These were the first cruisers laid down to carry the guns of a first-class battleship. Their armament includes four 12-in. guns mounted in pairs in two barbettes, one forward and one aft, twelve 6-in. guns in casemates and twelve 4∙7-in. guns, and they have a complete armour belt 7 to 5 in. in thickness and 7 in. of armour on the barbettes (fig. 106). They were followed by the 22-knot cruisers “ Kurama,” laid down in 1905, and the “ Ibuki,” laid down in 1906, which are 10 ft. longer, of about 900 tons greater displacement, and 4500 more I.H.P.

than in the “ Tsukuba” type. The armament is also more powerful, twelve 6-in. guns being replaced by eight 8-in. guns mounted in pairs in barbettes, while the 4∙7-in. guns are increased to fourteen in number. The “ Ibuki ” is fitted with turbines of 27,000 H.P., the “ Kurama ” with reciprocating engines of 22,500 I.H.P. The disposition of guns and armour are as shown in fig. 106. In 1910 Japan ordered of Vickers Co. an armoured cruiser of 27,000 tons and 72,000 H.P.

*Russia.—*Before the Russo-Japanese War, Russia had pro­vided herself with a great variety of fast, well-armed cruisers of various sizes, including some very notable vessels. Of those which remained in 1910 may be mentioned the protected cruiser “ Zhemchug,” of 3100 tons, 17,000 I.H.P., 24 knots, carrying eight 4∙7-in. guns; the “Askold,” built at Kiel in 1900, 6500 tons displacement, 20,000 I.H.P. and 23 knots speed, armed with twelve 6-in., twelve 12-pdr. and other smaller guns; the “Diana” and “Aurora,” of 6630 tons and 20 knots; the “ Bogatyr ” and similar vessels launched 1901- 1903, of 6675 tons displacement, 20,000 I.H.P., 24 knots speed, armed with twelve 6-in., twelve 12-pdr. and several smaller guns, and having a protective deck 1½ to *2* in. in thickness. The armoured cruisers, “ Rossia,” of *12,200* tons and 20 knots, and “ Gromoboi,” of 13,220 tons, 15,500

l.H.P. and 20 knots speed, carry four 8-in., twenty-two 6-in. and other smaller guns, and are protected by 6-in. armour. Since the war several vessels of this type have been built, including three of a new “ Bayan ” class, 7900 tons displacement, 19,000 I.H.P., 22 knots, armed with two 8-in., eight 6-in., twenty 12-pdr. and other smaller guns, and protected by 6-in. armour; and the “ Rurik,” built at Barrow in 1906, 490 ft. in length, 15,190 tons displacement, 19,100 I.H.P. and 21½ knots speed, armed with four 1o-in. guns mounted in pairs in barbettes forward and aft, eight 8-in. and twenty 4∙7-in. guns, and protected by a complete belt of armour 12 ft. deep, 6 in. thick amidships, tapering to 4 in. forward and 3 in. aft.

*Italy.—*Italy possesses several protected cruisers of the “ Piemonte ” type already described as well as a number of smaller vessels. She was in 1910 building scouts of the "Quarto ” type of about 3500 tons displacement and 27 knots, armed with 4∙7-in. and 12-pdr. guns. The most notable Italian cruisers are, however, those of the “ Garibaldi ” class, which are heavily armed, well armoured and of moderate speed. They have been developed from the “ Marco Polo ” type, which comprises three vessels; the “ Marco Polo,” launched in 1892, of 4500 tons, 19 knots, armed with six 6-in., ten 4∙7-in. and several smaller guns, and protected by a 4-in. armour belt as well as a steel deck; the “ Vettor Pisani ” and the “ Carlo Alberto,” which are of 6400 tons, carry twelve 6-in., six 4∙7 in., fourteen 6-pdr. and other smaller guns. The “ Giuseppe Garibaldi,” “ Varese ” and “ Francesco Ferrucio,”

launched in 1899, are of 7400 tons displacement, 13,500 I.H.P., 20 knots speed; they are armed with one 10-in., two 8-in., fourteen 6-in. and a number of smaller guns, and are protected by armour disposed as shown in fig. 107; the belt, battery and gun protection are all 6 in., the belt tapering to 4½ in. in thickness at the bow and stern. ,

In 1905 Italy commenced a series of enlarged “ Garibaldis ” of 9830 tons and 22½ knots, carrying four 10-in. guns in barbettes forward and aft with a secondary armament of eight 7½-in. guns in turrets on the upper deck amid- ships, the bases being en­closed in an armoured citadel as shown in fig. 108, which gives the general arrangement of guns and armour in the “ Amalfi ” and “ Pisa.”

*Gunboats and Torpedo Craft. —* Gunboats include numerous small vessels which, even in times of general peace amongst the great mari- time nations, have im- portant duties allotted to them. For the patrolling of rivers and islands, protection of fisheries, &c., a battle- ship or a cruiser, from its size, would be un- suitable, and for the performance of these and other duties special vessels have been built. These types, and those included in the torpedo-craft division, may be conveniently grouped under three headings, as follows:—

I. Sloops.

II. Gun-vessels and Gunboats.

III. Torpedo-boats, Torpedo Gunboats and Torpedo-boat Destroyers.

The “ Wild Swan ” class, the first of which was launched in 1876 for the British navy, represents one of the earliest of the sloop type. She was a single-screw composite-built vessel of 1130 tons displacement and 170 ft. length, with a speed under steam of 10½

knots and an armament of two 6-in., six 5-in. B.L. guns, and four smaller guns. This proved a very useful class of ships, and in all sixteen of them were built. The “ Beagle ” class, commenced in 1889, represented an advance on the “Wild Swan.” They were built of steel, sheathed with wood and coppered, and had twin-screws. Their displacement was 1170 tons, and they were 195 ft. long, steamed at 13 knots, and carried eight 5-in. B.L. guns and eight machine-guns. They were followed, at an interval of five years, by the “ Torch ” and “ Alert,” which were of 960 tons