

upon a spot, a romantic one, for me to lie in; and the management of the rest I leave to Lady Milbanke and you.”

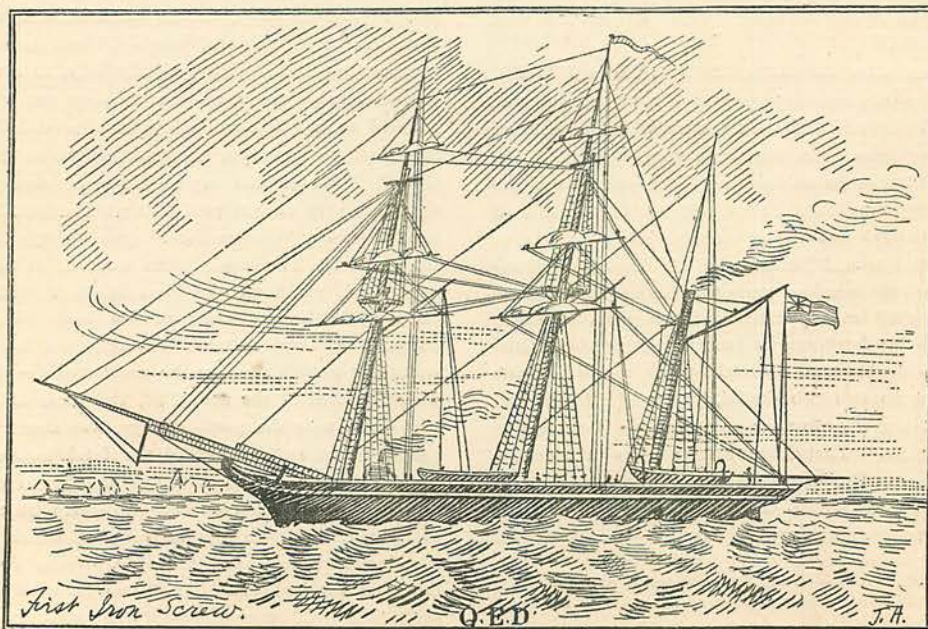
N. E. R.

## The First Screw Collier.

**M**ANY interesting articles have been published at various times on the progress of iron shipbuilding on Tyneside. It may, however, be worth while to note the beginning of this industry, more particularly in regard to the building of a certain vessel bearing the title of Q. E. D. This vessel is of as much interest, from an engineering point of view, as the Rocket and Number One engines of George Stephenson. Stephenson's engines were the pioneers of the system of traffic by rail which is now fast overspreading the globe. So the vessel built on the banks of the Tyne forty-six years ago was one of the first of the screw steamers which now cover the seas. The Q. E. D. marks the period of transition from the wooden sailing vessel to that of the iron screw steamer. It has usually been considered that the first screw collier was the John Bowes. As such it has frequently been mentioned. The John Bowes was built by Messrs. Palmer, at Jarrow, in the year 1852, to the following dimensions:—Length, 150 feet; breadth, 25 feet 7 in.; depth, 15 feet 6 in.; registered tonnage, 270 tons. Yet it is evident that the screw collier Q. E. D. was launched at Mr. Cootes's yard, Walker, eight years before the John Bowes was built. Mr. Wigham Richardson, in a speech delivered on the

occasion of the launch of the Spanish mail steamer Alfonso XII. at Walker, referred to the fact that the yard from which the Alfonso XII. was launched had formerly been in the occupation of Mr. Cootes, who had constructed the first iron vessels on the banks of the Tyne, and had the oldest shipbuilding yard on the river. The Alfonso XII. was made of steel, and was the largest merchant vessel built in a Tyne shipyard, the gross tonnage being over 5,000 tons, with engines indicating 4,500 horse power. The following particulars of the Q. E. D. are extracted from the *Illustrated London News*, dated September 28, 1844, from which also the illustration is copied:—

A perfected novelty in the coal trade arrived in the river Thames last week, and took in her moorings at the Prince's Stairs, Rotherhithe, where she has attracted considerable attention and curiosity. This was an iron vessel of handsome appearance, barque rigged, with taut masts and square yards, the masts raking aft in a manner that is seldom seen except in the waters of the United States. The vessel was built by Mr. Cootes, who is the owner, at Walker, near Newcastle, and is of peculiar construction, with a 20 horse-power engine by Hawthorn, which turns a screw propeller, a compound of several inventions, having four flies or flaps at right angles with each other, the bend of each flap at an angle of 45 degrees from the centre. Her length over all is 150 feet; breadth of beam, 27 feet 6 inches; and she is capable of carrying 340 tons of coals. With this weight, her draught is 11 feet 9 inches abaft, and 10 feet 3 inches forward. Her hold is divided into separate chambers, so that injury to the bottom in one chamber will not affect the others, and each chamber has a false floor of sheet iron hermetically sealed; while between the bottom and these floors are spaces, to be filled with water by means of large taps, for the purpose of ballast, so that her only ballast is the liquid element, which may, if required, be pumped out again in a very short time by the engine. Her bows are like the sharp end of a wedgerising to a lofty billet head, and her overhanging stern projects much more than is customary; but, though low,



