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THE facts concerning Training Colleges and supply of teachers on the continent of Europe, as described by Mr. Matthew Arnold in his answers to questions put to him when before the Commissioners lately sitting in England, will doubtless be of interest to many of our readers. Mr. Arnold said that he considers teachers on the Continent of Europe are much better trained than in England. They are trained on a different system. In France, for instance, the best of the instruction is given by people who are not, in general, permanent officers of the training college, but who are had in for the special subjects which they teach. The director is a permanent officer, who is carefully chosen, and takes some subject such as religion or pedagogy; but, generally, for the mass of their work, the students come under superior instruction, instruction given by superior men who come in to teach their specialty and nothing else. The training colleges have always practising schools attached to them, exactly as in England. The time of training is not the same in all countries. In the best they will have three or four years in a preparatory institution, followed by three years in a training college. In Switzerland they have the *secundar-schule*, a further development of the *primar-schule*, which goes on to the age of sixteen. This is accepted instead of the preparatory institution. The teachers have thus a much longer training than in England. The science of pedagogy is much better un-

derstood, and the teaching is distinctly very much better. He knew that in Scotland a very large proportion of the picked students attend the universities, where they came under a course of tuition by very distinguished professors. In examining the papers of English and Scotch students he found that the latter had evidently been under superior teaching, although they had not the same neatness in the way in which they put their work on paper as those in England had. The State, or the Province, or the Municipality, paid directly for the expenses of the training colleges, though there were some private normal schools which had no support from the State. The new training schools in France are very good; many of them would serve as models for England. They are chiefly residential, and there is one for each department. They are always in the great towns. The teachers are chiefly university professors. The students come in at about the age of eighteen and they remain for three years. He thought that in English training colleges more might have been done for what we may call the science of teaching; but the best part of what is called pedagogy abroad is the history of education and the biography of educators; this is very good, and we do not have it sufficiently. The gathering up of the experience of the past is very superior to anything he had found in his own country.

He had not considered the question of throwing the education of the teacher open as far as the education of persons for other professions is open, and using the training colleges for his professional education only, but was not disposed to think the change would prove a good one. It was usual in Germany for young people to live at home and go to the college for instruction. He did not find that this system was attended with evil results. The day-school system is so universal that nobody thinks of anything else. Families in the country had relations or connections in the town where the college was, and sent their sons to board with them. He thought this system had no moral disadvantage;

on the contrary, it is better than the *inter-net* system. He did not think that the lessons given before the inspection by the students in English training colleges, and which might carry with them 150 marks, of any use; he had always regarded them as entirely useless. It would be better to defer the judgment of their teaching power till the end of their two years' probation. The instruction in English practising schools is not real though the lessons often show a great deal of information and arrangement. It must be the case that some of the teachers who go out highly placed do not exhibit any great practical skill; he had known one or two remarkable instances of this. He had not found abroad students under seventeen; so that on leaving they would be at least nineteen years of age. These would generally serve for two years as adjoints or assistants, and then they would come for a final examination and be definitely appointed. He thought that persons ought not to be allowed to enter the profession without having been trained, though he was not in favour of the existing system of training colleges. He would have them provided by the State, or, if anything like provincial divisions existed, provided by the local bodies. He would prefer to have local training colleges under local public management, but failing that he would have colleges under State control. He would facilitate the admission of day scholars to these colleges, and would give the students a much wider culture than they had at present. He believed the greater culture of the Scotch teachers to be due to the more liberal scheme of education in Scotland, and to the contact of the students with the universities. Making the colleges State institutions would ensure their being put in the right place, and their being enough of them, and the programme being a rational one, all of which are very important matters. At present they are not all put in the right places, nor are all of them of equal efficiency. He would prefer that the training should retain its denominational character, liberty of conscience being protected.

Contemporary Thought.

WHILE the Government officials sent down to L'Original by the Minister of Education are enquiring into the sectarian differences between the school supporters there, they should be instructed to look into the charge that has been made, to the effect, that the English school books have no place in the education of the young. This charge has been freely made on what certainly appears to be good ground. It is no answer to say that the regulations provide that authorized English books shall be used, when the facts are that English books are not used, but French. In Quebec the language of the province is French, and therefore French is the language of the schools. But the language of Ontario is English, and English should be the language taught here. Those who wish to learn French or German are at perfect liberty to do so, but this is a very different thing from maintaining French public schools with the money of English-speaking people, thus perpetuating an anomaly that it should be the object of our people to do away with—a dual language in an English-speaking colony. The elections are over, and the Minister of Education is free to do what is best for the schools under his control. By all means let a definite line be followed in regard to these French schools in Prescott and Russell. It is bad enough to have public schools and separate schools, without also having schools in which the English language is ignored.—*Telegram.*

COMING down to modern days we find that many of the most illustrious women have remained spinsters all the days of their lives. Elizabeth of England, one of the most remarkable of latter day sovereigns, and a woman of remarkable acuteness, courage, and political sagacity, was an old maid. So was Maria Edgeworth, whose literary work prompted Sir Walter Scott to begin the Waverley novels; so was Caroline Hersche; so was Jane Porter; so was Joanna Baillie; so was Mary Russell Mitford; so was Jane Austen, to whom Macaulay awards a very high place in the field of fiction; so were Harriet Martineau, Francis Power Cobbe, and hundreds of others whose works live after them. Who will doubt that such women as Florence Nightingale, Emily Faithfull, and Clara Barton, single women though they be, have done and are doing double duty for humanity? Some of the most eminent women of every civilized land are found in the pursuit of science, literature, art, or benevolence, and are wedded only to their chosen calling. The tenderest ministrations to sick and suffering strangers in our hospitals and on our battlefields, come from the hands of the sisterhood. Are they not worthy of all honour? And because there are weak and silly, curious and gossiping old maids (just as there are weak and silly, curious and gossiping married women), shall all old maids become the subject of addeplated jest? That a woman's reason is best known to herself may apply to matrimony as well as to other affairs in life, and it is a matter into which idle curiosity has no right to apply. The good there is in the old maid commands our love and respect: for the sorrows which may have been hers she deserves our sympathy, and common justice, which is the common right, requires that we render unto Caesar the things that are Caesar's.—*Phila. Record.*

THE Church party in Huddersfield, England, connected with the school board have frequently "harped on" the question of having in the board schools some systematic teaching of Scripture. Recently an attempt was made to carry a resolution authorizing the reading of the Ten Commandments in the schools, with such explanations as the teachers might think advisable. The board overruled the resolution. If they had not done so one would not have been surprised to hear that the teachers had revolted against the decision. What teacher with a grain of common sense would have dreamt of explaining to young children such a commandment as the seventh? The vicar (the Rev. J. W. Bardsley, M.A.) is not a member of the school board, and till this week has made no public declaration on the matter. On Tuesday, however, a meeting in connection with the Pupil Teachers' Examination Association was held at Spring Grove School, and a letter was read stating that while Mr Bardsley took great interest in pupil teachers, still, so long as all religious teaching was excluded from the board schools he could take no part in any meeting of which the representatives of the board school formed a part. The letter continued: "When the Ten Commandments are absent I chafed at the inscription on any scheme of education. It pains me to write this. I have never entered a board school in Huddersfield while school has been going on. As far as I know myself, I never will until the present régime is changed." Mr. Bardsley's letter was commented on by Dr. Bruce, a member of the school board, and Ald. Glendinning, a former member, who remarked that he had read in the Old Book something about a man saying, "God, I thank Thee that I am not as other men are." He supposed that the vicar could take that text to himself, preach from it, and apply it to his own experiences of the public establishments of Huddersfield. Most of the officers of the Examination Association are connected with Church schools.—*The Leeds Times (Eng.).*

It is not to be denied that, considered from certain points of view, the music of Offenbach presents a certain number of objectionable features. To the stern philosopher it will always be stamped with irreverence; to the austere moralist the sentiment of "Dites-lui" (for instance) or the "Invocation de Venus" must of necessity appear, to say the least, a trifle easy going. But society is not wholly composed of austere moralists and stern philosophers, and for the greater part of it the Offenbachian magic will endure while it has ears to hear and feet to move and pulses to set dancing. The man was a prodigy of wit and gaiety and fun; an inexhaustible source of melody, new graceful and now riotous, now touched with a certain passion, and now bubbling with laughter. For thirty years he amused all Europe, and at first sight it seems by no means to all Europe's credit that, after a term of eclipse, a number of wiseacres should be found assuring it, with every mark of surprise, that there was something in its idol after all. Of course, the fault is with the wiseacres and not with all Europe, which has never forgotten, and is not yet likely to forget, the potency and glamour of the inspiration to which it succumbed, and lay so long in thrall. All the same, it is a little mortifying that it is possible for Offenbach to even seem to be for-

gotten. He was the musician of such masterpieces as "Les Deux Aveugles," and "Orphée," and "La Belle Hélène," and "La Grand Duchesse," and "La Princesse de Trébizonde;" to him we owe the strains of "Il grandira," and the letter song and "Les femmes, les femmes," of "La Perichole," and the "Chanson de Fortunio," and "Quand j'étais roi de Béotie," and the irresistible duet of the two gendarmes, and a hundred brilliant or bewitching melodies besides. He was, of his kind, the greatest writer of tunes that ever lived; and while the world has any ear for music pure and simple his work will touch whenever it is heard. That his name may cease from being remembered seems possible enough; that his melodies can does not. *The Saturday Review.*

UNITED STATES SECRETARY MANNING, in a recent report, stated that high wages and low cost of production go hand in hand, and the Boston *Herald* finds in this statement a strong argument for free trade. It says, in substance, that wages being higher in the United States than in Europe, Asia, Africa, and South America, the goods manufactured in the United States must of necessity be cheaper than in any other country, and it must control the markets of the world if free trade were universal. The *Herald* declares that in the last thirty years wages in the United States have increased on an average more than 40 per cent., while during the same period there has been a reduction in the cost of production in every line of manufacture. It believes, too, that in some parts of India and China five cents per day would be a tolerably fair rate of wages for an able-bodied man, but thinks it would probably cost more to make a pair of shoes, or a pound of nails, or a yard of cotton cloth in these parts of India and China, than it would in the United States where the workmen are paid from forty to one hundred times more per day. For these reasons the *Herald* claims that it can be demonstrated as conclusively as any possible economical statement that high wages is the almost invariable concomitant of a low cost of production. This may be admitted, but it would be very difficult to prove that cheapness of production is invariably the result of the high wages paid as the *Herald* seems to assume. It is true that it is usually cheaper to employ a skilled artisan at four dollars per day than an unskilled workman at one dollar per day, but the reduction in the cost of production during the last thirty years is due not to the increase in wages, but to the many inventions and improvements in machinery which have been made during the last quarter of the century, making it possible in many cases for one man to do the work formerly done by three or more. The productive powers of the workman have not increased. He does not do more work than formerly, but with the assistance of machinery he is able to produce more. The increase in wages merely shows that workmen now get a much larger share of the profits from the productions of combined capital and labour in proportion to the part they take in the production of articles than formerly. In the sections of India and China referred to by the *Herald* the people are not only without the machinery used in civilized countries, but are altogether unskilled in most of the lines of manufacture mentioned. If the manufacturers of the United States were forced by the adoption of free trade to compete with those European manufacturers who while having all the most improved modern machinery, still pay their workmen comparatively low wages they would probably be obliged either to reduce the wages of American workmen to the European level or shut down their works.—*Montreal Star.*

Notes and Comments.

