# SKILLED COLLIERY CRAFTSMEN

The process of producing coal does not begin and end with the miner working at the coalface. Collieries usually employed large numbers of men to work both underground and on the surface to support the miners cutting the coal. Often these were highly skilled craftsmen in their own right.

**BLACKSMITH**

The blacksmith fulfilled a very important role in ensuring the smooth running of any colliery. A blacksmith learned his trade during a four or five year apprenticeship and was highly skilled by the end of his training. His job involved a variety of tasks from sharpening miners' picks to making or mending all kinds of tools and machinery. Blacksmiths often made tools they had designed themselves, therefore many of the tools that they used were quite simple, and hand-made.

*Blacksmith and his apprentice.*

Colliery blacksmiths worked almost exclusively on the surface. Much of their work involved heating metal goods in the forge so that they could be shaped or worked. In most deep mines, with gas a constant danger, metal goods heated to high temperatures underground could have caused explosions.

**ROPEMAN**

The ropeman was responsible for looking after all the different kinds of ropes used in a colliery. The most important of these were the winding ropes that pulled the cages up and down the shaft, and those for underground haulage, which dragged the hutches along underground. Most modern colliery ropes were made of wire for strength rather than cotton or hemp. They had to be properly looked after to avoid possible accidents.

The job of looking after the ropes was highly skilled, and trainees had a four or five year apprenticeship where they worked with an experienced ropeman before qualifying.

Ropes used in the mining industry were placed under a good deal of strain due to the very heavy weights involved. Part of the ropeman's job was to examine them for worn or broken wires, damage or distortion, and to make certain the rope was well greased. Regular checks were made, and records kept, for each rope. Often a piece was cut off a new rope before it was used to see how worn the rope became compared with the unused sample.

The end of the rope was placed under the most strain and by law the end or 'cap' had to be removed every six months.

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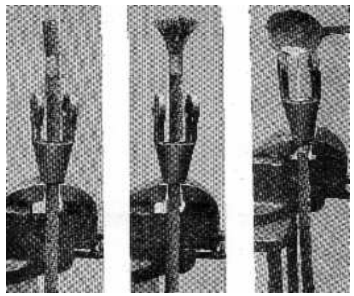
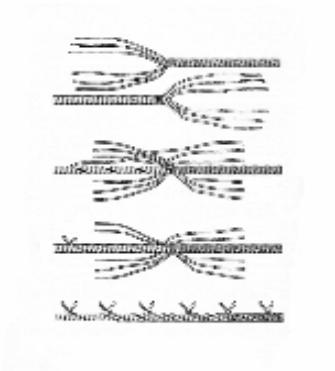
Before the rope was cut it had to be ‘seized’, which involved winding wire around each side of the cutting point to stop the rope springing apart. Once removed, the old end was tested for damage and a new cap was formed to replace it. One method used to do this was to open out the end wires into a brush and place a cone-shaped metal socket around it. Then molten metal was poured inside so that once it cooled the individual end wires were held firmly inside this socket, or ‘cappel’.



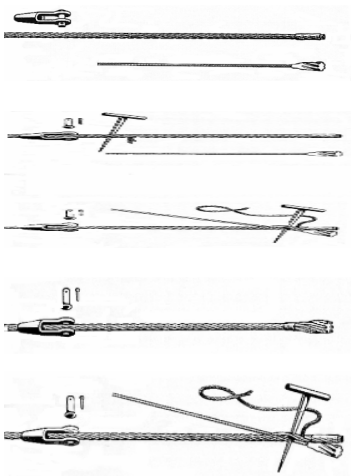
*Re-capping a wire rope with molten metal*

Splicing was a very skilful part of the ropeman’s job. Apprentices often practised repairing ropes by making a circle of wire rope with a join invisible to the untrained eye. Two different ropes can in this way be joined together so that the join is as strong as the rest of the rope. Splicing was also the method used to repair small strands of broken wire.

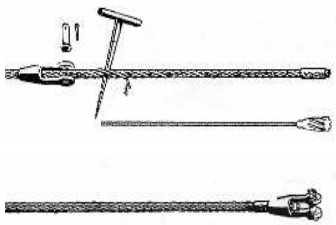


*Splicing two ropes together*

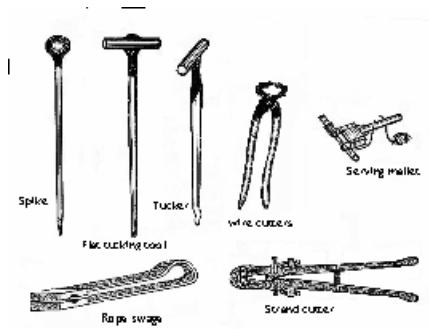
The main tools used for splicing were the marline spike and the tucker. The spike was used to open a gap between two strands of wire. The tucker, also known as the spoon or boot because of its shape, tucked the loose ends into the centre of the rope where they were held securely in place.



When recapping a rope underground, for example a haulage rope, a ropeman was not normally able to use molten metal because the heat may have caused a gas explosion. Instead a zinc cone attached to a short piece of wire rope was ‘spliced’ on to the end of the rope.



*Re-capping a wire rope with a zinc cone*




*Splicing tools*

Splicing is still an important trade in many industries where ropes are used, such as the oil industry.