

have made the beginning of an institution which shall bring science to the aid of agriculture. Chemistry has the same great store of wealth in reserve for agriculture that it has lavished upon the arts, and we must instruct the young farmer how to obtain the hidden treasure. The farmer needs more light, and this we are preparing to supply. We also hope to strengthen the arm of the mechanic, that he may multiply his productions by means of a mind of higher culture. Millions have been wasted for the want of thorough scientific and practical training among our mechanics. The great wealth of our nation has been derived from mechanism applied to agriculture. We must labor earnestly in this inviting field. I hope we have made a beginning towards a condition in which men shall have enlarged culture, greater truthfulness, honesty and manliness, and higher aims, and be better qualified to serve their fellow-men, their families, and their God. It shall be our aim to make true Christian men, without dwarfing or paring them down to fit the narrow gauge of sect. Finally, I trust that we have laid the foundation of a University where every person can find instruction in any study."—*Globe*.

7. PROVISION IN THE OLD WORD AND THE NEW FOR SCIENTIFIC EDUCATION.*

Practical education is daily receiving more and more attention. Both in the old world and in the new, schools of practical and applied science are being established, and well supported. Colleges have added scientific departments, and seats of learning have established scientific degrees—chemistry and practical mechanics are taught in schools in England, to meet the requirements of the middle class school examinations of the Universities of Oxford and Cambridge—and in the United States polytechnic schools flourish and multiply. Why have we no such educational institutions in Canada? The country is not too young—the population is not too sparse. In the far West, St. Louis and Chicago, these institutions spring up and receive a ready support. Have our countrymen sufficient intelligence to see their importance and go and do likewise? The Polytechnic College of Pennsylvania is situated in Philadelphia, and was founded in 1851. The courses are: Civil engineering, practical chemistry, agriculture, mines and architecture. These extend through two years. The number of students in 1865 was 136.

The Polytechnic Institute in Troy, N. Y., was founded in 1824. It has courses of civil engineering, mechanical engineering, topographical engineering, natural science, and chemistry. Each course is four years. The attendance in 1866 was 150. Union College, Schenectady, N. Y., has similar courses—two years duration; attendance, 40.

The Sheffield Scientific School, connected with Yale College, New Haven, Conn., was founded in 1841. The courses are from two to four years; attendance, 57. The Lawrence Scientific School, Cambridge, Mass., near Harvard College, was founded in 1848. Courses: Chemistry, zoology, botany, geology, engineering, comparative anatomy, physiology, and mineralogy, one year each; attendance, 75. The Chandler Scientific School, Hanover, N. H., was founded in 1852; general courses, three years; scientific courses, one year each; attendance, 48. University Michigan, Ann Arbor, same courses; one year each; attendance, 82. In New York city there are several such schools, viz: professional, scientific department, university courses, civil engineering, analytical and practical chemistry; two to three years; attendance, 31. Cooper Union, Science and Art—attendance, including high schools, 1,281. Collegiate and Engineering Institution, founded in 1862—courses, two years. Columbia College, School of Mines—course of six years; attendance, 33. Massachusetts of Technology, in Boston—full course four years; science, two years; attendance, 72. So satisfactory has been the working of these schools, and such the support, that some score of others are projected—Worcester, Ithaca, Suwanee, Franklin, Providence, Detroit, St. Louis, and Chicago, are establishing, or have recently established, similar schools for students above 16 years of age, and more or less engaged in trades or professions. It is surely time that Canada provided for her industrious sons and her skilled mechanics similar schools of training, where the cunning hand may be directed, by the well stored brain, into a thousand paths of useful knowledge, and the path of life be consolidated and enlivened by the twin treasures of science and art.—*Montreal Gazette*.