THE poet Campbell is reported to have said that "a man accustomed to work was equal to any achievement he resolved on, and that for himself, necessity, not inspiration, was the prompter of his muse."

LOCKE is credited with having stated that in his opinion the great skill of the teacher is to get and keep the attention of his scholars; whilst he has that, he is sure to advance as fast as the learner's ability will carry him.

METHODS of imparting moral instruction are often found in educational journals. There is a demand for such methods. Read one of AEsop's fables and let the children guess at the "moral," and a grand lesson will have been taught. Clip from a newspaper the brief story of a drunkard, read it to your school, and you will have taught a lesson on temperance.—*Ili. School Journal.*

WE hear from Mr. Phipps that, in consequence of the notice in these columns, many teachers have obtained copies of his last forestry report. Why not put the knowledge to some practical use? What if a school were to plant and care for a mile of ever-green windbreak along a country road? As the trees grew and flourished they would form a life-long remembrance of the boys who had planted them.

IN answer to some of our contributors we give here the English Literature required at the Entrance Examinations next July:—

- "The Vision of Mirza."
- "The Death of Little Nell."
- "The Bell of Atri."
- "Dora."
- "The Changeling."
- "A Forced Recruit at Solferino."
- "National Morality."
- "The Two Breaths."

THE London school board is true to British traditions; it refuses, by a vote of thirty to fifteen, to abolish flogging in the schools, but it decides that the power shall be restricted to the head masters, who are told, in addition, that the more thoroughly qualified and skilful a teacher is, the less necessary will it be for him to resort to corporal punishment. The idea that flogging breaks the average boy's spirit, or humiliates him in such a degree as to injure him, is a modern American namby-pamby notion. Boys, as a general rule, take a flogging as they take any other punishment brought upon them by their sins, as a sort of purgation, the pain of which they should bear manfully. They take their licking as they would pay a debt, without a sense of shame or disgrace except that which is caused by the offence.—*Hull-fax Critic.*

REFERRING to the list of books recommended by Sir John Lubbock for perusal, a contributor to *The Critic* remarks as fol-

lows:—"Some one, I am told, has taken the trouble to hunt up all the editions of the hundred books mentioned by Sir John Lubbock, and after counting the pages has made a calculation from which he thinks it fair to assume that one might get through the list in twenty years by reading two hours a day. This, to his thinking, proves Sir John an old fogey, who doesn't know what he is talking about. To my thinking it proves just the contrary. The man who reads such a collection of books need read nothing else in book form as long as he lives; if he can read them a second time and a third, so much the better. It is not omnivorous reading that improves the mind, but the careful reading and re-reading of what is best in the literature of all lands and ages."

A SWEET girl graduate, filled with "the knowledge" of literature, science, and art to her finger-tips, speaking upon domestic economy at an "at home" recently, remarked to her hostess, "Bread! Well, I should say I could make bread. We studied that in our first year. You see, the yeast ferments, and the gas thus formed penetrates everywhere, and transforms the plastic material into a clearly obvious atomic structure, and then—" "But what is the plastic material you speak of?" interrupted the hostess. "Oh! that is commonly called the sponge!" "But how do you make the sponge?" "Why, you don't make it; the cook always attends to that. Then we test the sponge with a thermometer and a hydrometer and a number of other scientific instruments, and then hand it back to the cook. I do not know what she does with it then, but when it comes to the table it is most palatable as an article of diet. Oh! yes, I assure you, I really can make bread."

"THE Archbishop of Canterbury has given a new turn," writes a correspondent, "to an old legend. In arguing for the celebration of the Queen's jubilee by means of bricks and mortar he referred to the analogy of the memorial to the great Duke, which took the form of Wellington College. 'The commemoration of which all men knew he would have been most proud was,' said the Archbishop, 'an addition to the great public schools of England, in which, he said, the battle of Waterloo was really won.' What the Duke really said, as all men surely know, is that the battle of Waterloo was won on the playing fields of Eton, and the allusion, as an old Etonian recently proved, was not to cricket and football, but to a corner of the playing fields where the boys settled 'affairs of honour' with their fists. If, therefore, the Archbishop's analogy is to be pressed it would seem to point to a consecration of the prize ring, an object which, to judge from the recent action of the police toward members of the brotherhood, will be somewhat difficult of attainment."—*Pall Mall Gazette.*

EDUCATIONAL reform is strongly advocated by school boards in the west riding (Yorkshire) manufacturing districts, and advantage was taken recently, of the visit of Sir Henry Holland, vice-president of the council, to Bradford, to hold a conference with him on the subject. The deputation who waited upon Sir Henry was very numerous, embracing representatives of a number of school boards in the Bradford district, and also members of the Bradford Trades Council. Resolutions passed at the recent conference of school boards in Bradford were submitted. The first subject discussed was that of the education of half-timers. Mr. S. P. Myers said the education department did not seem to understand or appreciate this question. It was found that the regulations requiring half-timers to take the same subjects as the day scholar had a very injurious effect in more ways than one, it making the half-timer be too much pressed to bring him up to the standard he ought to be. Under the present circumstances it was absolutely hopeless for the teachers to carry on the work well with the half-timers. It could not be expected that a child attending school 11 hours could be as proficient as one attending 22 hours. It was hoped the department would make a distinction between the half and full-timers in the code. Sir Henry said the difficulty had not been experienced elsewhere, but it was urged that this district was exceptional owing to the great amount of factory labour. Sir Henry promised to lay the case before the department, but did not hold out much hope of redress, and he remarked that the board, in his opinion, had been too lenient to the parents in granting half-time certificates. An interesting discussion followed on the question of evening schools. The board seek to make these more attractive, to do away with the "Three Rs," and to enable students of any age to choose any subject they thought suitable and obtain grant upon it. The members of the Trades Council pointed out the value which such facilities would be to the working classes. Sir Henry Holland said he sympathized very much with the feelings of the deputation on this point. But their proposal struck at the root of the elementary system. It was secondary or technical education, and this was a matter for Parliament to deal with. He promised to do what he could to bring the proposal before the Educational Department and the Government. There was also a question on the agenda relating to the disabilities of training colleges being under denominational control, but on Sir Henry reminding the deputation that a Royal Commission was considering the whole subject, it was not pressed. A cordial vote of thanks was passed Sir Henry for his patient hearing, on the motion of Mr. Illingworth, M.P., seconded by Mr. S. P. Myers.—*The Leeds Times.*

Literature and Science.

LIFE AT THE SCOTTISH UNIVERSITIES.

THE word university has a very different meaning in Scotland from that which it bears in England. At Oxford and at Cambridge learning has her favourite seats, chosen for her long ago. She is there richly endowed, she gathers her sons about her in homes of her own, she is the ruling spirit of the towns which she has made famous. In Glasgow and Edinburgh, on the other hand, she stands on one side, overshadowed; her voice can scarcely be heard in the din of commerce, of manufacture, of civic life, which goes on around her. But this is not all. The Scottish universities fulfil an ideal and perform functions totally different from those of their richer and more highly favoured sisters south of the Tweed. In England the idea is, in the first place, to afford to young men of the upper and of the upper-middle classes the best possible education, both intellectual and moral; and, in the second place, to endow learning and research with a secure and congenial home. In Scotland the idea is to afford to all comers of the male sex, rich or poor, young or old, the means of improving themselves intellectually, and of fitting themselves for the learned professions. The very wideness of the scope of this intention, in respect of the persons for whose benefit the Scotch universities are supposed to exist, narrows the sphere of operations in regard to each student. The endowment of research is, at the Scottish universities, almost entirely, the moral training of the students is totally, neglected. This is, indeed, almost a matter of necessity. The endowments are hardly large enough to provide adequate teaching power for the fifteen or sixteen hundred lads and young men who crowd the class-rooms at Edinburgh or Glasgow, and leave nothing to spare for learned leisure; while it would take a whole battalion of proctors to look after the behaviour of so many undergraduates, living, not in halls, but in separate lodgings. It would be impossible to imagine a system of college discipline, of board and lodging, which would suit both the son of the wealthy merchant and the son of the small shopkeeper who can live comfortably on fifteen shillings a week. The theory of English universities is to take lads of nineteen or twenty, and for a reasonable sum, give them a liberal education, and turn them out, in three years' time, well-mannered young men, accustomed to the society of their equals, and (to use a convenient phrase) "free from vice." The theory of the Scotch universities is to give the opportunity of acquiring knowledge, as much or as little as may be desired, during six months out of the twelve, for eight or ten guineas a year.

The obvious danger of the Scottish system is that the universities may degenerate into large, middle-class day schools; and this fate has, to a considerable degree, overtaken them. For many years Scotland has been living upon her old reputation in educational matters—a reputation earned in the days when she was the only one of the three kingdoms in which primary schools were established by law in every parish. Until lately, at least, a larger proportion of her population was able to read and write than was the case in England or Ireland. But this state of things is fast passing away; and in the point of secondary education, the truth is, Scotland has always been (but for her universities) lamentably deficient. In a few of the larger towns, besides Edinburgh and Glasgow, there are high schools, which correspond to the grammar schools of England; but they are only available for the boys who live within walking distance of them. Schools in which the pupils reside, or at which the masters keep boarding-houses for the boys, have been until lately almost unknown in Scotland, and they are still by no means common. One reason of this has been that the boarding-school system of education is necessarily an expensive one, and the Scotch were, until recent times, a poor, and are even now a frugal people. But another reason lay in the Puritanical principles which have taken so deep a hold of the Scottish character. A Scotch parent lays down a tolerably narrow path, and determines that his son shall walk in it up to the age of fifteen or sixteen. If with such a training he shall afterwards wander into the broad way, his blood be upon his own head. Home life, home influences, count for everything to the average Scotchman, so far as the education of morals is concerned. The due performance of religious observances is a matter of prime necessity; and Scotch parents are always unwilling to confide the task of seeing that their boys learn the Shorter Catechism and forbear all amusement on Sundays to any schoolmaster, however zealous. The effect of the dislike of boarding-schools, and the absence of good secondary day schools has been to turn the universities into grammar schools of a rather inefficient type, so far as a considerable portion of the students is concerned.

