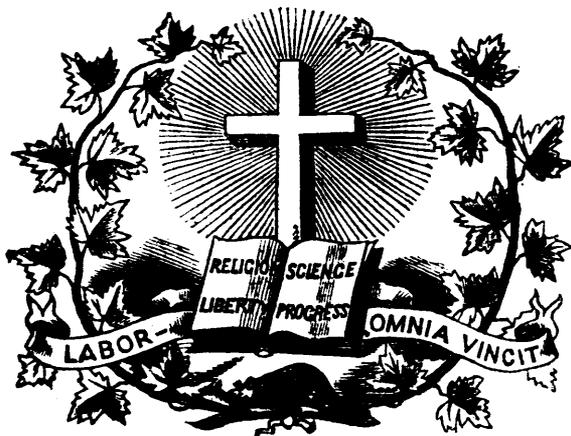


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speaking from mere theory, as to how it *might* be made more pleasant and profitable, but from actual experience in my own school-room, where the geography lesson is one of the most spirited and interesting of the week, because, having suffered from its dry details during my own schooldays, I determined that my scholars should not suffer in the same way. As I have been feeling my way gradually and making experiments in teaching it with that view before me, perhaps some of my young fellow-workers may find one or two hints of advantage.

First, I have a set of Guyots' Physical Outline Maps (besides the regular Atlas), one of which I hang on the wall during the recitation, for when once the pupils understand the distinct coloring they are of the greatest aid in forming the idea of the physical characteristics of a country. Take for example the Continent of Europe. Instead of being obliged to commit to memory—that it is low in the north and east, mountainous in the centre, south and west, a fact soon forgotten, they see by a glance at the map just where all the lowlands lie, by the distinct green color; just where the table lands begin to rise, by the buff; where the mountains are high, by the deep shading; and the line of white distinctly traces the snow-covered Alps. It fastens itself on the memory as no mere learning can fix it there, and the mind's eye always sees it so afterwards. Then I follow Guyots' general idea, given in his *Earth and Man*, of comparing the chief characteristics of the different continents; how in the New World the principal mountain ranges extend from north to south, the subordinate ones, from east to west, and how it is reversed in the Old World, and then I let them point out and compare for themselves, the Rocky Mountains with the Alps, Balkan, Caucasus, Pyrenees, and the Mountains of the Appalachian System with the Apennines, ranges of France, Russia, Scandinavia, &c., then glancing at the other continents to verify the principle, they easily retain the idea from interest in the fact. Still following this plan, I let them compare the indentations of coast with the even flowing outlines of Africa, or S. America, and tell them of the nations of sailors and merchants, who have naturally grown from this fact. No child can fail to be interested in tales of adventure and discovery, in the brave Sea Kings'

How to Make Geography an Attractive Study.

Much has been said in the papers lately concerning the study of geography. Some speak of it as a dry study that must necessarily be carried on, others depreciate it as worthless, a mere taxing of the memory to carry statistics for examination days, but of no real value; others ask to have it banished from the school room, thinking it a waste of time. As many children have still to spend much time over it before it is banished altogether as a study, I would like to suggest one or two ways in which it might be made less of a dry and barren lesson, and so gain some practical advantage from it while yet it is suffered to remain. I do not mean to

daring; in the ancient Venetians, rich in trade; tales of Holland and England's naval battles; the inland seas gulfs and bays will be no mere names to them, no dry statistics, but will be peopled by, and associated with, adventurous, brave, enduring men, and live long in the memory. When some such general plan is carried out in regard to all the natural features of a continent, then the details follow. I give a *very short* lesson, to be studied at home, on one country alone, but my pupils know that is not all when they come to recite, for I spend much more time preparing the lesson than they do, gleaning points of interests from books of travel, magazine articles, and encyclopædia, hunting up pictures to illustrate any part of the subject, or condensing a bit of history or story. While I am on this point, let me make one suggestion which I have found most valuable in my schoolroom, and that is a scrap-book, made of clippings from newspapers and magazines. Items are to be found, in everyone I take up, on all manner of subjects connected with the different countries of the world, many of which are awaking to progress and liberty from the sleep of centuries, items which are to be found in no school-book, nor indeed in any book, and help both teacher and children to feel that the world is alive, and the country and people they are studying of in some far off land, are very real, with their interests very closely interwoven with their own. My scrap-book tells of sleepy Trukey waking up to the necessity of railroads and the advantages she will gain there-from; of wonderful descriptions of the Mount Ceniz Tunnel, that no text-book has room for; of the visit of the Shah, so romantic in its details, and yet seemingly so important in the new opening of the East to Western civilization; of Chinese coal-fields and Canadian salt deposits; of African adventure and discovery, and a strange journey through the heart of Asia; of Arabian deserts and curious eastern cities; of the freeing of slaves in Brazil; and of the opening light in Japan. It has stories of life in Lapland, Siberia, Borneo and China; it contains pictures of remarkable trees of different lands, and a real grey silky leaf from a South African forest. It relates of Amadeus' abdication, and the royal progress and coronation of the Scandinavian monarch; King Oscar. It describes the late funeral of an Indian Prince; and the Russian Ice Palace; fêtes in Turkey, and wonders of South America. So it interweaves interests of to-day with every land or nation we touch upon in one geography lesson, and makes the children understand their reality and life. But to go back to the lesson itself. It begins with the few thoroughly studied questions, answered promptly, because they are so few and have been no burden to remember, then comes, sometimes a description of the people who live in the country of the day's lesson, their manners, customs, occupations, interests, or some interesting item of the country itself, its scenery, or some great natural curiosity; after these a journey in imagination to test the knowledge conveyed in these items and their familiarity with the country, or perhaps instead some questions on last day's narrative. When we take journeys, the starting place and destination are given and then the pupil travels in the mode of conveyance used by the inhabitants. Either she sails through bay or sea, river or lake, passes capes, islands, through straits, creeps along the coast, or sees only mountain tops in the distance, and arrives at last at her port; or she climbs mountains, crosses rivers and valleys, stops at cities and towns, everyone connected with some great or local interest, describing the scenery and mentioning the occupations of the inhabitants, or any special production, or peculiarity of custom. Sometimes when each country has been thus traversed, we all start together over the whole continent, with the purpose of furnishing

our wardrobes, libraries, pantries, or general household, and stop in every country or city where we can find the article of which we are in search. Sometimes we enter the domestic life of those whose manners are very different from our own. Sometimes we all go into far northern countries and see strange sights, like the progress of glaciers and the birth of icebergs in the Norway fiords, or the Geysers of Iceland; come to port in such odd towns as Hammerfest or Archangel; or visit the tea-loving women of the Shetland Isles, and see them knit while their husbands are away fishing; or look on at the ceremony of the Bridal of the Gulf of Venice; or trace again the romantic journey of the Lion hearted Richard. No journey can be taken without a host of associations to make it interesting and chain the memory to the places visited. Even the productions, imports and exports will be remembered if some reason is given for it. That Southern Russia exports hides and tallow will interest no child, but describe to them those great bare plains over which the wind sweeps with such fury as to roll the dried grass in great balls over its vast extent, and the drifting snow holds sway in winter, but during the brief summer months the wandering tribes roam with their great herds of cattle, and the children will always associate the two things together. Or tell them that England produces both iron and coal, while Norway only yields iron, and such a bare fact will soon pass from the memory, but tell them how England has grown wealthy because her iron can be worked so readily with coal-beds close at hand, while poor Norway has to send her ships over the rough North Sea to gain the coveted treasure, without which her richer iron mines lie almost useless, any intelligent child will easily fix upon such a fact and retain it, which class of facts are not of so much value in themselves, as they help the reasoning powers and habits of observation.

It takes a long time to study a map in this way and one cannot "go through" a geography in a term or two, but it seems to me worth while to devote a longer time to one continent, and leave an impression of its being a real part of the same world in which they themselves live, with just as real people with interests like their own, than to hurry through a book giving a list of facts which they will probably soon forget, or have wiped out by some greater interest that presents itself. It also excites in them a desire for books of travel and a more extended knowledge of the world than they can gain in any other way.

I hope that my few hints may be of some practical value to others.

B. W. SABINE.

Technical Education.

The rulers and teachers in a country so extensive as Canada is, have great responsibilities, and just in proportion to the manner in which those in authority discharge their duties will the prosperity of the nation be permanent. There is nothing plainer than that for many years to come agricultural pursuits must take a leading place among our industries, and although such a life does not promise much for the ambitious, there is a sufficient prospect of reward in the pursuit of that calling for patient, energetic, industrious and intelligent workers. We do not hesitate to say that no other class can succeed, because experience, education and special training are as necessary to success to the agriculturist as to the lawyer, the physician or any other class of professional men. It is therefore highly desirable that we should have provided

abundantly in this country the means for instructing the youth who design to make agriculture and mechanics their future calling. It is not enough that men shall bring strong arms and willing hands to their work in the field, however necessary those are, but they ought if possible to have the advantages of a special training that would enable them to judge of causes and effects in the same way as a practical chemist, and to have such a knowledge of mechanics as to serve them in adapting all labour-saving contrivances to their peculiar necessities. Such knowledge would be of far more general advantage than that which the professional chemist exercises in his laboratory, or the ingenious constructor of an intricate piece of mechanism that might be useless for any purpose beyond proving the mechanic's ingenuity. All knowledge is power, but only in the sense of applying it to some useful purpose. Already the world possesses a superabundance of men whose heads are filled with abstract reasonings; whose minds are vast storehouses of knowledge, but they lack the ability to apply it to any useful purpose, and so it is of less value than the miser's gold, for it cannot even be used by those who come after them. To educate in such a way as to convey knowledge to the mind of certain fundamental principles and afford the means of practically illustrating their value is of the greatest importance. A great deal of attention is very properly paid to educating young men in schools of law and medicine, of theology and theoretic science, but in this utilitarian age we want schools especially devoted to instruction in the practical industries of life. In every progressive country in Europe for many years, and latterly in the United States, technical schools and colleges have been established, in recognition of the principle that every useful occupation of man is a specialty; that it involves in its exercise principles and practices peculiar to itself—which do not in the same degree belong to any other. In order, therefore, to have these things intimately understood so as to make them applicable to everyday life we must have more regard for technical education. We are aware that this matter has received considerable attention throughout the Dominion, but at the same time we fear that those who advocate schools and colleges of this kind are too generally looked upon as dreamers, whereas they are the only practical educationists. They are not content to let a man blunder on from the beginning until dear bought experience teaches him his errors, and shows him when his energies are spent that he might have done better had he known more at the beginning. They desire to give young men a fair start in the race, and to show from the beginning what should be avoided and what attended to as advantageous. It is a far too common error, and one which must soon explode, that only large farmers can afford to use scientific knowledge on their land. The fact is the very opposite. We do not want men to become experimentalists without well defined laws to guide them, but with a knowledge of these a farm of small dimensions may be made more valuable to its cultivator than one of ten times its extent without the requisite information. It is a small thing to know that cabbage was originally a sea plant, and that if attacked by caterpillars or slugs, salt will destroy the insects and promote the growth of the plants. But then the man who knows this ought to be taught that a dressing of salt will have a different effect on a crop of pease for instance; and so on from one kind of knowledge to another. A vast amount of information, wonderfully useful in practice, may be taught in the simplest form, and conveyed to the mind without in any way perplexing the memory with technicalities and long sounding names of Latin origin. The nature of things is what the youthful student ought to be taught, and

understanding that, one achievement made strictly in accordance with the laws of nature will start new thoughts to be followed by new successors until advancement and improvement will take the place of failure and disappointment. It has been said that the greatest happiness of the greatest number should be the end and aim of all social and political institutions, and that being so, it is clearly our duty as a nation designed by nature to occupy a place as important as our country is extensive, to place the means for acquiring really useful knowledge within the reach of our ever increasing population. Our present remarks have been chiefly directed to what is necessary for the training of agriculturists, believing that the cultivation of the land will receive the greatest amount of attention for many years to come. But we do not by any means forget that in all industries the same system should be adopted of imparting knowledge in such a form as to make it practically useful for every day life, and, therefore, we hope to see educational institutions of this character established generally throughout the Dominion, and conducted in such a way that attention shall be given to thoroughly grounding the pupils in the fundamental principles of nature's laws rather than aiming at great achievements in scientific knowledge. This being effected, thought will proceed on sound reasoning, and the result will be to the nation's advantage as well as to the individual prosperity of all who enter upon the great work which requires to be done.

—(Chronicle).

Boards of Examiners—Their Functions and Responsibilities.

The school teacher holds a position in society second neither to the clergyman or editor. He has to train the children of the present generation for fitly exercising the duties of the men and women of the next. He is first of all answerable to the children placed under his charge and to their parents, and he is responsible at the same time to society for the manner in which he discharges the all important duties entrusted to him. It is obvious, therefore, that unless he be well fitted to exercise the functions assigned to him, that our children will grow up but indifferent citizens; and Society, as a consequence, exacts of those who may certify to his competency for that office a rigid regard for truth, which involves the strictest impartiality on their part in granting such certificates. We are conscious of the existence of very lax notions among our Boards of Examiners in regard to their obligations, the fruit of which is seen in the numbers of very poor teachers at present engaged in imparting instruction in our public schools; and it is not to be wondered at that these Boards do not stand in the highest esteem with those who are best capable of understanding the duties which fall to those engaged in the work of teaching. While the responsibility of being an examiner of teachers is great, the position is one not to be envied, as those who may conscientiously discharge that duty know to their regret; but unpleasant as it is to reject an applicant, it is better to incur the odium of irate friends and the displeasure of the disappointed, than to flood the country with incompetent teachers; and there are some Boards that do not hesitate to accept the displeasure and odium resulting from a conscientious discharge of their duties.

Only those who have to perform that ungracious task can estimate correctly the difficulties of the position. In the case of young girls especially, it is in the last degree painful. They believe themselves competent—they have

been justified by the assurances of their teachers, perhaps their friends think so, and in many cases their pastor or a friendly disposed clergyman, whose acquaintance with the candidate may be of the slenderest kind, endorses their fitness beforehand, and the rejection of such, by the Board before which they may come for examination, is to many a crushing blow; and in full view of all this, tender hearted examiners will frequently pass applicants utterly unfitted by training, aptitude, and education for the position of a teacher. This is a grievous wrong both to society and the candidate. It explains the humble position which in the rural districts the teacher occupies; it explains the reason why their salaries are so much lower in many cases than the hired domestic servant. If none but good teachers were commissioned, the remuneration paid for their services would be higher than it is, and their position in society would be raised. Instead of being obliged to be hawked round, pauper-like, for bed and board under the prevailing system of boarding round, they might then command and have salaries commensurate with their value, and teaching would eventually become a profession—not a mere filling-in of time, as it now is—a means for eking out a few dollars until something better turns up.

The functions of Boards of Examiners may be made more pleasant to themselves, more advantageous to the profession, and more satisfactory to applicants for diplomas if teachers would be candid in their advice to those of their older pupils who intend to make application for examination, rather than to yield, as many of them now do to the prevailing desire to “teach school” which almost every young girl of 14 or 15 exhibits.

We have had a long experience in commissioning common-school teachers, and we are obliged to confess that the number of really fit ones sent out is very small. It is only by the exercise of a very liberal charity in the formulated examination that even the best of them pass, and we have come to the conclusion that more depends upon the candor and honesty of teachers, parents, and friends, than upon the examiners. It is very easy to lay down rigid rules and say what we would do if we had the duties of examiners to perform—but the misfortune is that every parent thinks his son or daughter—if they happen to be a little smart—as fit as somebody else, and every teacher is prone to say—though he may know to the contrary—that this or that scholar of theirs can obtain a diploma, “if they only get fair play!” which latter phrase means if the Board will only make a pretence and a sham of their work.

All should bear this simple rule in mind—that we can teach only what we now—if we don't know, we cannot teach. The pretence of teaching, therefore, without knowing, is a fraud upon society, upon parents, and upon the children.—*Richmond Guardian.*

The Bishop of Barbadoes on Examinations and Prizes, at the Royal College of Preceptors, London.

The Chairman, the Right Rev. the Lord Bishop of Barbadoes, in opening the proceedings, said that, on such an occasion as the present, it was impossible not to notice what he thought would be hereafter remembered as an important feature when the educational history of the nineteenth century was written. This was a feverish age; and in education, no less than in other matters, people's minds had been seriously exercised with regard to trying all sorts of experiments. In connection with this great work, as with others, there seemed a desire to dig about the very foundations of the fabric, to see that

they were sound, and to have the whole building of education carefully re-surveyed and to some extent re-constructed. Now, one point, in which perhaps the founders of the great building of education had been found somewhat deficient, was that it had been fondly imagined that the power of education came by nature, and that it was possible for any person, however unprepared, to enter upon this duty whensoever it was convenient to do so. Now, he believed it would be remembered, in connection with the present age, that the College of Preceptors had, more than any other body, devoted itself to the task of combating, not only in theory but in act, the delusion that the faculty of education came by a sort of supernatural inspiration, and needed no previous training or culture. He did not mean that it was ever supposed that the person who embarked on the province of education could dispense with being more or less instructed; but by culture he rather referred to that more special training in the art and theory of education which was now commonly admitted to be necessary. It appeared to him that the greatest honour was due to the College of Preceptors for having so strenuously and persistently taken the lead in this matter, and especially for having incorporated in their newly revised regulations for conferring the diplomas of the College, one to the effect that no person should receive a diploma unless he satisfied the Examiners of his capacity as an educator both theoretically and practically. In connection with this effort—this strenuous effort—he could not but congratulate the College on having taken such a decided line, and, in fact, being the first learned body to establish a professorship of the science and art of education; nor could he too much congratulate them upon the selection of the first professor. The choice of the Council had fallen on his friend Mr. Payne, and he was happy to say that a most marked success had attended his energetic efforts to infuse into his lectures something of that activity of mind and vivacity which characterized all his doings. It was very often supposed that a person, before entering upon the work of education, had finished his or her own educational course, but he could conceive of no more fatal illusion to a good educator. The education of the educator really began when he or she undertook the great work upon which they entered. If they were simply content, as it were, to pump out of themselves knowledge and facts which had been previously pumped into them, they became simply mere machines, and would never attain to a practical knowledge of good education, which was simply the impression of one energetic mind upon others. Upon teachers, therefore, more than upon any one else, would he specially urge the duty of constant self-culture, and the keeping as far as possible abreast of the thoughts, discoveries, and literature of the age. This was not always an easy task, not simply from a question of time, but because the brain power was apt to be exhausted at the close of a day, the best hours of which had been spent in the honest earnest work of education. Still, any teacher who wished to do his duty intelligently must be perpetually taking fresh pabulum. They could not be like spiders, perpetually spinning webs out of themselves, but must march with the age, and endeavour, as far as possible, to keep themselves acquainted with all that was worthy of being read and assimilated, as it was from time to time made public. Lastly, he would say a word or two to the young people before him, who were about to receive the prizes and certificates awarded by the Council as the result of efficiency in the past examination; and to them he would say, put not too much faith in examinations or prizes. The present age was an age of examinations, and those who obtained the benefit of them could not be

too thankful for the advantage that they received from them ; but still examinations were to be considered only as whetstones, which, more than anything else perhaps, sharpened the intellect. The tendency of the age, he feared was to put excessive faith in examinations, both on the part of those who wished to test educational results, and on the part of those who wished to be tested. Many years ago Aristotle made this point very clear when, at the beginning of his *Ethics*, he spoke of the great variety of ends, some things being ends in themselves, whilst other ends were simply the means to higher ends. Now, he would strenuously impress on his young hearers that examinations belonged to exactly the latter class of ends, being simply instrumental to something higher and better ; and for boys and girls to work under the pressure of an approaching examination, would be fatal to any true intellectual life, for if, indeed, examinations ever took that place in people's minds, they would become paralyzing instead of stimulating. Therefore, though pupils should go through their work with a thorough cordial goodwill, in view of the examination immediately before them—for that which lay straight before one in the work of life was always the most important—still it should be remembered that the examination was not the final end to be looked to. The end of the examination was to make clear to the pupil what point he had attained ; its use was then at an end, and it was only from that point that true culture began. The only training or culture really worth having was something spontaneous—something which was not tested by any examination, but was the result of that love of learning, that desire for self-culture, that ardent zeal for self-improvement, which lay at the root of all real success in examinations, but which could never be created by them. He trusted, therefore, that those who had passed their examination successfully would bear in mind what he had said, and look forward in the far future to making a hearty, energetic use of whatever talents their Maker had given them, for the good of the public and the glory of God.—*The Educational Times.*

Science of Teaching.

When Democritus was asked what wit is, he replied, "Tis that which we all see and know." And, however unsatisfactory a definition this may seem to be, when we have pondered the subject, we shall arrive at precisely his conclusion—that one will apprehend the nature of wit better by an acquaintance with it, than from any description possible. So were we to inquire what is that which is the vital essence of successful teaching, we should finally be answered, that it can better be seen and known than be told. You can know a good school, as you can good wit, without the aid of a showman ; it makes itself known. The successful teacher knows better than any one else when she truly succeeds, although she may be too modest to say so, and too aspiring to be satisfied ; and she knows it far better than she could explain whence her success originates. Let me state parenthetically that I here use a pronoun of the feminine gender because teaching seems to me a natural office of woman ; man seems to have been called to occupy that portion of her sphere, which she, lacking the endurance or the incentive, has failed to hold.

