

THE NEW RUSSIAN BATTLESHIP "KNIAZ POTEKIN TAVRITCHESKY."

The "Kniaz Potemkin Tavritchesky," built in South Russia, is out and away the most formidable fighting ship in the Black Sea, and greatly strengthens the fleet which Russia keeps—for the present—inside the Dardanelles.

She will be an imposing-looking warship, with her big military tops bristling with guns and her three tall funnels, which, curiously enough, are placed with their longest diameter athwartships, contrary to the usual custom. Her displacement is reckoned to be about 12,500 tons; she is 371 feet in length and has a beam of over 72 feet.

Her armament consists of four 12-inch guns, placed by pairs in two turrets, one of which is forward upon the forecastle and the other aft upon the quarter-deck, which is of lower freeboard than the rest of the vessel. Her secondary battery, comprising sixteen 6-inch quick-firing guns, is placed in a series of casemates, of which four are on the upper deck at the corners of the superstructure and the remainder on the main deck, six a side. These guns are all placed in circularly recessed ports, which give the ship a somewhat unusual appearance, but which, doubtless give them a considerable arc of fire. Fourteen 3-inch, 12-pounder, rapid-fire guns are also carried, four mounted above the casemates on the upper deck, eight between them, and two right forward on the main deck. In the tops and on the upper works are distributed a like number of lighter pieces. Her torpedo equipment consists of five tubes, one right forward below the ram, one on either bow below water, and one on each broadside near the after turret. The two last are above water, but are protected by armor of considerable thickness, so that they are safe from the fire of light guns, unless a shell should enter the tube itself.

The extent of armored area is considerable, as the "Tavritchesky" is provided with an almost complete belt 9 inches in maximum thickness, has 6-inch armor on her lower deck, and 5-inch on her main deck, besides a protective deck about 3 inches thick. Her turrets are very efficiently protected by Krupp steel armor 12 inches in thickness.

The "Kniaz Potemkin Tavritchesky" has engines of 10,600 horse power and is equipped with twenty-seven of the "Belleville" boilers which have been so much discussed of late. The contract speed is about 17 knots an hour.

Marking Blue Prints.

It has become the custom to use a soda solution, using it as ink, and the result is a white line not very different from the print. The soda on the surface of the paper collects dirt and the lines fade and lose their original intensity. The right way is to write

your figure in ink—ordinary Carter's or any other fluid that is acid-proof—then take your ruling pen and put a blot of soda over the spot. This whitens the background and turns the ink jet black, and it is done in half the time and twice as nicely as any other way. The white spot is there to stay and the ink will never fade.—The Draftsman.

LARGEST WATCH IN THE WORLD

What is probably the largest watch ever constructed was recently completed by the Waltham Manufactur-



THE LARGEST WATCH EVER MADE.

ing Company at its plant at Waltham, Mass. While the timepiece is without the dial and hands, it contains all the parts of a modern watch, and was made for the purpose of showing the quality and formation of the more delicate parts contained in a movement, some of which in the ordinary size are so small that they are scarcely discernible without the aid of a microscope. The cog wheels, springs, pins, jewels, set screws and all other pieces are large enough in the model to examine with the naked eye. An idea of the size of the timepiece is given by contrasting it with a watch which is shown on the pedestal at the left of its mammoth companion. As a matter of fact the latter represents an ordinary watch magnified ten times. The glass case surrounding the model is 21 inches in height and the timepiece itself actually weighs 120 pounds.

A Superior Whitewash.

