

HASTINGS PIER CHARITY

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Hastings Pier Engineer, Eugenius Birch



A postcard of the original Pier HPC006.023



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Eugenius Birch

Eugenius Birch was born in London in June, 1818 and his father was an architect and surveyor. Eugenius was educated at Brighton and at Euston Square. At a very early age he showed considerable mechanical and artistic talent, and was rarely without a pencil in his hand.

He watched with much interest the cutting of the Regent's Canal, and indeed frequently played truant to assist at the construction of the various great engineering works then in progress in the north of London, particularly the Primrose Hill tunnel of the London and Birmingham Railway.

When still a boy; he submitted a model of a railway carriage to the authorities of that line, who had offered a premium for an improvement in this direction, and the Greenwich Railway Company at once adopted his mode of putting the wheels under the carriages.

At the age of sixteen, being then employed at Messrs. Bligh's engineering works, Limehouse, Eugenius Birch planned a marine steam-engine, which so pleased Dr. George Birkbeck, that the latter strongly advised the youthful designer to join the local Mechanics' Institute. This he did, and to such purpose that, the master falling ill, he undertook the entire charge of the drawing- classes for some time, to the satisfaction of all concerned.

In 1837, he received a Silver Isis Medal from the Society of Arts, for his drawing of a marine steam-engine, and in the following year a Silver Telford Medal and a premium of books from this Institution for his drawings and description of Huddart's rope-machinery. This subject was continued in a subsequent communication descriptive of a ("Machine for Sewing Flat Ropes,") for which he likewise received a premium.

On the 19th of February, 1839, he was elected a Graduate of the Mechanical Institute of Chartered Engineers, in which class he remained till he was transferred Member on the 5th of May, 1863, and shortly afterwards he entered into partnership with his elder brother, the late Mr. John Brannis Birch.

Mr. Birch and his brother were engaged in laying out the East Indian Railway from Calcutta to Delhi, designing the whole of the bridges and viaducts, and it was upon the material thus furnished that the guarantee of the line was obtained.

Between 1847 and 1851, he designed and carried out the Eelham and Stockwith bridges in Nottinghamshire. But Mr. Birch's claims to recognition are chiefly based upon the system of promenade-piers which he and his brother initiated, and which now form a feature of nearly every watering-place on the English coast.

The original screw pile mechanism was invented and patented by Irish engineer Alexander Mitchell in the 1830's. His original design was a simple but effective means of construction for lighthouses, ship moorings, beacons and other structures on mud banks and shifting sands.

Birch was an innovative engineer and the most important feature of his piers was the use of screw-bladed piles technique, which were turned and driven by man-powered capstans into the ocean bed. The system allowed a much lighter support framework at the columns and gave an elegance to the columns and the overall structure. They also provided a deeper stronger support, allowing a much heavier load of visitors.

The first, and for many years, single example of the screw-pile pier, was the well-known Margate jetty, which was completed in 1853, and formed a new departure in marine construction. It was from the first a most successful work, and has since been considerably improved and extended.

Birch was also a talented artist. Apart from his early technical drawings, he painted over a hundred water-colours during a visit to Italy, Egypt, and Nubia in the winter of 1874–5. He died at his home, Laurieston Lodge, West End, Hampstead, on 8 January 1884.

Similar piers were subsequently erected from Mr. Birch's designs.

List of Piers Designed by Eugenius Birch

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- Margate Pier, Margate 1855
- Deal Pier 1855
- North Pier, Blackpool 1863
- West Pier, Brighton 1863 (Destroyed in 1975, 2003, 2004)
- Aberystwyth Royal Pier 1865
- Lytham Pier - 1865
- Birnbeck Pier, Weston-super-Mare 1867
- Scarborough Pier 1869
- Brighton Aquarium 1869 and 1872
- Eastbourne Pier 1872
- Hastings Pier 1872
- Hornsea Pier 1879
- Plymouth Pier 1884
- Bournemouth Pier 1888

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