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NOTES.

ENGLISH names, according to a correspondent to the New York *Tribune*, are not always pronounced as written; thus St. John is "Singeon," Beauchamp is "Beecham," Saunarez is "Summery," St. Clair is "Sinclair," Derby is "Darby," Berkeley is "Barkly," Featherstonhaugh is "Freestonhay," Urquhart is "Urcot," St. Maur is "Seymour," Glamis is "Glahms," and Baroness Burdett-Coutts calls herself *Burdett-Coutts*.

COMPETITION is the life of trade and the stimulus of journalism. The *Educational Weekly* lies upon our table, a new and active competitor for the people's favor. *Grip* is publisher, and John E. Bryant, M. A., editor. Its contents are varied and interesting. It has taken lines differing somewhat from its rivals, and will doubtless make a path for itself. Educational weeklies are increasing—the "survival of the fittest" will give us, we hope, a well developed journal that will assist both pupil and teacher, and render service to the cause of education in Canada.

MR. C. H. KOYL, B.A., has been called to Washington to fill the chair of Professor of Physics in the Washington University. The high stand taken as a Fellow of Johns Hopkins University, Baltimore, has secured him the position. Thus Canada loses her young men. We have no university; our graduates must go across the line to complete their education, and the United

States secure their life-work. But we will not complain. Prof. Gould in the chair of Political Economy and History, and Prof. Koyl in the chair of Physics, will make a pair of professors who will show the six hundred students of Washington what stuff Canadians are made of, and will give Victoria a *status* in the American capital. Are there any more chairs vacant?

NEW YEAR'S DAY brought pleasure and happiness, we trust, to all of our readers; but to many the day would have been darkened by a cloud had they known that Mr. David M. Stickney followed the old year ere the merry bells had scarce died away. After a short illness of eight days this persevering young man, this true friend, this devoted teacher, quietly and contentedly passed away. Intense earnestness and overwork may have hurried somewhat his departure. We had the sad satisfaction of attending his funeral at Shannonville on Saturday, January 3rd, and witnessed the last tributes paid him by friends, pupils and relatives. Friends, young and old, are dropping all around us, and in his own words, uttered but a short time ago, we can only ask, "Who next?"

UNIVERSITY CONFEDERATION is now before us, and the scheme open to full discussion and criticism. We have neither time nor space in this issue to deal further with the question, but shall have something to say in our next. At present the attitude seems to be—Wycliffe, Knox, McMaster, and St. Michael's in hearty sympathy; Victoria and Trinity agreeable *on certain conditions*; Queen's opposed, unless forced by the unanimity of the others and the desire of the Church. The opponents of confederation say that Victoria's terms are fatal to the scheme; the friends of confederation foretell the sure success and final consummation of the scheme. Opposition among Victorian alumni will come from older-graduates rather than from the younger. But we must await another issue, when we hope to deal more fully with this important matter.

ENGLAND has voted five million pounds to fit up her navy. To a foreigner it is rather interesting to watch the quaking Englishman as he reads of the inadequacy (often imaginary) of the "walls of England." An idea has struck our sanctum, as though fired from a man-o'-war, that the navy is all right, that the deficiency is in the pockets of the English shipbuilders. The builders on the Clyde and elsewhere may be running short of work, may in some manner peculiar to monied men gain the ear and pen of journalists, and the thundering alarms of the great London daily may be but the opening boom of a greater boom that will enrich the builders. The Canadian navy might also be in a most precarious condition had we only a few energetic, influential shipbuilders in need of fortunes.

THE *Varsity* put on a neat holiday attire, and showered on its readers a profusion of literary buds and blossoms. Take it all in all, the Christmas number was equal to all previous numbers of the year combined. The first interrogation is by Dr. Wilson, who asks—

Did ever on painter's canvas live
 The power of his fancy's dream?
 Did ever poet's pen achieve
 Fruition of his theme?
 Did marble ever take the life
 That the sculptor's soul conceived?
 Or ambition win in passion's strife
 What its glowing hopes believed?
 Did ever racer's eager feet
 Rest as he reached the goal,
 Finding the prize achieved was meet
 To satisfy the soul?

DARWIN'S BELIEF.—"Unquestionably Dr. Darwin was a theist, and one of a very reverential tone of mind. There are hundreds of passages in his works which imply this, where it is not stated in so many words. The last paragraph in his 'Origin of Species,' however, is most explicit on the subject. Thus it runs: 'There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a

few forms or into one; and that whilst this planet has gone cycling on, according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been and are being evolved." We have no faith in Darwin's theory, but it is only just to the memory of a great man to say that he was no atheist, and never showed any sympathy with infidelity."—*Dr. Sexton.*

"PROGRESSIVE MORALITY," by Thomas Fowler, LL.D., F.S.A., President Corpus Christi College, Oxford. J. Fitzgerald, publisher, New York. "The progress of natural science has been not without effect upon the data of the moral and intellectual sciences. The present work, by an author of the highest eminence, is an attempt to show wherein the principles of moral conduct are reinforced or explained by the application to ethics of the methods of research employed in the study of nature. The author aims to present a scientific conception of morality in a popular form, and with a view to practical application rather than to discuss theoretical difficulties. His views are in full harmony with those which, making exception for a few back eddies in the stream of modern thought, are winning their way to general acceptance among the more instructed and reflective men of our day."

A TOOTH CARPENTER.—A medical doctor describes the teeth manufactured for the Japanese as follows: "The plates are made of wood, and the teeth consist of tacks driven up from the under side. A piece of wax is heated and pressed into the shape of the roof of the mouth. It is then taken out and hardened by putting it into cold water. Another piece of heated wax is applied to the impression, and after being pressed into shape is hardened. A piece of wood is then roughly cut into the desired form, and the model, having been smeared with red paint, is applied to it. Where they touch each other a mark is left by the paint. This is cut away until they touch evenly all over. Sharks' teeth, bits of ivory or stone, for teeth, are set into the wood and retained in position by being strung on a

thread, which is secured at each end by a peg driven into the hole where the thread makes its exit from the base. Iron or copper tacks are driven into the ridge to serve for masticating purposes, the unequal wear of the wood and metal keeping up the desired roughness. The ordinary term of service is five years."

AN old letter has come into our hands, dated "Victoria College, March 1st." It may turn back the minds of many of our readers to olden times, as the year of its production was at least thirty years ago. It is evidently the production of a fresh arrival at this ancient seat of learning. We give a quotation:—"I have to write another long letter yet to-day; Sundays I find is the only time I have to spare and we have to attend church twice a day or we are marked and generally very long services have a nice church and full attendance there is at least six or 8 males to one female in it. When we turn out it has to fill up at once for we goe by the hundred the most of the students go to the Methodist church and there is near three Hundred of us. You would laugh to see us stringing along with our fix up on all so nice each I suppose trying to leave some impression on the hearts of the few ugly ladeys we see every Sundy I will say there is a few exceptions." Student life is the same the world over within certain limits, though we hope that an improvement has taken place in orthography. The above extract will be suggestive to many old college students.

HEREAFTER teachers in high schools and collegiate institutes are to receive professional training at certain institutes to be set apart for that purpose. The *Educational Monthly* comments as follows:—"We submit that it is asking too much from men who have given evidence of considerable ability in the management of schools and the teaching of classes to require them to pursue professional training in a secondary school for a further term of three or four months. It seems to us that what is required in the case of high school assistants is attendance at a college for a year or two, together with the passing of the usual

examinations of such institutions for these years. In truth, we trust the day is not far distant when it will be possible for all our high school masters and teachers to be graduates. The case of graduates without experience in teaching is a difficult one. There is no doubt that masters have felt for some time that something should be done to better equip, professionally, young graduates just entering on the difficult and exacting duties of a teacher. The proposed solution of the problem is, to say the least, crude and unsatisfactory."

Queen's College Journal contains a most interesting address by Prof. Goodwin on "Alchemy." To Hermes Trismegistus he credits the following formula for the preparation of a philosopher's stone: "Take of moisture an ounce and a-half; of meridional redness, that is the soul of the sun, a fourth part, that is half an ounce; and of auripigmentum a half ounce, making in all three ounces." Geber, the earliest recorded Arabian alchemist, wrote a treatise on "The Height of Perfection;" so unintelligible, however, as to be termed *gibberish*. The greatest of alchemists was Roger Bacon, the most learned Friar of his age. Last of all came the great Paracelsus, or, as he termed himself, Philippus Theophrastus Aureolas Bombastes Paracelsus ab Hohenheim. He was accustomed to wind up a lecture to his students by such a remark as, "I am, beyond dispute, the greatest physician among the Germans." Besides the fruit of his work, he has bequeathed us the term *bombast*. "The alchemists delighted in mystery—allowed their imaginations to run riot through our planetary system, finding a bond between the sun and lustrous gold, between glowing Saturn and dull lead; or peopling chemical substances with myriads of controlling spirits, explaining all mysteries by shrouding them in deeper mysteries. Their very *faults* are dear to us, and after some bold curve or strong upward stroke reveals to us the bright genius that strove in that far-off shadowy age."

A CHANGING MOOD—THE SUBJUNCTIVE.

