

FROM MEDIAEVAL SWORD TO RENAISSANCE RAPIER

by

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THE sword types of the Middle Ages proper are not numerous. They are assembled chiefly about two main types: the sword with the *brazil-nut-shaped pommel* and the sword with the *disc-or wheel pommel*. In both main groups there are numerous variations of the pommel forms, with a certain amount of typological sequence, intermediate forms and special forms. To some extent the shape of the pommel is related to the hand-guard, which may be horizontal or curved, thick and heavy, round, flat, much curved or slightly curved. The shape of the pommel, the length of the tang and the shape and length of the guard or quillons are the most important aids to the period and provenance determination of the sword. In this respect the blade is secondary in importance, because in the majority of cases blades were mass-produced in great blade centres, whereas the hilts mostly are individual work, carried out in accordance with the owner's personal ideas and pecuniary circumstances, and also according to the intended purpose of the weapon: ceremonial, coronation, magistracy, public authorities or war. No doubt further and detailed examinations of the various types and shapes of blades, their material and the manufacture of the blades will be most useful as an important aid in regard to the determination of provenance, use and chronology.

The sword with the brazil-nut pommel and the horizontal quillons dates chiefly to the period between 950-1250, more especially in the 12th century. It is the sword of the Bayeux tapestry, carried both by Anglo-Saxons and by Normans (fig. 1). (Yet some few variations are seen in the tapestry, e. g. the State Sword of king Harold). But the forerunners occur in such illuminations as for instance The Gospels of Otto III, from about 983-991 (Munich Staatsbibl. Cod. Lat. 4453). The brazil-nut sword appears sometimes with curved quillons, but these are not common. The brazil-nut pommel sword is a direct continuation of the common Germanic-Viking Age types. In actual fact it represents *the close of an epoch*, of the *spatha* which continued from the Merovingian sword through the swords of the Carolingian and Viking periods with the many pommel variations, by Jan Petersen divided into groups named after the letters of the alphabet. The brazil-nut sword occurs especially in Central and North Europe, but it is also to be found in the northern part of West



Fig. 1. Transitional sword, from Meuse, late 11th century. In blade name of Ulfberth. (Coll. E. A. Christensen, Copenhagen, E 131).

Europe, for instance in northern France, Holland, Belgium and England, as well as in the Baltic countries, eastwards as far as the Volga regions and possibly still more to the East. On the other hand it occurs less frequently in South Europe and in the South of France, regions in which the disc and wheel pommels are sovereign.

The brazil-nut pommel varies with the periods, and to some extent also with locality. In early times it was often almost a half disc; soon afterwards it acquired more or less olive, lenticular, hat or saddle shapes, thick below and thin above, rounded or with an almost pointed top. (A detailed examination and division has been undertaken by the English archaeologist R. Ewart Oakeshott, in his book: *The Archaeology of Weapons*, 1960). In most cases the tang is very short, somewhat longer on the later swords, especially those with a tall, pointed pommel. The quillons are generally horizontal: thin and slender in late Viking types, thick and four-sided on the early swords, later on more slender, often with a cross section that is rounded or almost round. In *North Italy, Switzerland* and *Austria* we sometimes find broad quillons, horizontal along the top, curved underneath, perhaps the result of influence of South European forms (fig. 2-3). The curved quillon (including that on some Viking

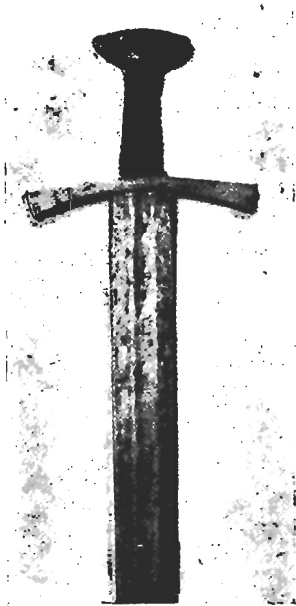


Fig. 2. So-called *Sci. Mauritius* sword, about 1200-1250. (*Armeria Reale, Torino, G 25*).

types) is presumably due to Oriental influence. The blades are of the heavy cutting type with a more or less rounded point. On the earlier ones the grooves extend almost to the point, whereas later they reach only three fourths of the length or less.

The Viking pattern-welded damast has disappeared; it is now encountered only very occasionally (e. g. a fragment in the National Museum in Copenhagen). Instead the blade-smiths have adopted another and improved technique. (Actually this new method makes its appearance as early as the 9th century.) His minute researches and analyses have enabled the Italian scientist *Carlo Panseri* to explain the technique, starting inter alia with a 12th century sword of the brazil-nut type found in 1948 at Adige, near *Legnago* castle, the important defence fortifications against the barbarian hordes of migration times and against the enemies of later days. As regards the blades, continued metallurgical research will presumably make it possible to make fairly valid distinctions between the blade-centres of South and Central Europe. Inscriptions and pictorial scenes on blades are not uncommon. On some of the early swords we find the master's signature «*Ingelri me fecit*», or simply the name *Ingelri*, spelt in a variety of ways. Swords signed *Ingelri* can be traced across large sections of Europe, for instance in *northern France, Belgium, England, Germany, Norway* and *Sweden* right over to the *Volga*. Only one specimen is known to have been found in *Denmark*, in South Schleswig and now in private Danish ownership (*Coll. H. Bröns Hansen, Hilleröd*). The lettering is the same as on the *Ulfberth* blades, good and painstakingly executed on the earliest, often slipshod and clumsy on the later ones. Other inscriptions appear combined with this one, especially of a religious character (fig. 3) such as *HOMO DEI* or *IN NOMINE DOMINI*, which are familiar from swords with a wheel pommel. It is presumable that these really are swords of the early days of the Crusades (*Homo Dei*, «*Man of God*», as the first crusaders called themselves see I. Timothy, 6,11: «*Tu autem, o homo Dei*»). Side by side with the iron-inlaid inscriptions we find several with fine silver or brass inlay, pictorial and allegorical scenes or merely ornaments between the letters. A remarkable example is the sword L. M. 10116, *Zurich*, with its long series of allegorical pictures. Incocations of Christ or His Mother (*O Sancta Maria*), *St. Peter*, blessings, «*Eripe Nos*», from the Psalms or other religious inscriptions are also met with. In South Europe they are often supplications to *Virgin Mary*. Another noteworthy sword is the one at *Rouen*, found in the *Seine* at the *Château Gaillard*, a relic of the siege by *Richard Coeur d'Leon* in 1203-4 with the inscription *DEUS* and Romanesque birds between each letter. These religious inscriptions are mostly confined to one particular period, the Crusades under *Richard Coeur d'Leon*, *Frederick Barbarossa*, *Philippe-Auguste*, the Counts of *Flanders* and in the days of *St. Louis*. Letters and ornaments on the sword blades have close parallels in

the manuscript illuminations of those times and sometimes can be dated by means of comparisons with dated manuscripts. They constitute an important chronological support. Among the swords with a brazil-nut pommel there are several fine specimens that are fairly reliably dated. Among the most distinctive we may reckon the so-called *St. Mauritius sword* in the Vienna Weltliche Schatzkammer, the Austrian coronation and ceremonial sword, which is dated by its inscriptions and heraldic figures, the German-Roman eagle and the three leopards, the arms of the emperor Otto IV (1198-1215). The scabbard, adorned with chased gold work and its borders of enamel and semi-precious stones seems to be Sicilian work. Another remarkable sword is the second *St. Mauritius* specimen, originally from St. Mauritius monastery at Valais, Switzerland, taken to *Torino* in 1591 (See Panseri, l. c. I., p. 10). The hilt is well proportioned, with a characteristic saddle-shaped pommel, short grip, band-shaped quillons curved on the underside, a form to be seen mostly in the sword material of the Latin lands (fig. 2).

The fragmentary sword from the Seine, outside the Château Gailard, dated to about 1203-4, is of interest on account of its finding place and its inscription. Related blade inscriptions will be found on two blades in the *Real Armeria in Madrid* (G 21 and G 180); G 180 has a later hilt, made by the Toledo master Salvador de Avila, prior to 1539.

The *St. Mauritius sword at Torino*, a similar specimen in the *Danish private collection, of mr. E. A. Christensen, Copenhagen*, and one in the *Landesmuseum at Zurich* must be placed among the latest of the swords with a brazil-nut pommel. In all probability all three are of *North Italian* workmanship (fig. 3). At about the middle of the 13th century the type almost disappears from the practical sword material and is encountered only now and then in the pictorial arts, especially in Germany and the Scandinavian countries, though it is still to be found in the illuminations of Matthew of Paris and in the Maciejowski Bible, dated about 1250. It appears on the tombstone of the Swiss Ulrik von Regensberg as late as 1280. *This type of sword, terminates the era of the old Carolingian and Viking sword*, which can be followed from certain Viking types via the swords of the Bayeux tapestry to the most characteristic Germanic type of sword of the 12th century.

The relatively few swords with a lobed pommel like some of the late Viking types may be regarded as descendants of Viking swords with subdivided pommels, such as the types Jan Petersen: R, S, and Z. The Norwegian sword from *Korsöygard* with its runic inscriptions—owner's and maker's names—has a forerunner in a sword from Riga

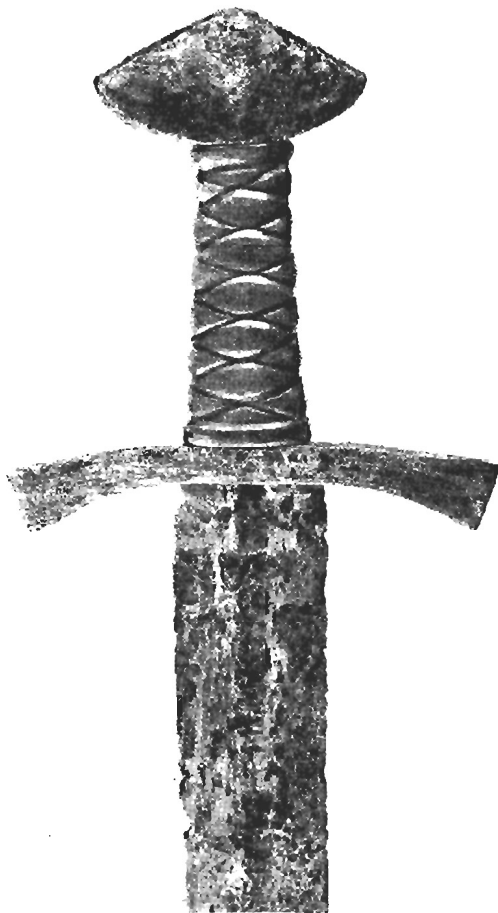


Fig. 3. Sword probably of North Italian workmanship, about 1200 - 1250. Blade inscription: IN NOMINE DOMINI. (Coll. E. A. Christensen, Copenhagen, E. I. Grip modern).

in Latvia, a younger parallel in a sword in an English private collection, found in River Trent in England, and is known in pictorial art inter alia from the Eberston carving in England. This type of pommel still is to be found in *Danish altar carvings* from the end of the 15th and the beginning of the 16th century. The trilobate pommel, that recurs in the various MSS of the *Apocalypse of S. Beato de Liebano*, dated to 10th, 11th or later centuries originates from Eastern types. It is well known from various Spanish MSS, from the notable

sword of *San Fernando* in *Real Armeria in Madrid* and from specimens, for instance in Musée Cluny in Paris. We find it too, for instance in *Matthew of Paris*, o. 1250, in his description of the Battle of Stamfordbridge in 1066. The *Maciejowski Bible* of about 1250 has it too. The 12th and 13th century trifoil pommel sometimes occurs on crusader's swords, with the leaves moreover decorated in variegated enamels. This type of pommel is to be found in Spanish paintings as late as the end of 15th and the beginning of 16th century.

Coming of the Knightly Sword

The main form of sword in the Middle Ages is *the disc-and wheel-pommel sword*, whether the pommel is flat or moulded, grooved or round-lenticular. The wheel pommel is combined with *horizontal* and with *curved quillons*. In this group the material is immense and spans over a period from about 1100 to 1500—for the Northern countries in fact to about 1550.

In this large group several sub-groups can be distinguished according to the pommel details, for example the size of the mouldings, the thickness and weight of the pommel, the size and shape of the top rivet on the pommel, the shape and length of the guard, the length of the tang. The results of this subdivision must be supplemented by studies of the shape, type and size of the blades, to which must be added any individual marks, heraldry, ornamentation, etc.

With shape and type as a basis it is possible to split the material into several chronological sections, in which the types group themselves about characteristic, more or less definitely dated specimens. The groups comprise the early swords up to 1200 or shortly after, the swords of the 13th century, the true classical knightly sword of about 1300-1350 and the various chronological periods after about 1350. The time about the middle of the 14th century signifies a distinct line of demarcation in the evolution of the weapon as regards the hilt and especially the blade: new blade types, the thrusting blade and the cut-and-thrust blade begin to be very much in evidence and exert an influence on the evolution of the sword otherwise. Moreover, it is possible to draw more distinct national lines, to distinguish more clearly between North and South, or rather between Latin and Germanic. At an early stage there is already a separation between the Latin and the Germanic. This applies also to England, which to a certain degree is more Latin than Germanic in character. This parting of the ways between Latin and Germanic development is perceptible particularly after the middle of the 14th century. Among the *Latin peoples* the development passes via the pointed infantry

thrusting sword and the hispano-arab jinete sword with a short hilt to the aristocratic *rapier*, whereas among the *Germanic peoples* the old cutting technique is continued and developed. Formidable cutting swords are produced for use by the *infantry*. Mixed forms, intermediate forms, mutual influences and currents from the Orient and East Europe are introduced and often make it difficult to unravel the types of subsequent epochs.

The *wheel pommel* (in which context the spherical pommel must be included) has *nothing* whatever to do with *Viking traditions*. Actually it is an ancient Mediterranean inheritance. Neither the wheel nor the spherical pommel is to be observed in Carolingian-Viking swords, any more than it was on the spathas of the Merovingian period. Beyond the Roman Empire it is to be found prior to the Migration period in *provincial Roman areas* and in the *Roman Iron Age* of the *Scandinavian* countries e. g. in the bog deposits of *Denmark*. In reality it is possible to trace the mediaeval wheel or spherical pommel back via *Byzantium* and the *Bosporan culture* region and the *Levant* as far as the ancient *Roman* and *Byzantine empire* reached, including *Persia*, etc., to the thrusting sword of the soldiers of the Roman legions. It is characteristic of this type that for instance in the 12th century when it reappeared in Europe, it was common in South Europe, less common in Central Europe and sparsely represented in the Scandinavian lands. In pictorial art it is almost universal in the Latin countries. From the 10th century Byzantine triptych in the Louvre (Harbarville) and other Byzantine works of that time it can be followed in *Italy*, *Spain* and *France*. Its occurrence is earliest in Italy and Spain, where an examination of early art found it to be common. On a capital from *San Pedro de las Dueñas in León*, now in the Archeol. Mus. Madrid, 11th century, a sword of this kind is to be seen thrust into the jaws of a lion; in *Biblia de Farfa* (Santa María de Ripoll), 11th century, now in Biblioteca Apostólica Vaticana, it appears distinctly several times. The same is true of the *Libros de los Testamentos* from the cathedral in Oviedo, 1126-29, a fresco in the apsis central in *San Martín*, in *Museo Episcopal de Vich*, about 1150, in ms. ill. *Cántigas de Alfonso el Sabio* in *El Escorial*, latter part of 13th century, in *Monreale at Palermo*, 1174-87, on the seal of *Raoul de Fougère*, 1161, on the tombstone of *Geoffrey Plantagenet* (in enamel) at Mans, about 1175, where the rendering is very characteristic of Latin swords in that period. It can be traced in numerous other monuments and illuminations of manuscripts. As a rule the pommel is rendered as a flat disc without mouldings, as we also see it in the archaeological material. Around 1200 or in the first half of the 13th century we see

the commencement of the mouldings that become so characteristic of the wheel pommel of the classical Knightly sword. The other details of these early swords are more or less the same as those of the brazil-nut sword: the tang is short, the guard often has horizontal quillons that are rectangular in cross section, the blades are as before, with a more or less rounded point, but sometimes with an approach to a sharper form. As regards inscriptions, these early blades too are sometimes furnished with an Ingelri mark, though less frequently than the previous ones, whereas HOMO DEI or IN NOMINE DOMINI, benedictory inscriptions, silver and brass inlays—religious or decorative—are more frequent, especially after about 1200. Entire complexes of letters occur, framed or separated by ornaments, animal figures, crosses, etc. With regard to these apparently meaningless and insoluble devices however it is probable that at any rate some could be interpreted by means of a careful study of the culture in Crusade days, of the Old Testament, especially the Books of Psalms and Proverbs. It seems that these wheel pommel swords made their appearance with the *first crusades*. It is the close contact with Byzantine culture and warfare, a contact that left its traces in other fields, also within the sphere of warfare and arms and is particularly prominent in the enamel-decorated mountings on equestrian trappings and harness. Sword pommels of the disc form, decorated with heraldic figures in coloured enamels, are known from the 12th century. A special ordinance established the national colours, white for English crusaders, red for French and green for Flemish. Disc pommels with castie motives and the like, have been found in Syria i. a. at Damascus, as in the case of bronze pommels for instance in the Musée Cluny. A fine enamel pommel now is in the Metropolitan Museum, New York, with the arms of Pierre de Dreux and his national colours. Pierre de Dreux took part in St. Louis' crusade at the siege of Jerusalem in 1248-50. With the crusaders the Mediterranean sword types were spread out over the countries of Europe which in one way or another had contributed man-power or had been implicated directly in the crusades.

