

Making edged weapons

The skill of the edged weapon maker has been passed from generation to generation and as metals have developed so has the art of the sword maker.

Iron and steel

While only iron was available, sword and knife makers were at a disadvantage as it is soft and easily bent out of shape. At some point, a different type of iron was discovered which had the property of becoming hard when plunged red hot into water. However, this had the disadvantage that it also became brittle, but it was found that the brittleness could be overcome by reheating to a lower temperature and then cooling, a process known as tempering. This new type of iron was, in fact, steel.

Blades could now be made which held a good edge and were tough enough to withstand the rigours of use.

Pattern welding

This new steel was at first quite a rare and expensive commodity and to make best use of it, it was combined with soft iron in such a way that the steel formed the cutting edge while the soft iron formed the core of a blade. Sometimes the iron and steel were blended together and created a blade which had more uniform qualities. These blades, when etched, revealed a variety of swirling patterns and today are often referred to as pattern-welded blades.

Craftsmen

All of this required an extremely high degree of skill. There was no oxy-acetylene welding equipment or gas heating available. Everything had to be carried out using the forge's hearth in which the metal was heated, followed by welding the components together using the hammer on the anvil and then giving the blade its finished shape.

Polishing

Once the forging stage had been completed, the blade had to be ground and polished to give it a cutting edge and a fine finish, followed by etching to bring out the pattern if required. It then had to have some form of hilt fitted with which to hold the weapon.

Mechanisation

By the mid 19th century, the manufacture of military blades especially was beginning to be mechanized. Shaping of long blades was done by special rolling mills and shorter ones by forging hot steel in specially-shaped moulds, or dies. The role of the craftsmen in blade making was gradually being overtaken by the machine. But this was only true

where large numbers of identical items were required, such as for military use.

Finishing touches

For special, one-off items the craftsman again came into his own especially in creating such things as elaborately decorated presentation swords requiring high degrees of manipulative and aesthetic skill.



Sword and scabbard presented to Lt James Bowen by the Lloyd's Patriotic Fund, 1803, displaying a high degree of craftsmanship in the sculptural embellishment of the hilt and the blue and gilt inscription and decoration of the blade. IX.2565