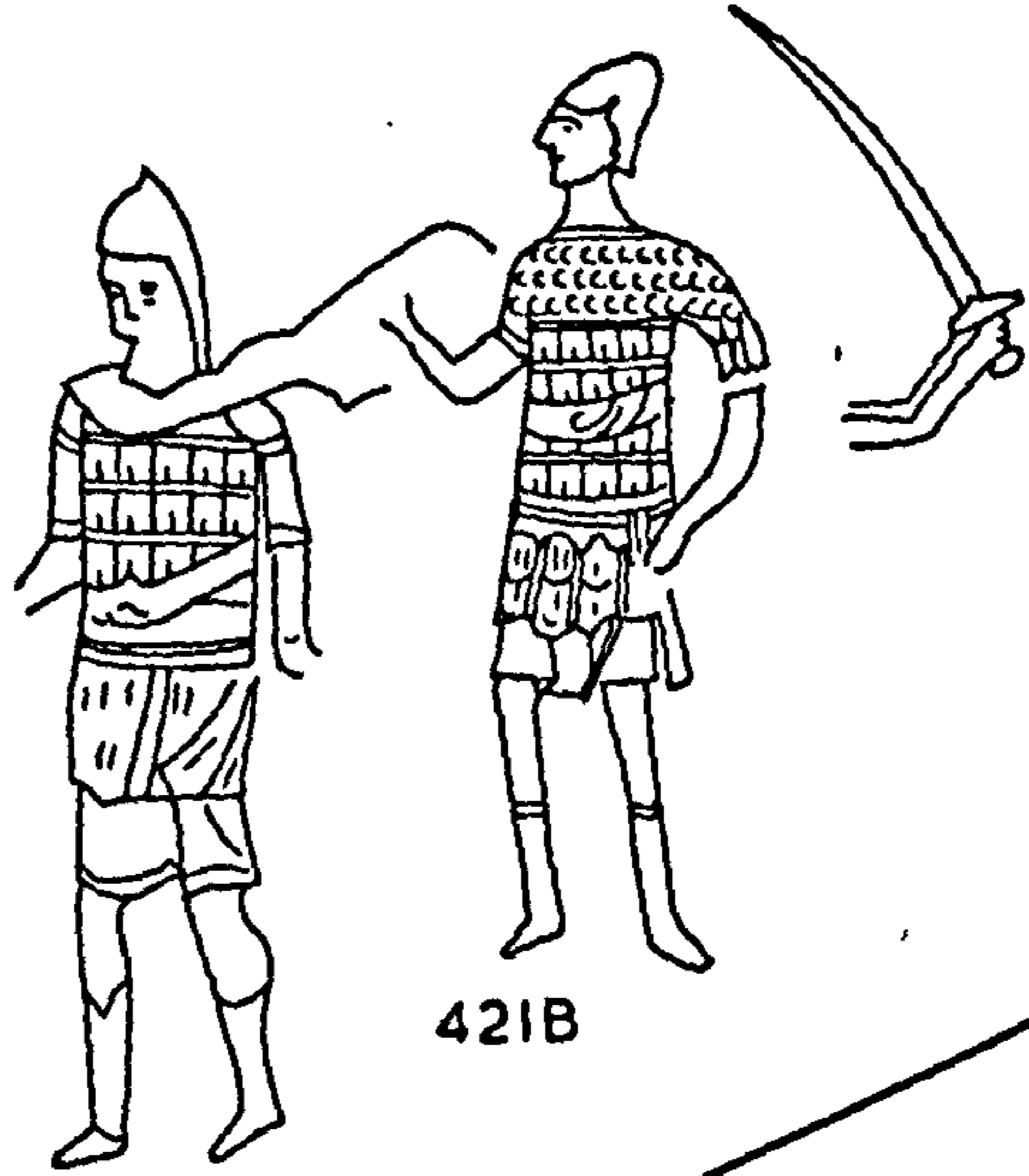
419



420



421A



421B



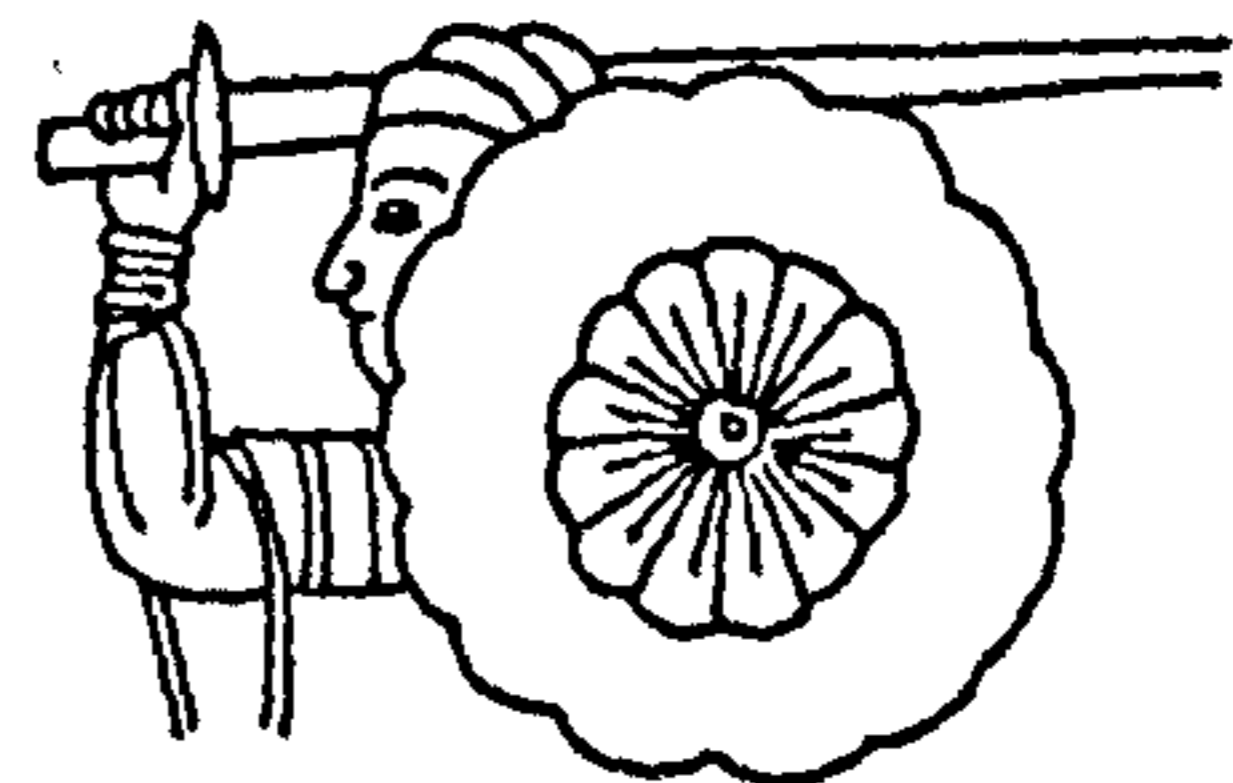
422A



422B



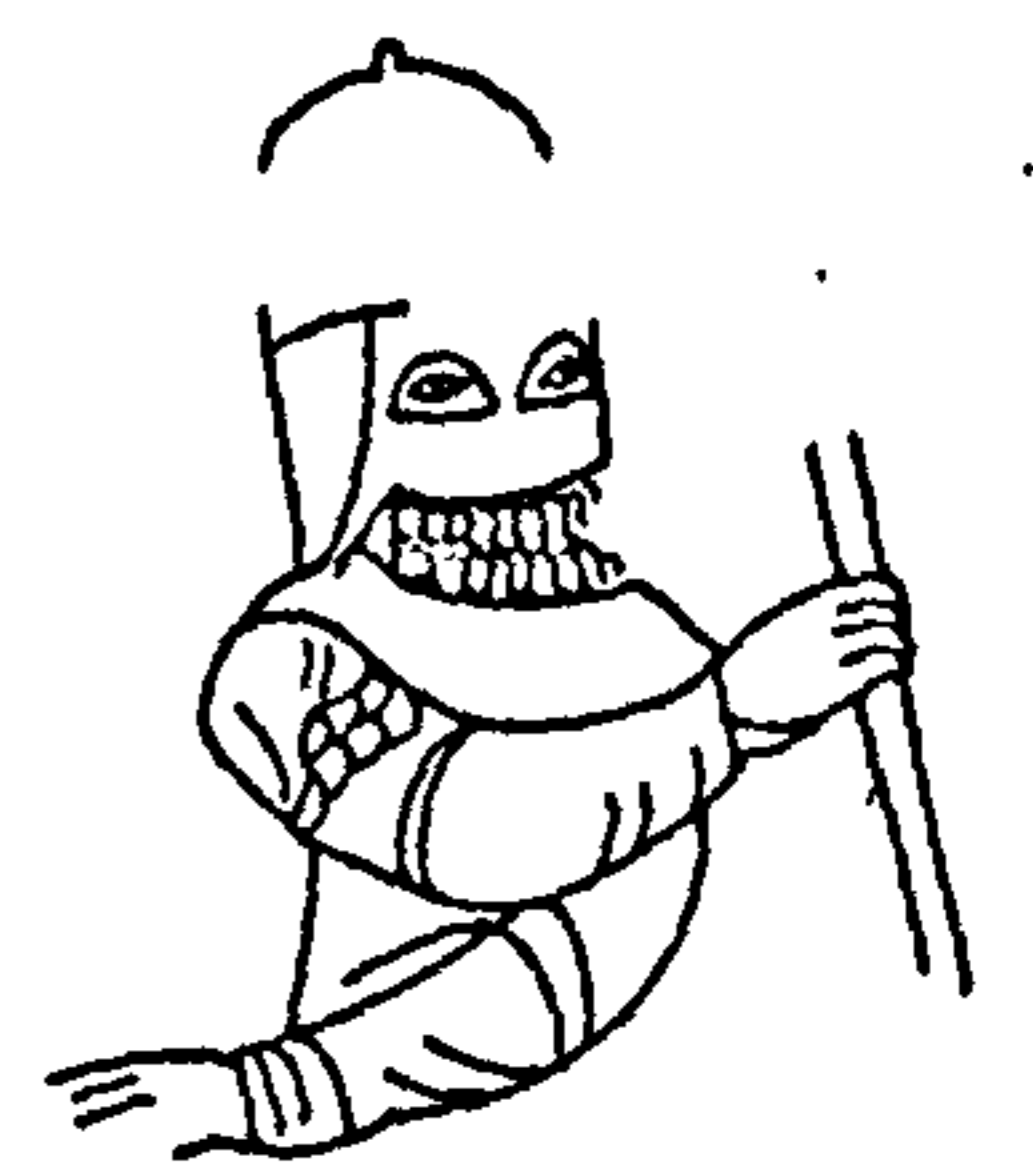
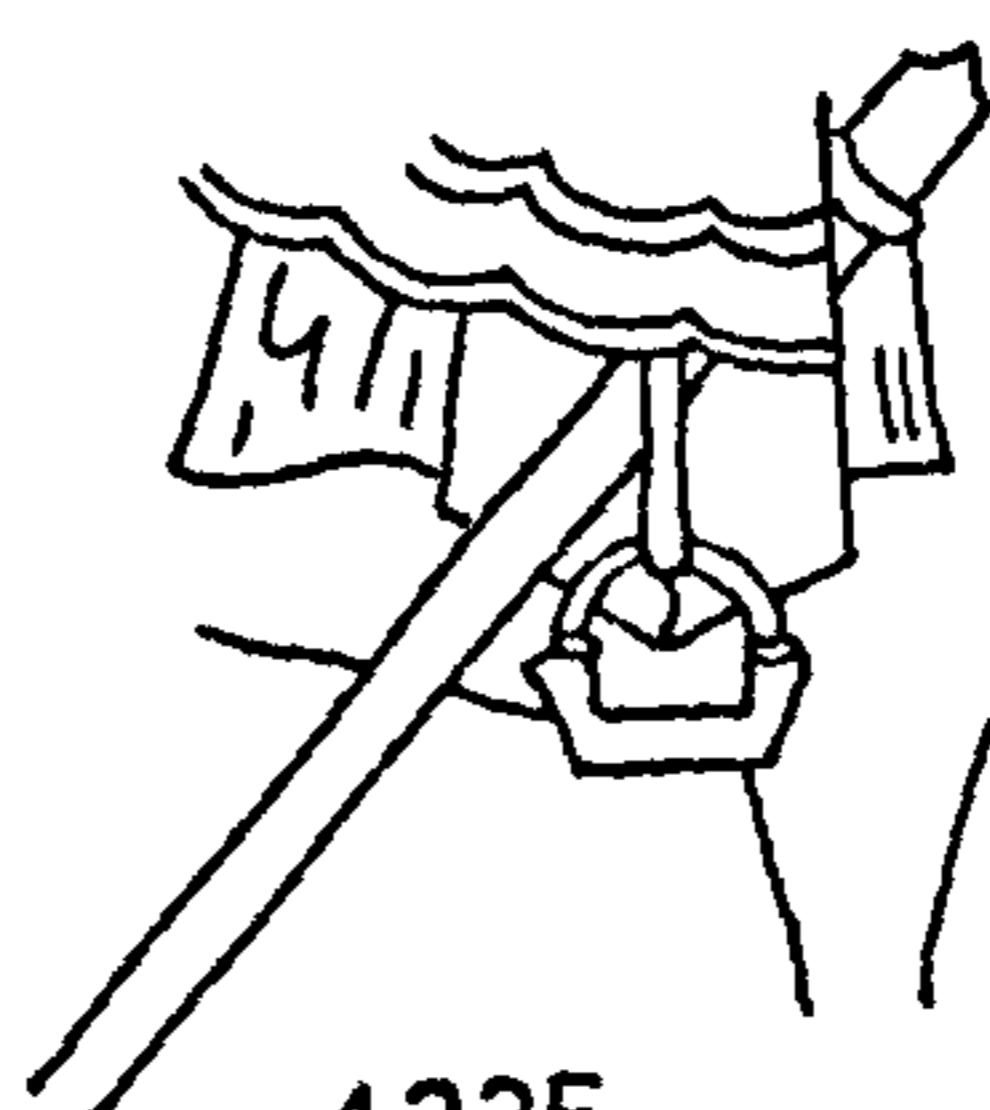
422C



422D



422E

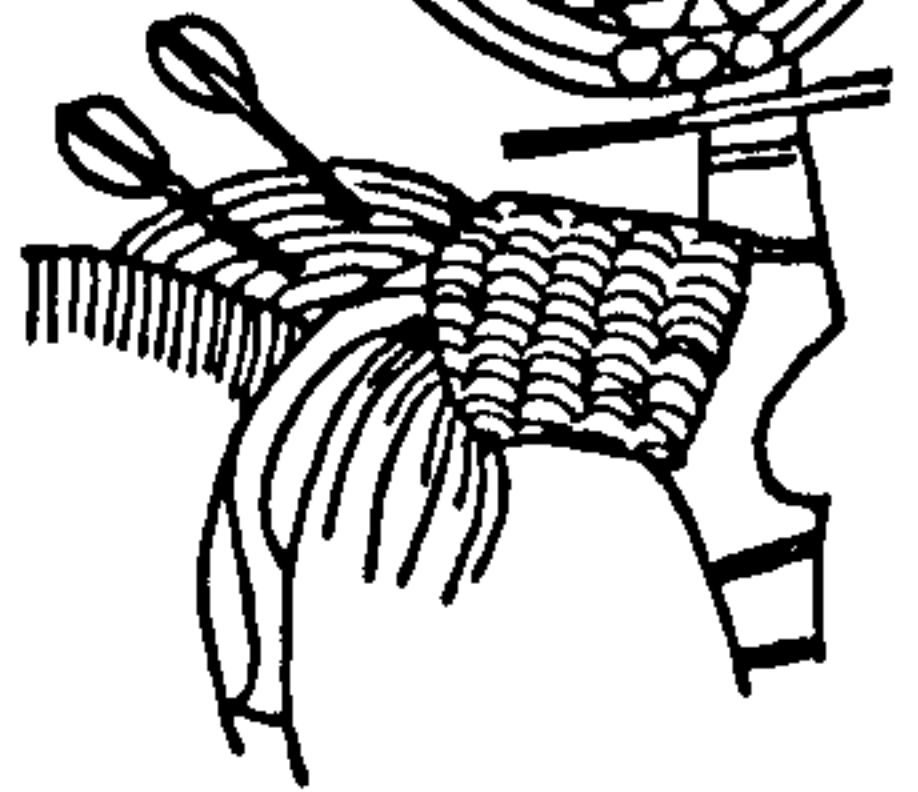
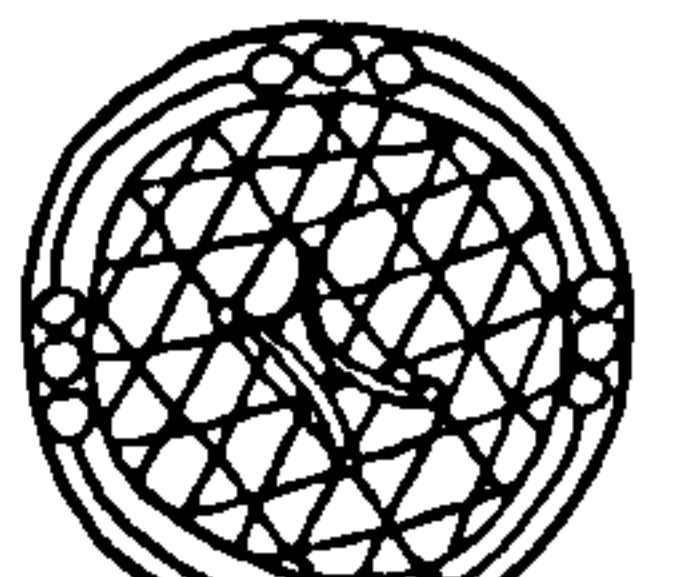
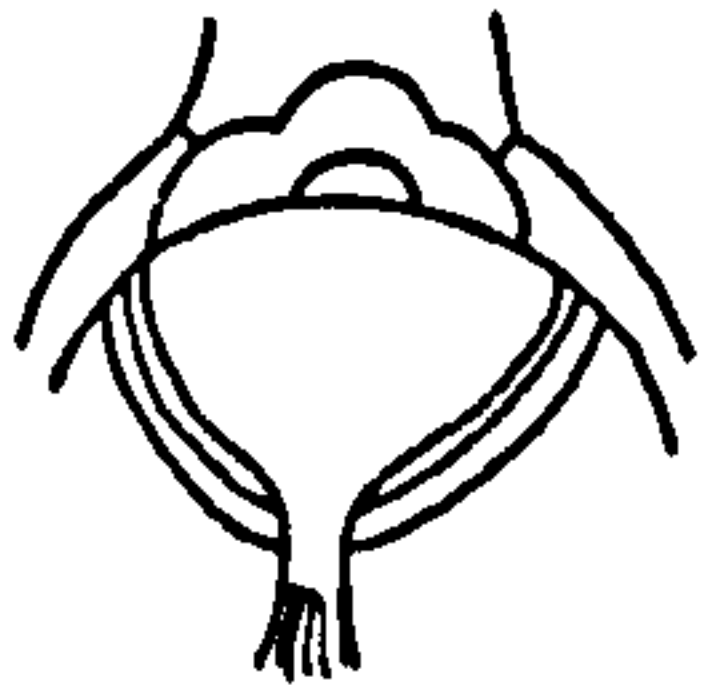


422F

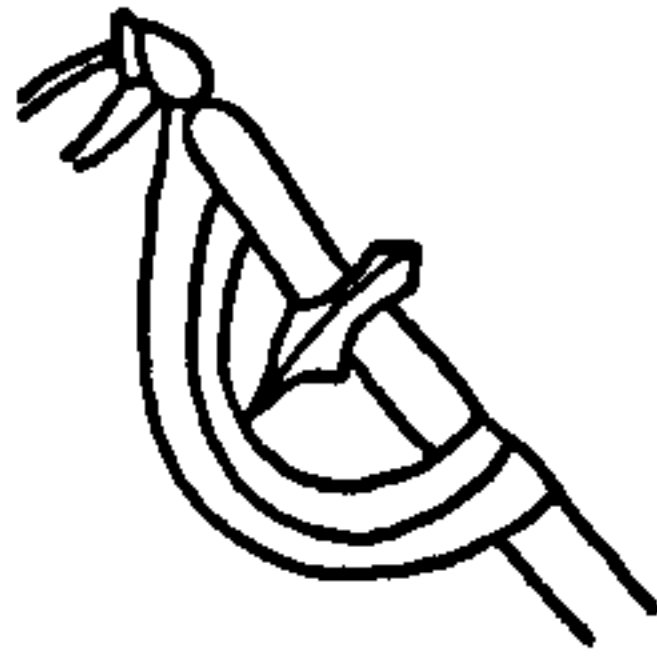
(Continued)



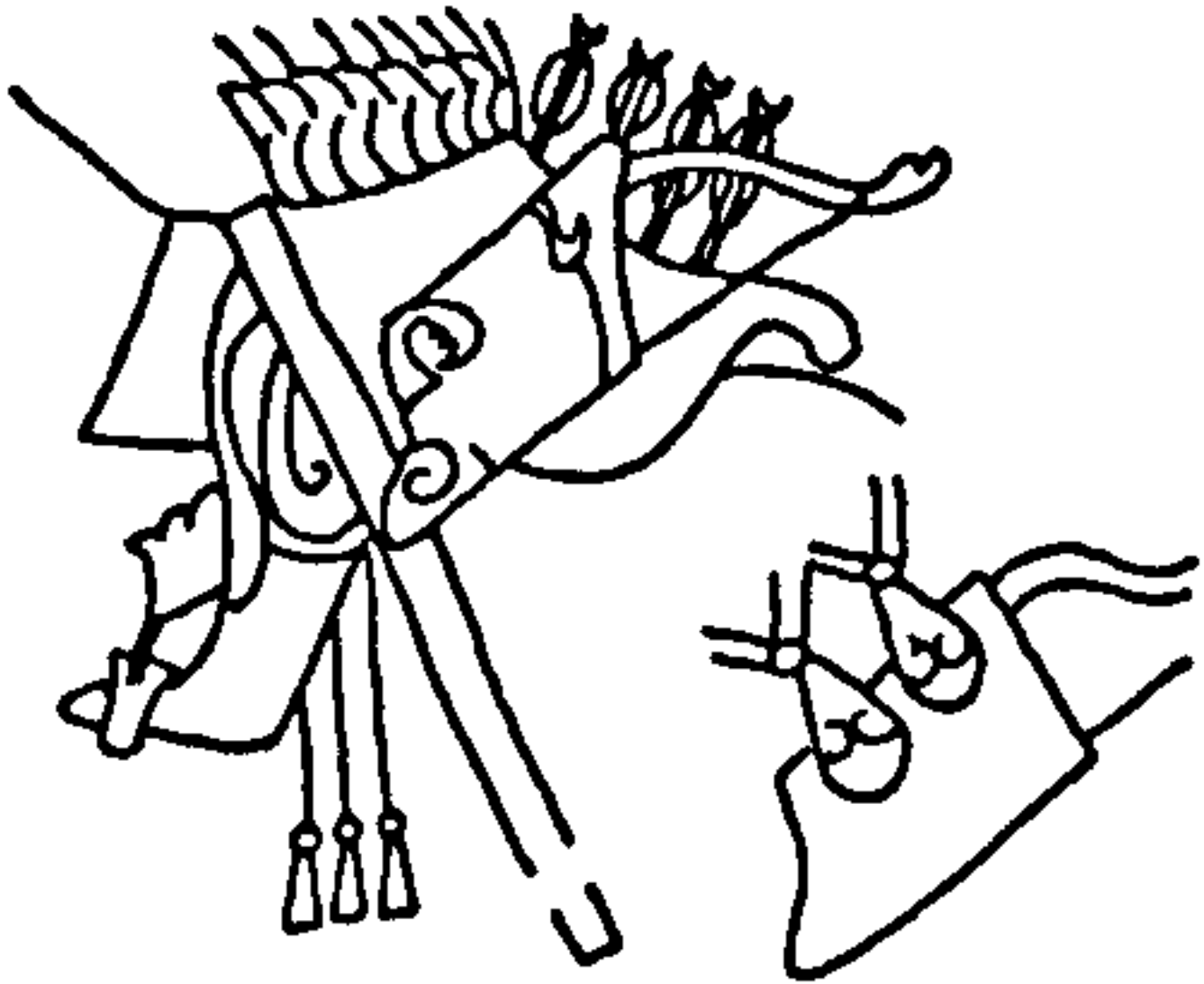
422G



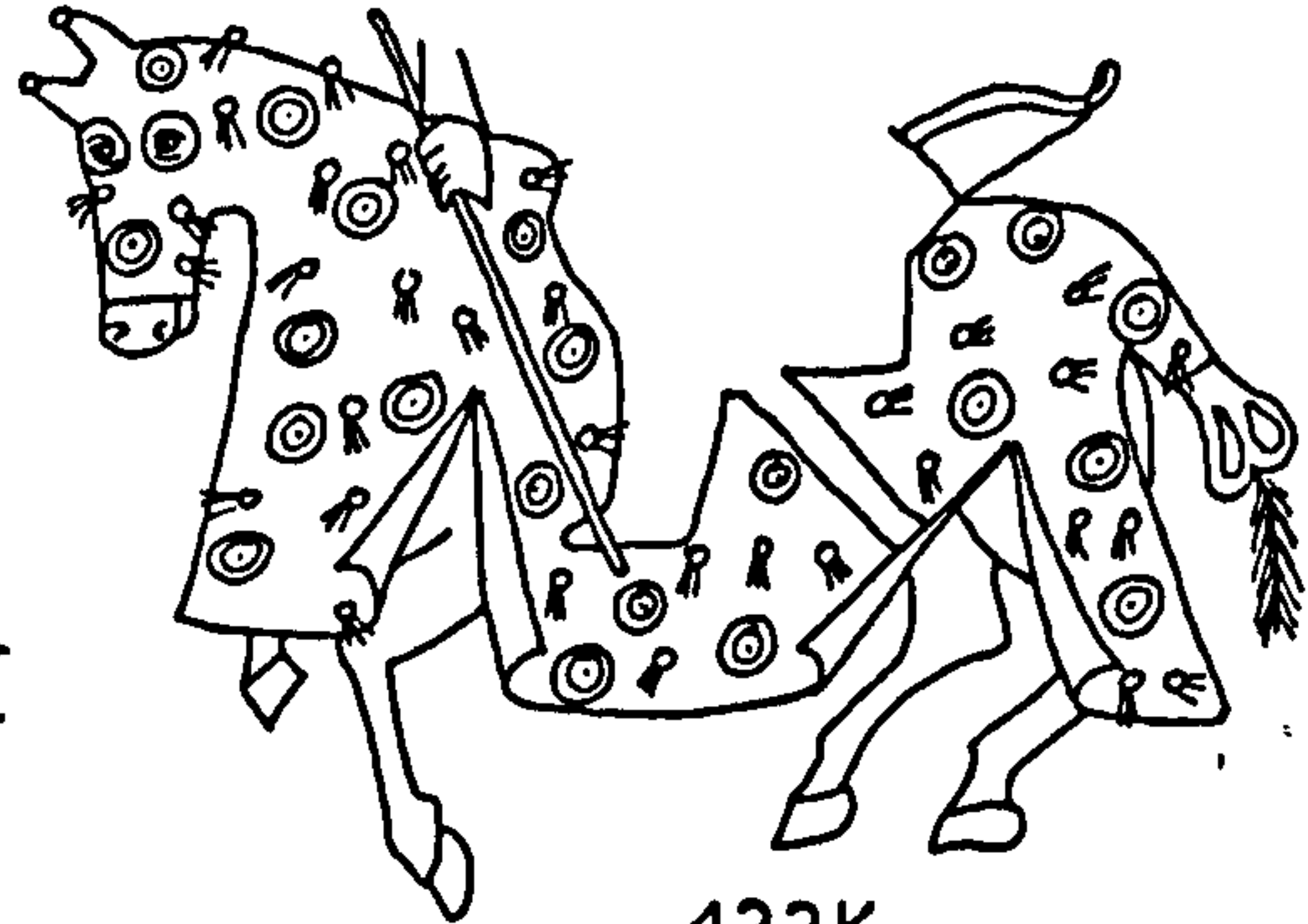
422H



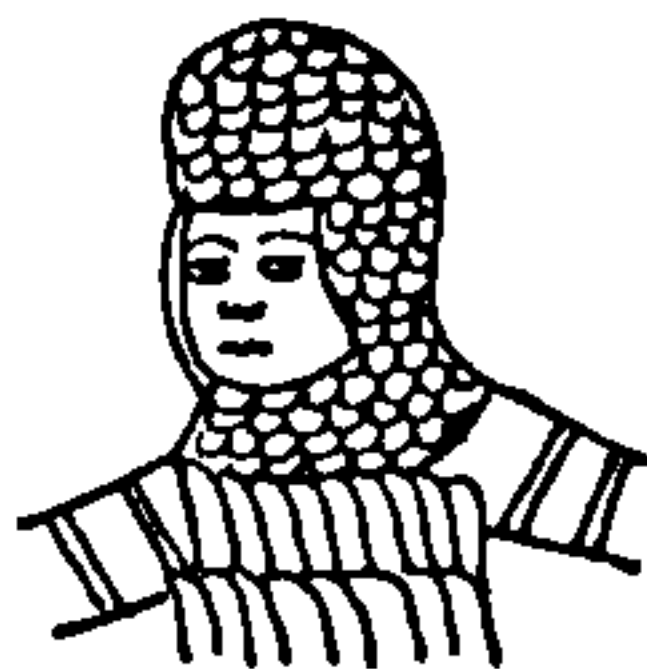
422J



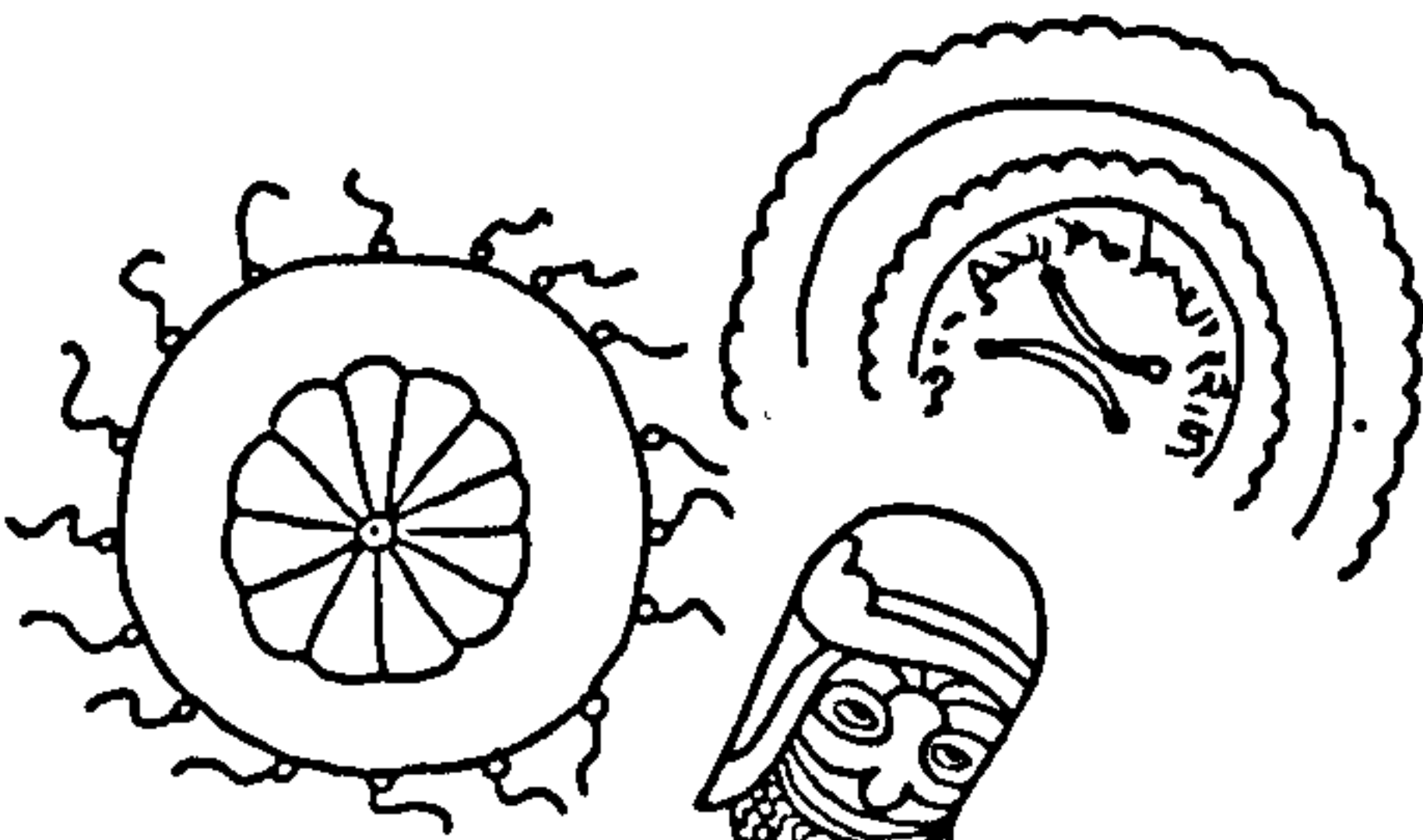
422I



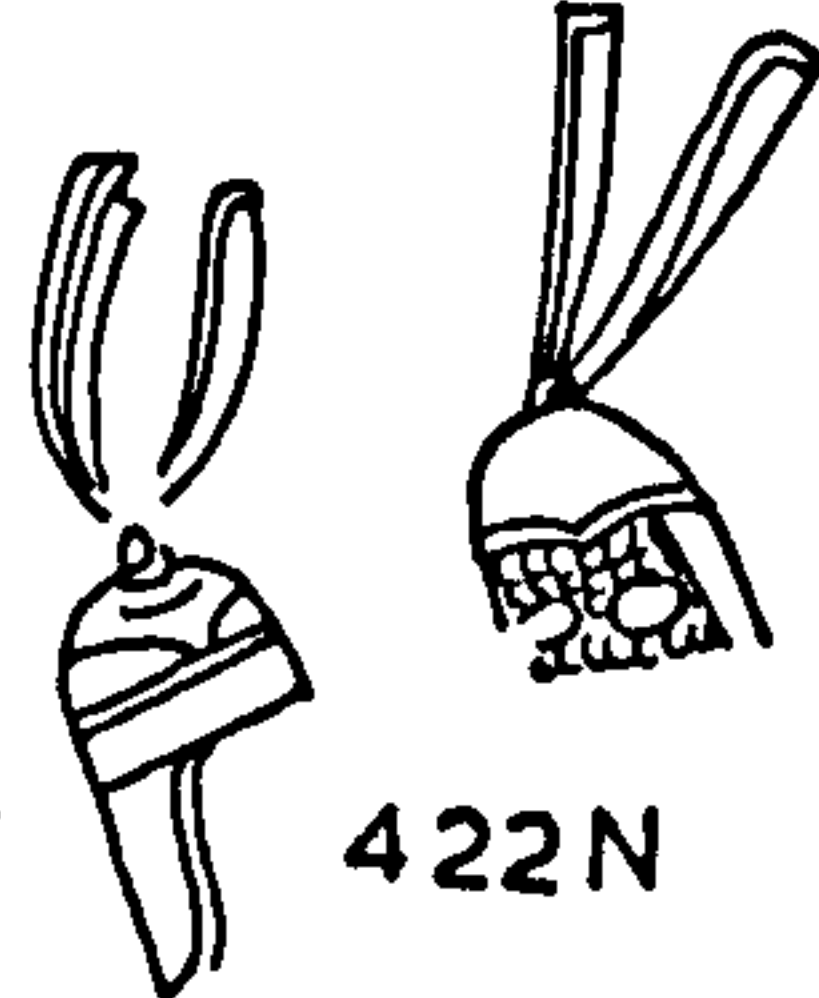
422K



422L



422M



422N



422O



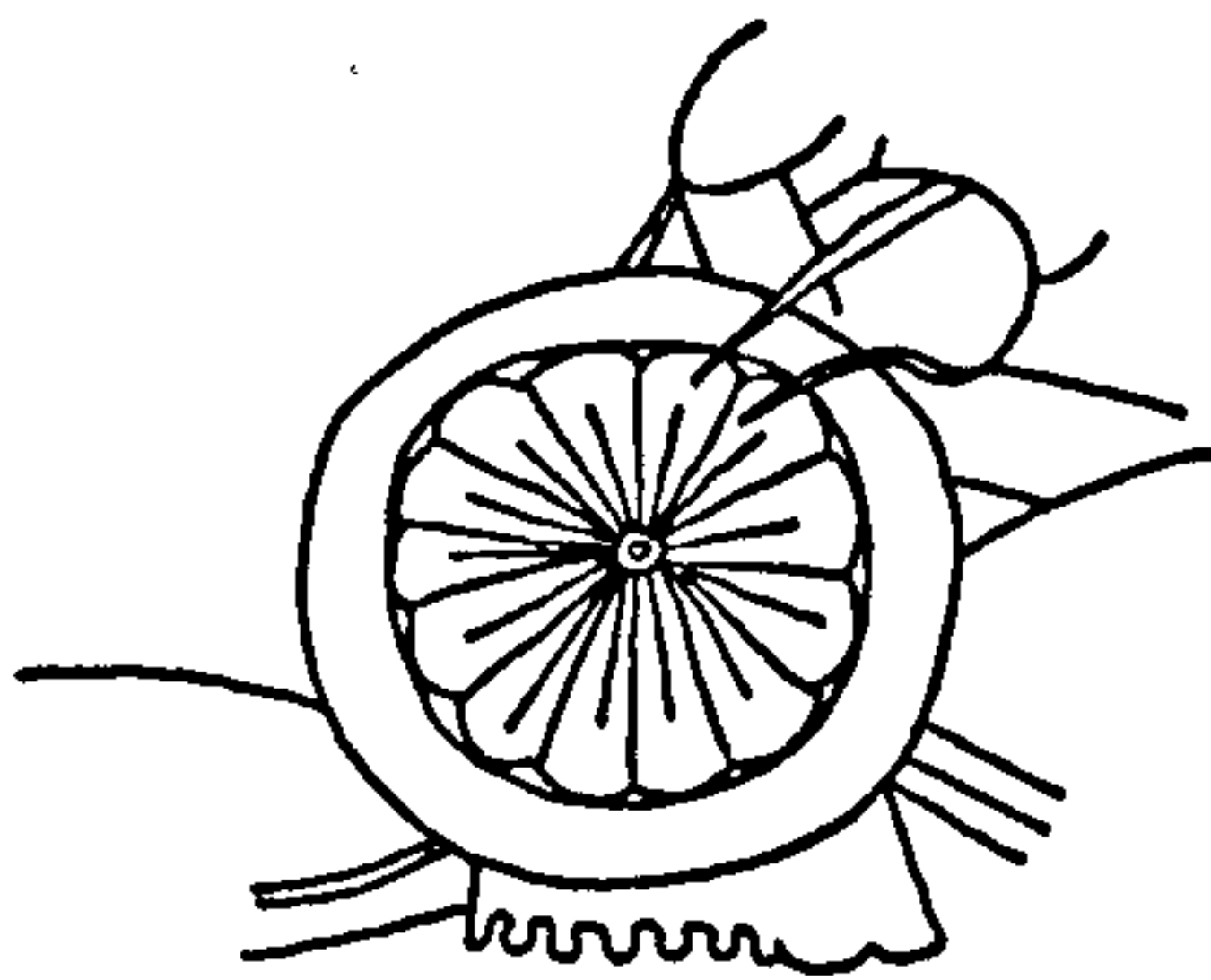
422P



422S



422Q



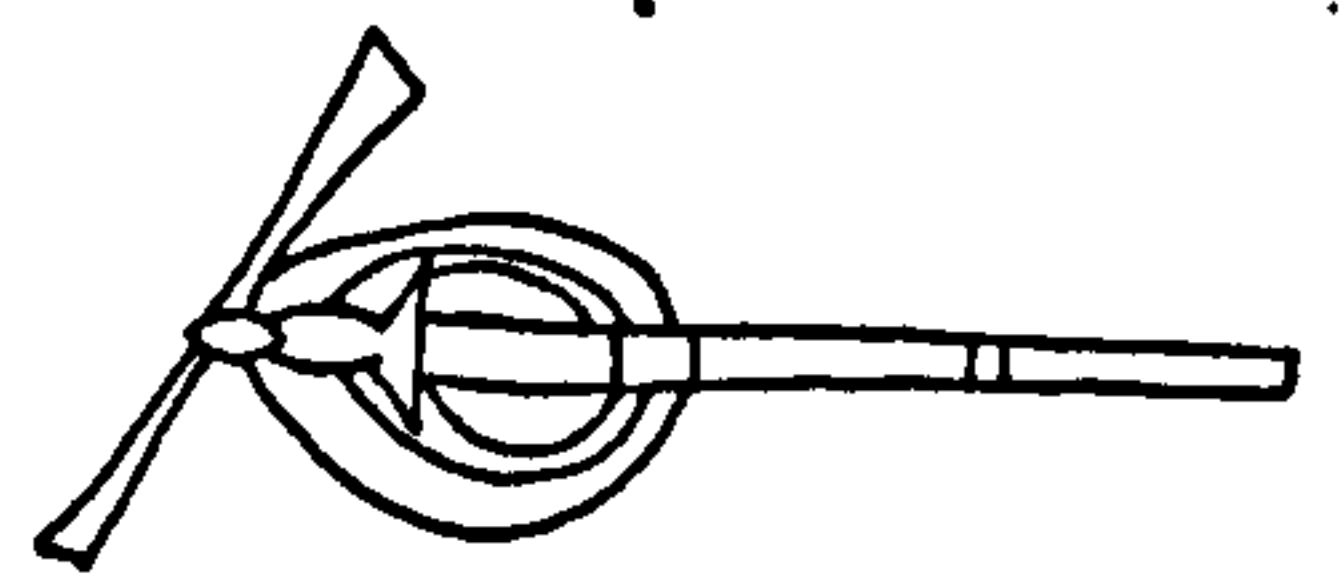
422R



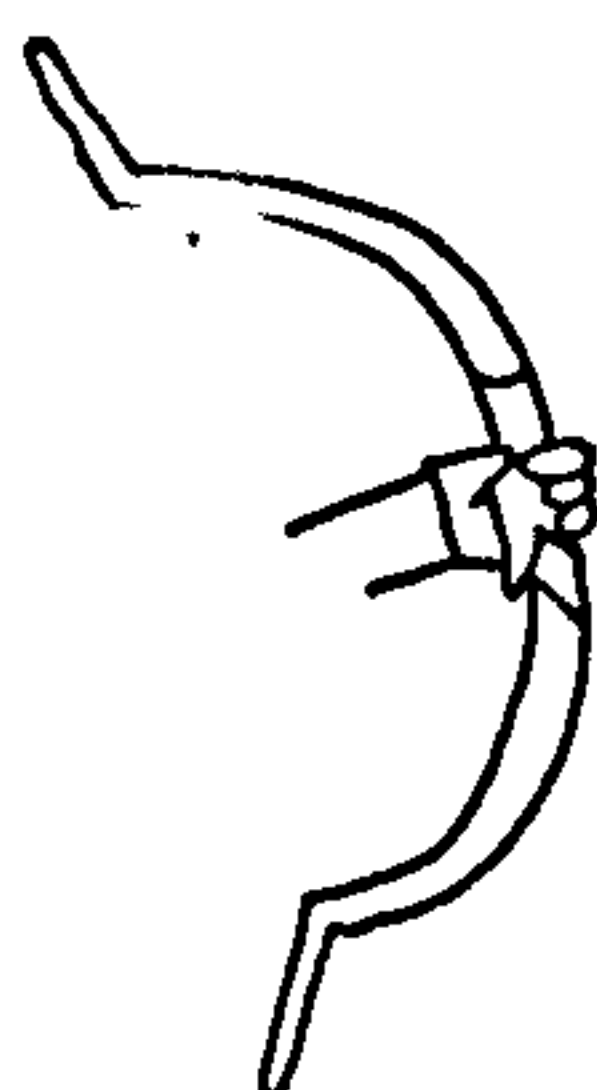
422T



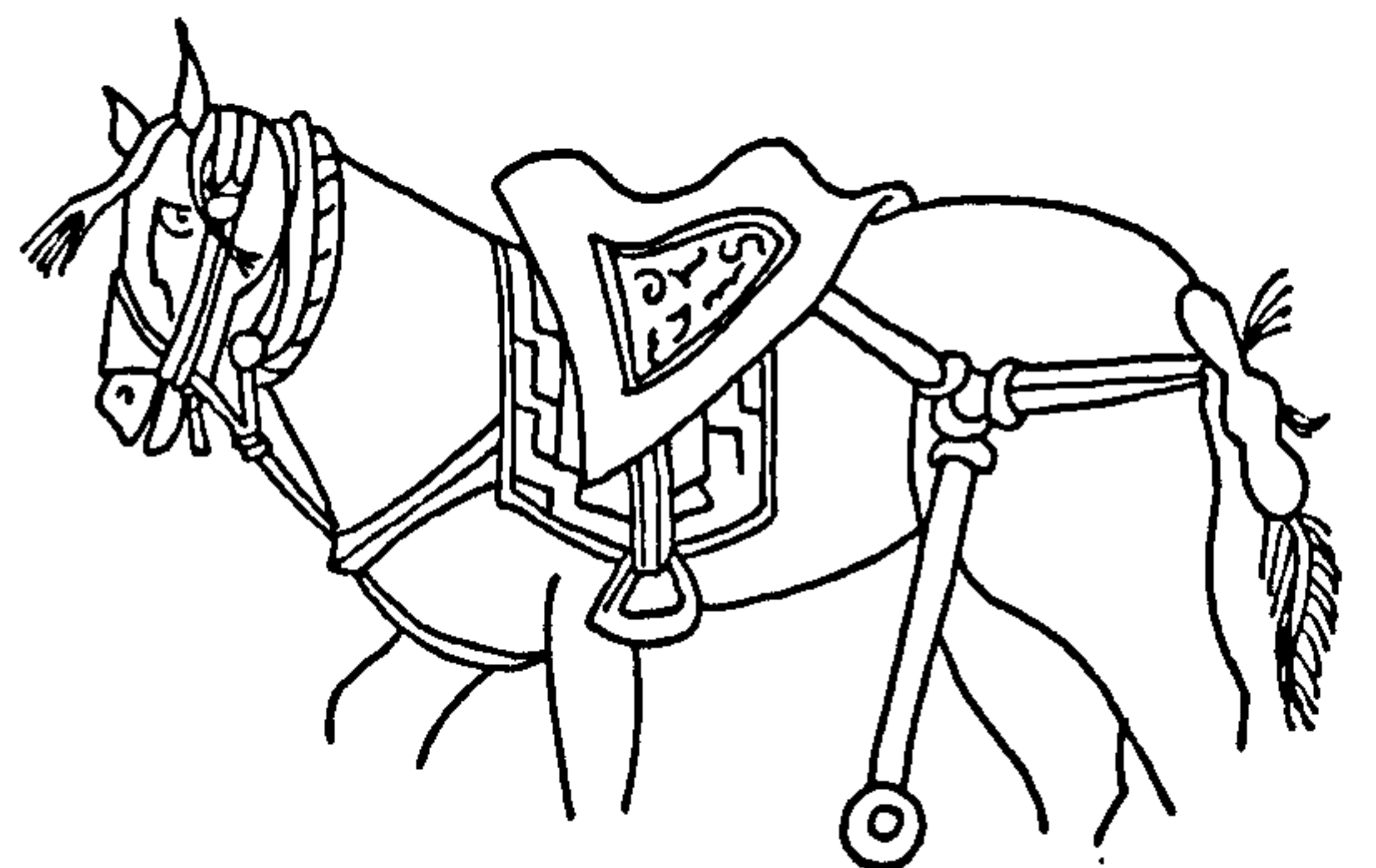
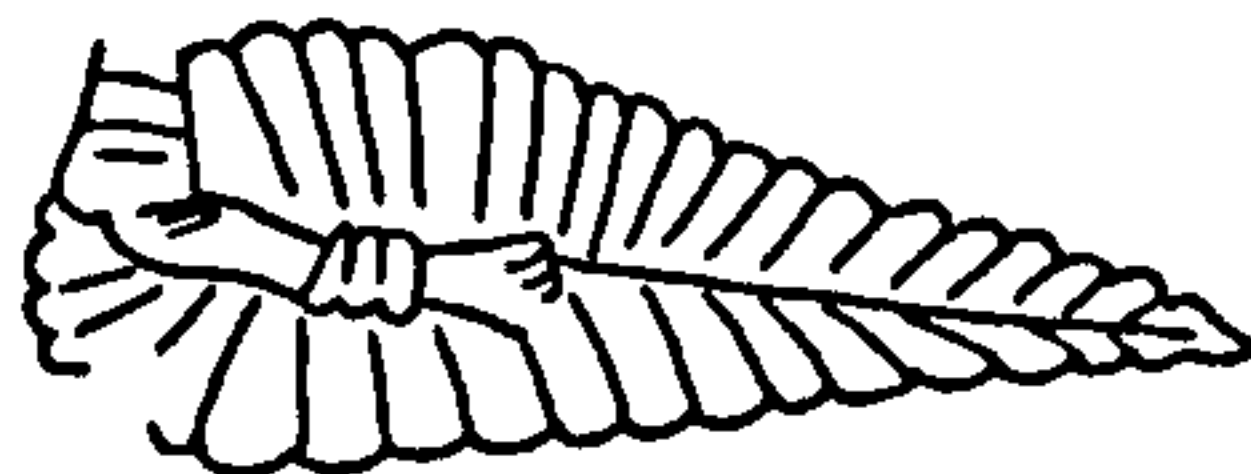
422X



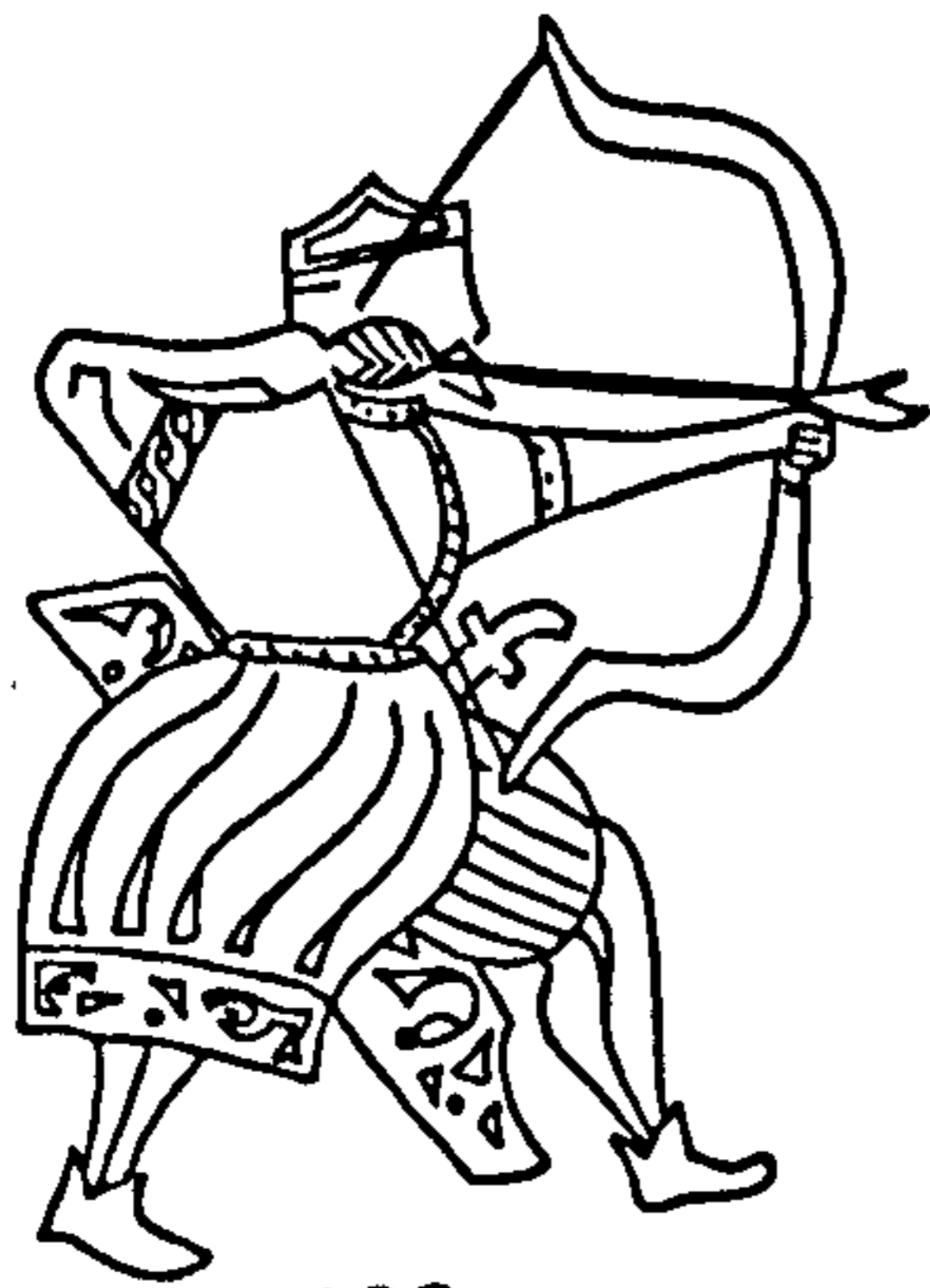
422U



422V



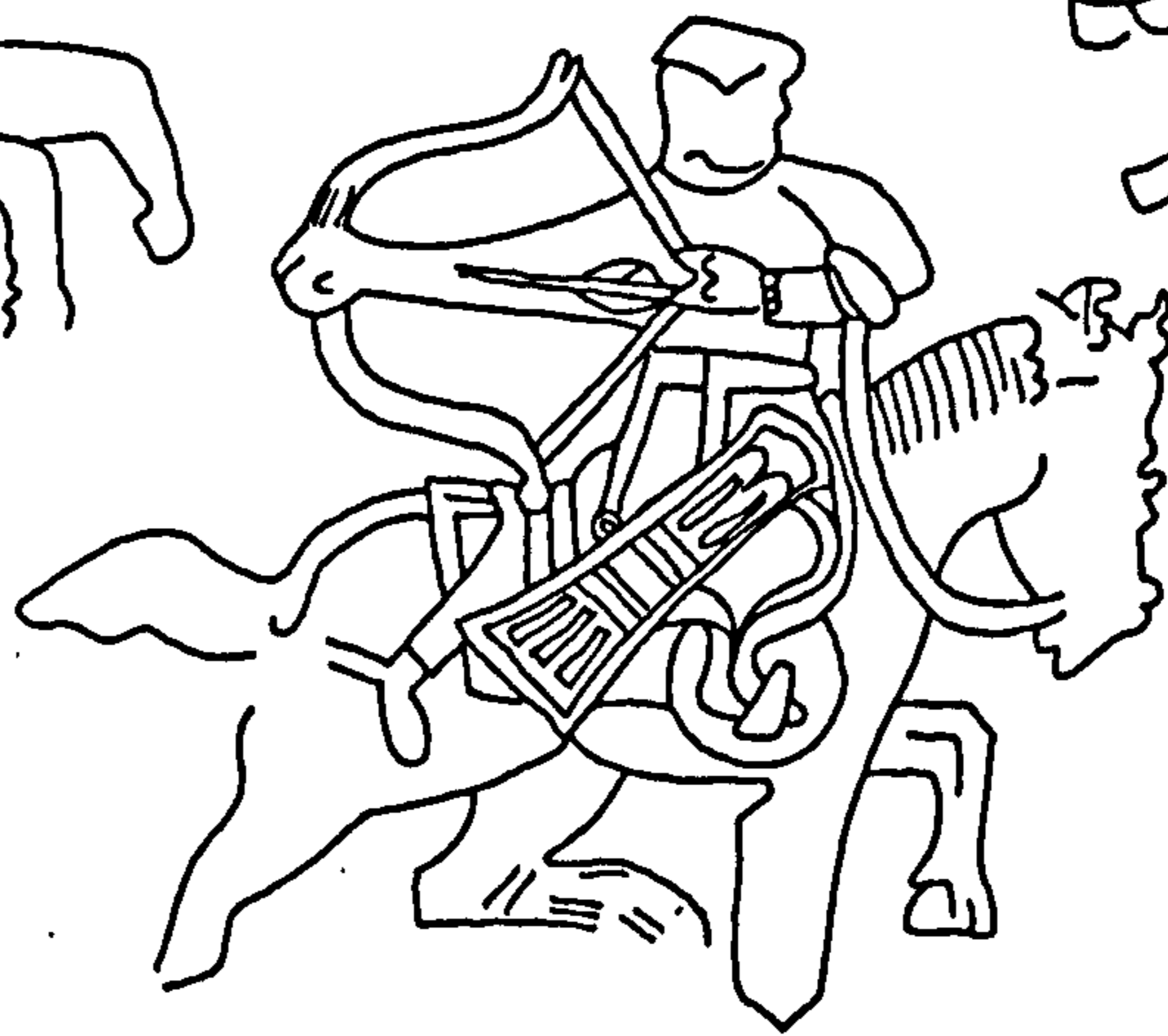
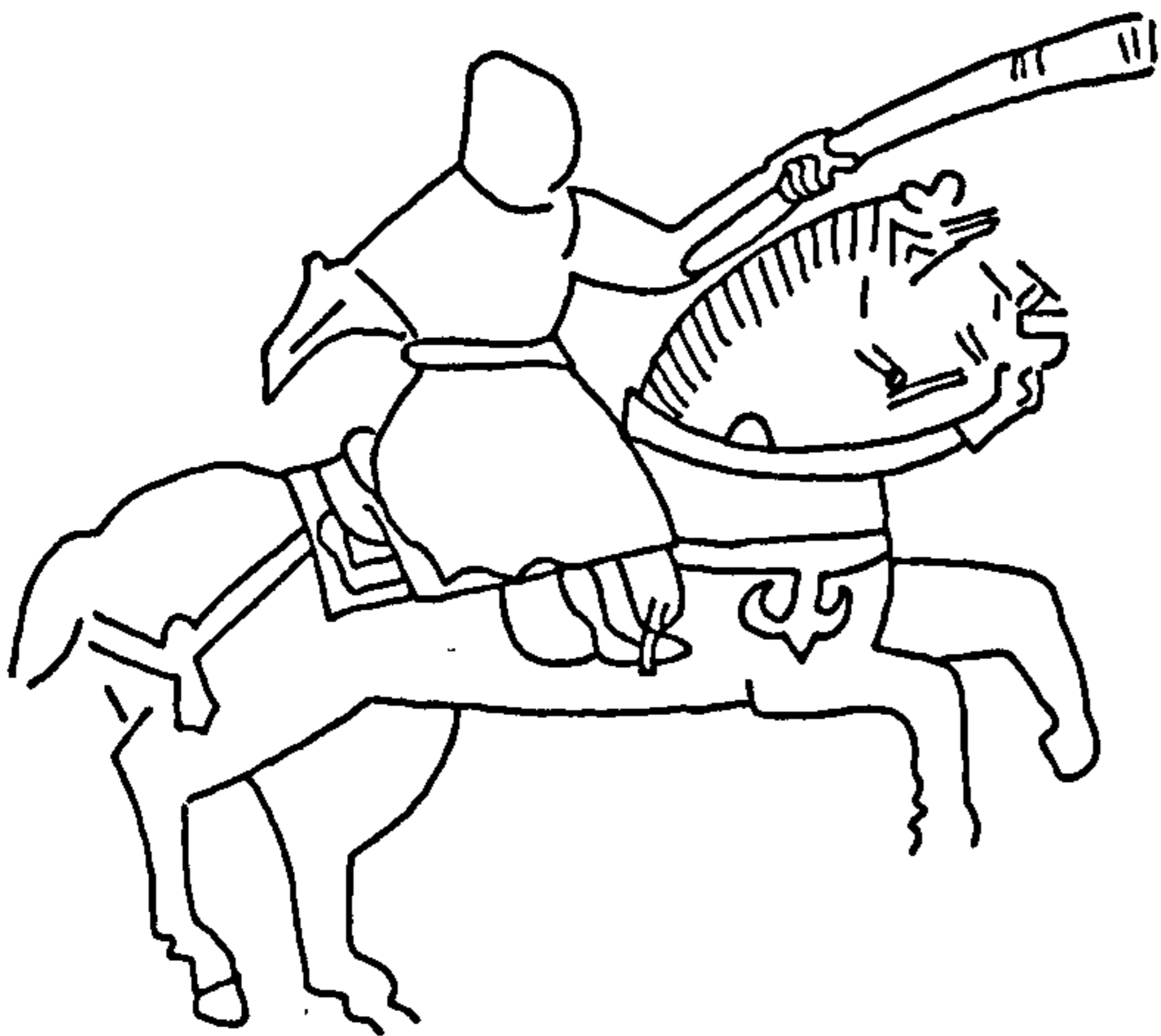
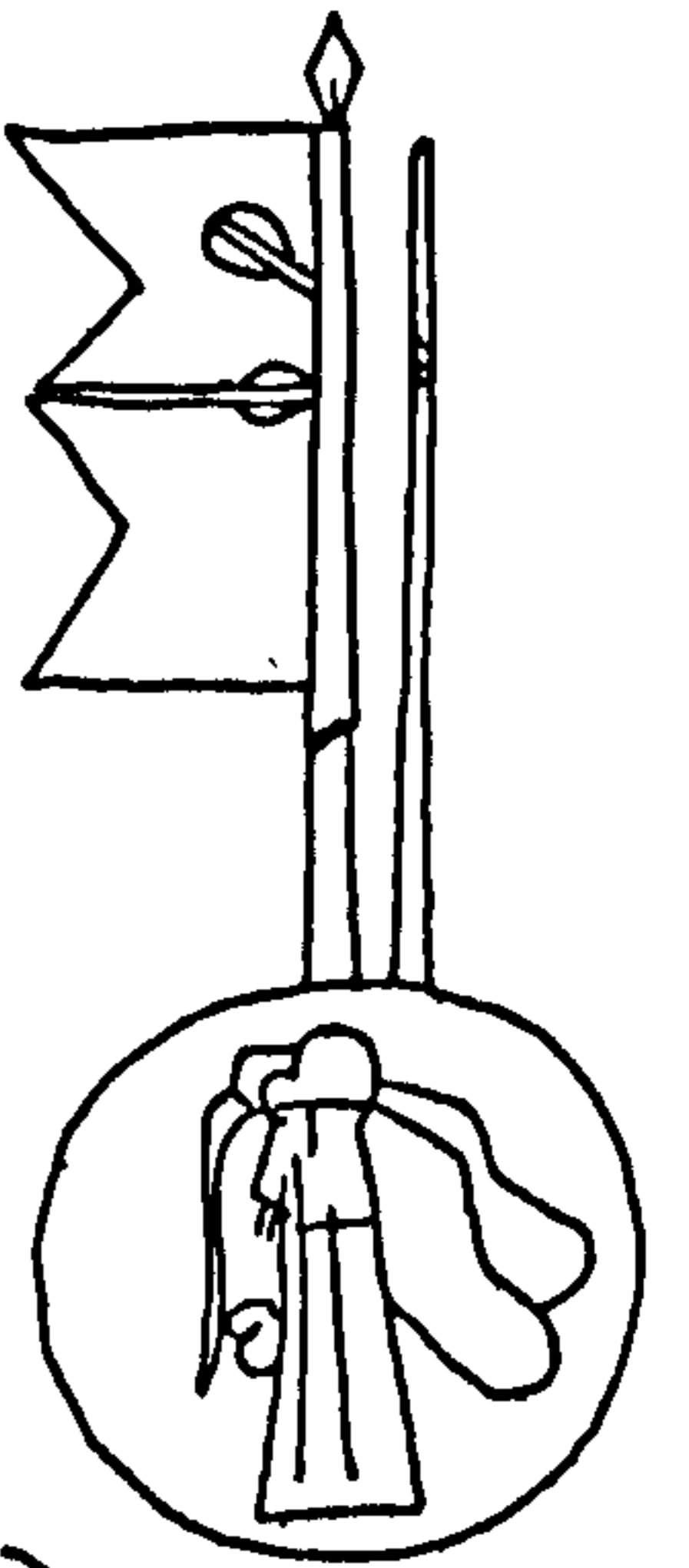
422W



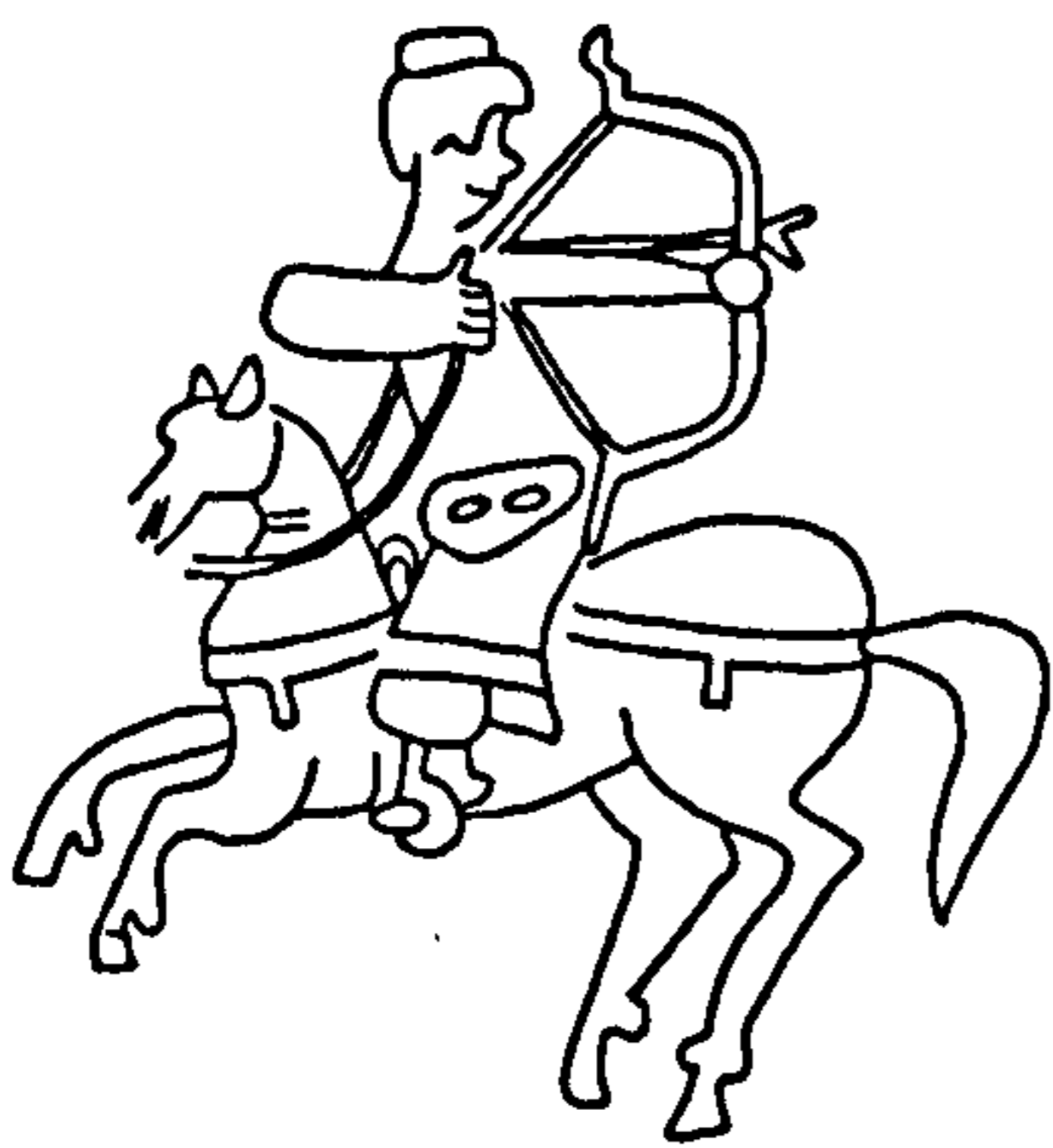
423



424



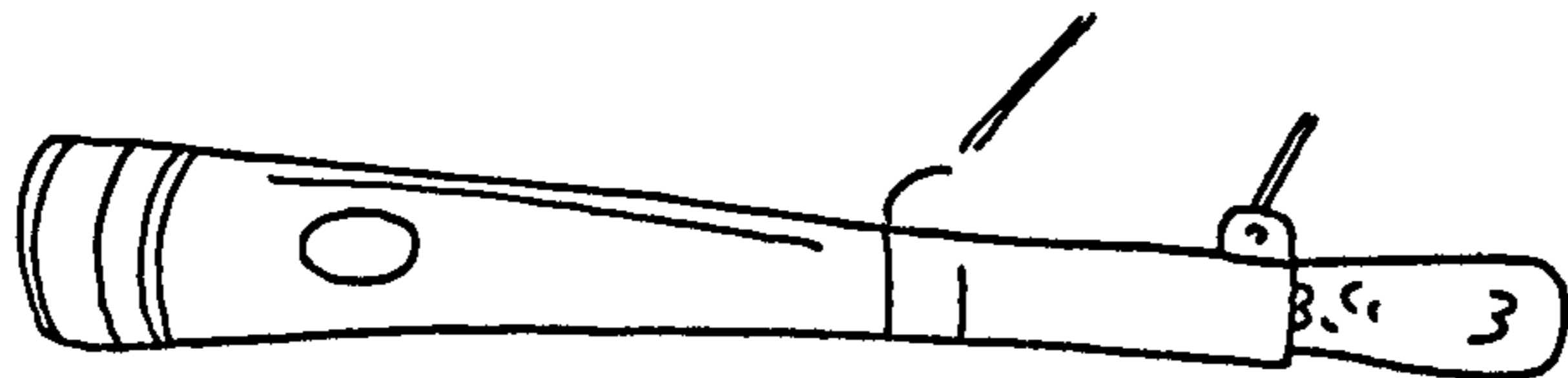
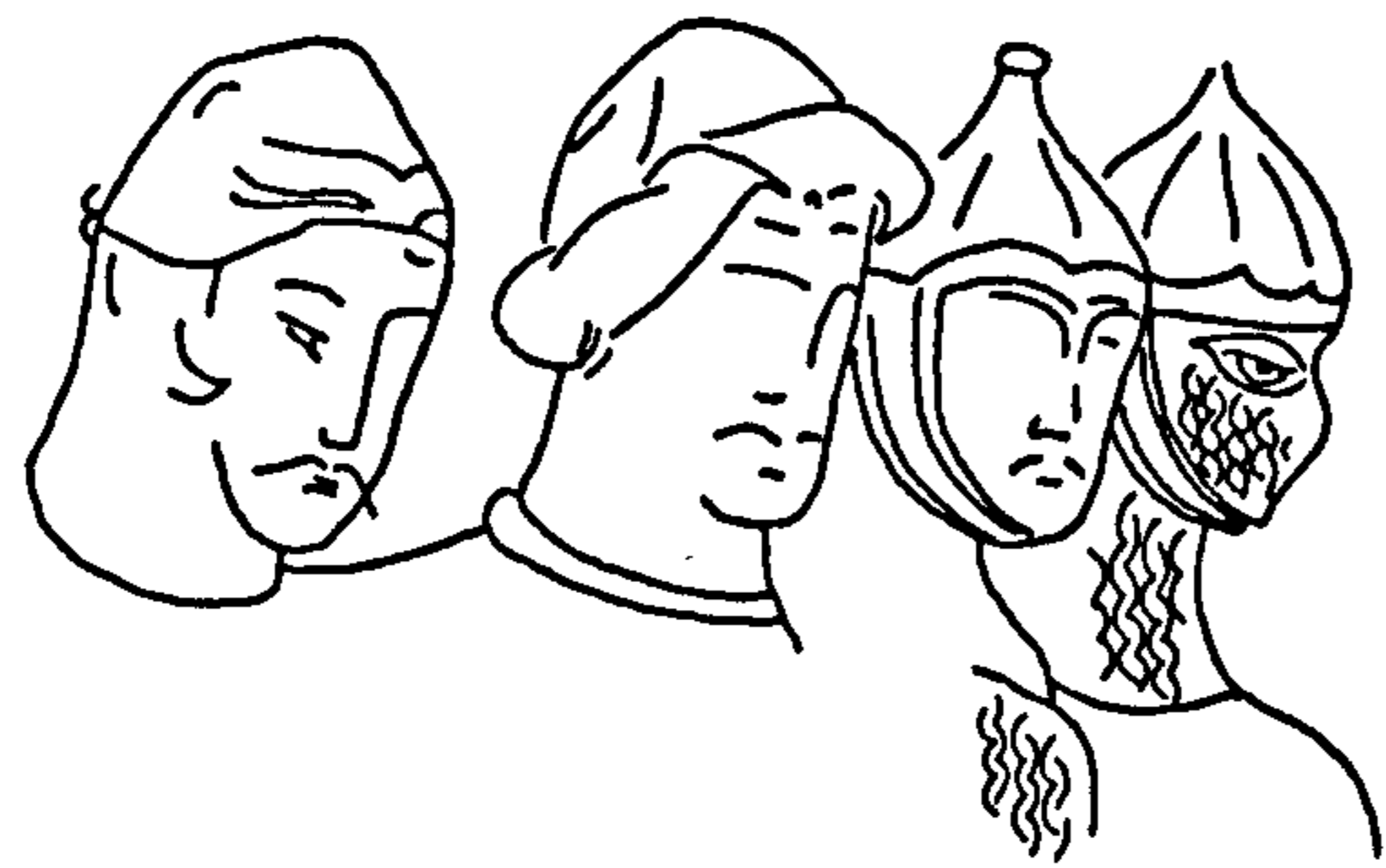
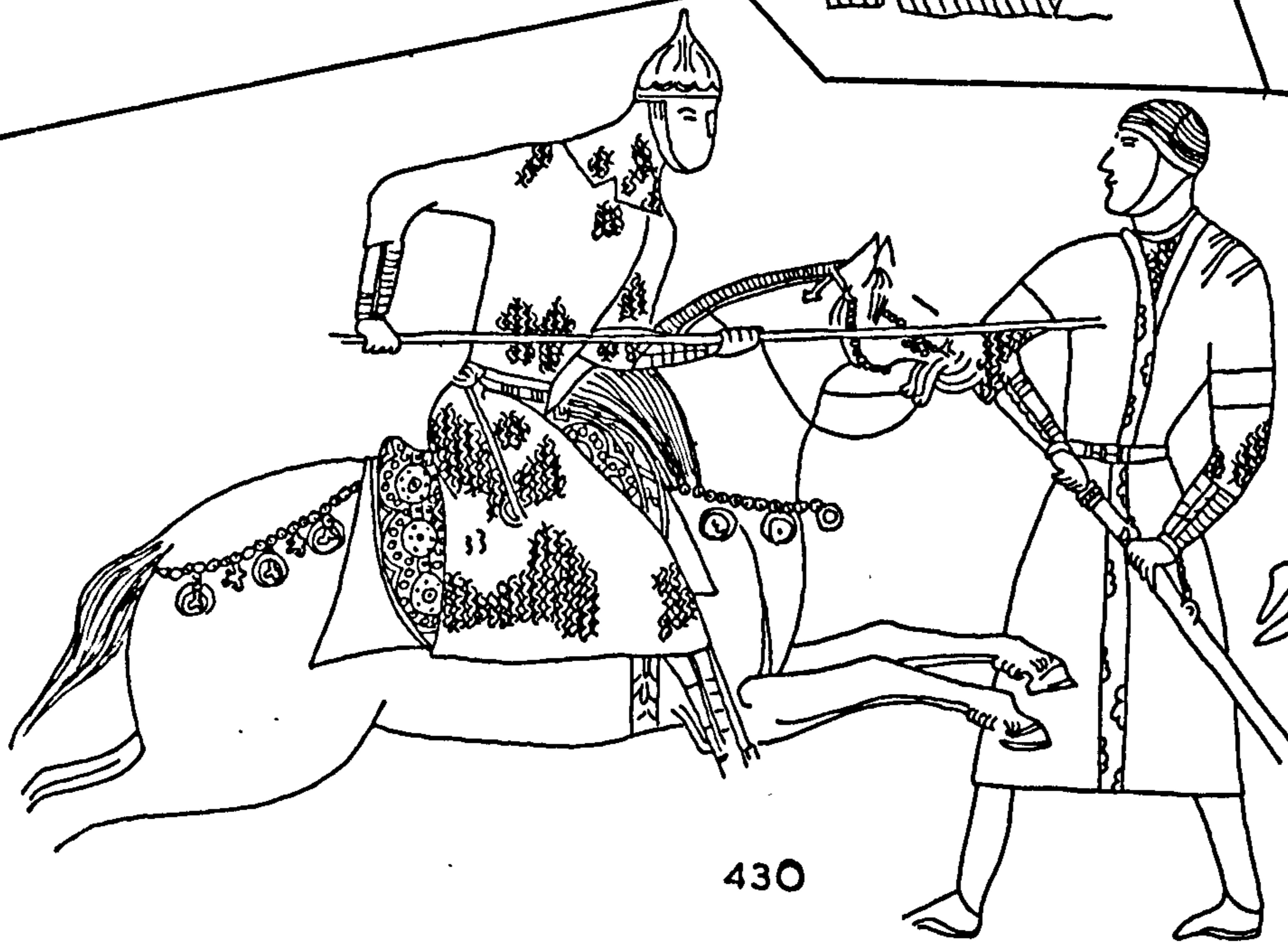
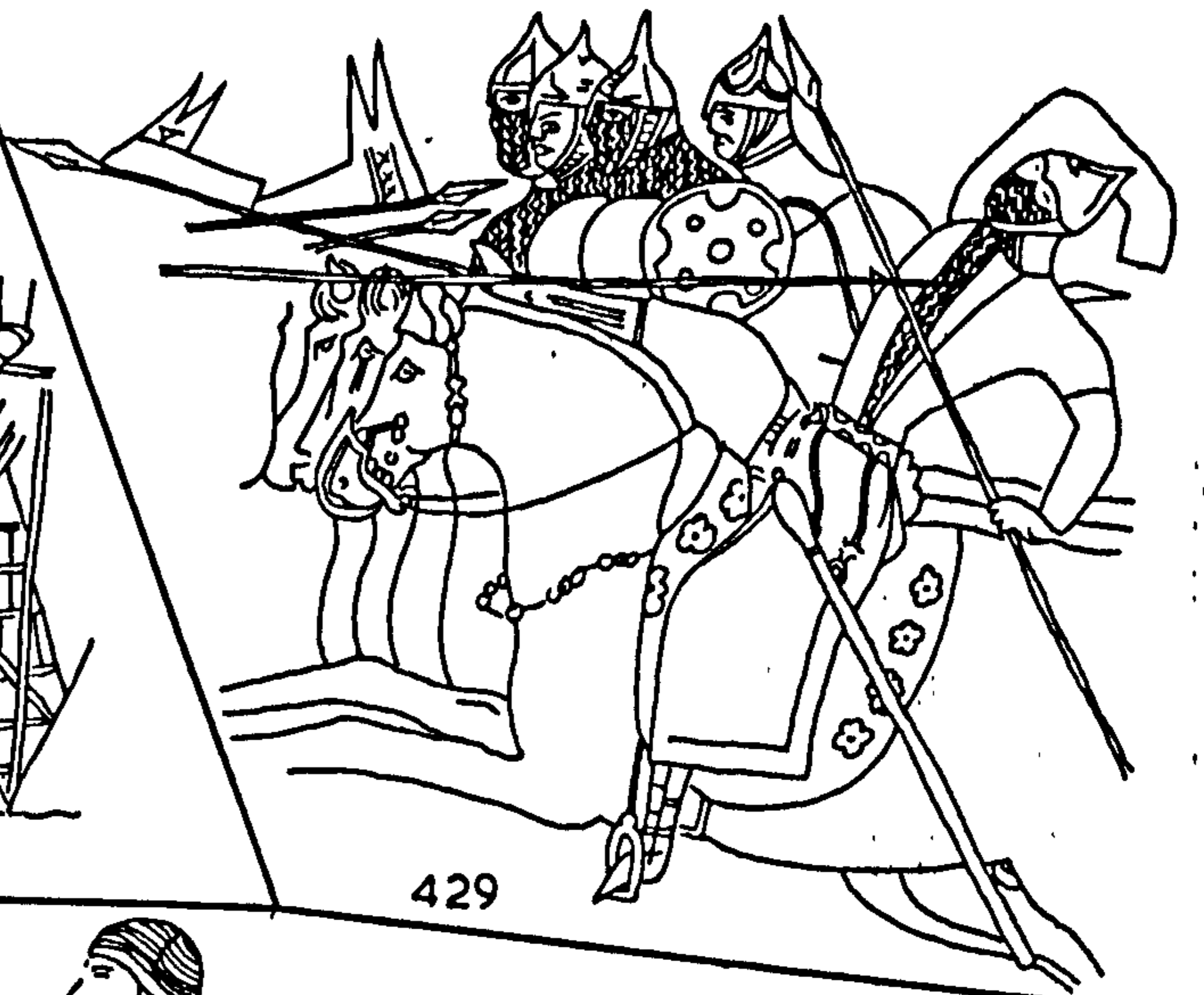
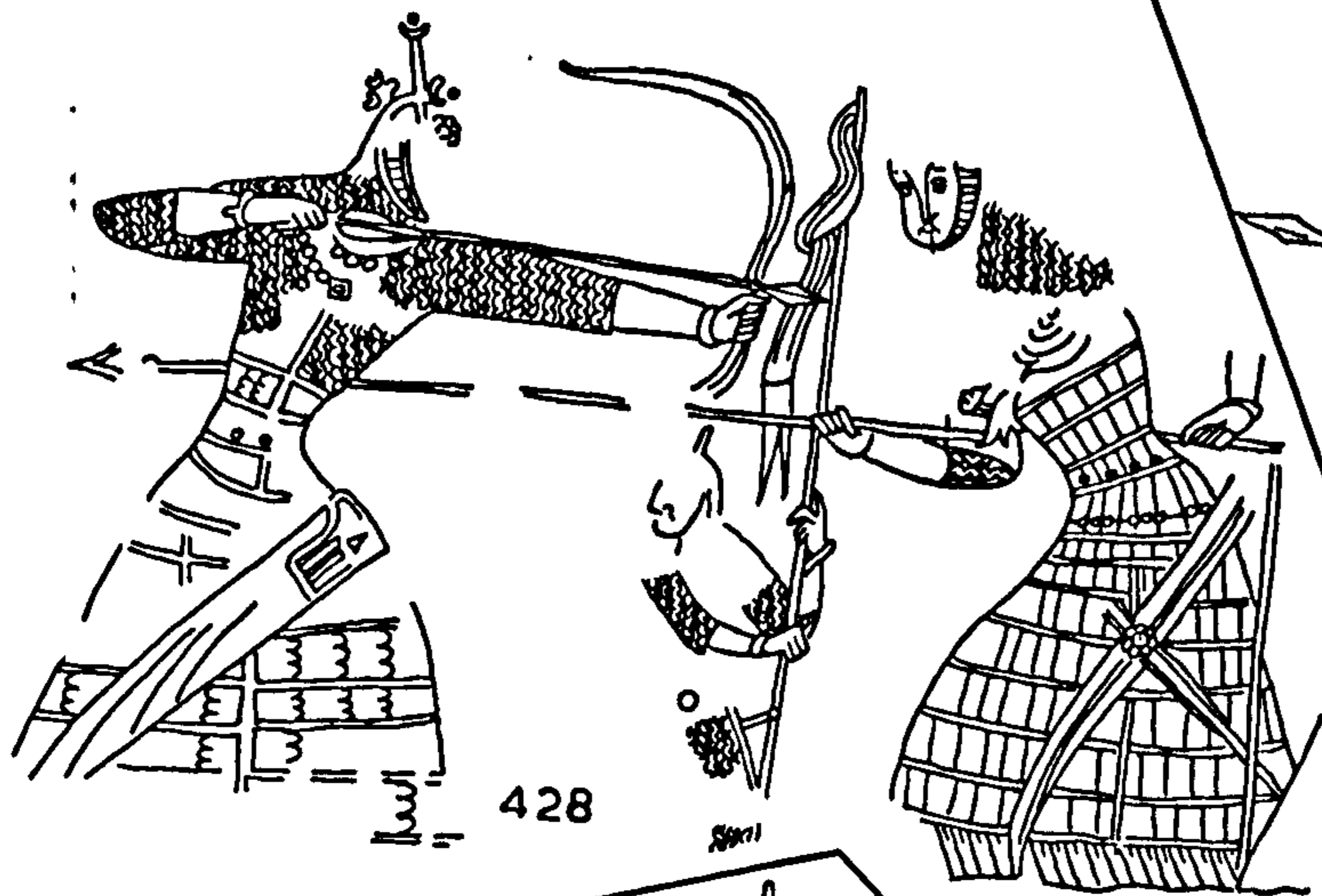
425

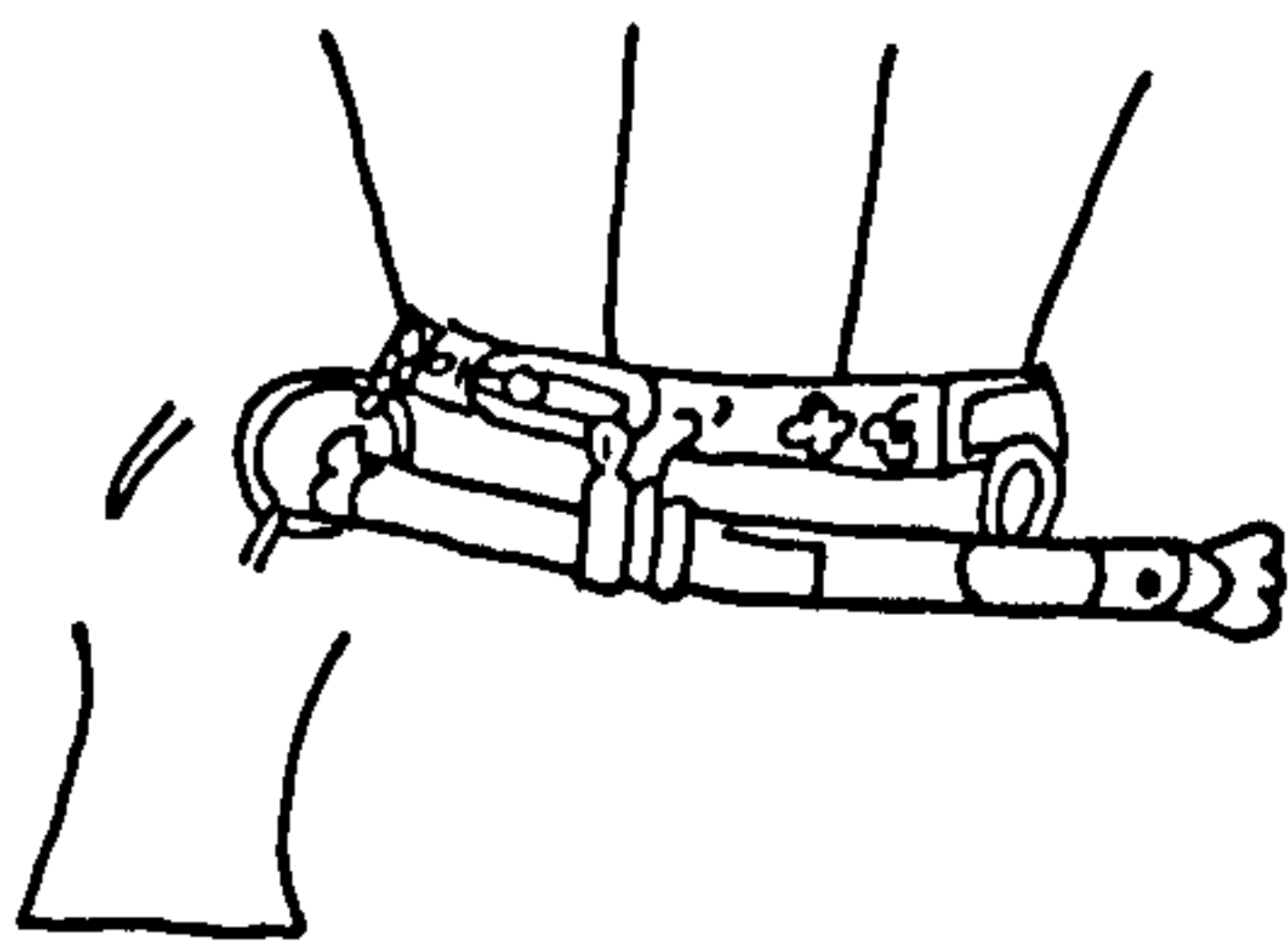
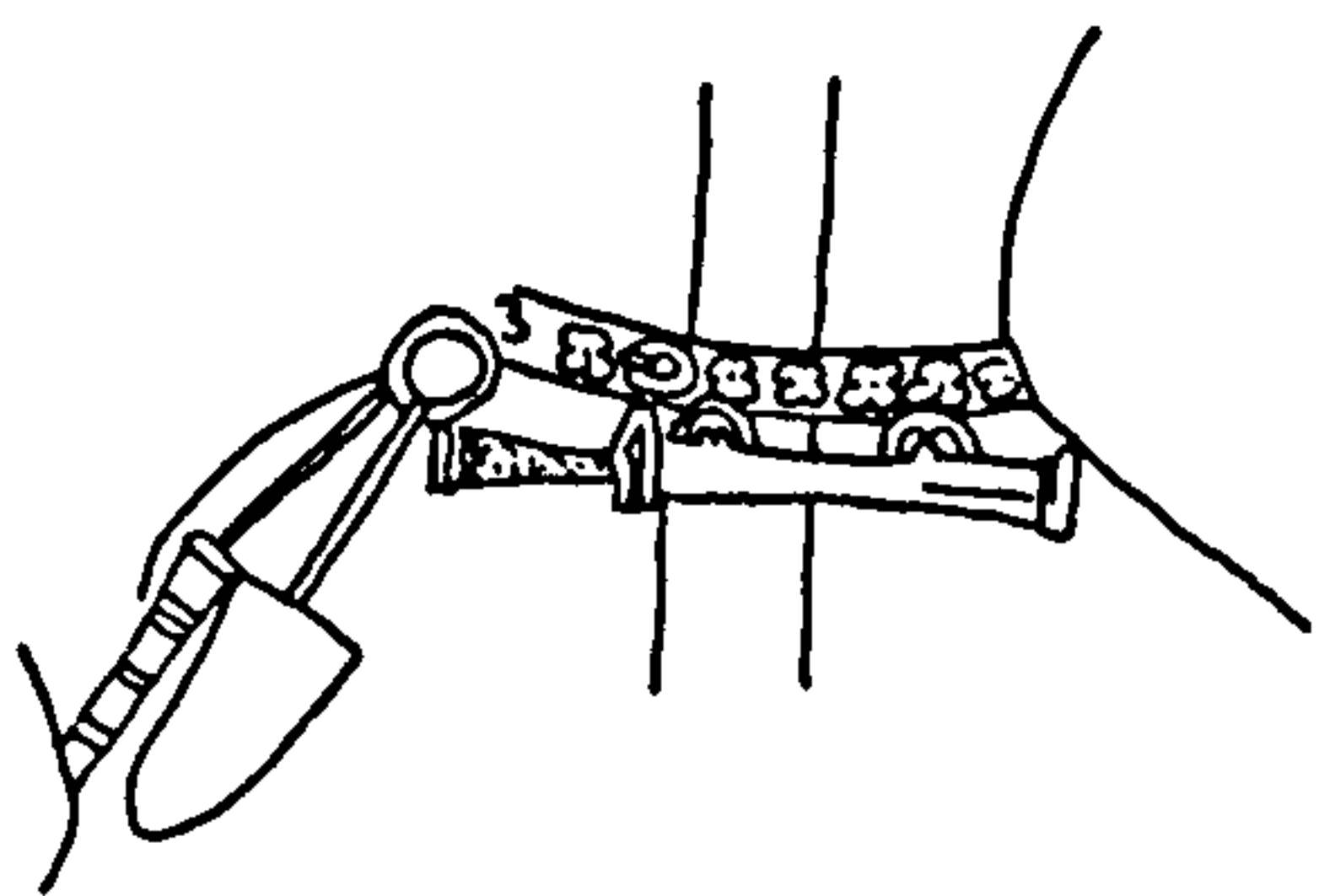


426

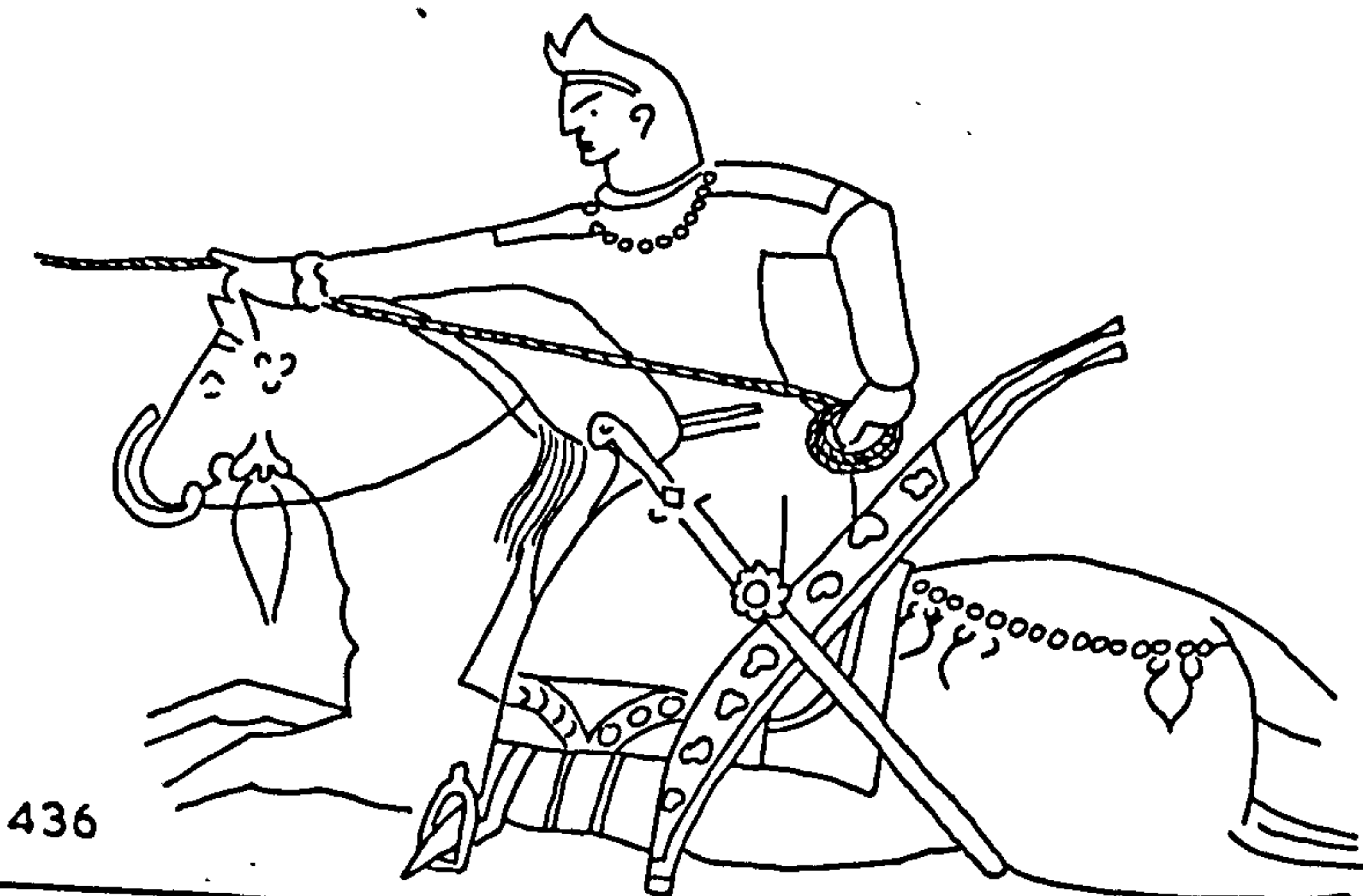
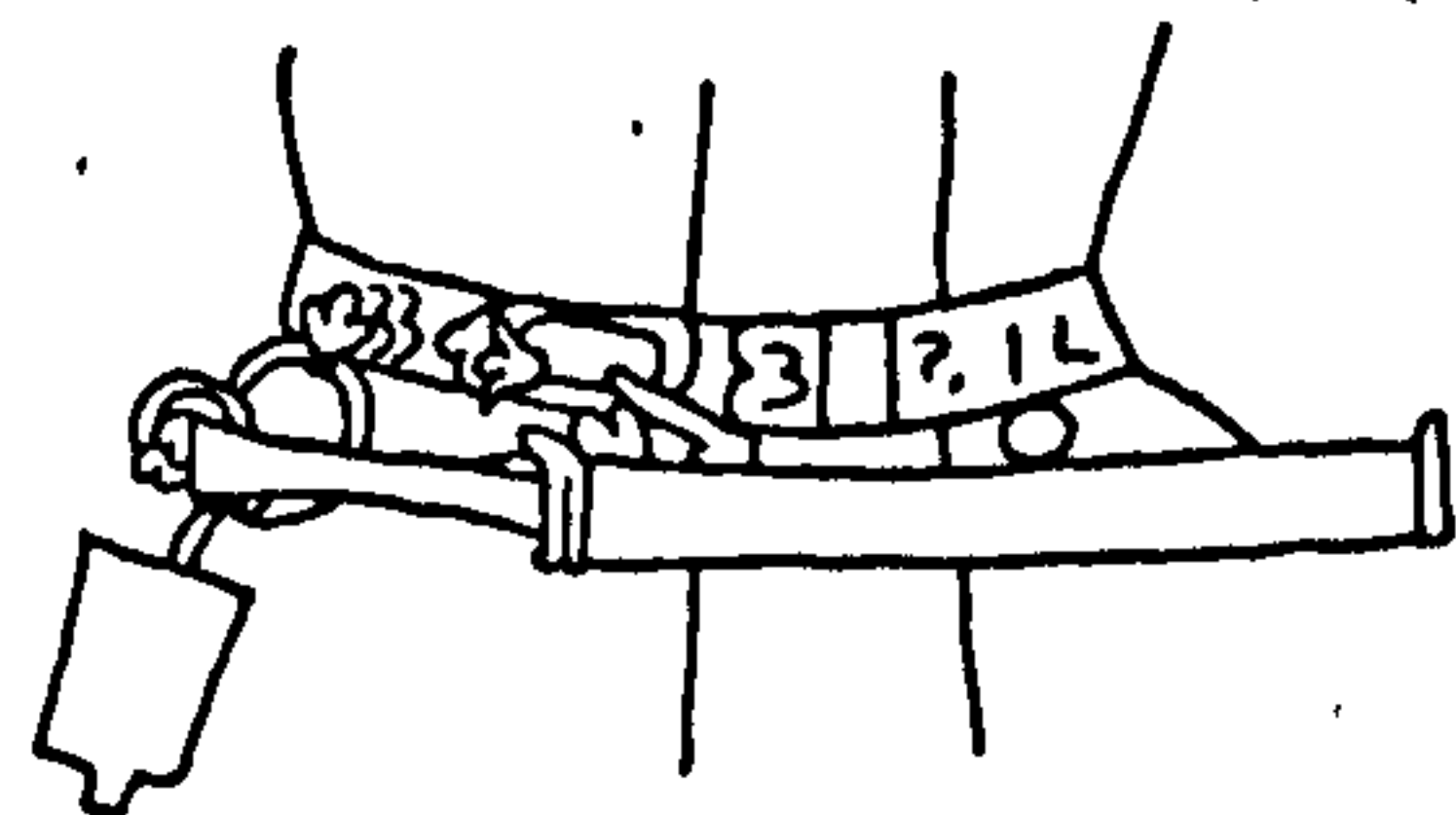


427

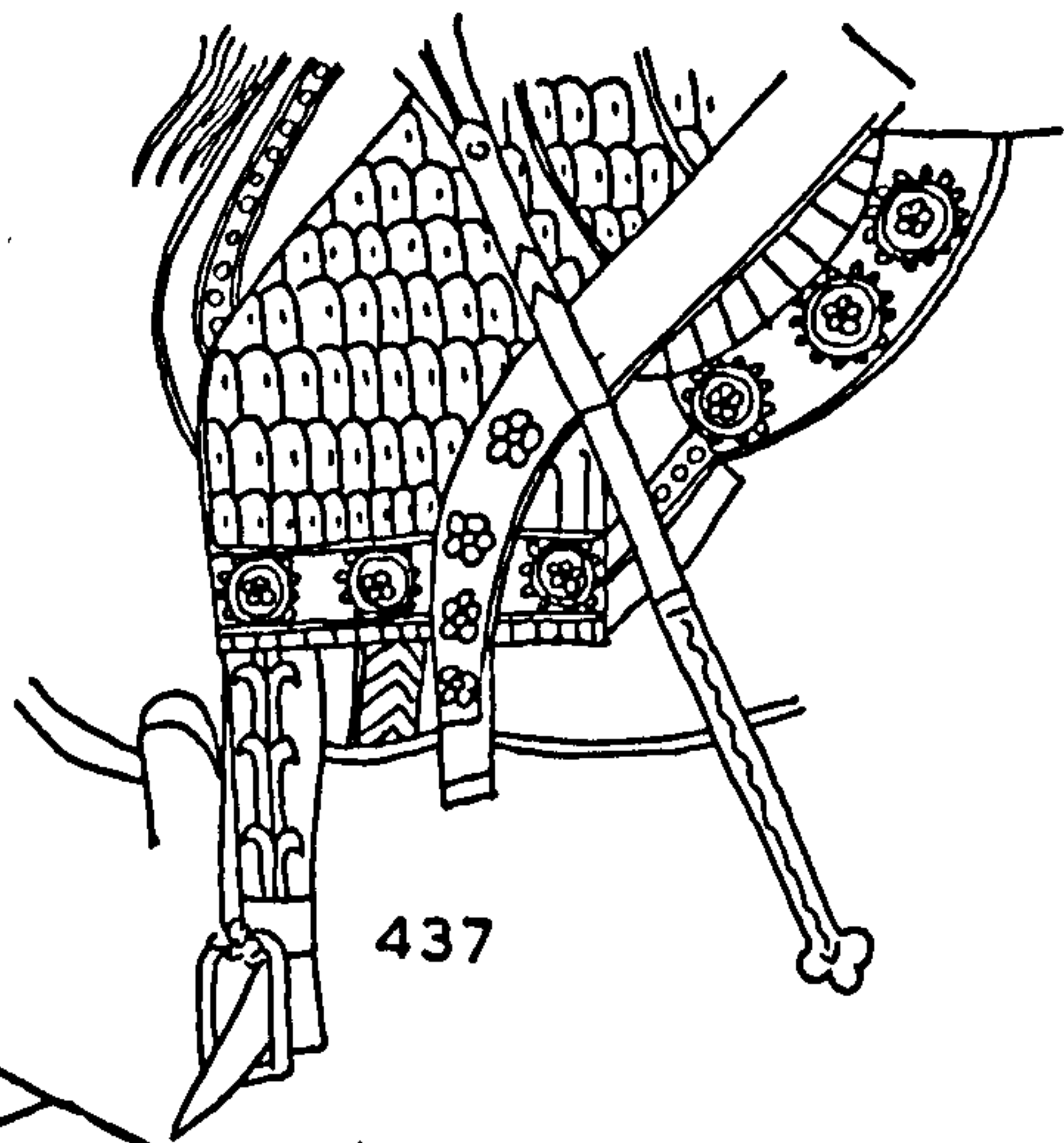




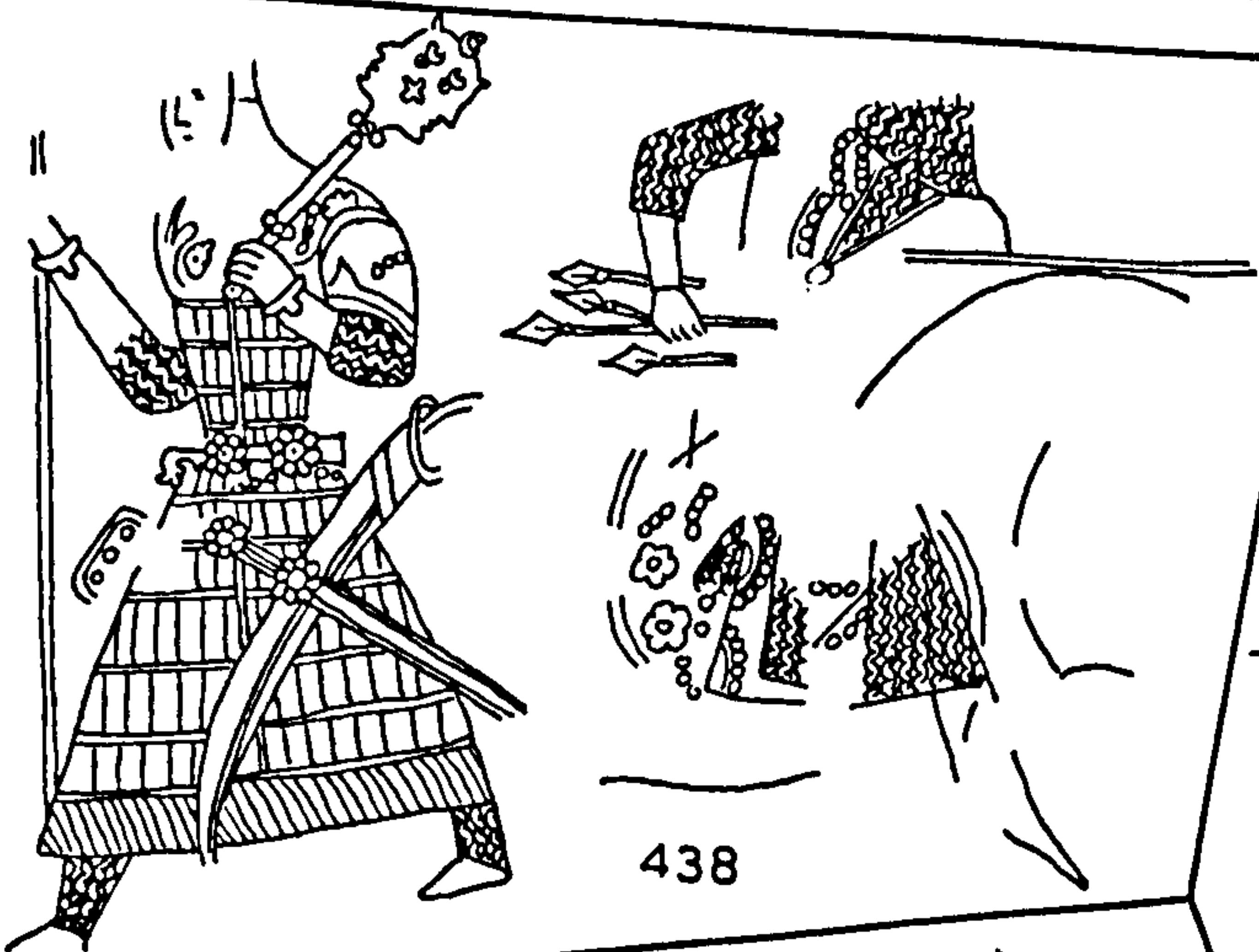
435



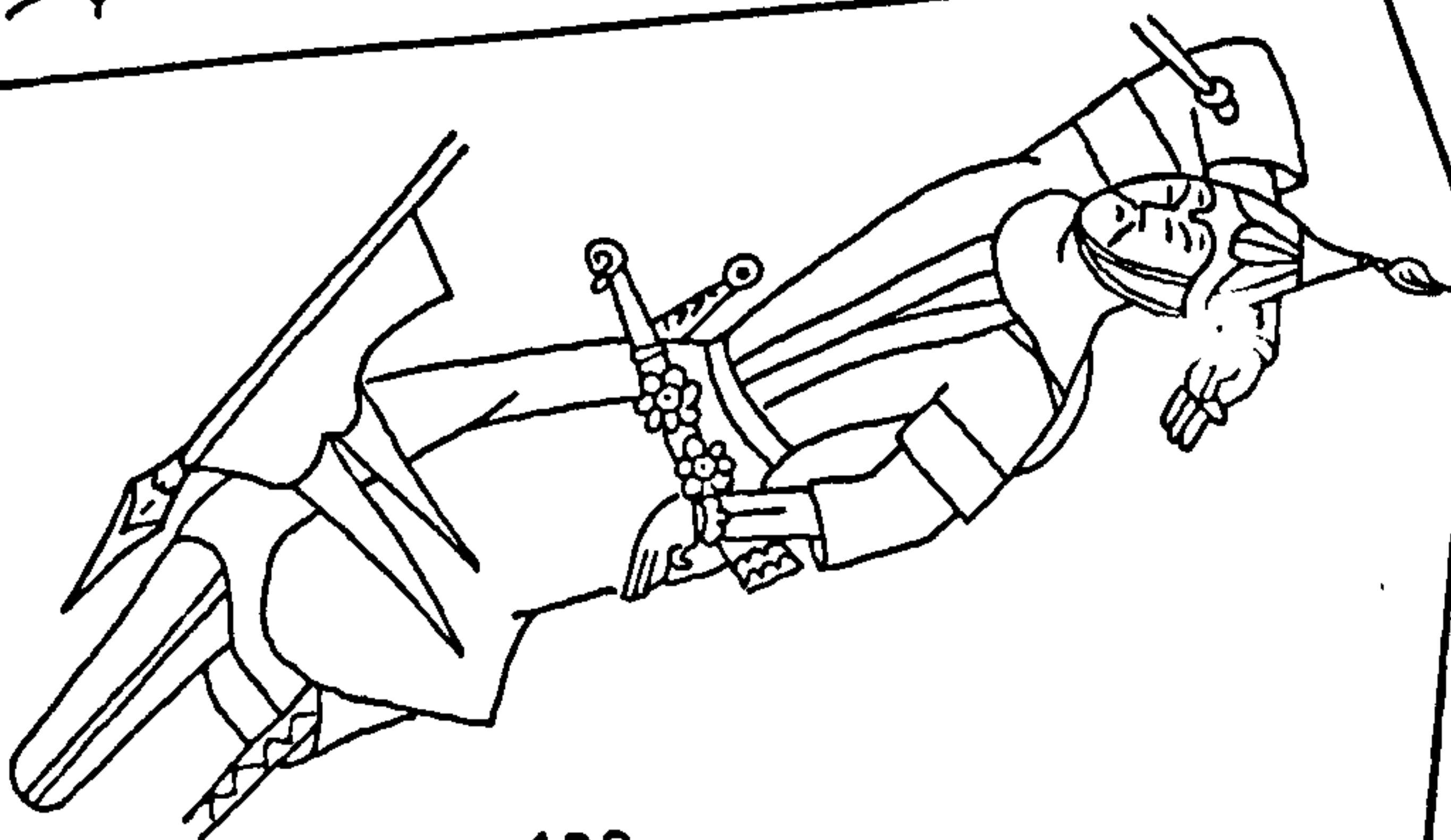
436



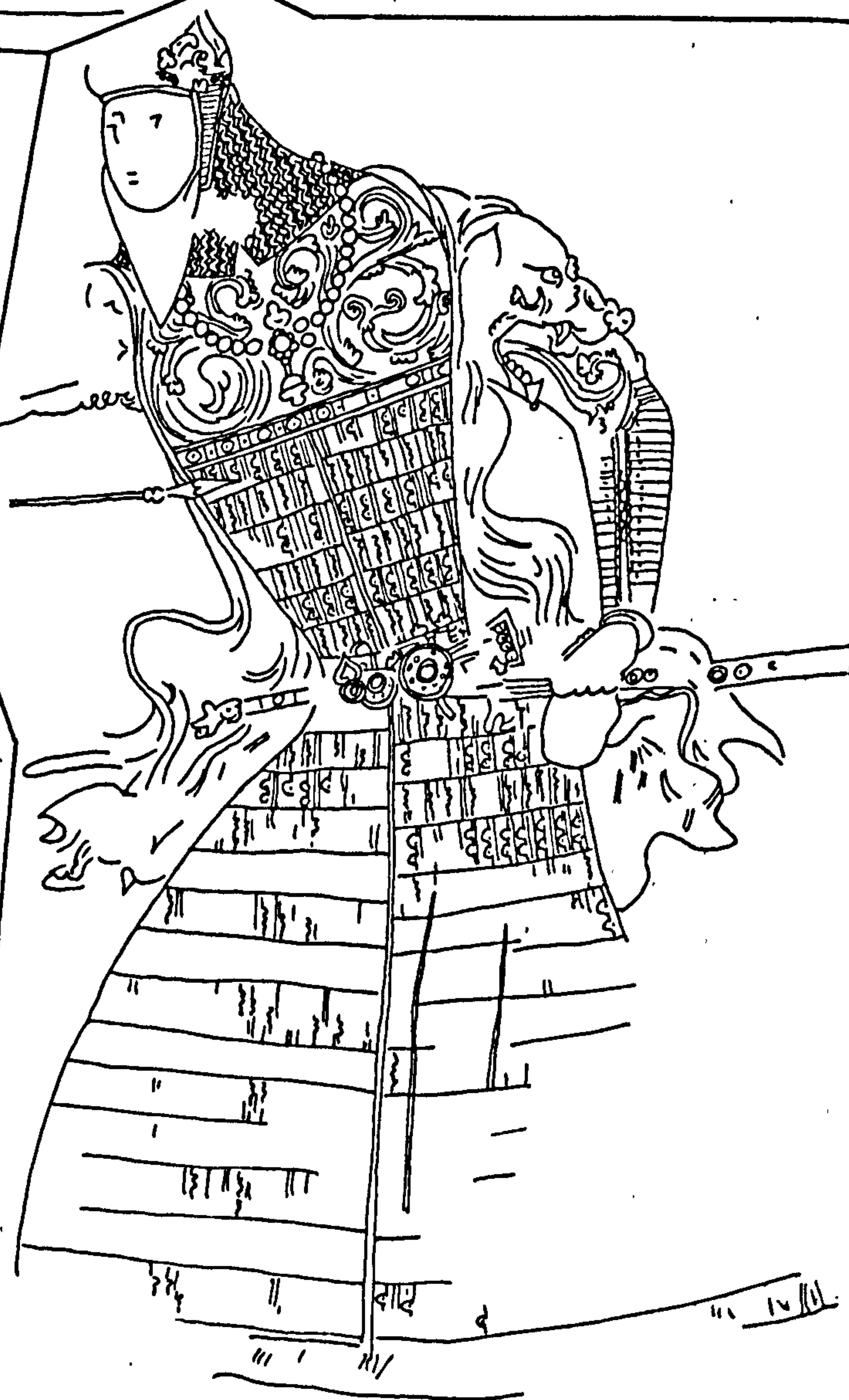
437



438

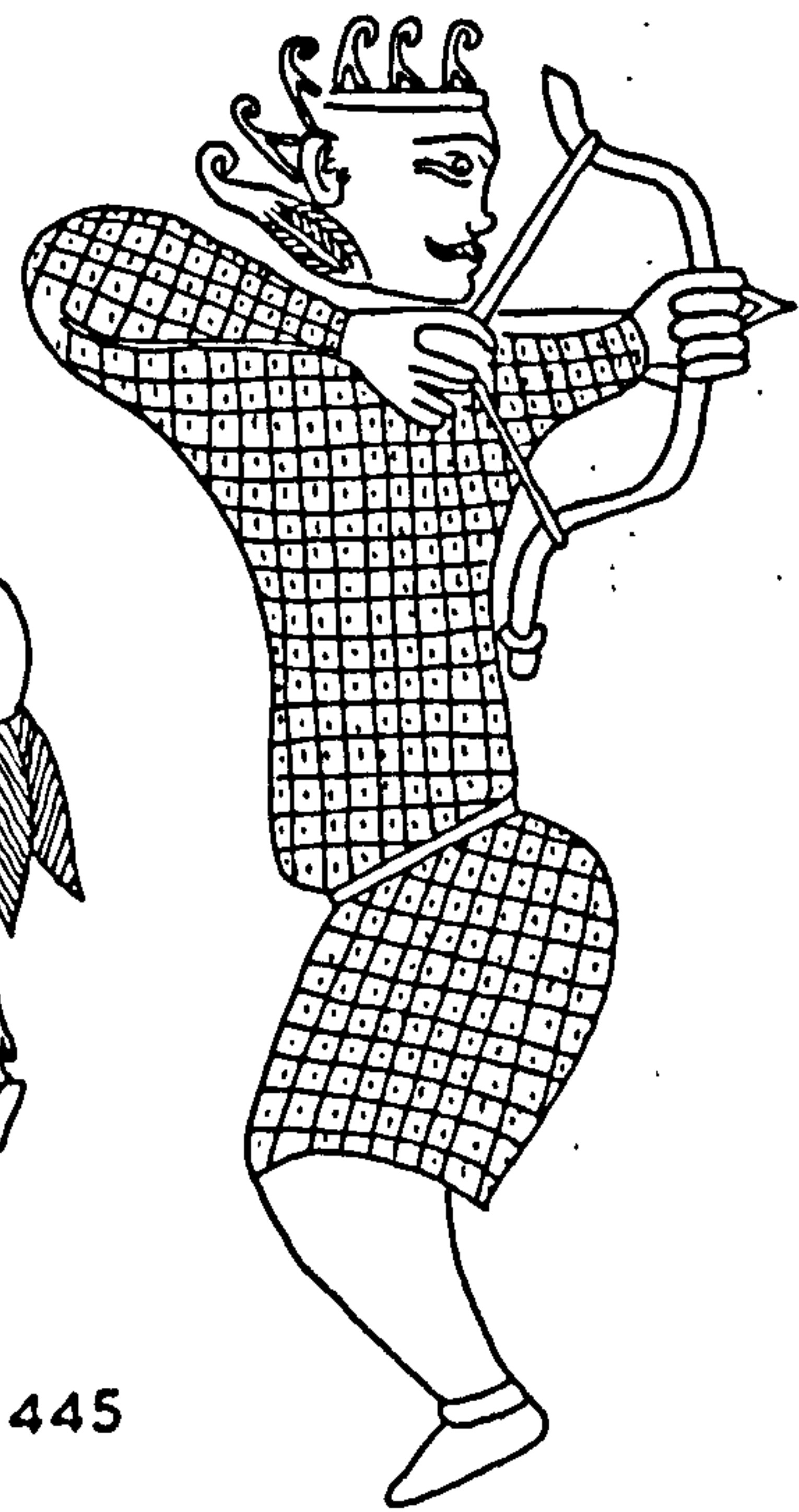
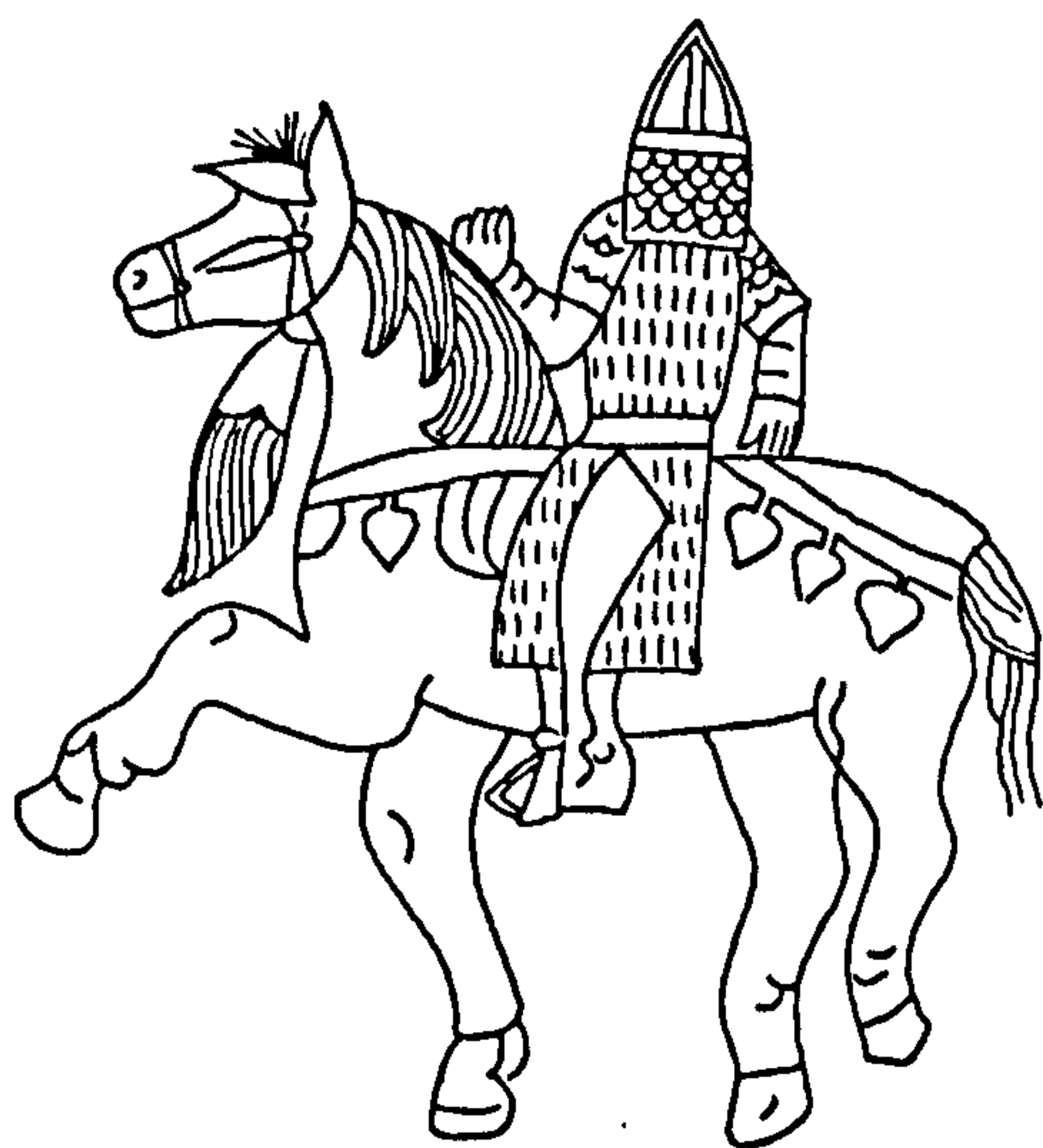
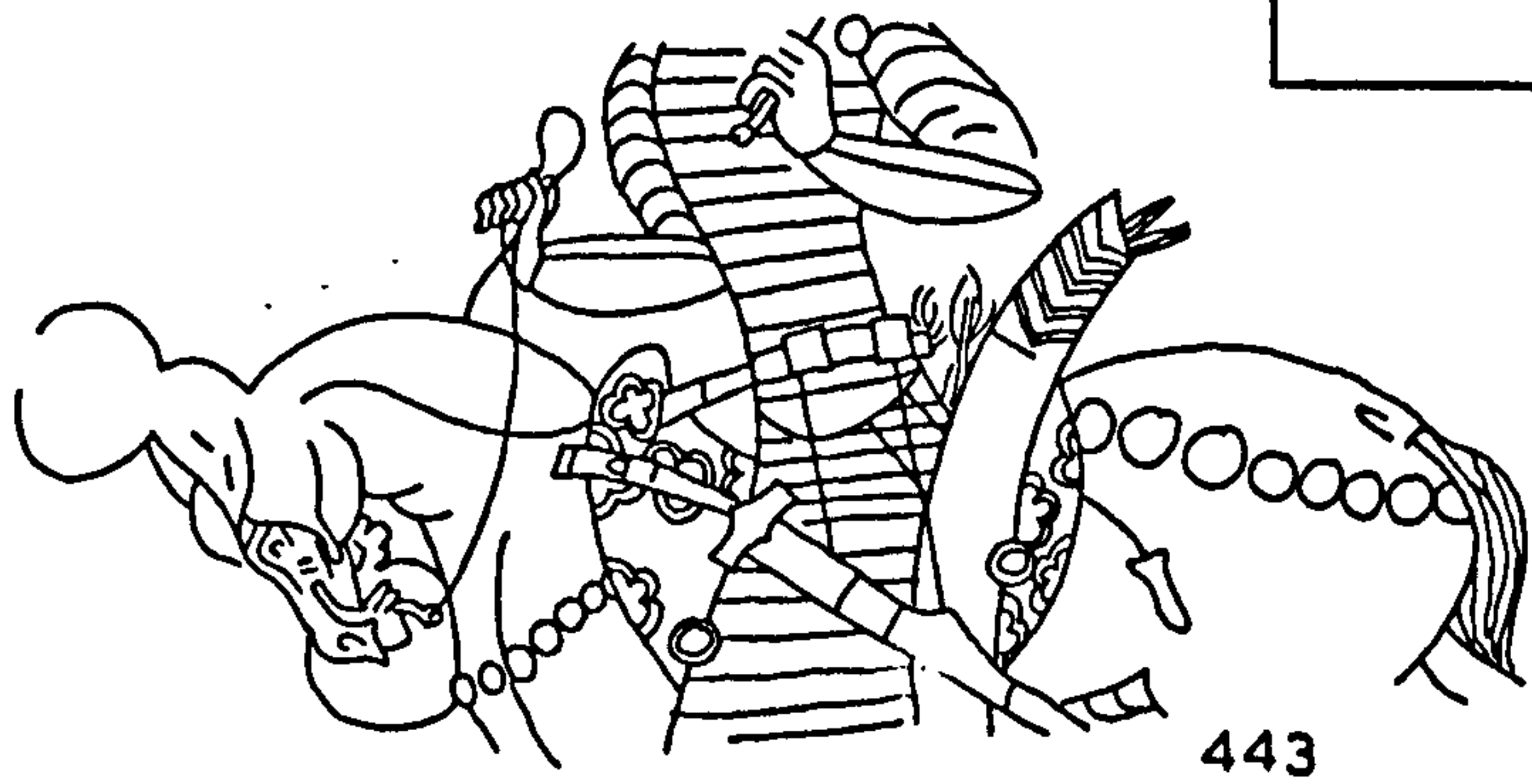
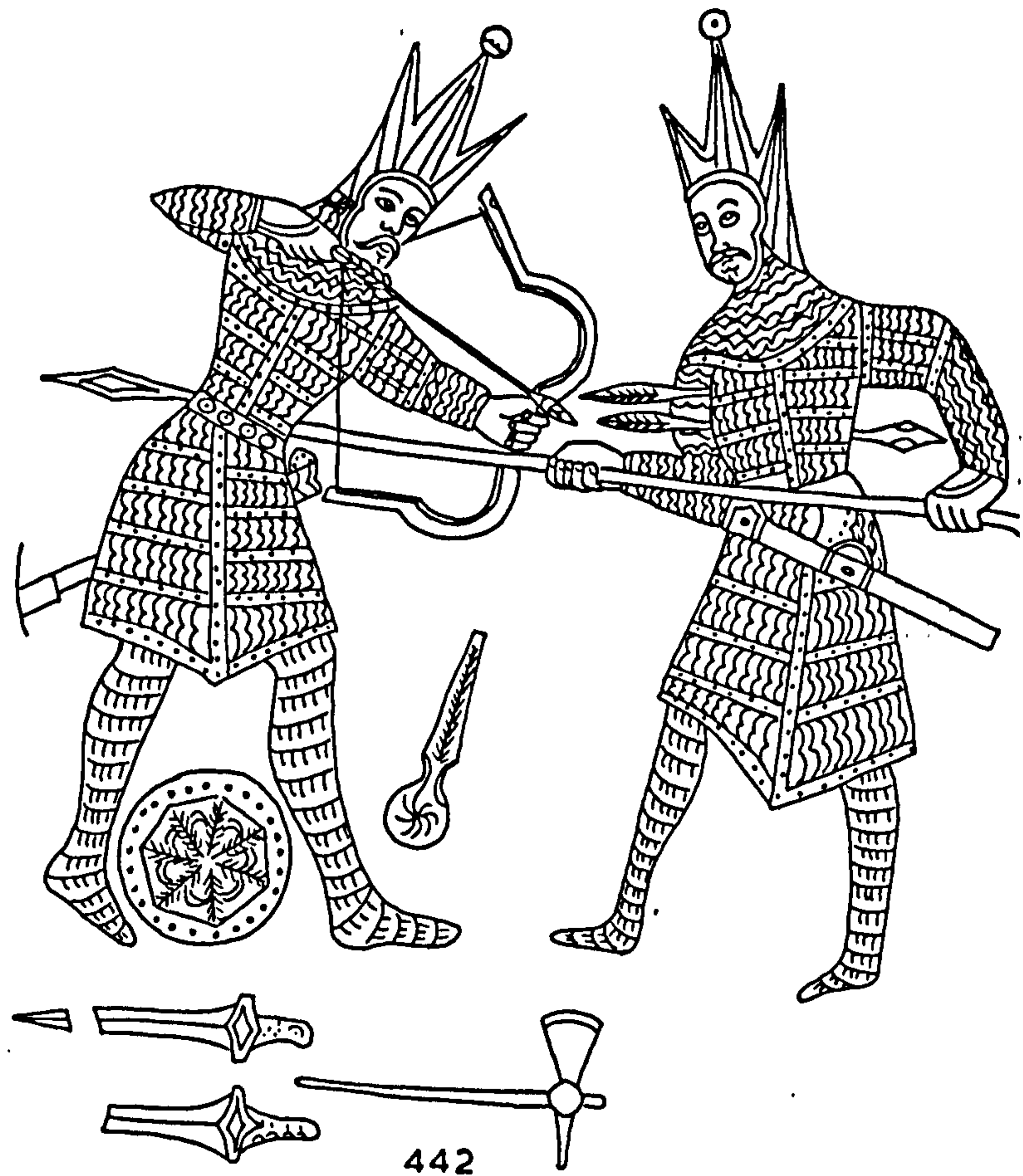
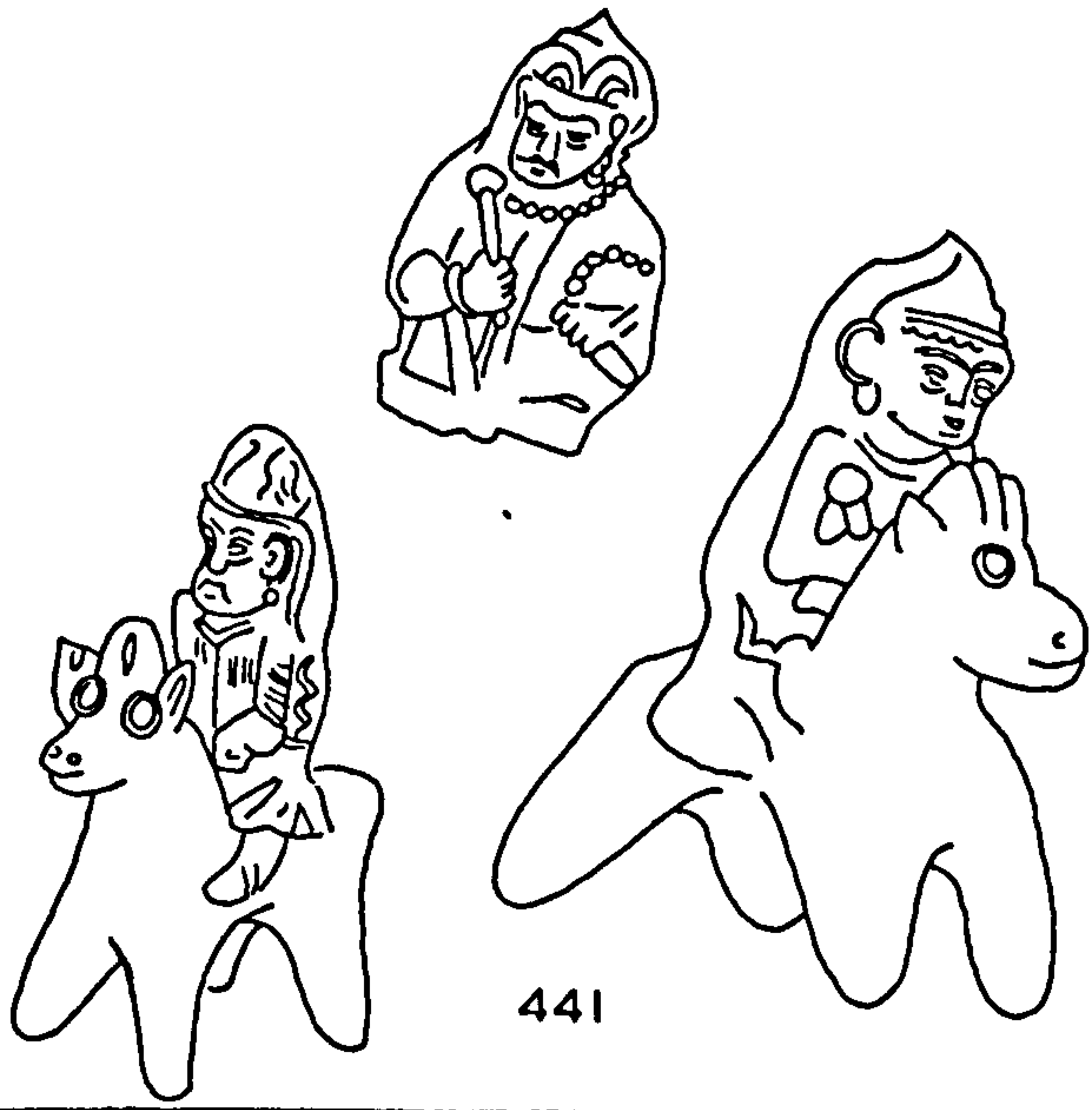


