

H. M. S. ORLANDO.

This new ship of war, built in the yard of Palmer's Shipbuilding and Iron Company, at Jarrow-on-Tyne, is the first of the belted cruiser class, of which seven are being constructed for the Royal Navy. They are quite a new departure in war ship design, and while superior to anything of this class of war vessel afloat in point of speed, are much more heavily armed and have greatly more defensive power than the Mersey class, which approach them nearest from a constructive point of view; the chief difference consisting of a belt of armor at the water line, which is fitted in the Orlando class, and from which they derive the name of belted cruiser.

The following is a general description of the vessel: Length between perpendiculars, 300 feet; breadth, extreme, 56 feet; depth, moulded, 37 feet; normal draught, 21 feet; and displacement, 5,000 tons. The estimated speed is about 19 knots. The armor is compound or steel-faced, and consists of a belt, 200 feet in length, extending from 1 foot 6 inches above the water line to 4 feet below. This belt is 10 inches in thickness, and is backed with 6 inches of teak, secured in steel

An inner bottom extends throughout the entire length of the engine and boiler spaces, the space between the inner and outer bottoms being divided into compartments, which are fitted as water ballast tanks. The vessel has three decks, exclusive of the platforms which cover the magazines, etc. The engines and boilers occupy four separate compartments, arranged fore and aft along the middle of the vessel, bounded on each side by coal bunkers, 5 feet in width.

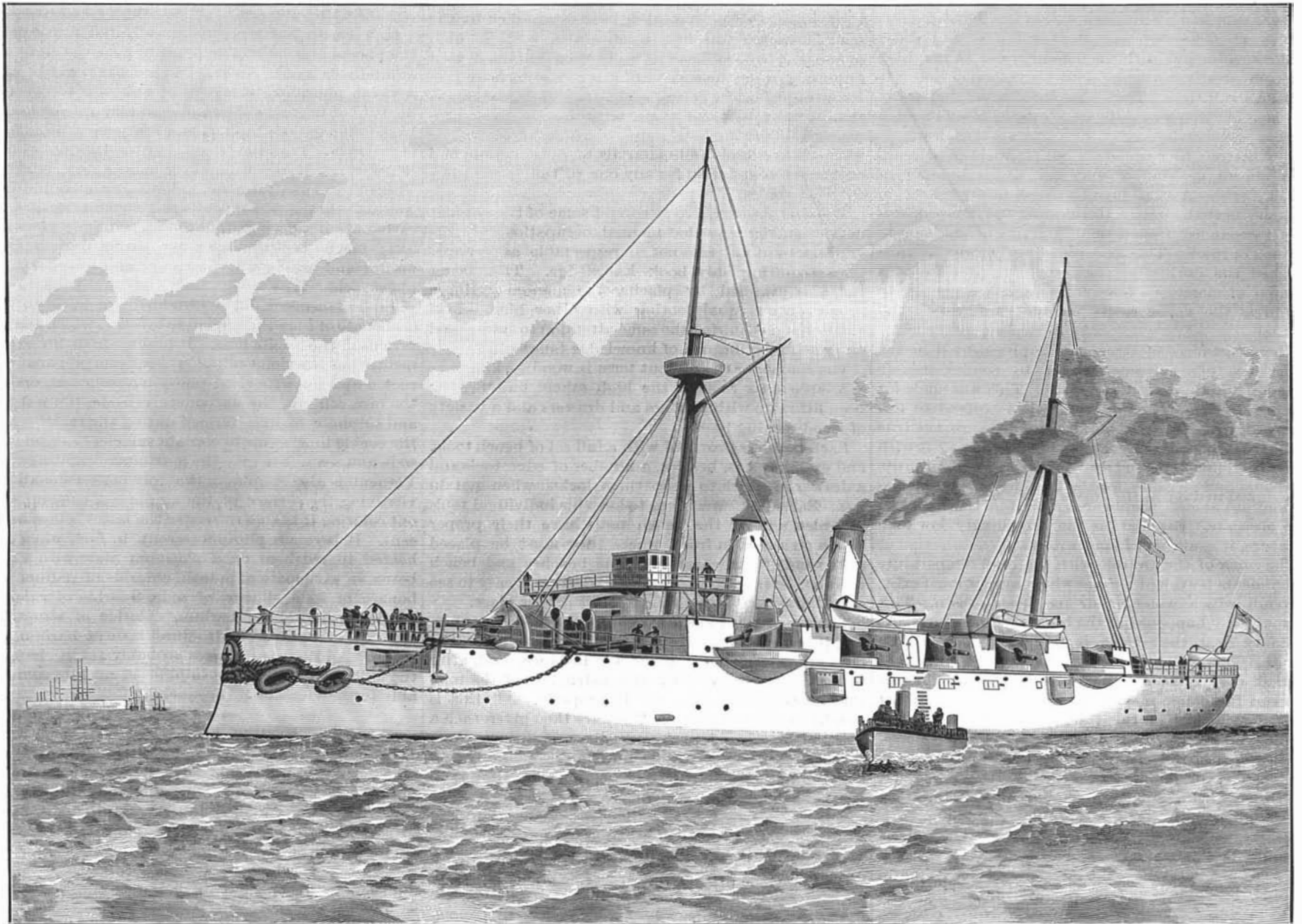
The armament is exceedingly powerful, and consists of two 9.2 inch 22 ton guns, ten 6 inch 5 ton guns, six 6 pounder and ten 3 pounder Hotchkiss quick-firing guns, and numerous boat and field guns. The 9.2 inch guns are placed on the upper deck, one forward and one aft.—*Illustrated London News.*

Dress in Relation to Health.

