

IMPROVEMENTS IN PROSPECT AND IN PROGRESS.

Reference is so often made to the progress of Toronto and other parts of Ontario, that the topic seems almost hackneyed and threadbare. Still so many illustrations of this advancement come to notice that the subject constantly acquires new interest.

It was stated at a meeting of the Toronto Board of Trade, on Monday last, on the authority of one of the city representatives, that the Dominion Government, in addition to building an Examining Warehouse, contemplates the purchase of a plot of ground for the purpose of erecting a Custom House, suitable in size and style to the growing trade of Toronto. The probable cost is put at \$160,000. We hope the intentions of the Government are correctly interpreted. Increased accommodation is greatly needed. The present Custom House is too small; it suited well enough the requirements of the Toronto of twenty years ago, but is no longer sufficient to accommodate the business yearly passing through it. Besides, as was urged by the President of the Board of Trade and others at the meeting, it is desirable to have the Customs and Internal Revenue departments all in the same building, which, without greatly increased room, is not to be thought of. But regard should be had not only to present, but also to future requirements; and now that a new Custom House has become a necessity, a handsome and capacious building should be erected, suited to the wants not only of the present, but in harmony with the expanding progress of the city in trade, in wealth, in architectural adornment and in improvements of every kind.

As already intimated, new evidences of this expansion are constantly coming under notice. We hear now of a dozen new warehouses that will be gone on with immediately. Nine of these are on Front street, and three on King, opposite Jordan street. Three of the number will be erected for Messrs. Thomson & Burns, four for Mr. Myles, and two for Mr. Staunton. Besides, two first-class warehouses are going up on the east side of Messrs. Sorley & Howe's premises for a wholesale boot and shoe firm. The Young Men's Christian Association have a building enterprise in hand that will cost probably twenty-five thousand dollars, and which, from the energy of the men who have interested themselves in the success of this excellent project, is pretty sure to be speedily completed. Then we are reminded of the McGill Square church, the offices of the Montreal Telegraph Company, those of the Trust and Loan Company, and the new post-office, each to cost from twenty to twenty-

five thousand dollars. These, with a host of private dwellings, shops, offices, and other erections, indicate not only marked progress, but are a proof of the strong conviction now so generally entertained and expressed, that Toronto has entered upon a career of prosperity which has only begun to be realized.

It is a gratifying fact that progressiveness is not peculiar to the capital of the Province. A tidal wave of prosperity has swept over every district of Ontario. More new buildings have been erected this year in Hamilton than probably in any previous season. London, which already boasts some fine structures, is to have a new Custom House, and other important additions to its business buildings. In Brantford, all the district swept by fire a year or more ago is being rebuilt with substantial brick stores. Peterboro' boasts a large acquisition to its business houses and private residences. Other towns are not behind some of these in enterprise and improvement.

The best feature connected with this rapid growth is, that it is unattended with excitement, and does not seem to be in any noticeable degree attributable to speculation. There is a solidity about it which gives promise of permanence; it is but the legitimate consequence of that marked accumulation of wealth which is shown in the swelling of bank deposits, the abundant surplus of loanable capital, and the low and steadily diminishing rates of interest.

GOLD MINING AS A COMMERCIAL ENTERPRISE.

Having in our last issue attempted to settle the data on which to calculate the commercial value of a gold mine, and set down from actual experience the cost of working the same, we shall now proceed to give a few practical directions for ascertaining the existence of a gold-bearing vein, and determining whether it contains a sufficient proportion of the metal to render it worthy of attention as a subject from which a remunerative return may be reasonably expected.

The existence of mineral veins is in general indicated by the outcrop of the material of which they are composed; that is, by its protruding above the level of the surrounding ground; by the appearance of detached fragments upon the surface, or mixed with the earth turned up by the spade or plough; and in many instances by a difference in the color of the soil that lies immediately over the vein, and is derived from its decomposition.

When any of these indications are observed, the first thing to be done is to remove the surface soil, as deep as the vegetable mould exists, for the space of three or

four feet square, then dig down to the rock, and wash out carefully in an iron or wooden vessel a portion of the lowest layer, that which lies immediately upon the rock. After the earthy parts are washed away, and the water comes off pretty clear, pick out the fragments of quartz or other stone, and examine carefully, laying aside in a safe place any which exhibit particles of gold. Having got rid of the coarser matter in this way, wash down the finer sand, allowing the lighter part to escape gradually over the edge of the vessel till only the heavier metallic oxides and sulphurets remain; then take a little clean water in the pan, and give it a gentle revolving motion from left to right. If this is properly done, the action of the water will carry away the baser material, and leave the gold plainly manifest to the eye. If it exists in the form of sand or scale gold, it will be more or less mixed up with the other matter; but if in the shape of the more finely divided flour gold, it will form a distinct yellow band on the left margin of the sand.

If the result of this preliminary experiment be satisfactory, it must only be accepted as an encouragement for further investigation, and by no means as a measure of the worth of the vein, for the decomposition and disintegration of the matrix which has released the gold from its grasp, and made it visible to the sight, has also caused it to accumulate in larger quantity than will be found to exist in an equal extent of the solid vein stone.

The next operation will be to uncover a portion of the vein of sufficient length to ascertain its direction, and then to trace its extent as far as may be thought desirable, by the surface indications already mentioned; after which a suitable situation for the future shaft should be selected, and the vein opened down upon until the limit to which decomposition has extended shall have been reached. During this process successive samples of the vein-stone may be submitted to assay by mercurial amalgamation, and also by fire, to shew whether the gold is merely superficial or partial, or whether it extends through the body of the ore. If there is a stamp-mill within a reasonable distance, these small assays may be dispensed with, and a test quantity of five, or preferably ten tons sent to be reduced. If the return from this sample is such as to promise success, another sample of not less than 100 tons should be worked, which, in most cases, would sufficiently test both the value of the ore and the honesty of the operator.

In our former article we assumed that to give a safe investment and satisfactory returns from an eight dollar vein with a fine