SHERIDAN, Walker, Perry, Jones, Fulton, Jameson, Knowles, Smart and Reid may talk of "sleivers," but if the mass of people talk of "slivvers," slivvers will they be, and to the pronunciation of the latter the former must adapt themselves. Custom makes and unmakes dictionaries, clips off Anglo-Saxon case-endings, decapitates unwieldy sesquipedalian combinations of syllables, and modifies our whole language from article to verb. If custom terms a man "a" hero, and speaks of "an" heroic deed, she settles the question, and even the most contrary pedant must bow before her. Custom *uses* words and often *abuses* them. Edge-tools become blunt by use—so do words; crystals are smoothed by handling—so are words; diamonds dim in lustre by familiarity—so do words. Words are formed and reformed, used and abused by the common people, and though some may scornfully recall "*oli profanum vulgus*," yet it remains true that this same profane vulgus rules the world to a very great extent.

It is not to the pronunciation of words that we wish here to refer, it is to a certain use which will, perhaps, carry us back to the days of school and English grammar. Do not let that, however, interfere with our interest and attention. Built upon the Anglo-Saxon, the structure of the English language has been changed and altered by the mingling of Latin, French, and even Greek ideas, so that the architecture now is somewhat complicated. The ravages of time, the crumbling of the ages, the mellowing of years, are rendering more and more homogeneous the material, and we at times look long and intently before we are able to trace out the huge foundation-stones of Saxon, or the gilding and frescoing of Norman.

The tendency of time and use is to simplify words and terms, to change the language from synthetic to analytic. With this simplifying of speech in certain directions, there is creeping into the language of even our most correct speakers and writers of the present day a carelessness in the use of the

subjunctive mood. The mood is being both disused and abused. Many, doubtless, remember how, at first to our sorrow, afterwards to our delight, the Greeks and Romans gave prominence to the slighted mood, making it seem to express shades of meaning that in English require elaborate clauses. Much of the beauty of the dead tongues is buried with the past because the living tongues have forgotten how to express the thought. Truly we might say that no language can be fully appreciated except by him who can *think it*. Homer needs a Homer to interpret and translate him.

Two shades of meaning in the Anglo-Saxon have faded from our perception; indirect questions and statements reported by others, not given as facts verified by the speaker, were expressed by the subjunctive. Mason, in his valuable grammar, defines the subjunctive mood as that which "comprises those forms of a verb which are used when a statement, question or supposition has relation to an event or state of things which is only *thought of*, and which is not treated by the speaker as *matter of fact*, independent of his thought about it." The definition may need and is worth careful study. The principal *vulgarisms* are found in sentences relating to condition, especially after the preposition "if." The beauty of the proper uses of the mood is easily seen in the two sentences:—"If it is snowing (a fact) I will stay in," and "If it snow this afternoon (an uncertainty) I will stay in." Again, "If the man is guilty (a fact) he is not to be pitied," and "If the man be guilty he will be punished." The improper use of the indicative mood in the second clause might cause serious consequences. The man who says, "If I am a liar," confesses that he is a liar, while the man who discreetly says, "If I be a liar," puts the question in a position more favorable to himself, since he may, or may not, be a liar. Mason classes as vulgarisms, "If he *was* to leave town," "If that *was* to happen," etc. Do we not sometimes, then, show ourselves vulgar? There is an utter impossibility expressed in the words, "If I was you." "If Victoria is Queen of England" expresses a fact;

but "If Victoria were Queen of the United States" expresses a mere possibility or conception of the mind, and should, therefore, be different from the former. We have not space to deal fully with the question. We wish merely to draw attention to the danger that we are in of being considered *vulgar*, of using bad grammar, of losing force and beauty in our expression of ideas. Since it is the people, not the individual grammarian, who makes the moods and tenses, let us, as parts of the people, do our best to preserve this important part of our language from falling into abuse and disuse. In our changeful and uncertain moods let us not slight that very important and expressive mood, the subjunctive.

THE DEPTHS OF GENIUS.

PROFESSOR SYLVESTER, the great mathematician, who has lately been recalled to England from Johns Hopkins University, is a trifle absent-minded. Once returning to Baltimore from a vacation in England, he got as far as Philadelphia when he missed a paper on which he had made some important calculations. Turning on his heel, he went immediately back to England, and was just leaving the steamer at Liverpool when he found the missing paper in the pocket of the coat he had been wearing all the time. He had not noticed it there before because he had been so deeply absorbed in the problems, how to turn a hollow sphere inside out without breaking the surface, and how to separate inter-linked rings without cutting them, both of which feats he claimed would be possible if only mathematics dealt with four dimensions instead of three.—*Ex.*

"HENCE, as the moral law is at once the formal determinator of an act by pure practical reason, and is likewise the material and yet objective determinator of the object-matter of an act as good or evil, so it becomes at the same time the subjective determinator to such an act by operating upon the morality of the subject and effectuating an emotion which advances the force of the law upon the will. But in all this there is no antecedent feeling given in the subject himself pointing to

morality, which last hypothesis is a downright impossibility, every feeling being of the sensory; whereas the spring of ethical volitions must be quite defecated from every sensitive condition."—*Kant*.

THE following parody on Walt Whitman's "poems" appears in "The Fate of Mansfield Humphreys," a novel by Richard Grant White, the well-known Shakesperian writer. Mr. Washington Adams, who is being passed off at the residence of an English nobleman as a typical American, produces the piece out of his pocket as "one that Walt Whitman never published yet; but I kerry it around," he says, "to read sorter b'tween whiles."

I happily myself.

I am considerable of a man. I am some. You are also some. We all are considerable; all are some.

Put all of you and all of me together and agitate our particles by rubbing us up into eternal smash, and we should still be some. No more than some, but no less.

Particularly some, some particularly; some in general, generally some; but always some, without mitigation distinctly some.

O eternal circles, O squares, O triangles, O hypothenuses, O centres, O circumferences, diameters, radiuses, arcs, sines, co-sines, tangents, parallelograms and paralleloipedons, O pipes that are not parallel, furnace pipes, sewer pipes, meerschaum pipes, briarwood pipes, clay pipes; O matches, O fire, and coal-scuttle and shovel and tongs and fender, and ashes, and dust and dirt!

O everything! O nothing!

O myself! O yourself!

O my eye!

I tell you the truth. Salut!

I am not to be bluffed off. No sir!

I am large, hairy, earthy, smell of the soil, am big in the shoulders, narrow in the flank, strong in the knees, and of an inquiring and communicative disposition.

Also instructive in my propensities; given to contemplation; and able to lift anything that is not too heavy.

Listen to me and I will do you good.

Loaf with me and I will do you better.

And if any man gets ahead of me he will find me after him.

Vale!

—*Varsity*.

ALPINE AND ARCTIC FLOWERS.

ONE finds a singularly beautiful flora above tree level in the Rocky Mountains. In the evergreen forests on the mountain flanks, on the other hand, one finds few flowers, and what there are have a pallor and frail delicacy arising from their life in the shade. When trees give up the struggle with an adverse climate, one might suppose that smaller plants would lead but a stunted existence, buffeted as they are by every tempest and half the year snow-covered. On the contrary, these hardy little mountaineers show a rugged health that nothing disturbs, and their flowers display a freshness and richness of color that is a constant delight to the explorer.

The tardy spring in these elevated regions scarcely begins till July, and frost and snow may pay them a visit any week in the year, but the flowers are ready for every emergency. If the snow drives across the bleak slopes, they close up snugly and patiently wait for better times. A half-hour's clear sky reassures them, and a myriad of starry eyes open laughingly to the sunshine.

The rare flower carpets that cover many of the loftier plateaus would charm an artist's heart. Ruddy browns and sober purples mingle with tones of orange and gold and mossy green. Touches of grey lichen harmonize the more startling combinations, while the intense crimson and scarlet involucres of one common plant give accent to the composition. The heathers, with their white or purplish red, or yellowish flowers, cover many spaces so closely that other flowers can hardly peep through.

The whole effect is very foreign to the eye of an eastern Canadian, though a few flowers look like errant cousins of old Ontarian friends. For instance, the spring beauty, adder's tongue and columbine have representatives there, but all with a modification. The spring beauty opens about the end of June, and is much smaller and less brightly colored than its handsome eastern sister. The adder's tongue has a different

yellow, and is prettier than ours. The columbine is like ours in form, but in color is delicate yellow.

The general look of these mountain dwellers is, however, quite unlike the ordinary plants of Ontario. Strange to say, they show far more resemblance to the flowers of the Alps or of Arctic Norway. For example, the birch which grows in bushy tufts on the Rocky Mountains and their foothills has small round serrated leaves, just like those of the Arctic birch creeping among the mosses at Hammerfest.

Why should such widely distant points show any similarity in their plant life? What connection is there between Norwegian fjelds, Alpine summits and the snowy peaks of British Columbia? Can plants swim oceans and overleap plains, or were they created where they stand, and made closely like one another because their conditions of life are similar?

Geology offers a theory accounting for these plant colonies so much alike, though occupying isolated peaks, scattered mountain chains and the dreary Arctic hillsides. They are blood relations.

Before the present geological age came an age of ice, when a gradual increase of polar cold drove an ever-widening circle of glaciers to encroach on the temperate lands of our hemisphere. The more delicate plants shrank from the icy breath of the conquering north, and withdrew to warmer parallels, while the hardy Arctic plants crept slowly south to take their place. An Arctic flora followed the Arctic climate into formerly temperate regions.

How this great encroachment of cold originated geologists have not quite settled, but there certainly was an age of ice, for the marks of glacial action are found over most of the north temperate zone.

At length the causes of the cold were removed, and the ice age slowly passed away. Warmth reasserted its power, and the glaciers melted before it. The plants of temperate climates slowly moved northward, reconquering their old territory, and driving before them the Arctic intruders. The latter

at length yielded to the unwonted heat and the keen competition, and took refuge, like hunted, beaten races the world over, in mountain fastnesses, or slunk back to their icy domain within the frigid zone.