The one redeeming feature of the system has been the superior character (in very many instances) of the old parish schools. Many of the masters of these schools had passed through the curriculum at Edinburgh or Aberdeen, and were well able to drill boys in Latin, Euclid, and the rudiments of Greek. At almost all parish schools a little Latin, at least, could be learned; and as soon as a boy could struggle through a page of Virgil, and had stowed away a fair number of Euclid's propositions, he was considered ripe for the university. The

universities were, of course, compelled, by the very theory of their existence, to adapt themselves to this state of things. Boys presented themselves in scores for matriculation, who could not pass the simplest examinations; and Glasgow, at least, met the difficulty by providing classes which might be profitably attended by those who had not yet climbed over the *pons asinorum*, or mastered the Greek alphabet. These classes are now attended in large numbers, not by boys only, but by men who, somewhat late in life, have caught the sacred flame, and have determined to begin a university career at the age of thirty. The system is a bad one in every respect. One might almost as well begin to learn Greek without a master, as in a class of one hundred and twenty students for one hour a day. It was an odd sight to see at Glasgow some years ago him who was justly described as

bearing all that weight
Of learning lightly, as a flower,

helping some horny-handed son of the soil to battle with the mysteries of *τυππο*. If the same professor received elegiacs from some of his students in which even his fastidious ear could scarcely detect a blemish, the result could hardly be ascribed by any one to the excellence of the system.

Each of the Scottish universities comprises four "faculties"—arts, medicine, divinity, and law. Edinburgh still maintains her old reputation as one of the best medical schools in the United Kingdom; and the law lectures are believed to be also exceptionally good at Edinburgh. Only those students who are intended for the ministry of the Church of Scotland attend the divinity classes at any of the four universities, the dissenting Presbyterian bodies having divinity halls of their own. Divinity students always attend four years at the "arts" classes, unless they pass a preliminary examination, and so escape the first year. Medical and law students, as a rule, spend only two years at Latin, Greek, and logic, before they proceed to their special studies. It must be understood that "a year" means, at a Scotch university, a "session" of barely six months, from the beginning of November till the end of April. There are, it is true, short "summer sessions;" but these exist only for medical students. This arrangement of the year is necessary on account of the poverty of a large number of the students. And an incidental benefit of considerable importance arises from what seems at first sight a very bad arrangement of the academical year. The work of a Scotch university professor is, while it lasts, exceedingly arduous; and while some of the chairs at Edinburgh and Glasgow are supposed to be worth two or three thousand a year, many of them are but poorly endowed. To

be absolutely master of one's own time for six months of the year is a great boon ; and constitutes an attraction which helps the northern universities to fill their chairs with exceptionally able men.

As might have been expected from the absence of good secondary schools in many parts of Scotland, lads begin their university studies at a very early age. Sixteen is a very common age for matriculation even now ; and this is an improvement upon the state of things which existed some years ago. Assuming that a lad of sixteen goes to a Scotch university with a fair elementary knowledge of Latin, Greek, and mathematics, he will generally finish his "arts" course in four years ; that is, four sessions of six months each, extending over four years. For the first session he will probably "take" junior Latin, junior Greek, and junior mathematics, spending two hours a day in the Latin class-room, and one in each of the other two. If he chooses to be lazy, and declare himself "not prepared," too often in the course of the session, the professor may refuse to sign his "class ticket," and thus compel him to go over the ground again, if he wishes to take a degree. The second year he will take senior Greek, and senior Latin, exchanging, in Greek, Homer and Xenophon for Euripides and Demosthenes ; and, in Latin, Virgil and Cicero for Horace and Tacitus. For one hour each day in each class he is expected to be prepared to translate when called upon ; for the second hour he may have merely to listen to the "prelections" of the professor, who reads for his benefit a play of Aristophanes or one of Juvenal's Satires, as the case may be. His third session he spends upon logic, moral philosophy, and, perhaps, English literature ; his fourth is devoted to natural philosophy ; that is, a taste of statics, dynamics, and science generally, and (if his talents lie in that direction), senior mathematics. But it is well understood that every student is at liberty to arrange his studies as he sees fit, and to present himself for examination for his degree in arts in each of the three departments of classics, mental philosophy, and natural philosophy, if and when he has a mind to do so, and not otherwise. In all these classes prizes are given, as at schools ; the names of the prize-winners being decided (in accordance with long-established custom) by the votes of the students of the class. As a rule, the plan works remarkably well.

Lectures begin every day at eight o'clock, and are generally over by one or two in the afternoon. Of course there are no "chapels," in the English university sense of the term. There is a university chapel at Glasgow ; but it is used only for fashionable sermons on Sunday afternoon ; education at the

Scotch universities (apart from the divinity faculty, which is quite an affair by itself) is purely unsectarian. When lectures are over, the students either go back to an early dinner at their lodgings, or betake themselves to the reading-room of the library, or to football, or the gymnasium. There is no boating, and but little cricket, at any of the northern seats of learning. Most of the students spend their evenings in preparing for the next morning's lectures ; for, as a rule, the Scottish youth goes to college to work, not to play. Evening amusements he has none. In the first place he cannot afford them ; and in the second place, theatres and cards are alike forbidden by the stern law of Scotch Puritanism. His only recreations are football, and a long walk on Saturday afternoon.

This is a fair sketch of the daily round of an average Scotch student, so far as one can take an average of so miscellaneous a body as the students of a northern university. It will be seen that the life is a singularly narrow one, and that it affords very few opportunities of social intercourse. There is, in fact, no student life in Scotland ; there is not a trace (except at St. Andrew's) of the collegiate life which is the great charm of Oxford and of Cambridge. Scotch students are not a body of young men associated together for any object, but a number of isolated youths, each leading his own life in his own way, scattered up and down over a great city, and brought together for two or three hours a day for purposes of instruction. They do not "keep terms," they "attend classes." They form into little groups, each group composed of two or three youths of similar tastes ; and life-friendships are often the result of these early acquaintances ; but the fact that they have nothing in common, except their studies, from the day the session opens to the day it closes, prevents anything like fellowship on a wide scale, or anything resembling university life in the proper sense of the word. There are debating and other societies, as a matter of course ; but they are generally in a languishing condition. Many of the students harbour the idea that in spending time with their fellow-students they are neglecting their work and giving somebody else an advantage in the race. There is, indeed, one period when there is abundance of student life at the Scottish universities, though it lasts for only a week or ten days every third year. It is the proud privilege of the undergraduates to elect the lord rector, who is an important personage, practically as well as theoretically, in university matters. Of late years rectors have been chosen more for the popularity of their political principles than for their literary or scientific eminence ; and the great body of the students range themselves for the time under

the rival flags of the Liberal and Conservative Associations. Very often, however, there is a third body, the Independents, who profess to be superior to political considerations and to recognize only academical or literary distinctions in their choice, and who do useful service by adding to the uncertainty of the final issue, and thereby increasing the excitement. The rival associations hold meetings on alternate evenings in the class-rooms—meetings in which peas generally take the place of arguments, and which are often enlivened by free fights of a harmless character. Nobody is supposed to do any work while the election is going on. The "courts" (as quadrangles are called in the north) are kept alive with electioneering hand-bills, parodies, and squibs of all descriptions—with songs, badinage, and cheering at anything or nothing. At length the eventful day dawns, the election takes place, the last volley of peas is delivered, and next day everybody settles down to work for the ensuing six months.—*National Review*.

(To be continued.)

A HUNGARIAN professor, Otto Christmar, has applied the incandescent electric lamp, fed by accumulators or storage batteries, to surveying in mines, using a large lamp to light the angle to be taken and a small one for lighting the vernier.

THE growth of science, not merely of physical science, but of all science, means the demonstration of order and natural causation among phenomena which had not previously been brought under those conceptions. Nobody who is acquainted with the progress of scientific thinking in every department of human knowledge, in the course of the last two centuries, will be disposed to deny that immense provinces have been added to the realm of science, or to doubt that the next two centuries will be witnesses of a vastly greater annexation. More particularly in the region of the physiology of the nervous system is it justifiable to conclude from the progress that has been made in analysing the relations between material and psychical phenomena that vast further advances will be made, and that sooner or later all the so-called spontaneous operations of the mind will have, not only their relations to one another, but their relations to physical phenomena, connected in natural series of causes and effects, strictly defined. In other words, while at present we know only the nearer moiety of the chain of causes and effects by which the phenomena we call material give rise to those which we call mental, hereafter we shall get to the further end of the series.—*Huxley, in the Fortnightly Review*.

Special Papers.

THE ROMANCE OF ARITHMETIC.

SURELY figures owe us whatever little of romance is to be got out of them. Have they not been associated from our earliest childhood with the taste of tears and slate-pencil? Have they not been the invariable cause of one's income being insufficient to meet one's expenditure? Have they not tyrannised over our tastes and enjoyments? And has not the sole reason of that gap which, at every year's end, prevents some of us, in spite of the most laudable intentions, from making both ends meet, been the obstinate persistence of two and two in their sullen refusal to make any more than four? I am rejoiced to learn that Pythagoras, who said something civil about all the other numbers, had a very poor opinion of figure two. I am delighted to know that he regarded this disreputable figure as the symbol of disorder, of division, of confusion, and inequality; as a hopelessly depraved number of evil augury, as an exceeding bad principle—nay, as the very Old Bad Principle himself. I've no patience with figure two, nor with the way in which it gets held up to public esteem in connection with what is supposed to be the very satisfactory proposition that two and two make four. I cannot regard it in that light. Whatever is good for anything ought to improve and increase; and if this boasted pair of twos had any genuine enterprise at all about them they would have made at least six by this time—in which case I might without difficulty have learned what a balance meant in my banker's book. As it is, they have not merely wasted their opportunities, but done me a personal injury. Besides, it is my opinion that three and one make four in a manner quite as successful, and very much less obtrusive.

The most romantic of all numbers is figure nine, because it can't be multiplied away, or got rid of anyhow. Whatever you do, it is assured to turn up again as was the body of Eugene Aram's victim. One remarkable property of this figure (said to have been first discovered by W. Green, who died in 1794) is, that all through the multiplication table the product of nine comes to nine. Multiply by what you like and it gives the same result. Begin with twice nine, 18; add the digits together, and 1 and 8 make 9. Three times nine are 27; and 2 and 7 make 9. So it goes on, up to eleven times nine, which gives 99. Very good; add the digits; 9 and 9 are 18, and 8 and 1 are 9. Going on to any extent, it is impossible to get rid of figure 9. Take a couple of instances at random. Three hundred and thirty-nine times nine are 3051; add up the figures and they give 9. Five

thousand and seventy-one times nine are 45639: the sum of these digits is 27; and 2 and 7 are 9.

