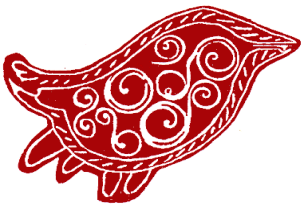

Title: Shipbuilding and repairing in nineteenth-century Cork

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Journal of the Cork Historical and Archaeological Society, 1989, Vol. 94, No 253, page(s) 74-87

Published by the Cork Historical and Archaeological Society

Digital file created: March 14, 2017

Shipbuilding and Repairing in Nineteenth-Century Cork

By COLMAN O MAHONY

INTRODUCTION

Shipbuilding and repair work in eighteenth-century Cork were confined to small craft; we learn that a pleasure yacht launched by William Draper for Mr John Rogers on 24 April 1754 was 'one of the most perfect and beautiful models ever seen here'.[1] A few years later His Majesty's cutter *Thunderbolt* was repaired and lengthened for the revenue services at Allen's yard near King Street.[2] The increasing shipping trade presented an opportunity to provide proper facilities and in the early 1780s the Cork merchant Henry Shea set about establishing a complex at Dundanion. Work commenced in May 1783 and it was planned to construct dry docks, quays, stores and artisans' dwellings. The project was not completed but when land was put up for sale some time later it included 'two large storehouses, with a fine quay, and ground sufficient for a ship carpenter to build a dock'. Though this notice does not indicate that a shipyard was actually in operation, the death announcement of a shipwright, Thomas Marsh, tells us that he died near the Dundanion dockyard, so it is apparent that some facilities were available near the city.[3] There are some other references to shipbuilding and repairs; on 27 May 1784 Denis Shine launched the trader *Kerry Lass* from his dockyard and on 13 August 1791, while working on a ship's bottom at Charlotte's Quay, a shipwright was seriously injured by a mule and a butt of lime which fell over the dockside on top of him.[4]

DOCKYARDS AND SHIPYARDS

In the early years of the nineteenth century the large amount of shipping using the port of Cork undoubtedly provided plenty of repair work and references to dockyards in the area known as the Brickfields began to appear. In July 1811 the 211-ton *Endeavour* was advertised for sale at Joseph Wheeler's yard at the Brickfields while in 1815 John and Edmond Moloney's dockyard at Glanmire Road was advertised to let. In August 1817 the Portuguese brig *Antonio* and the hull of the *Santamara* were on sale at John Knight's dockyard.[5]

At Passage West, some ten miles down river from Cork, evidence of shipbuilding and repairing is available from the mid-eighteenth century. Craftsmen such as James Barry, Francis Anderson and Thomas Bean were among the 80 shipwrights then operating in the town. As well as general repair work, the establishment of Ford and Atkins constructed revenue cruisers, and prior to 1800 there were about 200 rope-makers in the harbour area.[6] By the mid-nineteenth century Passage West had become one of Cork harbour's principal shipbuilding and repairing centres, for which William and Henry Brown were mainly responsible. According to family tradition the Browns came from Kinsale;[7] they were established in Passage early in the nineteenth century and in August 1812 Mr Brown, carpenter, had the *John and Mary* of London for sale 'on the Carpenters' ways at Passage'.[8] The *Sisters*, a vessel built by Brown, won a race in 1813 and his hooker *Pilot* had a good showing in another race in 1815.

A Passage West-built vessel from that period made maritime history as the first steamship to

be built in Ireland; she was the 86-foot *City of Cork* launched by Andrew Hennessy on 10 June 1815. In the following year Hennessy launched the *Waterloo*; unlike the *City of Cork*, her engines had been made by Cork city's Hive Iron Works, thus giving Cork the honour of constructing the first steamer of total Irish manufacture.

Ship repair facilities were primitive at Passage and attempts had been made to provide a proper dock or slip. Finally the Browns constructed a dry dock which was ready by the mid-1830s. During the period of the dock's construction they continued to build ships and in July 1836 their eighteenth schooner, the *Joseph R. Pim*, was launched.[9]

Shipbuilding also continued in the city and on 18 June 1825, two 130-ton schooners, the *Nelson* and the *Waterloo*, were launched at Knight's shipyard on the Lower Glanmire Road. Three years later Knight was involved in a legal dispute following the sinking of the *Innisfail* steamer in the river opposite his dockyard. On 23 February 1828 she struck an anchor which had been left in the river as a marker for the yard; the impact peeled a board from the steamer's bottom and she sank within minutes. At a subsequent hearing a jury was unable to assign responsibility for the sinking. Under the direction of Alexander S. Deane the *Innisfail* was refloated and taken to Passage for repair. An account of the refloating shows that Cork shipwrights had the ability to tackle a difficult task:

> A coffer dam was constructed round the vessel, so as to command the rise of the first quarter of the flood tide; the space within the dam was cleared of water by powerful chain pumps in 40 minutes, and in the interval before the return of the tide, an excavation was made under the vessel's bottom, so as to permit carpenters to repair it, and at next full tide she floated off . . .[10]

The entire operation took nine days.

