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THE LATEST BRITISH WAR SHIPS.

The Collingwood, of which we obtain the accompanying illustration from the *Illustrated London News*, is one of the newest British war ships, in which the idea is rather to make a floating fort than one of the old style ironclads. She has a displacement of 9,150 tons and engines of 7,000 horse power, is built of steel and plated with armor ten inches thick, and carries ten guns. She is the first of a series of regular barbette ships being built for the British navy, and is a representative of the Admiral type, named after distinguished British naval commanders, several others of the same class now being under construction in the government dockyards and by the Thames Iron Shipbuilding Company. Not only, however, is the Collingwood a new vessel of a distinctly novel type, but her armament has a new gun, with a new system of breech mechanism, actuated by a new application of hydraulics, and the gun is mounted and protected on an entirely new plan.

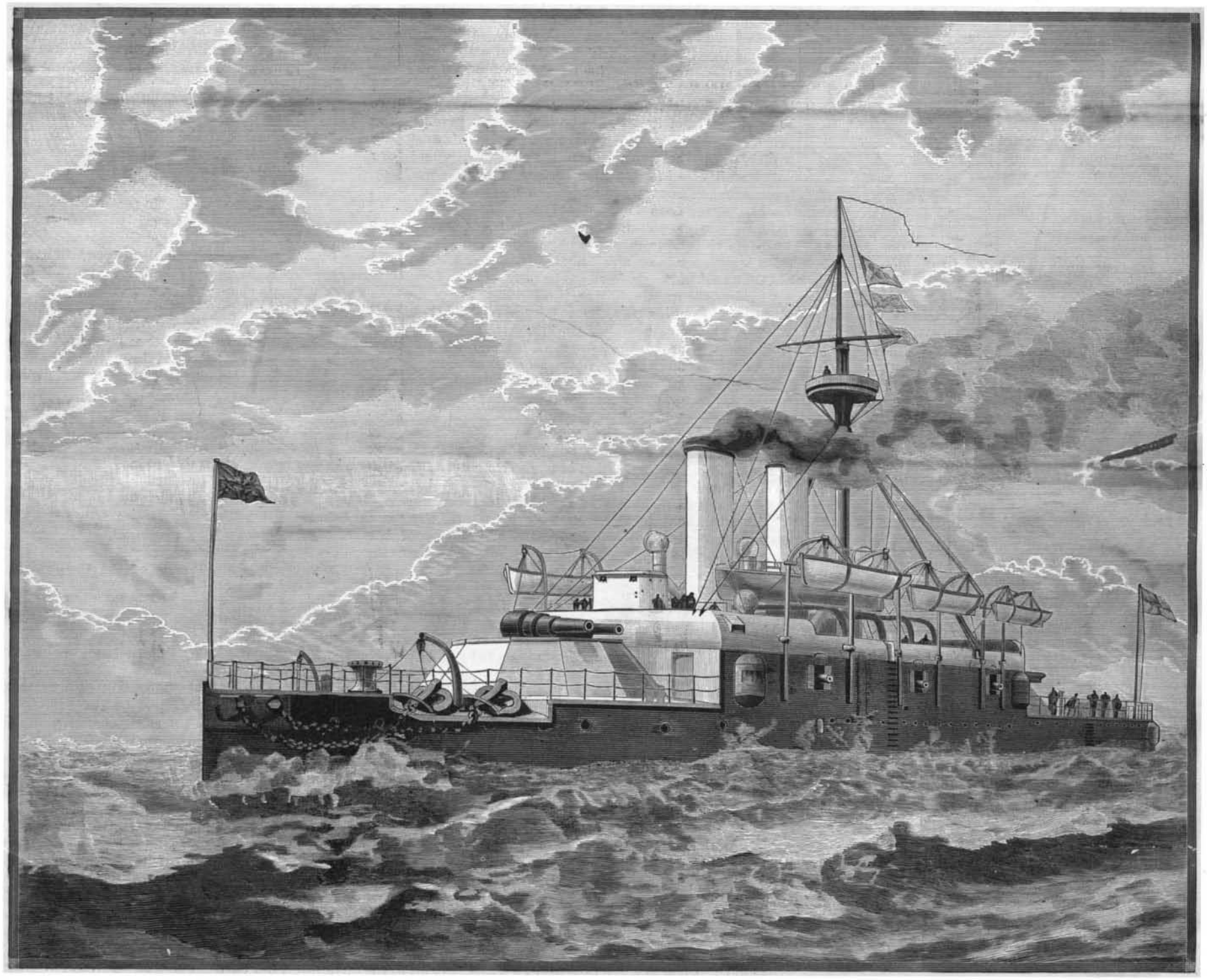
From the great height of the parapets above the water line, the barbette arrangement enables a powerful plunging fire to be directed against an enemy, and makes it possible for the guns to be worked under conditions of sea which would silence those of the Inflexible. The new system is advocated by its patrons also on the ground that it enables the gunner to see the enemy better, and to follow his movements more satisfactorily, so as to be able to strike him at the first favorable moment. But some critics of the new system have remarked that with it the object can be followed only by means of side-sights, and is completely hidden by the gun in the important moment of its being laid. An experimental trial of the Collingwood's armament and mode of working her guns took place on March 5, in presence of the Naval Lords of the Admiralty, the principal dockyard officials, and the Ordnance Committee. Two 43 ton guns were fitted on the barbettes erected at each end of the superstructure battery, along the middle line of the ship, their parapets being at an elevation of 19 feet 3 inches and 20 feet 3 inches respectively above the water. The barbettes are egg-shaped, and are formed of steel-faced armor, 14 inches and 12 inches thick, with a steep inward slope to secure the glancing of the shot when struck.

Communication with the magazine is obtained by means of an armored tube, up which the cartridges and shot are brought. The guns are mounted on a turntable, similar to those used on railroads, rotating on conical rollers. The diameter of the table is 24 feet, so that the guns cannot be brought within the protection of the barbette; when the breech is depressed for loading, the muzzles are dangerously elevated; and when the guns are run out for firing, they are protruded beyond the side. The top of the barbette is protected as far as possible by 3 inch plating flush with the parapet; outside is a circular gallery which serves the double purpose of forming a pathway round the barbette and a breakwater against the shipping of seas. The experimental firing of the guns, 24 rounds in all, single and double firing, was so far satisfactory as it proved that the barbettes and adjacent parts of the ship could bear the strain well.

How to Separate Lenses.

The two lenses of an achromatic object glass are cemented together with Canada balsam, the volatile part of which passes away, after a time, and it frequently happens that air or moisture, taking the place of this, gives an iridescent appearance to the glass and interferes with correct delineation. To remedy this fault it becomes necessary to separate and clean the two lenses and readjust them, cementing with Canada balsam, as before. Hitherto it has been customary, in order to effect the separation, to apply heat, and however carefully this may be done, it sometimes happens that a lens is thereby cracked. All risk of fracture may be avoided by placing the achromatic combination in a small quantity of benzole or naphtha (from coal tar) within a covered vessel, either of which hydrocarbons will, in a day or two, dissolve away or soften the hardened cement without heat. The same liquid will remove the last traces of resinous matter.

THE oldest architect in the United States, Mr. William Tinsley, of Cincinnati, died recently in that city, at the age of eighty-one.



NEW STEEL ARMOR-PLATED BARBETTE SHIP COLLINGWOOD, OF THE BRITISH NAVY—9,150 TONS, TEN GUNS.