The wheel pommel developed in the course of the 13th century. It became larger, heavier, thicker, with grooves and an elevated panel on each side, a panel which especially on the Germanic swords was often occupied by a small tin inlaid cross. These crosses are also familiar in pictorial renderings and are not uncommon in French illuminated MSS of the late 13th and the 14th century (e. g. French Titus Livius ms. at Bordeaux). The pommel acquires higher and more conical top rivet, often of brass. The tang becomes longer, the guard longer, often more slender, round or octagonal—sometimes

round at the ends only—in cross-section. Among the different pommels the details become much more varied. On the whole, however, these wheel pommels provide quite good material for their chronological and typological classification, and sometimes a determination of their provenance.

The 13th and 14th centuries are the period of chivalry's florescence. Chain mail for man and horse, additional defences in the form of cuir bouilli, iron plates, helmets, triangular shields and heavy lances, massive cradlesaddles and good rowel-spurs are a knight's outfit, besides his sword and the military dagger, especially in the 14th century. The effective and costly cutting sword, like the helmet and dagger, are chained to the iron breast plate under or over the mail. There may be national differences in details of the helmet and sword, probably individual preferences too, but there is a certain international stamp about the equipment, for which reason the type of sword is more or less the same in the greater part of Europe in the real days of chivalry. The classical knight's sword has the sharply profiled pommel, the high top rivet, the grip of fine but not exaggerated length, the horizontal or the curved quillons in proportions suitable to the length of the hilt, the blade heavy, with grooves half or three quarters of the way down and with a more pointed tip than before.

In this period the curved quillons are encountered chiefly in the *Latin* regions and in England. It is well known from the pictorial representations of the period, illuminated MSS, as well as the numerous sepulchral monuments, particularly in Italy, Spain and England. German and Swiss tombs provide excellent specimens of the knightly sword with horizontal quillons (many of the French were destroyed during the Revolution). But in the archaeological material the horizontal quillons are also frequent in South Europe. There are good, datable specimens of both types.

Among characteristic specimens that are fairly well dated there is, for the early period, the *Oldenburg sword*, which was found near Harmenhausen in Oldenburg and is probably a relic of the *battle of Stedinge in 1234*, where a crusader army fought against a force of peasants. The sword represents the introduction of the classical knight's sword, the pommel still only slightly modelled and a tang that is just beginning to lengthen. The decorative and well-executed silver-inlaid blade inscription was deciphered by the late Paul Post together with Professor Rüttinger, and in all probability correctly so. From this sword, dated to the first quarter of the 13th century, developments proceed via types like the fragmentary *Breslau sword*

which probably belonged to *King Ottokar of Bohemia* and which has blade figures, inlaid with silver, representing a knight crusader wearing his helmet, a Cross of Jerusalem on his shield, the Agnus Dei and with a tin cross in the now more profiled pommel, altogether a splendid specimen of a crusader sword of the period about 1255-1275. Although the quillons are now missing it is reasonable to assume that they were probably horizontal.

Round about the year 1300 the classical sword reached its full development, and in the first half of the 14th century we find the best and clearest representatives of *the Germanic knightly swords* in a number of specimens i. a. at Zürich, Hamburg, Lübeck, Berlin, Copenhagen and several other localities. For example, with its date determined from the find combinations is the *Betzimatt sword* from the battle of 1337, now in the L. M., Zürich. Undated, but closely related though more Latin of type and of splendid shape is a sword from the Thames, now in the British Museum; another French specimen is now in the Wallace Coll. in London. A South European sword from *Toledo cathedral* is the child's sword of *Juan, younger brother of Sancho IV*; this well-preserved specimen has a silver gilt pommel of modelled-wheel form with the arms of Castille and León on both sides in coloured enamels, a grip of medium size, horizontal quillons, a good cut-and-thrust blade, the scabbard covered with velvet and having the same heraldic coats of arms in enamel. This well-proportioned type is a clear expression of the classical knightly sword at its best and typologically conforms well to the first quarter of the 14th century. If the interpretations of the heraldic emblems are correct it agrees well with the claim that the sword belonged to Juan, who fell in 1319, fighting the Moors near Granada. The weapon is undoubtedly of Spanish workmanship; the enamel might indicate Valencia, which was well known for its enamel work in the period. As a matter of fact the town was also famous for its blades. One Italian parallel is the sword of *Can Grande della Scala* (ob. 1329), from the tomb at Verona dated to pre-1330. It is also in this period that we find the best parallels to the archaeological objects on tombstones in Spain, Italy and Germany. Another characteristic feature of this group of swords is the inlay of letters. Both letter groups and letter types are first-rate adjuvants in date determinations.

Among examples of datable swords with curved quillons I may mention another sword in *Toledo cathedral*, recovered from the tomb of *Sancho IV, king of Castille and Leon* (1284-1295), a son of Alfonso X el Sabio (fig. 4). The cruciform hilt has a modelled pommel of a form which well matches the later part of the 13th century, a short tang on which the grip covering is still extant, short, flat and

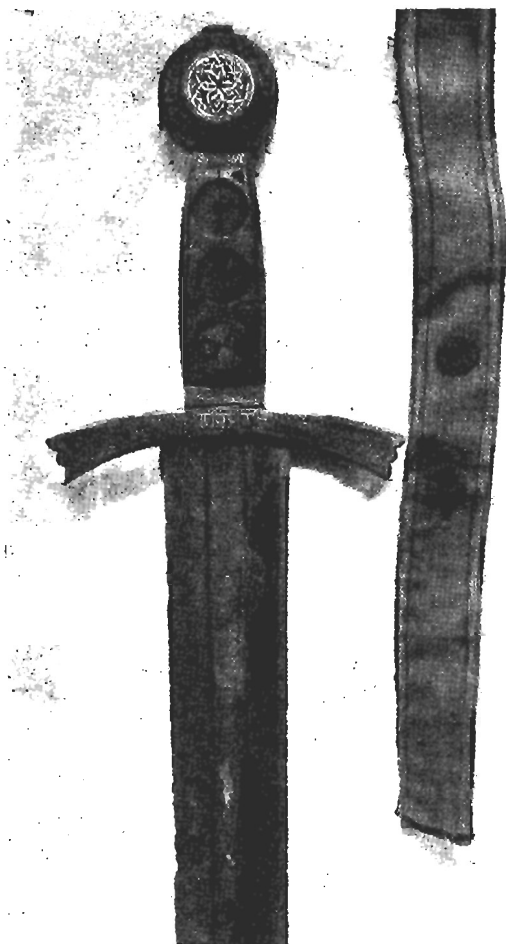


Fig. 4. Sword from the tomb of Sancho IV. King of Castille (1284-95). In blade part of inscription still visible on both sides. With part of the belt. (Capilla Mayor, Toledo Cathedral).

curved quillons with decorated lobate ends. Pommel and quillons are decorated with ornaments in Mudéjar style and with Arabic letters. The sword is a characteristic South European form and the short grip is fully in concord with local custom there. Another outstanding sword of the type undated it is true, is the characteristic specimen in the *Instituto del Conde Valencia de Don Juan*, the so-called *Santa Casilda Sword* with its heraldically ornamented disc pommel on which the wavy lines are seen in enamel and surrounded by the prayer: *Ave*

Maria, gratia plena (fig. 5). The quillons, which are broad with a slightly curved upper edge and under edge in the shape of a double arch, are of a form that is characteristic of and very popular in South Europe. They have an inscription in Spanish whose characters and contents place it to the period shortly after 1300: *Dios es vencedor en todo*. This sword type is known but is anything but common in



Fig. 5. So-called Santa Casilda's sword. Inscriptions on pommel: *AVE MARIA GRATIA PLENA*; on quillons: *DIOS ES VENCEDOR EN TODO, A(MEN)*. (Inst. de Valencia de Don Juan, Madrid).

the first half of the 14th century in the Germanic countries, whereas it is frequently met with in the pictorial arts of the Latin lands.

From cut to thrust, change-over about 1350

The sword is in constant evolution, dependent as it is upon the development of the other weapons, upon strategy and tactics. For this reason it may often be hard to draw sharp chronological boundaries, even when there are apparently good evidences. On the other hand there are some points that make sharp distinctions and help to set up a good terminus. This holds good of the time around the middle of the 14th century—a restless, belligerent period. Conditions are disturbed in the Mediterranean world. On the Iberian peninsula it is the conflict between *Pedro el Cruel* and *Enrique de Trastámara*. El príncipe negro *Edward* of England is actively trying to introduce his new tactical methods on the peninsula. Barcelona is enjoying a golden age, the Catalanians holding all the strings to the maritime routes on the Mediterranean, with brisk communications with Athens, Morea, Byzantium etc, with dominion over Sicily and a large part of the islands in the Tyrrhenian Sea. Opposite them are the Italian trade republics, especially Pisa and Genoa. The Hundred Years War between France and England was in progress; the famous Battle of Crecy in 1346 had revealed an important tactical advance, a form of shock tactics with the English long-bow archers against heavily armoured French cavalry. The Swiss fight for freedom against the Austrians, commenced with the Battle of Moorgarten in 1315, continued with Laupen in 1339, Sempach in 1386, again with infantry superior to the knights. The house of Anjou was at Naples, the French knights, conducted by Peter of Lusignan, were defeated by the sultan at Alexandria in 1365. The Italian republics and duchies fought. Cavalry had begun to waver, unable to cope with a mobile infantry carrying other categories of weapons such as the halberd, pike and two-hand sword, or against the short and sharp thrusting swords of South European foot soldiers.

The thrusting sword had already been used in battle in the second half of the 13th century. Of the Battle of Benevento in 1266 Primatus de Bouquet writes that at first the Provençal troops of Charles d'Anjou were unable to stand up to the great cutting swords of the German cavalry, wielded with both hands. It was only when, covered by the long pikes and armed with small, light thrusting swords, they engaged the horsemen at close quarters and thrust their sharp blades into armpits, groin and other unprotected parts of the riders that they

got the better of the heavily armoured cavalry. Thus the thrusting sword was in use, at any rate by the lower ranks of soldiers in South Europe, in the 13th century. *Sieur de Joinville* relates in his memoirs, written, when he was an old man, about 1309, of the Battle at Mansourah during St. Louis' crusade in Egypt in the year 1250, of a sword used for thrusting. A Saracen had struck him with a lance, so that he was pressed against the neck of his horse and the lance, and he was unable to draw his sword, which was suspended at his waist belt. When the Saracen now saw the knight draw the other sword, suspended at the saddle, he turned his horse and rode away, but the knight too turned his horse, rode against the Saracen and killed him, using his sword in the manner of a lance, as he writes in the memoirs. In Chapter 13 of his manual: *De regimine principum*, on the art of war, the Italian nobleman archbishop of Bourges since 1295 and general of the Augustine Order, *Ægidius Romanus Colonna*, the tutor of Philip the Fair, writes that the thrusting sword is the most useful form of sword, because it penetrates chain-mail more easily than the cutting sword, gives deeper and more mortal wounds and is less strenuous in use. In his manual *Ægidius* is evidently influenced by his studies of Vegetius, just as was king Alfonso el Sabio of Castille, who wrote a textbook on warfare in 1260. Yet Alfonso was even more influenced by the Arabic authors. And so it appears that in the wars of the 14th century — especially in the latter half — the heavily armoured cavalry with its cutting sword, which in the meantime had become very large, had difficulty in holding its own against the agile infantry armed with short thrusting swords. Time and again Froissart, writing on the Hundred Years' War, relates how both French and English had short, stiff thrusting swords, *short Bordeaux swords which are stiff and pointed*. French pictorial representations of the period contain splendid examples of such thrusting swords. At Sempach and elsewhere the Swiss carry a characteristic thrusting sword with a slender, sharp-pointed blade and a new form of hilt, a faceted, pear-shaped pommel, short grip and curved quillons, a weapon presumably inspired by French forms and, after the many finds on the battlefield of Sempach, came to be known as the Sempach sword. The Swiss freedom wars in the 14th and 15th centuries stand like a series of epitaphs over the cavalry.

Side by side with the pointed thrusting sword the heavy two-hand sword proved to be an efficient infantry weapon. In the second half of the 14th century the course of developments divided into two principal directions: *a thrusting sword* and *a cutting sword*, both essentially for infantry use, and in between a more commonly carried *cut-and-thrust sword*, used from horseback. The cutting sword, which

evolved from a hand-and-half to a two-hand sword, is mainly a Germanic creation, the thrusting sword a Latin. The former is used chiefly in the Germanic lands but is by no means unknown in Latin regions, though there it differs in appearance from the Germanic. It was in the *Latin regions* that the foundation was laid in this period for the 16th century rapier hilts with their complicated systems of branches for the protection of the hand. This hilt is the product of several factors, the *Latin way of using a sword — whether thrusting or cutting weapon — influence from the cavalry sword of the Berbers with its very short hilt, and the systemization of fencing as an art.* Towards the close of the 15th century gunpowder and firearms bring more influence to bear upon the art of war. *The change of mentality with the new school of thought, the Renaissance, disinterred the inheritance from antiquity, its great generals and its writings on war and strategy, the study of Vegetius, Vitruvius, Polybius, Caesar, the impulses from the learned Greek-speaking world which had to flee before the Turks, all led to a complete change.* In 1521 came in *Florence Machiavelli's work: Libro dell' Arte della Guerra* in which that great politician drew largely upon the antique writers, particularly Polybios and Cesar; but even Vegetius and Frontinus were his teachers. Machiavelli too had much to say about the role of the thrusting sword.

As an adjuvant to the thrusting sword the long infantry pike acquired great importance. Italy, Spain, the Low Countries and Switzerland brought it forward into the front ranks; the Swiss had halberds too. The two-handed sword or the halberd was combined by the Swiss with the pike, whereas the Latin nations combined pike and thrusting sword. The latter combination proved superior to the former in the famous *Battle near Bellinzona* in 1422. Armed with the thrusting sword the Italian infantry commanded by the famous Milanese *Carmagnola*, were more mobile and effective than the Swiss with the halberd. It is not without reason that the pointed thrusting sword became dominant in the South.

The Germanic line, i. e. Germany, Austria, Switzerland and Scandinavia, in that period had gone in completely for the large cruciform hilt with a heavy highly profiled pommel and a long grip, horizontal quillons (more rarely curved), or an entirely different type, the bastard sword with the pear-shaped pommel that was merely smooth or faceted. The tang was long, the quillons horizontal or curved almost like those of the Sempach swords. This type belonged mainly North of the Alps, though it is sometimes met with to the South e. g. in Spain, introduced by the mercenaries under the Hapsburgs. There are many variations, and datable specimens become more numerous.

It is possible to make a typological and chronological classification, which shows how developments took place within periods of about a quarter or a half century. A pear-shaped pommel is often seen on thrusting swords, frequently the very long ones small lances in fact. Cut-and-thrust swords and the purely cutting swords mostly have a wheel or more or less spherical pommel.

In the Scandinavian countries this type of sword continues in use right up to 1500, and even later often in conjunction with an almost spherical pommel that was especially popular in the North. Early in the 16th century in the Scandinavian countries these hand-and-half swords are furnished with branches and loops which turn them into big, awkward versions of the rapier. In a great many instances the blades of these large cut-and-thrust swords and the cutting swords bear the wolf and crozier stamp, the emblem of the Passau workshops. *Passau blades* were in particular favour in the *Scandinavian* countries in the 14th and 15th centuries; in fact, these blades were in very wide use in the Germanic countries at the time. All through the Middle Ages the Passau smiths did a large export trade with East Europe. In the 15th century the *Solingen factories* came more and more into the foreground and in time displaced the Passau products, at any rate on the *Northern market*, especially after about 1500. The Passau workshops had proved capable of satisfying the military standards set by the North Germanic countries for a sword blade, and Solingen in its turn did the same. The skilful Solingen smiths in the next centuries succeeded in turning out blades that satisfied the requirements of both Latin and Germanic countries, and thereby in the course of time became paramount—*quantitatively*; on the other hand there is no doubt that the *Spanish factories*, at any rate *Toledo* and *Valencia*, and the *Italian, Mián, Belluno* and *Brescia* were *qualitatively* superior.

The large cut-and-thrust swords and the long Germanic Panzerstecher or foining estoc of the end of the 15th century have no long religious inscriptions like the cutting sword of Crusade times. Stamps, figures such as wolf marks, stars, cartouches containing e. g. *INRI* or *JHS* in Gothic minuscules appear frequently on the Germanic swords. In the Latin regions conditions in the 15th and 16th centuries are somewhat different; «Maria» inscriptions and invocations of Virgin Mary are not uncommon.

