

REPRODUCTIONS OF PRINTS, DRAWINGS AND PAINTINGS OF INTEREST IN THE HISTORY OF SCIENCE AND ENGINEERING

5. The Earliest Print Showing a Steam Locomotive and Train

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THE original of this reproduction is a colored aquatint, eight inches by 12 inches in size, which was first published in 1813 and so is the earliest print of a steam locomotive and train that we have; moreover, the locomotive and train shown was the first to be commercially successful. It appeared in George Walker's *The Costume of Yorkshire* and was designed to show, not the steam train, but what the well-dressed miner of Leeds was wearing. It formed Plate III of a series of costume plates and was entitled "The Collier." The description that accompanied it reads as follows:

"One of these workmen is here represented as returning from his labours in his usual costume. This dress, which is of white cloth bound with red, may probably be ridiculed as quite inconsistent with his sable occupation; but when the necessity of frequent washing is considered, surely none could have been adopted more conducive to cleanliness and health. The West Riding of Yorkshire, it is well known, abounds in coal, the consumption of which is prodigiously increased by the general use of steam engines. In the back ground of the annexed Plate is a delineation of the steam engine lately invented by Mr. Blenkinsop, agent at the colliery of Charles Brandling, esquire, near Leeds, which conveys about twenty waggons loaded with

coals from the pits to Leeds. By two of these machines constantly employed the labour of at least fourteen horses is saved."

The high-pressure steam locomotives designed and built by Richard Trevithick (see Reproduction No. 4 in this series) were not commercially successful as they were too heavy for the tracks on which they were used and too light to provide the traction necessary to haul loads great enough to enable them to compete economically with horses. To meet this difficulty John Blenkinsop (1783-1831), in 1811 patented a rack railway with teeth, cast on one of the rails, which engaged with a cogged driving wheel added to the engine. Toothed rails of this kind were laid in 1812 from the Middleton Colliery to Leeds, a distance of three and one-half miles, and four engines were built by Messrs. Fenton, Murray and Wood in 1812-1813 for use on them. The engines were based on Trevithick's designs, but embodied certain improvements due to Mathew Murray (1765-1826). These were the first commercially successful steam locomotives and they remained in use for 20 years. Details of their construction will be found in the Handbook of the Science Museum, *Land Transport. III. Railway Locomotives and Rolling Stock. Part II—Descriptive Catalogue* (H. M. Stationery Office, London, 1931).

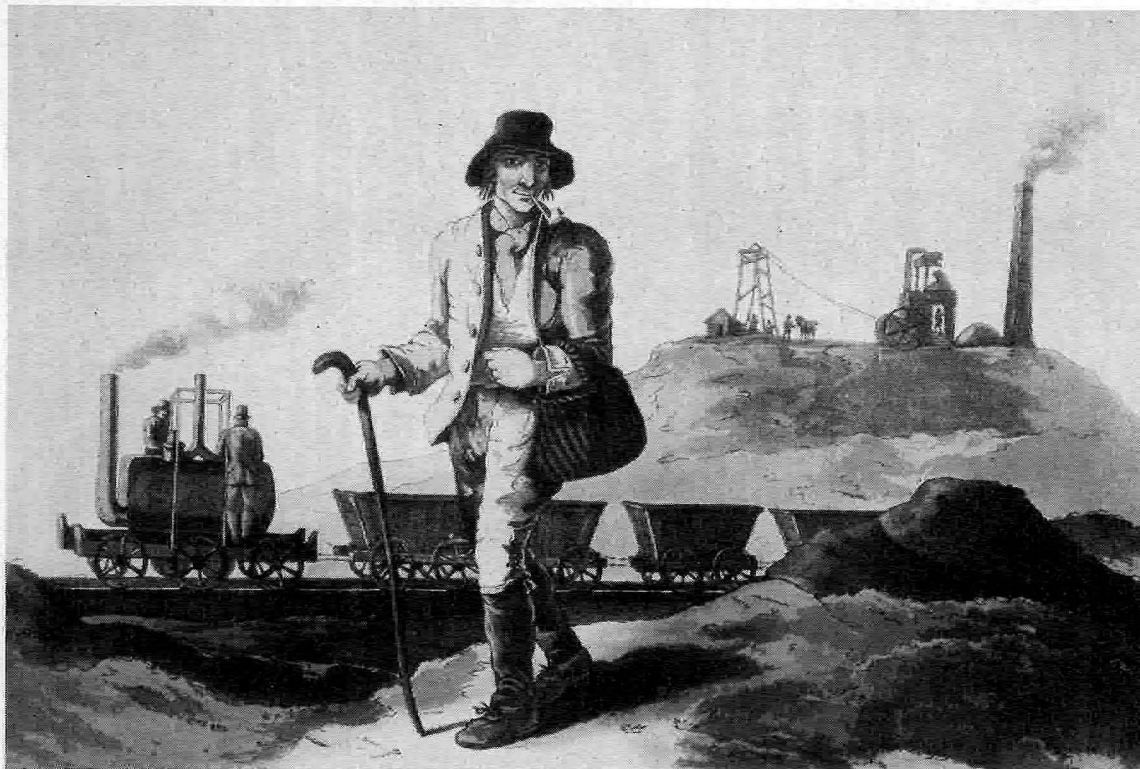


FIG. 1. Blenkinsop's rack railway and the first commercially successful steam locomotive (from an aquatint by R. & D. Havell after G. Walker).