Matthew Murray

FATHER OF THE LOCOMOTIVE

EXHIBITION

University of Leeds
Parkinson Court

JAN 22nd-FEB 3rd
9a.m.-9p.m.

LECTURE

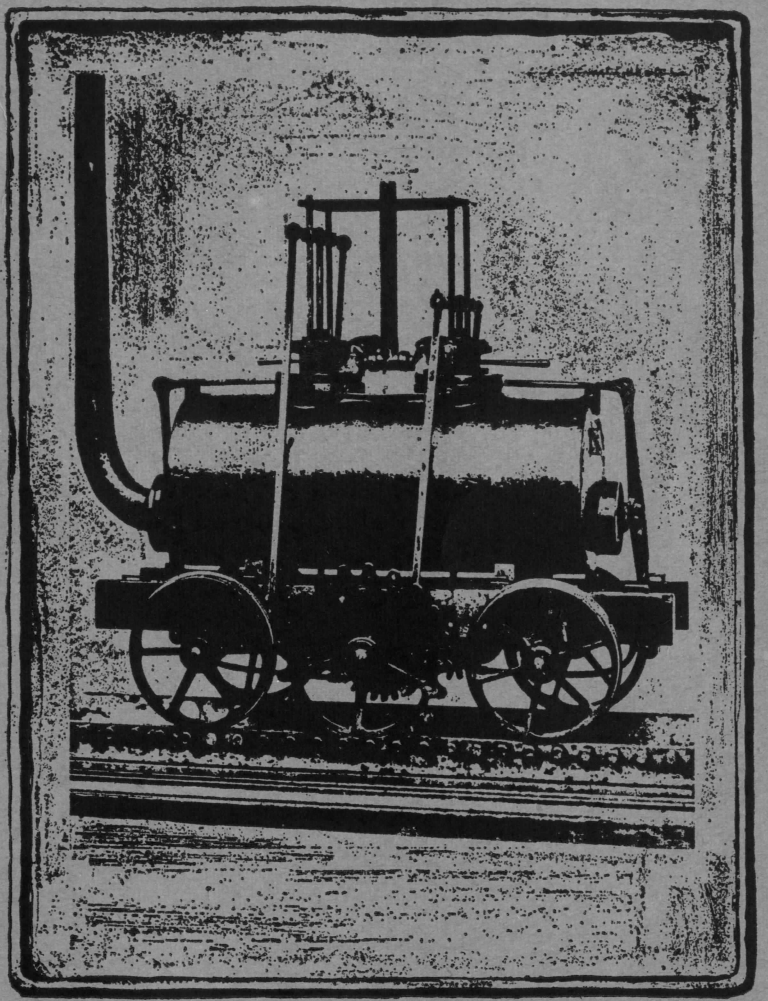
Holdsworth School
Clarendon Road
Lecture Theatre B

Friday 2nd February
7-30p.m.

BY

CHARLES E. LEE

Matthew Murray



Born in 1765, he came to Leeds from Stockton-on-Tees and worked for Marshall & Benson at Holbeck. Here he patented machines for spinning flax and fibrous materials and revolutionised the flax industry by his process of 'Wet Spinning', putting his firm in the lead.
After 12 years, Murray joined Fenton and Wood and established the first works in Leeds for making and repairing machinery and engines. They built the Round Foundry in Water Lane with Murray in charge of the Engine Building Department.
He designed and patented methods of constructing boilers to consume their own smoke; exhaust steam controllers; horizontal boilers and improvements in the moving parts of locomotives. In 1802 he sent a design of a vertical engine with parallel motion to James White who later received a gold medal for the 'invention' of 'White's Parallel Motion'.
Murray's firm became serious rivals to Boulton and Watt of Birmingham who had held a monopoly. Watt sent Murdock to Leeds to 'spy' and then contested the validity of Murray's next patent on the grounds that Murdock had in one case proposed a similar design without patenting it. The *whole* patent was declared invalid although it contained many novel ideas. Watt then purchased the vacant land adjacent to the Round Foundry to prevent any extension.
While Watt asserted that the use of steam to propel vehicles was 'a pure waste of time' and tried to get a Parliamentary veto on any pressure higher than 6 p.s.i., Fenton, Murray and Wood proved its practicability.

The pioneer engineer, a string of 'firsts', a host of talented apprentices – yet unknown and unrecognised – even in Leeds.

They became the first to export machine tools. In 1808 Murray's flax-heckling machine won a gold medal. He constructed a high pressure engine which was fitted to a former lugger 'L'Actif.' Renamed 'Experiment' it steamed from Leeds to Yarmouth and was a very early application of steam to regular passenger transport. Later the engine and boiler were transferred to 'The Courier' which plied between Sheerness and Chatham. It was thus the first steam power at sea. In 1815 a Murray engine was fitted to a Mississippi tug.
In 1811 he designed a steam engine for Mr. John Blenkinsop, manager of the Brandling Colliery of Middleton. 'Salamanca' and 'Prince Regent' were two of four which ran for many years on the Middleton Railway, the world's oldest railway and the first to make a commercial success of steam traction.
The first Stephenson locomotive (1814) followed Murray's design very closely. In 1825 Murray submitted a design of an articulated locomotive to the Stockton and Darlington Railway. Ten years later the design was patented by Harrison for experimental G.W.R. locomotives.
Murray patented a form of hydraulic press for packing cloth and was the first to use a hydraulic pressure-gauge. In later years he was engaged in almost every class of engineering. The firm was the first to be lit by coal gas and he was instrumental in inducing the authorities to build works for supplying gas to the City. In 1800 he centrally heated his own house, Steam Hall.
After Murray's death in 1826, the firm carried on his

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tradition. Railway locomotives were supplied to the Liverpool and Manchester, the Leeds and Selby, the Great Western (the first time 'live' rollers were used for testing engines because of the difference in gauge) the London and Southampton, the North Midland and the line between Paris and Versailles.

Many young engineers passed through the works and became eminent in the industry. They included Richard Peacock, locomotive superintendent of the Leeds and Selby Railway and founder of Beyer Peacock; Murray Jackson (son-in-law), manager of Eyscher Wyss of Zurich and later chief engineer of the Royal Danube Navigation; John Craven, locomotive superintendent of the London, Brighton and South Coast Railway; Luke Longbottom, locomotive superintendent of the North Staffordshire Railway; David Joy, inventor of the Joy Radial Valve Gear. Todd, Kitson and Laird were staffed from the Murray stud as were the Hunslet Engine Company. The brothers Krupp sent their sons for training.

After Murray's death the firm continued as Fenton, Murray and Jackson but due to a strike ceased operations in 1843. A number of leading employees combined together and carried on the business, the first example of industrial co-partnership. Eventually the foundry was owned by Smith, Beacock and Tannett and renamed Victoria Foundry, ceasing in 1894. Today Messrs. Crabtree and Sons Ltd., printing machine makers, occupy parts of the site where a bronze plaque commemorates Murray.

Matthew Murray who revolutionised flax-spinning and founded the locomotive engineering industry, lies in a neglected and half-forgotten grave in Holbeck Churchyard. Watt, his jealous rival, is commemorated in City Square and Westminster Abbey.