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<b>AUTHOR (S)</b>	Ruth Delany
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## THE HIBERNIA.

Ruth Delany.

It had long been one of Father Murphy's ambitions to lift the hull of the old flyboat which lay submerged in the canal to the west of Daingean. With his great love for recreating the past, he had hoped at one time to restore her to her former glory, and how splendid she would have looked surging along behind two galloping horses. There has always been a romantic appeal about the flyboats, conveying the passengers at 10 mph. with the postillion ducking as the horses galloped beneath the bridges. But the dream was not to be. Efforts to raise the hull some years ago ended in failure and investigation showed that it had deteriorated beyond repair.

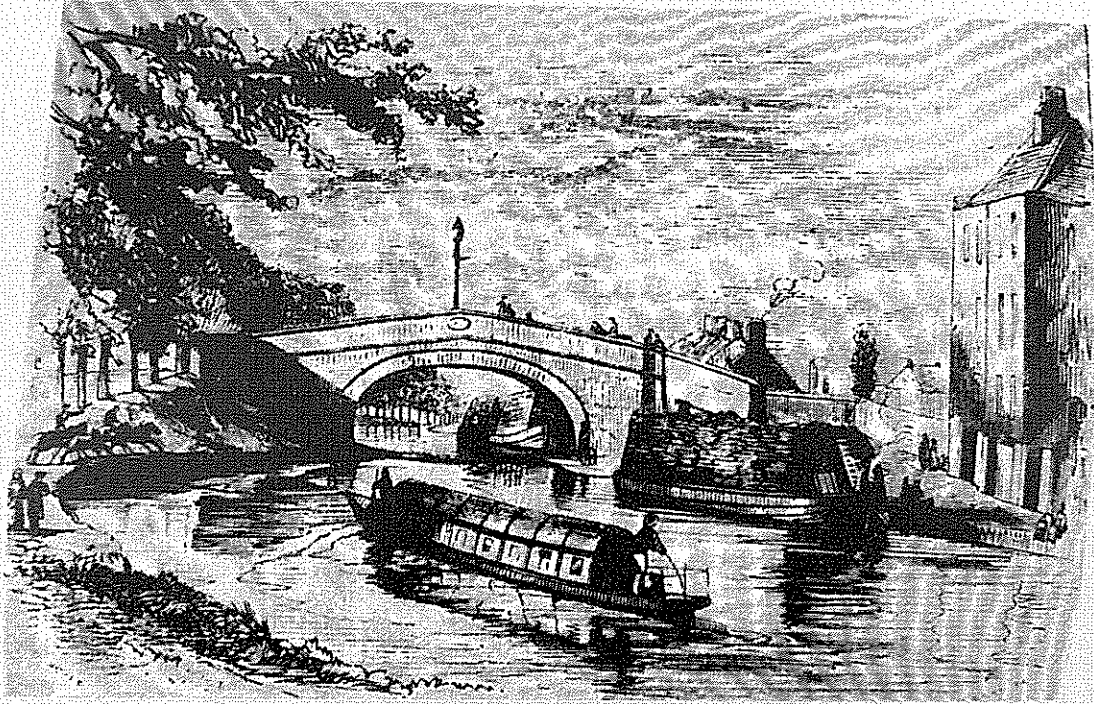
Then, last year, the long level was accidentally breached and the flyboat lay uncovered. Even though it was obvious that she would never float again, she was of great historic interest and Father Murphy gratefully accepted the offer of Brendan Daly and John MacNamara to place the resources of CIE at his disposal to move her to Robertstown. It was decided that the least possible damage would be done to the frail hull if she were to be cut into three pieces, and in this way she was lifted out and conveyed to Robertstown. At Father Murphy's request, Terence Mallagh measured her up and drew up a plan of what he thought she might have looked like. Whilst there are a number of old engravings of passenger boats on the Irish waterways, most of them illustrate the earlier wooden boats with roomy cabins and an upper deck. There is one engraving, however, in Mr. and Mrs. Hall's Ireland of a passenger boat on the Royal Canal, with an accompanying description in the text, which illustrates one of the later flyboats. A study of the hull can now be made, providing an early example of rivetting, and it is interesting to conjecture whether the oak frames were inserted afterwards or used to mould the thin iron plates.

The history of the development of this faster type of boat belongs to the age of experimental steam boats, when iron was gradually replacing wood and speed was the ultimate aim of all designers. In June 1831 William Houston had introduced a new type of boat on the Glasgow, Paisley and Ardrossan canal. She was 70 ft. long and 5½ ft. wide, her hull was made of thin iron plates with wooden ribs, she weighed less than 1¾ tons and she had a loaded draught of only 16¼ ins. The cabin was made of light oiled cloth on wooden framing and accommodated over 100 passengers. She maintained an average speed of 10 mph and was drawn by two horses, one behind the other, the leading horse wore 'blinkers' and the postillion rode the second horse. An excerpt from the Saturday Magazine for June 1843 quoting an address to canal proprietors in the 1830's gives the scientific background to this remarkable boat:

Mr. Scott Russell, who has made many important investigations into the motion of waves and of floating bodies moving in them, brought before the British Association for the Advancement of Science, about 6 years ago, some very curious results, in respect of the traction of boats on canals. On the general principle of the resistance of fluids to bodies moving in them, has been grounded the conclusion that it would be an impracticable thing to move the cumbrous boats upon canals at any but very low velocities, except by an expenditure of power so great, that the ordinary methods of conveyance by roads would be cheaper. It has been generally believed that the resistance would increase with the velocity, by a law so rapid in its variation, that for a speed of two miles an hour there would be four times the resistance of one mile; for three miles, nine times that of one mile; for four, sixteen times; and so on. Here then was an obstacle to rapid communication by canals, which appeared insuperable. But Mr. Russell has shown that there is practically a circumstance which so completely modifies the application of this principle, that when once a certain point of speed is attained, an increase of speed will entail a diminution of resistance instead of an increase. In one of his experiments he found, that when a boat is drawn along a canal at varying degrees of speed, the resistance increased as the square of the velocities, up to a speed of seven miles and a half per hour; but that at eight and a half, the resistance was actually less than at seven and a half, so that it would be easier to draw a boat along at the higher degree of speed than at the lower. Finding this to be the case, Mr. Russell investigated the cause; and he discovered that where the water of the canal is disturbed by any cause, such as the admission of a rush of water momentarily into one extremity of it, or the impending of a body moving in it, there is generated a certain wave, whose motion along the canal is altogether independent of the nature or velocity of the impulse given to it, and dependent only on the depth of the canal, — its velocity being precisely that which a stone would acquire in falling down one half of the depth of the canal. Mr. Russell was able to ascertain that, in the experiment which he made, this peculiar wave moved at the rate of eight miles per hour. As long, then, as the boat moved at three, four, five, six or seven miles per hour, it remained in the rear of the wave; the wave had no effect on it; but at eight miles an hour, the boat was, in point of fact, upon the wave; and it might indeed be seen about the centre of the boat lifting it out of the water and diminishing the traction upon it. This very curious result is one of the many which are now engaging the attention of the British Association, and is looked to with much interest, as it is supposed to throw light on many difficult points respecting the formation and motions of waves at sea.

A perusal of the records of the Grand Canal Company reveals that as early as 1828 they had commissioned William Mallet to build an iron passage boat on the same lines as one of the wooden boats. She was built in the dock at Portobello and was not completed until October, 1829. Her performance was disappointing. Mallet was asked to lighten her to make her more 'expeditious', but she was never a success. In 1830 John Marshall built another one of lighter construction and in October 1831 Courtney Clarke of Ringsend Iron Works contracted to build a boat of sheet iron less than  $\frac{1}{8}$  in. thick. This boat was subsequently named the Hibernia and, if local tradition is correct, this is the boat which now lies at Robertstown. Although the contract was signed four months after the first swift boat commenced to ply in Scotland, Clarke was either unaware of the significance of making the hull of the lightest possible construction or knew nothing of the Scottish boats. In July 1832 a printed report of the Paisley boats, possibly the one quoted above, was considered by the board and, in the light of this, experiments were carried out with the Hibernia. They succeeded in achieving a speed of 8 mph but the horses were exhausted and the board decided that she was too heavy, (5 tons) and that her bow was a bad shape. Andrew Bagot, the inspector of trade, was sent over to Scotland to inspect the boats on the Paisley canal and in October 1833 the board decided to order a hull from Messrs Reid & Hanna of Paisley. She was shipped over in November and two Scottish carpenters were sent over to fit out the 'house work'.

In the meantime (June 1832) the directors of the Royal Canal Company had received a quotation from Fairburn & Lilly of Manchester for an 'iron gig boat adapted to high velocities and such as would ride the surge and be tracked by two horses at a rate of 9 to 10 mph'. They, however, decided that it would be better to send someone over to inspect the performance of these boats and dispatched their dockmaster, Mr. O'Neill, to Scotland, two months before Bagot made his inspection for the Grand Canal board. O'Neill was very enthusiastic and reported that the boat rose about 12 ins. when in motion and added, 'there is no top or deck weight on this boat, they must be obliged to sit down equal on both sides'. O'Neill was instructed to construct a similar boat and she was launched in January 1833 but she did not satisfy the directors who decided to order a boat from Reid & Hanna in May. This boat was shipped to Ireland in August but she was holed in transit and, after carrying out trials, the directors asked for a second boat, one foot wider and 6 ins. deeper, to improve the stability; Reid & Hanna recommended a stouter iron plate with wooden pieces along the sides to protect her in the locks. The hull of the first boat had weighed 18 cwts. and her total weight was 30 cwts. but there is no record of how much the second boat weighed. Although the Royal Canal Company had received their boats first, their rivals managed to start a service to Athy on 1st May,

