

3E The Blacksmith's Tale

Blacksmiths' Shop

This is one of the best preserved of the mine buildings, and was an essential part of any industrial undertaking. (The position of the apostrophe is deliberate! There are two forges, and two blacksmiths could have worked here.)

- The blacksmith would make tools of all kinds, and in particular sharpen the drilling rods of miners.
- Machinery, and the iron straps used to secure the timbers of the pit head gear were made by the blacksmith.
- There were lots of horses to be shod, at least until the railway was built.

Inside, point out

- The anvil, on which metal is shaped
- The hearth, filled with coke to heat the metal to red heat
- The bellows, to produce the draught to make a fierce fire, operated by the blacksmith's left hand
- The leather apron, to protect the blacksmith against red hot sparks
- Hammers to beat the metal into shape
- Tongs beside the hearth to hold hot metal
- Goggles for eye protection

The Blacksmith's Story

You've come here because there isn't any industry that can function without a blacksmith. What I do is highly skilled work, essential work, and it's probably the best job in the mine. I don't have to go underground. And what is better, I'm not working outside in all weathers, winter and summer. I'm not standing in a dripping tunnel in the dark, with cold water round my ankles bashing at a chisel. And I'm not getting my hands frozen in winter trying to sort out which bits of rock are the lead ore, and which ones we they throw away. I'm here, under cover, in the dry. It might get a bit hot in the summer, but there's always beer when I'm thirsty, and the fire is a help on frosty days.

The way we work the iron is we heat it up until it starts to melt. It needs to be red hot, and for that we need a really fierce fire. The way to get a strong heat is to use these bellows to keep a strong draught on the coals. The metal goes in the fire, then I take it out with these tongs when it's hot. I shape the metal on the anvil by using a hammer. I can cut it with a chisel, or I can bend it with tongs and a hammer. Whilst it's hot I can produce any shape you like. When the metal cools, it goes back in the fire.

Everyone knows me, and everyone needs me. If a piece of machinery breaks, there's no shop to go to. They can't send for spares. They come to me and I fix it. I can mend anything made of iron, and fix a new piece on to what's broken.

Here the first thing is these rods used for drilling into the rock. One man holds the rod, and another one bangs the end hard with a hammer. He has to hit straight, because if he misses the rod he'll bash his mate's fingers. If they want to go faster, two people take it in turns to thump the rod. And after a while it gets blunt. They bring it to me to be sharpened. Notice the sharp end has to be wider than the shaft, so that it doesn't get stuck in the hole, and the blade has to be sharp. So, when it's worn I make a new blade. First I flatten the rod and make the end wider. Then I sharpen it, and I cool it quickly in a bucket of water to temper the steel and make it harder. So that's the first bit of machinery – a drill rod and a hammer.

Now, whatever your industry, I always say there's one piece of machinery you can't do without. It's something which is always made by a blacksmith, and we make them even today. This piece of machinery is a horseshoe. Yes, machinery, because the horse is what drives most things in the mine. The way they lift the buckets of lead ore called kibbles is they have a long rope down the mine, and at the top the rope winds round a large drum. You could turn it round by pushing on a long pole, but that's heavy work, and it takes too many men. But, if you have a horse, he can turn a horse gin all day and not get tired. So, to keep the horse working, he needs shoes, or his hooves will get worn out. And then it's the horse who takes the lead ore to the smelter, and the horse which takes the lead to be sold. If it goes by canal, the horse pulls the barge. And the horse comes back bringing the coal for the pumping engine at the mine. There's no way you can mine here without horses.

Next, if you look at the pit head gear over George's Shaft you'll see its great wooden beams held together with iron straps. Who makes those? Every one is made to measure by the blacksmith. And if one breaks, I make another. All the metal you see there is blacksmith's work.

Look at the wagons which carry coal and lead ore. They all have iron fixings, and they all get worn out. When they break they get me to make new parts. This is where you get the spares. As I said, you can't send out for spares. There's no-one to ask. We do the work here, and we get it right. This way the mine is kept working all year round. This blacksmith's shop is probably the oldest building here, because they had one before even the Snailbeach Company was formed. The Smith Shop is listed on accounts for 1769. And in all the time there's been a mine here there has always been a need for a blacksmith.