439



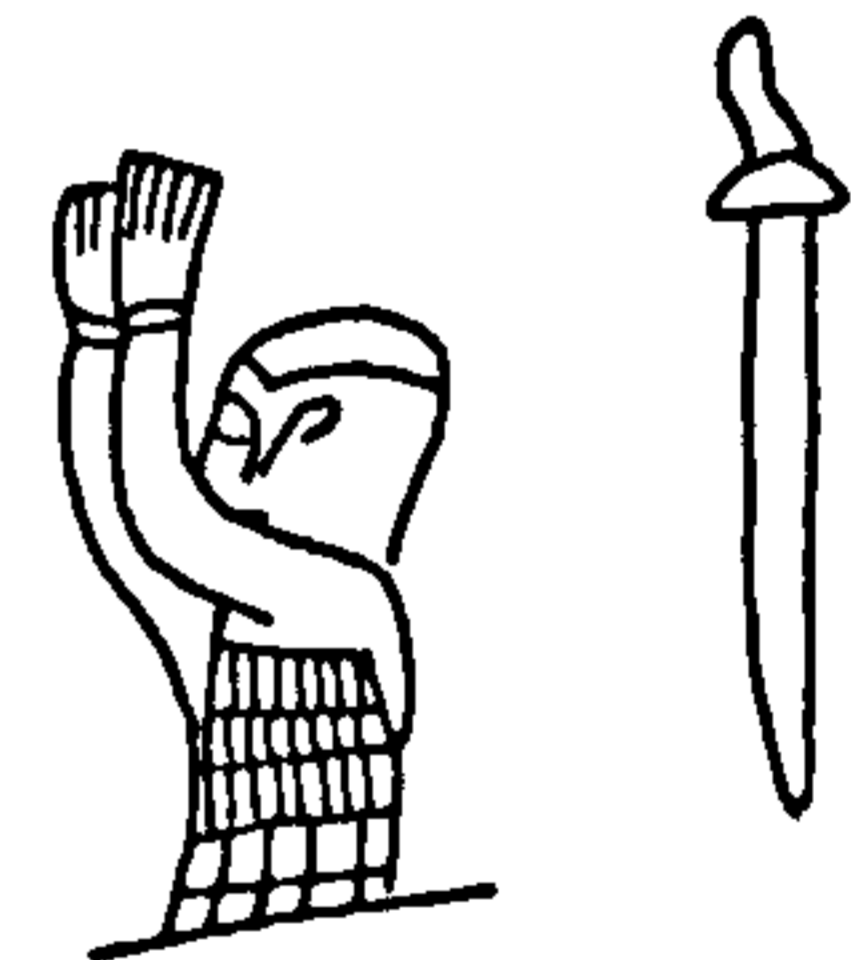
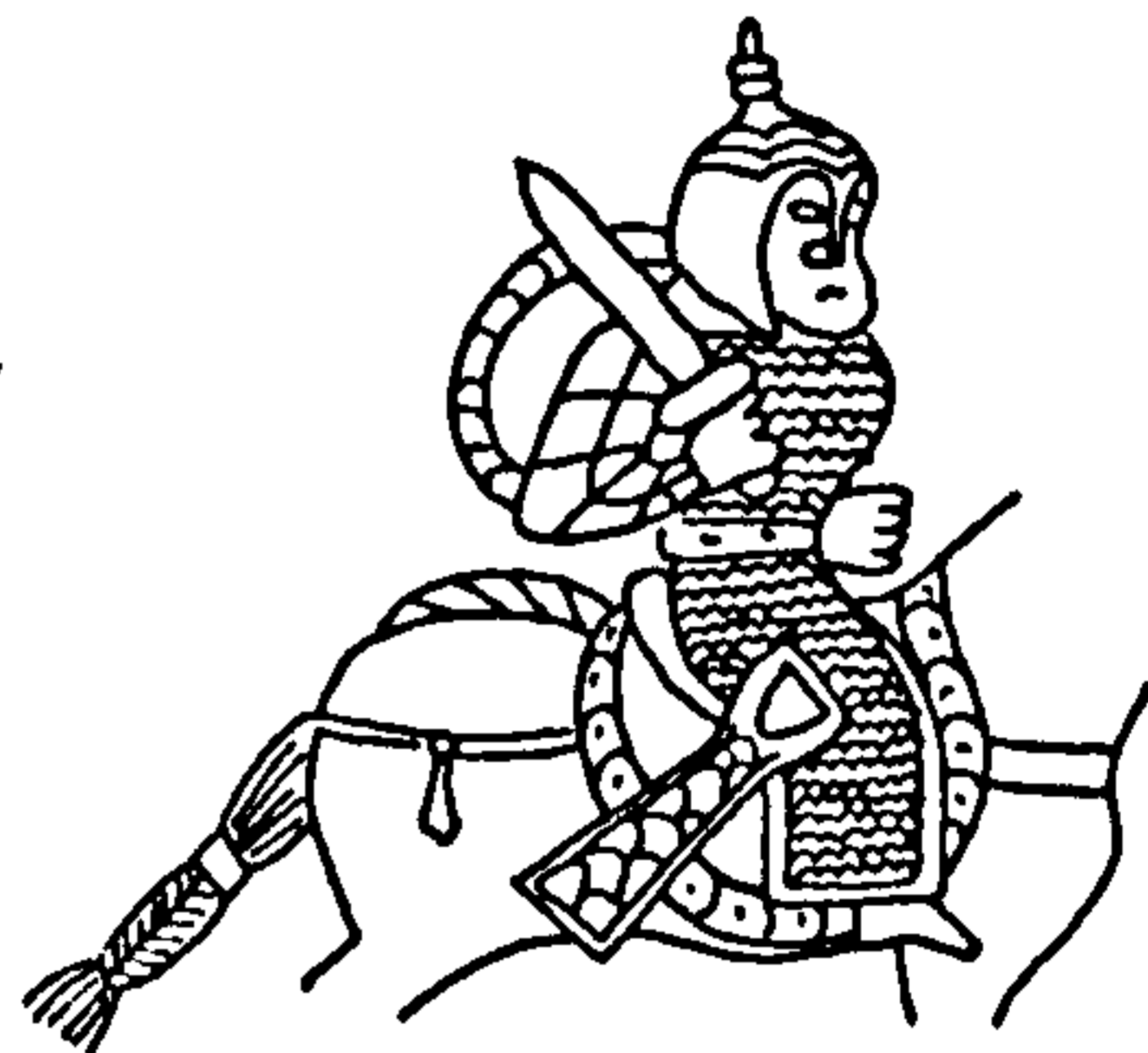
440







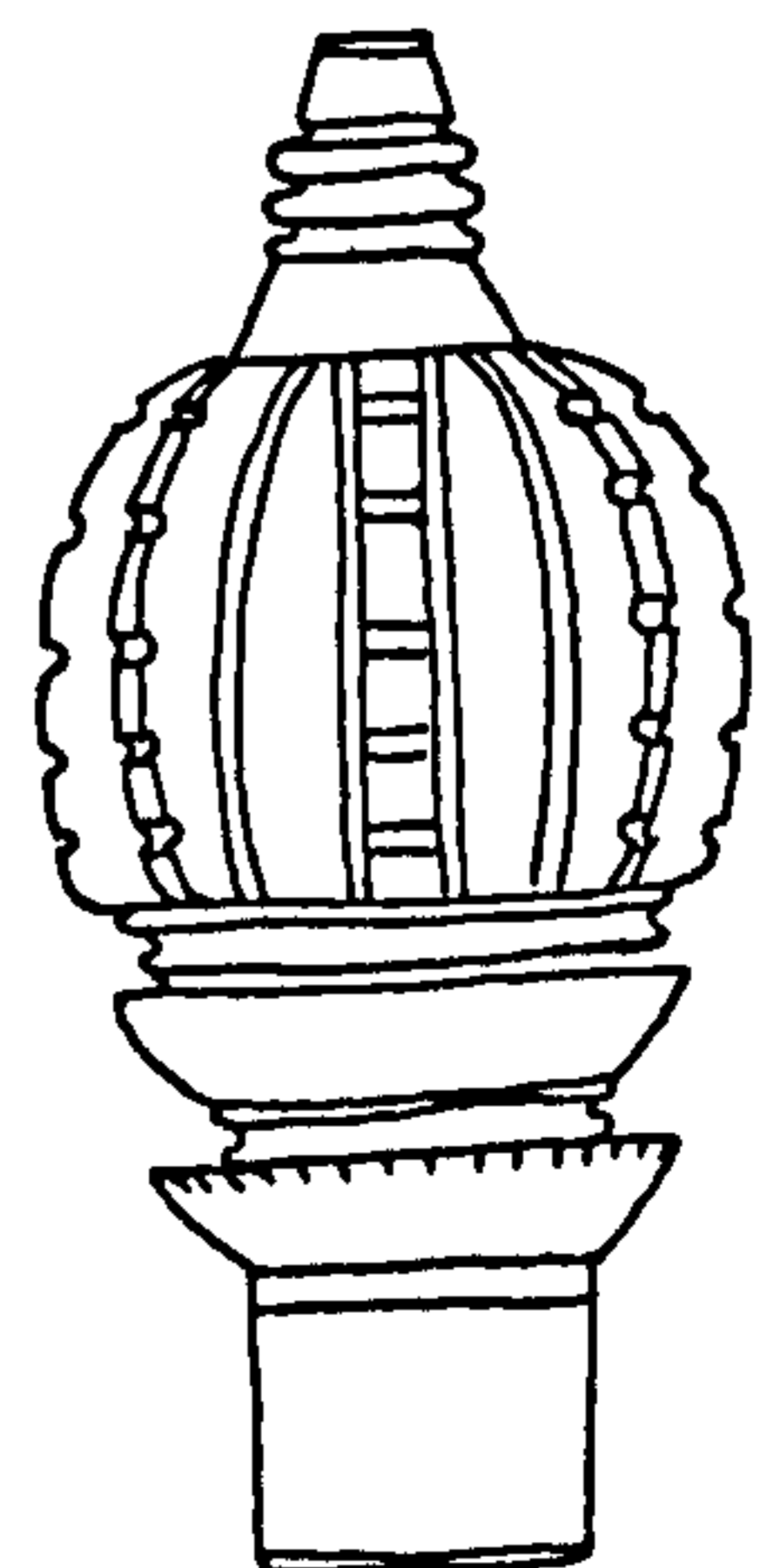
446



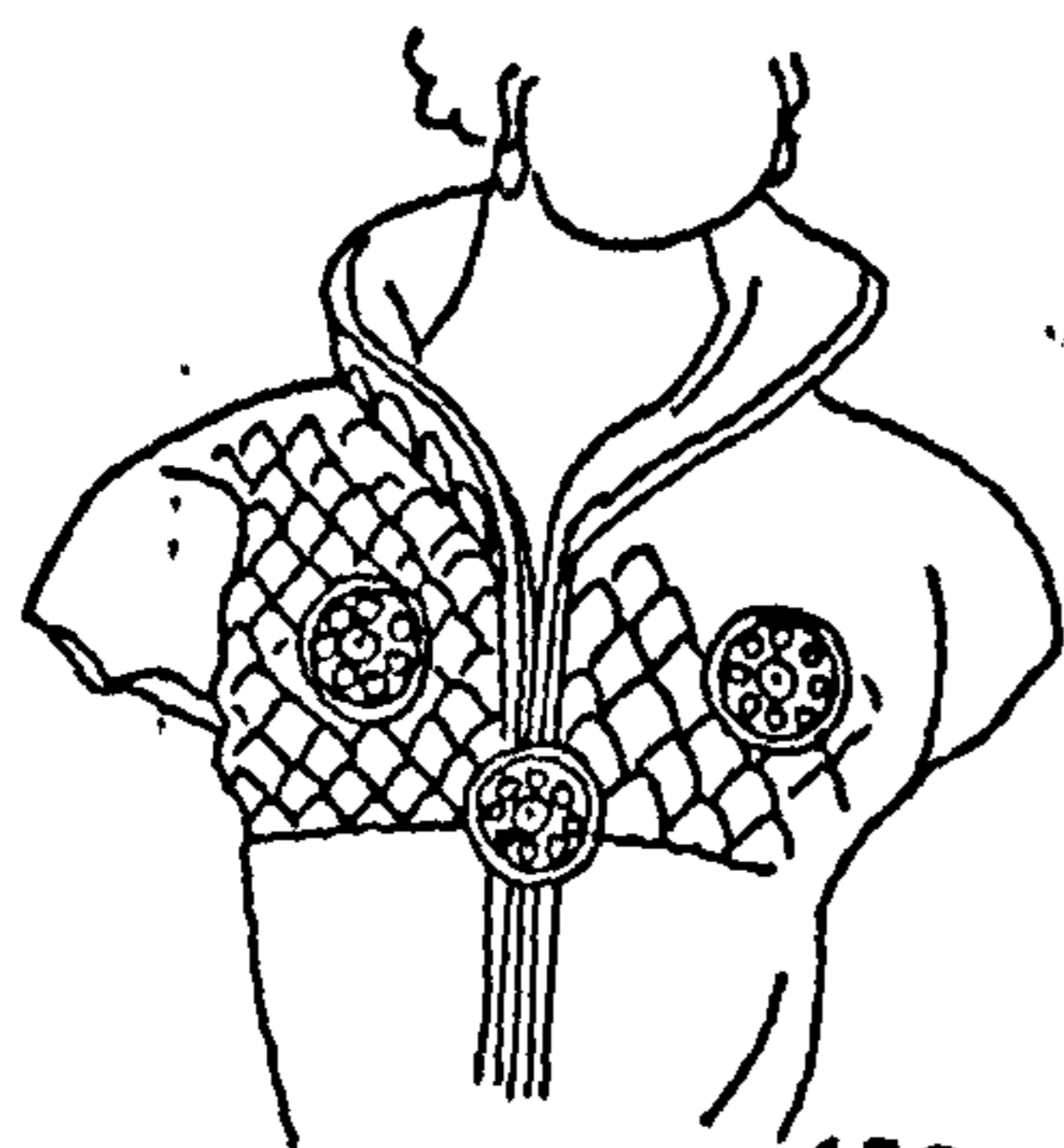
447



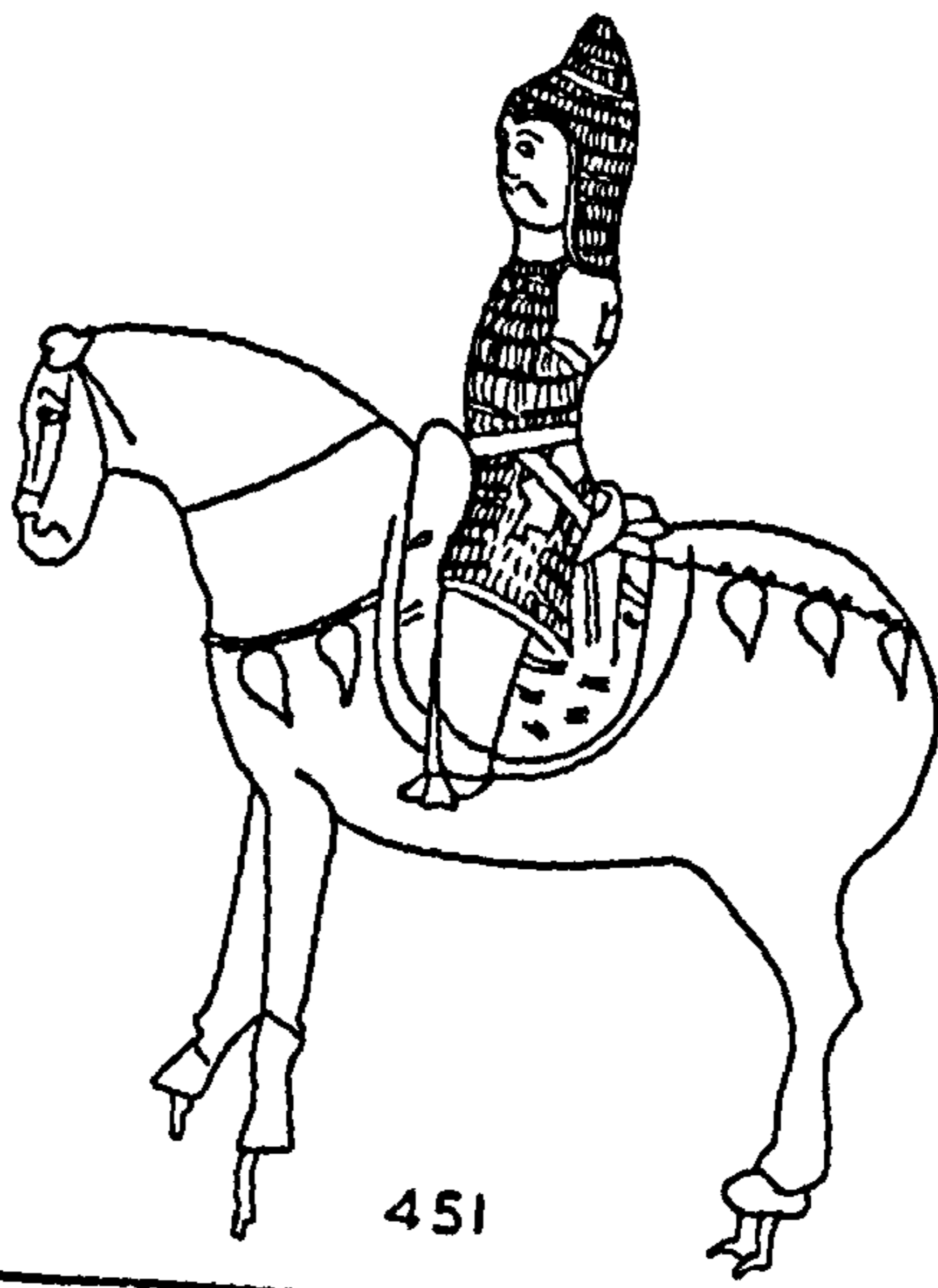
448



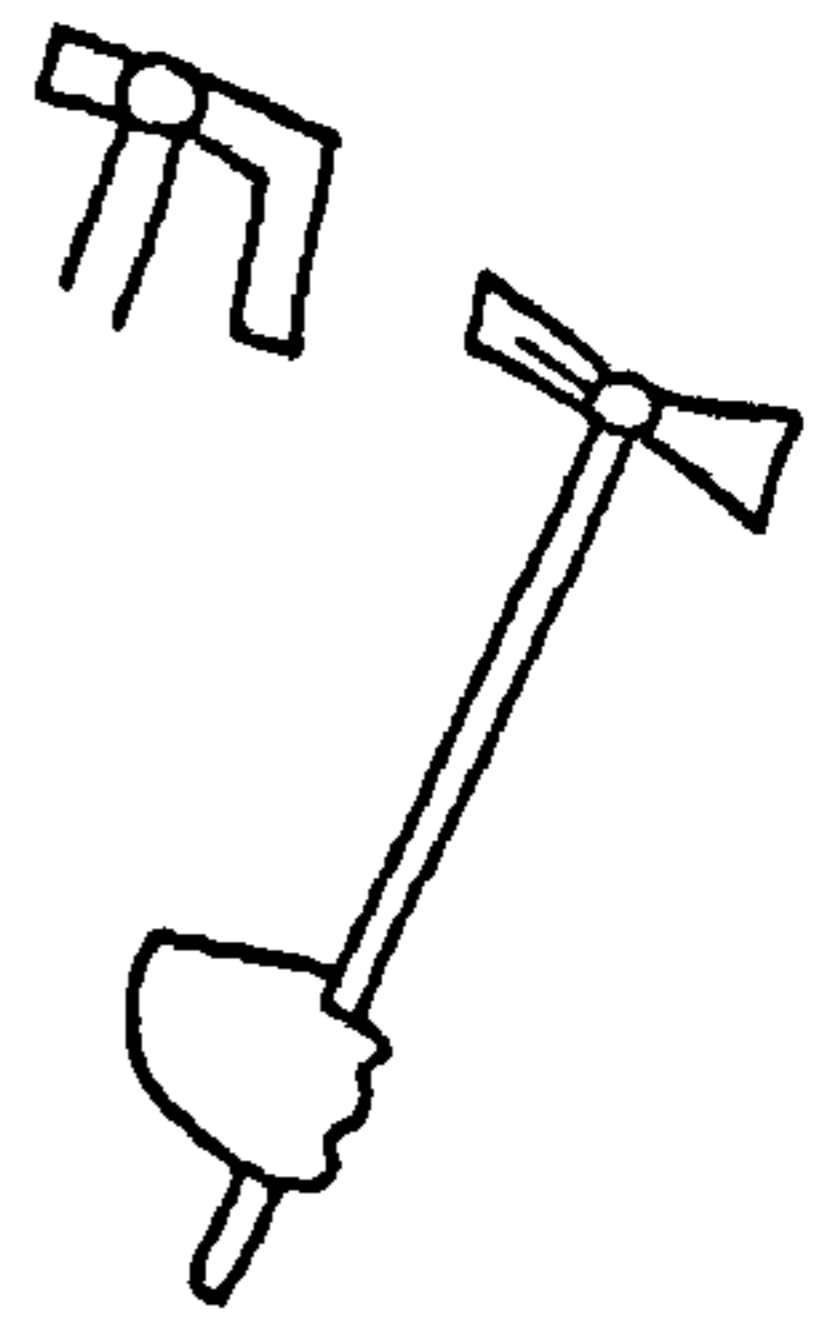
449



450



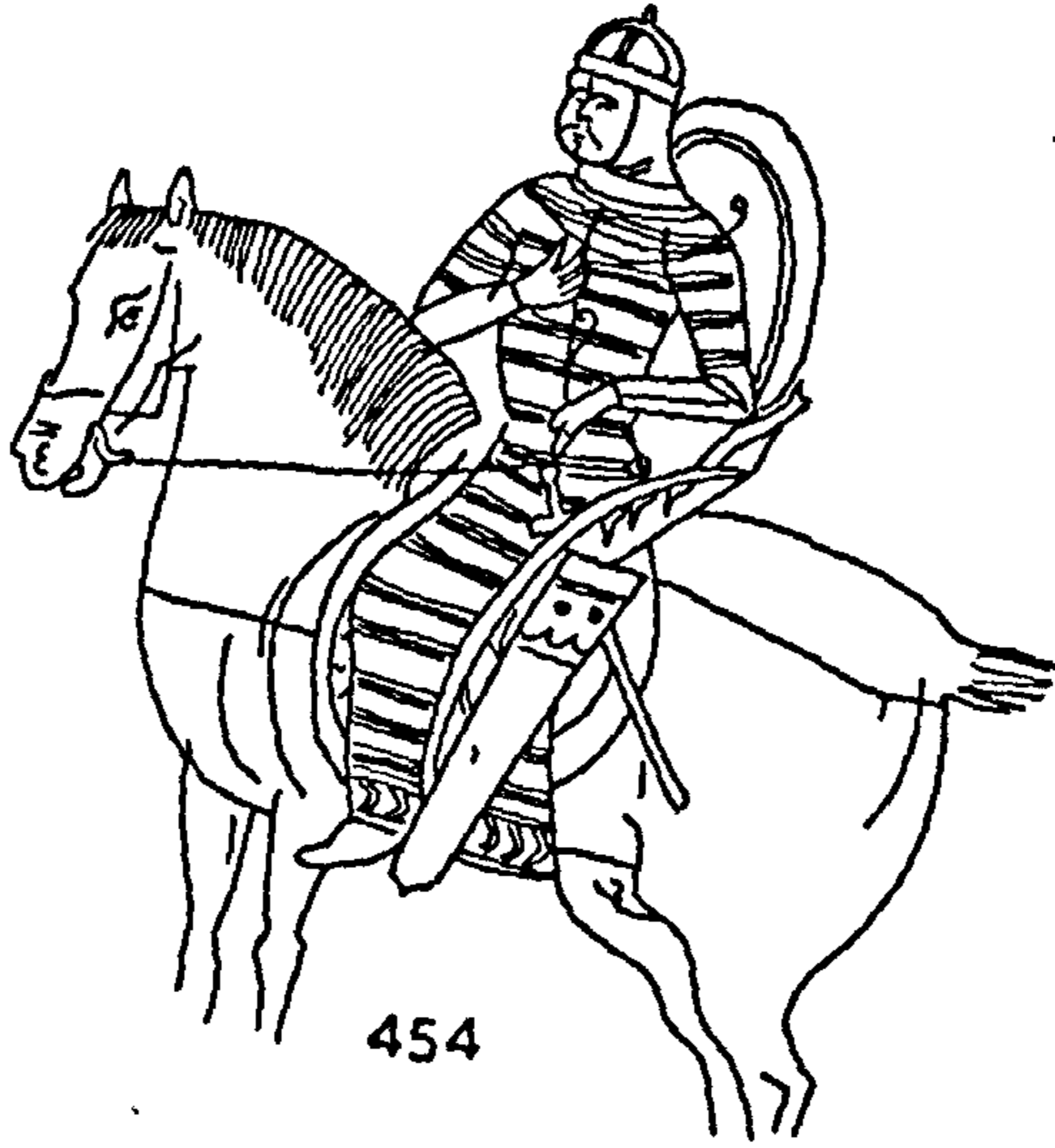
451



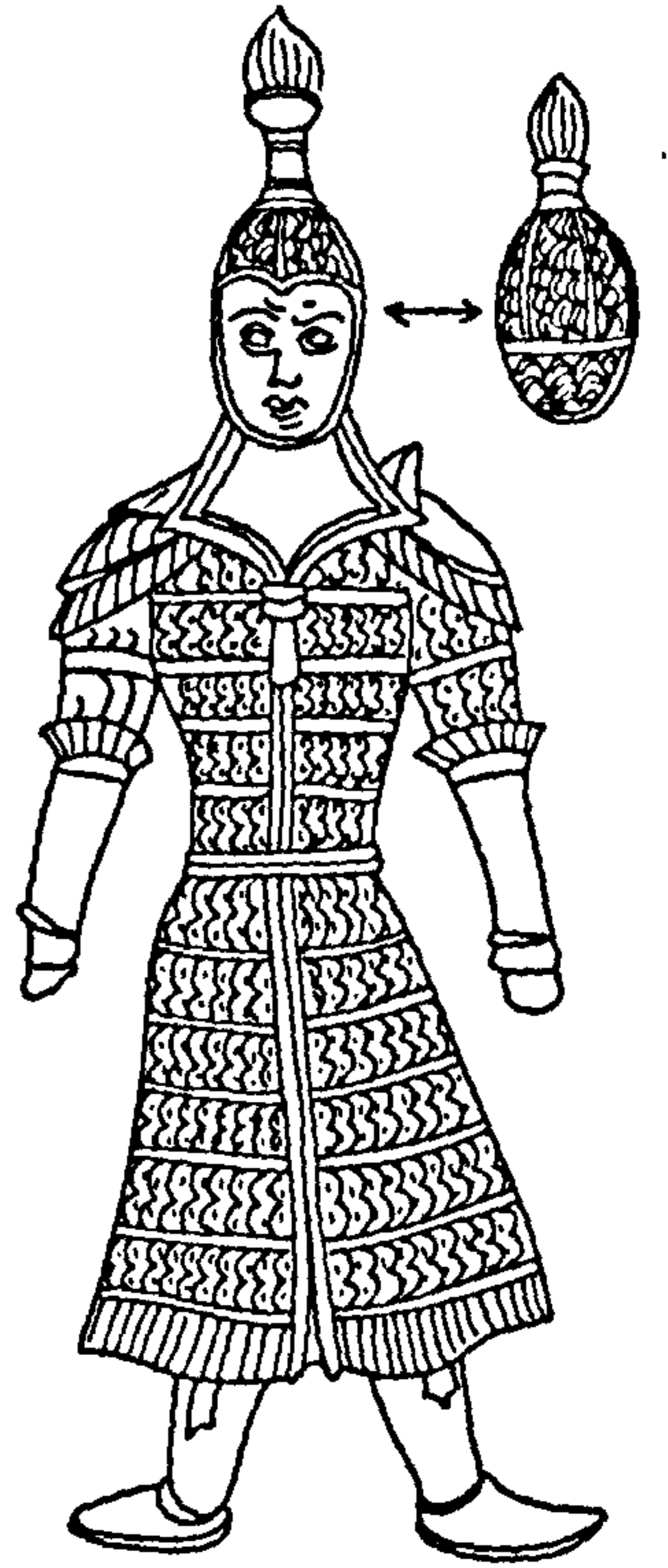
452



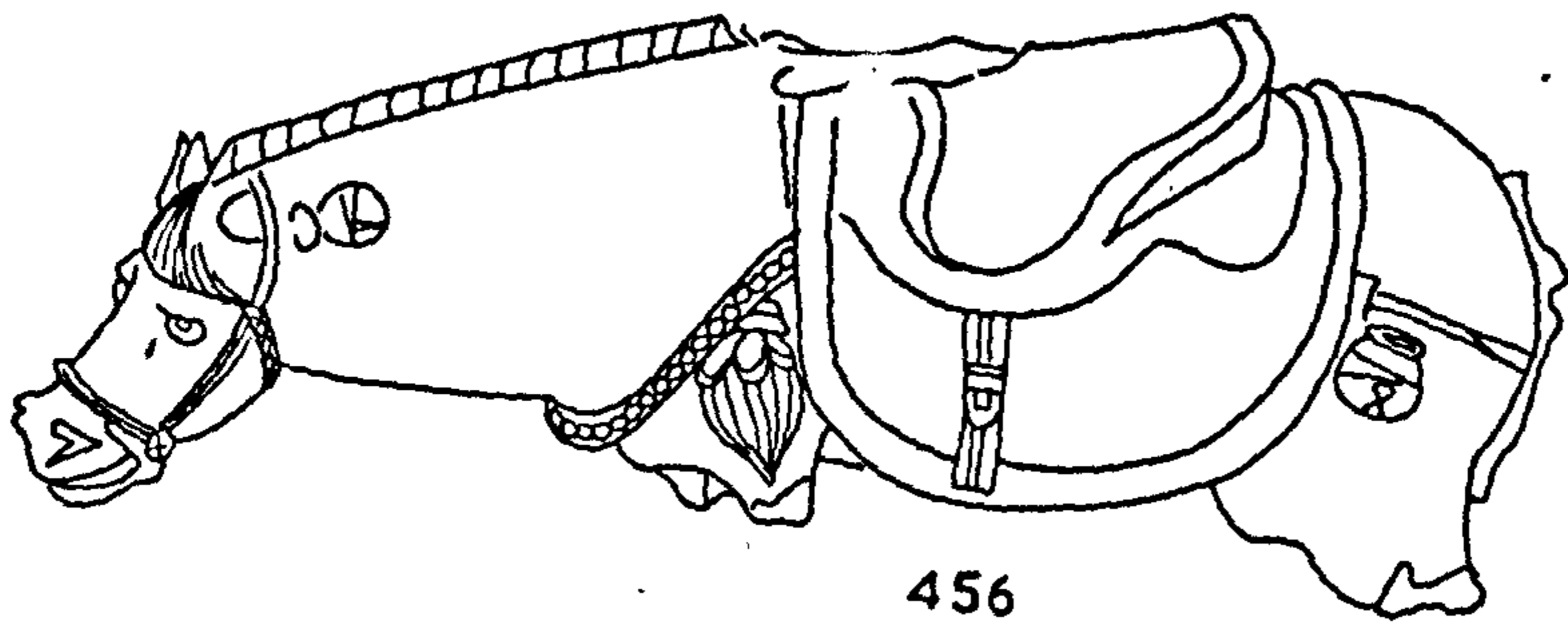
453



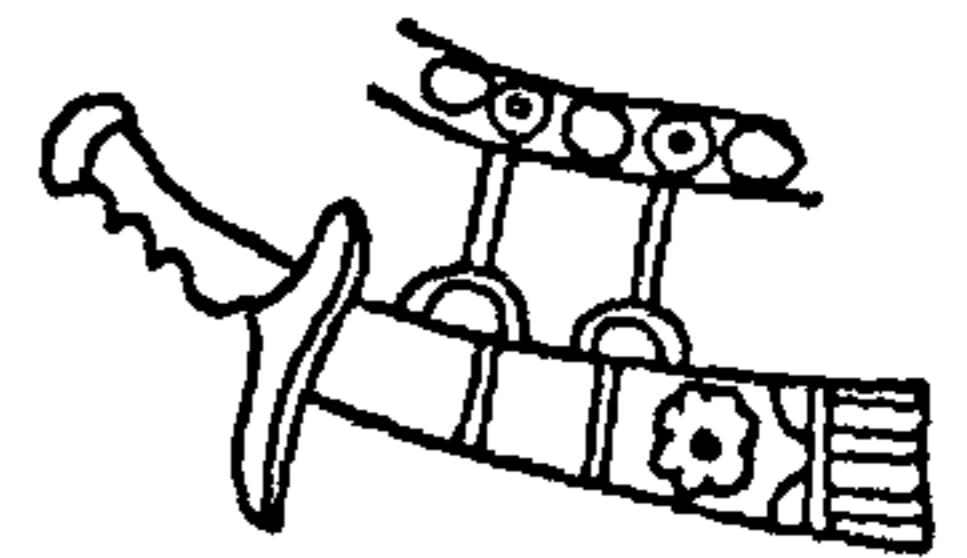
454



455



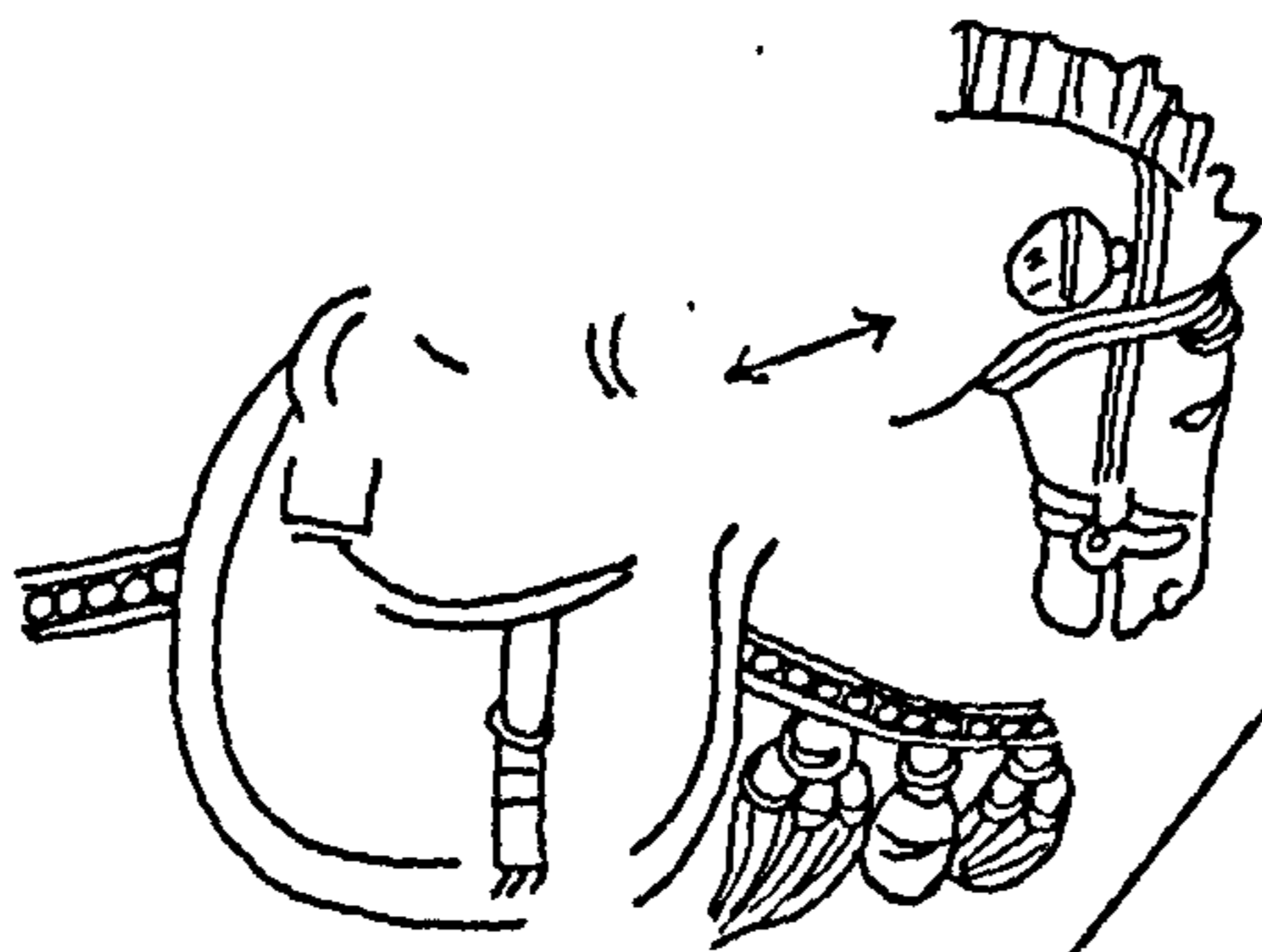
456



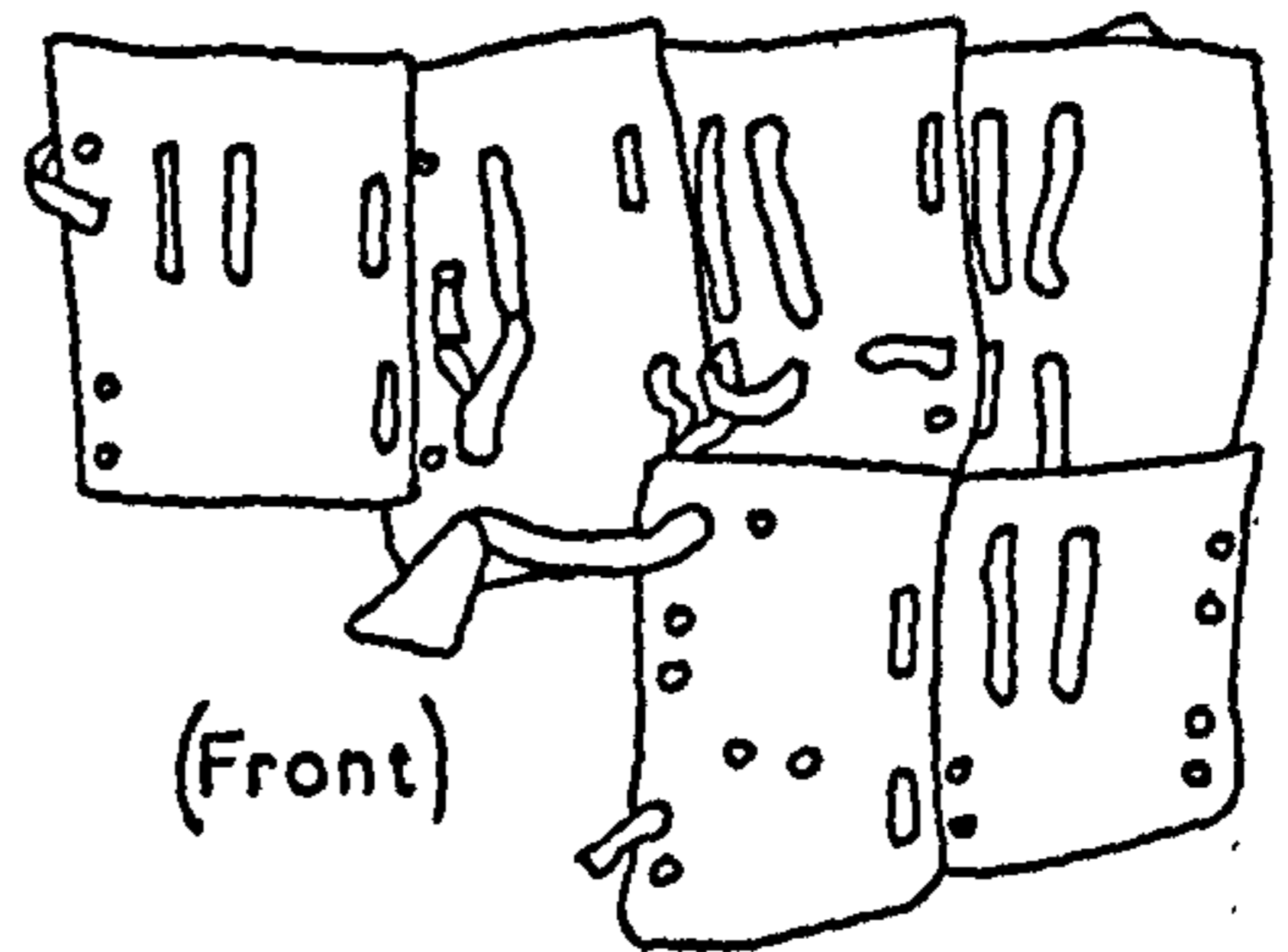
457



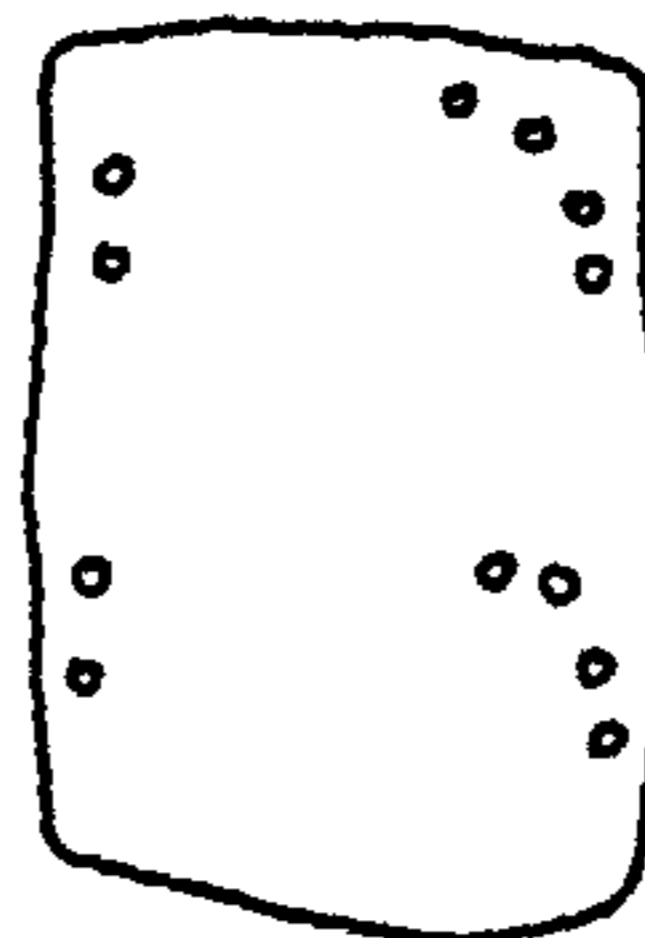
458



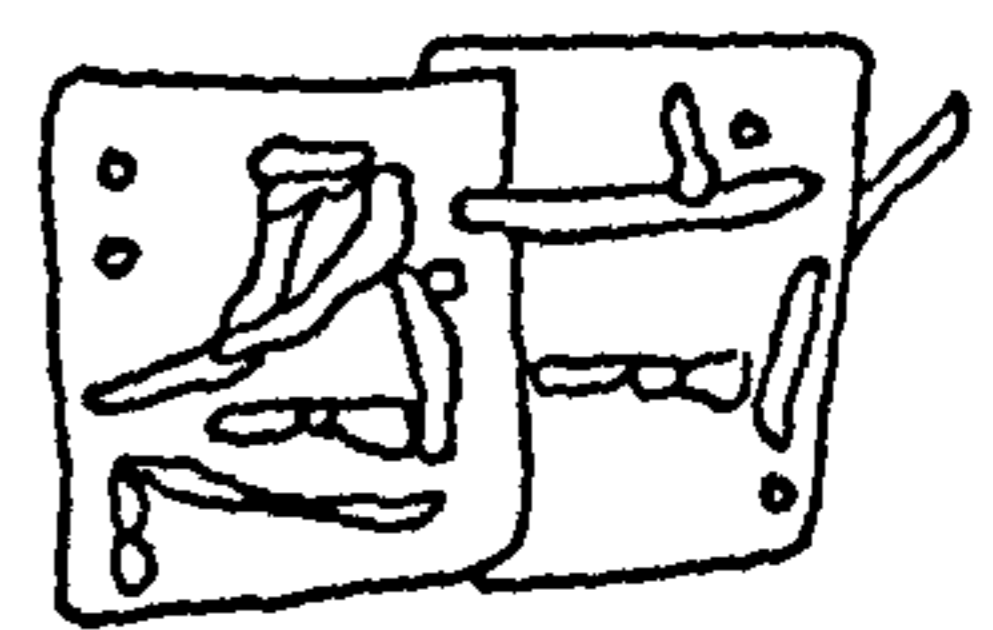
459



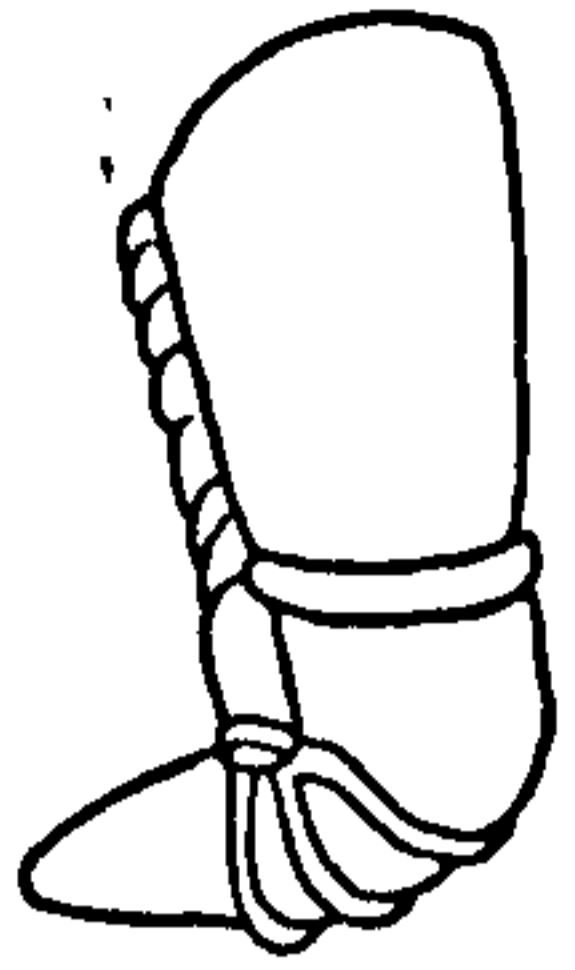
(Front)



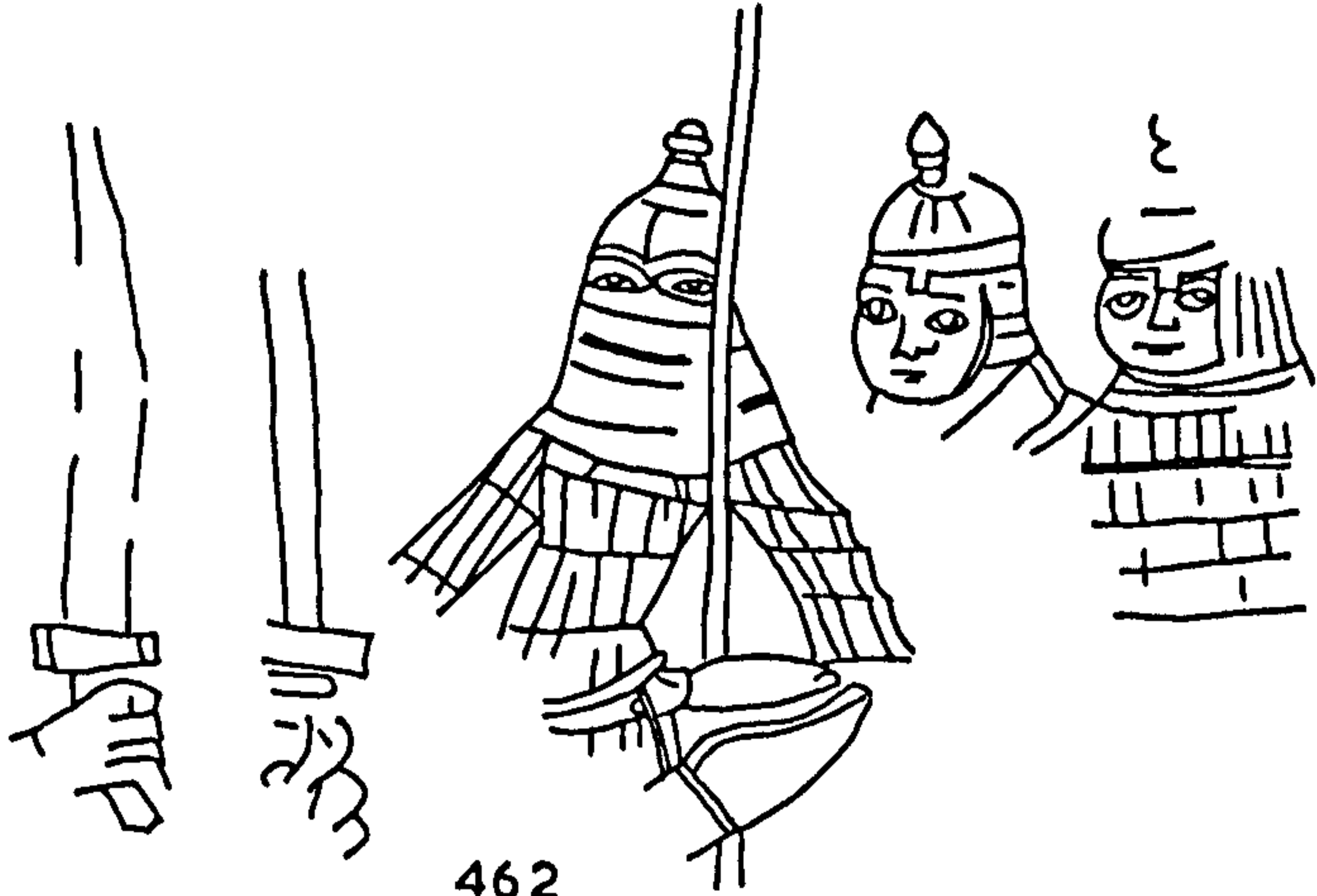
460



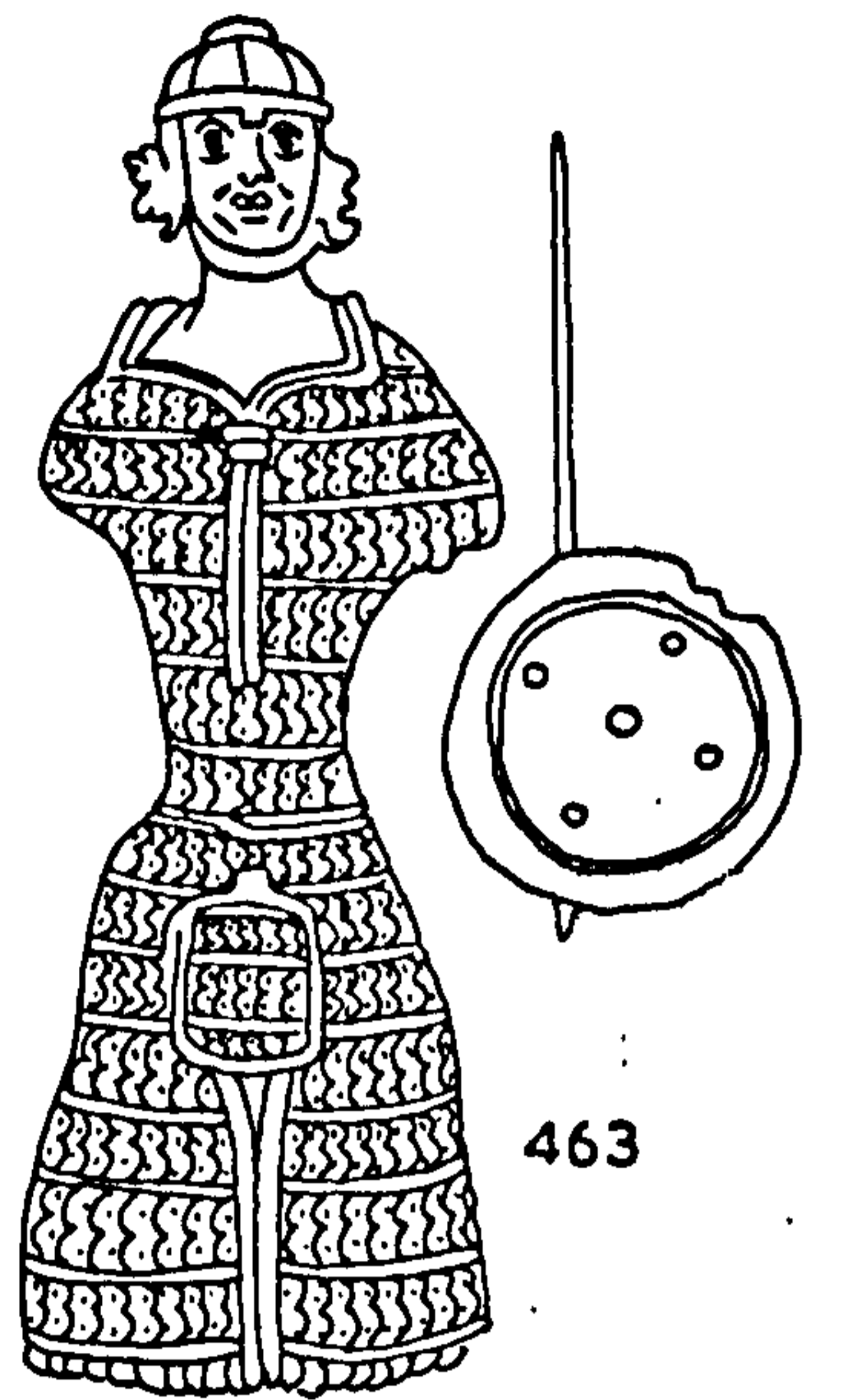
(Back)



461



462



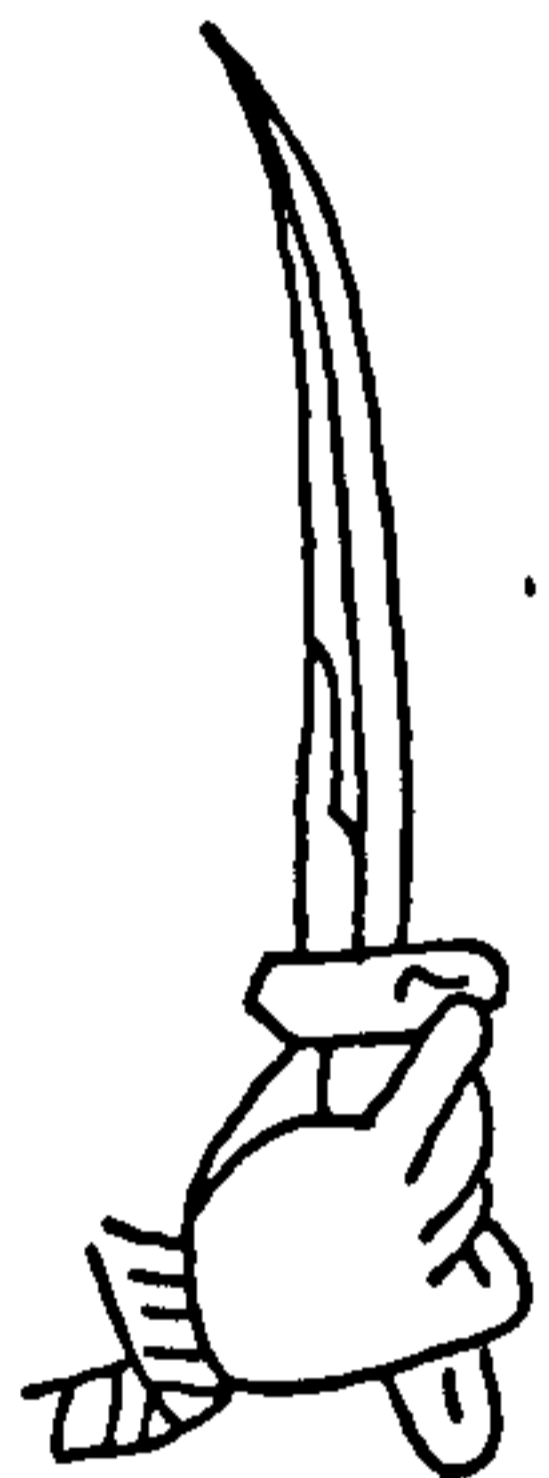
463



464



465



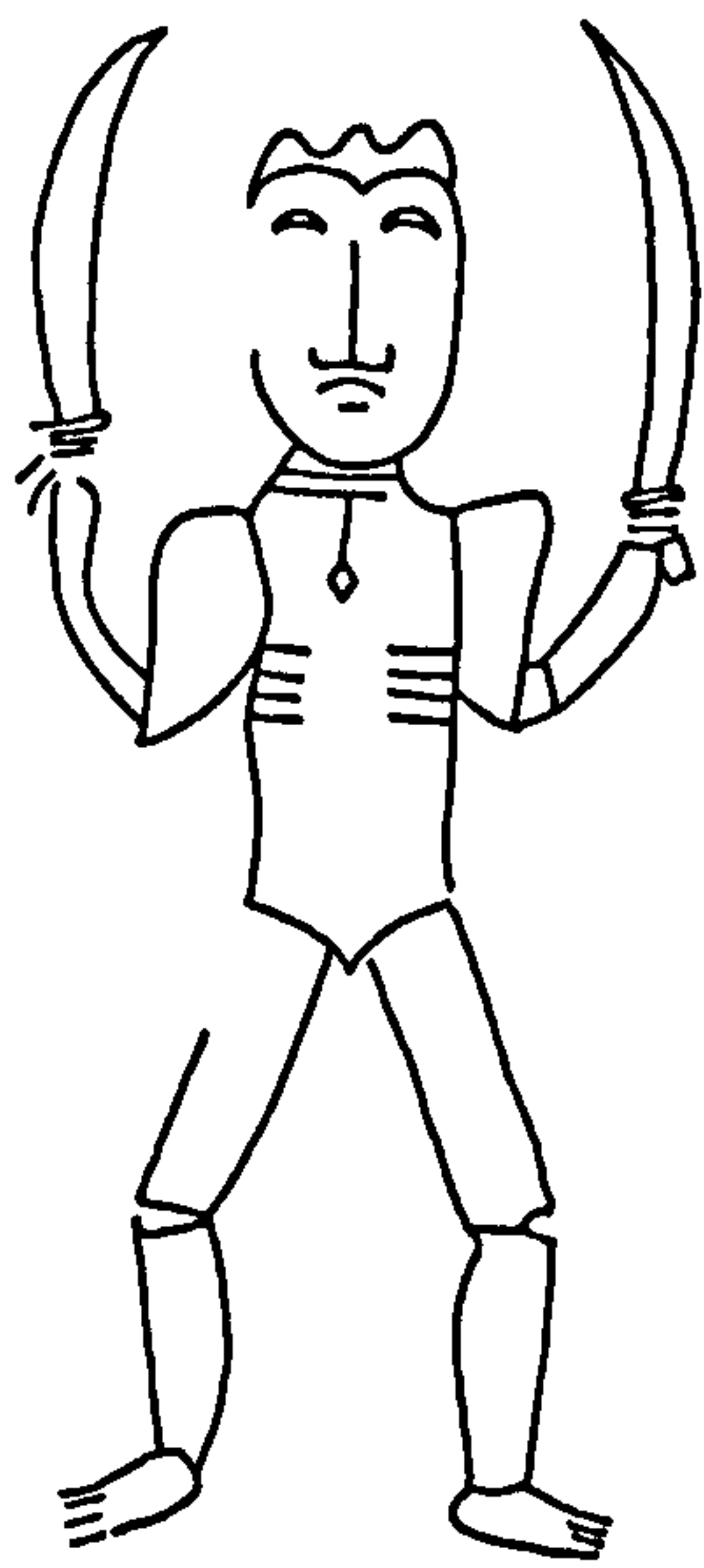
466



467



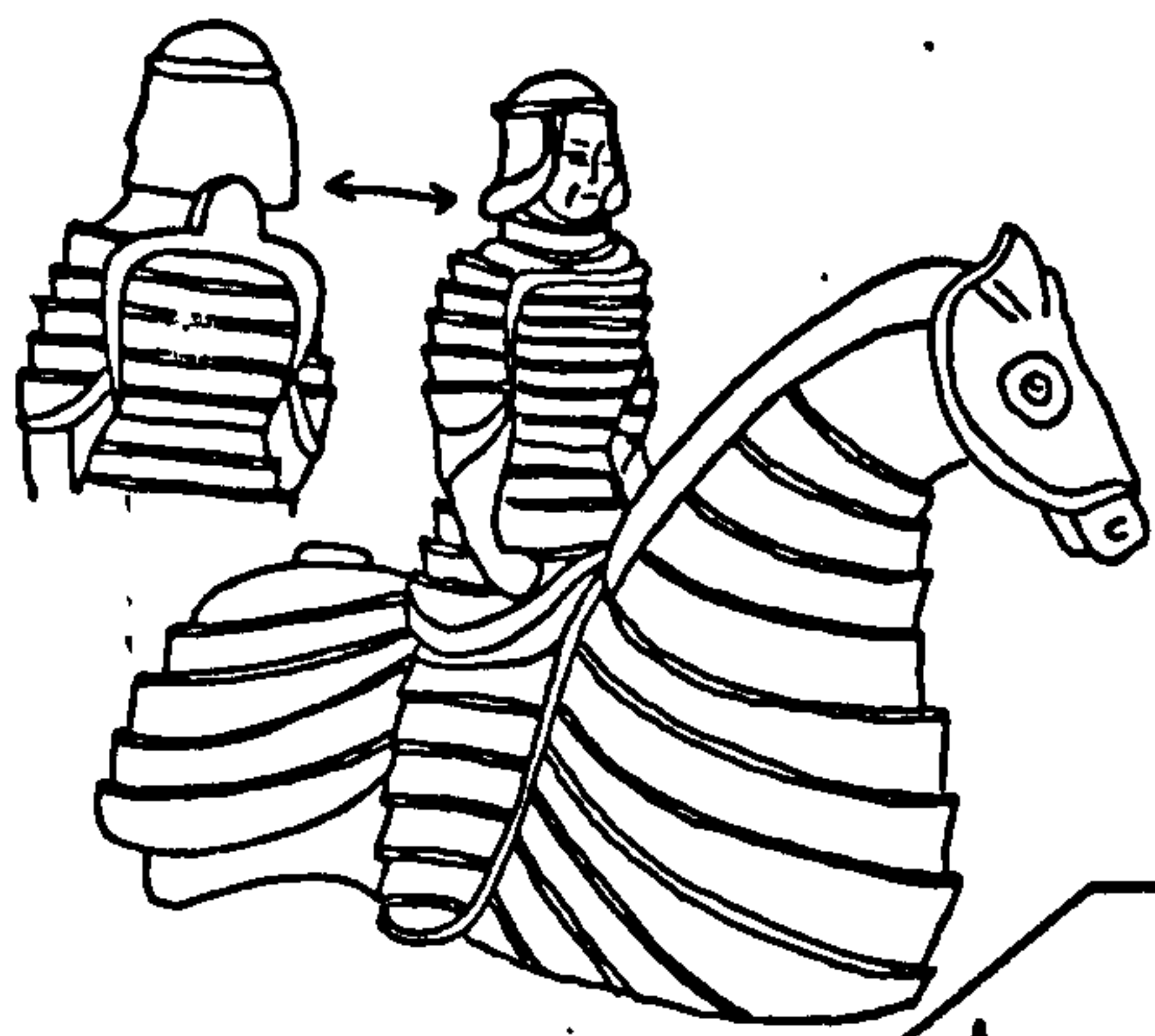
468



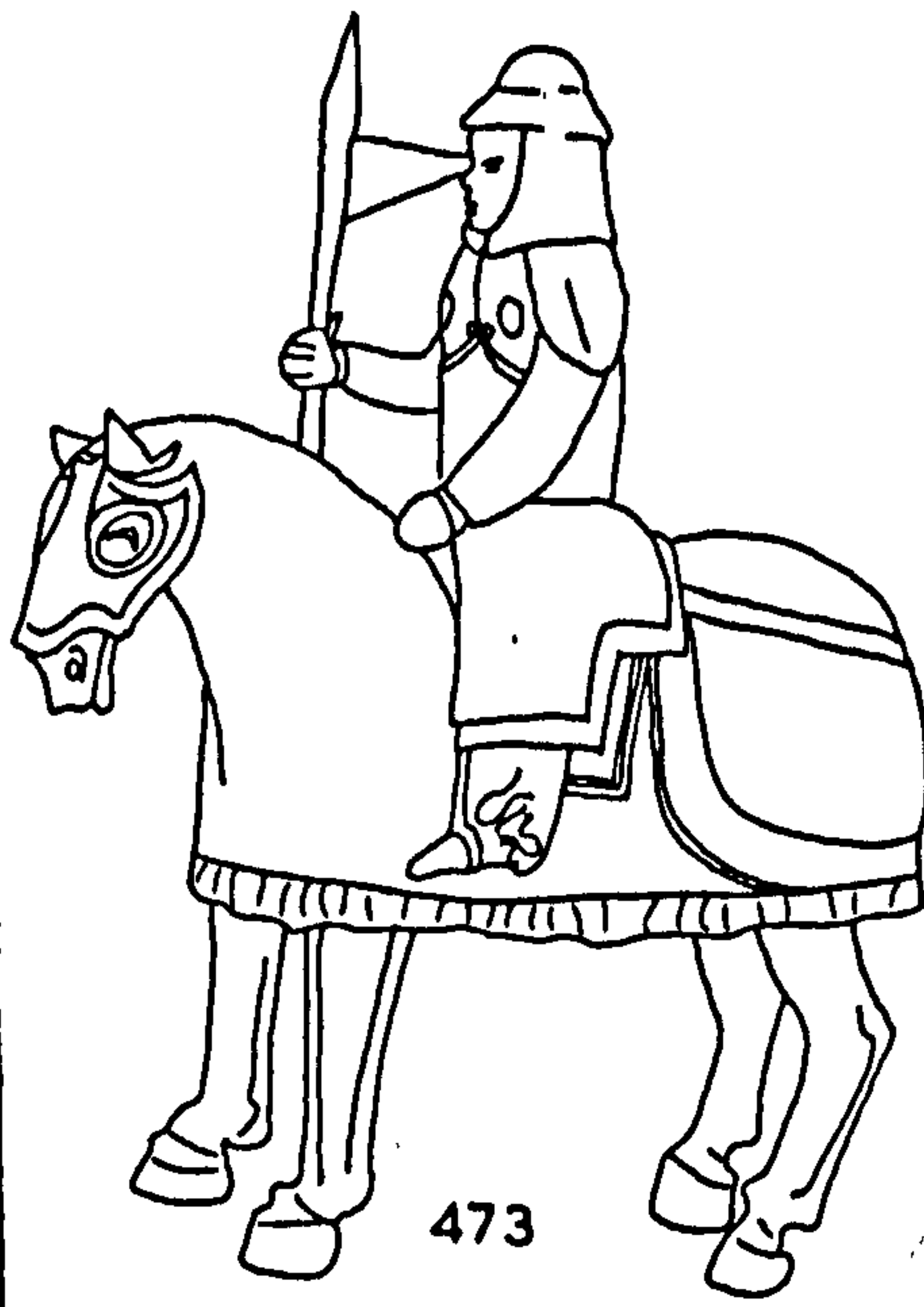
469



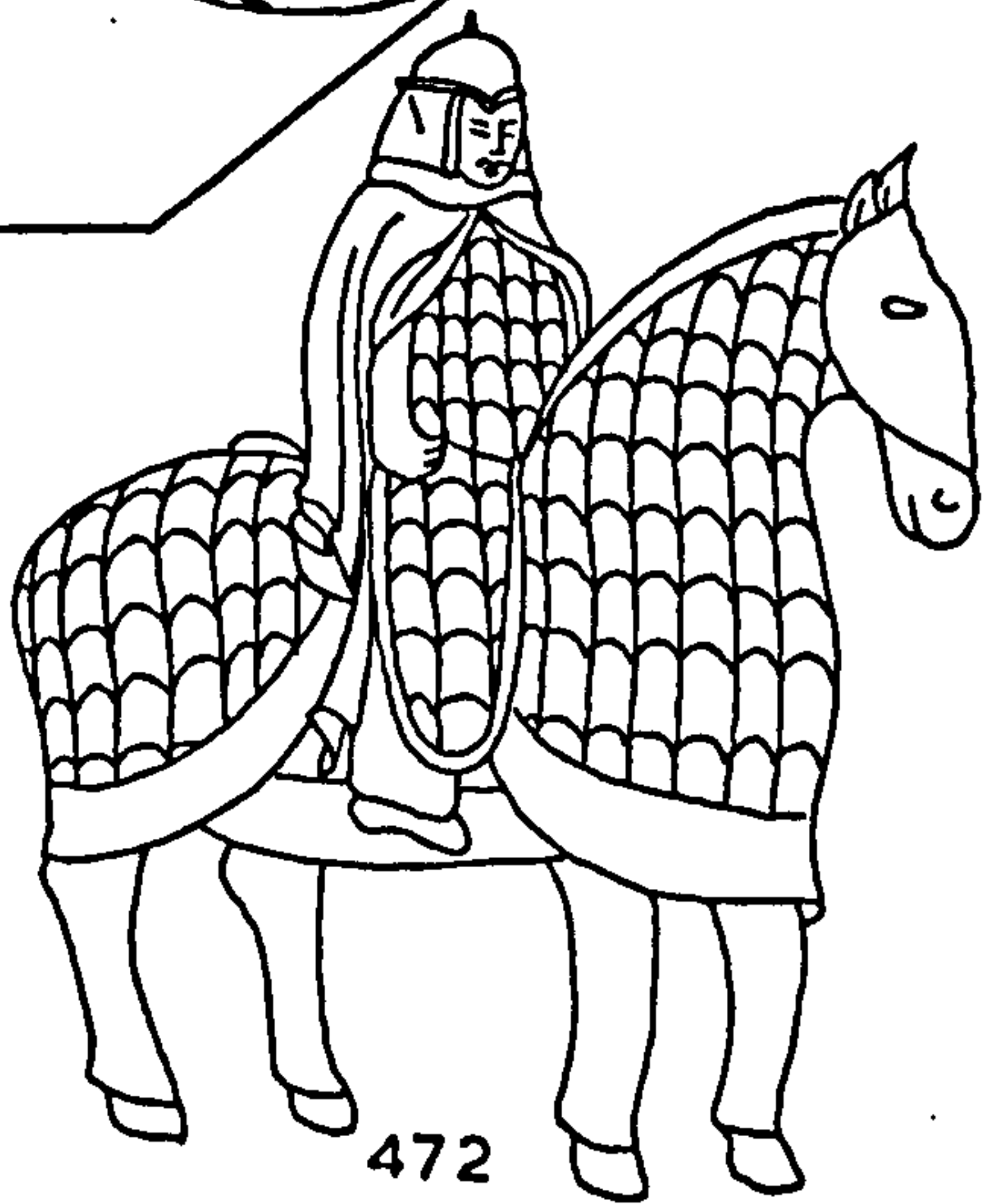
470



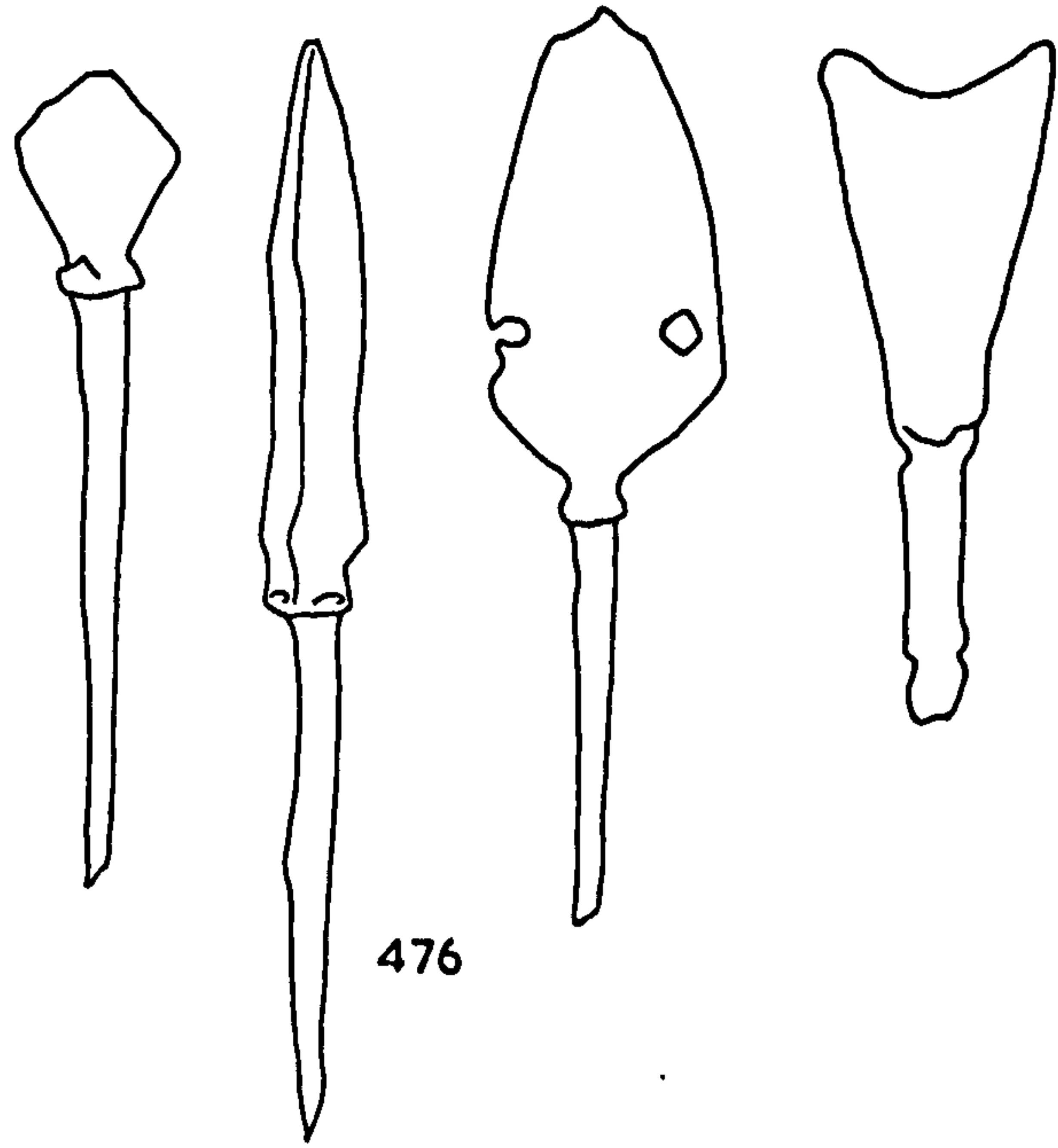
471



473



472



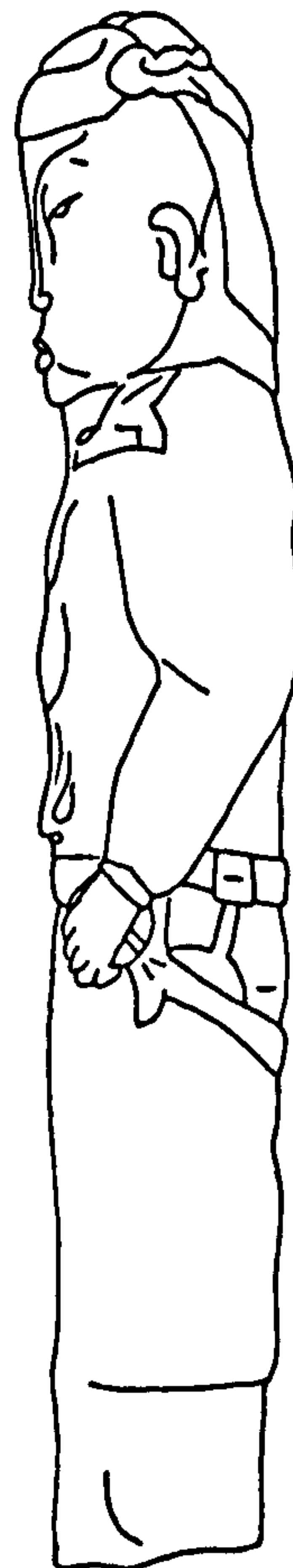
476



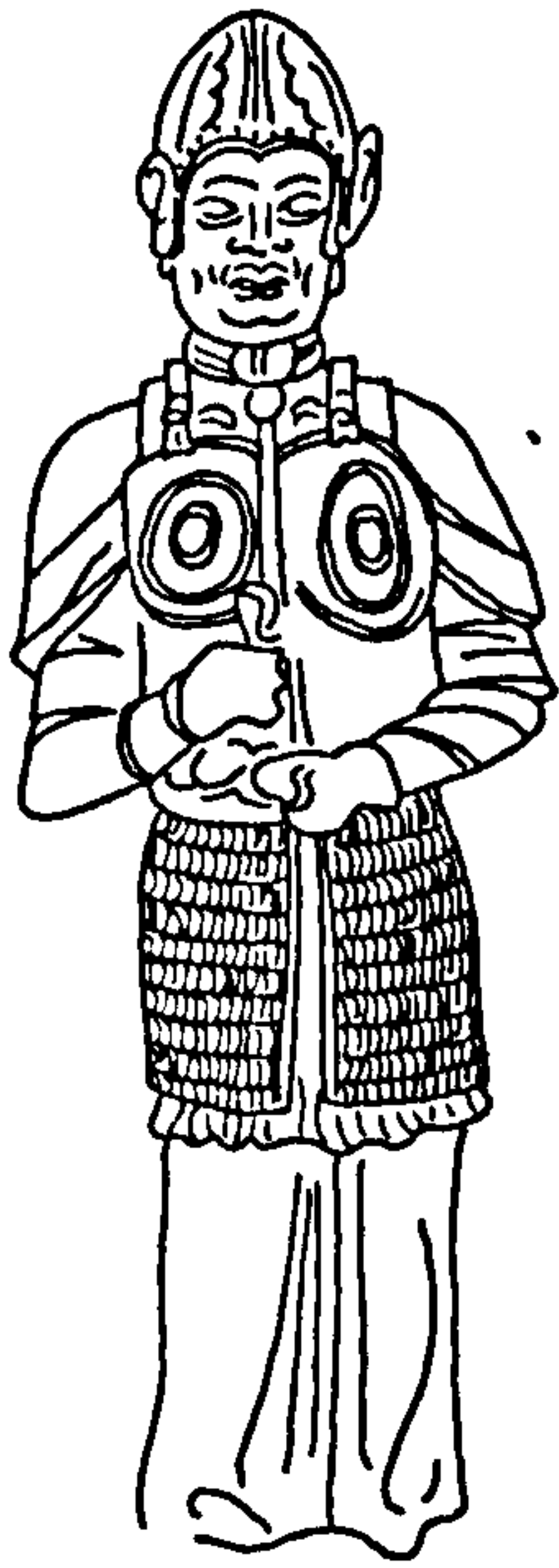
474



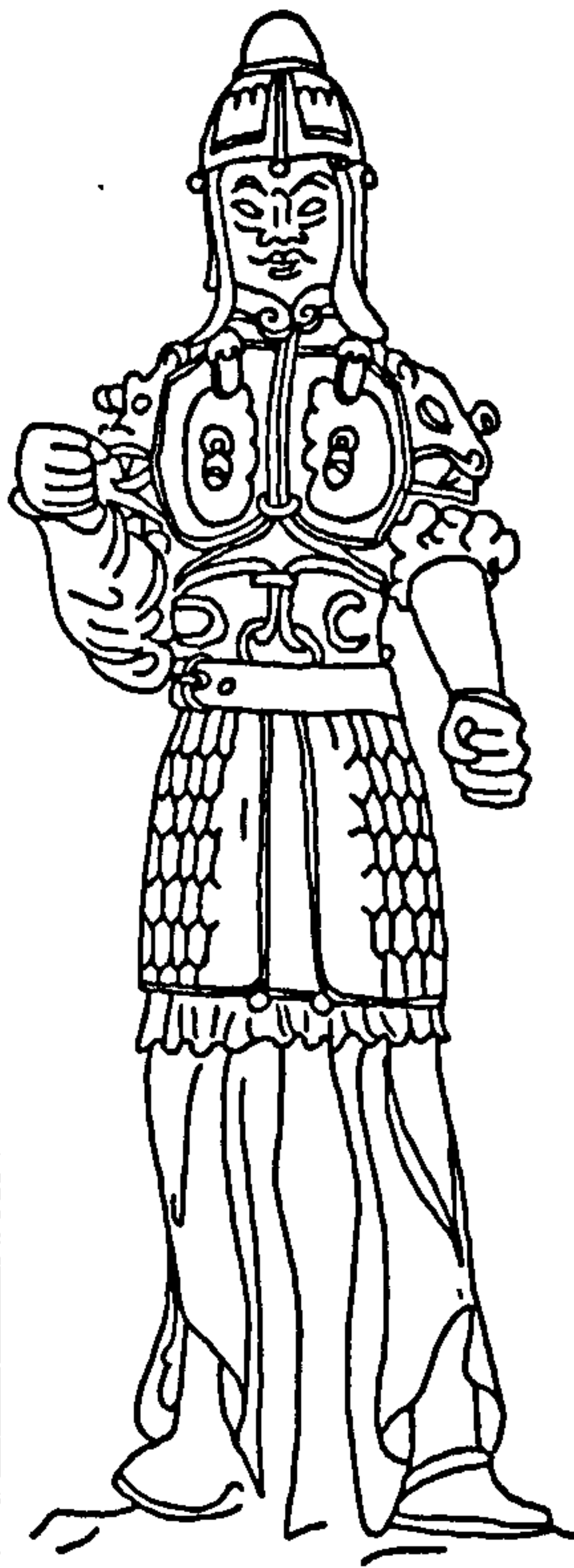
477



475



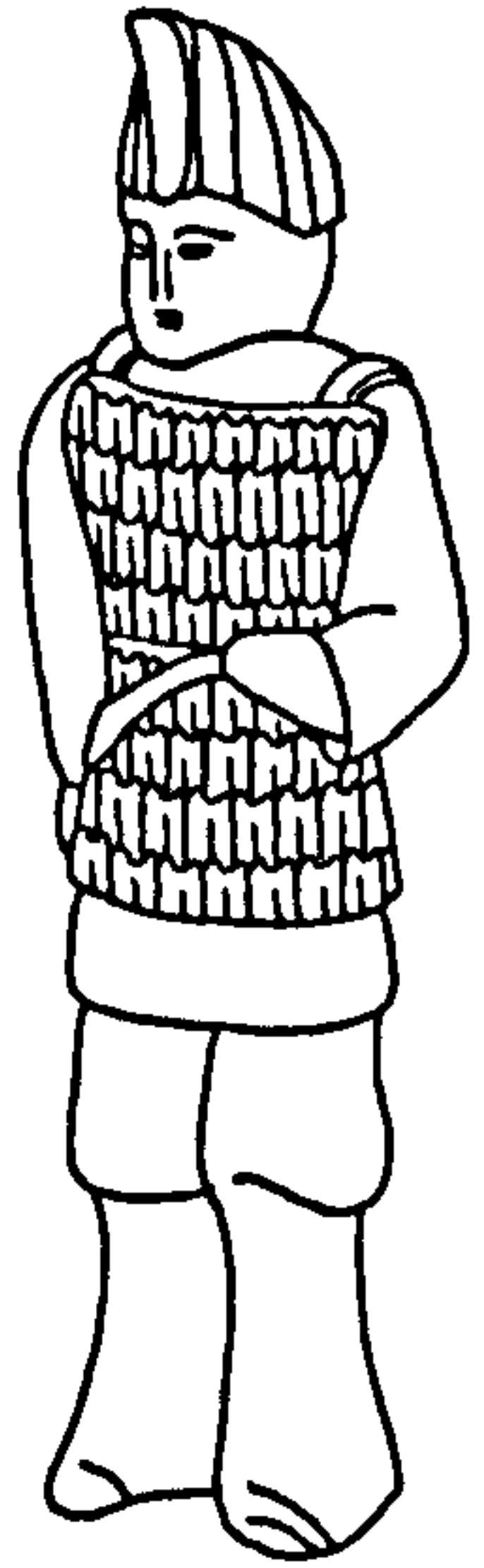
478



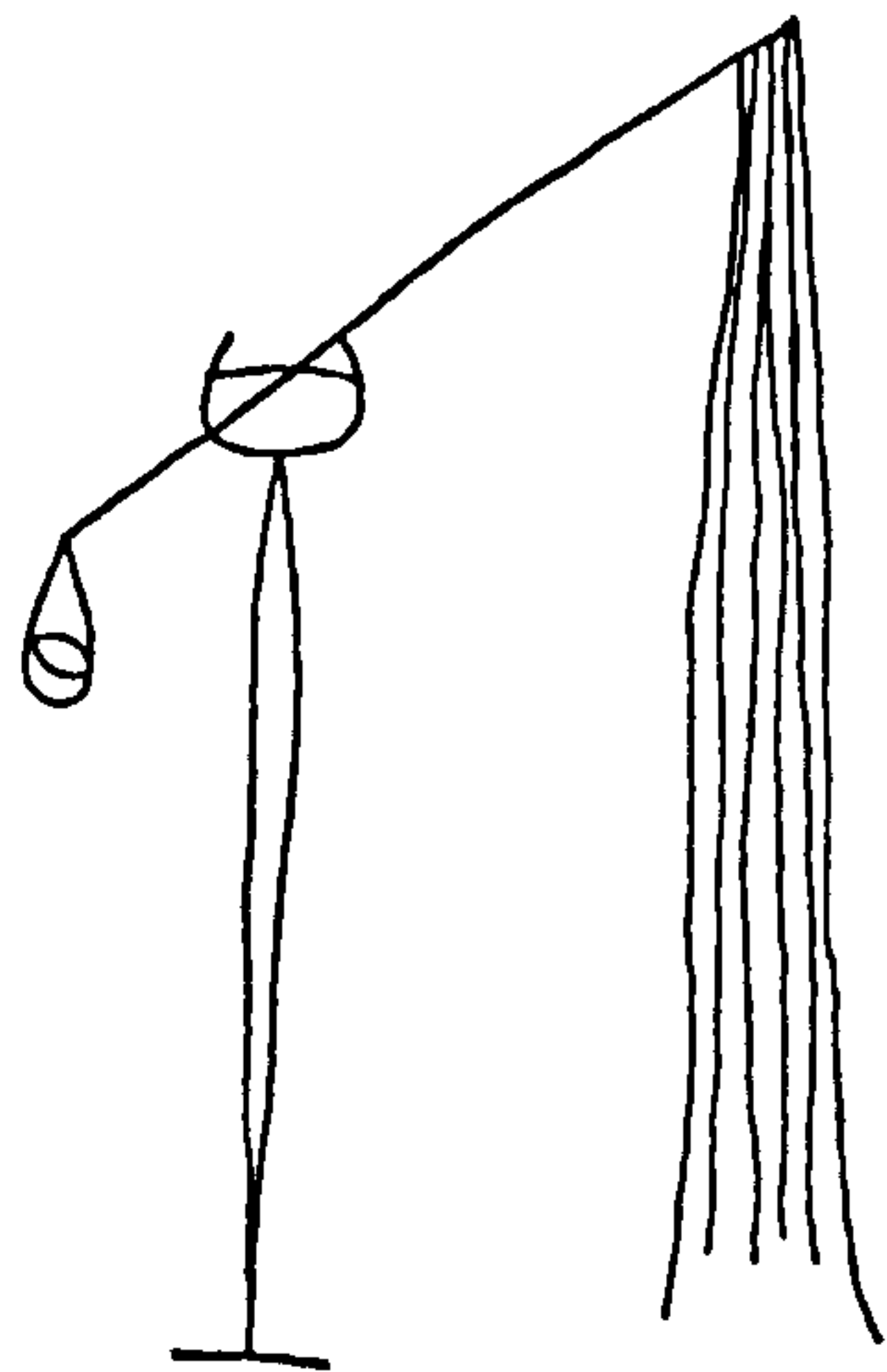
479



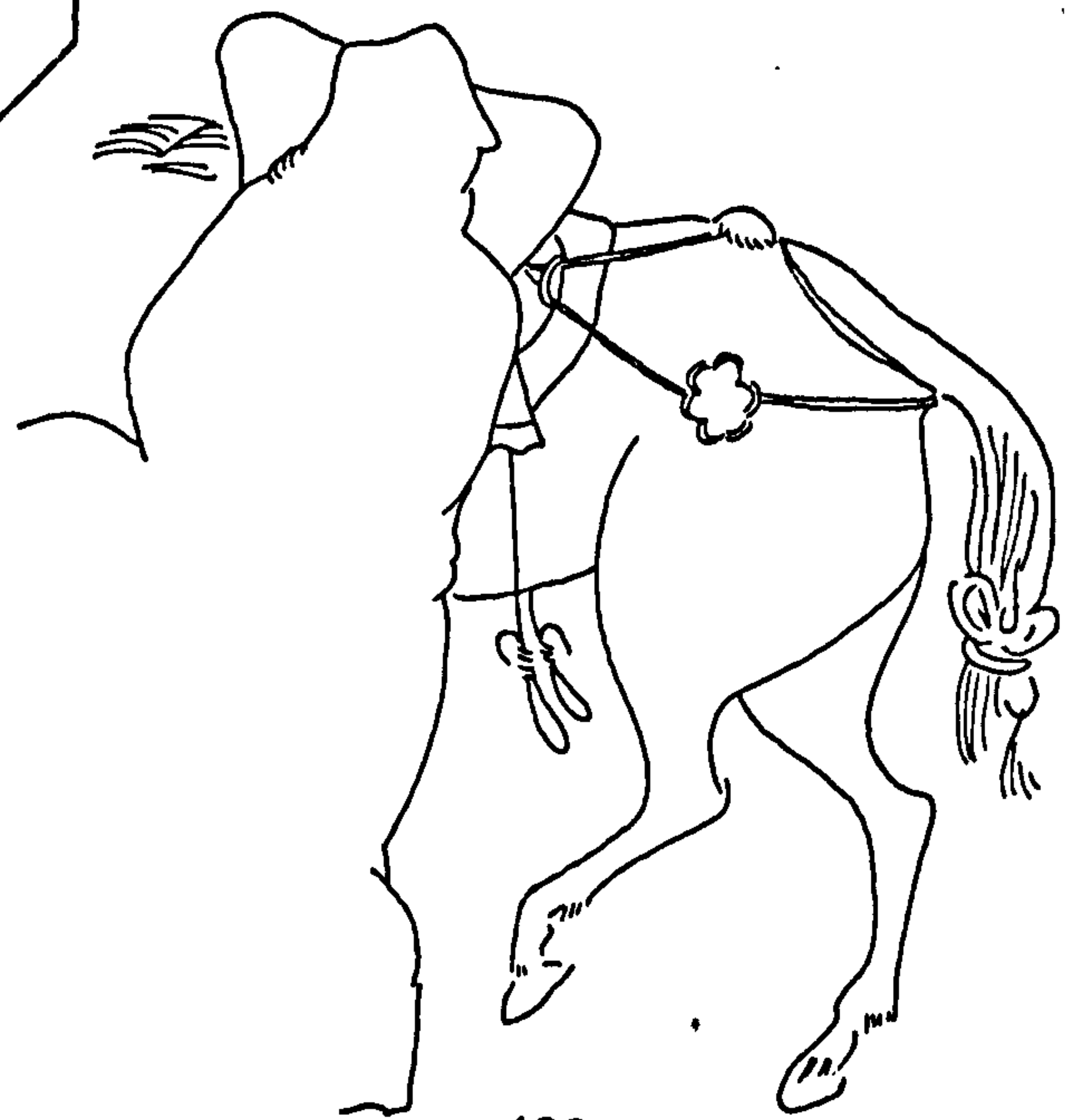
480



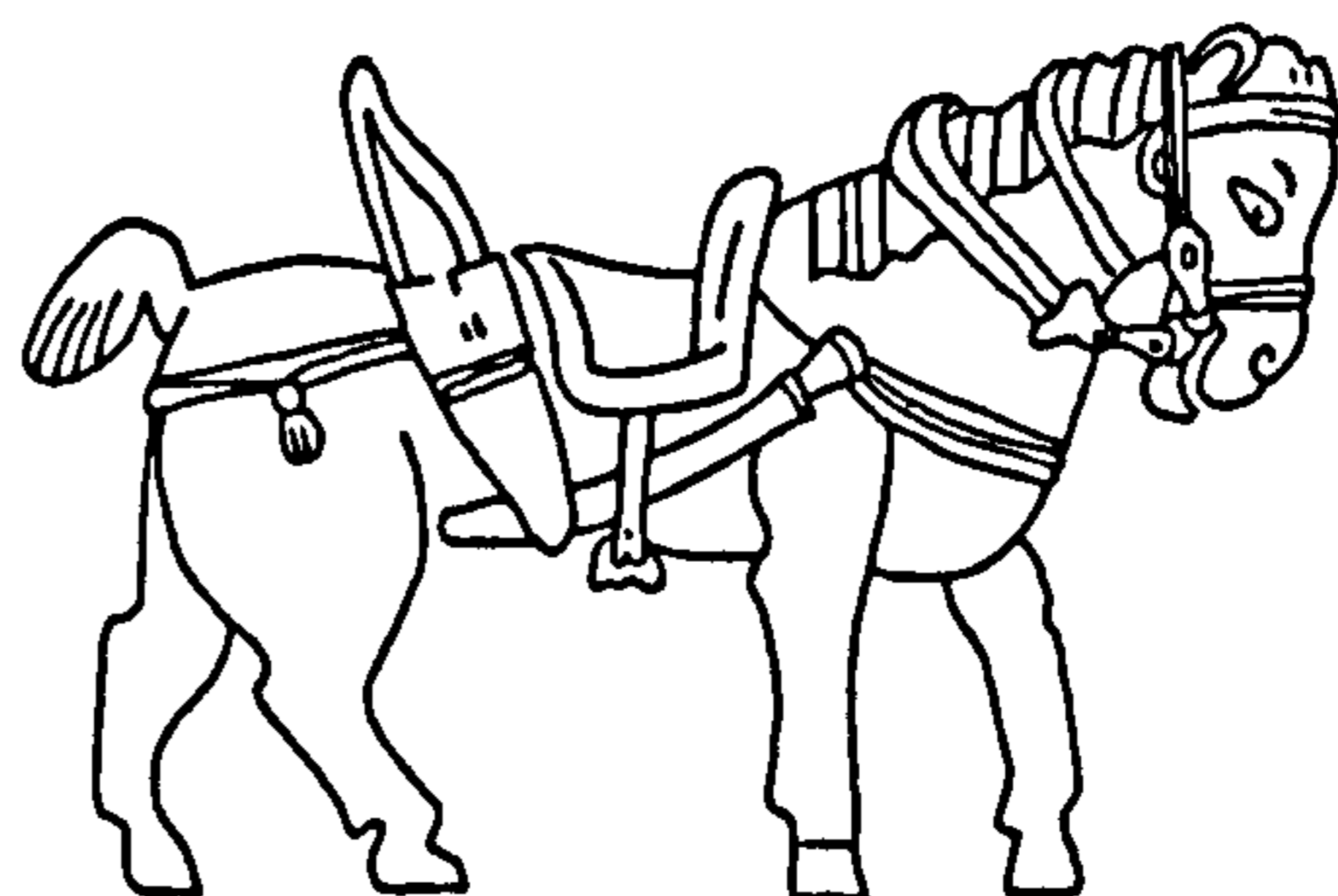
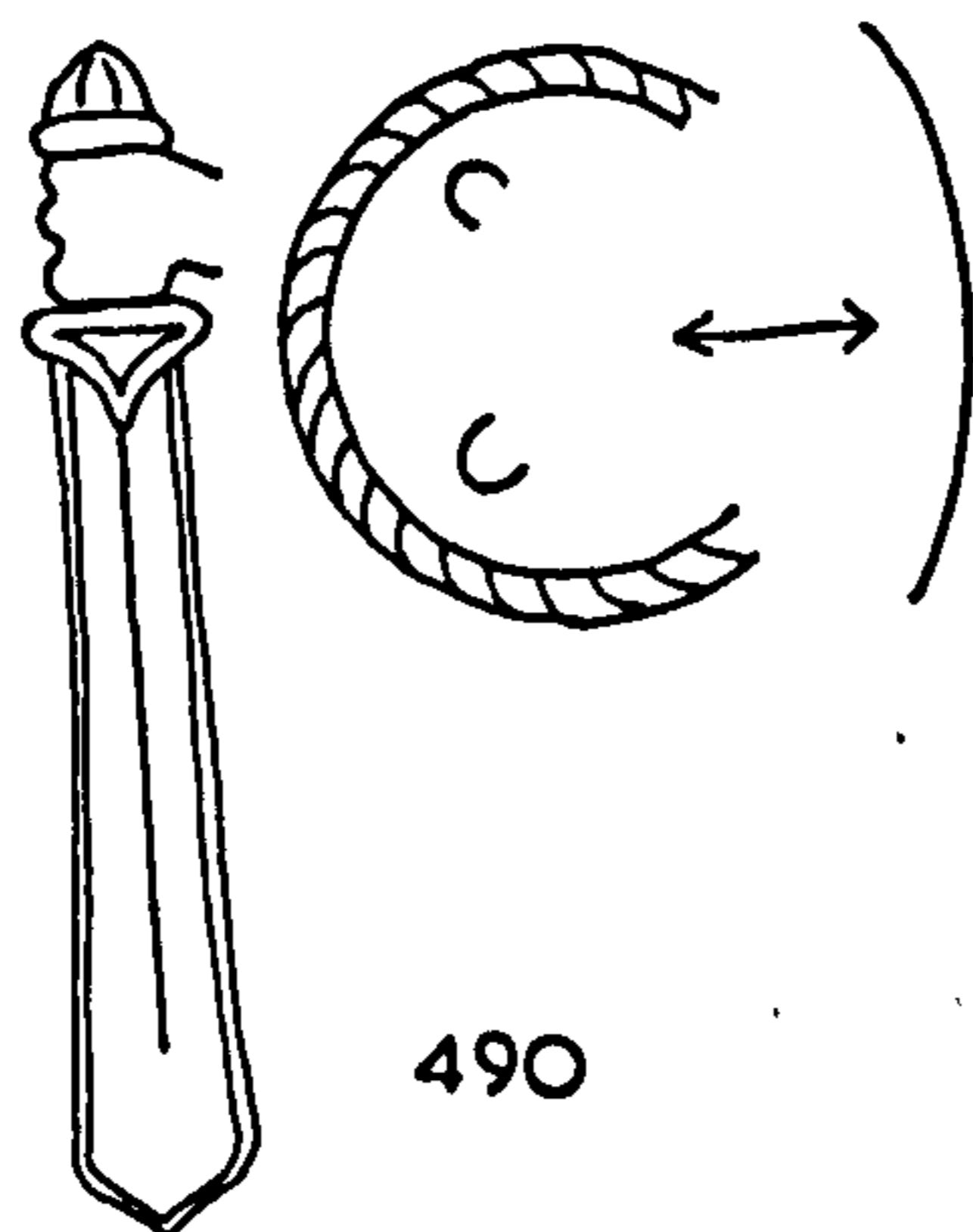
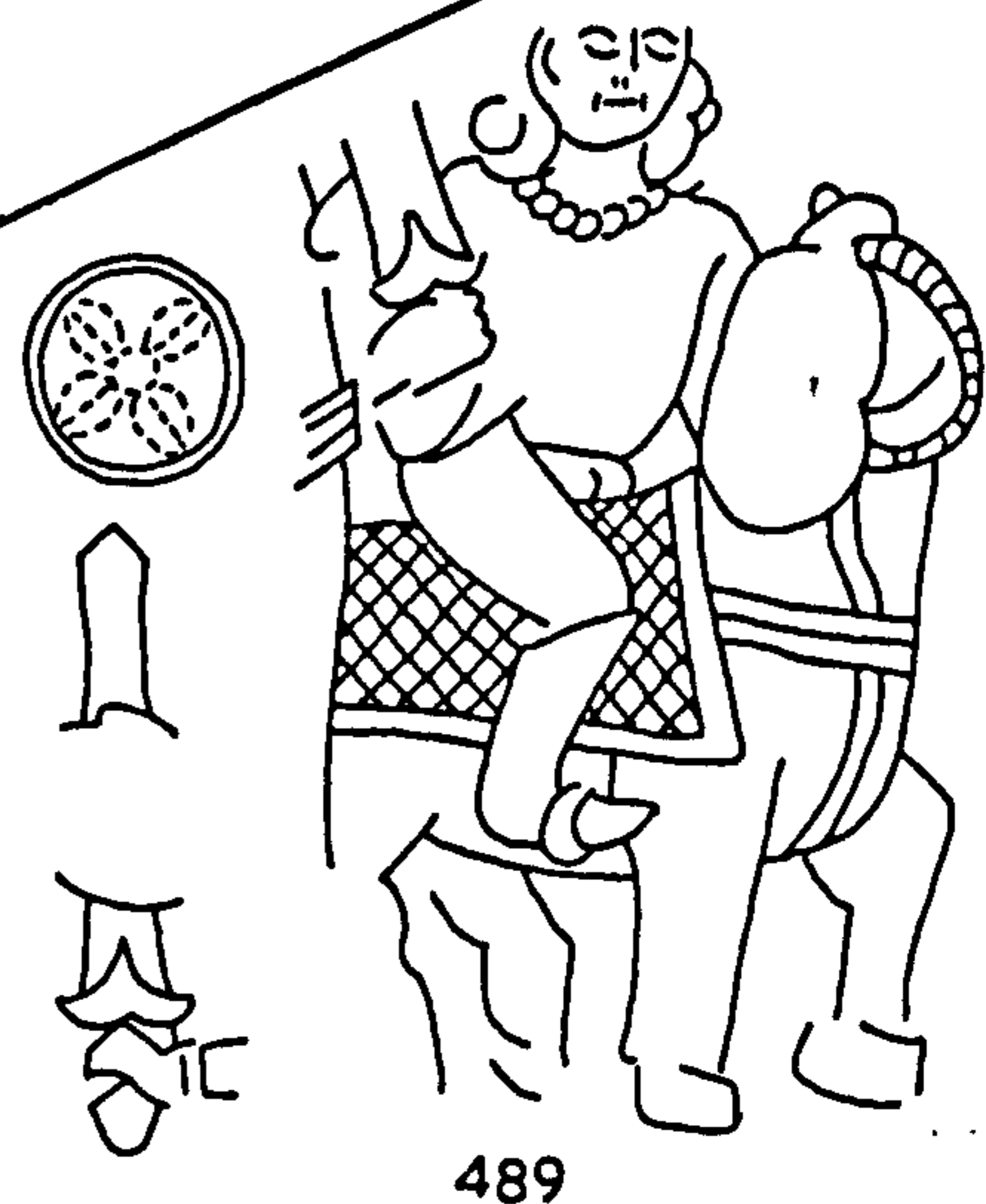
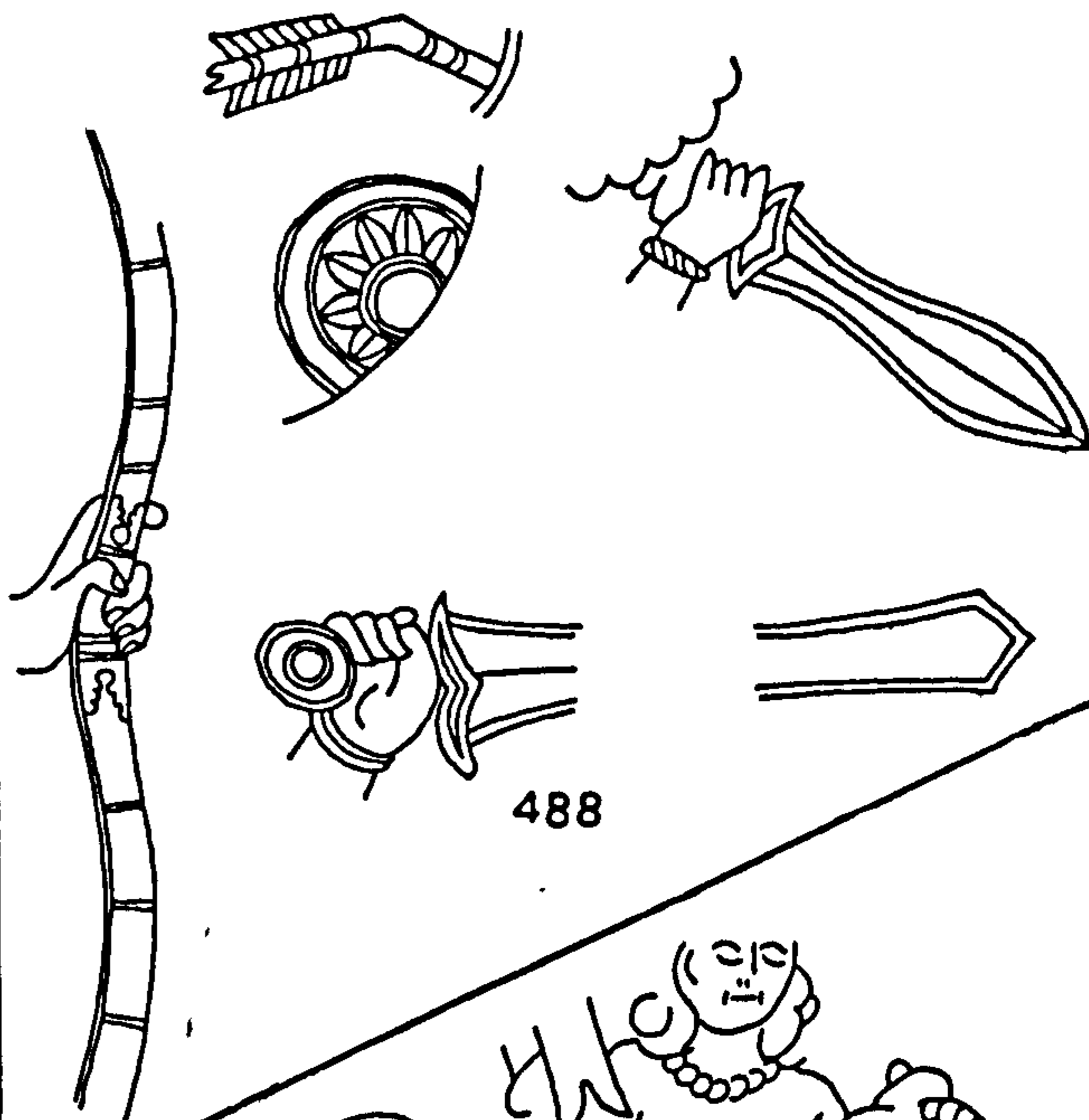
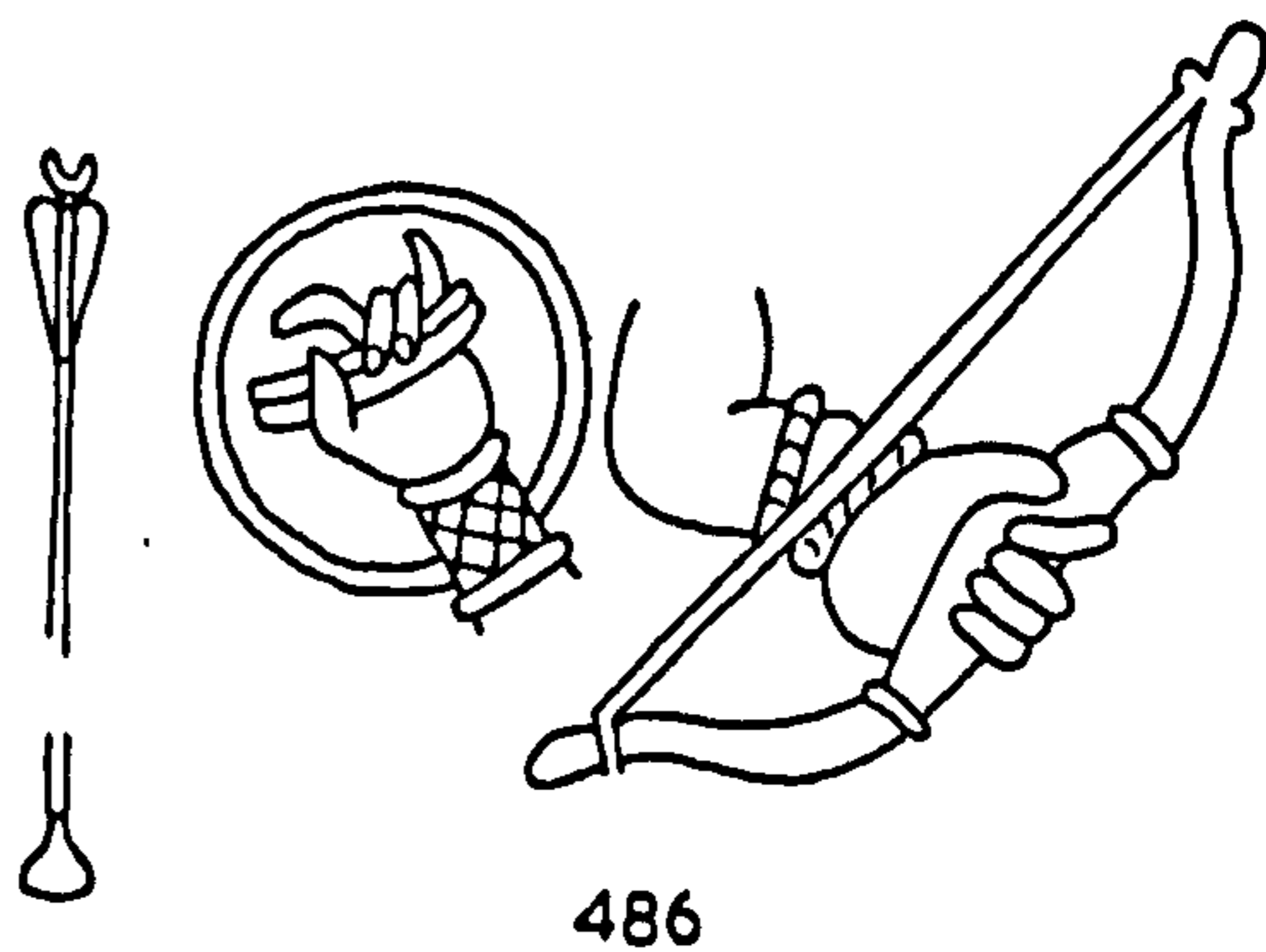
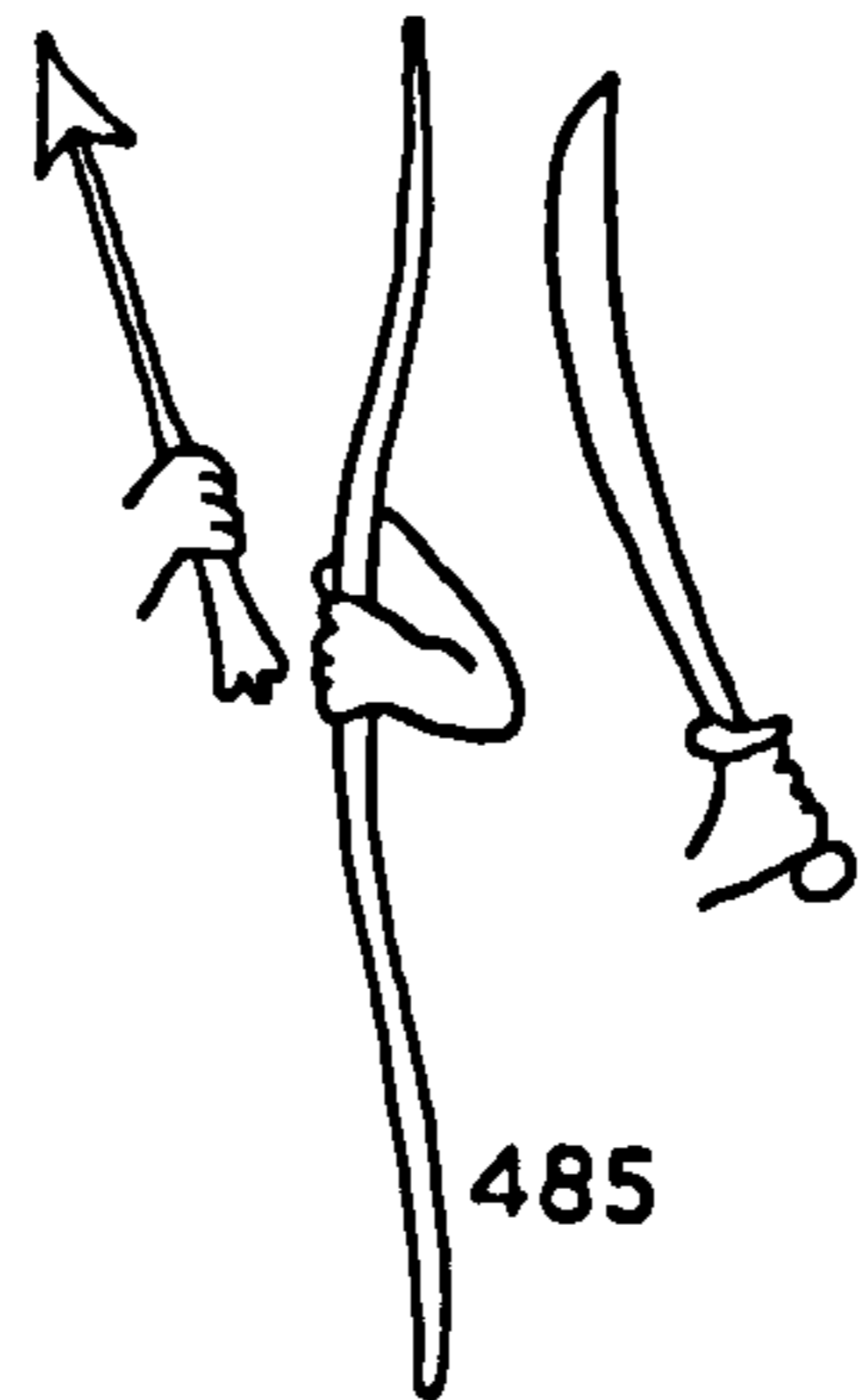
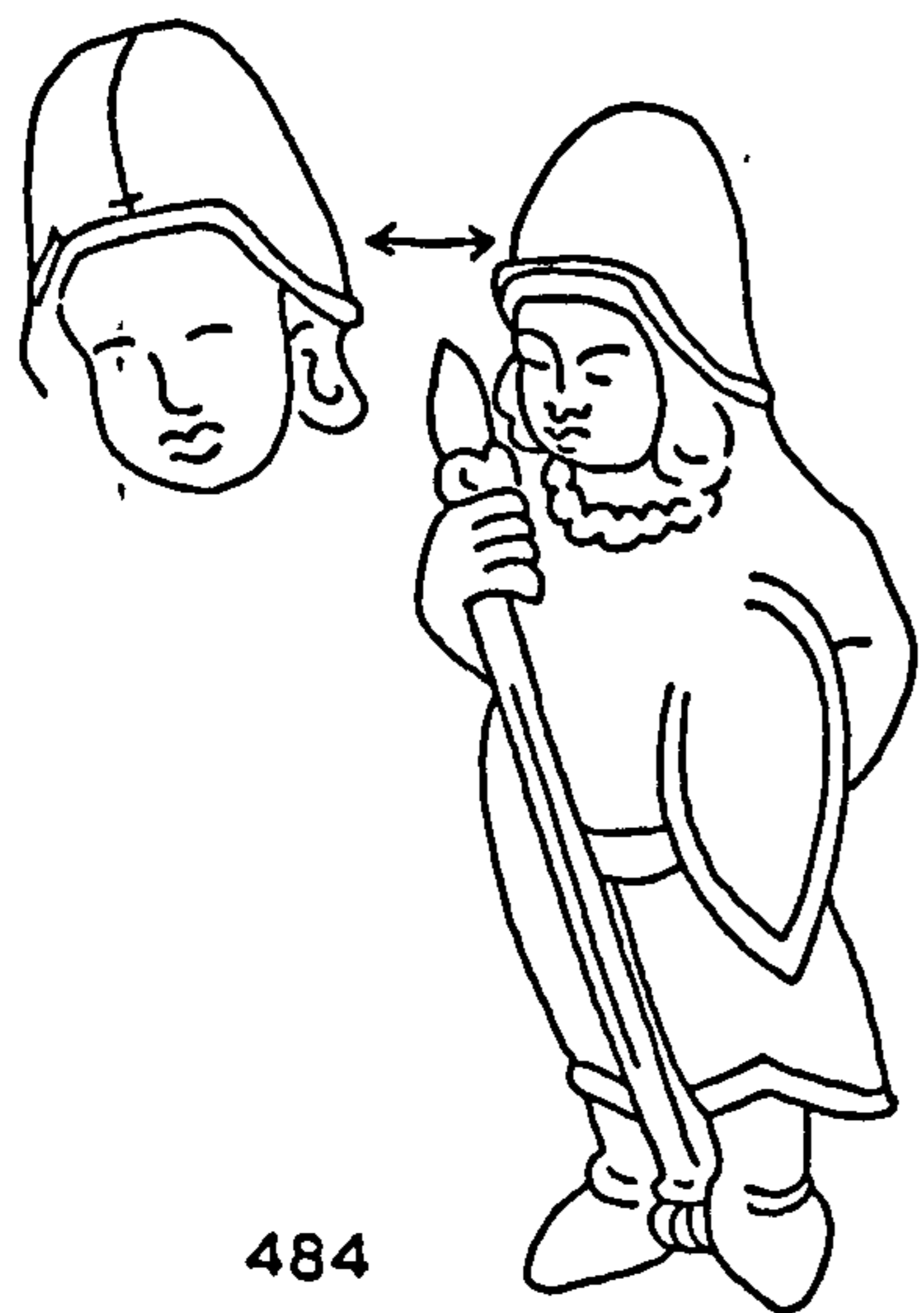
481



