of Phineas Pctt. He caused the fact of his being the in­ventor of the frigate to be recorded on his tomb. He was also the builder of the Sovereign of the Seas, in 1637, which was the first three-decker built in England. Her length over all is stated to have been 232 feet, her length of keel 128 feet, her main breadth forty-eight feet, and her tonnage 1637. Hey wood describes her in the following terms : “She hath three flush deckes and a forecastle, an halte decke, a quarter decke, and a round-house. Her lower tyre hath thirty ports, which are to be furnished with demi-cannon and whole cannon throughout, being able to beare them. Her middle tyre hath also thirty ports for demi-culverin and whole culverin. Her third tyre hath twentie-sixe ports for other ordnance. Her forecastle hath twelve ports, and her halfe decke hath fourteene ports. She hath thirteene or foureteene ports more within board for murdering peeces, besides a great many loope-holes out of the cabins for mus­ket shot. She carrieth, moreover, ten peeces of chase ord­nance in her right forward, and ten right aff ; that is, ac­cording to land service, in the front and the reare. She carrieth eleaven anchors, one of them weighing foure thou­sand foure hundred, &c. ; and according to these are her cables, mastes, sayles, cordage, which, considered together, seeing Majesty is at this infinite charge, both for the ho­nour of his nation, and the security of his kingdome, it should bee a spur and encouragement to all his faithful and loving subjects to bee liberall and willing contributaries to­wards the ship money.” Plate CCCCXLIX.

Of this ship, Fuller, in his Worthies, says, “ The Great Sovereign, built at Woolwich, a leiger ship for state, is the greatest ship our island ever saw; but great medals are made for some grand solemnity, while lesser coin are more current and passable in payment.” She was afterwards cut down one deck, and remained in the service, with the cha­racter of the best man-of-war in the world, until the year 1696, when she was accidentally burnt at Chatham.

About this time, 1650, appeared the first work connected with naval improvement ever written in this country, and by no less celebrated an author than Sir Walter Raleigh. It is very probable that his two discourses, the one on the Invention of Shipping, the other Concerning the Royal Navy and Sea-Service, had great influence in creating the interest which was evidently taken about this period in the improvement of the navy. Sir Walter says, “ Whosoever were the inventors, we find that every age had added some­what to ships and to all things else. And in my owne time the shape of our English ships hath been greatly bettered. It is not long since the striking of the top-mast (a wonder­fully great case to great ships both at sea and harbour) hath been devised. Together with the chaine-pumpe, which takes up twice as much water as the ordinary did, we have lately added the bonnett and the drabler. To the courses we have devised studding-sayles, top-gallant-sayles, sprit-sayles, top- sayles. The weighing of anchors by the capstane is also new. We have fallen into consideration of the length of cables, and by it we resist the malice of the greatest winds that can blow ; witnesse our small Milbroke men of Corne- wall, that ride it out at anchor half seas over betweene Eng­land and Ireland all the winter quarter ; and witnesse the Hollanders that were wont to ride before Dunkirke with the wind at north-west, making a lee-shore in all weathers ; for true it is that the length of the cable is the life of the ship in all extremities ; and the reason is, because it makes so many bendings and waves as the ship riding at that length is not able to stretch it, and nothing breaks that is not stretched. In extremity, we carry our ordnance better than we were wont, because our nether-overloops are raised commonly from the water, to wit, betweene the lower part of the port and the sea. We have also raised our second decks, and given more vent thereby to our ordnance, tying in our nether-overlcope.

“ We have added crosse pillars in our royall ships to strengthen them, which being fastened from the kelson to the beams of the second decke, keepe them from setling or from giving away in all distresses.

“ We have given longer floares to our ships than in elder times, and better bearing under water, whereby they never fall into the sea after the head, and shake the whole body, nor sinck sterne, nor stoope upon a wind, by which the breaking loose of our ordnance, or the not use of them, with many other discommodities, are avoided. And to say the truth, a miserable shame and dishonour it were for our shipwrights, if they did not exceed all other in the setting up of our royall ships, the errors of other nations being farre more excusable than ours. For the kings of England have for many years been at the charge to build and furnish a navy of powerfull ships for their owne defence, and for the wars only ; whereas the French, the Spainards, the Portu- galls, and the Hollanders (till of late), have had no proper fleete belonging to their princes or states.

“ Only the Venetians for a long time have maintained their arsenal of gallyes, and the kings of Denmark and Sweden have had good ships for these last fifty years. I say, that the forenamed kings, especially the Spainards and Por­tugalls, have ships of great bulke, but fitter for the mer­chant than the man of warre, for burthen then for battaile. ...Although we have not at this time 135 ships belong­ing to the subjects of 500 tuns each ship, as it is said we had in the 24th yeare of Queen Elizabeth, at which time also, upon a generall view and muster there were found in England, of all men fit to beare arms, eleaven hundred and seventy-two thousand ; yet are our merchants’ ships now farre more warlike and better appointed than they were, and the royal navy double as strong as then it was....We have not therefore lesse force than we had, the fashion and furnishing of our ships considered ; for there are in England at this time 400 saile of merchants fit for the wars, which the Spainards would call gallions ; to which we may add 200 saile of crumsters or hoyes, of Newcastle, which each of them will bear six demi-culverins, and foure sakers, needing no other addition of building than a slight spar-decke fore and afte, as the seamen call it, which is a slight decke throughout. The 200 which may be chosen out of 400, by reason of their ready staying and turning, by reason of their windwardnesse, and by reason of their drawing of little water, and they are of extreame vantage neere the shoare, and in all bayes and rivers to turn in and out ; these, I say, alone, well manned and well conducted, would trouble the greatest prince in Europe to encounter in our seas ; for they stay and turn so readily, as, ordering them into small squadrons, three of them at once may give their broad-sides upon any one great ship, or upon any angle or side of an enemy’s fleet. They shall be able to continue a perpetuall volley of demi- culverins without intermission, and either sink or slaugh­ter the men, or utterly disorder any fleete of crosse sailes with which they encounter.

“ I say, then, if a vanguard be ordained of these hoyes, who will easily recover the wind of any other ships, with a battaile of 400 other warlike ships, and a reare of thirty of his majestie’s ships to sustaine, relieve, and countenance the rest (if God beat them not), I know not what strength can be gathered in all Europe to beat them. And if it be ob­jected that the states can furnish a farre greater number, I answer, that his majestie’s forty ships, added to 600 before named, are of incomparable greater force than all that Hol­land and Zeeland can furnish for wars.”

In the foregoing extract, we have strong evidence that the ships of the royal navy were generally inferior to those employed by the merchant-service, in the essential qualifi­cations of being weatherly. This is exactly the conclusion that might be arrived at from the consideration, that a pri­vate individual would dispense with all that superabundance