and engines of 7000 H.P., giving her a speed of 20 knots. She carries 250 tons of coal at the above displacement, and has stowage for 550 tons. She has eight 4-in. Q.F. guns, eight 3-pdrs., and two above-water torpedo tubes, and a 2-in. protective deck.

This type of cruiser reached its final development in the four vessels of the “ Diamond ” class, of 3000 tons, laid down in 1902-1903, which were the last third-class cruisers designed by Sir William White. Three of the vessels, “ Diamond,” “ Sapphire ” and “ Topaze,” were fitted with reciprocating engines of 9800 LH.P. for 22 knots, and in the fourth, the “Amethyst,” Parsons turbines were fitted. All were 360 ft. long., 40 ft. beam, 14 ft. 6 in. draught, and carried twelve 4-in. and eight 3-pdr. Q.F. guns. On trial the “ Topaze ” reached a maximum speed of 22∙25 knots, while the "Amethyst ” obtained 23∙63 knots, an advantage of 1·38 knots per hour for the turbine with practically the same coal consumption, and with a distinctly less rate of coal consumption at equal speeds for all speeds above 14 knots. The experiment was regarded as a great success for Parsons turbines, and materially influenced the question of their adoption in succeeding vessels at home and abroad.

In 1903 four vessels classed as *scouts* were laid down, viz., the “ Pathfinder,” “ Patrol,” “Sentinel ” and “ Skirmisher,” of about 2900 tons displacement, and 25 knots speed; 370 ft. Jong, with engines of 17,000 I.H.P., and carrying ten 12-pdr. and eight 3-pdr. Q.F. guns as well as two torpedo tubes. Two others laid down in 1903 were named “ Forward” and “ Foresight,” and carried fourteen 12-pdrs. and two 3-pdrs., and obtained the 25 knots with 15,000 I.H.P. The last two of the series — “ Adventure ” and “Attentive ” (fig.89, Plate XIX.)—of 16,000 I.H.P. and 26 knots, were laid down at Els- wick in 1904; they were 374 ft. long, 38 ft. 3 in­beam, 12 ft. 6in. draught, 2670 tons displacement, 16,000 I.H.P., carried ten 12-pdrs. and eight 3-pdrs.

Four vessels, named “ Boadicea,” “Bel­lona,” “ Blanche ” and “ Blonde,” were laid down in 1907-1909, of slightly larger dimcn- sions, the “ Blonde ” being 385 ft. long, 41 ft. 6 in. beam, 13 ft. 6 in. draught, 3360 tons displacement, 18,000 I.H.P., 25 knots, and armed with ten 4-in. Q.F. guns and two torpedo tubes.

In 1909 five vessels of 4800 tons displacement, 22,000 I.H.P., 25 knots speed, carrying two 6-in. and ten 4-in. Q.F. guns, with two torpedo tubes, were laid down and known as second- class protected cruisers of the “ Bristol ” class. They are 430 ft. long, 47 ft. beam, 15 ft. 3 in. draught and protected by a 1-in. steel deck with 2-in. slopes. Fig. 90, Plate XIX., shows the “ Newcastle,” a vessel of this class built at Elswick. Four other vessels, the “ Dartmouth ” class, laid down six months later, were very similar, but slightly larger to give one knot more speed. The navy estimates for 1910-1911 provided for laying down five larger vessels of this type. The Australian cruisers “ Melbourne ” and “ Sydney ” are of the “ Dartmouth ” dass, while the new Canadian cruisers are of the later type.