John Knight made a large contribution to Cork's ship repairing facilities when he constructed a patent slip at his yard in 1828. Work commenced in April and following an expenditure of over £2,500 the facility was ready by the year's end. The 320-foot long slip had a 120-foot carriage capable of handling a vessel of up to 500 tons. Two ships could be accommodated and it took a few men about an hour to draw a vessel from the water.[11] Several large ships were repaired soon after the opening of the slip; one of them was the 500-ton *Bainbridge* of Prince Edward Island.

By the end of 1829 Joseph Wheeler also had a patent slip functioning at the Brickfields. On 31 October he successfully launched a 400-ton vessel, the first to be repaired on his new slip.[12] On the evening of 11 January 1830 the Cork to Bristol steam packet *Superb* was launched following refitting and recoppering. This launch was particularly impressive as it took place late in the evening under the light of torches and tar-barrels. Wheeler was highly praised for providing Cork with this efficient repair facility:

> Heretofore, until Mr. Wheeler put up the ample patent slip upon which the *Superb* has got her refit, our steamers were obliged to cross the Channel to be repaired or inspected, and thus our shipwrights and other mechanics were deprived of employment, a grievance the greater because the work could be as well performed at home. The introduction, by the enterprising individual we have named, of the costly but powerful machinery, by the agency of which the *Superb* was raised from and replaced in the river, with as much ease and facility as if she were not heavier than a pleasure yacht, has superceded the necessity of sending vessels of any dimensions for repair elsewhere . . .[13]

A few weeks later the 800-ton *Saladin* was successfully relaunched from the patent slip. She was the largest vessel to have been brought up to the city at that time.[14] A move to establish a patent slip in Youghal also took place but although some interest was shown in the idea, the project did not materialize.[15]

Though the repair of ships provided employment for skilled and unskilled hands, shipbuilding was far more beneficial. Of the Cork-built ships it was remarked that, for purposes of general trade

> a finer class, for their burden, has not been turned out of any Port in England. They are substantial in material, beautiful to a nautical eye, in shape, and they have performed their voyages, under adverse circumstances of wind and weather, with safety and expedition . . .[16]

In addition to John Knight and Joseph Wheeler some other small shipbuilders operated in or near Cork city. On 26 July 1828 the 220-ton brig *Rose* was launched by Mr Talbot at Whitepoint near Cove; he had previously launched the *Busteed Brothers* in Cork.[17] On 23 August 1828 the 90-ton cutter *Paddy from Cork* was launched at Blackrock for J. Caulfield Beamish. She had been built by Samuel Ahern of Passage. In May 1833 the 50-ton yacht *Princess Victoria* was launched at Ballybricken.

Shipbuilding was also taking place at the yards of Knight and Wheeler. In September 1823 the 150-ton copper-fastened and copper-bottomed brig *James Morgan* was launched by Wheeler.[18] The 400-ton *Granicus* was launched at Knight's on 7 July 1826[19] and on 29 November 1830 the 120-ton *T.S.Reeves* at Wheeler's yard.[20] Six months later the 'noblest specimen of naval architecture in size, material and design, that has ever been raised within this harbour' was ready for launching. She was the 600-ton *Brutus* and her builder, John Knight, was praised by the *Cork Constitution* for providing work 'at a period like the present, when such a dearth of employment prevails in every department of trade, and when the streets and avenues of our city are choked with starving mechanics and labourers'.[21] In May 1837 J. Beale of the St George Steam Packet Co., performed the christening ceremony on a new 300-ton schooner at Knight's shipyard. Described as a 'beautiful vessel, not inferior in appearance to a first rate yacht', she was the *Wild Irish Girl*, built for the West Indian trade. Her build, we are told, 'confers high credit upon the shipwrights, and her cabins are fitted up in a style of elegance scarcely surpassed by any of the gorgeous liners'.[22]

In the wake of the 1815 depression there was a marked reduction in the amount of shipping coming into Cork harbour and in January 1817 the Cork shipwrights reduced their wages because employers were unable to offer permanent work.[23] As an incentive to building ships, rates on new work was set at 4s. 4d. per day. Work on old vessels was reduced to 4s. 10d. per day because 'we are liable to many accidents, viz., men working on stages in the river, are in danger of being drowned, their tools lost, likewise men are in danger of being killed in Dock or on Bank, and subject to loss of time, owing to rain or inclemency of weather'.[24] Following a subsequent reduction to 4s. for new work and 4s. 4d. for old work, the rates were raised to 4s. 6d. per day in January 1826,[25] but when John Knight and Joseph Wheeler commenced work on their patent slips the shipwrights reduced the old work rate to 4s. also.