Thus we may explain the close relationship of mountain plants to one another, and the growth of the north. The Alps, the Himalayas and the Rockies lie thousands of miles apart, but their plant inhabitants are alike descendants of an Arctic host, scattered in all directions by glacial cold, and still remaining as remnants on mountain tops too inhospitable for other plants.

KNIVSKJAERODDEN AND THE NORTH CAPE.

KKNIVSKJAERODDEN has lately been noticed by various scientific journals, and, notwithstanding its jaw-breaking name, has attracted no little interest. It is announced as a newly discovered fact that this low rocky point on the Island of Mageroe is farther north than the North Cape, and hence is the most northerly point in Europe. For once the scientific journals are away behind the times. This "newly discovered" fact was known years ago, as may be proved by referring to the June number of the *Canadian Methodist Magazine* for 1883, in which Dr. Coleman, of Victoria University, describes an involuntary visit to the bleak promontory with the unpronounceable name. He was one of the passengers on the ill-fated steamer *Nordstjern* (North Star), which went out of her course in a fog, and was wrecked on Knivskjaerodden four summers ago. It was well known among the shipwrecked passengers that the point was more northerly than the North Cape, and the thought was a sort of consolation during the miserable hours of waiting before help arrived from Hammerfest.

The magnificent North Cape, lifting its gloomy brow nearly a thousand feet into the cloudy Arctic sky, will, however, scarcely suffer from the rivalry of its insignificant and treacherous neighbor. In poetry and the popular fancy it will still remain Europe's foremost bulwark against the Arctic blasts.

THE CLAIMS OF SCIENTIFIC EDUCATION.

(Continued from page 326.)

THE desires of the intellect, however, cannot be quenched any more than those of the physical nature. They are stimulated by the phenomena that surround us as the body is by oxygen. The Chaldean shepherds could not rest contented with their bread and milk, but found that they had other wants to satisfy. The stars shed their light upon the shepherd and his flock, but in both cases with very different results. The quadruped cropped the green herbage and slept contented; but that power which had already made man the lord of the quadruped was appealed to night after night, and thus the intellectual germ which lay in the nature of these Chaldeans was stimulated and developed. We long for these facts as we do for our natural food, and their acquisition increases the strength and clearness of our mind just as surely as our daily bread invigorates our bodies.

That our minds require discipline no one will deny. But we wish to ascertain the best means of obtaining this discipline; we wish to get the cheapest and easiest way of procuring it. No one is willing to pay five dollars for an article which he can get just as easily for two; no man will resort to the sickle when he wishes to harvest his grain if he has in his possession a reaping machine and all necessary appliances. Now, as the cheapest and most useful mode of culturing our minds, I have no hesitation in recommending a careful study of the sciences. We find in them everything necessary to give us thorough mental discipline, and at the same time those physical benefits to which I have already referred. We can easily see the influence of science by glancing at past history. Every great advance in intellectual education has been the effect of some considerable scientific discovery or group of discoveries. The development of the truths of geometry produced the intellectual awakening under Socrates and Plato. The varied history of Rome provided for us our system of jurisprudence. The re-

searches and discoveries of Galileo, Des Cartes, Bacon, and Newton have moulded the whole of our modern thought.

There is no other course of study that gives better training to the observation than the study of science. The mind of the student is brought into immediate contact with facts. Direct appeal is made to nature, and through his senses he gains that practical education which fits him for active life. Do you study chemistry? Do not overlook the minor fact that though marsh gas is combustible a white heat is required to ignite it. It was the application of this principle which enabled Sir Humphrey Davy to invent his "safety lamp," whereby thousands of human lives have since been saved. Are you a mineralogist? Carefully notice, then, the rich living colors which chase each other along the surface of the tablet. These hues, unrivalled except by the blush of the rose or the glory of the rainbow, reveal to us treasures long hidden, and but recently brought to light. Do you scan the wonders of the infinitesimal through your microscope? Do not forget that you are dealing with a power which, directed by close observation, can ward off disease and death. Do you soar from world to world with your telescope? Remember that the accuracy of the knowledge you acquire is dependent entirely on the care with which you observe. Your minutest errors will be magnified a thousand-fold, and will lead you far, amazingly far, from the truth. The meteorologist builds up his whole scientific structure by carefully noting the phenomena of the atmosphere. The geologist teaches us the botany, zoology and anthropology of past ages by closely observing the buried records of antiquity.

The study of science also educates our reasoning powers. The facts observed are transferred to the domain of mind. Here they are examined and compared until a casual connection is found between them. This is the last act of the mind in its progress from the multiplicity of facts to the central cause on which they depend. In other words, it completes the operation of inductive reasoning. But our minds do not rest contented

here. Having ascertained the cause, we set out from this centre in another direction. If our estimate of the cause be true, we see that other results must follow. We prove the correctness of such an assumption by resorting to experiment. Here we descend from general principles to particular facts, and thus perform the process of deductive reasoning. Thus the circuit of thought is completed—from multiplicity to unity and from unity to multiplicity—and in so doing all our reasoning powers are exercised, strengthened and developed. All the subjects of natural science give us discipline in one or both of these processes. This discipline is all the more beneficial because the facts upon which it rests are indelibly impressed upon our minds. The materials with which we work are not mere creatures of the imagination, but are realities which we have seen with our eyes and heard with our ears. The results arising from such a practical and congenial mode of study are almost immeasurably superior to what may be gained by dealing with abstract nonentities.

But science gives the reason more discipline than what is derived from inductive and deductive processes. There are several branches of science which present to us a peculiar order of truths. The facts are so complex, indefinite and inaccessible as to embarrass inference, and call for a higher exercise of the mind. Experiment can only be partially carried on. A comparison of the various phenomena can be made only to a limited extent. Complete induction is impossible. In proportion as the sources of error become more numerous, the greater is the necessity for close application of the reasoning powers. This application is made by means of a new principle—reasoning from analogy. We find analogical reasoning largely made use of in the biological sciences—physiology, zoology, botany and geology. By a thorough study of these subjects we obtain the discipline requisite to fit us for the mental concerns of life. The world is not governed by a law which can be read at a glance. Life is not a plain, even pathway. We cannot predict the future. We must be prepared to cope with whatever may

present itself. What better preparation can we have for life than a training in the very thing which we shall most need? Reasoning from analogy is a powerful mode of proceeding. It may lead to grave results if used by those unaccustomed to such a method, but in the hands of those capable of guiding it in the right direction, it exerts an influence which cannot be over-estimated.

The study of the sciences is eminently adapted to develop the memory. This is for two reasons—the vividness of the impressions when received, and the natural order in which these impressions are arranged in the mind. The acquisition of scientific facts is made largely by experiment and observation. This mode is vastly superior to learning by frequent repetition, on account of the enormous mental waste involved in the latter. And when ideas so vividly stamped upon the mind are to be recalled, the process is easy, and at the same time healthful, because it is in accordance with nature. Again, if these impressions are arranged in the mind in a natural order of connection and dependence, they are readily remembered—one thought suggesting another. In other words, the more perfectly the facts are classified in our memory, the more easily will any one of them be recalled. At the same time, the health and vigor imparted to the memory by such recollection will be unsurpassed. It is the discipline which is derived from following nature's law, and which cannot be obtained in any other way. No other subjects compare with zoology and botany in these respects. Not only do they furnish abundant material for the exercise of memory, but by the comprehensiveness and perfection of their classifications they exercise it in its highest form.

Then by a thorough study of the sciences we impart valuable culture to the judgment. Such culture is most necessary in our day. We all require the ability to judge between the conflicting opinions which are offered to us as vital truths—to choose, for example, what doctrines we shall accept in matters of religion; to decide whether we ought to be conservatives, liberals, or independents; to form rational convictions on all the living

questions of the day. If we are farmers, we want to find what will improve our soil ; if merchants, what will influence the markets of our commodities ; if advocates or judges, who it was that did an unlawful act ; if physicians, what will conduce to the health of our patients ; if teachers, what is the proper way in which to impart instruction ; if ministers, how we are to dispense the bread of life to the people that they may obtain the greatest spiritual profit. Then how shall we best acquire this ability ? The Indian pilot, in guiding the vessels over the rapids of the St. Lawrence, does not sail in a different course to-day from what he did yesterday. There is only one channel through which he can go. If he diverges the least distance out of this fixed course, he dashes the vessel to pieces on the hidden boulders. So in the education of our judgment. Experience must be our guide. Only one process has been successful yet—the one which is followed in the physical sciences. If we follow any other method we shall only meet with failure and bitter disappointment. The plan which the study of science affords is simple, but, at the same time, productive of the highest results. We first observe facts and get our data established. Then we submit them to a critical examination, under the light of reason. Here our judgment is brought to bear upon them, telling us which to reject as useless, and which to accept as suited to our purpose. The principal difference between one human intellect and another consists in their ability to judge correctly of evidence. Most of us are very unsafe hands at estimating evidence when appeal cannot be made to actual eyesight. The intellectual part of our education has nothing more important to do than to mitigate this almost universal infirmity. To do this with effect requires all the resources which the most perfect intellectual training can command, and these resources are found most extensively in science. A man so disciplined will not blindly depend on the dogmas of others, but will follow the suggestions and dictates of common sense. His mind, at the same time, will be open to correction on good grounds, even in those with which it is best acquainted. The mind will not

be enfeebled by such an internal admission, but strengthened. It is certainly right that we should stand by, and act on, our own principles, but not right to hold them in obstinate blindness, or retain them when proved to be erroneous. The culture of the judgment is also necessary in our day because of the numerous fallacies and impostures which are current in society. Look at the quacks which cling like parasites to the medical profession. See the hold which the so-called "spiritual manifestations" have obtained, even on the minds of many of our Canadians. Such empiricisms will disappear before careful personal investigation. Allow cool, impartial judgment to bear upon them, put them in the crucible of keen scientific criticism, and they will vanish like the mists of the morning before the advancing majesty of the sun.