M. de Maivan found out another queer thing about this number—namely, that if you take any row of figures, and reversing their order, make a subtraction sum of it, the total is sure to be 9. For example:

Take 5071

Reverse the figures 1705

$$3366=18, \text{ and } 1+8=9.$$

The same result is obtained if you raise the numbers so changed to their squares or cubes. Starting with 62, begin the sum over again. By reversing the digits we get 26, which, subtracted from 62, leaves 36, or $3+6=9$. The squares of 26 and 62 are, respectively, 676 and 3844. Subtract one from the other and you get $3168=18$, and $1+8=9$. So with the cubes of 26 and 62, which are 17576 and 238328. Subtracted, they leave $220752=18$, and $1+8=9$.

The powerfully *benigne* influence of this figure is exemplified in another way. Write down any number, as, for example, 7549132, subtract therefrom the sum of its digits, and no matter what figures you start with, the digits of the product will always come to 9. $7549132 = \text{sum of digits } 31$

31

$7549101 = \text{sum of digits } 27, \text{ and } 2+7=9.$

A very good puzzle has been based on this principle, as follows: Get another person to write down a horizontal row of figures, as many as he likes, without letting you see what he is about from beginning to end of the whole performance. He is then to reckon up the sum of the digits, and subtract that from his row of figures. When he has done this, bid him cross out any figure he pleases from the product, and tell you how much the figures add up, without the crossed-out figure. From the numbers so given you will be able to tell what figure he has crossed out, by only bearing in mind the fact learned above—namely, that if no figure at all had been crossed out, the result would necessarily be 9 or a multiple of 9. Hence you will see that the crossed-out figure must needs be *the one required to bring the sum given to the next multiple of 9*. Supposing, for instance, he gives his result at 37, you may be sure that he has robbed the product of 8, that being the figure needed to restore the total to the next multiple of 9—namely, 45. His sum would stand as under:

$$405678237 = \text{sum of digits } 42.$$

42

$$405678195 = 37.$$

There is only one case in which you can be at fault, and that is in the event of a multiple of 9 being returned to you as a product. Of course, then, you will know that *either* a 9

or a 0 must have been struck out. Had the 9 been struck out in the above instance, the result would have been 36: had it been the 0, the product would have been 45. Both being multiples of 9, it would be impossible to tell with certainty whether the missing figure were 9 or 0; but a good guess may generally be formed, because, if the figures appear suspiciously low in proportion to the time taken to tot up the sum, you may speculate that your product has most likely sustained the loss of the highest number.

That is a clever Persian story about Mohammed Ali and the camels, and though it will be familiar to many of my readers, they will scarcely be sorry to be reminded of it. A Persian died, leaving seventeen camels to be divided among his three sons in the following proportions: the eldest to have half, the second a third, and the youngest a ninth. Of course, camels can't be divided into fractions, so, in despair, the brothers submitted their difficulty to Mohammed Ali. "Nothing easier," said the wise Ali: "I'll lend you another camel to make eighteen, and now divide them yourselves." The consequence was, each brother got from one-eighth to one-half of a camel more than he was entitled to, and Ali received *his* camel back again; the eldest brother getting nine camels, the second six, and the third two.

Johann August Musæus, one of the most popular German story-writers of the last century, in his story of *Libussa*, makes the Lady of Bohemia put forth the following problem to her three lovers, offering her hand and throne as a prize for a correct solution. "I have here in my basket," said the Lady Libussa, "a gift of plums for each of you, picked from my garden. One of you shall have half and one more, the second shall again have half and one more, and the third shall again have half and three more. This will empty my basket. Now tell me how many plums are in it?"

The first knight made a random guess at three score.

"No," replied the lady. "But if there were as many more, half as many more, and a third as many more as there are now in the basket, with five more added to that, the number would be so much exceed three-score as it now falls short of it."

The second knight, getting awfully bewildered, speculated wildly on forty-five.

"Not so," said this royal ready reckoner. "But if there were a third as many more, half as many more, and a sixth as many as there are now, there would be in my basket as many more than forty-five as there now are under that number."

Prince Wladimir then decided the number of plums to be thirty; and by so doing obtained this valuable housekeeper for his wife. The Lady Libussa thereupon counted

him out fifteen plums and one more, when there remained fourteen. To the second knight, she gave seven and one more, and six remained. To the first knight, she gave half of these and three more: and the basket was empty. The discarded lovers went off with their heads exceedingly giddy, and their mouths full of plums.

Double Position, or the Rule of False, by which problems of this sort are worked, ought to demolish the commonplace about two wrongs not making a right. Two wrongs do make a right, *figure-atively* speaking, at all events. Starting with two wilfully false numbers, you work each out to its natural conclusion. Then, taking the sum of your iniquities as compared with the falsehoods with which you started, you have only to multiply them crosswise to get terms which will bring you straight to the truth. To be more precise, after the cross-multiplication, if the errors are alike—that is, both greater or both less than the number you want—take their difference for a divisor, and the difference of their products for a dividend. If unlike, take their sum for a divisor, and the sum of their products for a dividend. The quotient will be the answer. This is good arithmetic, and for those who can receive it, not bad philosophy. There is an enormous self-righting power about error, and if we could only manage the cross-multiplication properly, we might get some surprising results.

The number 37 has this strange peculiarity: multiplied by 3 or any multiple of 3 up to 27, it gives three figures all alike. Thus, three times 37 will be 111. Twice three times (6 times) 37 will be 222; three times three times (9 times) 37 gives three threes; four times three times (12 times) 37, three fours; and so on.

I will wind up for the present with a rather barefaced story of how a Dublin chambermaid is said to have got twelve commercial travellers into eleven bedrooms, and yet to have given each a separate room. Here we have the eleven bedrooms:—

: | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11

"Now," said she, "if two of you gentlemen will go into No. 1 bedroom, and wait there a few minutes, I'll find a spare room for one of you as soon as I've shown the others to their rooms."

Well, now, having thus bestowed *two* gentlemen in No. 1, she put the third in No. 2, the fourth in No. 3, the fifth in No. 4, the sixth in No. 5, the seventh in No. 6, the eighth in No. 7, the ninth in No. 8, the tenth in No. 9, and the eleventh in No. 10. She then came back to No. 1, where you will remember she had left the twelfth gentleman along with the first, and said, "I've now accommodated all the rest, and have still a room to spare, so, if one of you will please step into No. 11, you will find it empty." Thus the twelfth man got his bedroom. Of course, there is a hole in the saucapan somewhere; but I leave the reader to determine exactly where the fallacy is, with just a warning to think twice before deciding as to *which*, if any, of the travellers was the "odd man out."—*Chambers' Journal*.

Educational Opinion.

PHYSICAL CULTURE IN COLLEGE.

THE mental man has always been inclined to look down upon the physical man. It is only within the last half century that people have become sufficiently civilized to acknowledge the truth of the gospel of physical health, to realize that the body is a temple to be cared for scrupulously by its indwelling spirit.

And physical culture, as a part of the man's preparation for an intellectual life, is a very modern idea, one quite within the memory of teachers scarcely yet gray in the service. Twenty-six years ago a system of gymnastics was first introduced at Amherst as a distinct department in college education. Students and patrons were alike surprised at the plan of compulsory gymnastics, but the pioneers of physical culture in college answered that the highest standards cannot be reached, nor the best results obtained, by any except the possessors of good health. They believe it to be part of their business to train the students' bodies to healthful service of their minds. The fire of enthusiasm lighted at Amherst has kindled a large amount of inspired common sense throughout the collegiate world. In many institutions a thoroughly educated physician usually a member of the faculty, stands at the head of the department of gymnastics. This man should hold a definite relation of counsellor to every student with whom he is brought in contact. He should have a watchful care of all at all times, and should be ready for consultation and advice. In case a student has an organic difficulty of the heart or lungs, or any other physical weakness disabling him from going safely through with required exercises, he should, of course, be excused by the professor. No one can judge better in these matters than the teacher of physiology. The ideal course of physical training is not hard and fatiguing. In an institution made up of large numbers, confined in close quarters, all engaged in hard study, and wishing to make the most of their time, it is found, says Dr. Nathan Allen, that light gymnastic exercises, accompanied with music and practiced systematically every day for half an hour or thereabouts, work best. Special physical exercises are given to conquer special weaknesses, and are adapted to the individual need of the student in his pursuit of symmetrical culture. Regular gymnastic exercises hold the relation of auxiliaries or helpers to out-door sports. They are intended to exercise all the muscles in the body, and to improve the general health, while out-door sports, in general, call particular sets of muscles into action. Each sort of exercise

has its own benefits. There is, of course, less competition in gymnastics, less of the moral dangers of excessive competition which are sometimes seen in out-door sports. Instruction in hygiene goes, of course, hand in hand with all physical training. In the fifty institutions where systematic work in this department is carried on, there has been a marked increase in the state of vitality of the graduating men. The health of the best students improves nowadays, instead of decreasing, during the college years. The laying of a foundation of regular habits, and the gaining a reasonable degree of hygienic system, will prove of vast benefit through life to any student. The basis of professional success, as Dr. Eliot says, rests chiefly upon vigour of body. The men who have that, or who gain it, are usually those who win distinction.—*New England Journal of Education*.

MISS JEAN INGELOW, plunged into affliction by the death of her brother, writes to a friend, "she hopes her many correspondents in all of the States will not feel hurt by her apparent neglect in answering letters received from them."

The Schoolmaster, an English journal of great circulation and influence, has had exhaustive criticisms of the educational features of the Indian and Colonial Exhibition. It has the following notice of the new Ontario Readers:—These Ontario Readers are authorized by the Canadian Minister of Education, for use in the public schools, and are fine specimens of what a set of reading books should combine. They begin with the elements in Part I. of the First Reader, and gradually go on through the simplest primary exercises, until, at No. 4 we have selections from authors who stand in the front rank of English literature. High class pictorial illustrations are a considerable feature in both parts of the First Reader, and materially assist the teacher and scholar in surmounting the difficulties in the early stages. The Second Reader is adapted for a second standard, the Third Reader for the next two standards, and the Fourth Book would suit the upper classes in any school. It is a veritable storehouse of gems of modern English, and is as interesting to the adult junior students in the mother country as we hope it proves to the adult and scholar in the great Canadian Dominion over the wide Atlantic. The prefaces and explanatory pages to each book are excellent accompaniments to the set. Such books are an honour to any country. If children are to be taught reading in a logical manner, and to have their intelligence developed on rational lines, and withal to receive encouragement in their daily tasks, books like the Ontario Readers must be successful in producing such results, or they never can be done at all.

TORONTO:

THURSDAY, JANUARY 27, 1887.

OUR SCHOOL TRUSTEES.