In March 1840 the shipwrights sought the restoration of 'regular' wages, i.e., 4s. for new work and 4s. 4d. for old work. They also informed the shipbuilders that their work hours would be from 6 a.m. to 6 p.m. in Summer and from daylight to dark in Winter. At around the same time the Cove house-carpenters made known their intention of not working on any ship for less than 3s. 6d. per day.[26]

Joseph Wheeler launched the 206-ton *Xarifa* from his yard on 16 October 1841. She was the fourth vessel he built for Simeon Hardy and Company.[27] Two years later the 400-ton barque *Indian Queen* left the stocks[28] and on 20 January 1844 a sixth barque, the 300-ton *Liffey* which, like her predecessors, had been built for Hardy's. On 28 April 1846 a huge

crowd gathered to witness the launch of Wheeler's latest project:

> All being prepared, the rope was cut, when the *Giavour* amidst the roar of cannon and the shouts of thousands, gracefully and rapidly glided into the bright waters of the river Lee. The *Giavour* is a first class ship, 300 tons register, and was built for the respected and enterprising firm of Robert Carr and Co., of this city, being expressly intended for the West India trade. She is of the most beautiful model and proportions and could not possibly be surpassed by any English built vessel . . .[29]

Three months later the 150-ton two-masted yacht *Wandering Spirit* was launched. She had been built for the Earl of Mountcashel as a present for his eldest son, Lord Viscount Kilworth. She went on the rocks off Kinsale on 17 October 1846 and became a total wreck. Other work undertaken for Mountcashel was the lengthening of the *Swan* and the building of the *Falcon* yacht. The *Wandering Spirit* and *Falcon* were between 140 and 150 tons burthen and had been built at a cost of £14 per ton. In 1858 Mountcashel claimed that he had been overcharged by Wheeler; these claims were discharged at the court of Chancery.[30]

During the 1840s large ships were also being built at the Brickfields by Stephen Hickson. (During the late 1830s Hickson had held a senior position in Knight's business,[31] so he had possibly taken over the concern by the early 1840s). In April 1842 the *Oriental Queen* was launched by Hickson[32] and in March 1844 another new vessel from the Water Street premises. In September the *Ann* trader, which had been lengthened by 30 feet and modified for the inclusion of a screw propeller, was launched there.[33] About 100 workers were employed at Hickson's in the mid-1840s and on 25 June 1846 the 400-ton screw steamer *Doris* was launched for Messrs Coates and Lefebure of the Cork Screw Shipping Co. She was a beautiful vessel with many fine carvings. The saloon in particular had many elaborate carvings and mouldings, all of which were the work of a man named Donovan. In April 1847 the 409-ton *Free Trader* 'a perfect model of naval architecture' intended for the Cork to New York trade was launched by Hickson.[34]

Not only in Cork were ships being built — at Youghal on 16 October 1845 the 240-ton brig *John Barry* was launched from Thomas Kelleher's yard. This was the third craft built by Kelleher since he had taken up residence there and so pleased were Messrs Lefebure and Barry with the new ship that they immediately ordered another. This 97-ton schooner, the *Ballinacurra Lass*, was launched in October 1846.[35]

The Browns also continued to build ships at Passage and by the end of 1836 about 20 schooners had been launched there. Ship repairs increased as well and in the ten-year period to 1850 a total of 183 vessels were repaired at the yard.

In 1849 the Browns were given official permission to name their concern the Royal Victoria Dockyard. The dry dock itself was called the Victoria Dry Dock and was at that time capable of accommodating six vessels of about 250 tons each; ships repaired included the largest steamers belonging to the Cork and Dublin companies. In the early 1850s William Brown decided to extend his business by enlarging the Victoria dry dock and building a second dock.

For many years ships had been repaired on a 'graving bank' near the New Wall at Cork. (The New Wall, or 'Navigation Wall', is now known as the Marina). This was highly unsatisfactory as work could be undertaken only at certain tides and costly time delays resulted.[36] By the mid-1840s there were complaints that what amounted to a 'ship carpenters' yard' had been established at the Wall. There was a high demand on the bank, which could accommodate just one ship, and in December 1844 thirteen vessels were waiting to use it.[37] The city still lacked a dry

dock and although Joseph Wheeler was hampered by marshy ground and limited space he devised a novel plan to provide this facility. He excavated a site and at the same time a huge flat-bottomed wooden 'boat' measuring 168′ × 65′ × 18′ deep was constructed in his shipyard. About 480 tons of timber were used on the vessel and the *Queen* tug with a screw steamer pulled her from the ways. The vessel was then towed into the excavated basin and bolted to huge beams previously secured in the ground. The stern of the flat-bottomed boat was in actual fact a lock or gateway which could be opened to receive a vessel for repair. Thus, without the major engineering problems which had accompanied the building of Brown's dock at Passage in the 1830s, Wheeler had provided an effective dry dock at the Brickfields capable of containing a 2,000-ton ship on a draught of 18 feet of water.[38]

The mid-1840s saw the birth of a new branch of industry in Cork when a 70-foot long iron craft was launched at R.J. Lecky's yard on 4 May 1844. She had been built for Sir Richard Musgrave who intended plying her on the river Blackwater. With a 15-foot beam, she was designed to carry up to 50 tons of merchandise and draw only four inches of water.[39] Five months later on 17 September the same company launched the 45-ton iron yacht *Charm* for Mr Pim of Dublin.[40]

WORKING CONDITIONS

As iron shipbuilding was new to Cork it had been necessary to bring experienced workers from England. They in turn taught the skills of ironwork to locals who, we are told, became 'tradesmen' and were soon earning up to 15s. per week.[41] Good progress was made on a new iron-screw steamer but on 24 November 1845 scaffolding which had been attached to the vessel's side collapsed and two riveters were thrown to the ground. One was killed by a falling plank and his colleague suffered numerous injuries. As well as being dangerous, riveting large iron plates together was extremely noisy; this element presented a serious threat to Cork's infant iron shipbuilding industry.

