

work. On the 11th of the next November, the gunboat, fully fitted, except her engine, entered Portsmouth under sail. We don't know the tonnage of this vessel, but for the reader's information we may mention that these gunboats were of several classes, from 212 to 868 tons each: she must therefore, have been above 200 tons. After giving this proof of activity, Mr. Laird signed a contract with the Government authorizing him to build on plans supplied to him, and at prices agreed on, as many gunboats as possible until the day when notice should be given of terminating the contract. The Government, on its part, engaged to take until the contract was fulfilled whatever there should be in the yard. On this understanding Mr. Laird organised his works, where they laboured day and night with such effect that, when he received the order to stop work, he was delivering one vessel daily to Government." (P. 419.)

Extraordinary as was this feat of private enterprise, we are told that Messrs. Penn, of Greenwich, equalled it in the construction of the engines, turning out eighty between December and April, and thus enabling us to make the great Spithead demonstration in that month.

At this demonstration M. Raymond was present, and says:—

"We saw there 50 bomb vessels, all ready for service, 140 steam gunboats, completely armed, rigged, and stored, sailing, manœuvring and firing before 100,000 spectators. This was the creation of the last winter; it was the vanguard of the fleet which already possessed imposing reserves, and which could easily have been doubled within the year. It was also a great lesson to the world, which Lord Palmerston summed up in a significant sentence, when, on the following 8th of May, he said in the House of Commons, "We began the war (Feb. 1854) with 212 ships in commission, we had at its close (in March, 1856) 590."

At the present time, England is building iron-clad steam navies for Italy, Denmark, Russia, Spain, and many other countries, to say nothing of the Confederate States; all of these vast efforts of mechanical skill and enterprise are conducted by private firms. The real state of the case being simply this, that from Cornwall to Invernesshire, Great Britain is a vast machine-shop. Manufactures are the source of her power; agriculture holds only the second rank. Manufactures have made the empire what it is: the greatest, the most enlightened and powerful the world has ever seen. Wealth, manufactures and commerce are mainsprings of a successful and progressive nationality, and they are equally dependant one on the other, so that if a link in the chain shows

signs of weakness, the stability of the system must be measured by the internal strength of that link.

In Canada we are taking slow but sure steps to give our manufacturing industry a chance to acquire the high position it is one day destined to possess. But here, as elsewhere, private enterprise is the mainspring, and will be, eventually, the chief source of our future means of developing the resources of the country with rapidity.

Already, we notice very considerable improvement; already, we find that the country is capable of taking a respectable position among manufacturing people, and but a very short time will elapse before we shall be able to throw out of our imports all the more common articles of daily consumption or necessity, and find home industry, skill and enterprise adequate to supply whatever is necessary for our comfort, and the preservation and extension of our civilization. The Kingston Exhibition, we hope, will afford positive proofs of the progress we know has been made throughout the country; and, although no one looks upon our annual gatherings as typifying the actual state of the country in all particulars, yet it is a good and safe guide from which much may be learned, if properly studied and appreciated.

#### STONE PAPER.\*

Stone-paper is an invention of a Dr. Faxe, Com. of the Admiralty to the King of Sweden. It was Mr. Buscher, senior, who learned the method of manufacturing stone-paper, when residing with Dr. Faxe. The following are its most important characters, which will perhaps soon make it a valuable material for Canada:—

##### Solidity.

Stone-paper is, as the name indicates, made of pasteboard, in long stripes, three feet broad, and generally fifty feet long; but when required for special purposes it is made to any length.

It has the property of hardening when in contact with the air. This *hardening* is the consequence of the oxidation or formation into resin of the oily substance which is necessary in the manufacture of the stone-paper, and it gives a faster connection with the mineral substances used during the process of manufacture, and with the coating of the Stone Paper, viz., sand, gravel, ashes, lime, and chalk. A well made roof of Stone Paper, which is kept properly in order (that is, by renewing the coating about every four years) will gain in hardness so that after some years it

\* A roofing material, manufactured by Messrs. Buscher & Hoffmann at Neustadt, Eberswalde, near Berlin, Prussia, introduced by William Wagner, P.L.S. and Architect, 47 Alexander Street, Montreal.