Such are a few of the reasons upon which the intellectual claims of science are based. Now, because of the valuable mental culture which scientific education imparts, and at the same time the practical uses to which this knowledge may be applied, the study of the sciences should be one of the first requisites in a liberal education. If our educational system gives us preparation for the varied activities of life; if it fits us to guide a constantly unfolding mental career; if it puts us in possession of the ripest and richest results of past thinking; if it qualifies us for the relations of citizenship and the multiform responsibilities of social relation; if it equips us for the intelligent consideration of those vital questions which the progress of knowledge is forcing upon society; then, indeed, it affords a proper discipline for the needs of the time. But if the student, after having faithfully mastered his collegiate tasks, finds on entering the world of action that his acquisitions are not available—that he has to leave them behind and begin anew—then his preparation has been far from suitable. Energy has been irrecoverably wasted. Time has been irretrievably lost. The chances are strong that he will pay no attention to modern knowledge, but thin down his intellectual life to the languid nursing of his schoolday memories. This has occurred over and

over again. Many a young man who has distinguished himself in his academical course has been deeply mortified by those in the common walks of life, who make no pretensions to higher education. He may really spend a long time in finding some one more ignorant than himself. If he talks with the driver of the stage that lands him at his own home, he finds he knows nothing about horses. If he walks into the fields, he cannot tell the difference between rye, barley and wheat. If he goes to the woods, he cannot distinguish maple from oak. If he falls into conversation with the gardener, he knows nothing of flowers. If he dines out, he, as a youth of improved talents, is expected to be literary, but his literature is confined to a few popular works of fiction. The same exposure awaits him wherever he goes, and whenever he has the audacity to open his mouth. At sea he is a landlubber, in town a greenhorn, in the country a know-nothing, in business a simpleton, in science an ignoramus—everywhere out of his element, in the clouds, adrift, or by whatever word ignorance is to be described. What such a student lacks is the education which he can use in everyday life.

Let me ask here, "Is the most thorough acquaintance of humanity to be gained by cutting the student off from the life of his own age and setting him to tunnel through dead languages, to get such imperfect and distorted glimpses of man and society in their antiquated forms?" In other pursuits it is held desirable to place directly before the student his materials of inquiry. Why abandon this principle in the case of its highest application? The modern world is full of artillery, and we turn out the youth of our country to do battle in it, armed with the shield and sword of an ancient gladiator.

Now, I do not wish to underrate the value of classical education. We cannot, without prejudice to humanity, separate the present from the past. The nineteenth century strikes its roots into the centuries gone by, and draws nutriment from them. The world cannot afford to lose the record of any great

deed or utterance, for such deeds and such utterances are prolific throughout all time. We cannot yield the companionship of our loftier brothers of antiquity—of our Socrates and our Cato—whose lives provoke us to sympathetic greatness across the interval of two thousand years. But my remarks are directed against an educational system in which the *young* student is detached from all his early mental connections, and expatriated to Greece and Rome for a term of years, to fit him for usefulness in this advancing age of the world. A classical education is valuable to a man more as opening up the avenues of ancient thought than as providing the instruments of modern culture. By all means let the gleaned wealth of antiquity be showered into the open breast. But while we “unsphere the spirit of Plato,” and listen with delight to the lordly music of the past, let us honor by adequate recognition the genius of our own time. The mind of our age is confronted with a host of urgent questions with which we are called upon to deal. These living problems the classical scholar evades when he shrinks from the present and retires into the past. What is the result? His defeat is exactly in proportion to his fidelity to his espoused course of study. He masters a disqualifying culture.

This Canada of ours has a right to expect from her institutions a training which shall embrace something more than declension and conjugation. In order to have a nation of stalwart inhabitants, possessing strong, healthy intellects, we must have physical science placed upon its proper basis. This basis is not the languid attention for the last three or four years of academical life after the mind has become wearied and wasted by the abstractions of earlier studies. Let this order be reversed. Let the young student start his pursuit of the sciences in the public school, and there receive not merely a superficial training in them, but a thorough groundwork. Let this be carried on to a greater extent in our high schools, collegiate institutes and high grade academies. Let an extended knowledge of science be made one of the chief requisites for

matriculation to our universities. Then our professors can give their whole attention to the higher departments of the subject, and not be trammelled by those simple branches which should have been mastered long ago. Then our universities will do work of real worth in our land. Our young men will not be compelled to go to a foreign country—there, perhaps, to sacrifice their lives—in pursuit of an advanced education in their favorite department. Let classics take the same rank in education that science does now. Three or four years in the latter part of one's student life are sufficient in which to obtain as thorough a knowledge of them as can be gained in the present system. The study of science gives the mental culture which classics are designed to give, and then with this culture the truths and grandeurs found in the Latin and Greek writings can be learned, and learned much more intelligently. The mind of the student will be trained so as to observe all the more readily the beauties of ancient lore, and classical works will then have in them a freshness that is totally unperceived by the young lad whose mind is dwarfed and oppressed by our current system.

That this is the natural order in which our education should be conducted is shown by the keen desire in youth for scientific study and experimentation. This desire manifests itself from earliest infancy. The child grasps at the moon, and his failure to seize it teaches him to respect distance. At length his little fingers acquire sufficient tact to lay hold of a spoon. He lets it fall, and jumps with delight to hear it rattle against the table. This experiment, made by accident, is repeated intentionally, and thus our young Newton receives his first lessons on sound and gravitation. There are pains and penalties, however, in the path of the young enquirer. He is sure to go wrong, and nature is as sure to inform him of the fact. He falls down stairs, cuts his hand, scalds his tongue, and in this way learns the conditions of his physical well-being. His enjoyments for a time are physical, and the confectioner's shop occupies the foreground of human happiness. But soon the

blossoms of a finer life begin to unfold themselves. He begins to see that the present condition of things is not final, but depends on what has gone before, and will be succeeded by another. He becomes a puzzle to himself, and to satisfy his newly-awakened curiosity, asks all sorts of inconvenient questions. He takes unmingled pleasure in annoying the house animals with his pop-gun. The twenty-fourth of May and the first of July are days of inexpressible delight to him as times to set off his firecrackers and torpedoes. Soon he delves into experimental science. He arranges for himself a chemical laboratory in which he expects to perform wonders which will put to shame the researches of a Faraday or a Roscoe. But presently he emerges. His garments are stained, his fingers blackened, his face blanched with terror, his eyes starting from their sockets. His attempts to ignite hydrogen have only ended in a magnificent explosion. His chemicals are wasted and his apparatus shattered. He thinks he will defer further investigations in this line until some future time. It is wonderful how early in life ambitions of discovery and invention arise. Perhaps during the whole of one's lifetime there are no enjoyments more keen or more invigorating to the mind than those felt in boyhood when these ambitions are gratified, whether by finding some plant hitherto unknown in the home district, by the invention of some new appliance to a toy, or by any other such trivial cause. Later on in life, when pursuing a systematic study of the sciences, how interesting it is to learn that by means of the pendulum the figure of the earth can be determined and its rotation demonstrated; that if the diurnal velocity of the earth were seven^{ty} times greater bodies would have no weight at the equator; that mechanical motion, sound, heat, light, electricity and chemical action are all different phases of the same phenomenon. Curiosity is the most marked mental characteristic of youth. It manifests itself in a thousand different ways. See the exuberant and enthusiastic delight displayed at the sight of every new thing. Notice the eagerness with which every object not understood is scruti-

nized. Watch the interest with which simplest effects are traced to their immediate causes. Does not the early study of science answer to an impulse implanted by nature in the human constitution? He who opposes such instruction must be prepared to exhibit the credentials which authorize him to contravene nature's manifest designs. Such credentials were never given. God intended us for progress, and we counteract His design when we deify antiquity and bow down and worship an opinion, not because it is either wise or true, but merely because it is ancient.

The highest of all our gratifications in the study of science remains. In its pursuit we are not doomed to be buried in the mouldering caverns of the earth. We are not tied to the surface of our world. We are permitted to more than soar with the eagle to the outskirts of the atmosphere. Our flight is not even confined within the limitless regions of space. But far beyond all these we are brought into the very presence of the Creator of all things. We are enabled to study His wisdom, His omnipotence, His benevolence, His goodness. We follow with our eyes His marvellous works, and trace the unbounded power and exquisite skill which are exhibited in the structure of the universe.