IN a recent brief reference to the matter of the character of our school boards throughout the Province, we expressed our conviction that their members are not, as a rule, such men as, in the interests of the public, it is desirable to have in office. We contented ourselves, then, with a protest against such a state of things, and a statement of our opinion as to the qualifications that should be requisite to election as school trustees, by the voice of the people, in men who for a year or more are to direct and control the management of the educational affairs of a municipality. If we are justified in our conviction that in this matter a real grievance of a serious nature exists, it cannot be superfluous to add to the consideration of the subject in any of its aspects. Indeed, no discussion of the subject can be superfluous, until the grievance is remedied.

One has only to examine the *personnel* of the Public School Board of the City of Toronto—a city which boasts of its educational institutions and of its reputation as an intellectual centre—to see that it is not such a board as a person knowing anything about educational government and requirements would expect to find, if only those qualifications were looked for in its members which ought to be considered in the appointment of those whose duty it is to watch over, and make provision for, the education of the minds of the thousands of youths in attendance at our public schools. There are some good men among them—men who can be relied upon to act with discretion and wisdom in the management of the schools. But the fact cannot be disputed that the majority of our trustees in Toronto are elected for reasons far removed from any acknowledgment of personal fitness. The political shadow falls even over the surface of our school affairs. There is no inconsistency in our admission, which we freely make, that the school board in this city is improved in character. This is in spite of, not owing to, the method of choice. Men have been in our school boards here, even of late years, who could not speak half a dozen consecutive grammatical sentences in what they would be pleased to call their own language. We have said that there are good and useful

men on the board; the fact that they stand prominent proves that the average is not high. And the good men, free from political prejudices and free from party ties, are too often in the minority. They were in the minority during the disgraceful proceedings connected with the late Inspector Hughes fiasco.

We have referred thus fully to the City of Toronto only to emphasize the fact that throughout the rest of the Province matters are in this respect infinitely worse. In our towns and villages, almost all public offices go by political preferment, or by other means of choice scarcely more elevated in purity of character. Often have we seen town and village trustees whose long retention of office has not been able to develop their minds beyond the normal condition in which they could scarcely write their own names, and scarcely read a newspaper with intelligence. Here, too, of course, good men can be found upon the school boards, but in a decided minority. Neither the election nor the office is looked upon as of sufficient importance to bring out the best men, the men whose voices ought to be heard in the settlement of educational questions.

In the country it is even worse. Here it is a surprising exception to find, at a meeting of a section school board, a man who knows, or could be expected to know, anything more than the mere rudiments of that education with which the public schools have to do, or anything whatever about the qualifications necessary in those to whom the imparting of that education is intrusted. The ordinary country school trustee knows as little about the value of a teacher's services as he does about Grimm's Law or the Theory of Probabilities. And it is even more important that good trustees should be selected in the country than in the town. In the latter there is always a certain public opinion of a more or less corrective and directive value, which, in the former, owing to the scattered nature of the population, can scarcely be said to exist at all.

The fault, of course, lies mainly with the people themselves, in whom is the power of appointment. Until the tone of public opinion in this matter becomes more healthy, and parents recognize how important it is that they should place in office men into whose hands can safely be placed the control of the schools and of all connected with them, we cannot expect that the management of our school matters will

be much improved. But the fault lies, to a great extent, also, with those who allow themselves to be placed in office without any fitness therefor, or any interest in the duties involved, and with those who use their political influence, or other influence of a selfish character, to appoint those whom, apart from the interests in which that influence is bound up, they know to have few or no recommending qualifications. In the very name given to the officers who manage our school affairs, there is a "trust" involved. And it is a trust of prime importance, the execution of which affects the character of the development of many minds, at a time when the value and direction of that development are mainly determined, and to the wise and faithful execution of which are necessary not only honesty, good faith, interest and enthusiasm in the duties involved, but also that acquaintance with the requirements of an education befitting the time in which we live, which can come to no man by intuition (as seems often to be assumed possible), but only by experience, and experience in the right direction. And until both trustees, and those who elect them, recognize that in the office of trustee there is such a trust involved, we can hardly hope that the duties of that trust will be faithfully performed.

OUR EXCHANGES.

The Pansy, for January, which has just reached us, is unusually bright and well illustrated. Amongst its contents are a continuation of the new serials, "Monteagle," by the editor; of "A Sevenfold Trouble," by Faye Huntington; of "The Little Red Shop," by Margaret Sidney, besides correspondence, poetry, etc. Boston: D. Lathrop & Co.

Common School Education, edited by Mr. William A. Mowry, is a new educational journal, to be issued monthly, and we accord to it a warm welcome. Its purpose, as stated by the editor, is to furnish teachers of primary, grammar, and ungraded schools with the best aids possible for a better and more satisfactory performance of their duties. The initial number, both in respect to contents, and its dress and general make-up, is most attractive, alike a credit to the editor and the publisher. Boston: 50 Bramfield street; W. A. Mowry. 16. 31 Paternoster Row; Thomas Laurie. Price \$1.00 a year.

Littell's Living Age for the weeks ending January 8th and 15th contains "Domesday Survivals," *Contemporary Review*; "Nancy Dedman," *Macmillan*; "Fred. Archer," *Time*; "The Boss of Barangaroo," *Temple Bar*; "Life at the Scottish Universities," *National Review*; "Loyalty of the Indian Mohammedans," *Nineteenth Century*; "Madame Geoffrin," *Temple Bar*; "Dante—

Dean Plumptre's Translation," *Contemporary*; "Marie Antoinette at Trianon," *Gentleman's Magazine*; "Just Before Winter," *Chambers' Journal*; "The Rumours of Coal," *Spectator*; "The Fall;" of Calico-Printing," *Nature*; "Sea Phrases," *Contemporary*; "Unstable as Water," *Temple Bar*; "History in French, Part II.," *Fortnightly Review*; "Extracts from the Diary of a Young Lady," *Argosy*; "Canon Kingsley as a Naturalist and Country Clergyman," *National Review*; "Life in the Alleghany Mountains," *Macmillan*; "The Modern English Post Office," *Flux*; "The Late Master of Trinity," *Temple Bar*; "Napoleon in Tor Bay," *Chambers' Journal*; "Domesday," *St. James's Gazette*, together with choice poetry and miscellany. Boston: Little & Co.

REVIEWS AND NOTICES OF BOOKS.

The Education of Man. By Friedrich Fröbel. Translated by Josephine Jarvis. New York: A. Lovell & Co. 1886.

Of this work of course no critique is necessary. It will be sufficient to point out that it is extremely cheap—only 65 cents, by mail. It should be in the hands of every teacher.

Principles of Elementary Algebra. By H. W. Kogwin, Professor of Mathematics, Glenwood Collegiate Institute, N.J. Boston, New York, and Chicago: Ginn & Co.

As a guide for thorough oral instruction this little book is unique. The author may correctly remark that pupils will take up the study of Algebra with much more interest and advantage to themselves when they are led to discover and to interpret their own formulas and make rules that will fit their requirements. As a brief and useful text book, this little work is to be commended.

Beginners' Book in French. By Sophie Doriot. Boston, New York, and Chicago: Ginn & Co.

Children, for whom this book is designed, care nothing for the intrinsic meaning or value of words. In order to obtain satisfactory results in teaching them a foreign language, it is necessary to amuse them, awaken their enthusiasm, or appeal to their sympathy. In object-teaching it requires teachers of exceptional ability or of special energy to experience and communicate a never-failing enthusiasm about the chair they are sitting on, or the table placed before them. On the other hand, the author has found that by giving children and other beginners subjects which they like, or which are calculated to excite their curiosity, they will, in order to conquer the point which is luring them, master words and expressions in a time and manner that cannot be secured by the best-arranged methods.

It is on this principle that the present book has been prepared. It is intended as a relief to teachers, and a source of pleasure as well as instruction to young pupils. The pictures have been made as humorous as possible. They are exact illustrations of the texts following them, having been drawn expressly to accompany it.

Part II. contains a considerable amount of good reading material, interesting and at the same time easy.

The Elementary Geography. By James Monteith. Adapted for use in Canadian schools by R. Dawson, B.A., T.C.D. Toronto: Canada Publishing Co. (limited). 1886. 96 pp.

It would be difficult, we think, to praise this book too much. The binding, paper, and type are all excellent. The illustrations it would be hard to surpass. From an artistic point of view they rival *Harper's Magazine* and the *Century*, indeed we remember nothing in either of these periodicals that could be pronounced superior to them in any particular. These illustrations also are numerous, varied, and instructive. From them alone the pupil with a little help from his teacher is able to gain a large mass of information. Hills, valleys, mountains, volcanoes, rivers, rapids, canals, lakes, seas, straits, capes, peninsulas, promontories, boundaries, coasts, even streets are graphically represented by engravings which may truly be called pictures. The maps also deserve high praise. The work abounds in every variety of these. They are distinct—the first requisite of a map, well coloured, and contain a great deal of information. They show standard time, height of land, depth of water, comparative latitude, etc., etc., in addition to all the usual objects portrayed in maps, such as canals, roads, railroads, etc.

The method of teaching adopted is thus set forth in the preface:—

"The method adopted in this little book leads the young learner to look at things around him in such a way as to learn something about them and from them; thus developing his reasoning powers, by his individual effort.

"The author has acted upon the principle that the best way to help a child is to show him how to help himself.

"The pupils are encouraged to observe, examine, discover, inquire, and read. They ride, walk, and talk with their teachers or parents, who show them natural objects on the road, in the fields and woods, and at the sea-side.

"The easy, conversational and varied style of presentation will, it is hoped, make this study pleasant and effective.

"Beginning at the school-grounds, the children go over their county, province, country, continent, and the world."

All teachers of elementary geography should make themselves possessors of this admirable textbook.

CURRIE'S "Early and Infant Education," published some years since in England, will be issued in the early part of 1887 by E. L. Kellogg & Co., of New York.

THE "Catalogue of Reference Books in the Cobourg Collegiate Institute" merits a world of high commendation. It is an exemplar to collegiate institutes the Province over.

A JOURNAL devoted to matters pertaining to fish and the fisheries—from a scientific and not a political point of view—is being established by the National Fish Culture Association of Great Britain.

CHATTO & WINDUS, London, have nearly ready a small volume, entitled "Ireland Since the Union; Sketches of Irish History from 1800 to

1886," on which Justin H. McCarthy has been for some time engaged.

OWING to the failure of a lithographer to produce one of the very elaborate plates of the *Journal of Morphology* which he had undertaken, the first number cannot be issued until March. Most of the plates were sent in the first instance to Germany and placed in most competent hands. The *Journal* is warmly endorsed by the leading men in its department, and will be issued through agencies in England and Germany as well as in America. Subscription price, \$6.00 per year. Ginn & Co., publishers.

AN important and interesting book on the practical side of industrial education by Mr. S. G. Love, of Jamaica, N. Y., is announced for next February by E. L. Kellogg & Co., the educational publishers of New York. It will be fully illustrated, and contain practical directions for graded industrial work, from the lowest primary to the high school. Also description and use of tools, and minutia of every sort. Mr. Love has long been known as probably a most careful student of industrial education, and his book will undoubtedly be of the highest interest and value.