Naturally these years have handed down a number of distinctive and costly dated or datable swords of Germanic type, individual specimens created to suit the wishes and wealth of the patron, and there are also many plain, simple war swords, some factory made throughout, for instance from Passau or Solingen, others finished off

in the importing countries. It is possible to draw up a fairly reliable chronology for these swords from the 15th century.

However there is one group of swords that is mostly of *Latin* origin, some thrusting swords, others of the cut-and-thrust type, almost all of them with a wheel pommel, the majority with a short grip and curved quillons. These swords are dated by means of their blade inscriptions in Arabic, which give brief historical information about the weapons. They are war trophies, captured by the Egyptian sultans, from the Cypriote knights in 1365 when they besieged Alexandria and were defeated, and in 1426 when Barsbey raided Cyprus and took a large booty (fig. 6-7). Including swords, helmets and other weapons this booty was taken to the arsenal at Alexandria and hung as trophies,

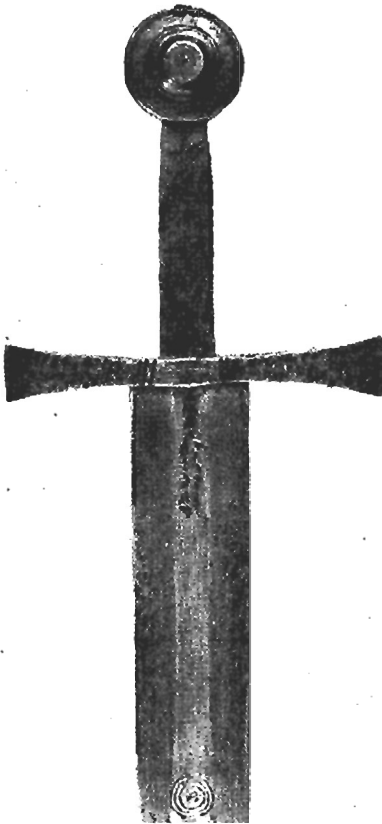


Fig. 6. Italian sword with Arabic inscription. Part of spoil taken from the Cypriote knights by the Egyptians in 1365. (Coll. E. A. Christensen, Copenhagen. E. 190).

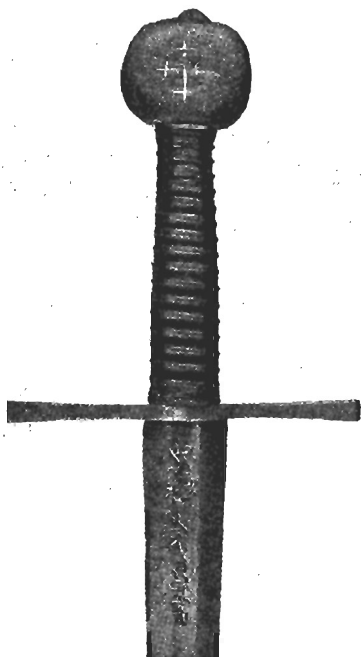


Fig. 7. Italian sword with Arabic inscription. War-booty from sultan Bursbey's invasion of Cyprus in 1426. (Coll. E. A. Christensen. E 129. Grip modern).

but when the Mameluke captured Egypt in 1517 most of them were carried to Constantinople. (Some few specimens Napoleon later was fortunate enough to bring away from Egypt). Several specimens came into the European market in the 1930's. Thanks to their Arabic inscriptions they provide particulars of sultans, emirs, etc., which have enabled them to be dated positively. On some of these swords (of which one group can be dated prior to 1365 the other to before 1426, a few specimens to 1419, 1431, etc.), there is a blade detail of considerable interest, a *ricasso* ornamented with a very plain design: an engraved line at each side terminating in a curve and an eye. Something similar is to be seen on the handsome sword recently published by *Pierre Contat* (*Annales Valaisannes* 1960), the ceremonial sword of the Archbishops of Sion, dated to about 1400 (fig. 8). Some of the swords from the Alexandria arsenal have very pointed thrusting blades with a sharp grat, broad at the top, almost triangular in shape. They recall what Froissart says of the sharp and stiff *Bordeaux* swords of the latter half of the 14th century. A number of swords of Latin



Fig. 8. Ceremonial sword of the Archbishops of Sion, Switzerland, about 1400. (Coll. Pierre Contat, Sion).

origin, mostly Spanish, and Italian, with a wheel pommel, some with a concave—mirror like depression in the side panels, other with enamelled heraldic arms, others again with a lenticular or sharply profiled pommel, but all with almost horizontal quillons whose ends bend downwards like hooks, are of the period around 1400—a little before or after. One particularly characteristic expression of this Latin type is the Italian sword in the *Metropolitan Museum* in New York, dated by its Arabic inscription to before 1419. Several others group themselves about it, e. g. a type familiar from Spanish paintings of about 1400 and a little way into the 15th century. The Italian blades from centres such as Milan, Belluno, Brescia, and other places were renowned far and wide for the quality of their products. Through Venice, Pisa and Genoa they were exported notwithstanding reiterated papal prohibition—to the Orient while simultaneously Oriental blades were imported, for instance from Syria. The Syrian factories fell into disuse in the 15th century. It is true that others began working in Egypt and Morocco, but part of the Syrian business seems to have passed to the Iberian peninsula. It is hardly likely that any establishment approached *Toledo* for quality. (As in the case of the Milanese products Toledo blades were extensively imitated by Sol-

ingen). With only few gaps Toledo's history can be traced back to antiquity, to the Iberians and Celto-Iberians, from whom the Romans, who already had excellent Etruscan workshops, learned a great deal. But there were other centres, *Valencia* for instance, which produced fine blades that were much in demand; some are still extant with signatures. *Seville* too was one of the most renowned establishments, and besides there were *Granada*, *Murcia*, *Barcelona* and various *Basque smithies*. The documents and accounts in the local archives of Spanish towns contain the names of a host of blade smiths. France, too, was in no way behind in the Middle Ages: The Rhône valley, French Savoie with Annecy, Bordeaux, and other places. Mention of blade smiths is to be found in several towns of southern France, at Lyons, Châtellerault, Poitou, and in the North at Paris, Rouen etc.

The sword type of the Latin countries in the 15th century is well represented in the museums, and richly so in the pictorial arts of the period. Characteristic types with the special forms of pommel, the short grip, usually curved quillons, distinctly thrusting blades with grat and strengthened point, and in many instances with a ricasso, are to be found on several Spanish altar-pieces, sepulchral monuments, mural paintings and in illuminated manuscripts.

The birth of Renaissance

It was a restless epoch, a time of ferment, of incessant political disturbance, of intellectual currents, commercial connections with distant parts, the period leading up to the crisis of the *Renaissance and humanism*. The Mediterranean world lives under a pressure born of the fear of the advancing *Turks*, who in 1453 finally demolished the weak and effete Byzantine empire. The kingdom of *Aragón* grows up to a period of brilliance which led to a certain rallying of the different Mediterranean cultural elements. *Catalonia* and with it *Barcelona* having fallen behind in many respects on account of internal and international political competition and conflicts in the Mediterranean, the house of *Aragón*, of the Trastámara family, rose to a mighty state. The very complicated political situation between France, Milan, Aragón and other states led to the great naval battle at Ponza in 1435, where the king of Aragón, *Alfonso V* and his navy was defeated by the Genoese. Eight years later matters turned, and Aragón under Alfonso came forward into the limelight, when the Aragonese king defeated the defenders of Naples, Renato de Anjou and the Genoese. In 1442 Alfonso marched into Naples and from there conducted a large-scale imperialistic policy, with dreams of becoming another Ale-

xander the Great assembling the entire civilized world under his banner. He assumed the titles of king of Jerusalem, Hungary, Croatia, Greece, Cyprus, had mercantile relations with Syria and its hinterlands and with such remote regions as Abyssinia, where he became friend with the Negus, with Mogul and Peking.

On the Balkan he contacted the famous chieftain of Albania, *Scanderbeg*. He called himself Divus and in the Roman manner had a triumphal arch erected at Castel Nuovo in Naples. The *kingdom of Naples* became a *most important factor* in the Mediterranean world, a strong safeguard against the Turkish menace just outside Byzantium. The whole Mediterranean world without France partook in this safeguard against the Turks.

With this important position Naples was destined to influence cultural developments. With the numerous and far reaching trade connections and the cultural currents flowing in from many quarters: the learned men of the Greek-speaking world, fleeing from the Turks to Venice, Florence and South Italy, the Arabian and Byzantine craftsmen and artists coming to Italy, the Spanish artists and goldsmiths attracted to the *Ho'y See* and to the court at Naples, and the Italians travelling to the cities of the Iberian peninsula, it is nothing remarkable that some measure of cultural fellowship was formed; *Naples became a centre of politics and culture*, from which emanated a stream of cultural renewal to the rest of the world, a *Renaissance*. In addition there was the rich culture that thrived at the courts of the various Italian princes, at *Florence* with the family of *Medici* (Cosimo, Piero and Lorenzo «il Magnifico») in *Milán*, in 1395, created a ducal with the family of the *Viscontis* and since 1450 the family of the *Sforzas*. Milan was the sovereign of almost all Lombardy with Pisa (since 1399) and Genoa «la Superba» since 1464. In *Mantova* we find the ducal family of the *Gonzagas*, in *Verona* the family of the *Scalas*. *Venice* was the ruler of a great part of the *Dalmatian coast*, the island of *Crete* and after 1489 even the ruler of *Cypros*. There can be no question of definite delimitations in the Latin world, for which reason we find noble Italian goldsmith's work on Spanish swords, Zaragozaan goldsmith's work on Roman swords (e. g. the goldsmiths *Pedro de las Cellas* and *Antonio from Zaragoza*). Nor is it remarkable that we find almost the same sword types and the same «novelties» in Spanish and Italian paintings of that time. Swords appearing in paintings of the Valencian school of about 1420-30 are to be seen in similar renderings in e. g. Pisan art of about 1430. About the middle of the 15th century there is a wealth of types and forms in both South and North of the two peninsulas.

It is only in rough outlines that the various sword types can be

followed. There are many intermediate forms, many individual products. But towards the middle of the 15th century the remnants of mediaeval knightly culture is forced to make room for the new. With the defeat of *Charles the Rash* in 1477 it was all over with the Middle Ages and chivalry which, in the first half of that century, and especially by this monarch had been elaborated to its culminative but most rigid perfection. Gunpowder and the new school of thought, the renaissance, a product of the many distant trade relations, the Aragonian empire, the cultural life in Milan, Florence, Venice, etc., the fear of the Turks, Byzantine culture, and ancient Roman and Greek traditions, marked an epoch—for the art of war and for its weapons. *Maximilian's* organization of the Germanic infantry with its special weapons, the strategy taught by *Machiavelli* in his great work *Arte della guerra*, which after all was based upon philosophy, political experiences and the organization and works of Vegetius, Caesar and Polybius in antiquity, and *Gonzalo de Córdoba*, «*El Gran Capitán*», decided the course of developments. Even for a thing so apparently small as sidearms the new outlook was decisive. With the Renaissance the sword was transformed. The estoc and the rapier appeared, not suddenly but as the result of a comparatively complicated process of evolution. Just as the *Renaissance* is a *product* of the *Latin*—or more precisely *the Italian world*, the *estoc and rapier* were a *Latin product*. Just as the Renaissance ran a different course North of the Alps, especially in the Scandinavian countries (where it developed almost into a social revolution), the evolution of the sidearm was also different, not least in the Scandinavian regions, at any rate in the 16th century and the first half of 17th. Just as *Scandinavian intellectual life* from now on was directed from *Wittenberg*, the evolution of the sidearm here came under the strong influence of the artists and craftsmen of *the Saxon Electoral court*

From sword to rapier

In order to understand this development it is necessary again to distinguish between Latin and Germanic peoples. The form and use of the weapons are intimately related to the temperament and character of the nations and to the history of their intellectual culture. The ancient thrusting traditions of the mediterranean people in conjunction with the cavalry technique of the Moroccan Berber tribes lead to the swepthilt with its many branches. The cutting technique of the Germanic nations persists during the Renaissance and in the course of its further evolution leads to the large infantry swords, the

bidenhandlers (which quickly fall into disuse as a war weapon) and to the huge cutting swords that are still characteristic of the Scandinavian lands in the first half of the 16th century. It also leads to the small cutting swords, the katzbalgers, the special sidearm of the lansquenets. Under influence of the Asiatic and the East European cavalry's single-edged, more or less curved weapons, sabres, came the intermediato forms, i. a. with sabre blades and basket hilts.

The *Lombardic* swords in North Italy and the *Visigothic* swords in Spain were cutting swords like the Viking-Age swords of the Franks. In the infantry battles of the following centuries in Germany the usual sword was used for cutting. It is rarely seen employed for thrusting, though some few such specimens of about 1200, is to be seen i. a. in a manuscript at Trier, *Jungfrauenspiegel*. It is unusual to find any mention of thrusting in the Germanic literature —though of course it occurs now and then. Ordinarily the sword was wielded with one hand. In the 12th and 13th centuries there was still room for one hand only on the short grip; and yet it is sometimes seen grasped in both hands when a particularly heavy blow was required. This occurs as early as in the period around 900, in a manuscript from St. Gallen (Cod. Perizoni 17, Leyden), where one hand is closed about the grip itself and the other is laid over the first. In the 12th century it is depicted several times, for instance in *Hortus Deliciarum* and in various other ms. illuminations of the period.

Cavalry and the more solid weapons of defense necessitated the heavier sword, the larger grip and the longer quillons. The blade became correspondingly longer and heavier. In the 15th century a broad area is required to receive the adversary's cut. The long quillons are not sufficient enough for cover; the protecting surface is expanded by bending the quillons S-shaped on the horizontal plane or by adding horizontal siderings where the hilt crossed the blade, sometimes only one on the outside, sometimes one on each side. The horizontal, S-shaped quillons came into use before the middle of the 15th century. Some few specimens are known from an even earlier date, as shown by Mr. Oakeshott, i. a. a sword in the Cambridge University Museum of Archaeology.

But the practise became more common during the later half of the 15th century. Swords of this description are to be seen in museums especially in Switzerland, Germany and the Scandinavian countries. Numerous wood carvings by artists such as Beham, Burgkmair, Lucas Cranach, Dürer, Urs Graf, Holbein the Younger and several others depict lansquenets armed with two-handed swords and with the katzbalger at their belt with guards of this kind. As regards Denmark there is a local version of these guards with a large, broad

surface made of a thin iron rod shaped into a figure eight. Some Scandinavian swords with horizontal quillons and side-rings are imports from Passau and Solingen. On some of them the pommels are disc-shaped, on others scentstopper or pear-shaped, or spherical. A knuckle-bow is scarcely ever seen on these German types of swords, though it does occur on a few lansquenets swords, usually of the slightly curved and single-edged types. The knucklebow reaches only to the middle of the grip, where it is bent slightly outward as in Albrecht Dürer's woodcuts of the Apocalypse of 1498. A vertical knuckle-guard, also reaching to the middle of the grip, appears on some types of hand-and-half swords from Switzerland, but it differs from those on the lansquenets swords. On South European sabres, both those with a one-hand-and those with a hand-and-half grip similar knuckle-bows already appear in the 15th century, for instance in the execution scene on one of the paintings of the Spanish-Flemish painter *Francisco Gallego* on an altar-piece in the Museo Diocesano in the *Old Cathedral at Salamanca*. It also shows how the index finger is laid in Latin fashion over the quillon. There are several other examples of this most important manner of grasping a cutting weapon.

Both in Spain and in Italy it is quite usual to find a knuckle-guard combined with side-rings, as shown in paintings by Pinturiccio. A fine example occurs in a picture of *St. Michael* from about 1473-81, now in *Leipzig*. Even here we find the index finger across the guard.

The Germanic development with the hilt guarded by rings and branches lying horizontally is observable during the greater part of the 16th century and can be followed into the 17th. In the latter part of the 16th century additional hand protections make their appearance in the form of more branches, rings and plates on both sides. These give a closed basket-hilt entirely horizontal in plane, a hilt providing complete protection to the hand. It is to be seen in Austrian and South German sidearms with a slightly curved or a straight two-edged blade, introduced into Denmark and Norway in the early 17th century (dusagge or so-called Sinciair sabres). And we meet it in Jost Ammans woodcuts of lansquenets of the 1580's. Something similar applies to the Venetian schiavones (fig. 9) in which Latin and Slav elements are combined.

