The "Monarch" has been built under the usual veil of secrecy, and altogether authentic details cannot be published; it may, however, be taken that she has a length overall of 581ft. and a breadth of 88ft. 6in. The main armament will consist of ten 13.5in. guns, capable of throwing a projectile of about 1250lb. weight. The secondary armament consists of twenty-four 4in. guns, and there are also three 21in. torpedo tubes. The designed speed of the "Monarch" is 21 knots, with a horse-power of 27,000. The turbines are of the usual Parsons' type, with the cruising system incorporated with the high-pressure turbine, as has been adopted in all the later battleships of the Dreadnought type. Steam will be supplied by Babcock and Wilcox water-tube boilers, which, like the turbines, have been manufactured by R. and W. Hawthorn, Leslie and Co., Limited. of Newcastle-upon-Tyne. The maximum coal-carrying capacity will be 2700 tons, and in addition there will be accommodation for 1000 tons of oil fuel. A belt of 12in. thickness extends fore and aft about 400ft., and is continued to the extremities by thinner plating. Above this is a belt of 9in., and there are armoured bulkheads where the thinner plating ends and a protective deck above the belts. It is understood that the "Monarch" will, like the other battleships of her class, have armoured control positions as an alternative to the control position on her tripod mast, and that the turret armour will be 10in. in thickness.

The "Monarch" was built upon a ferro-concrete piled berth, the keel being laid at a declivity of ½in. per foot. The launching ways, 5ft. 6in. wide, are laid at a declivity of 9/16in. per foot, with a camber of 12in., the length of the ground ways being 569ft., and the sliding ways 449½ft., giving a bearing surface of 4946 square feet, and an average pressure of nearly 2 1/3 tons per square foot. Special arrangements and strengthening were introduced at the fore end in way of the poppets to carry the weight of about 2110 tons thrown upon that part when the stern first floated. For releasing the vessel four hydraulic rams, each actuating a trigger, were fitted in the standing ways, all being connected to one centre on the launching platform, where Mrs. Lewis Harcourt (the wife of the Colonial Secretary) pulled a lever which released the pressure from the rams and set the vessel free. Owing to the narrowness of the river Tyne the "Monarch," after clearing the ways, had to be quickly brought up, and for this purpose about 700 tons of drags were arranged in five groups each side, each group coming into play 40ft. after the previous one. The launching weight of the vessel was about 11,500 tons, this weight including, besides the main structure, all the boilers, funnels, funnel uptakes, castings, etc., together with a large amount of auxiliary machinery and about 2000 tons of armour. This last-mentioned weight was made up of the armour bulkheads and the barbette armour of the ship. The installation of the latter before the launch of the vessel has allowed the plating of the various decks in the vicinity of the different barbettes to be finally put in place and riveted up, and in this way a great advantage has been gained inasmuch as the course usually adopted in vessels of this class, namely, temporarily to secure the deck plating and remove it after the launch, to permit of the armour being got into position, has been avoided. The remaining weight of the armour on board is made up of a large quantity of side armour from the Openshaw Works, which has been put in place. The quantity of armour already fitted in place will greatly facilitate the work on the battleship.

The fact of a first-class battleship being built on a slip, and having all these weights incorporated before being launched, is a performance which has never yet been attempted in this or any other country. To some extent the same course was adopted at Elswick in respect of the cruisers "Newcastle" and "Weymouth"; but the work which was undertaken in the "Monarch" is of much greater importance. Each of the eighteen boilers weighs 23 tons; the funnels are 53ft. high above the upper deck and weigh 18 tons each. It will be apparent that these large boilers could not be got into place excepting through large openings in the five decks above the boiler-rooms. The usual practice hitherto adopted in such battleships has been to put the deck plating in place, and in order to give the necessary strength for launching the vessel, to rivet or bolt down temporarily a large quantity of plating which has to be removed after the launch to permit of the boilers being shipped. This plating weighs some hundreds of tons, and is secured by many thousands of bolts and rivets. Therefore, by installing the boilers, funnel uptakes, etc., in the early stages of construction, not only have the decks and other structures been finally completed, but the engine contractors have been able to proceed with the other work in the boiler-rooms, which are consequently now in a very advanced state.

In making a tour of the "Monarch" just prior to the launch, one was impressed with the forward state of a large part of the internal work, such as the pumping, drainage, and ventilation, the fitting up of the magazines, shell-rooms, and store-rooms, and the electrical installation, the ring main in connection with which is already in place. Regarding the upper structure, the funnels are erected, the upper deck casings, etc., as well as the deck-house and bridges, are all completed. A large part of the wood is laid on the upper deck, the handrail stanchions, awning stanchions, bollards, fairleads, and other deck fittings, are all in place. It is quite certain that no first-class battleship has ever been launched in such a forward condition, and when it is remembered that the whole of the work has been done in 219 working days, it speaks volumes for what can be done in the private yards of this country when desired.

In the dockyards vessels are launched at a much earlier date of construction, and it is the custom to place them in dry dock after launching, in some cases for several months, when such work as water testing can be completed, which otherwise would be done on the slip. As private yards have not such docks at their disposal, it is necessary for them to complete more work before launching, and then in such battleships as the "Monarch" they do not go into dry dock until a few days before the official trials and then simply for the painting of the bottom, examination of the under-water fittings, testing of gun sights, etc. It is interesting to note that the "Monarch" is the forty-third warship built for the British Government out of a total of 135 warships built by the Armstrong firm, or, in other words, Sir W. G. Armstrong, Whitworth & Co., Limited, have built for the British Navy nearly 200,000 tons displacement, and for other Governments 300,000 tons, making a total of 135 ships, and nearly 500,000 tons displacement. It is confidently expected that the "Monarch" will leave Elswick shipyard in October, and be ready for official trials in November next, but it will not be a matter for much surprise if these dates are anticipated by a few weeks.

Wireless Telegraphy.

The Paris Wireless Telegraph Station.

(From Our Own Correspondent.)

Paris, March 20.

The various practical applications of wireless telegraphy have of late years aroused great interest, not only among scientists and engineers, but in the general public throughout the world. Not the least important of such applications is the service which it appears destined to render to navigators. With a view to keeping New Zealand readers *au courant* with the progress in this direction I recently made several visits of inquiry, and in the subsequent paragraphs I am presenting some of the principal facts that came under my notice.

An Interesting Subject.

The rigorously exact determination of the position of a vessel at sea has at all times been a subject claiming close attention and study from those interested in navigation. The methods of astronomical and chronometrical observations in use up to the present, although they yield approximately exact results, are not free from the risk of errors which may involve serious consequences. The application of radio-telegraphy to the transmission of time should, however, soon suppress every possibility of error. The multiplication of the stations in communication with one another will in the near future enable the surface of the entire globe to be covered by means of the Hertzian waves. The latest improvements affected in wireless telegraphy will rapidly lead to the achievement of this result.

Radio-telegraphy renders it possible to transmit to all ships within a radius of 3000 kilometres or more a given time, say the hour of noon, mathematically exact within one-tenth of a second, the speed of the Hertzian waves being almost equal to that of light, 300,000 kilometres a second. This puts the sailor in possession of the chronometric time, which assures the determination of the exact spot where the vessel is at that moment; that is to say, it enables him to calculate the longitude and latitude of the place with absolute exactitude.

Importance of Exactitude.

And the importance of this exactitude in the knowledge of the time, by means of which most serious errors can be avoided, will be appreciated by everyone who reflects that the best marine chronometers in use may, after a few weeks or