Many believe that the thorough study of natural science leads to materialism and atheism. They think the grand old truths of the Bible will be set aside as antiquated and out of date. They hold that a few of the sciences may be studied superficially, but must be pursued for only a short distance. But what science is there which we must avoid? It cannot be physiology. In the structure and economy of animal and vegetable existence there is not one fact in which nature disowns an intelligent cause. Even the wonderful forms of animal life, which can only be seen with the aid of a powerful microscope, declare to us with no uncertain sound that the hand that made them is divine. It cannot be geology. The monuments of departed ages do not contain one inscription which denies the being of a Creator, or proves the falsity of

the Bible narrative. It cannot be astronomy. There is not a syllable of atheism written on the face of the heavens. It cannot be chemistry. The laws regulating the attraction and repulsion of atoms, the affinities, combination and separation of molecules in fixed ratios and definite proportions, do not contradict the operation of an intelligent Creator. The only result we can obtain from these investigations is that atoms and the worlds alike proclaim the existence of a Deity. If we extend our observations to each of the sciences in turn, we find everywhere facts which harmonize with an intelligent creating energy. Why should Christianity tremble at the advance of science? Is it possible that the Word of God and the works of God should not agree? One of the grandest services which science is doing for mankind is the sweeping of infidelity and atheism out of the universe. What are infidels doing against the Creator in the light of science in its present development? Striking with a straw, chasing the sunset, writing on the surface of the water. Their researches, their eloquent writings, their brilliant addresses only seem to build up and strengthen the fabric of Christianity which they would demolish. Their darling theories and petted hypotheses, by which they intended to wipe God out of existence, have failed in their object. More than this, these theories have not only refused to obliterate God from creation, but have thrown their whole power and influence in the other direction, declaring to us with increased emphasis the existence of a Designer and Controller of the universe. It is not possible to make nature utter one discordant note to the proclamation of an all-wise Architect. We cannot look on a single work of creation without seeing the impress of God stamped upon it. We read His name in the soft south breezes, in the sparkling rivulet, in the silent dew, in the blade of grass, in the petals of the rose, in the twittering of the swallow. Nothing is too insignificant or too humble to reveal the power and goodness of the Creator. The smallest fact is a window through which the Infinite may be seen. It is the same with the mighty grandeurs of creation.

The sun reflects the smiles of the Almighty, and scatters them broadcast in blessings to all mankind. When the earth is wrapped in slumber the moon ceases not to proclaim His wonders. Every star that twinkles above us, every planet that moves through space, every flash of lightning from the angry sky, every tint of the peaceful rainbow, all bear testimony to the honor and majesty of the mighty God. The solos of joy and gladness are chanted by our earth, the orchestra of the firmament flashes forth the brilliant accompaniment, while the whole heavens resound in anthems of praise to Jehovah. Shall man be the only being to stand dreamily by and refuse to join in the chorus of praise to the eternal God? Does all this music, which is rivalled only by that which rings through the mansions of eternal day, tend only to lessen our estimation of the Most High? By no means. These very strains set our own hearts in vibration. We are constrained by overpowering testimony to fall in adoration before Him whose majesty rules the heavens, and whose dominion is from the river to the ends of the earth.

Then let science continue her advances. Let us study more carefully and more thoroughly the declaration God has given us of Himself in nature. Let the geologist dig deeper and descend lower into the strata of mother earth. His researches will only add strength and stability to the Rock of Ages. Let the botanist reveal to us the mysteries of vegetation. He will only increase the beauty of the Rose of Sharon and the Lily of the Valley. Let the astronomer not cease to pierce the heavens with his gigantic tube. His diligence and perseverance will only brighten the beams of the Sun of Righteousness upon the earth. By his revealings we shall be enabled to tread upon the pavements of gigantic planets, and number them among the stepping-stones which lead us to the world of joy beyond.

T. H. FOLLICK.

NATURAL LAW IN THE SPIRITUAL WORLD.

BY C. H. KOYL, B.A.

Late Fellow in the Johns Hopkins University.

THE pages of the V. P. JOURNAL are not open, probably, to any kind of religious controversy, and it is well so; nor would I care to enter upon any of the many theological questions so voluminously discussed since the discoveries of modern, physical and natural science have thrown new light upon them. For upon the subject of science and religion the great discussion has already taken place, and upon the question of how much weight should be allowed to knowledge in matters of religious belief, further words seem unnecessary. The civilized world is pretty well divided into the small class, who always take authority as their guide; the class, also small, who want physical proof for *all* they believe; and the great plurality, who accept the teachings of science where they are definite and certain, and adapt their creeds thereto, but in matters of doubt or of speculation, and where science has yet but hypothesis or probability, still prefer authority. It requires but little discrimination to predict the direction of change in our creeds and of relative increase in these classes as knowledge widens and as the phenomena of the universe are brought more and more within the domain of law. But it is noticeable that upon the theological side science is now courted as an ally, and it must be allowed that some conclusions drawn from analogies between the phenomena of the natural and spiritual worlds are unusually felicitous.

Among the many contributions to the subject, one has lately appeared which commands more than ordinary attention because of its originality, because of the high stand taken by the author in the work, and because of his candor and learning. The author of "Natural Law in the Spiritual World" is not content with asserting that the phenomena of the spiritual world are analogous with those of the natural, but postulates the *identity* of the *laws* of the natural and spiritual worlds; the laws of the

spiritual world being generally known as the "doctrines" of theology. I say postulates, as, though Mr. Drummond does not use this word himself, he in reality does postulate, for he assumes the truth of the proposition, and asserts that those who deny it must furnish the disproof. His argument is that, "As the natural laws are continuous through the universe of matter and of space, so must they be continuous through the universe of spirit; and if the law of continuity is true, the only way to escape the conclusion that the laws of the natural life are the laws, or at least are laws, of the spiritual life, is to say that there is no spiritual life."

It is very easy to seriously confuse an argument by intermingling the meanings of a word which has such various applications; and as, in order to prove that the same laws need not apply to the House of Hanover, to the Houses of Parliament, and to an ordinary dwelling-house, it is simply necessary to show that the word "house" has been used in different senses, so here it may be unnecessary to prove the non-existence of a spiritual life, but merely that the word "life" is not used with the same significance in the two cases. I wish that the argument did not appear to me open to such objection, for I am loath to break the charm which surrounds a work so pleasing and so suggestive; but even if my criticism is correct, the book will have lost only its philosophic and not its moral value.

I can best show, I think, that the term "spiritual life" is not used by Professor Drummond in the ordinary sense, by showing that, if his meaning is allowed, it leads at once to conclusions decidedly at variance with his own views and those of orthodox people in general; and as no such definition would be current, the sense in which the term is used in his book cannot be either his or theirs.

The assumption of the book is, that there is a spiritual life as distinct from ordinary animal or vegetable life as either of these is from the mere existence of inert matter; and that, as a stone cannot be supposed capable of growing more and more like a plant or animal, or more and more living, until finally it

reaches full vitality, so a man cannot be supposed capable of growing better and better, or more and more "spiritual," until, at last, he reaches a spiritual life; and the words of Scripture are taken as literal and exact, and spiritual life is the "gift" of God. Furthermore, he quotes, "Except a man be born again, he cannot see the kingdom of God." From which two propositions taken together, as they should be, it follows that if a man does not receive the "gift" of God, he cannot inherit eternal life. But if the attainment of spiritual life is not within the power of man—if a human being can no more reach it unaided than a particle of carbon can, unaided, bring itself into connection with a living organism and become itself living; if a man is as helpless in becoming living, in this new sense, as is *the unborn babe, in the natural sense*—then it follows that he is not accountable for the non-attainment of that spiritual life over which he has no control, which conclusion is contrary to the belief of Professor Drummond and everyone else, all of whom hold that eternal death is the proper punishment of those who do not attain eternal life.

To prove that the positions taken are not strained, it is merely necessary to mention the author's frequent references to the chasm which separates the mineral from the organic world, and the impossibility of crossing this chasm from the mineral side. Man is, in every case, represented as the mineral which cannot bridge the chasm, and the difference between animal and spiritual life is for him the chasm.

It does not break the force of the criticism to affirm that man, by virtue of his mental powers, may place himself in such a position in reference to God that he will be accepted of Him, and that it is this placing of himself in position for which he is responsible; for if God will *always*—which is the only supposable case—bestow spiritual life upon the man who brings himself into such a relation to Him, then the process is merely a natural phenomenon, and as strictly under the control of the natural man as is the opening of a door upon pushing the latch, or the flow of water upon raising the flood-gates. There is no longer

an unbridgeable chasm, and man *may* attain spiritual life by his own exertions. The term "biogenesis" will no longer apply, for the mineral *may* now become protoplasm and mortal man *may* put on immortality.

The argument is very short, and it seems to me needless to encumber it with words. If the assumption of the author is correct, and if the term "biogenesis" is applicable, then we are all to be judged, and acquitted or punished, as the case may be, for the attainment or non-attainment of a state for which we are as little responsible as is the babe for being born or unborn; and if we can place ourselves in such positions as to attain eternal life, then the term "biogenesis" is *not* applicable, and the proposition that there is a spiritual life as distinct from high moral attainment as animal life is distinct from the existence of the stone, is an assertion which needs proof.

I write not in opposition to orthodox beliefs, but as one who wishes his creeds to be logical; who sees no way to reconcile the idea of a spiritual life unattainable by honest, unaided effort, with the idea of man's responsibility; and who deprecates the promulgation by such authority of a doctrine of the "sudden" and "mysterious" entrance of man into a state for which he can as little prepare as the water of the stream for the state of the sap in the tree.

THE SCHOOL SYSTEM OF ONTARIO.

III.

IN the November number of the V. P. JOURNAL there is an interesting and valuable paper from the pen of Mr. McHenry. This paper is "offered as a friendly criticism" on the subject treated under the caption of this present short article.

Mr. McHenry naturally and correctly detects a weakness in the first two papers written by the undersigned. But this very weakness is only apparent and not real, inasmuch as the *whole plan*, as before my mind, was only partly revealed in my first two papers.

It was not my intention to advocate the exempting of university undergraduates from professional training. My plan in relation to this matter is quite simple and practicable, I think. Our universities give the fundamental and extended education which teachers need. But why not go further? Why not give the necessary "professional training?"