THE minutes of the last Ontario Teachers' Association is an important publication. Its contents include:—Officers, Minutes of General Association, Minutes of Public School Section, Minutes of High School Section, Minutes of Public School Inspectors' Section, Treasurer's Statement; the President's Address, Samuel McAllister; "Education in its Relation to Human Progress," Rev. E. H. Dewart, D.D.; "Prizes and Scholarships," D. C. McHenry, M.A.; "A College of Preceptors for Ontario," G. O. Dickson, M.A.; "Science Teaching," Geo. Baptye, M.A.; "Conservatism and Reform in Educational Methods," I. E. Wetherell, M.A.; "Our Profession," O. J. Jolliffe, M.A.; "Modified Forms of Kindergarten Work Suitable for Public Schools," J. Suddaby; List of Members.

BOOKS RECEIVED.

Catalogue of Books in the Reference Library of the Collegiate Institute, Cobourg. Established in 1886. Cobourg: The World Printing Co.

Handbook for School Trustees; A Manual of School Law for School Officers, Teachers and Parents in the State of New York. Syracuse, N.Y.: C. W. Bartlett, publisher. 1886.

Principles of Elementary Algebra. By H. W. Kogwin, Professor of Mathematics, Glenwood Collegiate Institute, Mantawan, N.J. Boston, New York, and Chicago: Ginn & Co. Price, by mail, 22 cents.

Tanglewood Tales, for Girls and Boys, being a Second Wonder-Book. By Nathaniel Hawthorne. Part II. Cice's Palace; The Pomegranate Seeds; The Golden Fleece. (The River-side Literature Series). Boston: Houghton, Mifflin & Co.

Minutes of the Twenty-Sixth Annual Convention of the Ontario Teachers' Association, held in the Public Hall of the Education Department, Toronto, August 10th, 11th and 12th, 1886. Toronto: Hill & Weir, Printers, Temperance street. 1886. 118 pp.

Methods and Illustrations

EXERCISES IN ENGLISH.

I. PARAPHRASE, using your own words as much as possible :—

1. When spring, to woods and wastes around,
Brought bloom and joy again,
The murdered traveller's bones were found
Far down a narrow glen.
The fragrant birch, above him, hung
Her tassels in the sky ;
And many a vernal blossom sprung,
And nodded careless by.
2. An Indian girl was sitting where
Her lover slain in battle slept ;
Her maiden veil, her own black hair,
Came down o'er eyes that wept ;
And wildly, in her woodland tongue,
This sad and simple lay she sung :
" I've pulled away the shrubs that grew
Too close above thy sleeping head,
And broke the forest boughs that threw
Their shadows o'er thy bed,
That, shining from the sweet south-west,
The sunbeams might rejoice thy rest.
With wampan belis I crossed thy breast,
And wrapped thee in the bison's hide,
And laid the food that pleased thee best,
In plenty, by thy side,
And decked thee bravely, as became
A warrior of illustrious name."
3. Gone are the glorious Greeks of old,
Glorious in mien and mind ;
Their bones are mingled with the mould,
Their dust is on the wind ;
The forms they hewed from living stone
Survive the waste of years. alone,
And scattered with their ashes, show
What greatness perished long ago.
4. These prairies glow with flowers,
These groves are tall and fair ;
The sweet lay of the mocking-bird
Rings in the morning air ;
And yet I pine to see
My native hill once more,
And hear the sparrow's friendly chirp
Beside our cottage door.
The red-bird warbled as he wrought
His hanging nest o'erhead,
And fearless near the fatal spot,
Her young the partridge led.

II. Break into a series of short sentences :

1. He was chastised by his tutor for giving a dance in his rooms, and took the box on the ear so much to heart that he packed up his all, pawned his books and little property, and disappeared from college and family.
2. Leaving the coast the shifting sand extends but a few days' journey at most, and we arrive at a somewhat elevated plain, which appears very extensive.
3. Much annoyed at the unexpected change in the programme, Montgomery,

with the natural intrepidity of his character, resolved to make the best of it.

4. When Sebert arrived, in the evening, he brought only about eighty or ninety men, exhausted by a march of between thirty and forty miles through deep mud, and dispirited by the news of the reverse in Lower Canada.

5. In the face of a heavy fire of grape shot and canister, with broadside following broadside of musketry in rapid succession, they stood their ground firmly, and killed and wounded a large number of the enemy, but were at length compelled to retreat.

6. Mackenzie reined in his horse, and with a double-barrelled pistol in his hand, briefly informed them of the insurrection, and adding that, as it was necessary to prevent intelligence of it reaching the Government, they must surrender themselves prisoners, and in that character go to Montgomery's hotel, where they would be well treated.

7. Three or four questions were asked as to his knowledge of any conspiracy to overthrow the Government by violence : and these briefly answered, the matter ended.

A. M. B.

OLD AND NEW METHODS OF SPELLING CONTRASTED.

A RECENT writer, commenting upon the proneness to bad spelling on the part of young women who apply for situations in Boston, for various kinds of services, says :— "The proportion of good spellers, even among the graduates of our grammar schools, is about one-fourth ; the remaining three-fourths have all the way from one to six misspelled words in their short letters of application and these are usually simple words in common use." This the writer attributes to a "lack of teaching" in the schools.

To our mind teachers should be exonerated from all blame and the spelling-book writers made to bear it. It is not because of a lack of teaching that our schools turn out so large a porportion of bad spellers, boys as well as girls, but it is owing to the mistaken method of imparting instruction in this very necessary educational branch in our common schools. The modern spelling book is in fault. Instead of classifying words in columns according to their orthography, as in past days, there is a decided change in the wrong direction in these books. "Spelling is a gift," say some. Well, if so, may not our natural gifts be enhanced by judicious training? Spelling is, it will be said, "a matter of memory alone." If simply a trick of memory, a routine, why not give memory an opportunity to carry out her perfect work, by arranging in their proper column words of similar orthography, leaving to

other books their classification—the dictionary for instance?

Examining a modern spelling-book, the ear is pained by the lack of rhythm displayed upon its pages. For instance, upon one page of this book the word "fish" is found ; then follow various words relating to fishing and fish culture ; no rhythm whatever to please the ear, or uniformity to attract the eye. "Fish, fishes, fin, head, tail, scales, line, hook, breeding, water, eggs, etc., etc." "The child masters "fish," and perhaps "fin." By the time "fin" is learned the poor "fish" has sunk beneath the waves of forgetfulness, and heads and tails are about all that are retained in the mind of the child by this mode of misplacing words, known as spelling-lessons.

Now look at the old method, where the words arranged in columns had, perhaps, no affinity, save in the matter of euphonious classification. "fish," "dish," "wish," "take," "make," "cake," "rake," etc., etc. Now this method pleased the child's love of rhythm ; it pleased the ear and the eye as well and so was better adapted to his powers of memory than is the present conglomeration of words, a tangle of monosyllable and polysyllable, in which the overtaxed brain of the poor little speller becomes inextricably involved, so that his early experience remains a sorrow and vexation his whole life long.

Look back, father and mother, twenty, thirty or forty years as you are able, and you will find poor spellers decidedly in the minority. Children almost taught themselves to spell in those days ; they just ran rapidly down column after column without a thought of signification or classification, "sanctification," "ratification" and "amplification," etc. What did they care for the meaning of these words, which used to rattle along so easily? They were simply spelling lessons, so many words to spell and nothing more, and the children spelled them then and as men and women they can spell to-day. Those old columns stand in the memory yet, with the stateliness and uniformity of well trained soldiers. After these words we committed to memory—which is usually true to its trust when well treated—there came, of course, their derivation and their signification, but spelling was spelling in those days, not dictionary and reading and spelling-book knowledge combined.

Perhaps it would not be a bad move for parents to search their garrets, where their old spelling-books have been too long relegated, and place these old books in the hands of their children, who are learning to become bad spellers every day by the mistaken method, or rather lack of method, which obtains in most of our schools.—*Boston Globe.*

EASY PROBLEMS IN DYNAMICS.

1. A BODY starting from rest, moved for 20 minutes, and had acquired a velocity of 20 miles an hour. At what rate was the body accelerated in feet per second?

2. If the motion of a body is accelerated for 10 minutes at the rate of 32 feet per second, what velocity does it acquire?

3. The acceleration of a body moving from rest is $\frac{3}{4}$ ft. per sec.; how long must it be moving to acquire a velocity of 60 miles an hour?

5. Two bodies are moving at the rates of 6 ft. in two-thirds of a second, and a quarter of a mile a minute. Compare their velocities.

5. A point P describes the circumference of a circle, a ft. radius in b minutes, while another point Q describes the circumference of circle of b ft. radius in a minutes; compare their velocities.

“WHAT is the best way for a teacher to correct an unwise regulation made thoughtlessly?” asks a correspondent of the *American Teacher*, to which that periodical answers:—Acknowledge frankly your mistake, and withdraw the rule. Such a course will, in nine cases out of ten, inspire your pupils with confidence in your intention to do right. The question suggests a word of counsel to inexperienced teachers. Never make a rule or regulation until you are sure you are right. By careful, previous thought, determine on the best course, and then you will have confidence in your judgment; without this confidence your authority will be at best weak. If you have any secret misgivings as to the wisdom of an order, withhold it until you are convinced it is discreet and right. J. G. Fitch, an eminent authority, says: “We must not evade the consequences of our own errors, even when we did not foresee or even desire all of them. The law once laid down should be regarded as a sacred thing, binding the law-giver as much as the subject. Every breach of it on the scholar's part and all wavering or evasion in the enforcement of it on your own puts a premium on future disobedience, and goes far to weaken in the whole of your pupils a sense of the sacredness of law.” Hence our caution. One of the most common faults of young teachers is to make too many formal for some pupils are largely kept in proper discipline by not knowing what may be the action of the teacher, in case they are disobedient.

INTELLECTUAL progress is of necessity from the concrete to the abstract. Regarding of this, highly abstract subjects, such as grammar, which should come quite late, are begun quite early.—*Spencer*.

Educational Intelligence.

THE NEW GEORGETOWN HIGH SCHOOL.