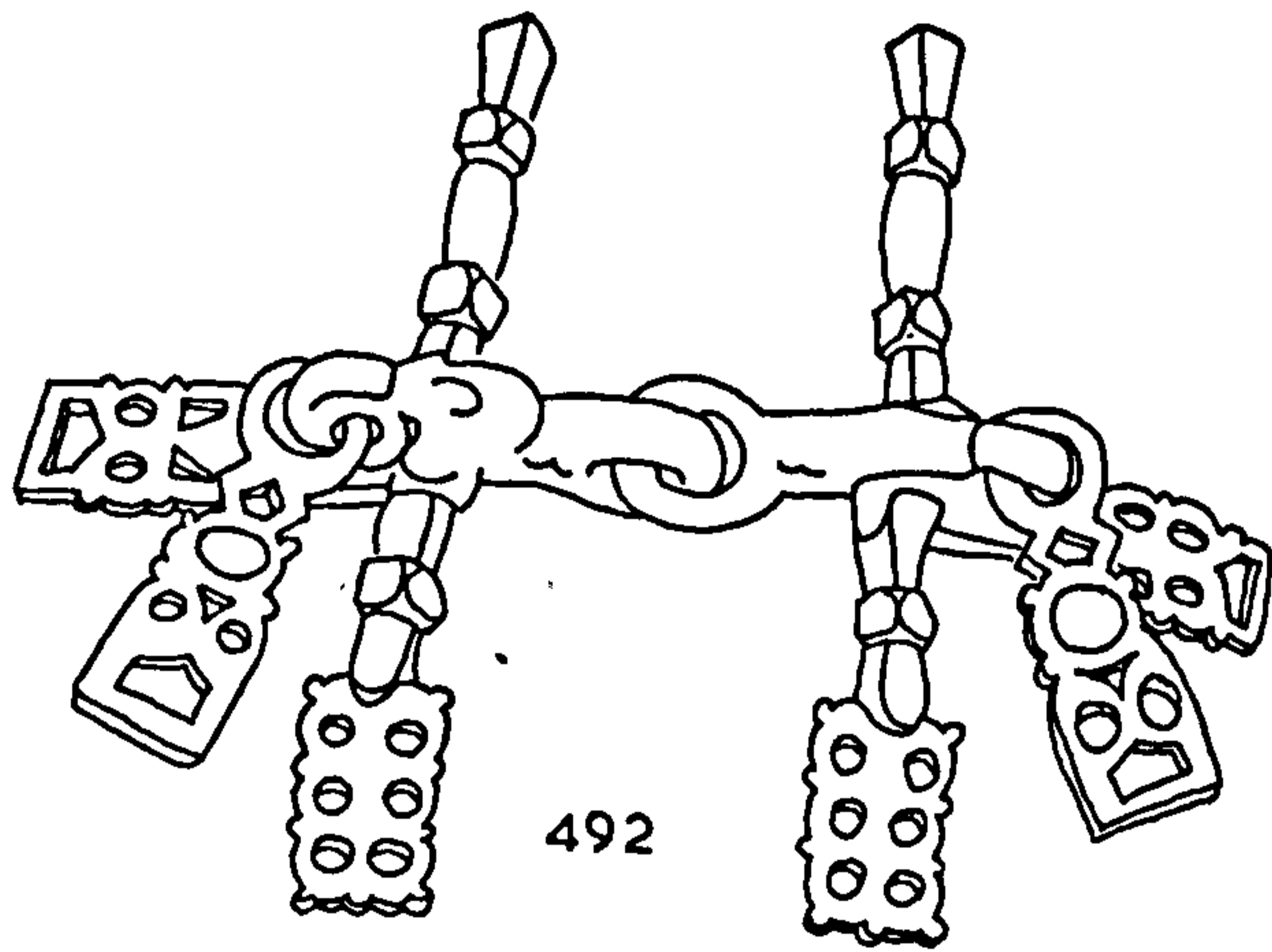
482



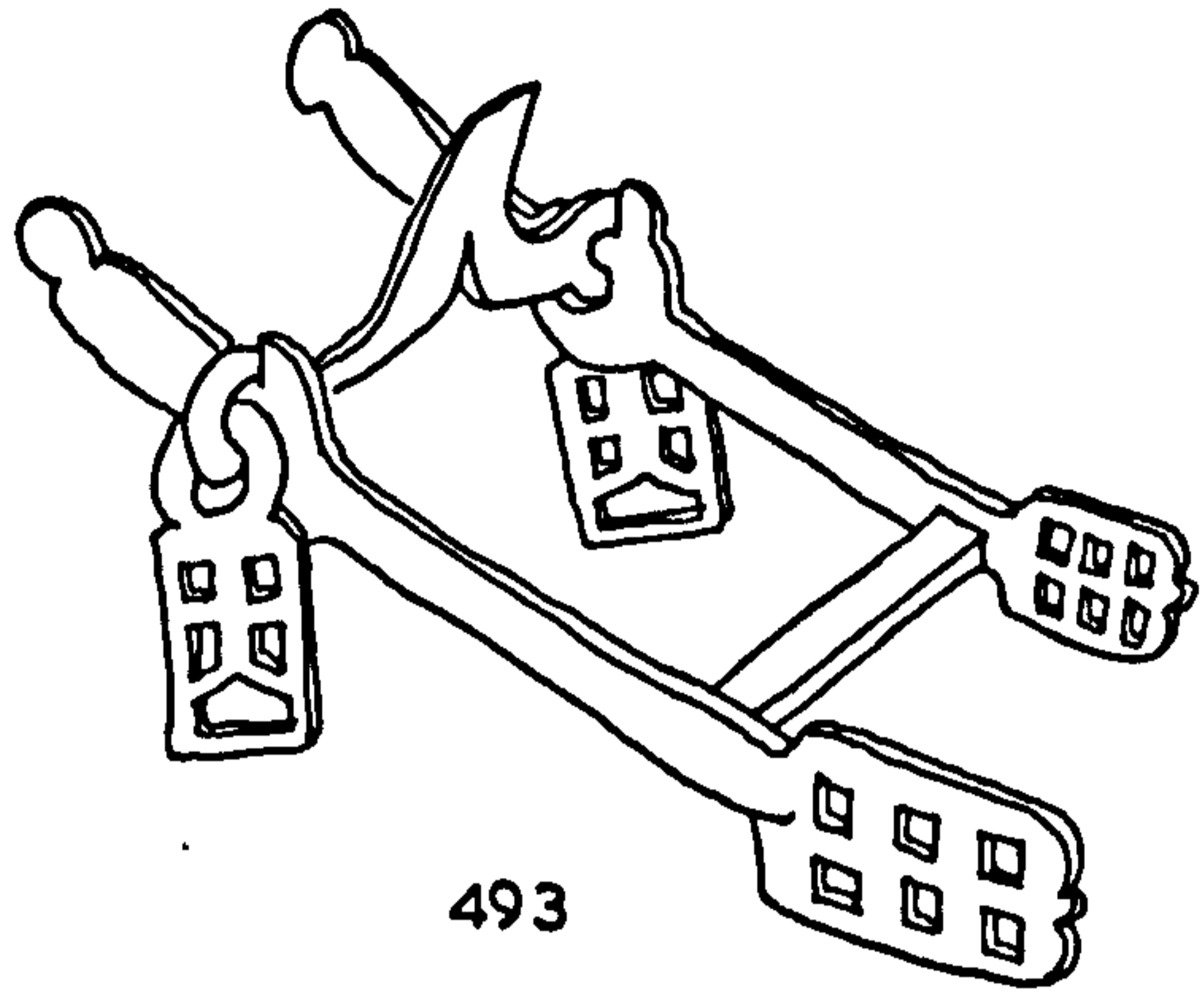
483







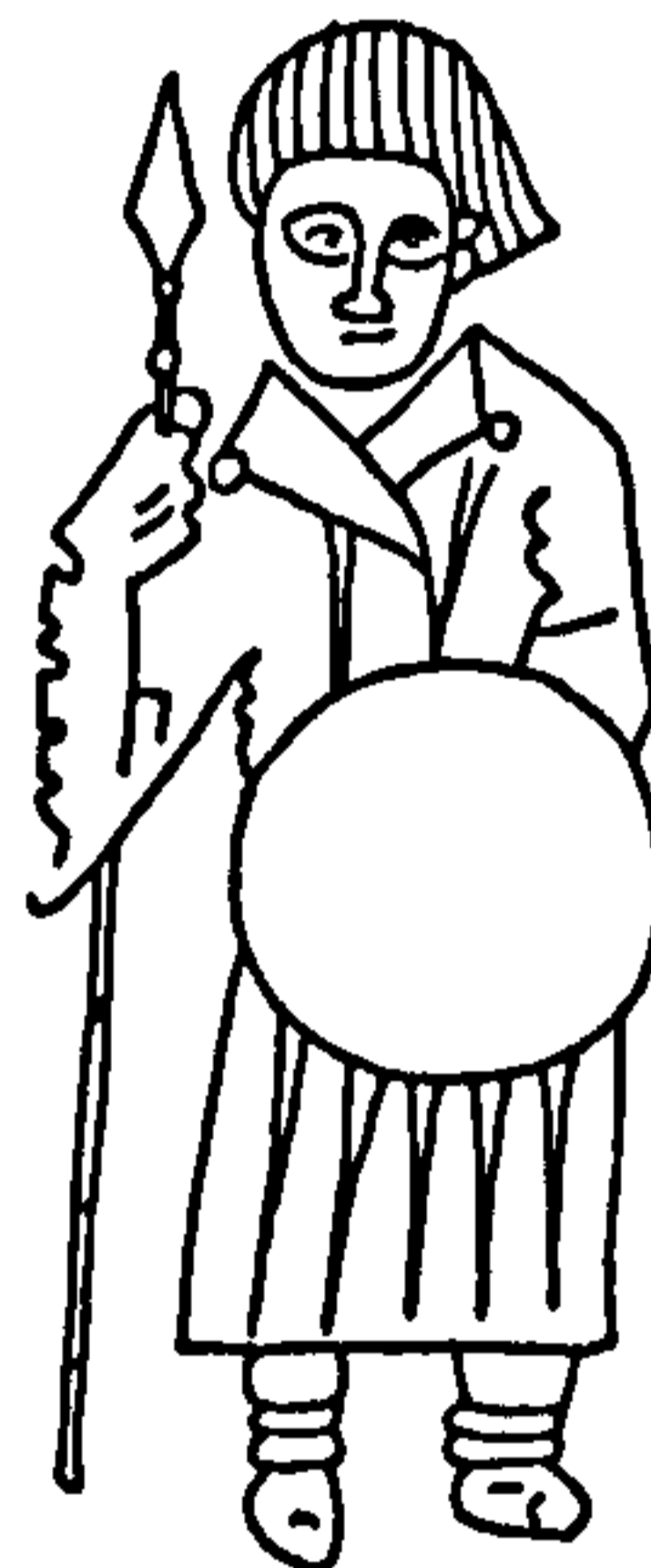
492



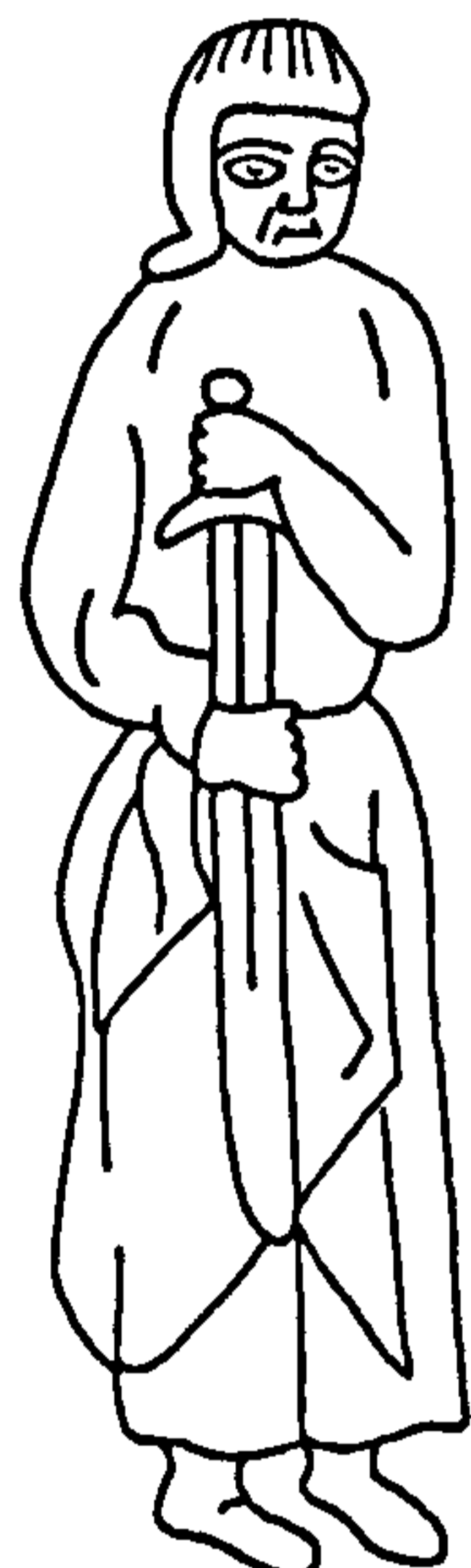
493



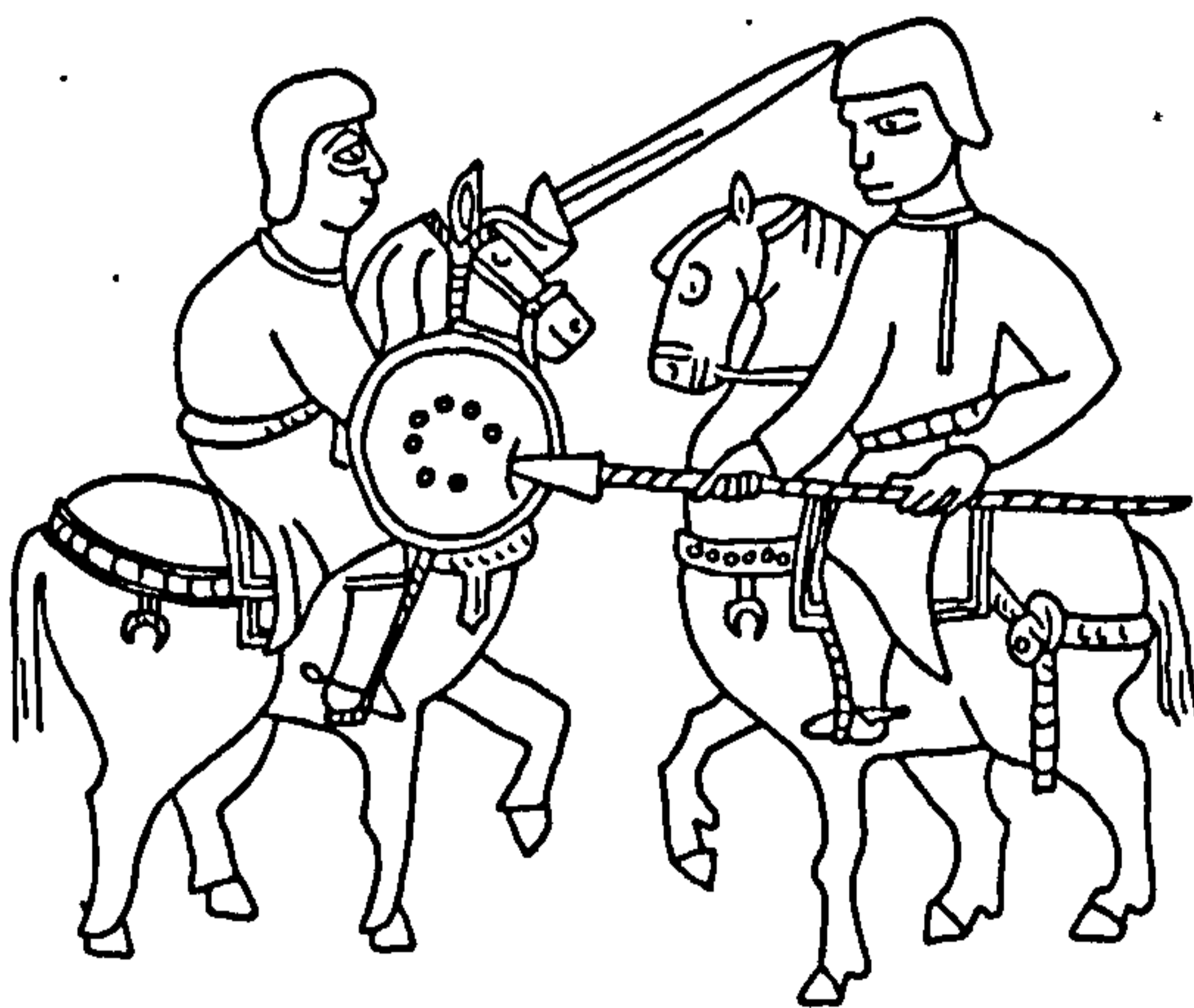
494



495



496

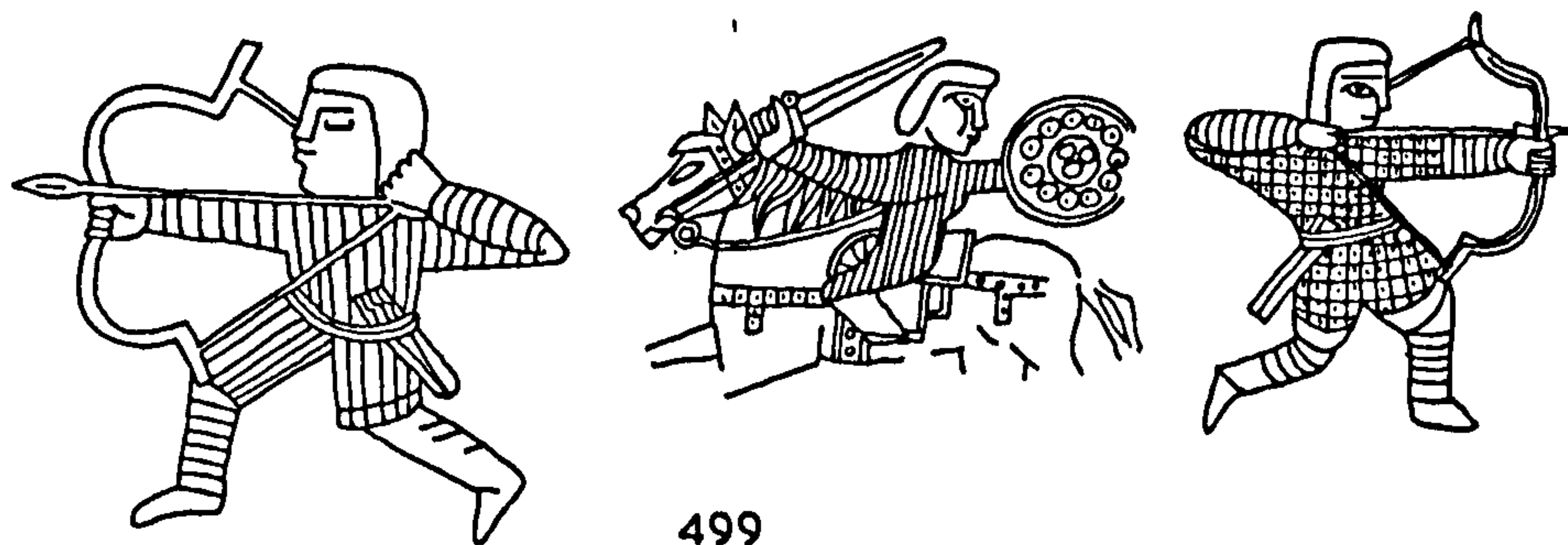


497





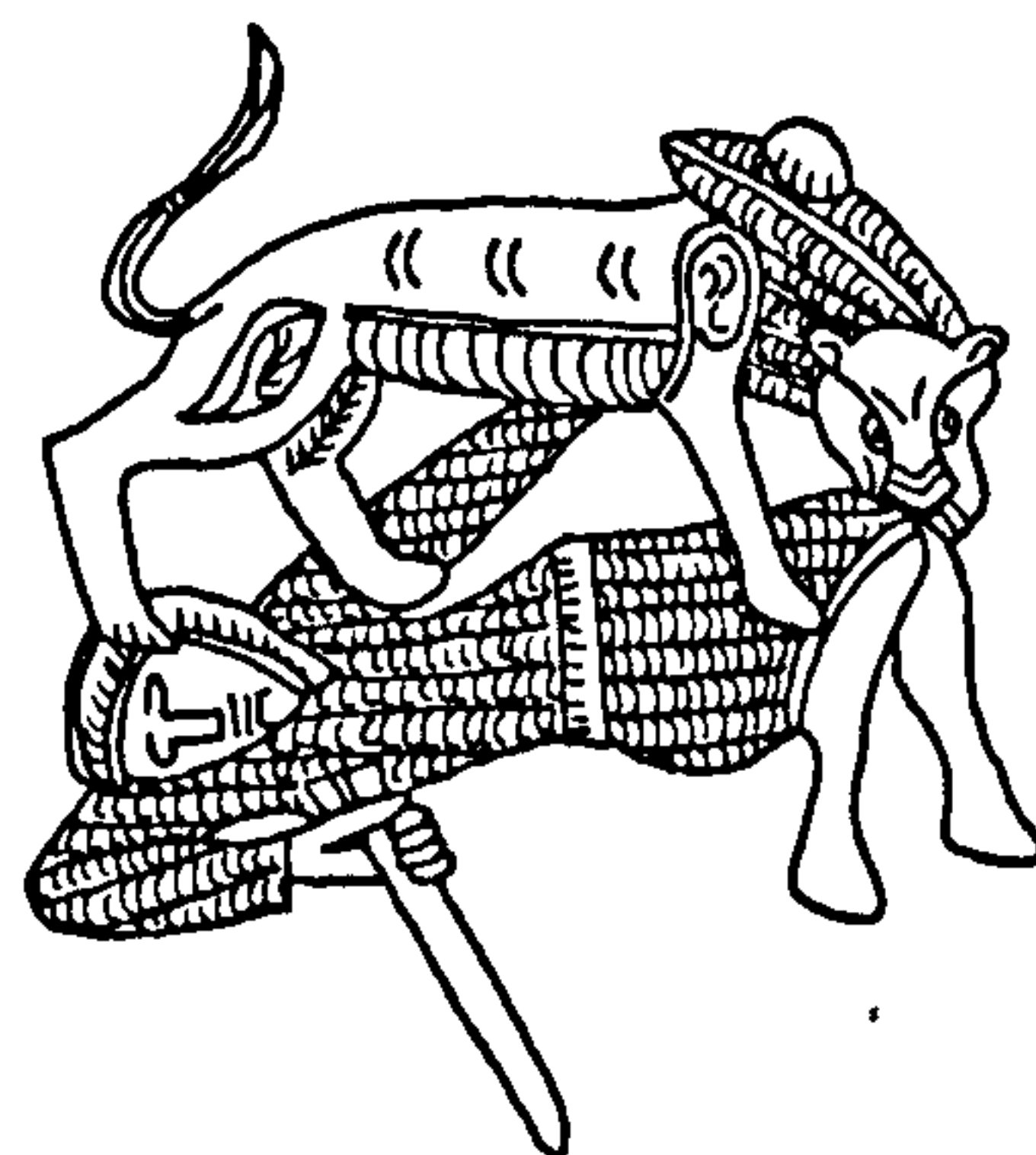
498



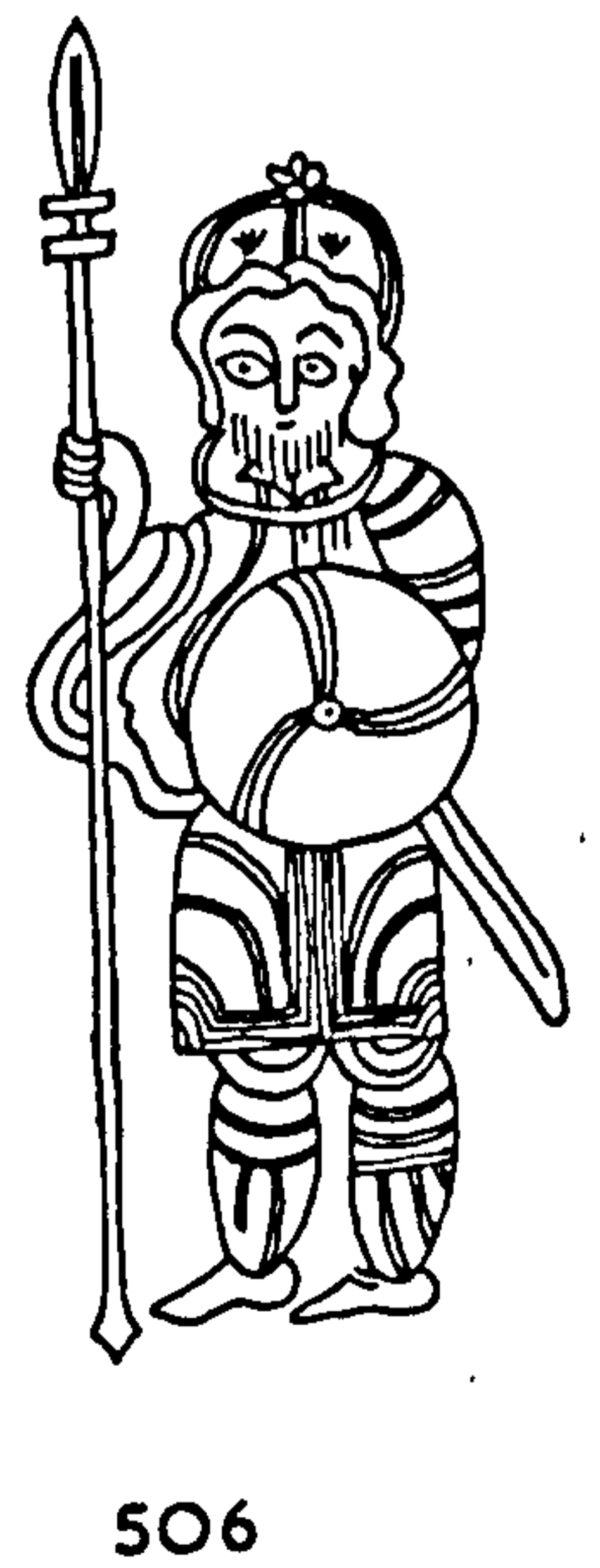
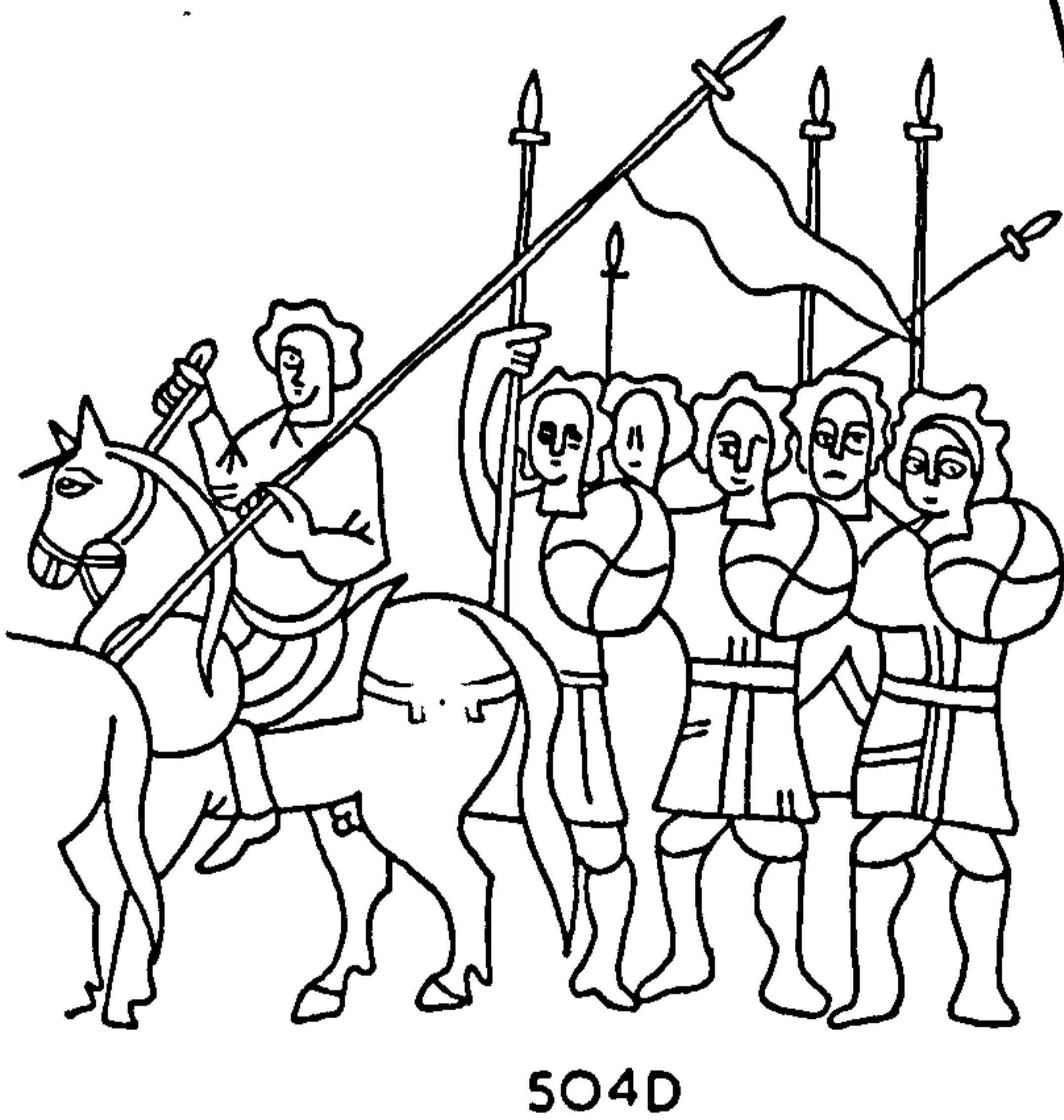
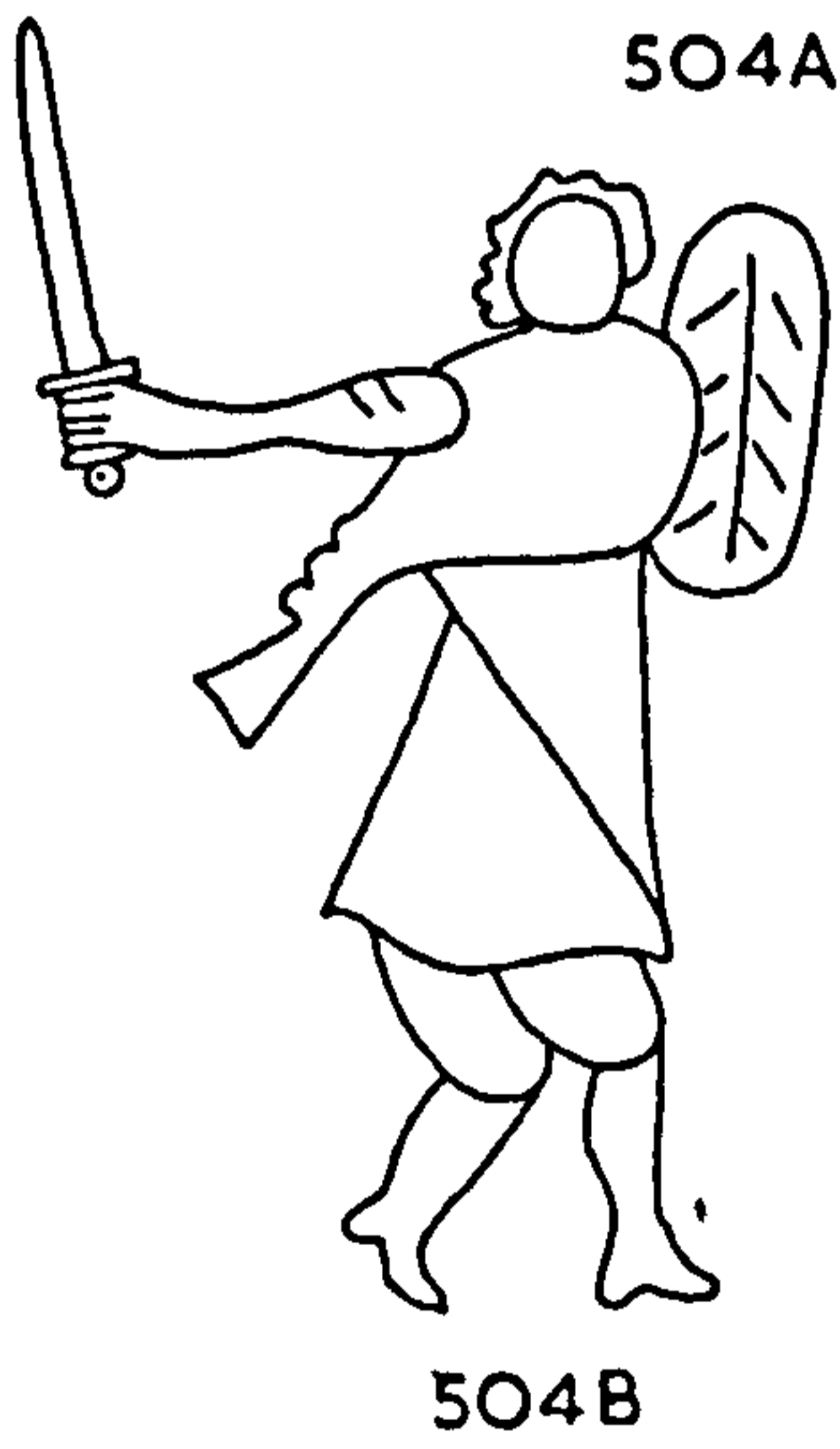
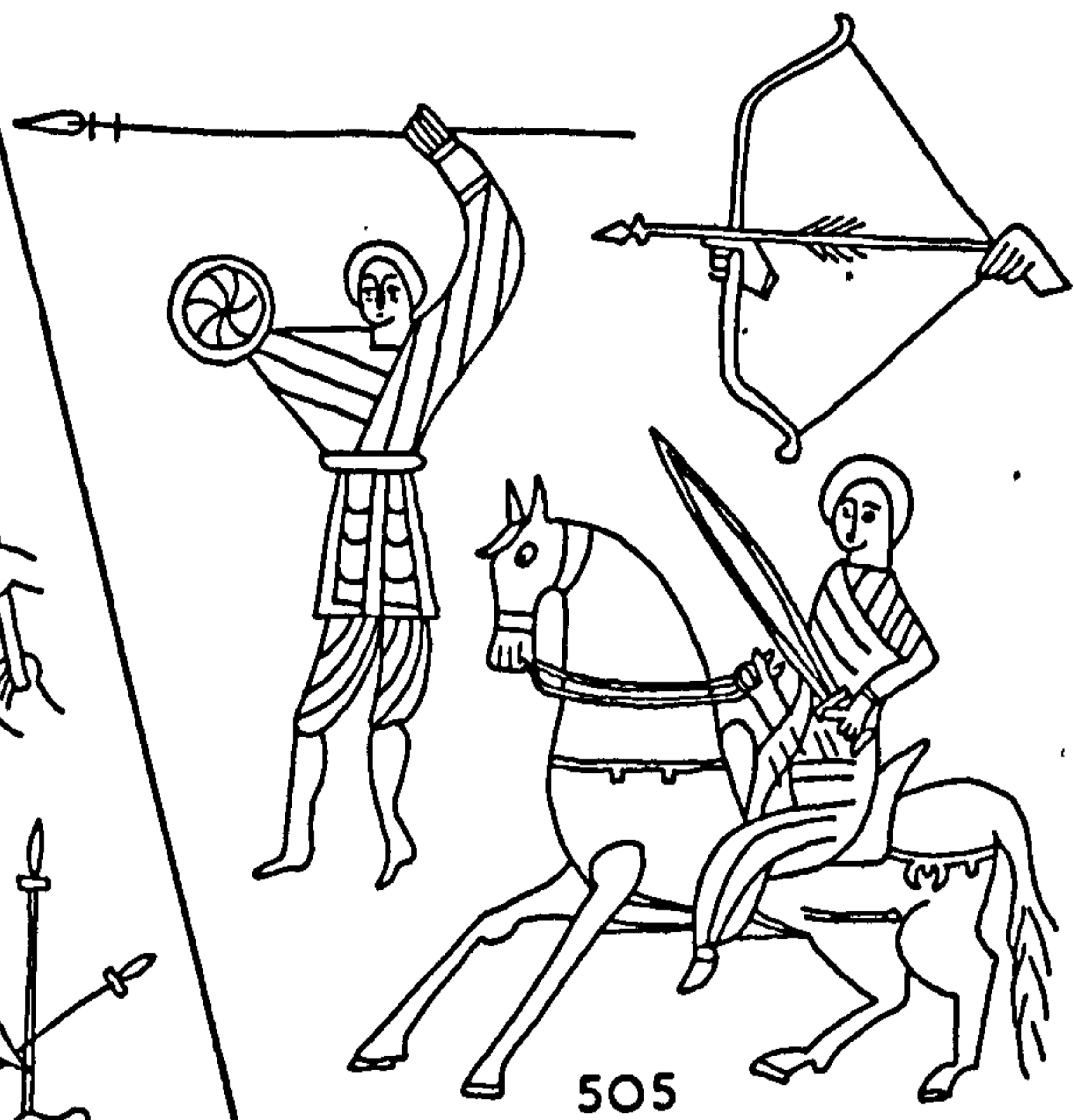
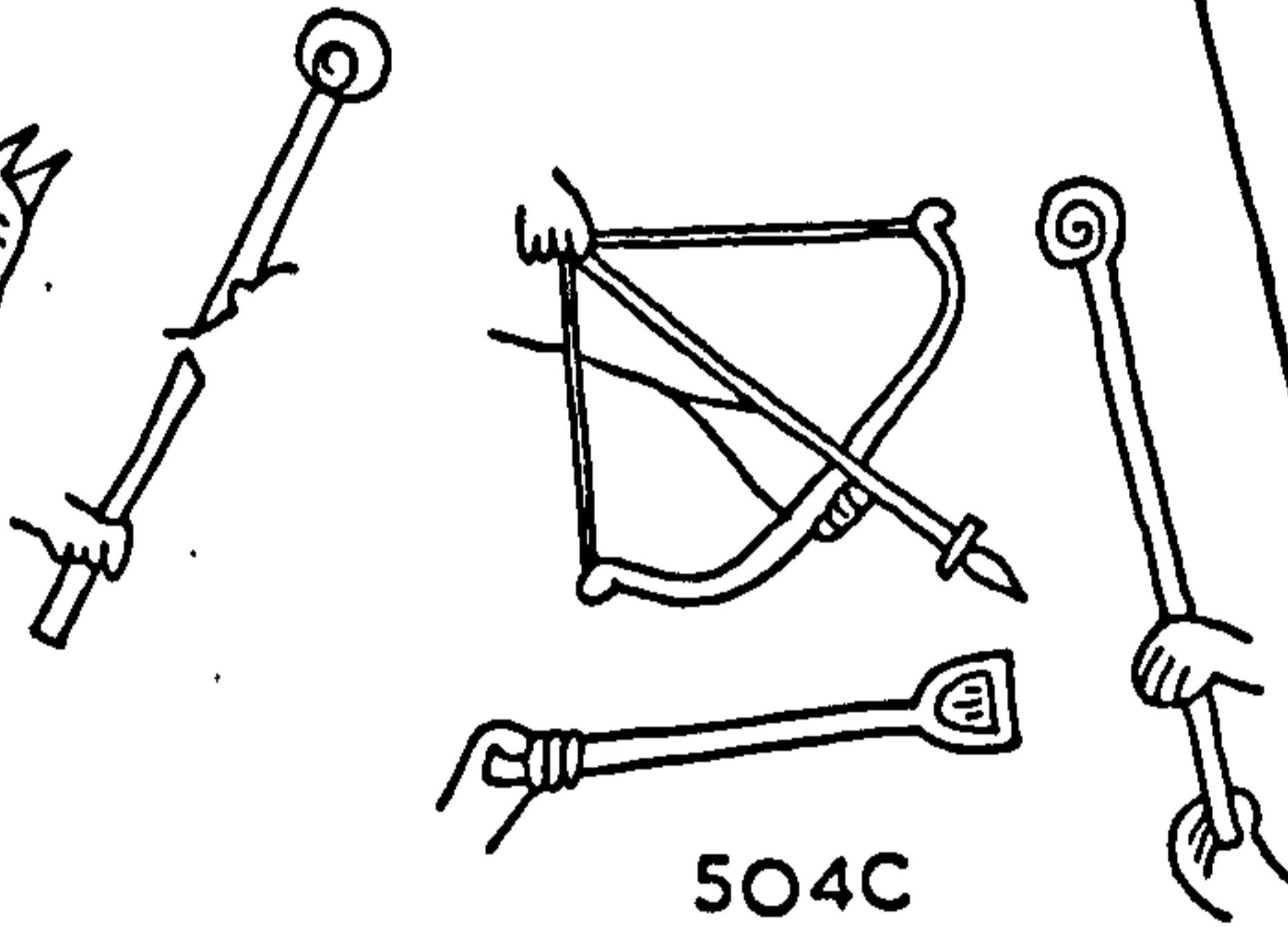
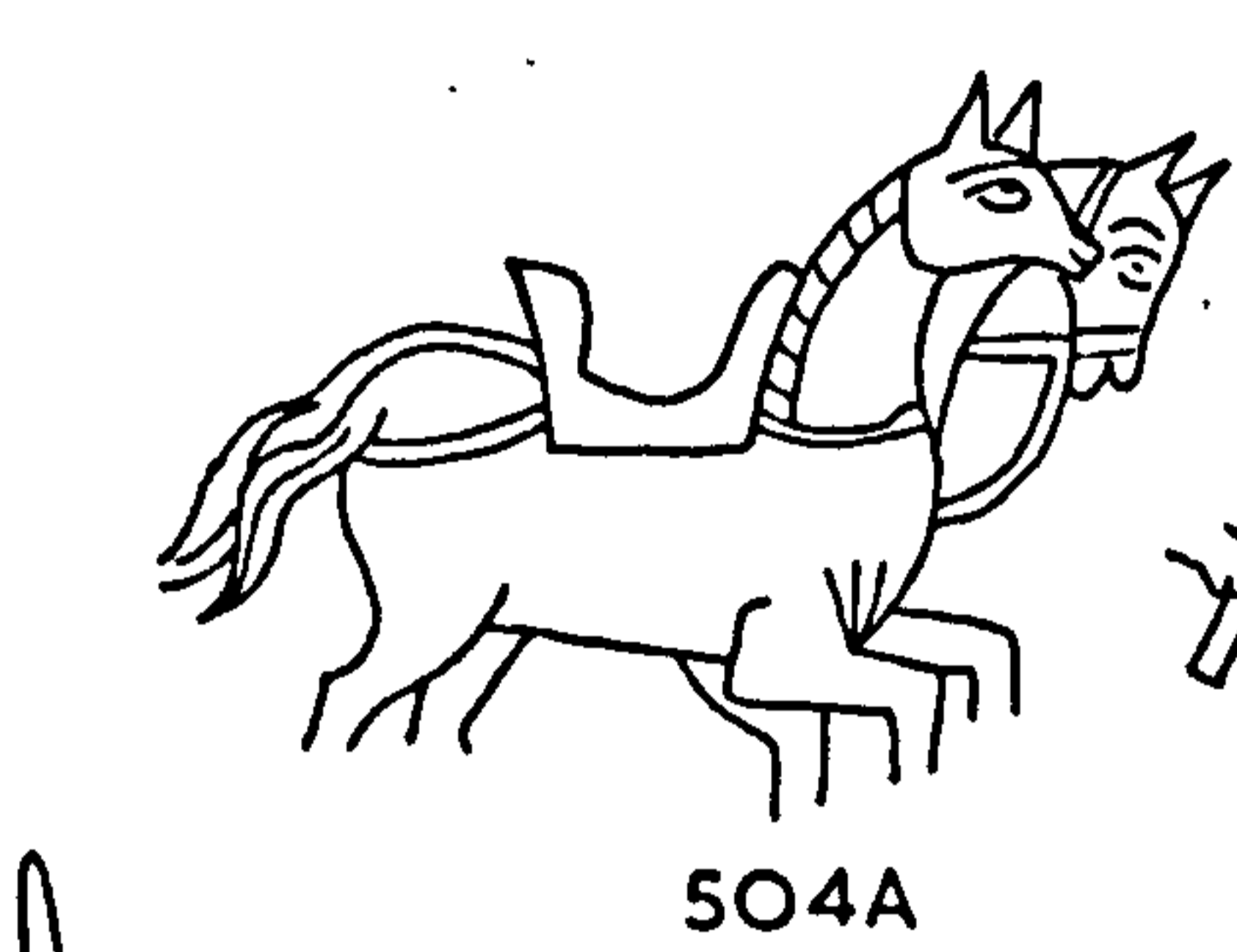
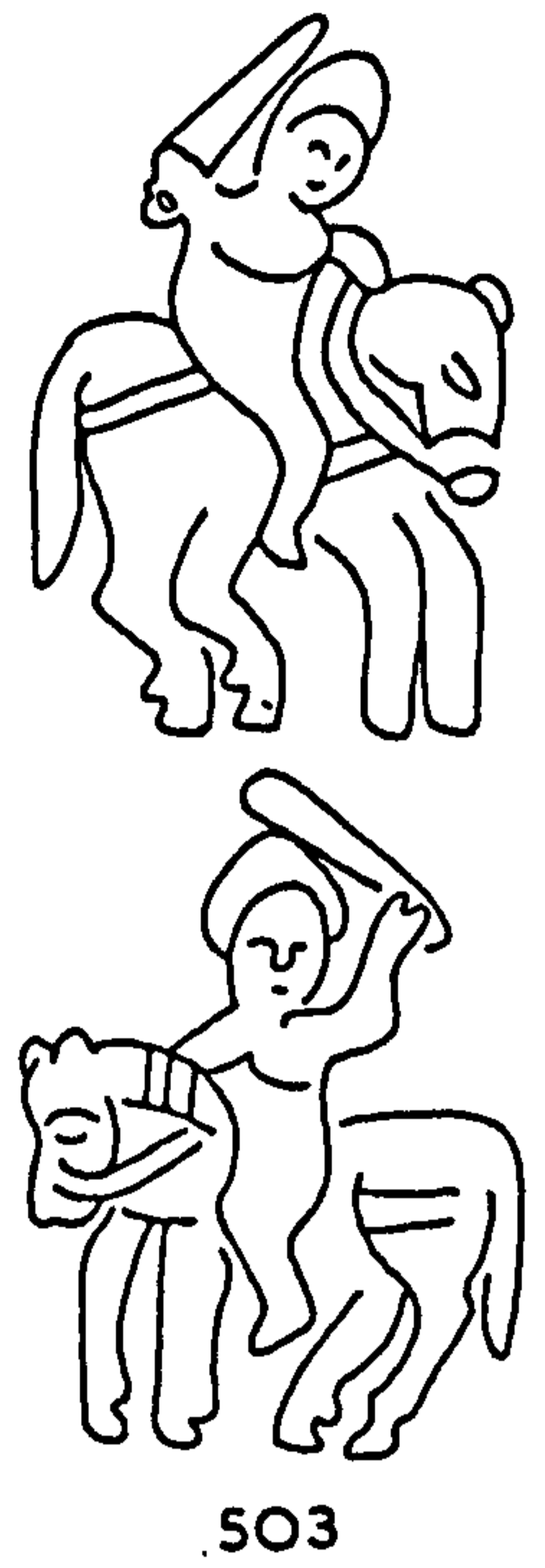
499



500



501





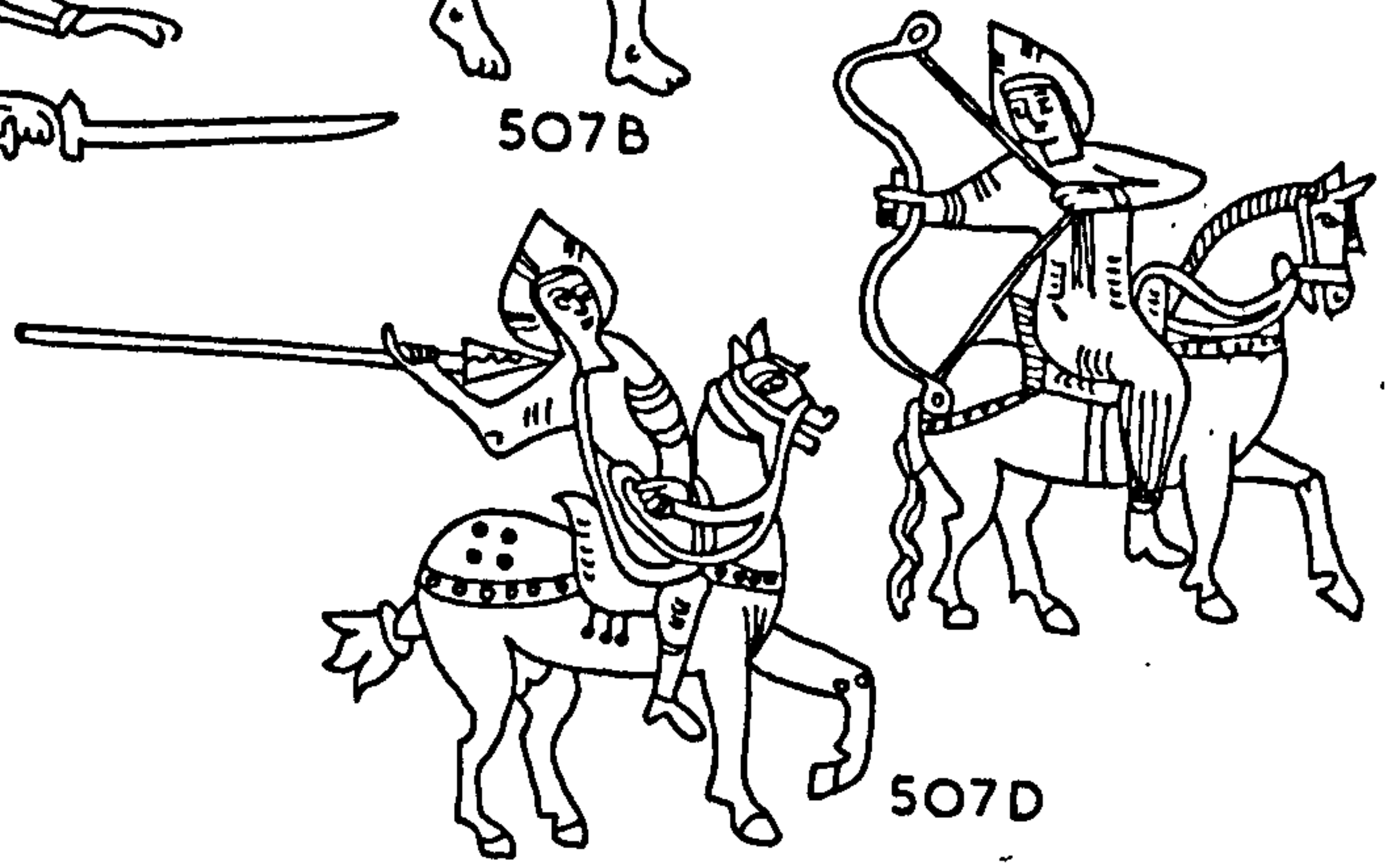
507A



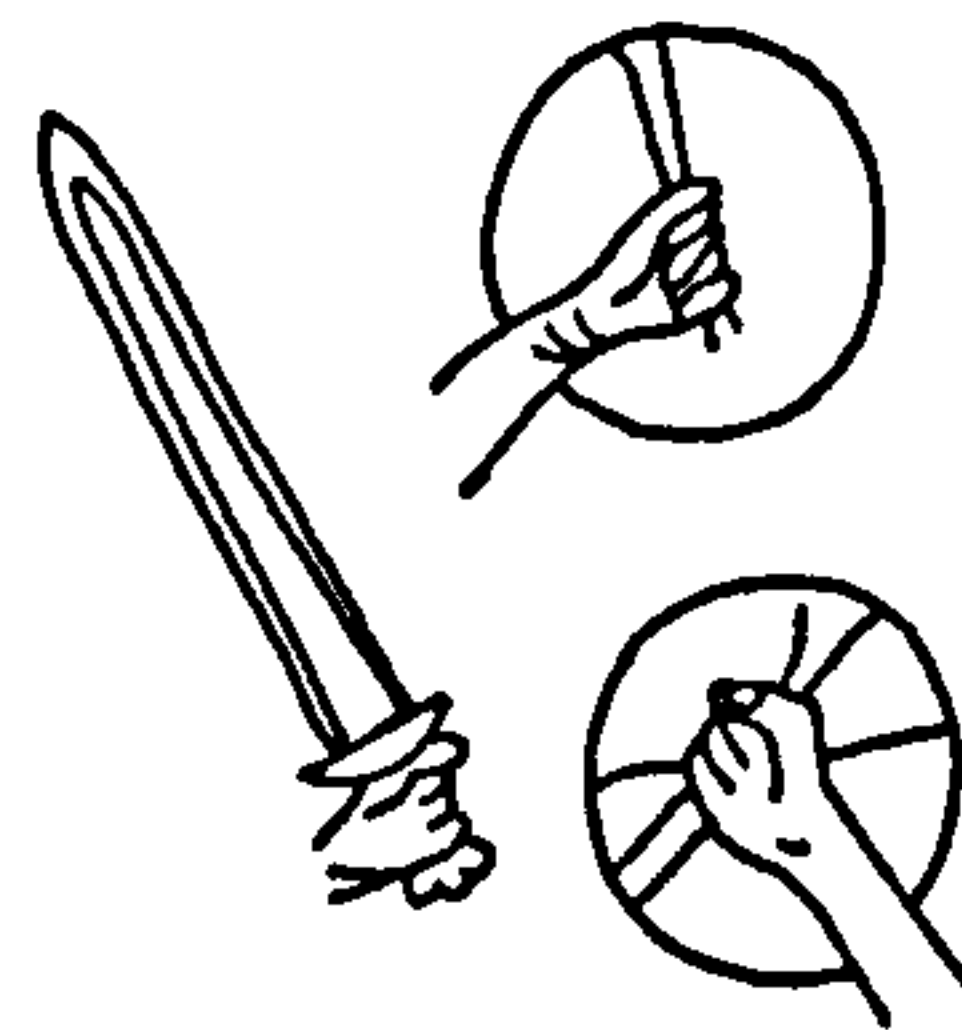
507B



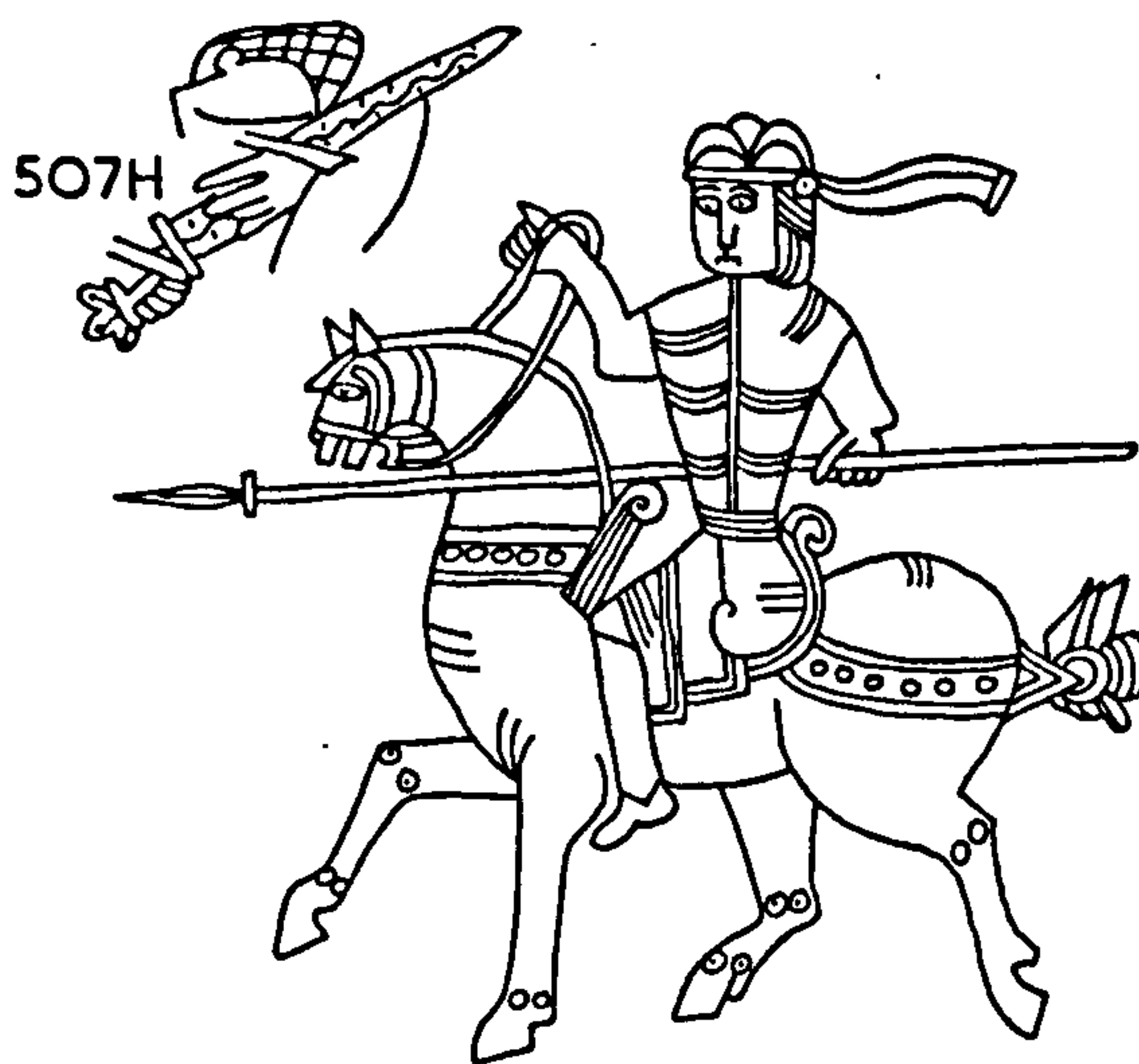
507C



507D



507E



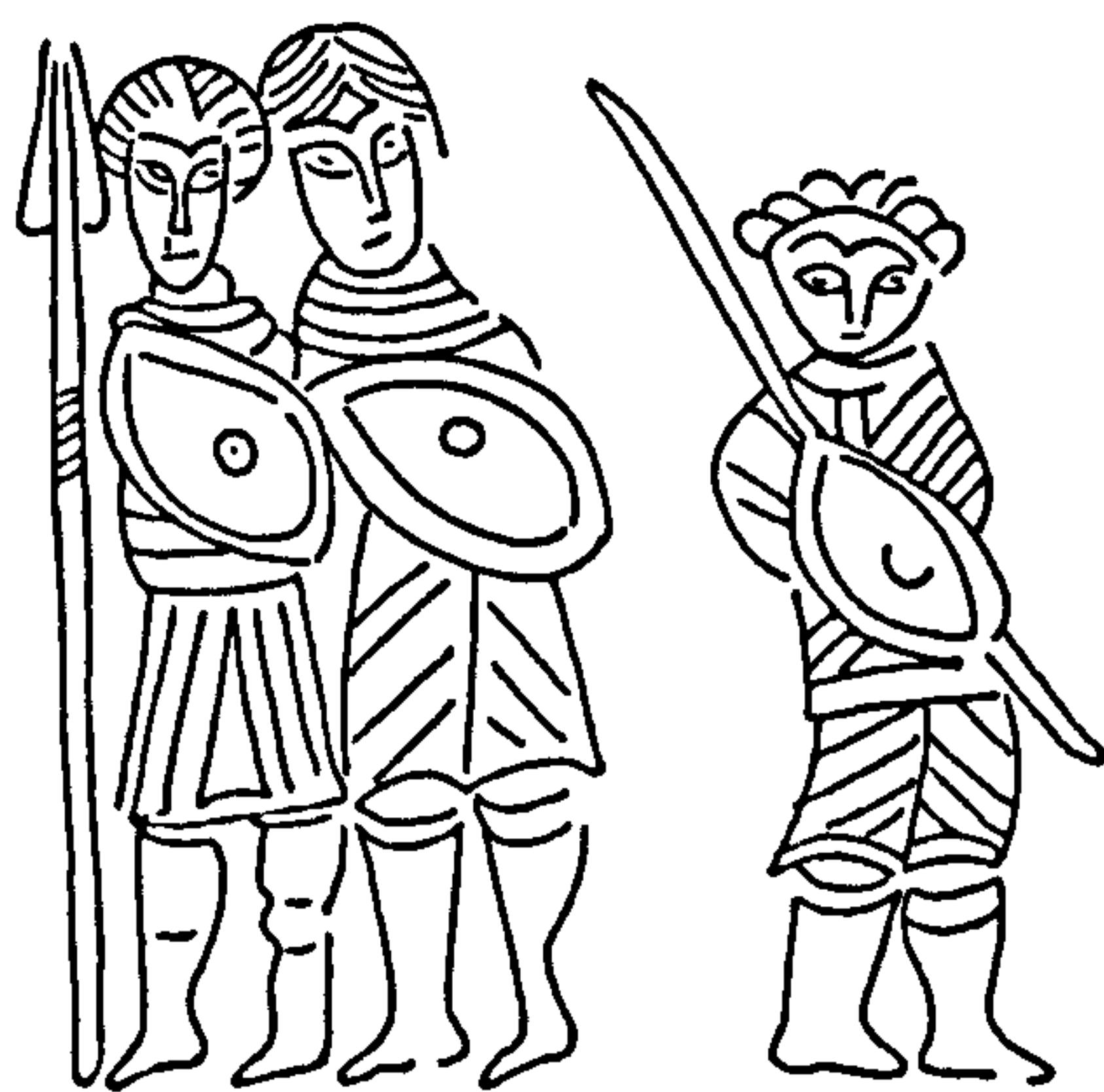
507H



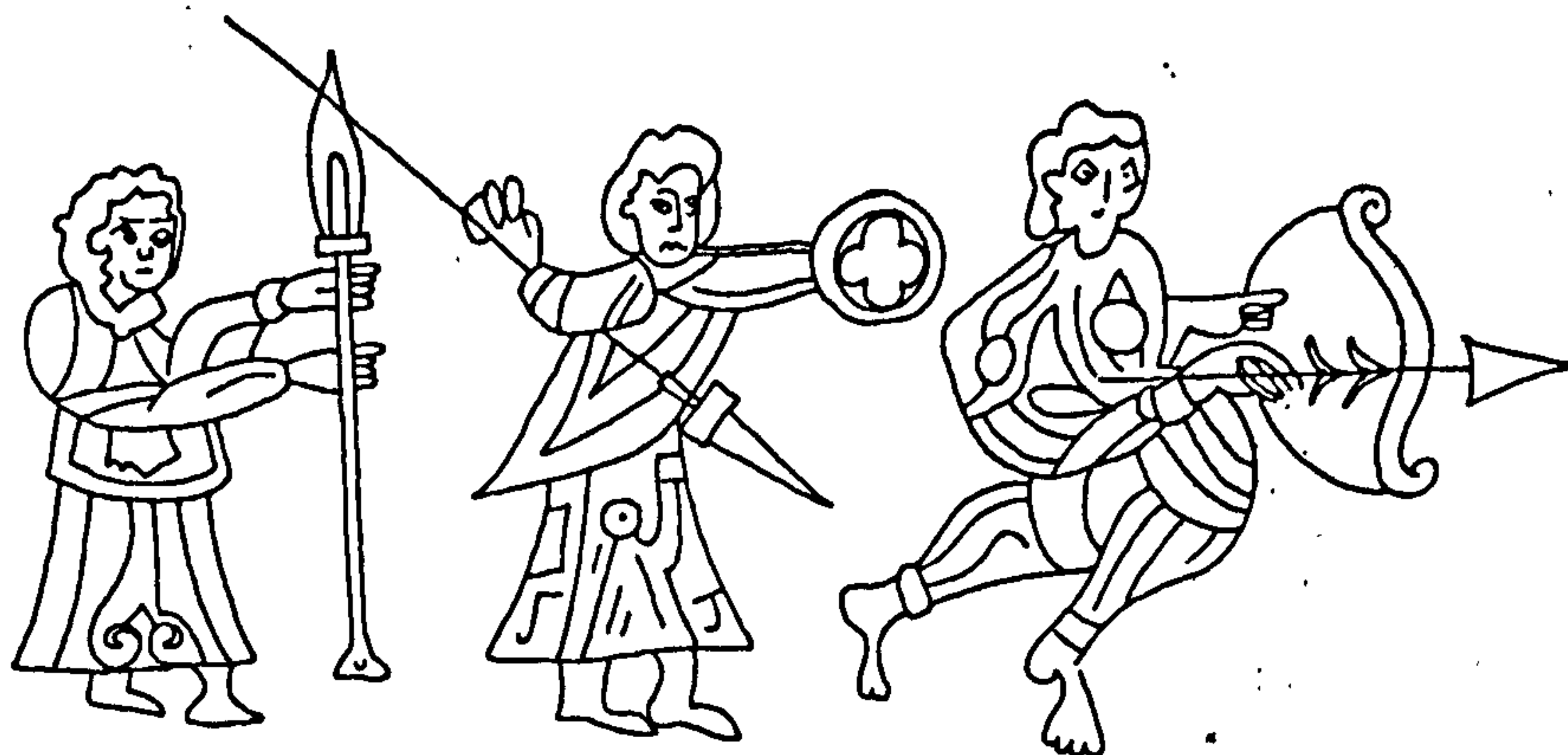
507G



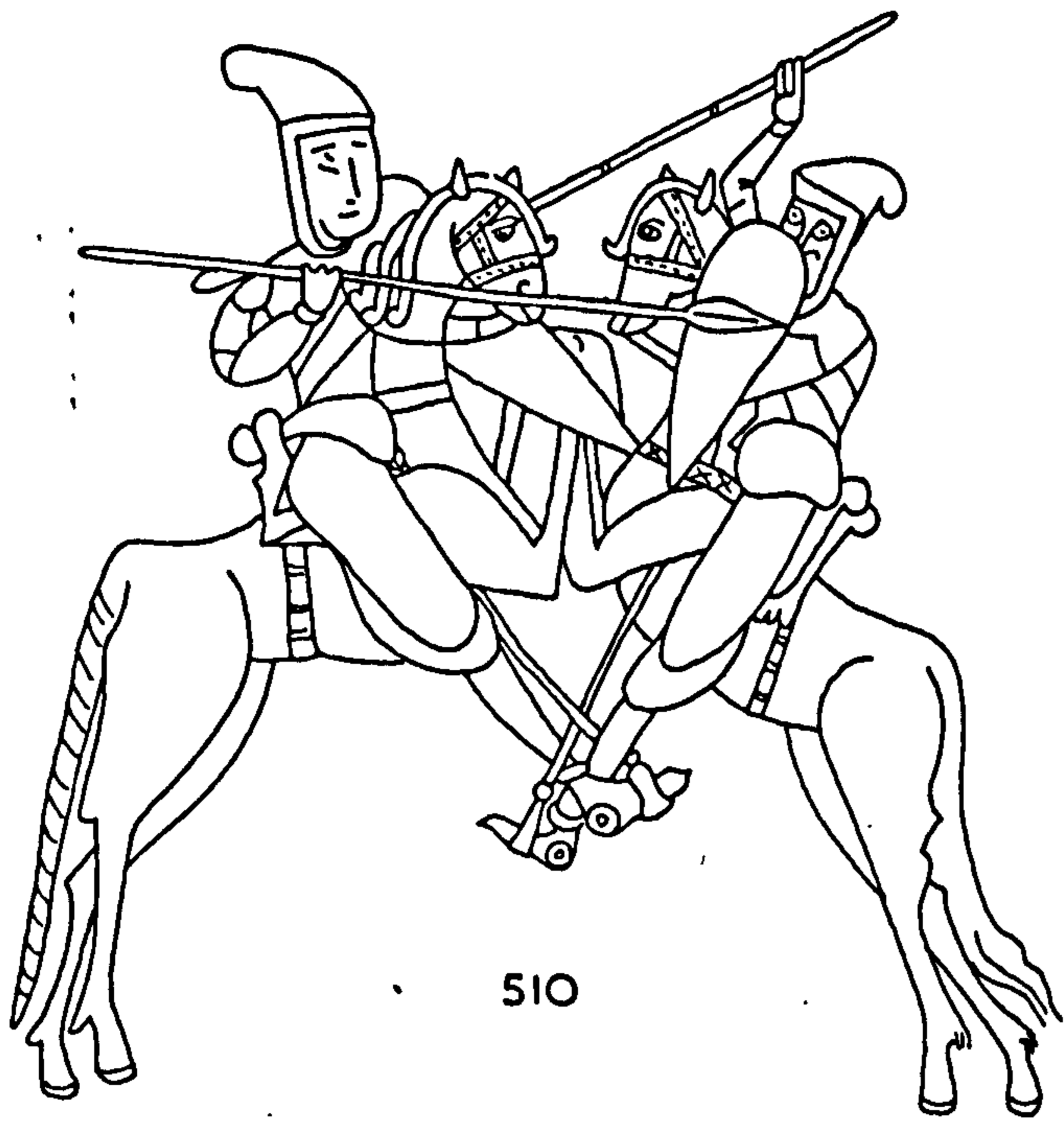
507F



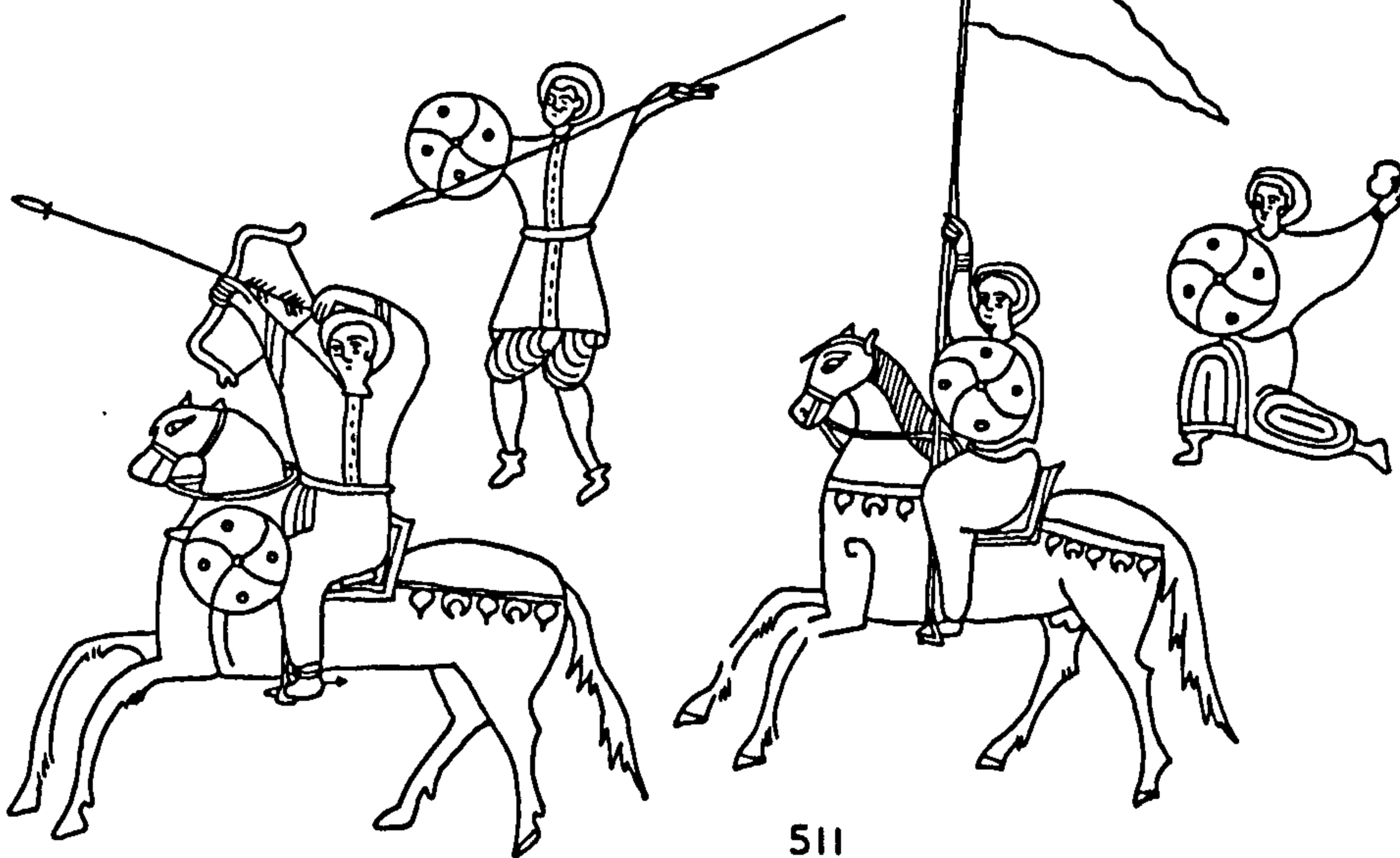
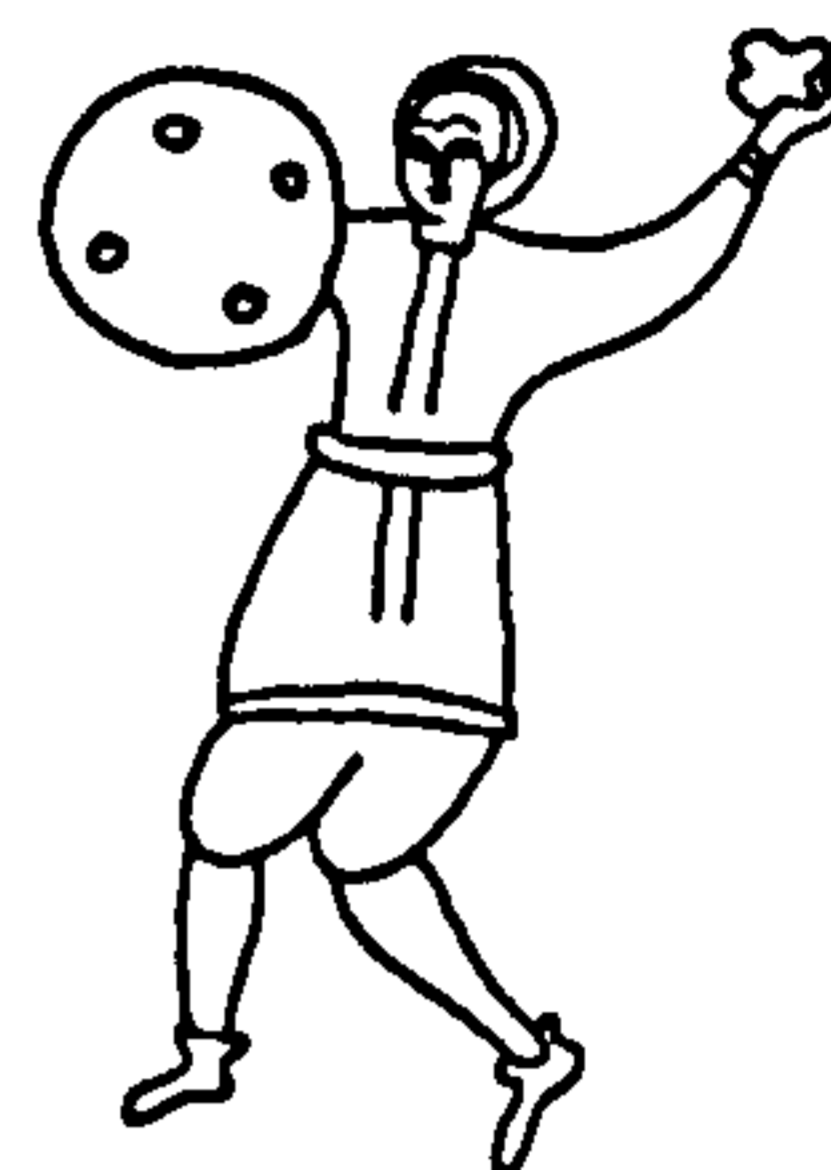
508



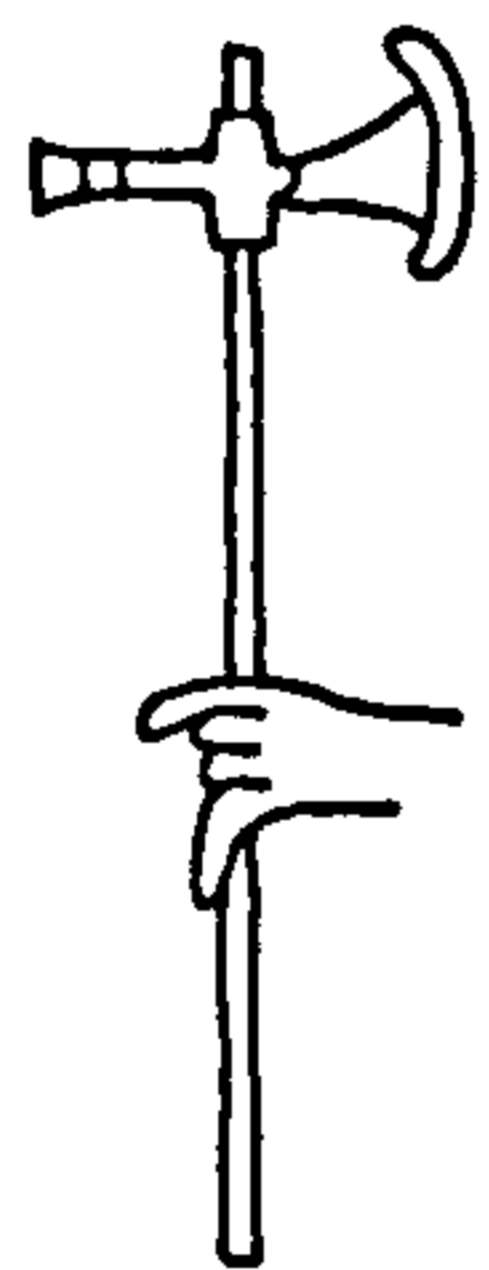
509



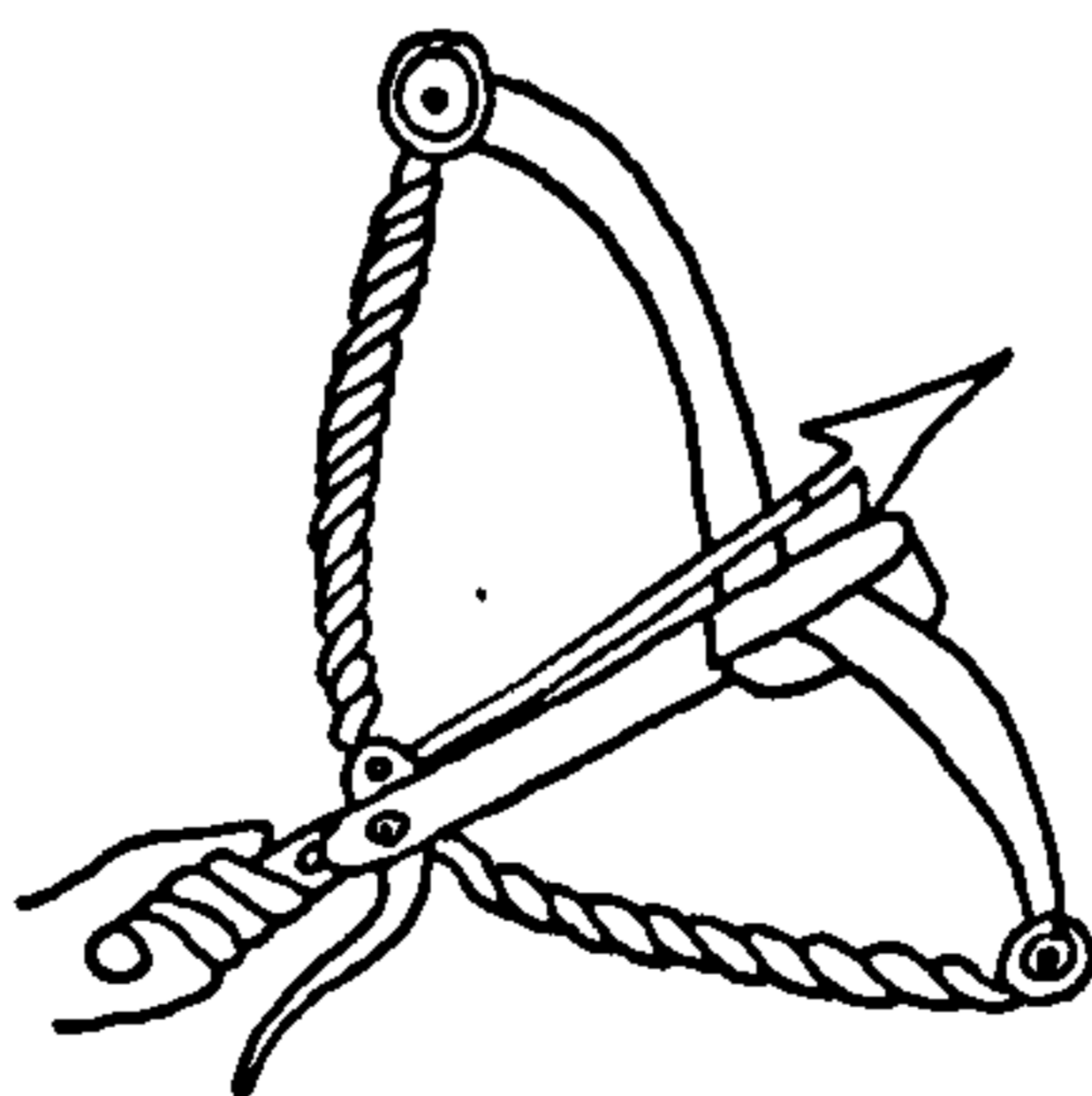
510



511



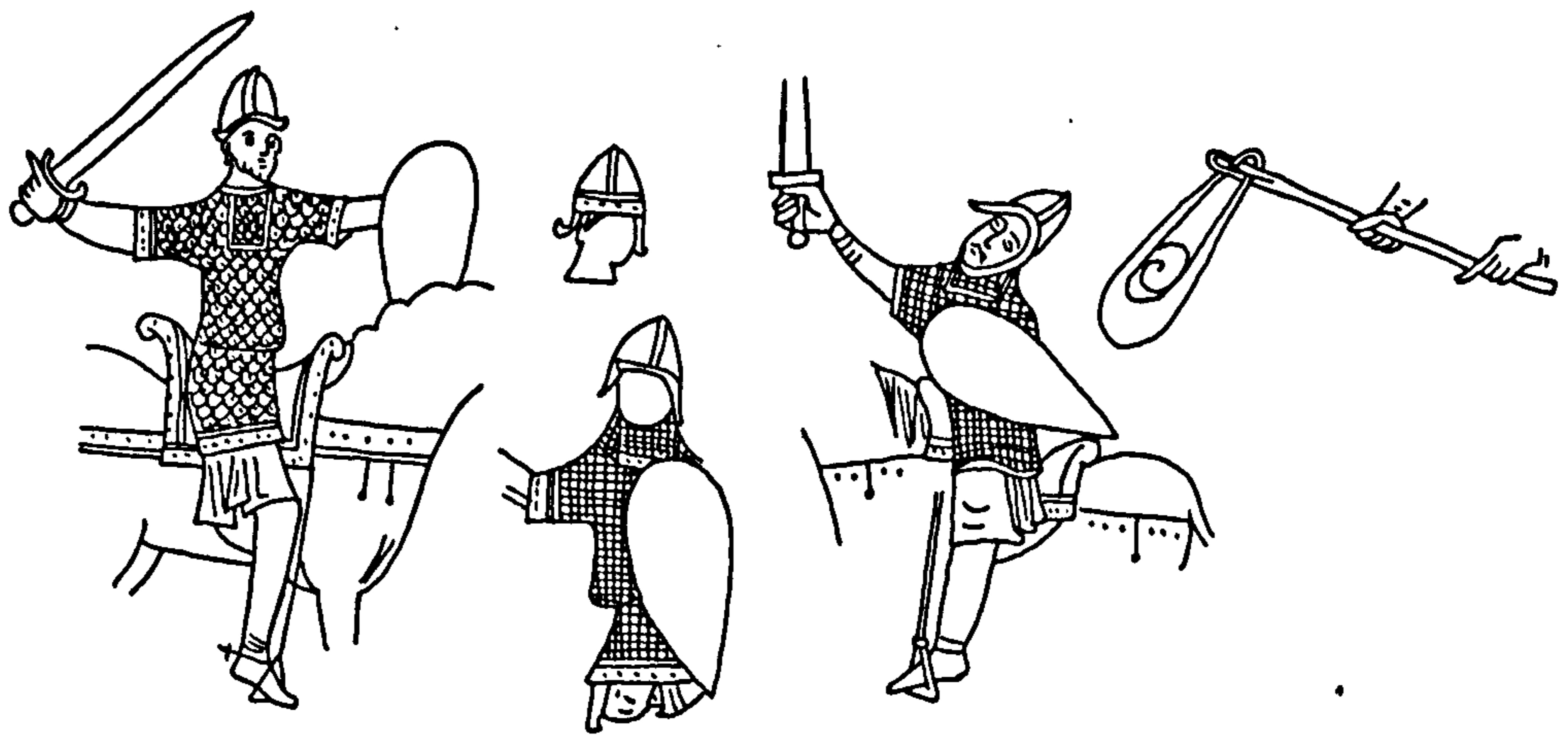
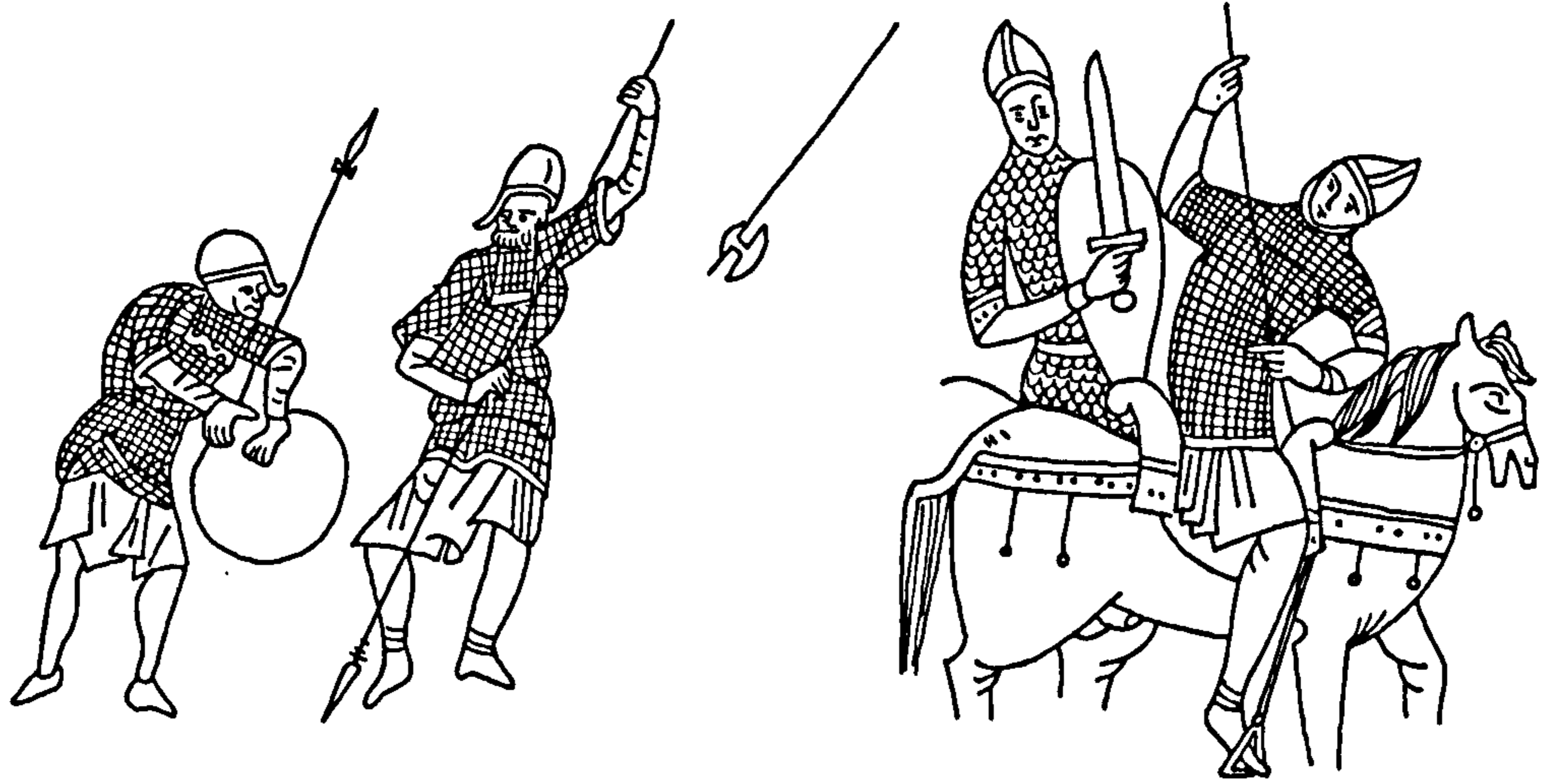
512



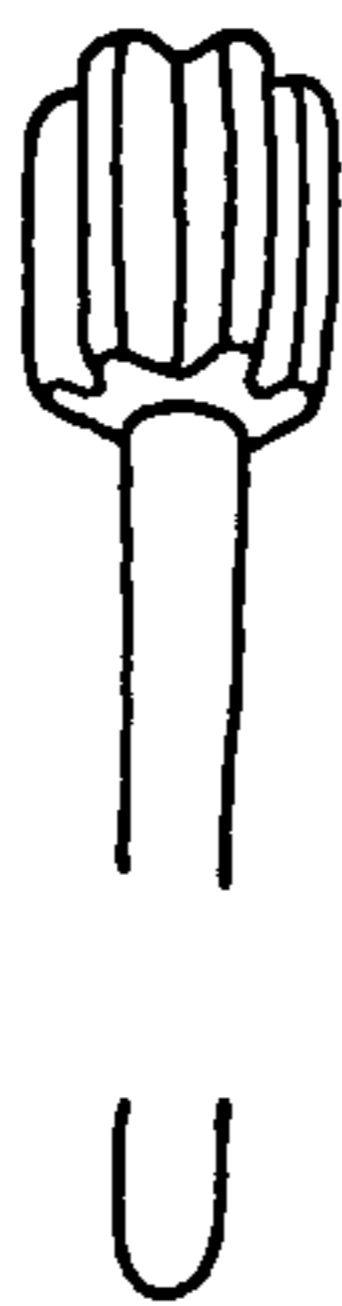
513



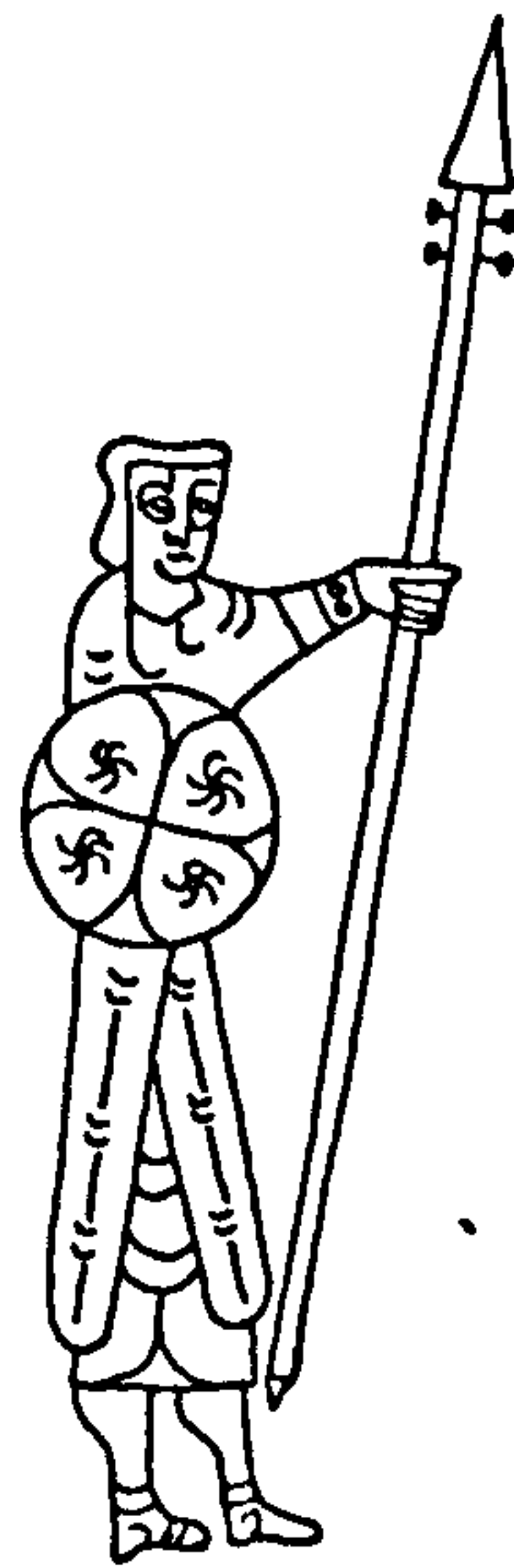
514



515



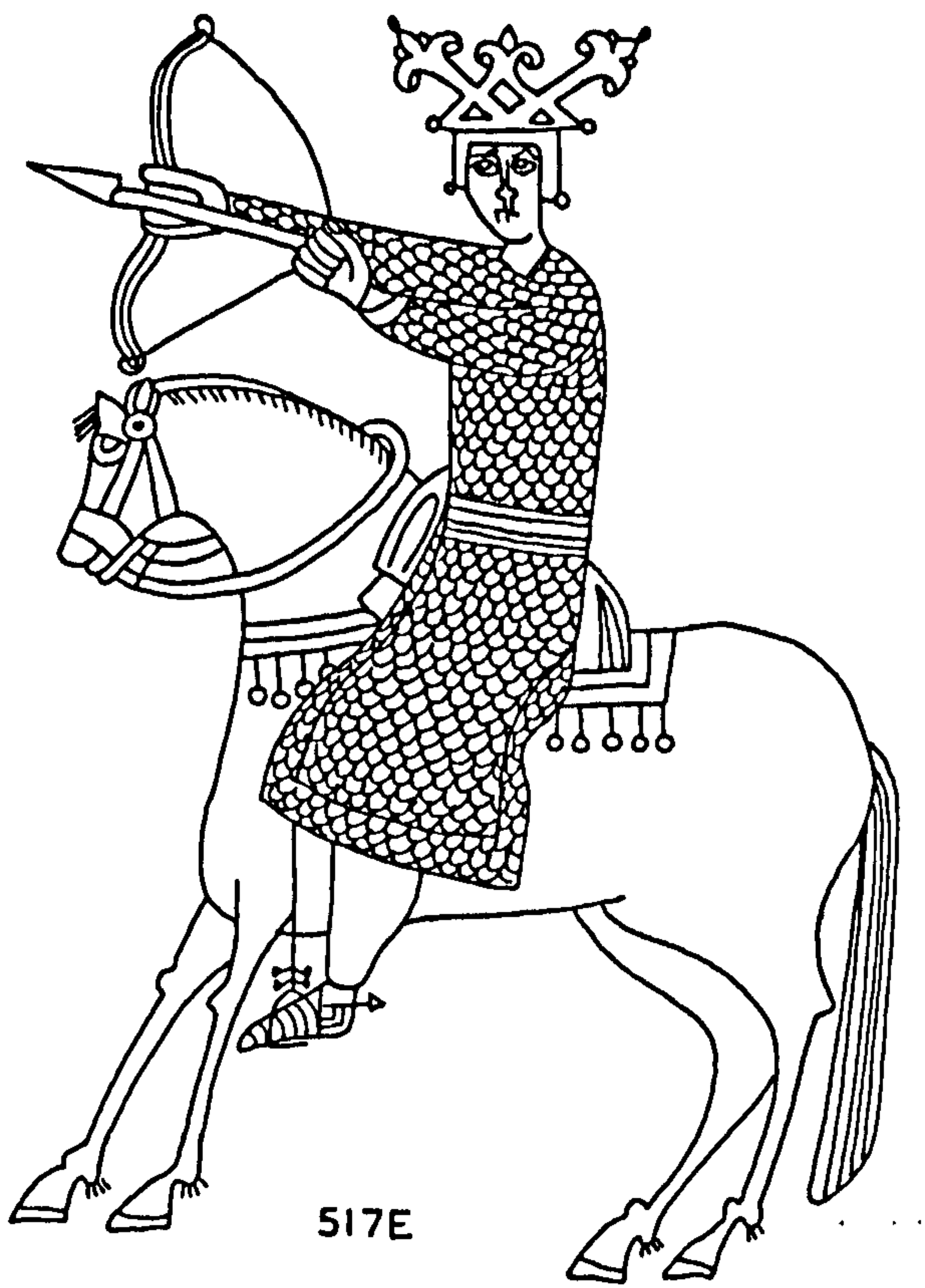
516



517A



517B



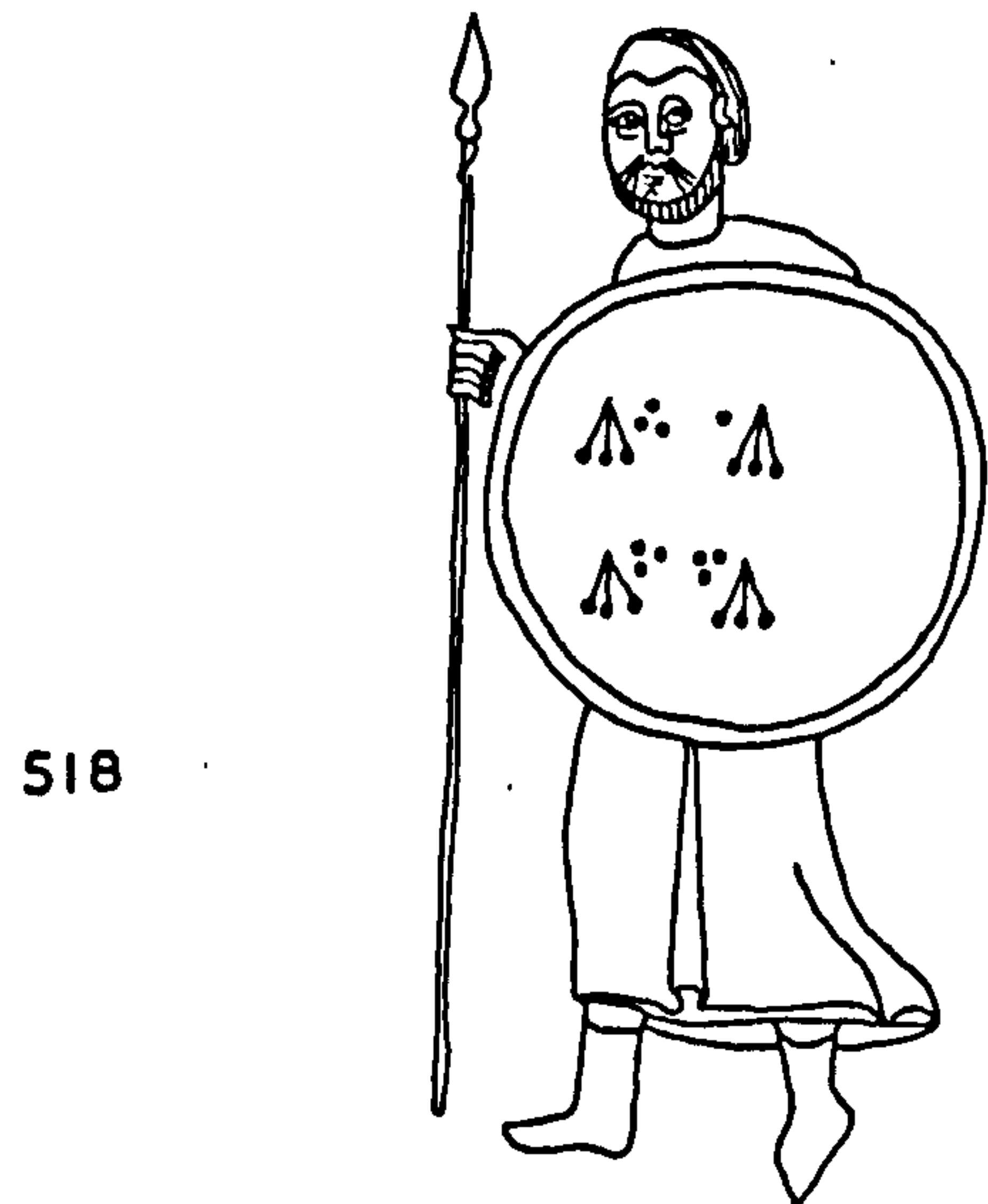
517E



517C



517D



518



519



520



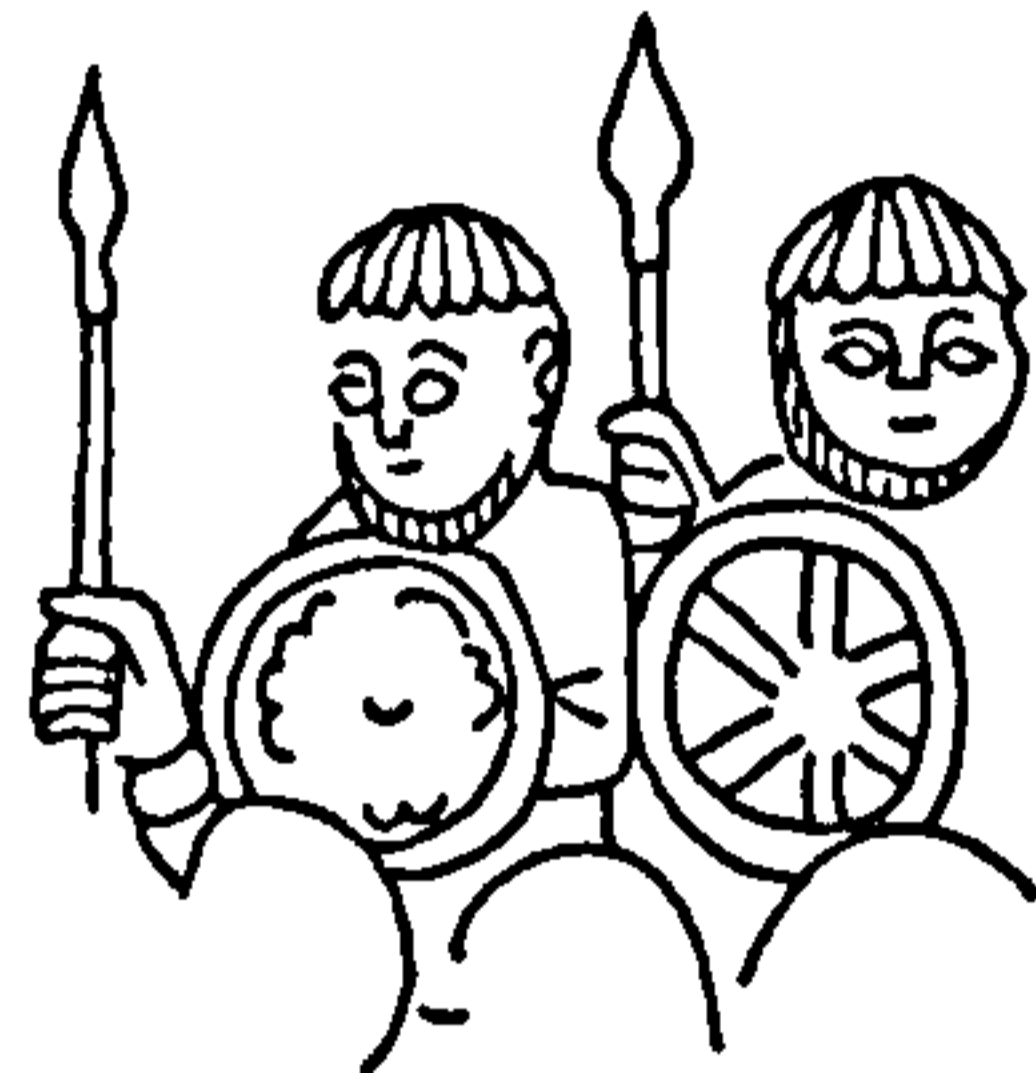
521A



521B



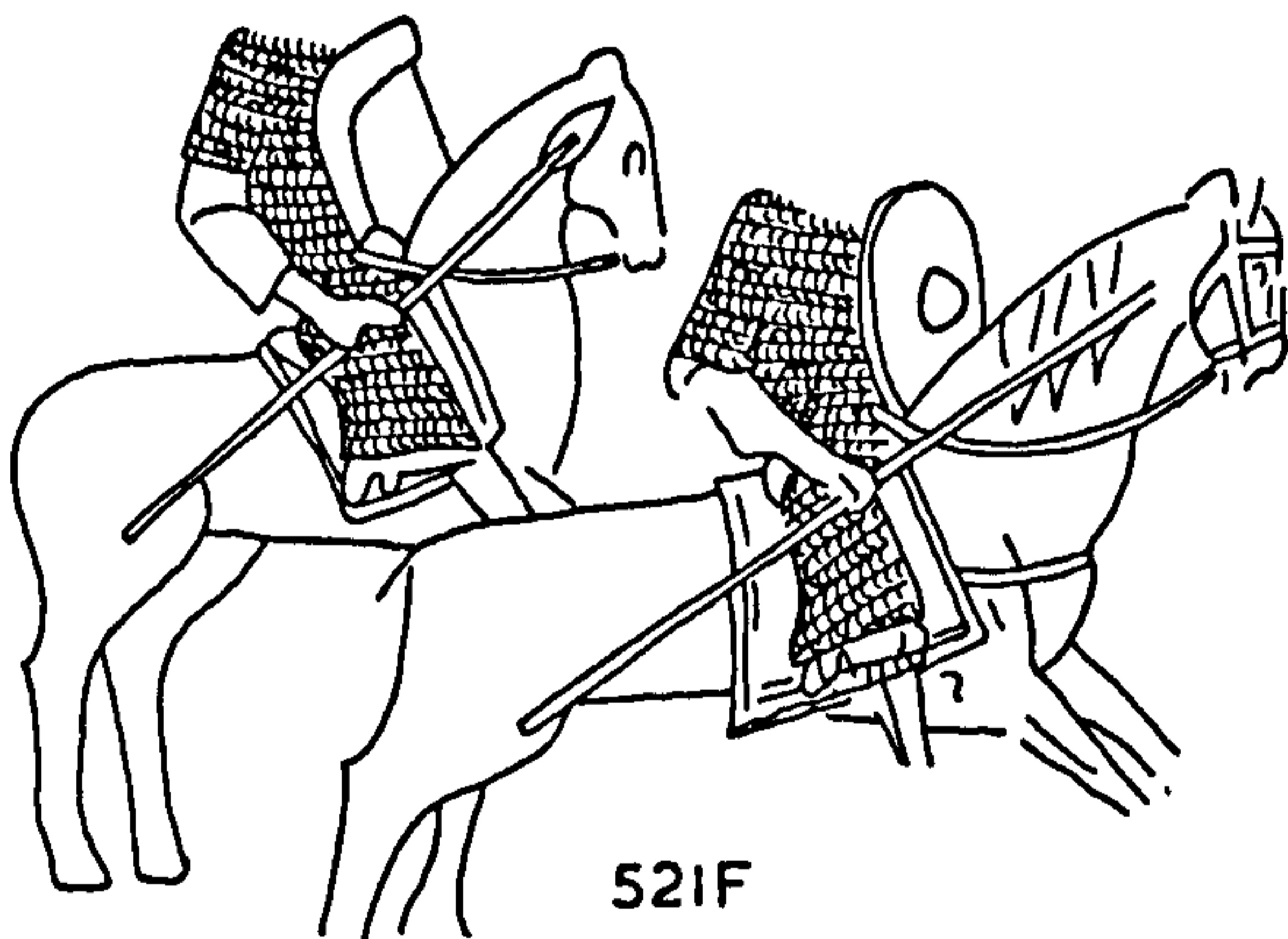
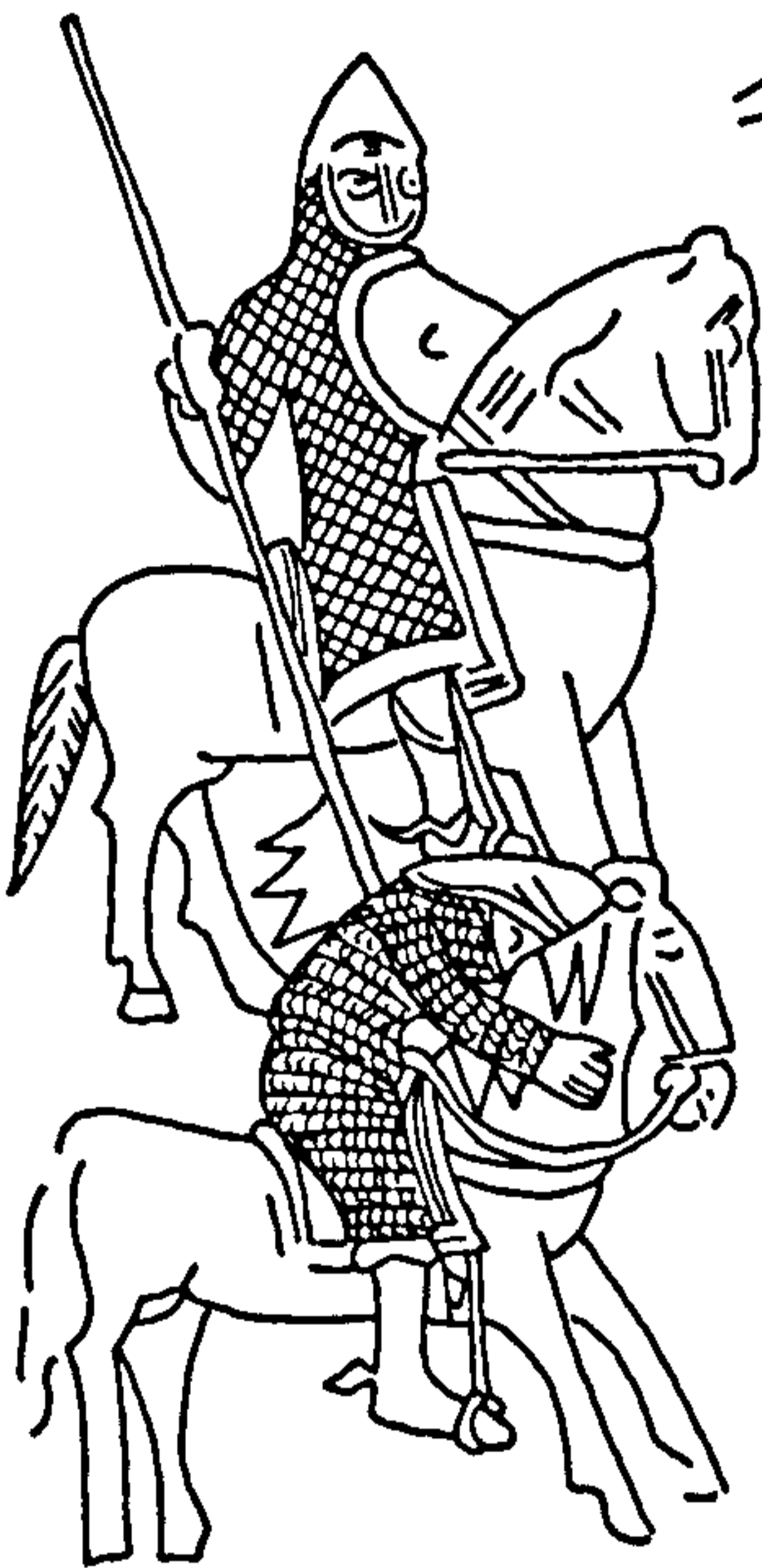
521C



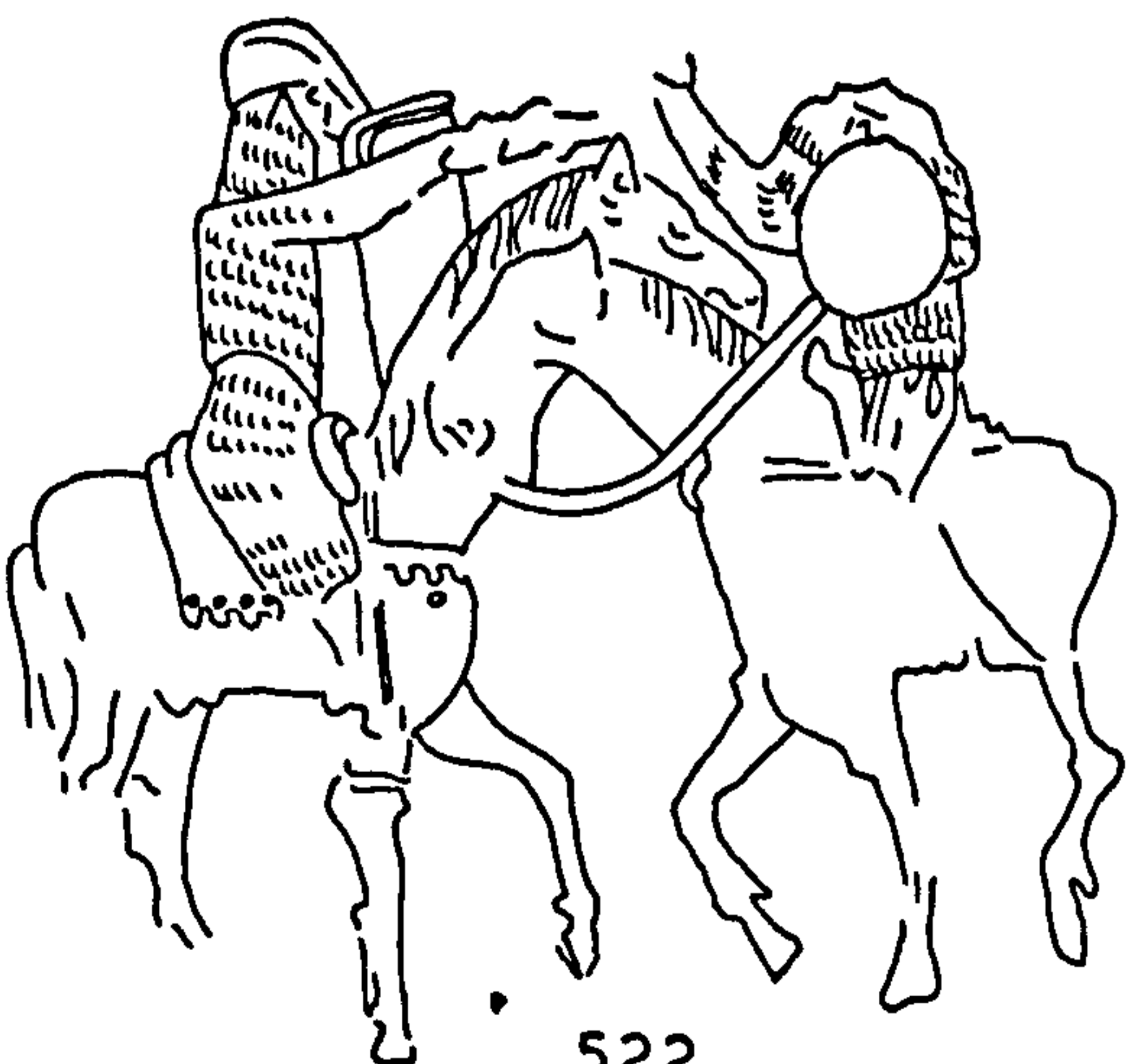
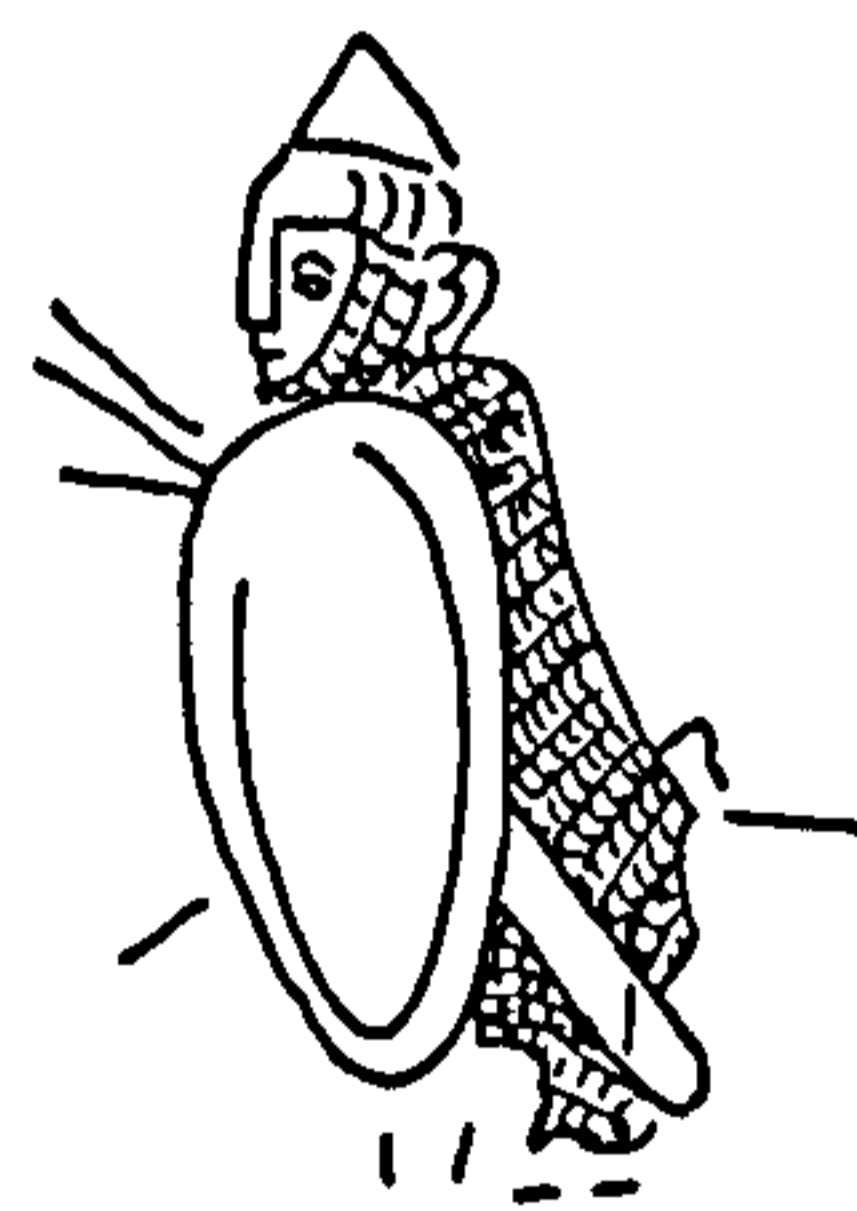
521D



521E



521F



522

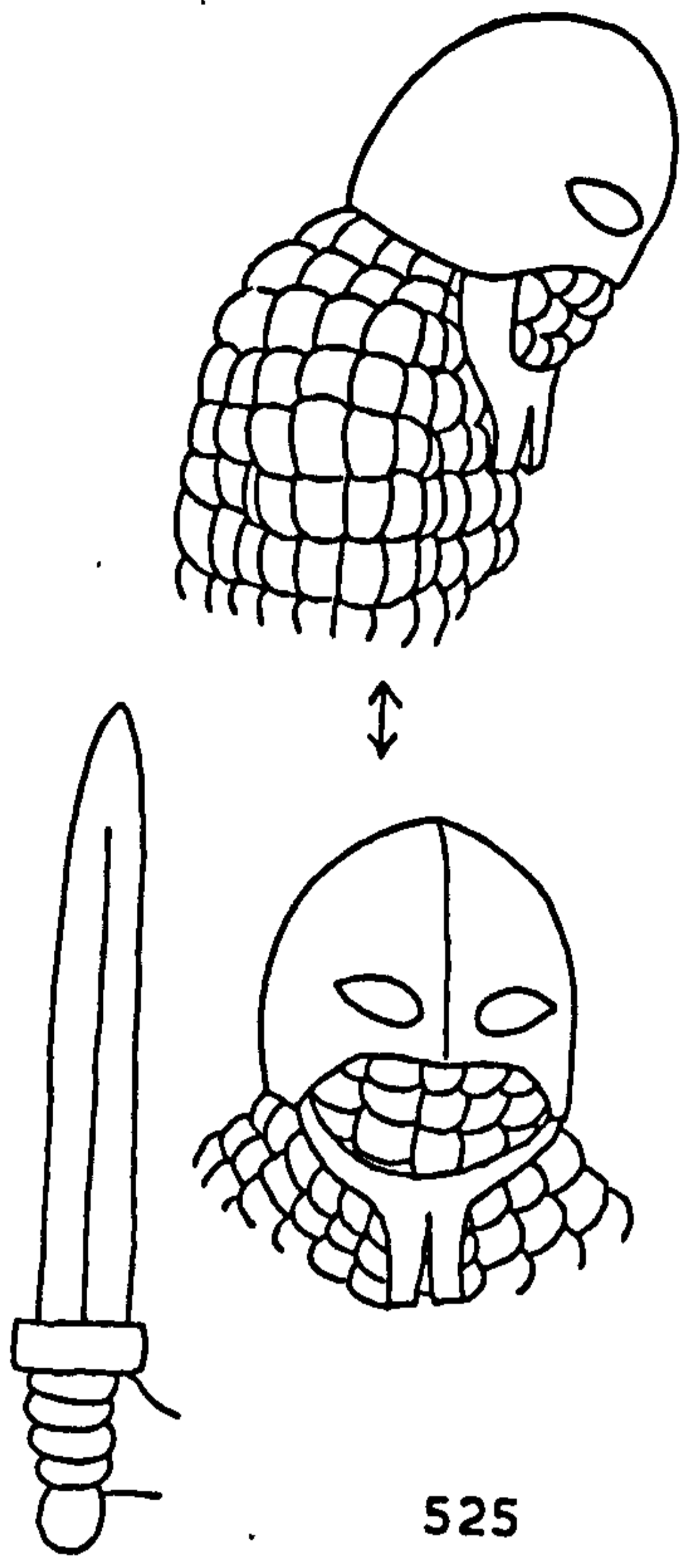


523





524



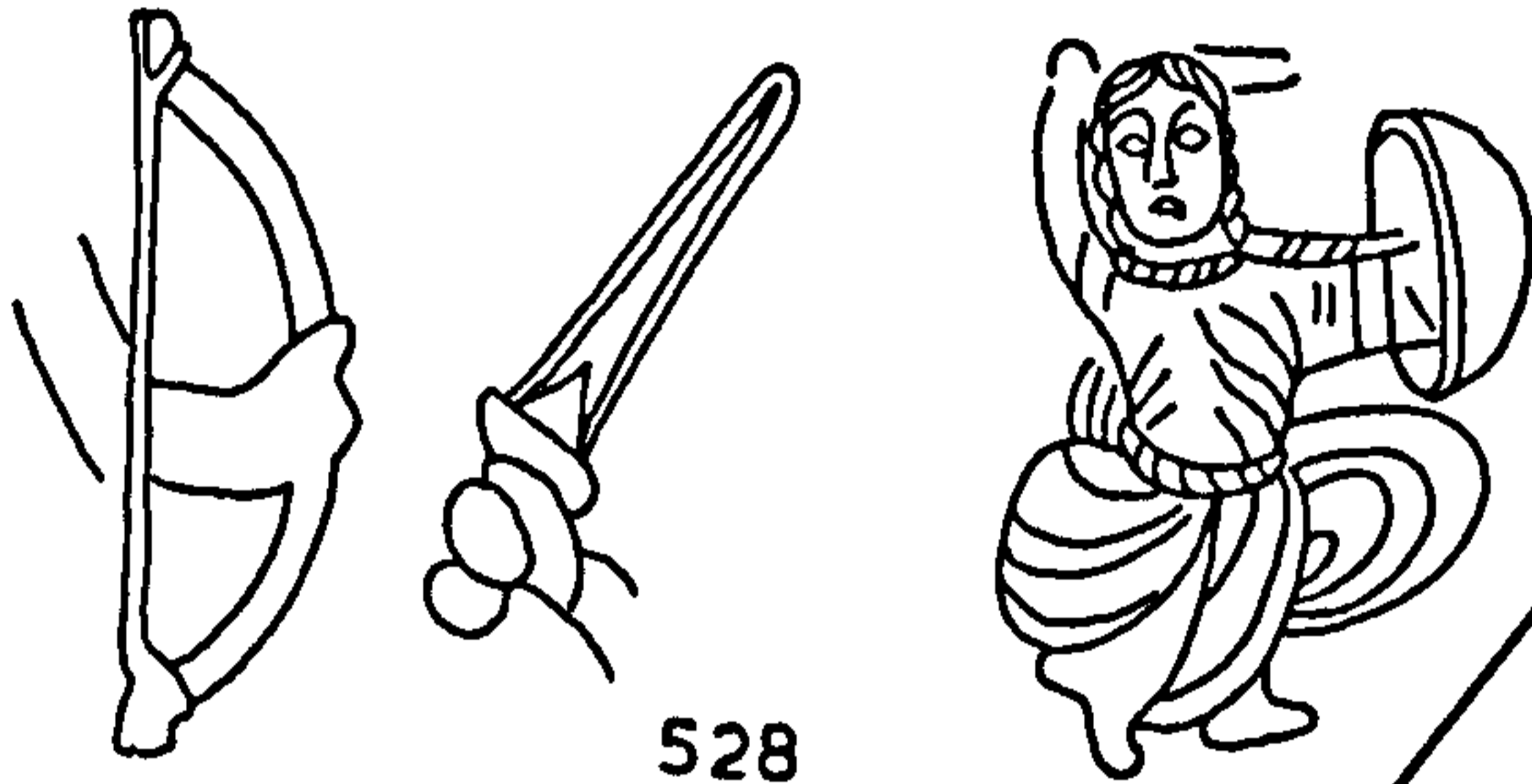
525



526



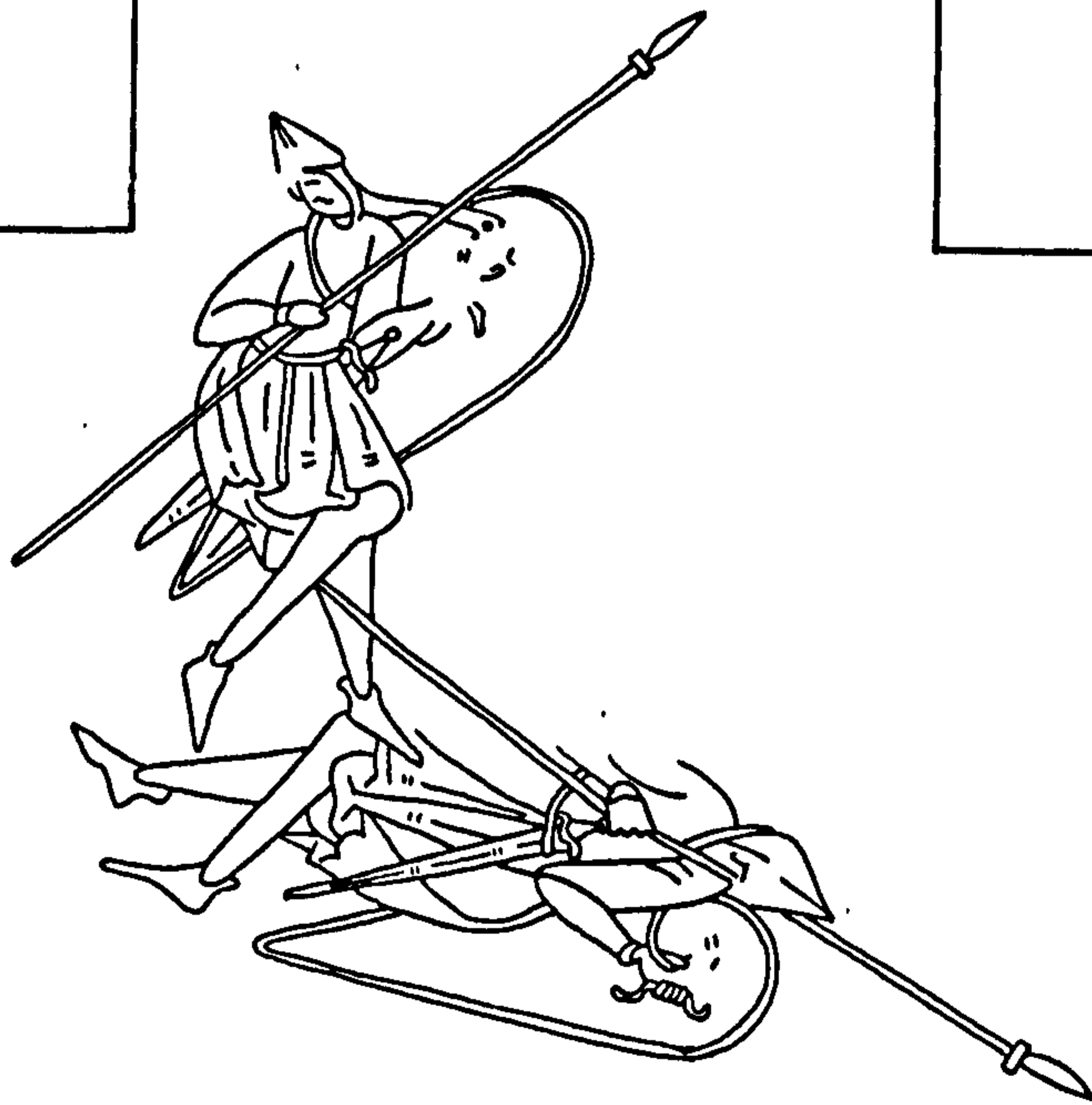
527



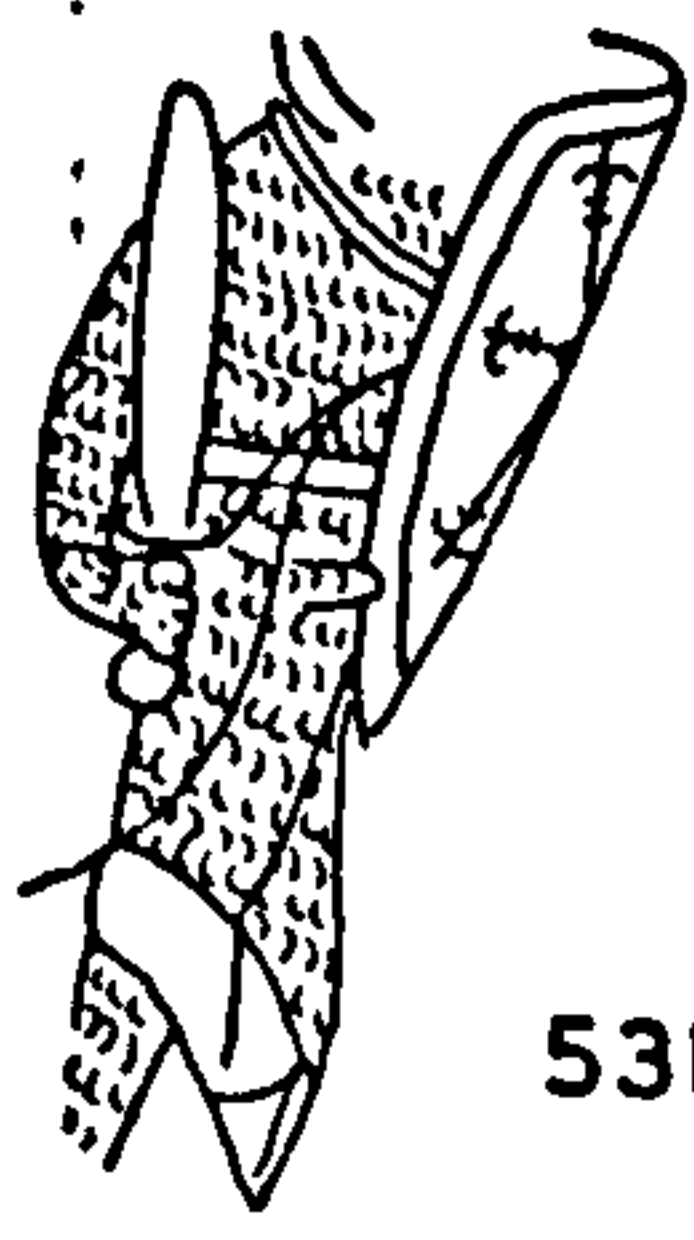
528



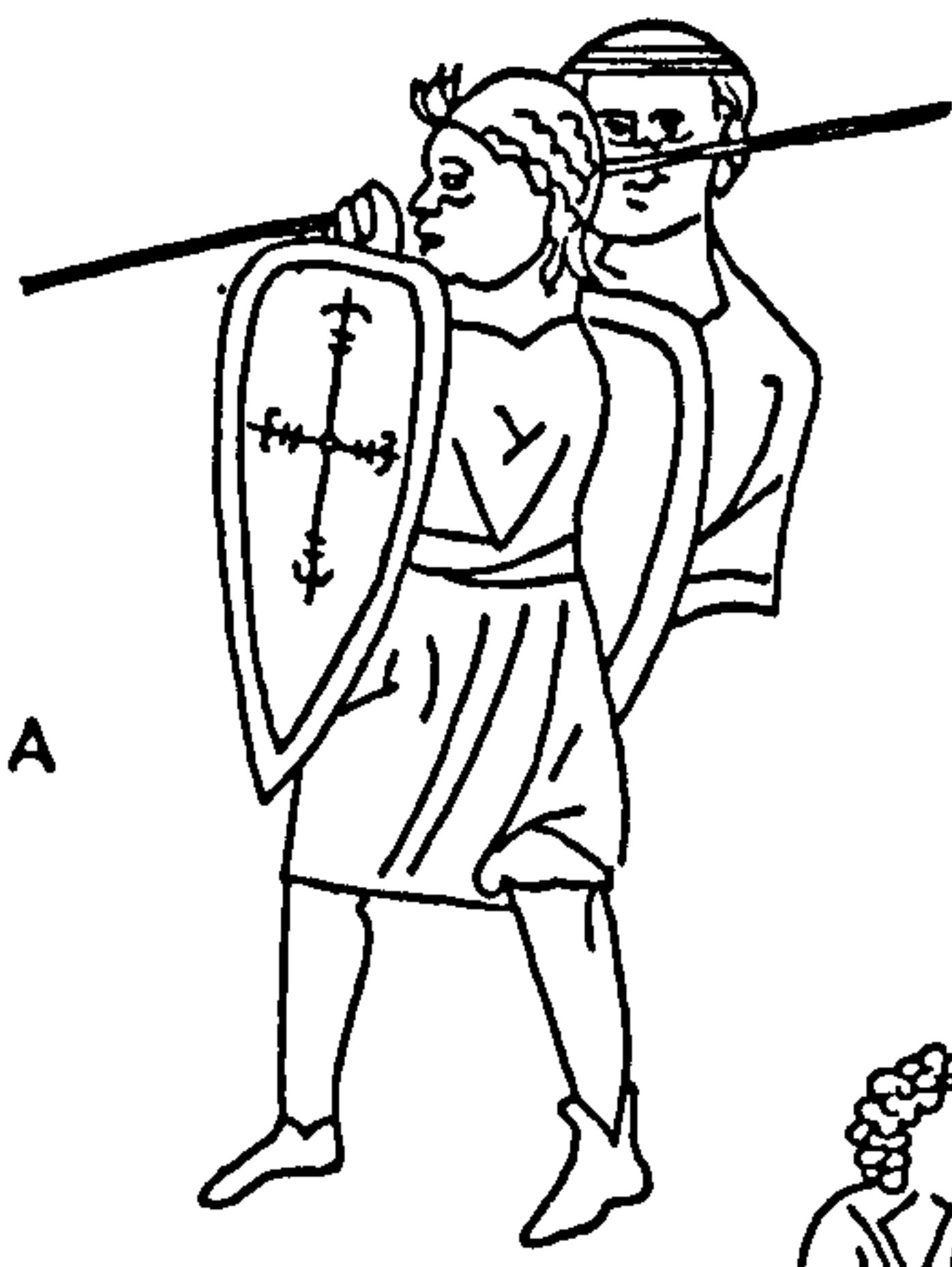
529



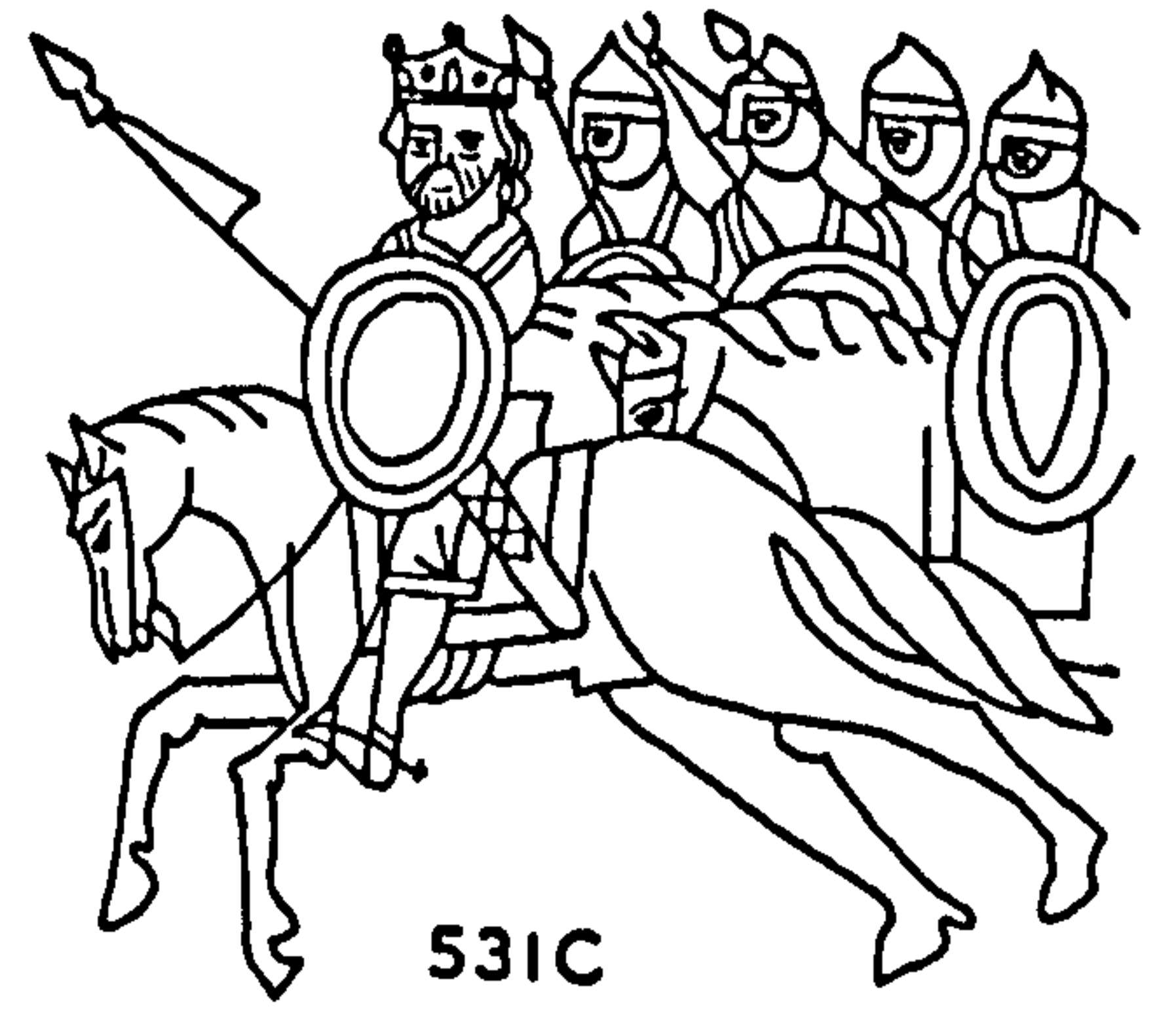
530



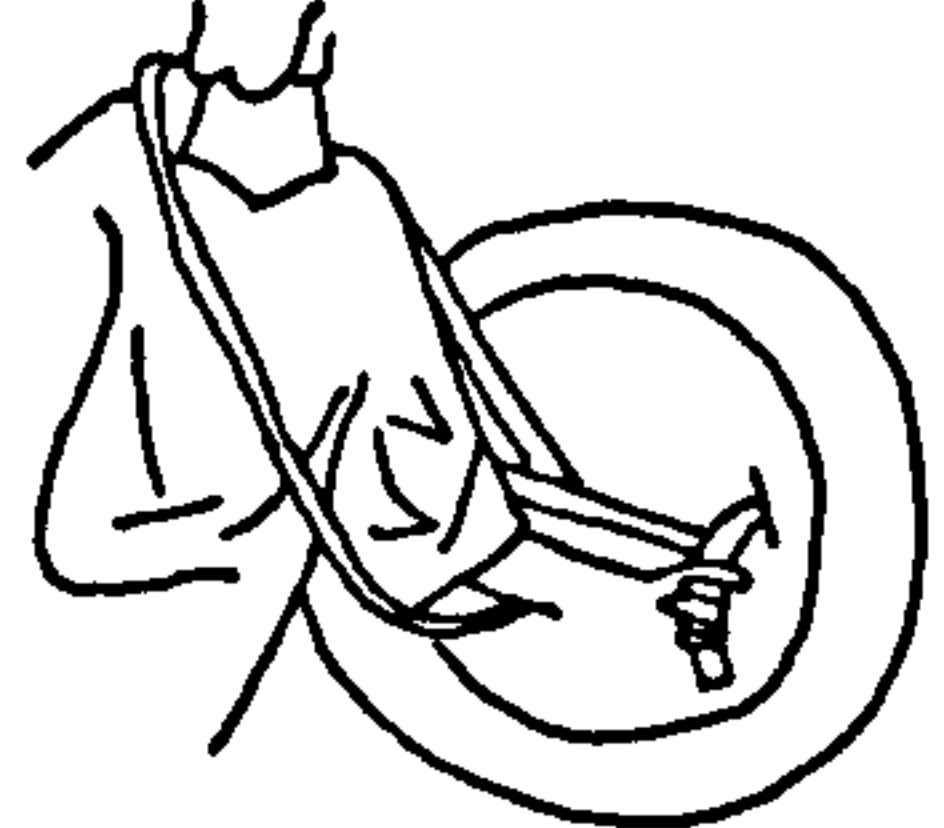
531A



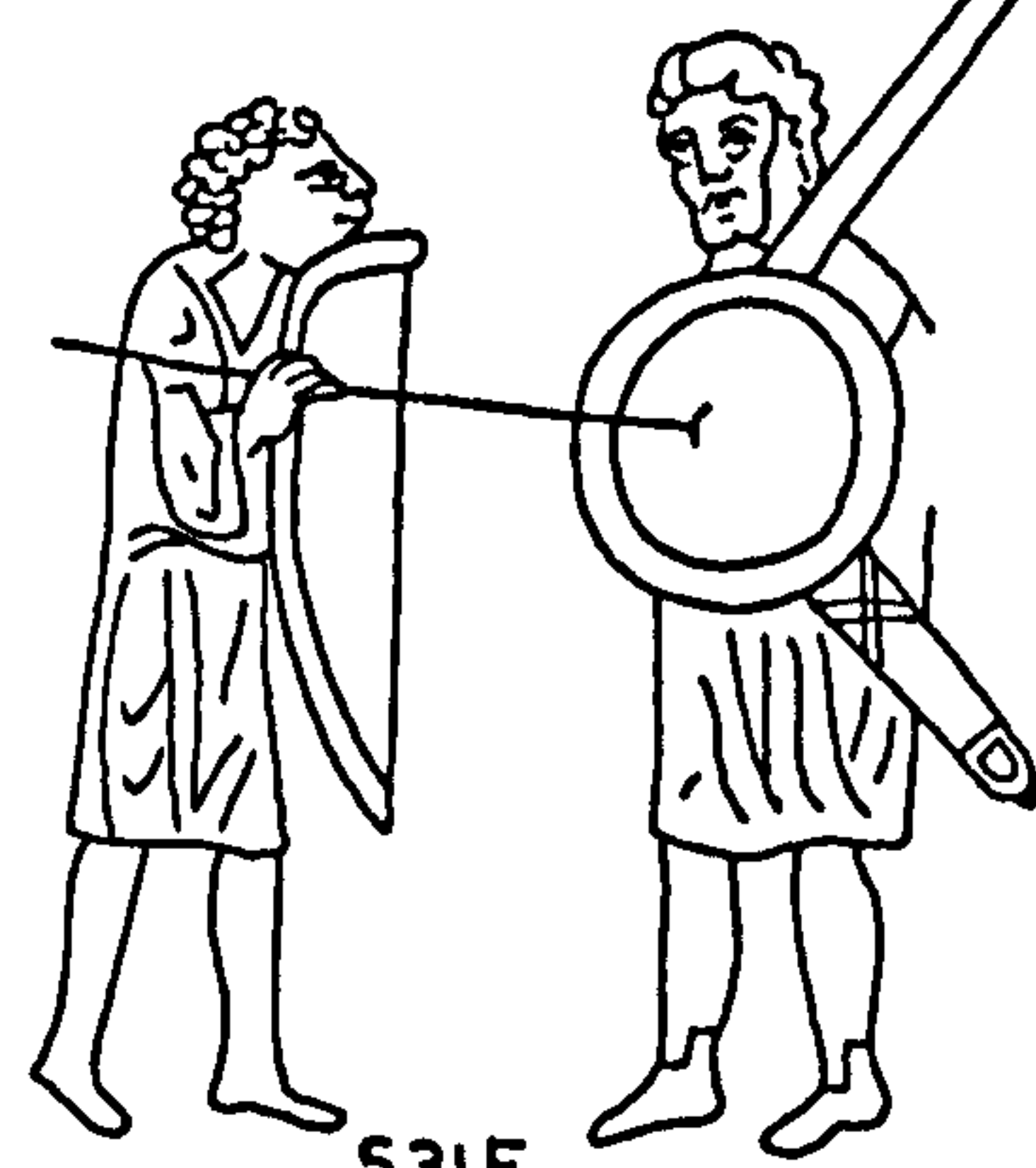
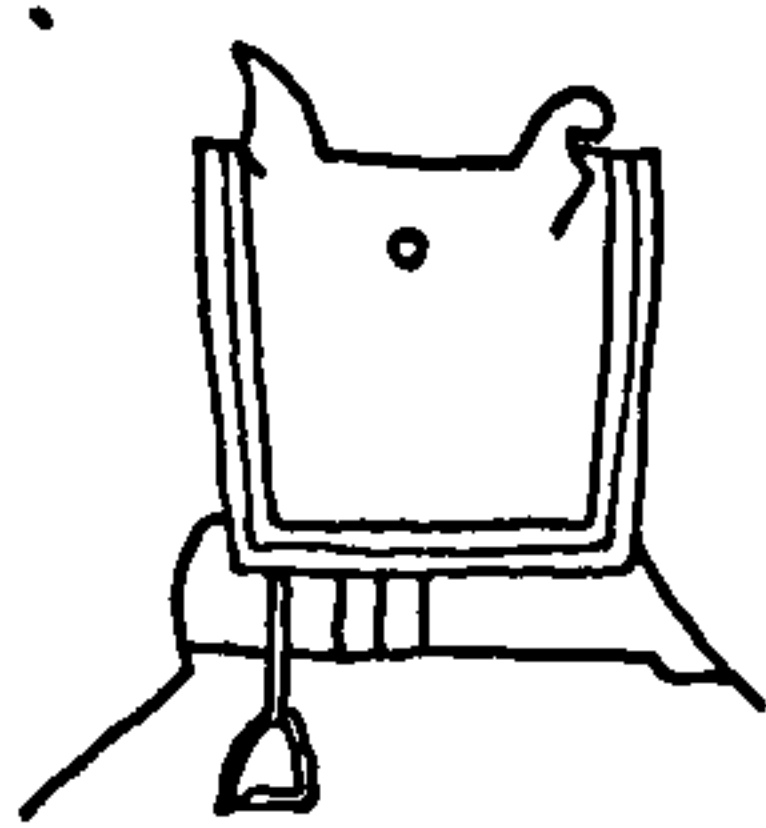
531B