Work at the yard commenced at 6 a.m. and as it continued until late in the evening there was little respite for the nearby residents; the constant hammering was also affecting the value of property. Residents in the vicinity of Lecky and Beale's yard made numerous unsuccessful protests to the company — on one visit they were told that 'when you become accustomed to the noise you will like it'.[42] An official complaint about the noise level was made to the Wide Street Board and the deputation also criticized the fact that the company was permitted to launch ships across the public quay in front of their yard. The matter was discussed at length and it was agreed that the company should not be permitted to encroach on the public quay. This would of course isolate the yard and prevent the launching of any vessel built there. The Board was severely criticized for its decision and 82 local residents said that the noise was tolerable and should not be the cause of closing the yard, which employed 250 men. A worker wrote to the press suggesting that the villas of the protestors 'should be banished, together with their sick, lame and lazy and the ground they encumber would be turned into cabbage gardens to raise food for the artificer'.[43] The Board subsequently reversed its decision and the threat to iron shipbuilding was lifted.

At 6 p.m. on 28 March 1846 the first iron-screw steamer to be built in Cork was launched from Lecky and Beale's yard. In response to a request from the workforce, the band of the 24th Regiment attended. During one stirring tune the platform collapsed and the band plus about 50 spectators fell from a height of about 12 feet. Subsequently the 150-foot long steamer, which was divided into three compartments, was christened *Rattler* by the daughter of Captain White, the Harbour-Master. The engines for the *Rattler,* which was

Launch of the *Pelican* at Joseph Wheeler's dockyard 11 June 1850 (*Ill. London News*)

intended for the Cork to London trade, were also manufactured by Lecky and Beale.[44]

At high water on 26 May, Lecky and Beale launched the 257-ton iron steamer ***Blarney*** for the Cork Steam Ship Co. The 140-foot vessel had been built at an estimated cost of £6,000.[45] She was later assigned to the Liverpool-Rotterdam route. Four months later, on 22 September 1846, the Cork Steam Ship Co. launched the 67-foot iron boat *Bee* from their own yard at Hargrave's Quay. The 450-ton, 150-foot *Calypso* left the stocks at Lecky and Beale's yard on 1 March 1847. Though provision was made for the inclusion of a propeller, this iron ship relied on sail for propulsion.[46] The Cork Steam Ship Co. launched a second vessel from their yard on 1 July 1848. Unlike the ***Bee***, the 460-ton *Garret* was driven by a propeller from 80 h.p. engines. The vessel had been designed by James Cassidy, the yard's foreman shipwright. The Cork Steam Ship Co., or Pike's yard as it was better known, was the largest shipbuilding concern in the city and with a staff of about 400 people[47] the monthly wage bill amounted to £200. In its buildings were housed a stem-engine machine shop and a boiler factory; with the exception of some specialized equipment the company was capable of producing most of the parts required for ships. There were many

heavy machines in operation and in mid-1850 replacement boilers were being manufactured for the *Sabrina, Preussischer Adler* and *Ajax*.[48]

By mid-1850 there were 286 shipbuilding workers employed at Pike's yard. Workers received good wages and constant employment on new or repair work, but discipline was severe. If caught smoking, workers were fined for the first offence and instant dismissal resulted if the rule was again ignored. Time-keeping was also important and one regulation read: 'The bell rings at six o clock in the morning and at six o clock in the evening, throughout the year, for a day's work, except on Saturday, when the day's work ends at four o clock.' By allowing the early finish on Saturday it was hoped that workers would avoid visits to public houses.[49]

LATER NINETEENTH CENTURY

The Cork Steam Ship Co.'s new iron steamer *Pelican* was launched on 11 June 1850. She was 220 feet long, had a draught of 850 tons and was capable of transporting about 700 tons of freight. The hold was divided into four water-tight compartments and, as she was to carry livestock, great care had been taken with ventilation. Cattle could be walked to the holds which dispensed with the necessity of hoisting them aboard. On her first voyage to London on 8 August 1850 she carried the largest single cargo to leave the city to that date; this included many horses and some cattle.[50]

By the mid-1850s the Victoria Dock at Passage West had been extended to 350 feet; its entrance was 80½ feet wide and there was 21 to 24 feet of water over its sill. A second dry dock, the 270-foot long Albert Dock, had also been constructed. The dockyard had a river frontage of just over 1,000 feet and at low water there was 21 feet of water which increased to between 32 and 36 feet at high water.

