The company is, at the present writing, negotiating for the contract to build a bridge in Australia, over the Hawksberry River. This bridge will cost about $2,000,000. If the contract is awarded to them, the iron will probably be shipped to Australia via San Francisco. The fact of an American bridge company being given the preference over British competitors, would go far to prove the superiority of American bridges. The best American bridges are lighter than those of English make, and just as strong, because the material is disposed along the lines of strain, so that no part is dead weight. Again, in American bridges all the principal parts are made by machinery, and in similar spans they are of precise, uniform dimensions, and hence interchangeable. The cost is thus reduced to the minimum. The quality of the iron, and the use of riveting instead of the pin connection, so commonly seen in American bridges, might also be mentioned.

The plant of the Union Bridge works is quite complete, and the work is turned out rapidly, with great precision and nicety. This summer (1885) gas furnaces were added, which produce a higher degree of heat for making steel eye-bars. Annealing furnaces and a large upsetting machine have also been constructed for the works.

A visit to the works is full of interest. The bridge may be traced from its inception to its completion. General plans and detail sheets are first drawn in the draughting-room. An order is sent to one of the great rolling-mills, and in the course of a week the material for the bridge arrives, in plates, angles, bars, and flats of steel and iron. Blue prints are taken of the traced sheets. One set of these is sent into the pattern-shop, where the "templates" and patterns for the cast parts of the bridge are made. Another set is given to the workmen in the shops along with the templates. The castings are not made at the works, but at the King Iron Works. The heavy iron and steel plates and angles are rolled in on cars, and taken off at the punching-machines by suitable derricks, where they are punched. These plates and angles are fastened together with drift-pins, and brought to the riveting-machine. Here they are suspended, while being riveted, by means of chains, from travelers running on tracks overhead. The finished pieces are assembled in the yard, where they receive a coat of red paint. Some of the parts have to be "faced," and are sent to a machine for that purpose. In another part of the shop a great steam-hammer is at work, pounding out eye-bars. The nuts, bolts, and rivets are made in the blacksmith-shop, which is quite a long building. When all the parts of the bridge, the posts, pedestals, sheets, rods, chord-sections, portals, have been assembled and inspected, the shipment commences. Derricks, cables, timber, bolts, etc., with the parts of the bridge which are needed during the early stages of the erection, are shipped first. Soon the yard is cleared of one bridge, and the interesting process commences again. The iron rolls into one door, and rolls out as a bridge at another.

Noticeable Articles.

The first paper in the Fortnightly for December is an anonymous one, entitled "The coming Contests of the World," and is an argument to prove the importance to England of securing possession of Egypt as the key to her great Asiatic possessions. The statistics of the increase of the Anglo-Saxon race are striking: "In a period of little less than one hundred years, from 1788 to 1885, the aggregate populations of France, Spain, and Italy have only increased from 5,000,000 to 82,500,000. On the other hand, the populations of Germany and England during this period have each trebled. Germany in 1788 had a population of about 15,000,000; in 1885 it had increased to 45,000,000. Great Britain, in the same way, had in 1788 a population of 12,000,000; in 1885 the figure is 36,000,000. Another country, largely but not exclusively populated by the Anglo-Saxon race, America, has in less than a hundred years increased nearly thirteen times; that is, from less than 4,000,000 in 1790, to nearly 60,000,000 in 1885. Finally, it must not be forgotten that Canada, Australia, South Africa, as well as other British dependencies, collectively, contain a population of some 10,000,000, chiefly Anglo Saxon."