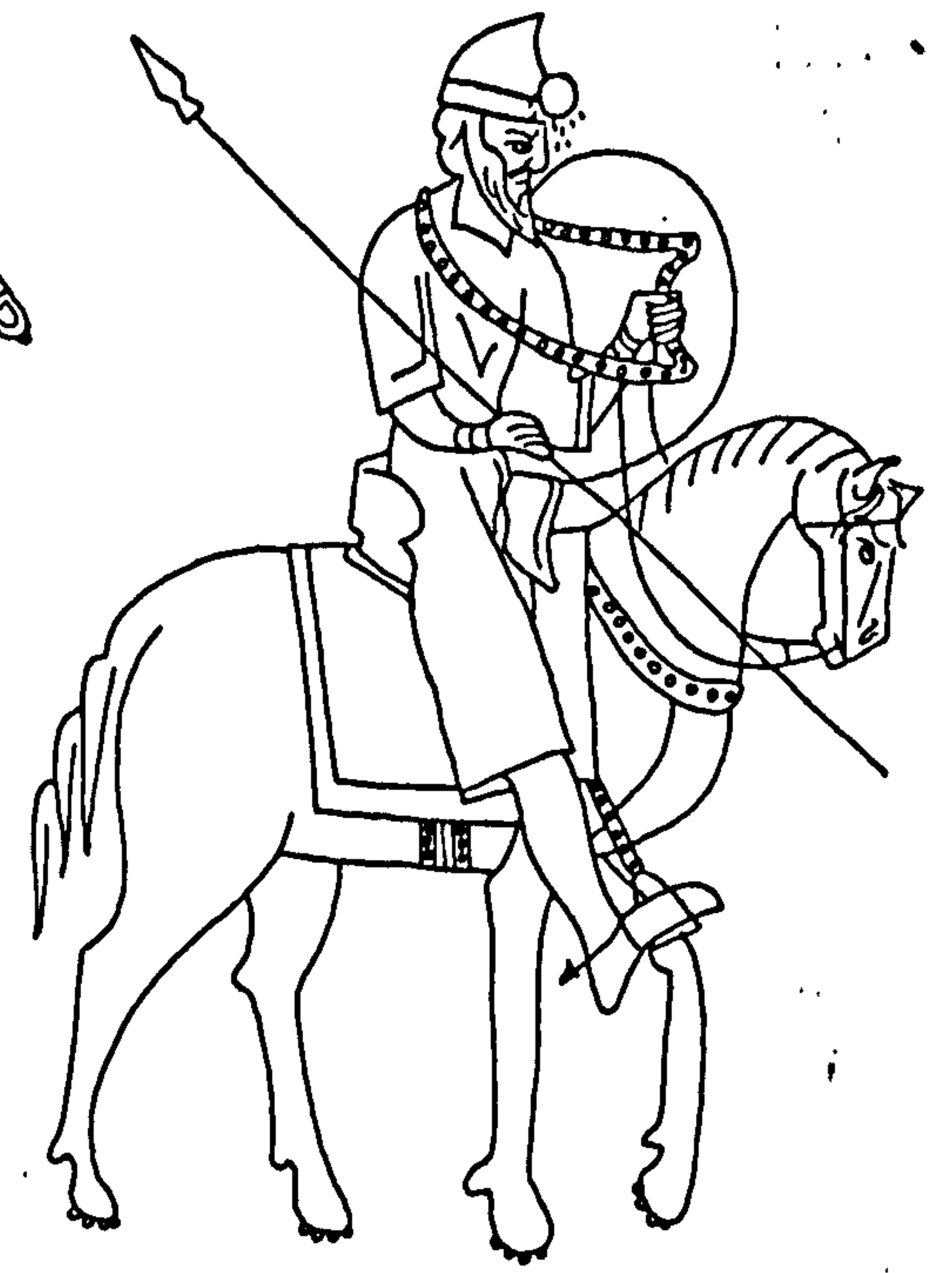
531C



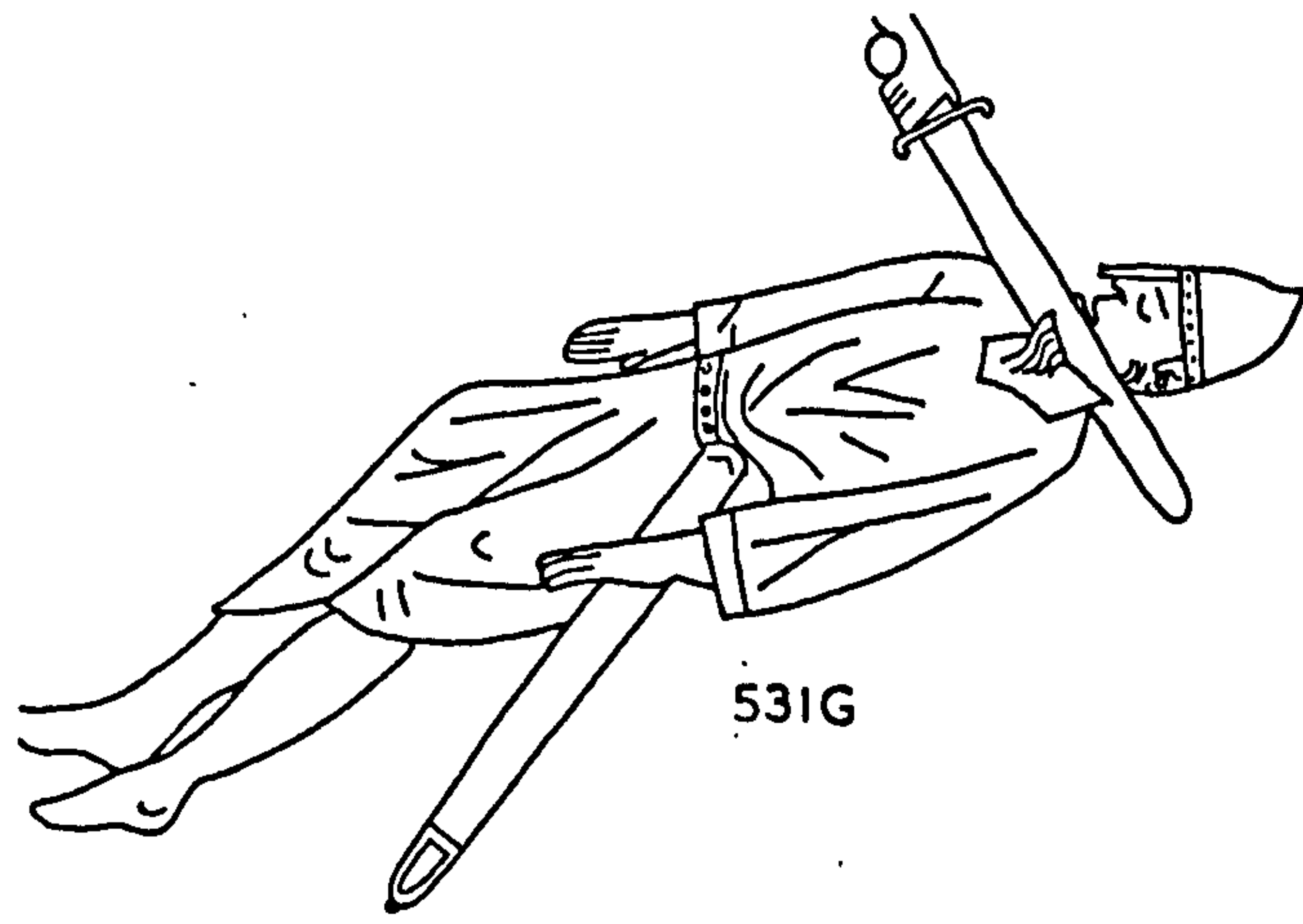
531D



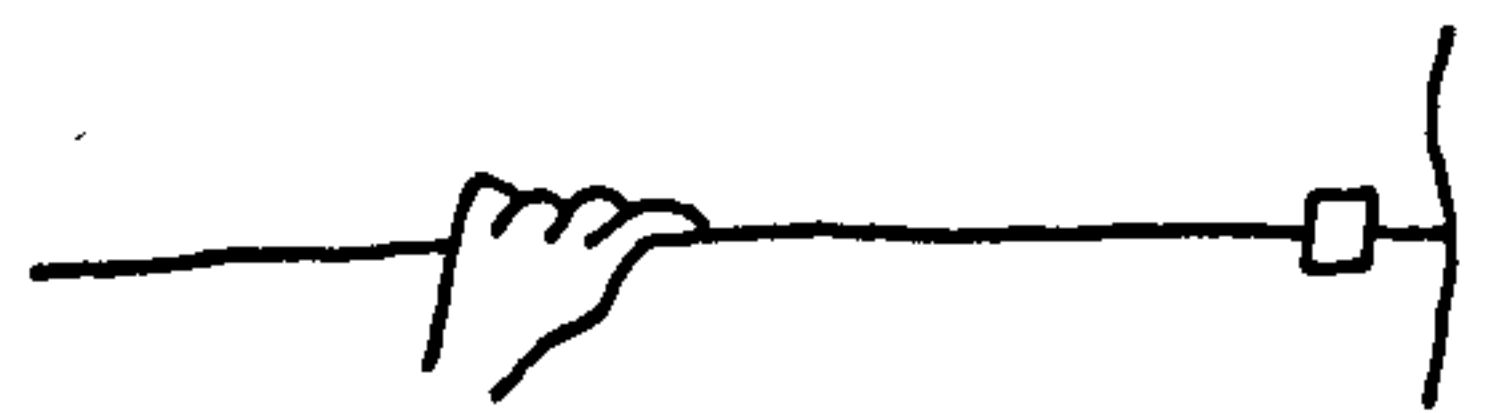
531E



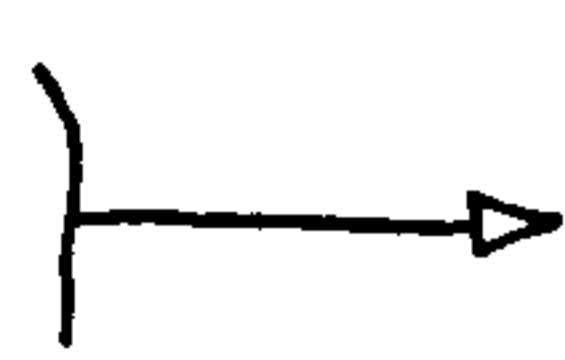
531F



531G



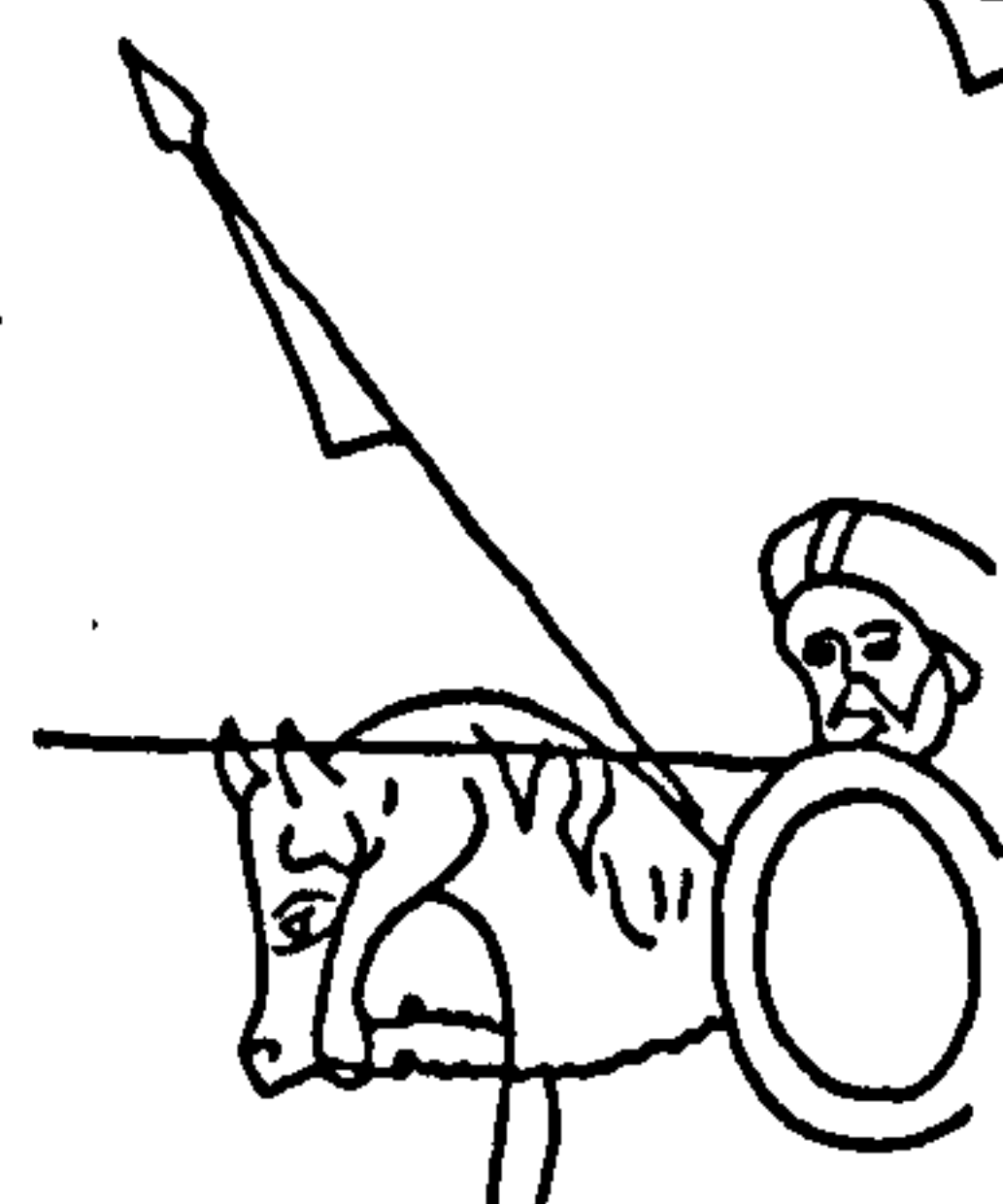
531H



531K



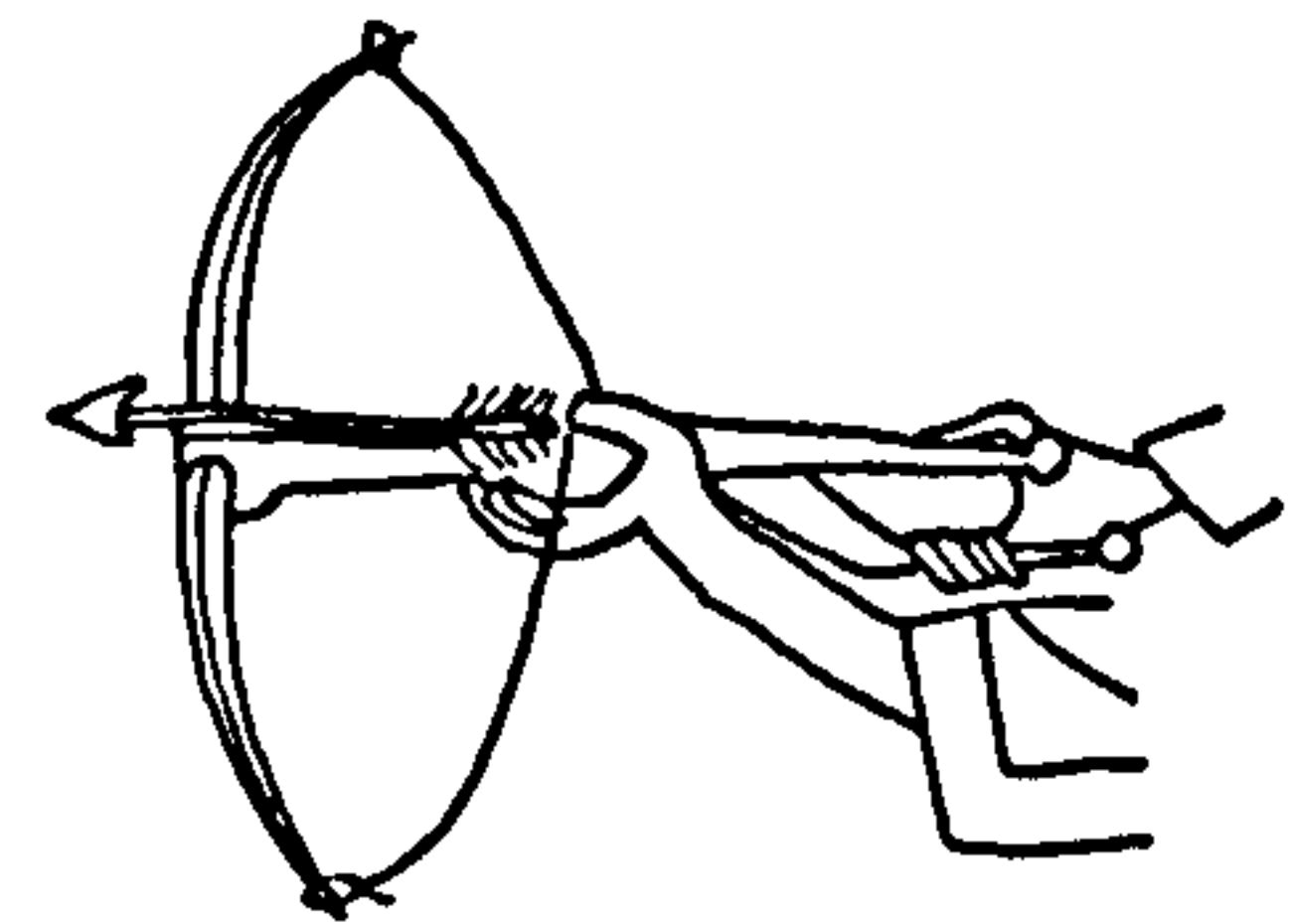
531I



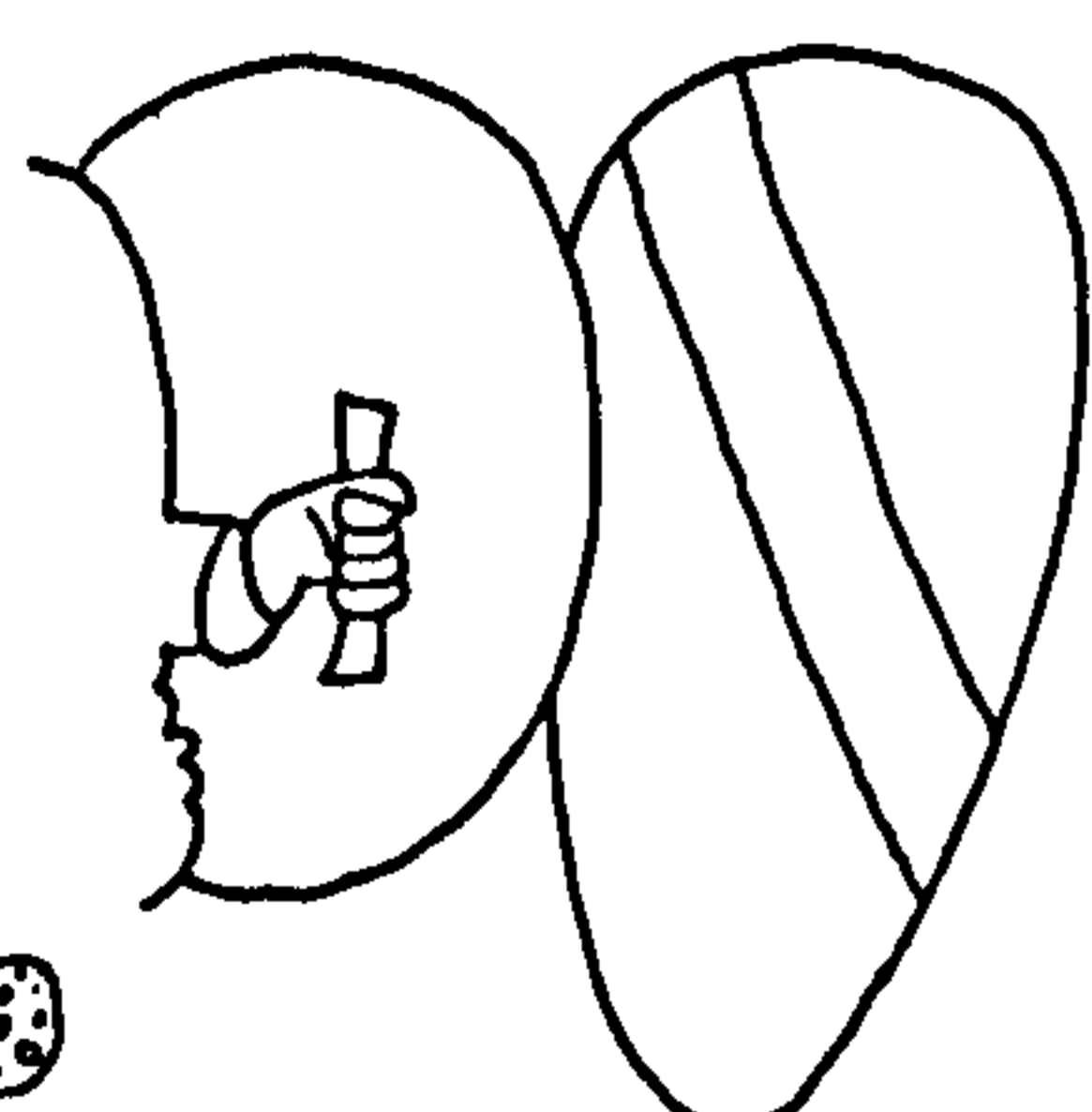
531J



531L



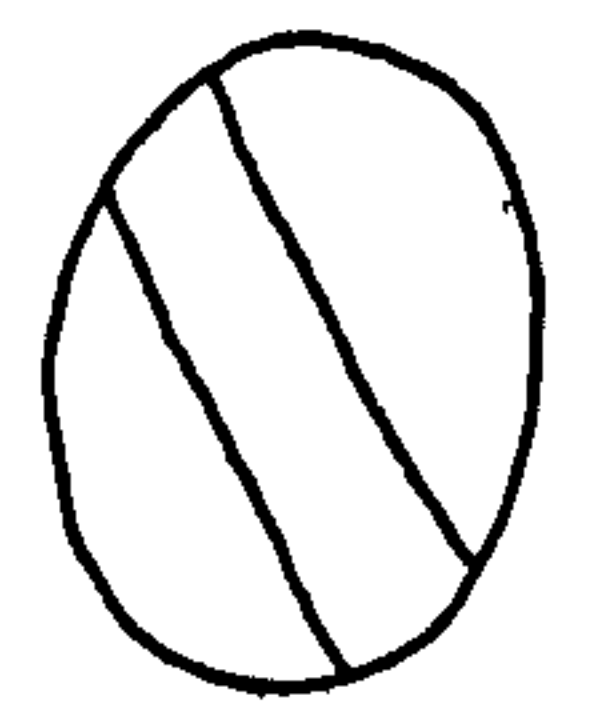
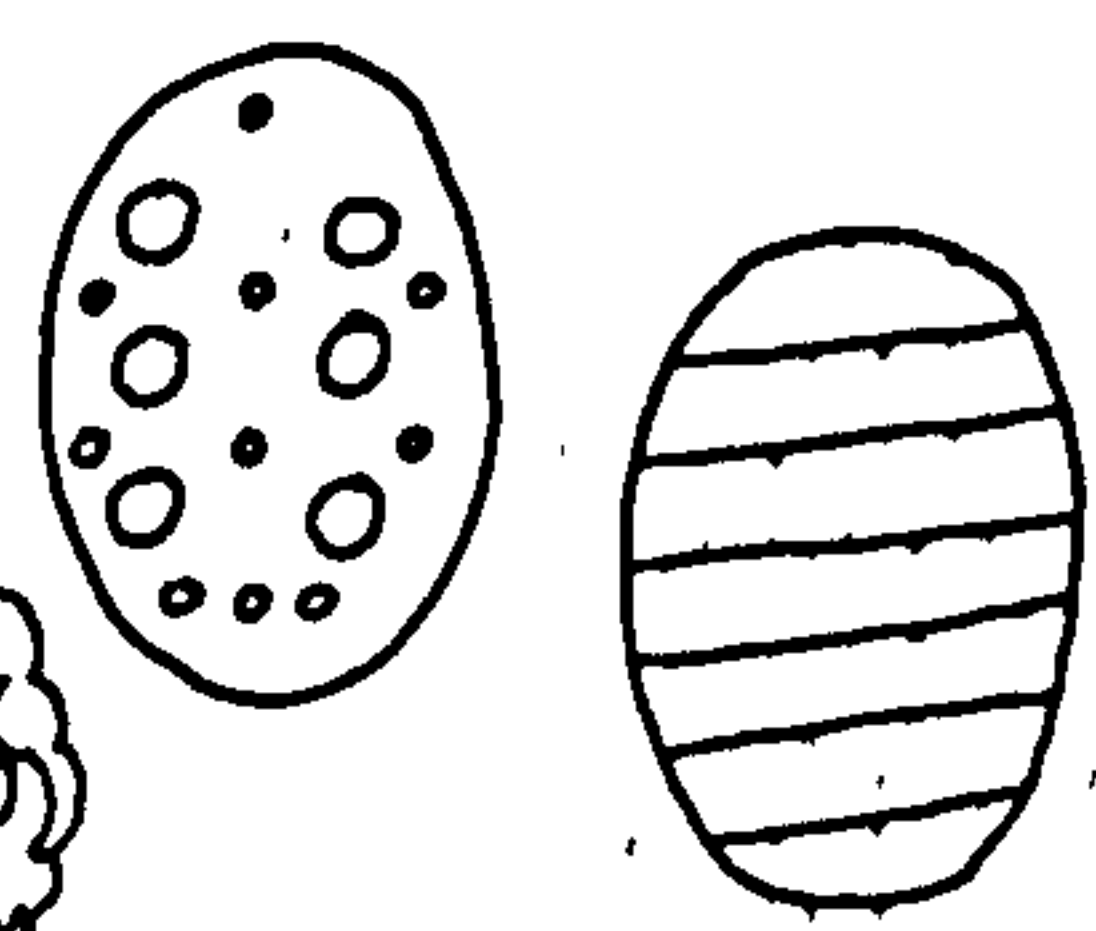
531M



531N



531O

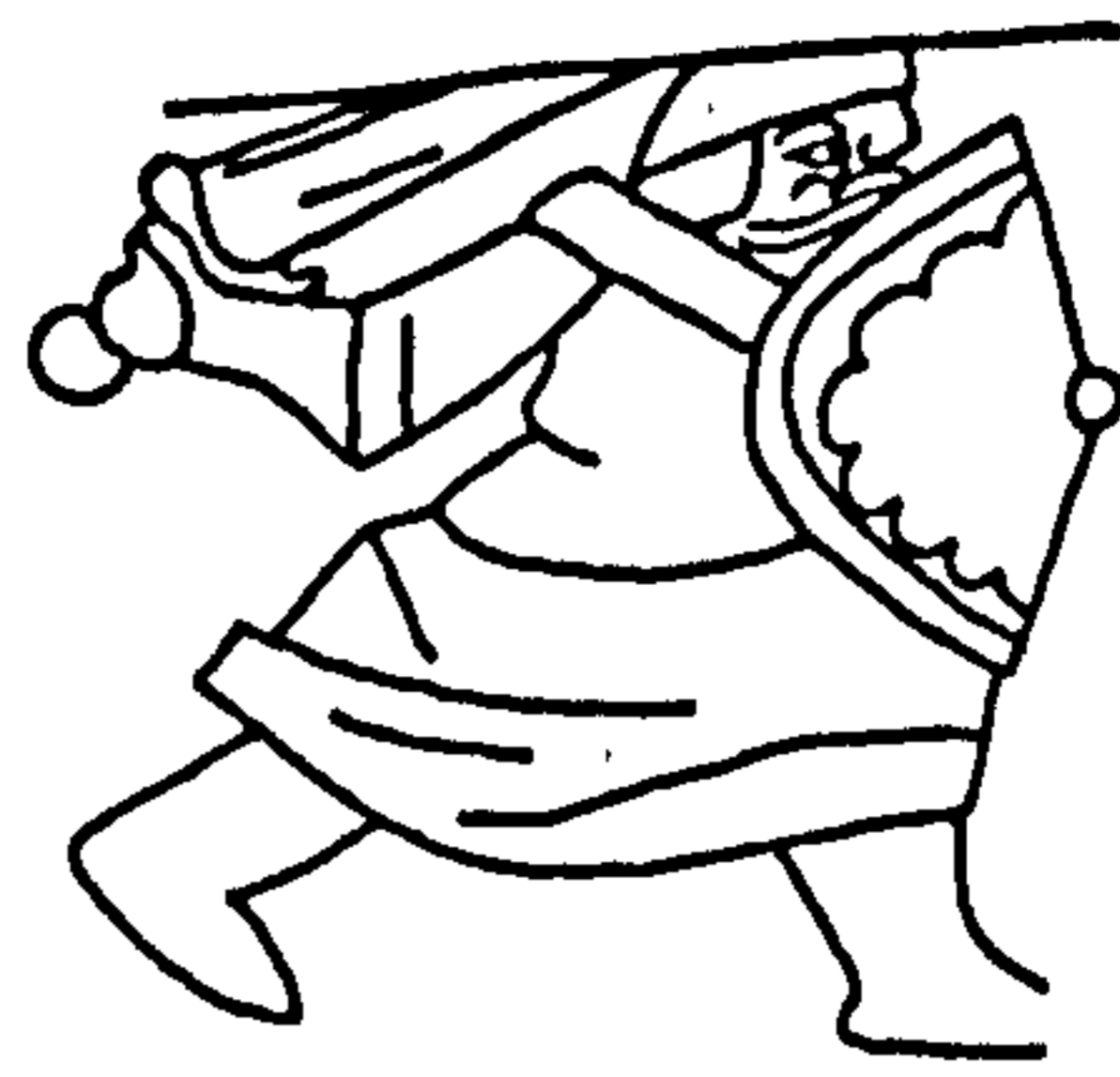




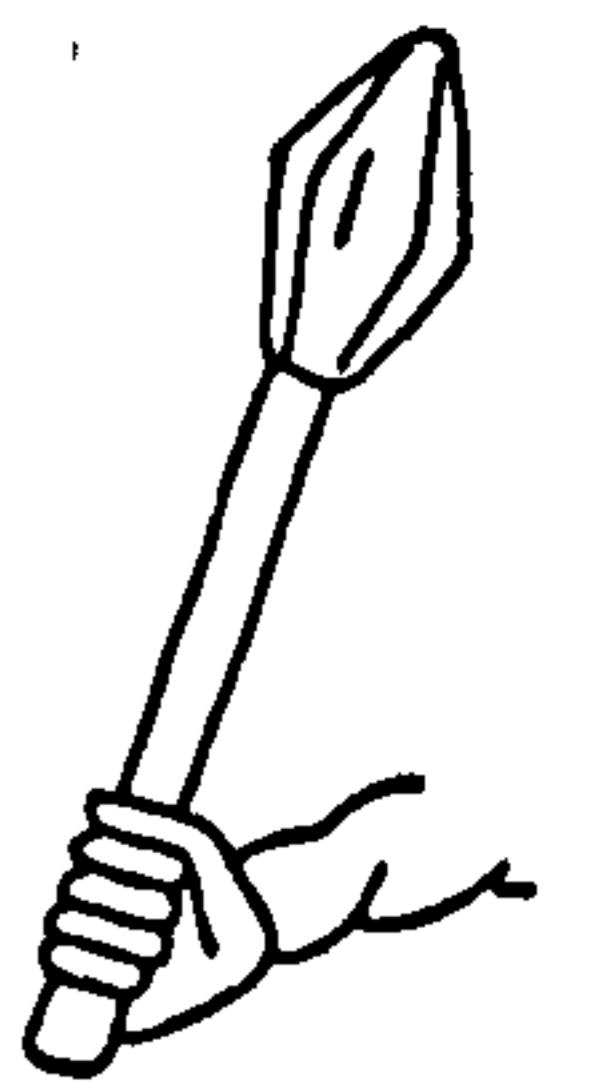
532



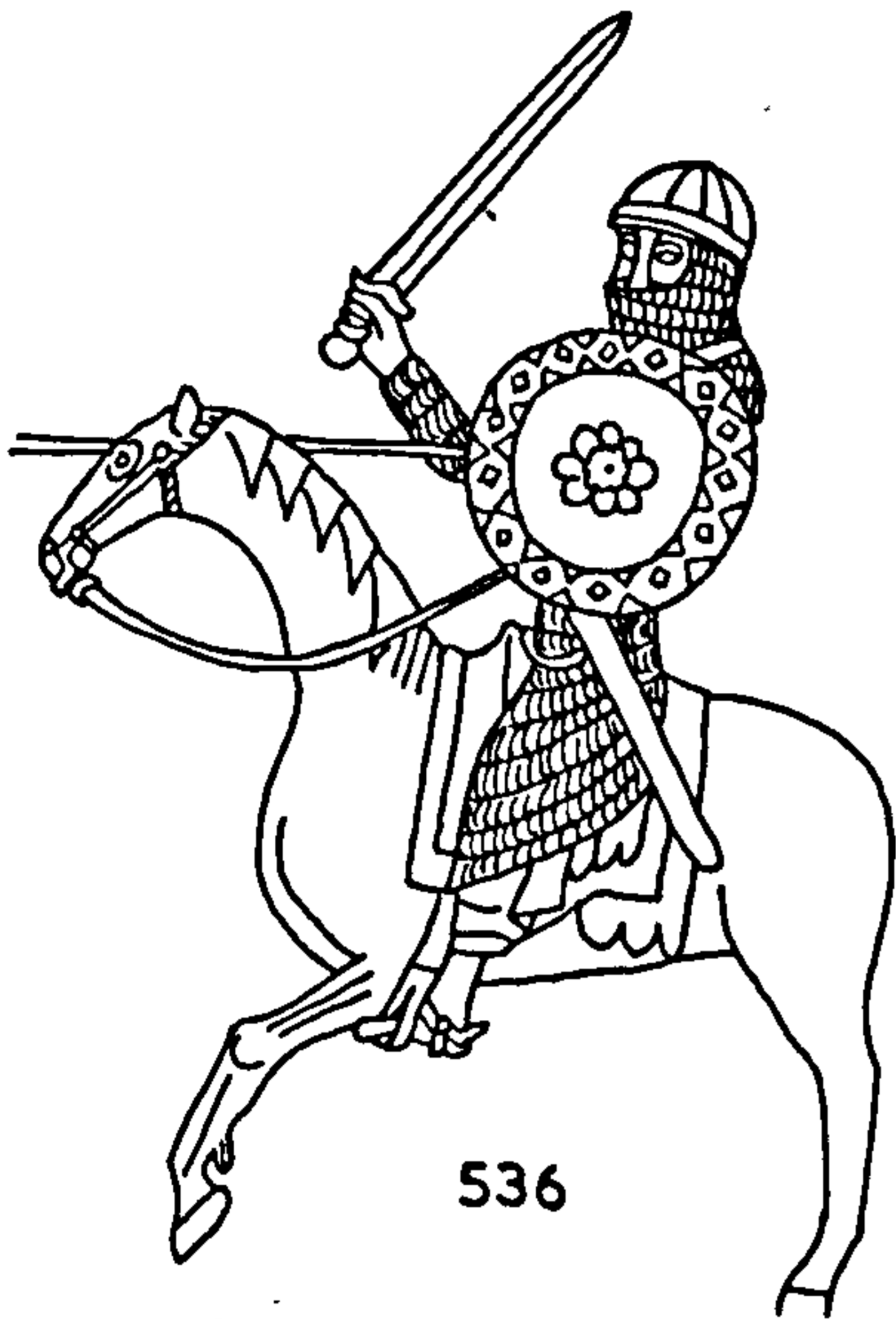
533



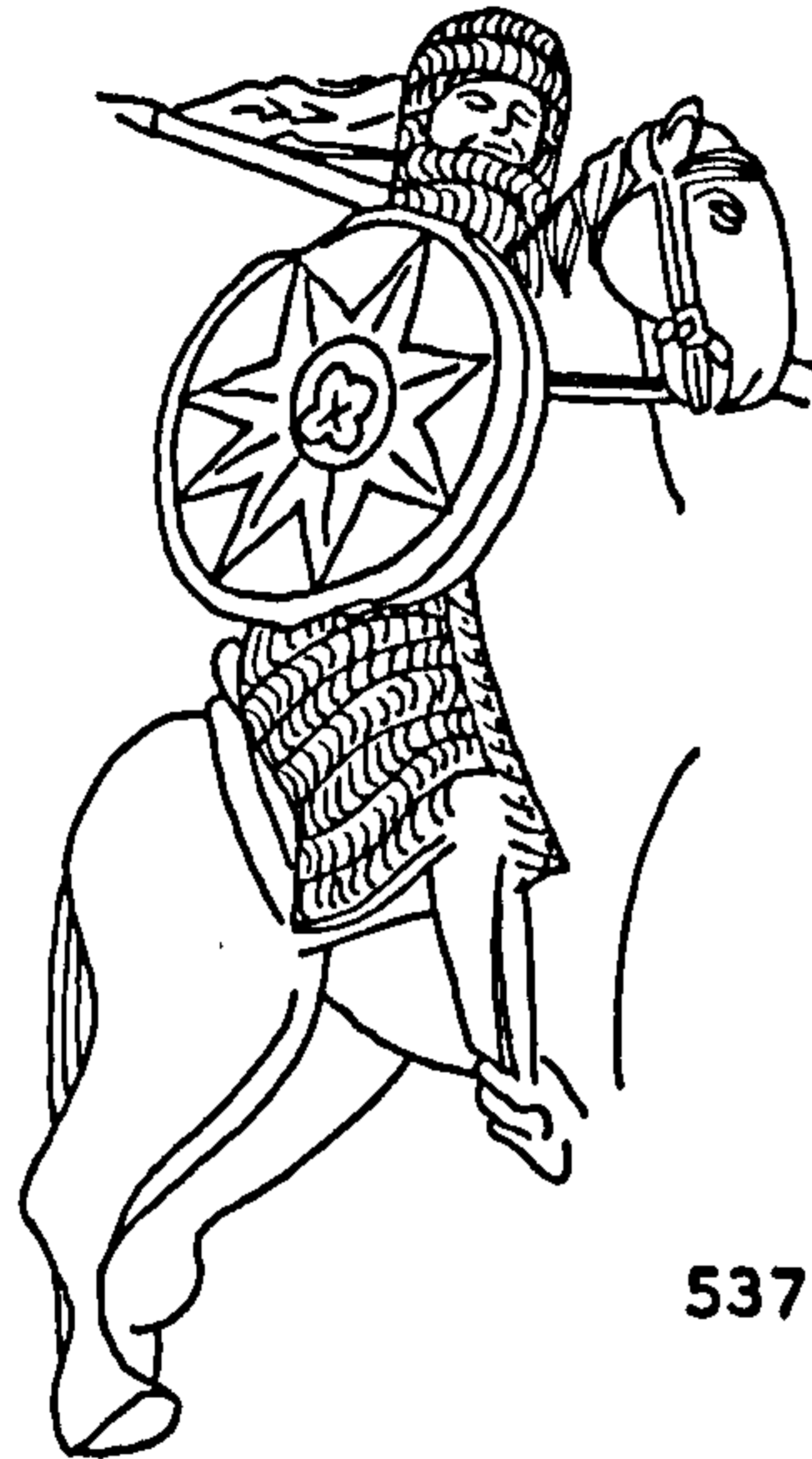
534



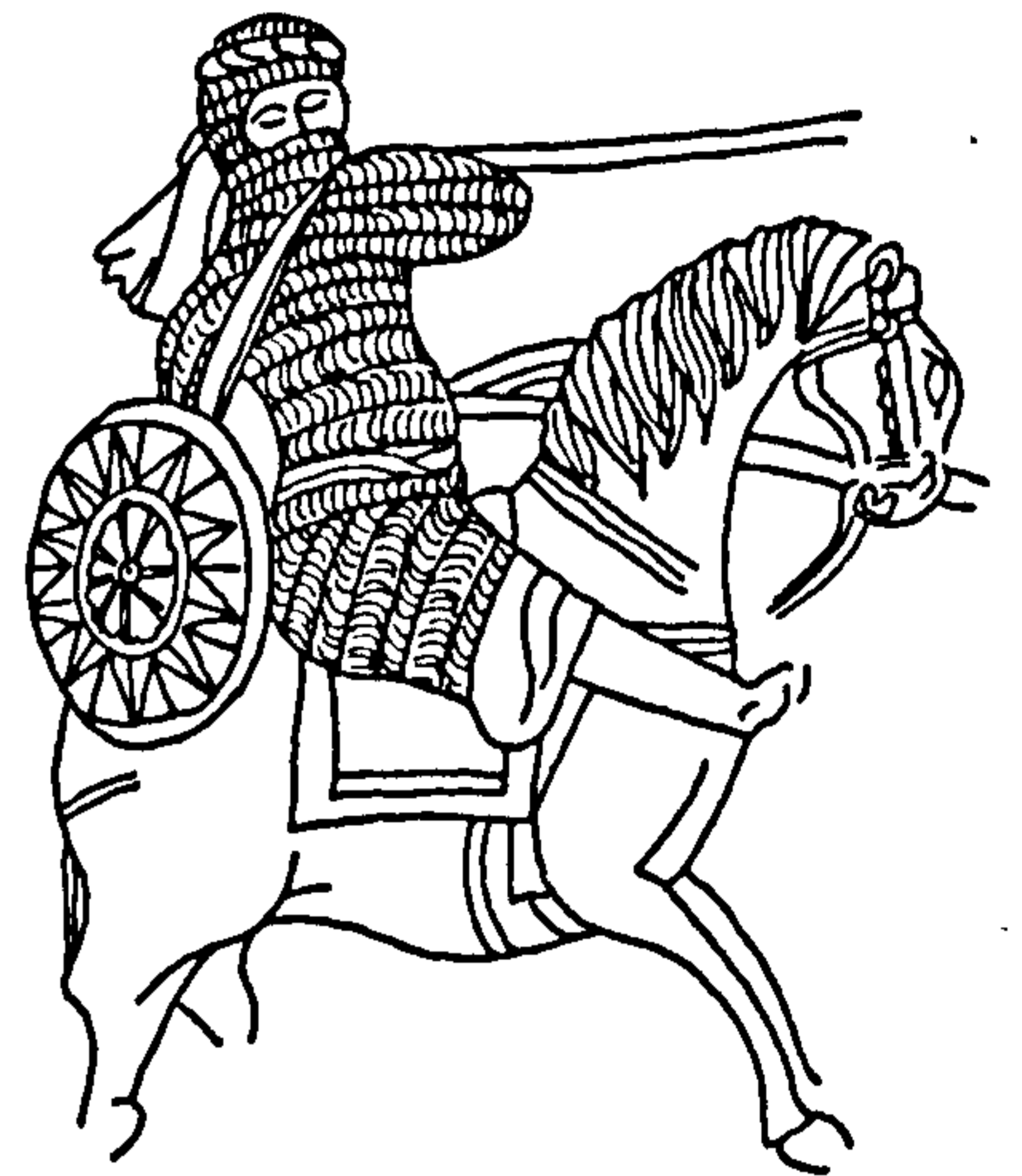
535



536



537



538



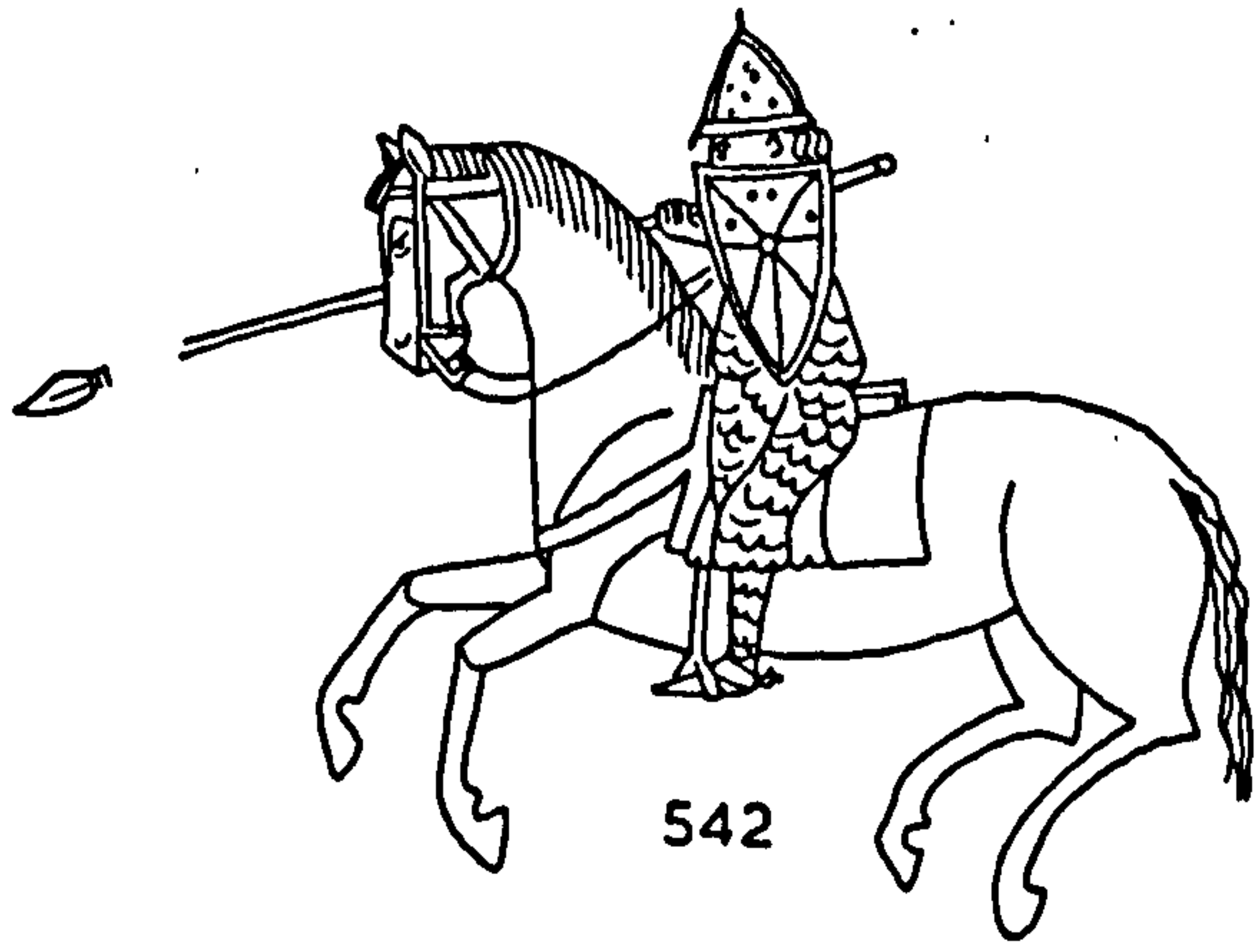
540



539



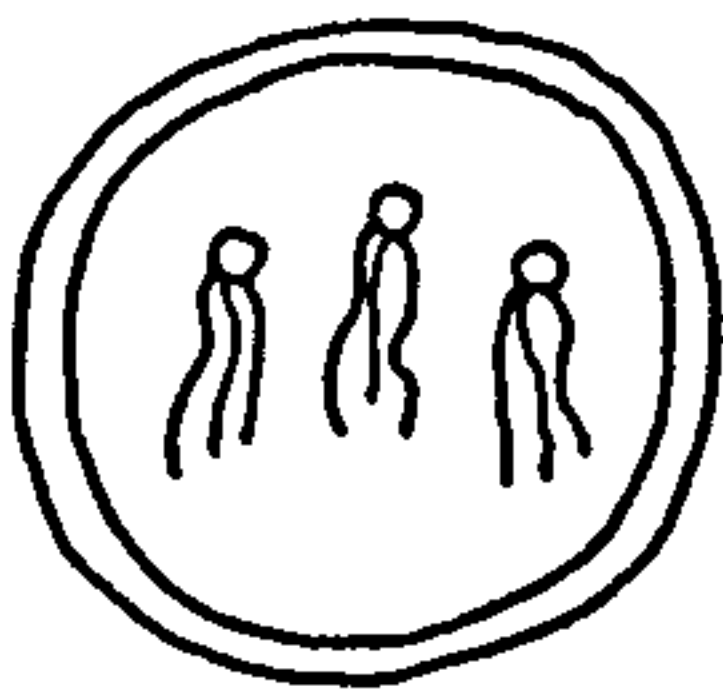
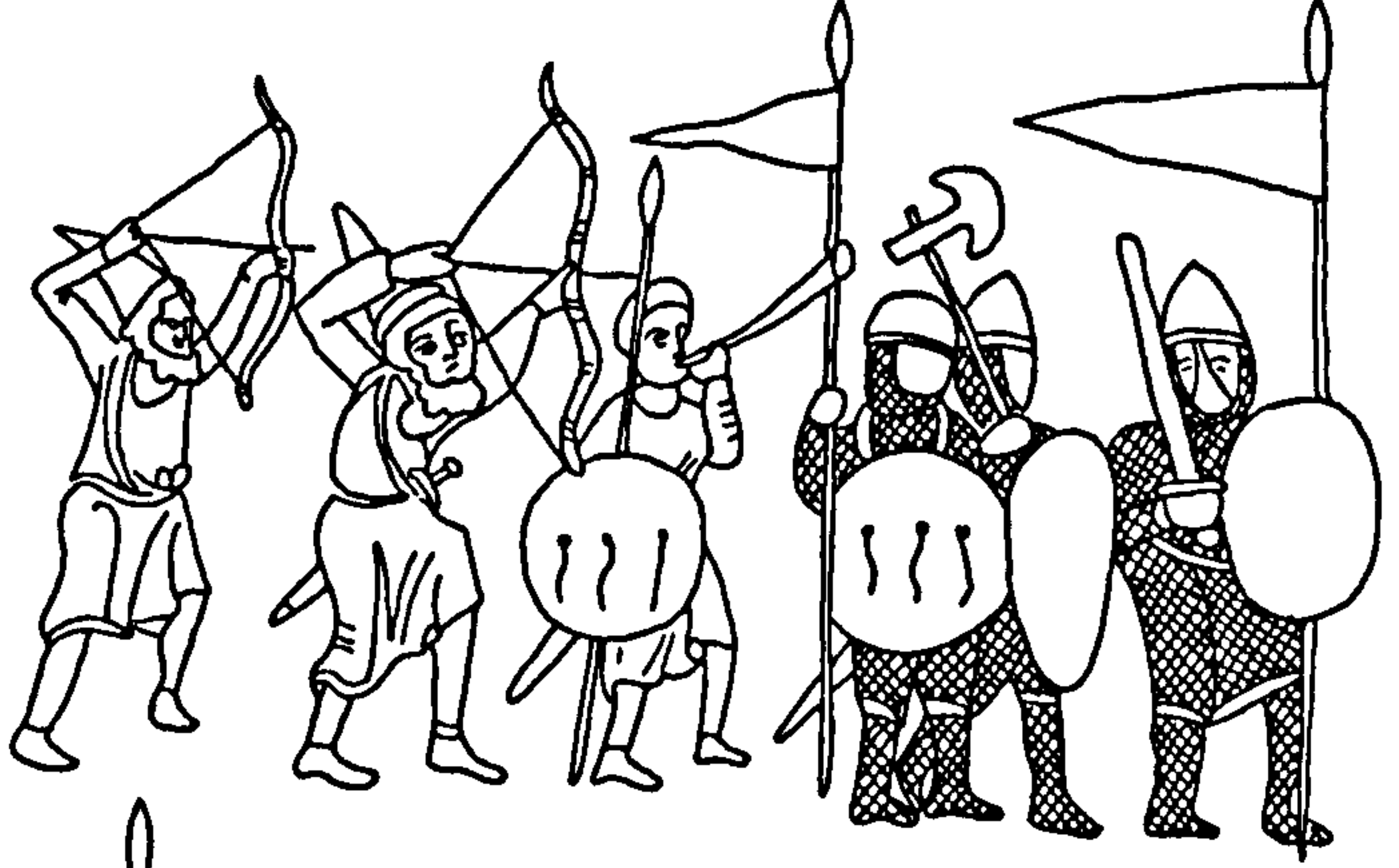
541



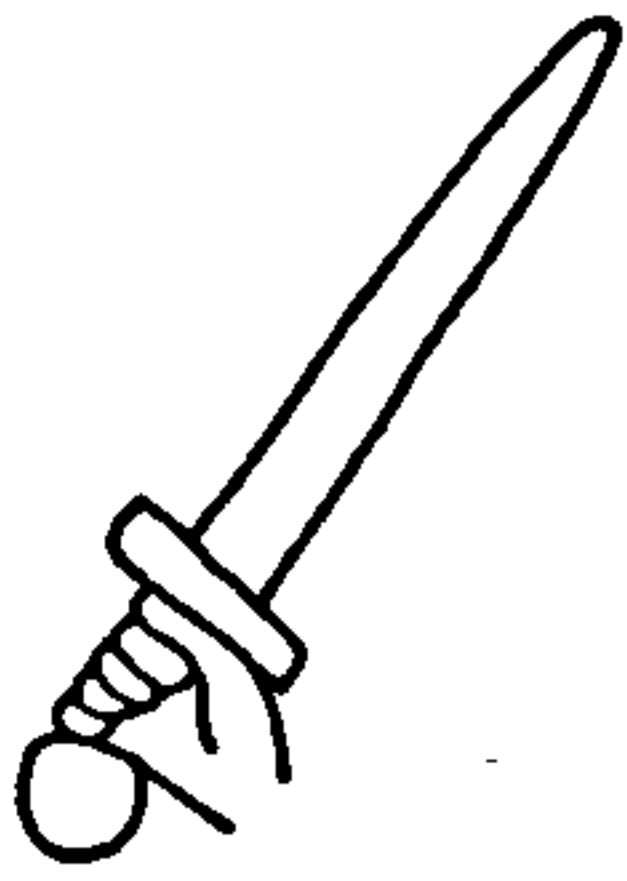
542



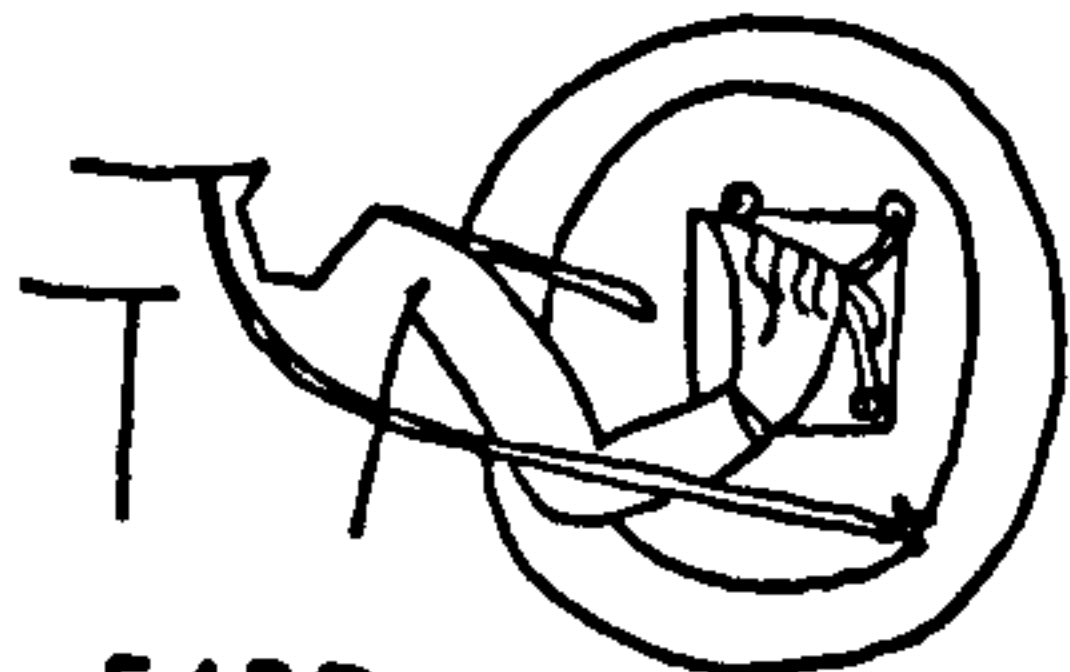
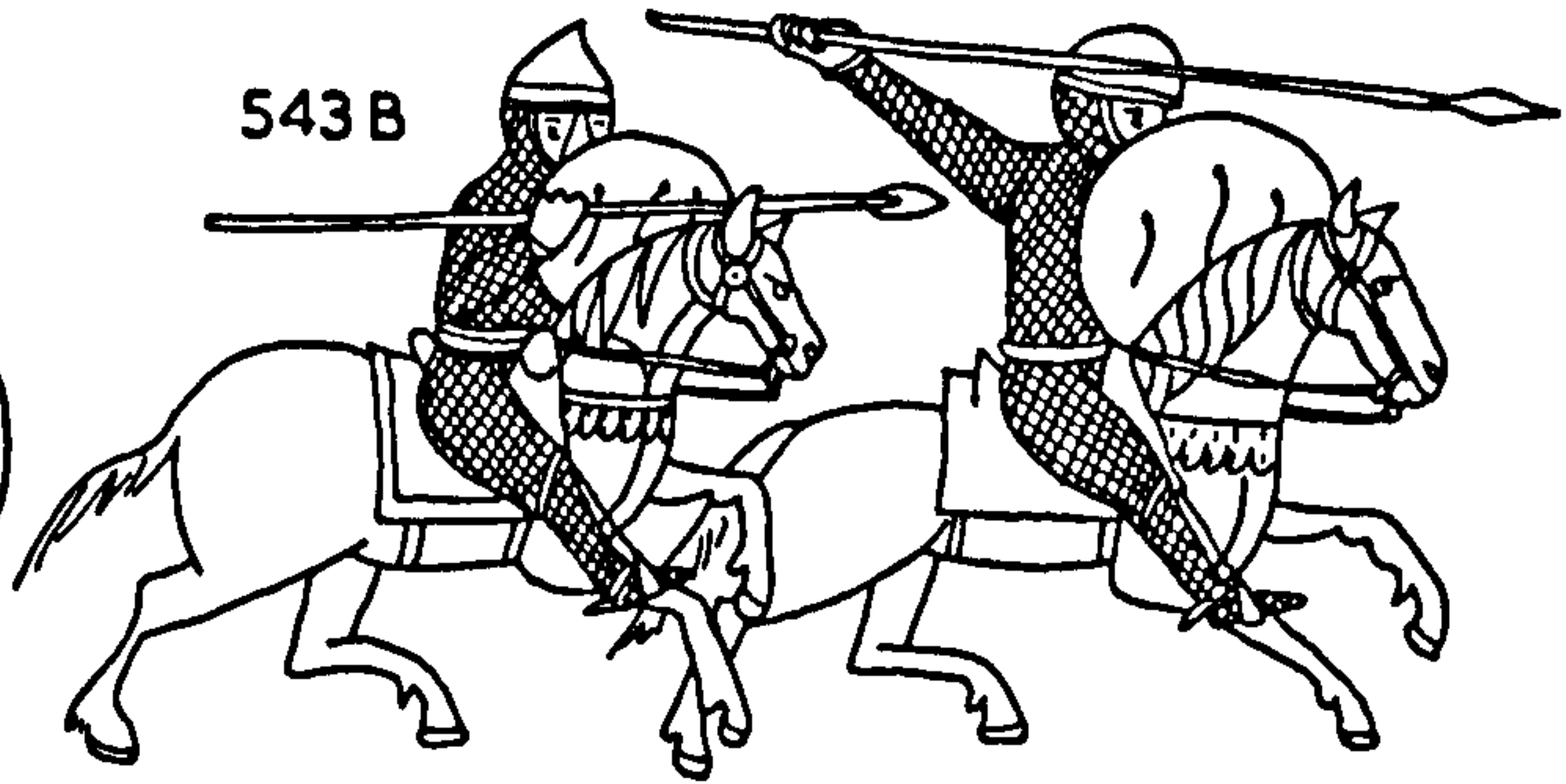
543A



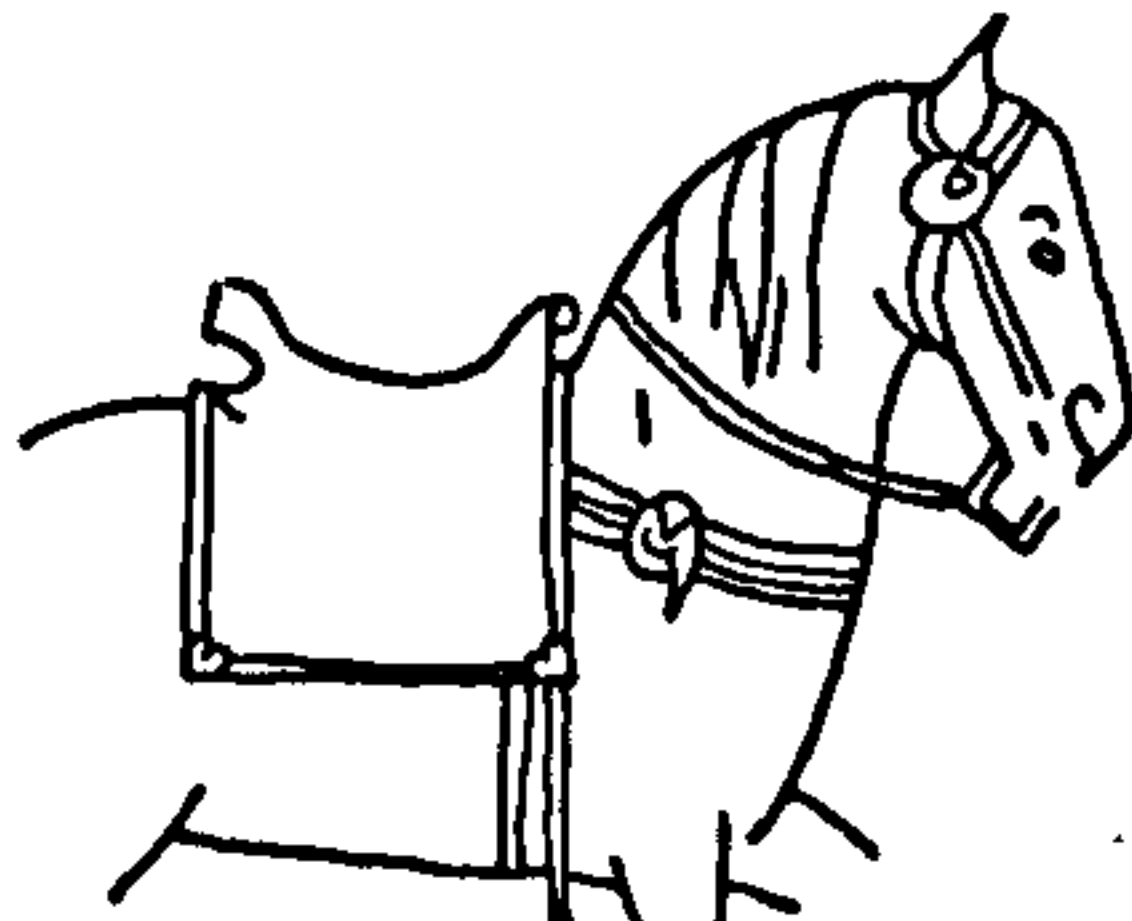
543C



543B



543D



543E



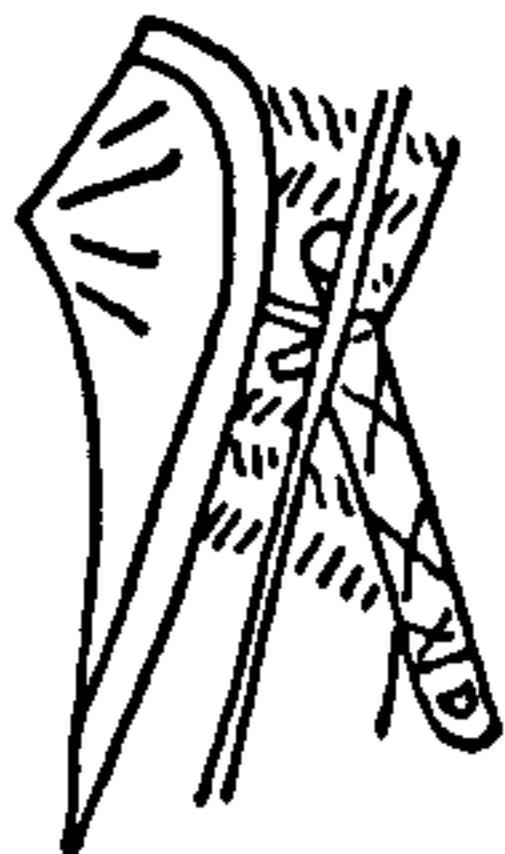
543F



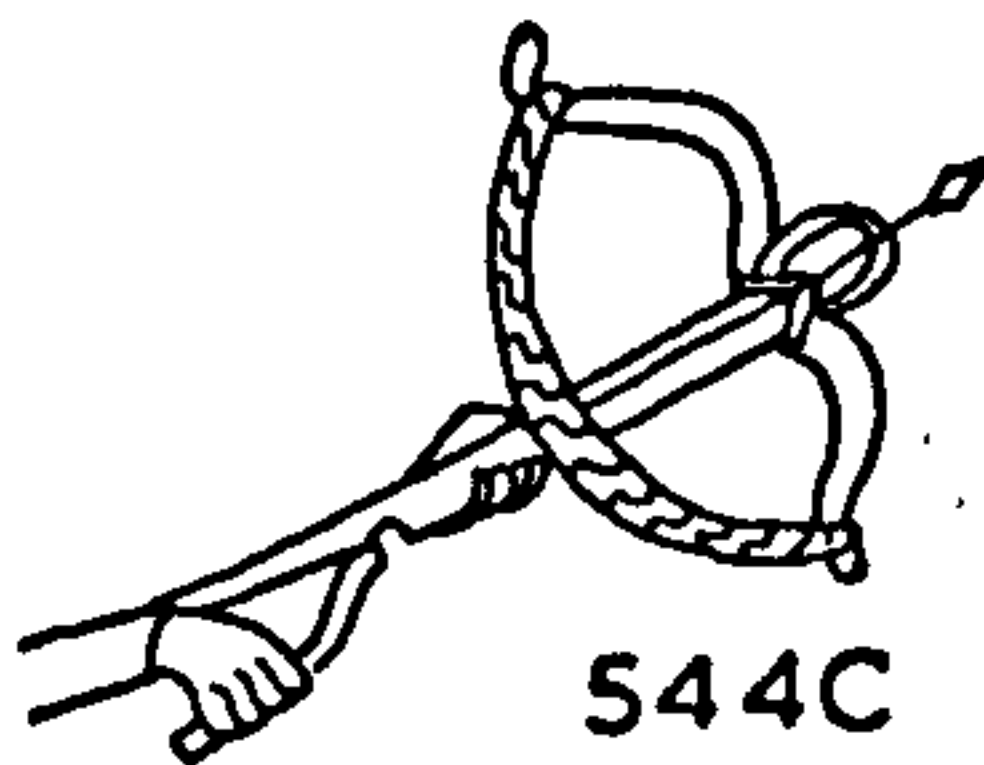
543G



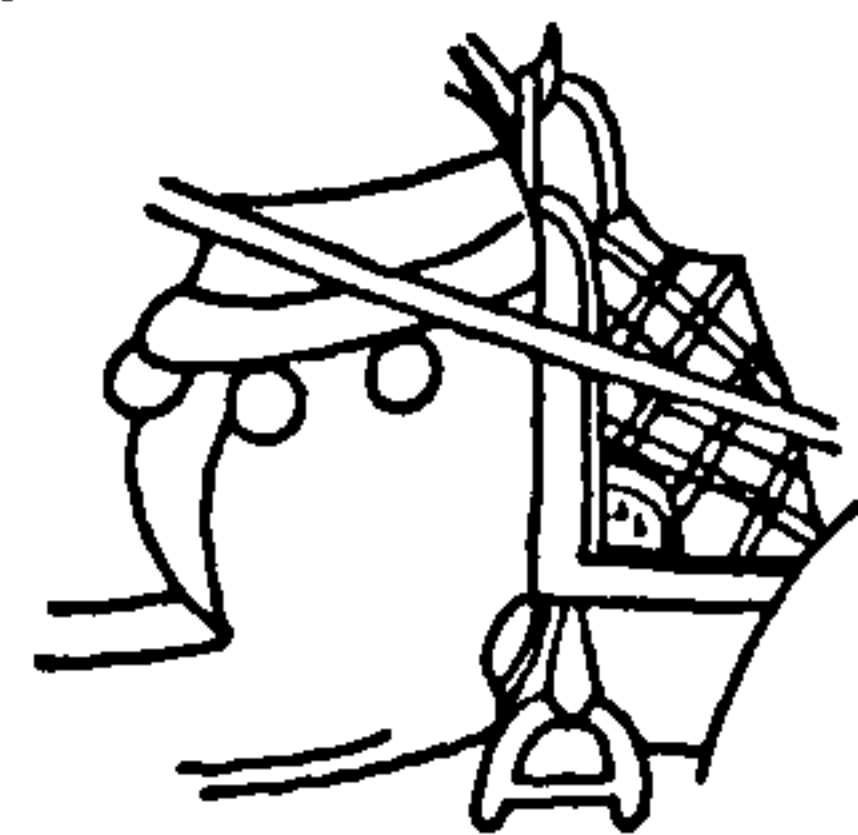
544A



544B



544C



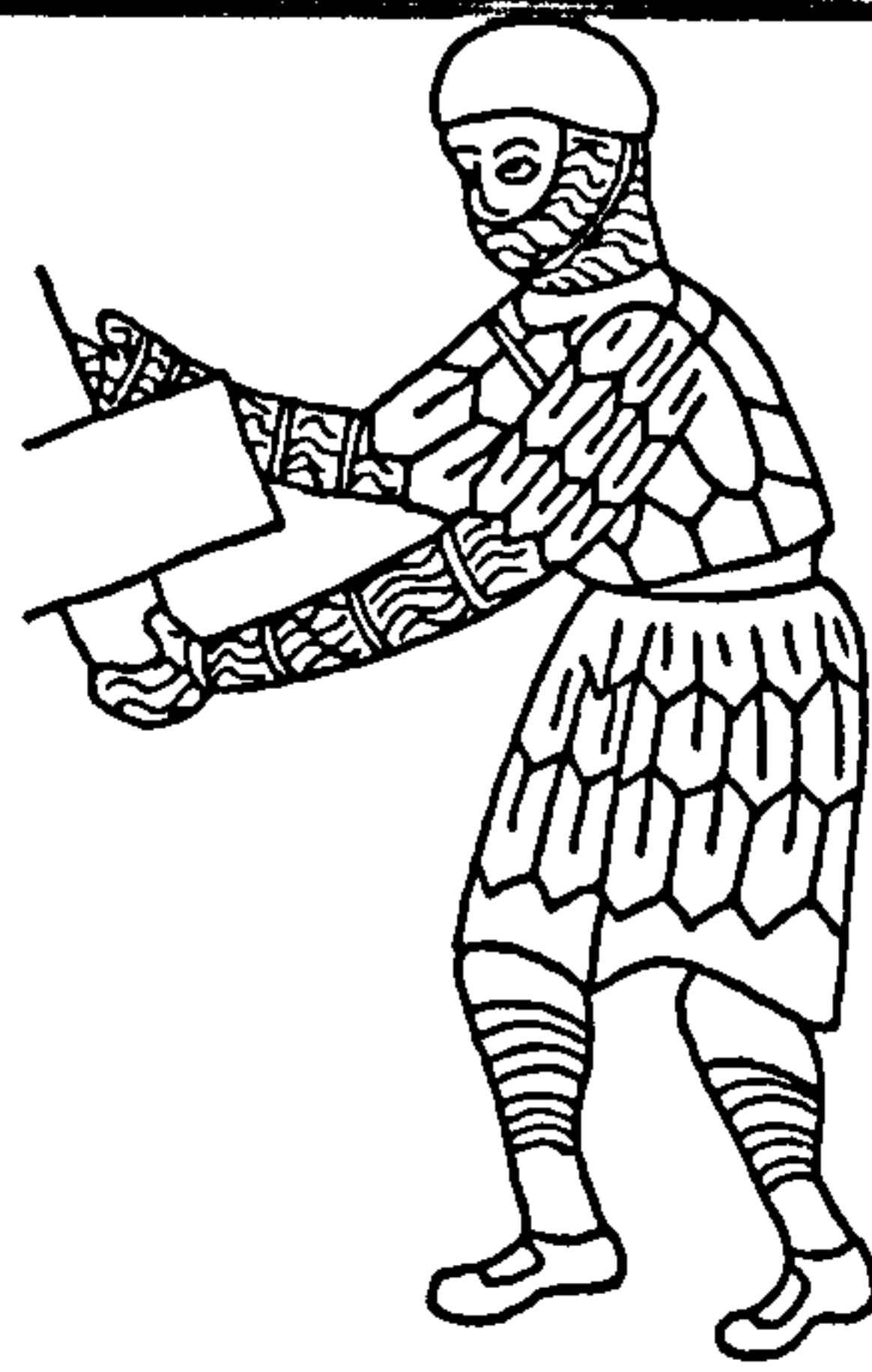
544E



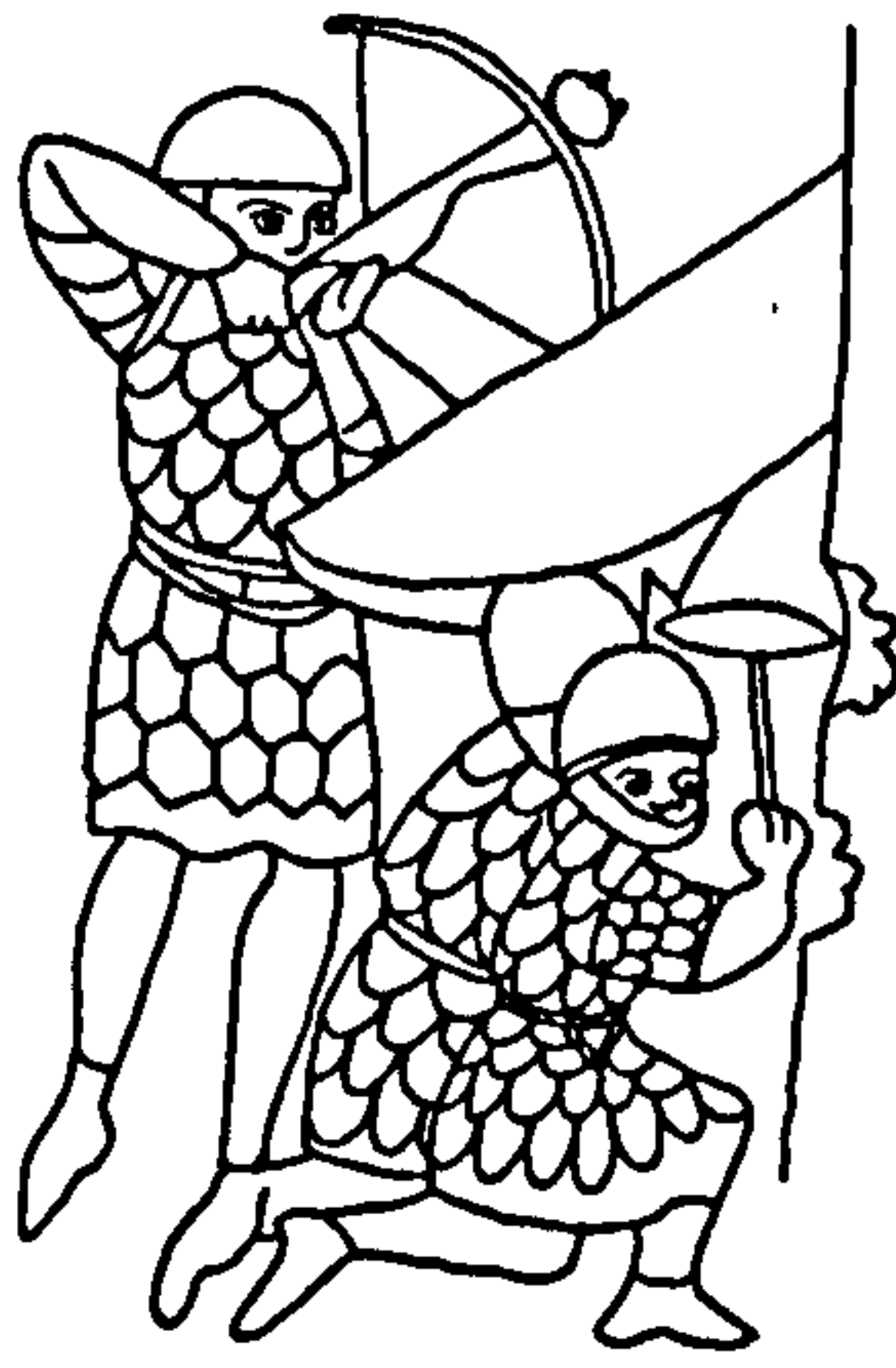
544F



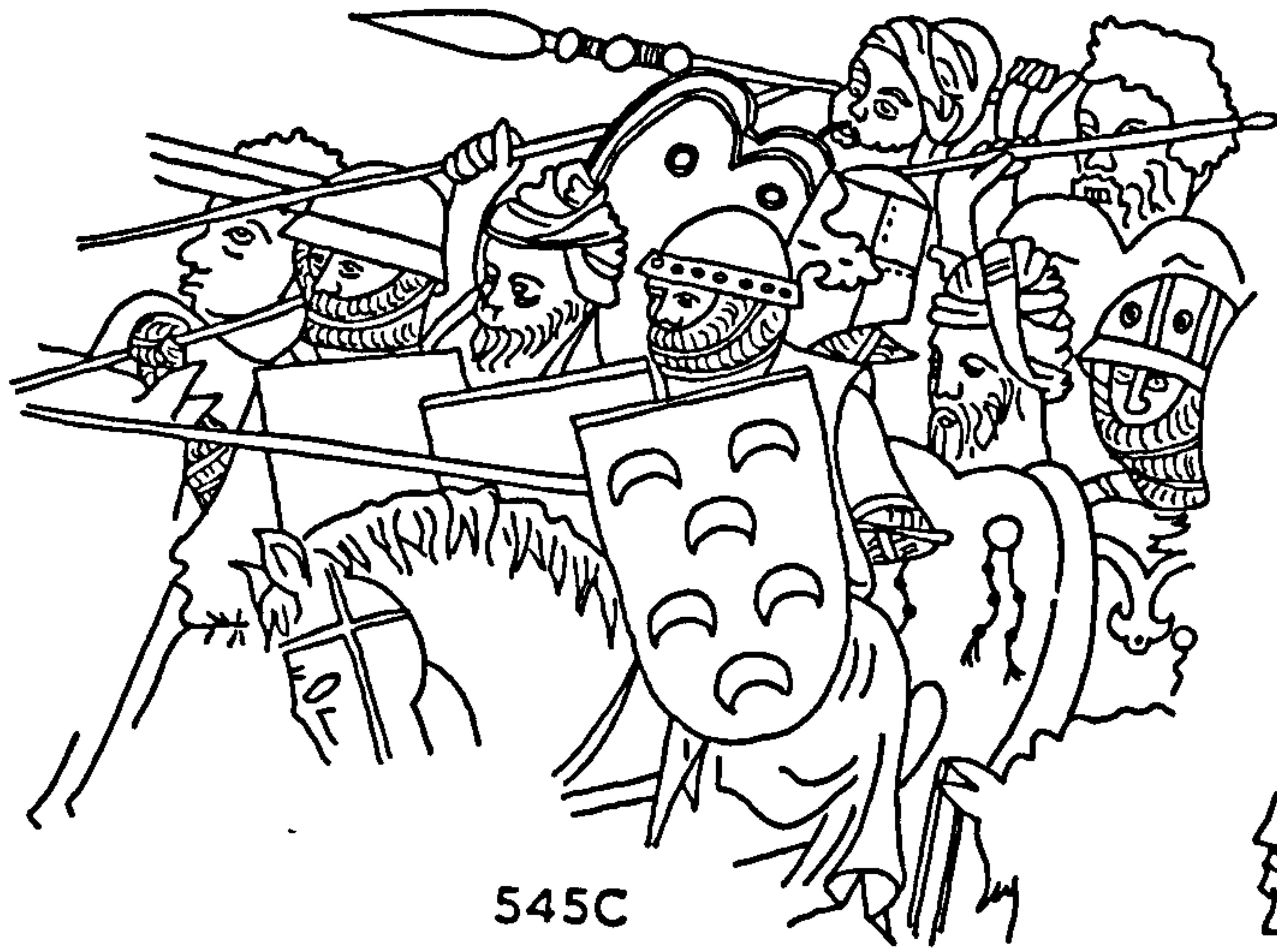
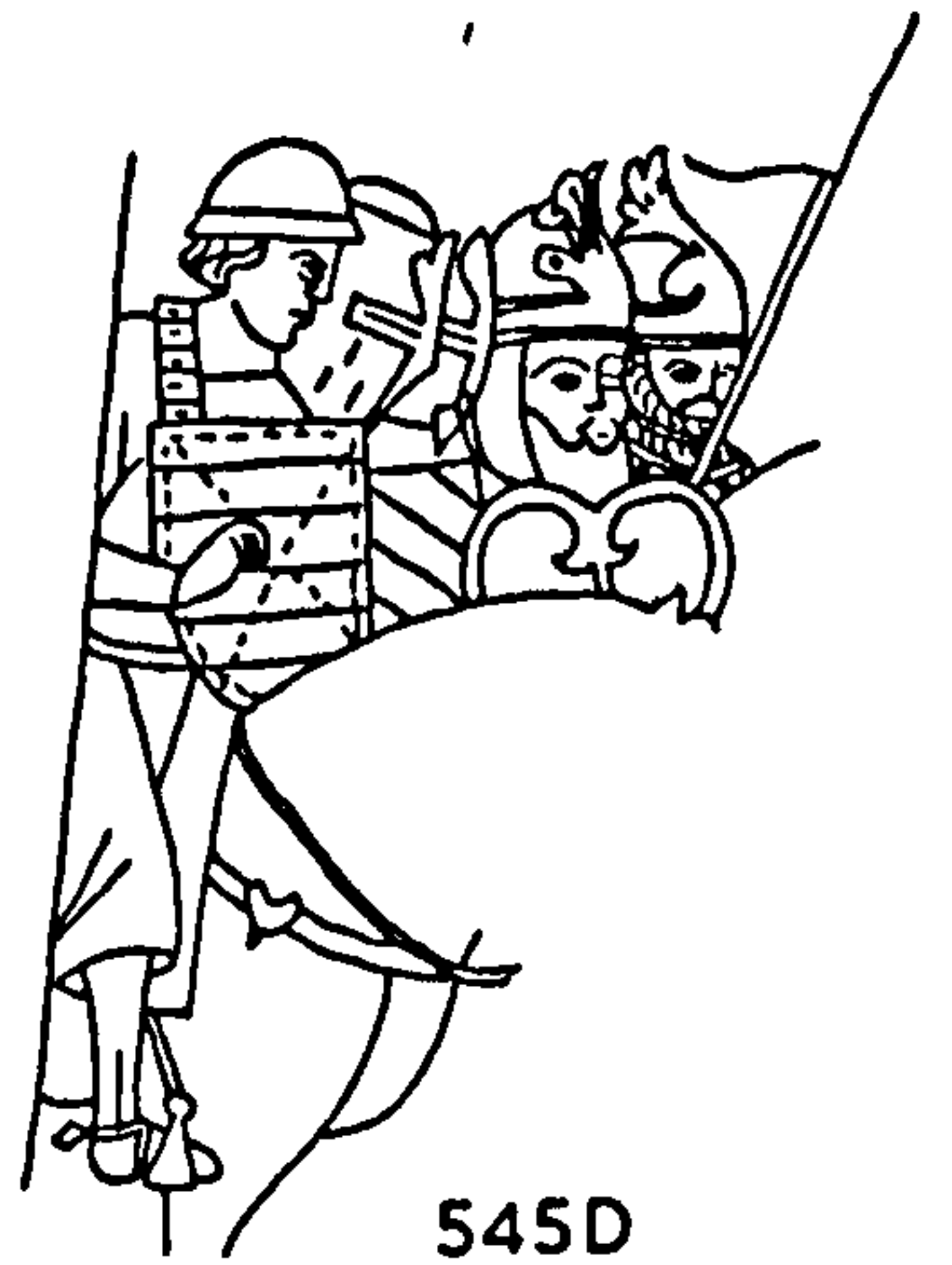
545A



545B



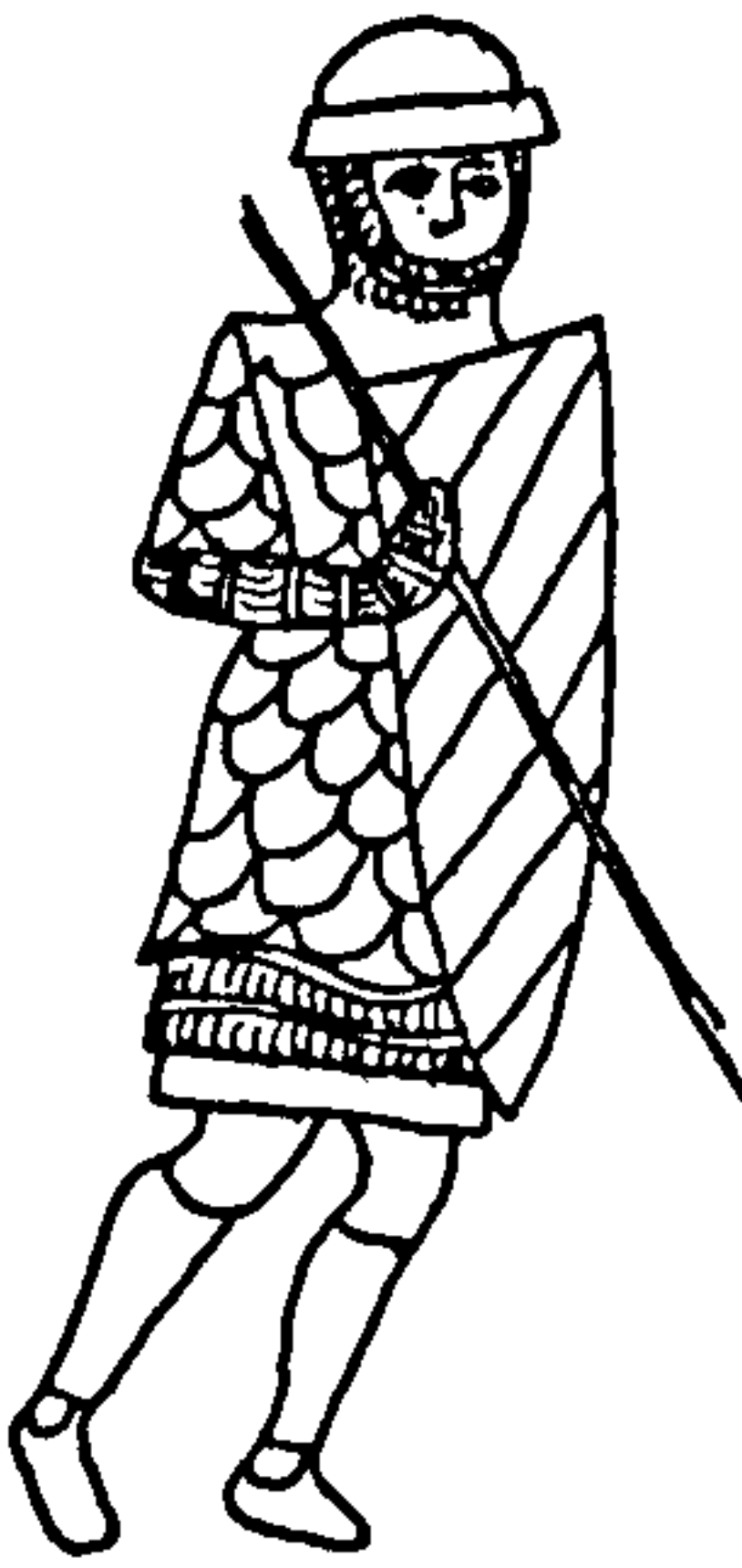
545D



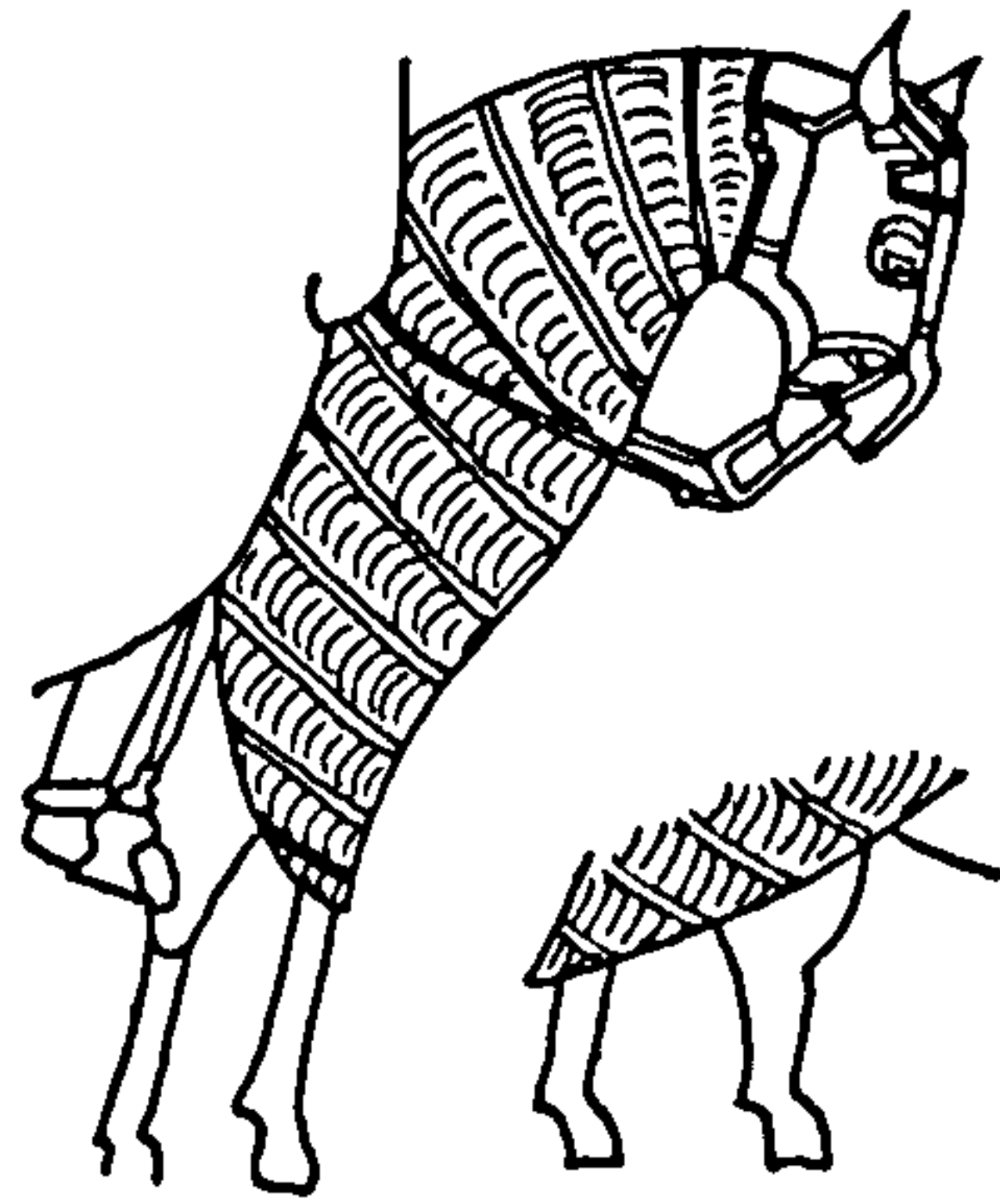
545C



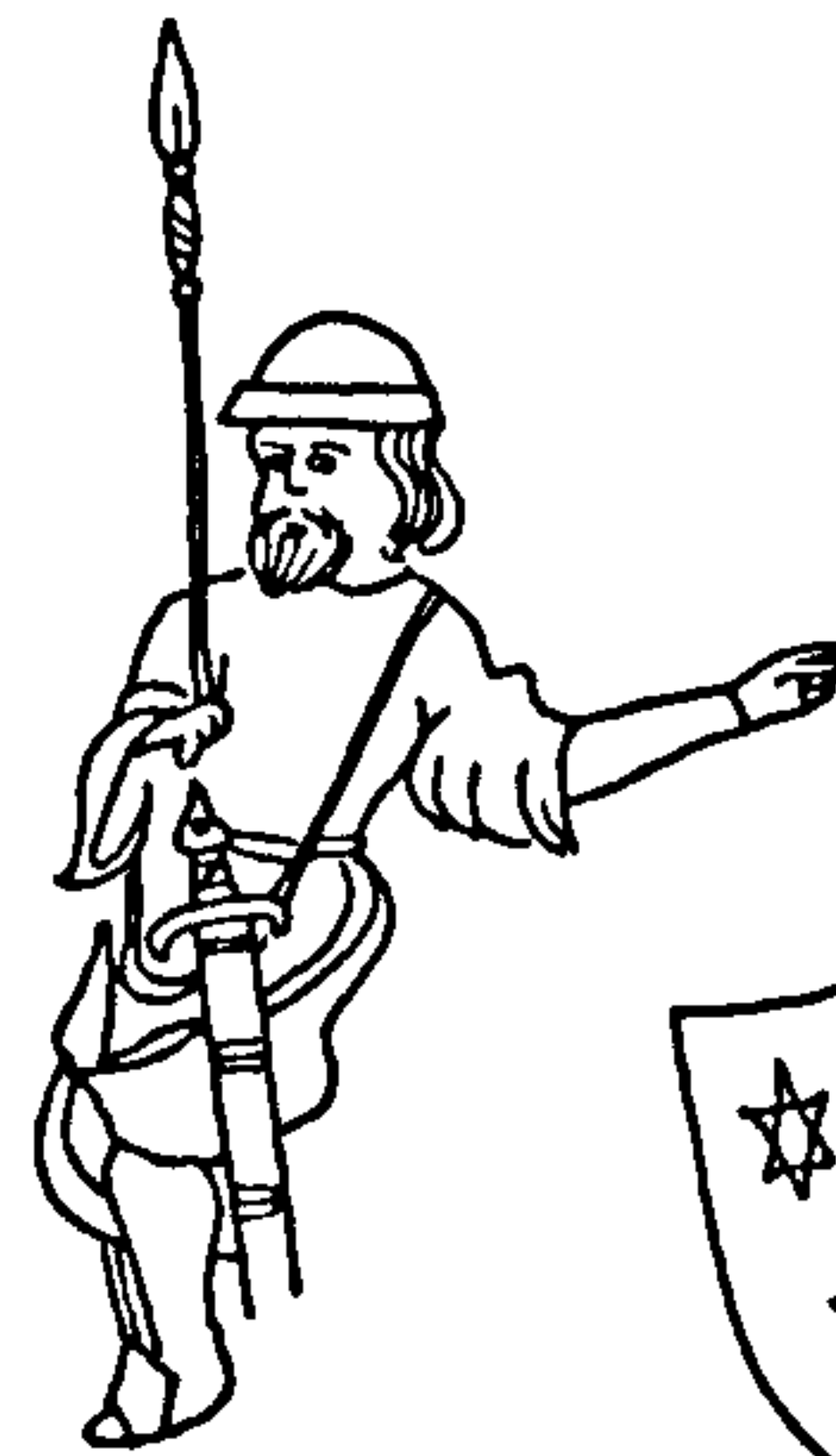
545E



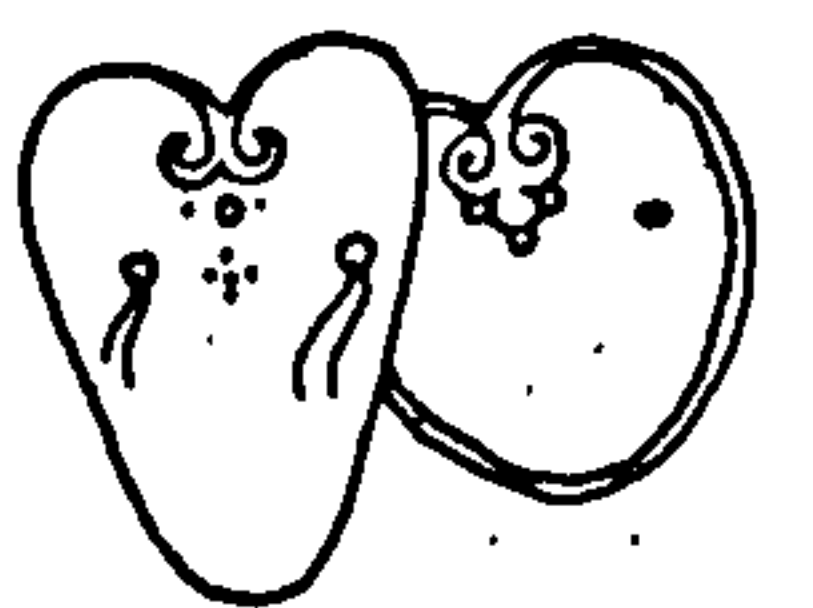
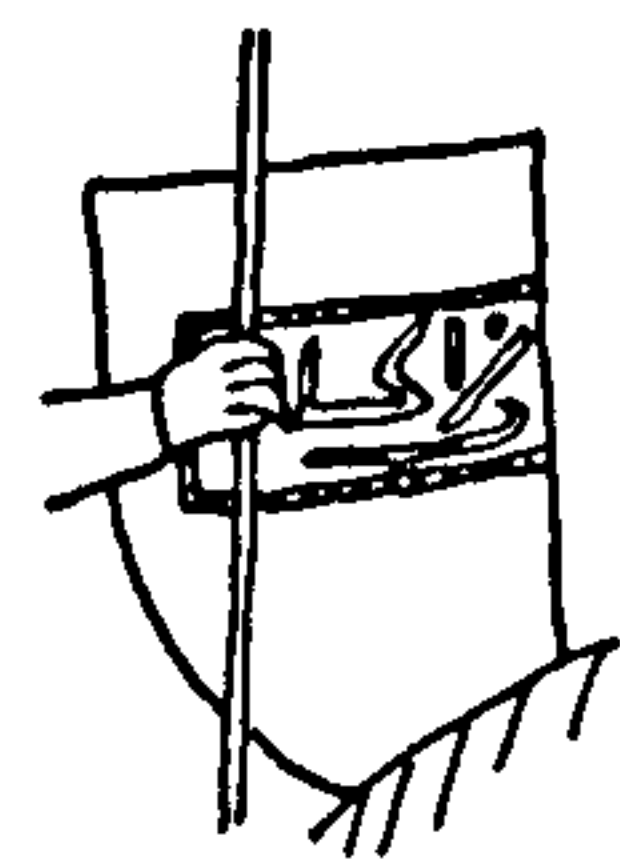
545F



545G



545H



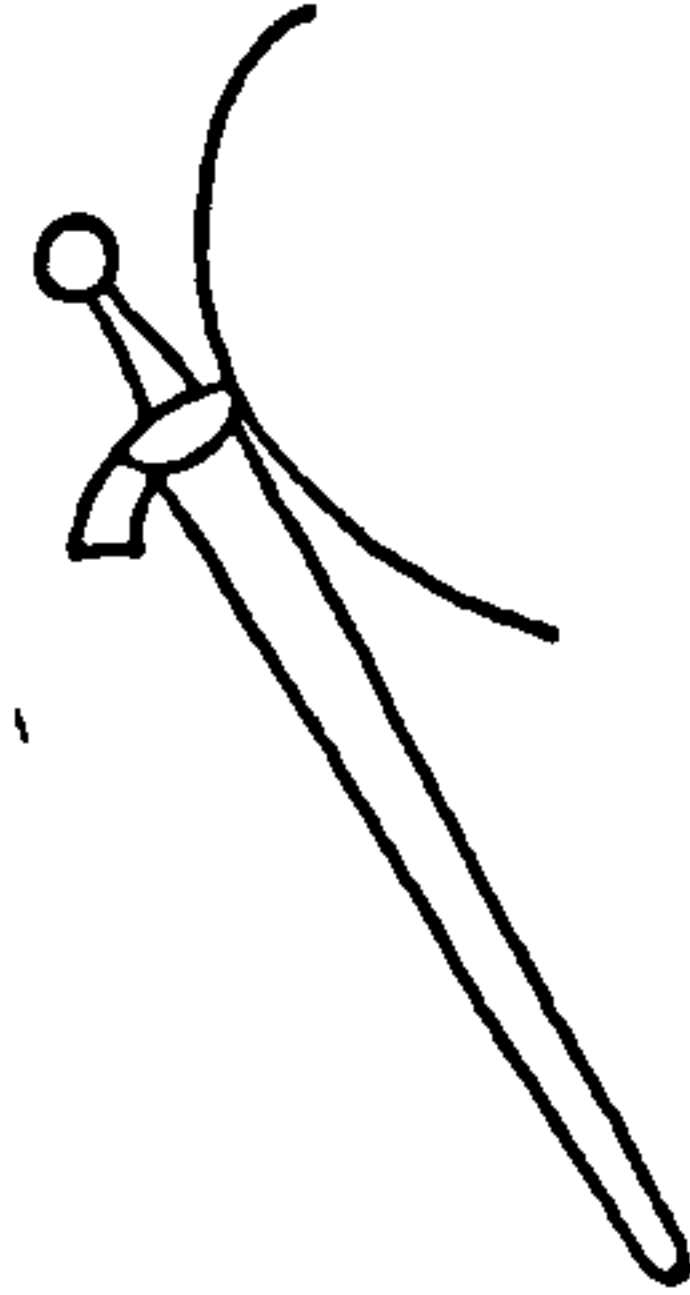
(Continued)



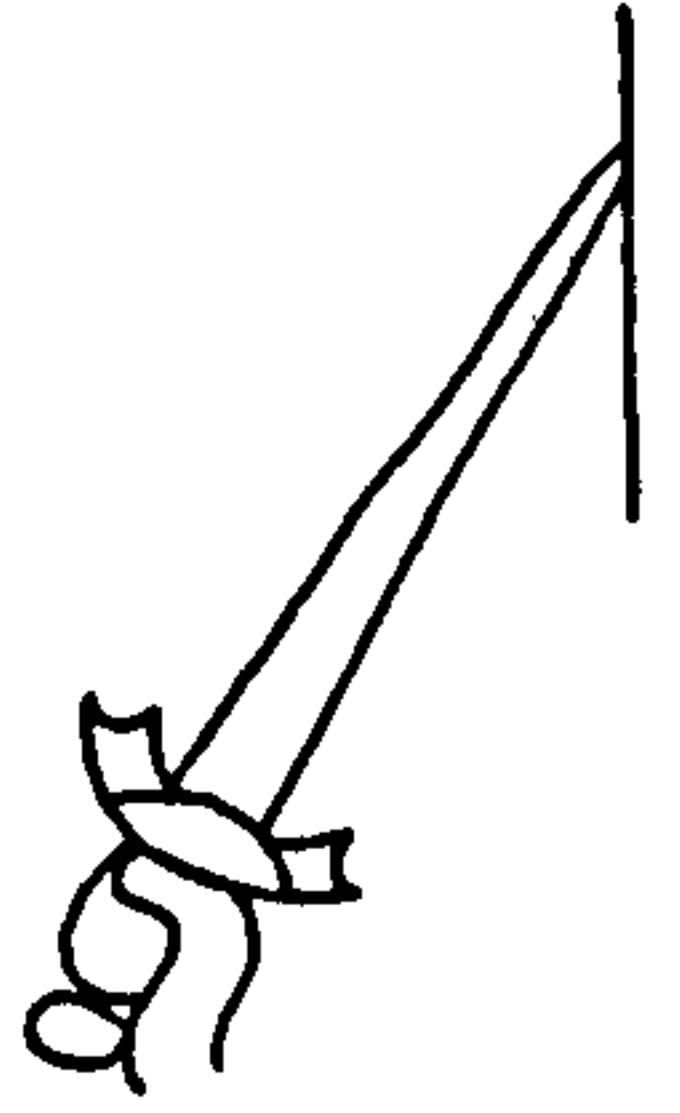
5451



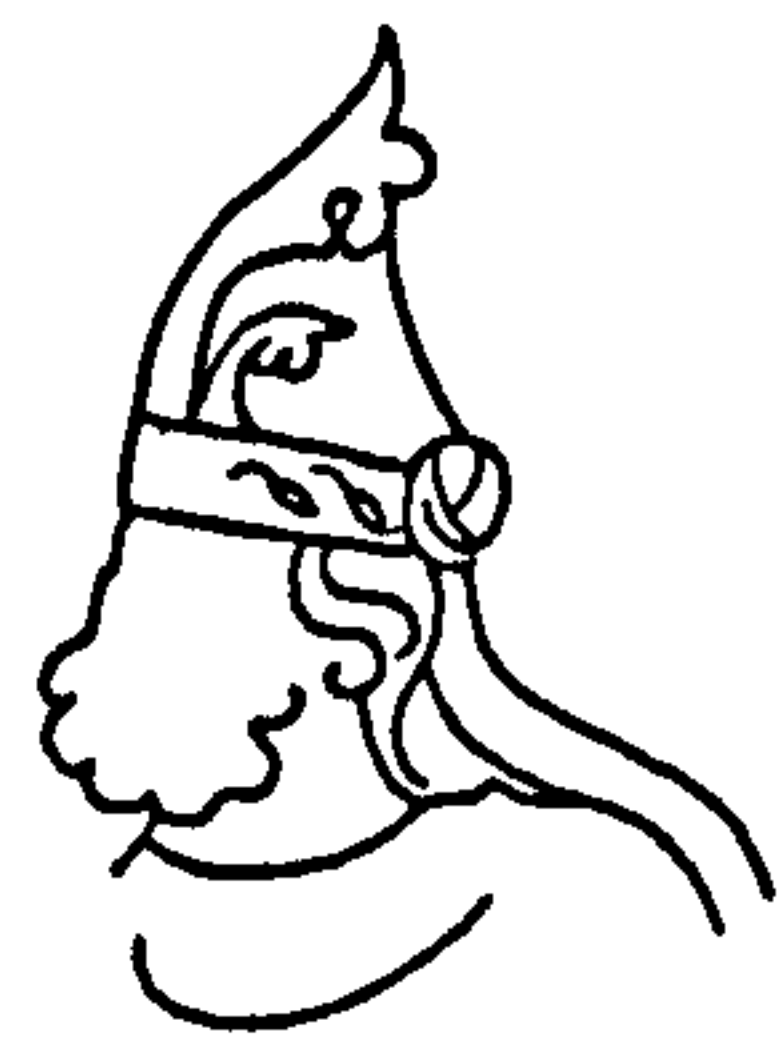
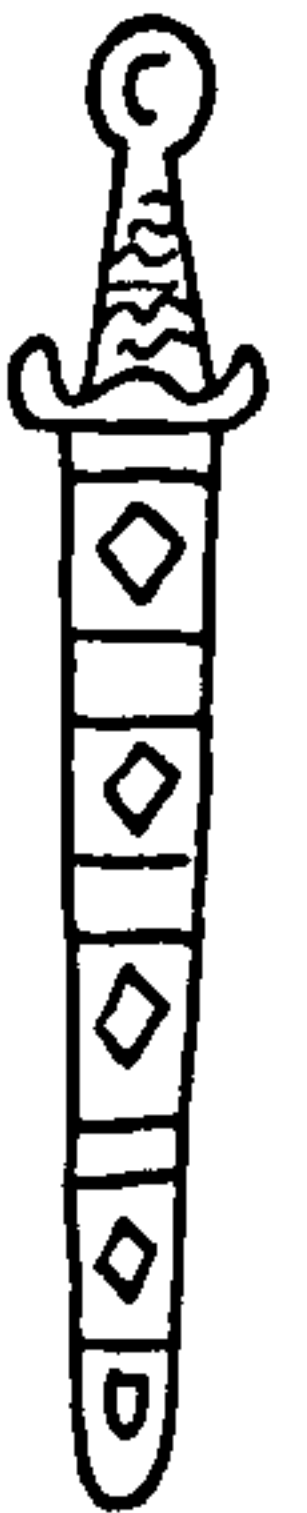
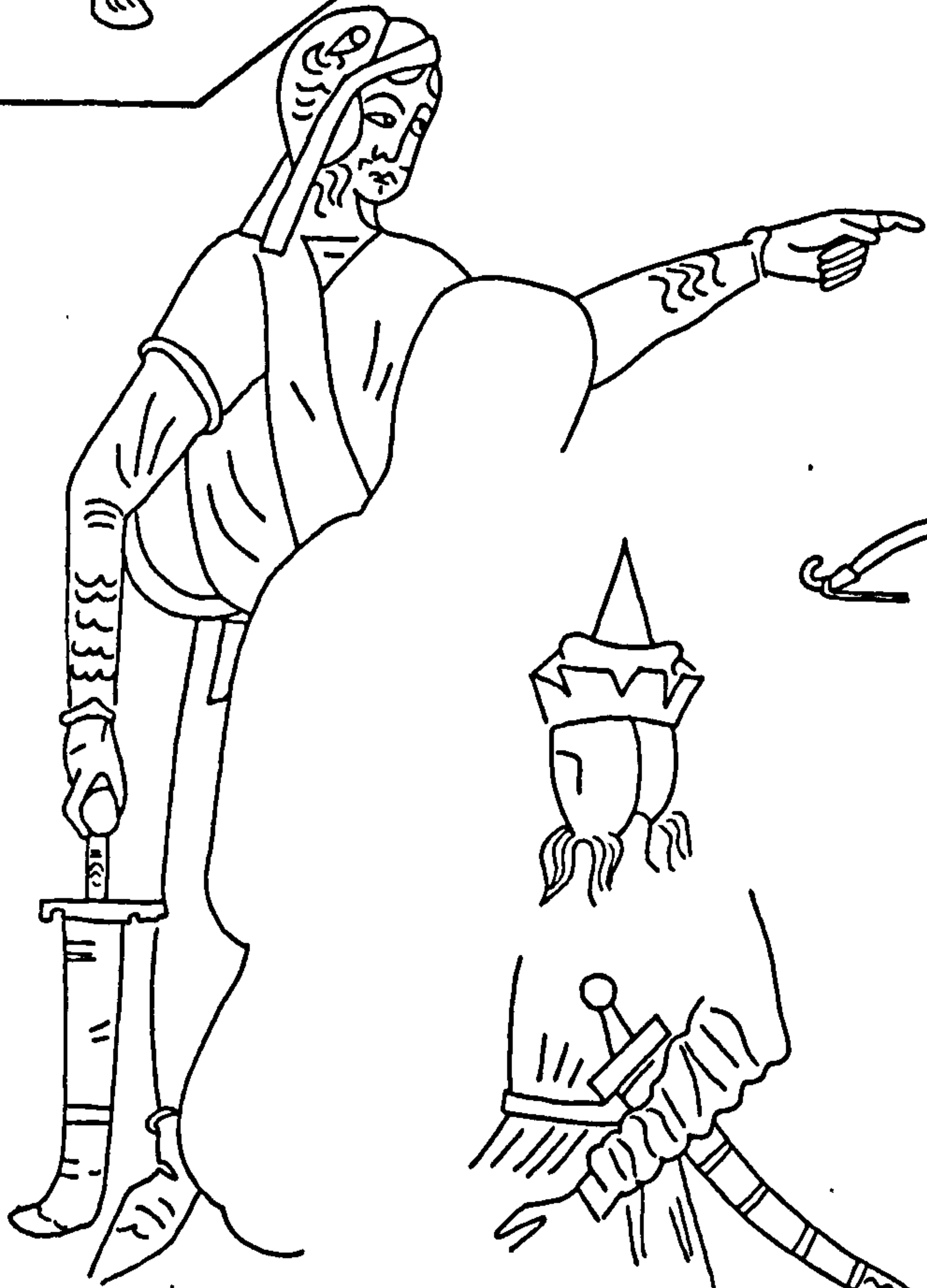
546A