The Cork Steam Ship Co. was still Cork city's principal shipbuilding yard and towards the end of 1852 370 workers were employed there. The machine shop had one 12-foot diameter lathe plus nine smaller machines; other equipment included two planing machines, a slotting machine, threading machine and a large vertical drill. The blacksmiths, plumbers, carpenters and boiler-makers also had extensive workshops and a visitor noted that:

> In each department the machinery is in active and incessant motion, wheels are spinning and whirling round in every direction; planing machines and punching machines are doing their ponderous work with almost the cunning of the human hand; while the hammers of the smiths as they ring off the iron, and the clang of the boiler-makers closing up their huge receptacles . . . make the visitor forget for a moment that he is within sight of the Lee, and not on the banks of the Clyde . . .[51]

A reporter who was guided through Pike's shipyard described the numerous departments involved in producing a vessel. The drawing office, which was under the direct control of the principal superintendent, had its walls lined with sketches and plans and shelves bulging with models. In the adjoining moulding loft full size models of every pulley, gear-wheel, etc., were carefully made in timber by pattern-makers. The principal parts used in the construction of the vessels were plates and frames which it was found necessary to import. These iron plates and lengths of angle-iron were then cut, drilled and rolled and each plate and frame received two parallel rows of rivet holes along the sides. On the stocks the frames resembled 'a number of parallel ribs' onto which the plates were riveted '. . . on the stages or temporary wooden galleries passing from stem to stern, and rising tier above tier, the riveters are busily at work keeping the echoes reverberating with their unceasing hammers. The decks are filled with carpenters, the cabins with joiners, and in every inch of the vessel the work is continually pushed forward'.[52]

On 9 April 1853 the 1,290-ton steamer *Cormorant* was launched at Pike's yard. There was little timber in the 220-foot ship — even her masts were made of iron.[53] Early in 1854 the iron steamer *Falcon* was launched. Construction work on this 750-ton vessel had taken twelve months and the completion of cabins plus machinery installation would require a further three months. It was the company's policy to have three vessels under construction — one being prepared in the workshop, one under construction on the stocks and one being completed in the water. The 220-foot *Dodo* left the stocks on 17 January 1855; during her construction there were 500 men employed at the yard.[54] Both *Cormorant* and *Dodo* were used as transport vessels in the Crimean War and in May 1855 Queen Victoria paid an official visit to the *Cormorant* at Plymouth prior to its departure with horses, men and equipment to the war zone.[55] In July 1855 the 218-foot *Osprey* was launched and in February 1856 the 800-ton steamer *Bittern* — unique in that she was the first vessel to be equipped with a Cork-manufactured propeller, cast in the former Lecky and Beale premises which had been incorporated into the Cork Steam Ship Co.'s concern. Great interest was taken by all the workers in the casting of this propeller, and 24 shillings which had been collected from the workforce were ceremoniously added to the molten metal before it was poured into the mould.[56]

Two other shipbuilding yards completed large vessels at that time. At Jospeh Wheeler's on the Lower Glanmire Road the 500-ton clipper *Mary Hardy* was launched for Simeon Hardy and sons. This full-rigged timber ship was the seventh to be built for the company by Wheeler. On 21 October 1854 the 300-ton brig *Westbourne,* which had been built for Scott and Co. of Queenstown, left the stocks.[57] Around that time Wheeler got the contract to build an 80-foot lightship for the Trinity Board, launched on 16 August 1856.

At the Water St. yard of George Robinson and Co. the 80-ton clipper yacht *Wanderer* was launched on Monday, 5 May 1852. The 63-foot craft was schooner-rigged and the height of her main mast was 62½ feet. George Robinson had spent a number of years in America and was well-acquainted with that country's yacht and boat designs.[58] In August 1854 he launched the 210-ton brig *John Harley* for Messrs Harley of Patrick's Quay. On 14 June 1855 a 220-foot iron steamer was launched for Joseph Malcomson of Portlaw. The 700-ton ship was christened *Flora* by Samuel Beale and Miss Lecky of Cork. Before the end of 1855 over 300 men were employed at Robinson's where a 150-foot iron and timber vessel plus a 133-foot iron craft were under construction.[59] The 350-ton 133-foot iron barque *Speedwell,* launched on 8 January 1856 intended for the transportation of railway equipment to South America, had been designed by the yard's foreman Mr Bailey. The 215-foot *Aurora,* a sister ship for the *Flora*, was launched in May and two months later on 19 July the 440-ton barque *Spitfire* left the stocks.[60]

During the Spring of 1857 construction work at Robinson's was concentrated on the largest iron steamer yet built in Cork. She had been ordered by an English company that intended shipping coal from Newcastle-upon-Tyne to France. A flat-bottomed vessel, it was designed to float with a full cargo on five to six feet of water. Though rigged as a four-masted schooner her masts could be lowered when passing under bridges. In the presence of M.C. Marcel, the French Consul, she was launched on 11 July and christened *L'Empereur* by Lady Benson. The 1,200-ton, 250-foot ship was equipped with two 260 h.p. engines and had eleven watertight compartments. She was lost before the year's end when stranded near Fecamp on 8 October.[61]