A large percentage of the graduates of—Victoria University, say—will be found in the ranks of the teaching staff of Ontario. This percentage is larger than that of any other single profession. If so, it is quite important that a most thoroughly equipped class of teachers be graduated from Victoria. So with the other universities.

Then it would appear natural that any necessary *professional training* should be provided for where the teachers are getting their education. This plan appears feasible. Could not the young men who purpose going into the profession of teaching take a special course in discipline, teaching, and classifying? Young men take special work in the moderns, in English, in science, mathematics and classics. Surely there can be added to the work of the universities a department for training the advanced teaching material for both public and high schools.

This would perhaps do away with the normal schools, and even lessen the number of model schools. But with qualified inspectors who could inspect public, model and high schools in his district, with training departments incorporated into our universities, *professional training* would be of a more efficient nature than at present.

This whole plan, as imperfectly sketched in these three papers, must certainly counteract the centralizing manifestations which belong to the present age, if only put into working order.

In no way would I reflect upon the Minister of Education, who is a most trustworthy gentleman, and an energetic worker in the direction of progress. The present system is of the past, and belongs to other gentlemen. But the fact remains that there is need of a *revolution* of matters rather than an intricate method of patchwork.

Let Victoria take the lead in this matter of professional training, and the result will be of the most important character. 1st. The Education Department will soon recognize its reasonable and practical nature, and exempt from further training in other schools. 2nd. Students will straightway turn their attention to Victoria, and take their education within her halls in preference to other places of learning. 3rd. Young men who would only take a Second Class A or B, according to our present plan, would, under the new system, be led in many instances to press forward to the university degree in arts or sciences. 4th. The other universities would soon follow and aid in carrying out this plan, if for no other reason, for the improvement of present methods. X.

EXTRACT FROM CORRESPONDENCE.

“WE rapidly approached that portion of Kansas noted for its terrible cyclones. At a place called Halstead we got into the edge of one. The sky in the west seemed to be inky black, and the rolling of the clouds indicated a terrible storm miles away. It started from the prairie grass millions of millions of what we passengers thought were grasshoppers, but the settlers call them snake-feeders.

“The country was level, and the few deserted-looking houses were built of *ādōbē*—which is pronounced out here as having three syllables. Adobe is a peculiar kind of clay made into large brick, which are sun-dried. The roofs of such houses are thatched, and of course in continued wet weather the house is liable to collapse. This portion of Kansas is a barren, sandy waste, and not fit for human habitation. The soil is of such a nature that where there are river courses it wears away the banks quite rapidly, and, strange to say, always leaves them perfectly perpendicular. In this country was observed the first sage brush, and a little farther on cactus in great abundance and variety. At Rocky Ford and its vicinity were seen thousands of cattle and some hundreds of horses. In this part of

the State the word ranche becomes the synonym for a grazing farm. As we saw the cattle and horses, we wondered what they could find to eat. These herds are sometimes confined to large tracts by means of barbed wire fences, but more frequently were herded by cow-boys. The surface of the prairie began to be varied by conical-shaped hills, as nicely rounded and pointed as though done by art. These increased in numbers as we approached the Rockies. During the eighteen or twenty hours previous to our arrival here we had been gradually ascending, and our train was hauled along by two engines.

“About the same time the large conical elevations were first observed we noticed hundreds of smaller ones all the way from six inches to three feet in height. At first we thought they were made by prairie dogs or some similar animal, but learned afterwards that they are made by ants. It is astonishing how strong these little insects are: they will haul out of their holes pebbles or stones weighing fifteen or twenty times their own weight. These ant hills are found all through Western Kansas and Colorado. Of course we saw the well-known prairie dog, and passed by many of their towns and cities. They are about the size of a kitten three or four months old, and are generally quite tame. As a rule they prove too quick for the hunter, and drop into their holes before a bullet reaches them. From Kansas City westward I noticed the change in the flora of the country. The great majority of the plants of Colorado are strangers to Canadian soil.

“We arrived at Pueblo, Colorado, at 10 a.m. Here I had my first near view of an adobe house and a family of Mexicans. The house was built on the outskirts of the city in the almost perpendicular face of a cliff. The women wear shawls over their heads, and both males and females have a decidedly foreign look. Pueblo has a population of 15,000, and is a stirring place. There are many Mexicans there, and a few Indians. The place is important principally on account of its smelting works.

“E. L. B.”

NOVA VICTORIA.

To the Alumni and Friends of Victoria :

IN reply to my former letter in this JOURNAL there came an answer from some quarter that, when matured, the scheme of confederation would be submitted to us for consideration. In my opinion that would not be soon enough. We feel an interest in it, and we should, I think, have an opportunity to express our views upon it. The steady and true growth of such a scheme will increase with the thoroughness with which it is canvassed; if the means be ineffectual to secure the end, then the scheme will be overthrown or changed. If we can obtain no light, let us push forward in the dark; it may be that we can of ourselves create a little light.

The necessity for a Methodist university now is placed upon a different basis from what it was at the foundation of Victoria fifty years ago. A necessity certainly existed then. The fact that the moral character of students cannot be too highly developed is sufficient reason why the Church should endeavor, as far as possible, to train and develop the character of its youth. How far is Methodism controlling her young men? At Mount Allison she graduates, say, ten yearly (a large average, I think); at Victoria her own trained graduates will number *twenty-five*. Is this a fair showing for Methodism—about thirty-five graduates annually? Since she teaches neither law nor medicine, such graduates are not, of course, Methodistically controlled. Where are the others? At McGill, at University College, and scattered elsewhere. Does thirty-five represent the full number of Methodists who each year attain to the standing of B.A.? We think not—nor double that. If thirty-five, if fifty-five, represent the number of B.A.'s annually, the literary training along this one line is not keeping pace with the numerical and financial growth of the Church. If Methodism is to control the large numbers of students who from year to year go up to Toronto, how shall she change her course? She must hold out as good opportunities as any other denomination; she must

place her graduates in as favorable a position for future advancement as others. After thoroughly weighing the question as far as light could be obtained, I have come to the conclusion that Methodism must do one of two things in order to control her own students and do her duty to her graduates: she must either place Victoria on equal footing with all others in the confederation of colleges, or she must establish Victoria in Toronto with an endowment equal to that of University College—removal to Toronto in either case. One thing she lacks, and that is money—much money, a million of money. Can she do it? She can if she will. Will she do it? She will if properly approached. I have said that Toronto, with a munificent endowment at her back, is the true destination of Victoria. The benefits accruing are many. I shall again enumerate some of them. She would exercise more universal control over the Methodist young men; she would place her youth on a footing of equality and friendly relationship with all others; she would take one step towards fraternity of sects; she would give her students the advantage of hearing more of the great divines of her own Church and others; she would give her students a better insight into life, open up the professions more thoroughly, and not place them at a disadvantage in entering these professions; she could do her duty to her professors by putting them side by side with their competitors and co-workers; she would arouse a more healthy rivalry between classes; she would consolidate her headquarters, making Toronto the centre of missionary, legislative, journalistic, and intellectual life for her own denomination, thereby conserving energy; she would increase the acquaintance of her students, and thereby increase her present and future influence; she would give her theological students more ample opportunities for supplying pulpits in Toronto and along the many railway lines centreing in the city. This great and influential Church, if she pretends to educate her sons, must give them the same advantages as they can acquire through any other channel.

Her students will do their share towards maintaining the

good stand of Methodism; her professors can be placed side by side with any other body of Canadian professors; her young men are anxious for the opportunity. One thing more—the money must be obtained. Are there not rich Methodists enough to give a practical demonstration of “the how?”

Yours sincerely,

AN ANXIOUS ALUMNUS.

A CANADIAN UNIVERSITY.

AS yet we have no Canadian or Provincial University; we have four or five colleges priding themselves with the name, but names will often cover a multitude of deficiencies. University life is, however, developing, and ere many years have gone by we hope that the people, the legislature, and the leaders of Canadian thought will be educated up to the idea and aroused to the necessity of a true university. Let us call things by their proper names: a college is a college, and a university should be one having the reality of a university. The true university will be an institution far surpassing anything at present to be found in Canada—one in which each professor is a specialist in his particular, single department, and the best in the country, the leader of thought and the authority along the one line that he follows. He must be liberally paid, having time, means, and all necessary apparatus at his disposal, in order that he may take men individually, graduates, and make specialists of them. In our opinion no student should be allowed to specialize until he has completed the B.A. course; then and then only can the majority of students choose a special line of study, and then only have they sufficient groundwork preparatory to specialism. The aim of the present colleges, then, should be the imparting of a general, thorough course in all the departments, and the rousing of an enthusiasm that will draw all into further lines of special work. The majority of graduates follow professions—law, medicine, teaching, ministry. The broad range of subjects coming under the consideration of law-

yers demands a most thorough education : our lawyers too often display their ignorance by the narrowness of their reading and knowledge, and injustice is the result. Our doctors must have Latin, must have all the Science attainable, should have French and German to keep up with the profession, and, what is too little conceded, should have a thorough insight into mental and moral philosophy. The teacher of advanced forms soon feels the awkwardness of his position and the confusion into which he is thrown the moment he is led beyond the subject immediately in hand. And the minister, mingling with all classes, finding his religion and theology touching all other departments of thought and investigation, above all needs a most elaborate and thorough course of training. In our opinion, no person should be allowed to enter one of these professions without a college training, and that college training should consist of a general, thorough grounding. The aim of the young man is always to get *at once* into his line of work ; but the ambition may be too impulsive, and the calm judgment of older persons will be found to be that there cannot be too much thoroughness and general work in laying the foundations. Work of this kind must, of course, be done by many colleges ; and whether they be provincial and confederated, or denominational and separated, makes but little difference, so long as they be thorough, earnest, and energizing.