Between 1870 and 1881, several armoured cruisers were laid down in England and· abroad, those in England being the “ Shannon,” of 5390 tons and 12½ knots, laid down in 1873, the “ Nelson ” and “ Northampton,” of 7630 tons and 13 knots, laid down in 1874, and the “ Impérieuse ” and “Warspite,” laid down in 1881. The two last-named ships were provided with masts and a good spread of sails, and were the last large vessels to be so fitted for the British navy. The sails were not found to be of much service and were removed. These vessels were of 8400 tons displacement, 315 ft. long, and were protected by a partial belt amidships of 10-in. compound armour over a length of about 140 ft., with a protective deck above it 1½ in. thick and transverse bulkheads at the ends of the belt 9 in. thick, the protective deck from these bulkheads to the ends of the ship being 3 in. thick. They had machinery of 10,000 H.P. and a speed of 16¾ knots. They carried four 9∙2-in. B.L. guns in separate barbettes—one forward, one aft, and one on each beam—besides ten 6-in. guns, twenty-six smaller and machine guns, and six torpedo tubes. They were sheathed with wood and coppered, in order to be able to keep the sea for a long period without docking. The next vessels of the type were the “ Orlando ” class, begun in 1885. Seven of these were launched in 1886 and 1887. They were much smaller than the “ Impérieuse,” being only 5600 tons displacement, 300 ft. long and 56 ft. beam, and 22 ft. 6 in. draught. They had a water-line belt of compound armour, 10 in. thick and nearly 200 ft. long; extending over the top of this, and sloping down forward and aft to the ends of the ship, was a deck 2 in. to 3 in. thick. Their arma­ment consisted of two 9∙2 in. B.L. guns—one forward and one aft —instead of the four carried in the “ Impérieuse ” and “ Warspite,” but in other respects the same armament as the latter ships. They had engines of 8500 H.P. and a speed of over 18 knots. These vessels were all built from the designs of Sir N. Barnaby.

As already stated, between 1885 and 1898 no armoured cruisers were laid down for the British navy. The "Cressy" (fig. 83, Plate XXI.) class, commenced in 1898, consists of six vessels of 12,000 tons displacement, 440 ft. length, 69 ft. 6 in. beam, and 26 ft. 3 in. mean draught. They are built of steel, sheathed and coppered, have a belt of Harveyized steel 11 ft. 6 in. wide, 230 ft. long, and 6 in. thick, with bulkheads 5 in thick and 2 in. protective plating on the sides from the forward bulkhead to the stem. They carry two 9·2-in. B.L. guns in barbettes and gun-houses 6-in. thick, mounted on the middle line forward and aft, twelve 6-in. Q.F. guns in 6-in. casemates, and twenty-five 12-pdrs. and smaller guns, with two submerged torpedo tubes. Their H.P. is 21,000 with natural draught steam being supplied by 30 Belleville boilers, and their speed is 21 knots. They carry 800 tons of coal at normal draught, with capacity for 1600 tons.

The four vessels of the “ Drake ” class (see fig. 91, Plate XXIV.),

laid down in 1899, were for several years the largest and fastest armoured cruisers afloat. They are of 14,100 tons displacement, are 500 ft. long, 71 ft. beam, and 26 ft. mean draught. They are unsheathed, are protected by a Krupp steel 6-in. belt extending from barbette to barbette, and from 6 ft. below water to the height of the main deck, completed at the after end by a 5-in. bulkhead, and carried forward to the bow by 2-in. plating extending right up to the upper deck. There are two protective decks, the lower, being 3 in. to 2 in. in thickness, and the main deck, which is 1 in. thick. Their armament consists of two 9∙2-in. B.L. guns in barbettes and gun- houses 6 in. thick on the middle line forward and aft as shown in fig. 92, sixteen 6-in. Q.F. guns in 6-in. casemates, fourteen 12-pdrs., twelve smaller and machine guns and two submerged torpedo tubes. Their speed was 23 knots as designed, and all the vessels of the class have attained over 24 knots on service. They have engines of 30,000 H.P., the boilers being of the Belleville type. They carry 1250 tons of coal, with bunker capacity for 2500 tons.

A consideration of the above features will illustrate the difficulties of the classification of modern ships. The “ Drake ” is called an armoured cruiser, but she is superior to the battleships “ Renown,” “ Barfleur,” and “ Canopus ” in armour protection and in her secondary quick-firing armament, as well as in speed and coal endurance, and is somewhat inferior to them only in the number, weight, and protection of primary armament. If 10-in. guns had been given to this vessel in lieu of her 9∙2-in., she would probably have been called a first-class battleship, and would have been a 23-knot battleship at that. Each successive increase of size has given the battleship more speed and the armoured cruiser heavier guns and armour, thus tending to merge the two types in one.

The next series of armoured cruisers was composed of ships of much less power produced in reply to the fast lightly armed cruisers being built abroad as commerce destroyers, and a considerable number of such vessels so built, although weak compared with the “ Drake,” were much less costly and at the same time endowed with