constructed at Carron. Every thing being completed, a trial took place on a level reach of the Canal, of about four miles in length, at Lock Sixteen. The trial was made in presence of many spectators, who were however disap­pointed in their expectations, owing to the breaking of the paddle-wheels. Stronger wheels were obtained, and another trial took place on the 26th December 1789, and the vessel moved at the rate of about seven miles an hour. Next day and afterwards the experiment was repeated with equal success ; and the following account of it was trans­mitted by Lord Cullen to several of the Edinburgh news­papers:—“ It is with great pleasure I inform you that the experiment which some time ago was made upon the great canal here by Mr Miller of Dalswinton, for ascertaining the powers of the steam-engine when applied to sailing, has lately been repeated with great success. Although these experiments have been conducted under a variety of disadvantages, and with a vessel built formerly for a different purpose, yet the velocity acquired was no less than from six and a half to seven miles an hour. This sufficiently shows that, with vessels properly constructed, a velocity of eight, nine, or even ten miles an hour may be easily accomplished, and the advantages of so great a velocity in rivers, straits, &c., and in cases of emergency, will be sufficiently evident, as there can be few winds, tides, or currents which can easily impede or resist it ; and it must be evident that, even with slower motion, the utmost advantage must result to inland navigation.” It is much to be regretted that Mr Miller, having made so successful an experiment, carried his attempts no further. The boat was dismantled and laid up at Carron ; and this ingenious and public-spirited gentle­man directed his attention to other objects. His pursuits had a greater tendency to improve the condition of his country, than to enrich his own family.

In 1793, Rumsey, who, as we have already stated, had been unsuccessful in his experiments in America, got some American residents in London to defray the ex­penses of another experiment there. He, however, died before his boat was finished ; and when it was got afloat by those engaged with him, it attained a speed of four miles an hour against wind and tide. The propulsion of this boat was effected, on the principle of Dr John Alien's, by ejecting a stream of water at the stern.

In 1795, Earl Stanhope revived the pastor of Berne's duck feet oars; but he could not cause his vessel to move at a higher rate than three miles an hour.

In the year 1801, Thomas Lord Dundas employed Mr Symington to make a tug-boat for dragging vessels on the canal. With this view, a series of experiments were made between 1801 and 1802, at a cost of £3000. In March 1802, Lord Dundas, Mr Speirs of Elderslie, and several other gentlemen, being on board of the newly- constructed tug-boat, which was named the Charlotte Dundas, it “ took in drag,” says Mr Symington, “ two loaded vessels, each upwards of 70 tons burden, and with great ease carried them through the long reach of the Forth and Clyde Canal to Port Dundas, a distance of 191/2 miles in six hours, although the whole time it blew a very strong breeze right ahead.”

In consequence of an impression in the minds of some of the canal proprietors, that the paddle-wheels of the boat injured the banks of the canal, the project of the steam-tug was with great reluctance abandoned, and the boat was laid up in a creek of the canal, where it re­mained for many years exposed to public view. A year after this most successful experiment, Mr Fulton, an American, made a similar experiment on the Seine at Paris, under the auspices of the American chancellor, Mr Livingstone. Owing to a miscalculation of the strength of the boat, it had no sooner received the weight of the engine than it broke through the middle, and went to the bottom. Not disheartened, Fulton set about building a new vessel ; and in August 1803 he launched it with its machinery. This vessel was 66 feet long and 8 feet wide ; but moved so slowly, that we may describe the experiment as a failure. He afterwards came to Scotland, and saw Mr Symington’s vessel. Of this visit, a memorial of Mr Symington’s, which we have before quoted, gives the following account :—“ When en­gaged in these last experiments, I was called upon by Mr Fulton, who very politely made himself known, and candidly told me that he was lately from North America, and intended to return thither in a few months, but having heard of our steam-boat operations, could not think of leaving this country without first waiting upon me, in expectation of seeing the boat, and procuring such information regarding it as I might be pleased to com­municate ; he at the same time mentioned, however ad­vantageous such invention might be to Great Britain, it would certainly become more so in North America, on account of the many extensive navigable rivers in that country; and as timber of the first quality, both for building the vessels, and also for fuel for the engine, could be purchased there at a small expense, he was de­cidedly of opinion it could hardly fail, in a few years, to become very beneficial to trade in that part of the world ; and that his carrying the plan to North America could not turn out otherwise than to my advantage; as, if I inclined it, both the making and superintendence of such vessels would naturally fall upon me, provided my en­gagements with steam-boats at home did not occupy so much of my time as to prevent me from paying any at­tention to those which might afterwards be constructed abroad. Mr Fulton having thus spoken, in compli­ance with his most earnest request I caused the engine­fire to be lighted up, and in a short time thereafter put the steam-boat in motion, and carried him from Lock No. 16, where the boat then lay, four miles west the canal, and returned to the place of starting, in one hour and twenty minutes, to the great astonishment of Mr Fulton, and several gentlemen who at our outset chanced to come on board. During the above trip, Mr Fulton asked if I had any objections to his taking notes regarding the steam-boat; to which question I said, none, as I considered the more publicity that was given to any discovery intended for general good, so much the better ; and having the privilege secured by letters patent, I was not afraid of his making any encroachment upon my right in the British dominions, though in the United States I was well aware I had no power of control. In consequence, he pulled out a memorandum-book, and, after putting several pointed questions respecting the general construction and effect of the machine, which I answered in a most explicit manner, he jotted down par­ticularly every thing then described, with his own re­marks upon the boat, while moving with him on board along the canal ; but he seems to have been altogether forgetful of this, as, notwithstanding his fair promises, I never heard any thing more of him, till reading in a news­paper an account of bis death.

“ From the above incontrovertible facts, which can be corroborated by a number of persons of respectability living at this day, it is very evident that commerce is not indebted to North America for the invention of steam­packets, it being hereby established beyond the possibility of doubt, to be truly British, both in the idea and practice ; and that Mr Fulton's steam-vessel did not make its first appearance in the Hudson river earlier than 1806 or 1807, four years at least posterior to his having been on board the Charlotte Dundas steam-boat, and minutely examined it, when at work on the Forth and Clyde Canal,