But cannot success in teaching be partially, if not wholly, described by means of some distinctive marks ? and cannot its origin be sufficiently well pointed out, for the help of those who would enter the profession ? Is not school-teaching a science, as well as an art ? I

doubt if it has been regarded as largely a science by many outside of the circle of those who may be called professionals. The great majority, both of teachers and of school officers—we might add citizens—think that one who is not a teacher born can acquire the faculty of teaching, only by its exercise, just as one learns to skate, to swim, or to dance. And, as instruction aids one in acquiring these accomplishments (and who would risk his reputation as a dancer before he had practised, under a master, the steps and graceful evolutions which he aspires to execute in the ball-room ?), so is instruction in pedagogy valuable, and, I believe, generally essential, to the highest success in teaching. Why is it that any are so presumptuous as to attempt the practice of the art before they have studied the science ? It is not difficult, I think, to find the reason. The applicant for the teacher's place has attended school, and this affords occasion, though not the reason, for her over-confidence. For, having seen her teacher go through the duties of the school-room day after day, with that grace and naturalness which practise gives, it seems to her an easy matter to teach. The same person, looking upon a company of dancers whirling through the elegant mazes of the ball-room, might think dancing very easy ; but she would hardly venture, unpractised, upon the floor—for, she says, there are so many looking on, and one might fail. It were, indeed, fortunate, if this self-distrust, which is manifested with regard to an accomplishment that is not over-difficult of acquisition, were felt in presence of an undertaking so infinite in its demands as is school-teaching. Moreover, if one had to enter upon teaching under the eyes of many beholders—critics and judges, as well as spectators—who had come to know the difference between grace and awkwardness, between ability and incompetency, she would go to her work very modestly, or, most likely, go prepared. But even "recognition," as Ruskin remarks, "is no proof of real and intrinsic resemblance. We recognize our books by their bindings, though the true and essential characteristics lie inside." Teachers are too often judged by unimportant characteristics. This one is approved, "because she keeps her hours," or "because the scholars don't laugh and shout at recess time." If, then, teachers enter upon their work without due qualification, the fault is as much the public's, who would laugh at an awkward dancer, and who cannot judge whether a school-teacher is really well-fitted for her duties or not.

A knowledge of the branches taught at school is not a mastery of the science of teaching. If it were so, then every one who knows how to read, write, or cipher, is competent to instruct others in those branches. People will generally admit that there is a vast difference between knowing and telling ; but they are not fully impressed with the fact that the faculty of telling may be acquired. If it does not come naturally to one, they say : "It is of no use,—she never will be a teacher." Nevertheless, as the district has hired her, and she has passed the requisite examination, let her go on. No glaring fault appears. The order is good—in fact, the school-room is as still as the grave and as lifeless. The scholars do not learn much. They are indifferent and slow—that is, of course, they are dull. The teacher knows enough. Such is the popular verdict. Alas ! as a teacher, she is ignorant. One might know colors well, and yet not be able to paint a fine landscape. There is all this difference between knowing and teaching ; and, until "normal" methods of recitation are adopted in all our schools, one should not pass immediately from the pupil's place to the teacher's station. To justly appreciate this last statement, let any teacher take the brightest member of her class in arithmetic ; one who could readily perform any problem

in the book, and ask her to teach the reduction of a fraction to lower terms.

This is instruction. Some dislike the name ; I do not. Some prefer education, a drawing out ; as if there were some well stocked spinneret in each mind, out of which, by nice skill, could be spun the warp and woof of all possible intellectual fabrics. Instruction is a building upon, and it suggests the foundation ; and, with that comes the illustration of our Saviour, in the parable of the two men that built—the one, upon sand, the other, upon a rock. What a noble architect the true teacher is ! And lo, his building ! what a glorious edifice of manhood and womanhood, with lofty purpose and Christian steadfastness, unhedged about by deceit, illuminated with the light of clear, penetrating thought, and warmed with a generous philanthropy and love.

In the elder days of Art,
Builders wrought with greatest care,
Each minute and unseen part ;
For the gods see everywhere.

Let us do our work as well,
Both the unseen and the seen ;
Make the house where gods may dwell,
Beautiful, entire and clean.

The chief object of the teacher, then, is to prepare the mind ; to discipline. Observe the appropriateness of the word *Discipline*, to make disciple-like ; and disciple is simply learner. When the mind is *disciplined*, (disciplined ?) when it is ready to learn, the work goes happily on. This is that receptivity of which I have spoken. But there are two kinds of receptivity. A sponge is receptive, and so is a bucket ; but you have only to place the sponge in contact with the water, and it will fill itself. This is active receptivity, and this is what we want. A mind put in this attitude, magnetized as it were, continues to gather to itself knowledge, even long after the teacher, the original magnet, is removed. Water will evaporate from a sponge, if not constantly supplied ; and, as constant supply is not always possible in educational affairs, the mind must have a power of holding. We must fix some things, "as nails fastened by the masters of assemblies." We must weld knowledge to mind, or knowledge to previous knowledge ; for we are acquainted with mind only by what it contains. Here some writer furnishes us with the unfolding of our thought. It is impossible to weld pieces of iron, unless they are first brought to the welding heat. I am glad to be thus able to mark clearly another condition of success in teaching. Enthusiasm in the teacher is the source of this heat ; and when the mind is all aglow with the same spirit, from the forge is brought forth that which is to be imparted, it is applied, and with closer skill becomes inseparably joined.

Now, precisely how to do all this is a matter of much concern and no little difficulty. If the point is settled that it positively must be done ; then, in nine-tenths of all cases, it positively will be done. Successful preparation for teaching requires, first, will ; and secondly, *will*. Then, one must proceed as in other affairs. The experience of those who have tried and succeeded, and of those who have tried and failed, is embodied in what may be called the science of school-teaching. And, as teaching consists, first, in putting mind in readiness to receive, or to reach and grasp ; and secondly, in communicating thoughts or suggestions, as well for the development of mind as for its endowment ; therefore, the science of mind, psychology, is and must ever be a part of the science of teaching.

There are two views of the purpose of teaching,—one very false and very prevalent, and the other as rare as it is worthy. The false view is this : Knowledge of cer-

tain branches is necessary to man ; childhood is the golden time for storing the mind with that knowledge ; and the teacher is employed to store it. The objection to this is, that bare knowledge is over-valued, and mental culture is everlooked. Knowledge may pass from the mind and be recalled, as the boy's toy-ship is drawn back with the string, provided that proper culture has furnished the string. If the mind is rightly trained and used, manhood is more golden than childhood as an occasion for gathering knowledge. The teacher cannot store knowledge into the pupil's mind, without the cooperation of the child, and it is the child's part to be receptive. Who would try to fill a sieve brimful with water ?

The correct idea is a worthy one, and I never knew a teacher to fail who made it her compass and chart. The mind should be in a state of readiness—if possible, in a state of expectancy—before facts and principles are presented. Why would you not discourse to an infant of Neo-Platonism or the nebular hypothesis ? Obviously, because he has not the mental preparation requisite in order to comprehend you, There are not more than two or three words that are capable of conveying any idea to his mind from yours, and they are the names of the most familiar objects. Beyond this, you may communicate with him by a smile, a gesture, or an expressive articulate sound. And that is all, for the present.

Who can tell what a baby thinks,—
Who can follow the gossamer links,
By which the manikin feels his way
Out from the shores of the great unknown,
Blind, and wailing, and alone,
Into the light of day ?

Who is not interested to see the vacant, yet curious, stare of infancy change as this "light of day" brightens, into the intelligent look of inquiry ? Who has not watched with pleasure, as object after object is taken in hand, examined on all sides with the most serious scrutiny, and then placed to the mouth for the final test ? By and by, the name is caught, is attached to the object, is spoken—with what a baby brogue ! It is needless to trace the whole way. Where the infant got its prattle, we know not ; but the prattle, the childish curiosity and quickness to imitate, are the foundations for our instruction. We correct the prattle, changing it into proper speech ; and the child is no longer an infant (*unspeaking*). Thus we go on. Upon that which is, we lay that which was not—upon the foundations, ever the fitted superstructure.

Psychology might be acquired, wholly or partially, in two ways. As far as possible, one might recall his own mental attitude, when the individual elements of knowledge were successfully presented to him ; and then the aim would be, to secure the same mental condition in the pupil. The knowledge of psychology thus obtained would be fragmentary and insufficient, inasmuch as it is deduced from the experiences of a single mind ; yet, where one person finds no need of explanation, another meets with his most insuperable difficulty. Psychology, as presented in books written upon the subject, is the combined experience of many minds, classified and arranged according to scientific methods. It has, therefore, both a wider and readier application. The study of some text book in this science we regard as essential—and not only the study, but the mastery of it. The day is coming, I believe, when this view will be accepted by school-officials everywhere, and the examination of candidates for teachers' places will include the science of mind, as certainly as the science of numbers.

The preparation for teaching, thus far described, consists in a thorough knowledge of the subjects to be taught,

together with an intellectual mastery of the science of teaching them. Another very important means of preparation is practice. Unfortunately, this practice is, for the most part, first had in the school-room. Even if the teacher has got the intellectual preparation recommended she is not yet ready to enter upon her work. She must acquire a certain grace or tact, in the use of it. Sculptors do not attempt the development of their artistic conceptions in the marble, until they have fashioned a model of them in plastic clay. So, our teachers should first tax their skill upon model classes, in the Normal School, or the Training School, where defects may be at once detected and remedied without detriment to youthful minds.

Happily for the cause of education, public sentiment is growing in the right direction. Soon, there will be few engaged in the profession of teaching, who have not had the benefits of a Normal course and served an apprenticeship in the management of classes. It would be unfair not to admit that there are many excellent teachers who never enjoyed those advantages; but they will acknowledge, with us all, that their attainments have been gained at some expense to the interests of their pupils. It must, on the other hand, be affirmed that Normal training cannot qualify every one that undergoes it; but it certainly improves all. And if we ever must place precious, eternal minds, the best jewels of earth, in the charge of persons unfit for the trust, by temperament, education, and habits; then, at least, give these persons the most thorough and careful training that can be obtained.—ANONYMOUS in *Penn. School Journal*.

Letter to a Student Who Lamented his Defective Memory.

So far from writing, as you seem to expect me to do, a letter of condolence on the subject of what you are pleased to call your "miserable memory," I feel disposed rather to indite a letter of congratulation. It is possible that you may be blessed with a selecting memory, which is not only useful for what it retains, but for what it rejects. In the immense mass of facts which come before you in literature and in life, it is well that you should suffer from as little bewilderment as possible. The nature of your memory saves you from this by unconsciously selecting what has interested you, and letting the rest go by. What interests you is what concerns you.

In saying this, I speak simply from the intellectual point of view, and suppose you to be an intellectual man by the natural organization of your brain, to begin with. In saying that what interests you is what concerns you, I mean intellectually, not materially. It may concern you, in the pecuniary sense, to take an interest in the law; yet your mind, left to itself, would take little or no interest in law, but an absorbing interest in botany. The passionate studies of the young Goethe, in many different directions, always in obedience to the predominant interests of the moment, are the best example of the way in which a great intellect, with remarkable powers of acquisition and liberty to grow in free luxuriance, sends its roots into various soils, and draws from them the constituents of its sap. As a student of law, as a university student even, he was not of the type which parents and professors consider satisfactory. He neglected jurisprudence, he neglected even his college studies, but took an interest in so many other pursuits that his mind became rich indeed.

Yet the wealth which his mind acquired seems to have been due to that liberty of ranging by which it was permitted to him to seek his own everywhere, according to the

maxim of French law, *chacun prend son bien où il le trouve*. Had he been a poor student, bound down to the exclusively legal studies, which did not greatly interest him, it is likely that no one would ever have suspected his immense faculty of assimilation. In this way men, who are set by others to load their memories with what is not their proper intellectual food, never get the credit of having any memory at all, and end by themselves believing that they have none. These bad memories are often the best, they are often the selecting memories. They seldom win distinction in examinations, but in literature and art, they are quite incomparably superior to the miscellaneous memories, that receive only as boxes and drawers receive what is put into them. A good literary or artistic memory is not like a post-office that takes in every thing, but like a very well-edited periodical, which prints nothing that does not harmonize with its intellectual life. A well-known author gave me this piece of advice: "Take as many notes as you like, but when you write do not look at them—what you remember is what you must write, and you ought to give things exactly the degree of relative importance that they have in your memory. If you forget much it is well, it will only save beforehand the labor of erasure." This advice would not be suitable to every author, he who dealt much in minute facts ought to be allowed to refer to his memoranda; but, from the artistic point of view in literature, the advice was wise indeed. In painting our preference selects while we are in the presence of Nature, and our memory selects when we are away from Nature. The most beautiful compositions are produced by the selecting office of the memory, which retains some features and even greatly exaggerates them, while it diminishes others and often altogether omits them. An artist who blamed himself for these exaggerations and omissions would blame himself for being an artist.

Let me add a protest against the common methods of curing what are called treacherous memories. They are generally founded upon the association of ideas, which is so far rational, but then the sort of association which they have recourse to is unnatural, and produces precisely the sort of disorder which would be produced in dress if a man were insane enough to tie, let us say, a frying-pan to one of his coat-tails and a child's kite to the other. The true discipline of the mind is to be effected only by associating those things together which have a real relation of some kind, and the profounder the relation the more is it based upon the natural constitution of things, and the less it concerns trifling external details, the better will be the order of the intellect. The mnemotechnic art wholly disregards this, and is therefore unsuited for intellectual persons, though it may be of some practical use in ordinary life. A little book on memory, of which many editions have been sold, suggests to men who forget their umbrellas that they ought always to associate the image of an umbrella with that of an open door, so that they could never leave any house without thinking of one. But would it not be preferable to lose two or three guineas annually rather than see a spectral umbrella in every door-way? The same writer suggests an idea which appears even more objectionable. Because we are apt to lose time, we ought, he says, to imagine a skeleton clock-face on the visage of every man we talk with; that is to say, we ought systematically to set about producing in our brains an absurd association of ideas, which is quite closely allied to one of the most common forms of insanity. It is better to forget umbrellas and lose hours than fill our minds with associations of a kind which every disciplined intellect does all it can to get rid of. The rational art of memory is that used in natural science. We remember anatomy and botany because, although

the facts they teach are infinitely numerous, they are arranged according to the constructive order of Nature. Unless there were a clear relation between the anatomy of one animal and that of others, the memory would refuse to burden itself with the details of their structure. So in the study of languages, we learn several languages by perceiving their true structural relations, and remembering these. Association of this kind, and the maintenance of order in the mind are the only arts of memory compatible with the right government of the intellect. Incongruous, and even superficial associations ought to be systematically discouraged, and we ought to value the negative or rejecting power off the memory. The finest intellects are as remarkable for the ease with which they resist and throw off what does not concern them as for the permanence with which their own truths engrave themselves. They are like clear glass, which fluoric acid etches indelibly, but which comes out of vitriol intact.—

“*The Intellectual Life,*” by Philip Gilbert Hamerton

School Text-Books.

That a book is a book, although there is nothing in it, is a poetical aphorism of which the truth is undeniable. How many books are issued from the press that have nothing to commend them to public notice, the professional critic alone can tell. It would puzzle many to explain the cause for the appearance of hundreds of the bantlings that now fall from the press, and disappear from the public eye within a brief period of their birth. Of school-books the numbers appear to be increasing from year to year, and teachers as well as critics are bewildered in the attempt to find any substantial difference between the new and the great majority of the old. Too many of them are produced after the manner of the kaleidoscope. The same matter is re-arranged so as to appear in a somewhat different aspect, but remains substantially unaltered. There is less novelty in the idea than in the typographical arrangement, and frequently the profession is deluded into buying as new what is simply a recasting of the old without any alteration whatever. Every book must be welcome which tends to lighten the teacher's labour, which simplifies what has hitherto been difficult, and which, by any improved method, enables him more effectively to communicate instruction. The school-book which is the result of skill and experience, which clearly opens up a shorter pathway to success in teaching, is a boon for which the whole profession should be grateful; but the mere remodelling of old material, so as to afford the glory of authorship and the honours of a title-page, should be frowned upon and discountenanced. The multiplication of text-books is a thing that has lately increased, is still increasing, but ought, in some measure, to be diminished.

What are the qualities which should mark a text-book, and especially which should be kept in view by new writers who are anxious to witch the world with noble authorship? Decidedly in the forefront we place as the first qualification that the book must be new—that its purpose shall be to expound something novel, or to inform us of a better way than that with which we are familiar; and, so far as the plan will permit, we prefer in every book that it shall be brief. Too many of our school-books err grievously in this direction, forgetful of what can be accomplished in school, and how much should be left for explanation by the living voice. If all unnecessary matter were crushed out of many manuals which aim at exhausting the subjects of which they treat, they would be greatly improved by the process. If their superfluous

fat were removed, and their muscle made more apparent, their usefulness would be increased, as the human system is improved under similar treatment. As it is, the pupils are often compelled to wade through a mass of matter which is quite unnecessary at the schoolboy stage of intellectual development; and weary hours are spent in retarding solid progress in the vain attempt to accomplish more than is possible. For the memory part of school-work there could be great improvement in more than half of even the most popular text-books now in use. Brevity is not only the soul of wit, but the life of everything that pertains to instruction. To press within narrow limits, in clear and tangible form, the great landmarks of every branch of study, is to secure rapid progress in laying the firm foundation which precedes the attainment of sound scholarship. With this condensation would come economy in time and the cheapening of the books themselves—two very important considerations for both teacher and parent. The more cheaply that books are produced, the more likely are they to find their way into schools in abundance; and the more aptly that they are suited for the work of instruction, the better are they as tools in the great workshops where we are daily engaged in moulding the youthful brain.—*The Schoolmaster.*

The Elementary Education (England) Act, 1873.

This Act, which received the Royal assent on the 5th August, introduces some important changes in the Act of three years ago. The more notable features of the Act now before us consist of the repeal of what is commonly known as “Denison's Act” (18 and 19 Vict., c. 34); of regulations for the holding in future of all School-Board elections by ballot, as in contested municipal elections under the Ballot Act of 1872; of certain provisions affecting corrupt practices at elections, and the legal proceedings connected with the prosecutions, under section 74 of the old Act (called “The Principal Act”), of recalcitrant parents; and of a clause enabling certain School-Boards where desirable to make up and audit their accounts but once a year. By section 3 of the new Act it is ordained that relief by guardians of the poor to the parent of a child between five and thirteen years of age shall be conditional upon the instruction of the child in reading, writing, and arithmetic, subject to the reasonable excuses which all Boards are bound to insert in their bye-laws for enforcing attendance under penalty; to certain minutes of the Department regarding districts where compulsory powers are not exerted; and to the possession by the child of a certificate held in terms of the Agricultural Children Act, 1873. To the parent is given full freedom to choose the particular public elementary school which his child shall attend. In November, 1872, the Lords of Committee adopted the ballot for all Board elections in municipal boroughs, but hitherto in parishes the method of open and cumulative voting has prevailed. Elections to fill casual vacancies (owing to continued absence, death, resignation, disqualification, &c.) are now to be held only on the day in the year prescribed for the election of members, except where an order is issued to fill up at once vacancies on a Board whose numbers are reduced to less than a quorum. In addition to the existing disqualification from exercising any franchise for six years, on conviction of corrupt practices at a School-Board election, it is further enacted that the offender shall be ineligible to serve on a School-Board, or to hold any municipal office for a like period. A wider limit is given to the circumstances upon which School-Boards can borrow money on the security of the

school fund and local rate. These now include not only the providing or enlarging of school houses, but the paying off any debt charged on a school house provided by a board, or on any land acquired by them through gift, transfer, purchase, or otherwise, and the payment for works of improvement or fitting up a schoolhouse, which, by reason of the permanent nature of such works, the Department may deem desirable to spread over a term of years. Gifts for educational purposes may be accepted by School-Boards, and they may also act as trustees on behalf of any educational endowment or charity, so long as the undenominational principles of section 14 of the principal Act are maintained in their integrity, and provided that no money is expended out of the local rate in aid of any but elementary education. The Department is endowed with new powers to cause School-Boards to be formed for united districts without the preliminary inquiry and publication of notices hitherto requisite, where a resolution for union has been recorded by each of the component districts; and provision is made for the sub-division, under certain circumstances, of the formerly inviolable civil parish, the Local Government Board consenting. To this Board also are delegated powers, with the approval of the Department, for the auditing of School-Board accounts in those instances where an annual, rather than half-yearly, audit is ordered. Fresh arrangements are also made for the publishing, by advertisement and placard, of notices and other matters of which the publication is demanded by either Act. Not less than one ordinary meeting is to be held in each month, but to Boards who meet ordinarily more than once a month power is given to vote, by a majority of two-thirds, not to meet in August and September, or one of these months. Power is conferred for the first time upon the Boards who have framed bye-laws under section 74 of the former Act, to collect returns from the managers of any public elementary school in their district, and thus obtain reasonable information with respect to the attendance of the children within their jurisdiction. The course of proceedings before a magistrate or justices of the peace, in prosecutions for non-attendance at school, will meet the representations that were made in all quarters on the part of those Boards—and they were important ones—who have found themselves fettered in their action by many practical obstacles which presented themselves. Recourse is to be had to the "Summary Jurisdiction Act" (11 and 12 Vict., c. 43); the defendant is allowed to prove his excuse, though it be not anticipated by the informant, and any justice may summon, under a penalty not exceeding 20s., a child who is liable to any bye-law requiring attendance at school, to be produced before a court of summary jurisdiction. Here a certificate under the hand of the principal teacher of a public elementary school, or of one of her Majesty's inspectors, will be admissible as evidence. It is further ruled that on the defendant shall lie the burden of proof of a child's age, as also the proof of stated efficiency with regard to any school not being public elementary (for of these the efficiency is guaranteed by Government) which the child is attending, the court having regard to the child's age, and to the standards of education (in the code) drawn up by the Department. It is for the defendant to show that the child has actually been at school, as alleged, in compliance with the bye-law, wherever the Board, by reason of the default of the managers or the proprietors of elementary schools, fail to ascertain this fact for themselves. This section of the new Act will prove a valuable ally to the cause of compulsory education, removing as it does most of the difficulties with which School Boards, in taking up that power, have had to contend. The Act concludes with certain protection clauses to cover what

has been done under the principal Act before this one became law. The two will henceforth be known as the Elementary Education Acts, 1870 and 1873.—*Ibid.*

School-Boards in England.

Mr. Gladstone, speaking at an education meeting at Hawarden, said that he preferred voluntary to compulsory education. School-boards were doing a vast deal of good, but where four fifths of the education was provided he did not see why they should go to the expense of a board to supply the remaining fifth.

By a return which has been published of the parishes and places where the question of establishing a school-board or not has been contested, it appears that in 465 places resolutions for the establishment of a school-board were passed, and in 113 places they were negatived. A poll was demanded in 117 cases. In forty two of those cases where the resolutions in favour of a school-board were adopted the vote was confirmed by a poll; in twenty-four cases it was reversed. In forty-four cases where the proposal to establish a school-board was negatived the vote was confirmed by the poll, and in seven cases it was reversed.