Opposite the *Germanic* line is the *Latin*, with a hand guard primarily designed against the cut, but soon afterwards for the thrust too. The *Latin* line is diffused out over Europe, inter alia by the accession to the throne of *Spain* by the *Habsburgs*, by foreign diplomats and with the mercenaries of the various countries and soon brings its influence to bear upon the *Germanic* line too. Mixed forms arise. A certain combination of *Latin* and *Germanic* is to be found

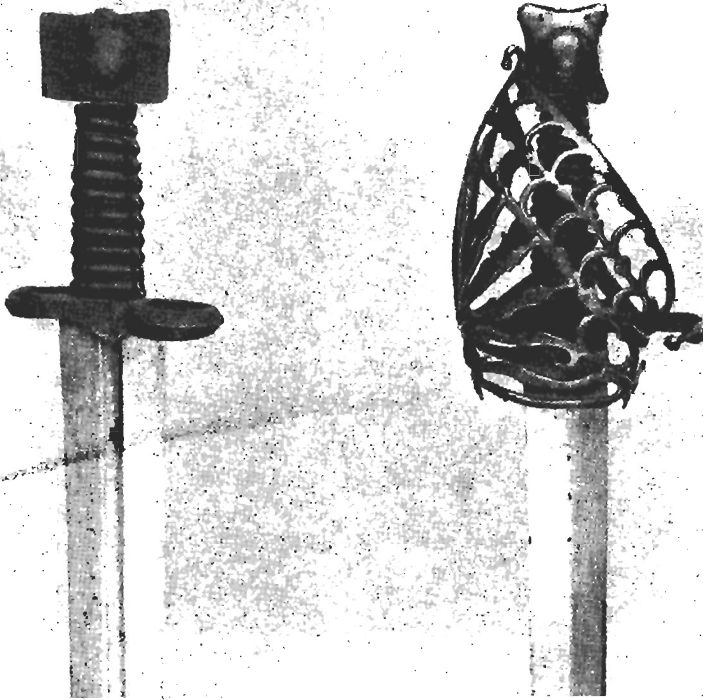


Fig. 9. a: Venetian sword, early 16th century, b: Venetian schiavona, late 16th century (Coll. E. A. Christensen. E 160 and 95).

in the Low Countries, especially in *Flemish* rapiers (fig. 21). In addition, there were currents from the Orient via Venice and across the Iberian peninsula.

The *Latin* development is more complicated than the *Germanic*, and more elegant. The typical South European sword with its wheel pommel, short grip and curved quillons ending in more or less rolled volutes towards the edges of the blade can be traced in Italian and Spanish pictures from an early point of time. If the soldier is wearing mail gauntlets he must naturally hold his hilt with the four fingers together. But in several instances where the hand is bare we find three fingers around the grip itself whilst the index finger is laid

across the foremost quillon. The examples of this are fairly numerous. Even on *Sassanian* silver bowls of the 4th-7th centuries A. D., the hand is holding the grip in that fashion (see *Gladius* I, p. 65 ff). Curiously enough the swords bear a striking resemblance to the weapon of the crusaders. A similar grip will be found in the aforesaid St. Gallen illumination of about 900-950. A search of early MSS. will presumably add to the number of examples. There is one dating from about 1125, in ms. Nero C VI, now in the British Museum. Here again the index finger is laid across the guard. From 13th century is the fine example from *Santa Lucía de Mur* in *Barcelona*. Very clear is the *Chinese* water colour drawing of warriors in battle, from *Yuan period* (1260-1368). We see not only this handgrip on the horseman's sword but another warrior is holding a short sword with two protection rings instead of the quillons. This may be a special way of holding cavalry swords, sometimes used in Central Asia. Byzantine-Russian 12th and 13th century ikons, e. g. an ikon in the Archeological Museum at *Kiev*, is displaying the same hand-grip for drawing the sword from the scabbard. Among the mosaics in *St. Mark's, Venice*, we find the same thing, for instance in the Capella de San Isidro, 14th century. Here the blade is remarkable, with a serrated edge. On an address from the town of *Prato* in Tuscany, 1335-40, to *Robert of Anjou*, king of Sicily, we find the same hand-grip (Brit. Mus. Royal ms 6E, IX). The frescoes in *Santo Campo* at *Pisa*, 1380-90, have it too just as the mural paintings from about 1400 in the cathedral of *Mondoñedo*, Spain. About the year 1400 it appears on an alter-piece from *Tessin*, work by a North Italian master depicting the execution of a martyr—into the bargain on a hand-and-half sword. Other examples could be cited. In most of the reproductions it is to be seen rather clearly that the blade has a talon, almost a ricasso below the quillons. In actual fact a heel of this kind appears early in the archaeological material. A sword at Arlington, Virginia (H. Peterson collection) must date from early in the 13th century. Chronologically the type comes close to the Oldenburg sword but the details suggest a South European origin. The swords having inscriptions in Arabic are datable. The *Royal Ontario Museum* at *Toronto*, Canada, possesses two excellent specimens of early, dated Italian swords with a strong ricasso, one from 1365, M. 976. It is of the type characteristic of the middle of the 14th century and the sword itself is a trophy of the Italo-Frankish invasion of Egypt. The blade has a very distinct ricasso, as well as the designs along the margins that are characteristic of these blades. In all probability this is an *Italian* sword. (Cf. the two swords figs. 6-7 in Danish coll.) The same applies to M. 973 in the same museum, but dated to the time prior to 1426, taken as booty by

Barsbey during his invasion of Cyprus. This sword has a pear-shaped pommel, whereas most swords bearing Arabic inscriptions have wheel pommels. A long, slender blade in the Musée de l'Armée in Paris (J. 13) must also date from about 1400; this too has a ricasso, though it is less pronounced than on the two Toronto swords. From this to furnishing the underside of the quillons with a guard ring for the index finger is merely a short step. And actually one of the earliest examples of it is to be seen on another of Barsbey's trophy swords from Cyprus, formerly in the collection of Baron de Cosson, then in the Hearst collection, now in the *Tower of London*. The sword is dated 1432 but is part of Barsbey's booty from his Cyprus raid in 1426.

In a paper on the sword of *Fernando el Católico* in the *Capilla Real of Granada cathedral*, the prominent Spanish archaeologist D. Manuel Gómez Moreno holds that this kind of quillons is a Spanish invention and that it dates presumably from about the middle of the 15th century (fig. 10). In all probability, however, it was introduced much earlier. Just up until the 13th century the Spanish Moslems wore the same types of weapons as did the warriors of Christian Spain. But in the 13th century the Hispano-Arab panoply completely changed. We hear about it in the *Chronicles of Alfonso el Sabio*. Weapons and the use of weapons changed and the manner of «pelear a la jineta» was introduced by the cavalry of the Benu Marin tribes, in the service of Mohamad I of Granada. The Spanish Moslems willingly adopted the methods introduced by the African horsemen. Their equipment from now consisted of a solid broad sword, lance, shield and body protection (*Exercicios de la gineta*, Madrid, 1641). Though the use of jineta-swords is represented in pictorial art of the 14th century no sword from this century seems to exist. The outstanding and rich series of Hispano-Arab swords now preserved in various museums and collections in Spain, France, and U. S. A. belong to the 15th century. The type of sword had originally been introduced for the Moorish cavalry, but very soon it was adopted by Christian knights, and used by certain branches of the cavalry in Spain (*Gladius I*, p. 49, fig. 7). In his paper on Granadine Arabian warfare, published in *Arch. Español de Arte* 1943, the famous Spanish orientalist D. José Ferrandis Torres, demonstrated that the origin of these Moorish swords with their extremely short hilts and the particular method of holding them doubtless lay in the Near East. Possibly we have to look for it among the Sassanids and the Arabs (*Gladius I*, p. 46 ff). The new type of sword contributed towards a complete renewal of the ancient hilt.

The new hand-grip called for a stout and convenient ricasso for the sake of the index finger, and so it led to a notch in the edge of



Fig. 10. Sword of El Rey Fernando el Católico, late 15th century. Golden hilt with traces of black enamel; possibly Florentine workmanship. Blade shortened and ill-treated Ricasso and point cut away centuries ago. (Capilla Real, Granada Cathedral).

the blade or in the ricasso itself, such as is to be seen in some blades in the *Real Armería* in *Madrid* and in a number of infantry swords in the *Arsenal* at *Venice*, dated to the close of the 15th century. Then came the guard-ring below the foremost quillon, as on the sword with Arabic inscription in the *Tower*. This ring is frequently shown in Spanish and Italian art of the 15th century. In the retablo in the cathedral of *León* is a painting of *Nicolás Francés*, of before 1435, with a similar ring and below horizontal quillons. Two sepulchral monuments, dating from about 1467, one at *Guadalupe* and one at *San Ginés*, in *Guadalajara*, have similar swords. On the tomb of the constable *Alvárez de Luna* in *Toledo cathedral*, set up after 1453, there is the same detail but with curved quillons. It also appears at *Valencia* on a picture by the *Marti de Torres master of St. Martin*, painted about 1443. From about the middle of the 15th century two rings are not uncommon in *Valencian* paintings. The same is to be seen in paintings of *Fernando Gallego* and his school, in *Pedro Fernández* of *Seville* and in *Bartolomeo Bermejo*, for instance in his large painting of *Santo Domingo de Silos* of about 1470, now in the *Prado Museum* in *Madrid*. In this picture, as indeed in most of the others, we see the wheel pommel with the concave panels that is familiar inter alia from some swords in the *Metropolitan Museum* in *New York*, from about 1450, and a number of Spanish swords in other museums. *Bermejo* gives a clear rendering of the quillons and the pas-d'âne; the blade has a ricasso and a sharp grat with a strong, reinforced point. Round about 1460-70 the same is to be seen in several paintings by the *Portuguese artist Nuño Gonzales* (examples e. h. in the art gallery in *Lisbon*). On the other hand it is rarely met with in *Catalan* and *French* art. Swords with two pas-d'ânes are also depicted on several of the large Spanish tombs, for example that of the *Infante Alfonso* at *Cartuja de Miraflores* near *Burgos*, a work of *Gil de Siloe*. About 1450 and in the subsequent period the type occurs frequently in *Italian* pictures. In *Signorelli's* frescoes in *Orvieto cathedral* we find it, as well as some very early examples of the knuckle-bow. These swords are on the whole very common in *Tuscan* art in the latter half of the 15th century, for example on *Nicolo da Bari's* monument to *Santo Domingo* at *Bologna*, about 1478. The painters *Ghirlandaio*, *Perugino*, *Botticelli* and *Raphael* have the motif (*Raphael's* picture of *The Vision of Scipio Africanus* in the *National Gallery*, *London*). With a knuckle bow and two pas-d'ânes we find the hilt of a sword in the illuminations of the *Statutes for Los Caballeros de la Hermandad de Santiago* (founded at *Burgos* in 1338), executed about 1490-99.

As I have said, the starting point of *Gómez Moreno's* theories

was the sword of *Fernando el Católico* in the Capilla Real, Granada (fig. 10). In the royal and municipal archives of Simancas and Granada this sword has been mentioned and discussed ever since the death of Fernando in 1516. This costly sword which has suffered badly in the course of time, with its biconical pommel, curved quillons and the two protection rings—in the shape of a snake—is of a form unusual in Spain. The pommel type is strange to the Iberian peninsula but common in *Tuscany*, especially in Florence, and an examination of the gold plated hilt and its ornamentation seems to show that it is *Florentine* goldsmith's work. But the blade may be *Spanish*. The ricasso is now lacking, because at some time or other the upper part of the blade has been shortened. The whole type of the sword is Tuscan, dating from the latter quarter of the 15th century.

From these swords with pas-d'âne below the quillons it is no long step to the next protective measure, the two small pitons, iron tiges ending in small knobs projecting from the lower ends of the pas-d'âne. They were possibly inspired by the Moroccan swords of about the same period. On the Italian and French swords of this type, from about 1520-30, the pitons are sometimes connected on the guard side by a ring, in which a small notch or hollow often is to be seen, which acts as a kind of stop for the thrusting blade. Apparently this notch dropped out of use about 1540-45 and only reappeared towards the end of the 16th century in the form of a small plate. The late French collector *M. Georges Pauilhac* together with *M. Robert-Jean Charles* were the first to notice it and gave it the name of *etrier à pattes*, in order not to confuse it with the small sidering with its plate later on. On the opposite side of this ring two small stems project like hooks. Whereas *Spanish* sidearms of the early period often have only pitons, *Italian* sidearms of the same period in stead of pitons have a ring, especially in Venice. Buttin drew attention to this and suggested that the *Spanish* form was due to influence from *Moroccan* swords, whereas the *Venetian* came from the *Arabian*. Communications between Italy — especially Venice — and the Arabian world were very brisk in the 15th century. Venice had made herself mistress of Cypros (1489) and had trading offices and stores both in Fama Gusta and in Alexandria for commerce with the Arabian countries and the India via Aden. To the Iberian peninsula however pitons came via North Africa with the Berber horsemen. There are fine specimens of the Spanish form i. a. in the *Real Armeria, Madrid*, on Nos. G 29, 30 and 31. The first two swords belonged to *El gran Capitán, Gonzalo de Córdoba*, the great general and military organizer. The pommel of G 29 is disc-shaped, the quillons are curved downwards with pas-d'âne and pitons, the blade has a ricasso. The decoration of the pommel is Italian renaissance

sance and depicts the victory of Gonzalo over the French at Cannae in 1503, as the inscription proudly announces. The third sword belonged to *Fernando el Católico* and is of the same type (the blade signed by Antonius). In the *Instituto del Conde Valencia de Don Juan* there is another such sword, No. 59, signed by *Cathaldo*, who was also the maker of the sword of Frans I of France, in Paris.

Of about the same period we find an Italian type represented by a number of estocs in the *Palazzo Capodimonte at Naples* (fig. 11). Among them the most remarkable is a specimen which last century was furnished with an inscription attributing it to *Ettore Fieramosca of Capua*, born about the end of the 15th century and died in Valladolid in 1515. Tradition has it that the sword was carried by this great soldier in the Battle of *Barletta* in 1503, a dating which seems too early; it would be reasonable to put the period to about 1510-20. The

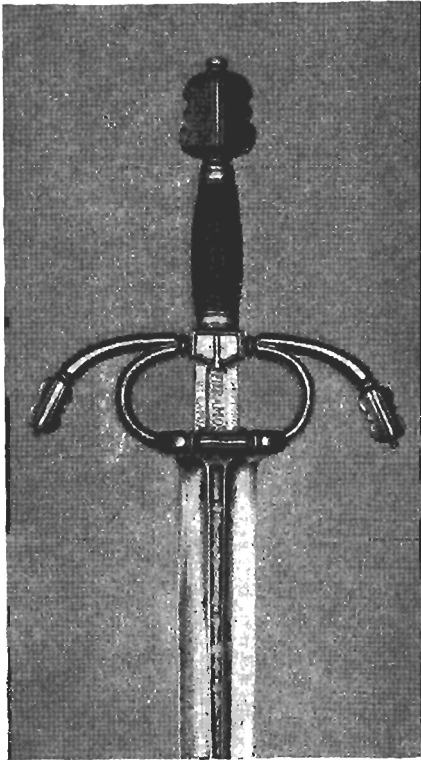


Fig. 11. Italian estoc, about 1510-20. Attributed to Ettore Fieramosca di Capua, who died in Valladolid in Spain in 1515. (Palazzo Capodimonte, Naples).

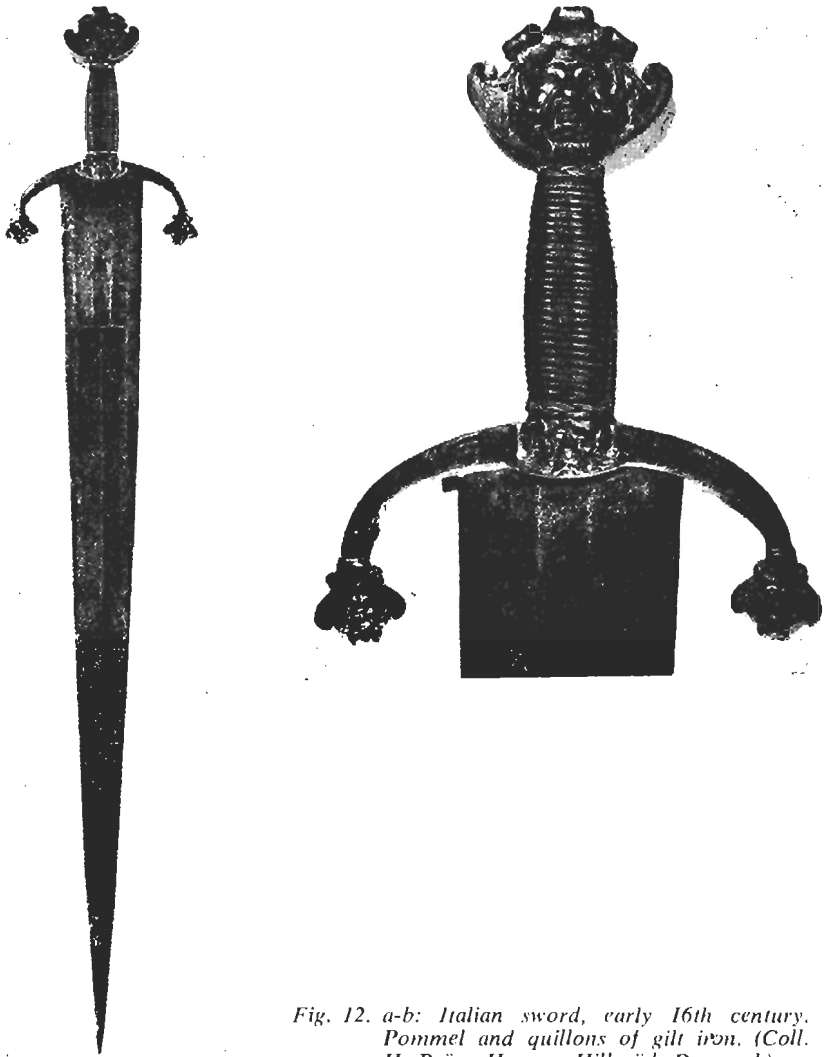
sword is a finer specimen than the others of similar Italian types at Capodimonte. Several more are now in the *Musée de l'Armée* in Paris.

