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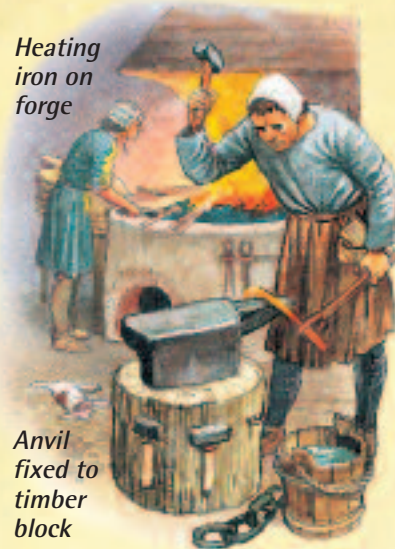
❑ Castles were very expensive to build. Records from the building of Beaumaris Castle, Wales, dated 1295–6, show that 200 quarrymen, 400 stonemasons, 30 blacksmiths and 2000 labourers were hired for the project. The total cost was £14,500 (about \$8–9 billion dollars in today's money).

## Tools and craftsmen

**A**n army of workers is needed to build a castle. With only a few basic kinds of tool available, most of the work is achieved by a combination of skilled craftsmanship and muscle power. Between 2000 and 3000

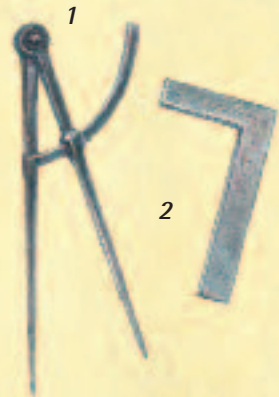
men, including masons, blacksmiths, carpenters and labourers, may be required if the job is to be completed within 20 years.

Tools, chains and other ironwork are made and repaired by blacksmiths (*left*). Using an iron anvil, the smith hammers metal heated over a hot charcoal fire in the forge into the desired shape. Carpenters (*below*) assemble wooden items including joists, floorboards, gates and scaffolding. If the castle comes under siege, they will need to make the timber hoardings to cover the battlements and turrets.



Heating iron on forge

Anvil fixed to timber block



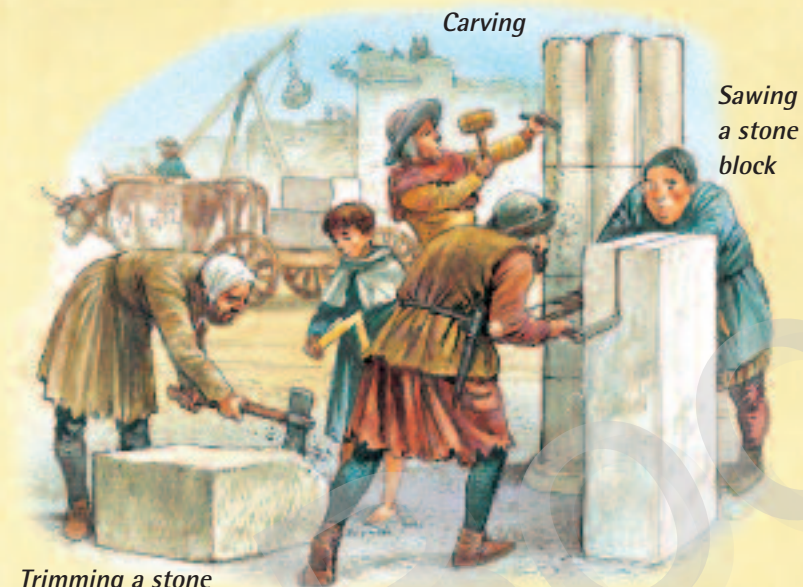
Masons need to cut blocks of stone very precisely, especially when working with curved or intricate designs. They measure accurately using dividers (1), transferring the measurements from drawn-up plans to stones and scoring their surface ready for cutting. Using a set square (2) ensures corners are cut to exact right angles.



Sawing wood

Using an adze for smoothing rough-cut wood

Using awl for making holes



Carving

Sawing a stone block

Trimming a stone with an axe

**T**he stones are fashioned by masons. A master mason is in charge of the design of the castle and all the building operations. He works in a tracing house, built for him by carpenters, where he draws out the plans on a plaster floor. He oversees the work of the freemasons, who cut and carve the stones, and roughmasons, who build the walls. Once the stones arrive from the quarry, the rough blocks are cut down to size. Masons select higher-quality stone to form the outsides of the walls and pillars. Using small axes or saws, they trim and smooth the stones, before carving them with mallets and chisels.



Checking level

Mixing mortar

Rubble infill

Laying mortar with trowel

A mason uses a range of tools to shape and lay the stones. He has a range of chisels (1) for splitting, smoothing and carving, and a special claw chisel (2) for scraping away stone. He uses a trowel (3) for laying mortar, while an axe (4) is needed for trimming large, rough blocks.



Labourers carry the building stones to the walls. Others mix up the mortar, a mixture of sand, lime and water that will be used to fix the stones firmly in position. Standing on scaffolding, roughmasons lay the stones in rows, checking that they are absolutely level. The walls are made by packing rubble mixed with mortar between two outer layers of stones.



A page performs a variety of tasks in his master's household, including helping his master dress in the mornings and serving food and drinks at mealtimes.



One of a squire's duties is to look after the knight's horses. He has three: a warhorse, called a destrier, which is trained for battle; a palfrey, used for travelling from place to place; and a packhorse to carry the knight's arms and equipment.

A squire is expected to follow his master into battle. His duties also include polishing his armour, sharpening his weapons and dressing him in readiness for combat.

# Becoming a knight

Only the sons of a knight can grow up to be a knight. In order to fulfil their destiny, they must go through years of training, to learn the fighting skills and the code of chivalrous behaviour that is expected of a knight.

The first step is to become a page. At the age of 7 he is sent to work in the household of another knight or noble lord. At the age of 15, the

page becomes a squire, acting as a personal servant to a knight. By this time, he is spending long hours learning swordsmanship, using wooden swords in mock duals with other squires (above).



page) is to take part in a game called quintain (above). The quintain is a post with a spinning arm at the top. At one end is a shield, at the other a heavy sack of sand. The squire must aim his lance exactly at the middle of the shield. If he strikes it off-centre, the sack of sand will instantly swing round and quite possibly knock him off his horse!

By the time a squire reaches the age of 21, he will become a knight. This happens at a dubbing ceremony (right), in which the squire kneels before his master, a noble lord or the king himself. Sometimes, if the squire had been especially brave in battle, he is knighted on the battlefield. Normally, however, it takes place in the Great Hall of a castle, before invited family and friends. The squire kneels before the lord, who lightly taps the young man on the neck with a sword, accompanied by the words: "I dub you a knight". He is then presented with his own sword and spurs, often a gift from his father or his master.



A squire dedicates his life to learning from his master: how to ride a horse, how to fight with a sword, mace, lance or axe, and how to out-think an opponent in battle. A useful training for the joust (see next

The evening before he becomes a knight, the squire is bathed and shaved. Dressed in simple robes, he spends the night in prayer at the castle chapel: an all-night vigil.



□ If a squire could not afford all the expenses of becoming a full knight – maintaining horses, purchasing armour, hiring a squire etc. – he might remain a knight bachelor, or even not be knighted at all. Many new knights had no land or property to begin with, and enjoyed a life of hunting and hawking, competing in tournaments and attending banquets at manor houses or castles.