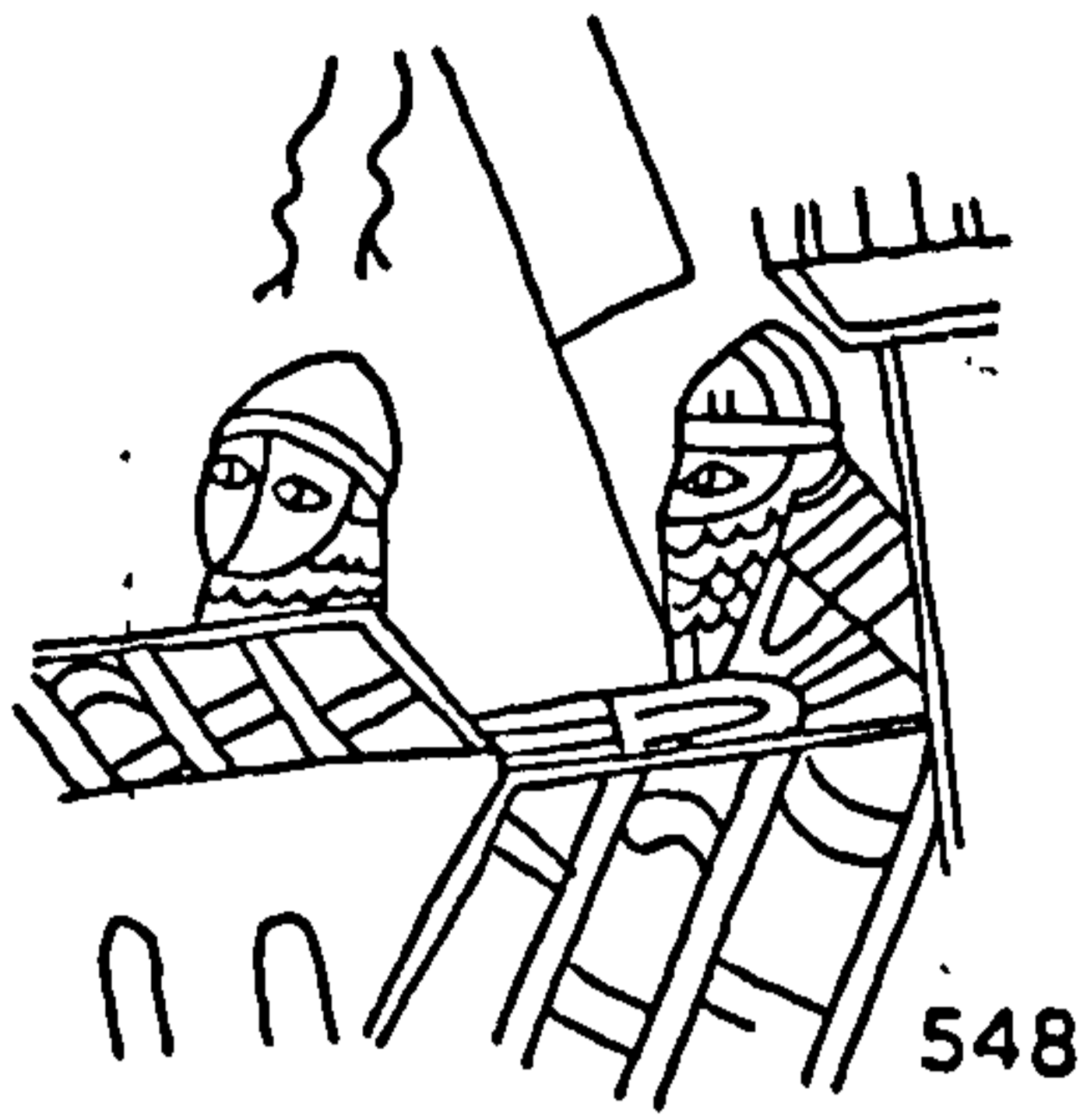
546B



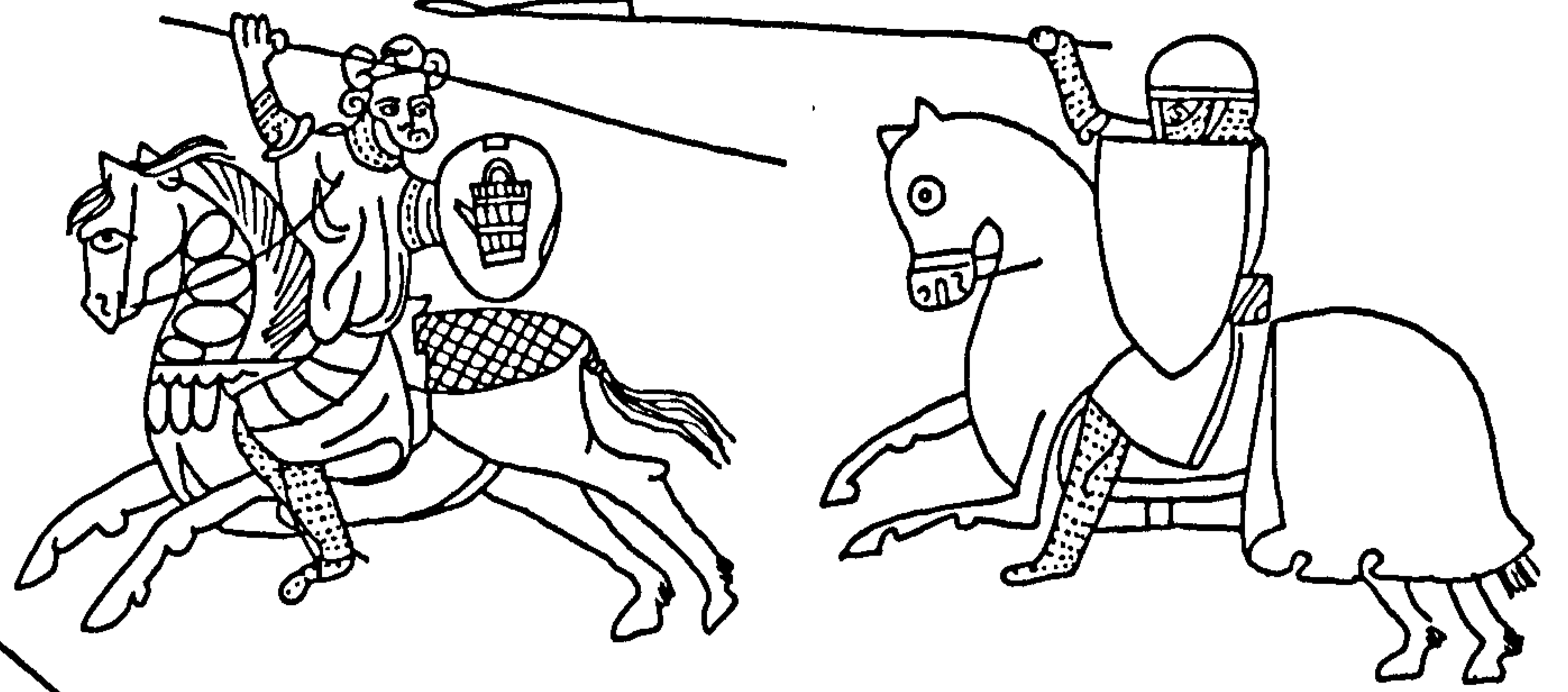
546C



547



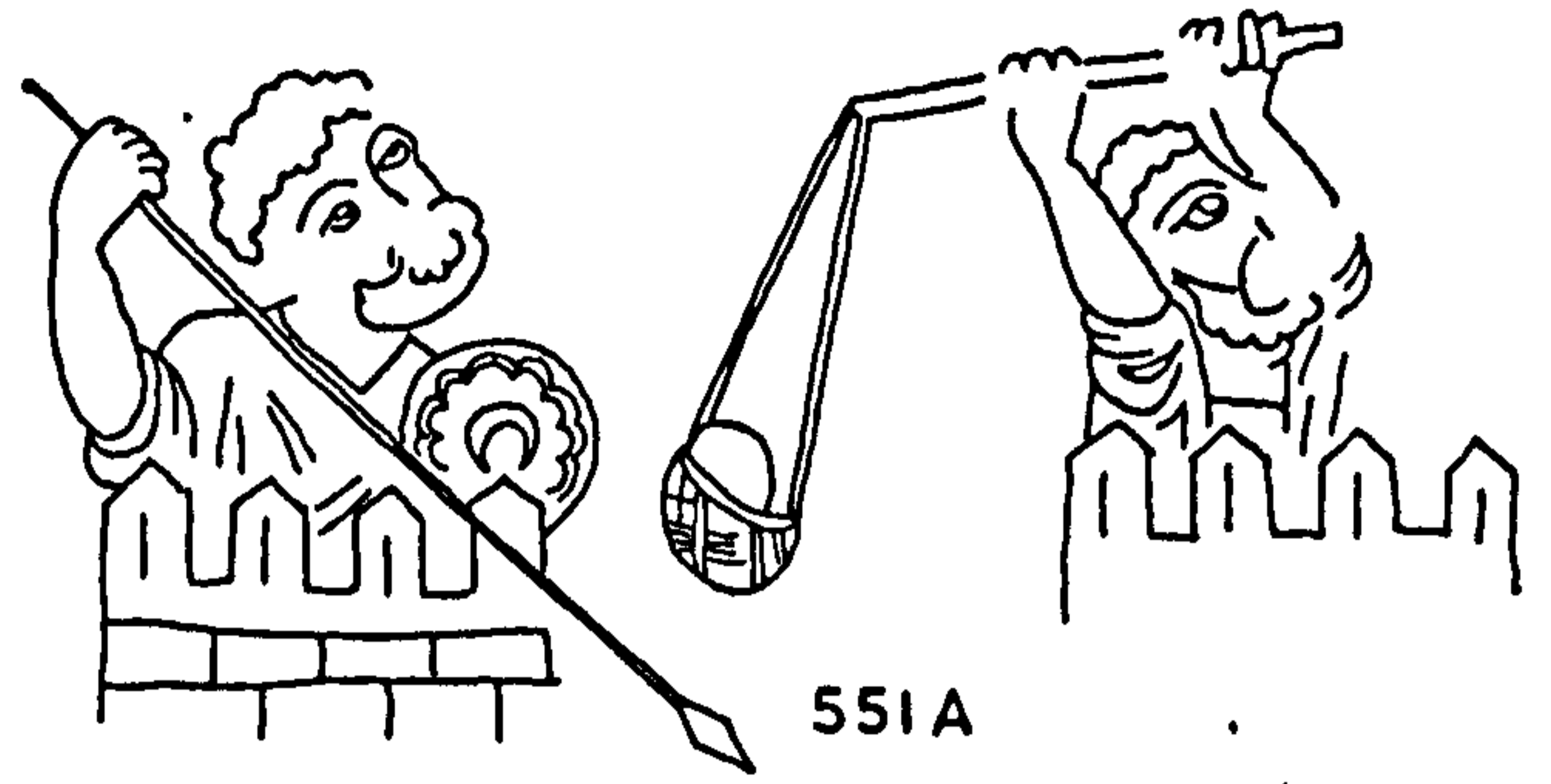
548



549



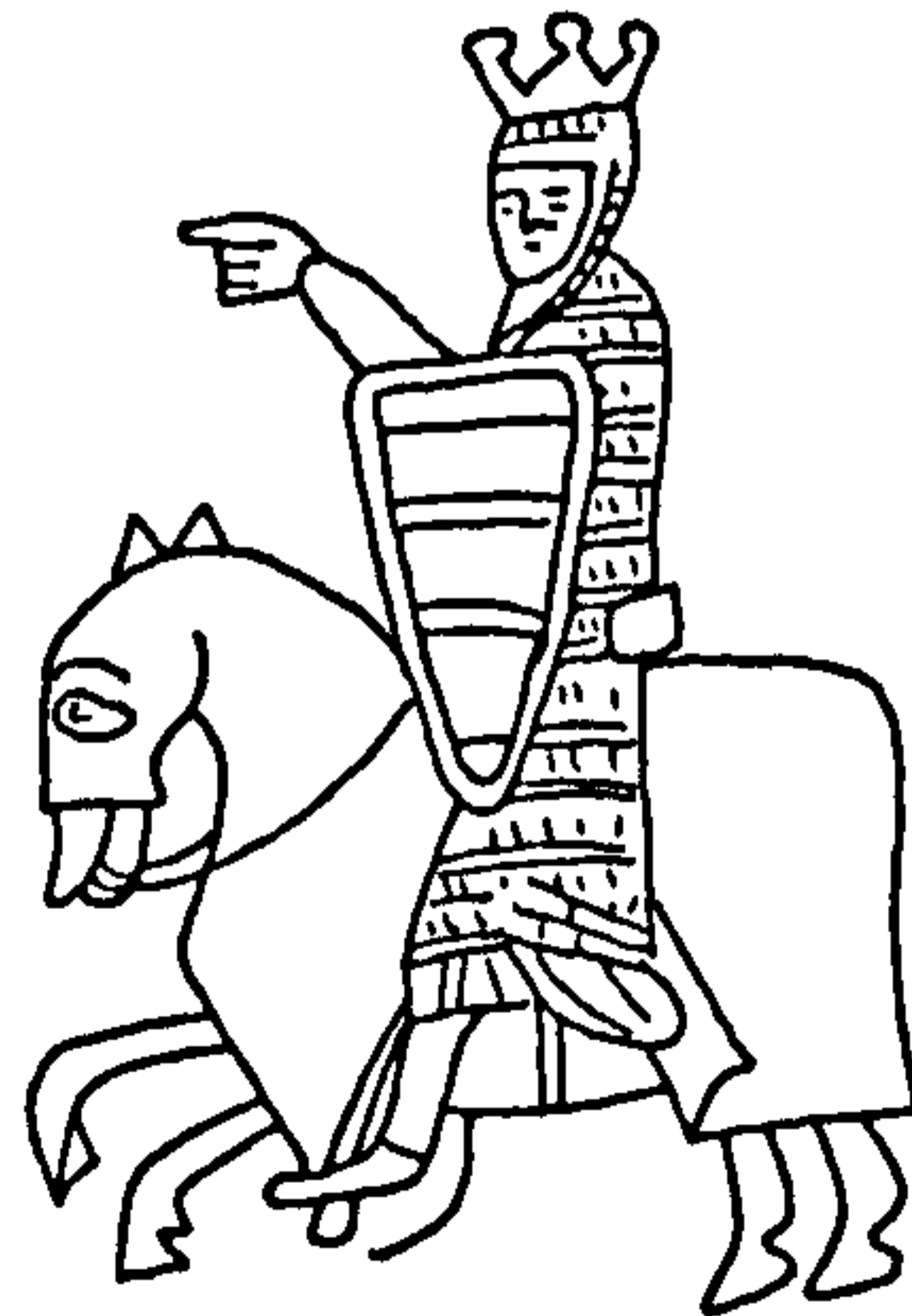
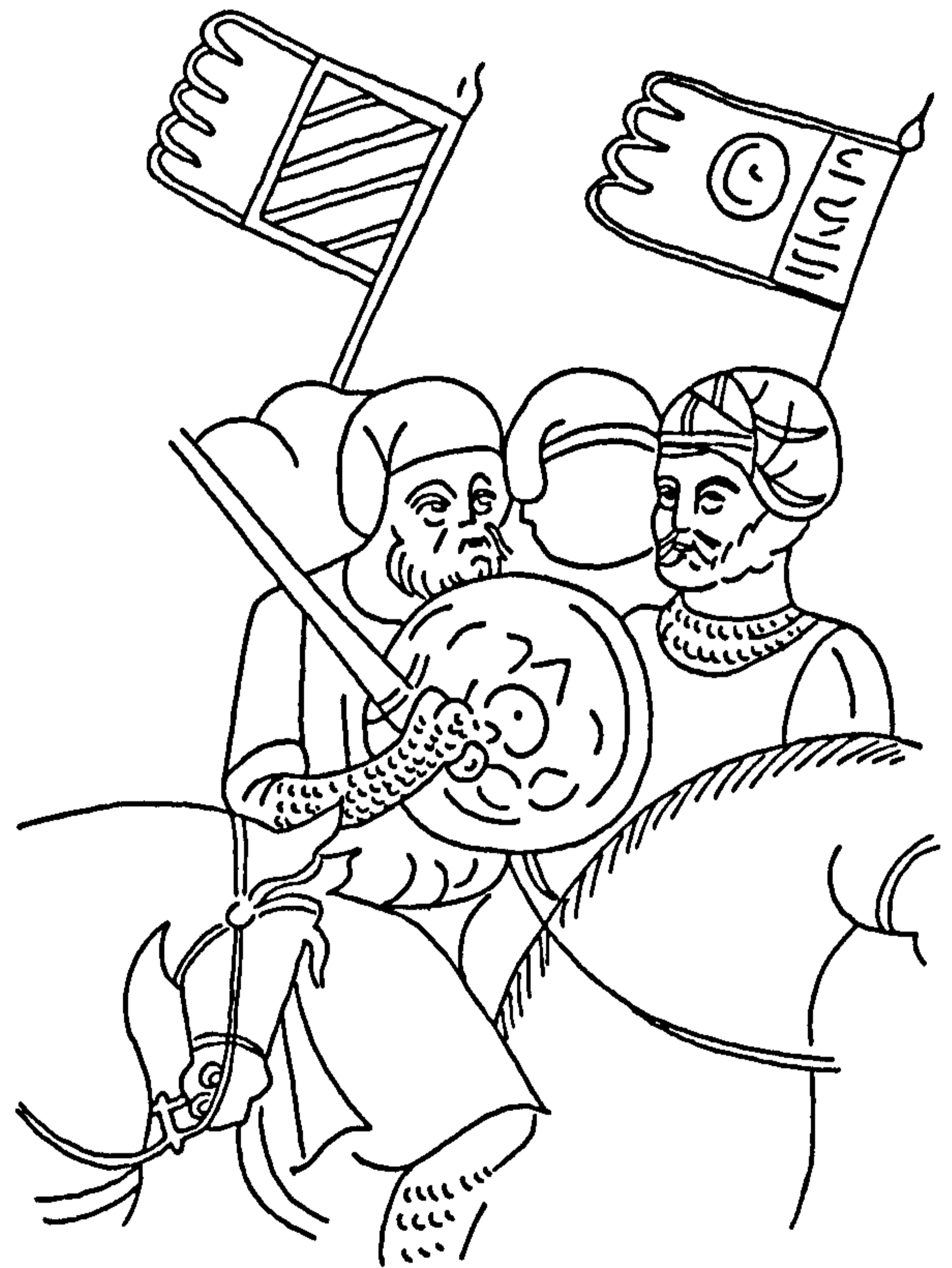
550



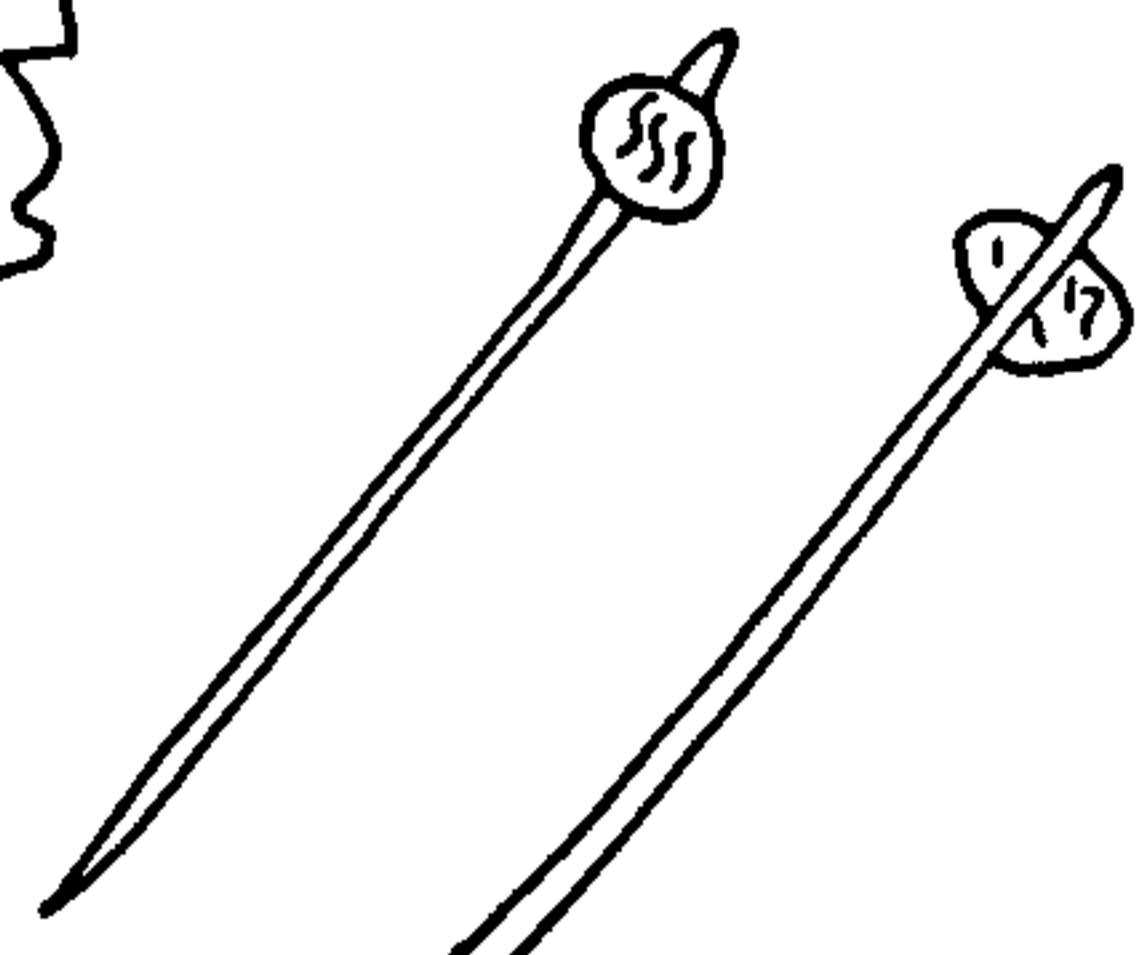
551A

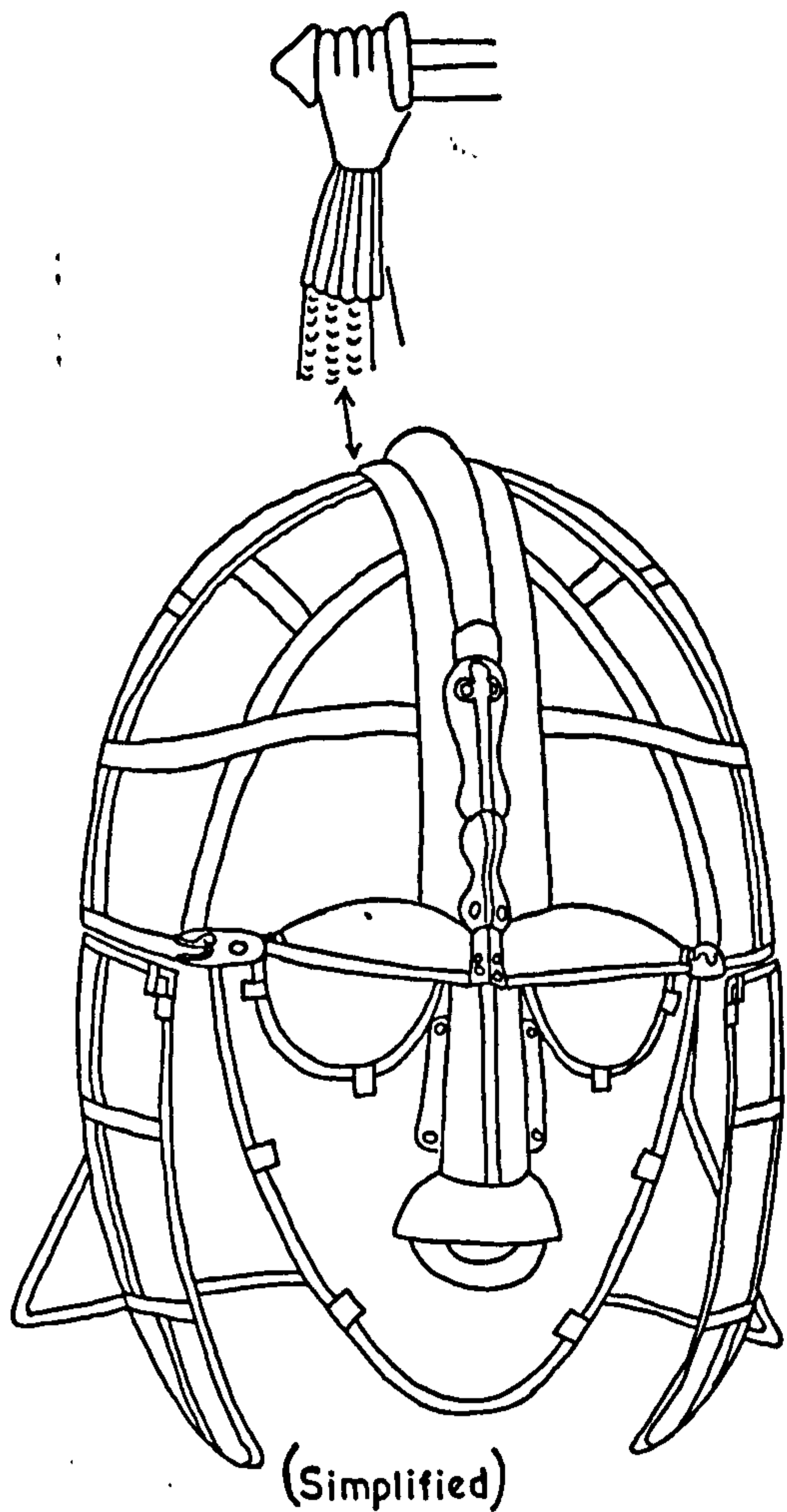


551B



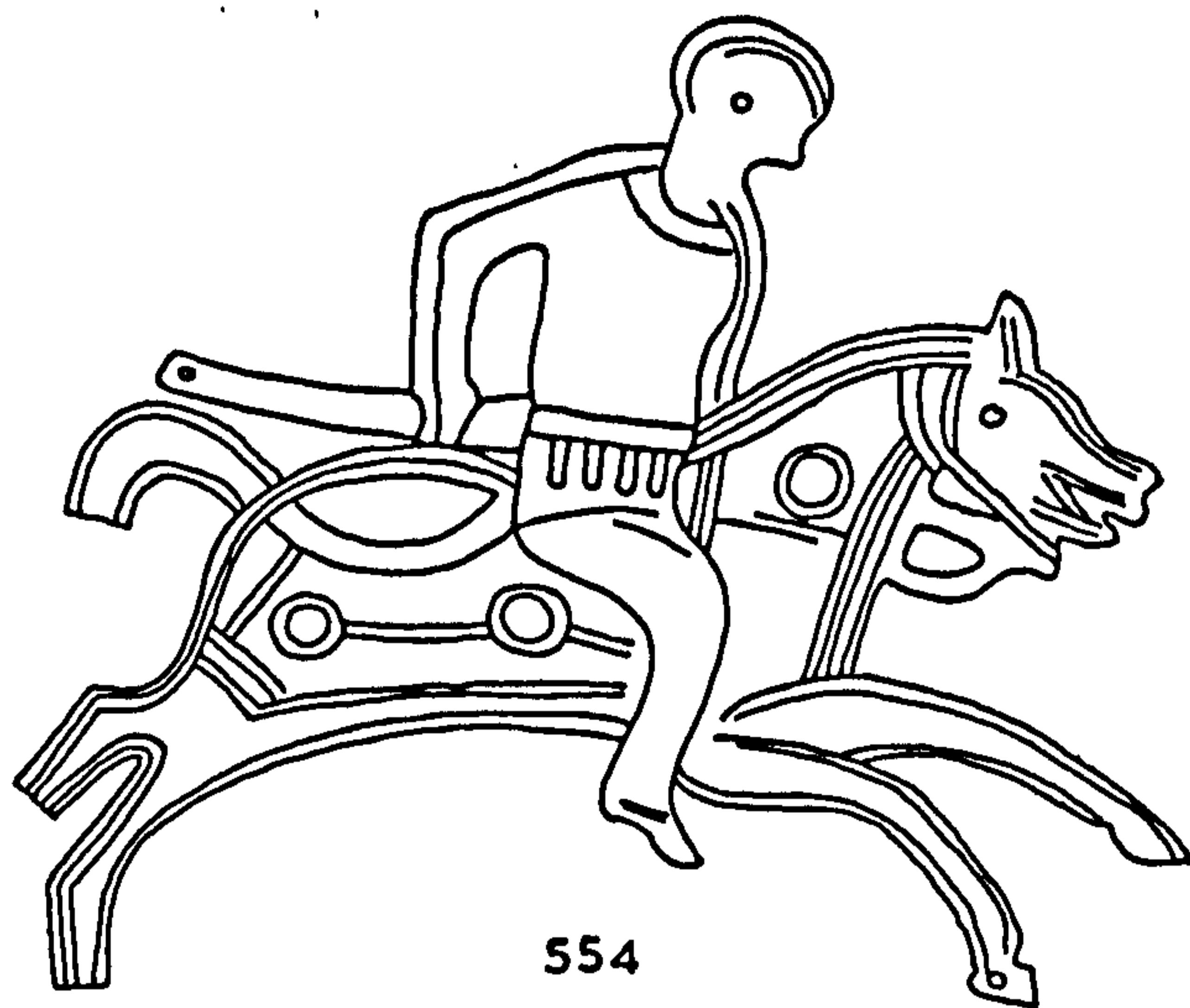
552



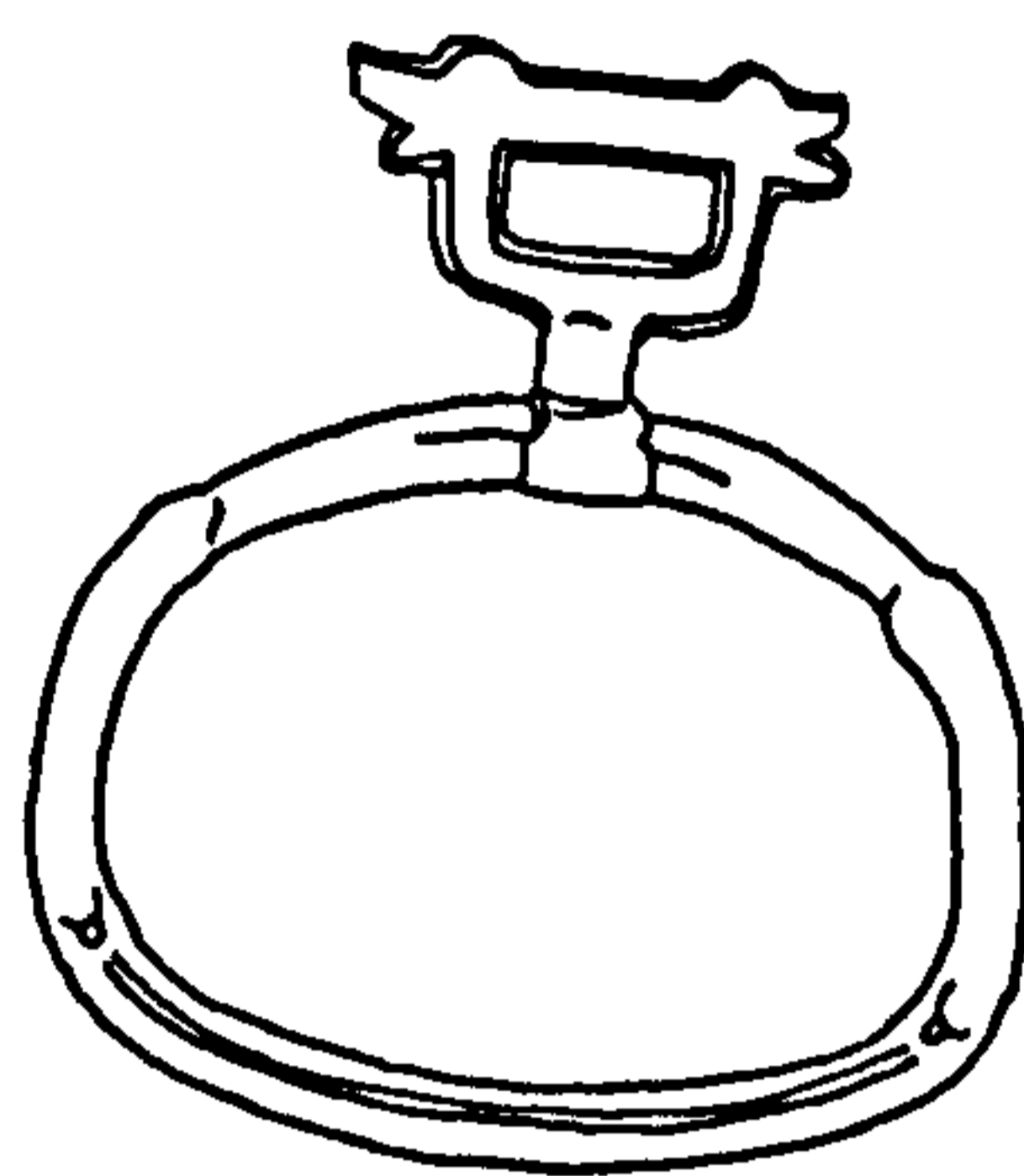


(Simplified)

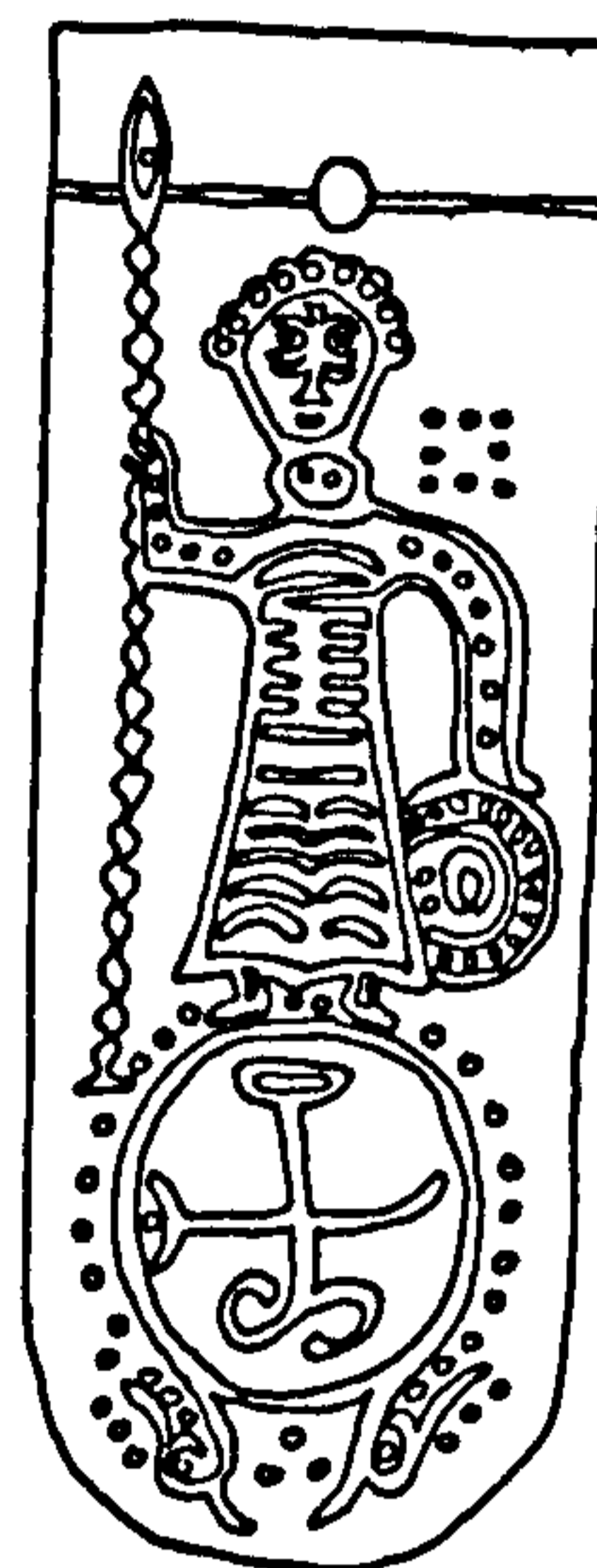
553



554



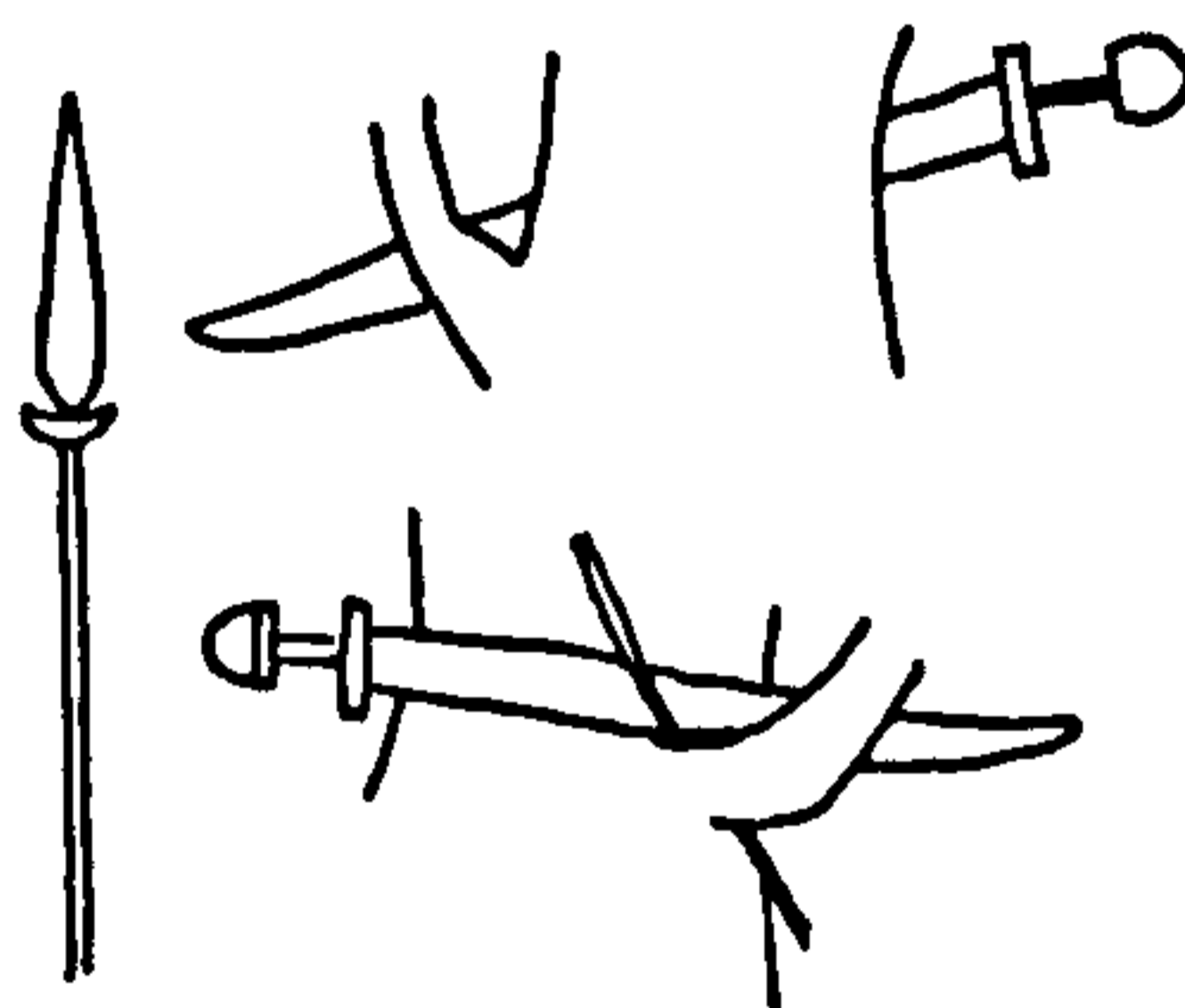
555



556



557



558



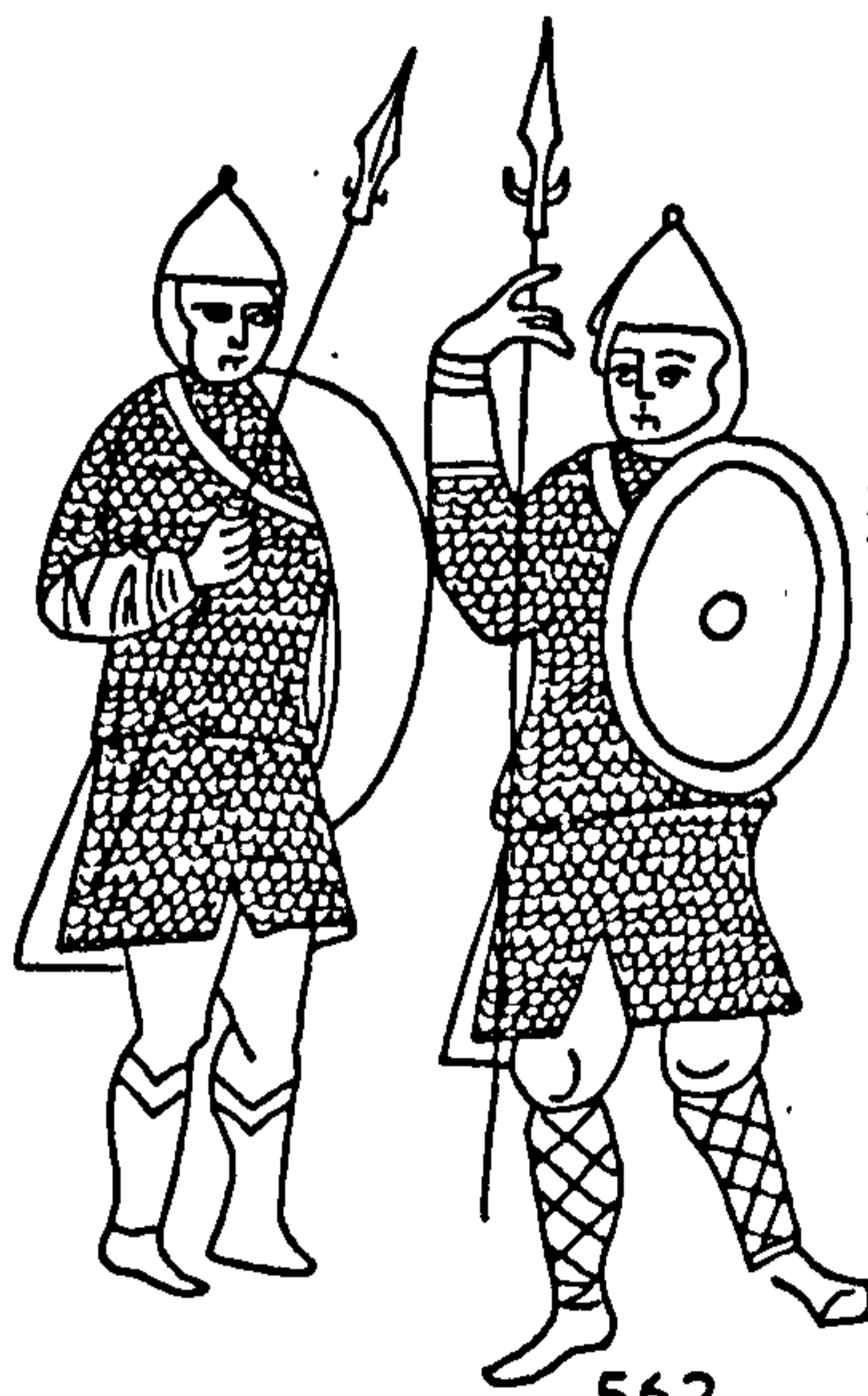
559



560



561

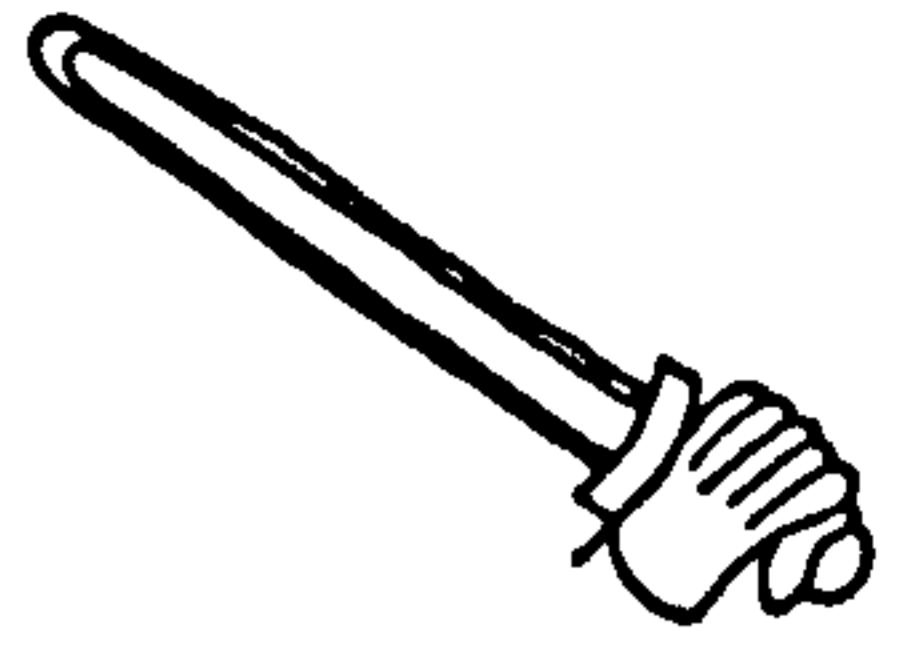


562

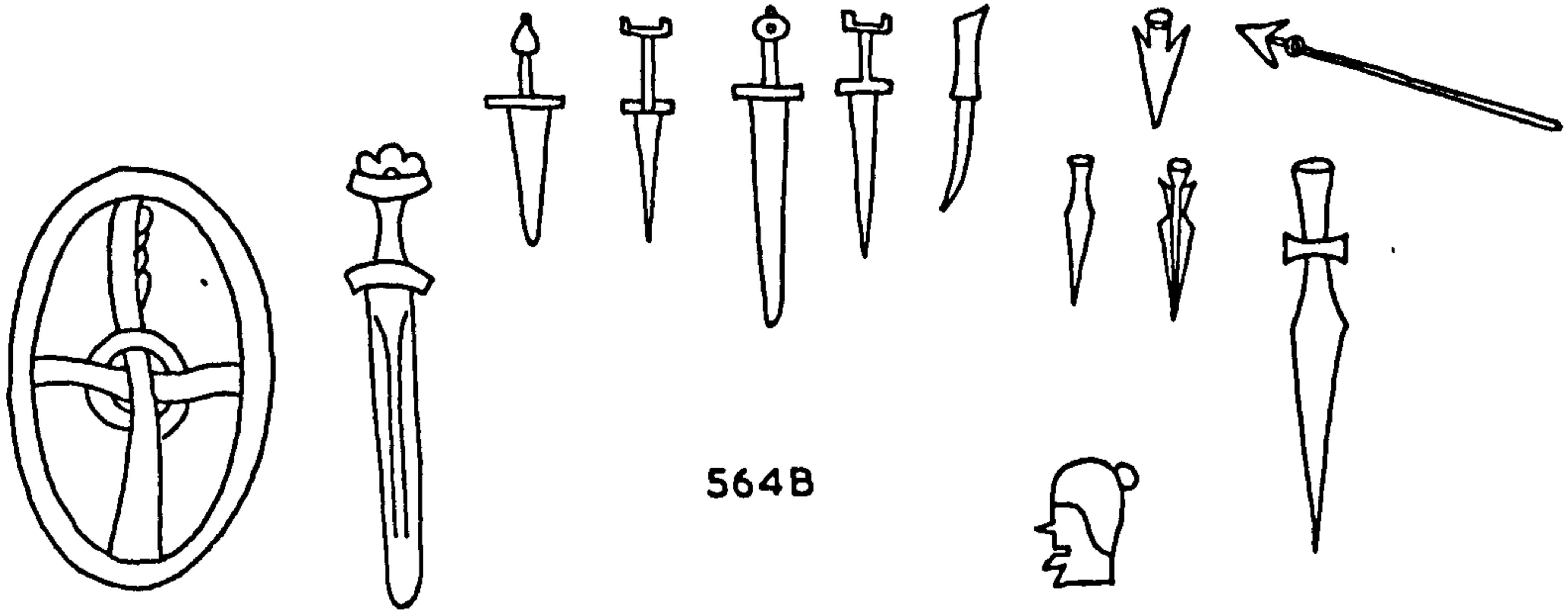




563



564A



564B



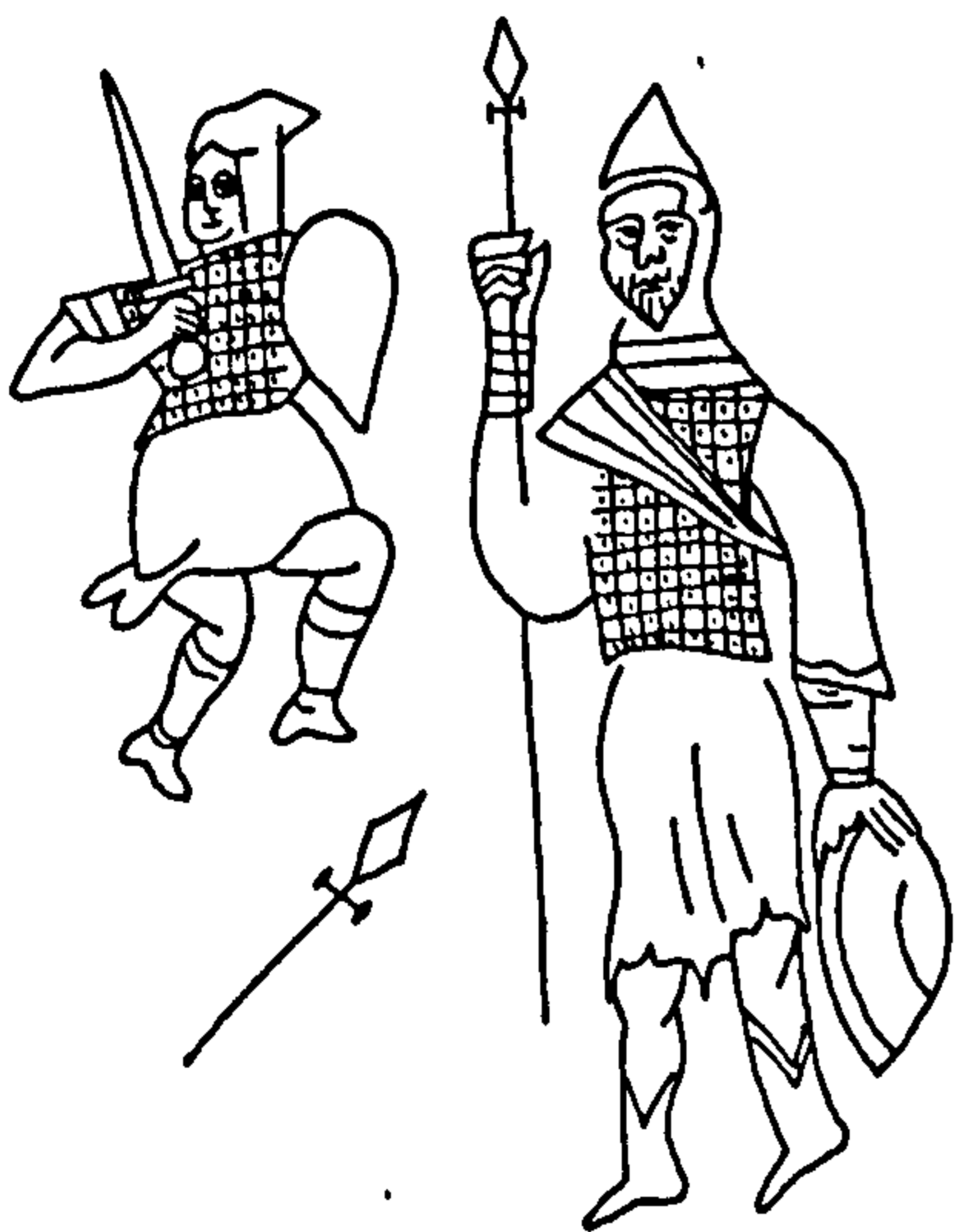
565



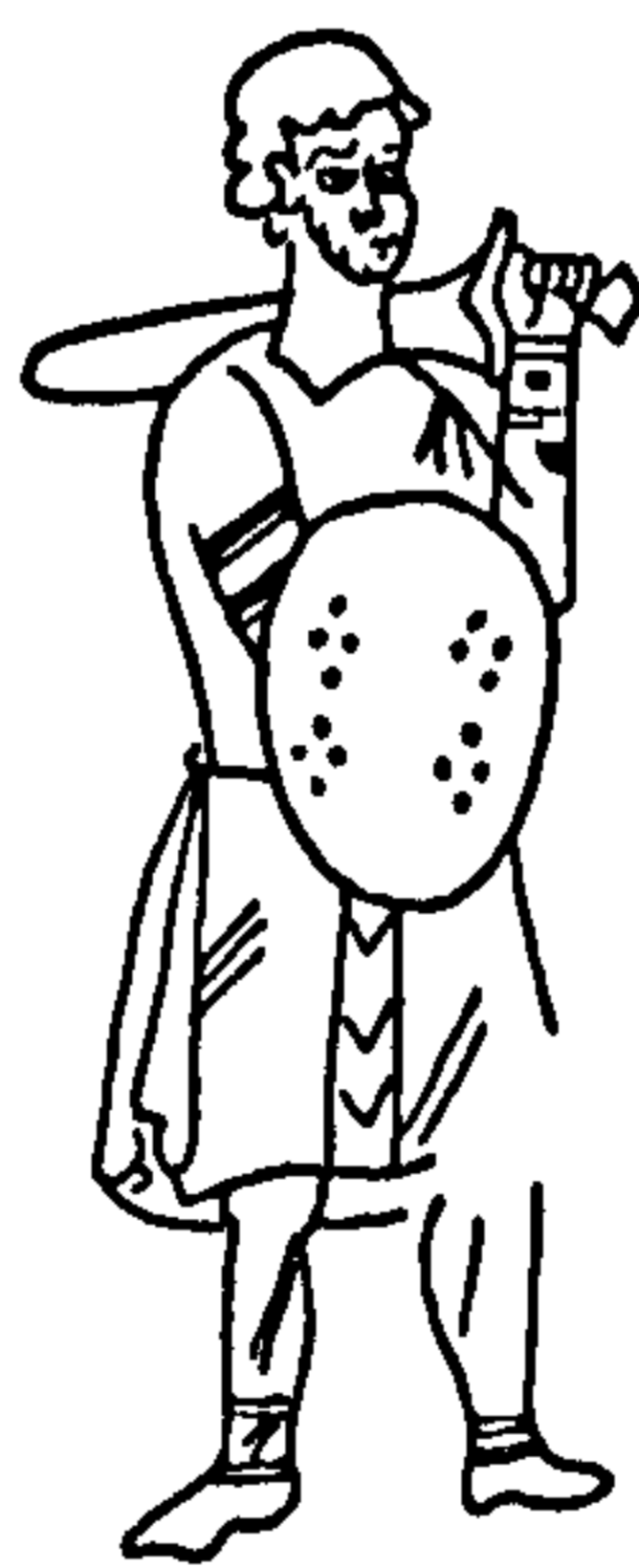
566



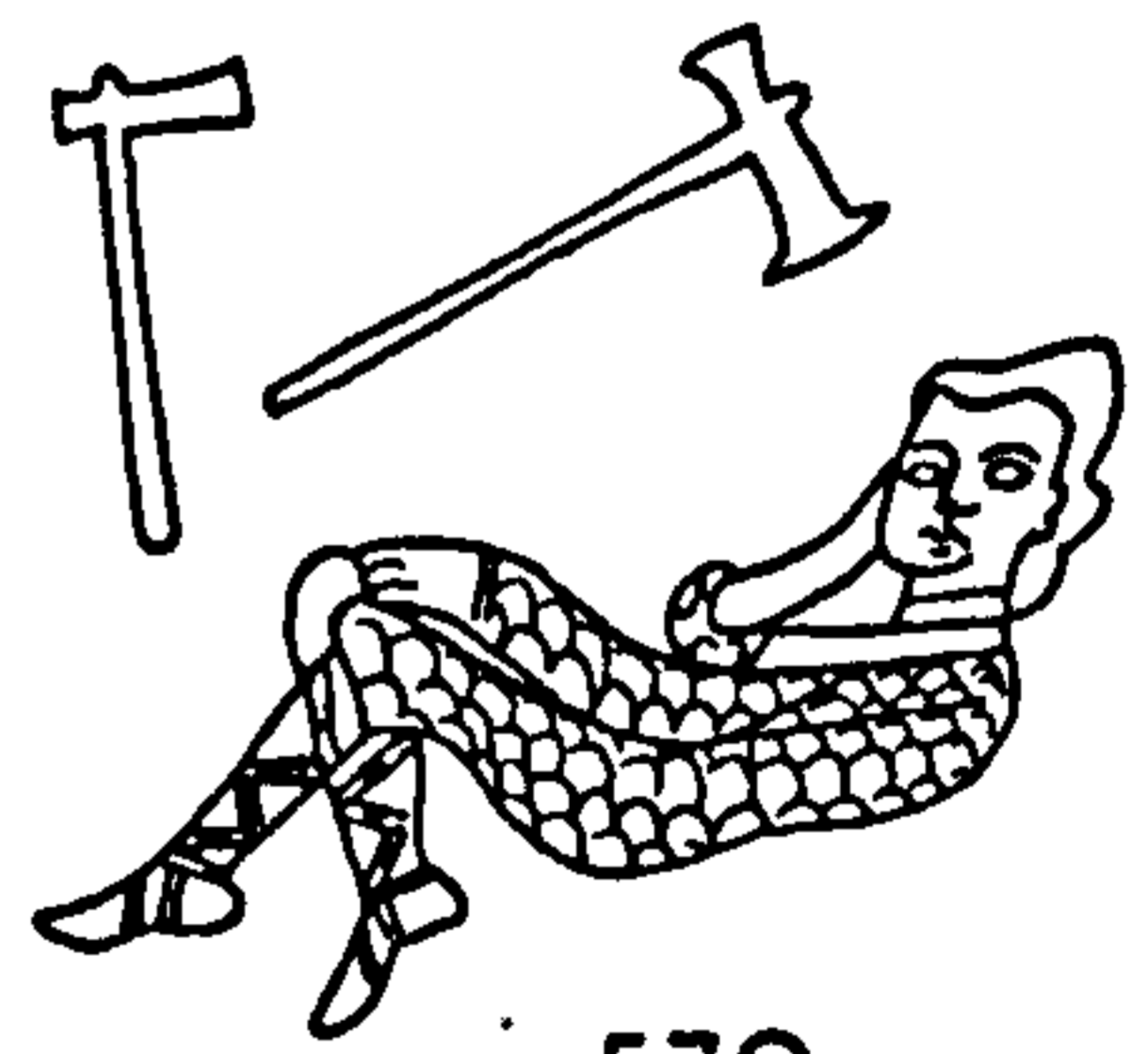
567



568



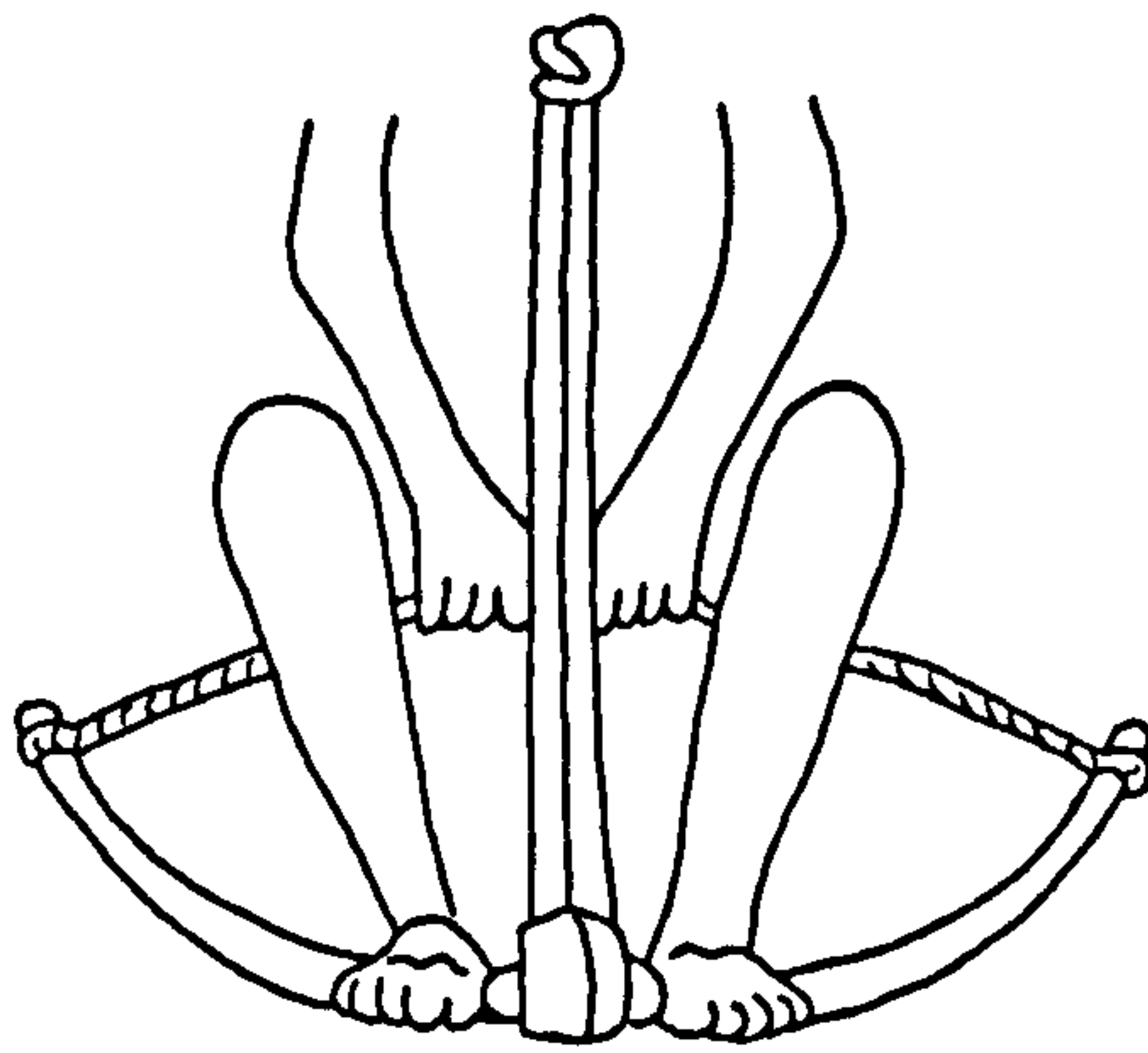
569



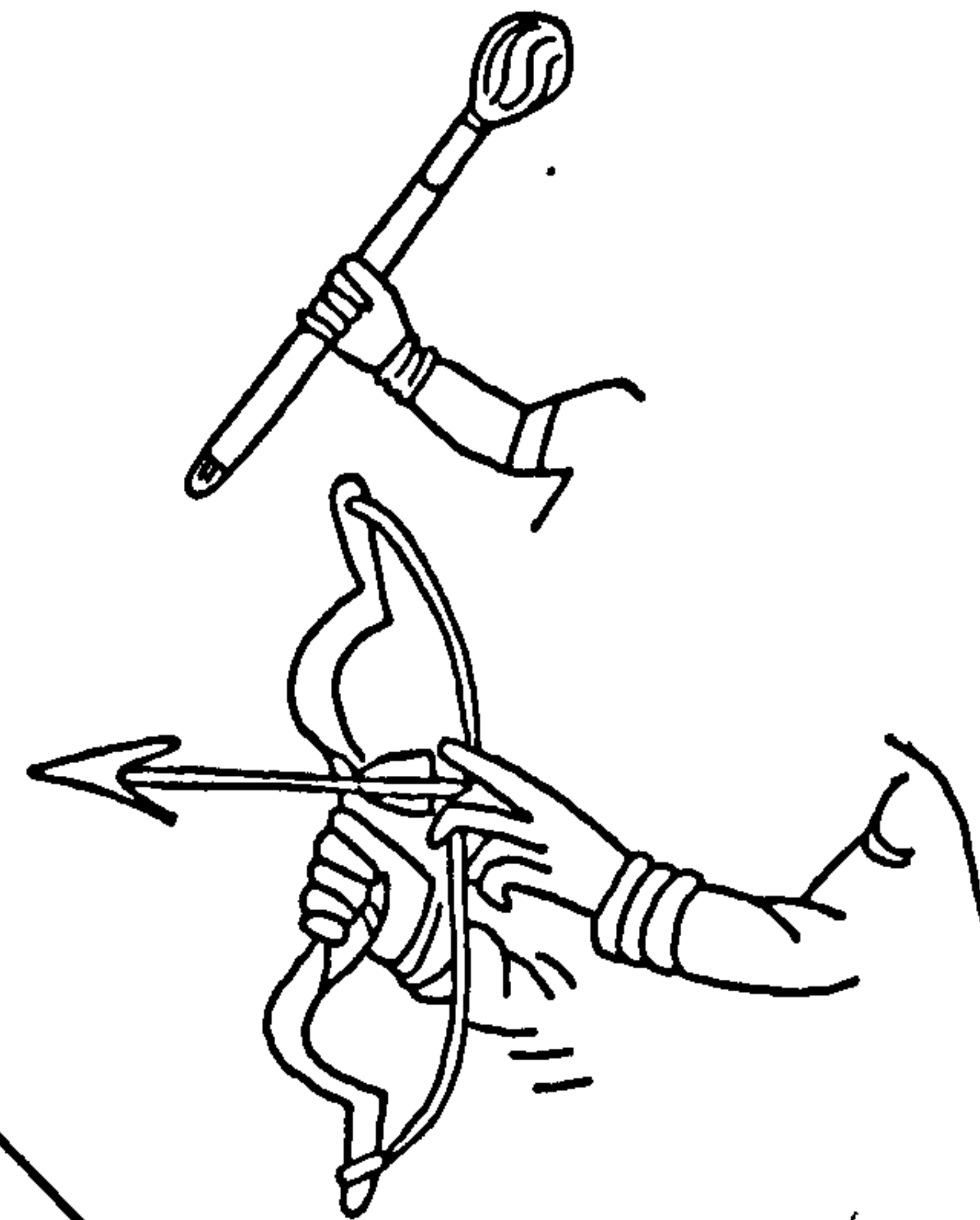
570



571



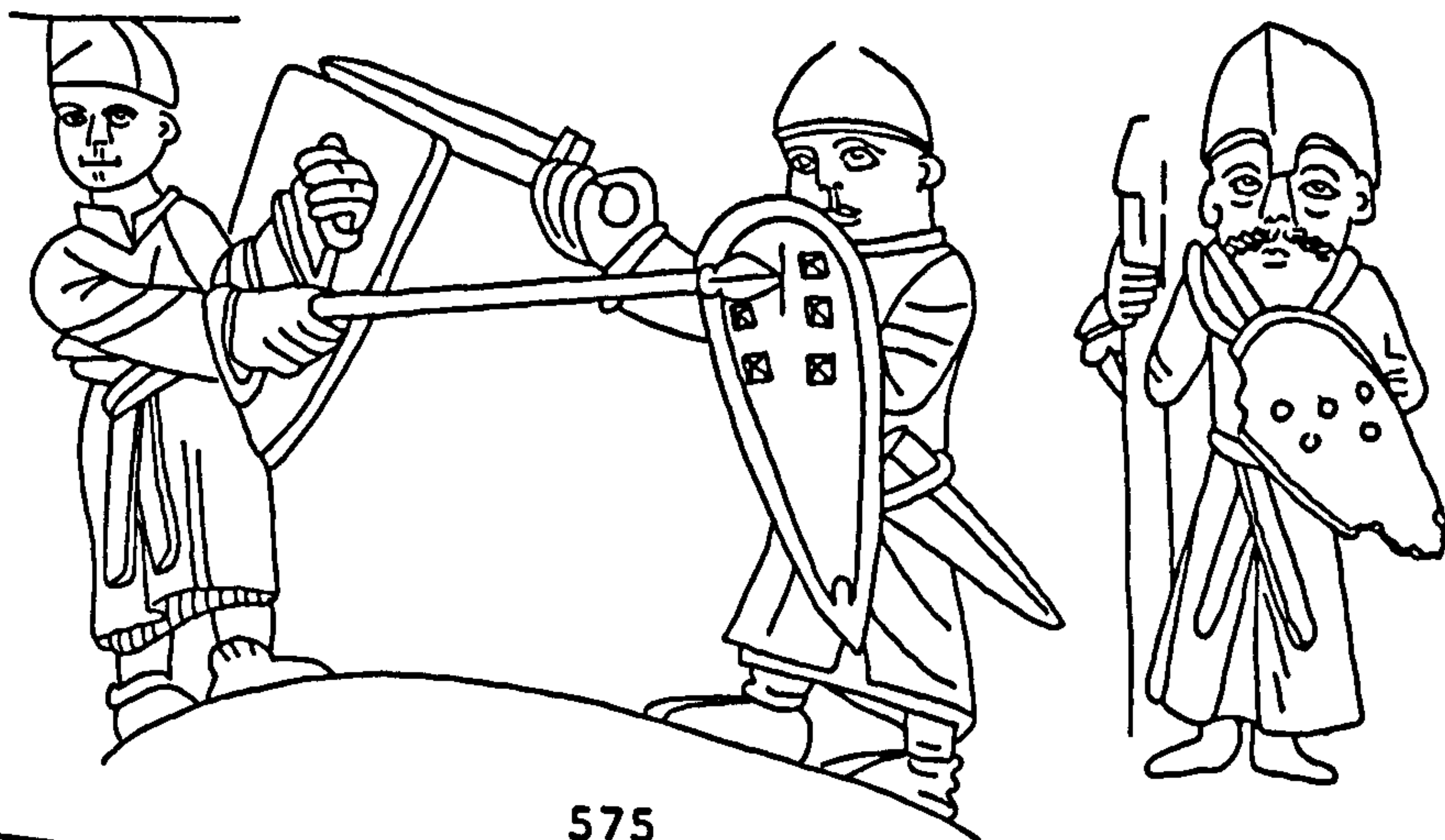
572



573



574



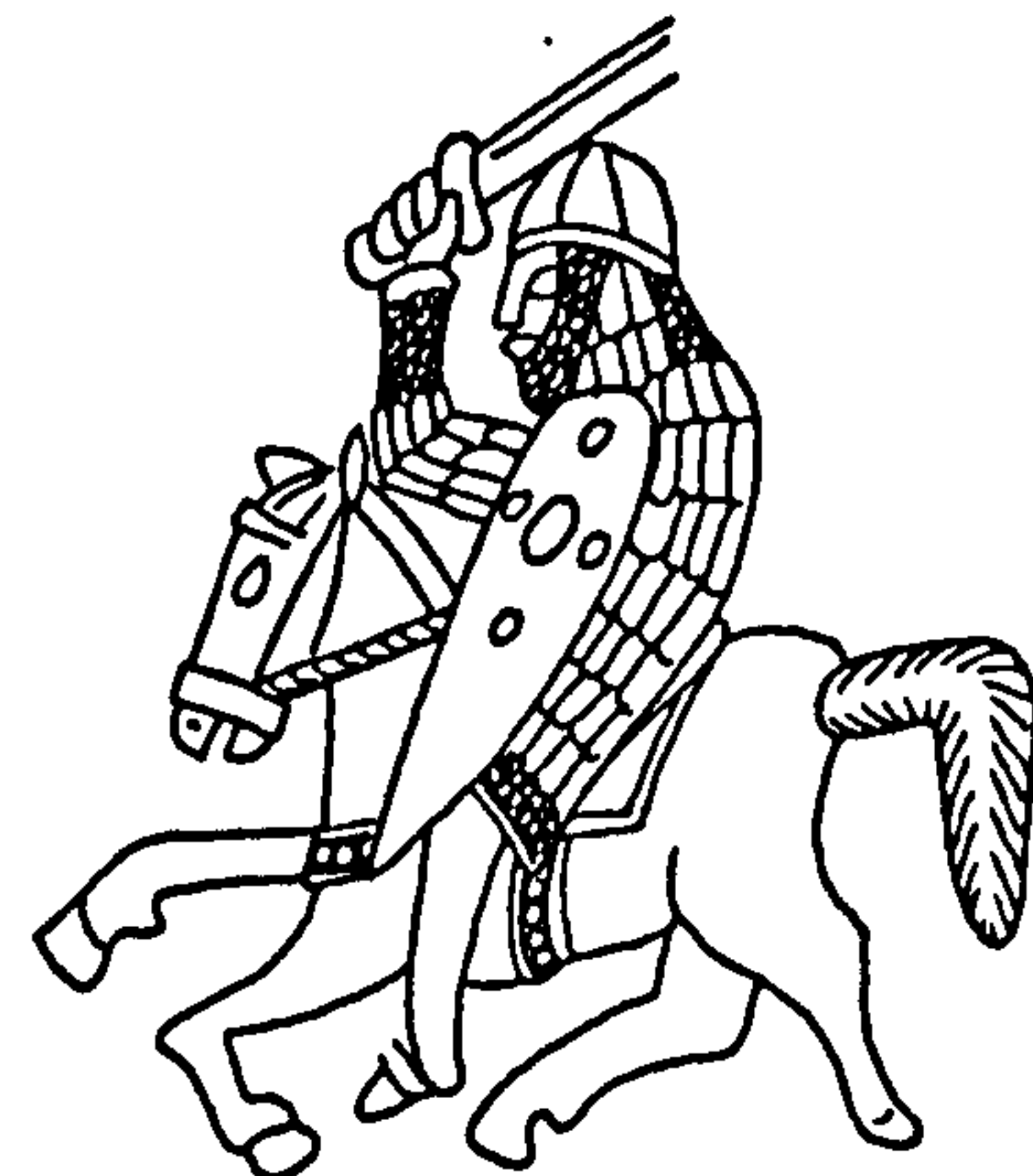
575



576



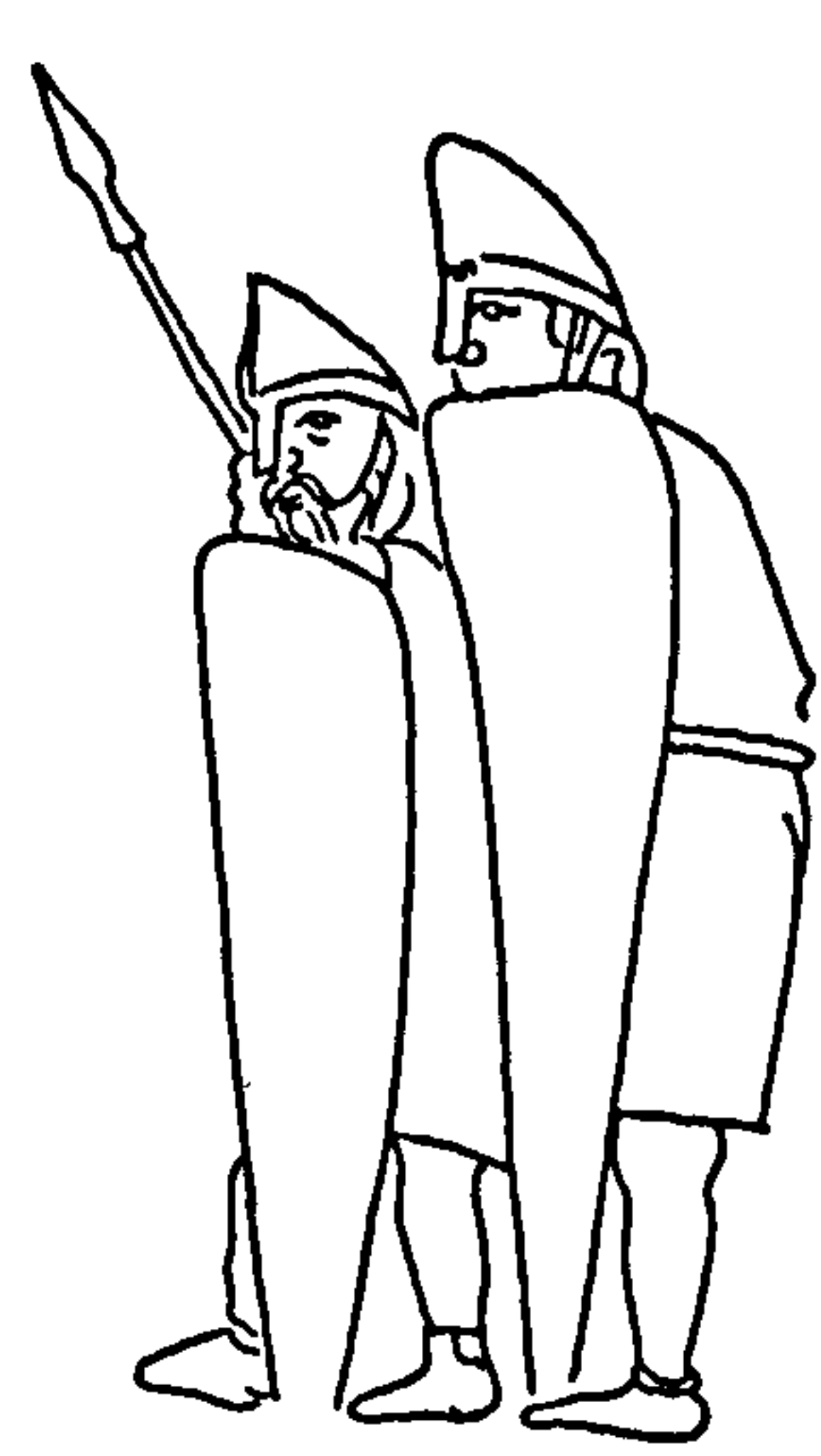
577A



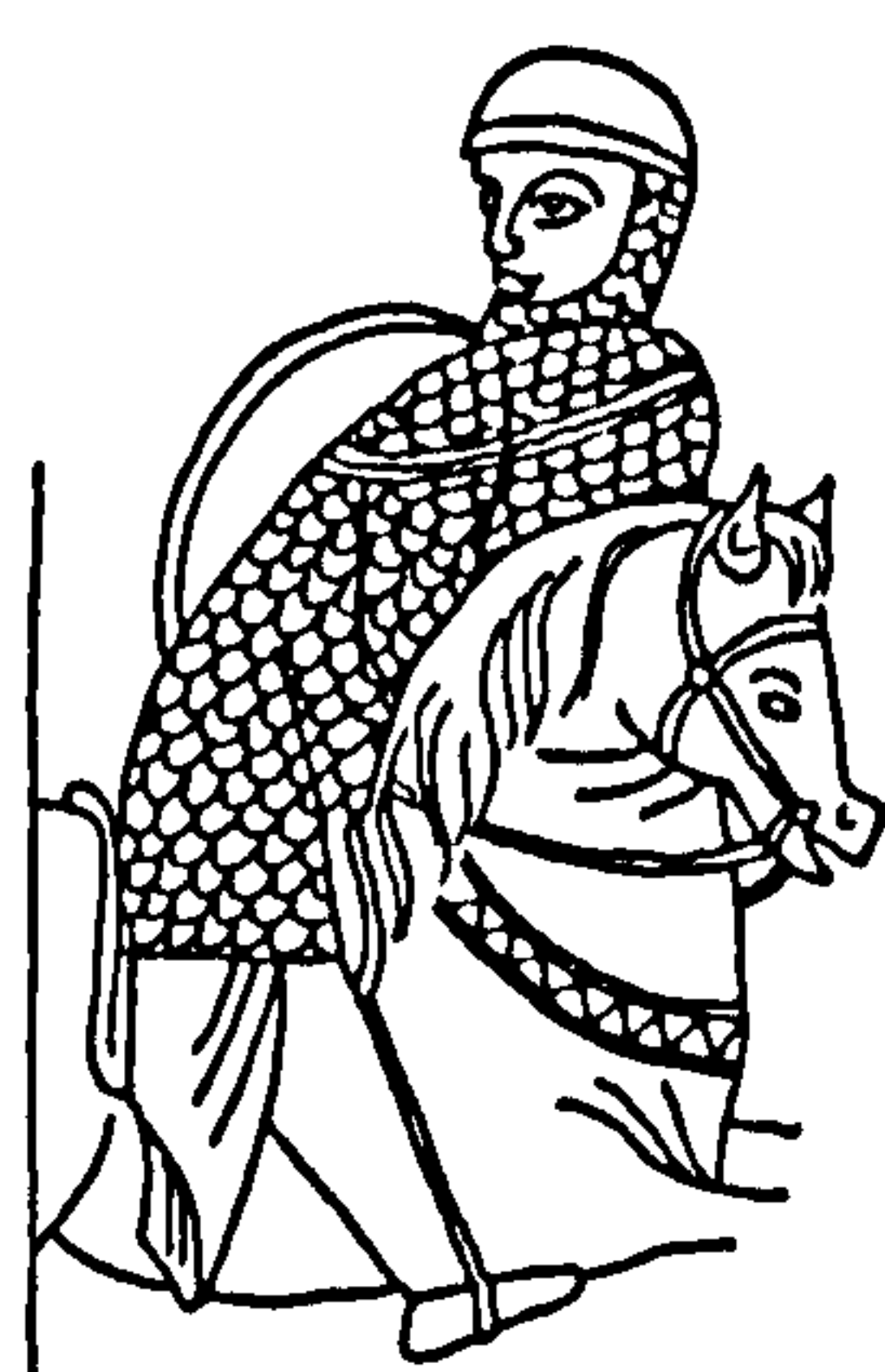
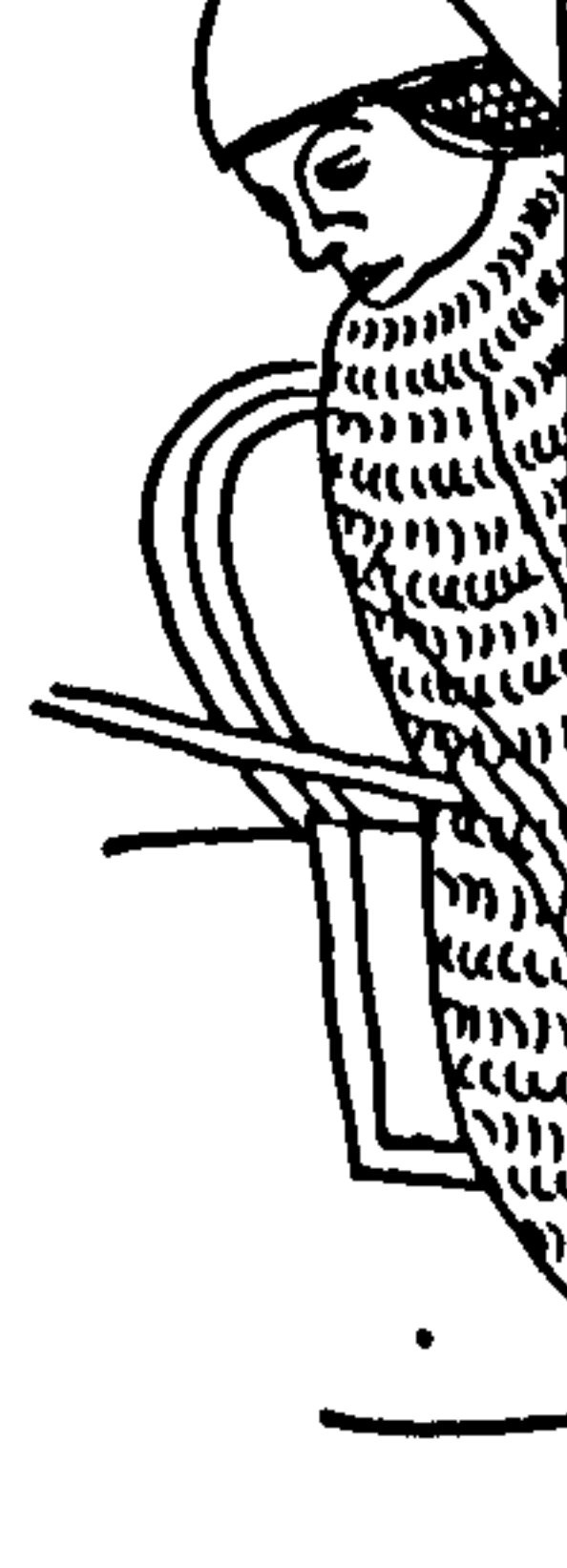
577A



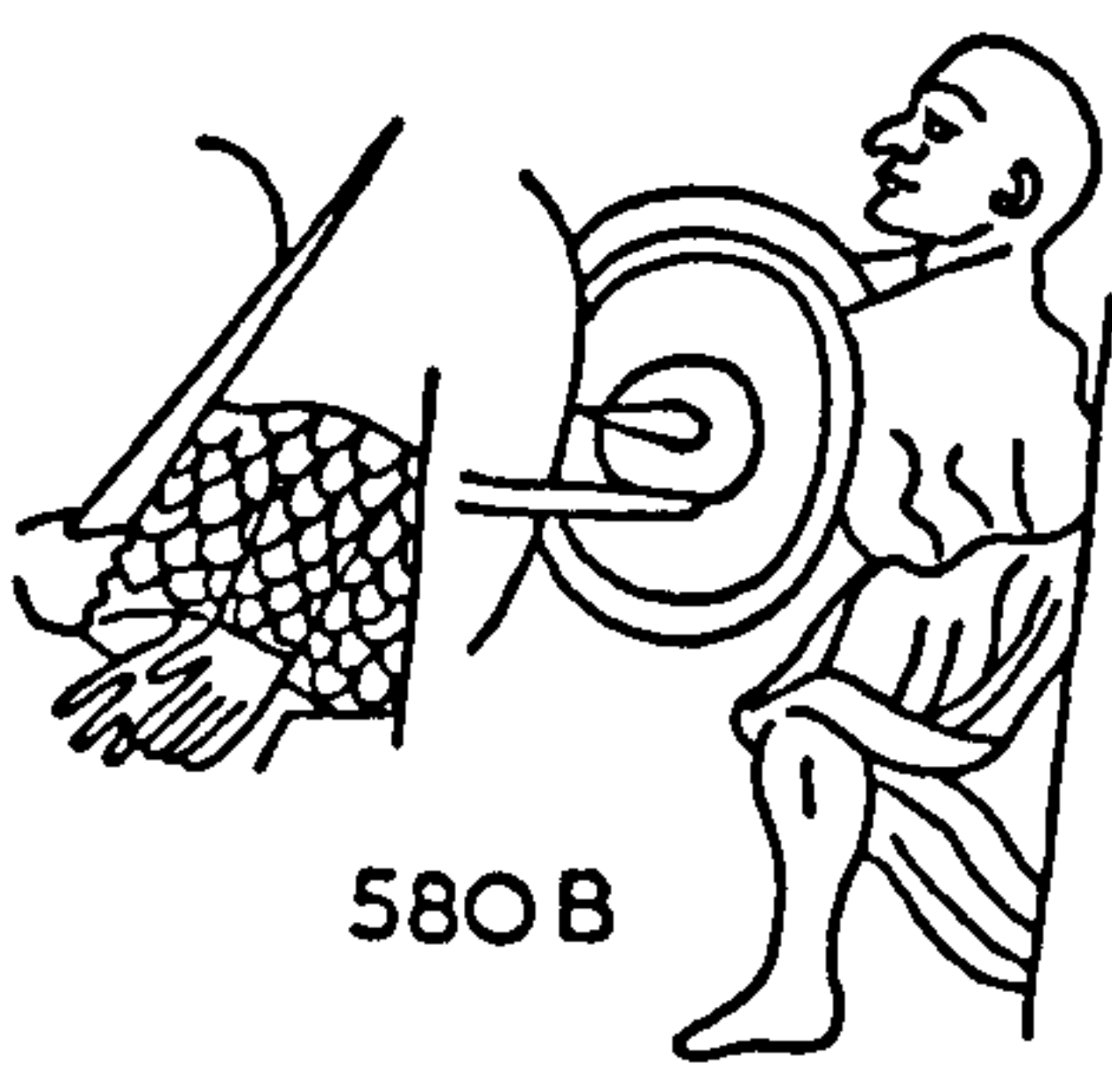
578



579



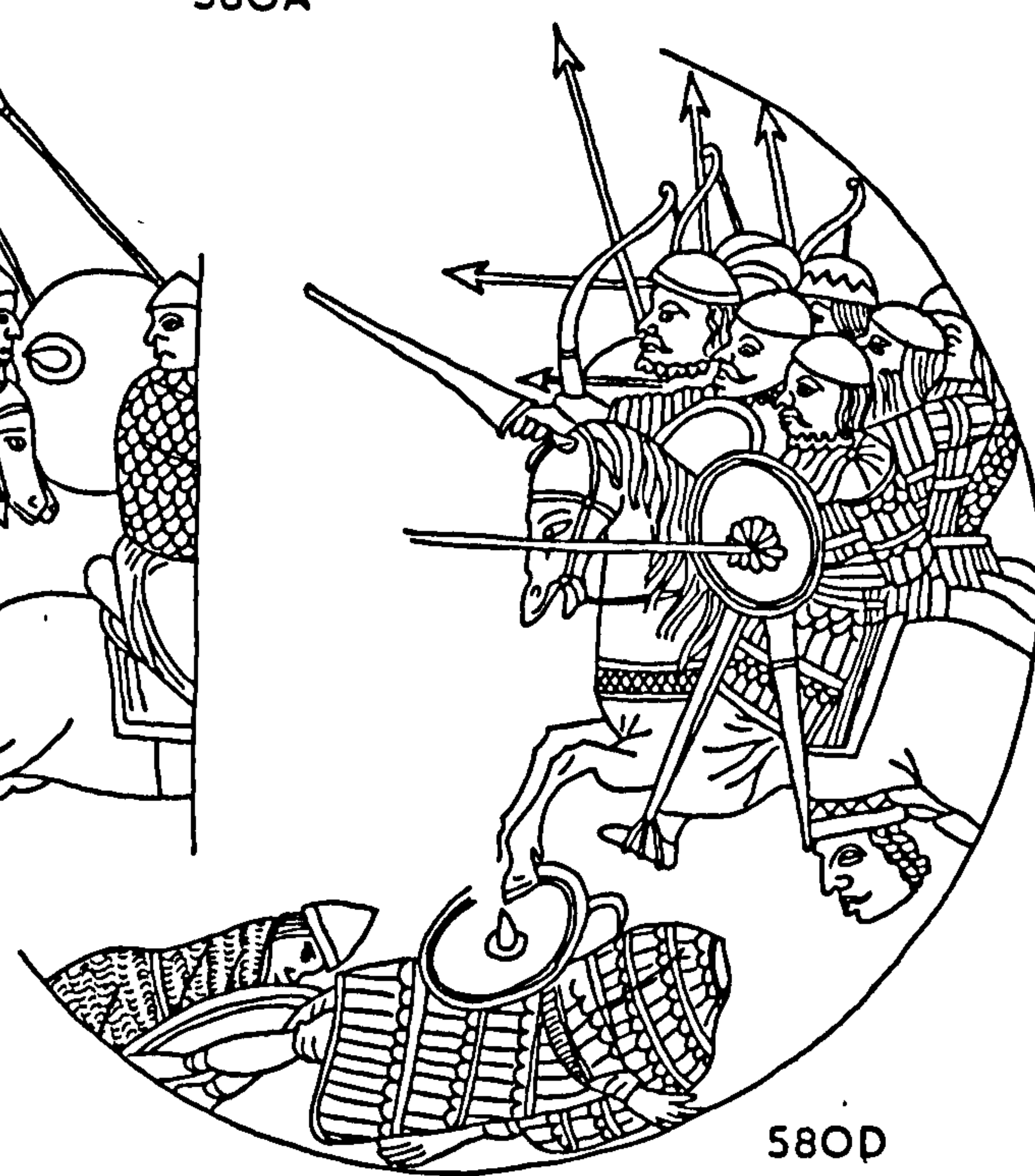
580A



580B



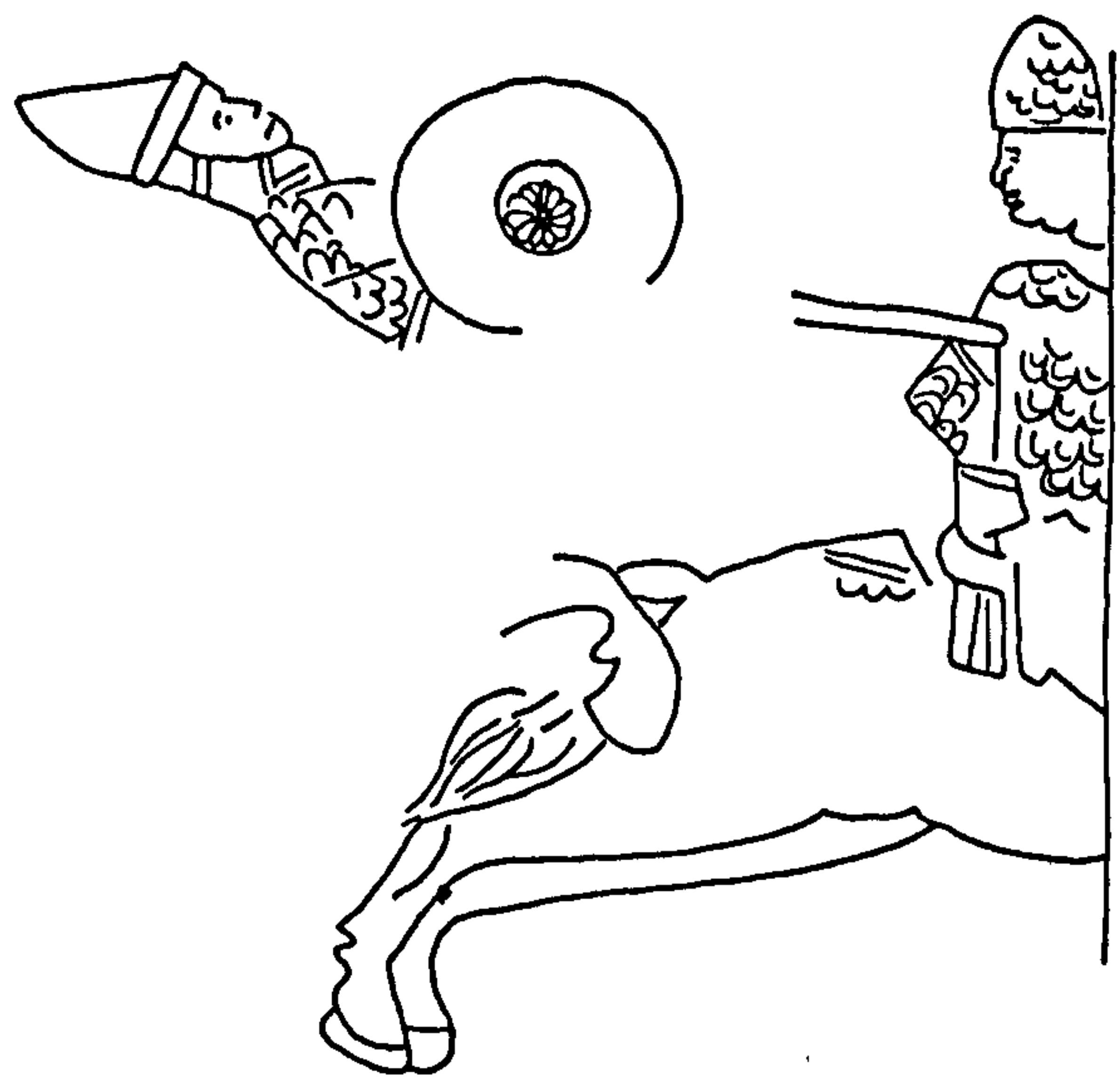
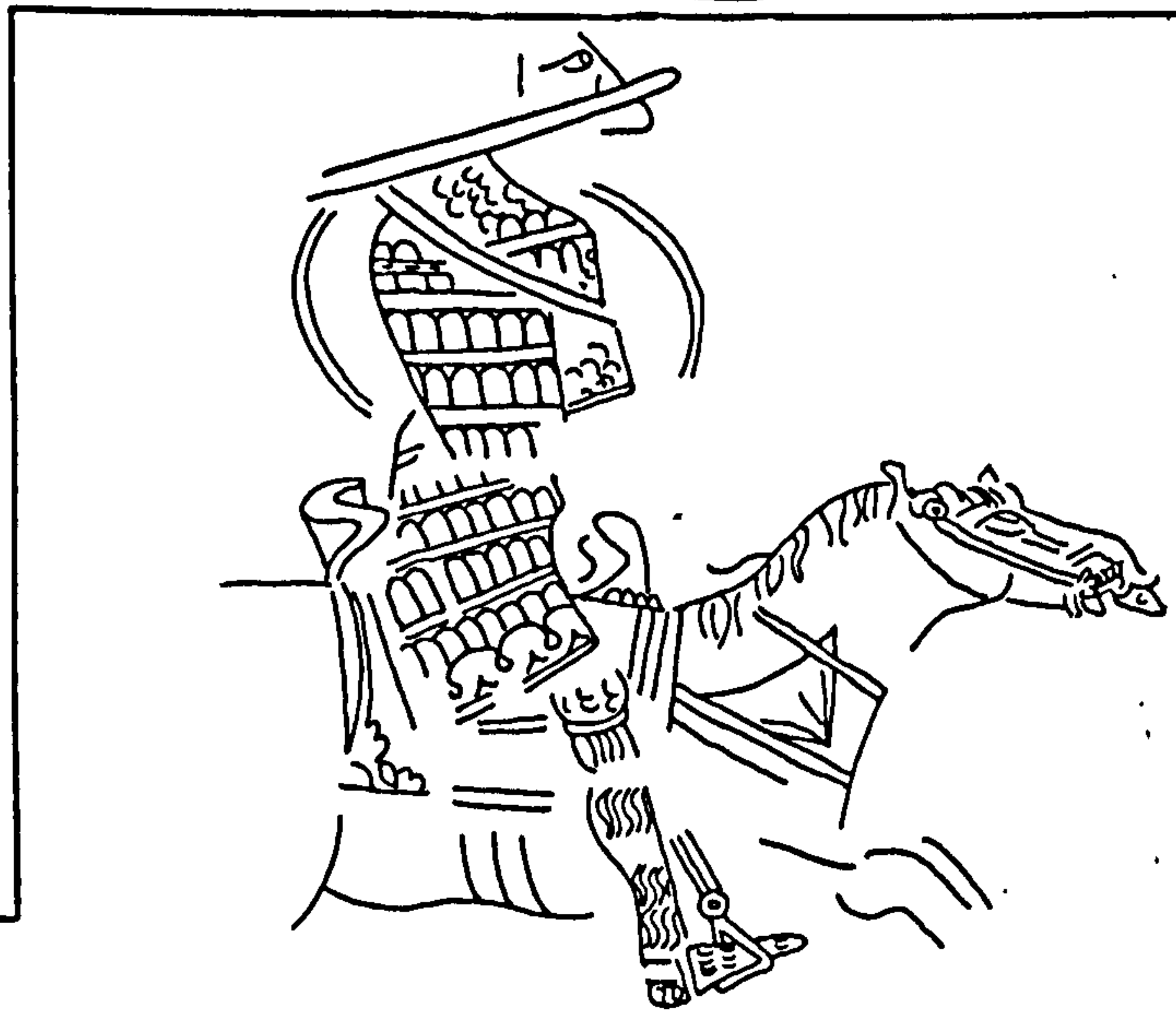
580C