Similar types of blades are also to be found on the swords mentioned by Buttin in his article on La Valenciana in «Armes Anciennes», 3, 1954. The most remarkable specimen, acquired by Reubell,* has been proved to have belonged to Carlos V. It is reproduced in *Inventario Iluminado* and described in *Relación de Valladolid*. According to these documents Carlos V had a store of 24 of them, presumably intended for the emperor's courtiers. Most of them must have been stolen in 1808 when the mob plundered the Armeria Real; three specimens now remain there—besides the Reubell sword. The latter has a wheel pommel, horizontal S-shaped quillons which at the ends spread out into wide, volute-like scrolls. There are also pas-d'âne and pitons. The blade is signed by *Juan el Viejo*, who worked both at *Valencia* and at *Toledo*; the majority of these swords had Valencian blades. The three specimens in the Armeria display the Valencian signatures IOANNES ME FECIT and the famous Salvador. Buttin, however, supposes that the type should be attributed to Venice, not to Valencia, and that it should rightly be called Veneziana; his argument is that the earliest specimen known to him appears in *Carpaccio's* picture of the martyrdom of Santa Ursula in the *Accademia Reale, Venice*, dated 1480, where this very type is shown. The blade is much like the aforesaid Neapolitan blades, but on it the lower ends of the pas-d'âne are joined by means of a ring in the Venetian manner. However, there is a very closely related sword with the same torsion of the quillons and with pas-d'âne—but differing slightly in the pommel—in a *Spanish painting* of about 1470, by an anonymous artist, in the *Fine Art Gallery in Copenhagen*.

In addition to the pas-d'âne other forms of hand protectors make their appearance in the 15th century. At any rate pictorial representations sometimes include the horizontal sidering on the cross, though frequently differing in form from the Germanic. It occurs here and there in Spanish manuscripts of the first quarter of the 15th century, but generally speaking only in the countries North of the Alps and East of the Rhine is it common.

From these basic forms progress is made in the course of the following sixty years, so that the complete rapier hilt with its complicated guard branches culminates at about the 1560-70's. In his article in *Revue Historique de l'Armée*, 1947 Robert-Jean Charles essayed to clarify the evolution of the hilt and its branches, and to show how a hilt can be dated with very brief intervals from the nature and

* This sword is now in Inst. de Valencia de Don Juan (no 213).



*Fig. 12. a-b: Italian sword, early 16th century.
Pommel and quillons of gilt iron. (Coll.
H. Bröns Hansen, Hilleröd, Denmark).*

placing of the branches. Although one cannot of course proceed too rigoristically in attempting a dating, the position of the branches does help greatly to determine the period and sometimes also the nationality.

Before turning to the further evolution from sword to rapier I would mention a small group of *Italian* thrusting swords. The form is mediaeval but in several instances the decoration is pure Renaissance. Their common feature is the sharp thrusting blade, wide at the top, with a prominent grat down to the point. The quillons are well curved and often terminate in volutes. The grip is short and the pommel usually disc-shaped, though sometimes lenticular and ornamented with a mussel-shell or rosette. Forerunners of these swords are those such as *Armeria Real, Madrid G 23* and the burial sword of Henry V in Westminster Abbey, of the latter half of the 15th century. The most distinguished representative of the type is the richly ornamented and costly specimen which once belonged to *Cesare Borghia, Duke of Romagna and Valentino*, now in the possession of the Duke of Simoneta. The wheel pommel is adorned with ornaments of pure Renaissance, with cloisssoné work and filigree on gilt copper. The blade is signed by *Ercole dei Fideli of Ferrarra*. The sword seems to have been made in the period 1490-1500. There are other specimens in Italian, Spanish and French collections and museums, including one in the *Museo Lázaro Galdiano in Madrid*. An excellent specimen of this type of sword is to be found in the outstanding Danish collection of *Mr. H. Bröns Hansen, Hilleröd* (fig. 12). This sword, of Italian workmanship, has a fine and characteristic blade, the length of which is 82 cm. largest width 8 cm. the total length including grip 97,5 cm. The point is sharp and strong, and the blade has the characteristic fullers, strong midrib in lower part and reinforced point. Beautiful and rich ornamentation with scrolls, flowers and masks still with good traces of gilding has been preserved. The grip, pommel and quillons are of gilt iron, with pommel in the shape of a faun-mask, and with faun-masks at the ends of the quillons. Related to this type of swords are the baselards or cinquedeas (fig. 13), with almost triangular blades, sometimes with a reinforced prismatic point and with rich etchings and gildings, very curved quillons, short grip and lenticular or wheel pommels. The Venetian specimens are of characteristic form with their special type of grip and with pierced ornaments at the rivet-holes in a style reminiscent of wood carvings from Baghdad and the Moorish palaces in Aragón (Zaragoza), and Andalucía from the 15th century. The best blades in the cinquedeas were made by *Ercole Grandi* and *Ercole dei Fideli of Ferrarra*. Even Florence and particularly Verona were famous for their cinquedeas. In Venezia they seem to have been the swords of the archers, particularly from about 1520. In their shape they are almost copies of the antique parazonium.



Fig. 13. Italian cinquedeca, about 1525. Quillons modern. Said to have belonged to a Danish nobleman of the Rantzau family, who brought it home from his travel in Italy about 1528. (Nat. Mus. Copenhagen, 10115, mus. fot.).

Scientific fencing

The fact that sword hilts were on the eve of such a rapid development was a result not merely of the strategy, the great importance of the infantry, the new fashion of wearing expensive and beautiful sidearms to court and civilian dress, but very much of the systemization of the art of fencing and the period's interest in that art. As

early as in 1295 the Italian *del Serpente of Milano* had written a work on the technique of fencing. Almost a century later came *Fior di Battaglia*, Flos Duellatorum (published at Bergamo in 1910). Fencing masters are mentioned in Italy in the 14th century, where they give instruction in agility exercises, cunning and tricks likely to come in useful when duelling. In the 15th century fencing academies were an established fact, i. a. at Milan, Venice and Verona. But fencing then was based upon hewing and hand-to-hand fighting; it was only systematized later. There were two styles in the 16th century, *the Spanish and the Italian*. Scientific works on the art appeared in Spain at the end of the 15th century, for instance the manuscript works in 1472 and 1474 respectively. They were *La verdadera esgrima y el arte de esgrimir* by Juan de Pons, Mallorca, and *El manejo de las Armas de Combate* by Pedro de la Torre (*Petrus Turrus*) of Seville. These two works are no longer extant but are known from numerous quotations in later fencing books. To these two authors fencing was actually a science. A special category of fencing masters, *Tenientes examinadores de la destreza de las armas* was organized through a special ordinance of 1478 by the Catholic king and queen, *Los Reyes Católicos*. A document of high interest is kept in *Cordoba: Ordenanzas para los maestros de esgrima* from 1512. In 1532 *Francisco Román of Seville* issued a work (now lost) *Tratado de la Esgrima* which had an important bearing upon developments in Spain. A continuation of his work appeared in 1569 by the fencing master *Hierónimo de Carança of Seville*. He was the real founder of *Spanish fencing*, which followed a different course from the Italian and the later French. His work, *Especulación de la Destreza* was re-issued in Lisbon in 1582 and in Madrid in 1600. It was based upon a number of sciences such as philosophy, medicine, astronomy, music and others, but particularly upon geometry. His theories, which are difficult to follow, were elaborated by his eminent disciple *Luis Pacheco de Narváez of Baeza*, who wrote a number of works, including *Libro de las grandezas de la Espada*, which appeared in Madrid in 1600. The 17th century saw the publication of other writers' works.

It was according to the principles laid down by these scientific fencing masters that the Spanish rapiers were evolved. In its later period especially, fencing there developed along a line that differed from that of other countries. The evolution of the very long rapier *la espada de lazo o del Emperador* and the cuphilt rapier, together with other long sidearms must be seen on the background of the strictly scientific method with its geometrical, well studied movements.

Matters were different in *Italy*. Four years after *Francisco Román's* work there appeared in *Modena* in 1536 the *Italian work Opera Nova*

Chiamata Duello overo Fiore dell'Armi by fencing master *Achille Marozzo*, one that became of great importance to the evolution of the sword hilt. He put the art of fencing into system in a relatively precise way. Although as yet it was based chiefly upon the cut, i. a. fencing with the two-hand sword, with a rapier or striscia (as was the Italian name to the long and slender rapiers), with rapier and shield, shafted weapons and even daggers, though this little weapon is only sparsely mentioned, he attached great importance to the shape and the construction of the quillons and the manner of grasping the hilt and the quillons with one or two fingers over the quillons. In his illustrations he demonstrates the various positions and movements. His work received so much appreciation that it appeared in a number of editions in rapid succession.

By the year of 1540 the sword hilt had acquired a veritable but still rather simple counter-guard, but as yet the bows did not reach up over the cross. During the subsequent twenty or thirty years events moved only slowly. Between 1560 and 1570 the bows of the counter-guard extended upwards and joined the knuckle bow of the hilt. This rapid development was due to two other fencing masters, first *Camillo Agrippa* and shortly afterwards *Giacomo Grassi*. The work of Camillo Agrippa: *Trattato di scientia d'arme* appeared in *Rome in 1553* and in *Venice in 1568*. Agrippa was an architect and engineer, a good mathematician and impassioned fencer. (Renowned among many other things for his direction of the erection of the obelisk on Piazza di San Pietro in front of the Vatican.) Among other aspects of the art he treated of fencing with left-hand daggers (fig. 14), with twin-rapiers, with halberds, etc. (Twin rapiers are rather seldom found. Two excellent pairs are to be seen in the Musée de l'Armée in Paris, one pair belongs to the Danish Nationalmuseum, for the moment on deposit in the Royal Arsenal Museum in Copenhagen.) Like his Spanish colleague *Carena* he analyzed the movements of the body and arrived at the conclusion that the cut is the natural movement and easier to carry out than the thrust. The thrust is complicated and demands rapidity and circumspection. And he is mostly in favour of the thrust. His theories would scarcely have gained so much ground and so much recognition had they not had the support of *Giacomo Grassi's* work: *Ragioni di adoprare sicuramente l'Arme si da offesa come da difesa*. This work was issued first in *Venice* in the year 1570. It was even translated into English. Grassi studied all forms of fencing in practice in his day, with two swords, with sword and left-hand dagger, with a small, round shield and with a larger shield and with a cloak about the left arm. Grassi's book forms the background of the Frenchman *Henri de Saint-Didier's* work published

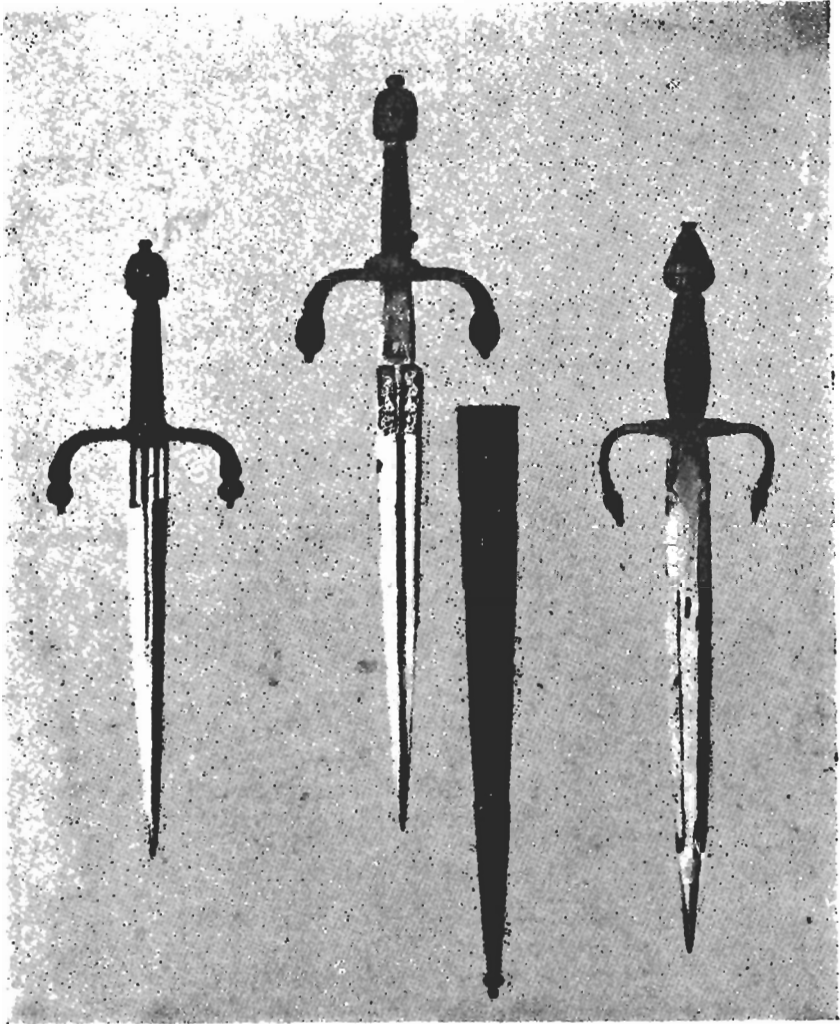


Fig. 14. Left-hand daggers. a: possibly North Italian, ca 1580-1600. b: Saxonian, belongs to rapier fig. 28. (Details of hilt differ). c: Saxonian triple-bladed, ca 1600. (Nat. Mus. Copenhagen, 10104, 10103, 10111, mus. fot.).

in *Paris 1573*, which likewise covered all forms of fencing. About 1606 came a book by the Italian fencing master *Salvator Fabris*. This fencing master was the teacher in fencing of the Danish king *Christian IV* (1588-1648); he came to Denmark and was in 1590 appointed fencing master at the Royal Danish Court. His book is written in Italian: *De lo Schermo overo scienza d'Arme*, and it includes 200 copars by J. Halbeech in *Copenhagen*. In the same year was issued another work by *Nicoletto Giganti*, in *Venice* (1606) on fencing with the sword and left-hand dagger. In 1610 came *Ridolfo Capo Ferro da Cagli's* work in *Siena*.

During the last period of the 16th century and the first half of the 17th century flourished the left-hand daggers. Various types came into use, many of them richly chiselled or ornamented with chased silver or with beautiful silver incrustations, corresponding to the rapiers. Among the characteristic Italian daggers of the time is the slender, elegant stiletto with its grip often finely chiselled. The left-hand daggers with triple blades were to be found in many countries, in Italy and e. g. in Germany (fig. 14 c).

In scientific fencing it had become necessary to protect the hand and body by means of a well-thought-out hilt construction with numerous bows and branches, each having its own purpose and significance. In France, around 1580, the development of fencing led to the counter-guard extending well upwards. About 1580-85 we see the reappearance of the old "etrier à pattes", but now in the form of a small finely perforated or elegantly decorated plate in the lower side ring. The thrust had practically displaced the cut and demanded still more branches and often plates inside the guard-rings. From the first little plate in the lower ring a further development leads to the more or less basket-hilted swords. But the development is also visible in the shape of the blade. The long, slender rapier blades reach their florescence.

We find the most elegant blades in *Spain* and *Italy*, heavier and less slender in *France* and in the *Germanic* countries. As with the hilt types, the blades of the various nations are evidence that South European fencing was modified to suit the temperament and character of the different peoples.

In time the elements of the hilts of the different countries become blended. Latin and Germanic were combined. From Germany the Latin rapiers received the mussel-shell guards which acquire importance on many *Spanish* rapiers. Although certain national characters still prevail in hilt details, it is most often in the ornamentation that the provenance of a rapier hilt can be determined.

Renaissance ornamentation

If the mediaeval sword had mostly been a strong and vigorous fighting or ceremonial weapon, carried in battle or on special occasions, the rapier of the Renaissance in quite a different manner became a regular detail of civilian dress, worn indoors as an indispensable accessory to the costly and elegant court dress. This meant that a prince or a nobleman not only had a number of expensive swords, designed to match his various costumes and his taste, but also a wealth of materials, precious stones and ornaments. Many of the Renaissance hilts are true jewels. The goldsmiths of the Renaissance held sway over a large field. Artists and craftsmen were entrusted with big tasks. This is evident not merely from the portrait painting of royalty and nobility, the sidearms that have been handed down, but also the many designs drawn by artists and goldsmiths as well as from the accounts and inventories written at the time. The aesthetical value had replaced the value of force.

In *Italy* already in the 15th century we find goldsmith work of brilliant quality applied to the hilts of swords and rapiers. It is the time of *Rafael* (born 1483 in Urbino), the pupil of amongst others *Perugino*. *Tuscany* is a region where the art of outstanding craftsmen flourished abundantly, led by *Florence* where *Donatello* worked and designed many such hilts. In *Lombardy* it attained to great heights, and there it was *Milan*, where *Bartolomeo Campi* worked for the *Spanish king Carlos V* and his son *Felipe II*, and the same did *Cesare Feramosca* too. Among the most outstanding sword hilts from Milan the specimen made for *Carlos V* in gold and enamel, now in Vienna must be mentioned.* Mantova, Venice, Rome, Siena and many other towns were also numbered among the well-known centres.