There is always an anxiety and a hesitancy about sending boys away from home to a distant college. The location of colleges in small towns is advocated on the ground that temptations are lessened. This we know to be true from experience ; but while temptations are lessened, advantages and experience are likewise lessened. The boy must leave home some day—he must be driven out into the world to stand on his own feet some day—and the average college student will be found to be a more ennobling companion than the average companion of other lines of life. The junior work of colleges, in our opinion, could be safely and economically handed over to collegiate institutes ; and thus the age at which boys would leave home

would be more advanced, and they could then be safely entrusted to the companionship of college students, even in such a city as Toronto. We do not think that colleges should be retained in small towns simply that temptations may be lessened or outside influences overcome.

And then, our coming university! Whence, when, and where shall we look for it? To build it up and develop it needs the combined effort of all classes. The capital of a country should be its *head*—that is, the legislature, the commerce, the professions, the learning, should all have their head or centre at one place, and one would thereby influence the other. The university of Ontario, in order to perform its work thoroughly and influence and control thought, must be in Toronto, and all classes must help build it up. Some predict that the confederation of colleges will pave the way to a grand university; if so, we hope that the movement will succeed. If the closer competition thereby resulting would have the effect of *waking up* a few independent professors, who now, relying on their positions, put in a rather monotonous and sleepy round of existence, another great advantage will result. There are some Canadian professors who started their careers with a little burst of enthusiasm, and have not since been heard of. They need rousing.

Into what shall university life develop? Not into the aristocratic life of England, the duellistic life of Germany, or the lazy, hazy life of many American colleges; for the material to develop is of a different quality. If the material at present found in Canadian colleges be further moulded by more thorough and more general college courses, and then be handed over to a competent university, we have no fear of the stand that Canadian scholarship will take in the future.

The masses look to our legislators and college professors to take the initiative in such matters. The heads of the colleges are deliberating. With what result? No one seems to know. Is it not about time that the great majority of those interested in this movement be taken into confidence, and the public be informed of what is going on? Surely by this time some pre-

liminary points have been settled. When the scheme is decided upon, of course the people must agree to it. But how often do the people refuse to back up the decisions of their leaders! Let us have something to say about this matter while in formation; for if the scheme be handed over to the different denominations, and if they should pick at it, the result will be that it will be picked to pieces—whereas, if they can see more thoroughly the development of the scheme and are able to influence it, a unanimous opinion will be more easily attained. If the scheme be a good one, an open discussion of it by all classes will not injure it. It affects the people, and they have a right to demand, and they should demand, to know what is going on in the secret conclaves of ministers and teachers.

Yours truly, CANADIAN.

THE HEAVENS ILLUSTRATING THE ATTRIBUTES OF GOD.

BY BISHOP WARREN.

(*Second Paper.*)

IN the previous article we considered God's care of the minute and His management of the vast; His effort to enlarge man's thought and reveal Himself thereby.

Man has some idea of time. He gets it from a succession of sensations. He estimates a half century by his own, and a few millenniums by the recorded sensations of his race. That is as far as his knowledge by experience can go. But the earth tells of hundreds of thousands of years, and the heavens of millions. Man's idea of time would be feeble and puerile but for the help of the heavens. But now he goes back to the ice epochs and coal-making eras, to an earth that once filled all the orbit of the moon, and a sun that filled space beyond where Neptune sails his unseen voyage. Thus the heavens do their utmost to stretch man's mind a little way toward understanding that God is from everlasting to everlasting, and His years have no end.

Man has some idea of speed. He can run a mile in 4 minutes 40 seconds; by a century's breeding and care he can train a

horse to trot a mile in 2.09; he can drive his locomotive a mile in 40 seconds, and a rifle ball 2,000 feet the first second. That is man's best, but it is nothing to the speeds that surround him. Our great car, the earth, that carries 1,500,000,000 passengers, with capacity for 1,500,000,000 more, flies the magnificent curves and all grades, even to the perpendicular of the celestial spaces, at the rate of 1,102 miles a minute. The planet Mercury flies nearly twice as fast, the sun Arcturus three times as fast, and other worlds seventy times as fast, as a rifle ball. Yet these are the slow speeds of the celestial spaces. There is the velocity of the lightning, and of the light, 186,000 miles a second, and the practically instantaneous action of gravitation, whatever that is, through infinite space. Man counts it as one of his greatest triumphs that he has been able to measure the speed of light, to count its 700 million of million steps per second; but He who could conceive it when yet unmade, and create its swiftness, unwearied for a millennium, with a word, has set it as a symbol of Himself. God is light.

Man slowly creeps up to an enlarged idea of power. He manages to get his twenty pound body erect after a year's practice. Not one in a hundred comes to an ability to lift 600 pounds after forty years' training. The average man does no more in a day's work than three pounds of good coal could do. But man begins to enlarge his ideas by handling other powers he did not create and often cannot control. He manages the power of a horse—an ability to lift 33,000 pounds a foot in one minute. He compacts a force equal to four or five thousand horse-power into the cylinder of his engines. But these are not the A B C's of the power that flood the surrounding worlds.

Gravitation is the weakest of all known forces, yet it holds the earth to the sun with a force almost incomputable—certainly incomprehensible. A steel wire one-eighth of an inch in diameter has a tensile strength of 1,500 pounds. If the earth were held to the sun by such wires a mouse could not run about the side next the sun, because the wires would have to be so near together.

But what kind of force is this? Material? How can matter act where it is not? Newton said that "any one who has in philosophical matters a faculty of thinking, could not admit for a moment the possibility of a sun reaching through millions of miles and exercising there an attractive power." By a necessity of thought we come to Herschel's statement: "It is but reasonable to regard gravity as a result of a consciousness and a will existent somewhere." Now new meaning comes into the words of Isaiah: "Lift up your eyes on high, and behold who hath created these things, that bringeth out their host by number: he calleth them all by names by the greatness of his might, for that he is strong in power; not one faileth. . . . Hast thou not known? hast thou not heard, that the everlasting God, the Lord, the Creator of the ends of the earth, fainteth not, neither is weary?" Such attributes that He is not even weary after handling such worlds from everlasting years!

Yet gravitation is the weakest of all God's known forces. Cohesion, that holds the rock of El Capitan together, in defiance of gravitation, is stronger. Chemical affinity, binding two airs together as water, so that it takes lightning to rend them asunder, is stronger than either of the preceding. "Mightier yet is the force of vegetable life, that lifts a tree hundreds of feet, in defiance of gravitation, tears the stones apart by its rootlets in defiance of cohesion, dissolves the air in defiance of chemical affinity, and builds each of its millions of leaves in defiance of all three before-mentioned forces." Even a squash has been known to lift 3,000 pounds in its determination to find room for its growth. Every evidence of strength in vegetable growth—lifting the big trees three hundred feet in air, rending the rocks asunder, overturning the most solid works of man—is meant as an aid in enlarging our minds to comprehend perhaps a hint of the power of Him who "causeth the grass to grow for the cattle and herb for the service of man."

One of the most amazing impressions received from high mountain climbing is that of an immensity of power. Great rocks have been hurled as easily as a tempest swirls autumn

leaves. Numerous strata of rock, scores of feet thick, have been contorted, bent, and folded as easily as a man could fold a dozen overlying leaves of paper. Vast chasms are rent or worn, that make man's greatest feats of engineering seem puny; and the whole wide landscape has been tossed into lofty peaks, channelled into deep valleys, and left as a visible symbol of the power of One at whose rebuke the waters that stood above the mountains fled, the mountains ascended, the valleys descended, unto the place that He had founded for them.

But we have not yet learned the alphabet of power. Mountains and continents are something, giant worlds perfectly handled at such terrific speed are something, but vastly greater power has come somehow into these sun-sprent skies.

There is a stored-up power in coal, three pounds of which will do as much work as the average man does with his muscles in an average working day. Exerting itself through steam, this power does as much work in the United States as could be done if every man had nineteen servants at work for him. This power, and all its undeveloped possibilities, had to be deposited here by some sufficient ability.

Power comes to us from without. Our world journeys through space whose temperature is at least 200° below zero. We live in an artificially warmed conservatory in the midst of perpetual and terrible winter. The sun does this work for us. By it all winds blow—the light ones an eighth of a mile, and the hurricans 100 miles, an hour. All the thundering cataracts, with power to turn the mills of great cities, are continued because the sun carries all the water of the Amazons and Niagaras back to the mountains from the sea.

Interpenetrating all these movements of the burdened air are the newly discovered forces of electricity, all derived from the sun. The sun's constant force, exerted on the earth, is equal to 543,000,000,000 engines of 400 horse-power each, working continuously. Yet the earth receives only 1-21,500,000,000th part of the force of the sun. It only receives the power exerted in the space it occupies. Conceive the whole circle of its orbit

to be filled with such receptive worlds—seventy thousand instead of one—every world would be as fully supplied with light, heat, and power from the central force as if there were but one. More. Add other rows of worlds above, below, till the whole dome, over, around, beneath, 185,000,000 miles in diameter, is filled with worlds; and then every one of these uncontrollable spheres would be touched with the same power as one is now—all would thrill with life from the same sun. Such power is as unthinkable by man as the power of two civilizations, embodied in armies, engaged in deadly struggle together at Gettysburg, handling all the force of horses, iron, powder, and 200,000 men, is unthinkable to a child two years old.

