BIG SHIPS IN HISTORY.

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THERE are many references to be found here and there to ships of a remarkable size for their epoch. As a rule definite figures are somewhat scarce, and even when they are given it is often difficult to make comparisons, because of the variations and uncertainties in the methods of measurement. Still it is possible to piece together a certain amount of information, and this I have tried to do in the following article.

The first mention of actual dimensions that I have found, dates from the beginning of the sixteenth century ; before this I know of nothing more definite than that various ships were of 1,000 tons, obviously a round number merely, though early tonnage measurement was very probably not quite so unscientific as is generally supposed. The English *Regent*, for instance, a ship of 1489, is said to have been of 1,000 tons, and was in all probability the biggest ship of her time.

The first figures available, those for the Scottish ship *Great Michael*, of 1506, are somewhat startling. She is said to have been 240 ft. long over all, and 36 ft. broad withinboard, while her sides were "ten foot thick in the wall and boards, on every side so slack, and so thick that no cannon could go through her." She was lost at sea in 1512. Probably she was the cause of the building of the *Henri Grace à Dieu*, launched in 1514, and described as of 1,000 or 1,500 tons. No actual measurements are to be found for this ship or for her French successor, the *Grand Français*, of 1,500 or 2,000 tons. This latter ship had, however, five masts with four tops on the mainmast, the uppermost so high that a man in it would appear from the deck to be no bigger than a fowl, while her length was such that a ball could hardly be thrown from one end to the other. Like the *Great Michael*, she was unlucky ; in fact, she never reached open water and was wrecked in harbour in 1533.

A year before this there had been launched a very large Swedish ship, the *Stora Krafvel* (*Great Caravel*). For her we have exact authentic dimensions. She was 179 ft. long over all,

157·5 ft. exclusive of the beak, and 134 ft. on the under side of the keel, the "tread"; her beam was 41 ft., her draught of water 11 ft., and her total depth at the stern 39 ft. Her mainmast was 130 ft. long and 18·5 ft. thick at the bottom, with a mainyard of 105 ft. Her sides were 6 ft. thick; not quite so thick proportionately as those of the *Great Michael*, but still pretty stout. Another Swedish ship, the *Mars* of 1563, burnt in action in the following year, was perhaps a little bigger. Chapman, the great Swedish naval architect, reckoned that she must have been 160 ft from stem to stern, without the beak, and 41 ft. wide. She was, however, undoubtedly surpassed by the *Adler* of Lübeck, built in 1566, for this ship was 220·5 ft. long overall and 122 ft. on the keel (presumably the measured keel, not the tread), while her extreme beam was 49·1 ft. She must have drawn much more water than the *Stora Krafvel*, since her depth at the stern was 71 ft. Her mainmast was shorter than that ship's, 118 ft., but its yard was longer, 116 ft.

English ships at this time were comparatively small, especially in beam; the broadest Elizabethan ship, the *Triumph*, measured only 40 ft. in beam, while the greatest keel-length was the 110 ft. of the *White Bear* and *Merhonour*. Under these circumstances, the Portuguese *Madre de Deos*, captured in 1592, appeared particularly remarkable. In length she was about the same as the biggest English ship, being 100 ft. on the keel and 165 ft. over all, but her beam of 46·8 ft. was a great increase on anything previously seen in this country. It is uncertain how she compared with other Portuguese and Spanish ships, the "great San Philip," for example, but probably she was nearly if not quite as large as the largest of them.

The *Madre de Deos* was never used by her captors, but it is perhaps allowable to trace her influence in the great increase of dimensions that took place in English shipbuilding in 1610, when the *Prince Royal* was launched. This ship was 43·5 ft. in beam, 115 ft. on the keel, and probably about 210 ft. over all. She was soon surpassed by the *Sovereign of the Seas* of 1637, 232 ft. long over all, 128 ft. on the keel, 48 ft. in beam and 76 ft. from her keel to the top of her stern-lantern; roughly of the same size as the *Adler* of 1566. The *Sovereign* seems to have marked the greatest extension of the beak; subsequent ships exceeded her in keel or gun-deck length by more and more, but her over-all length was not beaten until a century later.

A French ship, the *Couronne*, launched a year after the *Sovereign*, was almost exactly the same size, though carrying only

72 guns as compared with 102 ; she was some 2 ft. shorter than the *Sovereign*, but a few inches wider. For some years there was a pause in the building of very big ships in either country. A Swedish ship, the *Krona*, completed in 1672, and lost in action in 1676, was remarkable for her length, being 174 ft. without the beak, but her small beam of 42·3 ft. left her a long way short of the *Sovereign* or the *Couronne* in tonnage. The French *Soleil Royal* of 1675 was the first ship to surpass the *Sovereign* to any extent ; she was 175 ft. from stem-post to stern-post, 151 ft. on the tread, and 46·8 ft. in beam *inside* the planking. The *Royal Sovereign*, at her rebuilding in 1684, brought back the record to England with a gun-deck length of 174·5 ft., a tonnage keel length, of 141·6 ft., and an extreme beam of 50 ft., but in 1692 France went well ahead again with the *Royal Louis* of 187 ft. post to post, 158 ft. tread, and 51·1 ft. beam.

For a few years Denmark was the possessor of the largest ship afloat, the *Fridericus IV.*, launched in 1699 with a length from stem-post to stern-post of 190·5 ft., and a beam of 51·3 ft. Probably this was soon beaten by the French, who kept their position almost unassailed for a century or more. One of their ships, another *Royal Louis*, reached a length, post to post, of 202 ft., and a beam of 54·3 ft., while others were nearly as big. This particular ship was laid down at Brest in 1740, and burnt in 1742, while still on the stocks ; another vessel was, however, built on the same plans at Toulon, and was in existence up to the time of the War of American Independence.

Before this the record had passed to Spain, at least in length, the *Santisima Trinidad* of 1769 being 204 ft. long, and 53·8 ft. wide. Both ships were, of course, beaten by the famous *Commerce de Marseille*, launched in 1790, and captured at the fall of Toulon in 1792. This ship was 211·5 ft. long, post to post, 208·6 ft. on the gun deck, 186·5 on the tread, and 171·9 ft. in tonnage keel, with a breadth of 54·8 ft. extreme or 54 ft. moulded ; her depth in hold was 25 ft., and her maximum draught 26·5 ft. I have not found any ship that beat her in length, but the *Montebello*, launched in 1812, and rebuilt in 1821, went well beyond her in beam with an extreme measurement of 57·3 ft. on a gun deck length of 207·5 ft. The English *Queen* of 1839 had a beam of 60 ft., but was only 204·2 ft. on the gun deck, and 166·4 ft. in tonnage keel-length. The proposed 170 gun four-decker *Duke of Kent*, which was to have had a gun-deck length of 221·5 ft., and a beam of 64 ft. would have quite eclipsed all previous efforts, but unfortunately, or perhaps fortunately, was never built and remained merely a proposition.