The 188 feet *Bilboa,* launched by Robinson's in August 1858, was designed specifically

for the North Sea whaling industry. It was anticipated that the 600-ton iron steamer would have to contend with ice so her frames were extra close and the iron sheathing was thicker than usual. A special attachment allowed her propeller to be lifted on board; this would save fuel when sails were used. Shortly after her sea trials she was hired by the Atlantic Cable Company for cable-laying at Valentia and in December was purchased by the Russian Government as a transport vessel.[62]

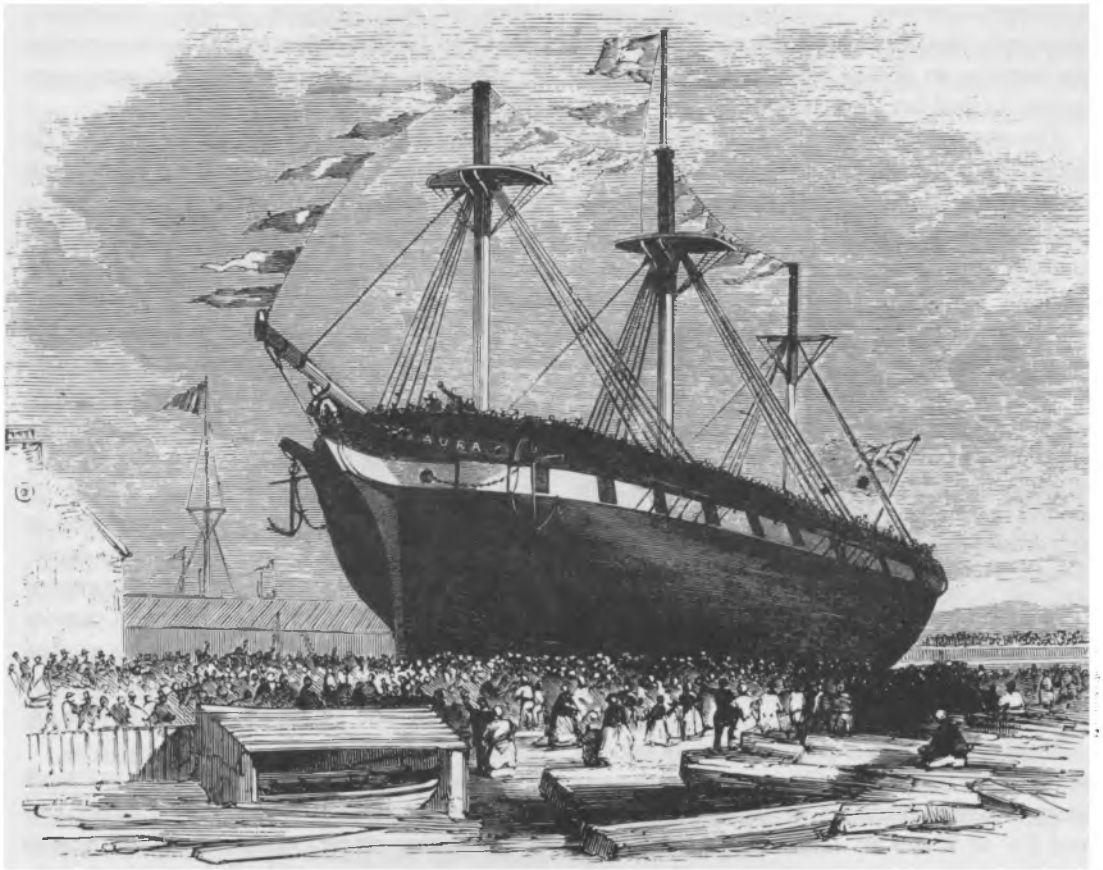
In April 1859 the company completed an 80-foot dredger for the Cork Harbour Board; with the exception of some old dredging machinery all her iron-work had been completed in Cork. The 700-ton *Ferrol,* launched by Robinson's in October, was purchased by the Spanish Goverment as a troop transport. The *Luna*, launched some months previously, was also purchased by the Spanish Government and on the stocks in the yard was a 100-ton dockyard tender for the same customer.[63] Robinson's shipyard provided employment for almost 500 hands in 1859.

In 1853 Joseph Wheeler purchased 16 acres at Rushbrooke as a site for a new dry dock, and before the end of 1855 work was nearly complete. Designed by Sir John Rennie, the dock was 400 feet long, and at low water it had a depth of eight feet over the sill; at high tide it was possible to dock a fully-laden merchant vessel. The dry dock was excavated from solid rock and much of the excavated stone was used for constructing stores and workshops; special stone for the entrance gate had been quarried at Foynes.[64] During the two years of its construction the dock had cost about £25,000 and had given employment to about 140 men. It was opened on 22 March 1856 when the *Eliza Steward* was docked. One large job completed at Rushbrooke in 1856 was the enlarging of the Cork Steam Ship Co.'s *Preussisher Adler* which was cut into halves and lengthened by 40 feet.[65] In 1857 the 1,266-ton *Adriatic* which had been shipwrecked off Ballycotton was purchased by Scott's of Queenstown and taken to Rushbrooke. She was completely repaired, rigged and coppered and the new owners renamed her the *Beechworth* after an Australian goldfield; she was immediately chartered by the Government to transport troops to the Cape.[66] In January 1859 the 'largest vessel that has ever been docked in Ireland', the 347-foot *Weser*, entered Rushbrooke for repair.