But all this power of a sun, so vast that its effects are so great 92,000,000 miles away, had to be taken from some source and posited in the sun. It could only be taken out of the Spirit, the origin of all power, and out of Almightyness, since only that could be a treasury of strength sufficient to endure the draft without bankruptcy.

SKETCHES IN THE SUNNY SOUTH.

II.

THE Charleston and Savannah Railway extends for 115 miles south-westward, just inland from the sea-coast, but does not traverse a very inviting or attractive country. It runs out of Charleston over low and level land intersected by water-courses and chiefly by market gardens. Here the early season already, though it is midwinter, enables them to plant and even ripen vegetables out of doors. Extensive phosphate works, established by Northern capital mainly, appear in several places, where the valuable phosphate rocks of the neighborhood are manufactured into fertilizers for use on the worn-out Carolina and Georgia lands, the planters having at last awakened to the necessity of doing something to restore their farms. The negro women as well as the men are working in the fields hoeing cabbage and even ploughing the ground. But the train soon

runs out of this market garden region, and crosses a monotonous district of swamp and pine timber, varied by the oak, bay, and laurel, which the humid atmosphere has festooned with garlands of gray moss and clustering vines of ivy and other creeping plants. Some of this lowland scenery gives views of picturesque beauty, but the festooned moss clustering and even destroying the foliage of the trees often gives the scene a weird and even ghostly appearance. Many streams of water flow under the railway, and broad expanses of swamp are crossed on piles, the almost impenetrable jungle bordering the line on either hand. Population seems very sparse, and the few settlements are widely separated. Cutting fagots, which are brought out of the forest and piled up in long rows alongside the railway to be carried away by the cars, appears to be the chief occupation of the comical-looking negroes, dressed in ancient clothing ornamented by frequent patches, who occasionally come in view. The few whites are yellowish and bilious, their complexions and clothes being alike of the butternut hue, while both races talk the same dialect and seem equally shiftless and unenterprising. As we thus penetrate further southward the "tar-heels" of the Carolinas are replaced by the "crackers" and "butternuts," who look as if they had been rolled for a generation in the clayey soils drained by the Savannah and neighboring streams, and who, further inland, are the veritable "clay-eaters" of Georgia. As we ride along, the pine forests frequently show the ravages of last summer's extensive fires, scorching the lower trunks of the trees, while above the new branches have grown out a delicious green. Rice plantations, at present overflowed, border some of the streams, for this low swampy region near the sea, which is full of water courses, is a great rice producer, and is also the section where is grown the fine "Sea Island" cotton. Through the forests and over the swamps we rode for hours, until the train passed out of a thick jungle and crossed the Savannah river upon a fine iron bridge, the waters being highly colored by the drainage of the red soil. Then, moving over the level lowlands of Georgia, we saw the

electric light masts towering high above the buildings of Savannah, and, amid a vast collection of resin and pitch barrels, cotton bales, and timber piles, halted at the rather primitive station, which was almost enveloped in the thick smoke made by the wood-burning locomotives.

Savannah has not so large a population as Charleston, but the civil war, which rather retarded the South Carolina city, gave Savannah a great trade impetus, so that it is now the chief port of the Southern Atlantic coast, particularly in cotton. The movement of the great Southern staple is second only to New Orleans. The town is laid out upon a level sandy plain, stretching away from a bluff shore on the river, which rises in some cases forty feet above the bank. It has broad streets crossing at right angles, with small parks at the intersections, trees lining the streets and filling the parks, so that the city is embowered in foliage, and thus presents an attractive and novel appearance. In these respects Savannah is the most beautiful city of the coast—the oak, the palmetto, and magnolia, aided by the holly, orange, and creeping ivy and clustering vines, setting the buildings in a framework of attractive green. But it is an incomplete town, and presents sharp contrasts. The modern electric light shines down upon unpaved streets, where the soft sand easily becomes either dust or mud and the roadway is heavy for vehicles, excepting on the pavements near the river front. The business quarter is along the bluff where the ships come alongside the storehouses, which have their upper stories on a level with the street on its top. The little parks at the street intersections are pretty to look at, but inconvenient for driving, as the vehicle has to be continually dodging around them. Near the centre of the city, in one of these parks, is a monument to Count Pulaski, the patron of Savannah. This noble shaft is one of the finest works of art in the country, and it marks the spot where Pulaski fell, in 1779, while leading an ineffectual attack upon the place, then held by the British. Fort Pulaski, also named in his honor, guards the Savannah river entrance from the sea, about eighteen miles below the

town. The elaborate array of lovely foliage in which Savannah is embowered gives it the appropriate name of the "Forest City," and this attractive feature also extends to the suburbs. A short ride out of town, over a shell road, brings one to the favorite burial place, the Bonaventure Cemetery, where the graves and tombstones are not at all remarkable, but are laid out alongside of avenues of live oaks, their wide-stretching, gaunt, and angular limbs being garlanded with moss and encircled by creeping ivy. The long vista views under these sombre archways have a weird and elfish look peculiarly appropriate for a city of the dead, and it would take little imagination to conjure up the spirits of the departed, and see them wandering beneath these canopies of overhanging shrouds. The arcadian attractiveness of this curious place gives it wide renown, but like most else in the South, it seems falling into decay, the gateways and fences, roadways and general surroundings being ill kept.

As our party have journeyed steadily southward, we have had ample opportunity to study one of the phenomena of American life—the inability of the Irish and the negro to get on together. New York was swarming with Irish, but in Washington the Hibernians were few, and the negroes numerous. South of Virginia an Irishman is a *rara avis*, excepting in the newly-settled towns of Florida. The negro monopolizes the labor field of the Carolinas and Georgia, and does his work as listlessly and slowly as it is possible to perform it. The negro women, in fact, seem to be more vigorous than the men. They hoe with energy, chop firewood with vim, and go about the streets "toteing" their baskets and bundles on the top of their heads, while their dusky lords are endeavoring to find the warmest sunshine or the softest plank for a siesta. There can scarcely be imagined a more deliberate or slow-moving machine than a Southern negro hotel servant. Their minds have to work with evident difficulty to comprehend the whole duty involved in transferring your breakfast order from the kitchen. The vein of humour runs through them, and contact with

modern civilization has taught the value of "tips." But the guest must be on his guard in chiding the negro's shortcomings, for he is as proud as Lucifer—is a "man and brother"—enjoys the right of suffrage, and may have been during the recent days of the "carpet bag" rule a "member of the Legislature" or "Justice of the Peace." It does not take much sometimes to enrage an "honorable member" or a "judge," and if the egg is overdone or the coffee cold it is the part of prudence to speak of it in gentle phrase, and thus avoid a small riot. The Southern negroes, like most of the whites, and, indeed, the whole aspect of the country, have a languid, ever-tired air. It is in sharp contrast with the completeness of everything in England and the energy and enterprise displayed in the Northern States of the American Union.

Southward from Savannah the railway ride renews the monotonous landscape of woods and swamp. Passengers bound to Florida, not long ago, generally made the journey from Savannah to Jacksonville by sea, as the only available railway was a long ziz-zag route inland towards the Gulf of Mexico, and then back again to the seaboard. The steady influx of Northern travel, with the capital it brought, has, however, improved this, and new roads built last year have made a reasonably direct railway route, which will be still further shortened by projects now maturing. But no route that is taken seems able to improve the scenery as it stretches along for miles over the sandy soil with its pines and expanses of swampy jungle. For 90 miles the railway goes south-westward from Savannah on an almost straight line, through the great pine belt of Southern Georgia, and then, making a right-angled bend, is an almost equally straight line for nearly the same distance south-eastward towards the coast. It traverses the edge of the famous Okefinokee swamp, a moist and mushy region of mystery and Indian legend, drained by the poetic Swanee river, which has given the scene for a well-known negro melody. This stream flows into the Gulf, and on the eastern side this extensive swamp overflows into the winding St. Mary's river,

leading to the Atlantic, which the railway crosses into Florida. More pine woods, much of it cut off for timber, and growing out of a sandy soil as level as a floor, in which every depression and fissure is full of water, is then crossed; and the balsamic odours of these pines, combined with the mildness of the climate, are the attractions that make Jacksonville such a popular health resort. The line finally comes out upon the broad St. John's river, and the train lands us at the Florida metropolis, which has grown from 1,000 people in 1850 to 7,600 in 1880, and probably, under the recent stimulus, to 18,000 now—a Northern city set upon Southern soil, 900 miles from New York, a distance that is traversed in about 30 hours by express trains now, and next season will probably, by increasing speed and making better arrangements, be run in 24 hours. Jacksonville has been built by Northern capital and is a watering place with fine hotels, and a fashionable Northern society in the winter, when many thousands come here from the North, seeking gentler air and a balmy climate. The negro seen here is a different type from the listless “darkey” of the Carolinas and Georgia. Contact with the energetic men of the North has infused life into him, and the hotels, which are conducted by Northern landlords, are managed on an improved plan compared with those of the other Southern seaboard towns. Here, with the large influx of whites, the Irishman also reappears among the laboring class. The “cracker” wanders into town in his dilapidated cart, plodding slowly with his mule or ox along the heavy sandy roads, and is astonished at the progress a few years has made. The streets show a Northern population, and here in our Southern journey we first experience the revival that has come from the investment of so much Northern and European capital in Florida. This process has already done much for the State, and will before long make a complete change in its character and position, as a large immigration is coming in, and in many respects this land of the orange and the alligator is looked upon as a new American agricultural El Dorado.—*Quoted from London Times.*