The Liverpool School-Board held an adjourned meeting, recently, to decide upon the manner in which they should meet a deficiency of school accommodation for 10,496 children. On the previous day the sub-committee on school accommodation presented a report showing that the number of children in Liverpool between the ages of three and thirteen was 94,868, and that, after deducting from this number 2070 for boys and girls and 2570 for infants, as authorized by the Education Department, the board had to provide for the education of 74,597 children. There is at present, or there is being provided, accommodation for 72,518 children; but, after deducting the school space which cannot be utilised on account of the population having migrated from the districts in which certain schools are situated, the sub-committee reported a net deficiency for 876 boys, 1020 girls, and 8600 infants: total, 10,496. They therefore proposed the immediate erection of schools for 1470 boys, 1470 girls, and 2460 infants: total, 5400; and recommended that present schools should be rearranged, so that they would be able to accommodate a larger number of infants. No estimate of cost was embodied in the report, but it was stated by the chairman of the board that the proposed outlay, added to the cost of schools now being built by the board, would bring up the expenditure to about \$1,000,000. An amendment was submitted proposing to postpone the further consideration of the matter for six months, on the ground that there were 21,522 vacant places in existing schools, irrespective of accommodation for 8000 or 10,000 children in schools not recognised by the board; and the debate was adjourned in order that public opinion on the matter might be ascertained. The discussion terminated in the adoption of the report of the sub-committee by a majority of 10 to 5.

Orders of her Majesty in Council have been published in the *Gazette* sanctioning bye-laws for the compulsory attendance of children at school, made with the approval of the Education Department under the seventy-fourth section of the Elementary Education Act, 1870, by the school-boards of Chigwell (Essex) and Thornton (near Bradford).

In accordance with the resolution passed at the meeting for the promotion of technical education, at which the Prince of Wales presided, the Goldsmiths' Company has forwarded a donation of \$100, and the Skinners' Company

one of \$50, to the London School-Board, to enable the board to send school children to inspect manufactures and their processes at the London International Exhibition of this year.

Mr. Gladstone on School-Boards.

Mr. Gladstone's declaration of opinion on the relative merits of School Boards and voluntary education will be received with widely varying feelings in different quarters. The Premier has inaugurated the Parliamentary holidays with a manifesto which can only be regarded as emphatically contradicting the rumours which have lately been current with respect to Mr. Bright's reintroduction into the Ministry, the intentions of the Government in the matter of the 25th clause, and as dashing to the ground all the hopes in which the Nonconformists have upon such slender justification been rash enough to indulge. Mr. Gladstone has spoken in no uncertain tone, and with a decisive straightforwardness that does him all possible credit. The view which he now publicly expounds as his own—and therefore as that of the Cabinet whose policy he directs—of the Education Act of 1870 is that consistently advocated by Mr. Forster, and which the champions of the League, in the spirit of over confident prophecy, asserted the Government had, at the eleventh hour, made up its minds to abandon. The Prime Minister categorically informed his audience at Hawarden that in his judgment voluntary education was best, and that the only duty to be discharged by school-boards was that of supplementing the system. There was, he said, another view which had been taken of the scope and meaning of the Act—that “voluntary education was a temporary expedient, to be got rid of as soon as school-boards could be made universal.” From this interpretation Mr. Gladstone, while not denying its legitimacy, expressed his unqualified dissent. School-boards, he admitted, were doing a vast deal of good. But we are indebted to voluntary effort, and therefore to denominational energy, for the great bulk of the assistance rendered to the cause of popular instruction in the past; and to sanction a condition of things under which voluntary effort could have no place would, as Mr. Gladstone indicates, be simply suicidal.

The occasion which Mr. Gladstone selected for these note-worthy remarks afforded accidentally a striking justification of his argument. In the parish of Hawarden it appears four-fifths of the necessary education are provided by voluntary effort; the question which the parishioners of Hawarden had to decide was whether for the purpose of supplying the one fifth yet desiderated a school-board should be elected, or whether an extension of the existing system should be attempted. Very little hesitation was displayed by the meeting as to the course to be adopted. The establishment of a school-board was negatived, and of the \$6,000 required to provide the school accommodation yet wanting \$3,000 was subscribed or promised before the company had dispersed. There is no reason to suppose that the experience of Hawarden is in any way exceptional, or that the choice of Hawarden is singular. School-boards are not popular in the country, and for two chief reasons—first, because the kind of education whose theory and practice are connected with these bodies is dead against all English sentiment and prejudice; secondly, because the conviction justly obtains that school-boards are essentially expensive in their administration and impose a needless burden upon the local rates. A letter addressed by Canon Gregory to a leading contemporary last week contained a signal proof

of the accuracy of the latter impression. In voluntary schools, Mr. Gregory told us, the cost of providing for school buildings for 86,542 children is \$2,380,000 or \$29 per child; in board-schools the cost of providing for 115,677 children is \$5,500,000 or \$48 per child. “In voluntary schools,” Canon Gregory significantly added, “the above outlay includes all that is expended; in board-schools it is considerably increased by staff expenses, cost of collecting rates, &c.” Of similar purport are the facts alleged by a correspondent of the *Globe*, Mr. Stuart, of Munster-square. Whereas in his parish, voluntary schools provide for the education of 900 children, at a cost of \$30,000, the “school board have taken upon themselves to build new schools out of the ratepayers' money to accommodate 750 children, at an outlay of \$85,000.” We have as little wish as Mr. Gladstone to include in one sweeping condemnation the establishment and the policy of school-boards in all cases alike. Doubtless, as the Premier intimated, they are in several instances preparing a highly beneficent work, and the conditions are perfectly conceivable under which the election of a school-board is a necessary resource; but the admission that these bodies may be necessary now and again will not bear out the conclusion of the League and the Nonconformists that they should be compulsory and ubiquitous.—(*Hour*, Aug. 19.)

Dramatic Representations in Schools.

Circular to the Directors of Colleges and Academies in the Archdiocese of Toronto.

I have hitherto tolerated, with much regret and misgiving, the practice of having plays and dramatic representations in our Colleges and Academies.

I was always apprehensive that those wordly entertainments would give to the pupils an aptitude and taste for the theatre—no inconsiderable evil in itself. Besides, those serious studies, for which children have been entrusted to your care by parents, are very much interrupted in preparing those plays. The pupils themselves, being obliged to be separated from the rest of their fellow-students to practise those plays, are exposed to danger, as well as to lose time from important studies.

The teachers, especially those of religious orders, are more or less secularized and annoyed in trying to infuse into the pupils the spirit of the drama, with attitudes and declamations quite unsuited to them and the pupils entrusted to their care for a real and solid education. Certain parents may be flattered at seeing their children smart and attractive on the stage of a school; but the sensible and prudent would prefer to see their children exhibit proficiency in Geography, History, Reading, Arithmetic, Philosophy, and other branches taught in the Academy.

Only a few of the pupils can be employed in the exercise of a play; and if there be any education to be acquired by it, which is very doubtful, but few can be benefited by it. Correct and elegant reading, so much neglected in schools, recitations, dialogues and speeches well studied and delivered are certainly more improving to pupils, and would please patrons of schools, at these public exhibitions, and be more entertaining than snatched pieces and scenes, even from great authors. I am aware that these theatrical representations are produced in distinguished Colleges and Academies; but I am also aware that distinguished Ecclesiastics and thinking men deplore that any necessity should arise for them.

From those very exhibitions in the Middle Ages, though innocent and religious in the beginning, sprang the

theatre of modern times. Many dangerous and evil consequences have arisen from the spirit of the stage acquired in some schools. A very grave responsibility rests with the Prelates of the Church under whose jurisdiction and patronage religious schools exist, to see that piety and purity of morals and solid studies reign in them and all dangers be removed. Teachers have and assume all the responsibilities of pious parents, and they cannot be too careful of the sacred trust confided to their care, for which they must give a strict account. Public schools and Universities became so deteriorated, even in Catholic times, that pious mothers, notably the mothers of St. Thomas of Aquinas, of St. Aloysius Gonzaga, and of St. Francis of Sales, had the greatest repugnance to entrust their sons to them.

No responsibility rests more painfully on my conscience than that of our educational establishments. If in the ages of Faith many became a scandal to the faithful, we must be doubly watchful in our age that our educational establishments, especially those conducted by religious orders, should be as the "field of sweet smelling odour, which the Lord hath blessed" (Gen. xxvii; 27).

Parents must know and be assured that in intrusting their children to the care of religious communities they will be more protected than under the paternal roof. We therefore come to the conclusion that all plays and theatrical representations shall cease in the educational establishments under our jurisdiction.

† JOHN JOSEPH LYNCH,
Archbishop of Toronto.

Something for Teachers.

Practical hints which bear directly upon school-work are always of interest to the progressive teacher. The following, drawn from actual experience in the school-room, may assist some inquirer after truth. The great secret of success in school government, is employment. Pupils who are kept employed find no time for mischief. Employment in the schoolroom means something more than mere poring over books. I propose to give a few directions, which if followed will not only keep pupils employed, but also tend to educate them in the higher sense of the word:

1. Have pupils write in their copy-books *each day*, instead of once or twice a week.
2. See that each scholar has some written exercise aside from the regular drill in penmanship.
3. Give younger pupils words to print on slates, figures to make, add, etc.
4. Have each scholar in the writing-class purchase a blank-book. Dictate exercises and have the books kept in the form of a Leger.
5. Give them each day something new to write, such as advertisements, orders, notes, receipts, bills, invitations, descriptions, sentences containing given words, lists of names, problems to analyze, etc.
6. Have larger pupils furnished with drawing books.
7. Have smaller scholars furnished with drawing paper. Give drawing lessons from board. Have pupils practise each exercise on their slates a week, then copy on paper.
8. Encourage the writing of letters. A school post-office may make this exercise more interesting. Some teachers establish a school currency, have their pupils buy and sell, keep accounts and transact all kinds of business. This if properly conducted might prove interesting and be a success. All teachers, however, have not the skill, inventive genius and tact which would be

necessary in order to carry it out successfully.

9. Encourage the drawing of maps. To do this buy a box of water colors and let the children paint their maps. The bright colors will attract their attention, gain their interest and cultivate their taste.

10. Give your pupils poetry to copy. Select those pieces which contain high and noble sentiments. Thus you will educate their hearts as well as their minds.

11. Encourage your pupils to draw from nature.

12. Have each exercise brought to you as soon as completed. File them away in your desk and return them at the end of the term.

13. Seek variety; as a word admits of many changes of accent and of form, so a thought admits of many methods of illustration.

14. Make study a second nature and school a second home.

15. Teach your pupils the value of time and encourage them to improve it.

The above methods, if followed, will lift the wheels from the ruts, smooth the way and cause the machinery of the school-room to run pleasantly and quietly. Teachers give them a trial. E. H. M.—*In Rhode-Island Schoolmaster.*

Schoolboys' Money.

We have reason to believe that the principals of public schools hold very strong opinions on the subject of boys' allowances. They find several evils spring from the modern habit of lavishness, one of the first being that it is difficult to maintain discipline when servants can be bribed; another being distinct injury to some boys' characters from the self-will which extravagance always generates; and a third being the destruction of that spirit of equality which is the main condition of tone in every large school. A boy with much money is toadied for the accommodation he can give, and a boy with little money is despised because he must avoid doing things his richer *confreeres* can manage easily. "Money," said the shabby chaplain to Mr. Pickwick, "is pretty much in prison what money is out of it;" and so it is in the playground. Moreover, the tendency of a large proportion of boys towards surreptitious "tuck," sweetmeats, porter, cigars, and what not, is dependent upon their supply of money, and is one which needs restraint sometimes, and in some schools very sharp restraint, in the interest of their health. A lad always after estables never does anything that requires intellectual concentration, and you do not get much out of any boy who has his bottle of porter a day. This is the masters' view, and we believe most masters would, if they knew how, keep up a distinct discipline in the matter of allowances; but there is also another view, and that is of the parent, more especially if he belongs to the educated middle-class. He wants his boys not so much to be thrifty, or careful, or penurious, or even considerate of his pocket, so much as to realize thoroughly what the value of money is, how much it ought to bring, and how it ought to be managed to the greatest advantage, and there is no greater perplexity than the way to secure those qualities. There must be some mode of strengthening boys' character in this regard, as there are modes of strengthening it on other sides, but it is nearly impossible to find it, boys differing in this respect nearly as much as men. Lord Lytton's sketch of the lad who was caught shying half-crowns at sparrows was, we must presume, a pleasant exaggeration, though we have seen boys use pence to make ducks and drakes on a broad river—nothing equals

an old penny, unfortunately, for that amusement—but there are boys in hundreds who have nearly reached that stage, who cannot apparently be taught what money means, who have no notion how it goes; who, if given an allowance all at once, will spend it in the first two days, and either run in debt—nearly the most dangerous temptation to which a schoolboy can be exposed—or remain miserable for the rest of term. Others, again, are made extravagant by income. The weekly allowance is felt to be small, is destined for little expenses, and is gone almost before it is received. It makes no impression on the mind, and helps in no way to produce the foresight the want of which is the root of all extravagance. There are boys again, who manage money as shrewdly as men, some so shrewdly that it becomes a vice—we doubt if there is a public school in which one boy does not lend money at usury—and a few who cannot endure to part with cash, who hoard it as men hoard property. All require mental discipline on the subject, just as they require it to keep them truthful, or industrious, or manly; and yet how is it to be administered without doing mischief? The master can hardly interfere with a boy's disposal of pocket-money, unless it goes in some way actually forbidden; and though the præpositor, or prefect, or sixth-form boy may, if he chooses, give those under him an effective hint, he has seldom sufficient experience to do it. Nor, if they had, do we think the boy-masters, the prefects, could interfere much without harm, though they can and often do cure any tone of extravagance that has infected the school. The father at a distance, is still more powerless, afraid to break his rules, lest his son should lose the first lesson of life, self-control; afraid to keep them, lest the boy should be under a disadvantage with his companions, or be more miserable than the occasion requires. He, as a rule, ends by breaking his own rules, and in losing all real influence over the matter. There is a want of some system which should give the father and the boy a clear idea of what is needed, and what ought to be avoided, and any experienced master who issued a little tractate on the subject would do a real good to the community.

It is admitted on all hands that there is a point of extravagance in boys' allowances which must be checked at all hazards. Dr. Arnold refused two promising pupils because a doting mother insisted on allowing them \$500 a year, and any sum of any substantive amount involves moral dangers which no master of experience would for a moment permit to exist. The absolute poverty, again, once common enough in old grammar schools, and in Scotland, and in schools just below the public-school standard, though invaluable in creating the capacity for "doing without" which is the curse of our new generation to lack, is all but impossible now, and we question if it would be healthy if it were possible. It pays if the home is very poor, but if it is not, it seems unjust and irritating, while it produces almost invariably a thirst for money as the end of life. Besides, if its consequences were ever so good, it would take too much out of the period of life which to half mankind—at least the half who have healthy stomachs and strong frames and a good thick hide over their nerves—is the happiest of all. If wearing hair shirts for five years made boys work harder, we should not give them hair shirts. Considering how infinitely little pleasure most men have in their lives, it is not worth while to begin worrying too soon. What is wanted is some sort of system by which a boy can be allowed money, and yet learn something of its use as he will have to learn it in the world,—not in the way of economizing or accumulating, so much as of arranging expenditure, and for this object we suspect all existing arrangements are wrong. The regular practice with lads

under sixteen is to allow so much a week, settled usually by the custom of the school, and a sovereign a term, subscriptions being paid separately or not, pretty much according to the class of school. The effect of that arrangement is that the lad has never to deny himself in the first month, and is always being bored by his want of means in the last two months. What is wanted is to enable him to have money to save if he wishes, for any great occasion, and money to go on with, and we believe by far the best way would be to reduce the whole allowance to income, but pay it month by month, instead of week by week. Most boys would thus obtain from 10s. to 12s. a month, a sum high enough to be appreciated, yet not issued at such intervals that they would not feel the consequences of immediate extravagance. It would be given them seldom enough to suggest economy, yet in amounts large enough to make good management seem of some "use" and comfort to their souls. It would, in fact, teach them "management," a virtue in which the new generation seems likely to be as deficient as the late Marquis of Hastings or the half-dozen of eldest sons who have recently passed through the Bankruptcy Court.—*Spectator*.

Reading Aloud.

We know of no accomplishment so valuable as that of reading "with good emphasis and discretion," of catching the meaning and spirit of an author, and conveying them to others with a distinct and intelligible utterance; and yet, strange to say, there is no department of modern education so much neglected. Indeed, so general is this neglect that scarcely one young lady or gentleman in a dozen, who boast of having "finished" their education, can, on being requested, read aloud to a private company with that ease and graceful modulation which is necessary to the perfect appreciation of the author. There is either a forced and unnatural mouthing, a hesitating and imperfect articulation, or a monotony of tone so roughly painful that one listens with impatience, and is glad when some excuse presents itself for his absence. Whatever may be the imperfections of our school tuition, this defect is rather to be attributed to a want of taste, and consequent neglect of practice on the part of grown-up individuals, than to any defect in their elementary training. There may be a deficiency of good models; but the main difficulty arises from the unequal value which seems to be attached to good reading as compared with music, dancing, painting, and other fashionable acquirements.

That the art of reading aloud is at the low ebb we mention, any one can readily convince himself by requesting his friend to read for him the last speech of the American President. Twenty to one, he will find his friend an apt enough scholar, but a careless and indifferent enunciator—one who has all along read for himself, and whose only object has been merely to acquire the meaning of the works he perused. Reading aloud should be cultivated as one of the most useful and attractive of domestic accomplishments. Gathered round the winter's fire or evening lamp, what could be more cheerful for the aged and infirm, what more instructive to the younger branches, or what more exemplary to the careless, than the reading aloud of some favorite author? Singing for the million is cried up on all hands—why not reading aloud? We have in almost every family and workshop evidence of what practice in concert has done for vocal music—why not the same for reading aloud? The one is chiefly valued as an amusement and refining

accomplishment; the other is equally entertaining, quite as necessary for the adornment of public or private life, and certainly more directly productive of utility and knowledge.—*Chambers' Journal*.

Precocity of London "Arabs."

Juvenile depravity seems, from the following remarks of the *London Daily News*, to be increasing in the British capital:

"Most family circles have their stories of juvenile depravity—of atrocious young persons of five smashing their sisters of three, or trying to set fire to the house in the absence of the nurse. These occurrences are regarded by fond parents and indulgent aunts as highly amusing; the expectation being that all such wickedness will disappear by the time that knickerbockers are wanted. But what are we to do with criminals of ten or a dozen years of age, and both sexes, who challenge the attention of the police, and puzzle the judgment of the most well-disposed magistrate? Yesterday a series of these instructive, if not entertaining, cases came before the courts. At Bow street, a small girl of ten was charged with stealing a purse; a school-board officer stating that he had seen this precocious delinquent try the pockets of over fifty ladies. She was ostensibly selling matches, while really pursuing a more lucrative, if more dangerous, calling. At Hammersmith, a boy of fourteen was convicted of having been drunk and incapable. He was fined five shillings, just as if he had come to years of discretion, although the glory of the sentence was somewhat dimmed by the magistrate directing the policeman to tell the boy's mother of the affair. At the Thames' police court another boy, aged thirteen, was charged with threatening to murder his mother, who said she went about in bodily fear of personal violence. It seems to us that a little personal violence, administered judiciously, and in time, would put an end to a good many of the juvenile freaks which seriously perplex our magistrates. A sound thrashing is about the best antidote possible for all the poisonous stuff imbibed from the penny romances; and in the case of a radically bad temper it is, indeed, about the only correction that can be employed. In such cases, parents are fortunately allowed to take the law into their own hands, and if they did so with a little more determination, we should have fewer of those cases in which the majesty of the law is invoked to supply the place of a proper domestic control."

The Reading-Room of the British Museum.

With all the English conservatism and hesitation in establishing popular institutions, and love of restricting and hedging about with conditions and qualifications great public privileges, no city of our Republic can show a more substantial or more liberally managed public benefit than this reading room. The reality of its freedom, its order, and its entire adaptability to answer its purpose, impress one. Here is one place where, without fee or favor, the humble student and the foreign scholar may partake of, and luxuriate in, the wealth of England; may participate in the marvellous range of lore, in every tongue, of every art and science, which her wealth, nobly bestowed, has collected. I can think of no happier destiny for the ardent lover of books, for a historian, a man of science, a statistician, a novelist, or a mere student,

absorptive but not fruitful, than to have cozy lodgings in the vicinity of Russell Square, a satisfactory English landlady, and a ticket—daily used—to the reading-room. He may sit in one of the roomy fauteuils as luxuriously as the West End lord in his velvet lined mahogany, and may look around with a sense of ownership (for their use and fruits are freely his) upon a far prouder possession of learning than the greatest West End lord can boast. He is in goodly company; for here burrow, almost invariably, the scholars, romancers, philosophers of England. He sits, co-equal in his privileges, with the British aristocracy of brain. He is served as faithfully and as quickly as is the minister of state by his favorite private secretaries. There is the whole day long to revel, uninterrupted if he will, in his beloved studies, in a tranquil and studious sphere, out of hearing of the bustle of the streets, though here is busiest London roaring all about him. If he grows weary, for the while, of his books and the quiet, he may walk and wander through those seemingly endless corridors where are literally crowded the antiquities of Egypt and Phœnicia, of Antioch and Afghanistan, of Athens and Rome; where are collected the marvels of geology and of mechanical science, of biology and the arts, ancient, mediæval, and modern. He may read up his subject in the reading-room, and stepping into a neighboring corridor, find it practically illustrated in the glass cases which surround him.—*Harper's*.

The Use and the Abuse of Memory.

There is hardly anything in which our educational system is more faulty than in the use it makes of the memory. Children are made to remember when they should be taught to comprehend; they learn words when they ought to be gathering ideas; they memorize rules when they should master principles. The thing called memory is a wonderfully capable and obliging servant, willing to do its own work and that of all its fellows, and as it is more softly shod than they, and readier of hand and eye, both teacher and pupil accept its service altogether too largely in almost every case, and the results invariably are imperfect scholarship and bad mental habits.