Building work had also continued at Wheeler's Lower Glanmire Road dockyard: a 160-ton light-vessel had been launched for the Dublin Ballast Board in August 1857 and the *Rosina* yacht for John Arnott on the following May. On 7 February 1860 the 140-foot *Aura*, the largest timber vessel built in Cork, left the stocks there; she was the eighth vessel built by Wheeler for the Hardys.[67] Also in February 1860 news that Wheeler was about to sell his city property and concentrate on the Rushbrooke establishment became public. His Cork property was purchased by Robinson whose premises adjoined Wheeler's on the Lower Glanmire Road.[68]

Shipbuilding, repairing and reconstruction also continued at the Cork Steam Ship Co.'s yard during the late 1850s. In 1859 four iron barges were under construction for the Harbour Board, and the *Sabrina,* which had been lengthened by 40 feet, was launched on 31 May.[69] Immediately her place on the stocks was taken by the keel of a new iron steamer for the Cork Steam Ship Co. There were 480 hands employed at the yard early in 1860 and the weekly wage bill amounted to £530. The new 236-foot ship was 'being built in a manner that could be excelled in no shipbuilding port in the world'. She was built for the company's own use as a coal transport and when launched on 5 April 1860 was christened *Ibis.*

Towards the end of the year the company decided to increase the carrying capacity of the *Cormorant.* At flood tide in October she was floated as high as possible on to the slips; chains were attached to her bow and three



Launch of the *Aura* at Wheeler's Cork Dockyard 7 Feb. 1860 (*Ill. London News*)

winches manned by 32 men pulled her completely out of the water. Following the removal of riveted plates her 270-ton bow section was hauled a further 50 feet up the slip. Lengthening of the vessel by 50 feet added about 400 tons to her carrying capacity. By early February 1861 she was ready for relaunching and it was estimated that the alterations had cost in the region of £10,000.[70]

Other workers at the yard were constructing a new paddle-steamer for transporting passengers and goods on the Blackwater. As there was inadequate turning space at the Cappoquin terminus she had been designed to steer at both ends and to allow her pass under the Youghal bridge, her funnel could be lowered. The 150′ × 15′ *Lily* was launched on 28 May 1861. She had full steam up and immediately set off on her trial trip; the voyage to Queenstown took just 45 minutes.[71] In February 1864 the 225-foot *Moorefort* was completed for Moore and Co. of Liverpool. About 750 tons of iron were used in her hull — her bottom plates were ¾ inch as also were those at deck level. The surveyor of the Liverpool Underwriters Association was quoted as saying that the 'workmanship employed upon this ship, which is no whit less important than the material, would not be readily equalled in the United Kingdom, and could not be

surpassed anywhere'.[72] As the ship was being launched, part of the launch-way subsided and she came to an abrupt halt; four tugs were required to pull her into the water.

This was the last large ship built by the Cork Steam Ship Co. because in July 1868 a fire caused great damage to the company's shipyard, destroying offices and stores as well as engine and boiler-houses. Also lost were valuable materials and the entire contents of the pattern-makers' shop. This was situated over the engingeering department where

> some shafts and pulleys have been smashed by the fall, and some of the lathe and planing machines are strained. Everything is more or less damaged. The ground floors of the fitting and engine houses present as sad a spectacle as ever was witnessed after the ravages of the destructive element. Machinery of all kinds, of the best description, used in this branch of the trade, is strewn about in all directions, mingled with great heaps of burnt slates, wood and bricks . . .[73]

Shipbuilding was not subsequently revived in the Cork Steam Ship Co.'s yard and the recently enlarged premises of George Robinson and Co. at Water St. dominated Cork's shipbuilding industry in the 1860s. At Passage in 1861 the Browns extended their dockyard by 500 feet. The works included stores, a steam sawmill and an extensive quay; the possibility of building a third dry dock was also being considered. Further extensions brought the total river frontage to over 2,000 feet by 1864.

On 4 July 1860 the 220-foot iron steamer *Halcyon* was launched at Robinsons. On the following March the 190-foot *Norah* was launched for Malcolmson's of Portlaw. Twelve months later another 200-foot steamer left the stocks. She was barque-rigged and her probable destination was the East Indian or China Sea; at the time of launching she was given the name *Ilion*. Another three-masted schooner was launched for Malcolmson's on 5 March 1863, the 240-foot *Camilla* designed by John Horn of the Neptune Works, Waterford. Again on 14 September a 275-foot iron steamer, the *Lara*, was launched for the same company.

