

## WORKING THE ELLAND EDGE FLAGS

Walton 1975

*During the eighteenth and nineteenth centuries a very large industry developed in West Yorkshire exploiting the sandstones of the Millstone Grit (Namurian) and the Coal Measures (Westphalian) for masonry, flagging and for roofing, known locally as thackstones. Generally the quarries or delves worked exposures on the steep valley sides, where there was less overburden to remove, but also extending into the plateaux beyond. There are many descriptions of the rows of cranes in quarry after quarry along the skylines of Elland Edge, Southowram and similar centres. The extent of the industry has been reviewed in Godwin (1984)<sup>1</sup>.*

*The fissile rock was sometimes followed underground. At Rand and Asquith's Tuck Royd Quarry near Brighouse the underground workings can be seen high up in the wall of the modern workings. Walton (1938) has described the early methods of working.*

From the records of the building of Rastrick Chapel in 1602 (Lister<sup>2</sup>), it appears that landowners employed labourers to quarry the stone on their own land. In the Elland Edge district this ultimately developed into the 'master-taker' system, whereby the landowner let out the getting of the stone to a 'master-taker', who undertook to get the stone for a stipulated sum. He employed 'delvers', but he was often regarded as unscrupulous by both the landowner and the delvers. Frequently the overburden from a working was tipped on the top of unworked land and the whole declared to have been quarried. The 'master-taker' was also usually the local innkeeper, and, as he paid out the wages of his 'delvers' in his inn, a goodly proportion of their earnings was quickly returned to his coffers. This system survived until well into the nineteenth century.

The early quarrymen, who worked the outcrop, took only the best stone, and, as this became worked out, galleries were driven into the hillside. The development of deep quarries and mines came only with the introduction of gins and steam cranes, and in Hipperholme the earliest shafts were sunk about 1860. The overburden removed when sinking a mine was hauled to the surface by means of a windlass and built into a massive retaining wall, known as a 'judd wall'. Behind this wall other waste material was tipped to form a level field in due course.

When the shaft reached the required depth, galleries were run under the ground, as at Collyweston, although the galleries were much more extensive. The mining operations were controlled by the 'wooder', who had charge of the timbering, and in order to conserve timber he also determined the nature and direction of the galleries. Props were not used and the timbering was restricted to the roof, which was wedged by means of ash 'lids'. The mines took advantage of a thin layer of soft shale underlying the stone, called the 'pricking'. Working by candle-light and in a height of only two to three feet, they removed the 'pricking', when the rock above was left to 'weight' and fall by gravity. When the quarries, or 'delves', were shallow the blocks of stone were carried to the surface by 'huggers', who wore leather 'saddles', similar to those formerly worn by coal hawkers, and were capable of carrying loads up to eight hundredweights<sup>3</sup>. The stone was carried up 'hugging ladders', having very broad rungs set close together, and as the 'hugger' had to hold the block of stone he could not use his hands to steady himself. Fatalities often occurred and there are records of ladders breaking under the strain and the unfortunate 'huggers' being killed.

'Hugging' continued until about 1870, although gins and hand-cranes, capable of lifting a ton, were used earlier in some quarries. One of the most primitive haulage devices was the 'Billy Wobble', which was merely a jib, over which passed a rope or chain into the quarry. The lower end of the rope was split into three parts, two of which were attached to iron rings and to the third a hook. The stone was loaded into a 'shim', which has a sloping front board and no sides. The rings were slipped over the 'strines' (handles) and the hook was attached to the 'tell' (wheel). A horse was harnessed to the free end of the rope and as it moved away, it hauled the loaded barrow to the surface. A similar method is still employed at Collyweston. Power cranes came into use about 1870, the first type being called by the quarrymen a 'monkey up stick' crane. Wire ropes were not used until about 1880.

Elland Flags in all forms were transported from the quarry on stone wagons, few of which have survived. An early example of such a wagon is depicted on Robert Parker's plan of Harrison Farm, Southowram. Later wagons were much sturdier. They had wooden axles with four plates at each end on which the massive wheels rotated. They required constant lubrication, and the carter invariably carried a horn of grease and a feather, with which to lubricate the wheels every mile or so. Such 'heavy' wagons quickly

damaged the poor dirt roads, and stone tracks, consisting of parallel rows of thick flags, were laid to the quarries. Many of these tracks, deeply rutted, have survived. (Walton 1975, 45--7)

1 Godwin C G, Mining in the Elland Flags, A Forgotten Yorkshire Industry. British Geological Survey Report London, HMSO 16: 4 1984

2 'Rastrick Chapel and School', Halifax Ant. Soc. Trans., 1905

3 This seems an awful lot but it's what he said.