and eighteen years later than the date of the first experi­ments made by me upon s∣eaιn boats, on the lake at Dalswinton, Dumfries-shire, in Great Britain.”

Fulton, having obtained what information he could, or­dered, under an assumed name, it is said, a steam-engine from Bolton and Watt. He shortly afterwards returned to America, and in conjunction with Mr Livingstone ob­tained a patent, securing to them the prospective advan­tages of steam navigation in America, by what they rather insincerely termed *their* invention of steam-boats. In 1806 Bolton and Watt’s engine arrived, and in 1807 the first steam-vessel in America was launched on the Hudson river. It was called the Clermont, which was the name of Livingstone’s residence. In spite of the advan­tages which it possessed over the Scottish vessels, ill hav­ing better engines, and in its projectors having the benefit of Symington's experiments, it was a comparative failure, attaining at the utmost a speed of only *five* miles an hour. The boat had not been long under weigh, on its first trip, when Fulton ordered the engine to be stopped. Having observed that the paddle-wheel floats were too deeply immersed in the water, he shifted them nearer to the centre of the paddle, so that they did not enter so deeply into the water ; and this alteration had the effect of in­creasing the speed of the vessel.

Shortly after this first experiment, it was announced that the Clermont would sail from New York to Albany; and of this first voyage the following account was sent to the Editor of the *American Citizen* newspaper, by Fulton himself :—

"Sir,— I arrived this afternoon, at four o’clock, in the steam-boat from Albany. As the success of my experi­ment gives me great hopes that such boats may be ren­dered of great importance to my country—to prevent erroneous opinions, and to give some satisfaction to the friends of useful improvements, you will have the good­ness to publish the following statement of facts. I left New York on Monday at one o'clock, and arrived at Clermont, the seat of Chancellor Livingstone, at one o’clock : time, 24 hours ; distance, 110 miles On Wed­nesday I left the chancellor’s at. nine in the morning, and arrived at Albany at five in the afternoon : distance, 40 miles; time, 8hours. The sum is 150 miles in 32 hours, equal to nearly 5 miles an hour, &c.— Robert Fulton.”

During the same season, the boat made many voyages between New York and Albany, and in these she met with not a few accidents, arising chiefly from the defective con­struction of her paddle-wheels, which were of cast-iron, and had no support beyond the vessel. She was likewise injured by the sailing vessels, whose owners, dreading the intruder, ran them against her. The Clermont was at length laid up during the winter; and being enlarged and strengthened, she was again, in the spring of 1808, em­ployed as a passage boat between the same stations, and continued during the summer crowded with passengers. The success of their first vessel induced Messrs Living­stone and Fulton to build other two vessels, the Car of Neptune, of 300 tons, and the Paragon, of 350 tons.

Thus it was that steam navigation in America origi­nated ; and the enthusiastic and speculative Fulton en­joys the honour of having first shown to the world its commercial value. It is now proper time to mention that Fulton had been aided in his experiments on steam navigation by Mr Henry Bell, by whom the first steam passage vessel in Britain was constructed. The nature of this connexion will be better seen from Mr Bell's own account of it, which was addressed to the Editor of the *Caledonian Mercury* in 1816.

“ Sir,—I observed in your paper lately a paragraph respecting steam-boats, in which the Americans claim the right to the discovery which is become of so much utility to the public. On this account I propose to give you a full statement of what I conceive to be the truth, iv∣r Miller of Dalswinton first wrote upon the method of moving or impelling vessels or rafts through water by paddles, wrought by a capstan, or by the wind, in the manner of a wind-mill, which idea he afterwards gave to all the different courts in Europe. It will be recollected by most people in this country, that the French proposed to erect rafts for conveying troops to invade this country, by means of Mr Miller's wind-mill or capstan plan ; for, it may be stated that this gentleman built two vessels at Leith, and put them in motion upon his new improvement, and even sent one of them to the King of Sweden as a present. After this, he thought that an engine could be so constructed as to be applied to work his machinery for the moving of his paddies ; and accordingly he em­ployed an engineer to put his plans in execution ; but they failed for want of being properly executed. But to give you a more correct account of the manner Mr Ful­ton, the American engineer, came to the knowledge of steam-boats, that gentleman had occasion to write me about the plans of some machinery in this country, and beg the favour of me to call on Mr Miller of Dalswinton, and see how he had succeeded in his steam-boat plan ; and if it answered the end, I was to send him a full drawing and description of it, along with my machinery. This led me to have a conversation with the late Mr Miller, and he gave me every information I could wish for at the time. I told him where, in my opinion, he had erred, and was misled by his engineer ; and at the same time I told him, that I intended to give Mr Fulton my opinion on steam-boats. The friends of Mr Miller must have amongst their papers Mr Fulton's letter to me; for I left it with Mr Miller. Two years thereafter I had a letter from Mr Fulton, letting me know that he had con­structed a steam-boat from the different drawings of the machinery I had sent him out, which was likely to an­swer the end, but required some improvement on it. This letter I sent to Mr Miller for bis information, which must also be amongst his papers. This letter led me to think of the absurdity of writing my opinion to other countries, and not putting it in practice myself in my own country; and from these considerations I was roused to set on foot a steam-boat, for which I made a number of different models before I was satisfied. When I was convinced that they would answer the end, I con­tracted with Messrs John Wood and Company, ship­builders in Port Glasgow, to build me a steam-vessel according to my plan, 40 feet keel, and 10 feet 6 inches beam, which I fitted up with an engine and paddles, and called her the *Comet ;* because she was built and finished the year that a comet appeared in the north-west part of Scotland. This vessel is the first steam-boat built in Europe that answered the end, and is at this present time upon the best and simplest method of any of them; for a person sitting in the cabin will hardly hear the engine at work. She plies on the Frith of Forth betwixt the east end of the great canal and Newhaven, near Leith. The distance by water is 27 miles, which she performs, in ordinary weather, in 31/2 hours up, and the same down. There were many attempts to make steam­boats in this country before this one. but none of them ever answered the end; and even three years after the Comet was set a-sailing, there was a number of our first- rate engineers joined together, and obtained a patent for what they conceived a new discovery on the paddles for impelling the vessel forward. They were disappointed in their plan, and had to return to the model of the Comet.”

The Comet was a vessel of about 25 tons, and her engine, which was a vertical one, exerted about three