The fault is not confined to the school-room by any means. Throughout life we abuse and maltreat the memory, requiring it to do not only its own work but that of half the other mental faculties as well, and when it fails us from sheer exhaustion we complain of our "treacherous memory." Any one who will take the pains to observe carefully, will discover that in more than half the cases a bad memory is simply a memory which is required to do that which it is not its business to do.

It is the office of the memory to receive and retain whatever we commit to its keeping, and this any ordinary memory may be trained to do. But while we may cultivate the faculty to almost any conceivable extent, people who have anything else to do in the world cannot afford to waste time in training one faculty to do the work which properly belongs to others, even if the result were not, as it invariably is to weaken the other and more valuable ones.

We should commit to the keeping of memory those things which it is necessary to intrust to it, and those only, sparing it unnecessary burdens, not so much because they are unnecessary and burdensome as because they are often essential to the well-being of other faculties of the mind.

In addition to matters of this class, however, there are many other things which it is a waste of time to commit

to memory, simply because they are not often needed at all, and may be readily had from books whenever wanted. Every book-keeper might learn his ledger index by heart if he saw fit to do so; but as it is a thing convenient of reference, he has no occasion to do anything of the kind, and to do so would be to misuse time sadly. The same is true of a hundred other things, chief among which, as a stumbling block to childhood, is the matter of dates in history. Of the many thousands of them which are given even in school histories, hardly a dozen are ever wanted after the recitations have been finished, and when one is wanted, a dictionary of dates furnishes it unerringly, and with a far smaller consumption of time than that which would be necessary to the memorizing of an elaborate chronological table, even if the table could be retained in the mind with any degree of certainty, which it can not.

In reading history, of course, a general and approximate memory of the chronology is necessary to a proper comprehension of the text, but this may be had in many ways without the trouble of remembering exact dates, and when it is secured it is a far more permanent guide than a bald memory of figures can possibly be.

We have before us a letter, in which a very excellent plan for the accomplishment of this is suggested. It is from a lady of more than ordinary ability to a friend who is engaged in the preparation of some children's histories to whom she says: "Let me put in a plea for poor persecuted childhood. Do not, please do not, put any dates into your books; or, at any rate, put in as few as you can get on with. They were the bane of my school-days, but I am glad to know that I do not remember one of them now. When I began to read history for myself, I always shut my eyes when I came to a date, and rejoiced in the conviction that the author had been compelled to look it up in some book or other before writing it. But as history is almost worthless if not studied comparatively, I use the History of England—with which school-drilling has made me familiar—as a chronometer (the reigns of the kings forming the divisions on the dial), and I make the history of all Europe keep time to it. The plan may not be the best one for the purpose, but it is certainly better than to consume all of my time in the study of dates."—*Hearth and Home*.

Little Things.

We cannot have it repeated too often what we all know and feel to be a great and important truth, but still what we are too prone to forget and pass by lightly, viz; that the human character, in all the stages of our existence, but especially during childhood, is moulded and formed more by the little things of life than the great ones. Were this more justly appreciated and acted upon in the education of our children, it would have a most salutary effect upon their character. Numberless small things happen in our every day life, so trivial in themselves individually, that they hardly strike us at the time, and we little dream of the influence they are exercising on the minds of our little ones. We will take for example a habit which will doubtless come home to almost every one of us—both fathers and mothers. We often correct a fault, or prevent one being committed, without at the same time taking any measures to see that our wishes are obeyed—or without paying any further attention to the subject, allowing the fault to be repeated with impunity, perhaps from indolence or a disinclination to be constantly reproving. The child knows what it is doing is wrong, and that it is against the expressed wishes of its

parents: but still sees that it can continue without further reproof or correction. The effect of this is most injurious to the child, and a habit is acquired which strengthens from repetition with impunity, of neglecting and undervaluing justice and a knowledge of what is right, and which will undoubtedly extend to the large as well as the little things of life. This is only a specimen of these little things which occur constantly, far more so than the great things, and which have a far greater and more potent influence in moulding the character than we give them credit for. It has been said, and with very great truth, that the most important duty of parents is to keep their word with their children, and act up without fail to their decisions. It would be far more preferable and far less injurious to children that parents should never make any decisions than that they should not be acted up to.—*Exchange*.

What Will You take for Yourself.

It is said that every man has his price; young man have you yours? Will anything at all buy you? Will you even sell yourself by a little deceit, a little falsehood, by evading the truth to gain somebody's favour, to raise you in somebody's opinion, or to accomplish some desired end? Will you even so far forget yourself, your manhood, your friends, your position in society, your best interests, as to thus sell yourself for the favor of another?

Doubtless, you now spurn the thought, and yet have you not often done so? Be careful, be honest in reply. Answer only as the little voice within prompts. Remember that it is of daily occurrence with mankind. Others, who think they are just as good, just as strong in character, who value themselves just as highly as you, are daily selling themselves.

Will you prove yourself a man, and talk, and act, and live like a man? Will you even countenance by your approval, by your influence, by your patronage that which in your heart you know to be wrong, for fear of giving offence, for fear of losing somebody's favour, of subjecting yourself to somebody's cutting jest? If surrounded by the jovial associates of former days, where the convivial bottle is freely passed, and you are urged to partake of an *extra* glass, can you, even if there be none present to expose you to those whom you know think better things of you, say 'No?' Can you, everywhere, under all circumstances of temptation say 'No!' If you can then indeed do you possess true nobility of soul; then indeed may your friends safely lean upon you and feel proud of you.

Even those whose solicitations to evil you have refused to accept, will respect and love you more because you are proving yourself a man. They who sustain such a character are building upon a rock, and will find themselves surrounded by friends comprising the best and noblest of mankind. All love you because they know they can trust you. Let your price be above earthly treasures or temptations, and you will thus gain not only nobility of character and soul but the respect and love of all the pure and good.—*Bow Bells*.

The British Army.

Writing many years ago, on the condition of England, Thomas Carlyle expressed a hope that armies of men trained to fight and kill one another would some day

give place to armies of industry, commanded by captains of industry, who should subdue the earth in a way very different from that of the slaughterers. In one sense, the hope expressed by the deep-thinking author is about to be realised, for the British army is becoming a working army. Every man who enlists may, if he will, learn a trade, the choice being left to him; and thus at the same time that he is subjecting himself to discipline, and acquiring habits of obedience, he may become an artificer, skilful or not, according to his capabilities. It is one of the miseries of a soldier's life in time of peace that during one half of his time he has nothing to do, and he frequently falls into mischief in consequence. By the new system he will be saved from this misery, and be taught a good trade in addition to military duties; so that should he desire to quit the army at the end of his term, he will be well qualified to earn his living, and to prove himself a useful member of society.

OFFICIAL NOTICES.



Ministry of Public Instruction.

APPOINTMENTS.

LAVAL NORMAL SCHOOL.

The Lieutenant-Governor,—by an Order in Council, dated August 26, 1873,—was pleased to appoint M. Rosario Saucier, Professor in the Laval Normal School, to replace M. P. Hudon, resigned.

MEMBERS OF BOARDS OF EXAMINERS.

KAMOURASKA.

The Lieutenant-Governor,—by an Order in Council, dated August 27, 1873,—was pleased to appoint Louis Charles Begin, Esq., a Member of the Kamouraska Board of Examiners.

CHARLEVOIX AND SAGUENAY.

The Lieutenant-Governor,—by an Order in Council, dated August 27, 1873,—was pleased to appoint Jean-Baptiste R. Dupont, Esq., a Member of the Charlevoix and Saguenay Board of Examiners.

SCHOOL COMMISSIONERS.

The Lieutenant-Governor,—by an Order in Council, dated August 8, 1873, was pleased to make the following appointments:

St. Valère, Co. Arthabaska:—The Revd. M. L. Elie Dauth and M. Urbain Vigneau to replace themselves;

St. Cuthbert, Co. Berthier:—M. Joseph Dudemène to replace M. Onésime Plante, and MM. Simon Savoie and Hilaire Chaurette to replace MM. Napoléon Allard, fils, and Henri Vadenais;

Baie Sud, Co. Gaspé:—MM. William Wakeham and Philip Bechervaise;

Newport, Co. Gaspé:—M. Jean Cormier to replace M. Joseph Grenier;

St. Jérôme (Village), Co. Terrebonne:—MM. Godefroi Laviolette and Joseph Amable Hervieux, to replace themselves;

St. Michel (No. 3.), Co. Yamaska:—MM. Antoine St. Germain and Isaac Mondoux to replace MM. Louis Girard and Michel Arèle;

St. Michel, (No. 4), Co. Yamaska:—MM. Olivier Salva and Henri Lambert, to replace MM. Joseph Labonté and Pierre Hébert;

St. François (Parish), Co. Yamaska:—MM. Jean-Baptiste Mahère and Edouard Despains, to replace themselves.

The Lieutenant-Governor, by an Order in Council, dated August 27, 1873, was pleased to make the following appointment:

St. Cajetan, Co. Bellechasse:—M. Jean Baptiste Fradet, to replace M. Pierre Isabelle;

Harvey, Co. Chicoutimi:—M. Adolphe Boudreau, to replace M. Lucien Bouchard;

Ste. Scholastique, (Parish), Co. Two Mountains:—MM. Louis Cléophas Leduc and Maxime Laviolette, the former to replace himself and the latter to replace M. Joseph Fortier;

St. Malachie (No. 1), Co. Dorchester:—The Revd. M. W. Richardson and M. François Lafontaine, to replace themselves;

Grande Grave, Co. Gaspé:—M. William Robert, to replace M. Charles Esmouf;

Lachine (Town), Co. Jacques-Cartier:—MM. Clément Deschamps, Thomas Chapman, Alphonse Garipey, Jean Baptiste Cavour, and Jean Baptiste Leger;

Lachine (Parish), Co. Jacques-Cartier:—MM. Jean Baptiste Onésime Martin dit Ladouceur, Maxime Latour, and Jean Baptiste Légault;

Ste. Agathe (No. 2), Co. Lotbinière:—M. Etienne Morin, to replace himself;

Ireland (South), Co. Megantic:—M. James Byrne, to replace M. Patrick Baily, and M. William McFarlane to replace M. John Porter;

St. Anaclet, Co. Rimouski:—MM. Joseph Lavoie and François Lemieux to replace MM. François Roy dit Lauzon and Germain Vignola;

Canton de Saguenay, Co. Saguenay:—MM. Alexandre Tremblay and Pierre Poitras, to replace Onésime Savard and André Daignault dit Laprise;

Ste. Brigitte des Sauts, Co. Yamaska:—MM. George Lavallée and Martin Purtell, to replace MM. James Purtell and William Shawken;

St. François du Lac, Co. Yamaska:—MM. François Verville and Isaac Desmarais, to replace MM. Edouard Despains and Jean Baptiste Maher.

SCHOOL TRUSTEES.

St. Jean Baptiste Village, Co. Hochelaga:—Mr. Joseph Thomas to replace Mr. John Seybold;

Aylmer, Co. Ottawa:—M. Luther Eddy, to replace M. William McLean.

SEPARATIONS, ERECTIONS, ANNEXATIONS, &C., OF SCHOOL MUNICIPALITIES.

The Lieutenant-Governor,—by an Order in Council, dated August 20, 1873,—was pleased

To detach, from the School Municipality of Lachine, the Town of Lachine and erect the latter into a separate School Municipality to be known by the name of the "Town of Lachine".

The Lieutenant-Governor,—by an Order in Council, dated August 27, 1873,—was pleased

To annex to Tingwick, in the County of Arthabaska, the south-east half and the South half of lot eighteen in the first Range of this Municipality; the South-east half of lot nineteen of said first Range and the South half of the quarter of lot seventeen, at present forming part of Warwick for school purposes; lot eighteen of the second Range, and the three-fourths of lots nineteen and twenty of the second Range of Chénier;

To erect, into a School Municipality, the new parish of St. Eugène, in the Co. of L'Islet, to be known by the same name and to have the same limits;

To detach the Town of Nicolet, in the Co. of Nicolet, from the rest of the Parish and erect it into a separate School Municipality with the same limits as assigned to the town for civil purposes;

To define the limits of Ste. Rose du Dégelé, in the County of Témiscouta, (not clearly set forth in the Order in Council of September 19, 1872) as follows:—

1. All that part of the Seigniorship of Madawaska, to the west of Lac Témiscouta and on the river Madawaska, running eastward as far as Lac Témiscouta, westward the depth of said Seigniorship as far as the Crown lands, northward to the Parish of Notre Dame du Lac and a line parallel as far as the depth of said Seigniorship, southward to the Province of New Brunswick;

2. That part of the said Seigniorship of Madawaska lying to the west of Lac Témiscouta and the river Wadawaska, westward of

the said Lake and river, eastward to the Crown lands, northward to a line parallel to that which divides Notre Dame du Lac, and southward again to the Province of New Brunswick;

To change the limits assigned to the School Municipality of the Canton of Chambly, in the County of Chambly, by Order in Council of June 23, 1873, to the following:—

All the lands comprised in the Municipal Corporation of the Canton of Chambly, the lots adjacent to said Municipal Corporation taken on the rural lands of the Parish of St. Joseph de Chambly, being the lands known and designated on the plan and the Official Book of reference, as deposited for registry purposes in the county of Champlain, namely; the lots three hundred and one, three hundred and three, three hundred and four, three hundred and nine, three hundred and eleven, three hundred and thirteen, three hundred and fourteen, three hundred and fifteen, three hundred and six, three hundred and five, and three hundred and ten.

DIPLOMAS GRANTED BY BOARDS OF EXAMINERS.

BEAUCE.

Session of August 5, 1873.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (F):—Miss Elise Bélanger.

Second Class:—Miss Délice Veilleux.

J. T. P. PROULX, Sec'y.

CHARLEVOIX AND SAGUENAY.

Session of August 5, 1873.

ELEMENTARY SCHOOL DIPLOMA, *First Class*, (F):—Misses M. Anastasie Chouinard, bias Dallaire, Louise Lachance, Suzanne Lavoie, and Philomène Tremblay.

CHS. BOIVIN, Sec'y.

KAMOURASKA.

Session of August 5, 1873.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (F):—Misses Emélie Bérubé, Héloïse Bérubé, Clara Bouchard, Démérisse Boucher, Adèle Levêque (F & E), Adèle Levasseur, Géraldine Rioux, Zoé Sirois, and Mary Smith.

Second Class:—Miss Appoline Deschênes.

J. G. PELLETIER, Sec'y.

MONTREAL (PROTESTANT).

Session of August 5, 1873.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (E):—Misses Lillian S. Anthony, Janet Connelly, Beatrice D. Graham, Louisa W. Graham, Mary Mitchell, and Mrs. Mary Haney.

Second Class:—Messrs. Robert G. Hall, Robert Scholefield, and Miss Ann Eliza Trepania.

T. A. GIBSON, Sec'y.

MONTREAL (CATHOLIC).

Session of August 5, 1873.

MODEL SCHOOL DIPLOMA, *First Class* (F):—Misses Selfrid Brunet, Philomène Chatel, Mrs. M. Delina Hamilton, Mrs. Peladeau, and Celina Lapiere.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (F & E):—Misses Mary Archer, (F):—Joséphine Bédard, Victoria Bélanger, Louise Bernard, Marie Louise Blanchard, Ritche! Boursier, Fidèle Brodeur, Alphonsine Demers, Virginie Désert, Octavie Favreau, Céline Gaudet, Marie Anne Gill, M. Eloïse Goulet, Emélie Guerin, Alphonsine Guertin, Aulia Hubert, Arselie Huot, Pulcherie Jacques, Joséphine Jordan, Vitaline Lajoie, Agnes Lereux, Odile Macé, Elmira Macé, Juliana McCarthy (F & E.), Maria McCarthy (F & E.), Elizabeth McCallum (E.), Hermine Paré, Marie Phanouf, Rose de Lima Ray, Eugénie Tremblay, and Sarah Ward.

Second Class:—Misses Elizabeth Bonin, Délina Brisebois, Joséphine Bille, Marguerite Clavel, Laure Cadieux, Elvina Cormier, Marie Louise Dulude, Marie Dumenlong, Mélina Gauthier, Anathalie Giroux, Salmée Gregoire, Marie Lachapelle Langlois, Agnes Leboeuf, Amanda Leblanc, Herménie Peloquin, Emélie Poirier, Ludivine Poulin, Cléopie St. Laurent, and Mathilde Vinet.

F. X. VALADE, Sec'y.

QUEBEC (CATHOLIC).

Session of August 5, 1873.

MODEL SCHOOL DIPLOMA, *First Class*, (E. & F.):—Miss M. Emilié Demers.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (E. & F.):—Mr. Joseph Henri Audibert, (F):—Misses M. Zélire Bergeron, M. Hedivige Boisvert, Rose de Lima Demers, M. M. Césarie Tradet, Obéline Gosselin, M. Léa Houde, Félixine Labrecque, Sara Lachaine, Paméla Alphonsine Lacombe, Adéline Pichet, Clarisse Bompré, Adéline Roy, Adèle Thibodeau, (E.):—Sarah Jane Bryson, and Margaret Bamford.

Second Class (F):—Misses Philomène Blais, Marie Fugère, M. Fédéra Virginie Germain, Dorothée Hardy de Chantillon, Arzelie Hébert, Delvina Cléopée Lachance, M. Antoinette Lamothe, Victorine Lauzé, Céline Marcoux, M. Georgina Plaisance, M. Anaïs Plaisance, Rose Roberge, M. Eléonore Routhier, and Ellen Duff (E).

N. LACASSE, Sec'y.

RICHMOND (CATHOLIC).

Session of August 5, 1873.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (F):—Miss Hélène Emma Guertin, Mary Ann McNamara (E), Olivine Ouellette, and Eugénie Talbot.

Second Class:—Philomène Bénéit, Rosa Ducharme, Mary Jane Gorman (E), Mary Ann McNamara, and Eugénie Talbot.

F. A. BRIEN, Sec'y.

SHERBROOKE.

Session of August 5, 1873.

ELEMENTARY SCHOOL DIPLOMA, *First Class* (E):—Misses Margaret McKay.

Second Class:—Misses Caroline S. Cowan, Maggie Cowan, and Odile R. Richard.

S. A. HURD, Sec'y.

THE JOURNAL OF EDUCATION.

QUEBEC, AUGUST & SEPTEMBER, 1873.

The Hon. G. Ouimet's first Visit to the Laval Normal School.

On the 30th May last, the Laval Normal School gave a literary and musical soirée on the occasion of the first visit to that institution of the Hon. G. Ouimet, after his appointment as Minister of Public Instruction.

The hall was filled by a large and select audience, and a most agreeable evening's entertainment was afforded, at the close of which the students in training presented an address to the Hon. Mr. Ouimet, of which the following is a translation:

The Hon. Gédéon Ouimet, Minister of Public Instruction and Premier of the Province of Quebec.

Sir,

Permit us to offer you the expression of our thanks for the honour you have done us in thus visiting the Laval Normal School in your official capacity of Minister of Public Instruction.

Although not unmindful of your high position as Premier of the Province, still it is more particularly with that of Minister of Public Instruction that we feel called upon to express our opinions.

We were already aware in what high esteem you were held by your honourable predecessor in office and founder of the Normal Schools, Mr. Chauveau, and of whose cabinet you formed a member.

When we learned some time ago that you were going to preside over the department of education, we were happy to hear that your private qualities and acts of benevolence were such as to command the esteem of those who enjoyed your intimacy. These are qualities you will often find the opportunity of exercising in our favour, as we require your protection and indulgence.

Finally, we would ask you to accept the expression of our best wishes for your success; and believe that we shall use our endeavours to cooperate in the good work of education, and that we shall carry, to the accomplishment of our duties as teachers, all the zeal and energy that you and the country have a right to expect from us.

The following is a translation of the answer returned by the Minister :

Messieurs the Students-in-Training at the Laval Normal School:—

Gentlemen,

I accept with pleasure the expression of your good will which you have tendered me in terms so flattering, too flattering, I am afraid, in what relates to me personally.

When His Excellency, the Lieutenant-Governor, entrusted to me the duties of an office, that had so long been discharged by my honorable predecessor, with such advantage to the department and such credit to himself, I did not conceal from myself the weighty responsibility that attached to it. I knew I was to succeed our first two superintendents of education whose learning and qualifications have been so justly appreciated, and one of whom, the Hon. Mr. Chauveau, is recognized as one of our leading men in politics and literature. In the relations that I had with him during the six years that I was a member of his administration, I became convinced of the importance he attaches to the spread of education, and particularly to the success of the Normal Schools of which he was the founder, and whose infant steps he guided to manhood. I knew also that the great statesman, whose loss we to-day deplore, the lamented Sir George Etienne Cartier, had given his powerful aid towards the establishing of these schools which he considered the very basis of a good system of education.

Hence, gentlemen, you can well believe that it was not without some misgivings that I accepted charge of the Ministry of Public Instruction, the duties of which office are not only arduous but peculiar especially for one who has not made a special study of the subject.

However, being a sincere friend to education, I believed that with a strong will and a devotion to the work, I could, if not do great good, at least, carry on the work of my honorable predecessor by endeavouring to follow in his footsteps. I agree with him in believing the Normal Schools not only highly useful but I believe them to be indispensable to the preparation of good teachers. In this I am borne out by the testimony of all civilized nations who have given any attention to the great question of the proper education of the masses. It is in reality a duty of the state to select good teachers, and to take every possible care in the training and preparation of those to whom the youth of a country is entrusted; those who are to mould and form the minds of the young; those who are not only to instruct in science, but who are to be guides in morals and religion, the very bases of a sound education.

Gentlemen, you are called upon to take charge of the youth of the country, a splendid army but one difficult to manœuvre. The late Emperor of the French called you, (the teachers) "the Army of Peace." You are not only to discipline and instruct for the duties of life, but you will, whether conscious or not of it, give an impulse and a bent to each mind that will play an important part in his after-career through life.

The youth of a country is a part of the cargo of the ship of State, how necessary and important then that each could not only act as pilot but even as captain, should the necessity arise! What a noble, but what a difficult, task! You, no doubt, gentlemen, understand the importance of it, by your coming here to perfect yourselves in the art of teaching, that you may afterwards give your pupils the benefit of those instructions of which you seem to have profited so much.

