

Extract from George Watkins, *The Stationary steam Engines of Great Britain*,
Volume 7: *The South and South West*, page 92.

(10 volume series, edited by A P. Woolrich, 2000-2005)

George Watkins made the survey on 12 November, 1962

Editorial introduction

George Watkins (1904-1989)¹ was a Bristol boiler man, whose life was devoted to recording the stationary steam engine as it was rapidly being superseded by electrification. He travelled mostly by motor cycle and lived very frugally. He was an internationally known and widely respected authority who published a number of learned books and articles. He noted his findings in MS in a series of lined 4to notebooks, which are a unique resource for technical historians. He took numbers of photographs of each engine, usually with a wooden plate camera, and made contact prints of each image which were pasted on loose-leaf sheets. These in turn were filed by engine type -- Beam engine, Table engine, etc. He had accumulated a useful technical library and also a valuable collection of trade literature.

He was appointed in 1965 as a research assistant at Bristol College of Technology to create the Steam Engine Record, the photographic index to his fieldwork. Each Record comprised a large format print of the best of those taken at each visit, and a transcription of the descriptive part of the notebook entry. As will be seen later here, useful information from the notebook was often omitted. The work was done under Watkins's supervision, so is definitive.

Bristol College of Technology later became part of Bath University, and the Watkins Collection was transferred there ; George Watkins became a Visiting Fellow there and was awarded an honorary MSc degree. Whilst there he published a series of book²

George Watkins died on 13 January 1989, and willed his collection to Bath University. His Technical library remains there. but his notes, papers and photographs were transferred to the Royal Commission on Historic Monuments (subsequently re-named English Heritage and later Historic England) for curation and conservation. They are now in the Swindon office of the latter.

The entire Steam Engine Record was published in book form, between 2000 and 2005³

In addition, his archive of trade literature was catalogued and a published in two profusely illustrated volumes⁴ As well as Watkins's photographs these included numerous high quality steel engravings Watkins had clipped from issues of the trade press he had accumulated.

In addition to the Telescopic bridge discussed here(SER 1115a + b), he photographed in Bridgwater some plant in the gasworks (SER 1373a + b), and Bertha, SER 1116) Also the Bridgwater Borough waterworks beam engine at Ashford, Spaxton, (SER 3).

Man and the Steam Engine. 1975

The Industrial Archaeology of the Steam Engine. 1976

(the latter 2 books with Prof. Angus Buchanan

The Steam Engine in Industry, 2 vol 1978-79

³ A.P Woolrich. ed. George Watkins: *Stationary Steam Engines of Great Britain*,

Vol 1, Yorkshire (2000)

Vol 2, Scotland and Northern England (2000)

Vols 3:1; 3:2, Lancashire (2001)

Vol 4, Wales, Cheshire, & Shropshire (2002)

Vol 5, The North Midlands (2002)

Vol 6, The South Midlands (2003)

Vol 7, The South and South West (2003)

Vol 8, Greater London and the South East (2003)

Vol 9, East Anglia & adjacent counties (2004)

Vol 10, Marine Engines (and readers' notes, indexes to the series etc) (2005)

⁴ A. P. Woolrich. ed. George Watkins, *Stationary Steam Engine Makers, the National Record*, 2 vol 2006

Notes

¹ Paul Stephens & Tony Woolrich, eds. "George Middleton Watkin, 1904-1989 ..." *Stationary Power: Jnl of the International stationary Steam Engine Society*, vol 13, 1997 (pub 2002)