Robinson's shipyard was well equipped for iron shipbuilding with its large stores and many other departments. Close to the Water St. entrance was a large sawmill which had been intended for timber shipbuilding but because of the change in ship design was seldom used to full capacity. In a huge shed at the centre of the yard was situated the principal metal-working department where about 200 men worked on the furnaces, forges, punches and cutting machines. There were two patent slips, each capable of holding a vessel of 500 tons. About 500 men were employed in the shipyard and as well as the obvious trade, work was also given to plasterers who coated the insides of the ship's iron ribs with cement to prevent rust. About 100 shipwrights worked on repairs and it was estimated that in the construction of one vessel about £6,000 was expended on wages.[74]

Unlike the Cork city dockyards, ironwork had not yet been introduced at Passage and Rushbrooke where work was concentrated principally on repairs. At Robinson's in early 1864 the workforce had risen to 600 men. On 8 March the 240-foot *Bolivian* was launched; she over-ran the available river space and her rudder became embedded in the opposite bank but she suffered little damage and was later pulled free.[75] The 225-foot, 2,200-ton *British Sovereign* left the stocks in October for the Liverpool Shipping Co., and on 28 January 1865 the 230-foot *Avoca* was launched for Malcolmson's, licensed to carry 678 passengers.[76] The 200-foot iron steamer *Aura* was launched from the newly-constructed slip in the yard a short time later, the 100-ton *Chloe* for Alexander Law in August and in March 1867 a new 120-ton steamer for the same customer.[77] Robinson's continued to be busy in 1866 and new work included the building of

a paddle-steamer and two brigs for Suttons. The first of these brigs, the 120-foot *Margaret Sutton* was launched in April 1866; she had beautifully-carved clipper bows, ornamented with a neatly-carved figurehead. Her sister vessel, the 400-ton *George Sutton* left the stocks just four weeks later,[78] and on the following week a 200-ton, 120-foot steamer with 'the graceful proportions for which the ships built in this yard are remarkable' was launched for W. and H.M. Goulding. April 1866 also saw the launching of a new vessel for the Citizens' River Steamer Co. This 150-foot paddle-steamer, the first 'iron' (steel was actually used in her plates) river-steamer launched in Cork, was christened *City of Cork* by the wife of John Francis Maguire, MP.[79] The year closed with the launch of the 100-foot iron tug *Lord Elgin* for Seaton's of Queenstown. The 1,200-ton *Mendora* was launched for Malcolmson's in January 1867 and in September the 220-ton steamer *Orange* for Captain Reed of Cork.[80]

At that time Robinson's had miscellaneous work on hand but down river the Passage and Rushbrooke dockyards were experiencing a severe slump in repairs during the late 1860s and finally in 1870 the two yards amalgamated. By February 1872 they were sold to a new company and because of the depressed state of the market it was decided to avoid shipbuilding and concentrate instead on the repair business. Robinson's launched a 46-foot steam launch for the Cork Harbour Commissioners in 1868 and a dredger for the Limerick Commissioners on 7 March 1872. Later that year a 218-ton steamer, the *Ilen*, was launched for the new Skibbereen and West Cork Steamship Co. On her first trip to West Cork in April 1873 she transported twelve passengers along with about 250 tons on cargo.[81]

CONCLUSION

Like the Passage and Rushbrooke dockyards the depressed state of the industry also affected Robinson's and by early 1873 the Cork Harbour Commissioners were negotiating the purchase of the Water St. premises from the Cork Steam Ship Co.[82] The transfer of the premises, which had a river frontage of 430 feet, was a protracted undertaking and the matter was finally concluded in 1877.[83] Towards the end of the year one observer lamented that 'several first class steam and sailing vessels both in wood and iron together with steam dredgers and hopper barges, had been artistically designed and substantially built there by faithful workmen'.[84]

An attempt was made to revive the shipbuilding industry in the mid-1880s and committees were formed in Cork city and harbour. Funds were raised and a number of 60-foot trawlers were launched; these included the 45-ton *Maid of Cove* and the *Star of the Sea,* from W.T. Cummins' boat yard in Carrigaloe in the Summer of 1886 and the *Perseverance* launched at Glenbrook in February 1887.[85] This scheme did not succeed and by the end of the century Cork's ship-repairing industry was concentrated in Passage and Rushbrooke, and to a lesser extent at the Admiralty yard in Haulbowline.

In recent years Cork's shipbuilding industry was revived at Rushbrooke when the 15,000 ton *Irish Rowan* was launched at the Verolme dockyard on 6 December 1961. Thirty-two more ships were launched there during the next 20 years or so and on 30 November 1984 the closing of the yard's gates brought an end to Cork's new shipbuilding industry. Today's uncertainty on the future of the dockyard brings to mind words written after the closure of the Lower Glanmire Road establishment:

> It is now pretty well understood when the shipbuilding and engineering establishment on the Brickfields was sold and broken up that a gross injury had been accomplished . . . The establishment was replete with modern, expensive machinery, and well disposed persons knew it to be of sound commercial value to the company. It afforded large

employment, and turned out excellent workmanship, a credit to the port . . . Where is the money now spent, or why was such a lucrative concern destroyed, and destitution ruthlessly cast all round? Was the prosperity of the company faithfully and practically considered before parting with so valuable a plant, the loss of which, in truth and fact, is irreparable?[86]

ACKNOWLEDGEMENTS

I wish to acknowledge help from the following in compiling this article: Kieran Burke, Tim Cadogan and Diarmuid Ó Murchadha.

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