580D

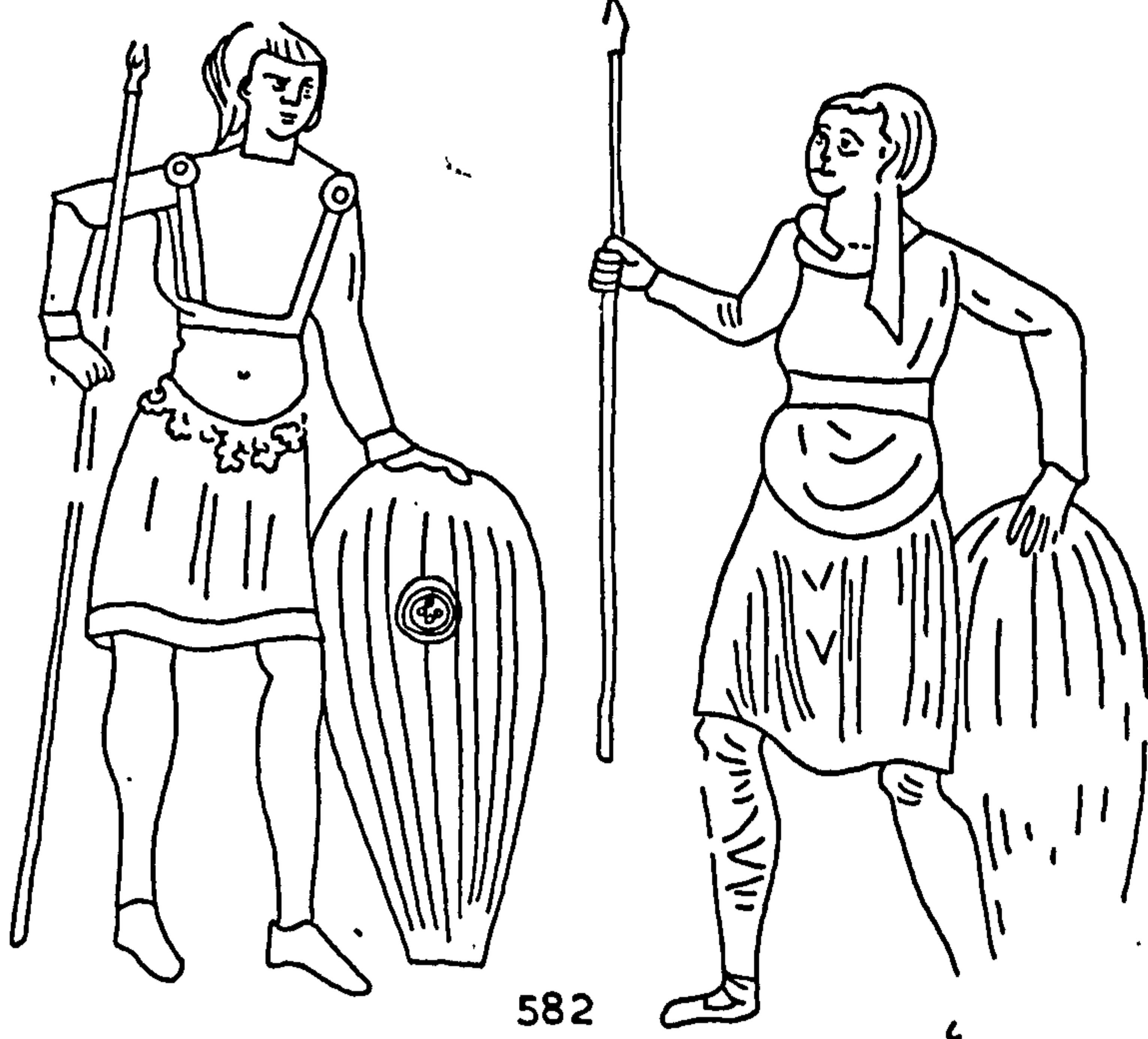


580E

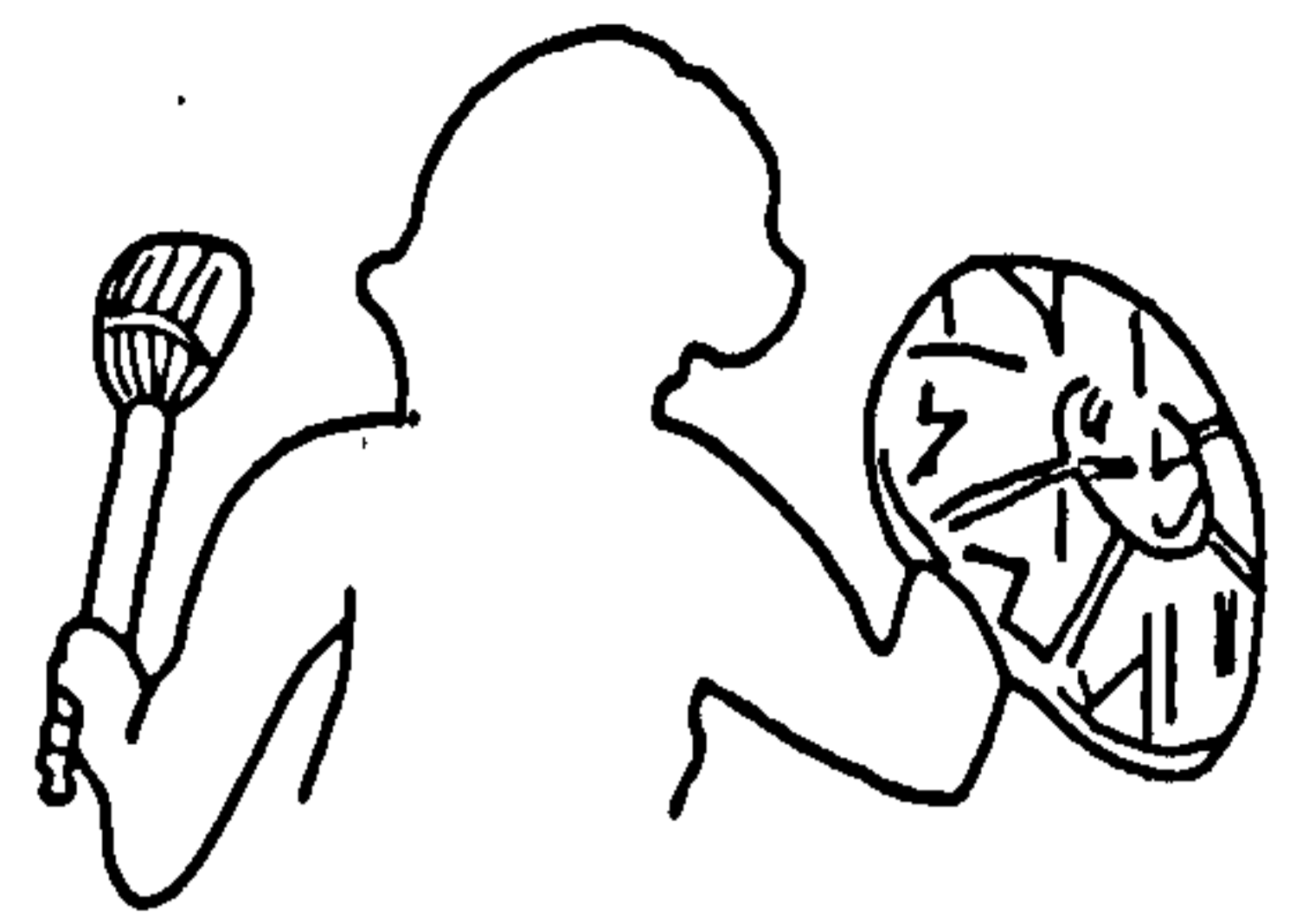


581

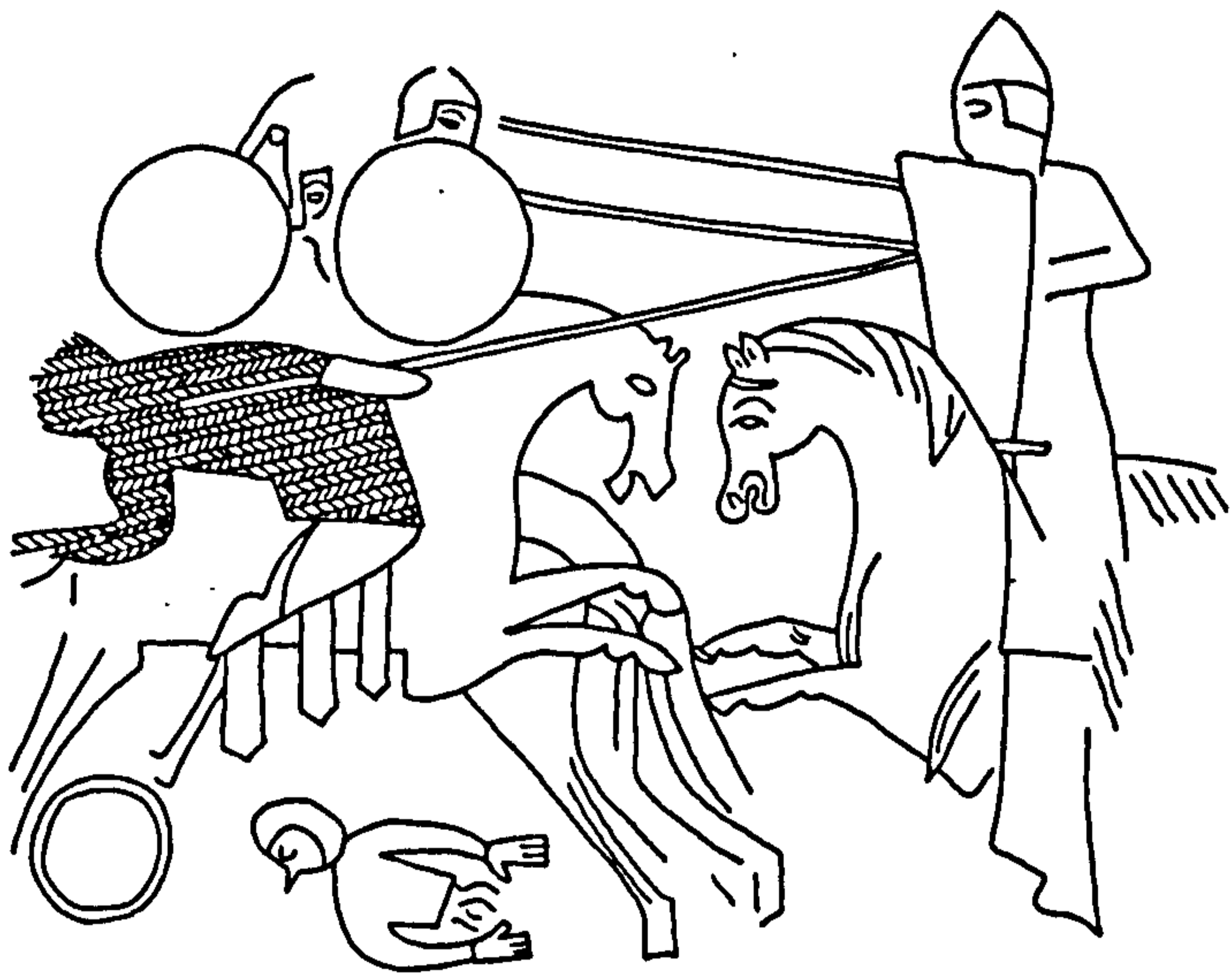




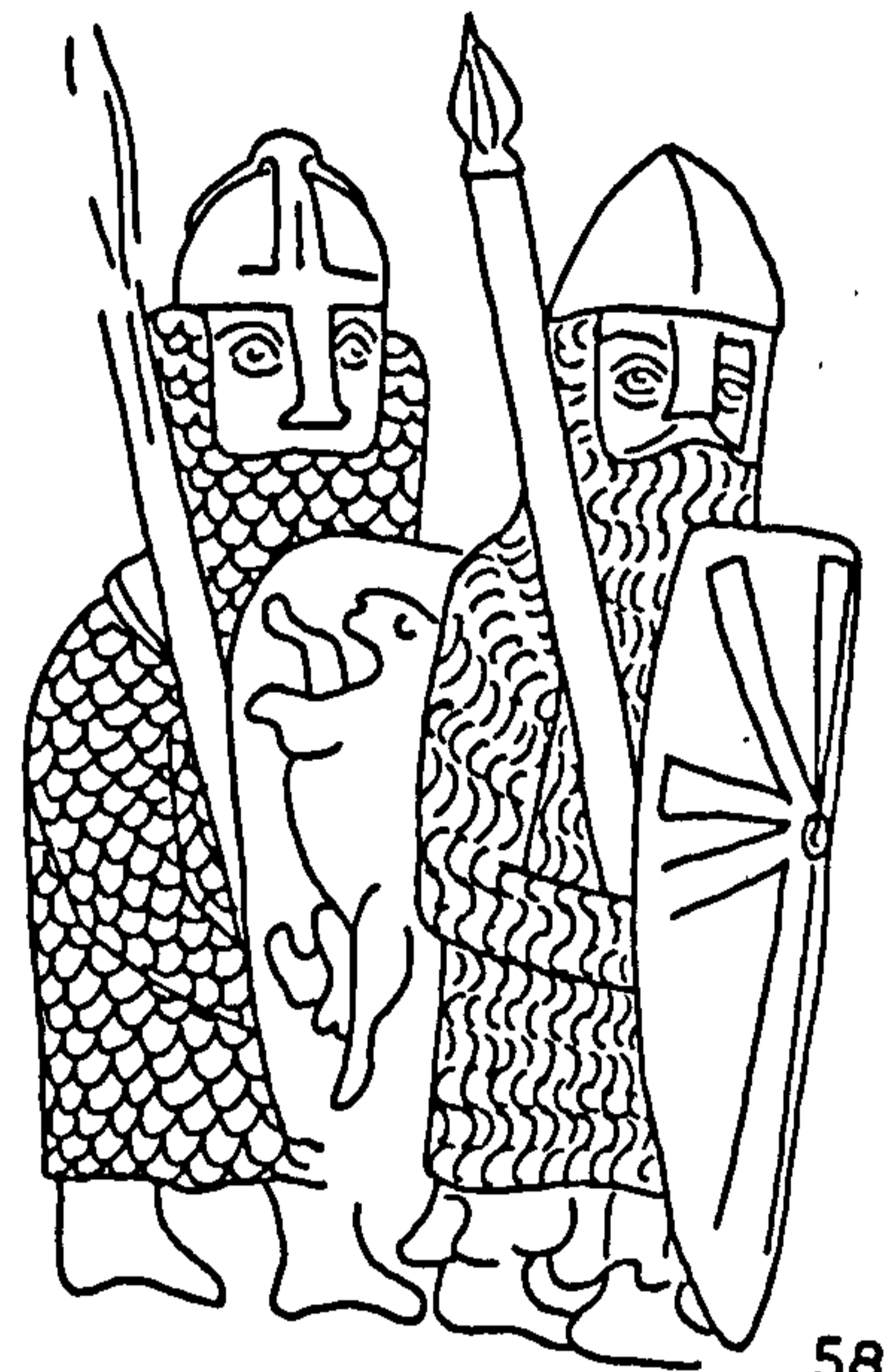
582



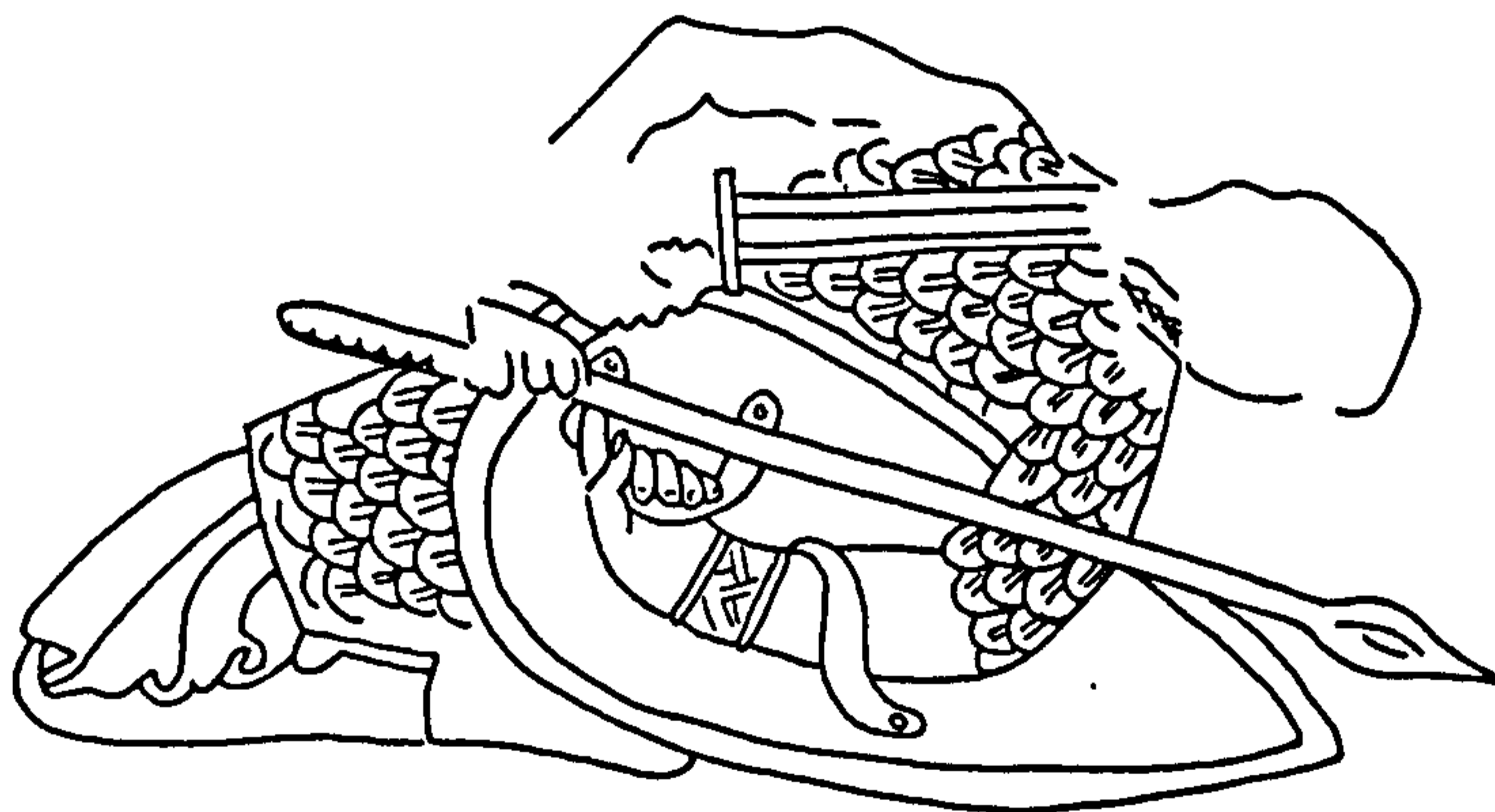
583



584



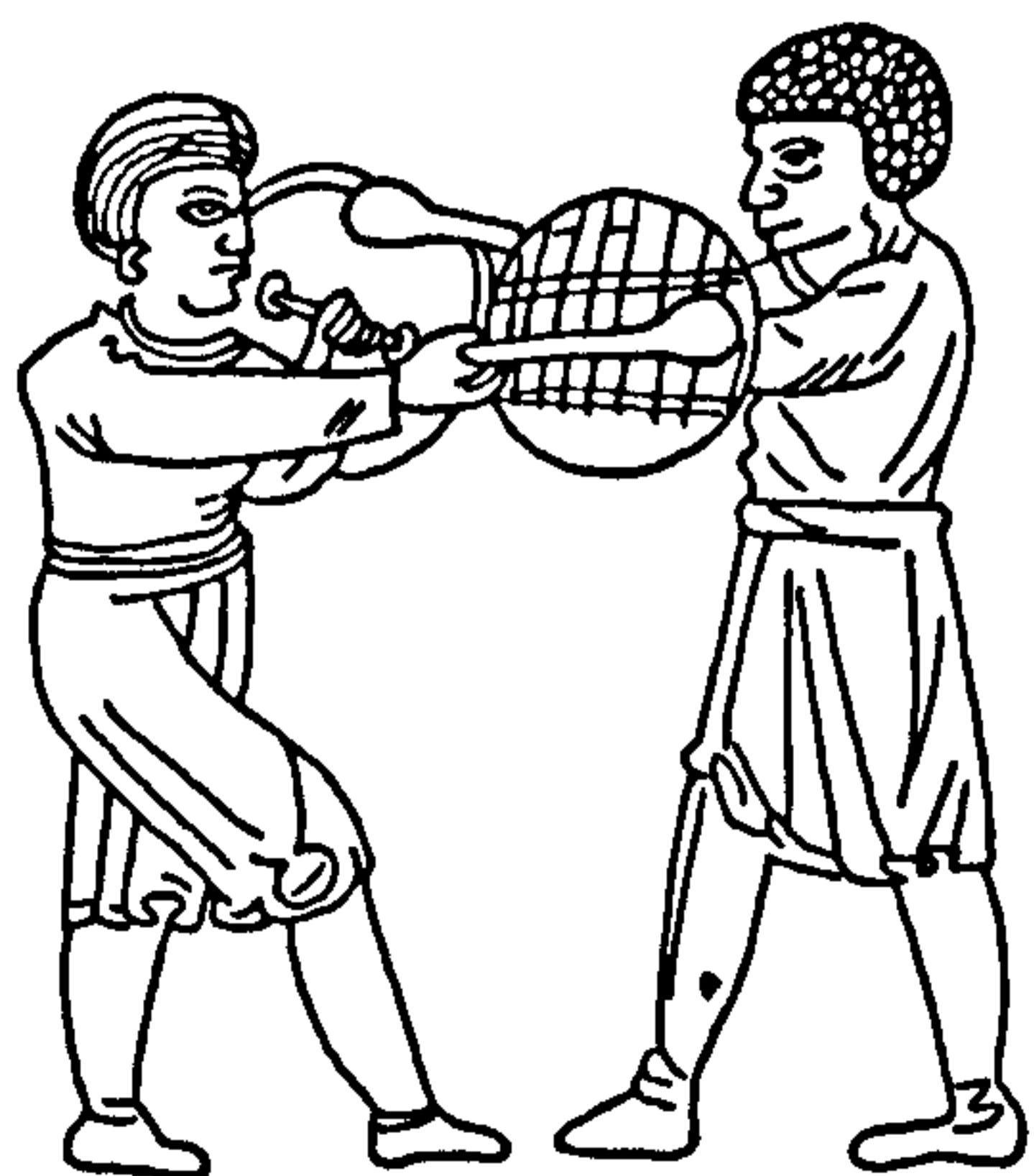
585



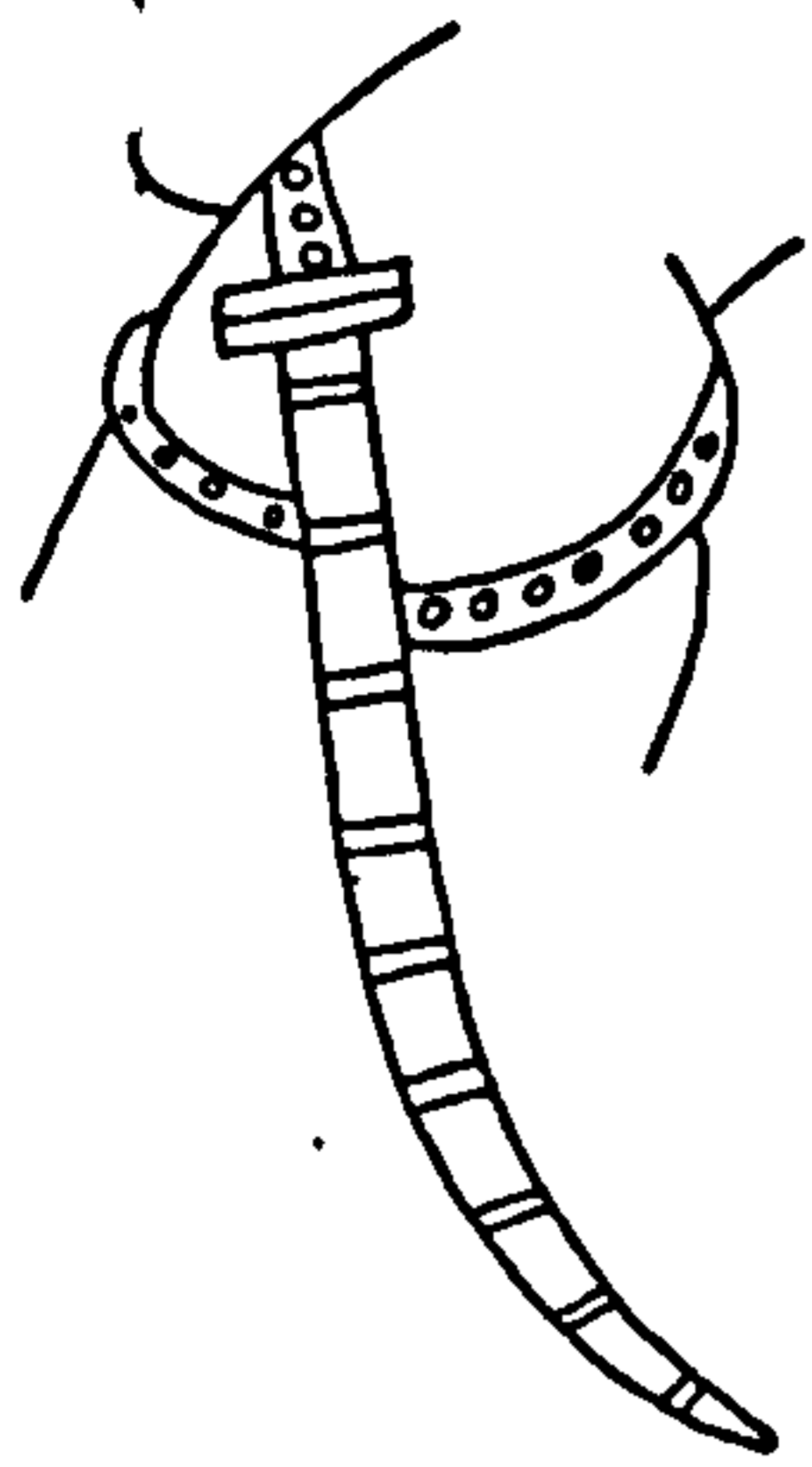
586



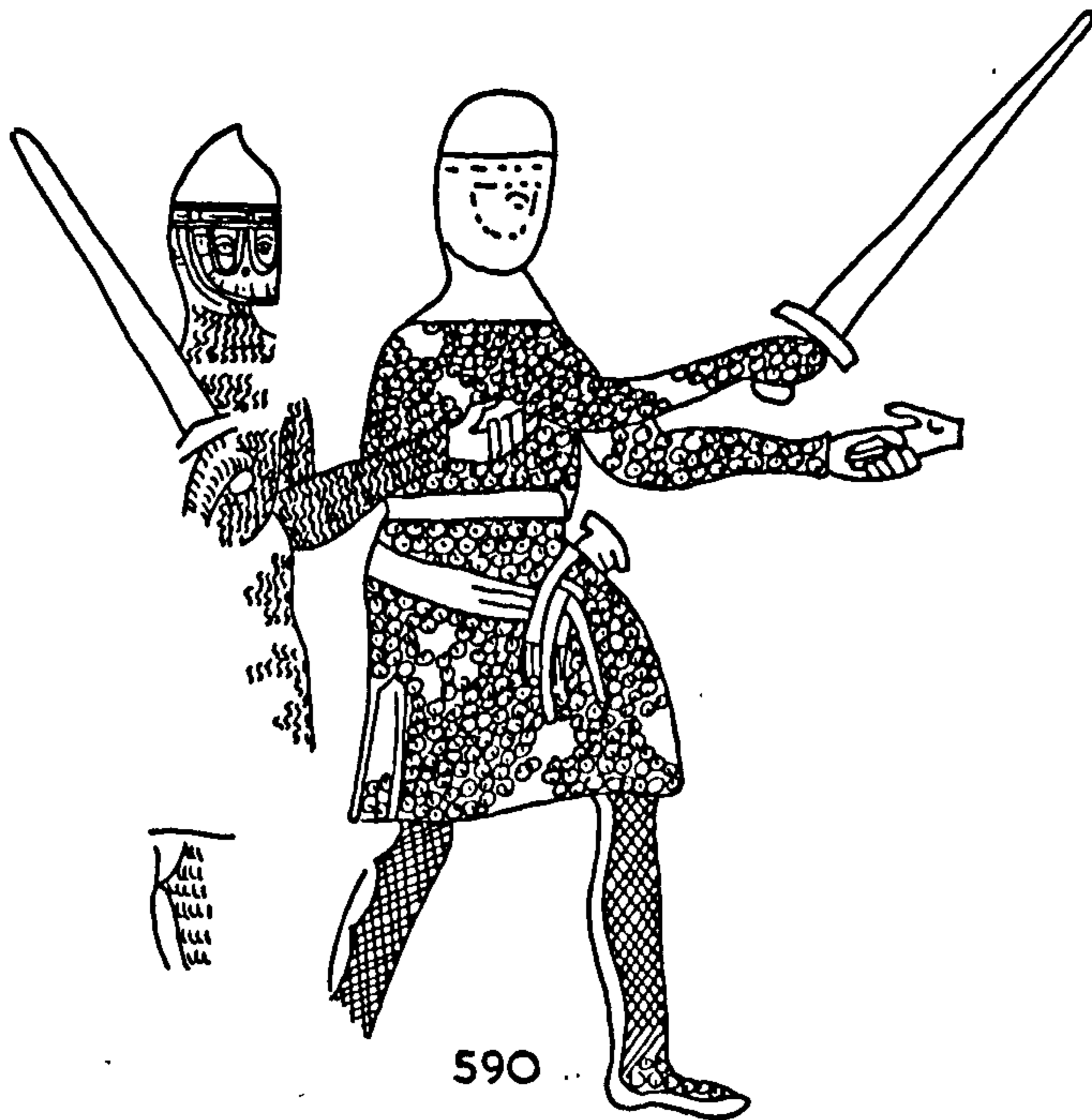
587



588



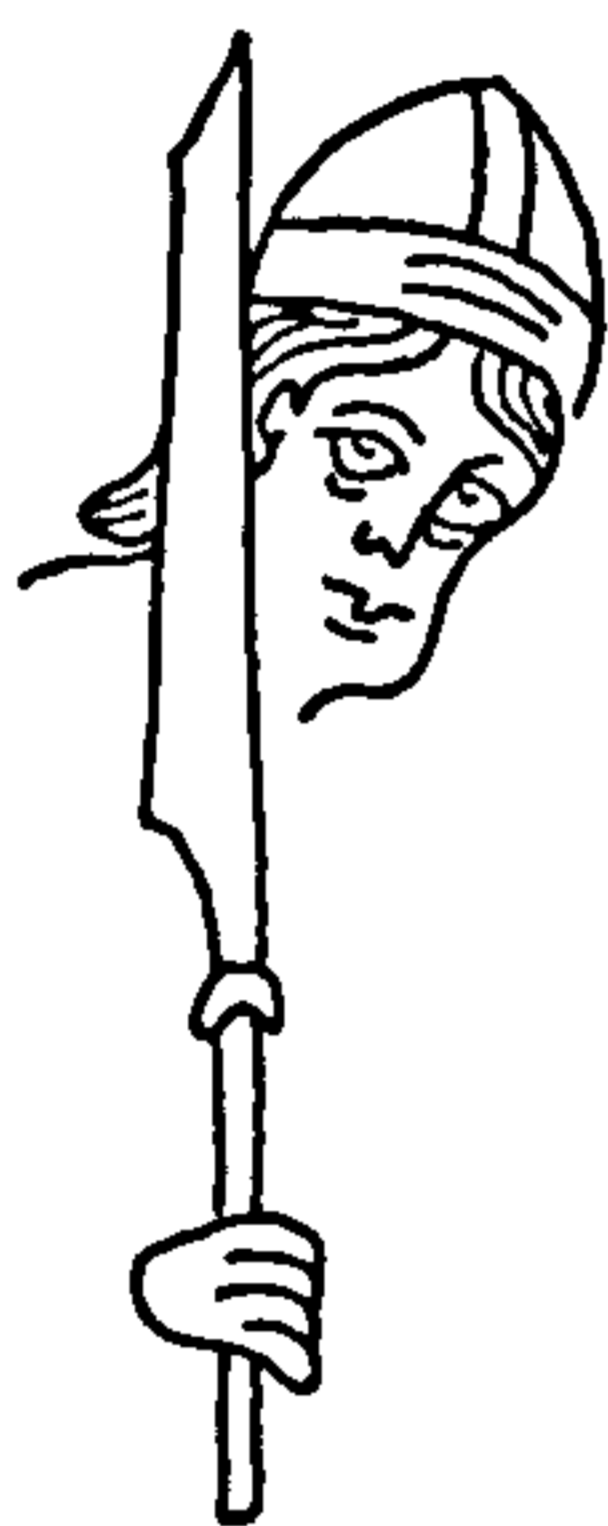
589



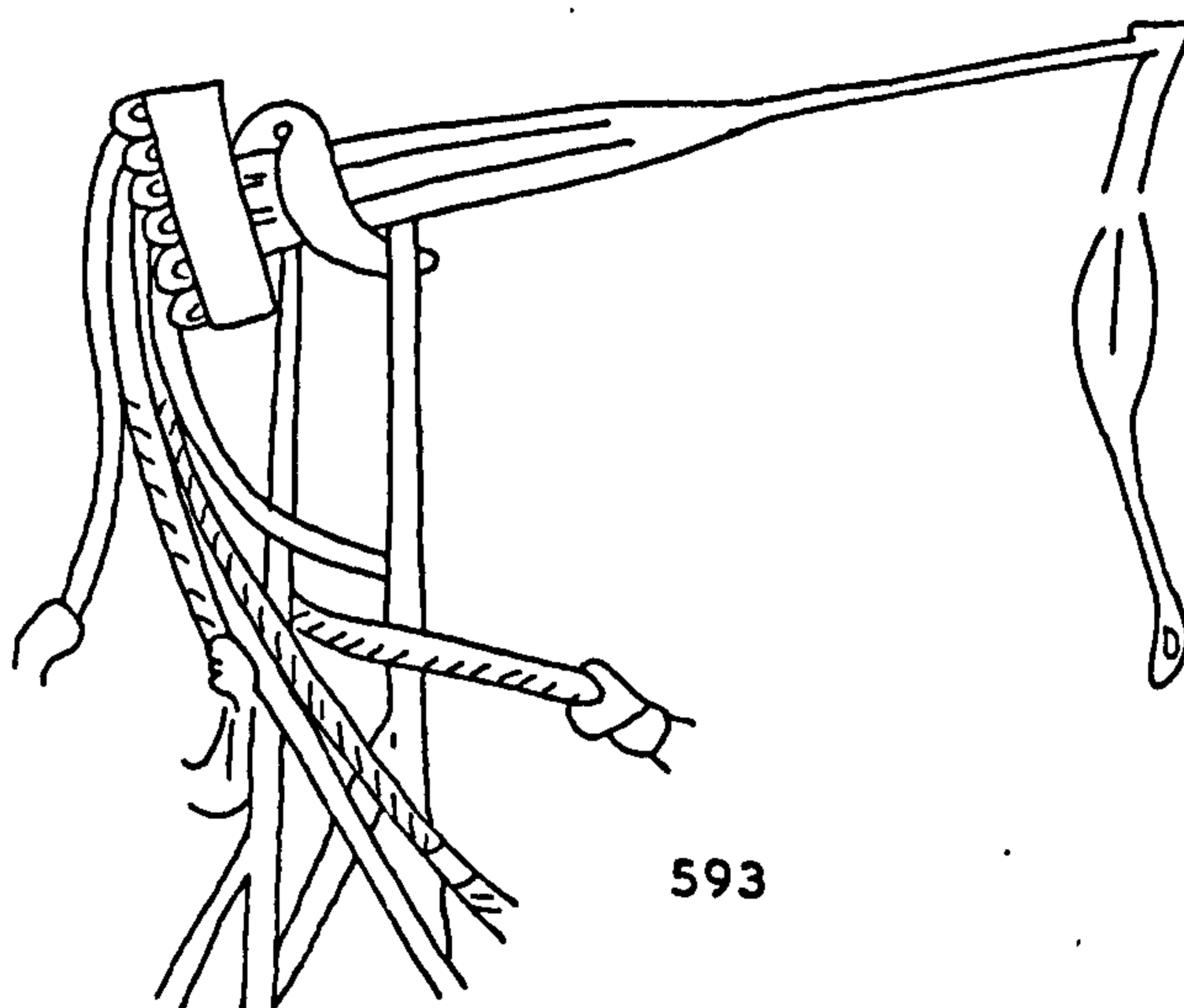
590



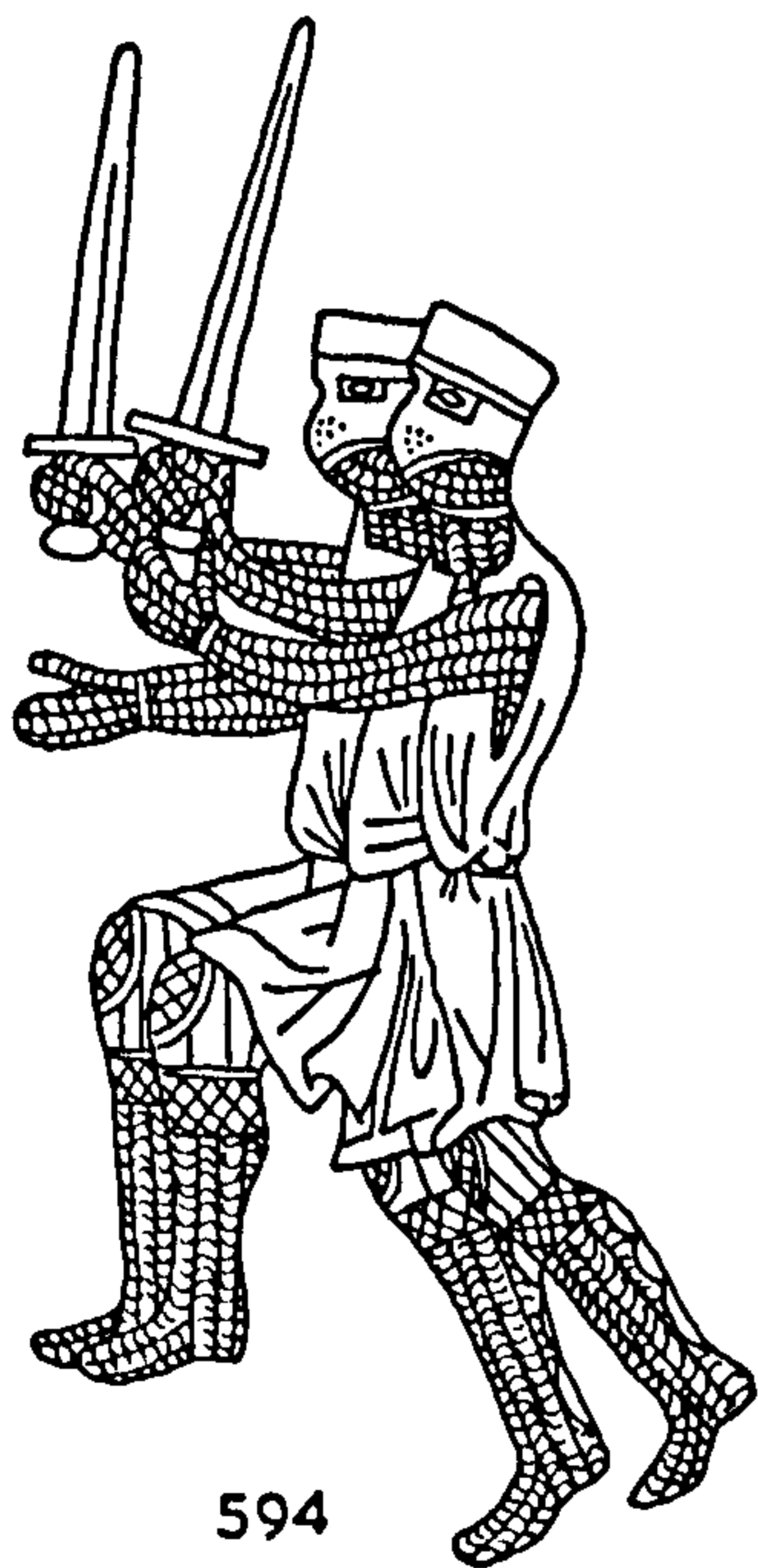
591



592



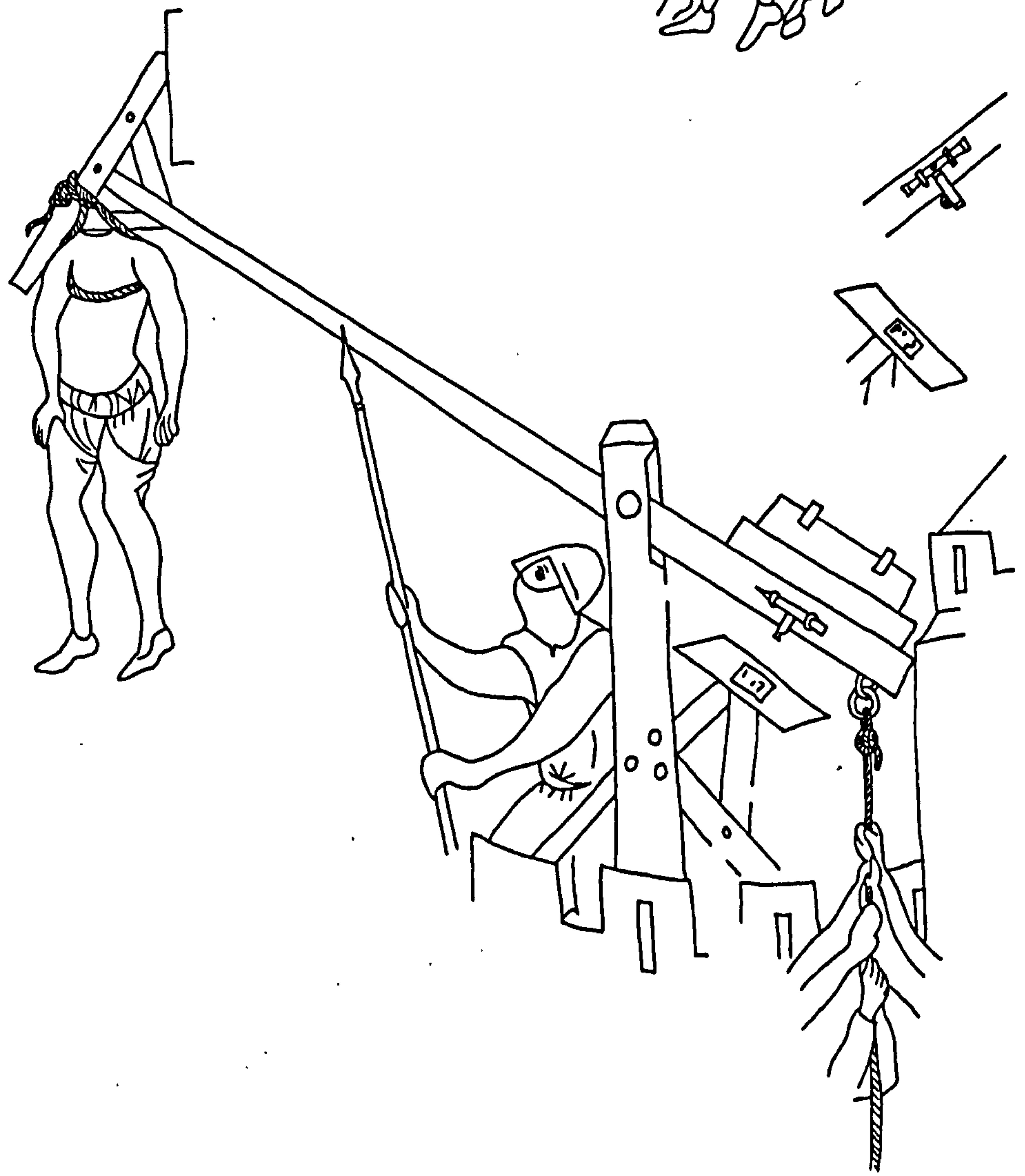
593

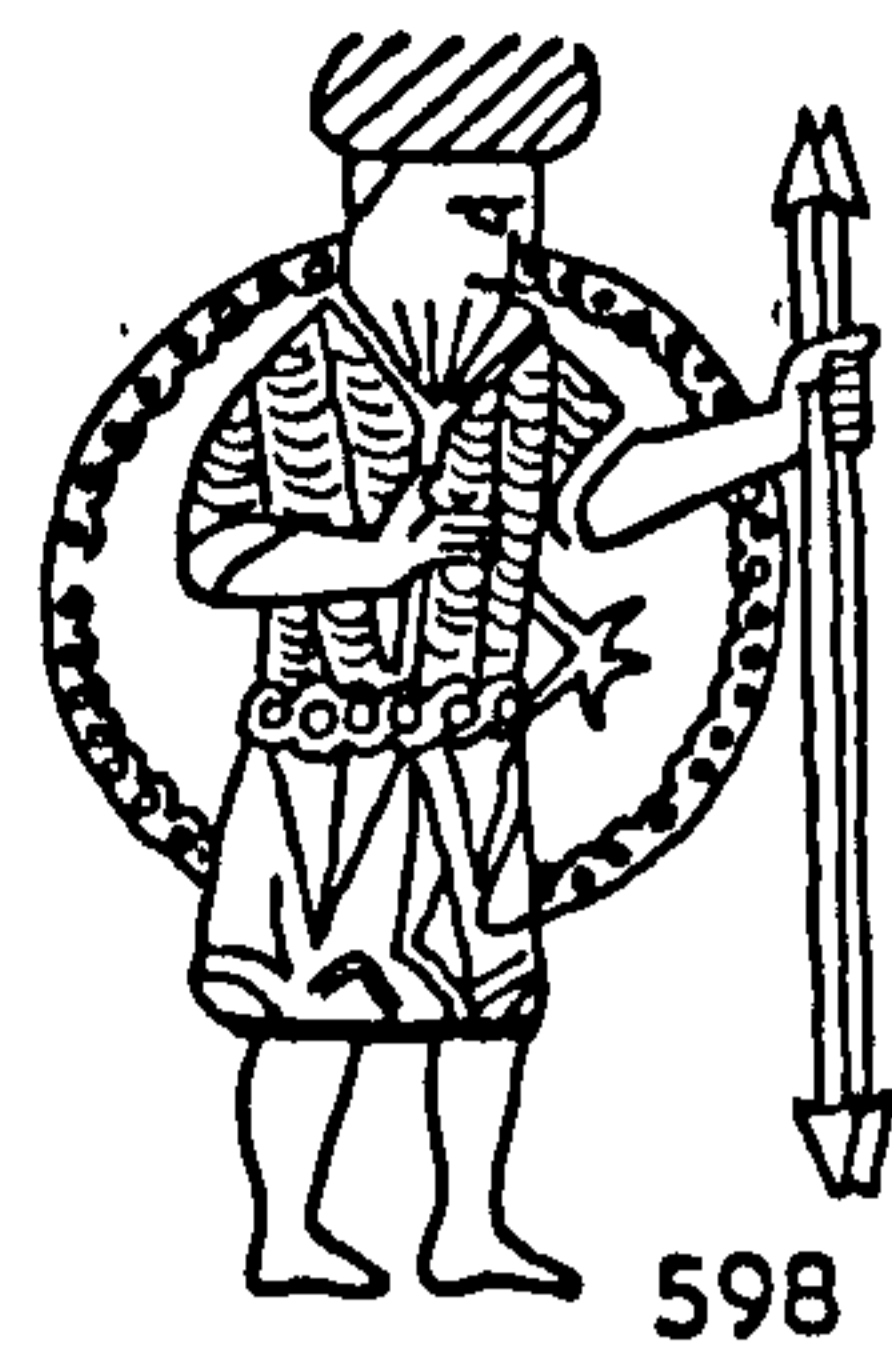
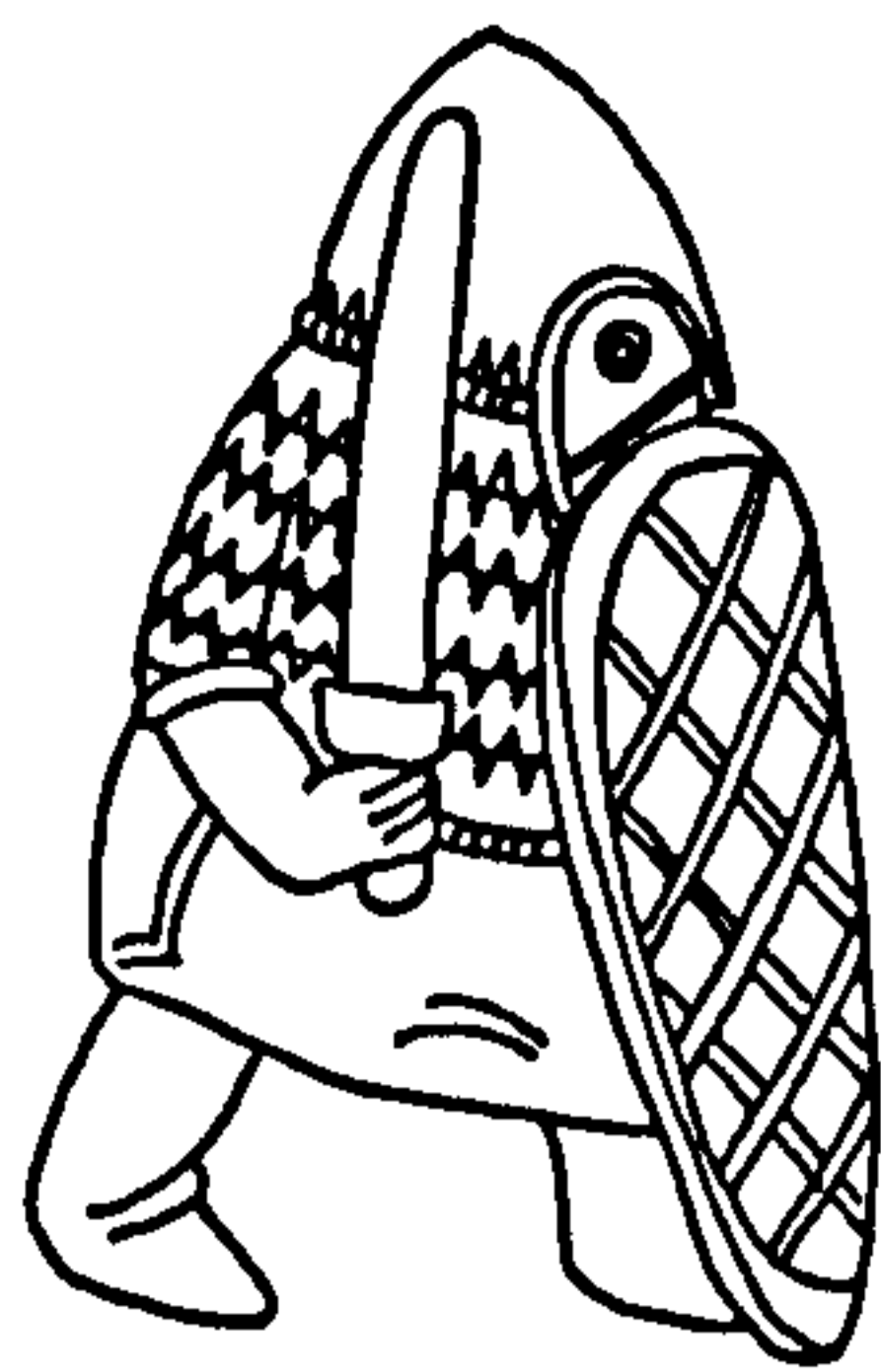
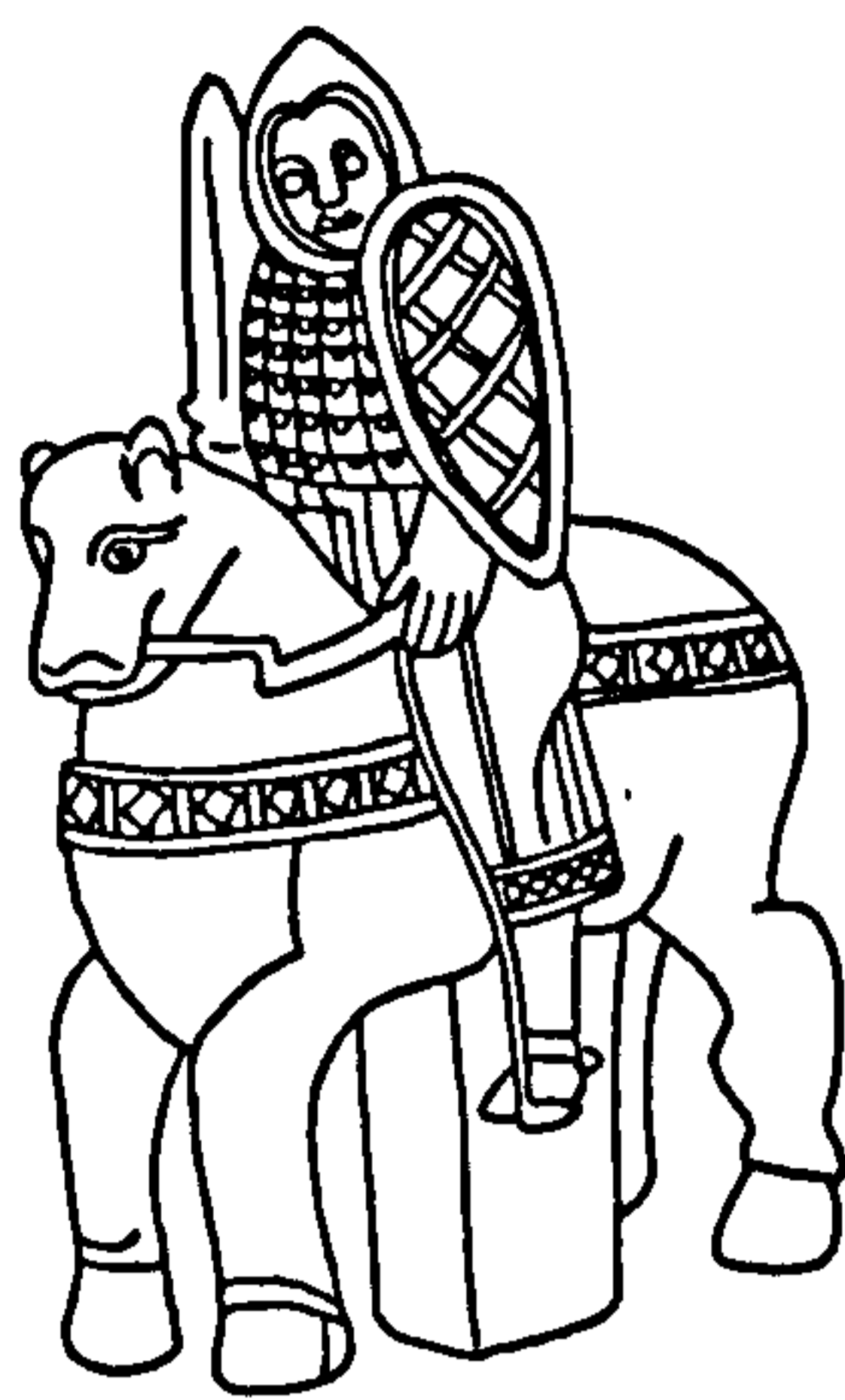
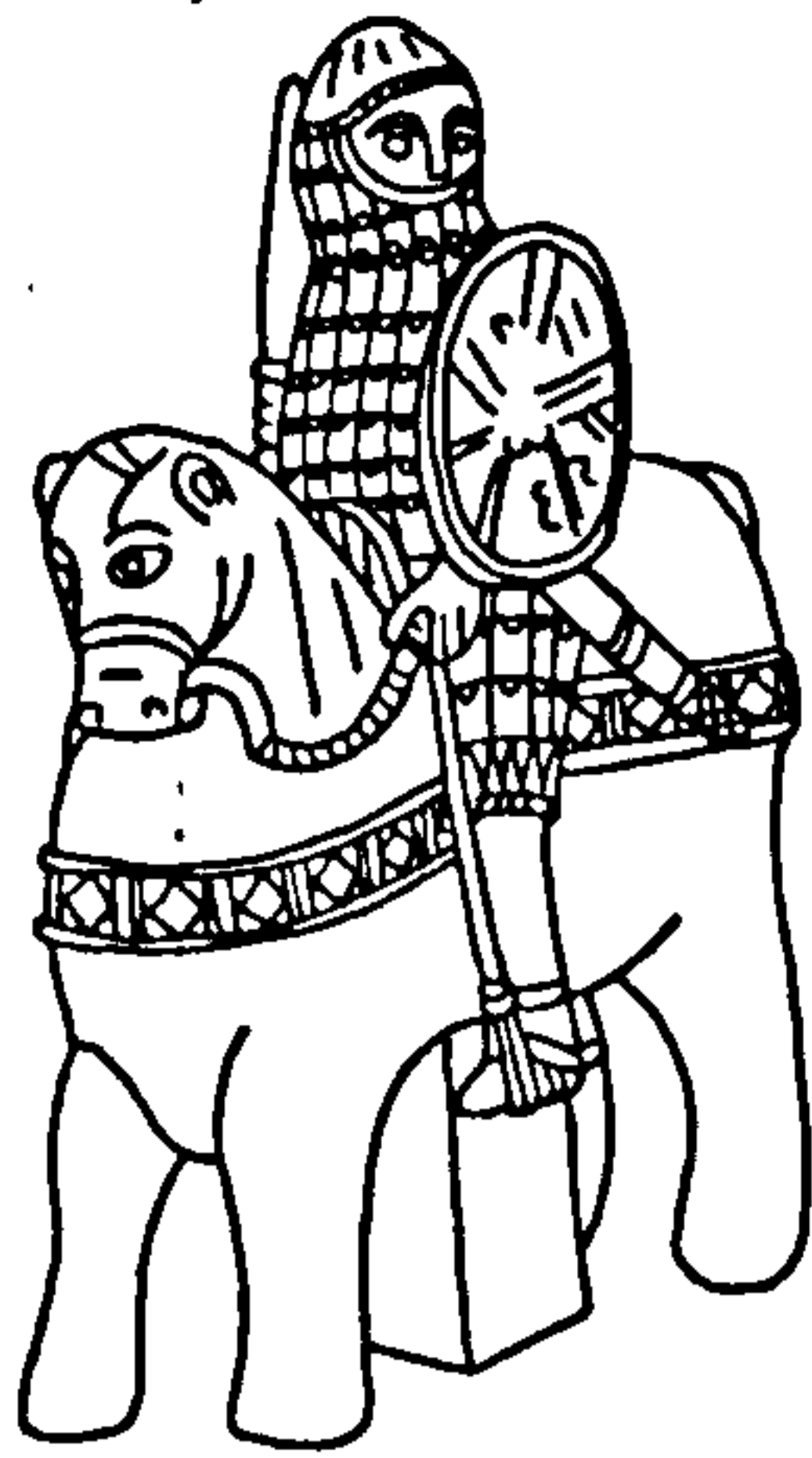


594



595





598

597



599



600



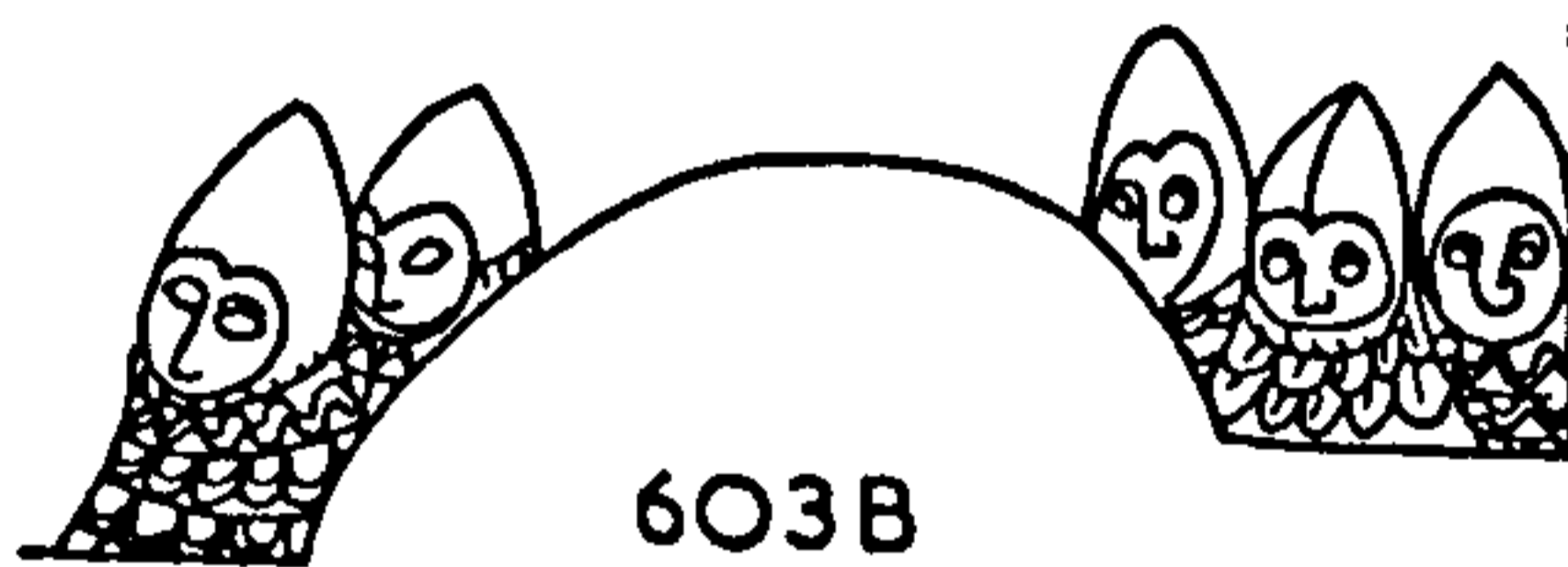
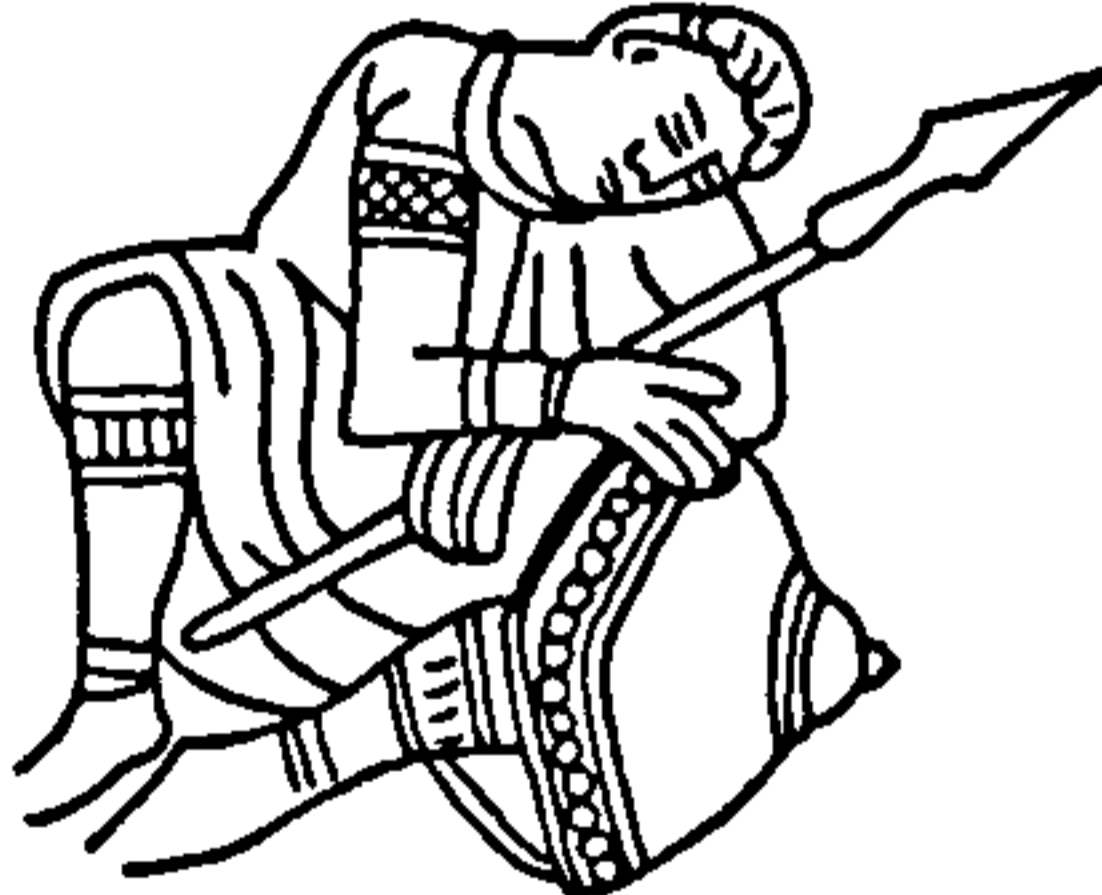
601



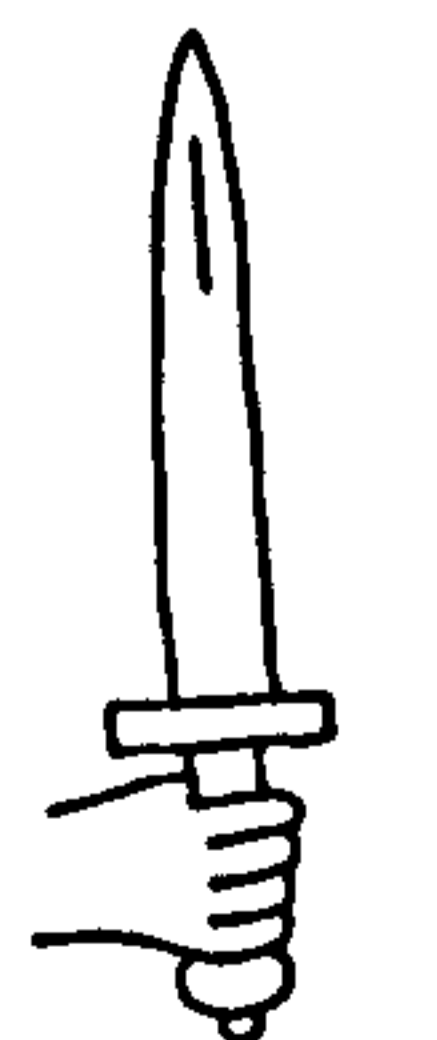
602



603A



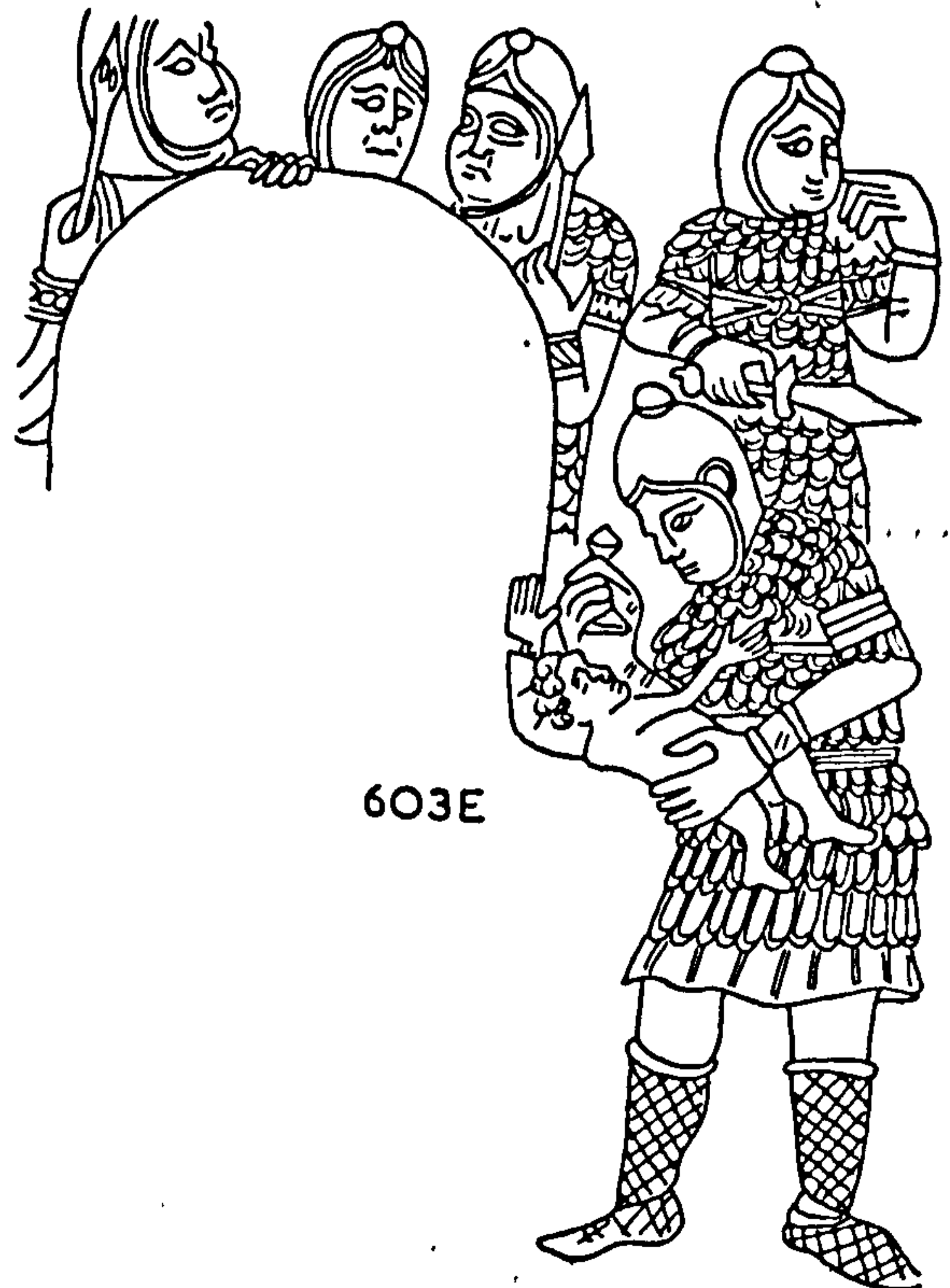
603B



603C



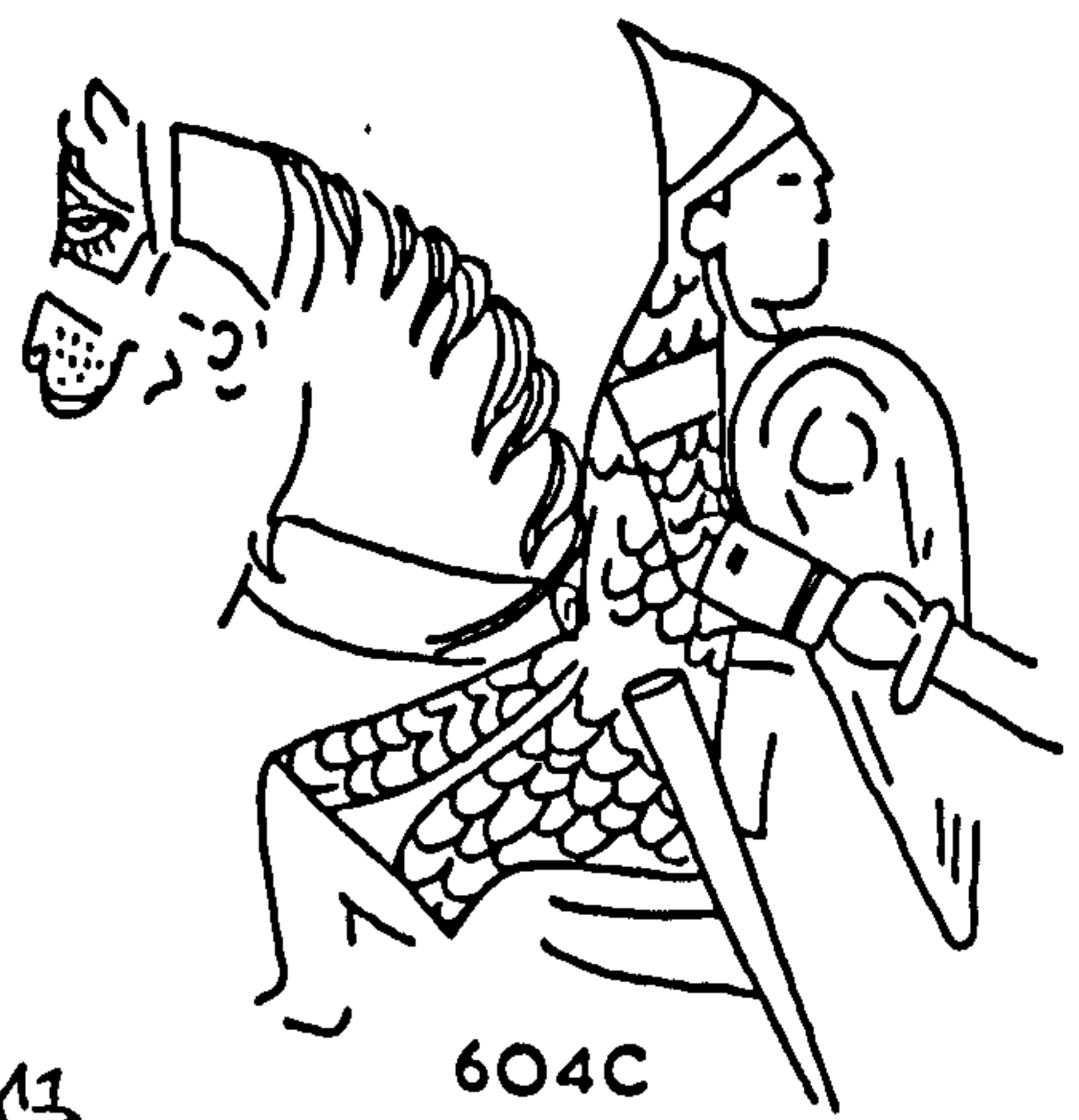
603D



603E



604A



604C



604B



604D



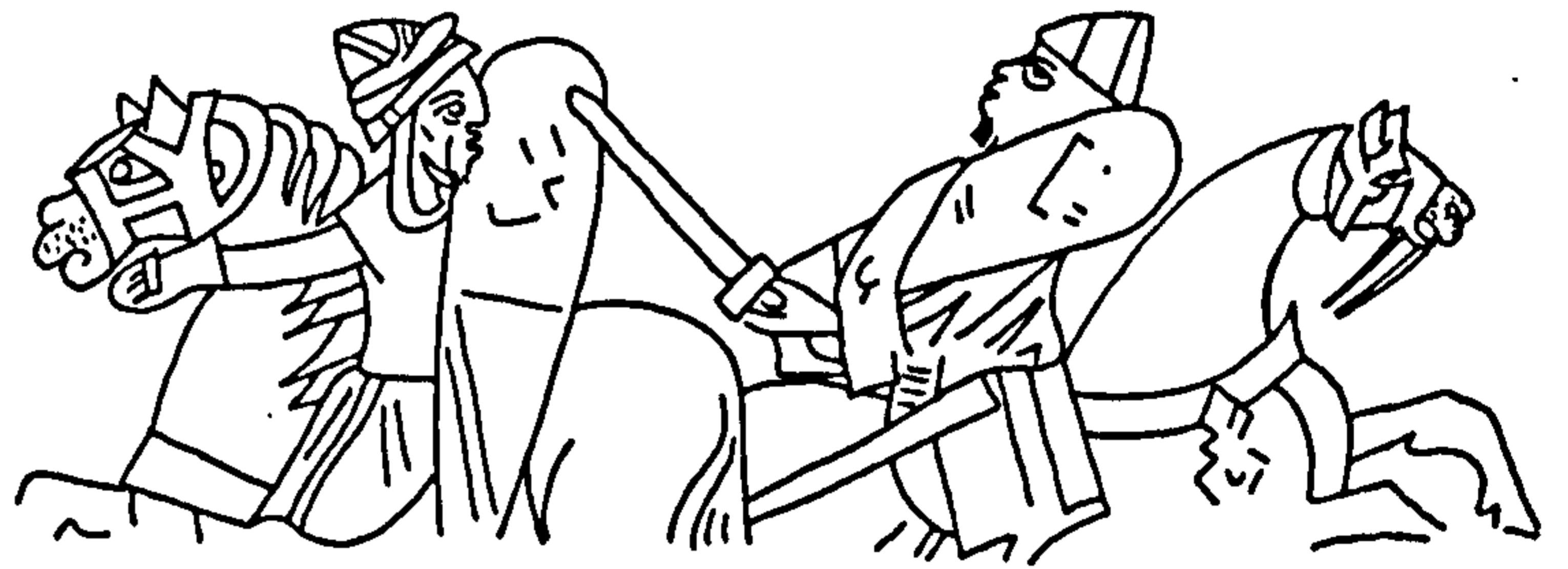
604E



604F



604G



604I



604H



604J

(Continued)

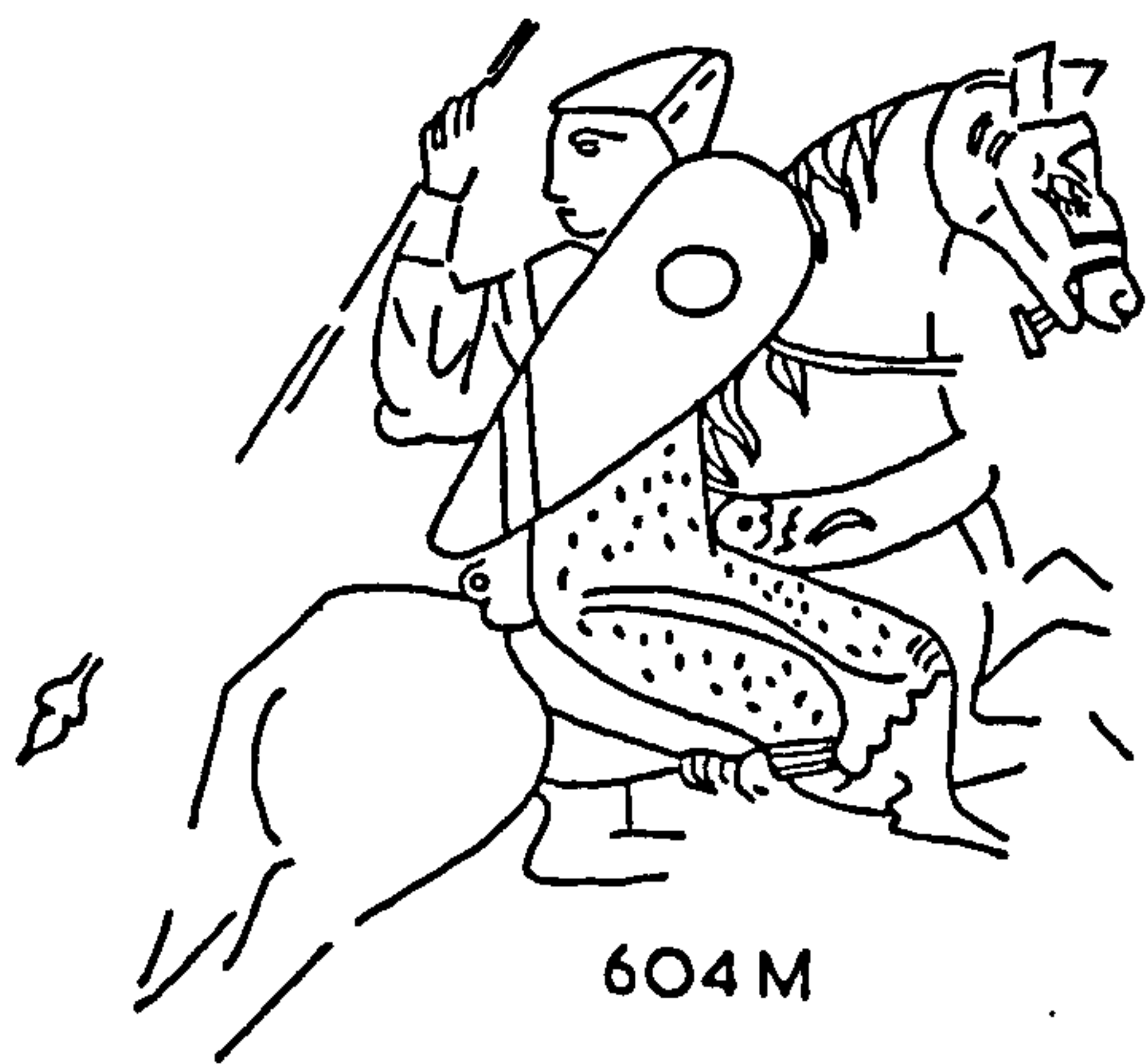




604K



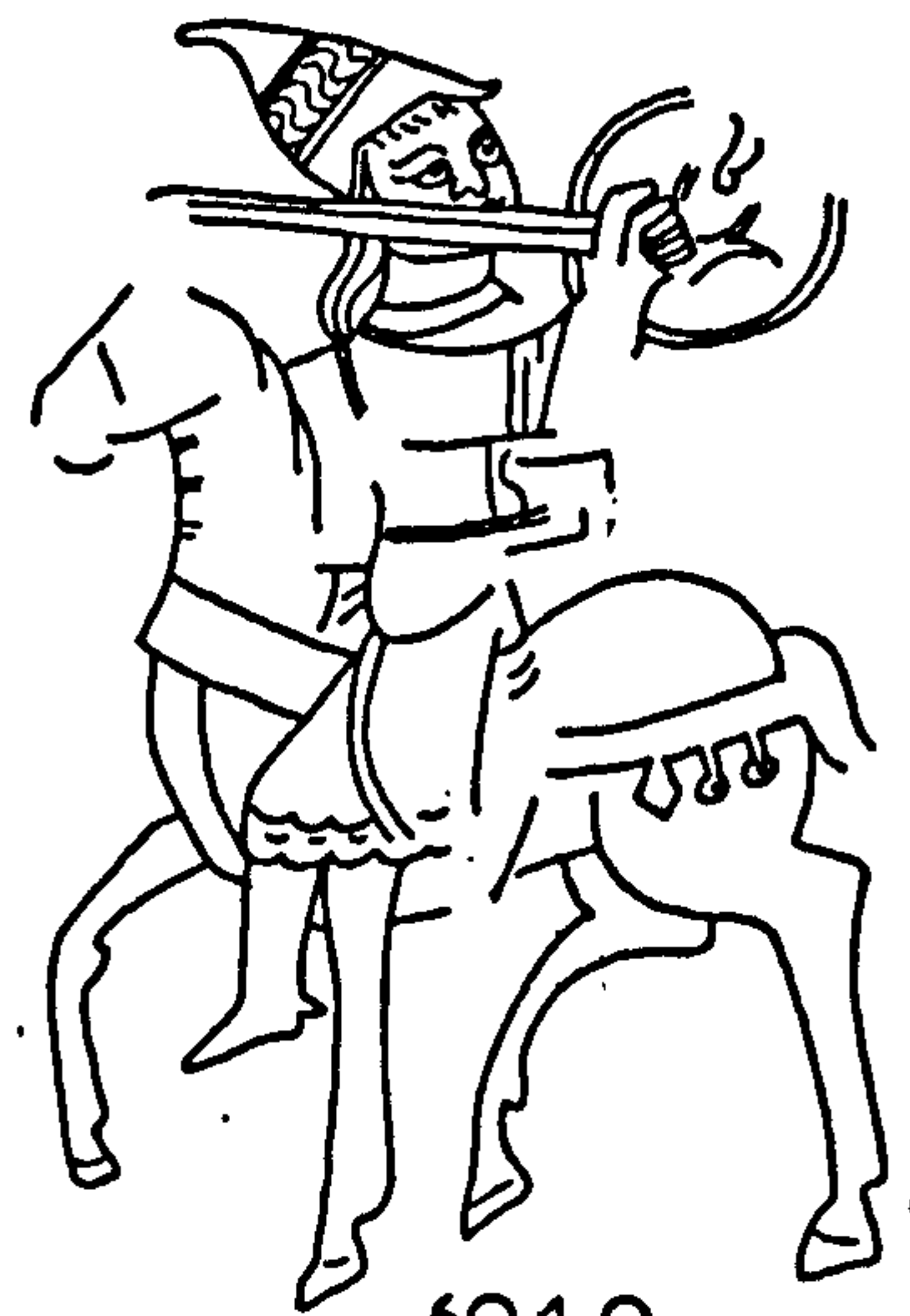
604L



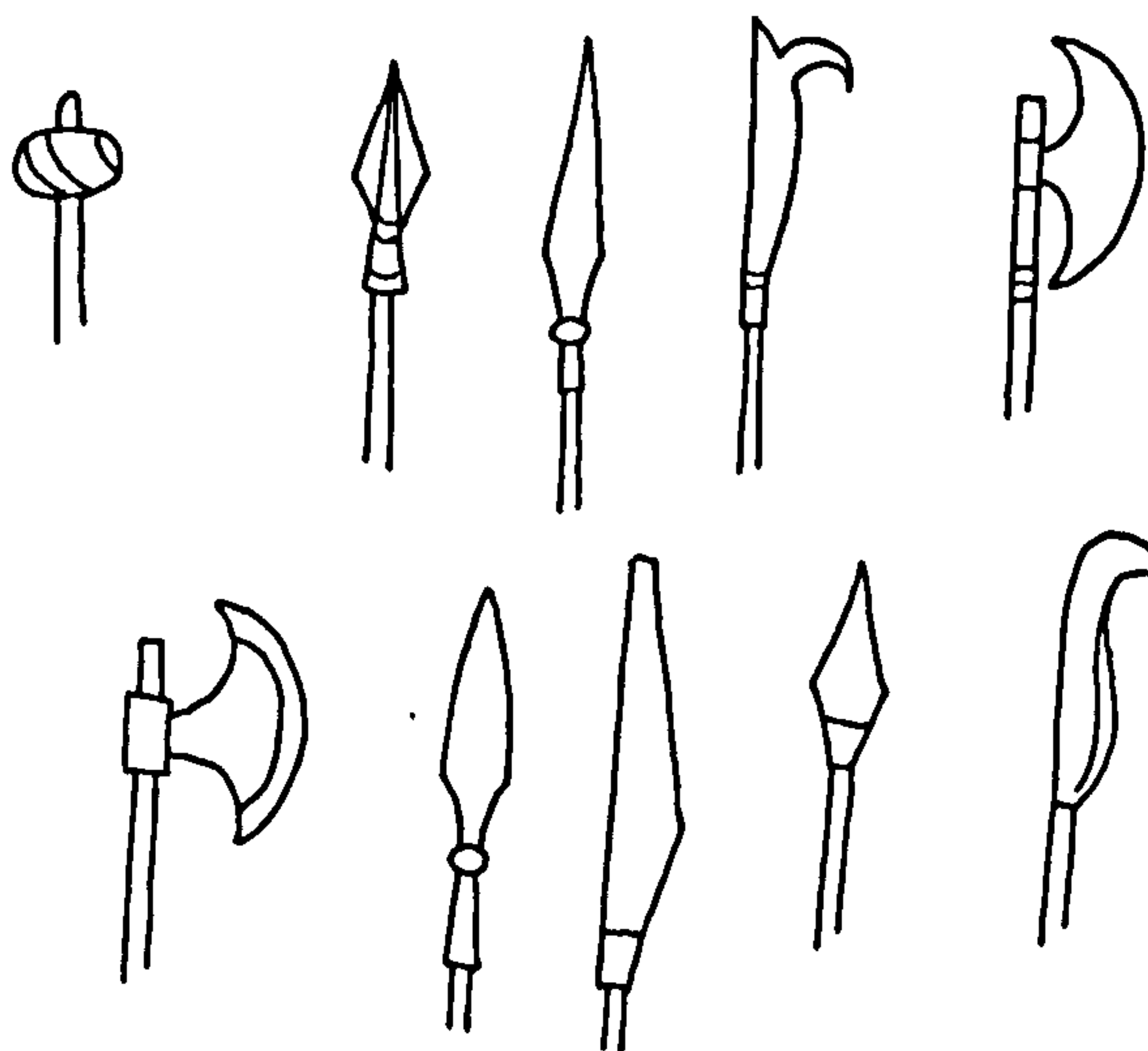
604M



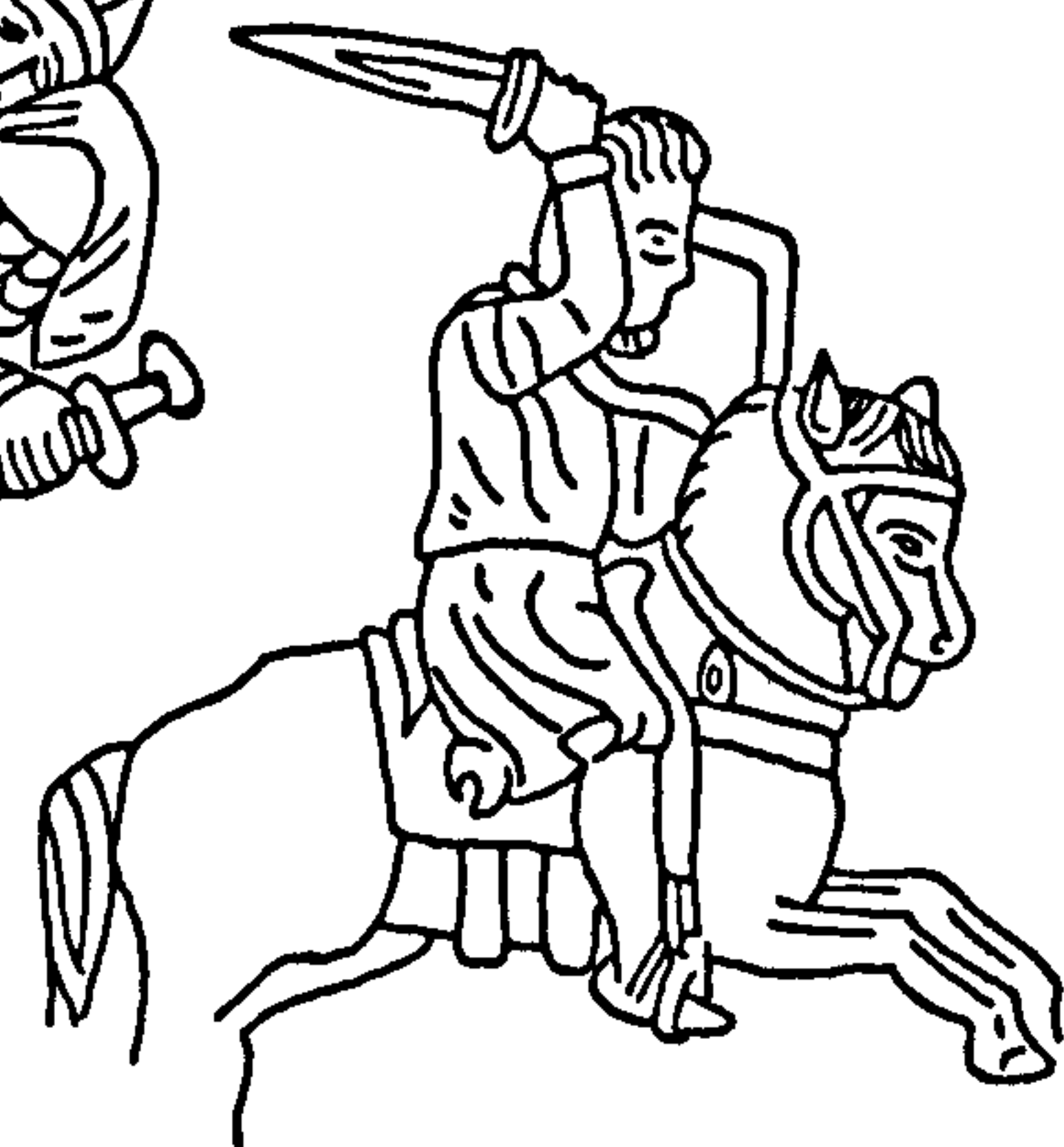
604 N



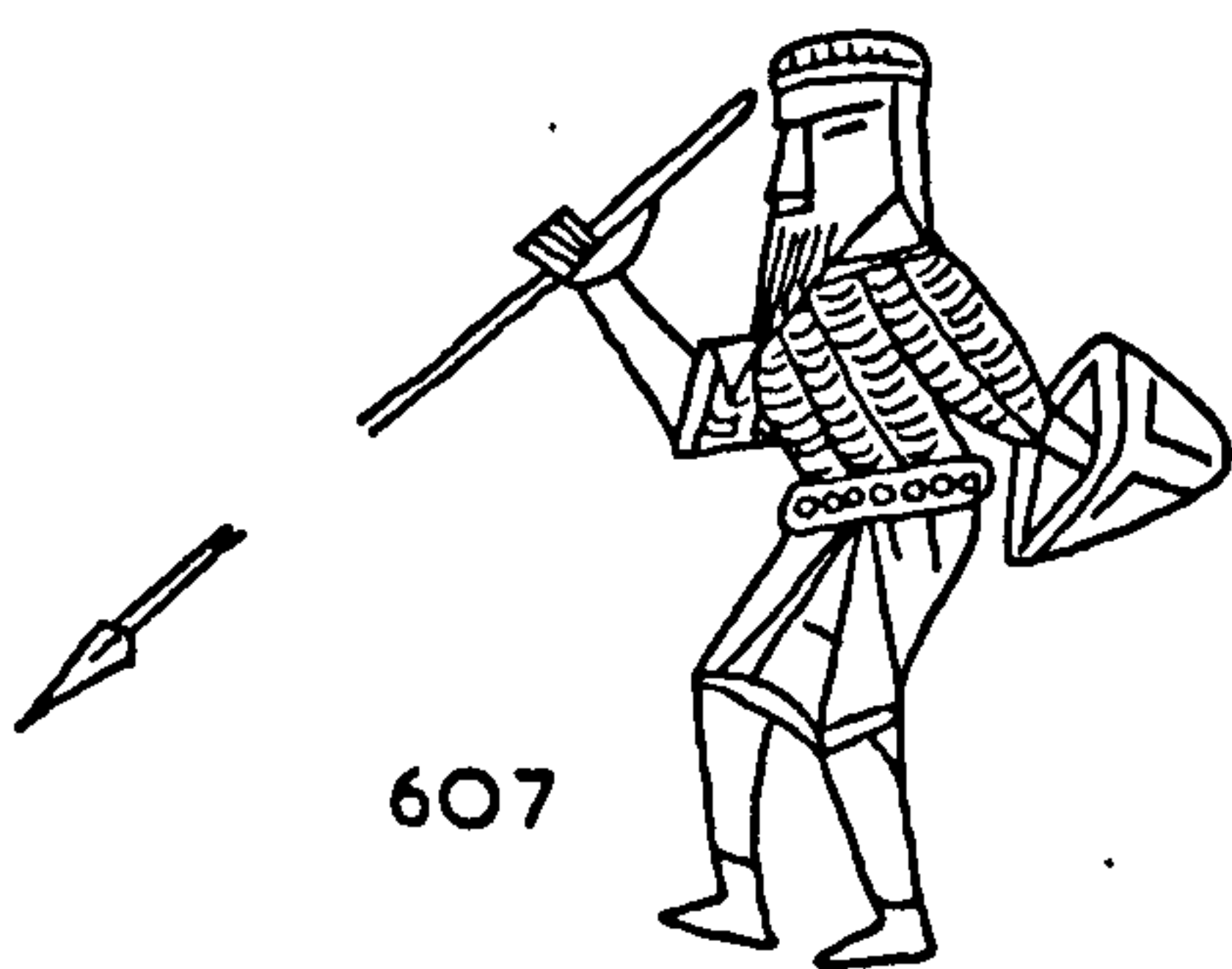
604 O



605



606



607



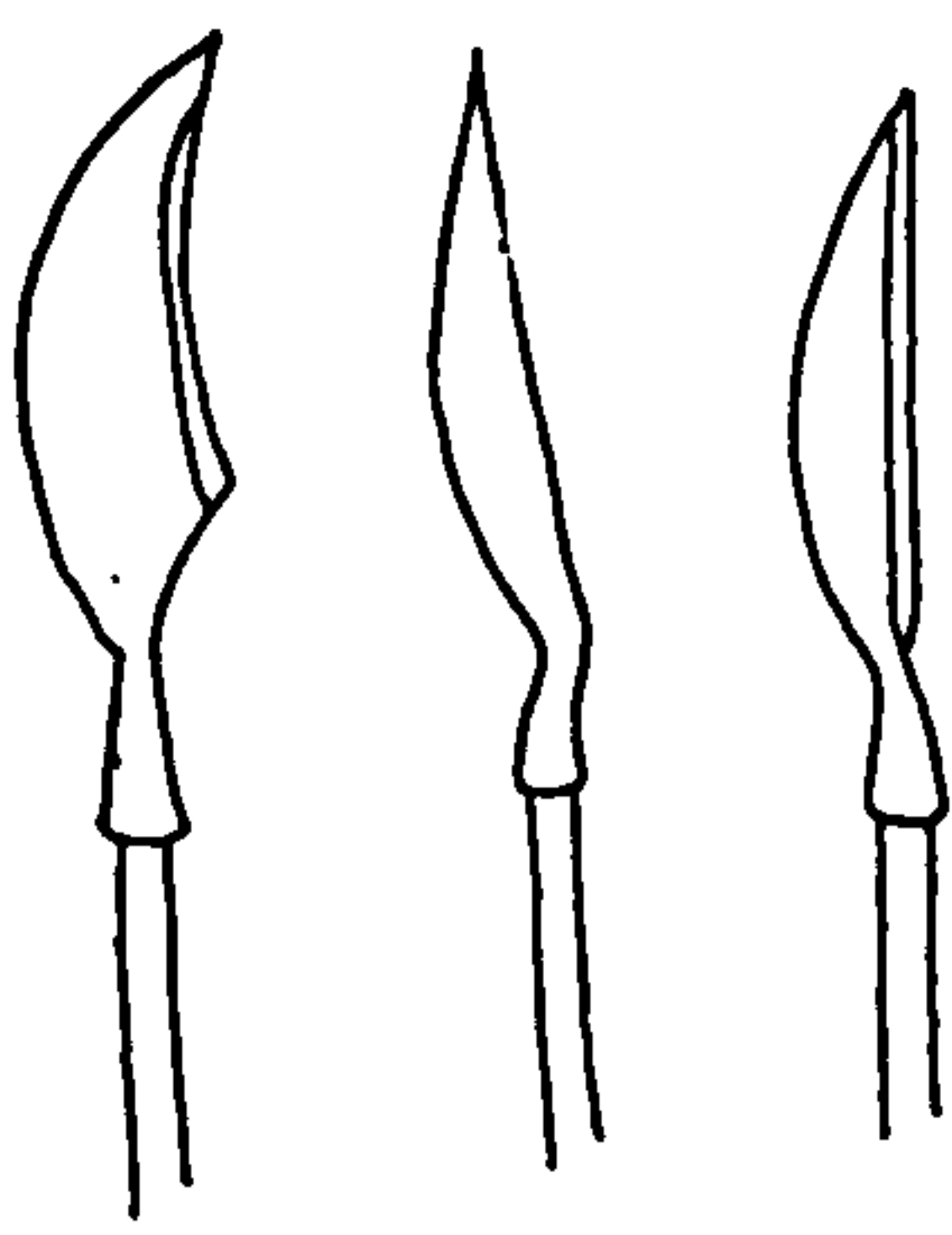
608A



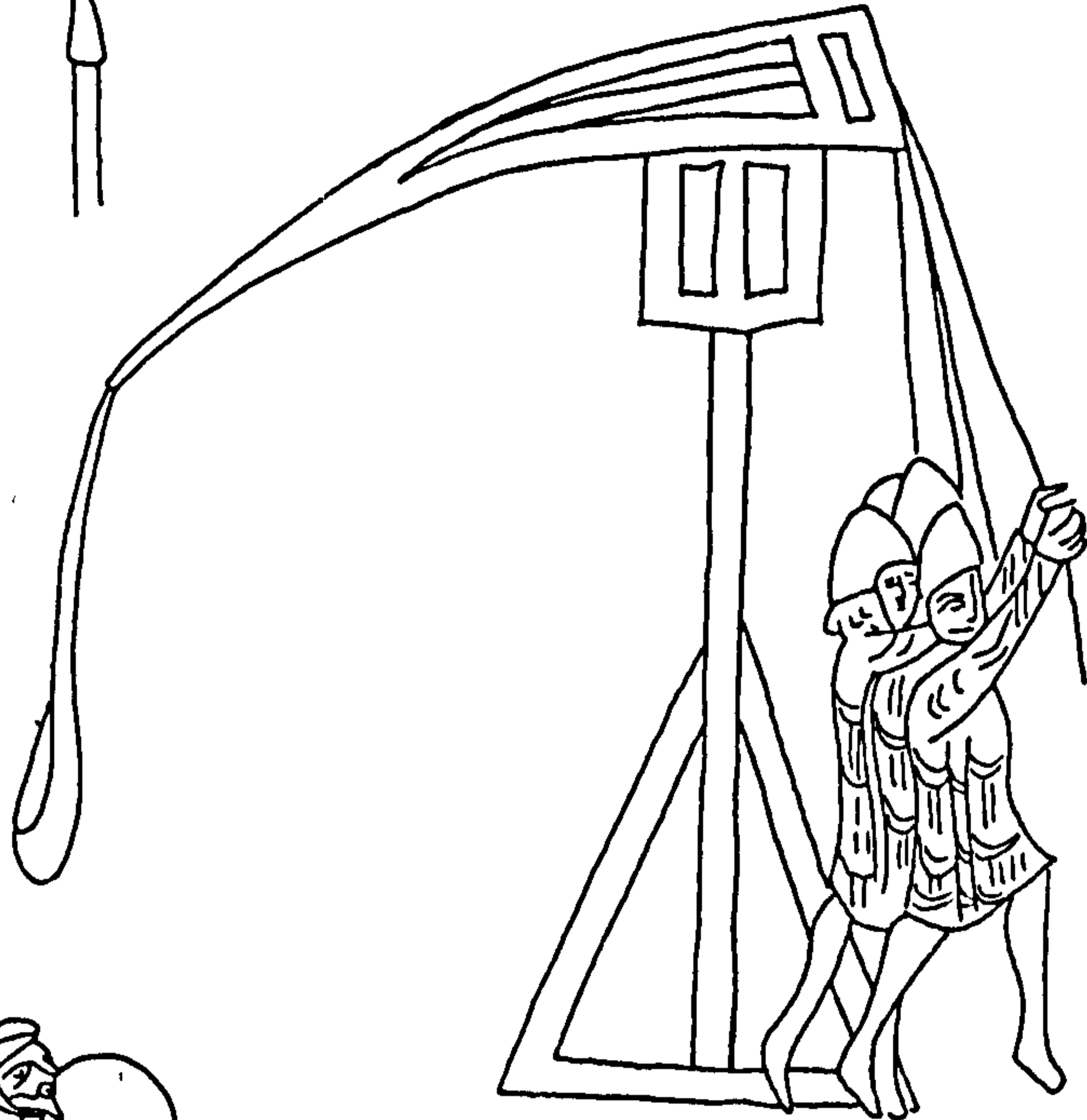
608B



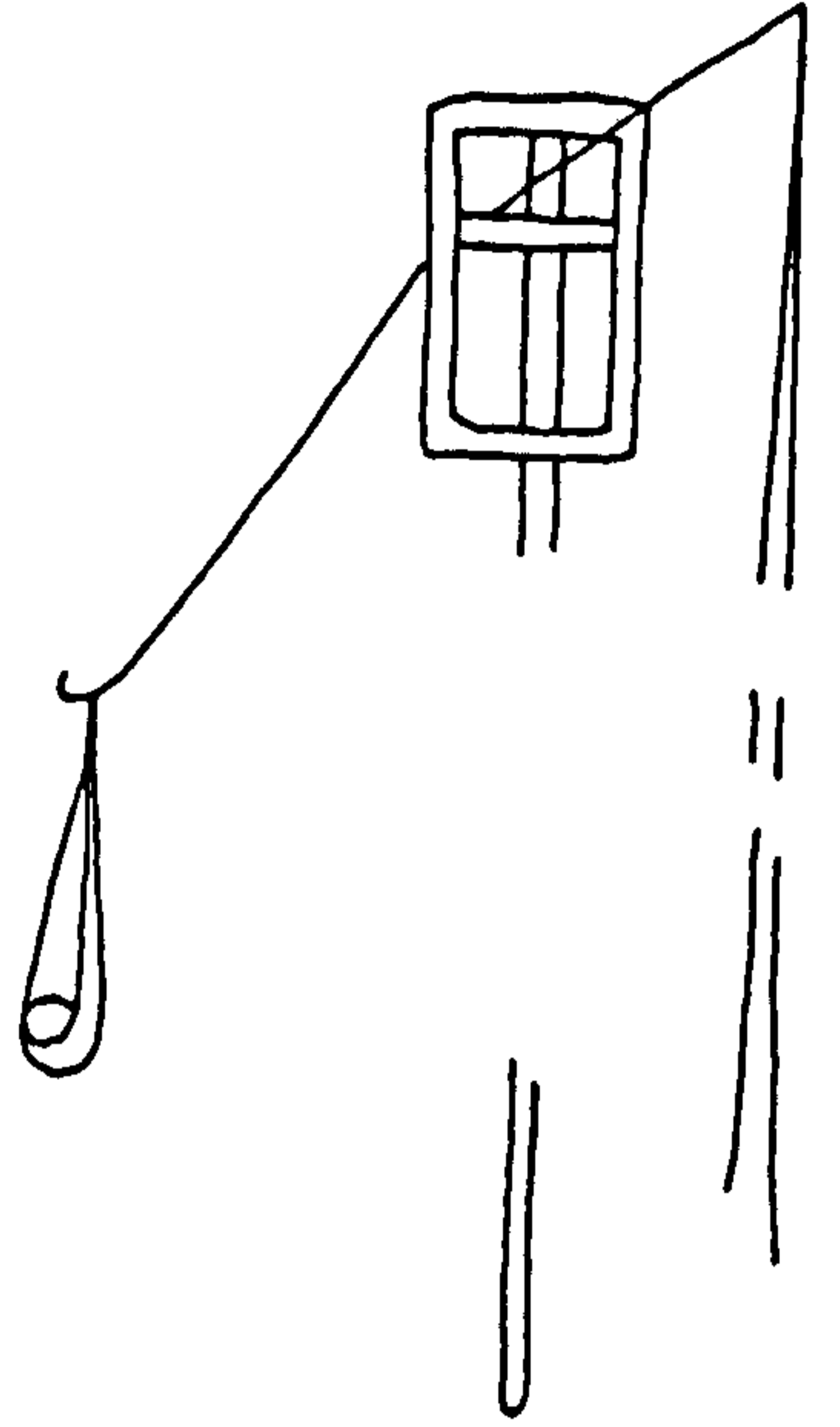
608C



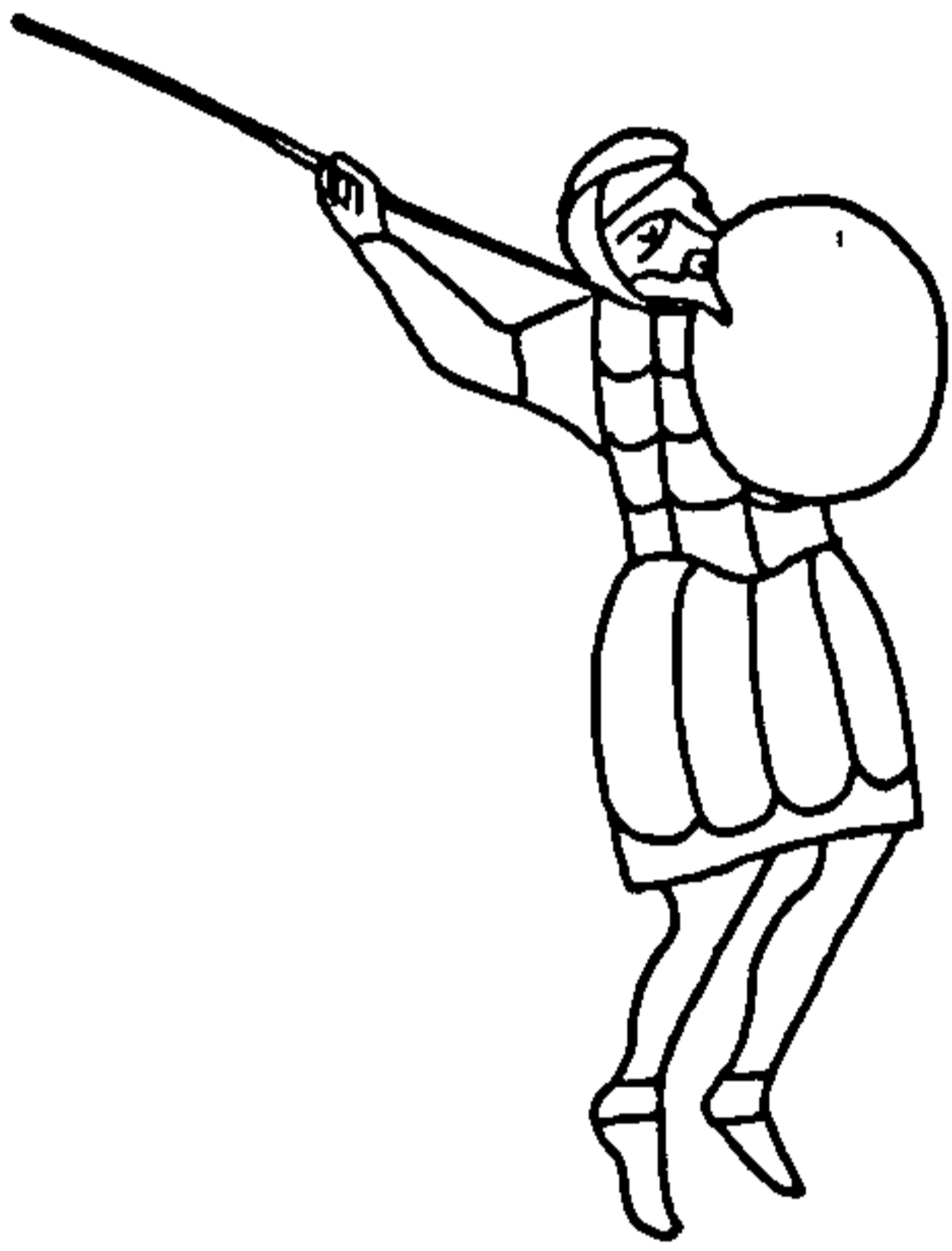
609A



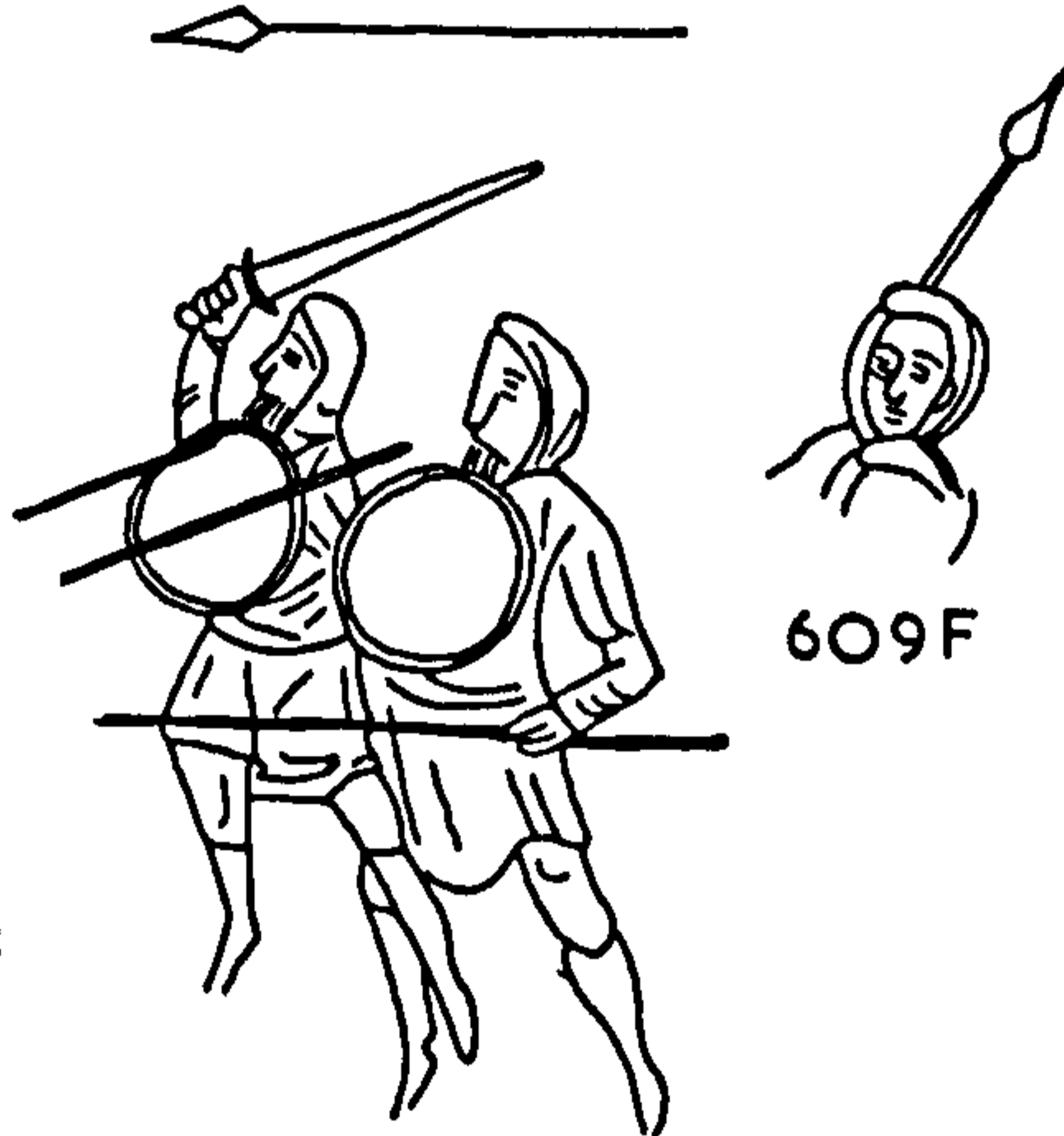
609B



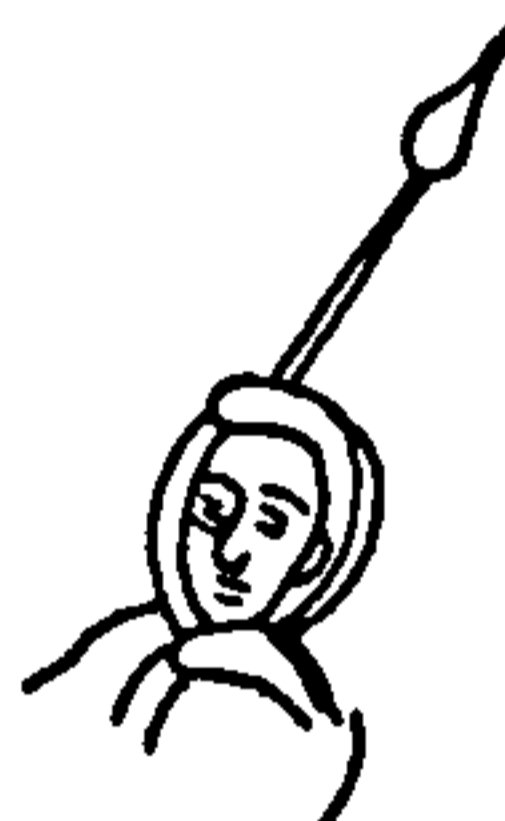
609C



609D



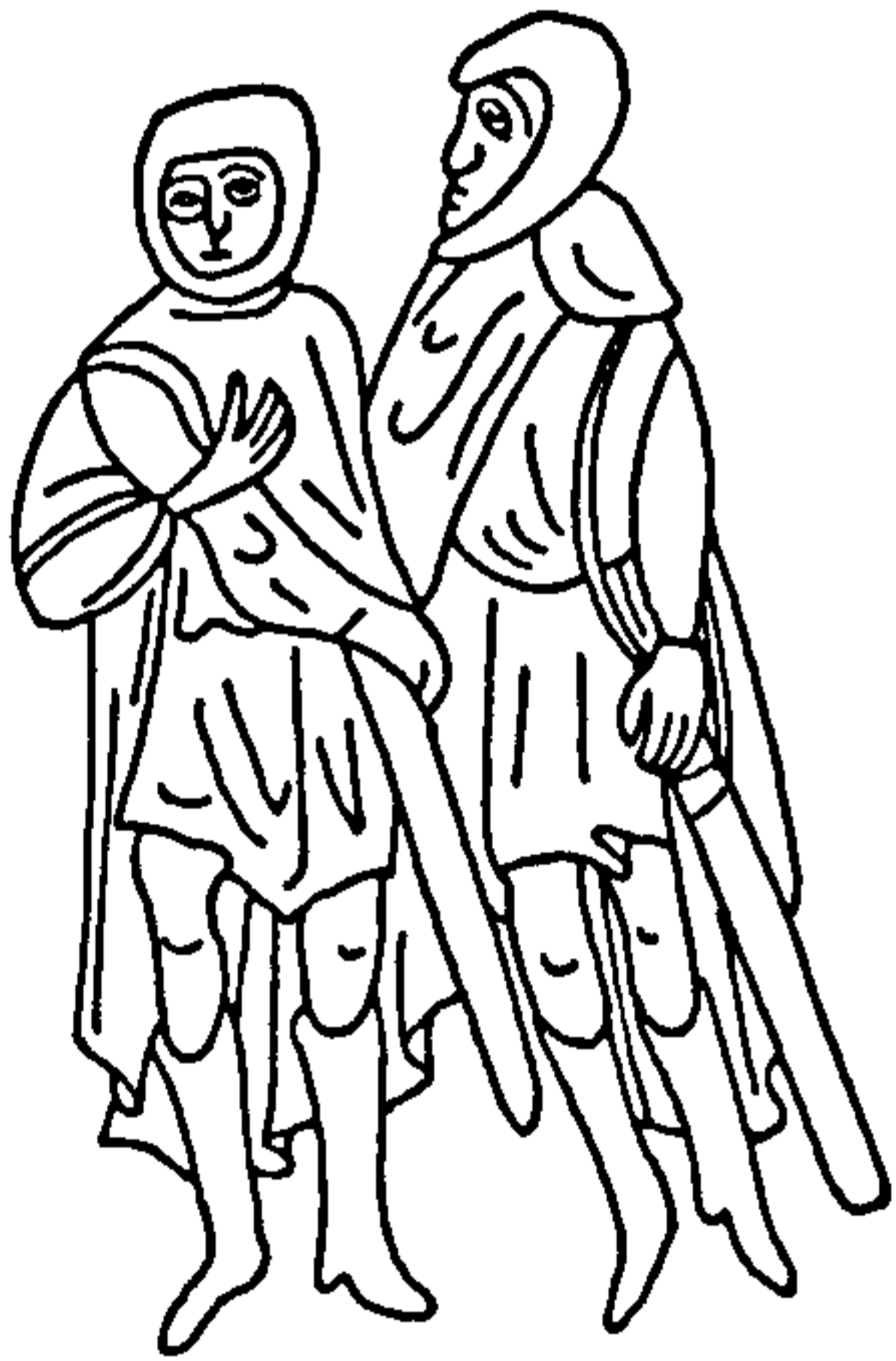
609E



609F



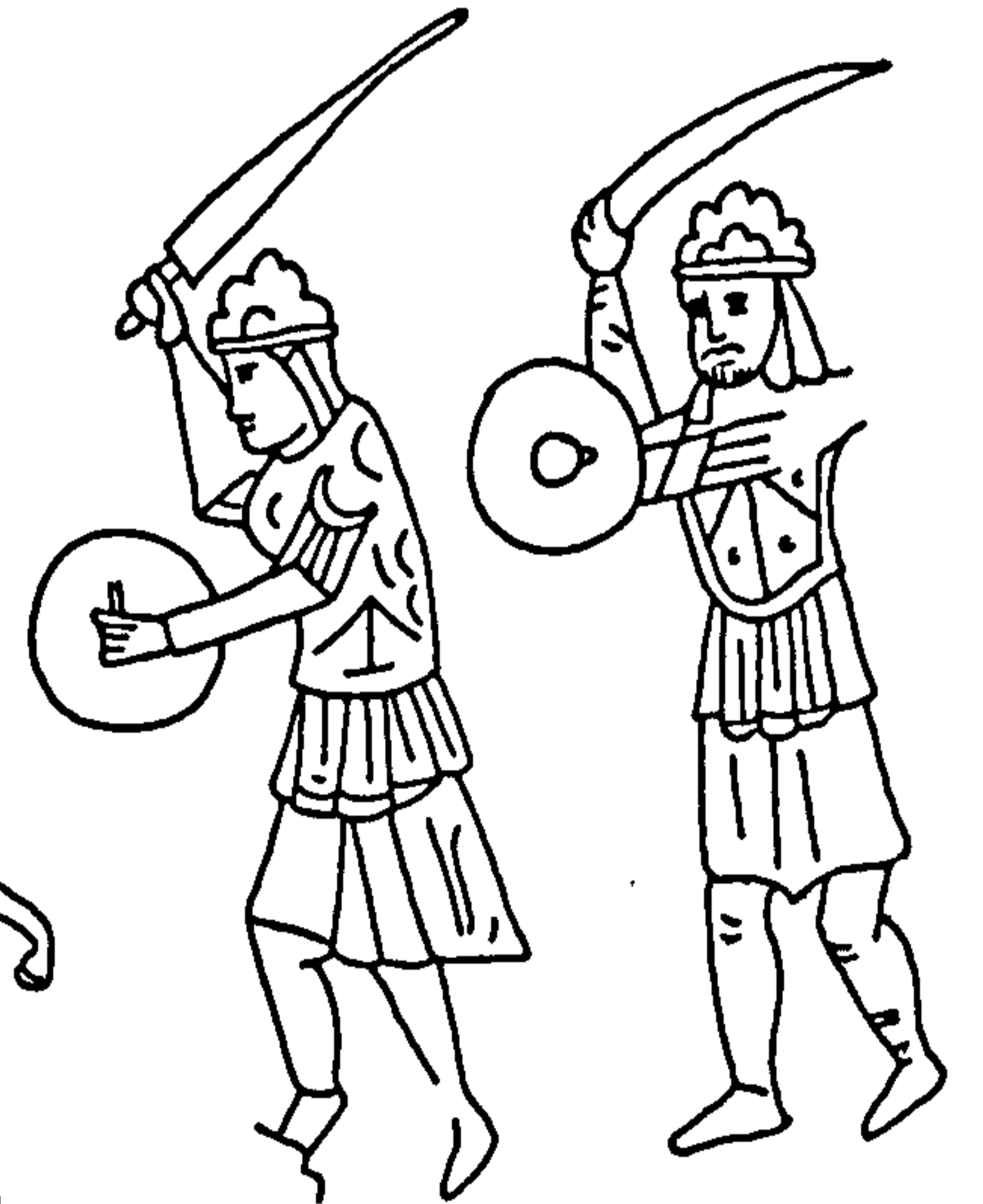
609G

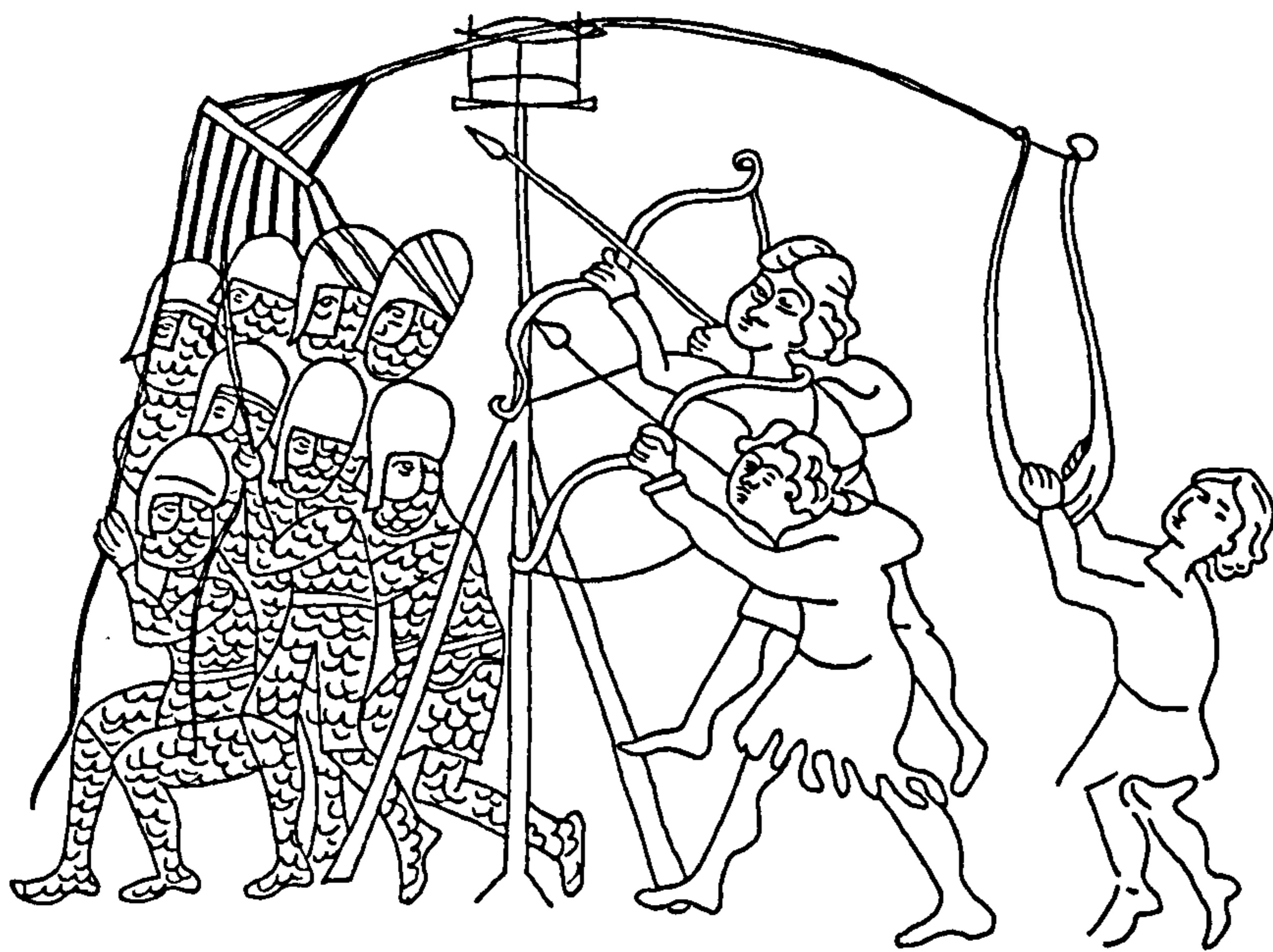


609H

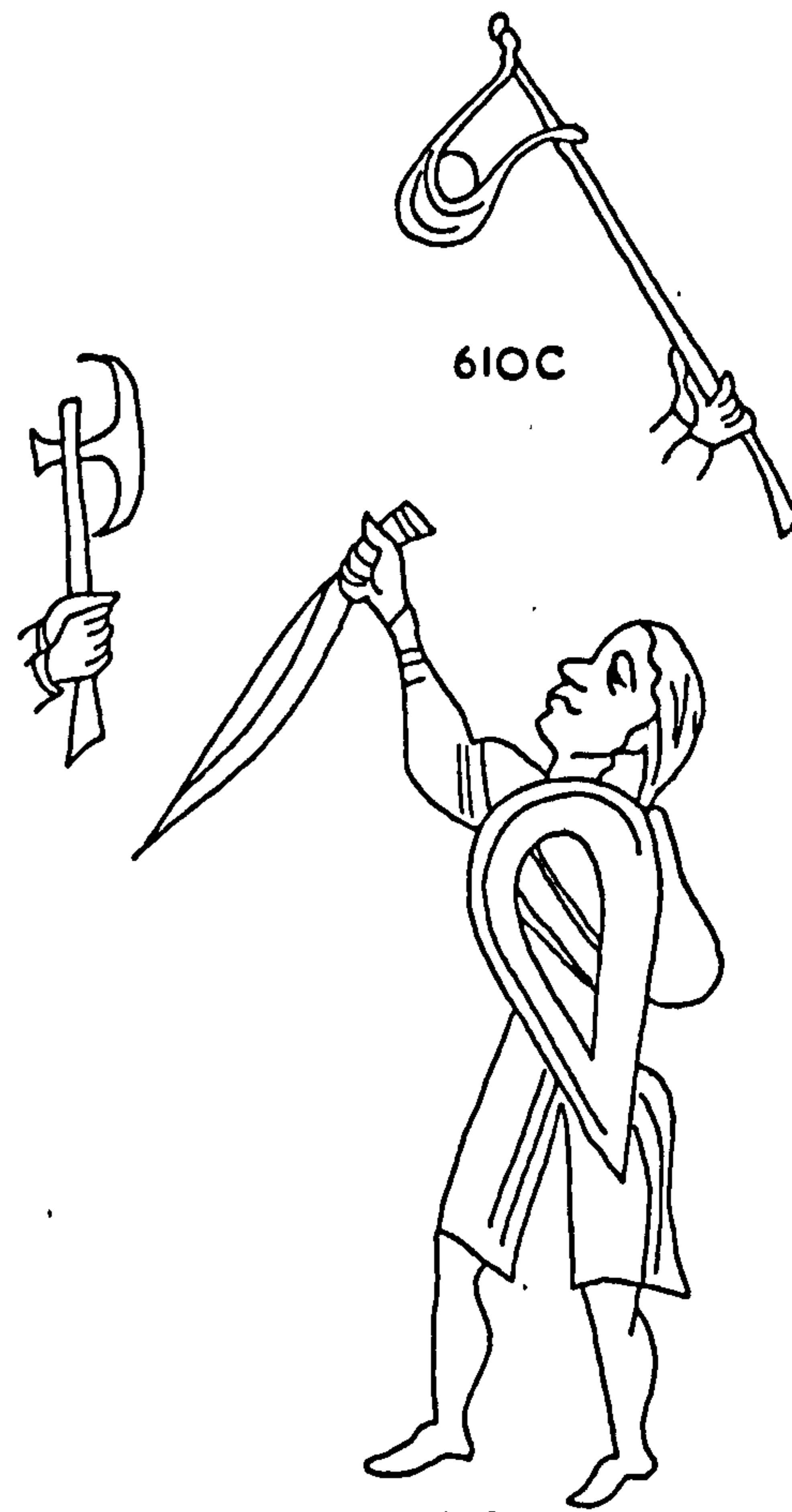


609I



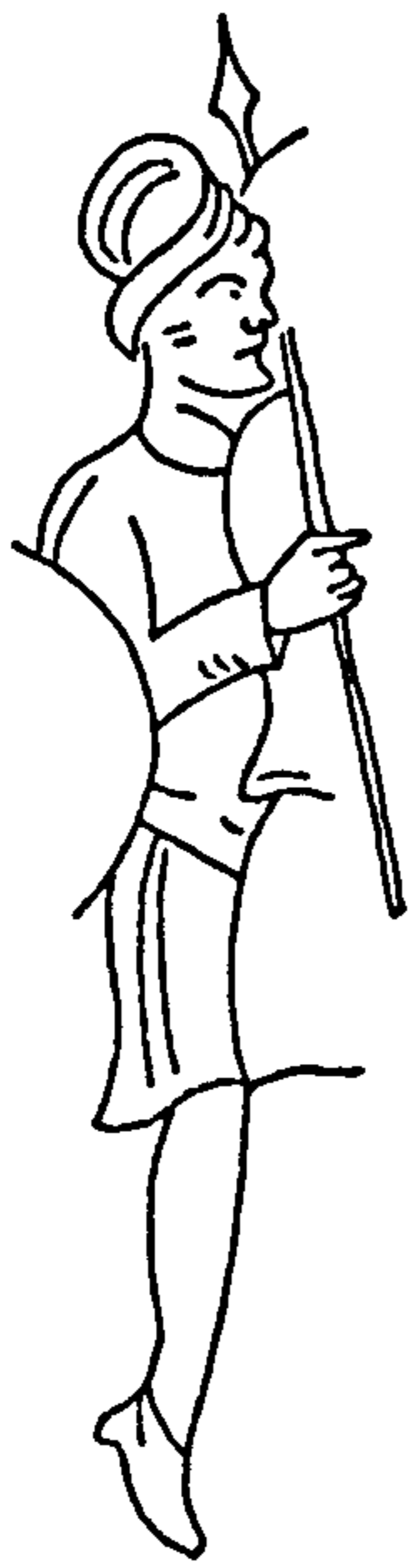


610A



610C

610B



610D



610E

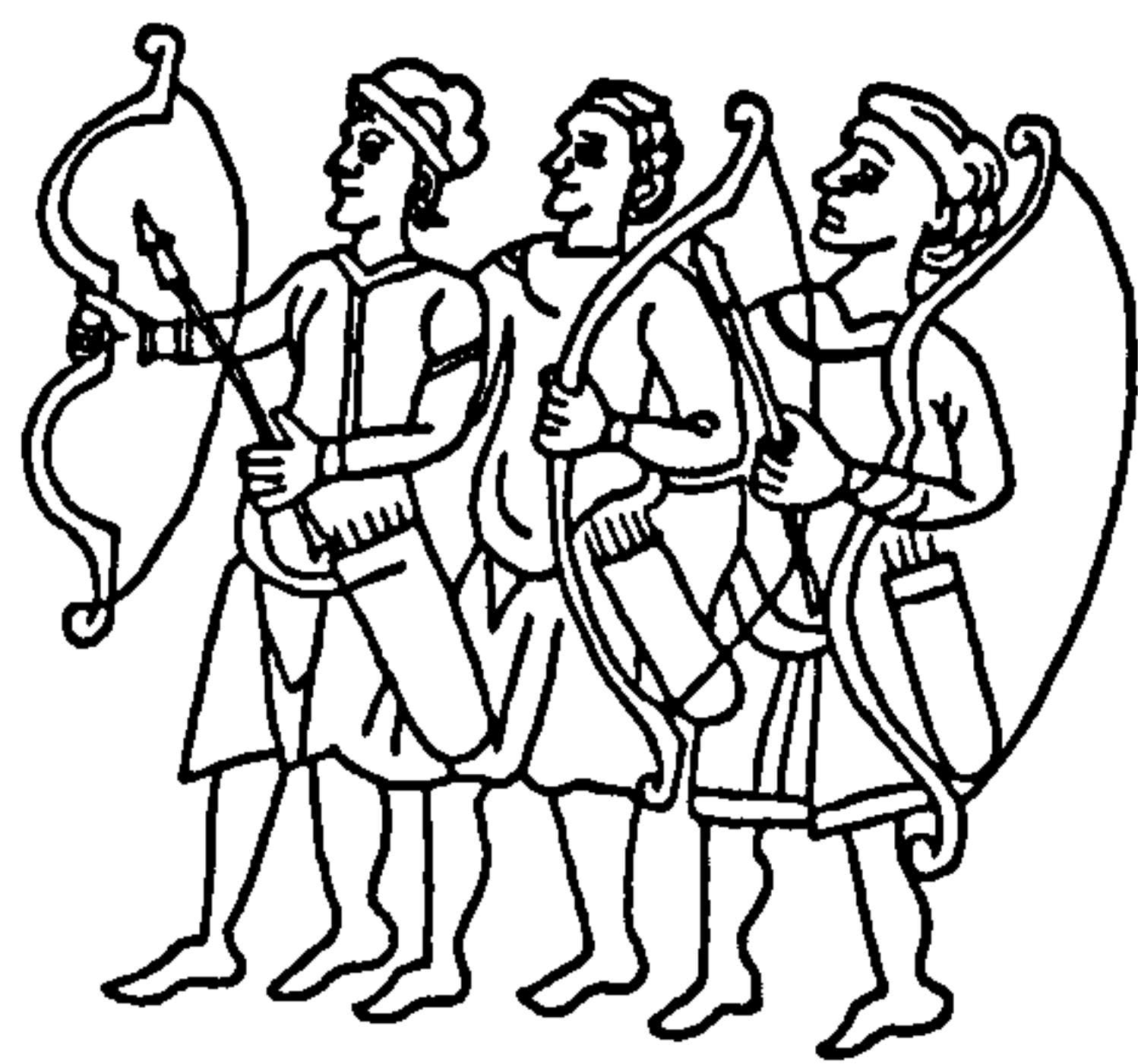


610F

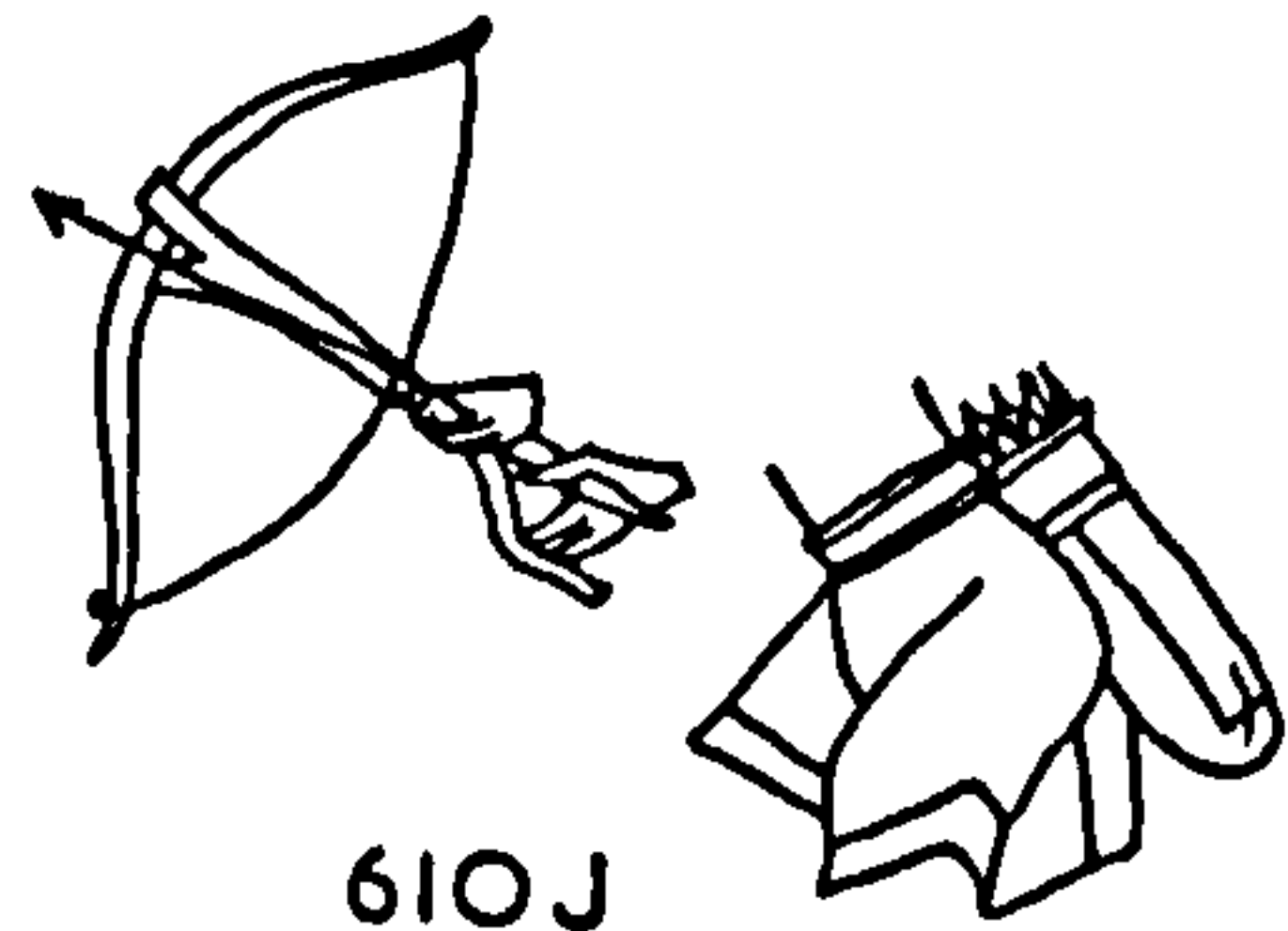


610G

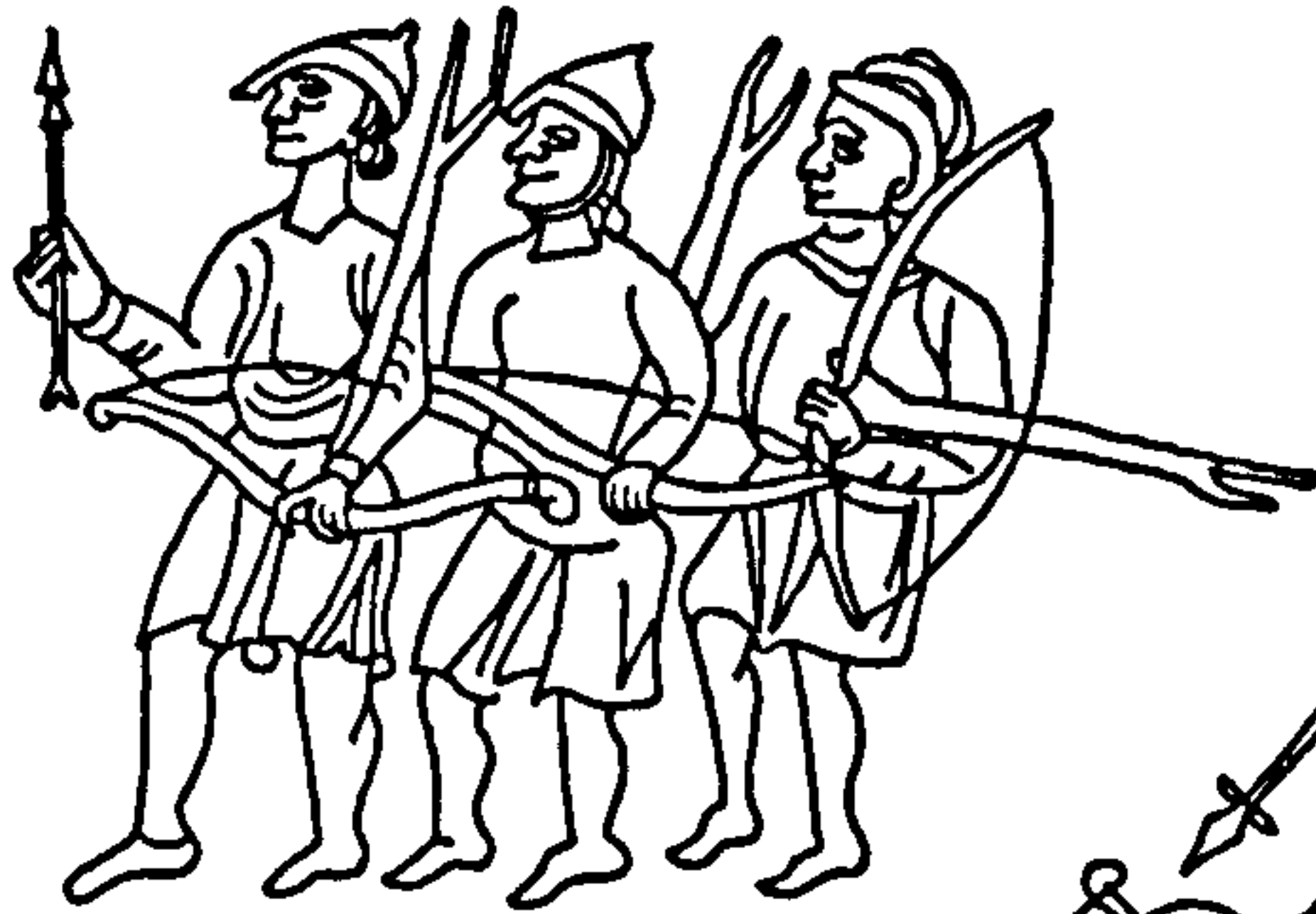
(Continued)