² *The Stationary Steam Engine*. 1968
The Textile Mill engine, 2 vol 1970-71

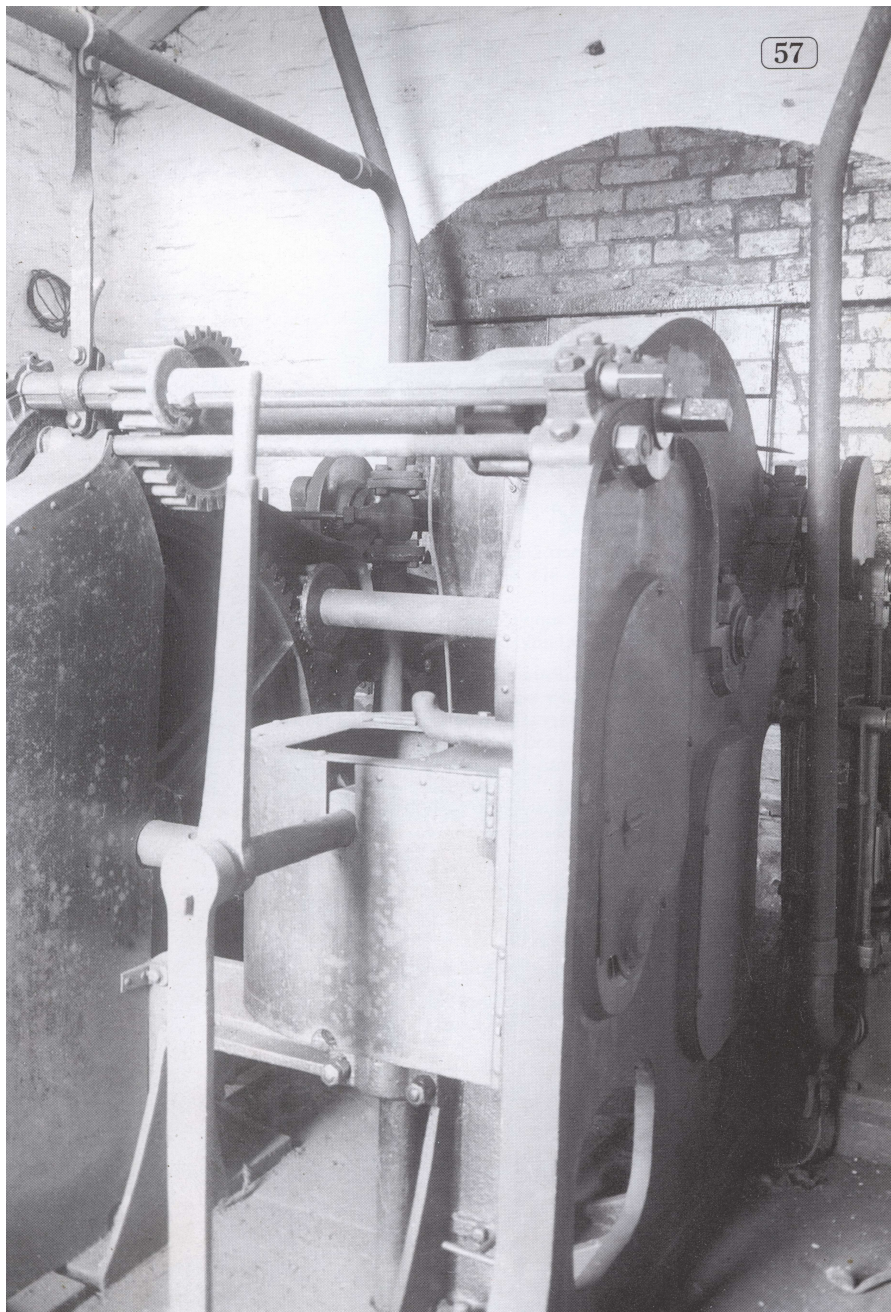


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56) Bridgwater, Bridgwater Dock, Steam Traversing Bridge SER 1115a

Type: Sliding traversing span
 Photo taken: 1962
 Maker & Date: Maker unknown, Staffordshire, early 1870s
 Cylinder dimensions: No other data
 Service: Railway and pedestrian crossing over the River Parrett

The bridge section is about 150 ft long, with 100 ft spanning the river, and a 50 ft counterbalance section, with a section on the North side, which could be moved sideways to allow the main section to be pulled back to allow vessels to pass to the Town Quay. There was never any passage for road vehicles, but the railway section was full carrying capacity. It was probably disused after 1920, when small coasting vessels ceased to use the mud berths, the traffic then going in larger vessels (which could not lie on mud) into the main wet dock nearer the river mouth. Although intended for preservation, it was vandalised in 1970-72. Probably the last bridge of the type in the UK.



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57) Bridgwater, Bridgwater Dock, Steam Traversing Bridge SER 1115b

Type: Twin cylinder vertical non-condensing
 Photo taken: 1962
 Maker & Date: Maker unknown, 1870?
 Cylinder dimensions: 6in x 9in - Slide valves
 Hp: 25 Rpm: 120 Psi: 100
 Service: Steam operating machinery

The sideways movement of the northern section which gave space for the movement of the traversing span to clear the river passage was provided by racks below it, moved by pinions on shafts driven by bevel wheels from this engine. The traversing movement of the main bridge span was by chains worked from a winding barrel beneath it, again worked by this engine. There was a single vertical centre flue boiler made by the railway company. Each movement of the engine was controlled by safety interlocks which were coupled both to the signals to prevent locomotive movements when the bridge was operated, and also to prevent the side traversing section and the main bridge movements operations occurring at the same time. The shafts seen at the top of the engine frame were for hand operation, if no steam was available. All of the drive was by a single vertical shaft driven by bevel wheels in the casing at mid level of the framing, which provided for reversing by twin bevel wheels and a central sliding bevel pinion wheel with dog clutches.