

British Navy. If any record was to be put up in this Institution of the historical deeds of the Navy I do not think there could be any names more worthy to commence the list, than those of the captains of these ships. And of all those names, many of them renowned in the world, I feel certain that there could not be a noble one to head them than that of Lord Charles Howard. A nobleman of England and a Catholic, he sacrificed his feelings and his ease, and without hesitation, drew the line between his adherence to his faith and his allegiance to his sovereign. Throughout the whole proceedings he shows the high minded honesty of an English gentleman, coupled with a skill and gallantry worthy of the best days of British seamen.

*Preparation in Netherlands and Scotland.*

We must not omit the preparations made by the United States of Holland and towards counteracting the Armada, for, without them, the junction between it and Parma would have been effected, and that great commander would have made a much more vigorous effort to land his troops in England. In the autumn of 1587, as soon as Parma had taken Sluys, they blockaded that port, and Newport and Dunkirk; and, by April, 1588, they had 90 war ships and 50 merchanters, varying in size from a gunboat to 1,200 tons employed on this service. The large square rigged vessels were stationed between the Flemish Coast and England, those of smaller size lay within the banks off the former, and the sloops and flyboats lay close in shore. The admiral of Holland was Warmond, and the admiral of Zealand was Juan de Nassau. These fleets, it will be seen, played an important part not only in blockading Parma, but in assisting to secure the results of the victory gained off their shores. And even after the great Armada had disappeared into the North sea, the danger that was still apprehended from Parma (so great was his renown) was so felt, that the English admirals showed great anxiety to get back to the Flemish Coast to watch him.

Neither must we omit to record the part played by Scotland. The young King James had been personally doubting which side to take, but the mass of the people of Scotland settled the question for him, by showing, unmistakeably, like the English people, their determination to adhere to the Reformed religion. In 1586, King James made a definite treaty of mutual defence with Elizabeth, in case of invasion of either country. Nevertheless, in June, 1587, Philip spoke of a simultaneous invasion from Scotland, when the Armada should appear by troops in his (Philip's) pay; but these were apparently to be furnished by the nobles of the Catholic party in Scotland. It, however, so far affected the arrangements in England that the militia forces in the northern counties were all kept there.

*Cost of Naval Preparations in England.*

We have got considerable data on the subject of the cost of the fleet, in the accounts of Sir J. Hawkins, the controller (who apparently had had as sad times under the Tudor sovereigns, as ever a controller of the present day had under the most economical Government). But there is a difficulty in determining the whole cost of the naval preparations during the year in which they were expecting the Armada; because the Queen, in her anxiety to save expense, ordered ships into harbour as often as she could, and the crews were either paid off or put on reduced rates, and the bulk of the expense of the merchant ships fell on the

seaport towns which furnished them, or on private individuals. Sir J. Hawkins gives a statement of all the expenses paid by him for the eleven months, from 1st November, 1587, to 30th September, 1588, for H.M. ships, coasters, and volunteers, over and above the charges borne by the seaport towns and others, and not including victuals. This was £77,295, of which about £24,000 appears to have been spent on merchanters. In Bruce, there is an estimate of the cost of victualling H.M. ships and others for 18 months, from 1st July, 1587, to 31st December, 1588, which was £86,331, of which about £20,440 was for merchanters. From these two accounts the total cost of the 31 Royal ships, during 12 months, would have been about £90,000.

For estimating the cost of the merchant ships engaged, we have the following data:—The tonnage paid by the Crown to the owners, was at the rate of 2s. a ton per month, which, for the 20,000 tons employed, would be £2,000 per month. The wages of the seamen so employed were 14s. a month, and their victualling was estimated to cost as much more, so that the 9,000 men employed in the merchant ships, at 28s. per head, would have cost per month £14,600. Now whatever proportion the Queen paid, the owners of the merchant vessels would have had to incur the balance of the expense to make up that amount. The fore it is fair to assume that the cost to the country during the twelve months could not have been less than £175,000 for the merchant vessels, and £90,000 for H.M. ships, or about £260,000 altogether. And if we take the purchasing power of money in necessities of life to have been in 1588 six times what it is now, that amount would be equivalent to about a million and a half pounds, and this fell on a population of about 1/3 of the present population of Great Britain, and consequently would be the same to them, as if we expended £12,000,000 in one year. The cost of the effective services of our War Navy at present is about £8,000,000 per annum.