You have attributed to me certain qualities for which I kindly thank you, not, however, overlooking your generous exaggeration of them. But there is one thing, however, of which you may be assured and that is, that you have the earnestness of my good will in your behalf, my wish that the institution may prosper, and my ardent hope that when you leave you will devote yourselves to the noble profession of teaching which you have had the courage to select.

The Hon. Mr. Chauveau, being asked to say a few words, kindly consented and delivered one of those improvised discourses peculiar to himself,—and so terminated a most agreeable evening's entertainment.

Ladies' Humane Education Committee, Montreal.

This Committee, established in connection with the Canadian Society for the Prevention of Cruelty to Animals, is formed for the promotion of the systematic education of the young in the principles of humanity, and by early training to inculcate in their minds the duty of kindness and consideration to all dumb creatures.

With this object in view the Committee has organized a plan of operations similar to that established by the Ladies' Humane Education Committee in London under the Presidency of the Baroness Burdett Coutts.

The Committee first desire to obtain the co operation of the School-Masters and Mistresses of the Province, and to this end an address will be presented to the Minister of Public Instruction for permission to introduce certain specified text-books into the schools under their control. These text-books are those which are now in use in the schools in England and France. The Committee will also send an appeal to all the teachers in the Province, requesting them to inculcate the principles of humanity and kindness upon the children under their care, and recommending to their notice the method pursued, with eminent success, by Monsieur de Saily, a French teacher in Algiers.

It is proposed to offer prizes for the best essays on the subject of kindness to animals, to be competed for annually in each school.

The Committee will also recommend, as an effectual method of awakening the interest of the young in schools, etc., the formation of societies for the protection of dumb animals, and particularly of birds, their nests and young.

The good objects for which the Committee is laboring can be materially assisted by the ladies of Montreal, who are now invited to associate themselves with the work of the Committee. This is peculiarly a sphere of action in which women's influence can be advantageously exercised, as they have opportunities for awakening and training the sympathies of the young, in families, schools, and charitable institutions. A subscription of one dollar constitutes membership. The money obtained from the members' subscriptions will be expended in prizes, rewards, periodicals, etc., and the necessary expenses of the Committee.

The Committee urgently request heads of families to subscribe either to the *Animal World*, a monthly periodical published by the London Society for the Prevention of Cruelty to Animals (at 75 cts. per annum), or *Our Dumb Animals*, published in Boston (at 75 cts. per annum), and cause these papers to be read in their families. Both these periodicals can be obtained at F. E. Grafton's. The Committee will place copies of their text books and of suitable periodicals and pamphlets, etc., gratuitously in all charitable institutions entrusted with the care of boys and girls.

The labors of this Committee are wholly of an educational character, and as such are distinct from the punitive work of the Society to which they are attached.

The ladies trust that when the objects of their Committee become known to the public they will be enabled to enlist the sympathies of all in its behalf, and they would call upon all to aid them in their labors by instilling into the minds of the young under their charge the duty of kindness, humanity and mercy to all dumb creatures.

ISABELLA ALLAN,
President.
ANNE McCORD,
Sec.-Treasurer.

Montreal, 3rd June, 1873.

Report of the Minister of Public Instruction for the Province of Quebec for the year 1872, and in part for the year 1873. (1)
(Concluded from our last.)

In the following table, in which appear the figures relating to the number of pupils who are learning the principal branches of primary instruction, a slight increase will be observed over the figures given in the report of 1870.

COMPARATIVE TABLE of the number of children, learning the more essential branches of primary instruction, since the year 1853.

	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871
No. Reading well.....	27367	32861	43407	46940	48833	52099	64362	67753	75236	77108	77676	75555	96491	98706	101166	101212	101264	101629	103129
" Writing	50072	47014	58033	60086	61943	65404	80152	81244	87115	92572	97086	99351	107161	1111709	112191	112220	113105	114505	114262
" learning French Grammar.....	15353	17852	23266	29328	39067	43307	53452	54214	50426	61312	63913	68564	76097	76264	76996	77011	77327	78105	79300
" " English Grammar.....	7066	7097	9004	11824	12074	15348	19773	25073	27904	28464	27358	29478	30458	30648	31749	31808	31912	32114	32912
" " Orthography.....	.....	20356	32612	40779	47504	37722	54573	61542	74915	78367	.....	.....	.....	.....	80709	94767	99500	102158	119508
" " Gram. Analysis	4412	9283	16439	20310	34064	40733	44468	46872	49460	50653	52214	60311	66237	66341	68172	69288	68492	68718	68615
" " Simple Rules of Arithmetic.....	18281	22897	30631	48359	52845	55847	63514	63341	69519	74518	75719	84197	83930	84201	84544	85209	85317	85634	86132
" " Compound Rules of Arithmetic.....	12428	18073	22586	23431	26643	29196	30919	31758	41812	44357	45727	46529	52892	53726	54660	54737	54804	54912	55190
" " Book-keeping .....	.....	799	1976	5012	5500	6689	7133	7319	9347	9614	9630	9610	10381	10430	10825	10852	10903	11024	11078
" " Geography.....	12185	13326	17700	30134	33606	37647	45393	49462	55071	56392	60586	66412	64719	64998	65616	65633	66112	66743	67242
" " History.....	6738	11486	15520	17580	26147	42316	45997	46324	51095	54461	59024	66894	71153	71453	71965	71972	72204	72856	73954

The tables Nos. 4 and 5 relate to the various kinds of assessments. They show, as appears above, a slight increase in all the columns, with the exception of that which refers to buildings and repairs.

(1). By the Translators to the Legislative Assembly.

TABLE of sums levied for Public Instruction in the Province of Quebec, from 1856 to 1870, inclusive.

Year.	Assessment to equal Grant.		Assessments over and above amount of Grant and Special Assessments.		Monthly fees.		Assessment for the erection of buildings.		Total raised.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
1854.....	113884	87	93897	90	173488	98	25493	70	506765	55
1857.....	113887	08	78791	17	208602	37	22928	63	424209	25
1858.....	115485	09	88372	69	231192	65	24646	27	459386	65
1859.....	115792	51	109151	96	251408	44	22883	52	498436	48
1860.....	114424	70	123939	64	249717	10	15778	23	503859	73
1861.....	1139	9	130560	92	264089	11	17000	00	526219	83
1862.....	110966	75	134033	15	281980	23	15798	84	542728	97
1863.....	110534	25	134888	50	307638	14	11749	74	564810	65
1864.....	112158	34	144515	61	321037	30	15	53	593264	37
1865.....	112447	09	147158	23	324801	87	13041	57	597448	76
1866.....	113657	35	153732	98	356691	53	22385	32	707067	18
1867.....	113909	64	19498	58	394068	37	2447	46	72494	05
1868.....	113790	64	178174	02	452868	89	47966	17	7928	9
1869.....	123625	44	201211	99	472573	70	97446	03	89457	18
1870.....	123381	08	233773	17	529193	12	90441	24	976788	61
1871.....	124002	19	246792	29	53591	12	46320	39	983095	91

TABLE showing the sources whence comes the difference of increase or decrease between 1. 1864 and 1863, 2. 1865, and 1864, 3. 1866 and 1865, 4. 1867 and 1866, 5. 1868 and 1867, 6. 1869 and 1867, 7. 1870 and 1869.

YEAR.	Assessment to equal Grant.		Assessments over and above amount of Grant and Special Assessments.		Monthly fees.		Assessment for the erection of buildings.		Total increase.		Total decrease.	
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Increase of 1864 over 1863	1624	09	9627	11	13399	16	3803	36	28453	72	.....	.....
Increase of 1865 over 1864	283	75	3642	62	3768	67	2511	55	4184	39	.....	.....
Increase of 1866 over 1865	1910	26	6574	70	31733	36	9943	75	49618	40	.....	.....
Increase of 1867 over 1866	251	29	42365	84	37376	84	1434	14	81426	87	.....	.....
Increase of 1868 over 1867	219	00	17924	56	58800	32	23568	71	64325	47	.....	.....
Increase of 1869 over 1868	9634	82	23037	97	10705	01	49459	86	102037	43	.....	.....
Increase of 1870 over 1869	244	38	32561	18	56619	42	7004	79	81931	43	.....	.....
Increase of 1871 over 1870	621	11	13019	12	6788	00	44120	85	.....	.....	.....	.....

This decrease for school buildings is explained by the fact that considerable expenditure had to be incurred during the previous year for the same object, particularly in the City of Montreal.

The Normal schools gave as satisfactory results as in previous years. The principals of these institutions state in their reports that want of accommodation did not allow them to comply with all the demands for admission.

The following table gives the comparative number of Students of each Normal school since its inauguration.

According to the following table there is a marked increase in the number of Protestant dissentient schools and pupils attending the same, and a decrease in the number of Catholic dissentient schools.

The former have a total of 173 schools, with an attendance of 6116 pupils, and the latter 27 schools with only 1049 pupils.

NO. OF DISSENTIENT SCHOOLS AND NO. OF PUPILS.

Names of Inspectors of Schools.	Protestant Dissentient Schools.	Number of Pupils.	Catholic Dissentient Schools	Number of Pupils.
1 J. B. F. Painchaud				
2 Rev. R. G. Plees	4	174		
3 L. Lucier			3	190
4 Th. Tremblay	4	125		
5 Vincent Martin	1	22		
6 G. Tanguay				
7 S. Boivin	9	264		
8 Wm. Thompson				
9 P. F. Bédard				
10 E. Carrier	4	164		
11 J. Crépault				
12 F. E. Juneau				
13 P. Hubert	3	249		
14 W. Alexander			19	680
15 B. Maurault				
16 H. Hubbard				
17 M. Stenson			5	179
18 McLoughlin	18	470		
19 J. N. A. Archambault	2	98		
20 J. B. Delage	8	138		
21 Michel Caron	21	523		
22 L. Grondin	16	526		
23 G. Thomson	25	1212		
24 F. X. Valade	22	806		
25 A. D. Dorval	10	273		
26 C. Germain	9	268		
27 C. B. Rouleau				
28 Bolton McGrath	17	804		
Total	173	6116	27	1049

The table showing the state of the Superannuated Teachers' Fund establishes that notwithstanding the liberality of the Government in increasing the grant and consequently the pensions, the teachers seem to be no more disposed to profit by this benevolent institution than in the past, thus failing to secure to themselves some support on retirement.

SUPERANNUATED TEACHERS' FUND.

YEAR.	Number of Teachers enrolled each year.	Number of Pensioners each year.	Rate of pension for each year of teaching.	Total of pensions paid
1857	150	63	\$ cts. 4 00	\$ cts. 883 90
1858	74	91	4 00	2211 74
1859	18	128	4 00	3115 36
1860	4	130	3 00	2821 47
1861	9	160	3 00	3 03 59
1862	10	164	1 75	2522 00
1863	13	171	2 25	3237 00
1864	7	170	1 75	2727 00
1865	11	160	1 75	2787 00
1866	13	172	1 75	2784 00
1867	15	176	1 75	3036 00
1868	10	163	2 50	4590 00
1868	9	171	2 50	4677 00
1870	5	174	2 50	4700 00
1871	13	162	2 50	4865 00

P. J. O. CHAUVEAU,

Minister of Public Instruction.

Quebec, 15th December, 1872.

Quebec Educational Report for 1871-72.

It is somewhat late in the day to be receiving the report of the educational work done in Quebec during 1871, but better late than never. The progress made during the period embraced in this report seems to have been encouraging. In 1857 there were only 2,015 school houses in the Province, while in 1871 there were 3,233, an increase in fourteen years of 1,223. In 1853 there were 2,352 institutions of all kinds for public instruction in Lower Canada, in 1870 there were 4,028. The scholars had increased during the same period from 108,284 to 218,503, while the increase in the contributions was still more remarkable. In 1853 all that was raised amounted only to \$165,848, while in 1870 it had risen to \$976,788. In 1871 there was a slight diminution, but only in the department of building and repairing school houses. The Normal Schools appear to have had a very gratifying amount of success, the number of pupils having increased from 70, in 1857, to 246 in 1871-2. The number of Protestant Dissentient Schools now amount to 173, with an attendance of 6,116 pupils. The *Toronto Globe*, in its review of this report, has the following deserved tribute of praise to the Quebec education authorities:—

"It is not to be expected that we, in Ontario, should take so much interest in the mere statistics of education in Quebec as in those of our own Province, yet it is very gratifying to mark the continued onward progress, and the commendable zeal and liberality which are being displayed in all parts of our Dominion to extend the blessings of a thorough Common School education to the poorest child among us. The great work has not as yet been fully achieved, but the friends of education are keeping the end steadily in view, and will rest satisfied with nothing short of all the children in Canada being trained in our public schools in such a manner as to fit them for the discharge of life's duties with some measure of efficiency and success.—*Budget*."

Lower Canada Emigration to The United States.

The *American Journal of Education* for March last, under the head of "Geographical Notes," has the following in relation to the composite population of the United States:

The *Paris Tour du Monde*, relying on certain Canadian journals, greatly exaggerates the emigration from Lower Canada to New England. Thus, it reckons the French Canadians in Massachusetts at over 50,000, whereas, according to the last census, there were in that State but 38,689 Canadians (whether French or English). In like manner Fall River is credited with 7,500 instead of only 1,129; Lawrence with 1,500 instead of 1,306; Lowell with 3,700 instead of 2,620. Cowley, in his "History of Lowell" (Boston, 1868), describes a procession of over 2,500 factory girls, "clothed in white" and looking "like liveried angels," which took place in 1834, and greatly impressed M. Michel Chevalier, who happened to witness it during his visit to this country. In 1861, Prince Jerome Napoleon found "their places filled by a motley crowd of Americans, English, Scotch, Irish, Dutch, and French Canadians, who were hardly likely to arouse that exquisite poetic sentiment which Chevalier felt for the factory girls of 1834." Vermont, from its position on the border, naturally stands next to Massachusetts, having 28,544 Canadians. New Hampshire has 11,901; Connecticut, 10,056; Maine, 9,410, Rhode Island, 8,933.

Jacques-Cartier Normal School, Montreal.

The following is the list of Diplomas and prizes granted and distributed at the close of the Session of 1872-73, held on July 7, 1873.

DIPLOMAS.

ACADEMY :—Ismaël Longtin, Evariste Leblanc, Vitalien Cléroux, Delphis Martin, Julien Tiflé ;
MODEL SCHOOL :—Casimir Grégoire, Hormidas Prud'homme, Casimir Valiquet, David Dupuis, Joseph Jasmin, Louis A. Olivier and Constantin Lecavaller ;
ELEMENTARY SCHOOL :—Simon Aubin, Arsène Godin, Joseph Brassard and Albert Laurendeau.

PRIZE LIST.

MODEL SCHOOL (DIPLOMA) CLASS :—Excellence—Pr. Casimir Grégoire ; 1st acc. Joseph Jasmin, 2 Hormidas Prud'homme. Teaching—Pr. Casimir Grégoire ; 1st acc. Casimir Valiquette, 2 Oswald Coursol. French Language—Pr. Hormidas Prud'homme ; 1st acc. Joseph Jasmin, 2 Casimir Grégoire. English Exercises—Pr. Casimir Grégoire ; 1st acc. Hormidas Prud'homme ; 2 Oswald Coursolle. English Translation—Pr. Casimir Grégoire ; 1st acc. Louis A. Olivier, 2 Joseph Jasmin. English Vocabulary—Pr. Oswald Coursolle ; 1st acc. Casimir Grégoire ; 2 Louis A. Olivier. English Orthography—Pr. Oswald Coursolle ; 1st acc. Hormidas Prud'homme, 2 Casimir Grégoire. English Prosody—Pr. David Dupuis ; 1st acc. Oswald Coursolle, 2 ex æquo, Casimir Grégoire and Joseph Jasmin. Algebra—Pr. Casimir Grégoire ; 1st acc. Casimir Valiquette, 2 Joseph Jasmin. Geometry—Pr. Casimir Grégoire ; 1st acc. David Dupuis, 2 Casimir Valiquette. General History—Pr. Joseph Jasmin ; 1st acc. Casimir Grégoire, 2 David Dupuis.

ELEMENTARY SCHOOL (DIPLOMA) CLASS :—Excellence—1st pr. Albert Laurendeau, 2 Joseph Brassard ; 1st acc. Napoléon Mallette, 2 Arsène Godin. Teaching—1st pr. Joseph Brassard, 2 ex æquo, Arsène Godin and Napoléon Mallette ; 1st acc. Pierre Derome, 2 ex æquo, Albert Laurendeau, Joseph Octave Drouin and Simon Aubin. French Language—1st pr. ex æquo, Albert Laurendeau and Joseph Brassard, 2 Simon Aubin ; 1st acc. Arsène Godin, 2 Joseph O. Drouin. English Exercises—1st pr. Albert Laurendeau, 2 Arsène Godin ; 1st acc. Joseph O. Drouin, 2 Simon Aubin. English Translation—1st pr. Joseph Brassard, 2 Albert Laurendeau ; 1st acc. Arsène Godin, 2 Simon Aubin. English Vocabulary—1st pr. Napoléon Mallette, 2 Albert Laurendeau ; 1st acc. Joseph O. Drouin, 2 Joseph Brassard. English Orthography—1st pr. Joseph O. Drouin, 2 Joseph Brassard ; 1st acc. Albert Laurendeau, 2 Napoléon Mallette. English Prosody—1st pr. Napoléon Mallette, 2 Albert Laurendeau ; 1st acc. Joseph O. Drouin, 2 Joseph Brassard. Arithmetic—1st pr. Joseph Brassard, 2 Jean Baptiste Demers ; 1st acc. Albert Laurendeau, 2 Napoléon Mallette. Mental Arithmetic—1st pr. Joseph Brassard, 2 Napoléon Mallette ; 1st acc. Moïse Guérin, 2 ex æquo, Albert Laurendeau and Joseph O. Drouin. Book-Keeping—1st pr. Pierre Derome, 2 Joseph Brassard ; 1st acc. Moïse Guérin, 2 Arsène Godin. Geography—1st pr. Arsène Godin, 2 Simon Aubin ; 1st acc. Moïse Guérin, 2 Napoléon Mallette.

PREPARATORY CLASS : Excellence—1st pr. Onésime Boisvert, 2 Cyprien Dupuis ; 1st acc. Jean Baptiste Turcot, 2 Napoléon Dubeau. French Language—1st pr. Onésime Boisvert, 2 Jean Baptiste Turcot ; 1st acc. Elzéar L'Ecuyer, 2 Cyprien Dupuis. English Exercises—1st pr. Onésime Boisvert, 2 Jean Baptiste Turcot. English Translation—1st pr. Onésime Boisvert, 2 Jean Baptiste Turcot ; 1st acc. Napoléon Dubeau, 2 Cyprien Dupuis. English Vocabulary—1st pr. Onésime Boisvert, 2 Jean Baptiste Turcot ; 1st acc. Cyprien Dupuis, 2 Georges Gauthier. English Prosody—1st pr. Onésime Boisvert, 2 Jean Baptiste Turcot ; 1st acc. Cyprien Dupuis, 2 Georges Gauthier. Arithmetic—1st pr. Onésime Boisvert, 2 Elzéar L'Ecuyer ; 1st acc. Napoléon Dubeau, 2 Cyprien Dupuis. Sacred History—1st pr. Onésime Boisvert, 2 Cyprien Dupuis ; 1st acc. Napoléon Dubeau, 2 Joseph Gibouleau. Geography—1st pr. Onésime Boisvert, 2 ex æquo, Napoléon Dubeau and Joseph Gibouleau ; 1st acc. Jean Baptiste Turcot, 2 Cyprien Dupuis.

CLASSES UNITED :—Calligraphy—(3rd Class) pr. Hormidas Prud'homme ; 1st acc. ex æquo, David Dupuis and Oswald Coursolle, 2 ex æquo, Casimir Grégoire and Joseph Jasmin. (2nd Class) :—1st pr. Joseph Brassard, 2 Napoléon Mallette ; 1st acc. Pierre Derome ; 2 Albert Laurendeau.

PREPARATORY CLASS :—1st pr. Octave Godin, 2 Cyprien Dupuis ; 1st acc. Onésime Boisvert, 2 Georges Gauthier. Drawing—1st pr. ex æquo, Jean Baptiste Demers, Joseph Brassard and Casimir Valiquette, 2 Delphis Martin, 3 ex æquo, Onésime Boisvert, Koch Forté and Joseph Goyette ; 1st acc. ex æquo, Moïse Guérin, Vitalien Cléroux and Julien Tiflé, 2 ex æquo, Louis A. Olivier, Casimir Grégoire, Evariste Leblanc and Simon Aubin, 3 ex æquo, Pierre Derome, Joseph Jasmin, and David Dupuis. Religious Instruction (3rd Class) :—1st pr. Casimir Grégoire, 2 Hormidas Prud'homme ; 1st acc. E. Leblanc, 2 David Dupuis. (2nd Class) :—1st pr. ex æquo, Albert Laurendeau and Moïse Guérin, 2 Arsène Godin ; 1st acc. Simon Aubin, 2 Joseph Brassard. (Preparatory Class) :—

1st pr Cyprien Dupuis, 2 Napoléon Dubeau ; 1st acc. Onésime Boisvert, 2 Georges Gauthier. Agriculture (3rd Class) :—pr. Casimir Grégoire ; 1st acc. Louis A. Olivier, 2 Hormidas Prud'homme. (2nd Class) :—1st pr. Albert Laurendeau, 2 Arsène Godin ; 1st acc. Pierre Derome, 2 Napoléon Mallette. (Preparatory Class) :—1st pr Onésime Boisvert, 2 Cyprien Dupuis, 1st acc. Napoléon Dubeau, 3 Joseph Gibouleau. Horticulture—(Th : Four Class United) :—1st pr. Casimir Valiquette, 2 Joseph Gibouleau, 3 ex æquo, Louis A. Olivier, Moïse Guérin and Casimir Grégoire ; 1st acc. Evariste Leblanc, 2 Georges Gauthier, 3 Cyprien Dupuis, 4 Delphis Martin. Botany—(2nd Class) :—1st pr. Albert Laurendeau, 2 Joseph Brassard ; 1st acc. Pierre Derome, 2 Moïse Guérin

The Canadian Trade.