MONDAY, the 11th January, was a red letter day in the history of Georgetown. The occasion being the opening of the High School. Already there is a bona fide enrolment of over seventy pupils, the largest first attendance, according to the Minister of Education, of any high school he has yet opened. The staff consists of M. S. Clark, B.A., late modern language master of Strathroy Collegiate Institute; and Edwin Longman, who holds a first A. certificate. A large number assembled in the town hall in the evening, when the High School was formally opened. Rev. W. G. Wallace, Chairman of the High School Board, presided, and on the platform were many of the prominent men of the community. Mr. M. S. Clark, on his introduction to the audience, was warmly welcomed. Mr. J. S. Deacon, Inspector of Public Schools for Halton, was also favourably received. Hon. G. W. Ross, Minister of Education whose introduction was the signal for rounds of applause, spoke for an hour and a half. He dwelt at length on the democratic and free character of our school system, and showed its perfect symmetry, the high schools being in a direct line between the public schools and the universities. After speaking in very high terms of Mr. Clark, whom he had known personally in Strathroy, and after again congratulating the people of Georgetown on so auspicious an opening of their High School, he closed by reminding all that the ultimate object of the school system was not to make boys and girls scholars, but through education to prepare them for the varied duties of citizenship. A hearty vote of thanks was tendered to the Minister, after which the meeting dispersed.

TORONTO SCHOOL BOARD.

At the last meeting of the Toronto School Board for 1886, the school management committee recommended that the resignation of Miss C. M. Holterman, teacher in Louisa Street School, be accepted; that three class rooms in the new school on Brock avenue be opened for the reception of pupils on the 10th inst.; that Mr. Alexander Muir, head master Mabel Street School, be transferred to the head mastership of the new school on Brock avenue; that Miss A. I. Cameron, head mistress in Howard Street School, be transferred to the position of head mistress of Mabel Street School; that Miss B. M. White remain assistant teacher in Mabel Street School, and that Mrs. M. E. Hay be transferred from Mabel Street School to Brock Avenue School; that Miss L. Brown be placed, temporarily, in charge as head mistress of Howard Street School; that Miss L. Young be transferred from Victoria to Louisa Street School, in place of Miss Holterman, resigned; that Miss C. Latham be transferred from Morse Street School to Brock Avenue School; that Miss F. Bright be appointed teacher in Morse Street School, in the place of Miss Latham transferred; that Miss M. Cowan be appointed teacher in Victoria Street School, in the place of Miss Young, transferred; that Miss A. M. Killoch, teacher in Ryerson School, be allowed the surplus

of her salary, after deducting the amount paid her substitute during her recent leave of absence as a special case; that Miss A. E. Cullen, teacher in Church Street School, be granted leave of absence for the months of January and February on account of illness, said leave of absence to be subject to the usual conditions. The report was adopted.

CHATHAM COLLEGIATE INSTITUTE.

ON Friday, the 7th inst., a number of representative men from all parts of Kent assembled by invitation of the Chatham High School Board to meet the Minister of Education, and to assist at the opening of the new high school in that town, as already briefly noticed in our issue of 13th January, since which time the following more definite particulars have reached us. The building bears inspection well; it is handsome and convenient; the sanitary and heating arrangements are good; the system is that of a Toledo company; it is controllable and effective. Judge Bell, as chairman of the board, has not spared himself in exertion to have a first-class building. Its cost was \$21,000. Part of the programme of the day consisted of a public dinner at the Garner House. Dr. Samson occupied the chair, and Dr. Mitchell the vice-chair. Hon. Mr. Ross and Mrs. Ross sat near the chairman, besides whom were Mr. R. Ferguson, M.P.P., members of the Collegiate Institute Board, of Ridgeway, of the town and county press, and leading citizens of Chatham. The several toasts were duly honoured. In the evening the Hon. Mr. Ross spoke in the assembly room of the new building. Judge Bell occupied the chair.

MISS TYE, of Goderich, has been engaged to teach at Guelph.

MISS MURDOCH, teacher of S.S. No. 12, North Verulam, has resigned.

MR. J. V. McDONALD has been appointed to teach in S.S. No. 4, Ekfrid.

MISS DYERS has been engaged as teacher in Alton School, County Dufferin.

MR. H. R. O'Malley will teach the Morside School, Wardsville, for the year 1887.

MISS H. ROBINSON, it is stated, has been appointed teacher of S.S. No. 2, Albion.

MISS BERTHA COLLINS will teach in Linwood School, Walkerton, for the next six months.

MISS ALMA SHAIN has been engaged to teach in S.S. No. 24, North Yarmouth, for the year 1887.

MISS A. KINSEY, of Walkerton, has secured a position as teacher in the Renfrew Model School.

MISS L. EDMONDS, of Wolford School, Easton's Corners, has been presented with an album by her pupils.

MR. SANDERSON, teacher of Tamworth School left at Christmas to attend the Ottawa Normal School.

MR. GEO. DEROCHE, of Newburg, has succeeded Miss Hicks as teacher of Switzerville School.

MR. S. H. MURPHY has received the appointment of Modern Language Master at Pembroke High School.

MR. E. B. HOWARD, teacher of Westover School, County Wentworth, has been engaged for another term.

MISS ROSE, of Napanee, takes Mr. Graham's place as teacher of Waterdown School, Glencoe, for this year.

MR. J. NICHOLS, late of Bexley School, has been appointed teacher at Norland with an increased salary.

MR. ALBERT ADAM, of Petite Cote, will replace Clement Renaud as teacher at the Marais, with a salary of \$450 a year.

MR. G. D. WILSON, B.A., of St. Marys, has received the appointment of Classical Master at Uxbridge High School.

MISS PARKS, teacher S.S. No. 7, Smithville, has been presented with a cake basket and a napkin ring by her scholars.

MISS MARION SAMSON, teacher of S.S. No. 1, Harwich, has been presented with an address and a gold ring by her scholars.

MR. L. J. CORNWELL and Mr. A. E. Morrow are both engaged as teachers at the Farmersville High School, Beamsville.

MR. CHARLES B. OLIVER, teacher of S.S. No. 7, Cottam, has left, and before his departure was presented with a gold ring.

MR. F. W. IRELAND, teacher of S.S. No. 7, Brock, has been presented with a handsome book and an address by his pupils.

MR. N. WILLIAMS has accepted the position of Mathematical Master in Pembroke High School at a salary of \$500 per annum.

MR. MCHUGH, teacher Clairville School, Co. Peel, was presented with an address and a beautiful writing desk by his pupils.

MR. HUSBAND, teacher Oakville Public School, has been presented with an address, together with a handsome clock, by his pupils.

MR. J. A. YOUNG, who has taught for the past four years at Ethel Public School, is re-engaged for 1887 at the same salary (\$500).

MISS HOKKINS, teacher of S.S. No. 8, Rawdon, has been presented by her scholars with a beautiful gift, accompanied by an address.

MR. MCPHERSON, teacher of Sheffield School, Wentworth County, was presented by his scholars with several gifts on Christmas Eve.

MR. A. NUGENT's engagement made with the Pembroke School Board to act as principal of the High School, has been cancelled.

MISS FOOTE, teacher of Norland School, has been presented, by her pupils, with an address, together with an album and other gifts.

MR. MCPHEARN, late teacher of the Gravel Road School, Corbetton, we are informed, is engaged at Coleridge School for this year.

MR. JOHN McC. KELLOCK, teacher West Prescott, has relinquished his position, and is going to take charge of Bishop's Mills School.

MR. J. D. MCKAY has relinquished his position as Principal of the Markham Public Schools, to take charge of the schools at Bloomingdale.

R. A. SEABORNE has resigned his position as teacher at Kintail, and will attend the High School, Goderich, during the coming term.

MR. MCALPINE, of Sarnia, has been appointed to take the place vacated by Mr. Robinson, on the teaching staff of the Central School at Chatham.

MR. WM. N. BIGGAR, teacher of Jordan Mountain School, District No. 7, Studholm, K.C. (New Brunswick), has been re-engaged for a sixth term.

MR. A. E. JEWETT, who has, during the past year, been teaching in Vankleek High School, goes to Campbellford High School for the year 1887.

MR. JOHN MCINTOSH has been re-engaged as teacher in S.S. No. 1, Grey township, for 1887. This is his fifth year in the same school. Salary \$500.

MR. G. W. IRONS, of Grand Manon (New Brunswick), has been appointed to the vacancy in Moncton Schools, caused by the death of J. G. McCurdy.

MR. ROBERT SEABORNE, teacher Kintail School, was presented with a gold ring by his friends in connection with the school, before he took his departure.

MISS BELLA HOTSON, teacher of S.S. No. 7, Ekfrid, has been presented by her scholars with an address, accompanied by handsome gifts, three articles in all.

MISS LILLIE A. SCOTT, of Poplar Grove, Newport, has been engaged as teacher in the intermediate department, Wolfville Public School, (Nova Scotia).

MR. A. MCKAY, who has taught at Cranbrook for the past seven years, has given up teaching, and is going into business. He is succeeded by Victor E. Smith.

MR. J. H. FELL, formerly of Milton School and during the past year teaching in Nelson, has been engaged by the trustees of Burlington Public School as first teacher.

MR. J. C. STEWART, principal of Pembroke Public School, has been presented with a parlour clock and an address by the pupils of the senior department of the school.

THE scholars of the Prince Albert Public School presented their teacher, Mr. John Langdon, with a beautiful dressing-case and a large Christmas card, as a token of esteem.

MR. T. C. SOMERVILLE, teacher of the Smithville High School, has been presented, by his pupils, with an address and a set of Chambers' Encyclopaedia, in twelve volumes.

MR. FRANCIS WHITE, of Oakwood, Victoria County, has taken charge of the school in Section No. 4, Malden. Mr. Yorrell, his predecessor, has gone to teach at Penetanguishene.

MR. S. E. COUCH, teacher of S.S. No. 5, Fullarton, being about to relinquish his position, was presented with an address, together with a handsome Bible and an album, by his pupils.

MISS WIDDFIELD, teacher Penetanguishene School, has been presented with a mirror and whisk-holder by her late pupils on her retirement. She has accepted another position at Campbellford.

MR. C. W. FELL, teacher Maynard School, Prescott, has resigned, and is going to Buffalo. Miss Mary Fraser has also left; her position will

be filled by Miss Lane, and Mr. Fell's by Miss Pyke.

MR. S. W. STINSON, teacher of S.S. No. 7, Verulam, who is about to leave, has been presented with a clock, accompanied by an address. Miss Weldon has lately been appointed to this school.

MR. STEELE, principal of the Barrie Model School, being about to sever his connection with that institution, has been presented by the students with an easy chair, accompanied by an appropriate address.

MR. ARTHUR ECKARDT, teacher of S.S. No. 11, Markham, was presented by his pupils with an address, accompanied by an inkstand with calendar, and a paper knife, on the occasion of his departure.

MISS KYLE, teacher of S.S. No. 9, near Granger, County Dufferin, who has relinquished her position for another elsewhere, was presented by her pupils with an address, a pair of bracelets, and a work-box.

MR. A. MCINTOSH, formerly of the Brantford Collegiate Institute, and lately first assistant master of the Provincial Model School, Toronto, has been appointed principal of the last mentioned institution.

MISS STEWART, teacher of S.S. No. 4, Central Manvers, on the eve of her departure, was agreeably surprised by being presented with an address, accompanied by a beautiful album and several other articles.