There is eminent early Renaissance work for instance on some of the *benedictional swords* which the Popes, solemnly celebrating the Holy Mass on Christmas Eve in a certain period distributed to princes and other persons of high rank who had done well-merited service in the fight for *Christianity*.

Among the goldsmiths who made sword hilts of this description the papal archives mention i. a. those of Florence, Rome and Siena, and some of the most outstanding swords perhaps are the one presented in 1454 to *Ludovico Bentivoglio of Bologna* and the specimens with which some of the *Doges of Venice* were honoured. In this context mention must be made of the highly skilled goldsmiths of

* See C. Blair: *European and American Arms*. 1962, p. 85. The hilt now justly considered Spanish.

the Spanish town of *Zaragoza*, who turned out richly adorned renaissance hilts in gold and silver (*Pedro de las Cellas*) especially under the Popes of the Borgia-family. And at about the middle of the 16th century we find a number of profusely ornamented Italian rapier hilts, some of iron with inlaid gold and silver decoration in the typical tendrill style of the Renaissance with putti, herms, fauns, fruit etc. or with pictorial scenes of mythological contents. On the whole, Italian damascening attained to extremely high levels on the gala armour and shields of the time; the artists were such as *Giorgio Ghisi of Mantova*, the members of the *Negrolì* family, *Pompeo della Chiesa*, *Antonio* and *Lucio Piccinino* and several others from *Milan*. *Venice* presented her own styles; in the forms there is often a trace of influence from Oriental weapons, due to that town's trade relations with the Oriental countries and because craftsmen came from there to the powerful commercial republic to work. Currents are also perceptible from the *Balkans*; among weapons particularly affected from there were the large *schiaivones* (fig. 9) with their basket hilts, which were carried by the Venetian foot-soldiers and somewhat later, bigger in size, by the cavalry for instance the cuirassiers of Ferdinand II. The Oriental influence is particularly evident on the ear daggers of *Venetian* type which differ from the *Spanish* type in the style of their ornamentation.

In his memoirs, Ch. VI, *Benvenuto Cellini* relates how in 1524 he saw some *Turkish* daggers with hilts and scabbards of iron, inlaid with fine foliage in gold in keeping with Turkish taste. He took a fancy to cultivate the art himself and was very successful, whereafter he began to make more of the same kind. However, his weapons were finer and more durable than the Turkish, for one reason because he engraved deeper into the steel. He also invented a richer variation of the ornaments the Turkish ones being most chicory leaves with a few flowers of *Echites*. «In Italy there is a much greater wealth of ornaments», he says. «In *Lombardy* they fashion the most elegant garlands of ivy and vine leaves which are a great joy to the eye. The Romans and the artists of *Tuscany* have excellent taste, especially in their use of acanthus and all their garlands and flowers. Moreover they place birds and animals of various kinds among leaves and flowers, employ wild flowers such as the so-called snapdragon. In addition there is a wealth of imaginary beings which are termed grotesques by the ignorants». *Benvenuto* then turns to explaining why such things are called grotesques.

In *Naples* too the goldsmith's work is of magnificent quality; moreover, in both *Naples* and *Brescia* were produced the elegant chiselling work that resembles lace made in iron. (One branch of it

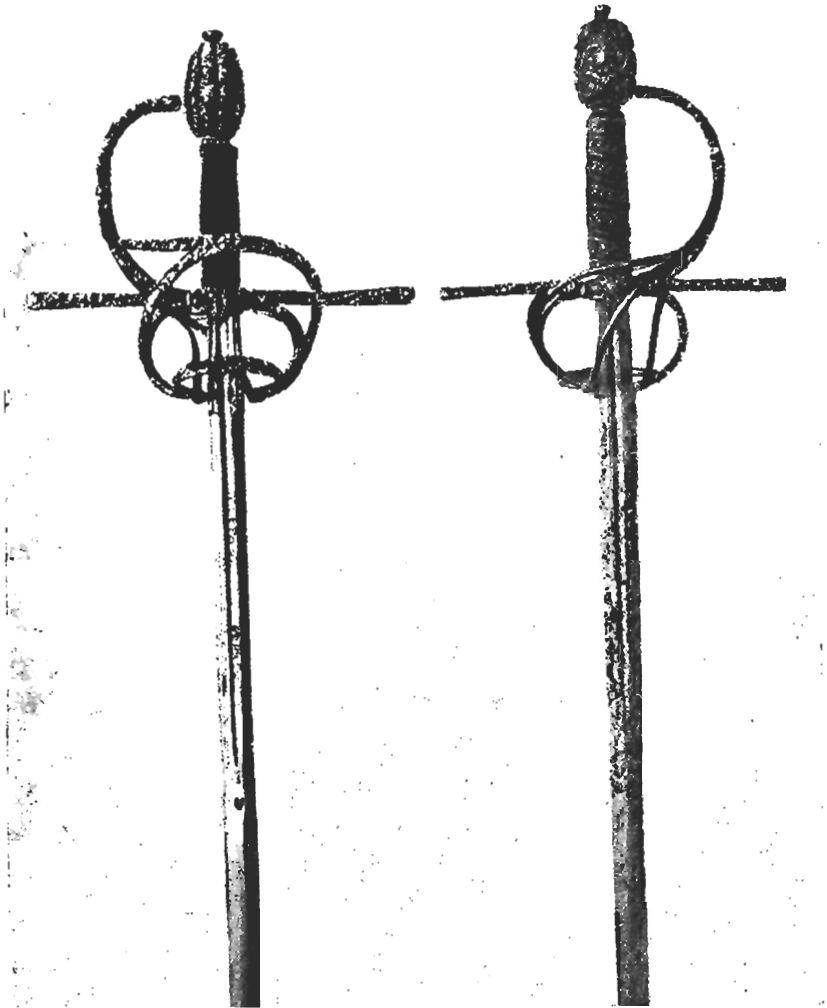


Fig. 15. Italian rapiers with silver ornaments in the hilts. In blades: a: Stetzius Keuller me fecit Solingen and stamps with Agnus Dei. b: Clemens Horn me fecit Solingen. (Nat. Mus. Copenhagen. 10126 and 21715, mus. fot.).

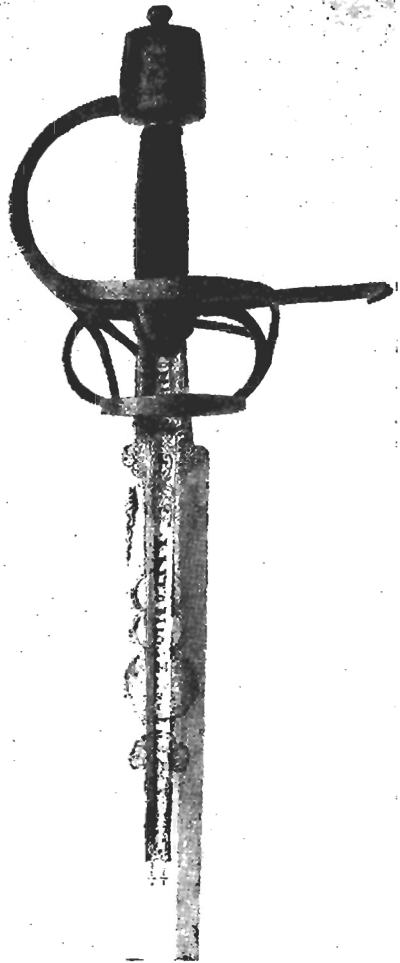
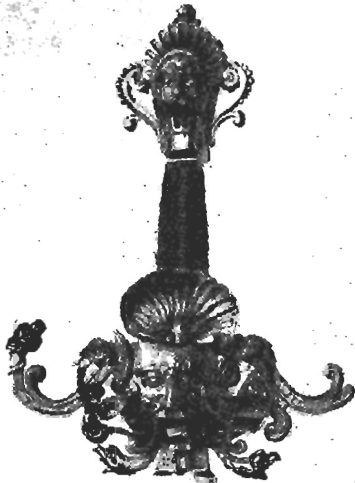


Fig. 16. a: Italian rapier, first half of 17th century. Grotesque masks, finger guards in shape of winged monsters. Quillons with Turk's head, one missing. In ricasso stamps of Sebastián Hernández. b: Rapier from about 1600, floral ornaments, traces of gold. In blade the name of Antonio Piccinino several times. Sickles of the Stüntler family. (Nat. Mus. Copenhagen. 10141 and 10135, mus. fot.).

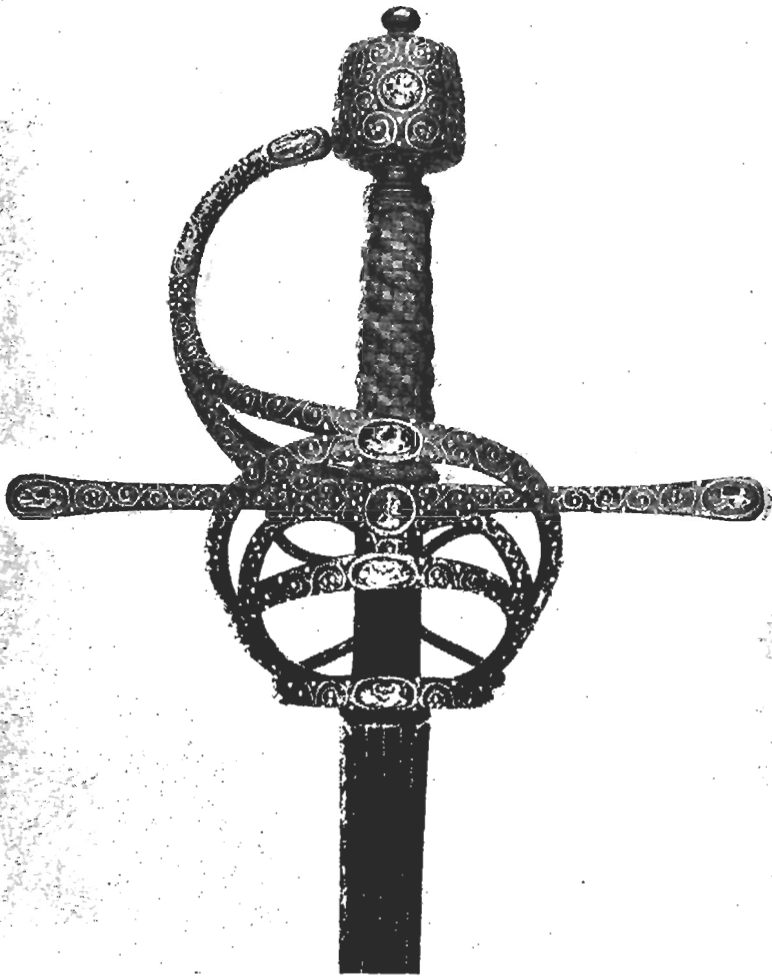


Fig. 17. Rapier probably Italian with silver incrustations. About 1585. (Coll. E. A. Christensen, E. 99).

is the mountings on the ornamental firearms of the day.) From Naples we have the signatures of several artists who for instance fashioned the cups for Spanish cup hilt rapiers. Round about 1530 many rapier hilts were designed by Raphael's disciple *Caravaggio*.

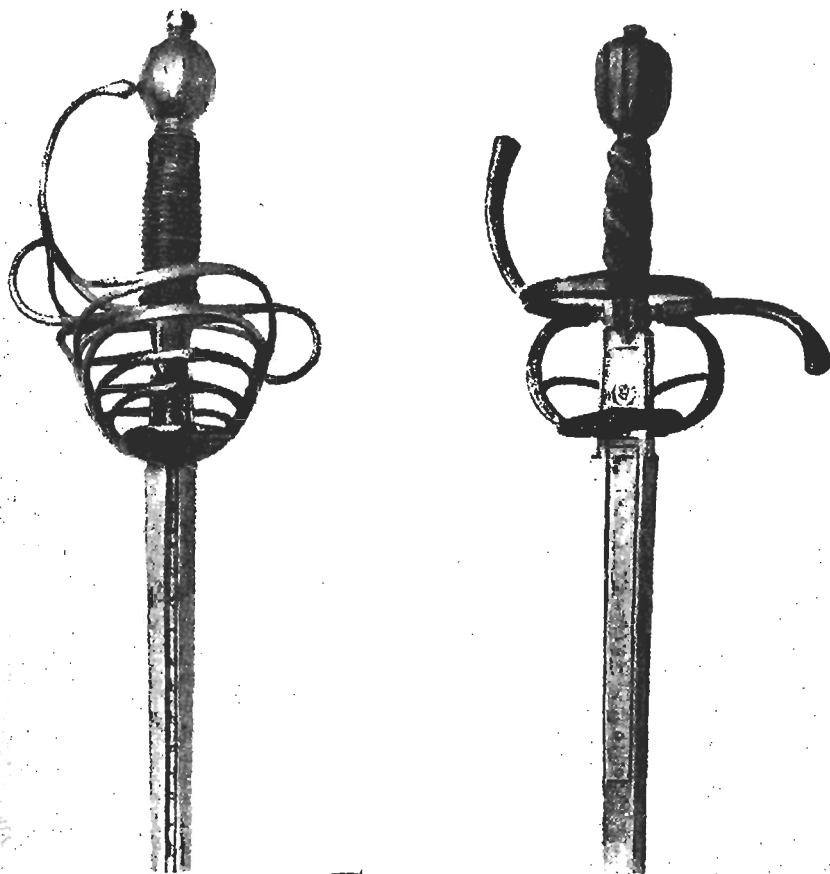


Fig. 18. a: Spanish rapier «*espada de lazo*». In blade *De Horiuno de Aguire en Toledo* and the official stamp of *Espadero del Rey*. b: Spanish rapier with damascened ornaments, now faint. In ricasso stamp of *Johannes Wunde*, in blade name of *Sebastián Hernández* and inscriptions. (Nat. Mus. Copenhagen. 21711 and 10136, mus. fot.).

North Italian hilts often have a rather complicated basket with many bows, which is nothing strange having regard to the fencing masters there and the manuals on fencing published in that part of the country. The Italian hilts are often extremely elegant with slender guards and quillons. The latter are very long, longer than for instance the German and French though scarcely comparable with the Spanish. The bows are often artistically entwined. From below the pas-d'âne runs the traditional bow followed upwards by a midway bow which may assume the form of a spiral volute; a third joins the knuckle bow at its middle, and on the side of the counter-guard three bows emanate from the pas-d'âne and join on to the knuckle bow. Often the latter is only loosely joined on to the pommel. It may end in a small ball or knob corresponding to the ends of the quillons, or in a hook bent outwards; or, slightly rounded, it may terminate a very short distance from the pommel, often no more than a millimetre. The museum in the *Palazzo Capodimonte* has a number of typical Italian hilts of the middle 16th century. Several of them are richly ornamented, a type that is familiar for example from the famous work from 1554 in the Victoria and Albert Museum on London (No. E 1764-1929), by *Philippo Urso* of Mantova. The hilt material is often iron (fig. 15) gold or silver gilt with a wealth of ornaments and figures inlaid with the technique mentioned by Benvenuto. Although this form of inlay recalls the Spanish and French it differs from them; the blades are often of Italian work, especially from Milan (Caino, Piccinino (fig. 16-17) and others), from which city we also have archival evidence of a large production of arms, and not armour alone. Other names are *Ferrara of Belluno*, *Pedro di Napoli*. They may also be Spanish, signed by *Hortuno de Aguirre*, *Delaorta*, *Ayala*, *Sebastian*, *Hernandez* (fig. 18), *Alonso de Sahagun* and others.

In many instances the blades are from *Solingen*, some of them imitations of the Italian and Spanish—and into the bargain with imitations of the names of the Italian and Spanish masters. Sometimes it may be difficult to distinguish between the genuine blades and the good imitations, but the Spanish blade smiths had their own technique for forming and placing the letters, and this could not be copied.