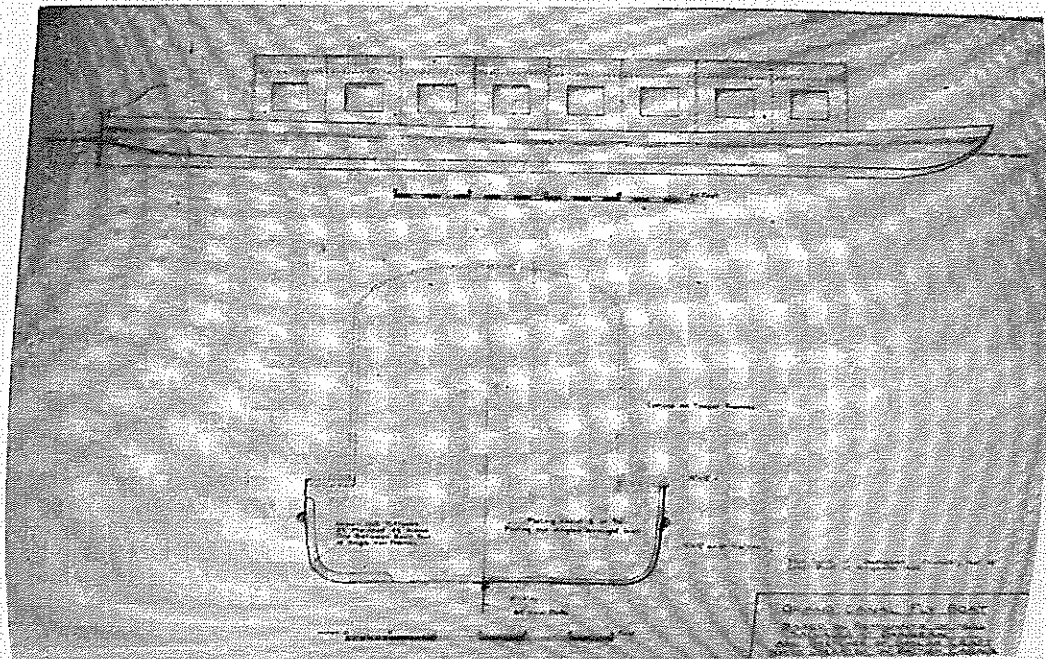


A drawing of a passage-boat on the Royal Canal in the 1840's.  
From Mr. & Mrs. Hall's "Ireland".

1834 while the first boat to Mullingar did not commence until 23rd June. The Hibernia was consigned to the slower night service.

Both companies experienced problems; stables had to be built to accommodate the teams of horses and the trackways repaired to allow the horses to gallop. O'Neill was instructed to report 'what stage upon the line it would be advisable for the boat to stop at for the accommodation of females and other passengers', which suggests that there were no facilities on board. There were no hot meals but cold snacks were served and some liquor was available. O'Neill had suggested that wooden panels should be substituted for the oilcloth covering and it had already been decided to use sheet iron roofing when a lockkey had fallen through the covering during the trial period. O'Neill had also recommended that a hinged gunwale should be added to prevent the crew having to pass through the cabin. John Stokes, the Grand Canal engineer, made frequent reports to the board about the damage caused to the banks and said that in places the wash was passing right over the banks. Some years later he suggested that the increased revenue from the fast boats did not begin to pay for the increase in maintenance costs.

Surprisingly, there do not appear to have been many accidents. In March 1835, however, the board of the Grand Canal carried out an inquiry to guard against a 'dangerous accident' which had occurred on the Royal Canal. It had reached their ears that 'the light day-boat, proceeding to Mullingar before the Assize, with many respectable passengers in the state cabin and a good number in the back, was entering an ascending lock, eight miles from that town, when the stop rope having been thrown on the iron hook set in the side wall came off in consequence of frost, or missed the hook, so that the boat proceeding at a rapid rate, and not being stopped, the bow was thrown up on the cill, and the stern immersed proportionally in the water, and no attempt being made by the Master or crew by the use of poles to stop the progress of the boat, to keep her upright, or to push her back, she turned on the side, when nine of the cabin passengers were thrown into the lock, but fortunately taken out afterwards by ropes, etc., the water meantime from two of the sluices which had been incautiously raised, poured into the state cabin, and wet passengers and luggage and rose still higher in the after cabin, the boat being retained in the inclined position, in consequence of the deep gate not being shut'. There was a report of a similar incident on the Grand Canal in December 1841 when the Mountmellick boat entered the 24th lock on the Barrow line too fast, 'The practice of drivers carrying on their full speed into the locks is extremely reprehensible and nearly produced the fatality: the body of water propelled by the velocity of the boat raised her in part over the middle cill of this double lock — which immediately receding left a vacuum at the stern that caused her to sink so much that the water flowed in to the height of the cabin table — the alarm I understand was dreadful'.



Grand Canal Fly Boat. Based on remnants of hull salvaged at Daingean and sketches of similar craft which operated on British Canals.

Courtesy of C.I.E.



By the late 1840's the passage boat establishment was suffering considerably from increasing railway opposition and in 1848 nine of the Grand Canal flyboats were sold for small sums. There is no record of what happened to the Hibernia but she was probably sold as a trade survival and, unfortunately, no traces of any of the real flyboats appear to have survived.



Remains of Flyboat uncovered at Daingean.

Courtesy of Ruth Delány.