610G



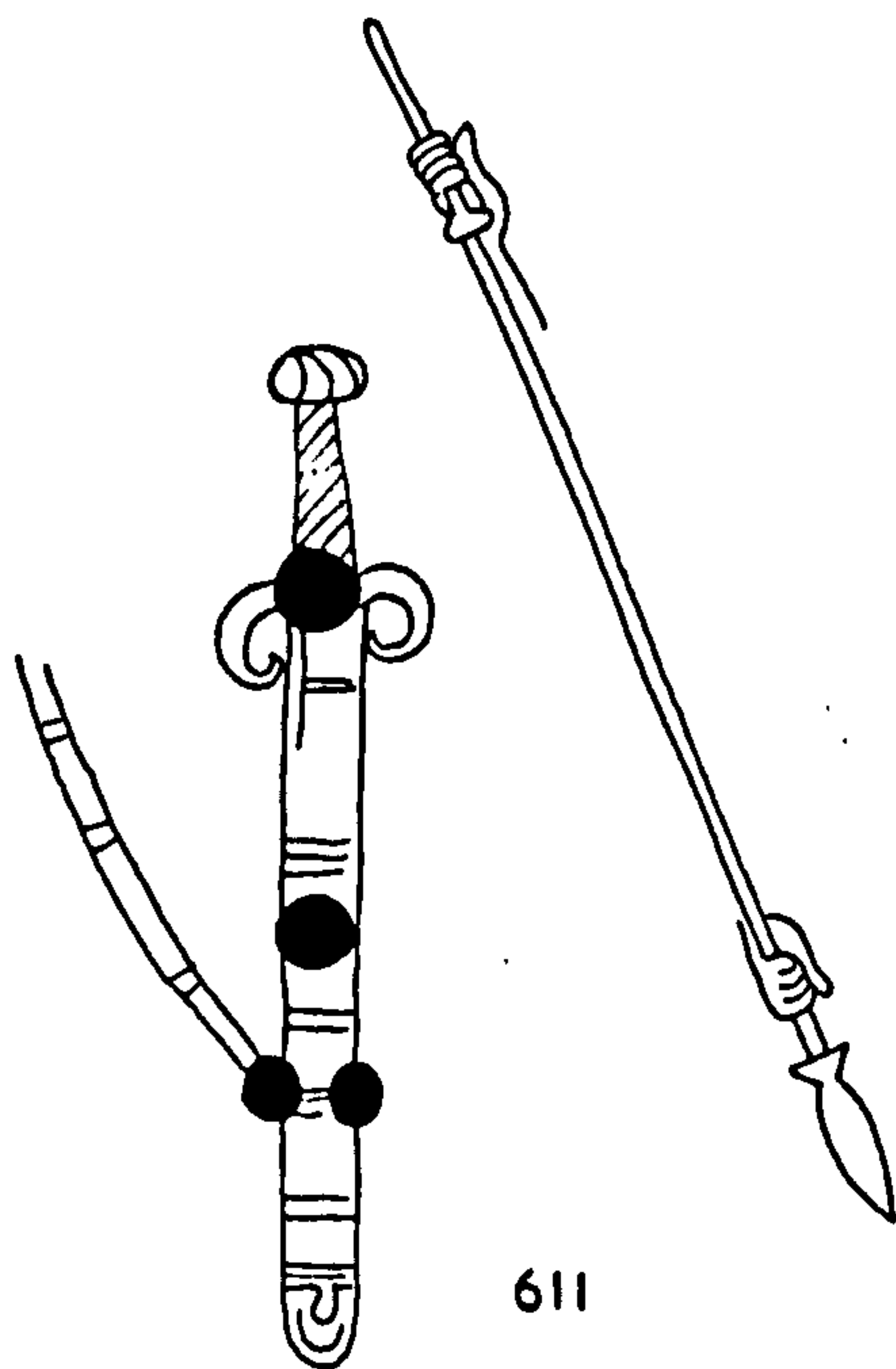
610J



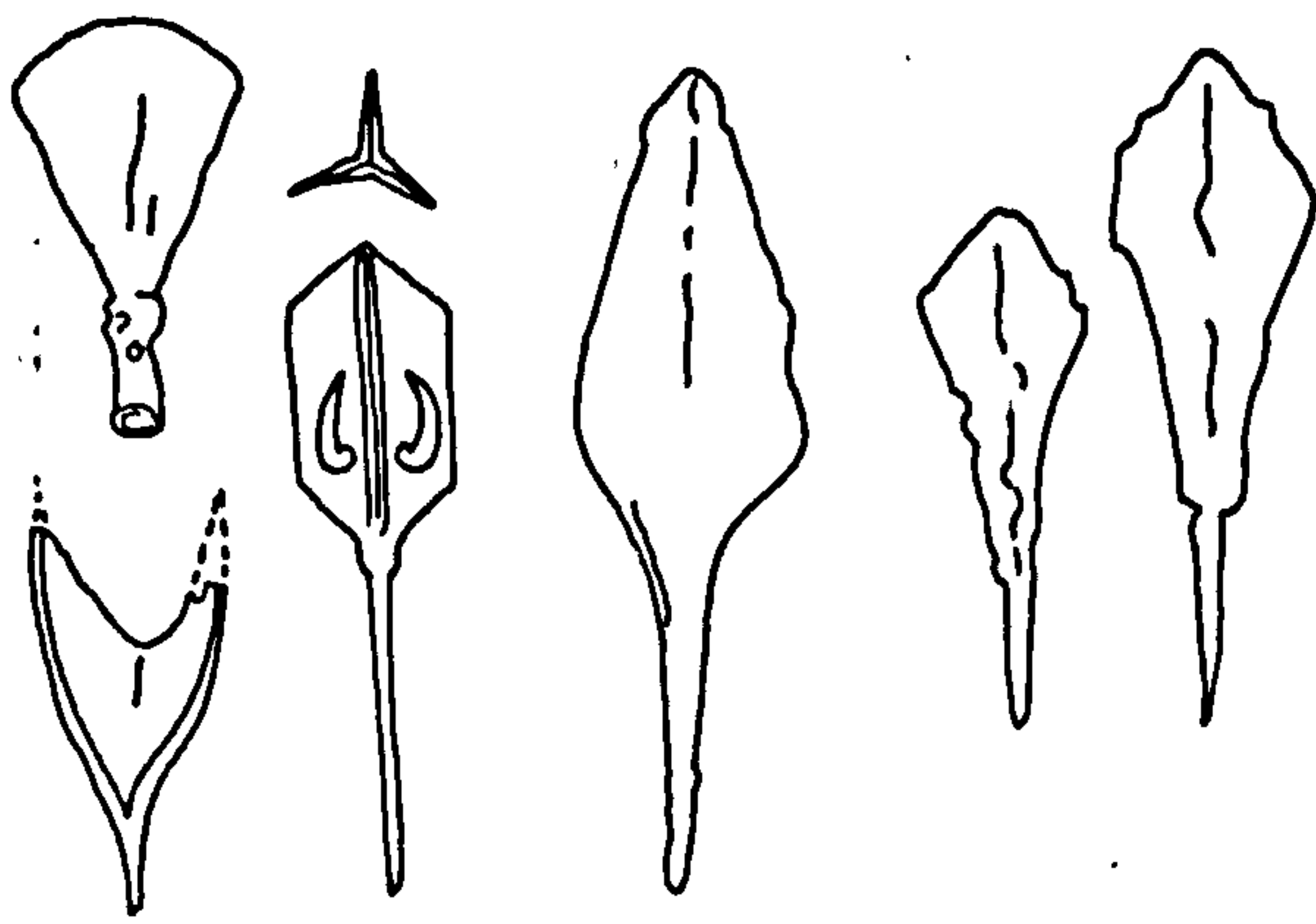
610H



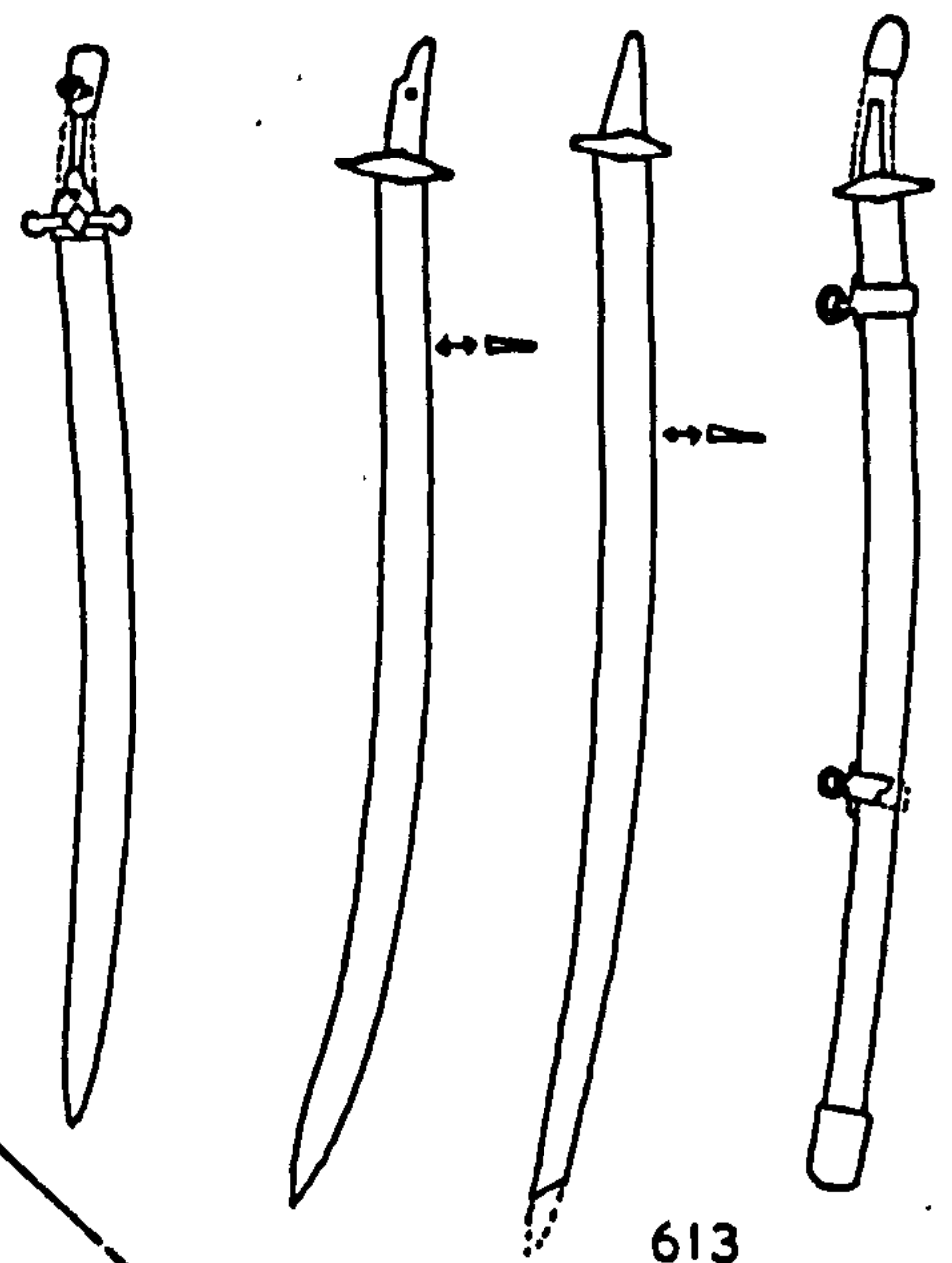
610I



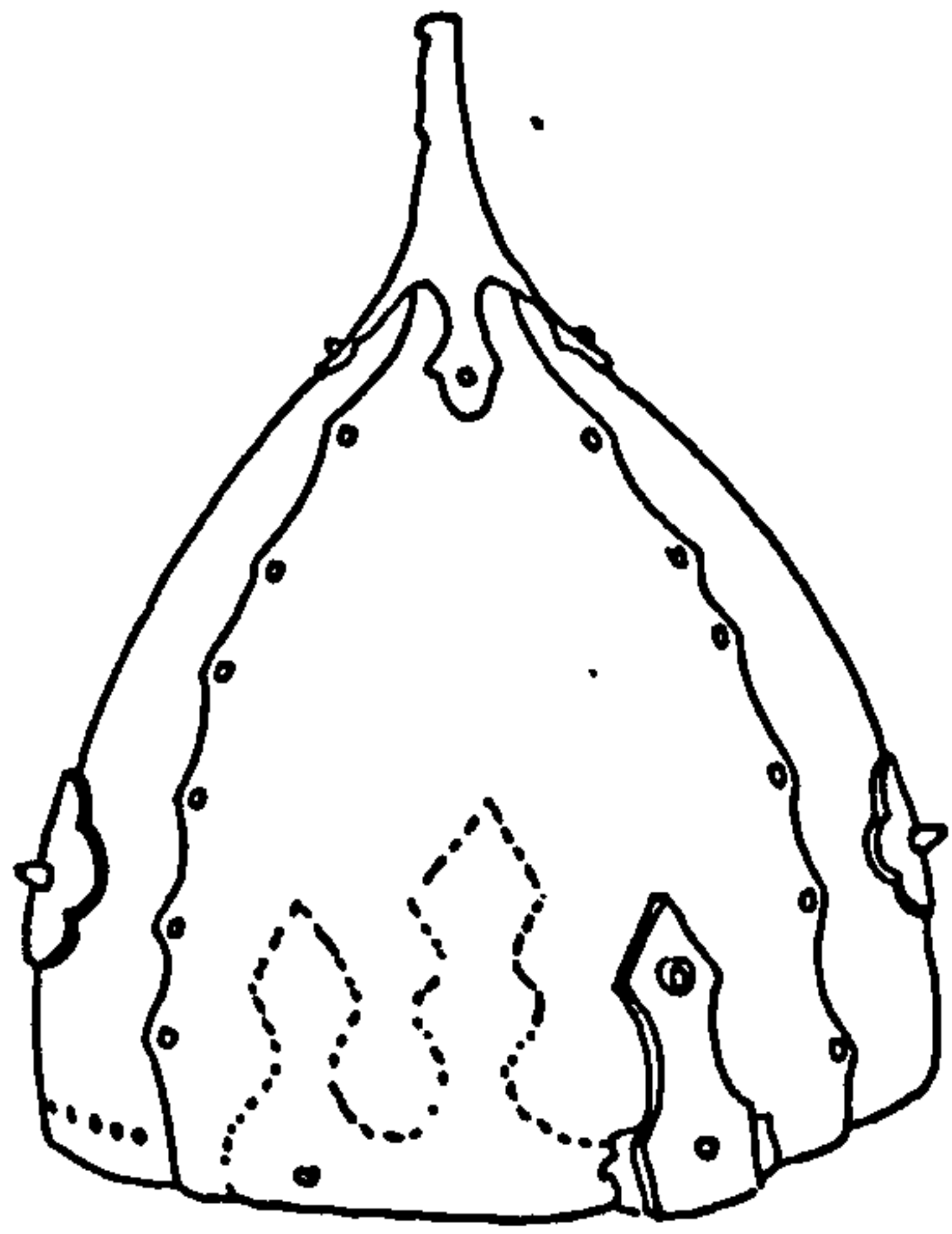
611



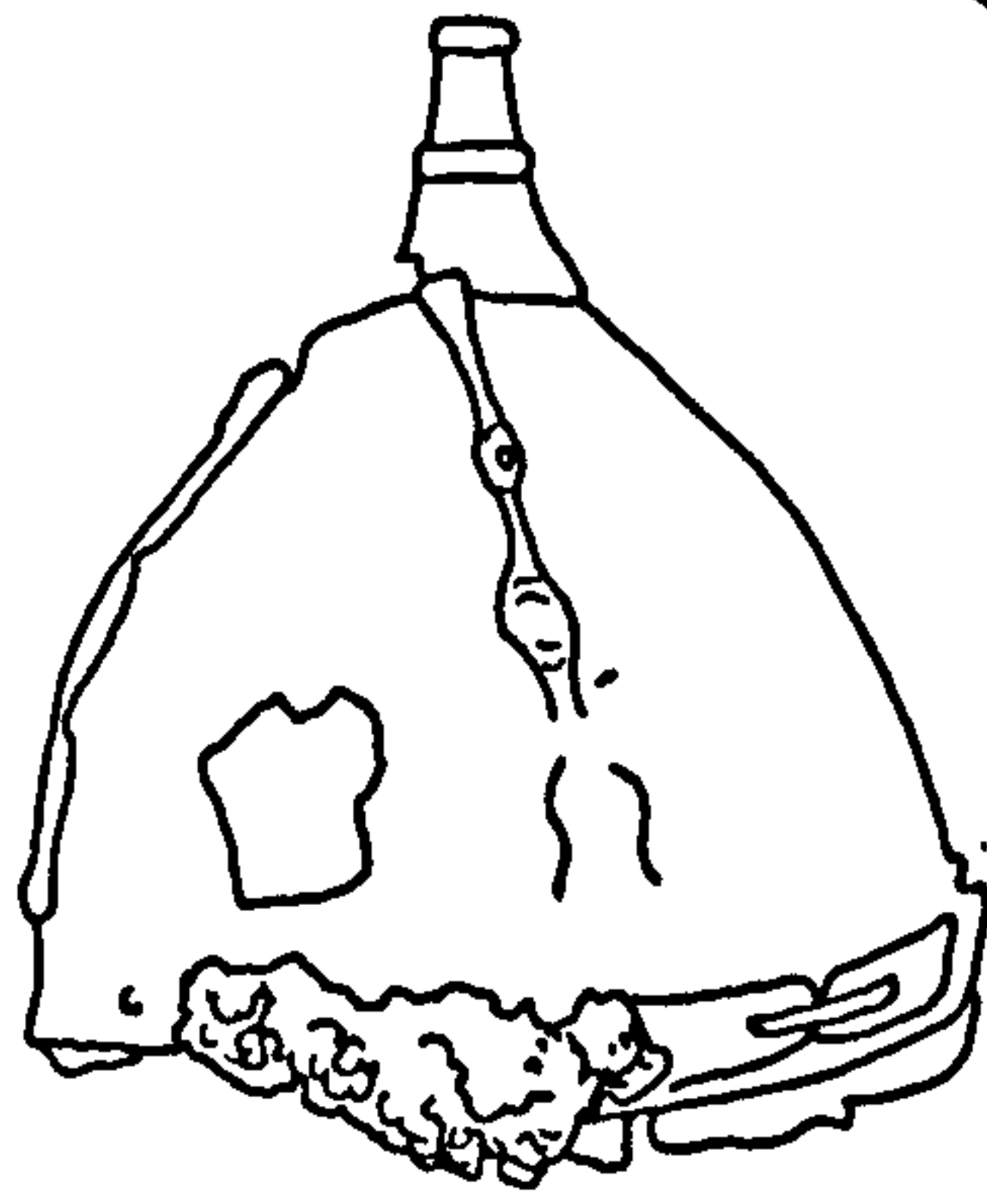
612



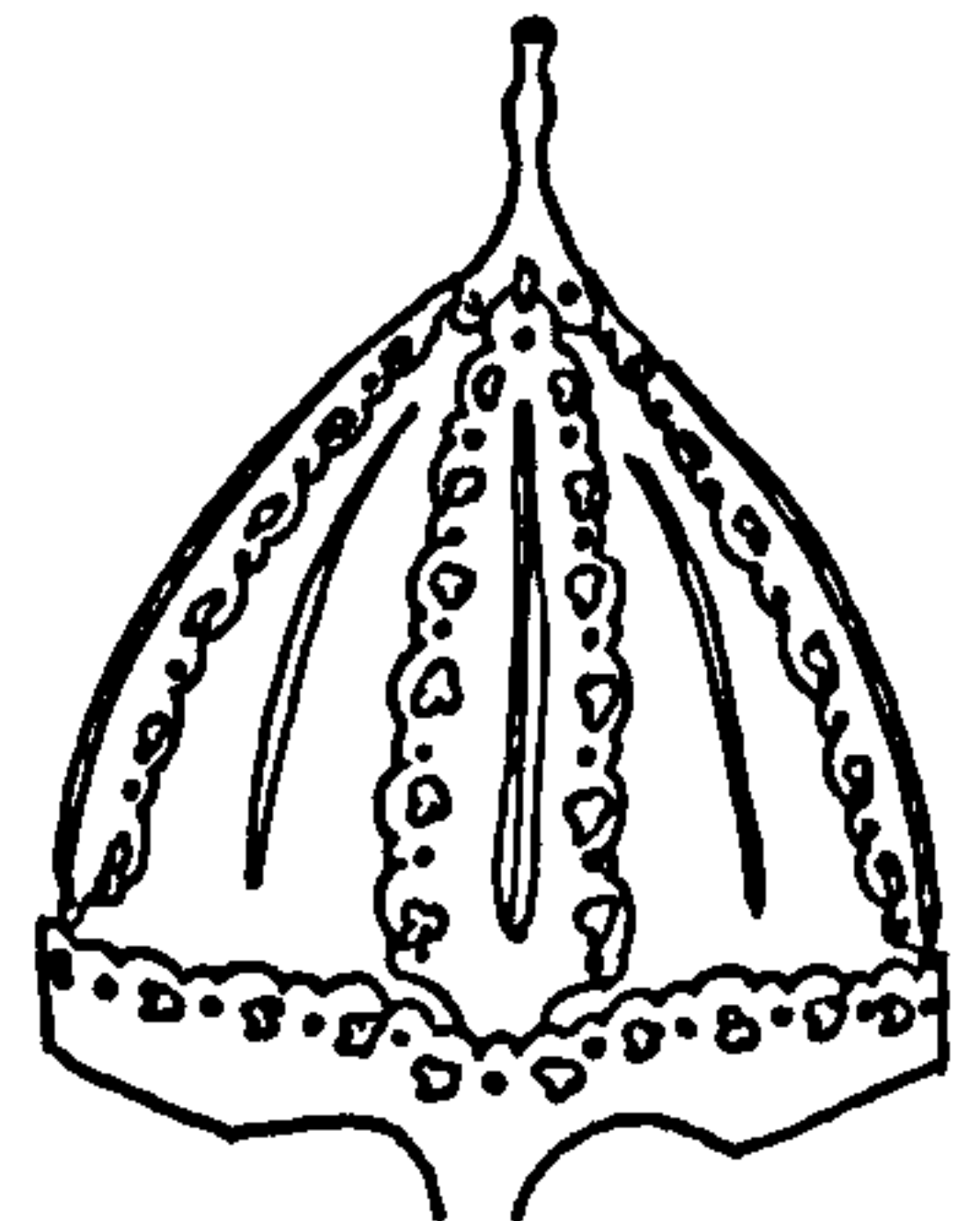
613



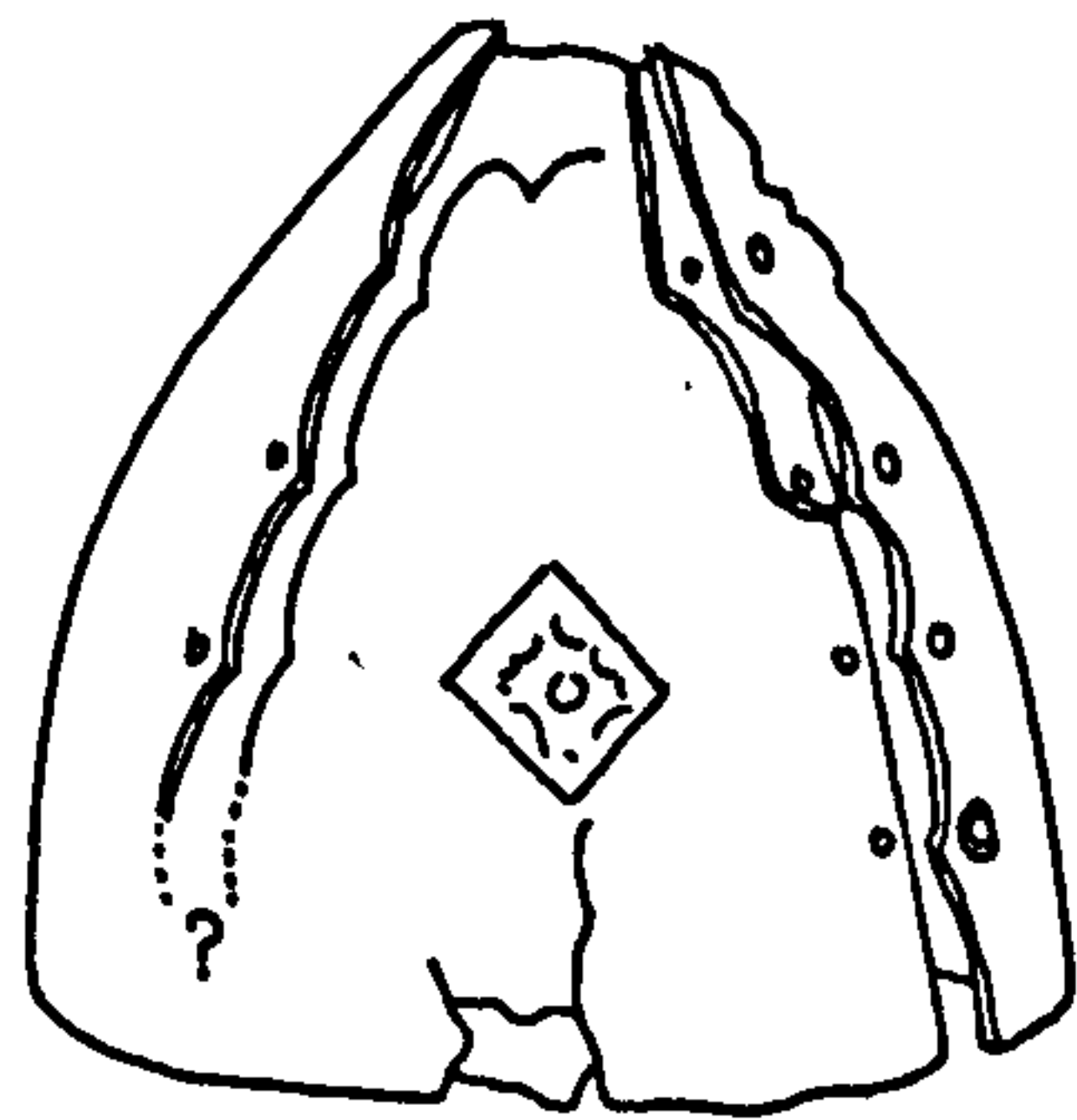
614



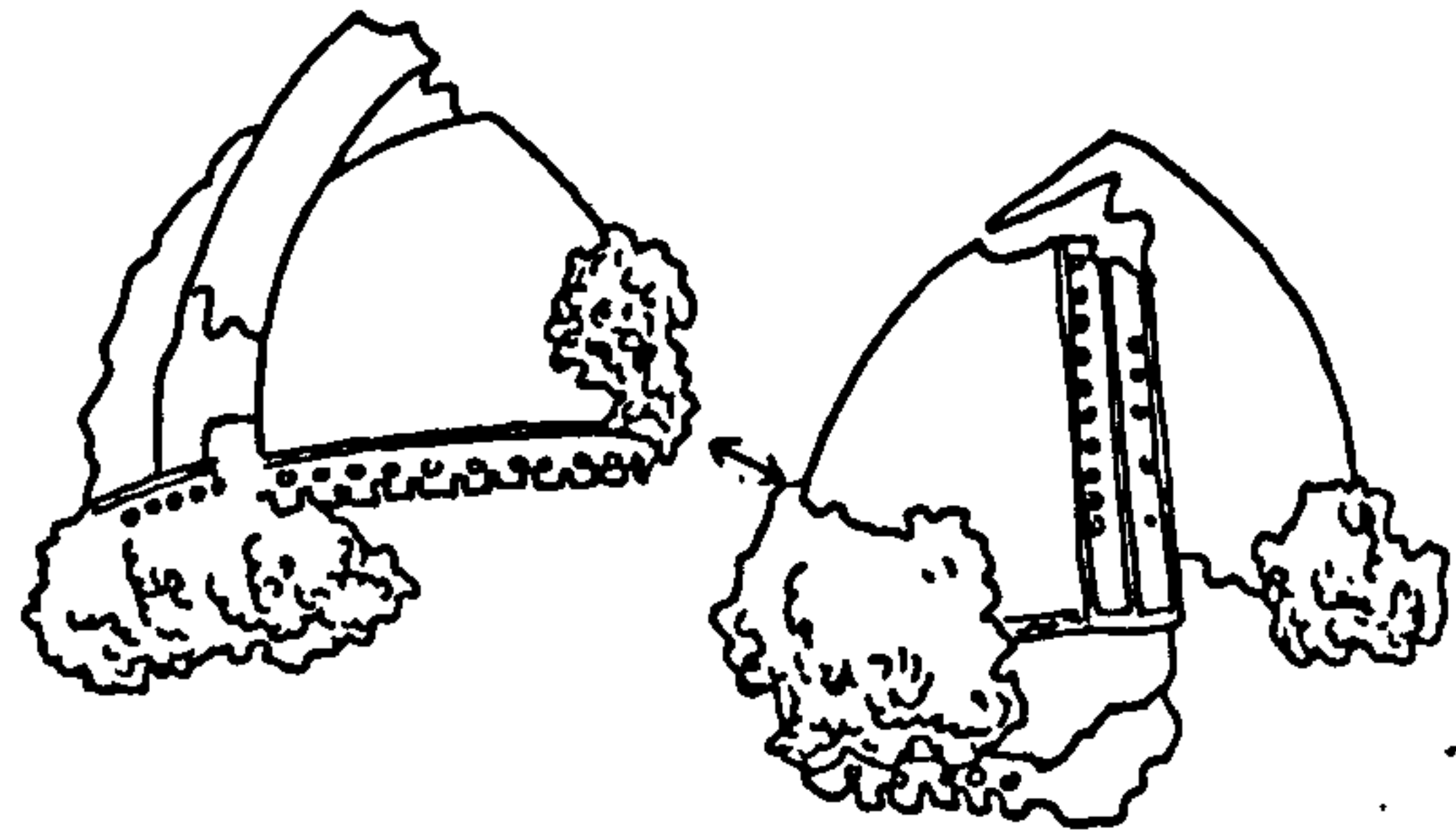
615



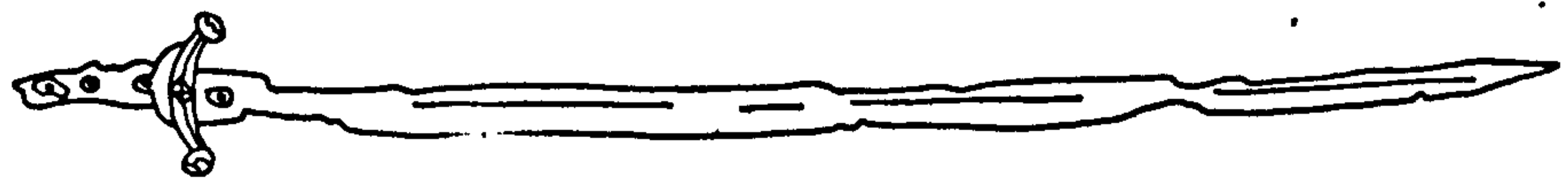
616



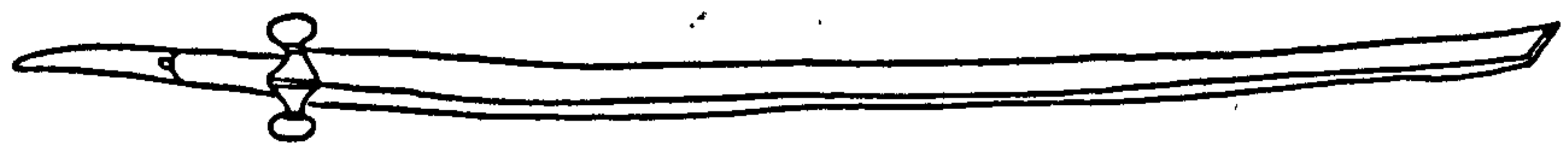
617



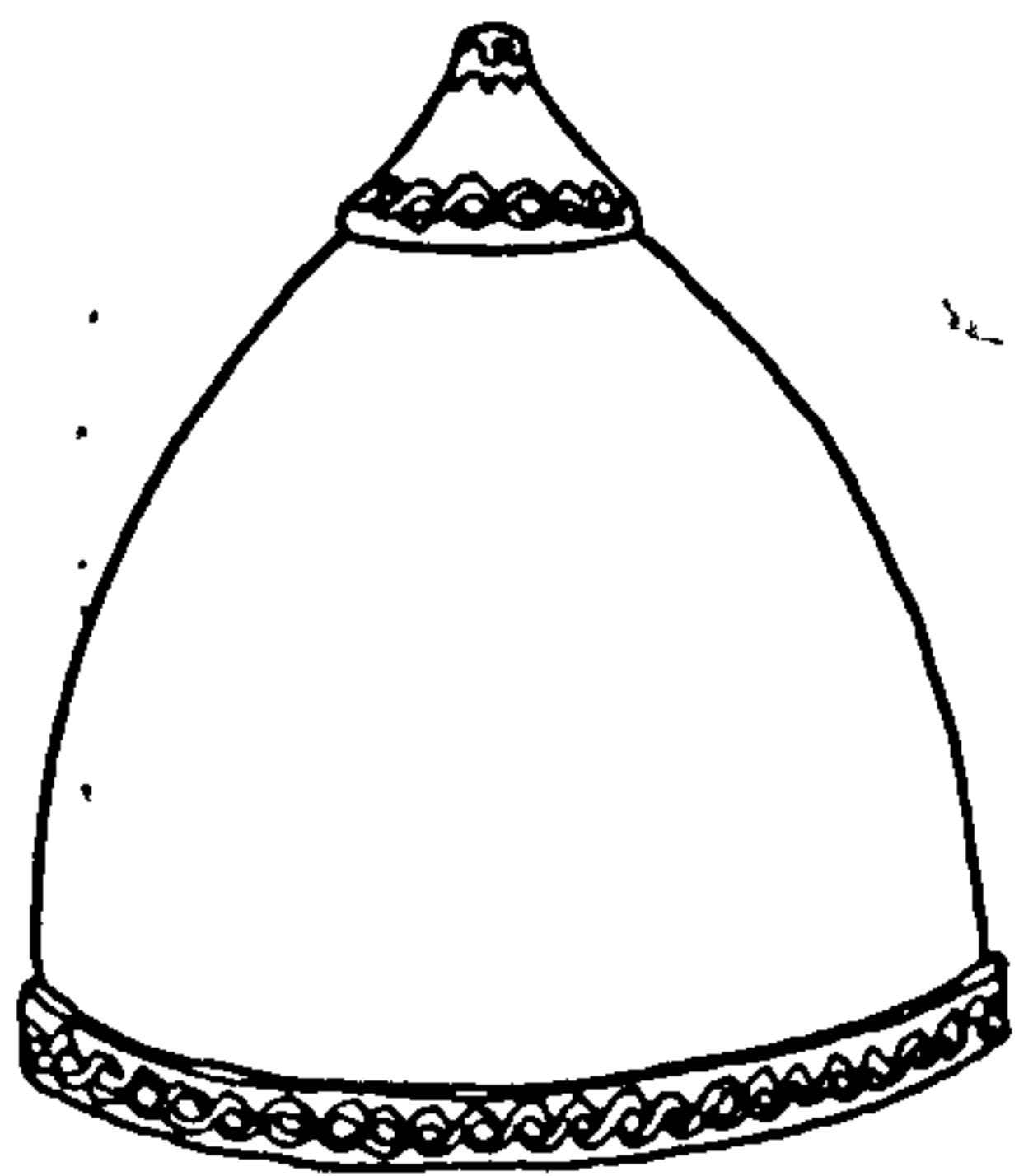
618



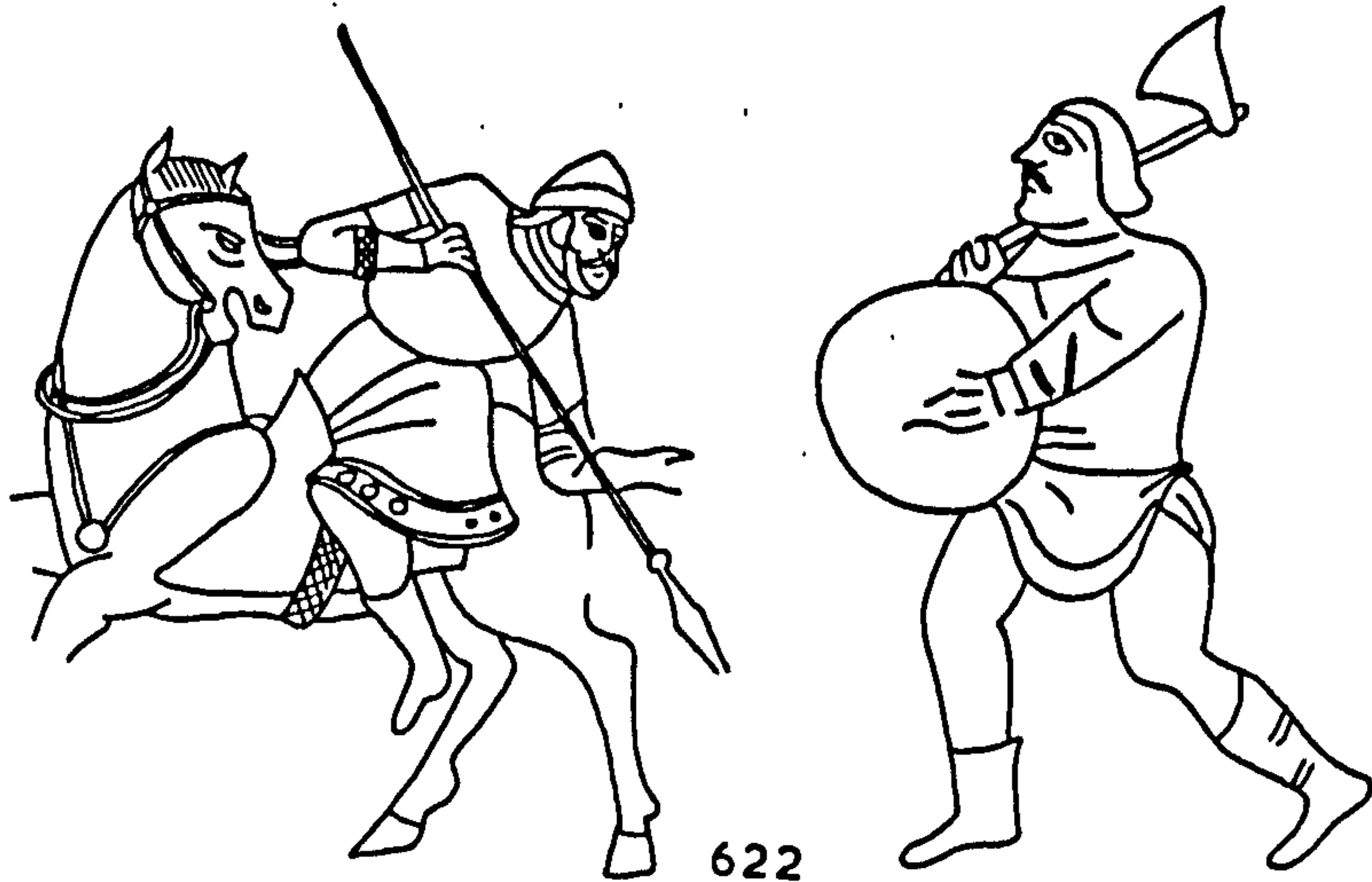
619



620



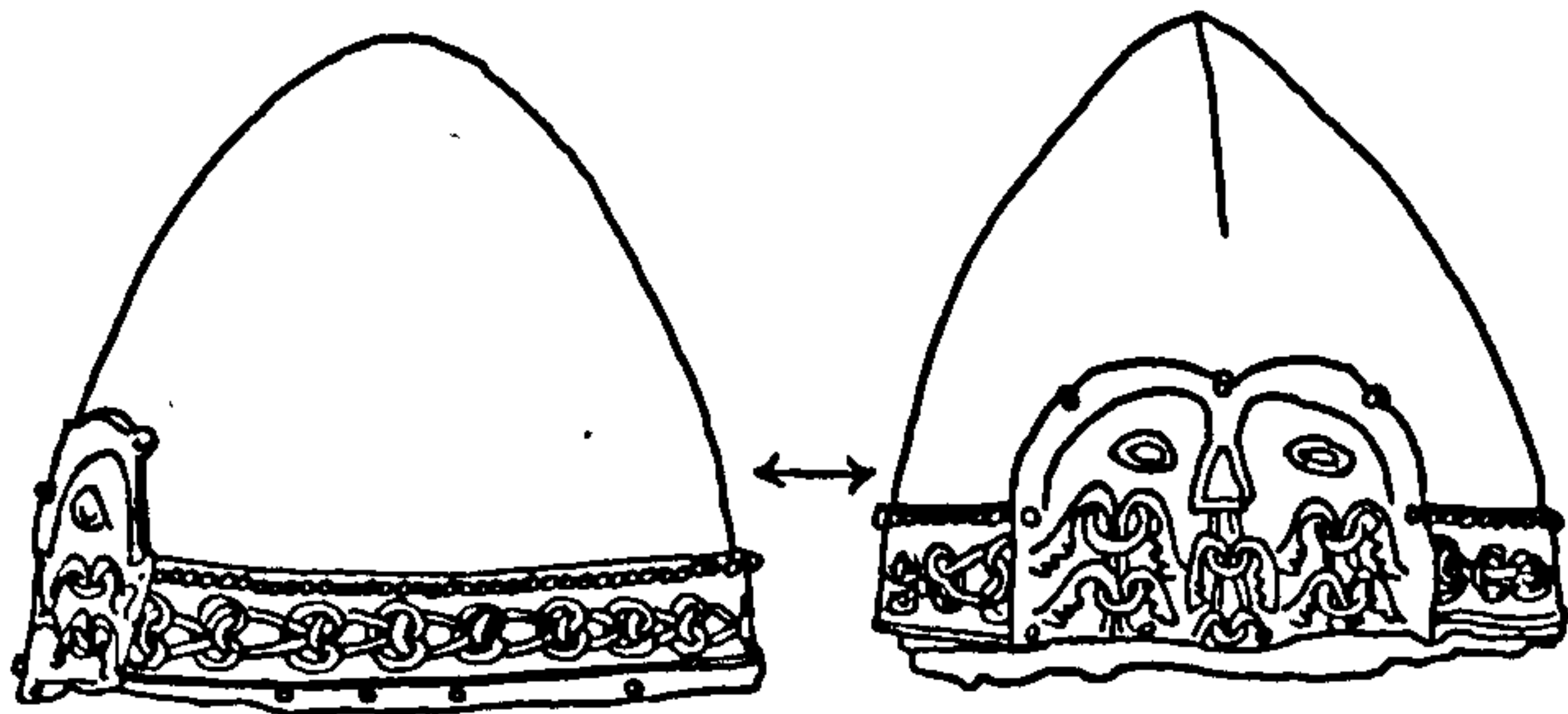
621



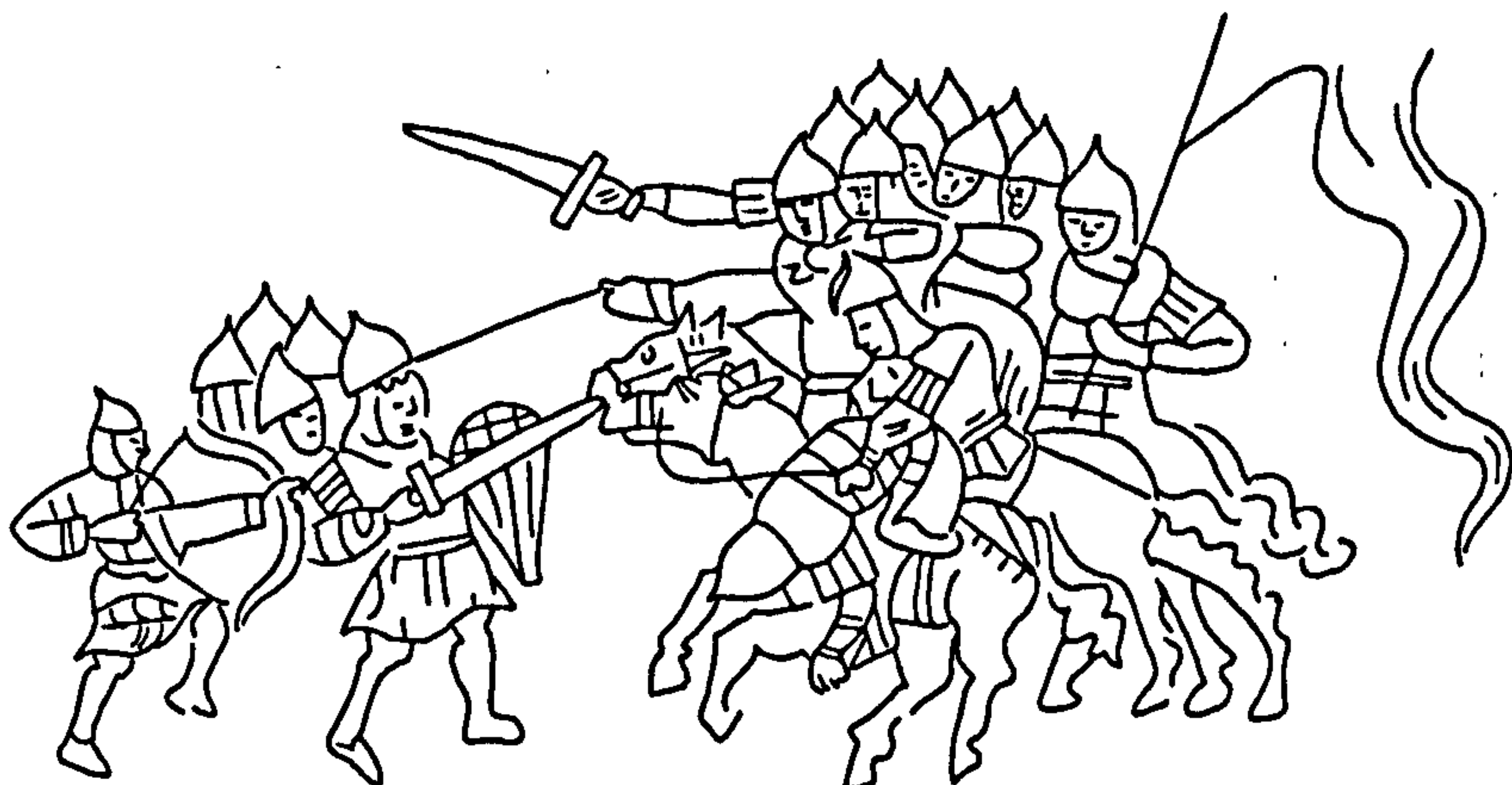
622



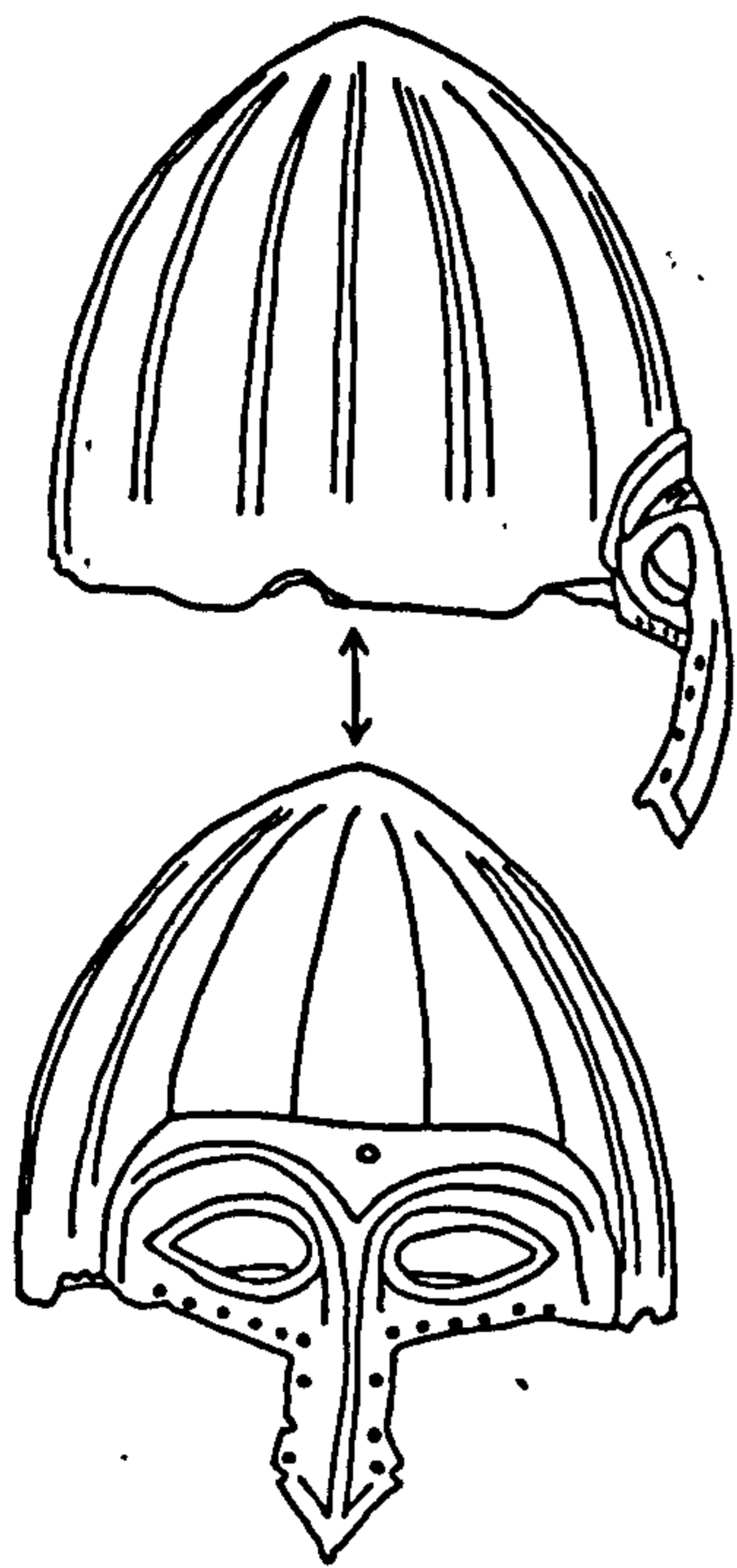
623



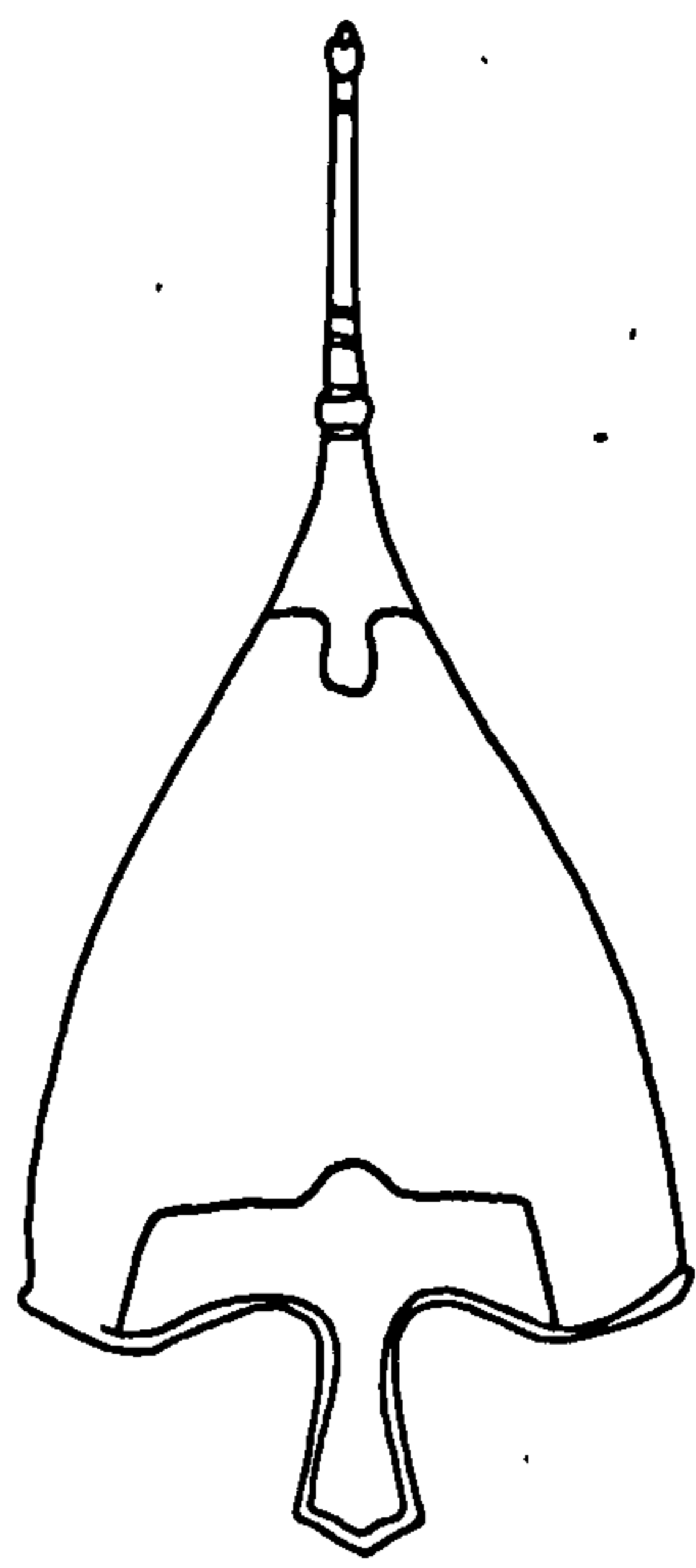
624



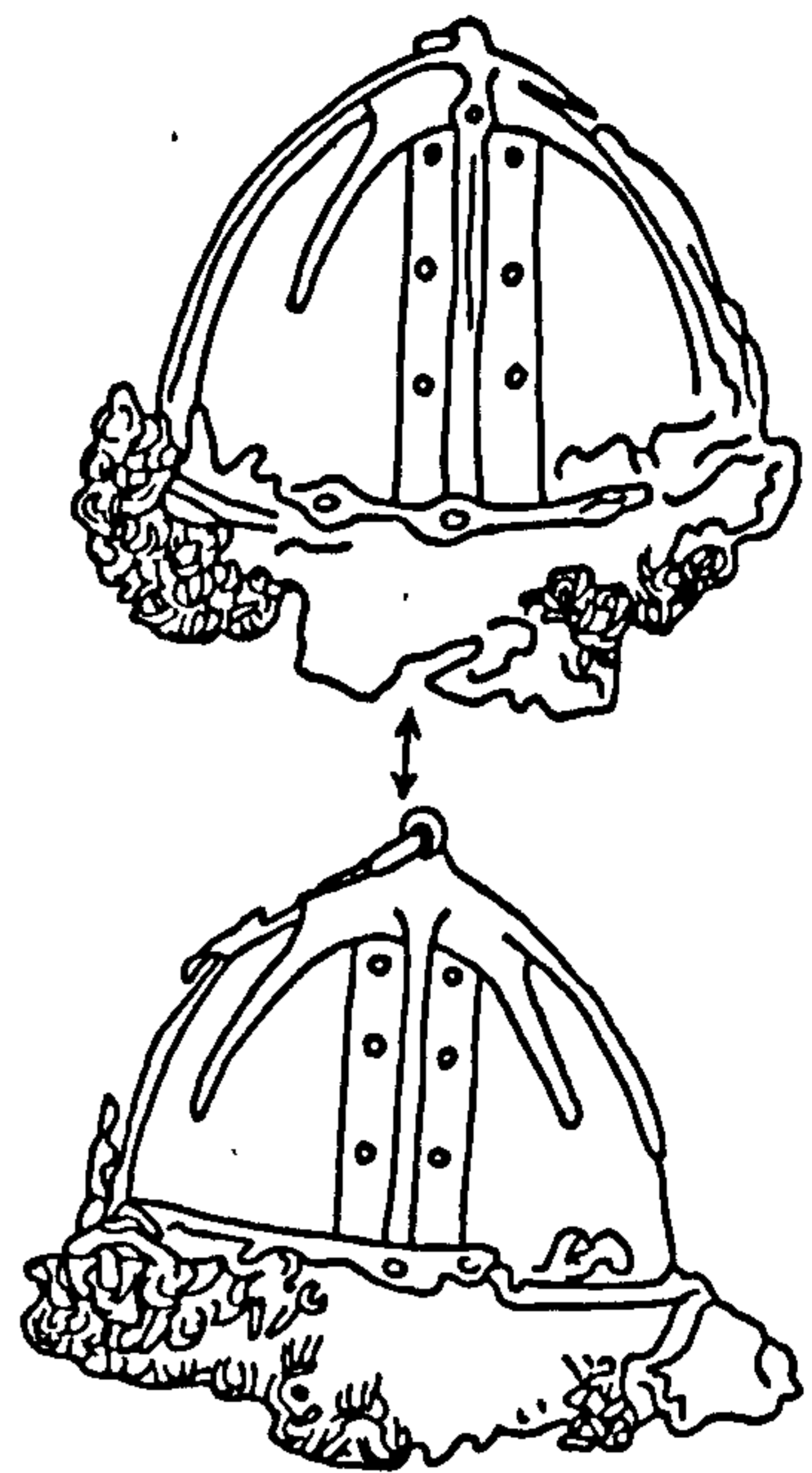
625



626



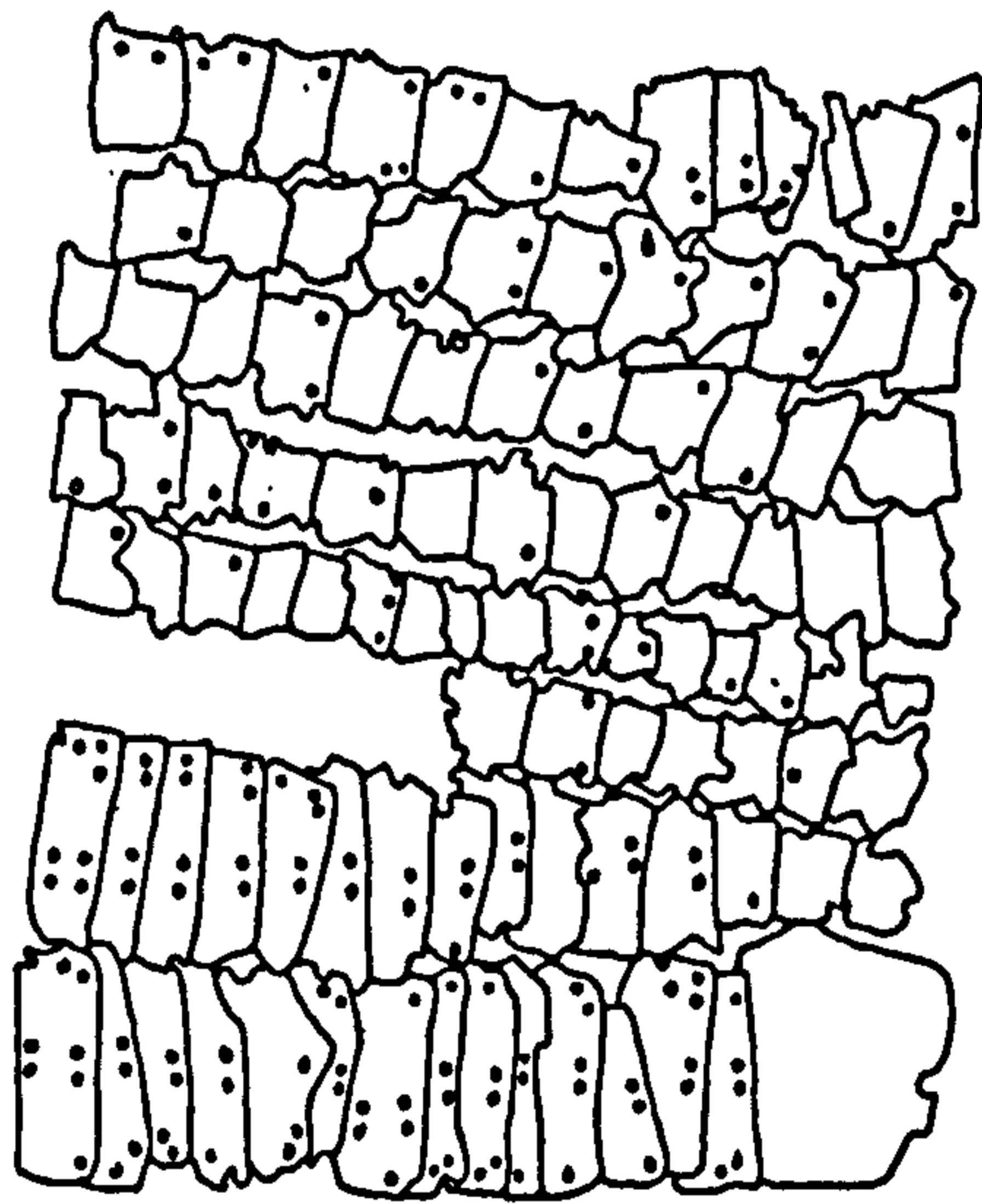
627



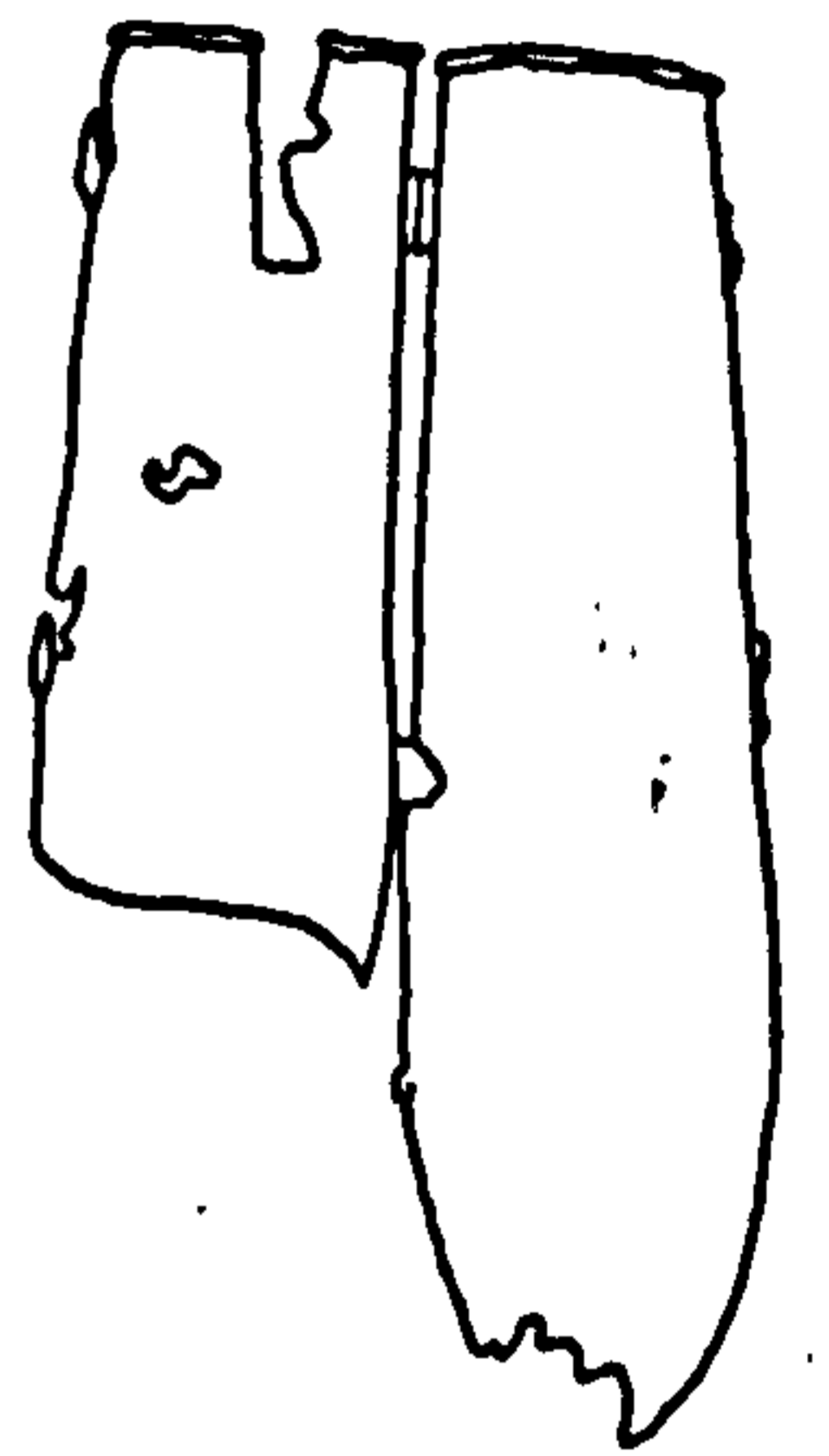
628



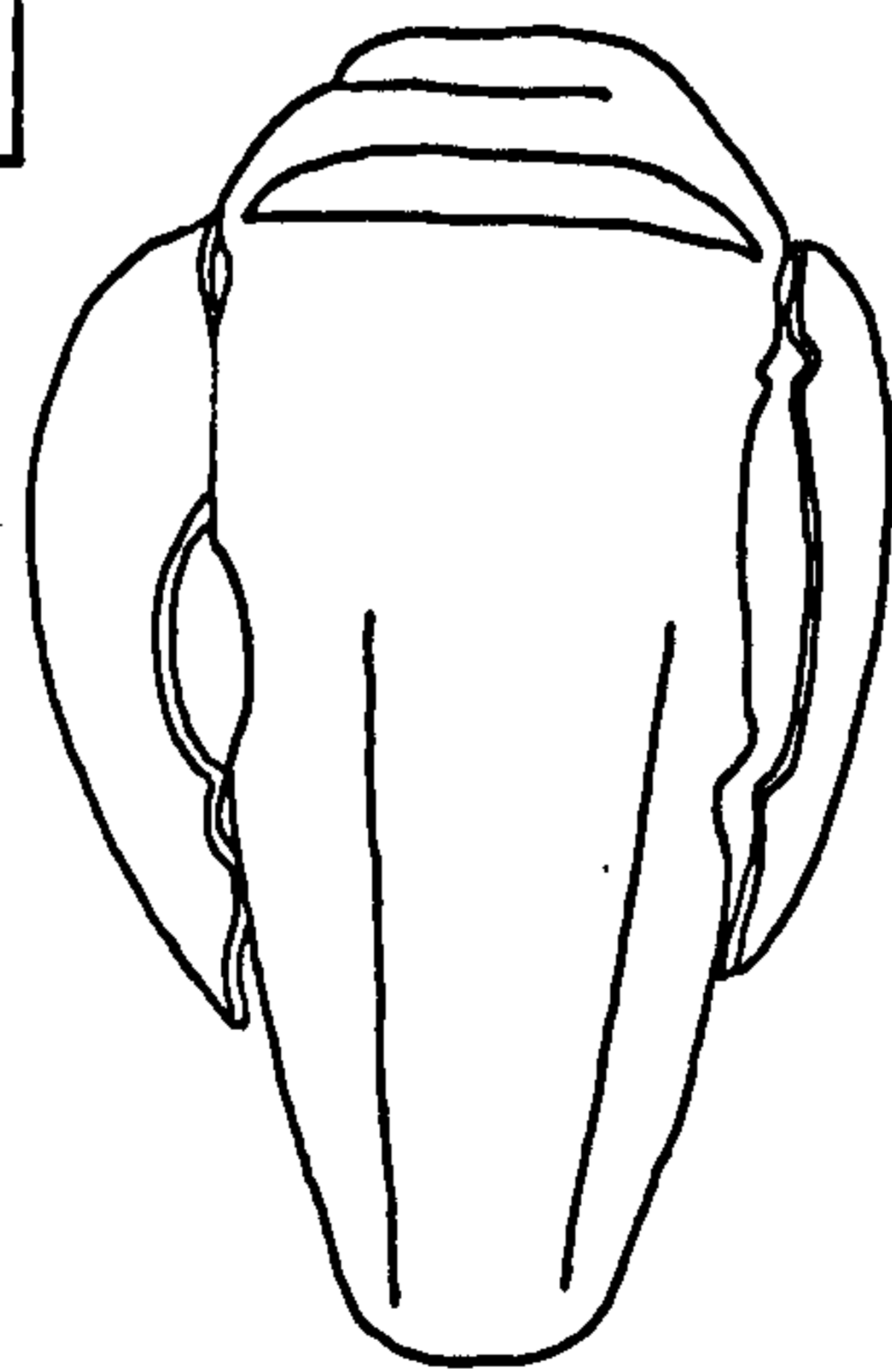
629



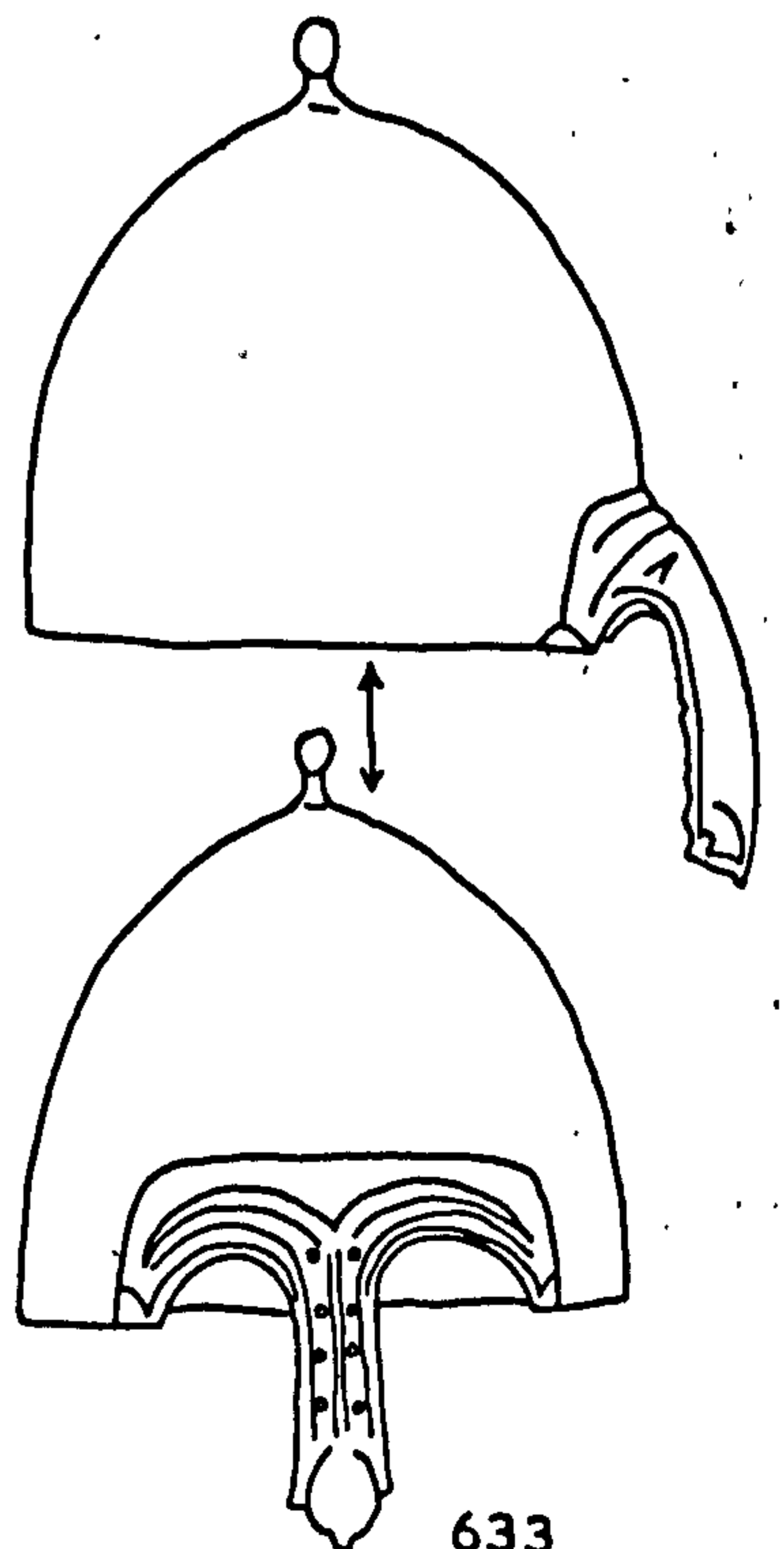
630



631

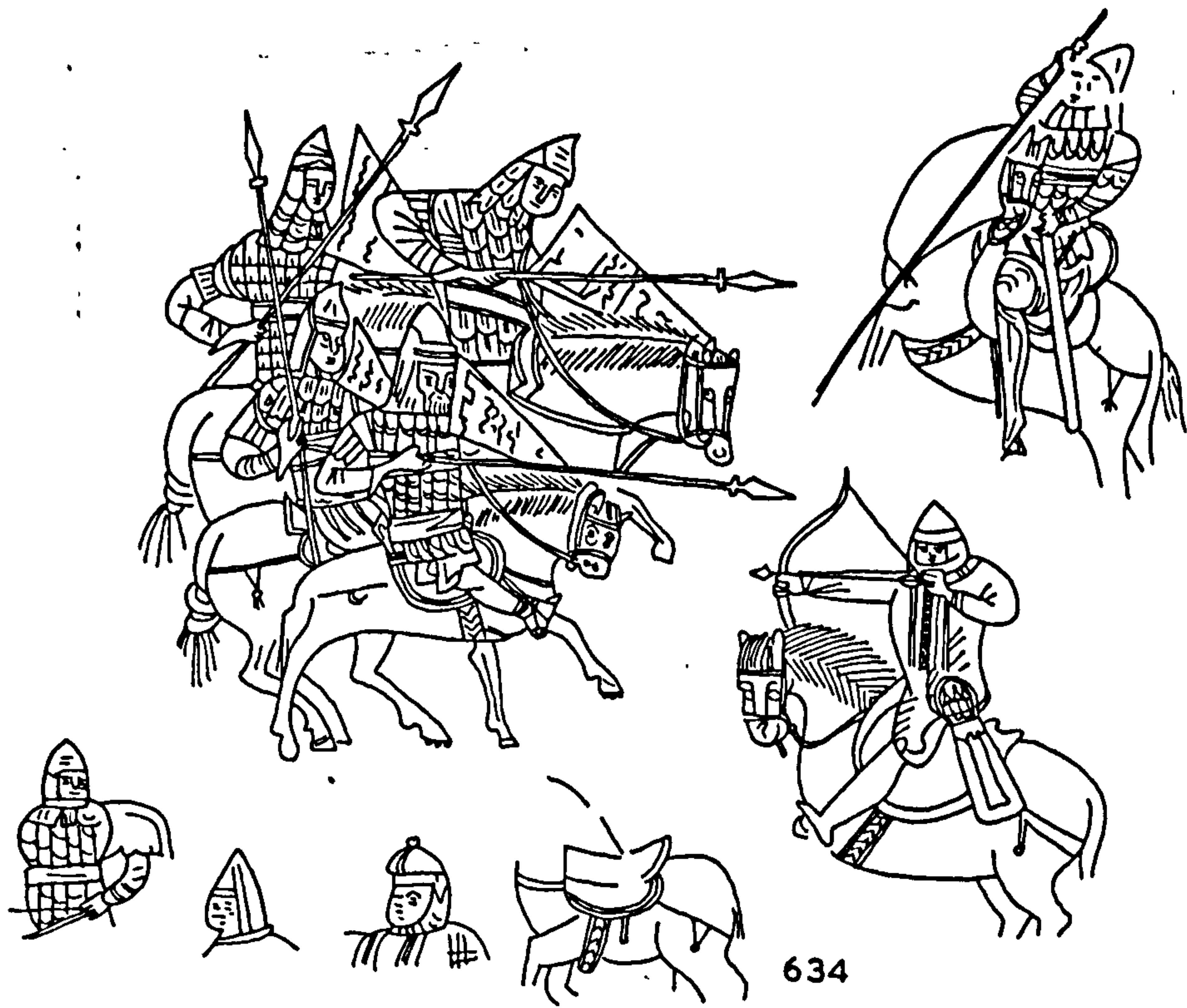


632

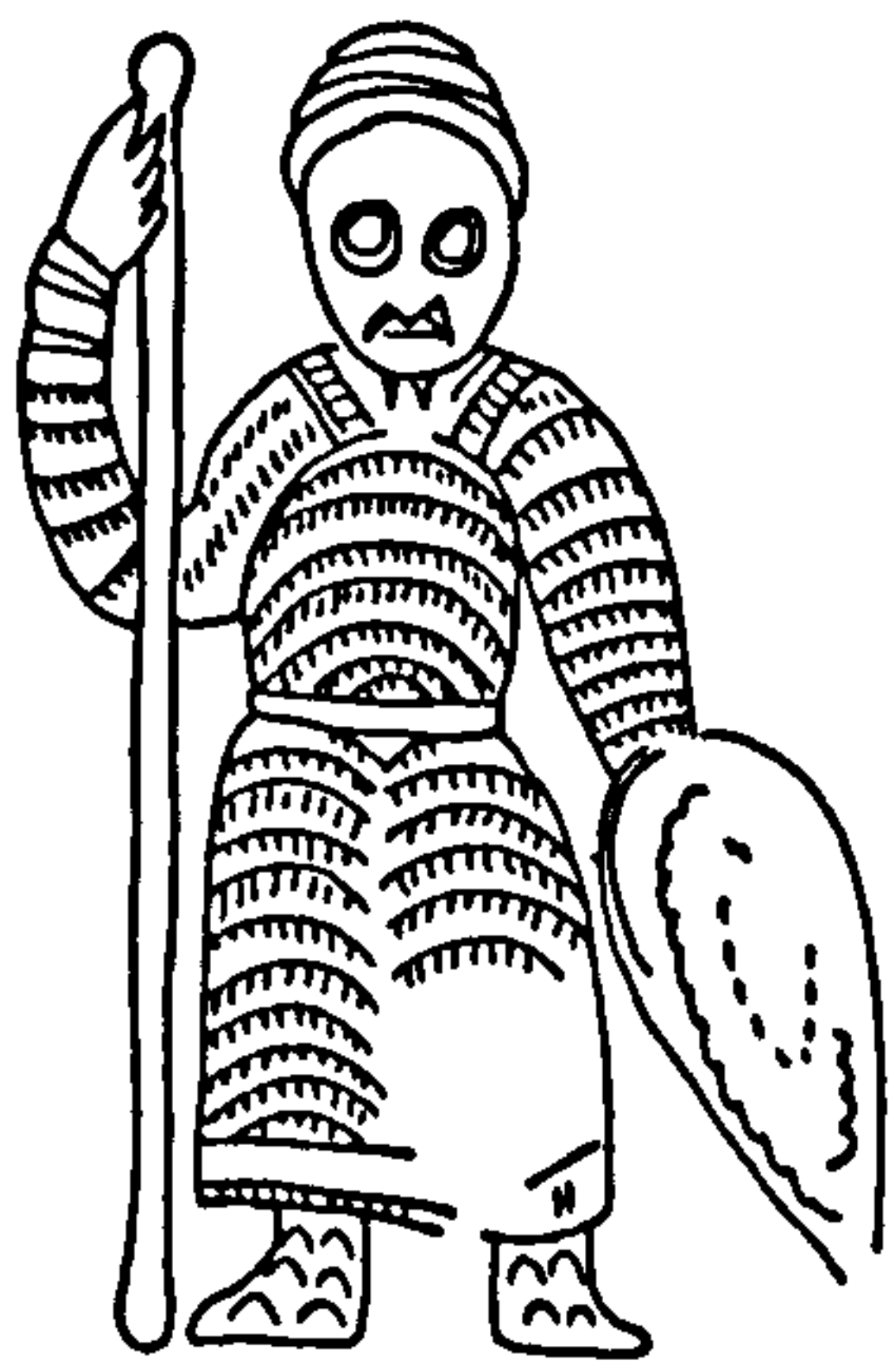


633

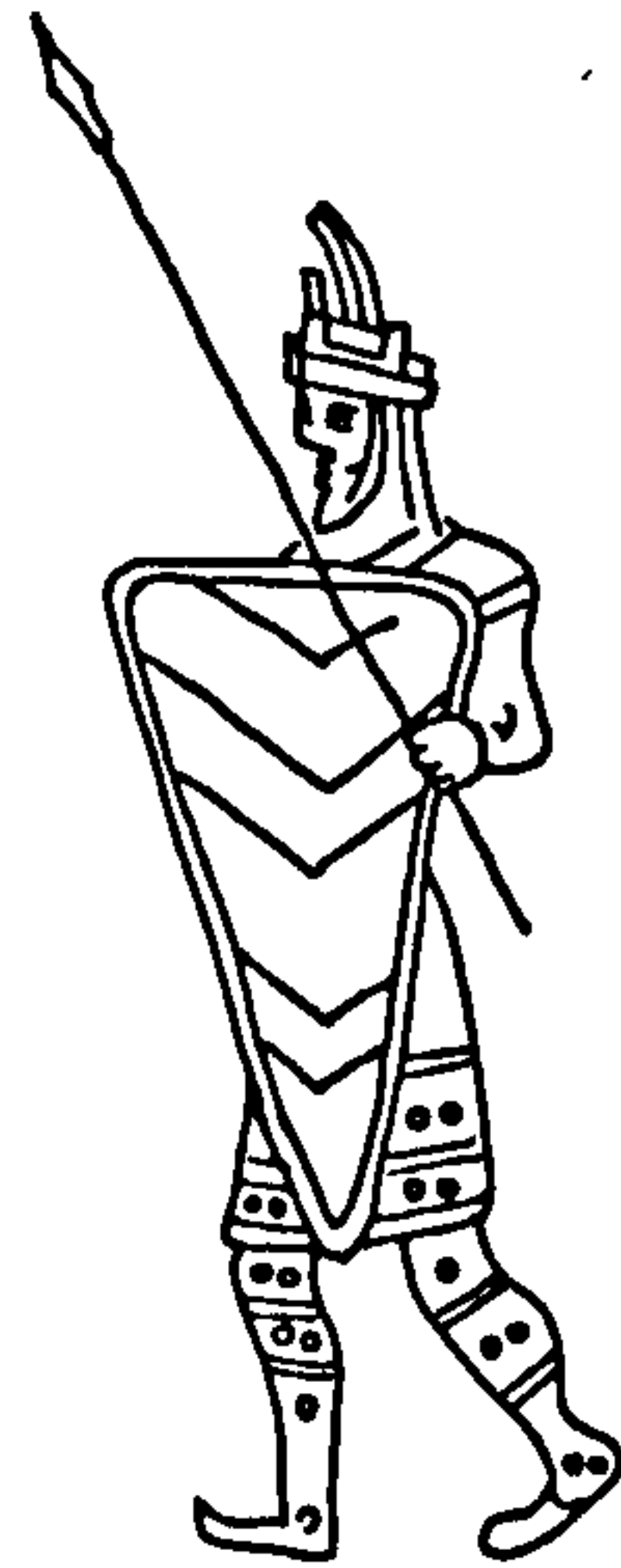




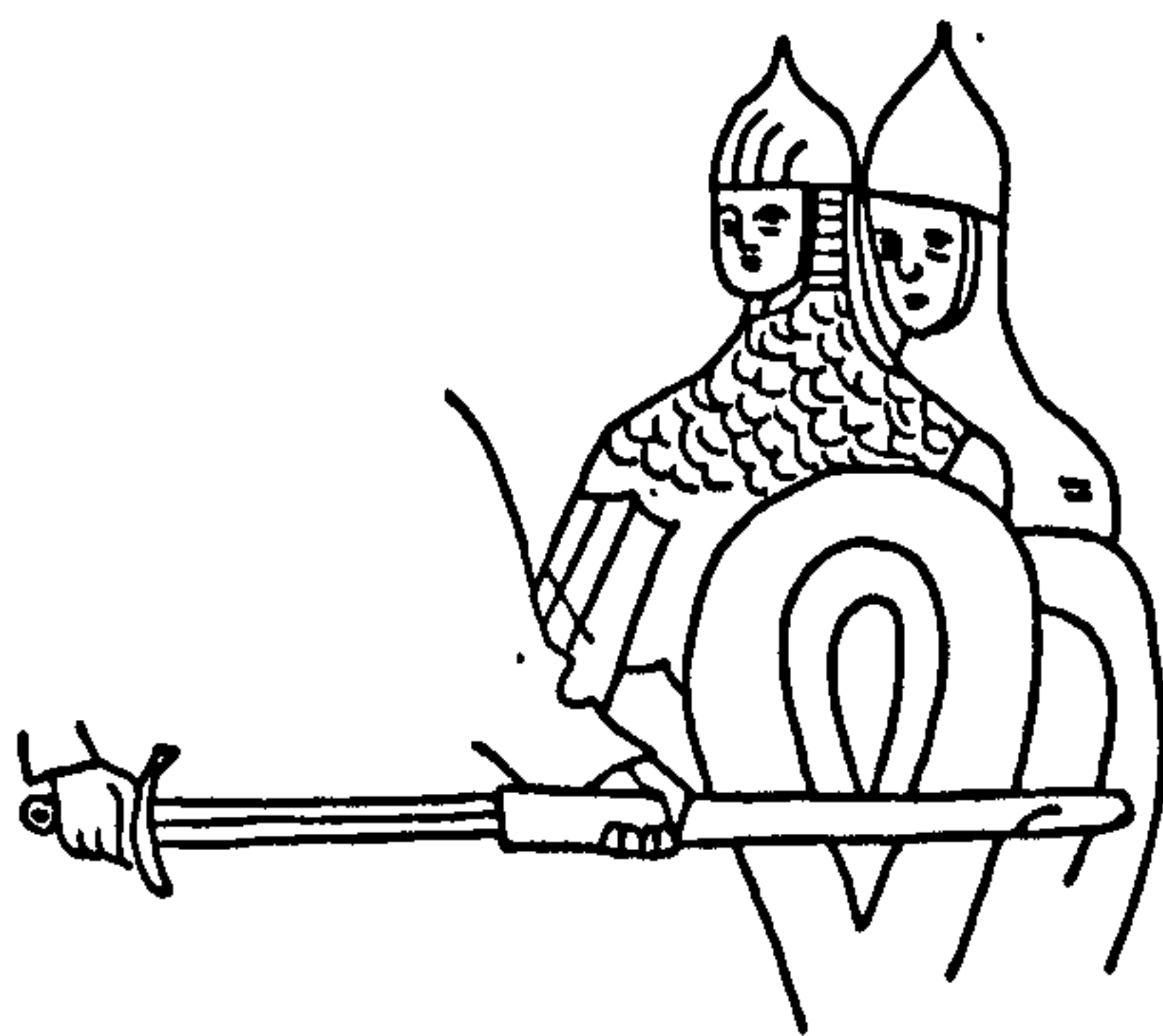
634



635



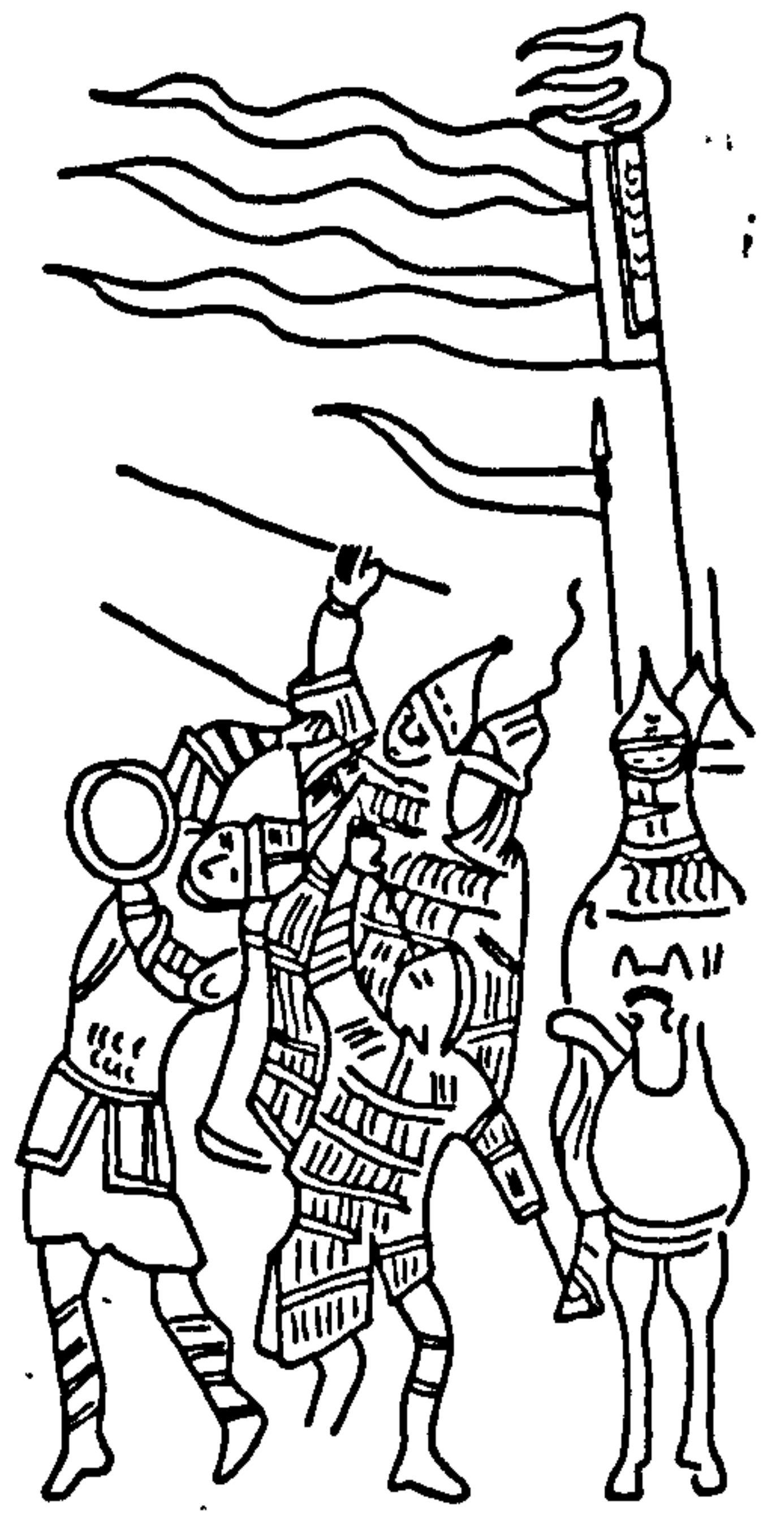
636A



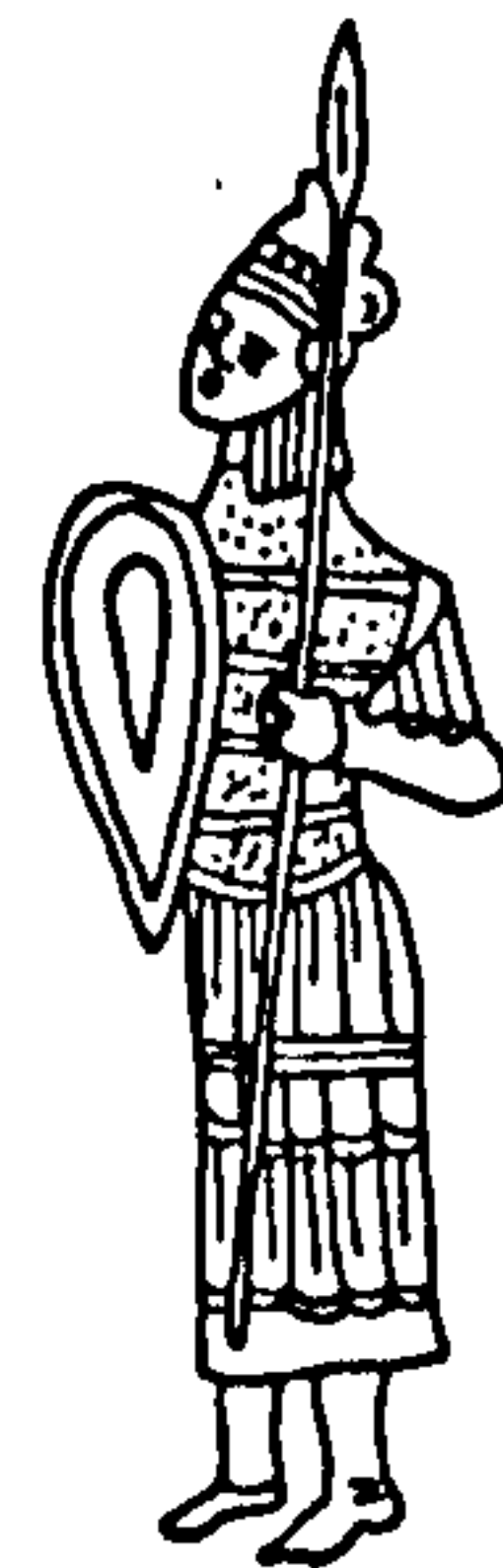
636B



636C



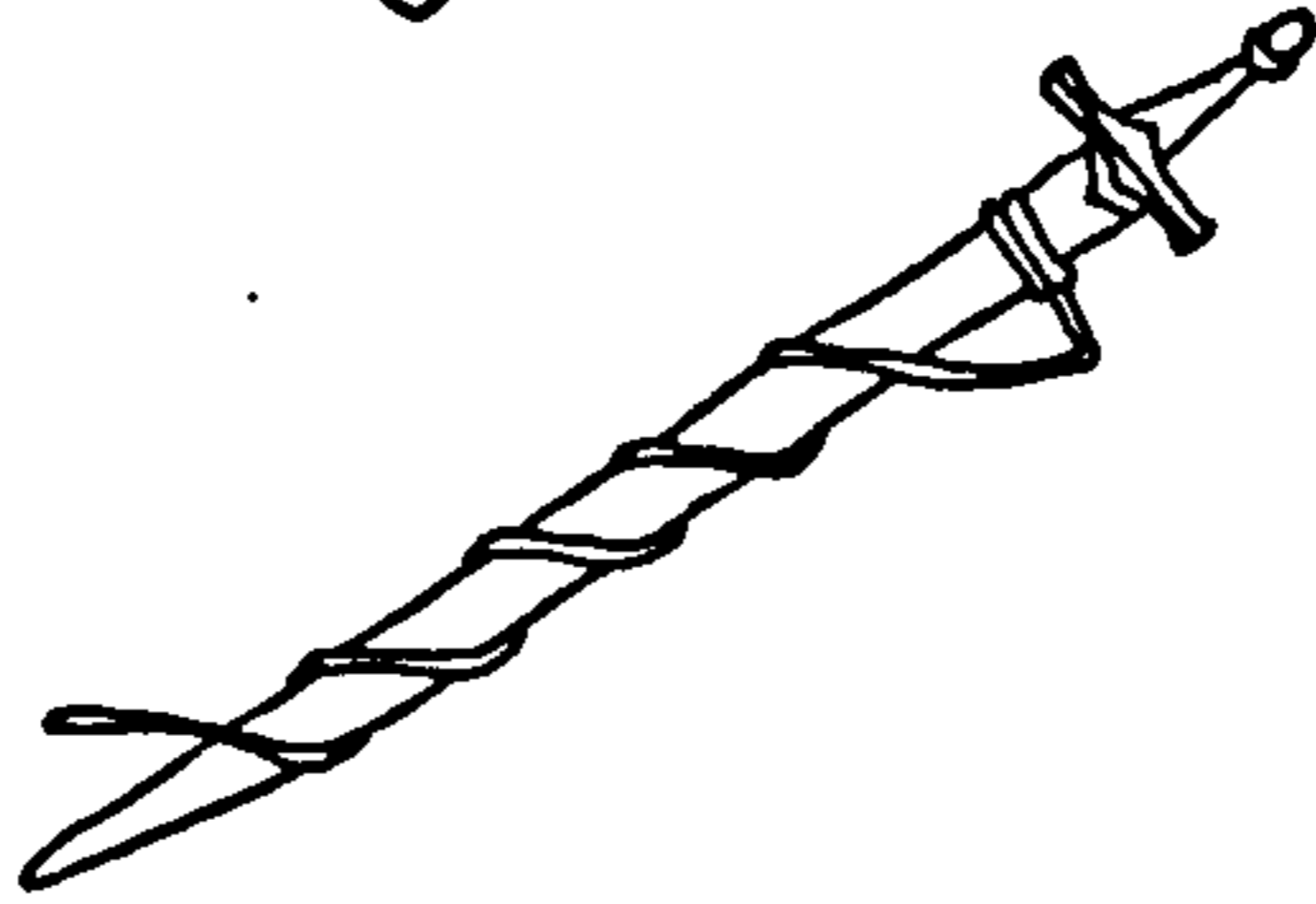
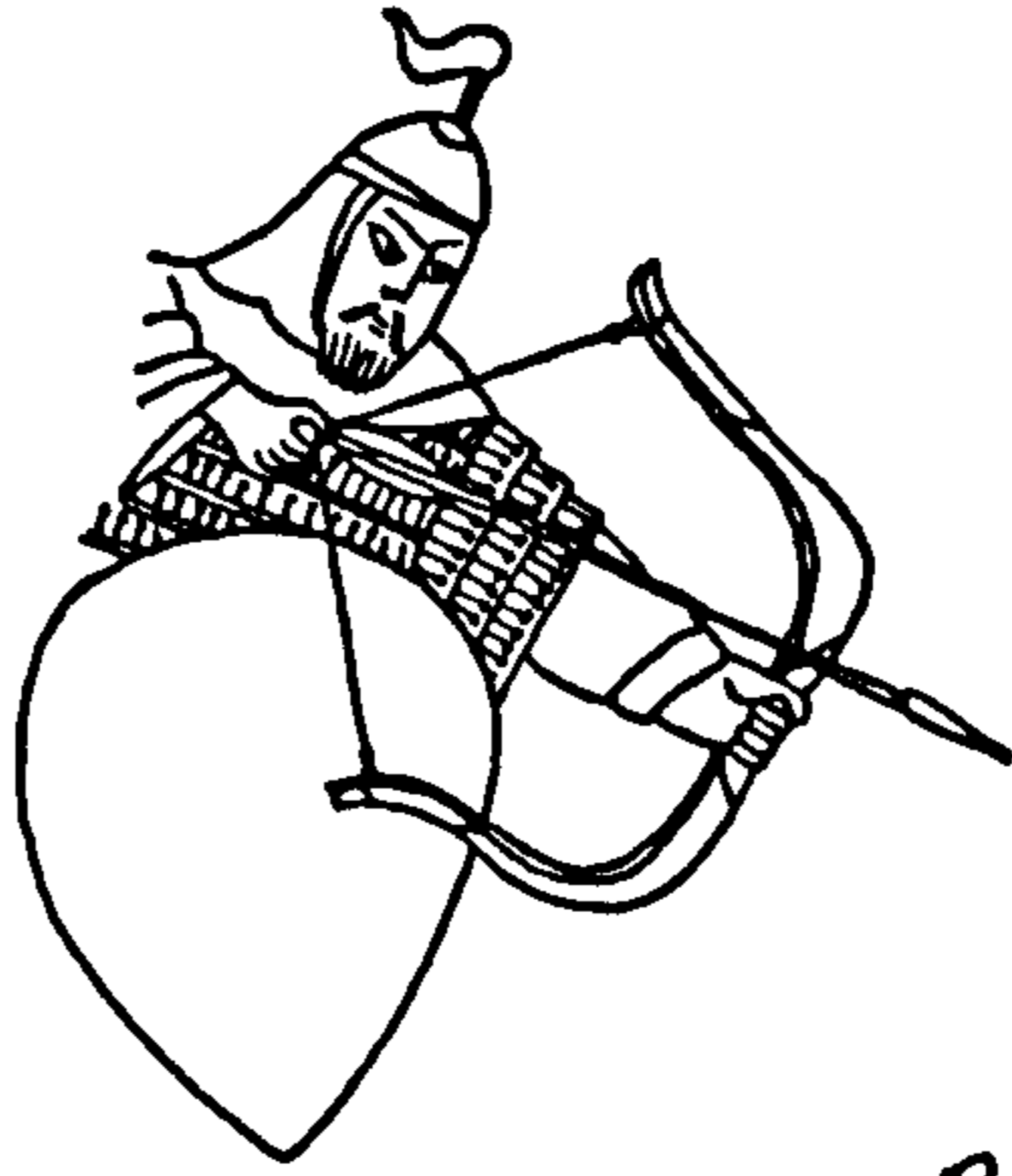
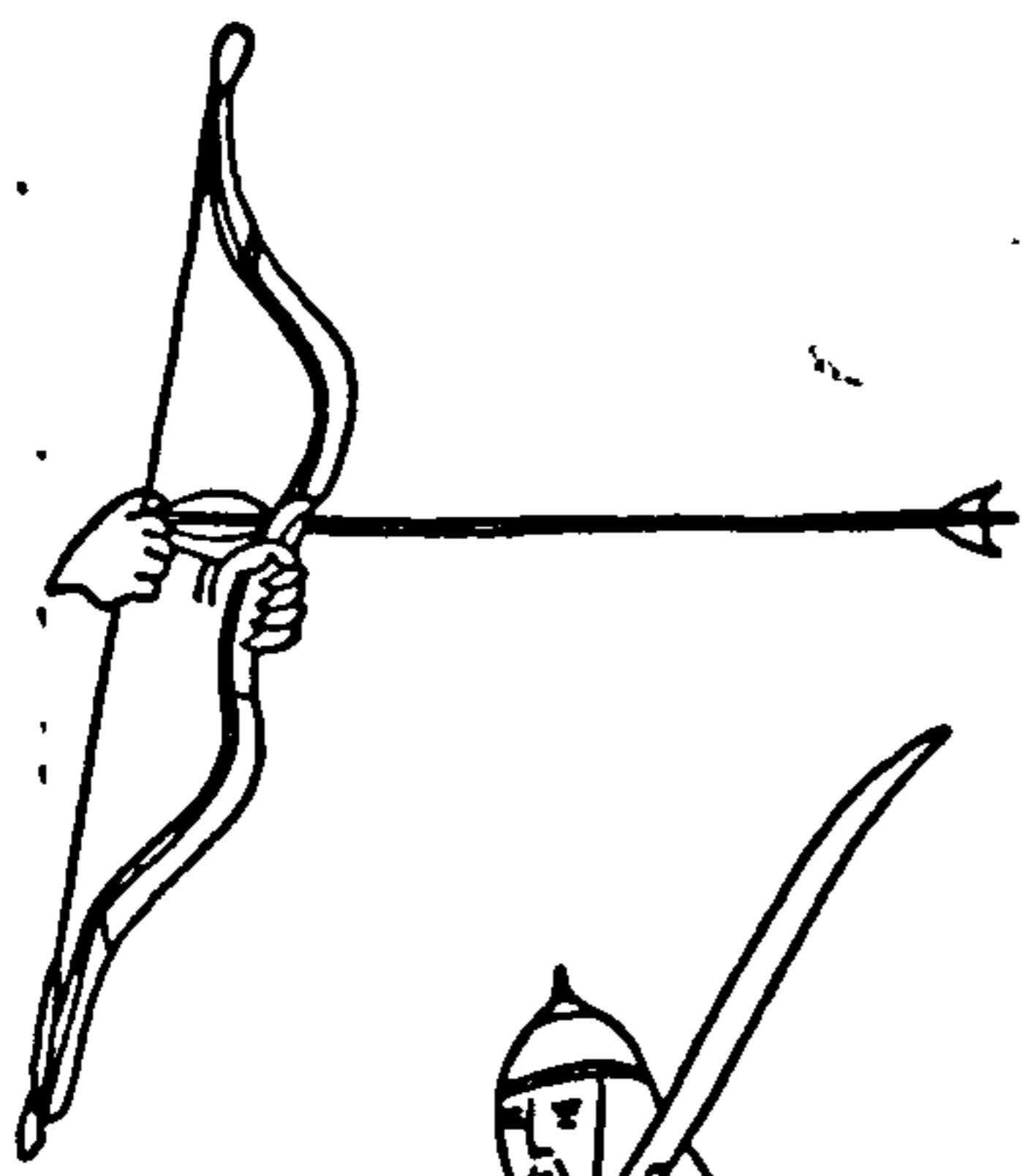
637A



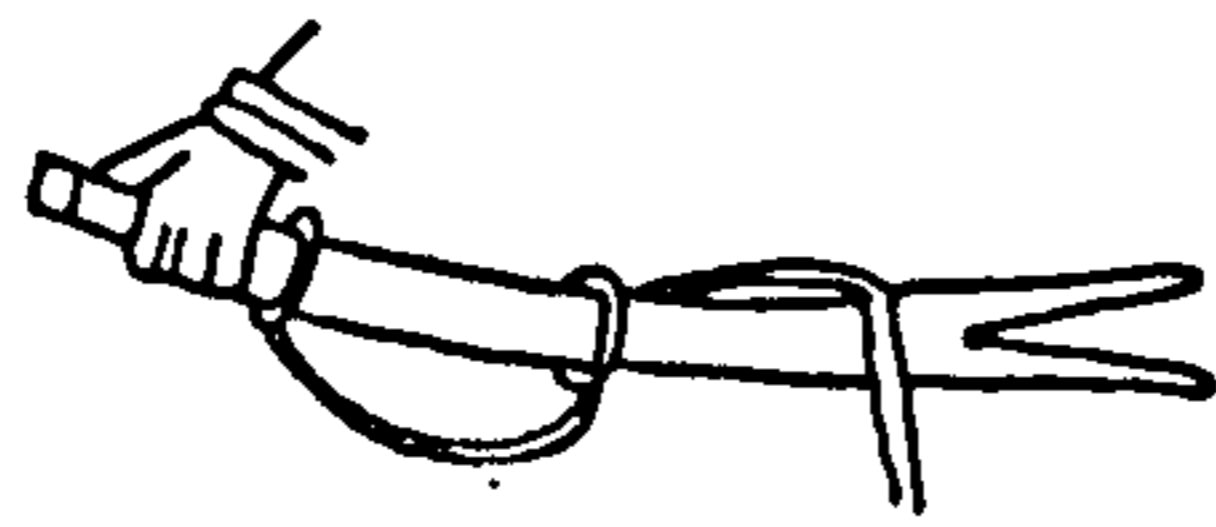
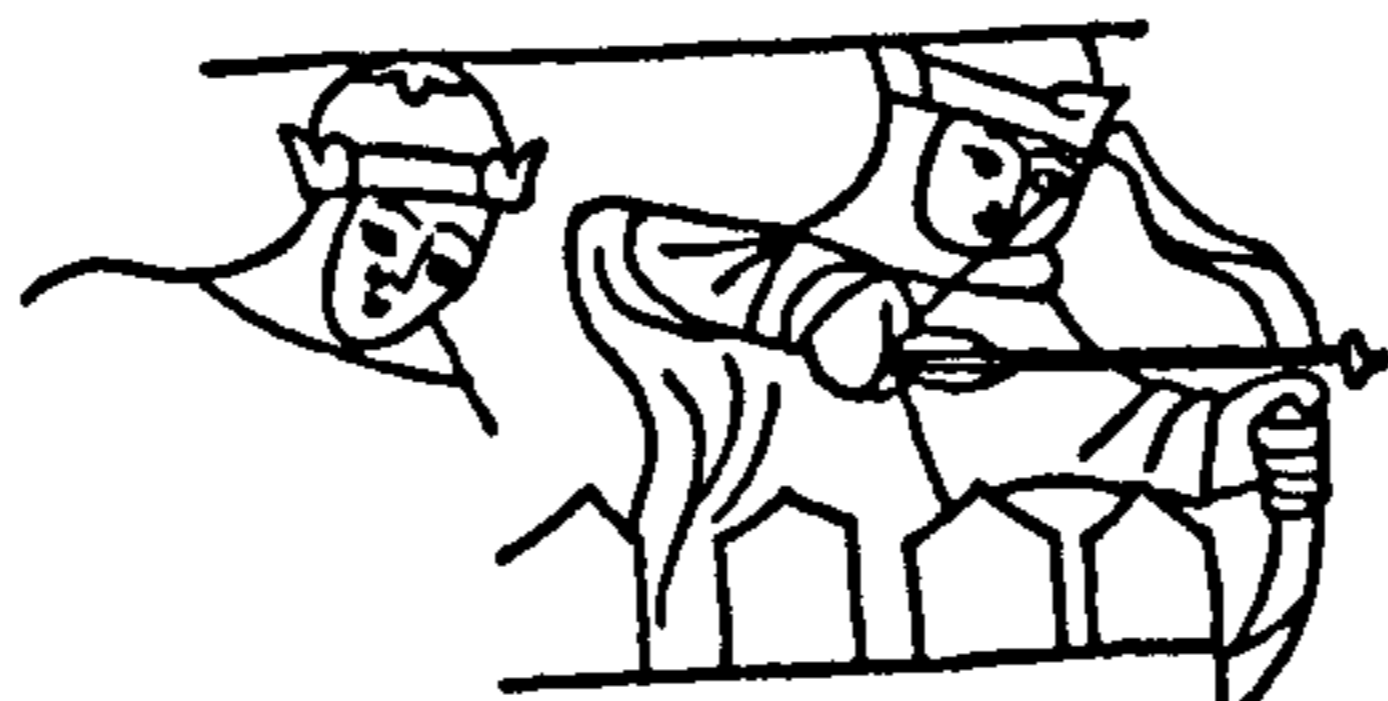
637B



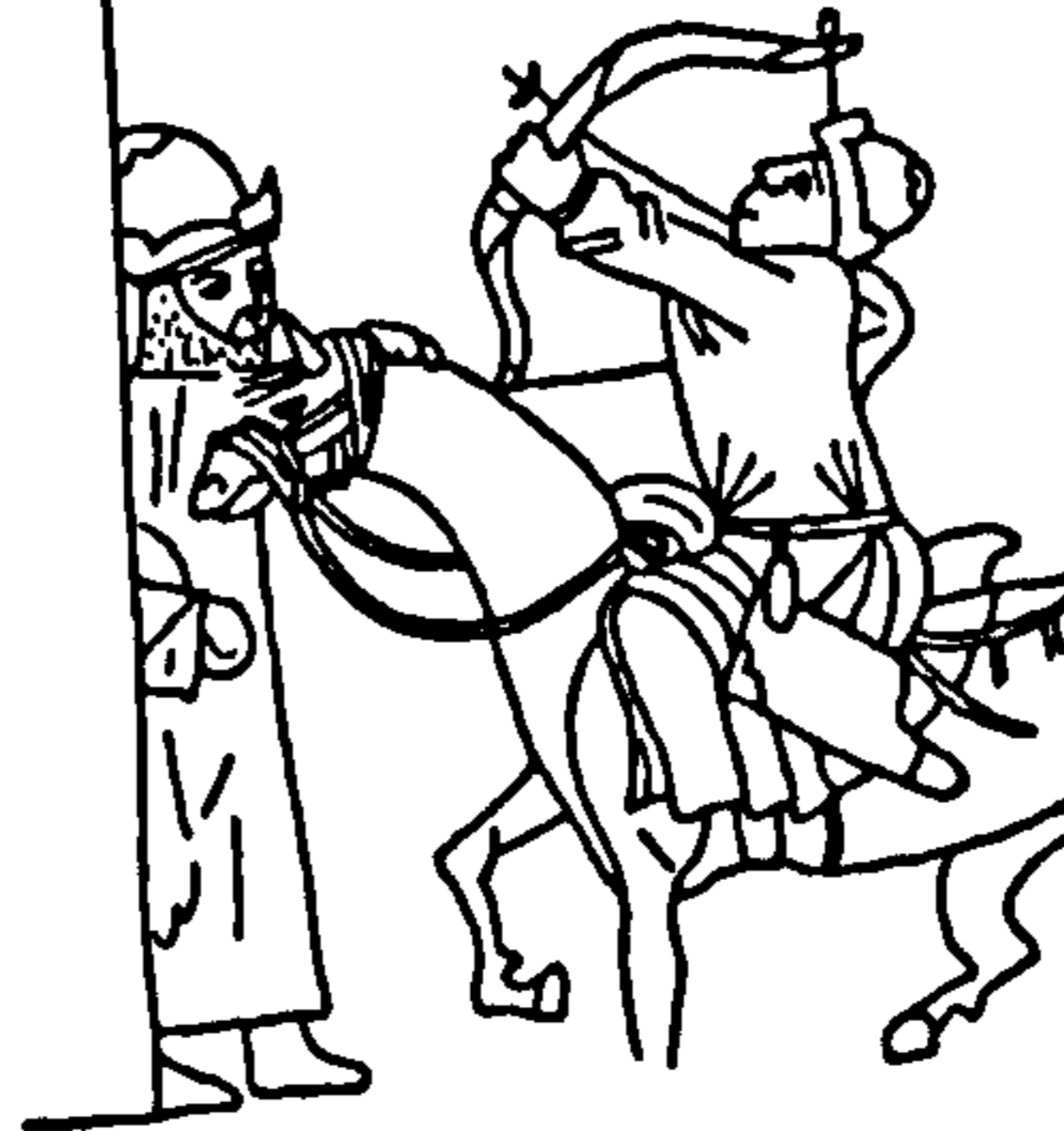
637C



638



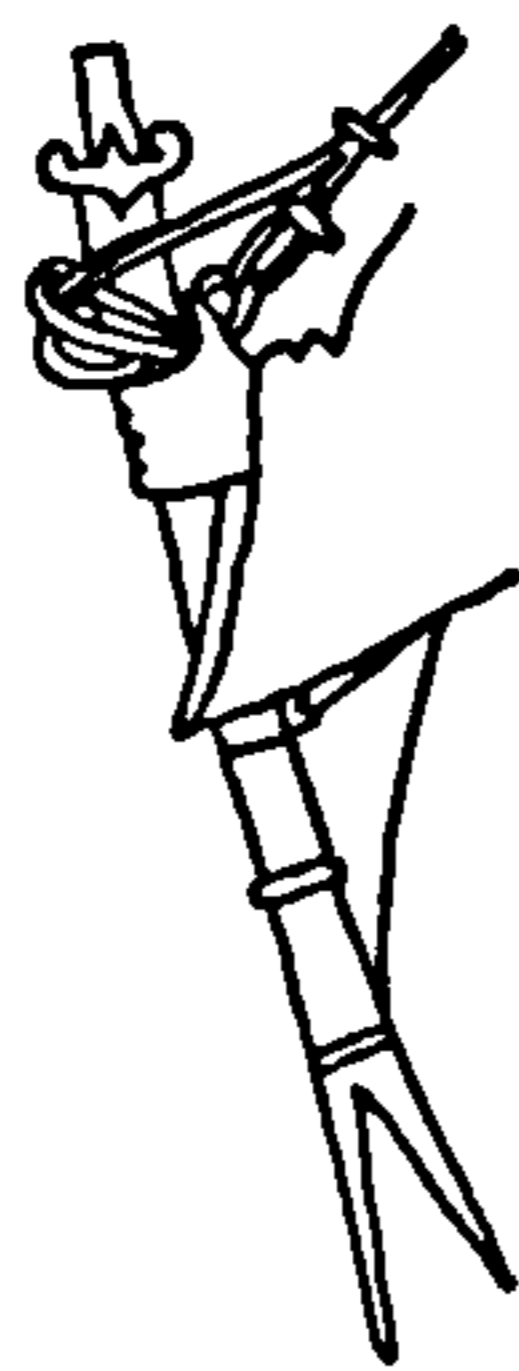
639A



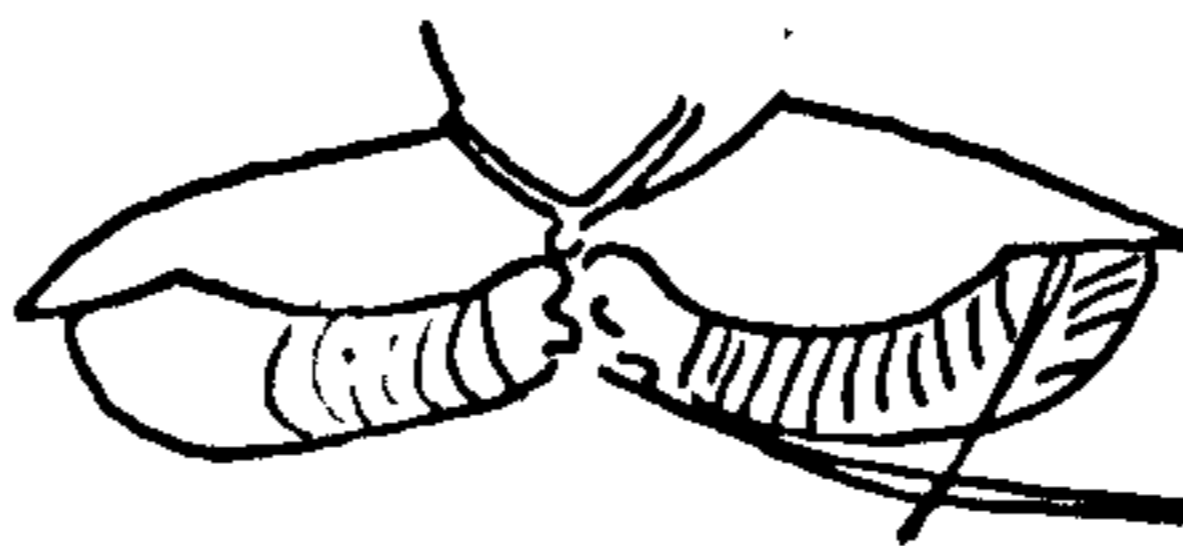
639B



639C

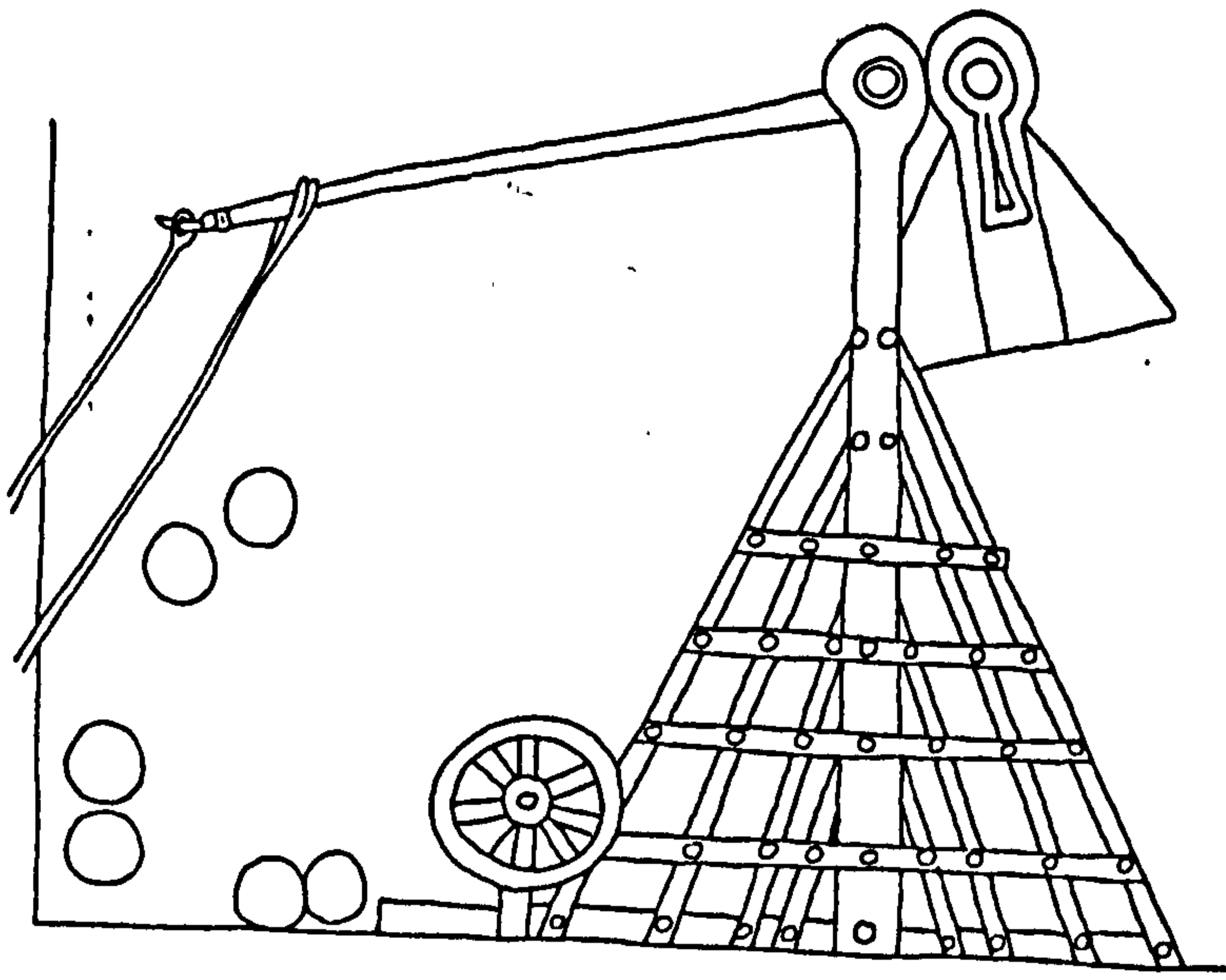


639D



640

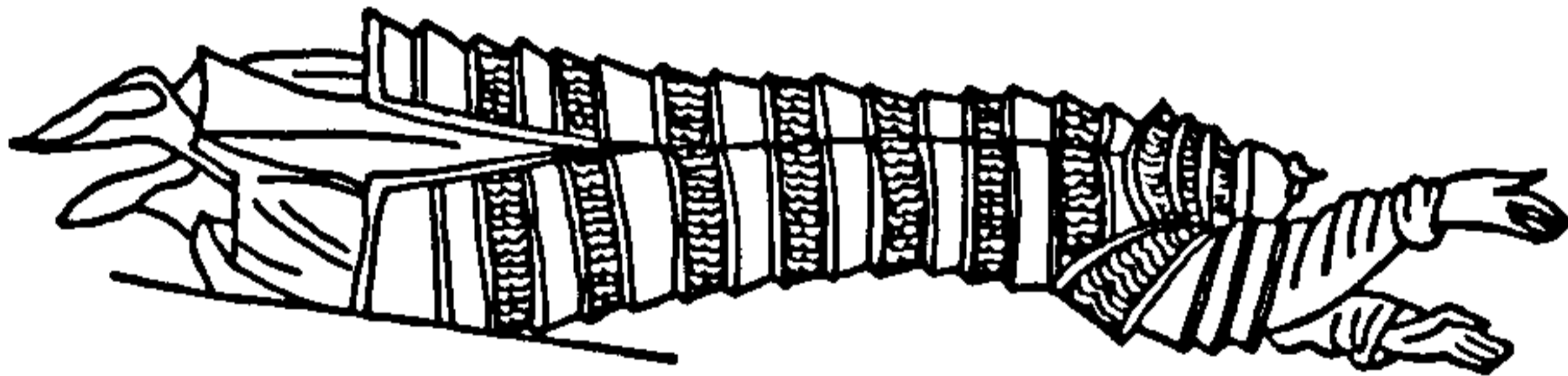
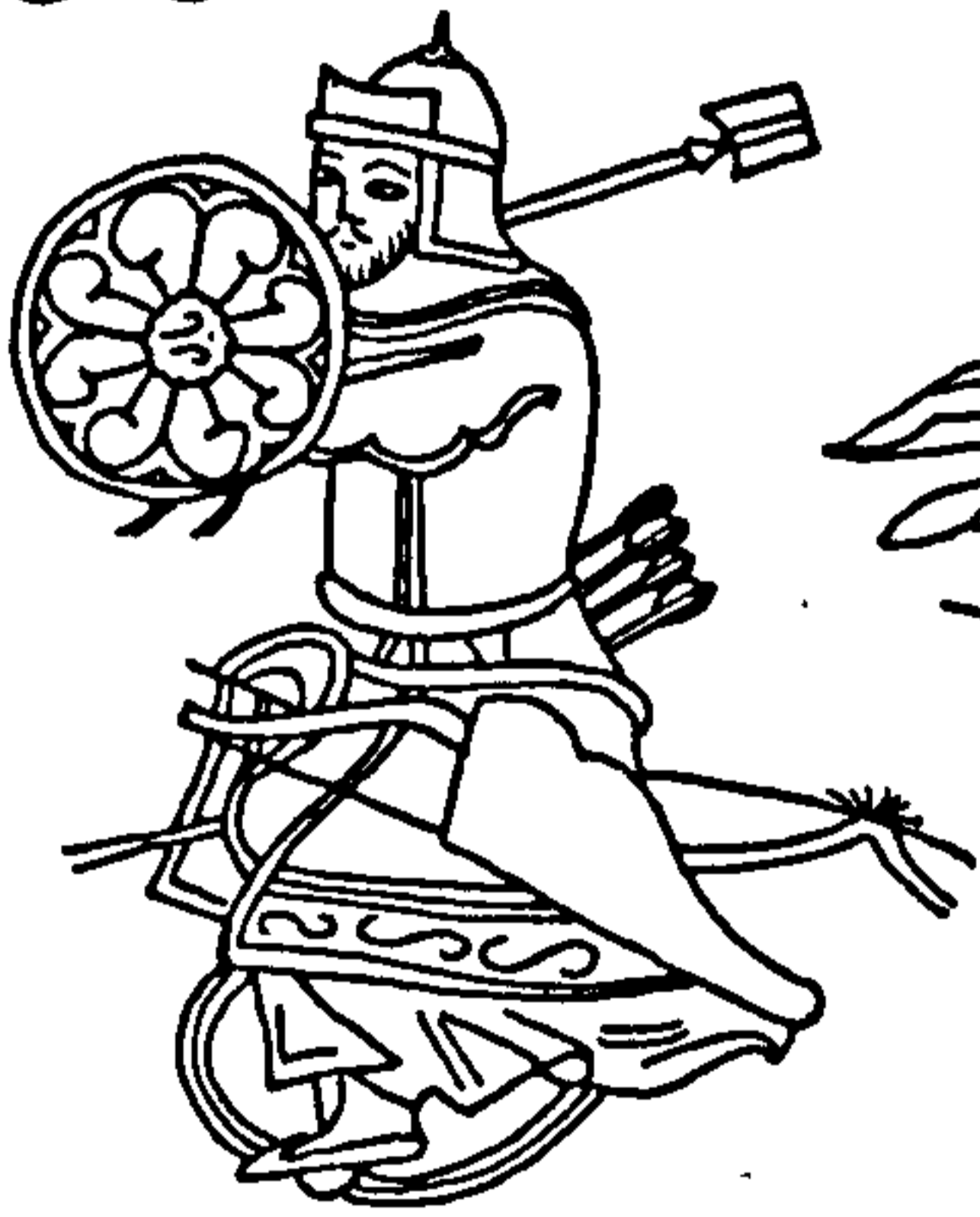
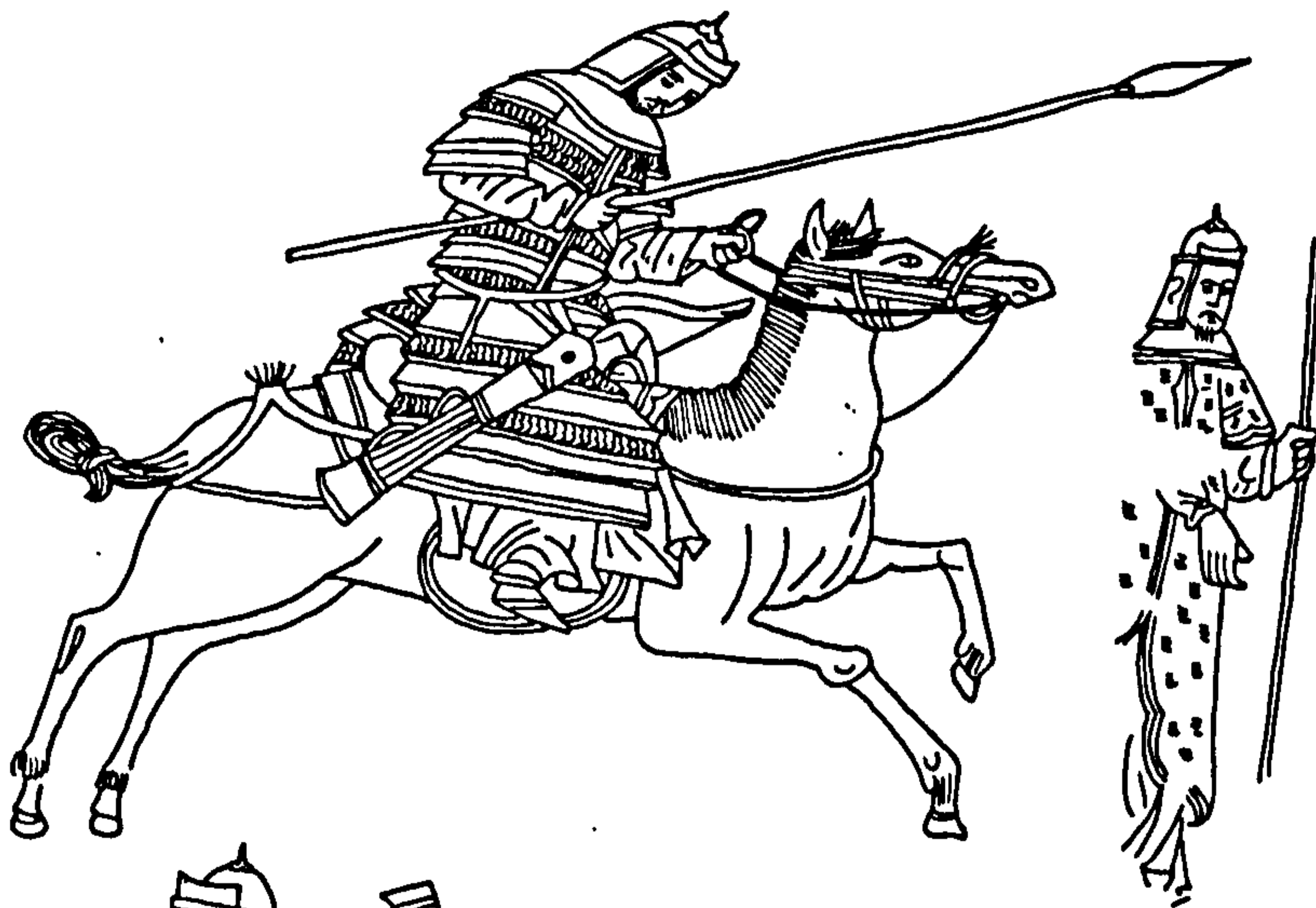