Spain is highly individual with her rapiers (fig. 18-20). The hilts are remarkably short—an inheritance from the Moorish swords. The pommels are often like those of Italy and France but there are special forms too (lantern-shaped, etc.) (fig. 20). There is something undefinable, something foreign about many of the Spanish forms. The pas-d'âne bows, guards, pions and the like are slightly more prominent than on the weapons of the other countries, but first and

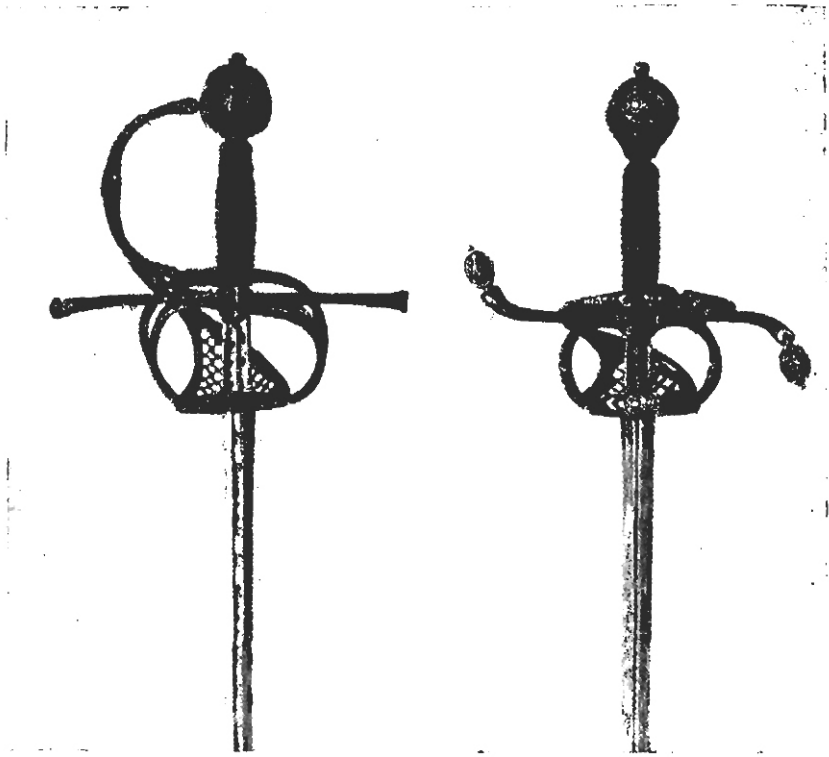


Fig. 19. a: Spanish rapier with engraved ornaments in the hilt. In the blade: *Juan Martínez en Toledo* and stamp of *Espadero del Rey*.
b: Spanish? rapier with engraved scrolls and with hearts and flowers in enamel and silver openwork. In the blade the whole prayer of *Ave Maria, gratia plena*. In ricasso crossbow stamps. (Nat. Mus. Copenhagen, 10134 and 10130, mus. fot.).

foremost the quillons are often of a different style, the foremost being turned upwards into an open knuckle guard, often in an elegant arc, whereas the lower one is turned downwards in a corresponding curve (fig. 18). Sometimes there is quite a small cage of close bows emanating from the *pas-d'âne*. One guard is sometimes turned upwards in an open knuckle guard, the quillons forming a long, elegant letter S. In these rapiers, whose blades are often unusually long, slender, strong but whippy, like a steel spring, *Toledo work*, we find the prototypes of the curious *Flemish* rapiers with a basket hilt of

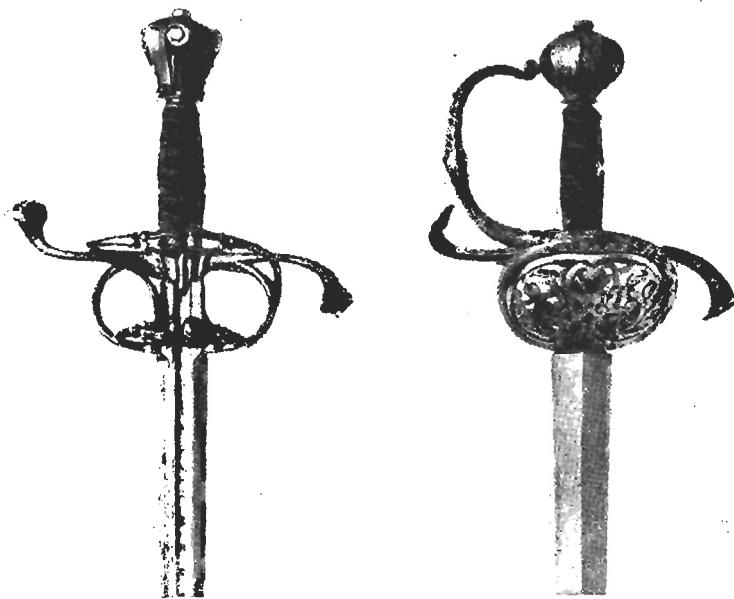


Fig. 20. *a*: Spanish rapier with lantern-shaped pommel and lantern-ornaments on quillons and side rings. About 1580. In the blade *De Francisco Ruiz en Toledo*.
b: Officers sword, so-called «Pappenheimer». Dutch type from about 1620-30. The type was very popular in Sweden. In the hilt engraved ornaments, in the blade: *Clemens Deinger*, and stamp with a swan. (*Nat. Mus. Copenhagen, 10123 and 10132, mus. fot.*).

many bows that almost wraps itself about the hand. The shape of the quillons may embody a reminiscence of the old *a la Valencianas*. It is no long step from there to the more or less perforated mussel-shell guard plates to be found especially on the Flemish rapiers but not uncommonly on the Spanish too. There is no doubt that in this we see an influence from Germany (fig. 21).

The Spanish rapier hilts also provided the goldsmiths with opportunities to display their skill. Like the Italian, the art of the *goldsmith in Spain* was on a particularly high level in the early Renaissance and the 16th century. One of the most remarkable localities for this art was *Guadalupe in Estremadura*, which had fostered one of the most able Spanish goldsmiths, *Fray Juan de Segovia*. Most



Fig. 21. Flemish rapier, «Pappenheimer», about 1620-30. In the blade the name of Heinrich Paether. (Coll. E. A. Christensen, E 18).

prominent, and also one of the oldest, was *Toledo*, followed by *Santiago de Compostela* and *Oviedo*; the art was somewhat younger in *León and Seville*. *Granada* too belonged to the circle. *Zaragoza* must also be mentioned, because from it came a large number of skilful goldsmiths to the many Italian courts and to Rome. The damascening technique that was practised at Toledo was closely related to the Oriental, which originally came from India. Both technically and stylistically it differs from the damascening of the other Romanesque countries. This special products of damascening is to be seen not only on rapier hilts but also on daggers, particularly on the characteristic ear daggers. Like the Venetian weapon the Spanish types originated in the Orient, but the two types—the Venetian and the Spanish—differ in both ornamentation and form. The main center of manufacture in Spain may have been *Granada*. An outstanding representative from this center is the dagger of *Boabdil* in the Real

Armeria in Madrid. Another outstanding specimen of ear dagger possibly from Granada is to be found in Instituto Valencia de Don Juan, Madrid. Various specimens are in the museum of *Lázaro Galdiano in Madrid*, in the coll. of *Palazzo Odeschalchi in Rome* and in a few other museums. The types have been treated by Mrs. Pilar Fernández Vega in an essay: *Dagars granadinas*. The Spanish type by the way was popular at the French court, and French accounts of both 15th and 16th centuries, make more mention of Spanish ear daggers, e. g. the inventory from Fontainebleau as late as 1560. Dating from 1538 there is a drawing by the goldsmith Cristóbal Juan at Barcelona, of a most elegant ear dagger. The archives of Barcelona mention drawings from such artists as *Antonio de Valdés* and *Rafael de Ximenes* from 1537.

The most characteristic rapiers are the *cup hilt rapiers*, which make their appearance early in the 17th century and culminate round about the 1650's (fig. 22). They were still in use around 1700, and dated and signed specimens of after the year 1700 are known. The cup was possibly designed under the influence of the mussel shells of German rapiers, which on the Spanish rapiers were made larger and rounder, and in time grew into the well-known cup or bell. The turned edge was developed in conformity with the manuals of the Spanish fencing masters, its function being to catch and break the blade. The quillons are extremely long, the grip very short and the knuckle guard does not close right up to the rather flattened spherical pommel. On the later cup hilt rapiers various details are added on the inside of the bell, details that are of importance to the holding of the weapon. Cup and pommel may be quite plain, undecorated or having merely a narrow lace edge cut in the iron; but the most characteristic form is the cup with openwork like fine lace. Outstanding specimens are extant, made in Spain itself, i. a. in *Madrid by Madrileman artists*, and indeed in *Portugal*. But it was the artists at *Naples*—then under Spanish rule—who became famous for their extraordinarily fine cup hilt rapiers. The cup was carved a *la espagnole*, and among the more renowned artists in this field are two whose signed works now repose in the *Victoria and Albert Museum* in London and the *Detroit Art Institute, U. S. A.*, *Antonio Cilenta* and *Lorenzo Palumbo*. *Brescia* and *Milan* are other towns which had a name for their Spanish-style cup hilt rapiers. The Solingen factories imitated them, and in Germany we find the type represented, but often of a somewhat coarser finish.

Coupled with these rapiers are the *Spanish left-hand daggers* with similar iron-work (fig. 22). Just as the cup of the cup hilt rapier was produced in various forms, for instance like a scalloped

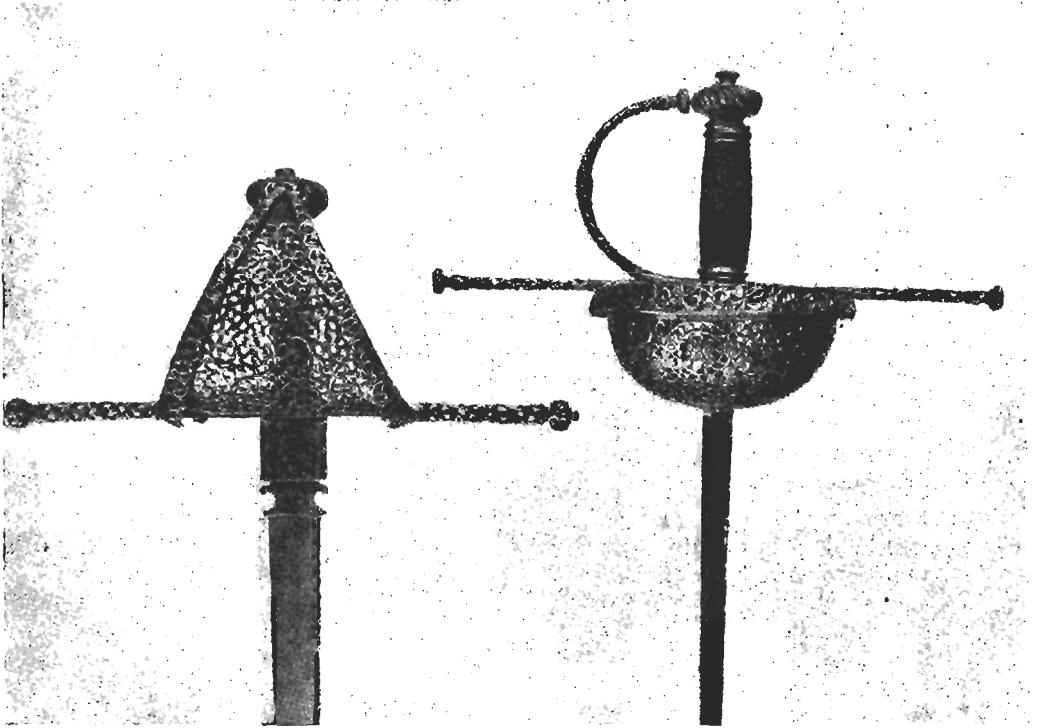


Fig. 22. Spanish left-hand dagger and cup-hilt rapier. The pierced and chiselled hilts are possibly Italian workmanship, about 1650. (Coll. E. A. Christensen, E 71 and 79).

calyx of greater or smaller depth and especially in the latter part of the 17th century got sloping brims with a higher margin under the knuckle guard, so the guard on the Spanish left-hand dagger varies in appearance, becomes lobate, with a «lace border» on the smooth iron plate. That the cup hilt rapier persists so long in Spain is due to the special line of development in Spanish fencing as evolved by *Luis Pacheco de Narváez* with its methodology and its geometrical, scientifically devised movements. A good idea of the Spanish school of fencing was provided by the large work which appeared in Leyden in 1630, by *Girard Thibaut d'Anvers: Académie de l'épée ou se démontrent par reigles mathématiques sur le fondement d'un cercle mysterieux la théorie et pratique des vrais et jusqu'a present incognus*

secrets de manieiment des armes à pied et à cheval, a work difficult to understand but illustrated by eminent artists.

In France at about the middle of the 17th century a change was made to a shorter small-sword—«la courte épée» and the left-hand dagger was abolished. The three edged blade was introduced at the same time and a distinction was made between épée militaire and épée de ville. A book by *Le Perche du Courdray* the founder of the French School with: *L'Exercice des armes ou le manieiment des fleuret*—, Paris 1635 was of particular interest. The French school was instrumental in causing the long rapier to disappear in Italy and elsewhere except Spain, and the new shorter and more simple form to appear. During the second half of 17th century the small-sword led to the handsome dress-swords which flourished during the rococo.

France separated herself on the whole from Italy and Spain by her heavier forms of sword, though maintaining a high degree of elegance. Iron chiselling came into the foreground and *Spanish damascening* made its way across the *Pyrénées* (fig. 23). At first the hilts were of the same complicated types as the Italian and Spanish. Some way into the 17th century the French swords separated from those of the other Romanesque countries on account of the French fencing system.

French renaissance hilts are scarcely ever lacking a quillon running right through the cross with a front and back end. Then there are the knuckle-guard and the other bows. It has several points of similarity with South German hilts, which were often influenced by French work especially towards the close of the 16th century and around the year 1600. French artists and goldsmiths provide drawings and suggestions for characteristic renaissance hilts in gold and silver, and several such drawings are extant after them in a book at *Lyons* by *Pierre Woerriot* from *Lorraine, Bordeaux, Paris* and elsewhere. The drawings of *Etienne Delaune* influenced the artists and swords makers at the *Bavarian* court, including iron chisellers like *Daniel* and *Emanuel Sadeler*, whose hilts are actually French in style. A special iron-work technique developed in France, with ornaments and whole pictorial scenes in blued relief on a gilt background. One famous sword and gun smith, *Antoine Jacquard of Poitiers*, drew designs for hilts with silver incrustations in black steel. In the late baroque and during the rococo France, especially *Paris*, became the *European centre* for elegant dress-swords. French 16th and 17th century inventories and other documents sometimes mention swords with hilts à la espagnole, à la italienne, and à la allemande by French artists. A sword hilt was not necessarily made in the country in

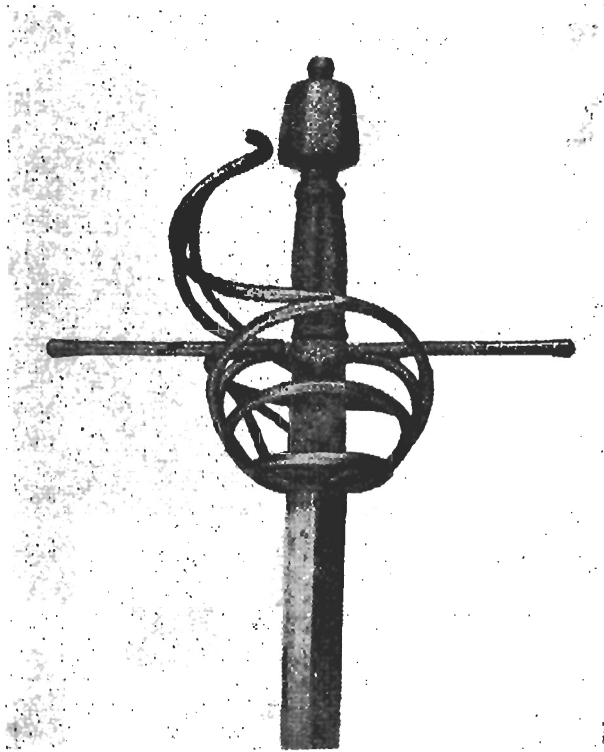


Fig. 23. The «classical» French rapier from about 1575. Hilt richly damascened with gold and silver. Stamps in the ricasso. (Coll. E. A. Christensen, E 208).

whose type and style it was designed. Form and style depended upon the desires of the customer.

The swords in *England* stand to some degree quite alone. In that country were evolved a separate group of designs and a separate style which on the whole were local (fig. 24 b). The hilts often have several bows and guards, half and whole guard plates, small, shallow bowls, etc. Sometimes the pommels are reminiscent of the Spanish and French, occasionally of the German. The quillons are frequently peculiar, for instance extremely volute-rolled. The decorative elements are highly characteristic. A special favourite is the damascening,

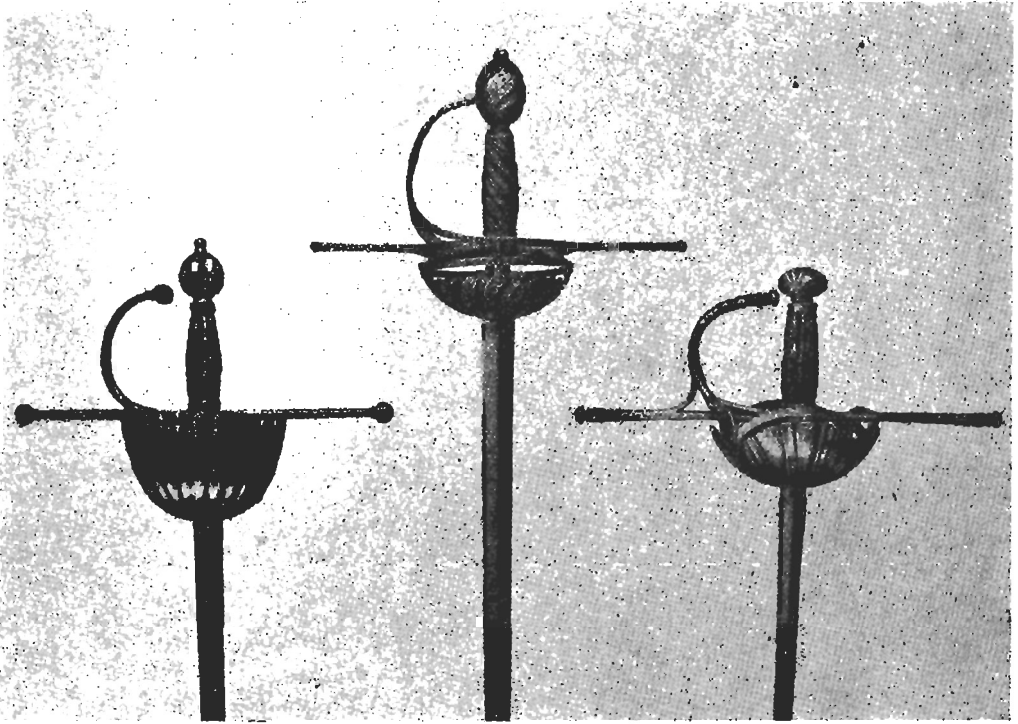


Fig. 24. a: Italian. b: English and. c: Spanish cup-hilt rapiers, the English rapier with rich silver incrustations. First half of 17th century. (Coll. E. A. Christensen, E 91, 20, 206).

which recalls the French or South German. There is a predilection for silver and gold incrustations in the dark steel. The artistic quality is often very high. In many cases it is impossible to decide whether the hilts are the work of English goldsmiths and artists or of immigrated South German craftsmen. The latter alternative is not unusual, as in the 17th century England sent for German craftsmen and blade smiths (Hounslow blades). There is also pierced iron work with no form of inlay in other materials. Some of this work attains to great beauty whereas others are rather crude, almost primitive. On the whole, England's 17th century sidearms have a physiognomy of their own.