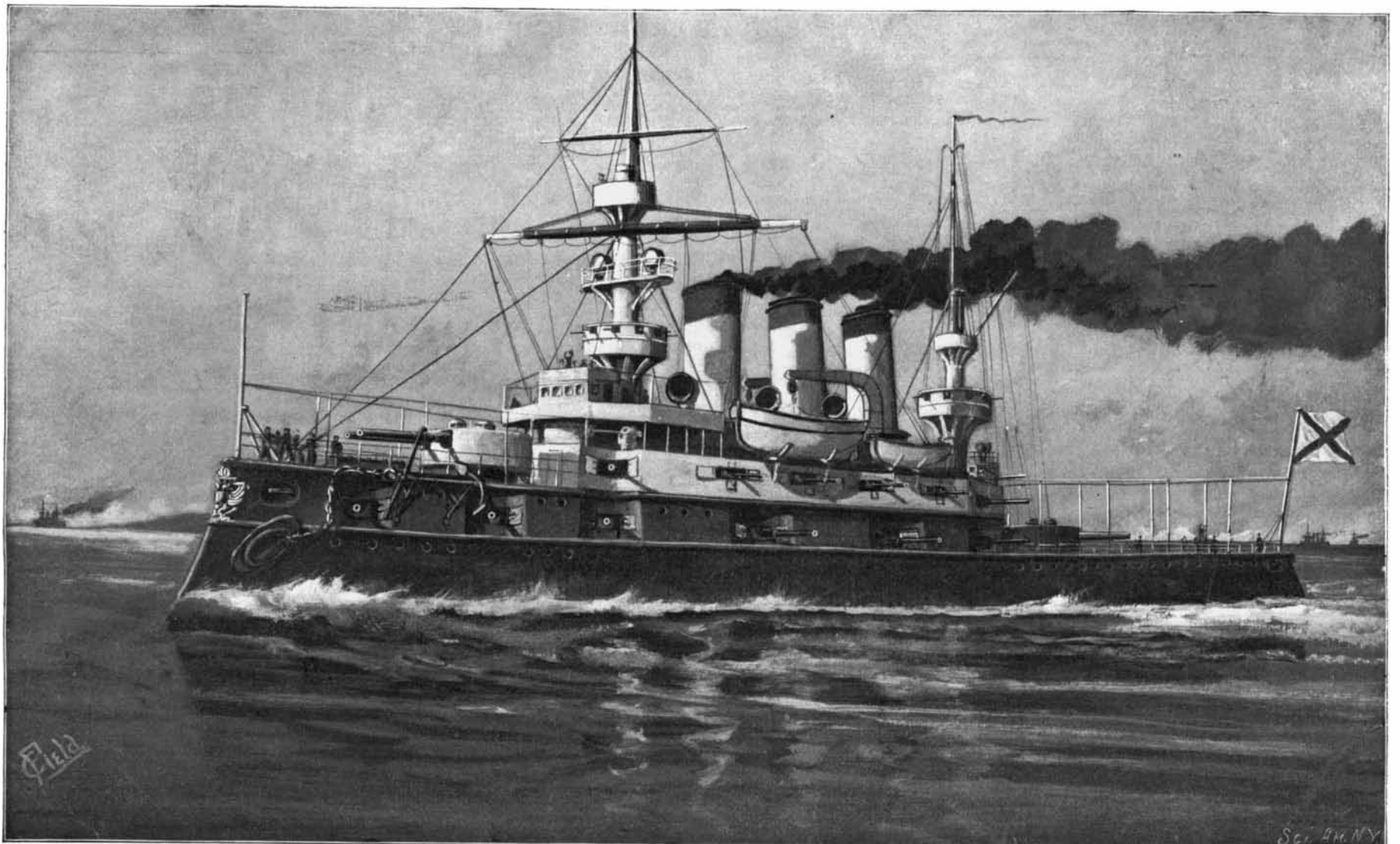
Every spring the lighthouses of the country are given a coat of whitewash of a composition which is enduring and able to withstand the attack, not only of the elements, but also the corrosive action of salt water. The east end of the White House, which bears the brunt of the strong moisture-laden winds of Washington, is annually coated with this wash.

The wash is made as follows: Slake half a bushel of lime in boiling water, covering during the process to keep in the steam. After straining this through a fine sieve or trainer add to it a peck of common salt, previously dissolved in warm water. Three pounds of ground rice should then be boiled to a thin pasty mass and, while hot, stirred into the above; one-half pound of Spanish whiting should also be added and then one pound of glue, melted in a glue pot, should be put into the composition. After adding five gallons of hot water to the mixture, it should be allowed to stand for a few days, securely covered to keep out the dirt.

It is claimed that this whitewash is very efficient if heated before applying. In order to make a careful estimate of the amount of wash needed, it must be remembered that a pint properly applied will cover a square yard. Farmers will find this wash very useful, not only in the dairy, home, barn or any interior work, but also for applying to wood or stone work out of doors. If, however, white is undesirable for coating a barn or other out-buildings, an addition of paint powder such as painters use in preparing their paints may be made, and the results are very satisfactory.

The Current Supplement.

The Duesseldorf Exhibition which is just now attracting such widespread attention in Germany is again made the subject of an article in the current SUPPLEMENT. This time the Krupp exhibit of ordnance is treated. Mr. John B. C. Kershaw describes a new form of diaphragm cell for the electrolytic production of alkalies and chlorides. Of technological interest is a very exhaustive discussion of the rapid ageing and fireproofing of wood. The oil-fired locomotives used on the Great Eastern Railway of England are illustrated and described. In commemoration of the completion of the Sault Ste. Marie Canal, an article is published describing this greatest of all engineering feats. Now that the Berlin-Zossen tests have been temporarily abandoned, the critical review of the results obtained, by Robert Grimshaw, should be of particular value. Mr. Grimshaw presents as concisely as possible the conclusions to be drawn from the tests. Archaeologists will doubtless read with interest Mr. Mills' entertaining account of his excavations of the Adena Mound. The Selected Formulæ and Consular Notes will be found in their accustomed places.



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Displacement: 12,480 tons. Speed: 17 knots. Normal Coal Supply: 900 tons; also liquid fuel. Armor: Belt, 9 inches, gun position, 12 inches. Armament: Four 12 inch, sixteen 6-inch, fourteen 3-inch, fourteen smaller guns. Torpedo Tubes: five. Complement: 636.