A photographic record of a water-powered wire-works at Thurgoland, Yorkshire

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ABSTRACT: Photographs of Thurgoland Upper Wire Mill, Yorkshire, taken between 1898 and 1913, are reproduced. The text provides a commentary, and outlines of the history of the mill, and of wire drawing using wortle plates.

Introduction

The photographs

In the journal Engineering for April 18, 1913, Percy Longmuir and Joseph Kenworthy published 'Notes on early wire-drawing practice'. These were illustrated by photographs of the Upper Wire Mill, frequently referred to locally as ‘Old Mill’, at Thurgoland on the Yorkshire Don (SE 278005). The South Yorkshire Industrial History Society holds photographs of this mill, recently found to include those used by Longmuir and Kenworthy. The selection reproduced below complements the photographs which were published in 1913. The photographer is believed to have been Frank Downing, a local man, who started recording buildings in the district about 1898 (information from Maurice Williams, Thurgoland Historical Society).

Percy Longmuir (1873–1942) was a Sheffield metallurgist, a specialist in foundry practice. He was author of, inter alia, a contemporary metallurgical text-book (1905) and was manager of the Stocksbridge steelworks of Samuel Fox during the 1914–18 war (obituary in The Sheffield Telegraph 19 October 1942). Joseph Kenworthy (1852–1929) worked for Samuel Fox from 1865 to 1907, but is best known as a local historian, publishing a history of Stocksbridge in 33 instalments between 1914 and 1928. There survives, outside this series, what appears to be a marked proof for an article, shown by its content to have been written after 1915 and entitled ‘Wire drawing: an ancient craft in Thurgoland and district’; it refers to these wire-works and is accompanied by prints of some of the same set of photographs (Sheffield Archives (subsequently SA) MD 3336/4). It is not known whether the article was ever published.

Methods of wire drawing

The making of copper-alloy wire by the use of a draw-plate is known from the Viking period (Armbruster 2006, 32–33). The process was recorded by Theophilus in the 12th century (Hawthorne and Smith 1979, 88) and there are references to wire drawers in Augsburg in the 1350s (Heine 1995, 50). In medieval England wire was required for wool-cards, used for raising the nap on cloth, and there are references to wire-drawing and wortle (draw) plate makers in the textile town of Coventry in the 1430s (Harris 1907–1913, 142, 160, 181–5). In 1540, Biringuccio (Smith and Gnudi 1990, 377–81) mentions the drawing of iron wire, and illustrates a process where the drawer sat on a swing seat,