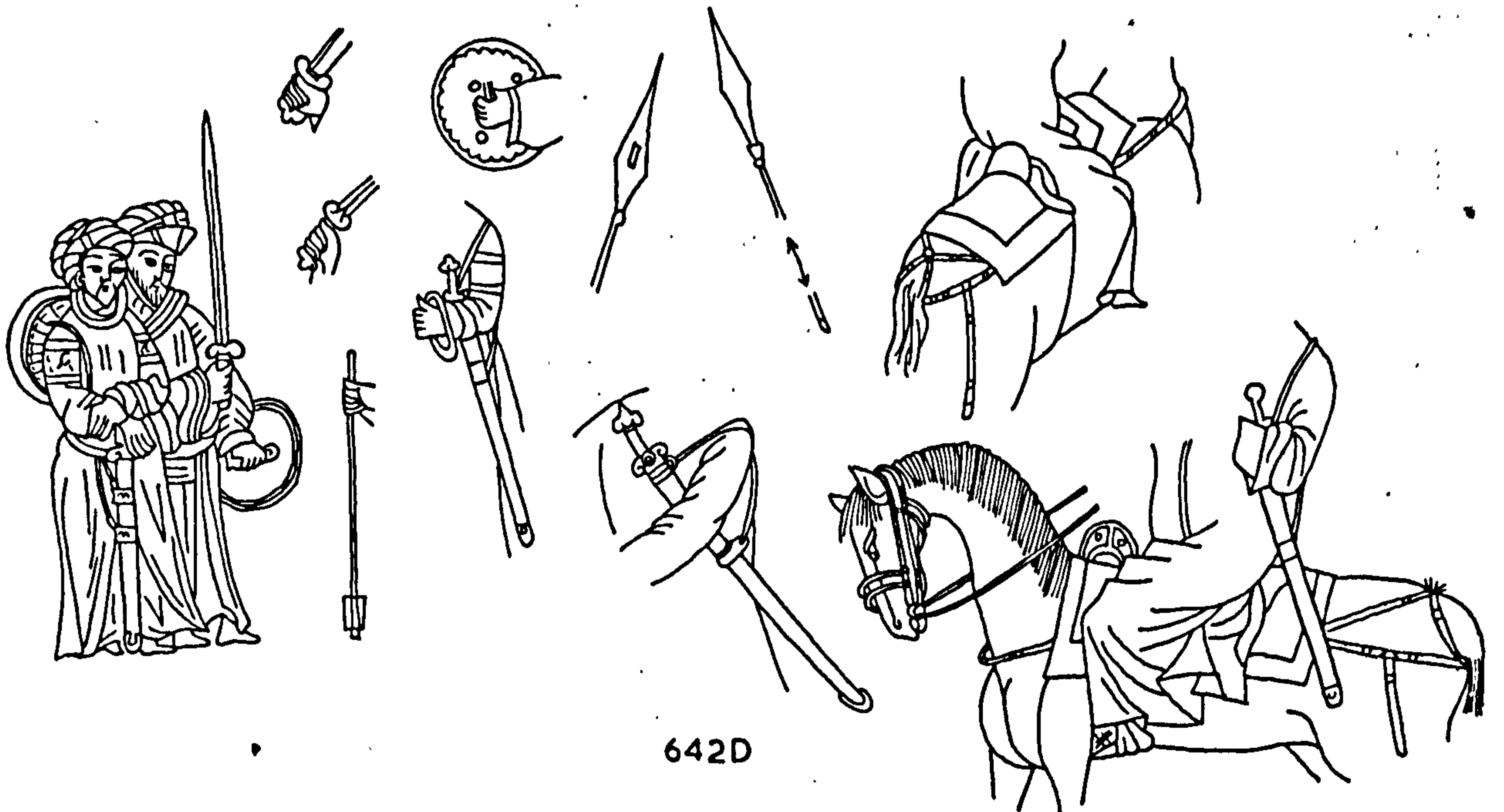
642A



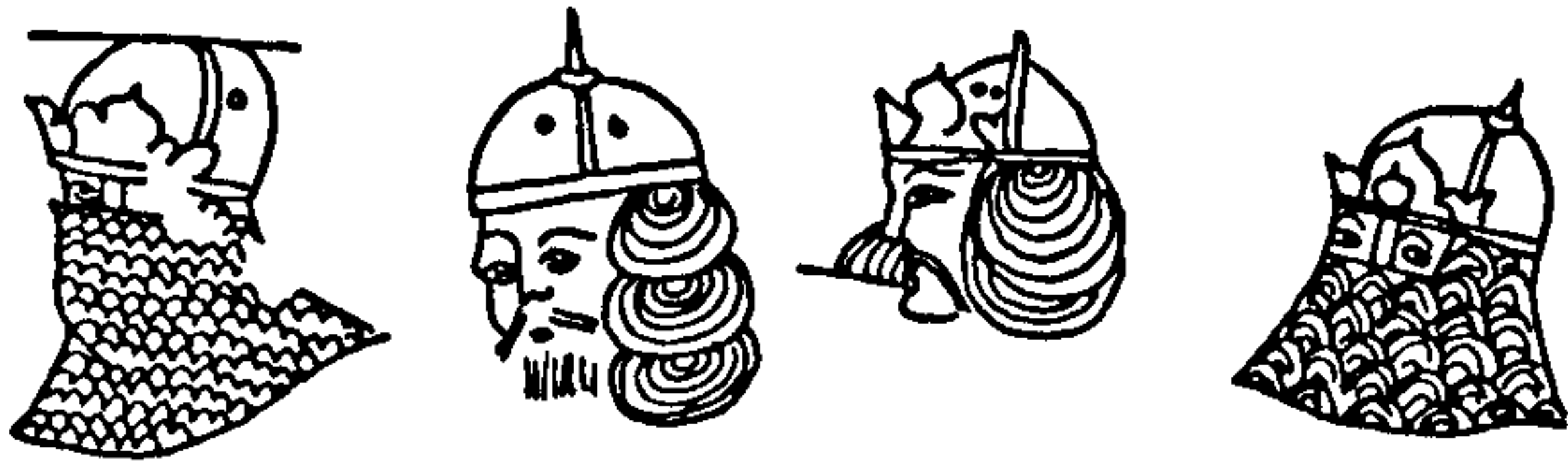
642B



642C



642D



643



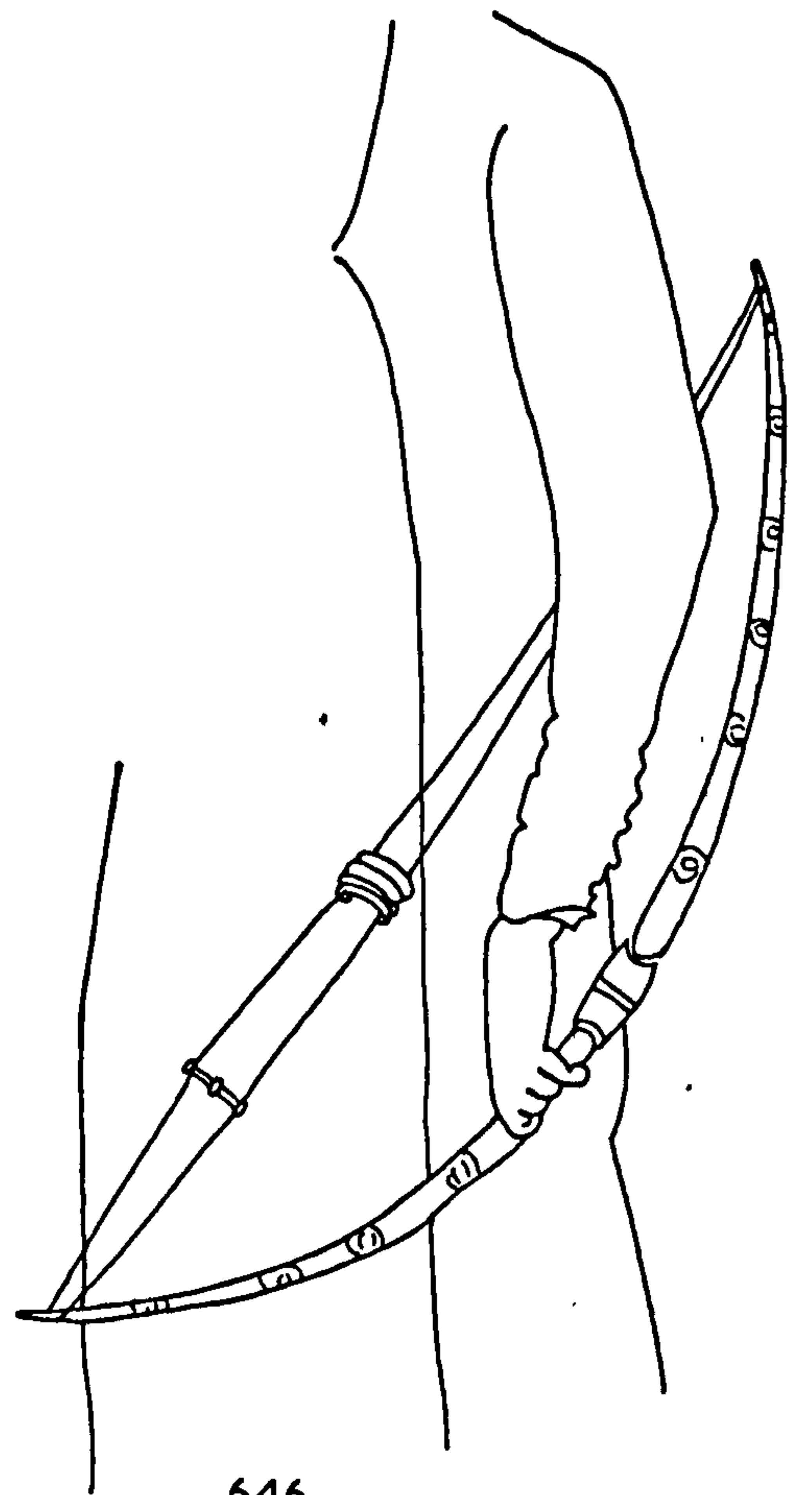
644



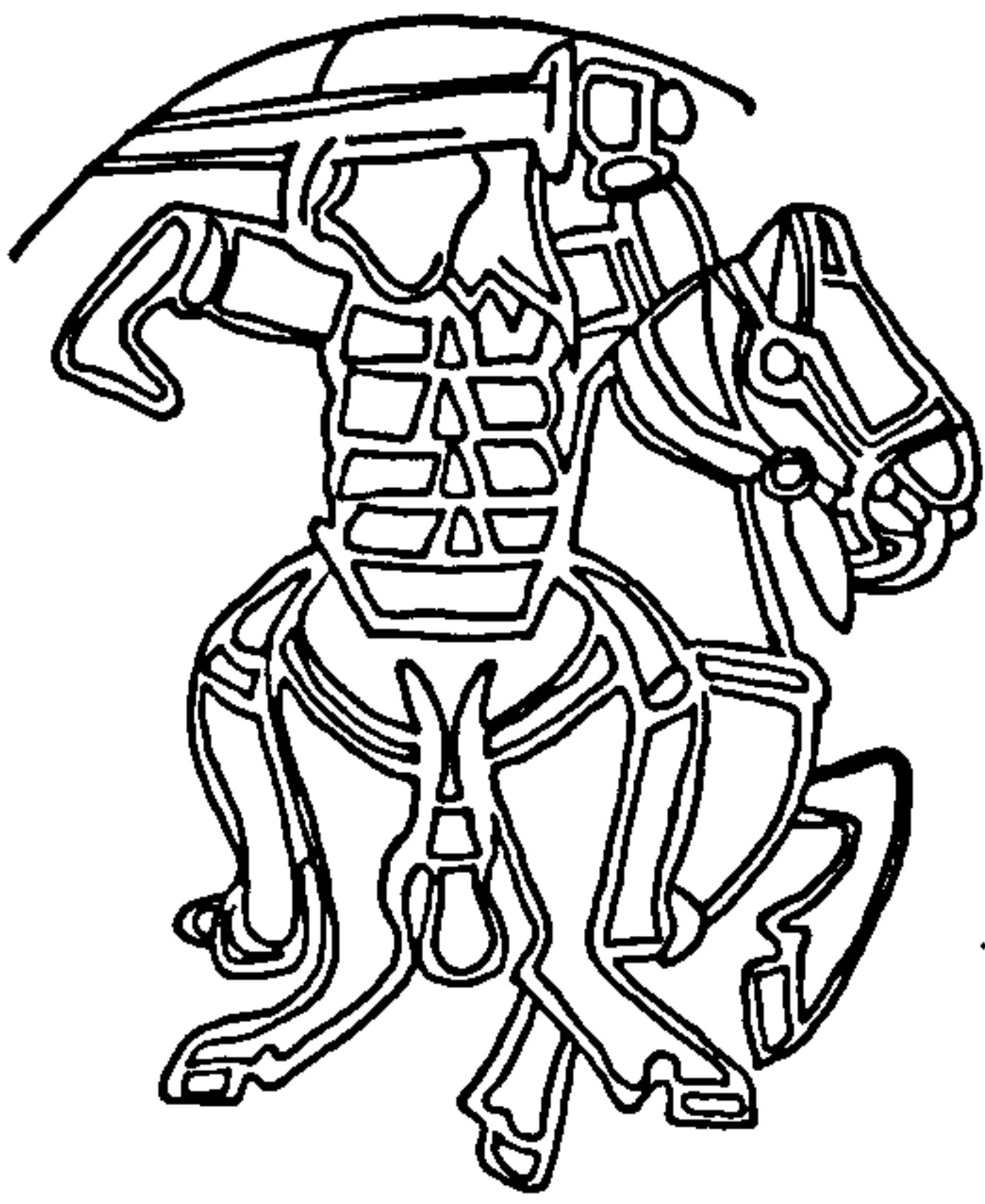
645A



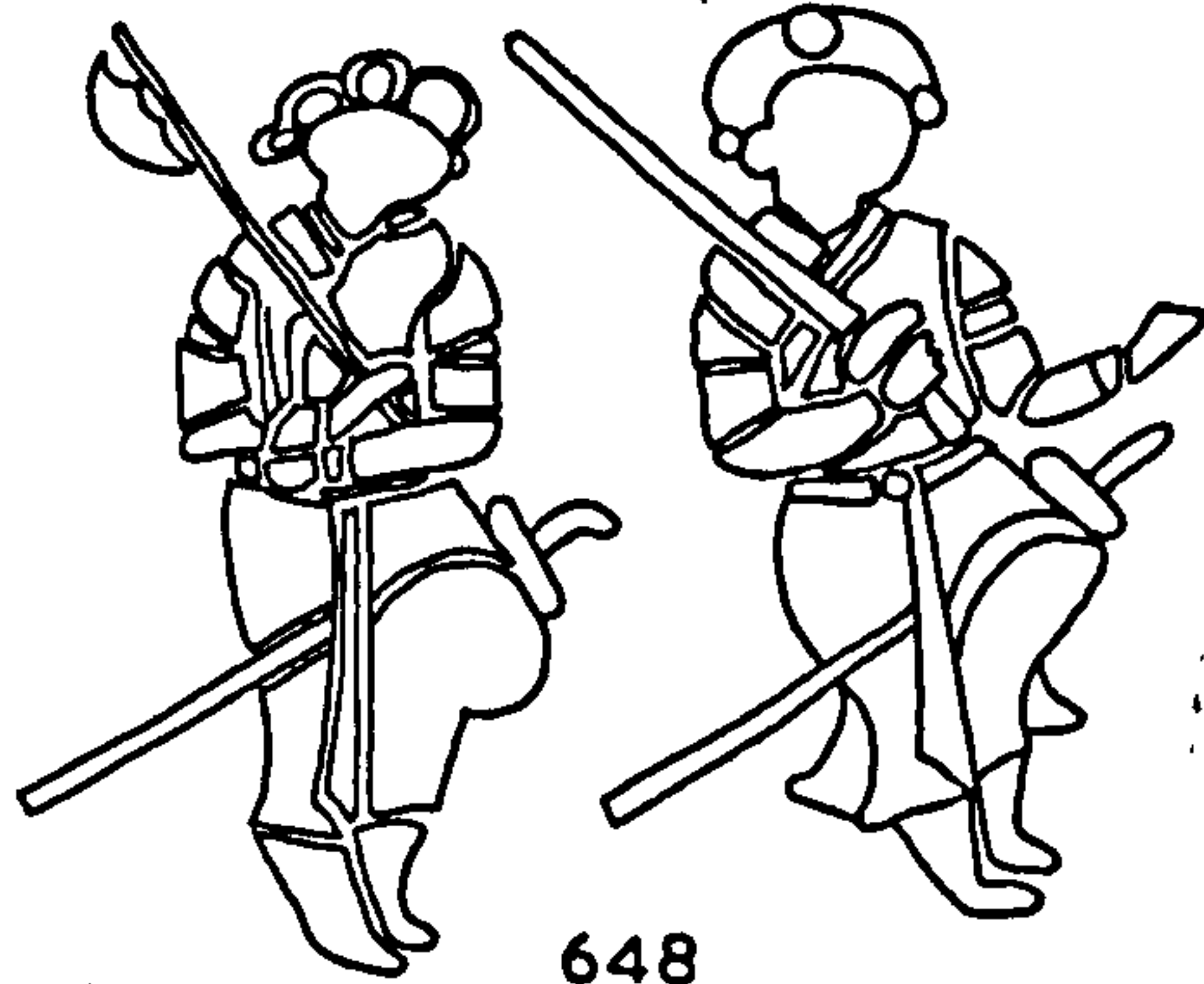
645B



646



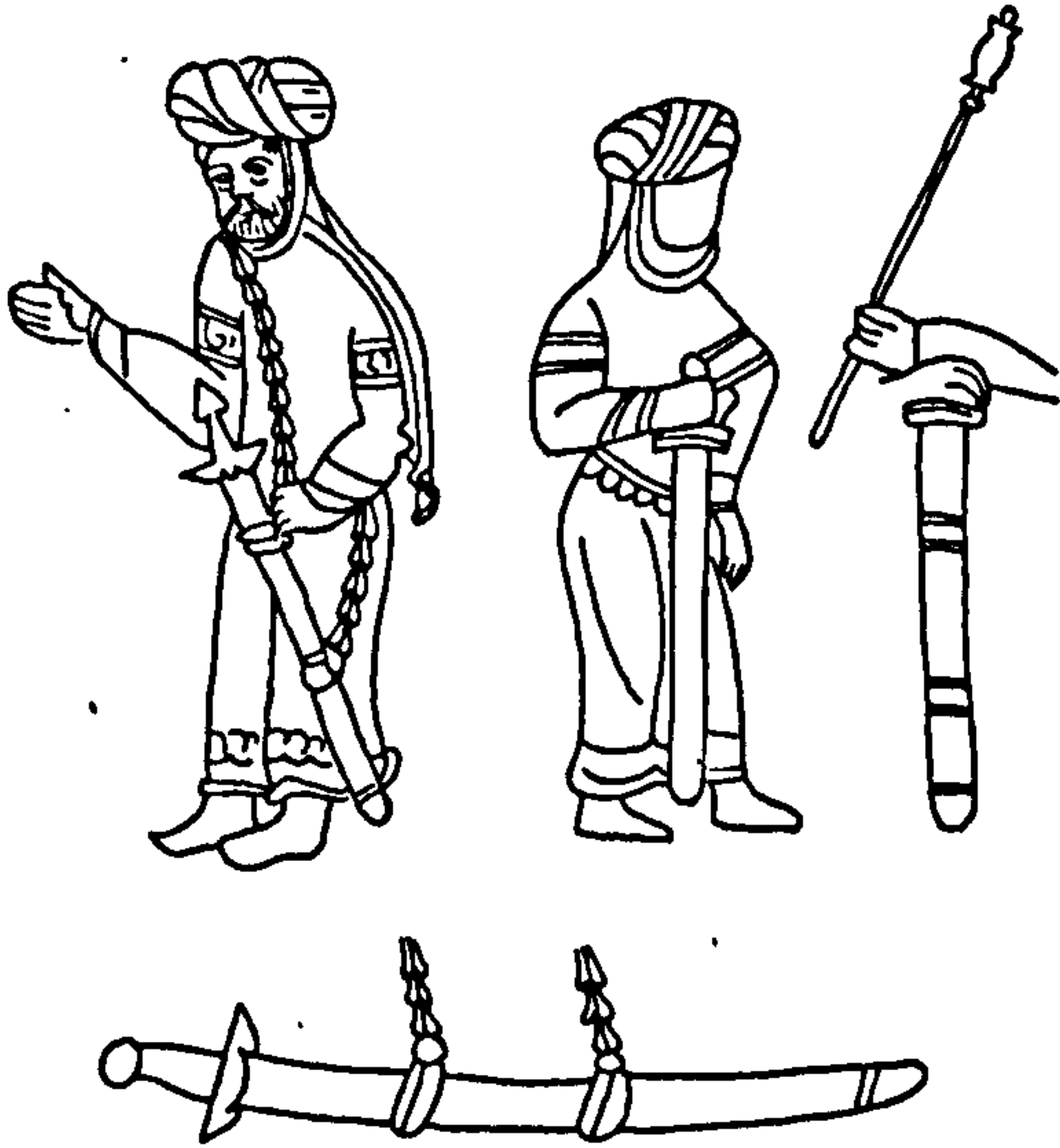
647



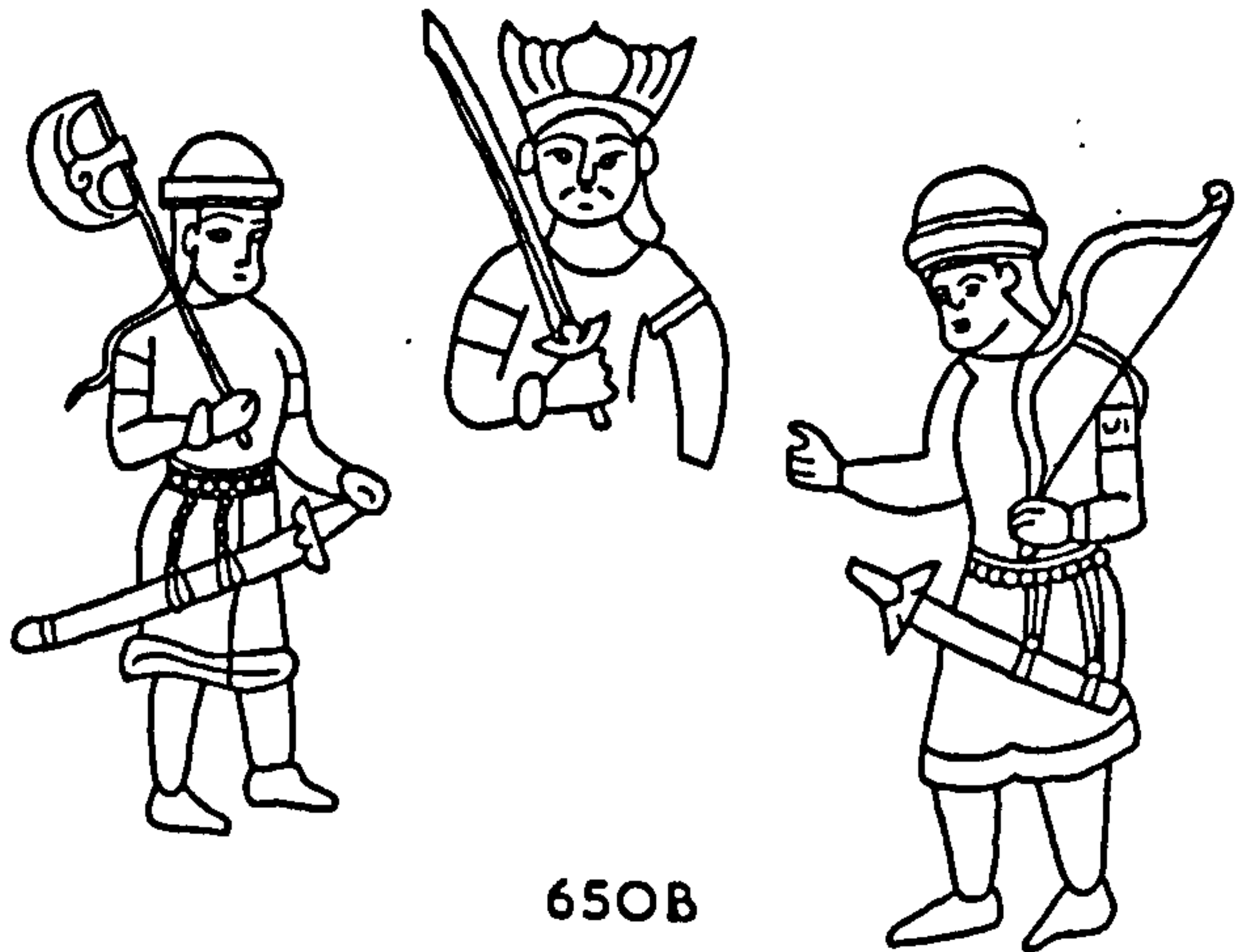
648



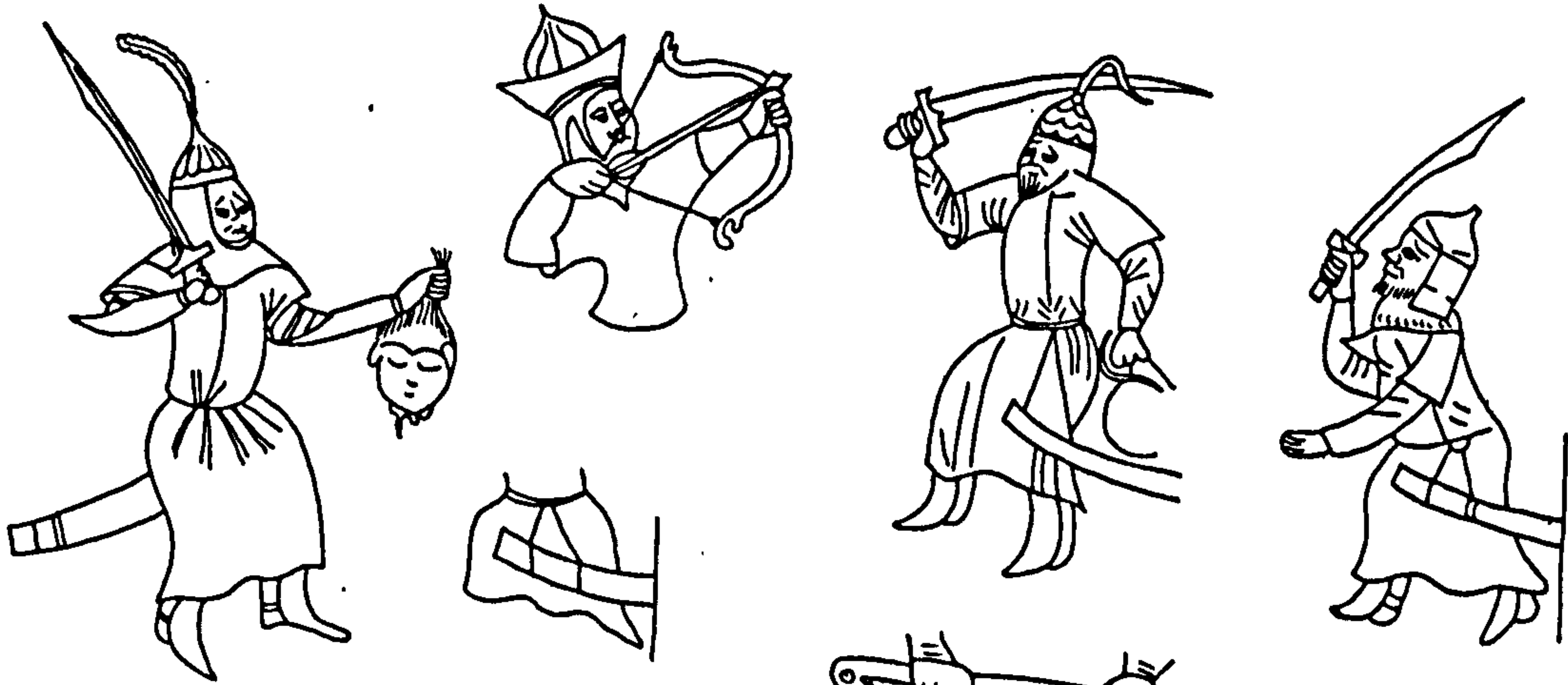
649



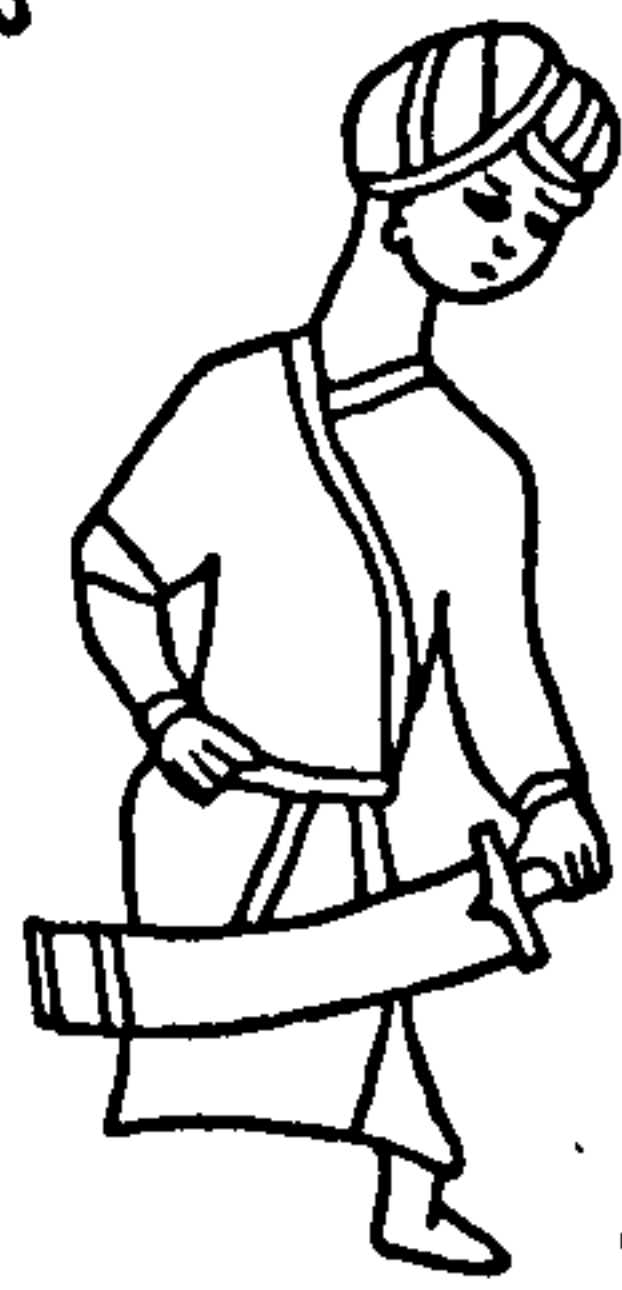
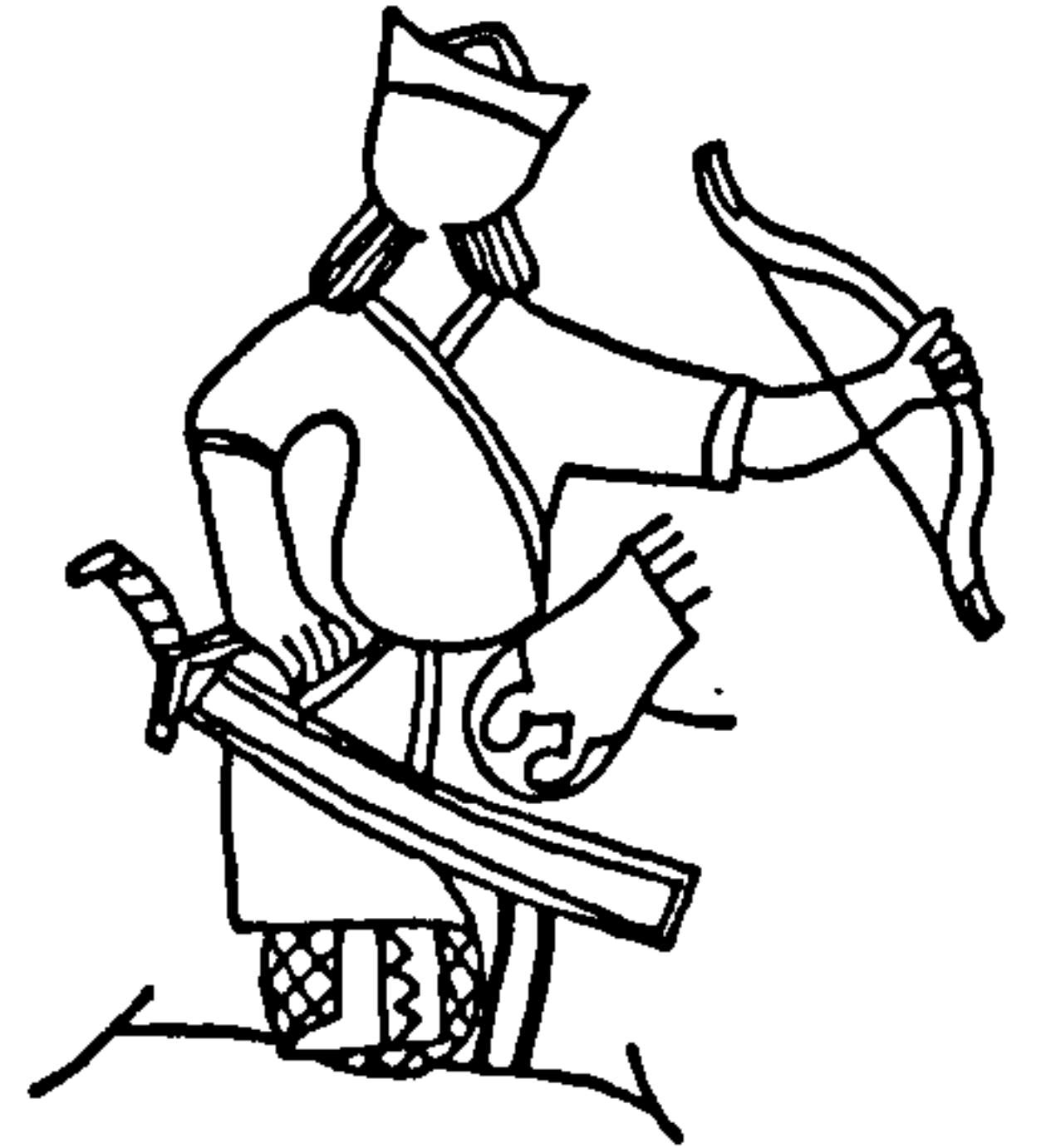
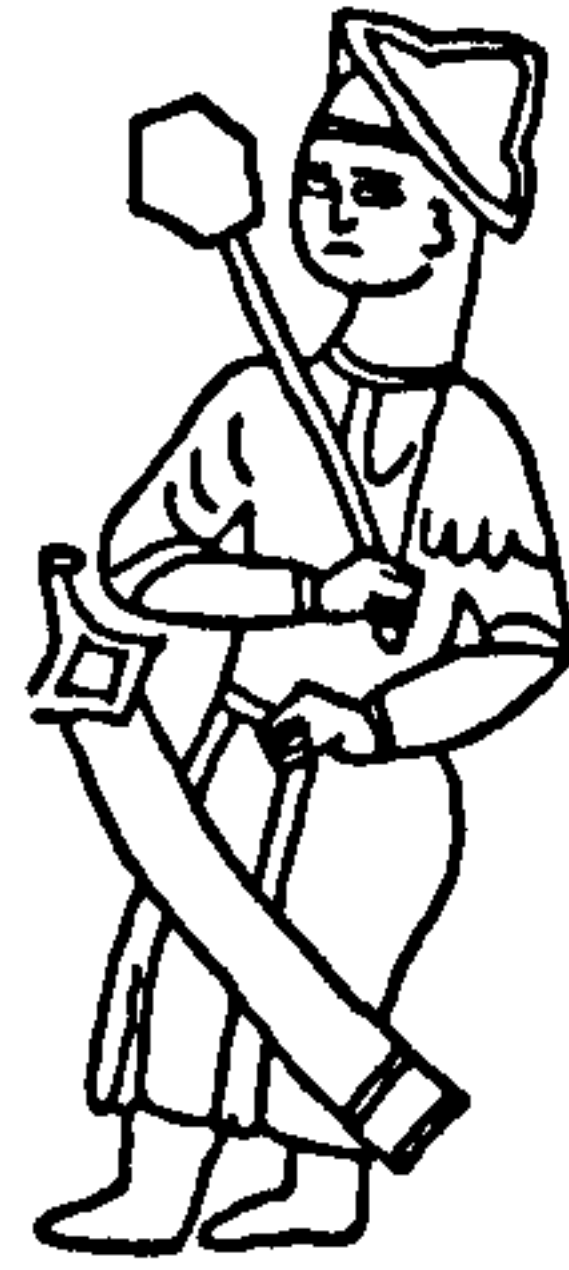
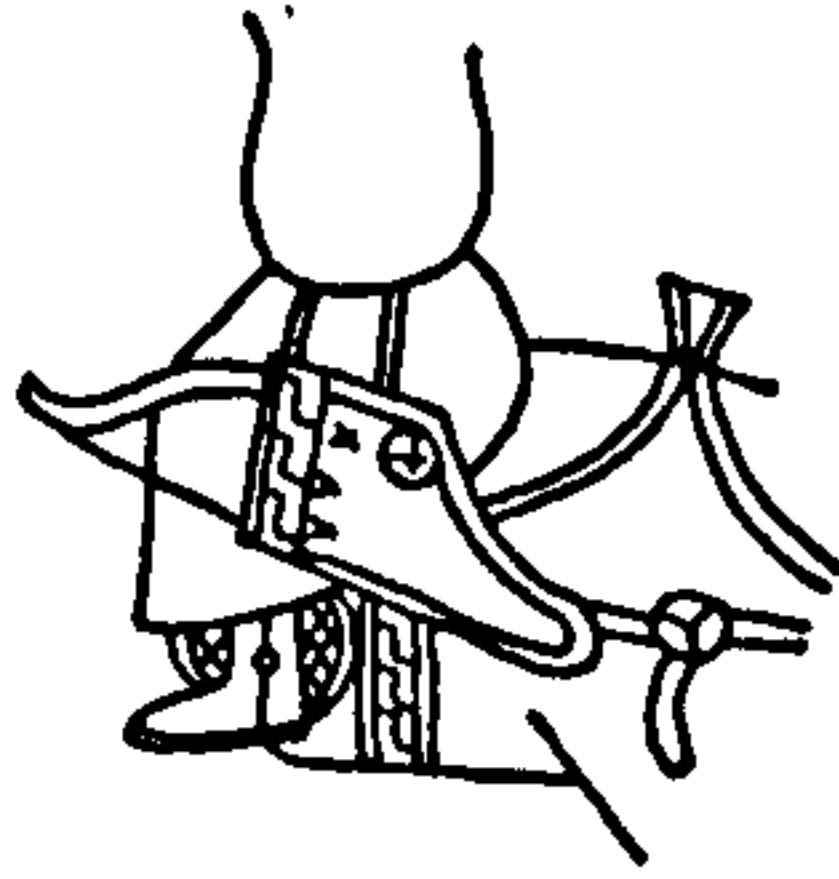
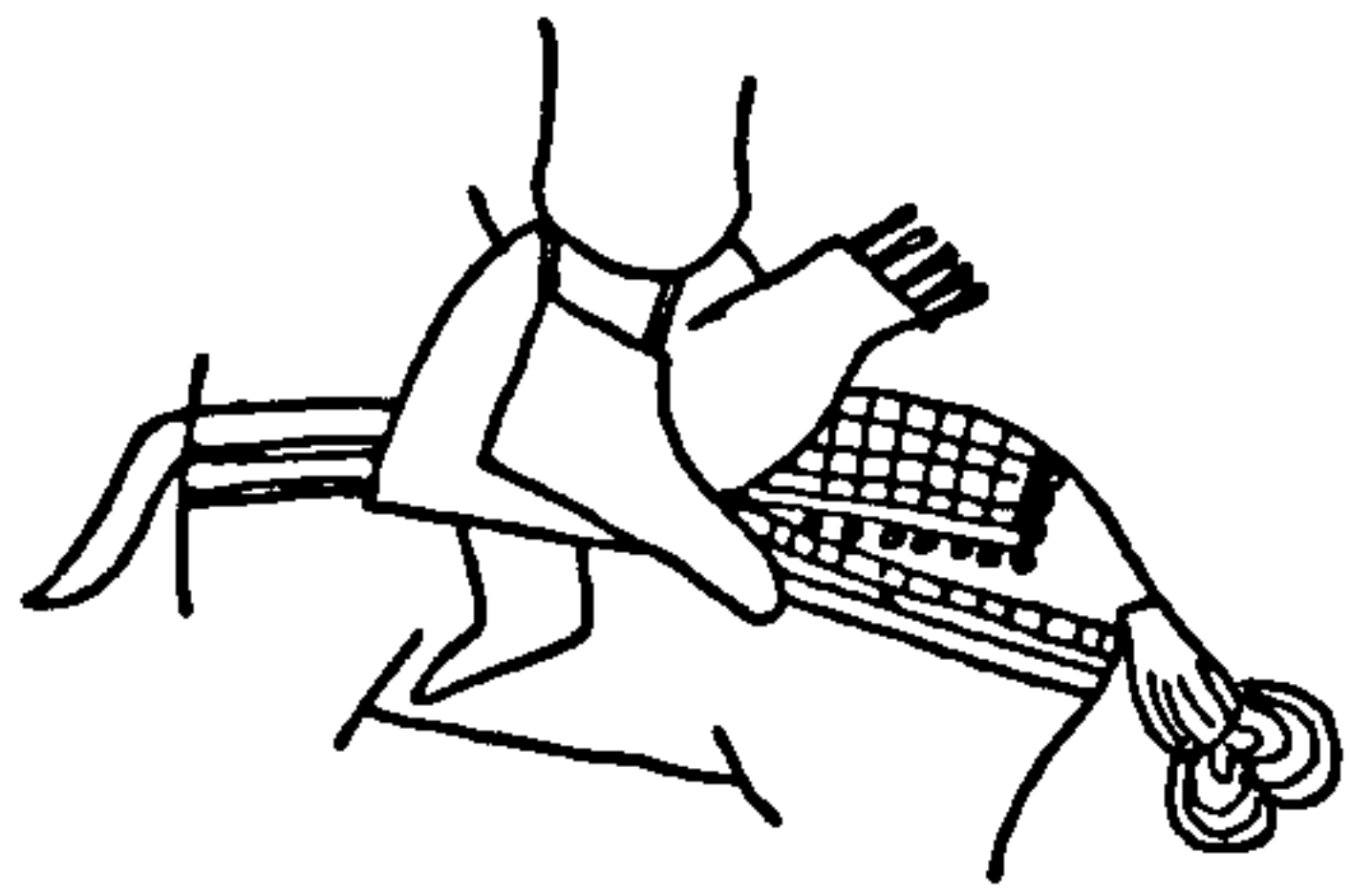
650A



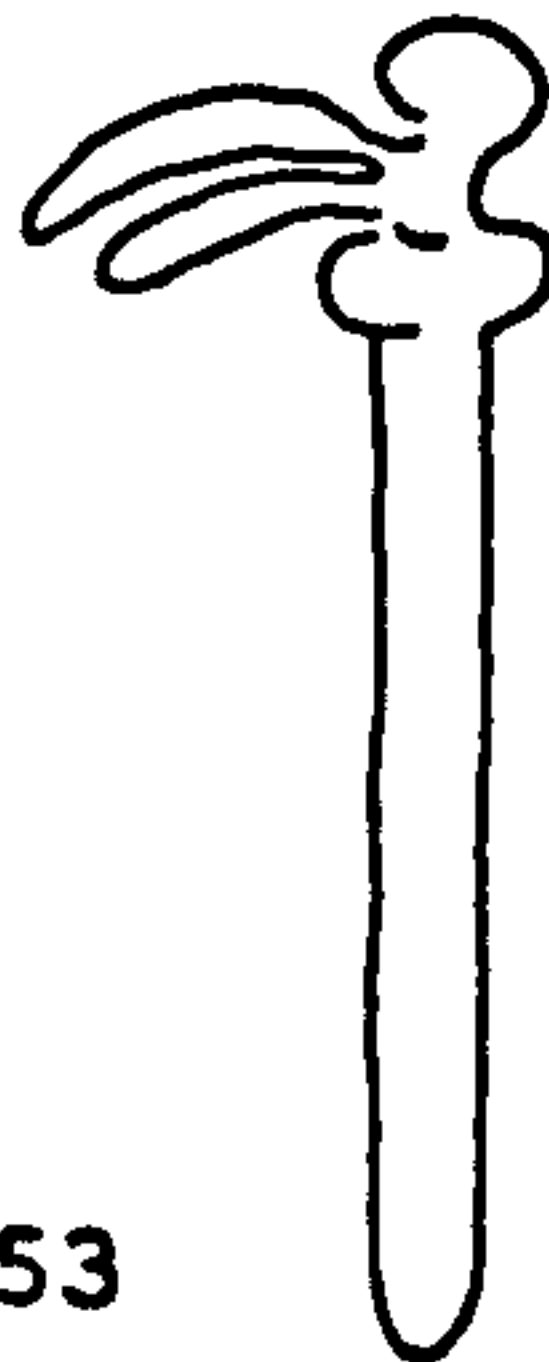
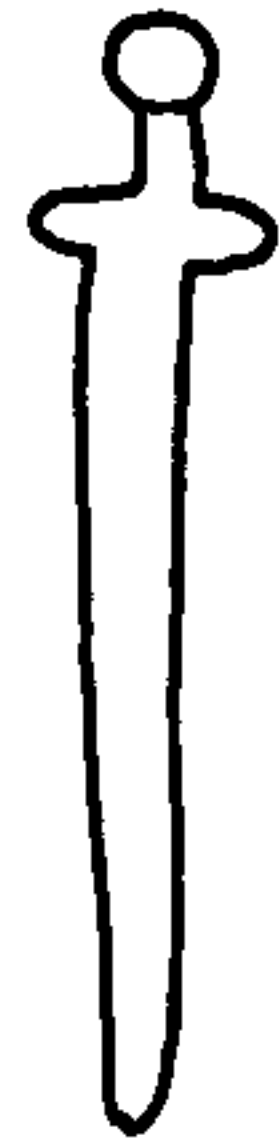
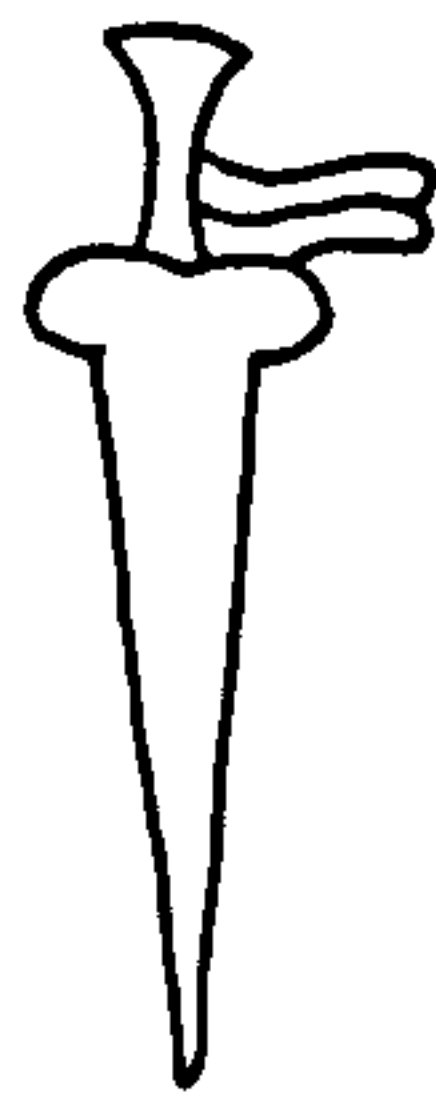
650B



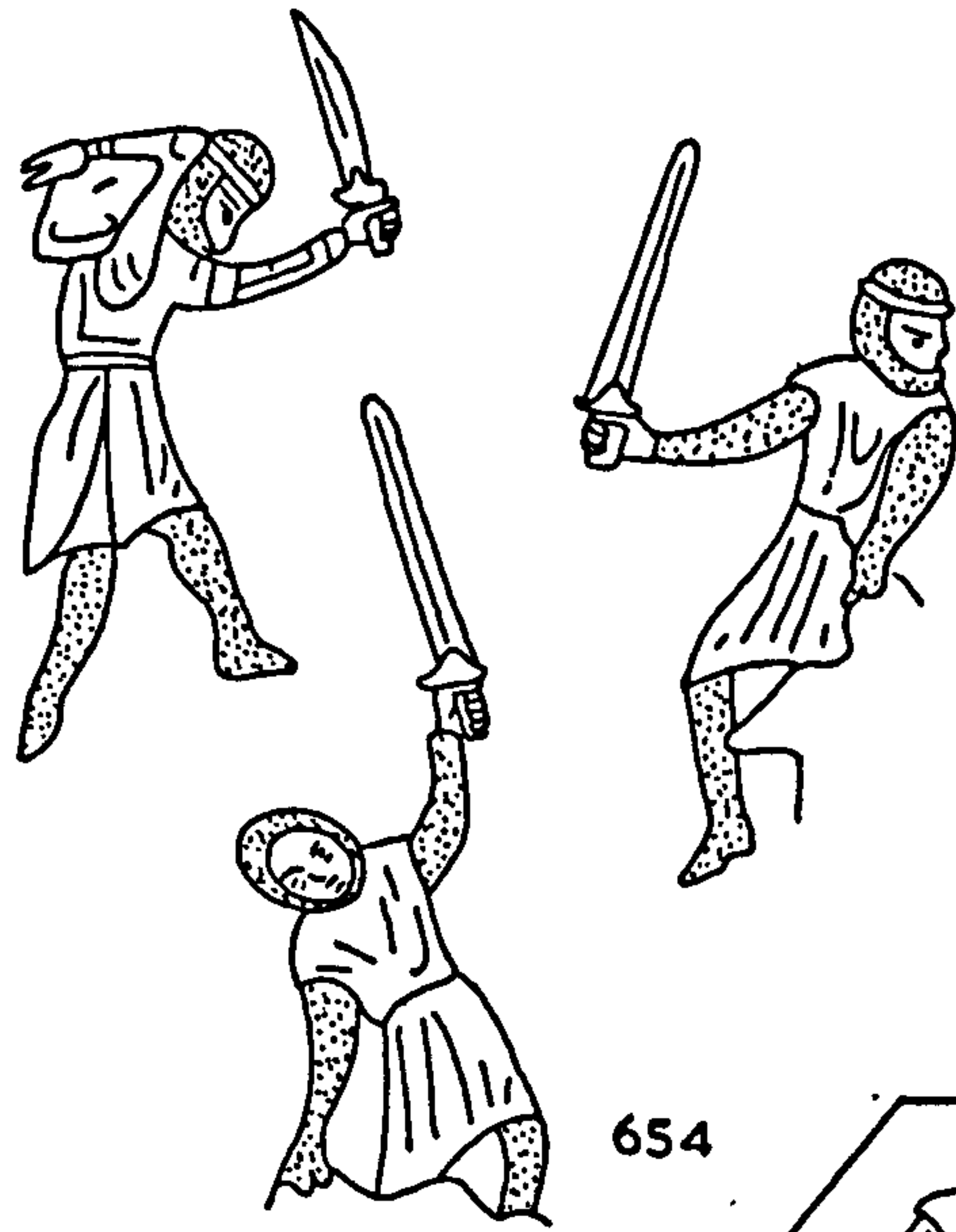
651



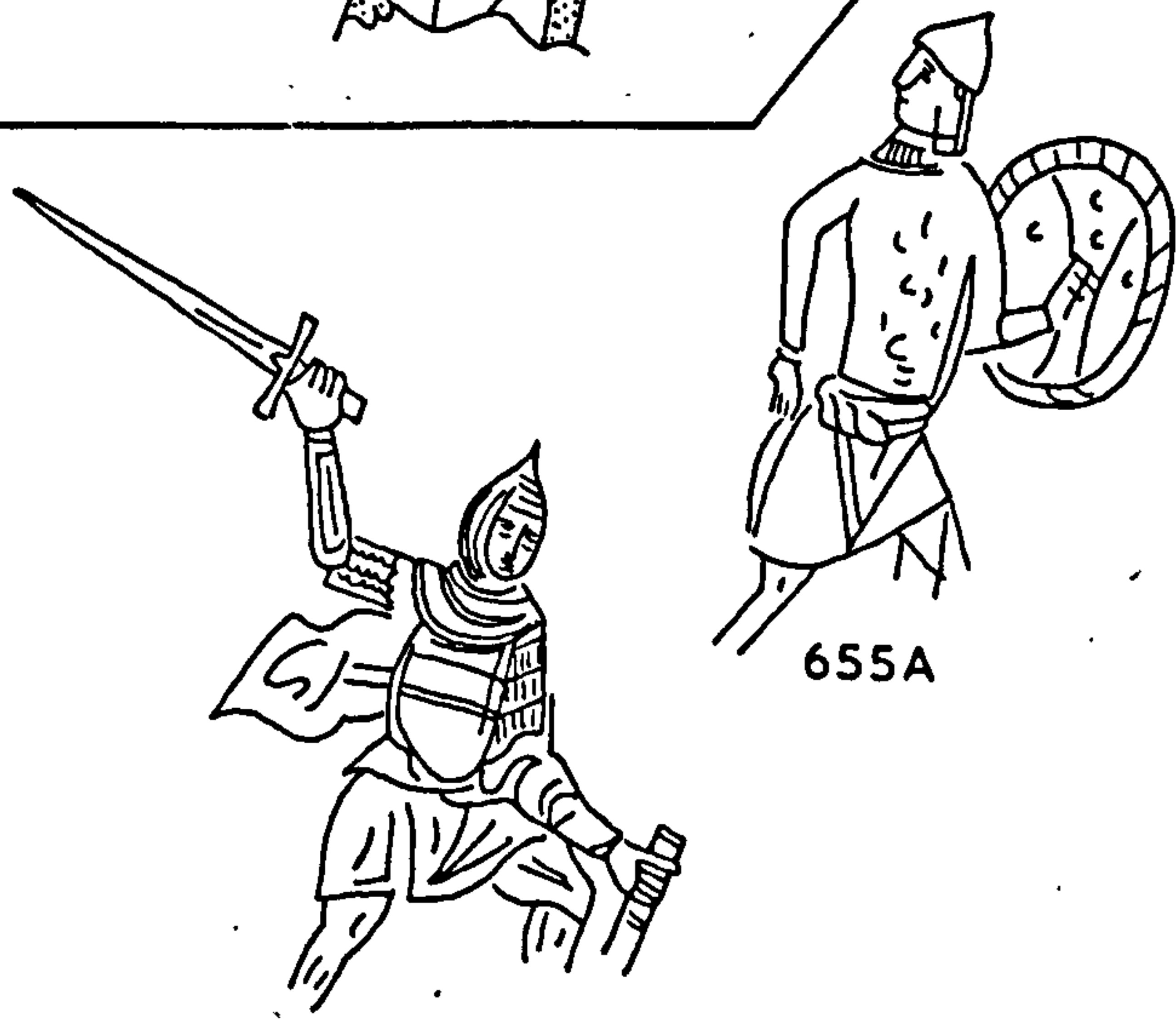
652



653



654



655A

655B



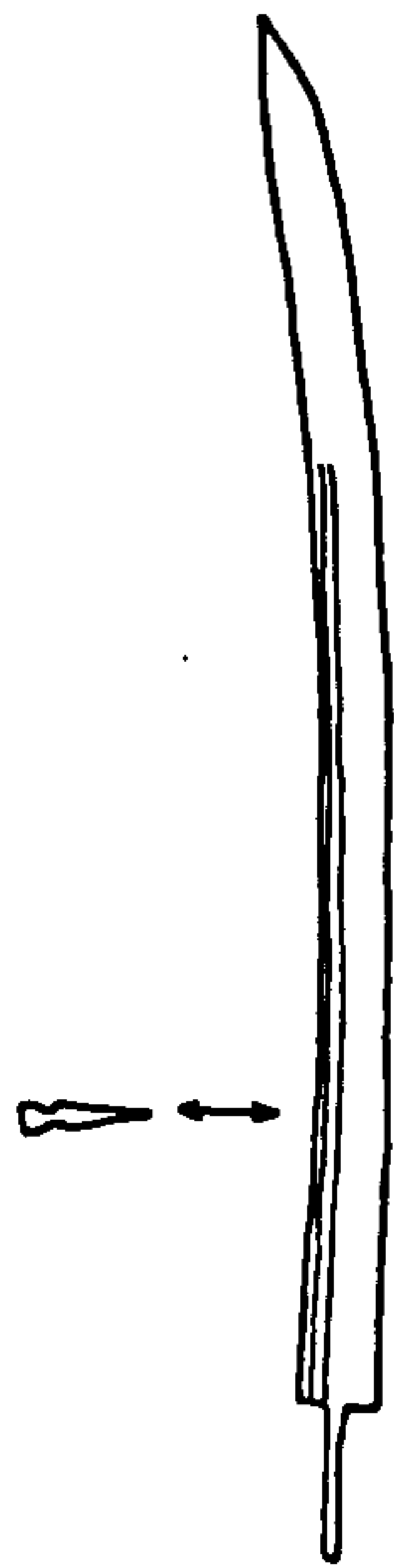
656



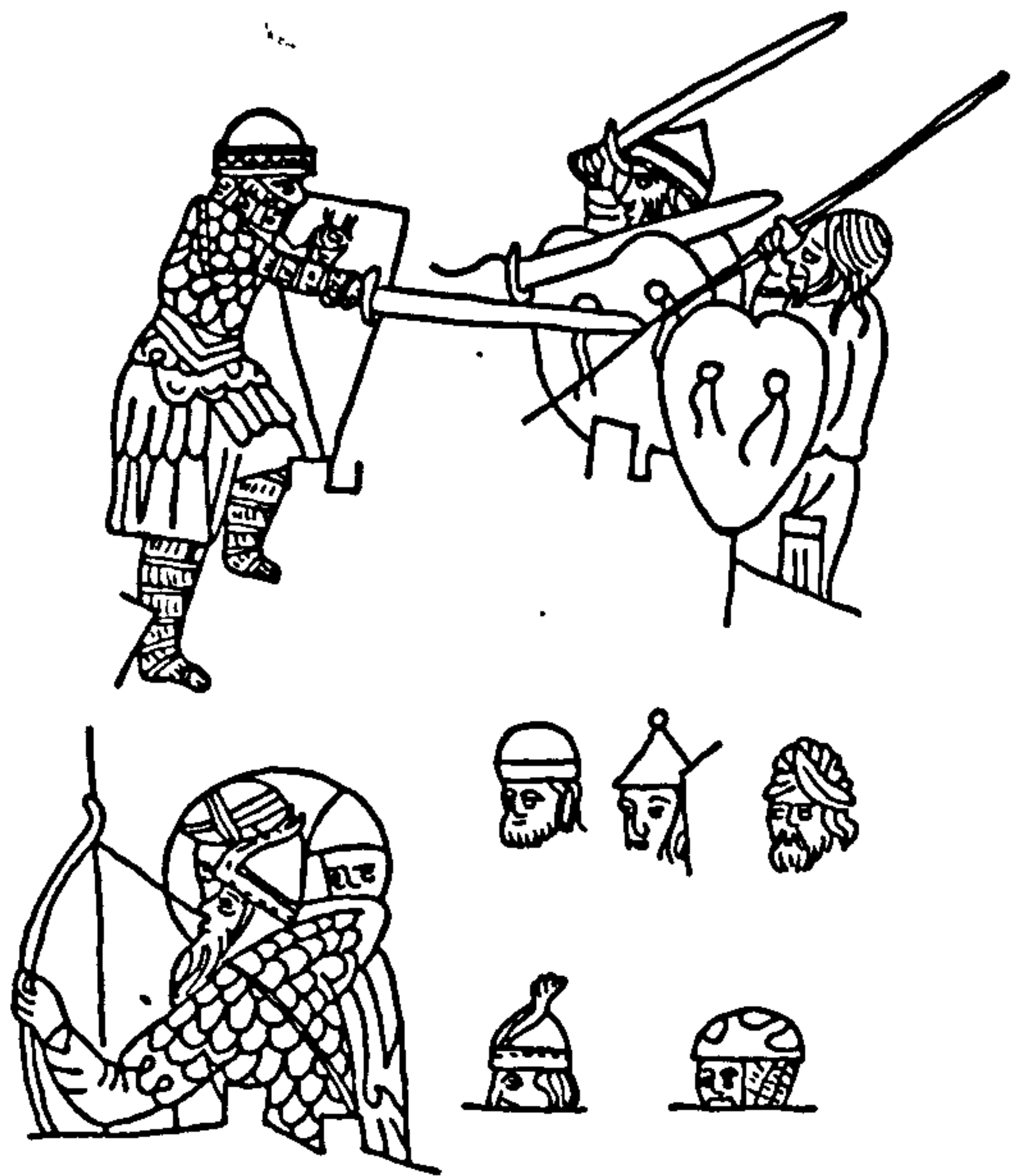




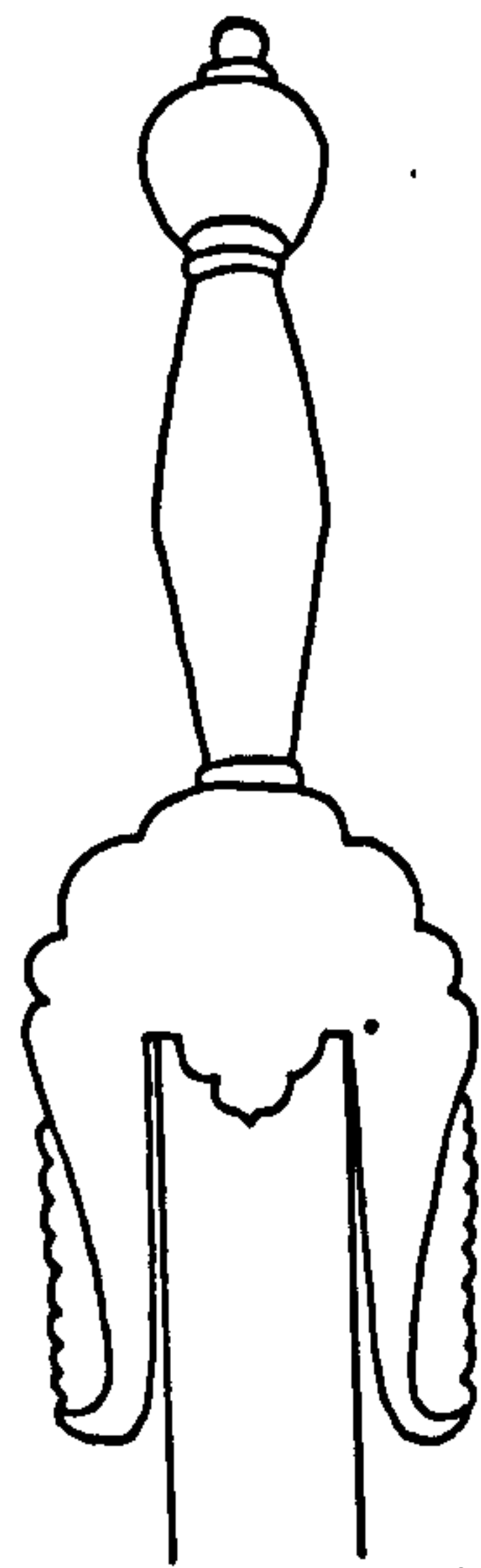
657



658



659



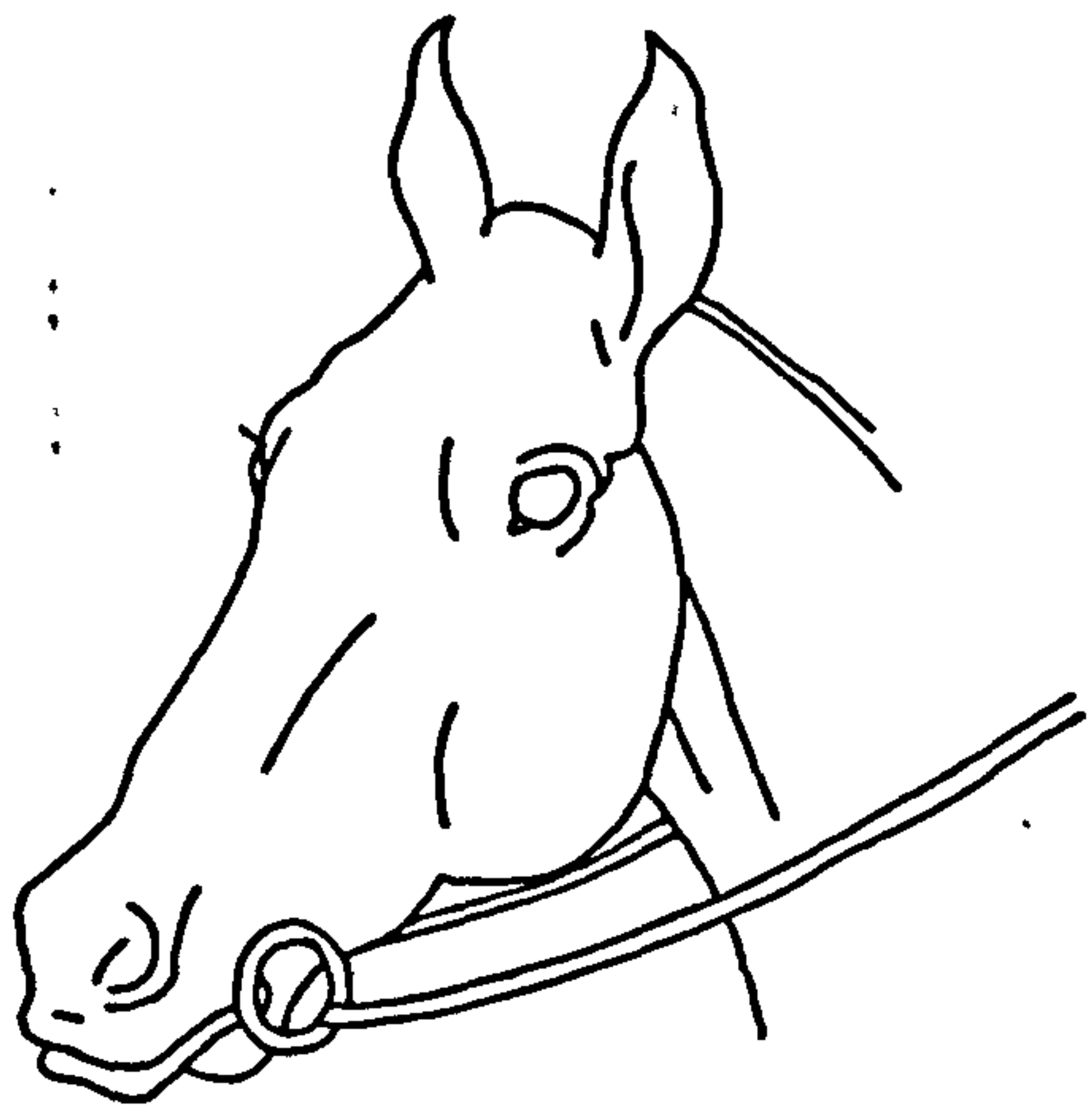
660



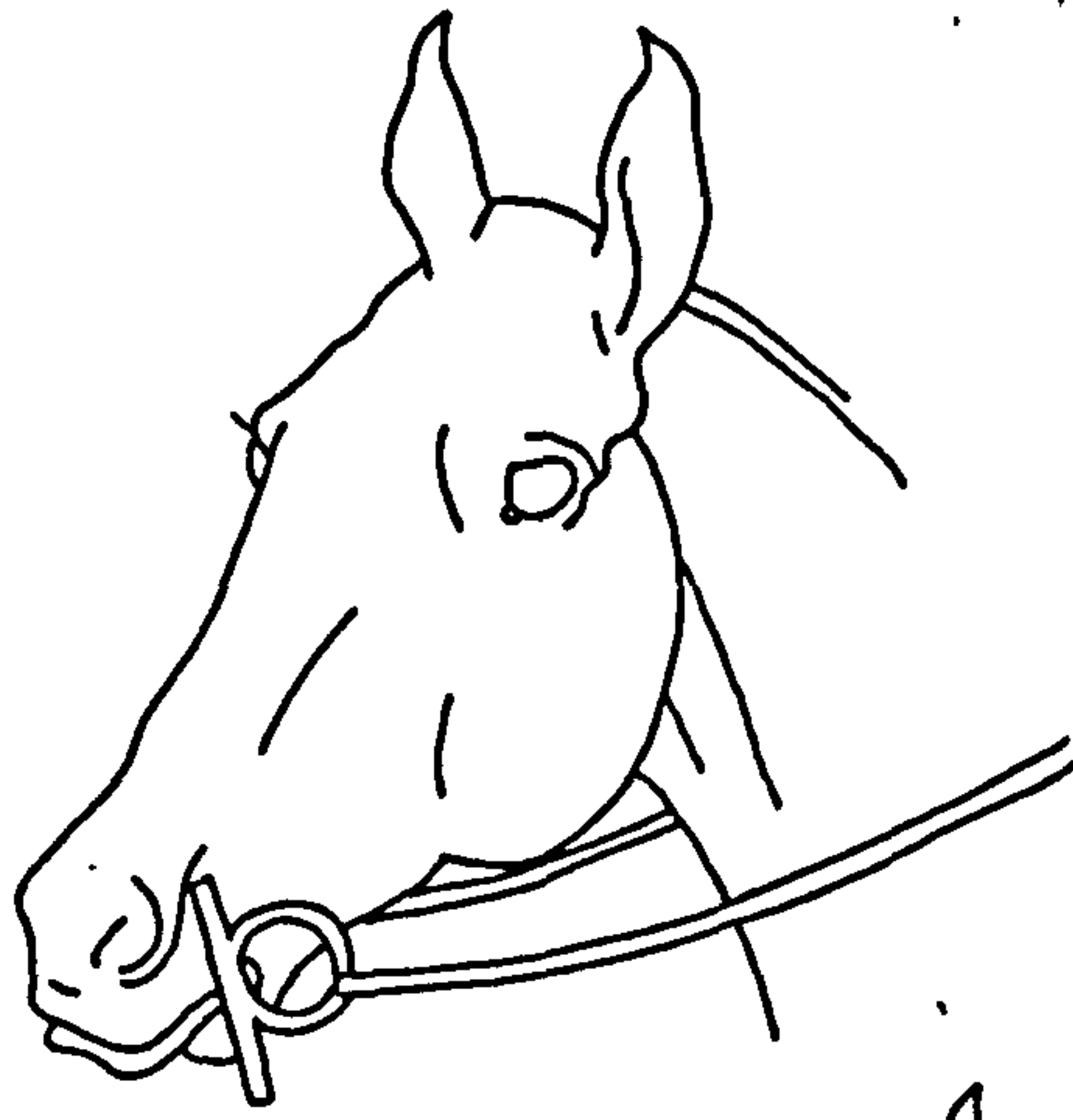
661



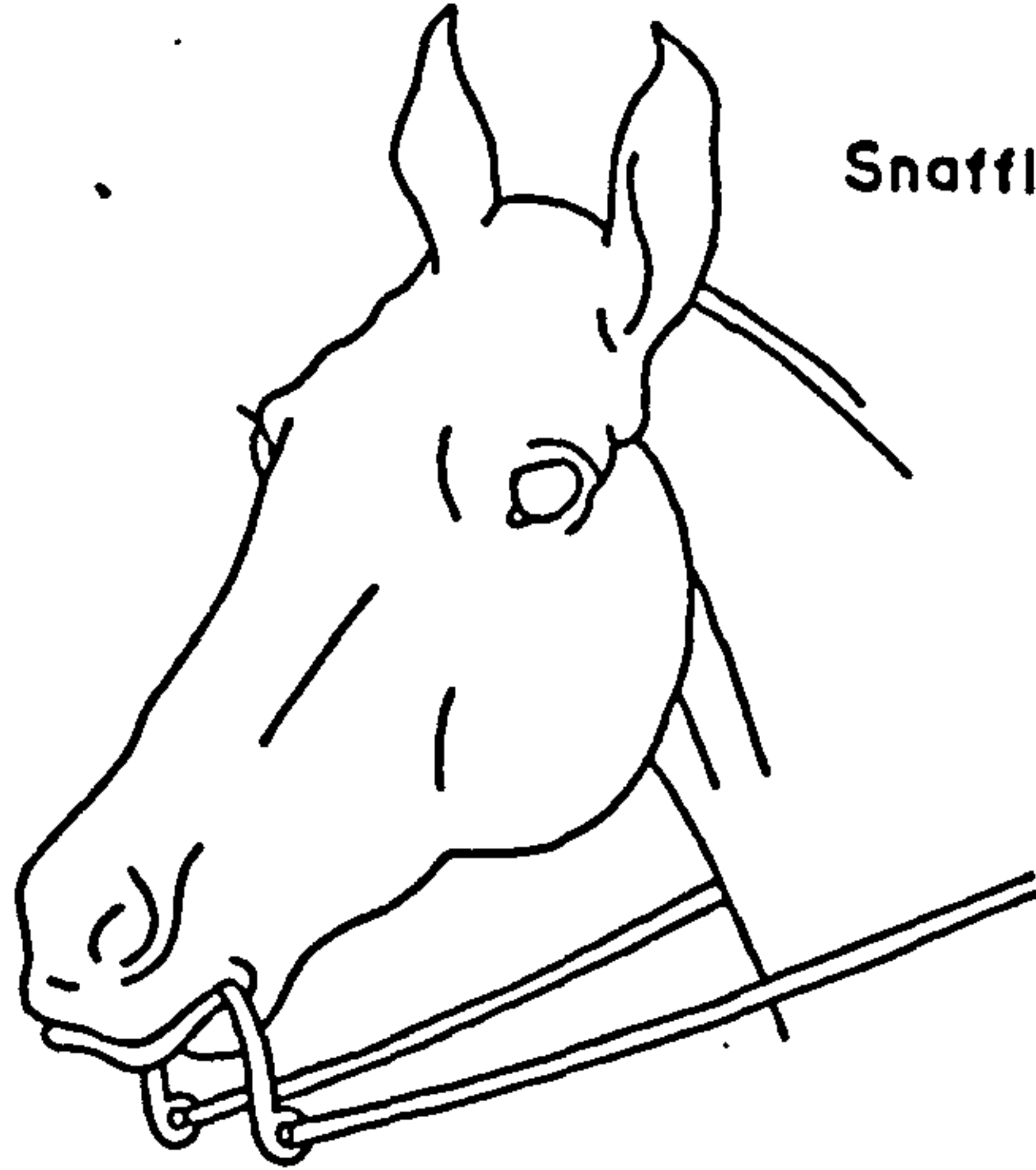
662



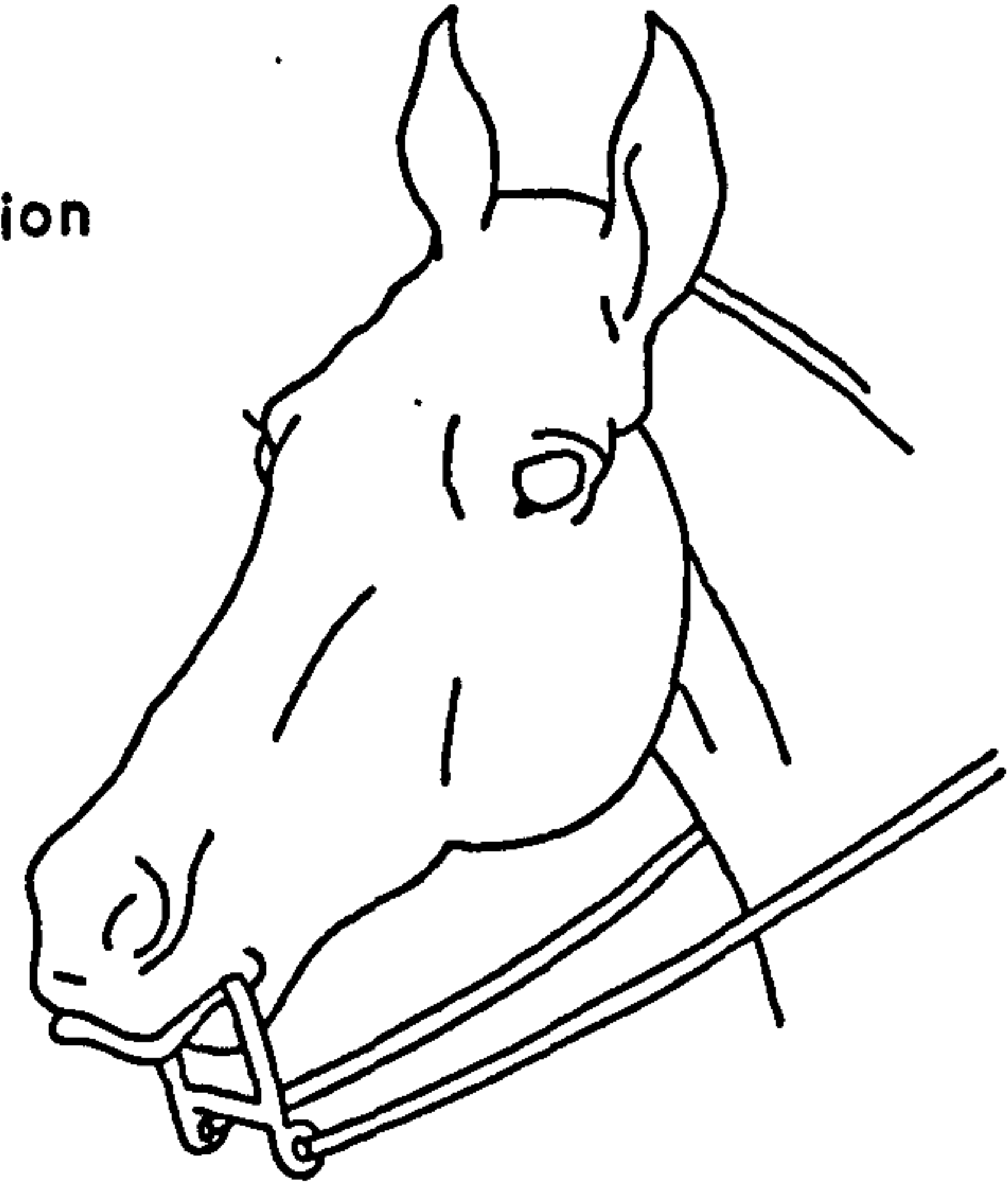
Snaffle



Snaffle-Psalion

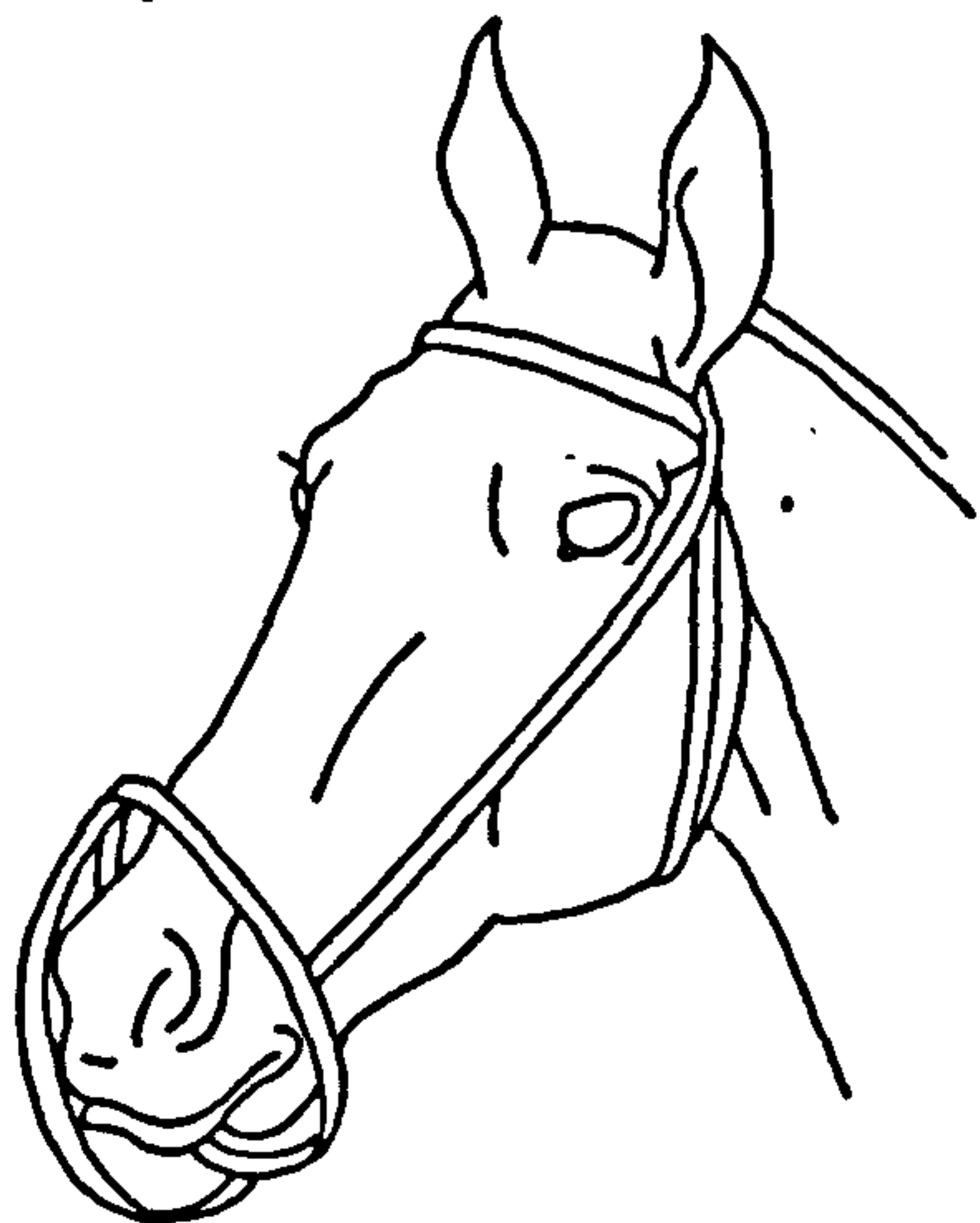


Curb

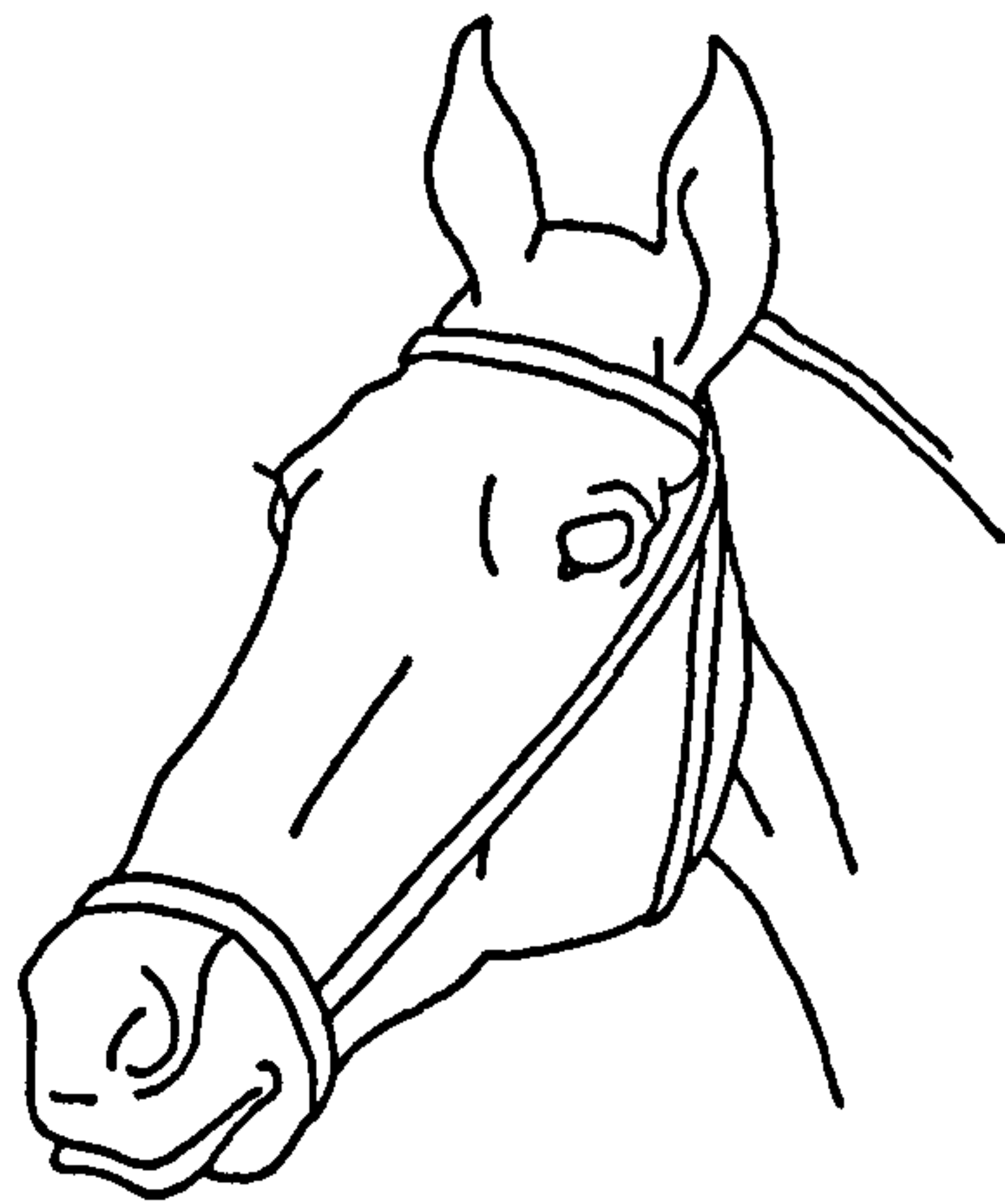


Curb-crossbar

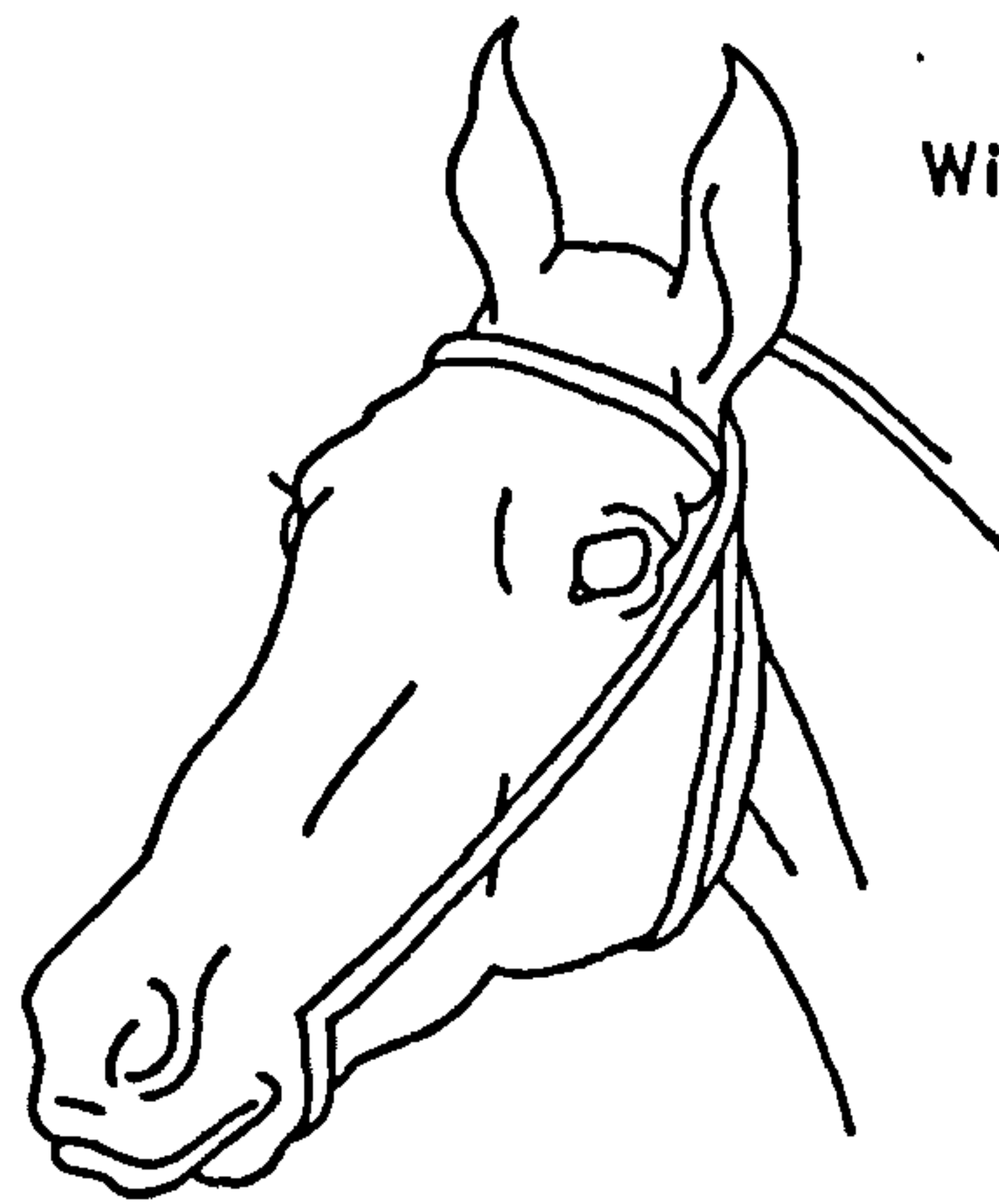
663



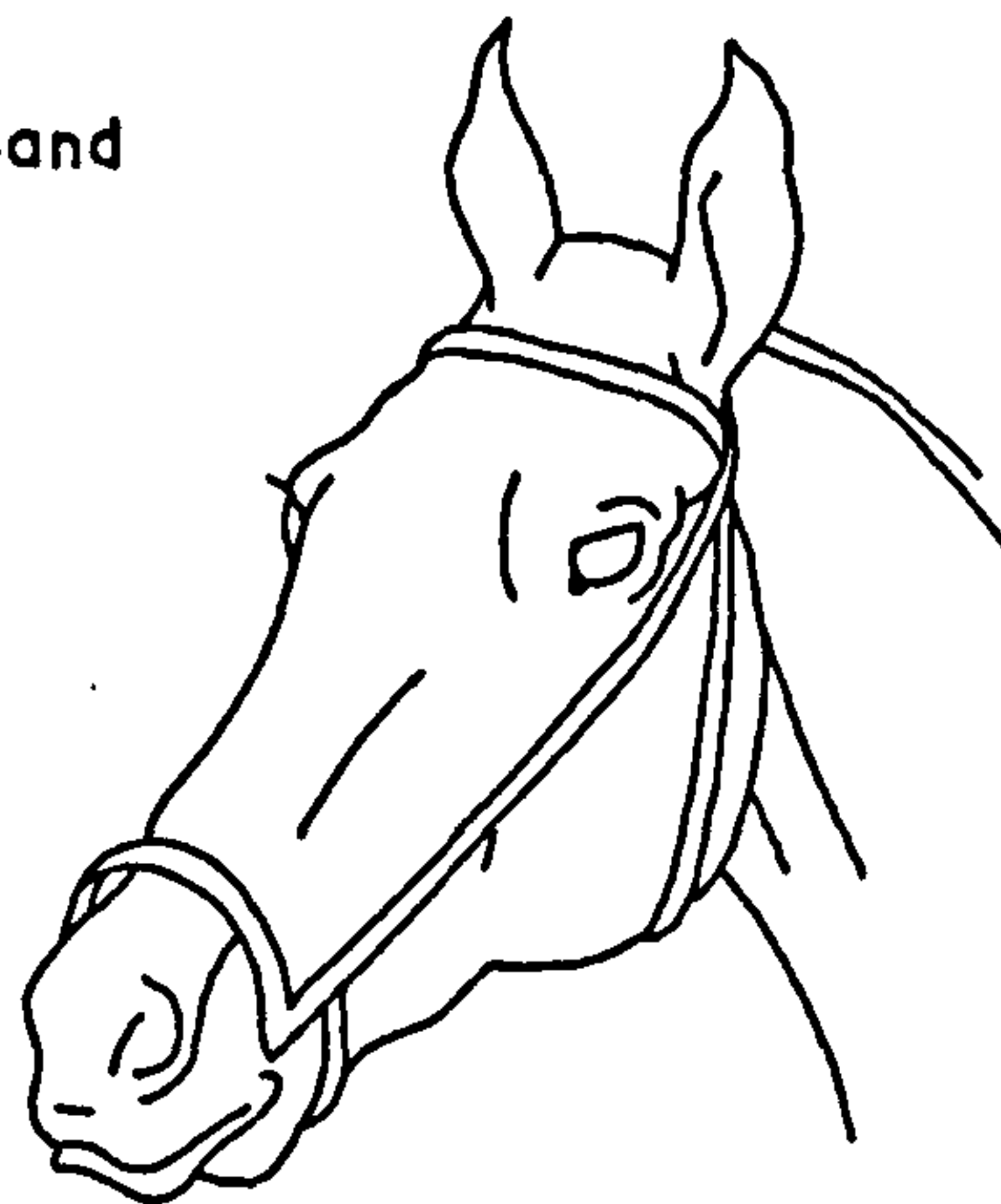
Muzzle



With Noseband

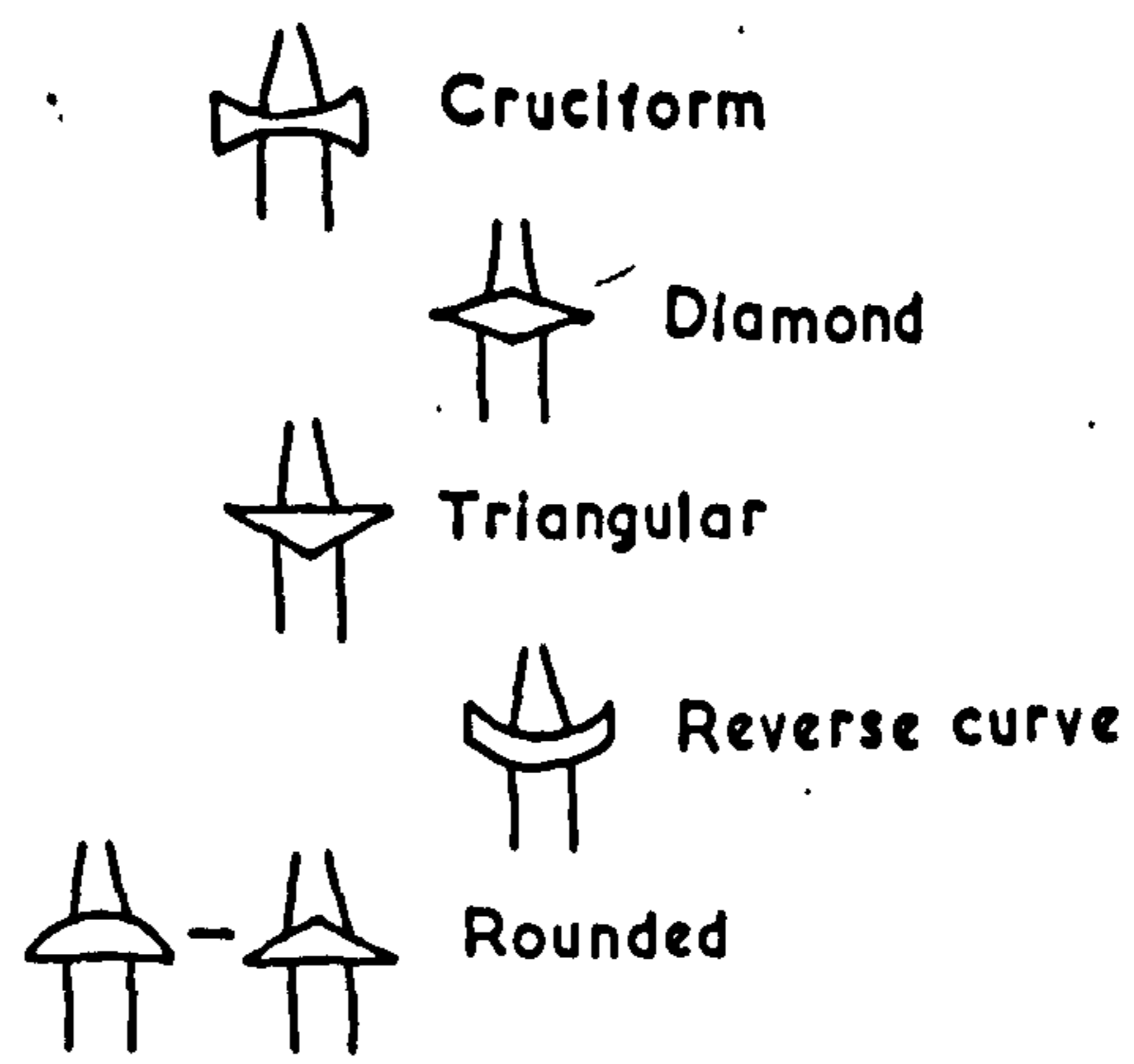
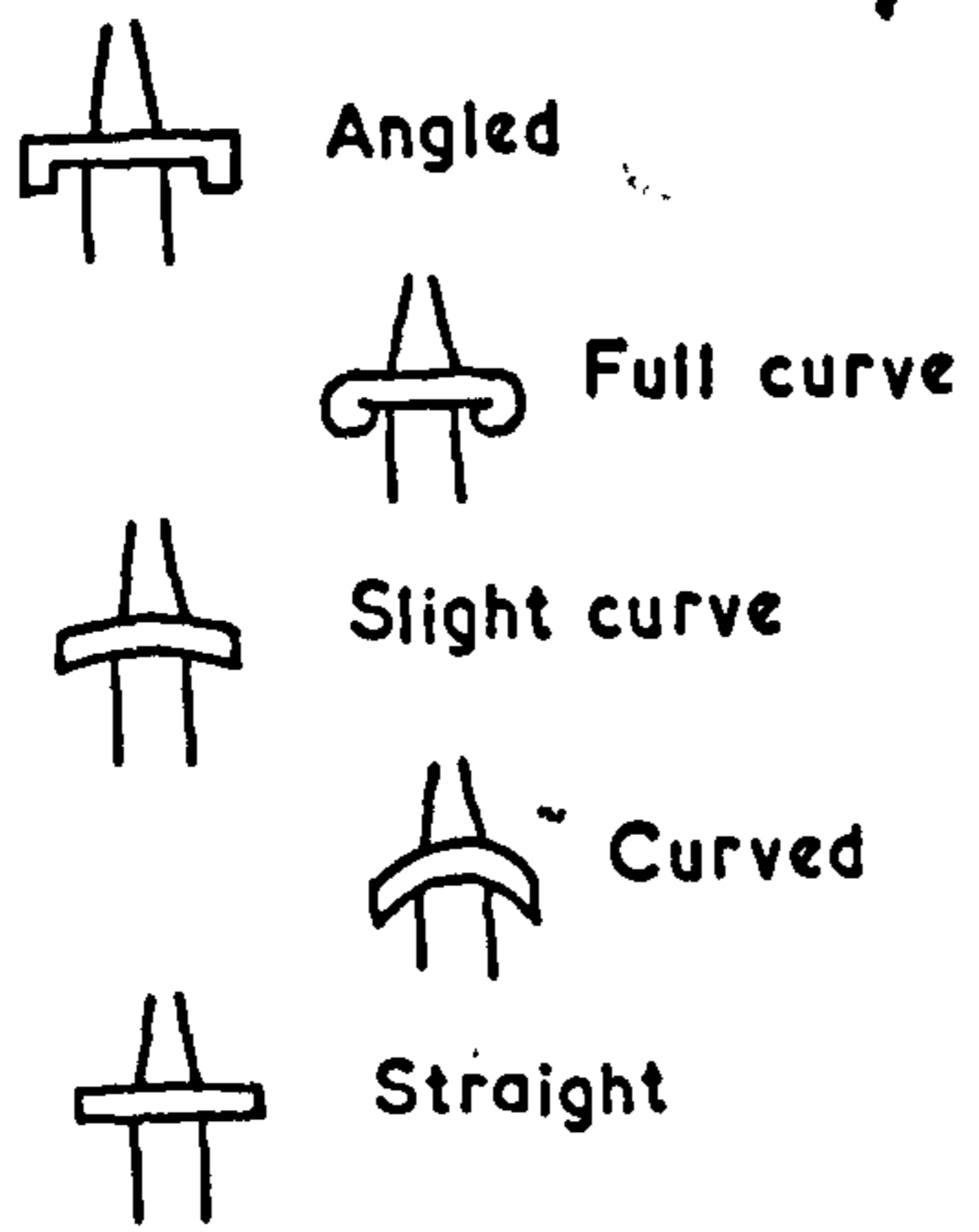


Without Noseband

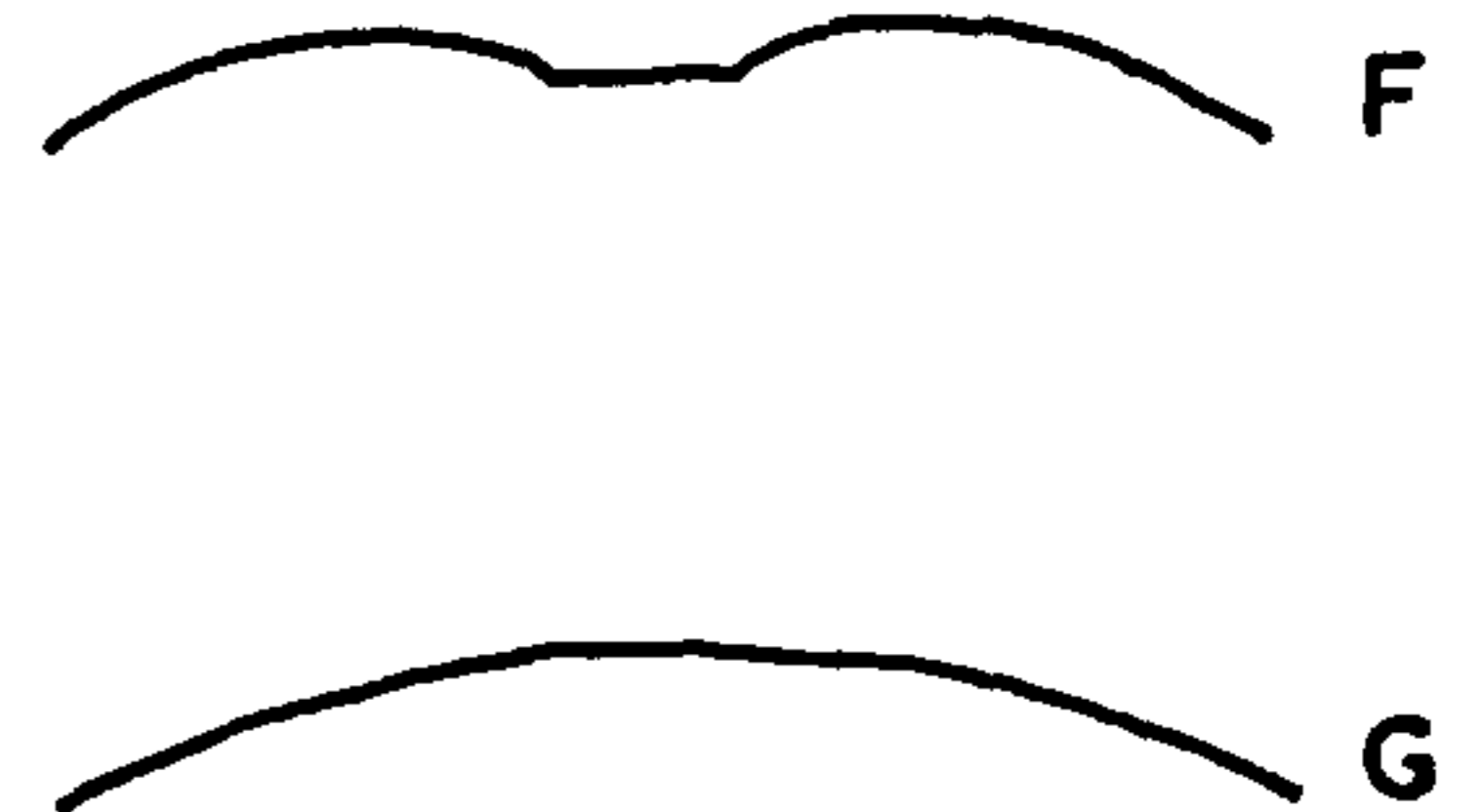
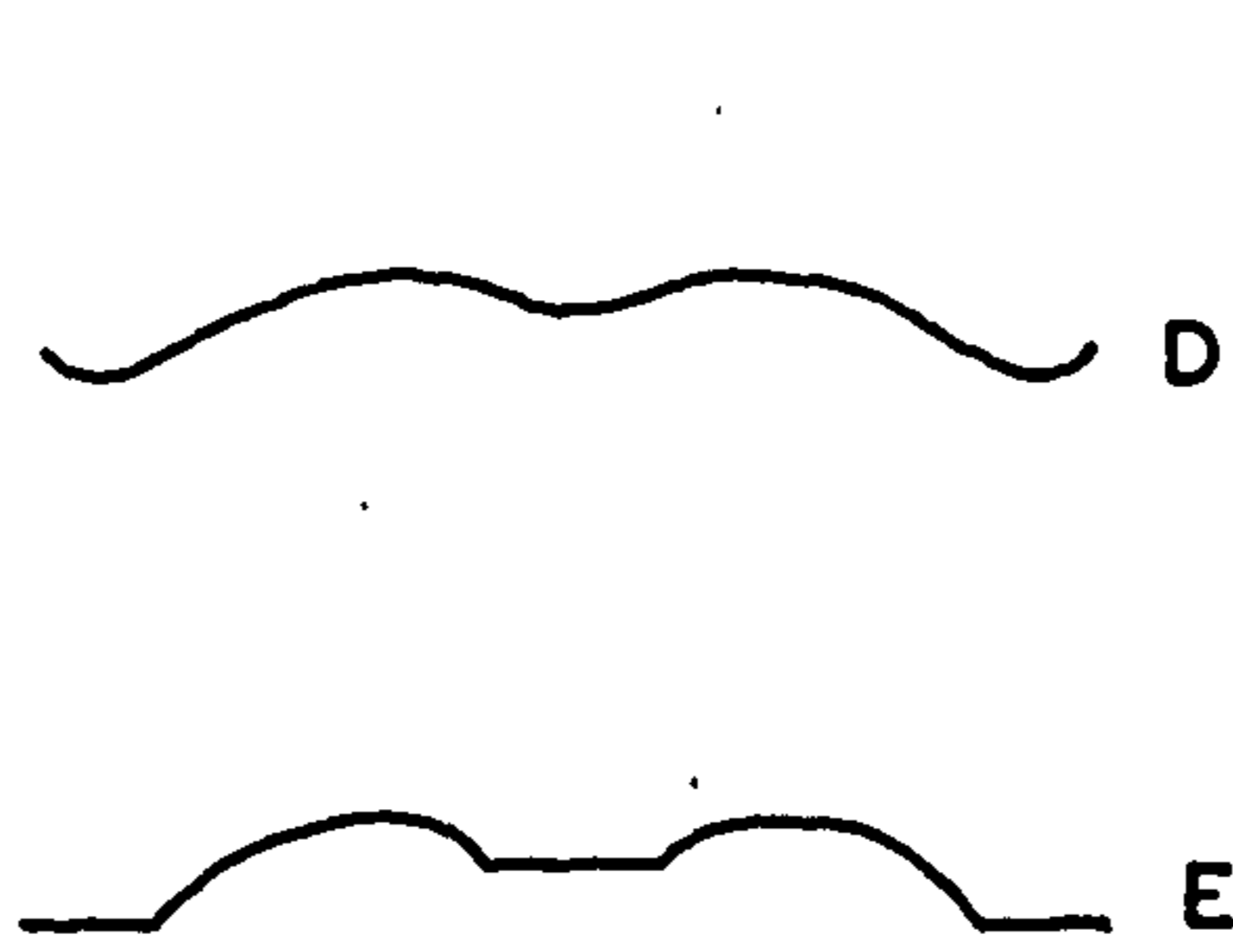
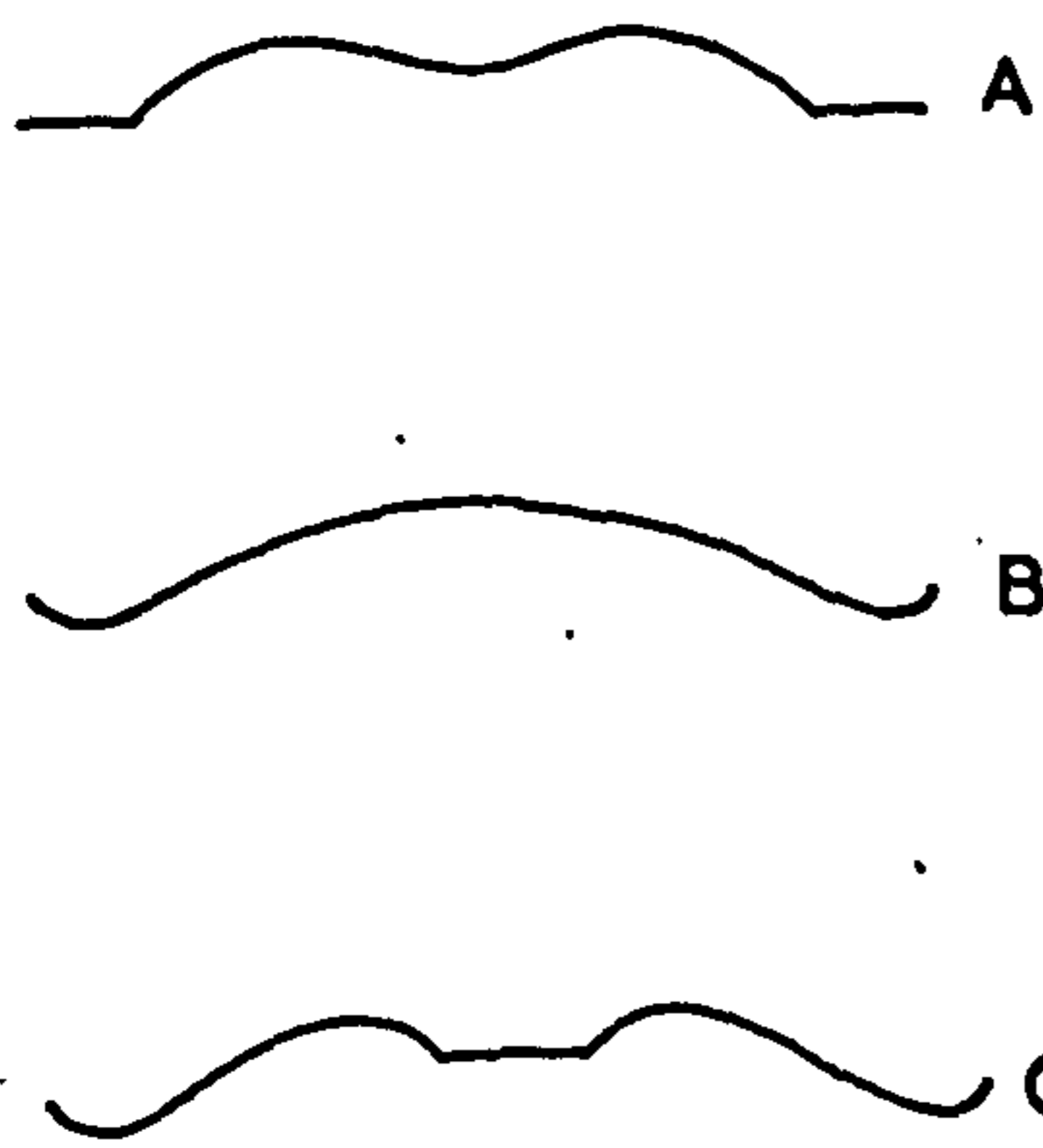


Rigid Noseband

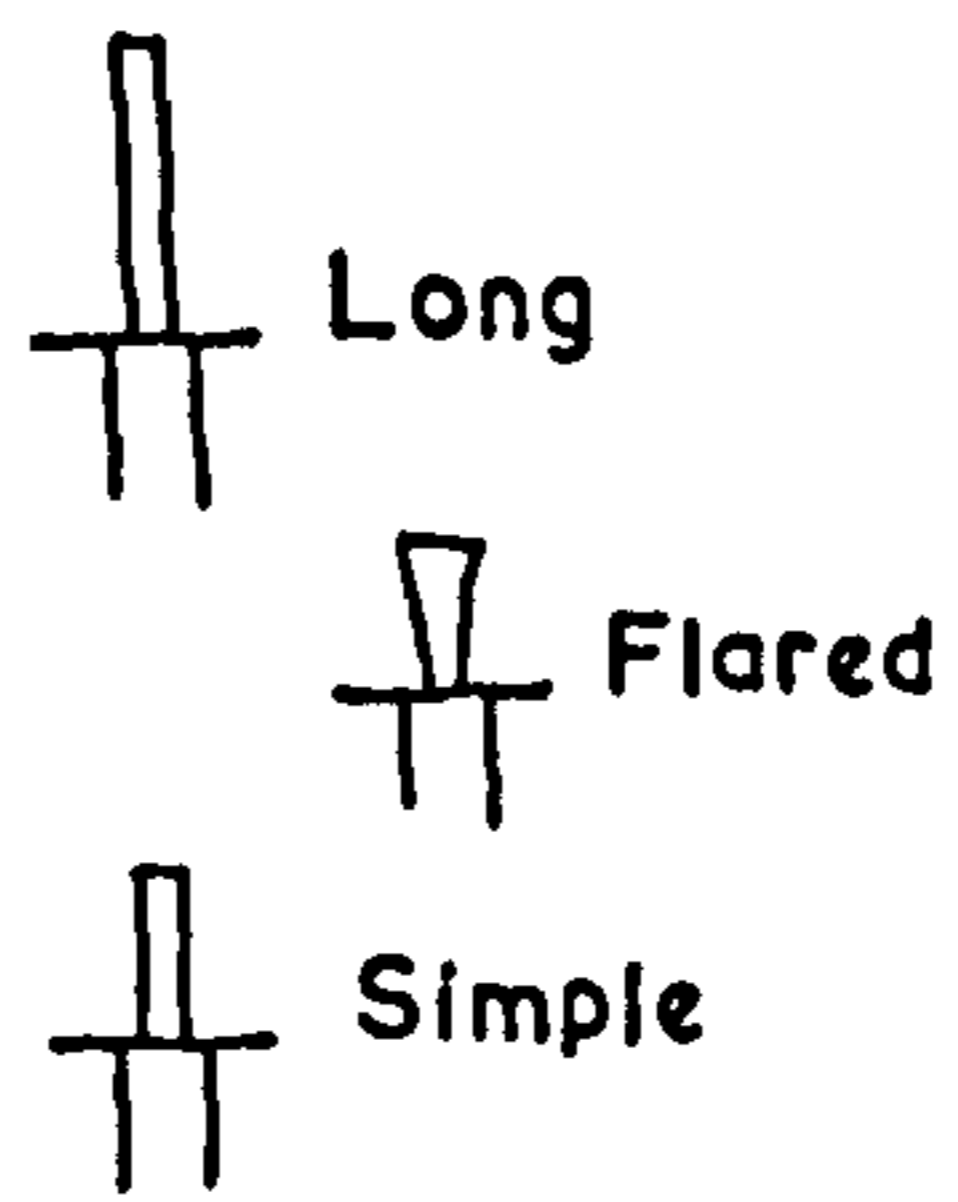
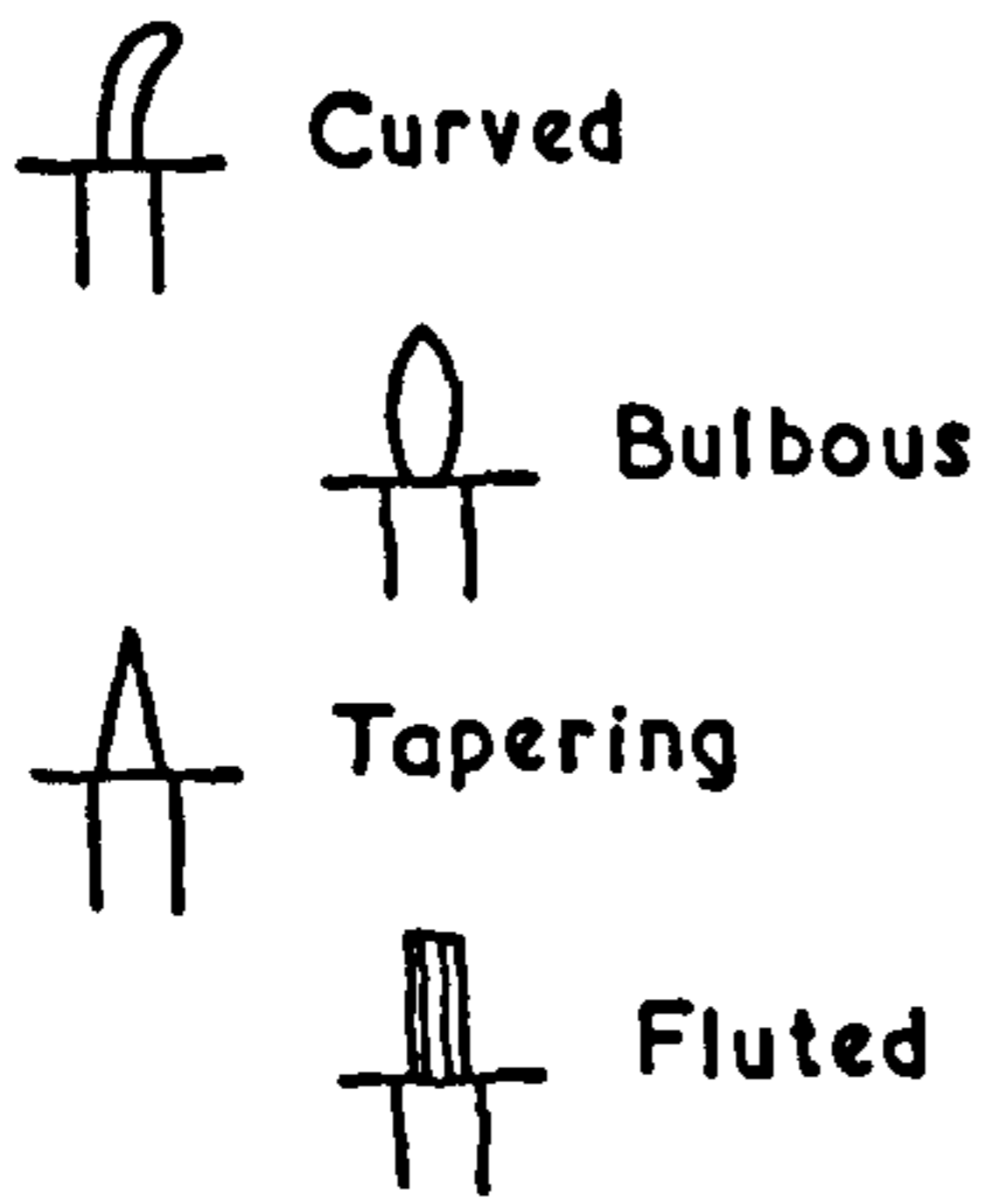
664



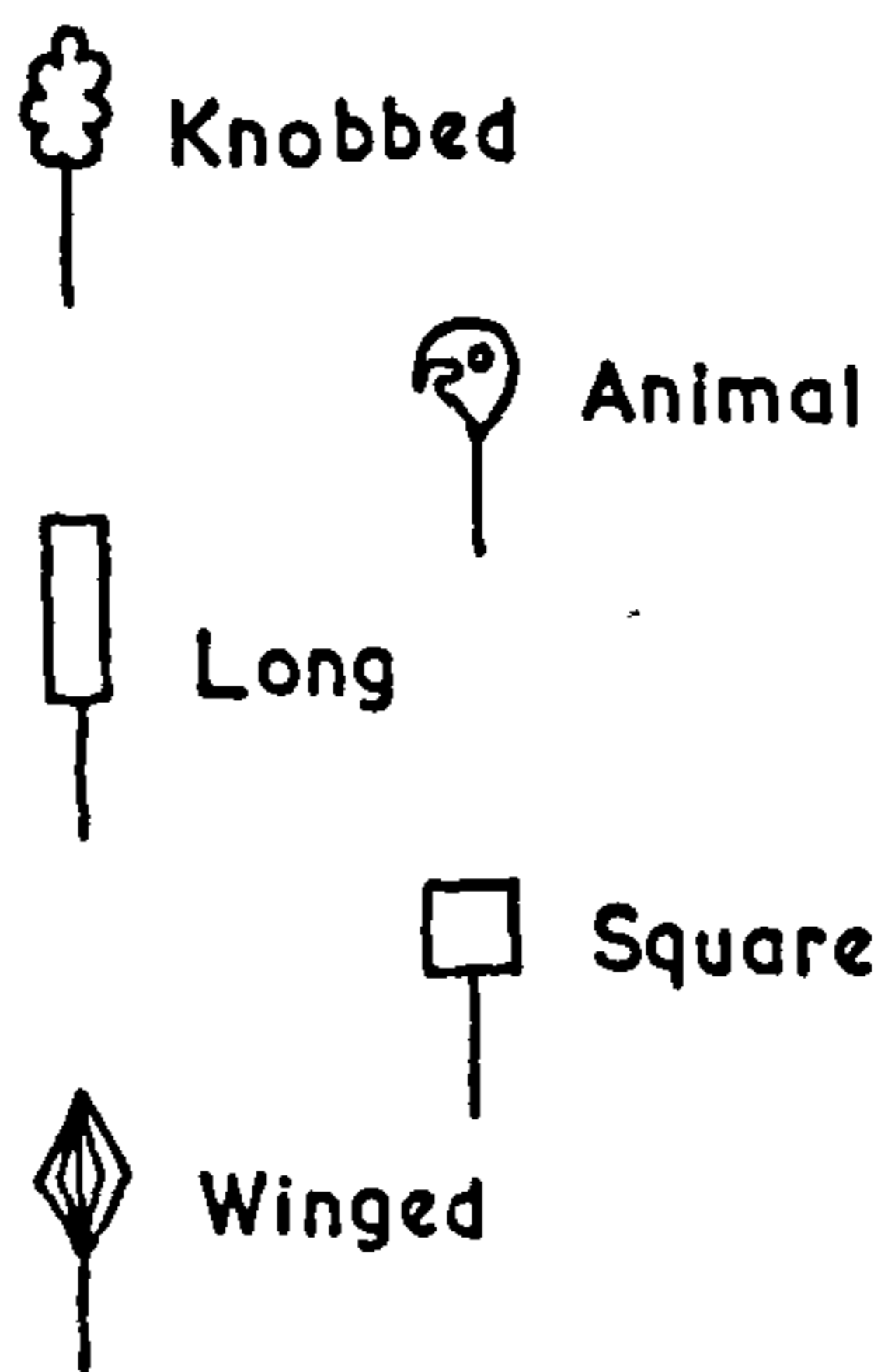
665



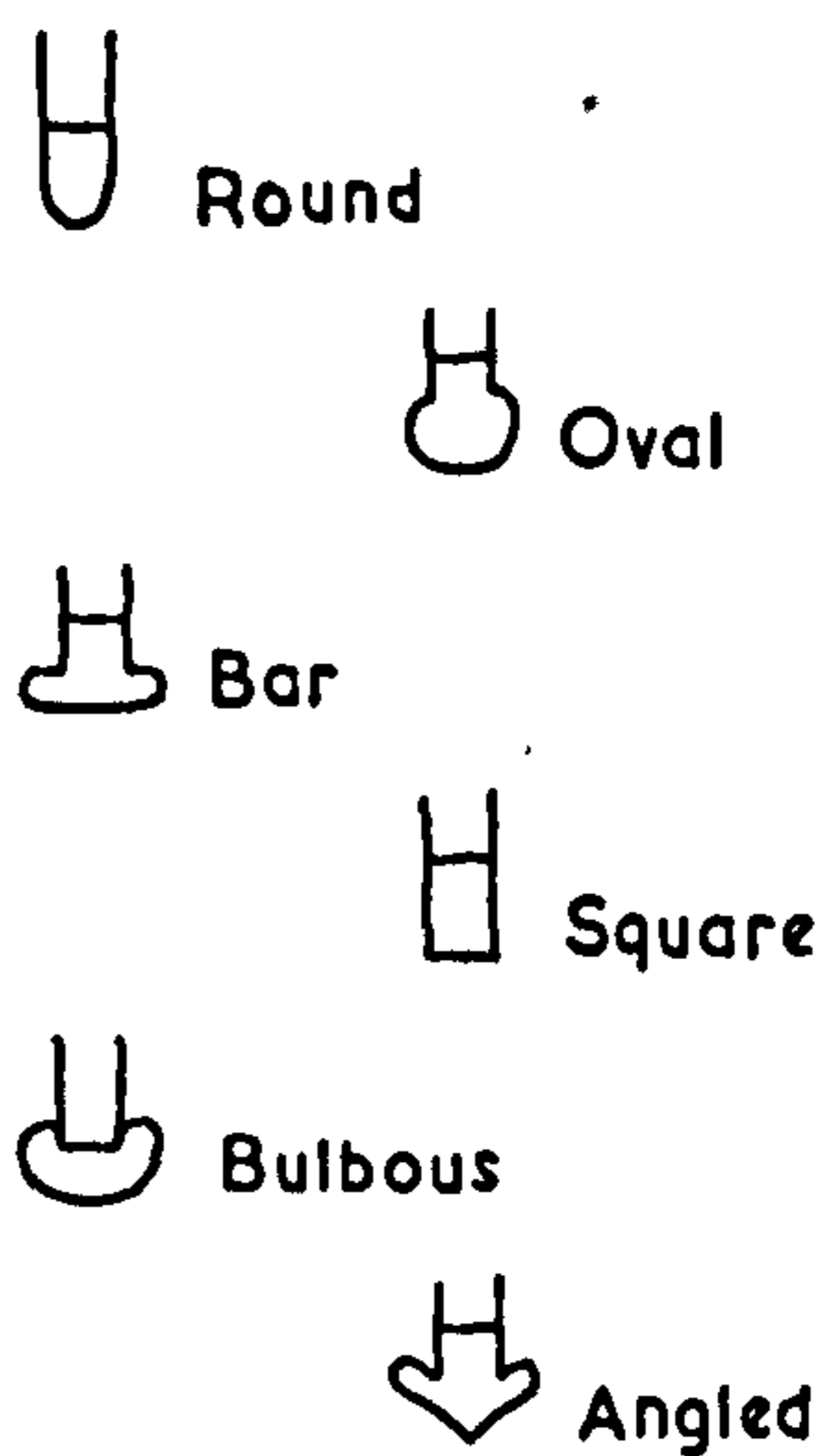
666



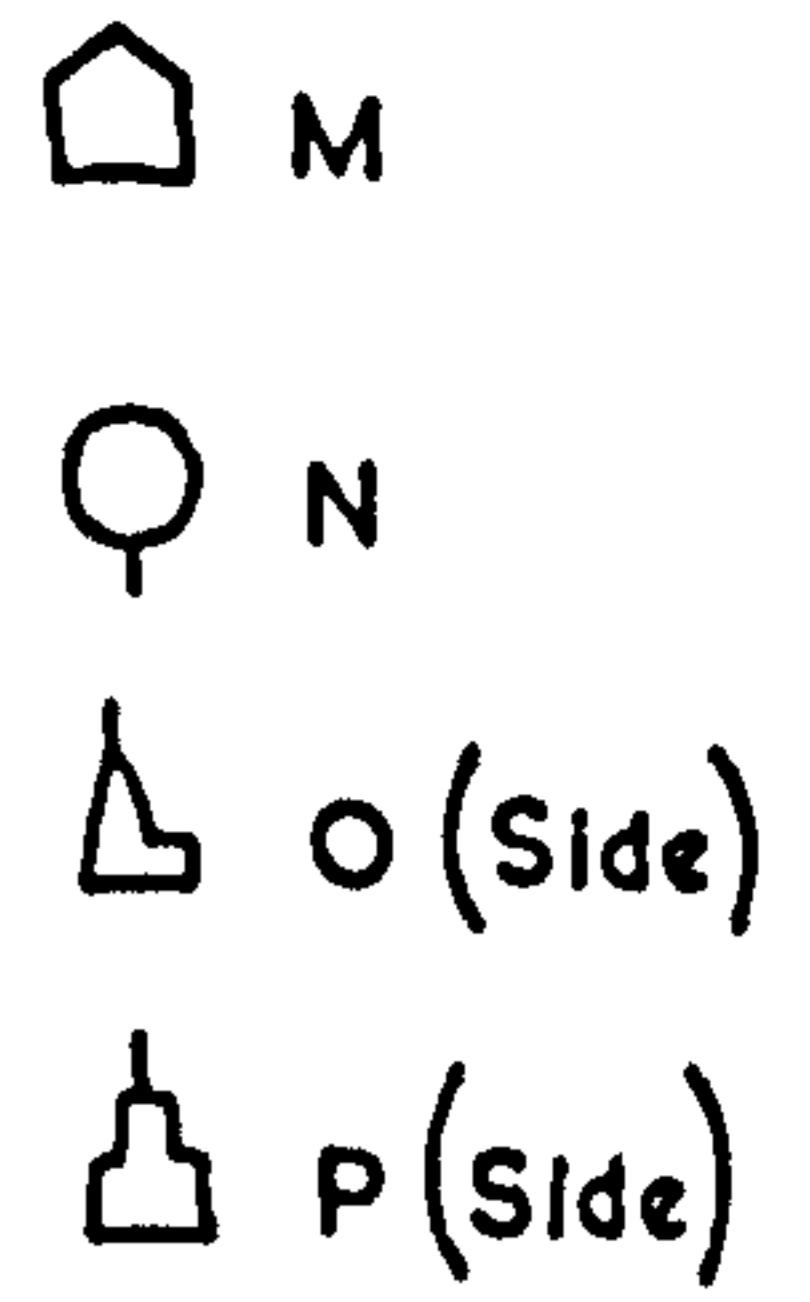
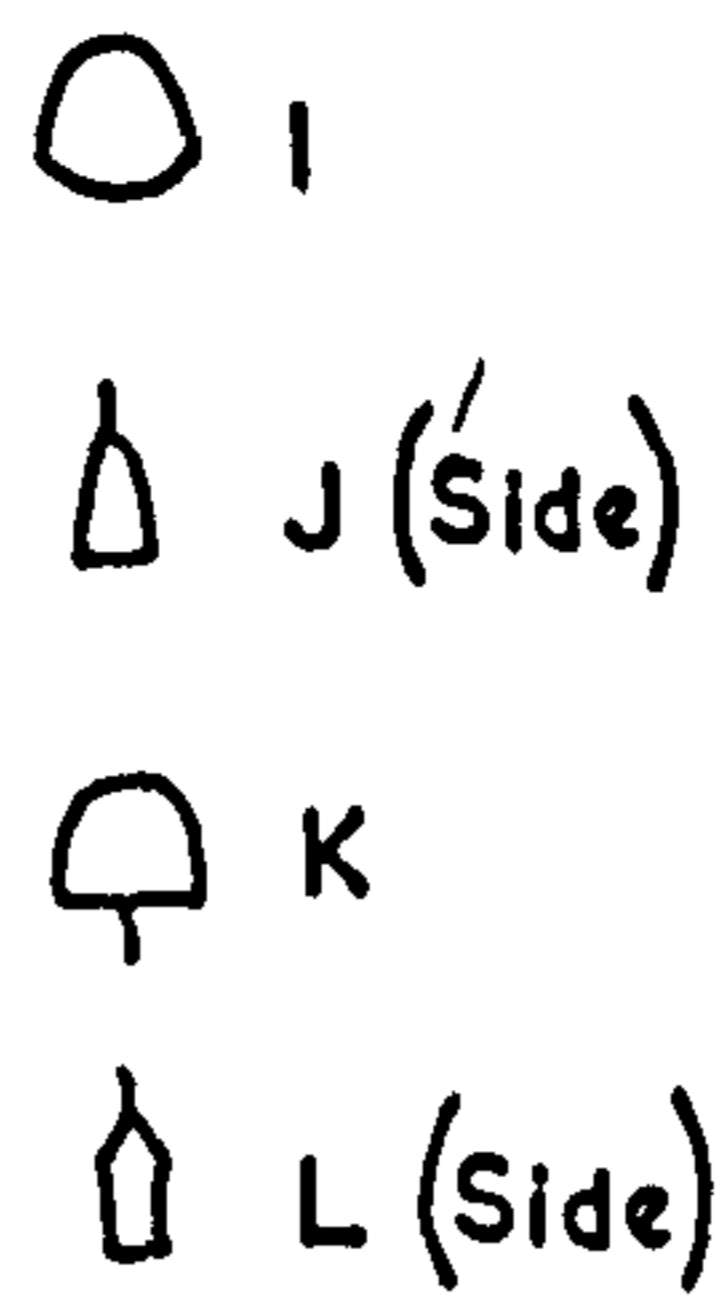
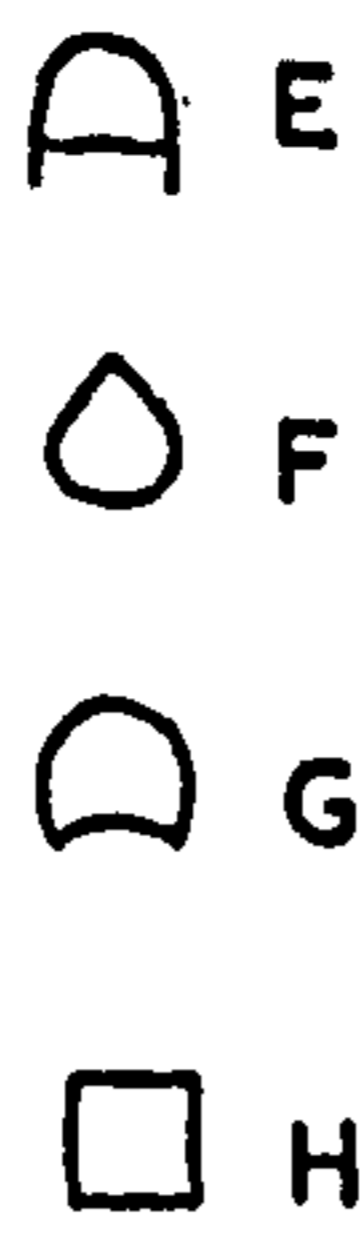
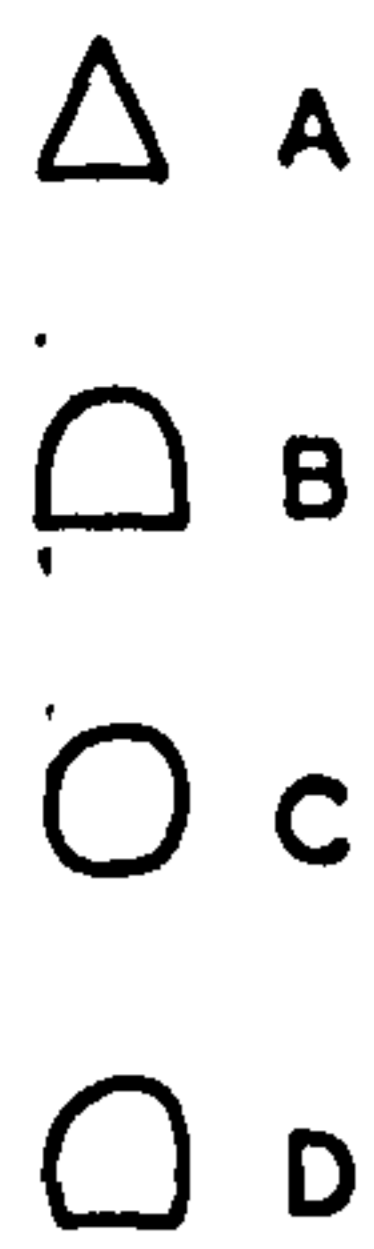
667



668



669



670



Egg



Nut



Ring



Round



Floriated



Bun



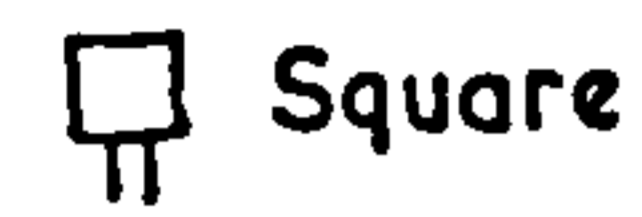
Hazel



Diamond



Trefoil



Square



Extended



Bar



Angled

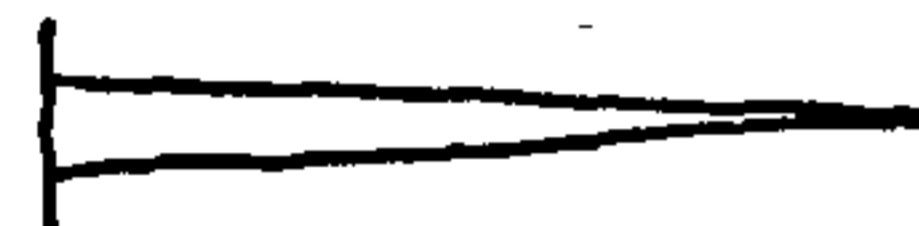
671



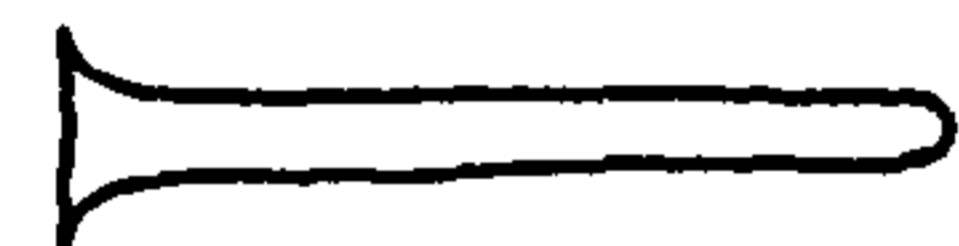
Almond



Straight non-tapering



Straight tapering



Straight non-tapering flared



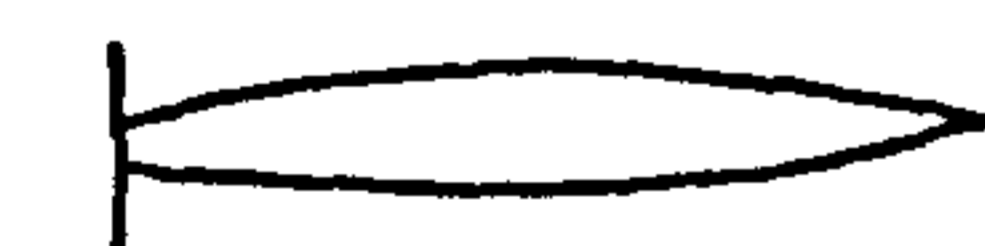
Single curved edge



Curved non-tapering



Curved tapering



Leaf shaped



Expanding



Sickle

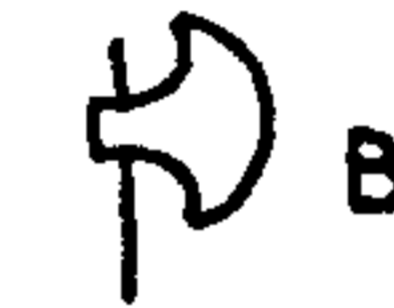
672



A



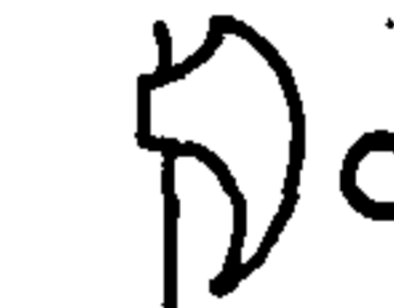
I



B



J



C



K



D



L



E



M



F



N



G



O



H

673



A



H



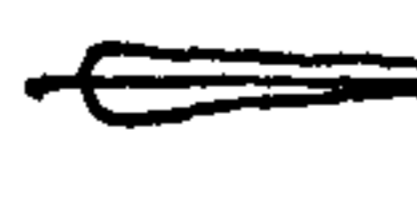
N



U



B



I



O



V



C



J



P



W



D



K



Q



X



E



L



R



Y



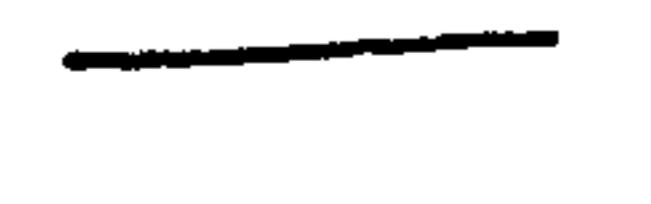
F



M



S



Z

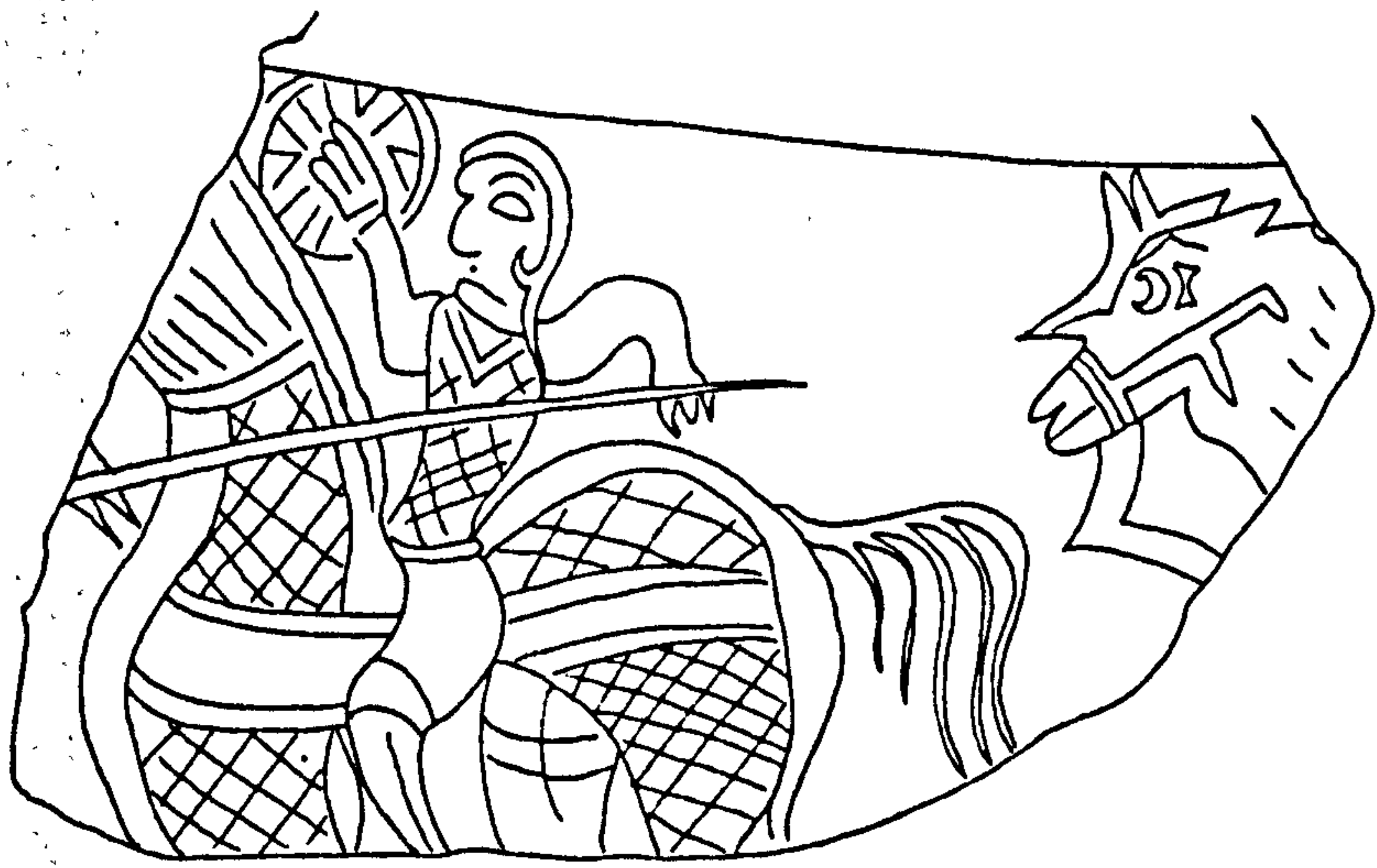


G



T

674



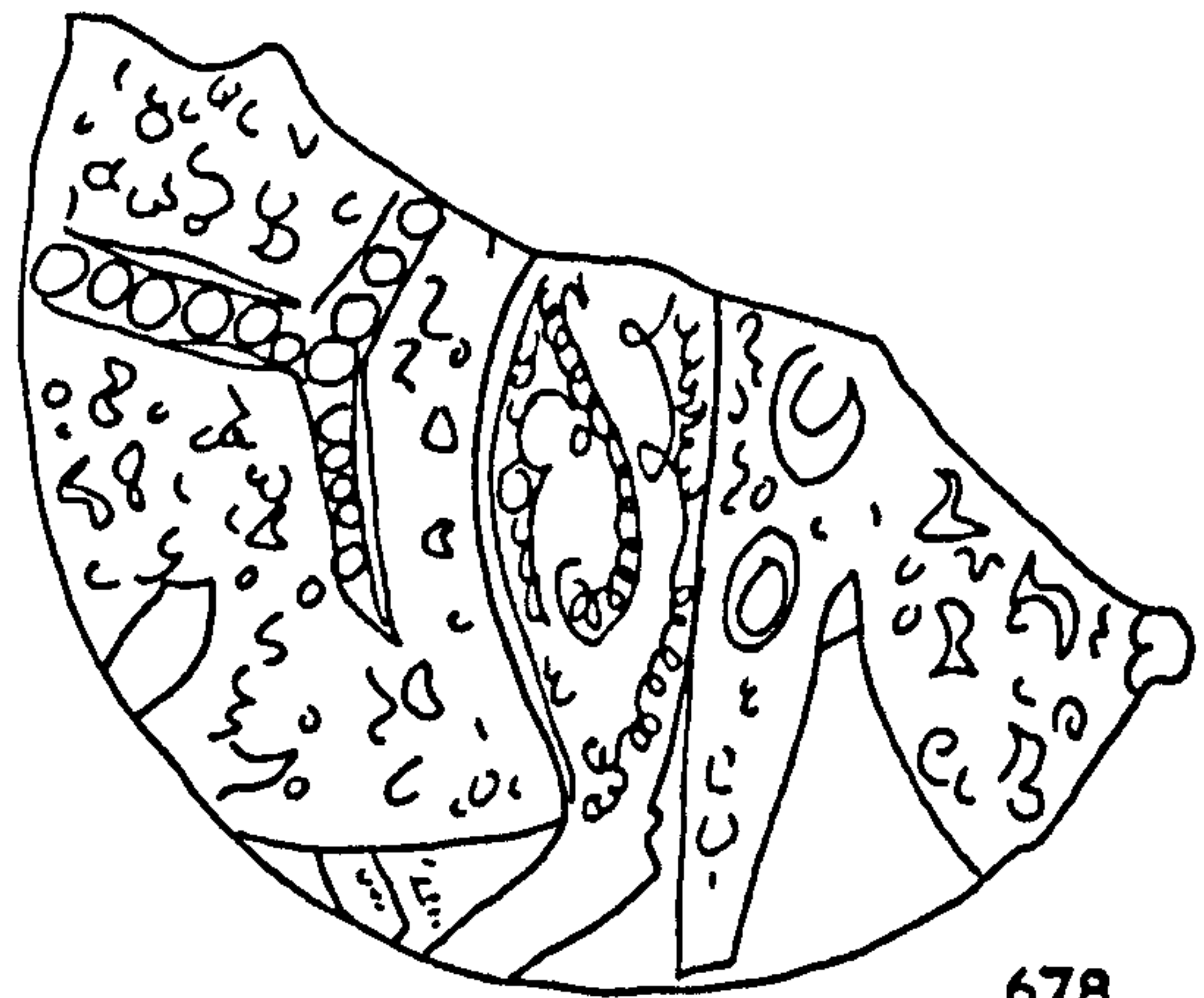
675



676



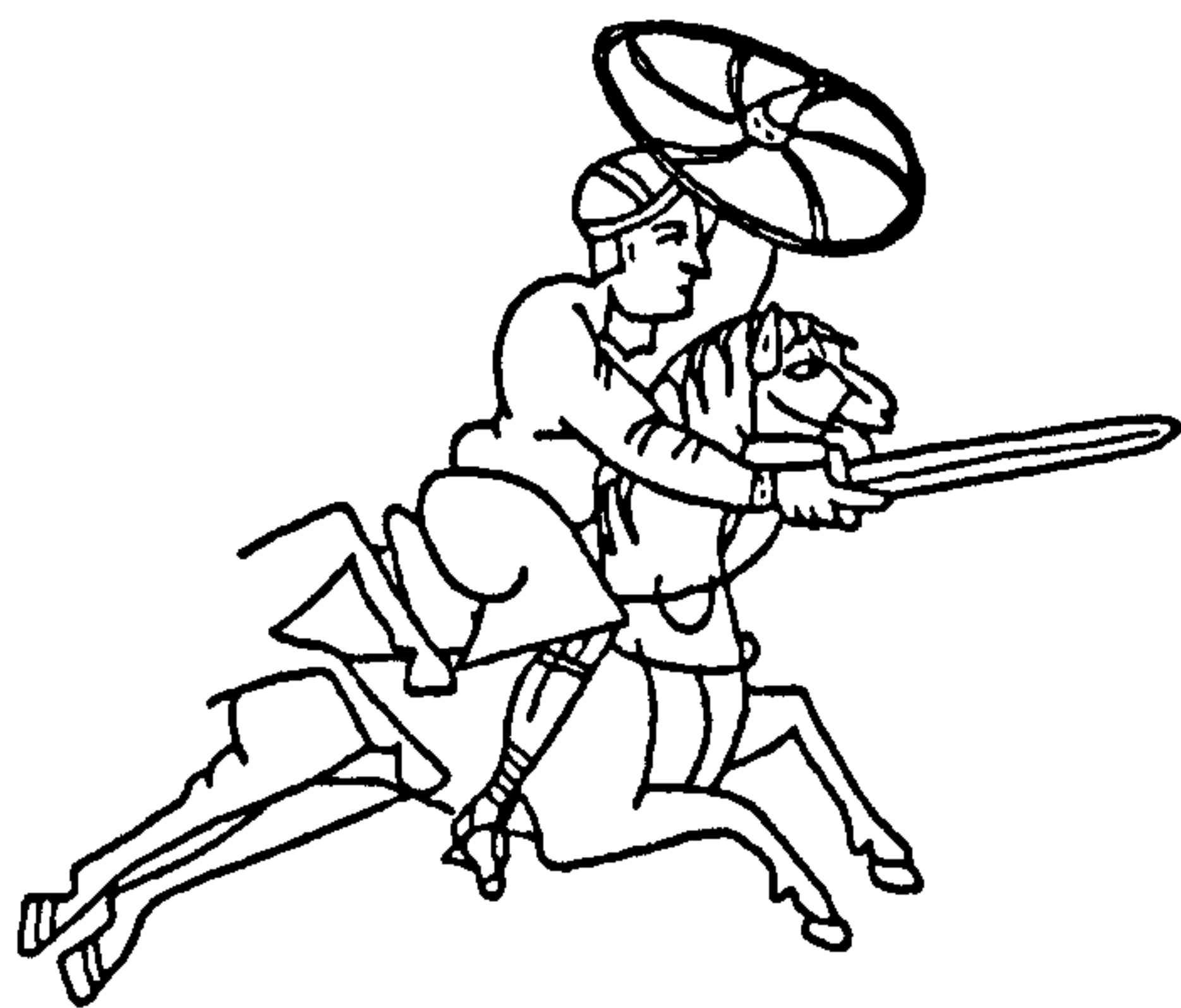
677



678



679



680