Under this caption, the *Chicago Tribune* makes some important admissions, of which Canadians would do well to take advantage with a view to retaining their present acknowledged superiority. It says :—

In some departments of our commerce Canadian houses are leading all others. Most of the pork is in their hands, and since the opening of navigation they have bought by far the largest part of our wheat. The trade has largely increased over the figures of last year, and the same is likely to be true to the end of the season. The effect on freights has been to nearly equalize them, while last year they were 2c to 5c per bushel in favor of Montreal. The larger shipments by the St. Lawrence have enabled the vessel owners and the railways to advance their rates, while by New-York a corresponding reduction is realized. The increase in this trade is due largely to the facilities offered by the Allan line of steamers. In the evening Montreal dealers telegraph to Liverpool the prices ruling here, offering to purchase and deliver free on board at Montreal in so many days Chicago or Milwaukee wheat at a certain figure. In the morning, perhaps, they receive orders to buy, and, by the time our Board meets, the order is here and the grain is purchased within the next hour. In this way ends of the world are brought together. By means of telegraph our and their lake and ocean steamers, wheat passes from our mammoth elevators, and, in little more than thirty days, is found upon the tables of the hungry crowds on the other side of the Atlantic. That this trade will steadily increase till nearly all our cereals and produce destined for European markets will go by the St. Lawrence, there cannot be a particle of doubt. Let the Canadians enlarge their canals so as to pass vessels of 1,200 tons burden and they will beat the New-Yorkers in the race for our commerce in spite of all the latter can do. They will this season, as above stated, carry to Europe a large majority of our shipments of wheat. A great misfortune to foreigners, and to the West as well, is that they do not understand the best modes of preparing corn meal for the table. Ignorance on that subject will doubtless gradually be dissipated, and then scarcely any limit can be placed to the foreign demand for our corn. It would be a capital investment for the North-west to send over a hundred or two of our best hotel and steamboat cooks to teach the Europeans what delicious food can be made from corn meal. Innovations of that kind, however, are slow of growth.

Dominion Finances.

ESTIMATES FOR THE NEXT FISCAL YEAR.

The following is a summary of the estimates for the year ending June 30th, 1874, which were submitted to the House of Commons by the Finance Minister :—

Public Debt.....	\$6,123,766
Charges of management.....	160,359
	<hr/>
	6,284,125
Civil Government.....	733,459
Administration of Justice.....	380,261
Police.....	426,278
Legislation.....	99,700

Geological Surveys, &c.....	127,607
Agriculture and Statistics.....	144,680
Emigration and Quarantine.....	327,210
Marine Hospitals.....	60,500
Pensions.....	52,923
Superannuation.....	52,980
Public Works, &c., chargeable to capital.....	9,974,240
Public Works, &c., chargeable to income.....	2,097,500
Ocean and River Steam Service.....	368,674
Penitentiaries.....	357,515
Militia.....	1,000,000
Lighthouse and Coast Service.....	492,649
North-west Territories, British Columbia, &c.....	930,493
Fisheries.....	51,835
Steamboat Inspection.....	10,850
Indian Department.....	80,133
Miscellaneous.....	733,236
Subsidies to Provinces.....	2,927,104
Collection of Revenues:	
Customs.....	\$ 602,237
Inland Revenue.....	2 8,300
Culling Timber.....	78,000
Public Works.....	2,069,845
Post Office.....	1,316,000
Minor Revenues.....	10,000
	<u>4,294,382</u>
Total for 1874.....	\$31,008,423
Total for 1873.....	31,050,171
Decrease for coming year.....	\$ 41,748

Yield and Value of the Canadian Fisheries in the year 1872:

PROVINCE	KINDS OF FISH	1872 QUANTITY	1873 VALUE
Nova Scotia.....	Codfish	525,249 qtls	\$2,232,308
	Mackerel	115,833 brls	1,624,894
	Herring	170,657 brls	682,628
	Salmon	6,677 brls	144,078
	Other Fish & Fish Oils.....		1,332,927
			<u>\$6,016,835</u>
Quebec.....	Codfish	217,741 qtls	911,845
	Mackerel	1,759 brls	17,590
	Herring	29,069 brls	87,206
	Salmon	4,050 brls	64,800
	Other Fish & Fish Oils.....		238,748
			<u>\$1,320,189</u>
N.-Brunswick..	Codfish	81,420 qtls	346,035
	Mackerel	2,217 brls	32,728
	Herring	124,157 brls	496,628
	Salmon	8,000 brls	207,767
	Other Fish & Fish Oils.....		882,301
			<u>\$1,965,459</u>
Ontario.....	Whitefish	17,490 brls	143,520
	Trout	7,586 brls	60,688
	Herring	6,974 brls	41,844
	Other Fish	4,466 brls	21,581
			<u>\$267,633</u>
Total Value.....			<u>\$9,570,115</u>

NOTE.—Salmon, Mackerel, and Herring are uniformly reduced to barrels from the numbering by pieces, cans, boxes, etc.

About one thousand decked vessels and seventeen thousand

opens boats are now engaged in this branch of Canadian industry, giving employment to 42,000 men, and supplying entirely the support of two hundred thousand persons. The total value of the boats' tackle, nets, &c., embarked in the fisheries in 1870 was \$7,225,494.

The fisheries of British Columbia and Manitoba have not yet been made available for foreign commerce, but they are of incalculable value to the inhabitants, and as they are inconceivably rich will be of great value by and bye.

MISCELLANEOUS.

The Mastership of the Rolls.—According to Haydn's "Manual of Dignities," the Master of the Rolls ranks next after the Lord Chief Justice of England. Anciently, according to Bratson, the Lord Chancellor, or Keeper, was assisted by a numerous body of learned persons termed "Masters," at the head of whom was an officer called the "Master," or Guardian of the Rolls or Records of his Court. When the duties of the Lord Chancellor as a Minister of the Crown increased, his lordship very naturally referred no inconsiderable portion of his judicial functions to this personage, whose decrees, however, were always subject to the appellate jurisdiction of the Court of Chancery itself. He has in his custody all enrolments of the Court of Chancery, in which are recorded charters, patents, commissions, and other instruments under the Great Seal, together with deeds, recognisances, and other public documents, made on rolls of parchment. The enrolments since the reign of Richard III, have been kept in the Tower of London. Under the statute of 1 & 2 Vict. cap. 94, the Master of the Rolls is constituted keeper of all the records in the Public Record Office founded by that Act. The mansion between Chancery and Fetter lanes called the Rolls House, with its chapel adjoining, was formerly a hospital for the use of Jews who became converts to the Christian faith; but after the expulsion of the Jews from England, in the reign of Edward I., it was annexed for ever to the office of the Master of the Rolls, who is now a gentleman (Sir G. Jessel) of Jewish extraction, and enters "The Rolls" without becoming, or being asked to become, a convert. The Master of the Rolls holds his court here and at Westminster. Although the Rolls of the Court of Chancery begin in the reign of King John, the first authentic appointment of a Keeper or Master, according to Haydn, dates only from the 23rd year of the reign of Edward I. when Adam de Osgodby had the custody of the Rolls of Chancery.

The New Supreme Court of Judicature Act.—Recently was issued the new Act for the constitution of a Supreme Court, and for other purposes relating to the better administration of justice in England, and to authorize the transfer of the appellate division of such Supreme Court of the business of the Judicial Committee of the Privy Council. The Act is divided into seven parts, with a schedule of 58 rules on the procedure to be adopted on the operation of the new law, on the 2nd November, 1874, by which time new rules are to be made for carrying the Act into force. There are 130 sections in the statute. Two courts are to be constituted out of the existing courts, one to be called "Her Majesty's High Court of Justice," and the other "Her Majesty's Court of Appeal," of which latter court the Lord Chancellor is to be the president. There are to be division courts, and rules to be made as to the sittings. The division of the legal year into terms is to be abolished, and the "long vacation" will become historical; vacations will be appointed, but sittings will be held in the same. A new feature in law, called "referees," will be engaged in hearing cases. Law and equity are to be concurrently administered. Much will depend on the new rules to be framed under the Act.

New Statutes.—In the August number of our Reports, says the *Law Journal*, some important Acts of the Session will be found as printed by the Queen's printer. The University of Dublin Tests Act, 1873, which is marked chapter 21, and which in substance consists of only one section, and opens every office of emolument in that university, except Divinity professorships, to all persons without distinction of creed, recalls to mind the fierce struggles which marked the commencement of the Session, and the triumph of Mr. Fawcett over the Government.

Chapter 22 is an Act enabling the Legislatures of New South Wales, Victoria, South Australia, Queensland, Western Australia, and Tasmania respectively to impose import duties upon agreement with one or more of the Colonies named or with New Zealand, so long as all countries are treated equally in the levying of customs, and no breach is effected of any imperial treaties. Chapter 24 continues the Peace Preservation (Ireland) Acts to the first day of June 1875, subject to certain limitations and amendments. Ireland also claims chapter 27, further amending the law relating to juries in that country, and regulating and perhaps improving the method of making the general and special juror's books; chapter 30 amending the Registration Law for the present year, and chapter 34 enabling grand juries to present at assizes sums of money for the purposes of repairing and widening towing-paths on the banks of navigable rivers, to be levied off entire counties, the old Act of William IV, only authorizing the levy of money off the baronies. The English law matrimonial is affected by three Acts printed in the number—namely, chapters 25, 28, and 31. Two of these are passed to legalize marriages in two chapels using the service of the Church of England, but not licensed. The first is Gretton Chapel, in Winchcomb, in the county of Gloucester; the second the chapel of St. John, in Eton, which was built in 1854, as a chapel of ease to the parish church of Eton College, and in which many hundreds of marriages have been celebrated, although no authority had ever been given by the Bishop of Oxford or otherwise for the publication of banns or the solemnization of marriages therein. Chapter 31 is the Act passed, at the instance of the Attorney-General, to authorize the Queen's Protector to intervene in suits of nullity of marriage, in cases of collusion, or of suppression of material facts, as that officer now does in suits for dissolution of marriage.

Lord Lytton on Violent Crimes.—In one of the most suggestive passages in "Kenelm Chillingly," Lord Lytton refers to the age at which violent crimes are usually committed. He says: "Do you think Macbeth was young when he murdered Duncan?" "Certainly. No man ever commits a first crime of a violent nature, such as murder, after thirty; if he begins before, he may go on up to any age. But youth is the season for commencing those wrong calculations which belong to irrational hope and the sense of physical power. You thus read in the newspapers that the persons who murder their sweethearts are generally from two- to six-and-twenty; and persons who murder from other motives than love—that is, from revenge, avarice, or ambition—are generally about twenty-eight—Iago's age. Twenty-eight is the usual close of the active season for getting rid of one's fellow-creatures—a prize-fighter falls off after that age. I take it that Macbeth was about twenty-eight when he began to whine about missing the comforts of old age. But can any audience understand that difference of years in seeing a three-hour's play; or does any actor ever pretend to impress it on the audience, and appear at twenty-eight in the first act, and as a sexagenarian in the fifth?"

Good Advice to Young Farmers.—Mr. Joseph Harris says in the *American Agriculturist*: What I want to say to any young farmer reader of the *American Agriculturist* who honors me with his confidence is this: Make up your mind to steadily improve the condition of your land; above all, kill the weeds, underdrain, grow more clover, pease and roots, and consume them on the farm. Make more and better manure. Buy bran to feed out. Sell timothy hay if need be, but never sell clover hay. Sell straw whenever, as now in this section, it is worth half as much per ton as bran. Study the chemistry of manure. There are many places where artificial fertilizers can be used to great advantage. Improve your stock; feed liberally. Raise a few thorough bred, and gradually work your way into business; but do not be in a hurry. Set out choice fruit trees, and take care of them. Spend moderately. Live within your income. Do not be discontented with your prospects. And again I say, *kill the weeds*. Cultivate the land thoroughly. Make the weed seed grow, and then kill the young plants. I feel sure that the young farmer who follows this advice will not have to wait many years before getting his reward. I look upon it as absolutely certain that we shall get good prices for produce in the near future. I fear still more that farmers will not profit by them. Prices never have been and never can be high enough to make poor farming profitable. You must get your land in good condition now, and thus be ready to avail yourself of the high prices when they come—as come they will.

Anecdotes of Dogs.—A writer in the *Quarterly Review* adduces many pretty instances of affection, sagacity, and cunning in dogs. A dog deserted by his master will take some cast-off garment and lie on it for days; the sight of the cleaning of guns preparatory to the 12th of August fills him with rapturous anticipations of sport; the taking up a hat or stick makes him leap for joy. As it is probable he has dreams in which are reproduced the impressions made on his memory, so it is probable that when waking he may follow imaginary scenes, which the memorative faculty, or hope, or fear, may depict on the imagination. He is said to distinguish at a glance a tramp or a swell-mob's man from a gentleman, even in the most soiled attire. He will steal away unperceived on a poaching expedition, perhaps invite a serviceable companion to assist him, and, when all is over, steal back into the kennel, and sometimes even wriggle his head back into his collar. A dog which once saw its master drop a gold coin on the floor, is related to have picked it up, and to have sat the whole day with it in its mouth, refusing to eat anything till his master returned for fear he should drop the treasure. A poodle puppy, unable to resist temptation, stole a pigeon out of a pie, and, to avoid detection, filled up the hole with a bit of damp inky sponge taken from a writing-table. A dog has been known to simulate a quarrel with another dog outside a door into which he wished to gain admission, because a real quarrel the day before had led to that result. The story of the dog, which being discarded by its master, was seen deliberately to stand gazing at the rushing waters of the Loire, then painfully lift himself on his crippled legs, and leap into the water, and when a stick was stretched out to him, gave a look of despair, turned his head away, and floated down without an effort to save himself, has a little of poetry in it, but we are not prepared to deny anything except the consciousness, *i. e.*, real deliberation or the intention of the act. With this exception, there is nothing here, or in much more wonderful stories of the cunning and affection of animals, that is at all inconsistent with the theory we lay down. The combinations of direct perception, feeling, memorative and estimative power, and adaptations to the ever changing circumstances of their life, are only second to the variations of operations of intellectual life. The difference is that in animals the perception is of the individual and particular good or evil, and that the operations that lead to the wonderful variety of the acts which so much resemble men, are without reflex consciousness, whereas the human mind perceives the good and evil in the abstract at least implicitly, and is capable of conscious reflection in its acts. And if we wish to realize in some sense the state of beasts, we have only to remember that many of our most complicated acts, which in themselves seem to require a long train of thought, may be performed unconsciously by the mere force of habit. What is thus an occasional state in us, is in a certain sense the normal state of beasts, who have not the power of consciousness, but for whom nature supplies that concatenation of sensitive operations which in us minister to our intellect, but would have been sufficient for our animal nature and are all that is given to beasts.—*The Month*.

Philology in the Court of Queen's Bench.—The precise meaning of the French word "valet" has been the latest bone of contention in the Court of Queen's Bench. Dr. Kenealy asserted that Chatillon had been less Sir Roger Tichborne's tutor than his valet; and the statement was resented by the Lord Chief Justice, who observed that the term "valet" in French was peculiarly offensive, as it implied a mere lackey. On this point there can be no doubt that Sir Alexander Cockburn is philologically, if not quite technically, right. "Valet" is, save only in the case of a "valet de chambre du roi," an offensive term; still, a valet is not necessarily a lackey any more than a potman is an hostler. A French hostler is a "valet d'écurie." Gay Miège, gent., writing in 1690, renders the term "un valet de chiens" as "a scurvy servant." The hangman's assistant was dubbed "le valet du bourreau." The knave at cards is "le valet" and this last use of the word calls up the indefatigable word-grubber, Ménage, who doubts whether "valet" and its cognate "varlet," had in old times the degrading signification which now attaches to them. Ménages quotes the old crusading historian, Villahardouin—so often mentioned by Gibbon who calls Alexis, son of the emperor Isaac Comnenus, "Valet de Constantinople." Again, the author of the romance of "Lancelot du Lac," speaking of the young son of a Vavassor, who had not yet been dubbed a knight, says "Vers la fin du manger vint céans un varlet." In the *patois* of Picardy, "varlet"

or "varleton" is the equivalent for our "hobbledehoy;" and in Gascon a growing lad is called a "baelet"—the *b* being pronounced, as in Spanish, as *v*. All things considered, the status of the mediæval "valet" is adequately expressed in the portrait of the Knave of Hearts, who "stole those tarts, and took them quite away." The felonious "valet" was not a mere menial, but a kind of sub-courtier, half gentleman-usher, and half yeoman of the guard. Pasquier and President Fauchet call him an "escuyer tranchant," or squire who carved at his lord's table; and such a squire-valet was the father of Gil Blas in his latter years. With regard to the origin of the word the opinions of the learned differ. Some sages derive "valet" from the Hebrew *valad*, "a child"; others from the same Celtic root with "vassal"; while yet other authorities trace it to the Latin "baro" or "varo," a blockhead, a simpleton, a boor, an oaf. Thus Cornutus, on the Fifth Satire of Persius, "Varones dicuntur servi militum qui utique stultissimi sunt, servi scilicet stultorum." And so we get the word through *varo*, *varoletus*, *varlet*, *valet*. In conclusion, we may mention that in one sense only must a valet wear livery, and become a lackey or flunkey; that is when he is a "valet du pied," hanging on to the foot-board, or running by the side of his master's carriage. Otherwise plush and hair-powder need not enter into the valet's soul.—*Daily Telegraph*.

How London is Watched and Fed.—Colonel Henderson, the Chief Commissioner of Police, supplied the Shah, at his own request, with some statistics of London which greatly interested him, specially the fact that the streets of London patrolled by the police would reach, in a straight line, from London to Teheran, and thence to Point de Galle, in Ceylon, 6,612 miles. The following statistics were also supplied to the Shah, and will probably be new to most of our readers:—The area of London, consisting of the Metropolitan Police District, 688½, and the City Police District 1½, is 690 square miles. The population, from the census of 1871, of the Metropolitan Police District, is 3,810,744, and the estimated increase to this date, 1873, is 140,018; the City Police District is 74,897, affording a total population of 4,025,659. The total length of streets and roads patrolled by the Metropolitan Police is 6,622 miles, and the addition or increase in the length of streets during the past ten years is 3,623 miles. As the crow flies from London to Point de Galle, the distance is 6,600 miles. Teheran is in the direct line between these two places, 2,800 miles from London, and 3,800 from Point de Galle. The number of inhabited houses in the metropolitan police district is 519,489, in the city police districts, 9,305—giving a total of 528,794. The number of omnibuses, is 1,400, and of hackney carriages 8,108. The estimated number of horses drawing public carriages, allowing two horses for each hackney carriage and six horses for each omnibus (which is about the average number), is about 25,000. The strength of the metropolitan police is 9,927, and of the city police 785—giving a total of 10,712. The number of cattle, sheep, &c., sold last year in the Metropolitan Cattle Market were:—Oxen, 40,000; sheep and lambs, 1,500,000; calves, 30,000; pigs, 8,500—total, 1,803,500. The quantity of dead meat brought to the Metropolitan Meat and Poultry Market during the year 1872 was as follows:—Country meat 87,70 tons; town killed and foreign, 66,875—total 154,045 tons. The town-killed meat was no doubt bought alive in the Metropolitan Cattle Market.

Largest Telescope in the World.—The work upon the new tower and dome at the Observatory for the refracting telescope now being made at Cambridgeport, Massachusetts, has already commenced, and is being pushed forward rapidly. The Telescope will be completed and mounted in its place at the Observatory by next Fall, at least eighteen months sooner than the time specified in the contract. This will be the largest refractor in the world, the object glass having a diameter of twenty-six and a half inches. The tube will be of iron, and its focal distance thirty-two feet. The next largest refractor is owned by a private gentleman, Mr. Newhall, of England, the object glass of that being twenty-five inches in diameter. The object glass of the instrument now in use at the Observatory is only nine inches in diameter, and when the new one shall be mounted, the observers here will of course be able to make much closer and more satisfactory observations than have been obtainable heretofore. The object glass alone of the new telescope cost \$7,000. It was cast in England and finished in Massachusetts, where it is now ready for the instru-

ment. The cost of the new telescope and its requisite machinery, will be about \$30,000, and that of the tower and dome about \$15,000.

New instruments to observe the transit of Venus in December 874, are also being made, consisting of telescope, chronometers, photographing instruments, &c., some of which are now adjusted at the Observatory.

This transit will not be visible at this place, however, and arrangements are now being made to send out parties to the Indian Ocean, the South Pacific, and to China and Japan, where the observations can be made. Eight parties will be sent out from the United States: two of which will go from the Observatory here. All the parties will sail next summer. The Naval Observatory here, with the new telescope, will be better equipped than any other institution of the kind in existence. The professors on duty there stand at the head of their profession, and the Washington Observatory is now regarded as the best in the world.—*Washington Star*.

Hoe's New Printing Press.—A new style of steam printing press, of the fast kind, specially intended for daily newspapers, has just been perfected and put in operation in London, by Messrs Hoe and Co., the well known press makers of New York city. The new press is designed for the use of the London *Daily Telegraph*, a penny paper, said to have the largest circulation of any daily in the world. The improved machine on a recent trial at Lloyd's paper mill, Bow, actually printed and delivered, in even piles, twenty-two thousand copies of *Lloyd's Weekly*,—a large sheet—in sixty minutes, with the attendance of two men and a boy. The sheets are delivered printed on both sides, and the number of newspaper impressions when the sheet is cut apart by the machine is forty-four thousand per hour. The machine is built on the rotary plan like the Bullock, Walter, and other presses, and is said to yield superior printing. The cost of each press is \$17,500. The *Telegraph* is to be supplied with ten of them, and thus have the means of throwing off 220,000 copies of the paper in sixty minutes.