It has always been a stereotyped statement of physiologists that the respiration of woman differs from that of man in being limited almost entirely to the chest. On the other hand, we have the apparently contradictory fact that abdominal or deep respiration is the

half or three-fourths white; while in no single instance did a full-blooded Indian girl possess this type of breathing.

"From these observations it obviously follows that, so far as the Indian is concerned, the abdominal is the original type of respiration in both male and female, and that the costal type in the civilized female is developed through the constricting influence of dress around the abdomen. This is markedly shown in the greater prominence of the costal movements in those girls who were either one-half or three-fourths white, and who were hence dominated to a greater or less extent by the influence of civilized blood. While these tracings were taken an incident occurred which demonstrated that abdominal constriction could modify the movements of the thorax during respiration. At my first visit to the institution I obtained an exceptional costal type of respiration from a full-blooded Indian girl. At my next visit I concluded to repeat this observation, and found that, contrary to my instructions concerning loose clothing, etc., this girl at my first visit had worn three tight belts around her abdomen. After these were removed she gave the abdominal type of

**THE NEW BRITISH WAR SHIP ORLANDO.**

plating of 1 inch thickness. On a level with the top of the belt is a protective deck, which extends throughout the whole length of the vessel. This deck, along the belt, is perfectly horizontal, and is formed of 2 inches of steel plating. Beyond the belt, at both ends, it is inclined downward to an angle of 30 degrees, and is 3 inches in thickness. All openings in this deck are fitted with either armor shutters or shell-proof gratings, and those necessarily open in action are fitted with cofferdams.

By the armor belt amidships, and the protective deck plating fore and aft, the whole of the vessel under this deck is rendered invulnerable to shot and shell, and forms an unsinkable raft, in which are placed the engines, boilers, magazines, shell rooms, and steering gear. The movements of the machinery, the steering of the ship, and the firing of the guns are under complete control from the conning tower, a massive structure at the fore end of the vessel. The look-out men in this tower are protected by 12 inch steel-faced armor, and all the communications to engine rooms, magazines, and steering wheels pass through a tube of steel 8 inches thick. The stem, which forms a ram, is exceptionally strong, and is well supported by the framework of the vessel and the protective deck. The ram, stern-post, and propeller brackets are of cast steel.

The hull is built of Siemens-Martin steel, and is divided into over one hundred watertight compartments.

most potent of all factors for returning the blood through the veins to the heart. It is, therefore, a necessity for the prevention of blood stagnation in the lower portion of the trunk.

We have, at last, some investigations which promise to solve this interesting problem. These investigations tend to show that the exclusive use of the chest in respiration is a result of the restrictions of civilization, and is hence *unnatural*. In order to investigate this subject scientifically, Dr. Mays, of Philadelphia, devised an ingenious instrument for examining the respiration of the native Indian girls in the Lincoln Institution. The girls had not yet been subjected to the restrictions of civilized dress. The results of his investigations will be found recorded in the *Therapeutic Gazette* of May 16, 1887. He says:

"In all, I examined the movements of eighty-two chests, and in each case took an abdominal and a costal tracing. The girls were partly pure and partly mixed with white blood, and their ages ranged from between ten and twenty years. Thus there were thirty-three full-blooded Indians, five one-fourth, thirty-five one-half, and two were three-fourths white. *Seventy-five* showed a *decided abdominal* type of breathing, three a costal type, and three in which both were about even. *Those who showed the costal type, or a divergence from the abdominal type, came from the more civilized tribes, like the Mohawks and Chippewas, and were either one-*

breathing, which is characteristic of nearly all the Indian girls."

To us these facts are invaluable. It shows the faulty construction of modern female dress, which restricts the motion of abdominal respiration. It explains why, as experience has taught us, it is necessary to restore this abdominal rhythm, by proper movements, in order to permanently cure the affections of the lower portion of the trunk. It demonstrates conclusively that woman's dress, to be injurious, needs only to interfere with the proper motion of respiration, even though it exercises not the slightest compression.—*Health Record.*

The Diet of Strong Men.

The Roman soldiers who built such wonderful roads, and carried a weight of armor and luggage that would crush the average farm hand, lived on coarse brown bread and sour wine. They were temperate in diet, and regular and constant in exercise. The Spanish peasant works every day and dances half the night, yet eats only his black bread, onion, and watermelon. The Smyrna porter eats only a little fruit and some olives, yet he walks off with his load of a hundred pounds. The coolie, fed on rice, is more active and can endure more than the negro fed on fat meat. The heavy work of the world is not done by men who eat the greatest quantity. Moderation in diet seems to be the prerequisite of endurance.