the flatness of what is usually termed the counters must lift her to every swell, so as to render it next to impossible for a sea to break over her taffrail. On her stern is an armorial bearing with the motto, *Spes mea Christus*, and also her name, the Q. E. D., of Newcastle. The cabin is commodious, with a raised roof surrounded with window lights. There are four sleeping apartments, and a state-room for the captain. A swinging compass is suspended, having a magnet on each side, and one before it, to counteract the attraction of the iron. Her shrouds are wire rope served over with a strong double screw to each, to set it up when slack with the smallest difficulty and scarcely any labour: her mainmast from the step to the cap is 65 feet in altitude; her mainyard 52 feet in squareness; from the keel to the royal-truck the height is about 130 feet. The other masts and yards are in proportion, the mizenmast being of iron, and hollow, so as to form a funnel for the engine fire. It is not the least curious point about her to see the smoke issuing from the mizenmast-head. This vessel was launched on St. Swithin's Day (15th July); took in a cargo of coals at Newcastle, about 20 keels, but, getting aground on the Hook of the Gunfleet Sands, was obliged to heave two or three keels of coals overboard. She lay ashore several hours, but got off without any damage. She steers with ease, sails remarkably well, and, when tried with the screw propeller, exceeded expectation. Much ingenuity has been displayed in putting her together, and we feel confident that the time is not far distant when our ships of the line will be fitted with engines and screws in a somewhat similar manner.

JAMES HUNTER.

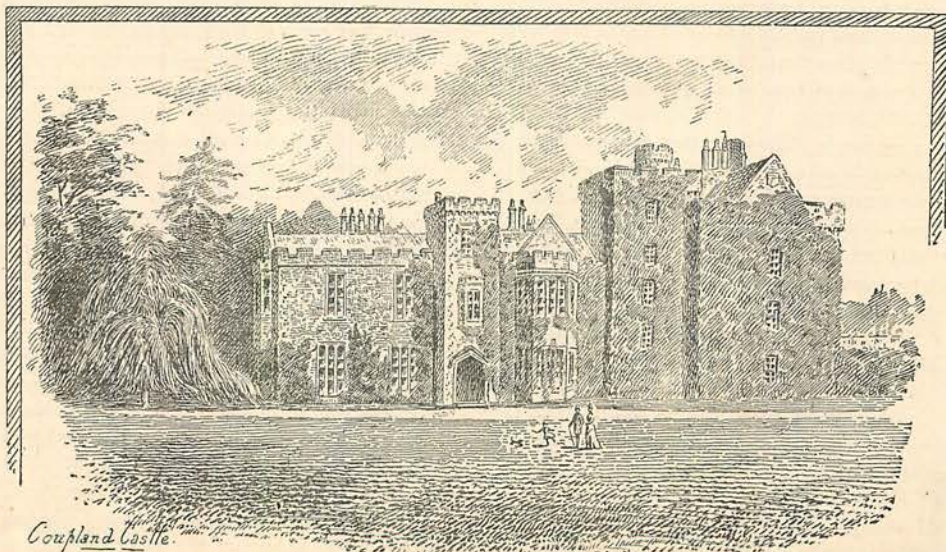
## Coupland Castle.

**S**ITUATED on the banks of the Glen, a tributary of the Till, about five miles from Wooler, Northumberland, Copeland or Coupland Castle is pleasantly surrounded by trees. When the survey of Border towers and castles was made in 1552, it would appear that no "fortress or barnikyn" was to be

found at Coupland. The oldest portion of the building, which dates from the early part of the seventeenth century, consists of two strong towers, containing eleven rooms and a somewhat remarkable stone cork-screw staircase. In some places the walls are six or seven feet in thickness. At the corners of the castle are "pepper-pot" turrets, the only other examples south of the Tweed being at Duddo and Dilston. After the ancient family of the Copelands (to which Sir John de Copeland, who distinguished himself at Neville's Cross, is supposed to have belonged) had died out, the place came into the possession of the Wallises. The initials G. W. and M. W. are inscribed over the chimney piece in one of the rooms known as the "Haunted Chamber," with the date 1619. From the "History of the Berwickshire Naturalists' Club, 1835-1886," we gather that in 1830 the late Mr. Matthew Culley succeeded to the whole of the Coupland Castle estate, in right of his mother, Elizabeth, who died in 1810, and who was the only sister and heir-apparent of Mr. Thomas Bates.

Not far from Coupland Castle is Ewart Park, the seat of Sir Horace St. Paul, Bart. In February, 1814, there were discovered in the park two swords, buried perpendicularly, as if they had been thrust down for concealment. The Glen, which curves round the southern boundary of the park, falls into the Till a short distance to the east. In this angle, forming the south-east corner of Millfield Plain, King Arthur, according to Nennius, is said to have achieved one of his great victories over the Saxons. A Saxon fibula was found here, and is now in the possession of the proprietor of the mansion.

Above Coupland Castle, on the west, rises Lanton



Coupland Castle.