capitalists to engage a number of hands in manufacturing goods which can be sold to advantage in a foreign market; a trade which brings back gold to be disbursed in more work to the people year after year, finding employment for many unskilled laborers, of both sexes, who, were it not for such inventions, would barely be able to eke out an existence. And yet such is the ignorance of the working classes as to those things that are ultimately for their advantage, that in every country opposition has been manifested to all labor-saving inventions. They cannot foresee that it is to the facilities afforded by such inventions the manufacturers of one country are successfully able to compete with those of another; and that without such facilities, the very trades by which they earn a living, would be monopolized by others, or that where 100 persons find employment in a factory working with old fashioned machinery, 1000 would gain a livelihood in another using machines of the highest degree of perfection, by which a better class of goods could be made and sold at a cheaper rate. The opposition that was shown to Mr. Côté at Quebec by the employés in the shoe trade, is only another instance of this suicidal policy against those who are their benefactors. What would Quebec be to-day without its shoe trade? It is owing to Mr. Woodley, Mr. Bresse and other enterprising boot and shoe manufacturers, that her labouring population are not now half a century behind the times. What does she owe to political favor—which she has for years been depending upon? Nothing whatever. Quebec, to recover her lost ground, must now turn her attention strictly to manufacturing, for which she is well adapted. She should be to Canada, what Lynn and Haverhill are to the United States.

In closing these remarks we cannot too strongly urge upon manufacturers in Canada the advantages of bringing the machines of their workshops to the greatest perfection, so as to be able to compete in finish, celerity and in price with all outsiders and to manufacture goods for foreign countries, as we are now doing in the boot and shoe business, in place of permitting foreigners to manufacture them for us, which would actually have been the case, had it not been for the energy and spirit of a few enterprising men. We advise all operatives to remember this fact, that there has been no instance within the last fifty years in which labour-saving machines have not vastly increased the demand for labour, and that where one person, through his talent or genius, has made a fortune by inventions or improvements in machinery, thousands of his fellow-men have gained a living thereby.

THE HUNDRED TON GUN AT SPEZIA.

(See page 68.)

The experiments with the wonderful "King Gun" which has been made by Sir William Armstrong for the Italian Government, have made it evident that in the strife between offensive weapons and defensive armour the former have at all events up to the present time by far the best position. A few weeks since we published an engraving of the unshipping of the "King Gun" from the *Europa*; this week we have views of one of the targets against which the 2,000 lb. shots, vomited forth by the monster weapon, were directed. The first engraving shows the massive nature of the structure, and the second will give some idea of the enormous force with which the shots were propelled. Some of the targets were of steel, others of wrought iron, and each was twenty-two inches in thickness, with a four-foot backing of teak timber, behind which was a series of iron plates, the whole being supported by strong iron girders fastened against immense piles of teak, embedded in the earth.

THE SANDRINGHAM CASKET.

(See page 68.)

This elegant silver snuff-box, a New Year's gift from the clergy and tenantry of Sandringham to H. R. H. the Prince of Wales, was specially designed and made for the donors by Mr. Emmanuel, of the Hard, Portsea. The ornamentation is all in chaste Indian style. On the lid is a faithful likeness of the Prince in hunting costume, surrounded by his native attendants, and about to mount a richly caparisoned elephant which is kneeling to receive him. In the front of the casket appears the badge of the Star of India in gold, combined with the Prince's plume and the initials "A.E.," and flanked by the mythological monster *couchant*. The same animals are repeated on the back, and between them is the inscription: — "Presented by the clergy and tenants of the Sandringham estate to H. R. H. the Prince of Wales, K.G., G.C.S.I., &c., on his safe and happy return to his own place, after a most successful visit to British India, 4th July, 1876." The ends of the casket are ornamented with elephants' heads in high relief, with dolphins on each side, and the whole rests on the heads of grotesque animals.

DISCOVERY OF MICA.—The *New York Times* states that the schooner *Era*, which was despatched by a Philadelphia company a few months ago to Cumberland Bay, Baffin's Land, in search of graphite and mica, has returned from her expedition. The *Era*, which was under the command of Lieutenant Mintzer, of the United States navy, arrived at the place known by whalers as the Nialtic Valley, where the crew, which consisted of thirty men established a tramway and working sheds. The mica was found in veins 10 ft. below the surface, and some of the blocks brought back by the Mintzer expedition are of great sizes and purity, being nearly 20 in. square and weighing 50 lb. Altogether the crew of the *Era* obtained 15 tons of mica, and to do this exhausted three veins. The mica is estimated to be worth $5 to $12 a pound.

VARNISH FOR UMBRELLAS AND WALKING STICKS.—We annex two methods of colouring and varnishing sticks, paper, and which we can reccommend strongly.—No. 1. Use Judson's simple dyes; they are so clean, and moreover so economical in their application, that I believe they will take the leading part in all work of fancy or intricate workmanship. Put the stains on with a camel's-hair brush, diluted with water. For dark stains use copal varnish. For light woods use the light crystalised varnish, such as is used for the tops of washstands, &c. Old damaged sticks that were varnished should have the varnish eaten off with liquor ammoniæ, then rinsed, scoured, stained, and varnished again. No. 2. Make a solution of 3 parts of glue in 100 of warm water; to this add 1 part of whiting, 2 parts of orange chrome. Mix well. Apply hot with a soft brush to your sticks. When thoroughly dry, rub down with a piece of dry flannel. Apply a second coat of colour if deeper tints be required, or use burnt umber and brown ochre for oak tints. When dry, apply the following varnish:—Coarsely-powdered copal and glass, each 4oz.; alcohol, 64 O. P., 1 pint; camphor, ½oz. To be heated over a watery bath, with constant stirring, until the copal is dissolved. When cold, decant the clear portion. Be careful that alcohol does not inflame.

POLLUTION OF RIVERS.—Last week an illustration of the effect of river pollution through manufacturing refuse being cast into the stream, was afforded between Guilford and Godalming in Surrey, in the river Way. Tons of dead fish were found, and in such quantities as to be sold in the neighbourhood and in London for the purpose of manure. The cause of this has been traced to some paper mills situated on the Wey above Godalming, and the authorities are taking active steps to abate this nuisance. Should such an occurrence happen on a salmon or trout stream we imagine that there would be little delay in passing the River Pollution Bill during the present session, although already its discussion in Committee in the House of Commons has twice lately resulted in a "count-out." Action for public good is generally stimulated when powerful, although private interests suffer in a pecuniary point of view, and perhaps the "accident" here named may have the desired effect on our tardy legislators.

BE EMULOUS.—Don't be content with doing what another has done—surpass it. Deserve success, and it will come. The boy was not born a man. The sun does not rise like a rocket, or go down like a bullet fired from a gun; slowly but surely it makes its round and never tires.