There as in Italy and France the hilt became simplified about the

middle of the 17th century. The many bows disappear and are replaced by a single knuckle-bow and mussel-shell guards, often rather small and placed below the quillons at the lower ends of the pas-d'âne.

Although it cannot generally be said that all European sword hilts can be divided into Latin and Germanic and these again into Italian, Spanish, French, English, etc., it is possible to make a certain subdivision. The *Germanic* hilts were evolved on another basis and originally according to other principles than the Latin. Actually it was not long before the Latin characteristics began to influence the Germanic and vice versa. In *Germany* especially in the South, many Latin elements were absorbed. The same was the case in the Netherlands, where in particular the Spanish influence was highly perceptible. (fig. 21). In conjunction with the Germanic elements special forms emerge just here, as was the case in England. One separate development occurred in the East corner of Central Europa, where the much enclosed basket hilts that are familiar from the *schiauvones*, *dusaggz*, *sabres*, etc., become characteristic. However this extreme hand protection, intended mainly as a guard against the cutting blow, also become the recipient of Latin elements, receives a kind of pas-d'âne, oblique bows, etc., on the counter-guard or quite a little cross of bows on that side. In this respect *North Italy* displays a curious form with the Latin, very long quillons, often slightly S-shaped, with a closed basket-hilt, sometimes quite devoid of pas-d'âne and oblique guards, an Italo-Slav type of sword, mainly intended for cutting.

In *Switzerland* the combination of Latin and Germanic is clearly visible. Around the 1520's there are still large cutting swords to be seen, almost hand-and-half swords with a cruciform hilt, pas-d'âne and oblique bows, side rings which connect the pas-d'âne-ends, pitons and half or whole knuckle-bows (fig. 25). The Swiss sabres also have curious combinations of bows. On the whole Switzerland is remarkable for her different local types—swords as well as rapiers, hangers and daggers.

One of the local groups observable especially in the Germanic development is to be found in *Saxony*. A number of excellent and very characteristic rapiers are preserved in the *Electorial Armoury in Dresden*, while others have been spread about museums and collections in the course of time. Characteristic is another large and simple cruciform type, one that was easy to imitate and therefore gave rise to a multitude of copies and falsifications. The characteristic feature of these swords is the often short, plump form of the grip with an almost serrated collar above and below as well as vertical bands of iron from the one to the other, and also a biconical pommel, often with six sides on each half. One also encounters the long, divided

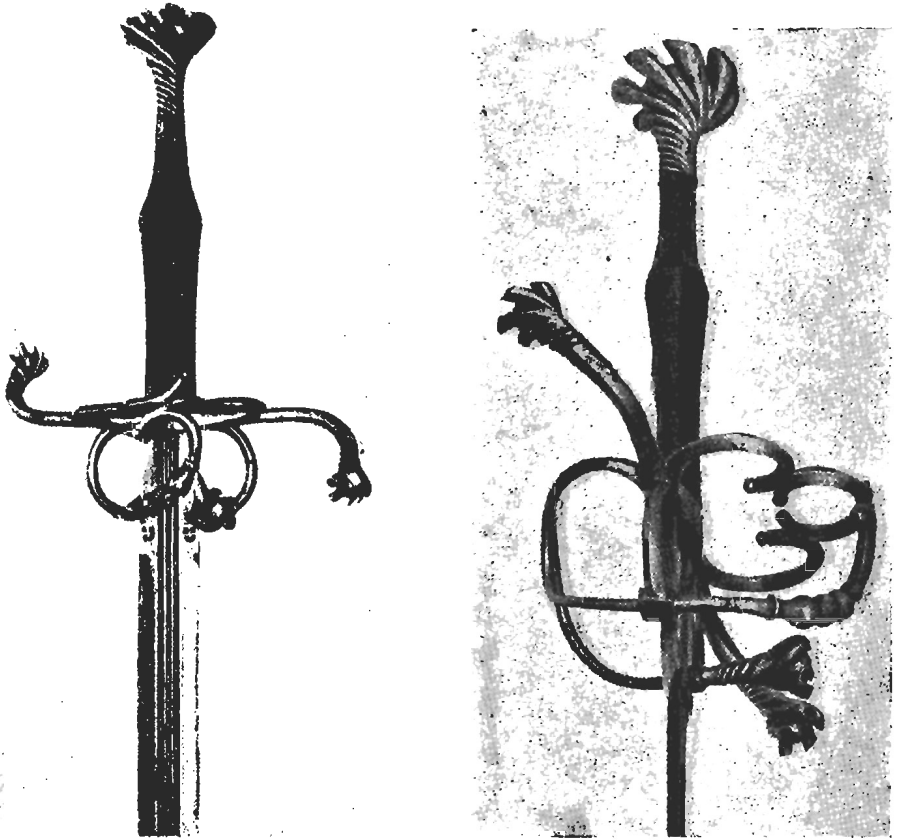


Fig. 25. Swiss one-and-a-half sword, early 16th century. (Coll. E. A. Christensen, E 11).

grip, a reminiscence of the late-mediaeval sword. The quillons, which often widen towards the ends, are either horizontal or faintly curved. In the cross on the guard is a horizontal bow. Some have two pas-d'âne, connected by a small ring whereas the counter-guard has an oblique bow from the end of one pas-d'âne to the cross or there are two crossed oblique guards, one from each pas-d'âne. Others have only one pas-d'âne and a single oblique bow. Below the cross there is sometimes a kind of muff of silver. The blades are often

heavy with one or more grooves. In a few cases they are Milanese blades, in others Solingen. The mountings on hilt and scabbard are often silver, decorated with ornaments (engraved or chased) in a style recalling i. a. Heinrich Aldegrever and his circle. In this type we see the old mediaeval sword of cross-form surviving under the influence of the new Latin currents, the short grip and the various bows under the quillons and the pas-d'âne. This transitional type was very popular in the Scandinavian countries, where not uncommonly it appears with a long two-piece grip, pas-d'âne, oblique branches and the like. There are examples in Sweden. It was popular in Denmark and is represented by the silver-adorned sword of the Danish nobleman Herluf Trolle (1516-1565) in Herlufsholm Church in Sealand. A Saxonian type, influenced by the North Italian rapiers or striscias is i. a. the burial sword of Christoph Rosengaard (ob. 1596) in the Cathedral of Roskilde (fig. 26). The heavy Saxonian types are often depicted on the tombstones of Danish nobles. This Saxon type achieved such a wide distribution in Denmark because of the latter's intimate relationship with Saxony through royal marriages and the cultural influence from the Lutheran Electorate. Saxon craftsmen came to Den-

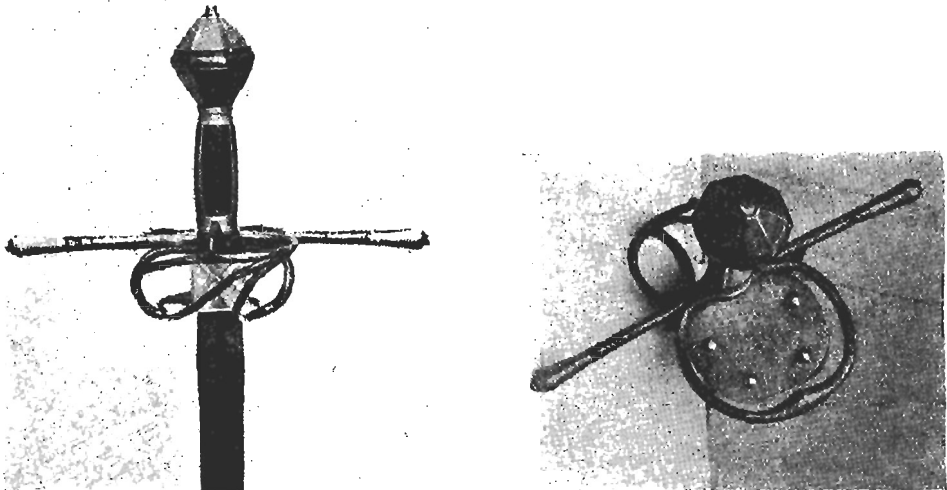


Fig. 26. Silvermounted rapier from the tomb of Christoph Rosengaard, ob. 1596. Saxon type with Italian influence. On the broad silverplate the coat of arms and name of the owner. (Roskilde Cathedral, Denmark).

mark, sword-makers among them. Sidearms were imported from there or imitated. Swords of Saxon type are reproduced in Danish portrait paintings of the period.

Another characteristic Saxon type with its appurtenant left-hand dagger is in the *Dresden Armoury*. The hilt has not quite lost its mediaeval form, though it has got the modern accessories such as pas-d'âne, side rings and counterguard. The material is iron chiselled in a basketry pattern. There are other sword-rapiers in Dresden with hilts in the same basketry pattern and with knucklebow and curved parade quillon. Some of the specimens preserved in the Dresden Armoury have Milanese blades others have *Solingen* blades bearing the name of Peter Munsten. Possibly there was some question of a series of swords, made for the Electoral life-

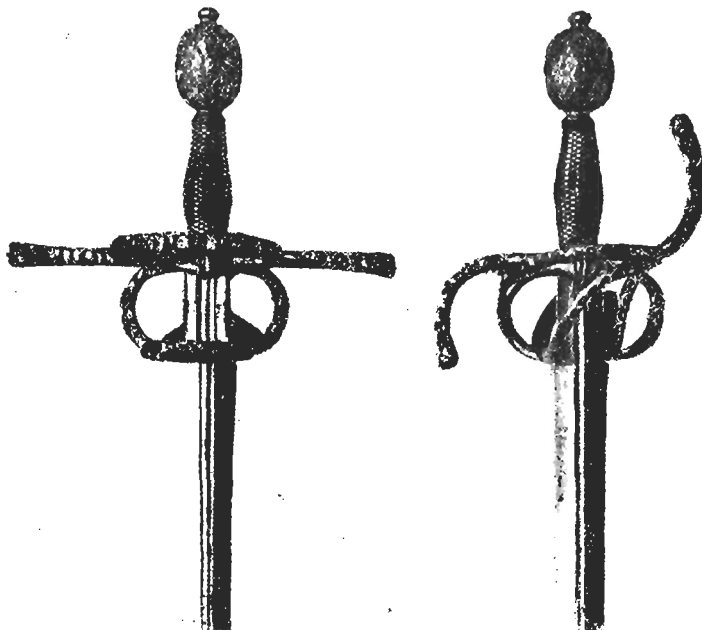


Fig. 27. Saxonian rapiers, about 1600. Silver incrustations in hilt and grip. In the blades: Herman Stof me fecit Solingen, and stamps. Blade on the left dated 1619. (Nat. Mus. Copenhagen, 10128 and 10127, mus. fot.).

guards under *Christian I* (1586-91) and *Christian II* (1601-1611). Some elegant rapiers are now in the Danish national museum (fig. 27-28).

In connection with the Saxon swords mention must be made of one of the period's most distinguished German chisellers, *Ottmar Wetter*, who was attached to the Elector's court at the close of the 16th century. Actually he was from Munich, whence as a Protestant he had had to flee to Saxony, where he found protection under the Lutheran Elector. For the prince he made a number of sword hilts besides other iron work. One of his most characteristic swords, entirely in black, now in the Royal Arsenal Museum in Copenhagen, is both signed and dated (1594). And other works from his hand and his school are to be seen in several museums in Germany, England, U. S. A. (J. Hayward, *Studies on Ottmar Wetter*, Livrustkammaren V. Stockh. 1949).

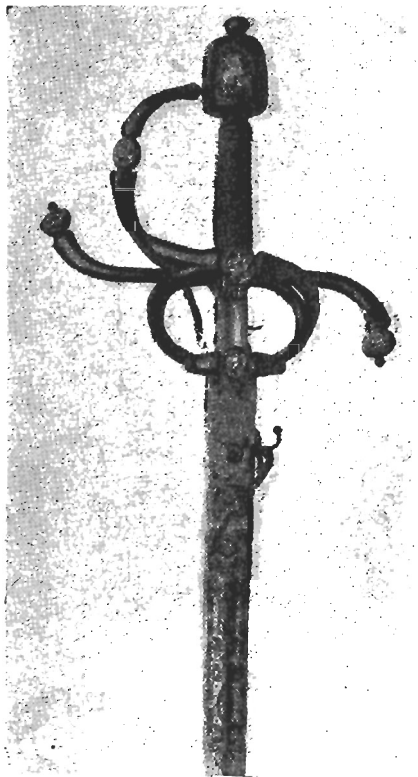


Fig. 28. Saxon rapier with wheel-lock pistol. To it belongs the dagger fig. 14. (Nat. Mus. Copenhagen, 10115 and 10163, mus. fot.).

The most distinguished of the *German* groups is undoubtedly that belonging to Munich at the *Bavarian court*. The forms of these swords and their left-hand daggers are particularly good and surviceable, of the latest fashion; but what makes them remarkable is the decoration, the masterly chiselling—work, in which figures, leaves and flowers stand well in finely cut and blued relief against the gilt background. They are chiefly the work of the two brothers *Daniel* and *Emanuel Sadeler*. Slightly younger is the similarly fine, but perhaps somewhat less thorough work of *Caspar Späth*. The Sadeler were summoned to *Prague* by the German emperor *Rudolf II*, where they made several ceremonial weapons, specimens of which are now to be seen in Vienna. The motifs in their chiselled hilts are typical of the period: antique gods and goddesses, herms, fauns, masks, etc., among leaves and flower garlands. Many of the Sadeler's work was done in collaboration with *French* artists and designers and all their products bear a light and elegant stamp that suggests *French* prototypes. Very remarkable are the hilts on some of these swords now in the Victoria and Albert Museum and in the Wallace Collection in London, others in Munich and Vienna. Among other things there are the drawings of *Etienne Delaune*, which were patterns. The blades in many of the Sadeler's works are *Milanese*. Round about the year 1700 and in the first half of the 18th century drawings were published on hilts for dress-swords, especially by *Augsburg* and *Nuremberg* artists.

The simplification of these sword hilts in the 17th century was not confined to South and West Europe. One particular form developed in *North Germany* about the middle of that century, the so-called *Brandenburg* sword, wholly devoid of bows and handguard, having a cruciform hilt but more slender and of other proportions than the old mediaeval swords. A typical and unusually fine example of it is the one in the Victoria and Albert Museum, signed by the chiseller *Gottfried Leygebe*, dated to 1660-70. Others by the same and other artists repose in the museums of Europe and America, or are depicted in the portrait painting of the time.

With hilts such as the later French, English and Brandenburg we are now on the way to sidearms of an entirely different form. In reality they form a connecting link with the characteristic small-swords of the 18th century, the fine, often elegant and slender dress-swords whose small hilts bear survivals of the old *pas-d'âne* and whose blades are slender, sharp-pointed and stiff. With the sidearms of the baroque we have arrived at the transitional stage to the last phase of these weapons. This is the last independent epoch before they become shorn of their artistic significance—to some extent

their usefulness too, and become simply brazier work, more or less in mass production. Individual swords are made only in special cases. In its best style the sidearm becomes an accessory to the gala uniform of officers or civil servants, or swords of honour like the French swords from Boutet in Versailles, sabres presented on special occasions to persons of merit, from generals to N. C. Os. As mass articles they become the regulation military swords, sabres, etc., bearing the impress of the particular services who are to wear them and, to some extent, of the style and fashion of the period. Their interest and importance lie elsewhere. Their value as art and their cost — with few exceptions — are slight compared with the sidearms of former periods, from the mediaeval sword to the rapiers of the renaissance and thence to the dress-swords of the rococo.

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