II. Papers on Education in Canada.

1. EDUCATIONAL STATUS OF CANADA.

The Journal of Education for Quebec says:—

In order that our readers and friends of Education in Canada may understand our position in the scale of education, we present a few

figures, in a tabulated form, which speak more eloquently than words. After a perusal of the following statistics, we may justly feel proud of the comparative spread of Education in Lower Canada:

	Population.	Pupils.	Prop.
Italy, 1863.....	22,184,560	1,109,224	1 in 20
Spain, 1865.....	16,301,000	1,569,067	1 " 10½
France, 1850.....	35,779,222	3,407,545	1 " 10½
—, 1862.....	37,472,000	4,336,368	1 " 8½
Austria.....	36,514,466	2,605,000	1 " 10
England, 1858.....	16,921,888	2,144,378	1 " 7½
United States, 1860.....	30,000,000	4,300,000	1 " 6½
Prussia, 1860.....	16,285,036	2,605,000	1 " 6½
Lower Canada, 1861.....	1,111,568	180,845	1 " 6

The following, which we add for this Province, will shew that Upper Canada is quite in advance of all the countries named by our confrere:

Upper Canada, 1861.....	1,396,091	344,117	1 " 4
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2. NEW DOMINION ENGLISH, THE LANGUAGE OF THE PROVINCES.

To the editor of the *Halifax Witness*, writes in the last number of the *St. John Literary Quarterly*:

"The United States have to some extent enriched the language which they have inherited from the mother country, though unfortunately, they have in some respects taken very unpleasant liberties with it. The best English in the United States is heard in New York and Philadelphia.

"Cockneyism is unmercifully scourged with ridicule whenever it shows its head among us. Still, there is remarkable variety. I can distinguish a lumberer from a farmer by his speech. I can tell by the same sign whether a man comes from the St. John Valley or from the North Shore. Quite as easily you can distinguish a fisherman's English from a farmer's or a lumberer's. You could not mistake a Pictou man for a Lunenburg, or a Yarmouth man. A "Cape Bretoner" is never mistaken for a man from Annapolis or King's. The Tight little island over the Strait, has its linguistic characteristics too; but it is not of the "Dominion,"—it is an independent dependency.

"The English of the Provinces is materially influenced by the mother tongues of the original settlers. French, Gaelic, Irish, Welsh, German and a variety of Indian dialects have all had possession of more or less of the ground, but all bow the head to the supremacy of the Queen's English, and the young people generally, from one end of the Dominion to the other, are paying the most practical homage to the imperial language by learning it. In the heart of the loneliest settlements of Lower Canada, where French is all in all, you are sure to find at least one or two individuals or families who have mastered a little English—enough to understand the stranger and make themselves understood by him. It is the same with respect to Gaelic in Cape Breton and Antigonish. There can be no serious doubt that all these weaker "tongues" must give way to the tongue of the majority. Step by step, their power is circumscribed, and the circle of their influence narrowed. The newspaper, the common school, the railway, the platform and the pulpit, are all enlisted overwhelmingly in the service of the English language. French will struggle long in "Quebec," and in sections of the sea provinces, but it cannot hope to run a successful race against its mighty rival.

"Since, then, English is to be our language, we should take care that it be of the right stamp—"undefiled,"—worthy of its name and its claims to precedence. Nowhere in the British empire or elsewhere is English better spoken than in Toronto, Kingston, Montreal, St. John and Halifax. We are free alike from the nasal twang of the typical "American" and the absurd "refinements" of cockneyism. What is of more importance, our spelling is still almost pure. We have resisted Websterian innovation, and clung faithfully to the traditions of the English Schools.

"Still there is danger, and we should carefully watch against it. Not a few of our papers spell honour, favour, Saviour, etc., without the *u*. But this is an "Americanism" of the most unreasonable sort, against which we should set our faces 'as a flint.' Webster's 'reforms' in spelling are in every instance worse than worthless, and very few American scholars of any standing approve of them. When he commenced his reforms, more than sixty years ago, he changed *acre* into *aker*, *keg* into *cug*, *crowd* into *croud*, *group* into *groop*, *heinous* into *hainous*, *island* into *iland*, *sew* into *soe*, *soot* into *sut*, *steady* into *steddy*, *porpoise* into *porpess*, and *tongue* into *tung*. He had the unspeakable coolness to reform women into *wimmen*! He himself saw the folly of his course in such absurd "reforms" as these, and if you turn up a "Webster" of the present day, hardly

* See also article on page 145 of this number.