*Cost of the whole Naval and Military Defences in England.*

Thus we see that the people of England had made arrangements for the defence of their country, which would have involved an expenditure for army and navy in the course of twelve months of a sum which would be equivalent to about 90,000,000% at the present day, which is more than the cost of our naval and military forces in 1813—the most expensive year of the great war with France—and double the cost of the Crimean war in 1856.

(To be Continued.)

**The Russian Navy.**

(From the Pall Mall Gazette.)

Herr von Lengenfeldt, whose observations on the Russian army we have already noticed, supplies a vast amount of information concerning the Russian navy also. The foundation of the Russian Navy is due, as is well known, to Peter the Great, and dates from the close of the seventeenth century. At the time the second Azov campaign the fleet consisted of merely 2 ships of the line, 23 galleys, and 4 fire ships, manned on the whole by some 500 men. By 1711, however, the naval force of Russia had undergone considerable development, and comprised no fewer than 15 ships of the line, with 4 frigates, and various smaller craft, armed altogether with 1,117 guns, and manned by upwards of ten thousand seamen. The Czar

Paul, who had a great leaning towards the navy, assumed the title of Admiral General himself, and during his reign as many as fifteen ships of the line were launched. Nevertheless, by the time that Alexander I. ascended the throne, Russian statesmen had had arrived at the conclusion that Russia could never become a great naval power. Still the committee appointed for reforming the fleet decided in favour of building first class vessels, and fixed the naval force in the Baltic at 27 ships of the line, comparing 9 with 100, 9 with 74, and 9 with 64 guns.

In 1857 a reduction of the Russian navy was effected, owing partly to the necessity which existed for converting the sailing into a steam fleet, and partly to the Treaty of Paris, which limited the number of war vessels on the Black Sea. Subsequently to that period all steamers were kept ready equipped for war, and merely a small number of sailing vessels were retained for exceptional services. Only those naval squadrons which had their full complement of steamers retained their full crews, the others being placed upon a peace footing, while the transport fleet and companies were done away with and the arrest companies handed over to the civil branch of the service. The effect of these reforms was to reduce the fighting element in the Russian navy to 20,000 men, and the non-combatants to little more than a quarter of that number. Later reforms have been directed towards imparting a more thorough warlike training to the great mass of seamen and to reducing the coast and assistance commands as far as practicable. The ships, too, have all been classed according to their sea going capabilities.

We gather from Herr von Lengenfeldt that in June of last year the Russian fleet comprised 27 armour plated vessels, including 1 double turreted mastless iron clad, 8 frigates, 3 floating batteries, 2 corvettes, 10 gun boats, and 3 double turreted monitors for coast defence. These ships are armed with 11 inch, 9-inch, 8 inch, 6 inch, and 4-inch bore steel breech loading cannon, the charge of powder for which varied from 1 1/2 lb. to 9 1/2 lb. They carry 197 guns in all, are of 11,460 horse power, and 83,316 tons burden. The fleet further comprised 177 steamers—namely, 4 ships of the line, 3 frigates, 13 corvettes, 7 clippers, 4 steam frigates, 35 gunboats, 11 steam tugs, 6 yachts, 25 schooners, 4 transports, 41 small steamers, and 24 launches. The 40 sailing vessels included 3 schooners, 2 tenders, 12 yachts, 3 transport, 6 barques, and the floating docks, in addition to which there were 306 harbour vessels comprising 6 floating docks, 4 life boats, and 295 crafts of various kinds.

Thus the entire fleet consisted of 550 vessels, besides 2 corvettes, a clipper, a schooner, 4 steamers, and a couple of transports, all of which were engaged exclusively in harbour service. At that epoch there were 4 iron clads, two of which have since been transferred to the Black Sea fleet, and 5 steamers in course of construction. The total number of guns carried by the non-armour plated ships of the Russian fleet amounted to upwards of 900.

The Baltic fleet comprises the 27 ironclad, already mentioned with an armament of 197 guns, altogether with 60 wooden steamers, including 4 ships of the line, 3 frigates, 8 corvettes, 6 clippers, 28 gunboats, carrying 5 guns each, besides 1 iron gunboat, 4 steam frigates, 4 sea going steamers, and a couple of sea going yachts. These non armour plated ships carry altogether 708 guns, are of 13,500 horse power, and 72,053 tons burden. The Baltic fleet also includes 11 sail-