

Atlantic, which the author explains by the prevailing influence of the Gulf-stream: and from his analyses of many samples of water taken in the current which flows from N. E. to S. W., between Iceland and the east coast of Greenland, he thinks it highly probable that this East Greenland current is in reality not a polar current, but a returning branch of the Gulf-stream, its mean quantity of salt being nearly the same as in the northern part of the Atlantic Ocean, viz: 35.5 per 1000.

The author then compared the Mediterranean with the Baltic, and stated that there is a double current at the entrance of the Baltic as well as in the Straits of Gibraltar; but with this difference, that the under-current of the Mediterranean runs out of, and the surface-current generally runs into, that sea; whereas the under-current of the Baltic is an entering one, and the surface-current of the Sound generally runs out into the Kattegat and North Sea. He showed, moreover, that the deep water in both seas is richer in salt than that from the surface, and consequently has a greater specific gravity.

In the Atlantic he found the reverse, viz: that the quantity of saline ingredients in the water *decreases* with the depth, if the samples are taken at some distance from the shore; and as his analyses are sufficiently numerous, and include specimens from great depths (12,000 feet), he considers this unexpected result to be tolerably well established. He thinks that this fact would prove the existence of a polar current in the depths of the Atlantic, as well as in some parts of its surface.

In the sea to the east of Africa he found the quantity of saline matter slightly increasing with the depth.

Gigantic Masses of Rolled and Forged Iron.

From the Intellectual Observer, June, 1862.

Among the stupendous masses of iron exhibited* may be mentioned the forged double crank shaft weighing twenty-five tons, and designed for the engines of one of the new armor-plated vessels now building. Forged armor-plates are also shown more than six feet in width, that can be manufactured of any thickness and almost of any length required, and a rolled boiler plate 112 square feet is exhibited.

* At the International Exhibition.

The Exportation of Iron from Great Britain.

From the Mechanic's Magazine, August, 1862.

The exportation of iron in its various forms experienced some reduction last year, the total value of the iron and steel sent abroad having been £10,341,574, against £12,154,997 in 1860. There was an increase in pig from £974,065 to £1,047,318; but bar, bolt, and rod iron declined from £2,385,871 to £1,885,605; railroad iron from £3,408,759 to £2,903,357; cast iron, from £832,638; wire, from £250,087 to £207,317; wrought iron of all kinds, from £3,317,349 to £2,868,923; and unwrought steel, from £986,228 to £727,840. It was in 1853 that the export iron trade assumed its present large