Swedish ship of extraordinary dimensions built in the middle of the sixteenth century, and which was burned in an action between the Swedes and Danes in 1564. Chapman has given an estimate of the dimensions of this vessel. She was called the Makalos (by Chamock, Megala). According to Chapman, she was 168 English feet in length and forty-three English feet in breadth, an immense vessel for that period. Her armament was 173 guns, sixty-seven only of which could be considered as cannon, the remainder being merely swivels.

We find that Henry VIII., deeply sensible of the ne­cessity of a permanent and powerful naval force, estab­lished the navy-office, and also several dock-yards for build­ing and repairing the ships of the royal navy. Among these were Woolwich, Deptford, and Chatham. He also greatly added to and improved the dock-yard at Ports­mouth. He invited from foreign countries, particularly from Italy, the commercial cities of which were still in ad­vance of the rest of Europe in the maritime arts, as many skilful foreigners as he could allure, either by the hope of gain, or by the honours and distinguished countenance he paid to them. The following extract is from a report made to James I. in the year 1618, and published in the Archaeologia. It was made in answer to a commission issued by that monarch to the several master-builders. The date of the report is rather in advance of our history ; but we in­sert it here because the information it contains is of the time on which we are writing ; as, while it confirms the statement we have just made, it informs us on the force of the royal navy during the reigns of Edward and of Mary, the period at which we have now arrived.

The minority of Edward VI., and the civil and religious strife which distracted the kingdom during the reign of Mary, depressed the resources of the state, and evidently much checked the progress of its maritime strength. The report says, “ In former times our kings have enlarged their dominions rather by land than sea forces, whereat even strangers have marvelled, considering the many ad­vantages of a navy ; but since the change of weapons and fight, Henry VIII., making use of Italian shipwrights, and encouraging his own people to build strong ships of war, to carry great ordnance, by that means established a puis­sant navy, which in the end of his reign consisted of seventy vessels, whereof thirty were ships of burthen, and contain­ed in all 10,550 tons, and two galleys. The rest were small barks and row-barges, from eighty tons downwards to fif­teen tons, which served in rivers and for landing of men. Edward VI, in the sixth year of his reign, had but fifty- three ships, containing in all 11,005 tons, with 7995 men, whereof only twenty-eight vessels were above eighty tons each. Queen Mary had but forty-six of all sorts.”

There is one peculiarity about the fleets of this time, which exemplifies the defects of their design in a very re­markable feature. It is, that the ships built for the royal navy appear only to have been adapted for the lodgment of the soldiers and mariners, with their implements of war, and the necessary stores for navigation. The provisions were carried in an attendant vessel, called a “ victualler,” of which there was one attached to each of the large ships of war in the fleet, or to several of the smaller size. The hold appears to have been principally occupied by the “cook- room,” the inconvenience of which arrangement, though much complained of, was general when Sir Walter Raleigh, in his Discourse on the Royal Navy and Sea-Service, re­commended that it should be removed to the forecastle ; and even so lately as 1715, several men of war had “ cook- rooms” in their holds. There is also no doubt that the enor­mous quantity of ballast which was rendered necessary by the immense top-hamper of these ships, and the space which it occupied from being shingle, left but little room for the stowage of any quantity of provisions. In the ships built for commerce, this defect does not appear to have existed,

as in fleets composed of the king’s and of private shipping, those ships only which belonged to the royal navy had these attendant victuallers. We also know that the cook-rooms in the merchant-shipping were under the forecastle ; and they had less top-hamper, as less accommodation was requir­ed for officers.

Although we may comment on the comparative inefficien­cy of the vessels, we cannot but perceive that we have en­tered that period in the history of naval architecture and of navigation, in which, though still in their infancy, these arts may be considered as perfect in all but the maturity to be acquired by the experience of years. The mariner’s com­pass was known ; the theory of taking observations was un­derstood, and the practice of it in the course of being per­fected ; and therefore the longest voyages could be under­taken with comparative certainty and safety. Besides this, the ships, though still imperfect, were becoming gradually ma­nageable machines, and had ceased to be the cumbrous masses of the preceding ages, which, with few exceptions, were capable of little more than of being driven before the wind.

If we consider the contents of the foregoing pages, there will appear to be three epochs in the maritime history of England; the first commencing with the introduction of galleys by Alfred, and ending with the reign of Edward III., before whose time these galleys and vessels propelled by oars were the chief instruments of navigation ; the second ending with the reign of Henry VII., during which period, though sailing vessels were used for the purposes both of war and commerce, they were comparatively at the mercy of the winds, and, speaking generally, could sail only when they blew both fairly and gently ; the third epoch we have already noticed. And henceforward we find the sister arts of navigation and naval architecture, if not always making rapid progress towards their present improved state, at least with no existing impediment to their advance towards that comparative perfection.

We have seen, from the extract of the report of the builders, the state of the navy during the reigns of Ed­ward VI. and of Mary. We know, therefore, that when Eliza­beth ascended the throne, the marine of England, both mi­litary and mercantile, was in a very depressed state. The successful enterprise of Drake, and the fear of the Spanish Armada, aroused the energies of the country, and the force collected to resist the invasion amounted to 197 vessels of various descriptions, of the aggregate burthen of nearly 30,000 tons; thirty-four of which, measuring together 12,600 tons, composed the royal navy. It is true, that by far the larger portion were of small force. One only, the Triumph, was of 1100 tons; another, the White Bear, was of 1000 tons ; two were of 800 tons, three of 600, six of 500, and five of 400; sixty-six were under 100 tons; and fifteen were victuallers, of which the tonnage is not men­tioned. There are also seven other vessels included in the 197, which have no tonnage assigned them; but they must have been of small size, the number of mariners on board the whole seven being only 474. We have very conclusive means of comparing the Spanish with the English ships, and also of judging how very little naval arrangements were then understood, from their imperfect state even on board a fleet which had occupied the whole attention of the Spanish authorities for a space of three years, exemplified in the following anecdote ; Burchett, in his account of the action of the 23d of July 1588, says, “ The great guns on both sides thundered with extraordinary fury, but the shot from the high-built Spanish ships flew over the heads of the English without doing any execution ; one Mr Cock being the only Englishman who fell, while he was bravely fighting against the enemy in a small vessel of his own.”

The Spaniards appear to have been the first to introduce a third tier of guns, the earliest mention of a three-decker being the Philip, a Spanish ship engaged in the action