

experience in conducting their business, from the want of education; this being the case, it is their duty to see that these disadvantages were not entailed on their children. There are two kinds of education, the one generally implies a knowledge of our own language, as well as an acquaintance with the higher branches of education, the other is acquired by experience; while he admitted the advantage of experience, yet he thought that this experience was rendered much more useful when engrafted on a good education. He fully concurred with an eminent educationist in the United States, that money spent in the support of education, was like the vapour which rises from the earth, which soon returns to enrich it.

#### CANADIAN RESOURCES AND PROGRESS.

*Extract from the Annual Address of the President of the Agricultural Association of Upper Canada, (T. STREET, Esq. M.P.P.) delivered at the recent Provincial Exhibition at Toronto.*

We have many blessings for which to be thankful to the Gracious Giver of all good. Our lot has been cast in a land inferior to none, in all natural advantages—its soil is fertile—its waters are abundant and pure—its climate is favourable to the health of man—to the sustenance of all the lesser animals—and to the growth and ripening of all the various vegetable productions, which the necessities of man and beast demand. It has been frequently remarked, and I believe it is now freely admitted, by those best qualified to judge, that the splendid peninsula which lies between the Lakes Huron, Erie, and Ontario—as regards its forests—soil—climate and water—is not surpassed on the continent of America—and it rests chiefly with ourselves, by a unity of purpose and action—by well timed efforts and proper exertions, rightly directed, to place it in a situation to rank as one of the finest agricultural portions of the world.

The land in which it is our good fortune to live, abounds in the richest mines of iron, copper, and lead, and although we have not, to any extent as yet discovered the gold of California and Australia, or the silver of Mexico and Peru, deeply imbedded in the bowels of the earth—it ought to be a source of the highest congratulation, that many of our industrious farmers have found abundance of these precious metals, in the laudable and profitable pursuit of stirring the fruitful soil of their own farms.

We have an inexhaustible supply of lime sandstone—of free stone and granite—of gypsum and water lime or hydraulic cement—we have peat and marl in various parts of the Province, and even lithographic stone, a very rare production, is to be found of fine quality in some of the Counties.

We have a climate and soil which will grow oats and peas, Indian corn, turnips, carrots, flax and hemp, as well as they are produced any where else,—and as respects wheat, the great staple of the county, it was with true Canadian pride, that I lately noticed in an article taken from the "American Miller,"—a standard authority, that the wheat raised in Upper Canada makes better flour than any wheat the American union produces—not even excepting the wheat grown in the far famed and justly celebrated "Genesee Valley." We have running along the whole front of our country, the noble River St. Lawrence, which furnishes us a high-way to the Ocean. We can boast of a chain of water communication through that River, our Lakes and our Canals, the like of which is no where to be seen. Macadamized, gravelled and plank roads, are being rapidly made in all the older parts of the country—nay, even in some, but recently settled. Railroads—the sure indication of increasing prosperity—are either in the course of construction, or are seriously contemplated, in all eligible directions. Improvements are to be seen on all sides. The people are industrious, prudent and moral, and are more intelligent and enterprising.

Agricultural Societies have introduced and encouraged the best breeds of horses, cattle, sheep and swine—the best kinds of wheat and other grains, as well as improved agricultural implements, of various forms and descriptions. Through their exertions, and the introduction of ploughing matches, and other useful incentives to rivalry, a valuable change has been effected in the art of husbandry; straight furrows, clean fields, and a judicious rotation of crops, have been obtained. These improvements, aided by a praiseworthy competition amongst the farmers themselves, have secured such returns for their labor, that despite the low price of wheat hitherto, the agriculturalists are, as a class—I may venture to say, in a prosperous condition, if we may judge from the flourishing appearance of their farms, from their handsome and well built dwelling houses,

their large and commodious outhouses and barns, and the highly improved character of their stock. These things, added to the creditable show which they make, on suitable occasions, with their excellent carriages and horses, and the comfortable and independent manner in which they live, betoken an advanced state of improvement amongst us, that cannot fail to bring with it a large share of happiness and contentment.

In our villages, towns and cities, the same progress is visible. The wilderness has become the thriving village—the lately insignificant village has become the busy and populous town—and the town of a few years existence has grown into a city, with gas; filled with throngs of busy people, and lined with shops, which, whether we look at their magnificent plate glass windows, massive doors or well filled shelves, would not disgrace Regent street or Oxford street, London.

Correct styles of Architecture have of late years been introduced, and generally adopted, not alone in the chaste designs of our many public buildings, but by our enterprising citizens, in the erection of their splendid private dwellings. And landscape gardeners, find ample employment in beautifying the grounds, and improving the outskirts of our large towns and cities.

On our Lakes, Rivers and Canals, are transported every year, an increasing amount of the surplus productions of our Farms to other markets, and manufacturing goods are brought back in their stead. These same Rivers and Lakes are now navigated by fleets of noble steamers, which for safety, speed, and convenience and elegance, can scarcely be equalled—and our sailing craft, occasionally take in their loading on the shores of Lake Huron, and unship in the spacious Harbor of Halifax.

#### GREAT RESULTS FROM SMALL BEGINNINGS.

Berthold Schwartz, according to a common report, having, in some of his experiments in alchemy, put into a common mortar a mixture of saltpetre and other combustible materials accidentally dropped in a spark, when he was astonished to see the pestle fly off into the air. This incident furnished two ideas—that of the increased power of gunpowder when confined, and that of its applicability to the propulsion of heavy bodies. These two simple ideas, carried out into practice, produced guns, large and small, and revolutionized the entire system of war.

The vibrations of the lid of an iron tea-kettle gave the first hint of the expansive power of steam. This hint, followed out through innumerable experiments, finally ended in the modern steam engine, which is fast revolutionising the mode of both land and water carriage.

The first idea of our modern railways—and it is a very simple idea—came from a mine near Newcastle, England. The plan occurred to some one of "laying rails of timber exactly straight and parallel; and bulky carts were made with four rollers fitting those rails, whereby the carriage was made so easy that one horse would draw four or five chaldrons of coals.

Thus coal was conveyed from the mines to the bank of the river Tyne. This mode was in practice in 1676; how much earlier, is not known to us, probably to no one; for, though a great idea, it was like most other great ideas, thought of little account at the time of its origin. Like Columbus's method of making an egg stand on the big end by jarring it so as to break the yolk, it was thought to be too simple to deserve any praise. Nevertheless, out of this simple idea sprang one hundred and fifty years afterward the modern railway.

It had been noticed by chemists, that flame cannot be made to pass through a tube of small diameter. In the hands of Sir Humphrey Davy, this fact grew into the miner's safety lamp, which has saved the lives of thousands.

The magnet had been for centuries a plaything in Europe. At last its property, when freely suspended, of taking a north and south position was noticed, and applied to navigation. This resulted in the discovery of America.

The power of the sun's rays to discolour certain substances, had long been known. In the hands of Daguerre, this great fact grew into a most beautiful and perfect method of taking miniatures.

From Volta's simple pile, to Morse's magnetic telegraph, what a stride! yet this stride is only the carrying out into practice of certain very simple properties of galvanism and Magnetism.—*Ohio Observer.*