Autographs by Telegraph.—A very curious and complicated transmitter, used in France, is an autographic instrument by which the *fac simile* of the handwriting can be produced at any other office where a similar instrument is used. It is especially useful for messages relating to transfers of money, as it affords the receiver an opportunity to test the authenticity of the dispatch by the *fac simile* on the sender's signature. It is said that on an average thirty messages an hour can be transmitted by it. The message is written on chemically prepared paper and the price varies with the size of the paper. This instrument can transmit stenographic writing, and then its rapidity is said to be truly prodigious. Portraits and drawings can also be transmitted by it. This seems almost incredible. But the reader who has followed the explanations before given can form a general idea of the process by imagining that two great pendulums are made to swing simultaneously one at either end of the line. Each moves a metallic point back and forth over the surface of chemically prepared paper, and after every movement the position of the pencil is changed a hair's breadth down the page. If, then, at the instant that the metallic point at one terminus is in contact with a line of the manuscript or copy, a telegraphic current is transmitted to the point at the other terminus, and passes thence through the paper, it will produce a discoloration, which will be a dot or a line according to the duration of the current. If the autograph be closely inspected, it will be seen that it is made up of very fine parallel lines. *Harpers Magazine for August*.

Duplex Telegraphy.—According to the Scotsman, a system of "duplex" telegraph working, by means of a condenser, which splits the current of electricity and enables the operator to send messages through the cables in contrary directions at the same moment, has been successfully applied by the Eastern Telegraph Company. The electricians of that company, it is said, have surmounted all difficulties, and have proved the perfect applicability of the system to submarine telegraphy by practically adapting it to the section of the cables between Lisbon and Gibraltar (330 miles, and Malta and Alexandria (950 miles), and it is added that they fully expect to be able to apply it to the longer sections—between Malta and Gibraltar (1,100 miles), between Suez and Aden (1,145 miles), between Aden and Bombay (1,800 miles). This system, although only now about to be applied in connexion with the Eastern Telegraph Company, has

been for some time known. It is highly ingenious and is described as consisting briefly in having a double line of wires at each instrument, one connecting the stations and the other passing to earth. These are coiled round a magnet in opposite directions, so that the battery currents are neutralized. In working, the transmitting line being clear, one operator works the other's instrument. If the two happen to signal at the same time, the two currents meet on the transmitting line and are conducted back through the earth wire, working each operator's own instrument. They thus see exactly what is amiss, and act accordingly. At the same time it is reported that an American invent on, capable of transmitting messages through land wires at the rate of 500 words per minute, has been brought under notice, and that attempts are now being made to apply this also to submarine telegraphy. The first of these improvements alone promises to double the carrying capacity of all existing cables, and to add proportionably to their value.

New Style of Paper.—The English display at the Vienna Exhibition an original manufacture which is very strong and tough, and yet perfectly soft and pliable, like cloth. This is embossed and printed on, and is prepared for the purpose of hangings, curtains, &c., for which it seems well adapted; some of the rooms of the British Commission are furnished with this. It is simply tacked to the walls, so that it can be easily removed at any time. It is handsome cheap and durable.

Paper from Hops.—A discovery has been made, says the *Garden*, by a French firm of paper manufacturers, which seems likely to interest English hop-growers. At the last general assembly of French paper-makers, MM. Jourdeuil, Parizot, and Gusseo submitted some samples of a new textile fabric, namely, the sheath of the hop-stalk. By removing this outer skin, and subjecting it to a certain chemical process, a textile substance possessing qualities which make rags so valuable in paper-making—length, suppleness, and delicacy of texture—has been produced. The invention has been patented.

A New Thermometer.—Dr. Hilliard has added another clinical thermometer to those in use, and a capital one it is. The *Medical Press* has very little doubt it will prove a success. Its chief point is that it shuts up like an ordinary pencil case, and then goes into the vest pocket. Thus, there is no separation between the handle or case and the thermometer itself. The latter therefore cannot fall out, nor does it require so much trouble to put away after use. It has also the advantage of being increased to double its own length on opening it. The temperature consequently can be taken and read in positions in which it is not so easy to do it with the common pocket instrument. The case has fluted mounts, so that the instrument, whether open or shut, will not roll off the table. We may add that the degrees are marked very distinctly, and the finish of the instrument is all that could be desired and does great credit to the manufacturers—Messrs. Maw, Son, & Thompson—who have carried out Dr. Hilliard's suggestion.

Photographing the Transit of Venus.—M. Janssen's method for photographing the apparent contact of Venus with the edge of the sun is worthy of description. The photographic plate is in the form of a disc, fixed upon a plate which rotates upon an axis parallel to that of the telescope. Before it is placed another disc, forming a screen, in which is a small aperture, in order to limit the photographic action to the edge of the sun. The plate which carries the sensitive disc has 80 teeth, and is placed in communication with an escapement apparatus actuated by an electric current. At each second the pendulum of a clock interprets the current, and the plate turns one tooth, so that at each second a fresh portion of the photographic plate is exposed. Thus, in as many seconds, 80 images of the sun and the planet can be obtained. When the series relating to the first contact is obtained, the plate is withdrawn and another substituted, which gives the second contact, and so on for the four.

Exhalation of Carbonic Acid Gas.—The *Archiv für Physiologie* contains an account of Aubert and Lange's interesting researches on the quantity of carbonic acid exhaled in a given time from the skin of a man. The experiments were carefully made in an airtight chamber, in which the subject for experiment was seated, and through which a current of air, freed from carbonic acid, was steadily passing, while the proportion of carbonic acid in the air on leaving the chamber was estimated by transmission through bulbed tubes containing a solution of salt of barium. The results of these novel investigations lead to the

general conclusion that sixty-two grains of carbonic acid—a considerable amount, certainly—are exhaled from the body of a full-grown man, through the skin, in the course of twenty-four hours.

Embalming.—The Brunetti method, by which Mazzini's body was recently embalmed, is said to be even more effective in the preservation of the dead than that of the ancient Egyptians. It consists of several distinct processes: 1. The circulatory system is cleared thoroughly by washing with cold water till it issues quite clear from the body. This may occupy from two to five hours. 2. Alcohol is injected, so as to abstract as much water as possible. This takes about a quarter of an hour. 3. Ether is then injected, to abstract the fatty matters. This occupies from two to ten hours. 4. A strong solution of tannin is then injected. This occupies, for thorough imbibition, from two to ten hours. 5. The body is then dried in a current of warm air passed over heated chloride of calcium. This may occupy two to five hours. The body is then perfectly preserved, and resists decay; and the Italians exhibit specimens which are as hard as stone, and retain perfectly every detail of form and feature.

New Views on Diabetes.—M. Lecorché has submitted to the Academy of Medicine of Paris the following opinions respecting the nature of diabetes:—1. The current theories touching the pathology of diabetes refer only to certain varieties of glycosuria which have nothing to do with diabetes. They do not explain diabetic glycosuria. 2. Glycosuria, in diabetes, is only a secondary circumstance; the principal phenomenon is a tendency to disassimilation of protein substances. Diabetes may, in fact, be called azoturia. This disassimilation is the very essence of diabetes, and is characterized by the enormous quantity of urea which the patient is daily losing. 3. This protein disassimilation is the primary cause of glycosuria, which latter is simply an unimportant sequel of that cause. Protein disassimilation requires combustion, and during this combustion the oxygen leaves unattacked any glycosic substance formed in the economy; hence the existence in the urine of a quantity of sugar which quantity increases with the amount of urea. 4. These views of the pathology of diabetes are of capital importance as regards the treatment, for they pave the way to a rational mode of treating the disease. The theories hitherto offered do not admit of such a course, as they refer only to glycosuria. In viewing diabetes as M. Lecorché proposes (*i. e.* as azoturia, of which the glycosuria is the consequence) there is, he says, only one way of contending with the disease—namely, to endeavour, by every means in our power, to stop the loss of urea experienced by the patient. To attain this end we have only one mode of treatment at our command—the administration of cumulative remedies. Among these the principal are opium, arsenic, valerian, and perhaps bromide of potassium.—*Lancet*.

Antineuralgic Snuff.—The *Rivista Clinica di Bologna* mentions an antineuralgic snuff prescribed with success in cases of facial neuralgia, by Dr. Scriffignano. The base of the snuff is quinine, and its composition as follows:—Citrate of quinine, ten grains, very strong; exciting snuff (tobacco), fifteen grains. The medicament is said to act almost directly on the diseased nerve through the ethmoidal thread of the nasal ramus of Willis's ophthalmic, a branch of the fifth pair.

Five Hundred Thousand Pounds for the Church of Scotland.—M. James Baird, of Auchmedden, the Scotch ironmaster, has paid over to a body of trustees, to be called "The Baird Trust," the sum of \$2,500,000, to be applied for religious purpose in connection with the Church of Scotland. After providing for the endowment of the "Baird Lectureship," lately founded for the illustration and defence of the vital truths of religion, and for the promotion of Christian knowledge and Christian work, M. Baird directs that the trust fund is to be expended "for the support of objects and purposes in connection with the Established Church of Scotland, all of a religious character, and for the aid of institutions having the promotion of such purposes in view, my grand object being to assist in providing the means of meeting, or at least as far as possible promoting, the mitigation of spiritual destitution among the population of Scotland, through efforts for securing the godly upbringing of the young, the establishing of parochial pastoral work, and the stimulating of ministers and all agencies of the Church of Scotland to sustained devotedness in the work of carrying the Gospel to the homes and hearts of all."

The French War Indemnity.—The 5th September was a glorious day for France. She has paid the last instalment of the enormous war indemnity to Germany—5,000,000,000 francs—and her territory is free. It was the 10th of May, 1871, when the Treaty was signed which provided for this indemnity. Within 30 days after French authority was restored in Paris, the payment of 500,000,000 francs was stipulated. During the year 1871, a thousand millions more were required. May 1, required another five hundred millions. The last 3,000,000,000 remained payable May 2, 1874. Now, eight months before the debt is due, the whole debt is paid. France, fresh from a wasting war has gathered up from the hoarded wealth of her people this vast sum of \$1,000,000,000—equal to half the National Debt of the United States. She has done it within two years and a quarter.

Eminent State Authorities on International Arbitration.—Her Majesty Queen Victoria (speech in proroguing Parliament, August 21st, 1871):—"By the Treaty of Washington modes of settlement have been fixed for several questions which had long remained in dispute. The President has concurred with me in the application of that principle of amicable reference which was proclaimed by the Treaty of Paris (1856), and which I rejoice to have had an opportunity of recommending by example."—The President of the United States, General Grant, (Message to Congress):—"The year (1871) has been eventful in witnessing two nations which speak the same language, adopting a peaceful arbitration for the settlement of disputes of long standing, and which were liable at one time to cause conflict. An example has thus been set which, if successful in its issue, may be followed by other civilized nations, and possibly be the means of restoring to productive industry the millions of men now engaged in military and naval employments."—Count Sclopis (President of the Geneva Tribunal of Arbitration in 1872, in a letter dated Turin, February 19th, 1873):—"No one is more convinced than I am, of the importance, the utility, and the seasonableness of the formation of a code of public International law. All wise and enlightened publicists, and good men in general are of this opinion. That which appears to me to be the best mode of procedure for the present is that some gentlemen, specially authorized, should raise their voices in the British Parliament, the United States Congress, and the French National Assembly, in order to propose the assembly of a congress for the desired object. Allow me, however, to press upon you, before all things, to raise proposals in the political legislatures. I am thoroughly persuaded that there is no better way of reaching any real and positive result."—M. Drouyn de Lhuys (formerly Minister of State to Napoleon III; Letter dated Paris, March 6, 1873):—"The idea of submitting to arbitration conflicts between states was brought forward at the Conference of Vienna, at which the writer to this note assisted during the first months of the Russian war. Consecrated by the Treaty of Paris of 1856, it has too often remained inoperative. In trying to release it at present, we obey a sentiment which, evoked at that epoch, will not cease to manifest itself among all civilized nations, until it has obtained satisfaction. If any difference were to arise between two nations, what sovereign, what assembly, would dare to refer the decision to the terrible chances of battle, when there would be a law which had foreseen the case, and a tribunal of arbitration, the composition of which should be indicated or described? It might be hoped by this means to banish or to diminish the terrible scourges that arise to imbrue Europe in blood."—Right Hon. Earl Derby, (when Secretary of State for Foreign Affairs):—"Unhappily there is no interventional law by which parties can be required to refer cases of this kind. If such a tribunal existed it would be a great benefit to the civilized world."—(Speech on the *Mermaid* difficulty with Spain, 1867).—*Peace Society's Papers.*

Tea, Coffee, Cocoa, and Alcohol.—We extract from the *British Medical Journal* the conclusions of a French physician, Dr. Angel Marvaud, who has been experimenting on the physiological and therapeutical effects of coffee, tea, cocoa, mate or guarana [Paraguay tea], and alcohol, which he classes together as aliments of economy or anti-waste foods. He considers their influence or nutrition from two points of view: as stimulants to the nervous system, as anti-waste foods or anti-assimilators. Alcohol acts directly on the sensory apparatus of the spinal cord and indirectly on the motor apparatus. Cocoa acts directly on the motor apparatus, which it excites in the same manner

as strychnine. Coffee, tea, and mate act principally on the brain. Alcohol and cocoa excite the exercise of the muscles; coffee, tea, and mate, the exercise of thought. Further, by lessening the waste of the tissues, counteracting organic oxidation, and diminishing loss by means of the secretions, they all act as aliments of economy. In this way is explained their action in stimulating to work in the evening, in partly supplying the want of solid food, and in moderating vital combustion. Hence arises their increasing consumption, and their more general use as articles of daily regimen, hence, too, their utility in alimentation, and their important place in hygiene. The abuse of these aliments has, it is true, two principal inconveniences. In the first place, the excitement of the nervous system which they cause is liable to be followed by fatigue, weakness, and even inertia. In the second place, by their interference with and reduction of the processes—indispensably necessary to life—of combination, transmutation, and of decomposition, they may cause arrest, suspension, or even complete suppression of the nutritive changes in the cellular elements, and may produce as results, torpor, atony, fatty degeneration, and noerobiosis of the tissues. Thus are explained alcoholism, coffeeism, theinism, and cocoaism.

Sir Henry Thompson on Alcoholic Beverages.—Sir Henry Thompson, the eminent surgeon, has addressed a letter to the Archbishop of Canterbury, in which he says he has long had the conviction that there is no greater cause of evil, moral and physical, in England than the use of alcoholic beverages. "I do not mean by this," he adds, "that extreme indulgence which produces drunkenness. The habitual use of fermented liquors to an extent far short of what is necessary to produce that condition, and such as is quite common in all ranks of society, injures the body and diminishes the mental power to an extent which I think few people are aware of. Such, at all events, is the result of observation during more than twenty years of professional life devoted to hospital practice, and to private practice in every rank above it. Thus, I have no hesitation in attributing a very large proportion of some of the most painful and dangerous maladies which come under my notice, as well as those which every medical man has to treat, to the ordinary and daily use of fermented drink taken in the quantity which is conventionally deemed moderate." Sir Henry therefore rejoices to observe an endeavor to organise on a large scale in the national Church a special and systematic plan for promoting temperance. "My main object," he says "is to express my opinion as a professional man in relation to the habitual employment of fermented liquor as a beverage. But if I ventured one step further it would be to express a belief that there is no single habit in this country which so much tends to deteriorate the qualities of the race, and so much disqualifies it for endurance in that competition which in the nature of things must exist, and in which struggle the prize of superiority must fall to the best and to the strongest."

Census Statistics.—The "Tables of Occupation," which have just been completed at the census office, Washington show that the number of persons pursuing gainful occupations on the 1st of June, 1870, was 12,505,923; of these 1,836,487 were females. Of the total, 9,802,038 were born in the United States, 826,512 in Germany, 949,424 in Ireland, 301,779 in England and Wales, 71,933 in Scotland, 109,681 in Sweden, Norway, and Denmark, 58,197 in France, 189,307 in British America and 46,300 in China and Japan. The occupation returning the largest number is that of planters and farmers, 2,982,573; farm laborers, 880,045; the entire number engaged in agriculture including gardeners, dairymen, apiarists, etc., 5,922,471; in manufactures, mechanical and mining pursuits, 3,707,411; in trade and transportation, 1,923,8; in rendering personal and professional services, 2,684,793. Under specific heads the principal were as follows: laborers, 1,031,666; domestic servants, 971,048; carpenters, 334,596; miners, 152,107; shoemakers, 172,127; tailors, 171,800; blacksmiths, 4,774; painters, 85,123; brick and stone masons, 89,710; in cotton mills, 111,606; in woolen mills, 58,836; in iron works, 81,000; teachers of all kinds, 136,570; physicians and surgeons, 62,383; clergymen, 43,874; lawyers, 40,736; journalists, 5,286; U. S. army and navy officers, 2,286; National, State, and Municipal civil officers, 44,741.

OFFICIAL DOCUMENTS.

TABLE of the Apportionment of the Grant in Aid of Superior Education to Catholic Institutions for the year 1872, in virtue of the provisions of Chapter 15, Consolidated Statutes of Lower Canada, and of Chapter 16, 32 Victoria

1.—CLASSICAL COLLEGES.

INSTITUTION.	No of Students.	Grant for 1871.	Grant for 1872.
Nicolet.....	297	\$ 1597	\$ 1501
St Hyacinthe.....	240	1597	1501
Ste Thérèse.....	165	1488	1501
Ste Anne de la Pocatière.....	212	1637	1637
L'Assomption.....	2 0	1488	1501
Ste Marie de Montréal.....	343	1488	1501
Trois Rivières.....	168	1276	1197
Ste Marie de Monnoir.....	166	710	710
Rimouski.....	120	1438	1438
Total.....		\$12719	\$12487

2.—INDUSTRIAL COLLEGES.

INSTITUTION.	No. of Students.	Grant for 1871.	Grant for 1872.
Joliette.....	174	\$ 786	\$ 740
Laval.....	124	344	324
Longueuil.....	250	348	328
Masson.....	334	1276	1197
Notre Dame de Lévis.....	154	786	740
Rigaud.....	155	786	740
Sherbrooke.....	90	269	300
St. Laurent.....	345	622	586
St Michel Bellechasse.....	105	607	565
Varennes.....	120	269	254
Verchères.....	86	344	320
Ste. Marie, Beauce.....	141	454	427
Schools of Applied Science and Art.....		2500	2000
Total.....		\$9391	\$8521

3.—MALE OR MIXED ACADEMIES.

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Aylmer.....	85	\$ 204	\$ 192
Baie du Febvre.....	87	136	128
Baie St. Paul.....	94	161	142
Beauharnois.....	234	204	192
Belœil.....	68	303	285
Berthier en haut.....	60	303	285
Bonin, St. André d'Argenteuil.....	80	204	192
Buckingham.....	134	136	128
Chambly.....	120	159	400
St. Columban of Sillery.....	199	233	223
St. Cyprien.....	136	136	128
Dufresne, St. Thomas Montmagny.....	60	233	223
St. Eustache.....	164	204	192
Farnham.....	223	179	170
Gentilly.....	49	136	128
Girouard.....	118	138	128
St. Gregoire.....	65	136	128
L'Islet.....	163	204	300
St. Jean.....	178	424	400
St. Jean, Montmorency.....	100	136	128
Kamouraska.....	89	301	283
Laprairie, (increase promised).....	140	179	300
Lotbinière.....	22	120	114
Ste. Marthe.....	85	136	128
To be carried over.....		4705	4917

4.—MALE OR MIXED ACADEMIES.—(Continued.)

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Amount carried over.....	4705	4917	
Montmagny, St. Thomas.....	213	225	212
Montreal, Commercial Academy.....	241	1687	1585
Pointe-aux-Trembles, Hochelaga.....	62	269	255
Quebec, Com. and Lit. Acad., St. Roch.....		136	000
Roxton.....	82	118	112
Sorel.....	350	353	332
St. Timothée.....	145	198	186
Vaudreuil.....	95	136	128
Yamachiche.....	140	204	300
Total.....		\$8031	\$8027

4.—FEMALE ACADEMIES.

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
St. Aimé.....	180	\$ 103	\$ 97
St. Ambroise de Kildare.....	100	89	89
Ste. Anne la Pérade.....	111	122	115
L'Assomption.....	207	122	115
Baie St. Paul.....	130	103	97
Belœil.....	110	89	89
Berthier.....	138	96	96
Boucherville.....	100	89	89
Chambly.....	125	137	129
St. Charles de l'Industrie.....	304	181	170
Châteauguay.....	140	89	89
Les Cèdres.....	80	89	89
St. Césaire.....	168	116	114
St. Clément.....	201	137	128
Ste. Croix.....	90	137	128
St. Cyprien.....	180	89	89
St. Denis, St. Hyacinthe.....	150	89	89
Ste. Elizabeth, Joliette.....	127	181	170
St. Eustache.....	129	94	94
Ste. Famille.....	66	174	164
Ste. Geneviève, Jacques-Cartier.....	113	135	128
St. Grégoire, Nicolet.....	269	236	194
St. Henri of Mascouche.....	110	89	89
St. Hilaire.....	67	89	89
St. Hyacinthe (Sisters of Charity).....	230	122	115
“ “ of the Presentation.....	237	122	115
L'Islet.....	74	122	115
Isle Verte.....	122	120	113
St. Jacques l'Achigan.....	205	181	170
St. Jean Dorchester.....	477	206	194
St. Hugues.....	118	272	256
St. Joseph, Lévis.....	308	272	256
Cacouna.....	100	152	143
Kamouraska.....	102	137	130
Laprairie.....	196	89	89
St. Laurent, Jacques Cartier.....	180	181	170
St. Lin.....	142	89	89
Longueuil.....	344	272	256
Longue Pointe, Hochelaga Convent.....	30	137	128
Lachine.....	305	189	178
N. D. de la Victoire.....	270	108	102
Ste. Marie, Beauce.....	150	152	143
Ste. Marie de Monnoir.....	131	137	128
St. Martin.....	95	89	89
St. Michel, Bellechasse.....	120	206	194
Providence Deaf and Dumb.....	161	194	183
Academy, St. Denis, Congregation.....	170	169	160
St. Nicolas.....	86	89	89
St. Paul, Industrie.....	115	89	89
Pointe Claire.....	91	89	89
Pointe-aux-Trembles, Hochelaga.....	114	181	170
“ “ Portneuf.....	85	181	170
Rimouski.....	161	206	194
Amount to be carried.....		\$6808	\$7057

4.—FEMALE ACADEMIES.—(Continued.)

