simplified also. Early in the 18th century, the use of the edge having been finally abandoned in rapier-play, the two-edged blade was supplanted by the bayonet-shaped French duelling sword, on which no improvement has since been made except in giving it a still simpler guard. The name of rapier was often but wrongly given to this by English writers. About the same time, or a little earlier, the primacy of the art passed from Italy to France. There is still a distinct Italian school, but the rest of the world learns from French masters. It is unnecessary here to consider the history of fencing (*q.v*.); Mr Egerton Castle’s book on the subject will be found a trustworthy guide, and almost indispensable for those who wish really to understand the passages relating to sword-play in our Elizabethan literature, of which the fencing scene in *Hamlet* is the most famous and obvious example.

Meanwhile a stouter and broader pattern, with sundry minor varieties, continued in use for military purposes, and gradually the single-edged form or broadsword prevailed. The well- known name of Ferrara, peculiarly associated with Scottish blades, appears to have originally belonged to a Venetian maker,

or family of makers, towards the end of the 16th century. The Spanish blades made at Toledo had by that time acquired a renown which still continues. Somewhat later Oriental examples, imported probably by way of Hungary, induced the curvature found in most recent military sabres, which, however, is now kept within such hounds as not to interfere with the effective usa of the point. An eccentric specialized variety—we may call it a “ sport—of the sabre is the narrow and flexible “ Schläger ” with which German students fight their duels (for the most part not arising out of any quarrel, but set trials of skill), under highly conventional rules almost identical with those of the old English “ backswording ” practised within living memory, in which, however, the swords were represented by sticks. These “ Schläger ” duels cause much effusion of blood, but not often serious danger to life or limb.

There are plenty of modern books on sabre-play, but com­paratively little attention has been given to its scientific treat­ment. It is said that the Italian school is better than the French, and the modern German and Austrian the best of all. Some of the English cavalry regiments have good traditions, enriched by the application of a knowledge of fencing derived from eminent French masters.

The following description, written for the 9th edition of this work from personal inspection, applies to the process used by the best private makers till near the end of the 19th century, and is purposely left unchanged. The present method of making army swords is separately described below. Mechanical invention has not been able to supersede or equal hand-work in the production of good sword-blades. The swordsmith’s craft is still, no less than it was in the middle ages, essentially a handicraft, and it requires a high order of skill. His rough material is a bar of cast and hammered steel tapering from the centre to the ends; when this is cut in two each half is made into a sword. The “tang” which fits into the handle is not part of the blade, but a piece of wrought iron welded on to its base. From this first stage to the finishing of the point it is all hammer and anvil work. Special tools are used to form grooves in the blade according to the regulation or other pattern desired, but the shape and weight of the blade are fixed wholly by the skilled hand and eye of the smith. [Machine forging in the early stages is now common, and there is no difficulty in making the blade and tang of the same metal.] Measuring tools are at hand, but are little used. Great care is necessary to avoid overheating the metal, which would produce a brittle crystalline grain, and to keep the surface free from oxide, which would be injurious if hammered in. In tempering the blade the workman judges of the proper heat by the colour. Water is preferred to oil by the best makers, notwithstanding that tempering in oil is much easier. With oil there is not the same risk of the blade coining out distorted and having to be forged straight again (a risk, however, which the expert swordsmith can generally avoid); but the steel is only surface-hardened, and the blade therefore remains liable to bend. [This is disputed.] Machinery comes into play only for grinding and polishing, and to some extent in the manufacture of hilts and appurtenances. The finished blade is proved by being caused to strike a violent blow on a solid block with the two sides flat, with the edge, and lastly with the back; after this the blade is bent flatwise in both directions by hand, and finally the point is driven through a steel plate about an eighth of an inch thick. In spite of all the care that can be used both in choice of material and in workmanship, about 40% of the blades thus tried [now only about 10%] fail to stand the proof, and are rejected. The process we have briefly described is that of making a really good sword; of course, plenty of cheaper and commoner weapons are in the market, but they are hardly fit to trust a man’s life to. It is an interesting fact that the peculiar skill of the swordsmith is in England so far hereditary that it can be traced back in the same families for several generations.

The best Eastern blades are justly celebrated, but they are not better than the best European ones; in fact, European swords are often met with in Asiatic hands, remounted in Eastern fashion.