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COLOSSUS, OF THE BRITISH NAVY.

The keel of the Colossus was laid at Portsmouth dockyard in 1879. She is a steel ship, armor plated with 18 inches thickness of armor, carrying four 42 ton guns in two turrets, and four 6 inch guns. She is a sister ship to the Majestic, which was built at Pembroke at about the same period. She is 325 feet in length between the perpendiculars; extreme breadth, 68 feet; draught of water, 25 feet 9 in.; displacement 9,150 tons. Her engines have 6,000 indicated horse power, and she carries 950 tons of coal. Our illustration is a reproduction of a photograph of the Colossus taken only a few weeks ago.

Boys and Trades.

A short time since a correspondent of a Southern paper, who evidently knew how to wield something besides his pen, and this he uses to a good purpose, made some observations, from which the *Jewelers' Journal* quotes as follows:

"I believe," says the writer, "in schools where boys can learn trades. Peter the Great left his throne and went to learn how to build a ship, and he learned from stem to stern, from hull to mast, and that was the beginning of his greatness. I knew a young man who was poor and smart. A friend sent him to one of these schools up North, where he stayed two years and came back as a mining engineer and a bridge builder. Last year he planned and built a cotton factory, and is getting a large salary. How many college boys are there in Georgia who can tell what kind of native timber will bear the heaviest burden, or why you take white oak for one part of a wagon and ash for another, and what timber

will last longer under water and what out of water? How many know sandstone from limestone, or iron from manganese? How many know how to cut a rafter or brace without a pattern? How many know which turns the faster—the top of a wheel or the bottom—as the wagon moves along the ground? How many know how steel is made, and how a snake can climb a tree?

"How many know that a horse gets up before and a cow behind, and the cow eats grass from her and the horse to him? How many know that a surveyor's mark on a tree never gets any higher from the ground, or what tree bears fruit without bloom?"

"There is a power of comfort in knowledge, but a boy is not going to get it unless he wants it bad, and that is the trouble with most college boys, they don't want it. They are too busy, and haven't got time. There is more hope of a dull boy who wants knowledge than of a genius, for a genius generally knows it all without study. These close observers are the world's benefactors."

