ore is delivered to the furnaces by means of the Armstrong hydraulic cranes, and mixed with ores from Cumberland, Devonshire, and Lincolnshire, thence it is passed to the mills, and from the mills to the ship-yards. The number of men employed in these operations is upwards of 3,500. The number of tons of iron consumed per annum in our yards and engine works is about 18,000. The amount of tonnage launched during the year ending the 1st August was 22,000 tons. We have 15,000 tons in course of construction, and orders spread over a period for 40,000 tons more. Amongst these latter are steamers of upwards of 3,400 tons burthen, pronounced by their owners to be "the finest and most complete merchant steamers ever built." They are intended to bring cotton from the Southern States of America, so soon as the unhappy war in that country shall cease, and they will no doubt be but the pioneers of others of a similar class. One of these steamers is of sufficient capacity to carry 6,000 bales of cotton, and it is estimated that, during one year, she will bring from New Orleans to Liverpool 38,000 bales. The crew of such a vessel consists of sixty hands, and it would require five sailing vessels of 1,200 tons each, employing 130 seamen, to do the same work. A consideration of the future of the iron shipbuilding trade opens out a vast field for speculation; but the ultimate result is not difficult to anticipate. We have seen with what success sailing vessels have been superseded by steamers in the coasting and coal trades, and we know that magnificent fleets of steamers, engaged in the postal and other services, are ploughing almost every known sea. As commerce increases, there will be few trades in which the employment of iron steamers will not be found of advantage. Most of the carrying trade to the Baltic and Mediterranean is already conducted in vessels of that class, and the sailing ships that cross the North Atlantic are being rapidly displaced by iron steamers. Their advantages in strength, speed, and capacity, are so marked, that sailing vessels of timber must give way before them. Even the Admiralty, cautious and unyielding though it be, will have to abandon its "wooden walls" in favour of the stronger and more useful material; a material, too, that lies in rich profusion beneath our feet, and has not, like timber, to be purchased of other nations. The commercial men of this country have set the Admiralty a single example of industry and enterprise. It is they who have made the experiments, and adopted the inventions, that have established the maritime supremacy of this country; and it is owing to their energy that we find on every sea, in the shallow rivers of the east, and the deep broad waters of the west, English built ships of commerce diffusing the benefits of free trade, and linking nations and tribes together in the bonds of amity and peace. The true source of our national greatness is to be sought in this wonderful development of our merchant navy. Other nations are entering into friendly rivalry with us, but the larger share of the carrying trade of the world will ever be secured to that country that can produce vessels combining the largest capacity with the utmost amount of economy and expedition in construction, and that can, at the same time, navigate those vessels with the greatest degree of skill and rapidity. In conclusion, permit me to express the proud conviction I entertain that the mineral wealth of this district, and the skill and endurance of its workmen, whether on land or sea, will enable the locality that gave birth to an Armstrong and a Stephenson to maintain its character for maritime industry and enterprise, and bear its full share in promoting the commercial greatness of the country.—*British Association.*

A Mode of Rendering Timber Built Ships Impregnable and Unsinkable, Under Moderate Screw Power, or in a Leaky Vessel.

Admiral E. Belcher recently read an interesting paper on rendering ships unsinkable, by closely sealing the holes under the planking of the hold beams, and saving those spaces between for the storage of light dry goods above the deck, (which were generally lost), and placing loose planks as a temporary deck. In the event of a dangerous leak, or even a large hole being stove in the bows or bottom of a vessel, he proposed securing the hatches from beneath and the hatches from above, screwed firmly in opposition to each other, and filled in by pitch from the upper or open hatch. It was apparent that if a ship was air-tight the water could only enter so long as the air was compressible; and by inverting the pump boxes, and rendering them air pumps, the leak would not only be stopped, but by the continual action of the air it would be expelled by the very orifice by which it entered; therefore the customary and continued labour and power of the crew would not be required to such an extent, if at all, when once the necessary quantity of air had been forced in. So far back as 1823-4, he had introduced this principle at Bermuda; and, on a late occasion, when he was consulted by Mr. Marryatt, chairman of the London Dock Company, as to the value of one of those lifting caissons, he proved to the parties that, by aid of a a glass tube, about three feet long and half an inch bore, he could by his lungs, even at his age, effect the very same displacement which they had obtained by machinery. He then proceeded to explain, in detail, how, by pursuing his mode of construction, the vessel would not only become very much less liable to injury by the ram advocates, but, if carefully and scientifically fitted, she might be over-run by an adversary, come up on the other side, and perhaps return the compliment. The gallant admiral concluded by making a few observations on moveable armour, which might be adapted as a further protection to those vessels, which might be carried to a foreign station or long voyage in the hold, and, when war was declared, might be put on as occasion might demand.

An Immense Iron Deposit.

The Lake Superior *Journal* says that recent explorations show the deposit of iron ore, embracing what is known as the St. Clair Mountain, on the Esconawba River, to be very much more extensive than was supposed. West of the river it not only skirts along the south side of Sections 1 and 2, but covers the entire north half of Sec. 11, and also that of Sec. 12, being nearly two miles in length and about three quarters wide, and rising from fifty to three hundred feet above the level of the surrounding country. On the east side of the