

larged and light is cheaper, whereby hours are now available for industrial pursuits, and for the acquisition of knowledge by large numbers, which were formerly either unemployed or wasted. In steam-power, especially that applied to railroads and to ocean steam navigation, economical appliances have advanced rapidly. In ship building, the past ten years have produced vast changes. The navy and mercantile marine have advanced in scientific construction and in mechanical arrangement. The ocean steamers which were then employed in the postal service included but one of 2,000 tons; now there are many of nearly double that tonnage, with corresponding power and speed. In printing, great advances have been made; in the perfection of chromatic printing, and in the application of most expensive and most beautiful machinery to the printing of the daily journals. Invention and mechanical contrivances have thus kept pace with the requirements of intellect and the daily increasing love of knowledge.

The effect of the progress that has been made since 1851 is also shown by the rapid increase of colonial and foreign trade, and the much greater interest that foreigners take in England and English manufactures.

On such topics one might enlarge at any length, but enough has been said to show that, if the Exhibition of 1851 was "to form a new starting point from which all nations were to direct their further exertions," that of 1862 will surely still more efficiently perform that office, inasmuch as the basis upon which it rests is broader, the nations interested in the progress of civilization and commercial freedom more numerous, and the population to be stimulated to exertion enormously larger.

Since then so much may be expected from the mother country, in addition to what was done in 1851, surely expectations, in at least an equal proportion, may be formed respecting the position which Canada ought to take in the approaching Exhibition. Our country has since that time made enormous strides in everything that tends to its advancement and material progress. Then it had but recently emerged from a period of discontent and difficulty; now it is—as is acknowledged on all hands—the most flourishing and rapidly increasing in wealth and population of all the Colonies of the British Empire. It now has a system of railway and water communication unsurpassed any where; the Victoria Bridge over the St. Lawrence being one of the greatest engineering triumphs in the world.

While it is a matter of extreme regret that the Government do not intend to appropriate any sum of money, during the present year, towards the representation of Canada at the International Exhibition of 1862, still we trust that our manufacturers

and artisans will not be discouraged, but will set about the preparation of the products of their skill with the energy that is their great characteristic, and thus render the exhibition of our progress, resting as it must upon individual resources, the more satisfactory and encouraging than if it were mainly dependent upon pecuniary aid bestowed by our Government.

THE DUNDAS COTTON MANUFACTORY.

The subjoined notice of the Dundas Cotton Works is taken from a late number of the "*True Banner*," published in that town. We rejoice to find that such an establishment has been set in active operation, and we heartily concur in the wishes of our contemporary for the success of the undertaking.

About a year ago, Joseph Wright, Esq., a gentleman whose experience in the Cotton Manufacturing business in England extends over a lengthy period of years, purchased the large brick and stone building erected in this town by Holt & Co., for the purpose of converting the same into a Cotton Factory, since which time he has been actively engaged fitting up machinery for the execution of the enterprise; and we are happy to be able to announce that he has now got his works so far advanced as to be able to turn out a very large quantity of cotton-batting and yarn daily. We visited the establishment on Friday last, when we were very courteously shown through the various departments thereof, and had an opportunity of watching the process of manufacture from the raw cotton to the packing of the batting and yarn in bales ready for the market; and as it may prove interesting to some of our readers to know something of the operations that are necessary for the conversion of the raw material into such marketable products as are daily sold and bought in large quantities in every section of the country, we give a brief outline thereof. In the manufacture of Batting, the raw cotton is first thrown into a machine called a "whipper," where it is beaten out and cleaned; it is then passed to a machine called a "scutcher," where all the seeds and dust that may still be in the cotton are removed, and where it is brought out into what is called a "lap," when it is ready for the carding machines, through which it passes and receives the final dressing, and is wound on large drums and cut into six feet lengths, whence it is removed and put up into "batts" ready for baling.

The process of manufacturing yarn is of a much more complicated nature. The raw cotton is first placed in a very large scutching machine, which occupies of itself one entire room; the scutcher is composed of a large number of rollers, beaters, fans, &c., and the cotton, in passing through it, is thoroughly cleansed, and pressed, the fans carrying all the dust and refuse beneath the floor and out of the building. This machine coils the cotton into "laps" on large drums, which are carried to another room, where ten large carding machines are in operation, and where the "laps" are run through—the fibres of the cotton being all laid straight and drawn out into what is called a "sliver," which coils of itself directly from each machine into a can. The can is then removed containing the "sliver," and placed at another machine called a draw frame having three "heads" and five "deliverers" to each "head," where the sliver passes through three distinct processes for the purpose of straightening and strengthening it, when it is again coiled into another can. The draw frame is a singularly constructed and self-acting machine—one peculi-