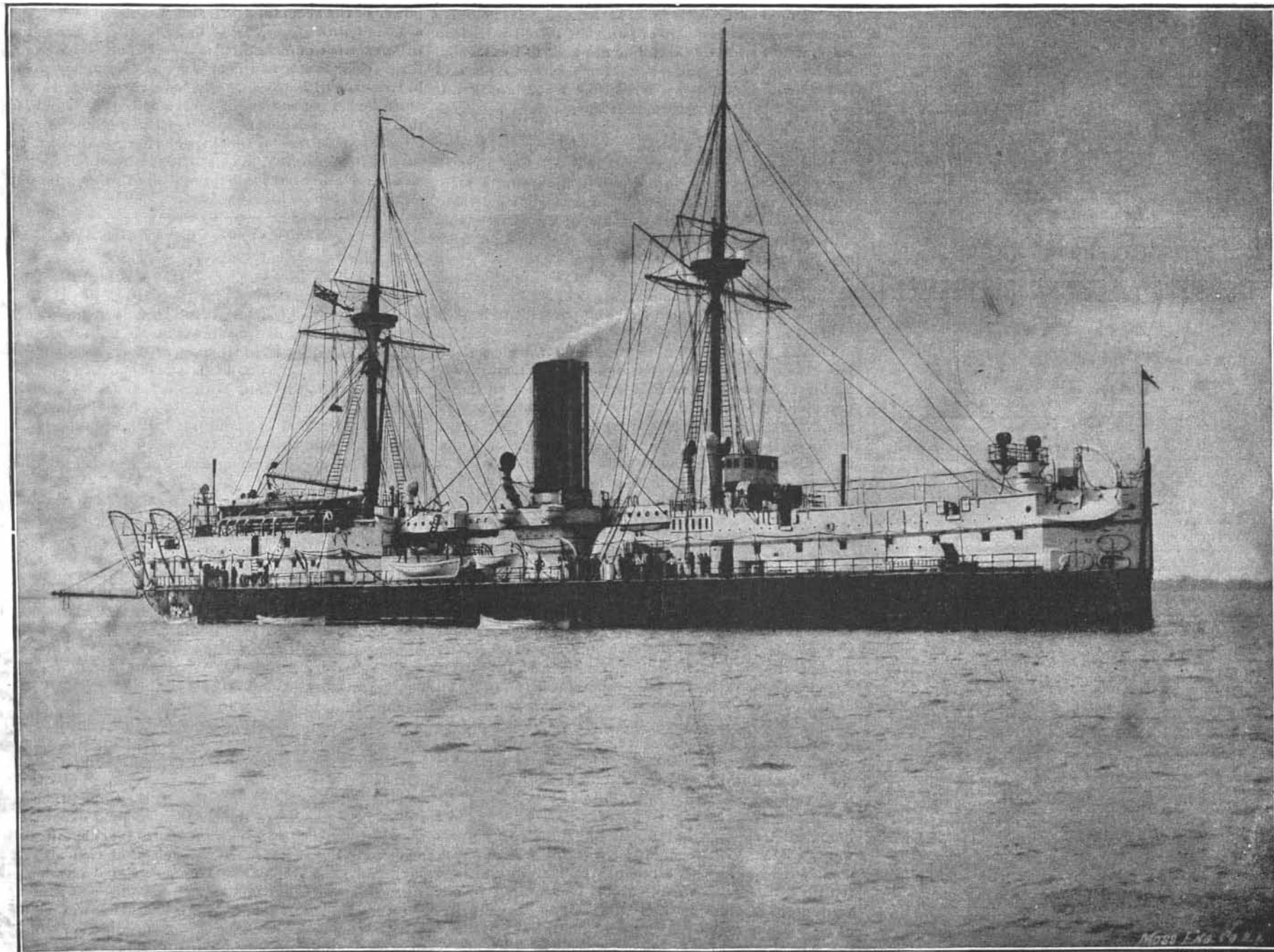
Bellite.

This explosive is inexpensive, easily made, and not liable to spontaneous explosion, but it develops, when intentionally fired by a spark, a force thirty-five times as great as gunpowder, and greater by 15 per cent than that of guncotton. To make bellite, benzine is treated with a mixture of sulphuric and nitric acids. The sulphuric acid should be of the fuming kind, which is nearly free from water; and the proportion of nitric acid should be somewhat larger than that of the other. By keeping the mixed acids in contact with the benzine for some time, at a temperature rather

above that of boiling water, the benzine is converted into trinitrobenzine, which is washed, so as to clear away all traces of free nitric acid, and then mixed with nitrate of ammonia, which is the common substance used for producing nitrous oxide gas. The mixture, if the free acid is thoroughly washed away, is very stable. Unlike dynamite, which explodes so readily from concussion that in heavy blasts only every tenth cartridge is fired directly, the others being all exploded with certainty by sympathy, a charge of bellite cannot be ignited by a blow or by friction. A shell charged with it strikes its object without exploding, unless a fulminating fuse is attached to it, and a magazine filled with it may be struck by projectiles without danger. When applied to use, however, its force is enormous. A charge of less than half an ounce, placed in a mortar behind a shell weighing ninety pounds, projected the shell to a distance of nearly four hundred feet, and its efficacy in detaching rock in a quarry proves greater than that of any nitroglycerine compound.

A State Cannot Compel Drummers to Pay Tax.

In the matter of interstate commerce, the United States are but one country, and are and must be subject to one system of regulations, and not to a multitude of systems; the doctrine of the freedom of commerce, except as regulated by Congress, is so firmly established, that it is unnecessary to enlarge further upon the subject. And the law of Tennessee requiring a drummer, before he can sell goods by sample in that State, to pay a tax and take out a license, is unconstitutional and void. *Sabine Robbins vs. the Taxing District of Shelby County, Tennessee.*



TWIN SCREW, DOUBLE TURRET BRITISH WAR SHIP COLOSSUS.