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Amount carried over.....		\$6808	\$7057
Rivière Ouelle	94	157	148
Sts. Scholastique.....	115	97	97
Sherbrooke.....	304	272	256
Sorel.....	500	314	298
Terrebonne.....	120	89	89
Ste. Thérèse.....	142	89	89
St. Timothée.....	95	121	114
St. Thomas de Pierreville.....	80	137	128
" Montmagny.....	226	206	194
Trois Pistoles.....	103	120	113
Trois-Rivières.....	312	206	194
Vaudreuil.....	118	89	89
Varenes.....	97	152	143
Yamachiche.....	140	137	128
Youville.....	100	137	128
Total.....		\$9721	\$9263

5.—MODEL SCHOOLS.—(Continued.)

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Amount carried over.....		\$5820	\$5812
St. Pierre de Charlesbourg.....	90	56	56
Charlesbourg, (Boys).....	74	56	56
" (Girls).....	50	56	56
Eboulements.....	60	73	73
Ecureuils.....	116	56	56
Escourmains.....	64	73	73
Etchemin, Village.....	230	100	100
Grande Baie, (Boys).....	36	73	73
" (Girls).....	39	56	56
Grande Rivière.....	63	73	73
Grondines.....	80	56	56
Henryville.....	57	56	56
" Convent.....	146	56	56
Huntingdon.....	73	73	73
Hébertville.....	108	100	100
Iberville.....	112	73	73
" (Girls).....	160	56	56
L'acadie.....	92	73	73
Lacolle.....	83	73	73
Lachine.....	135	73	73
Lotbinière.....	34	73	73
" Convent.....	83	73	73
Maitrise St. Pierre, Montreal.....	242	200	188
La Pêcho.....	68	56	56
Maria.....	40	73	73
Malbaie.....	64	73	73
Matane.....	88	56	56
Female School, Visitation Street.....	1215	73	73
Model Schools of Cath Com., Montreal.....	275	946	889
Nicolet, Girls.....	145	56	56
Notre-ame de Bonsecours, Convent.....	155	146	188
Notre-Dame de Hull, (Boys).....	100	73	73
Notre-Dame de toute Grâce, Convent.....	333	73	73
Notre-Dame du Portage.....	55	56	56
Nouvelle.....	42	100	100
Percé.....	66	56	56
Pointe-Claire.....	55	136	129
Pointe-aux-Trembles, Portneuf.....	72	73	73
Pointe du Lac.....	94	73	73
Portneuf, (Boys).....	139	56	56
" (Girls).....	76	56	56
Quebec, St. Roch, South.....	430	168	158
" Convent.....	625	73	73
" St. John's Suburbs.....	68	73	73
Rawdon, diss.....	36	73	73
" Convent.....	40	73	73
Rigaud, Female Academy.....	112	73	73
Rivière Ouelle.....	49	73	73
Rivière des Prairies.....	41	56	56
Rivier-du-oup, Maskinongé.....	70	73	73
" " Fraserville Témiscouata.....	83	73	73
" " " (Convent).....	130	73	73
Sault-aux-Récollets.....	63	73	73
Sherrington.....	130	89	89
Somerset de Plessisville.....	24	185	175
Stanford.....	37	56	56
Soulanges.....	40	73	73
Shawinigan.....	91	56	56
St. Aimé.....	132	168	159
St. Alexandre, Iberville, (Convent).....	114	56	56
" (Boys).....	70	73	73
" Kamouraska.....	83	73	73
St. Anicet.....	99	56	56
St. André, Kamouraska.....	81	73	73
Ste. Anne Lapérade.....	111	160	151
" des Plaines.....	103	73	73
" No. 2, Kamouraska.....	105	200	188
Amount to be carried.....		12,103	11,961

5.—MODEL SCHOOLS.

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Education Society, Quebec.....	515	\$944	\$1094
" " Three Rivers.....	362	457	430
Indians of Lorette (Boys).....	26	162 50	162 50
" " (Girls).....	22	162 50	162 50
" " St. François.....	133	152	143
St. Jacques, Montreal.....	612	757	712
The Catholic Commissioners of Quebec.....	285	304	286
Acton Vale (Convent).....	45	56	56
Arthabaskaville.....	90	146	138
Aylmer, Convent.....	73	73	73
Ange Gardien.....	70	56	56
Bagotville.....	72	73	73
Beaumont.....	106	73	73
Beauport.....	102	73	73
Berthier, Montmagny.....	75	121	114
Béancour.....	118	73	73
Boucherville.....	193	73	73
Baie du Febvre.....	96	56	56
Batiscan.....	97	100	100
ap St. Ignace.....	115	100	100
Cap Rouge.....	17	56	56
St. Félix du Cap Rouge, Dame Thivierge.....	60	100	100
Carleton.....	60	73	73
Châteauguay.....	80	73	73
Château Richer, (Boys).....	106	51	51
" " (Girls).....	98	166	157
Chicoutimi.....	100	73	73
Côte des Neiges.....	77	73	73
Côteau du Lac, (Boys).....	80	56	56
" " (Girls).....	136	73	73
Côteau St. Louis.....	90	73	73
" " Convent.....	54	146	138
Chicoutimi, Convent.....	61	194	183
Carleton, ".....	60	136	128
Deschambault, (Boys).....	102	73	73
" " (Girls).....	136	73	73
Champlain.....	141	73	73
Champlain, Convent.....	144	100	100
Coaticook.....		\$3820	\$3812

5.—MODEL SCHOOLS.—(Continued.)

5.—MODEL SCHOOLS.—(Continued.)

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Amount carried over.....		\$ 12103	\$ 11961
St. Anselme.....	96	73	73
St. Antoine de Tilly.....	33	73	73
St. Apollinaire.....	86	73	73
Ste. Anne de Bellevue.....	89	73	73
St. Ambroise.....	47	56	56
St. Ambroise, Quebec.....	815	73	73
St. Angélique, Papinauville.....	78	56	56
Ste. Agnès, Charlevoix.....	43	56	56
Ste. Agapit.....	53	56	56
Ste. Brigide, Iberville.....	81	56	56
St. Barthélemy, Berthier.....	70	73	73
Buckingham, Convent.....	40	73	73
Ste. Croix.....	57	56	56
Ste. Cécile, (Boys).....	182	73	73
" Convent.....	283	103	97
St. Césaire.....	225	194	183
St. Charles, Bellechasse.....	47	73	73
" Girls.....	60	73	73
" St. Hyacinthe.....	122	73	73
St. Colomb de Sillery.....	108	200	188
Ste. Claire.....	80	73	73
St. Célestin, Nicolet, (Convent).....	108	100	100
St. Constant.....	112	103	97
St. Christophe (Convent).....	156	194	183
Cap Santé, Portneuf.....	70	73	73
Ste. Cécile du Bic.....	115	56	56
St. Denis, Kamouraska.....	84	73	73
" de St. Hyacinthe.....	51	73	73
St. David, Yamaska.....	130	100	100
Drummondville.....	55	73	00
St. Dunstan.....	34	73	73
St. Edouard, Napierville.....	127	73	73
Ste. Elizabeth, Joliette.....	71	73	73
Ste. Flavie.....	119	56	56
St. François du Lac, (Parish).....	98	56	56
St. François rivière du sud, (Convent).....	90	72	72
Ste. Famille.....	52	73	73
Sie. Foye.....	70	73	73
St. François du Lac, (Village).....	90	73	73
St. Félix de Valois.....	79	72	72
St. Frédéric, Drummond.....	306	73	00
St. Ferdinand, d'Halifax.....	44	56	56
Ste. Geneviève, de Batiscan.....	68	73	73
" Jacques-Cartier.....	75	56	56
St. George, Cacouna.....	54	56	56
Ste. Gertrude.....	36	73	73
St. Gervais, Convent.....	66	73	73
" (Boys).....	54	73	73
St. Grégoire le Grand.....	72	100	100
St. Gabriel de Brandon.....	68	100	100
" Convent.....	90	56	56
St. Henri de Mascouche.....	53	73	73
St. Henri, Hochelaga.....	405	73	73
" de Lauzon.....	75	146	138
St. Hermas, Deux-Montagnes.....	84	73	73
St. Hilaire.....	54	73	73
St. Hubert.....	47	56	56
Ste. Hélène, Kamouraska.....	71	56	56
St. Henri, Hochelaga, Convent.....	294	56	56
Hemmingford, Huntingdon, Convent.....	93	73	73
St. Irénée.....	45	73	73
St. Isidore, Laprairie.....	94	73	73
St. Jacques le Ineur.....	116	103	97
St. Jean Bte. Village.....	292	73	73
" Chrysostôme de Châteauguay.....	232	56	56
" " Lévis.....	49	56	56
" Deschailons.....	74	73	73
" Port Joly, (Boys).....	38	73	90
Amount to be carried.....		17523	16210

INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Amount carried over.....		\$ 17523	\$ 16210
St. Jean, Port Joly, (Girls).....	33	73	90
St. Jérôme, Convent.....	160	73	73
" (Boys).....	139	146	138
St. Joachim, Deux-Montagnes.....	94	73	73
St. Joseph, Chicoutimi.....	171	56	56
Ste. Julie de Somerset.....	126	56	56
St. Joseph de Lévis.....	183	150	141
" Beauce.....	34	73	73
St. Jean, Dorchester.....	204	100	100
St. Lambert de Lauzon.....	69	96	97
St. Laurent de Montmorency.....	81	73	73
St. Léon.....	68	56	56
St. Lin.....	108	73	73
St. Louis de Gonzague.....	120	56	56
" " Convent.....	119	56	56
St. Luc, St. Jean.....	48	56	56
Ste. Luce.....	90	56	56
St. Liguori, Convent.....	92	146	38
Longue-Pointe, Hochelaga.....	37	73	173
St. Mathias, Rouville.....	80	56	56
St. Martin.....	77	73	73
Ste. Martine, (Boys).....	75	56	56
" (Girls).....	80	56	56
St. Michel, Archange, Napierville.....	67	56	56
" " Convent.....	166	73	78
Ste. Monique.....	91	73	73
St. Maurice.....	53	73	73
St. Marc, Verchères.....	70	73	73
St. Narcisse.....	104	73	73
St. Nicolas.....	46	73	73
St. Norbert, Arthabaska.....	68	56	56
" Cap Chatte.....	62	73	73
St. Octave de Métis.....	96	56	56
St. Ours, Convent-Ville.....	130	73	73
" (Boys).....	75	78	73
St. Paschal.....	128	73	73
St. Pierre, Montmorency.....	80	56	56
St. Philomène.....	63	73	73
St. Pierre de Durham.....	54	56	00
St. Philippe.....	85	73	73
S. Pierre les Becquets.....	77	56	56
St. Polycarpe, (Boys).....	70	73	73
" Convent.....	146	73	73
St. Roch de l'Achigan.....	92	73	73
St. Romuald de Lévis.....	192	73	73
Ste. Rose.....	102	73	73
St. Raphaël.....	74	56	56
St. Roch des Aulnets.....	25	56	56
St. Sévère.....	80	73	73
Ste. Scholastique.....	108	73	73
St. Stanislas, Champlain.....	140	73	73
" Beauharnois.....	134	73	73
St. Sylvestre, Lotbinière.....	60	56	56
Trois-Pistoles, No. 1, Témiscouata.....	82	73	73
St. Thomas de Pierreville.....	106	73	00
Trois-Rivières, Sœurs de la Providence.....	130	100	100
Ste. Ursule, Maskinongé.....	107	56	56
St. Valentin, St. Jean.....	80	56	56
St. Vincent-de-Paul, Convent.....	126	73	73
" " (Boys).....	55	56	56
St. Vallier, (Boys).....	53	73	73
" Convent.....	80	73	73
Waterloo, Shefford.....	144	100	100
" Templeton.....	143	72	72
Wotton, Wolfe.....	33	194	183
Victoriaville.....	205	56	56
St. Zotique.....	100	56	56
Total.....		22,329.00	21,851.00

NEW APPLICANTS.		
INSTITUTION.	No. of Pupils.	Grant for 1872.
INDUSTRIAL COLLEGE.		
Notre-Dame de Lévis	230	\$ 260
MALE OR MIXED ACADEMIES.		
Arthabaskaville	113	167
COMMERCIAL SCHOOL.		
Lotbinière	12	200
MODEL SCHOOLS.		
St. Arsène	73	75
St. Anne de Bellevue	80	56
St. Agnes, Charlevoix	42	36
St. Anne des Monts	51	80
St. Augustin	40	60
St. Bruno	84	60
Côte des Neiges, Convent	88	56
Œuvre du Patronage	63	100
St. Félix du Cap Rouge	70	100
St. Culthbert	56	80
Gentilly, Nicolet	100	160
St. Hubert	78	56
Hereford, St. Venant	54	80
St. Placide	75	56
Sisters of Charity and Good Shepherd	883	100
Somerset de Mégantic, Convent	69	150
St. Ursule, Convent	62	56
St. Zéphirin	99	56
Kingsey	41	56
Total		\$2160

2.—CLASSICAL COLLEGES.			
INSTITUTION.	No. of Students.	Grant for 1871.	Grant for 1872.
St. Francis, Richmond	48	\$ cts. 587 66	\$ cts. 587 66
Morrin	8	369 98	369 98
Total		\$957 64	\$957 64

3.—INDUSTRIAL COLLEGES.			
INSTITUTION.	No. of Students.	Grant for 1871.	Grant for 1872.
Lachute	152	\$184 99	\$ 184 99

4.—MALE OR MIXED ACADEMIES.			
INSTITUTION.	No. of Pupils.	Grant for 1871.	Grant for 1872.
Aylmer	129	\$ cts. 129 52	\$ cts. 129 52
St. Andrew's, Argenteuil	60	57 37	57 37
Barnston	63	86 35	86 35
Bedford	119	90 06	90 06
Charleston	65	173 92	173 92
Clarenceville	29	170 82	170 82
Clarendon	65	86 35	86 35
Coaticook	126	75 91	75 91
Compton	71	86 35	86 35
Cookshire	41	86 35	86 35
Danville	171	129 52	129 52
Dudswell	30	86 35	86 35
Dunham	105	170 82	170 82
Eaton	65	145 66	145 66
Farnham	34	129 51	129 51
St. Foye	40	86 35	86 35
Frelighsburg	42	114 07	114 07
Georgeville	41	88 14	88 14
Granby	119	170 83	170 83
Huntingdon	114	191 18	191 18
St. Jean	86	205 39	205 39
Knowlton	46	170 83	170 83
Missisquoi	50	131 98	131 98
Philipsburg	38	88 14	88 14
Shefford	110	197 96	197 96
Sorel	63	76 49	76 49
Stanbridge	36	133 22	133 22
Stanstead	150	305 86	305 86
Sutton	35	107 13	107 13
Sherbrooke	64	189 32	189 33
Cowansville	50	86 95	86 95
Total		\$3948 71	\$4048 71

TABLE of the Apportionment of the Grant in Aid of Superior Education to Protestant Institutions for the year 1872, in virtue of the provisions of Chapter 15, Consolidated Statutes of Lower Canada and of Chapter 16, 32 Victoria.

1.—UNIVERSITIES.			
INSTITUTION.	No. of Students.	Grant for 1871.	Grant for 1872.
McGill College	277	\$ cts. 1369 49	\$ cts. 1369 49
“ Contingencies		271 00	271 00
Bishop's College, Lennoxville	87	979 18	979 18
Total		\$2619 67	\$2619 67

—OBSERVATIONS from the Records of the Montreal Observatory, Lat. 45°31' North; Long. 4h. 54m. 17sec. West of Greenwich; Height above the level of the sea, 182 feet.—For the month of July, 1873.—By CHARLES SMALLWOOD, M.D., LL.D., D.C.L.

DAYS.	Barometer at 32°			Temperature of the Air.			Direction of Wind.			Miles in 24 hours.
	7 a. m.	2 p. m.	9 p. m.	7 a. m.	2 p. m.	9 p. m.	7 a m	2 p m	9 pm	
	1	29.776	29.778	29.801	75.2	74.0	70.5	s	s		w	126.43
2	30.000	30.080	30.020	69.2	80.0	70.5	w	w	w	86.87
3	29.964	29.951	29.858	70.6	79.8	76.3	s w	w	w	125.40
4	.911	.882	.850	70.0	74.0	75.2	w	w	w	112.08
5	.775	.704	.732	69.2	81.5	75.0	w	w	w	156.72
6	.826	30.000	30.020	62.0	76.6	69.0	n	n	n	82.89
7	30.023	29.987	29.946	62.5	81.1	70.5	n w	w	w	75.25
8	29.950	.899	.820	64.4	79.5	70.0	w	w	w	74.54
9	30.033	30.026	30.040	61.2	74.5	69.0	n w	n e	w	80.55
10	.001	29.920	29.918	63.0	79.6	67.0	w	w	w	89.21
11	29.960	.962	.998	62.2	70.0	67.4	n e	n e	n e	100.00
12	30.167	30.181	30.187	57.5	74.0	68.5	n e	w	w	125.10
13	.176	.175	.097	62.6	79.9	70.2	w	s	w	102.76
14	.030	29.923	29.904	69.6	87.6	76.1	w	w	w	160.90
15	29.931	.958	.974	71.8	82.8	74.0	w	n e	n	109.02
16	30.100	30.077	30.001	60.0	72.5	68.6	n	w	w	88.98
17	29.961	29.900	29.831	62.8	65.0	60.5	w	s e	s w	80.36
18	.834	.875	.850	59.8	64.0	60.1	e	e	s w	105.68
19	.833	.783	.768	60.6	71.0	63.0	s	s	w	158.40
20	.800	.782	.830	59.8	68.2	64.1	w	w	w	195.11
21	.882	.902	.983	62.2	74.9	69.5	w	n w	n w	108.06
22	30.100	30.133	30.098	64.0	80.5	72.6	w	w	w	150.75
23	.075	29.974	29.898	68.0	81.0	77.2	w	w	w	285.35
24	29.950	.960	.963	71.8	82.6	71.4	w	w	w	71.73
25	.975	.806	.800	62.8	76.6	76.8	w	s w	w	176.42
26	.930	.951	.993	70.0	76.3	70.8	w	w	w	84.42
27	30.075	30.121	30.170	70.0	78.2	71.0	w s w	s	s	71.98
28	.250	.211	.108	65.2	85.1	76.5	n	n e	n e	79.84
29	29.900	29.997	29.917	70.8	79.9	74.1	s w	w	w	139.95
30	.994	30.000	30.998	71.0	81.5	75.6	w	w	w	139.18
31	30.102	.187	.100	70.0	35.6	76.1	w	s w	w	91.0

REMARKS.—The highest reading of the Barometer was at 8 a.m. of the 31st day, and was 30.203 inches; the lowest reading was at 3 p.m. on 5th day, 29.704 inches. The monthly mean was 29.966 inches, and the monthly range 0.599.

The highest Temperature was on the 11th day, and was 90° 0. The lowest was on the 12th day, and was 54° 3.

The monthly mean was 71° 82, and the monthly range or climatic difference 35° 7.

—OBSERVATIONS taken at Halifax, Nova Scotia, during the month of July, 1873; Lat: 44° 39' North; Long. 63° 36' West; height above the sea, 125 feet, by Serg't John Thurling, A. H. Corps.

Barometer, highest reading on the 29th.....	30.231 inches.
" lowest " " 15th	29.623 "
" range of pressure.....	0.608
" mean for month (reduced to 32°).....	29.838
Thermometer, highest in shade on the 24th	89.3 degrees.
" lowest " " 18th	37.4
" range in month.....	51.9
" mean of all highest	77.8
" mean of all lowest.....	51.1
" mean daily range	26.7
" mean for month.....	64.4
" highest reading in sun's rays	Instrument broken
" lowest reading on the grass	32.8 degrees.
Hygrometer, mean of dry bulb.....	67.6
" mean of wet bulb.....	62.7
" mean deduced dew point	58.9
" elastic force of vapour.....	498 inches.
" weight of vapour in a cubic foot of air....	5.5 grains.
" weight required to saturate do	1.8
" the figure of humidity (Sat. 100).....	74
" average weight of a cubic foot of air.....	522.9 grains.
Wind, mean direction of, North.....	8.25 days.
" " East.....	1.25
" " South.....	11.00
" " West.....	10.00
" " Calm.....	0.50
" daily force (0-12).....	2.6
" daily horizontal movement.....	262.6 miles.
Cloud, mean amount of (0-10).....	6.0
Ozone, mean amount of (0-10).....	2.1

Rain, number of days it fell..... 1.8
 Amount collected on ground..... 4.49 inches.
 Fog, number of days..... 8
 Aurora Borealis..... 4

—OBSERVATIONS taken at Halifax, Nova Scotia, during the month of August, 1873; Lat. 44° 39' North; Long. 63° 36' West; height above the sea, 125 feet, by Serg't John Thurling, A. H. Corps.

Barometer, highest reading on the 18th.....	30.323 inches.
" lowest " " 24th.....	29.214
" range of pressure.....	1.109
" mean for month (reduced to 32°).....	29.892
Thermometer, highest in shade on the 31st.....	84.9 degrees.
" lowest " " 28th.....	40.2
" range in month.....	44.7
" mean of all highest	75.9
" mean of all lowest.....	50.8
" mean daily range.....	25.1
" mean for month.....	63.3
" highest reading in sun's rays.....	Instrument broken
" lowest on the grass.....	28.0 degrees.
Hygrometer, mean of dry bulb.....	67.3
" mean of wet bulb.....	62.0
" mean dew point.....	57.8
" elastic force of vapour.....	479
" weight of vapour in a cubic foot of air....	5.2 grains.
" weight required to saturate do	2.1
" the figure of humidity (Sat. 100).....	72
" average weight of a cubic foot of air.....	524.1 grains.
Wind, mean of direction North.....	7.5 days.
" " East.....	4.25
" " South.....	8.25
" " West.....	9.75
" " Calm.....	1.50
" daily force.....	2.2
" daily horizontal movement.....	267.5 miles.
Cloud, mean amount of (0-10).....	6.2
Ozone, mean amount of (0-10).....	2.4
Rain, number of days it fell.....	1.11
Amount collected on ground.....	4.15 inches.
Aurora Borealis.....	1
Fog, number of days.....	4.....

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