MR. HORTON, teacher of S.S. No. 14, Paramount, being about to relinquish his post, was presented by his pupils and friends with an address, accompanied by a valuable chain, locket, ring and album.

MR. GEO. MCKAY, teacher of S.S. No. 1, East Nissouri, was the recipient of a handsome gold chain and an address, on the occasion of his leaving to attend Ingersoll High School, at the hands of his late pupils.

MISS NELLIE LEACY, of S.S. No. 4, Bramley, Co. Renfrew, has been presented by her pupils with an address accompanied by a gold necklet and locket. She will act as teacher in Osceola Village School during the year 1887.

MR. H. B. CALLENDAR, who is about to sever his connection with the Windsor Public Schools, and who goes to Woodslee to teach the school there, was recently presented with a very handsome cabinet album by his late pupils.

MR. R. GRANT, who has had charge of Welland School for the past ten years, has accepted the headmastership at Brockville, and Mr. J. McLaughlin, of London, has been appointed his successor with a salary of \$650 per annum.

THE pupils of Napanee Mills Public School took occasion to present their teacher, Mr. L. E. Rice, with an address, accompanied by a handsome ring, which was suitably engraved. Mr. Rice purposes studying for the medical profession.

MR. MCENTEE, and Miss Raleigh, teachers in the Almonte Separate Schools, have both been presented with flattering testimonials by their pupils; the former received two photograph albums and a paper-hanger, and the latter a dressing case.

MISS NELLIE DELURV, teacher Manilla School, County Victoria, has relinquished her position and obtained an appointment as teacher at Vallentine School. Prior to her departure from Manilla, her late pupils presented her with a silver butter-cooler, a purse, and a satchel.

MISS NETTIE RUTHERFORD, who has been teaching in S.S. No. 6, Chatham Township, for the past three years, was presented with a beautiful silver fruit dish, silver spoon, and napkin ring, by her scholars on the occasion of her departure, accompanied by an address.

As both the teachers, Miss McGowan, principal, and Miss Allis, assistant, of Union S.S. No. 5, Hullett, are leaving, the pupils presented them with tokens of goodwill, consisting of a card receiver to the former, and a pitcher to the latter, accompanied by an address.

MISS JENNIE MILLER, who taught last year in in S.S. No. 1, Arran, on the occasion of her departure for Ottawa to attend the Normal School, was presented with an address, and accompanying it a handsome satchel, together with a copy of Shakespeare's works.

At Orillia High School the following presentations were recently made:—To Miss Hanna, a beautiful jewel case by the pupils of "C" and "B" classes; and to Mr. Kerr an admirably arranged ink-stand by the pupils of "B" class. Addresses were read to both teachers.

MR. NILES G. ROSS, head teacher of the Plantaganet Public School, Ottawa, was the recipient of a testimonial and purse containing fifty dollars in gold from his Plantaganet friends on the occasion of his departure to his new home at Morewood, in the County of Dundas.

THE pupils of the Westville High School (Nova Scotia) have presented to their teacher, Mr. A. P. Douglas, an address, accompanied by as handsome a writing-desk as could be procured, together with a copy of Hay & Mitchell's edition of Sir Walter Scott's poems, and some elegant Xmas cards.

ON the last day of school for the year, the pupils of S.S. No. 13, Otonabee, presented their teacher, Mr. M. McClelland (who has been their teacher for the past three years), with a writing desk, a gentleman's companion, and a copy of Burns' poems, handsomely bound and illustrated, accompanied by an address.

MR. G. B. RENNIE, teacher of Oakwood Public School, has been presented on the part of his pupils, with an address, together with a highly ornamental silver dish; and Miss Ford, teacher of the junior department in the same school, was presented with an album and other gifts on the occasion of her departure.

THE salaries paid to the teachers of Strathroy Collegiate Institute during 1886, were as follows: J. E. Weitherell, \$1,440; H. D. Johnson, \$1,000; M. S. Clarke, \$900; L. DeGuerre, \$720; M. Parkinson, \$250; J. E. Tom, \$150 part of the year; G. H. Hogarth, \$300 part of the year; R. S. McGowan (drill), \$100.

AT the last meeting for 1886 of the Lindsay Board of Education, Mr. Head was re-engaged as Master in Modern Languages at the High School. Miss Brown was appointed temporarily as substi-

tute for Miss Peplow; Miss C. Holtorf was granted leave of absence for two months, and her position filled by the appointment of Miss Carrie Smith.

MR. JOHN LANGDON, teacher of Prince Albert Public School, was, on the occasion of his severance from the school, presented by his scholars with a dressing-case, accompanied by an address; and, in the same school, the scholars of the junior class presented their teacher, Miss Bullen, with an elegant cup and saucer, a beautiful Christmas card and address.

MISS JENNIE LANGFORD, the retiring teacher of Eden (Mariposa) School, was made the recipient of some beautiful presents by her scholars, consisting of a large parlour lamp, a beautiful pair of vases, pair of kid mitts, a wine-coloured drinking crystal cup, a china cup and saucer, and a lamp. Mr. Harry Feir has been engaged for the coming year at this school.

AT the last regular meeting of the Engineering Society, held in the School of Science, University College, Mr. F. Babington read a highly scientific paper on the subject of Electrodynamics, dealing at length upon the theory that magnetism and electricity are one and the same thing. Mr. George H. Richardson then read an exhaustive paper on "Railroad Construction."

THE *Peterboro' Examiner* says:—"We have much pleasure in congratulating Mr. J. Stirling, Head Master of the South Ward School, on his success at the professional examinations lately held at Kingston. By virtue thereof, Mr. Stirling now holds a First-Class Grade A professional certificate, and is entitled to fulfil the duties of School Inspector, Head Master of a Model School, and to teach in High Schools.

AT the Stratford Collegiate Institute, the following are the subjects assigned to the different masters and teachers: W. McBride, M.A., principal, French and Mathematics; C. A. Mayberry, B.A., Classics; J. B. Wilson, B.A., English; A. H. McDougall, B.A., Mathematics; J. M. Moran, 1st A., Science and German; R. Holmes, Grade A., Mechanical and Architectural Drawing; Miss Denovan, Grade A., General Drawing and Painting.

WITH reference to recent charges made against Mr. Wm. McBride, the *Stratford Times* says:—An official letter from the office of the Ontario Educational Department, sets forth that the Commissioner appointed to make an inquiry and investigation into the charges preferred by Mr. Idington, Q.C., against Mr. Wm. McBride, head master of the Stratford Collegiate Institute, has reported to the Hon. Minister of Education, that not one of the charges made by Mr. Idington was established.

A pleasing feature of the recent examinations at the Public Schools, Amherstburg, was the presentation of addresses to Misses McDougall and Johnson, accompanied by elegant souvenirs, given them by their pupils before their departure for home. Miss McDougall goes to Strathroy, where she commences her studies in the Collegiate Institute for a first-class certificate. Miss Minnie Powell takes Miss McDougall's place as teacher after vacation. The present staff of teachers with this one exception, has been re-engaged for 1887.

CAPT. J. C. RICHARDSON, who has spent considerable time as a school teacher among the aborigines of Keewatin and the North-west, since his first appointment in March, 1881, is completing a pronouncing Cree dictionary with two parts—English-Cree and Cree-English. He is also translating some hymns into Cree. The dictionary will supply a long felt want to teachers, farm instructors, and missionaries, and will be very valuable to the student for Indian Missions, in short to any one coming in contact with, or having dealings with, the Indians.

MR. A. MORTON, who, for nineteen years and a half, has occupied the position of principal of the public schools at Brampton, was made the recipient of a very handsome present from the teachers and pupils over whom he has had control. The present consisted of a handsome crimson mohair plush easy chair and footstool to match, together with an address, which is being handsomely illuminated and framed. Mr. Morton also received an address from the teachers in training at the Model School, together with a framed photograph of the whole class.

AT the last meeting of the Parkdale School Board for 1886, the question of teachers' salaries was re-considered and adopted as follows:—J. A. Wismer, principal, \$1,100; R. W. Hicks, \$850; Miss H. K. Curry, \$450; Miss Edie, \$425; Miss Littlefield, \$425; Miss Noble, \$375; Miss Elliott, \$350; Miss L. M. Currie, \$350; Miss L. Cook, \$350; Miss M. Warren, \$325; Miss A. Duff, \$325; Miss C. Lawson, Kindergarten teacher, \$325; K. Berkshaw, assistant, \$150. Miss L. M. Currie was allowed \$20 for extra services during the Model School term.

MR. ALFRED S. JOHNSON, M.A., of Caledonia, Ont., an ex-pupil of the Ottawa Collegiate Institute, has been appointed Instructor in Philosophy and Logic, in Cornell University, Ithaca, N.Y., U.S.A. Mr. Johnson left the Institute in 1878, going to Toronto University, where he took a very distinguished course, ending in his being awarded the gold medal in mental and moral science, logic and civil polity. Since graduating he has held the position of Fellow of University College, Toronto. He will act at Cornell as an assistant to Prof. J. G. Schurman, M.A., D.Sc., late of Dalhousie College, Halifax, N.S.

AT the Milton School the following presentations were made, accompanied by addresses:—To Miss Jennie Pattison, on leaving the senior department, a neat little clock in a plush frame. To Miss M. Jarvis, who has resigned her position in department II., and who has been a teacher in the school for seven years, an elegant silver cake-basket. To Miss S. Andrews, who leaves department III., having resigned the position of teacher of that department, a handsome plush cabinet album, a plush music holder, two vases, cruet stand, many Christmas cards and several other articles. To Miss A. Curtis, who leaves department IV., in which she has taught the infant classes, a beautiful cabinet album in cardinal plush, and several Christmas cards.

WE take the following from the *Peterborough Examiner*:—Some changes have taken place in the staff of teachers of the Boys' Separate School. Mrs. M. J. McGillis goes to Brockton (part of Toronto), as principal of that school, and will b

succeeded by Miss Annie Lynch, a graduate of the Ottawa Normal School; and Miss Ellie Harley, who had charge of the junior division for the past five years, and who intends writing at the next examination for a higher grade certificate, will be succeeded by Miss O'Connell, of Hamilton, also a Normal School graduate. Mrs McGillis and Miss Hurley were presented on the eve of their departure, by the pupils and teachers, with presents and addresses. The change was made at the expressed desire of the teachers departing themselves. The teaching staff of Boys' Separate School for 1887, will consist of: J. D. McIlmoyle, principal; Miss K. Leonard, 2nd division; Miss Annie Lynch, 3rd division; and Miss O'Connell, 4th division. All the teachers are Normal School graduates.

THE St. John, N.B., Board of School Trustees, at a recent meeting decided to make the salary for the principalships of the Victoria, Albert, Centennial, and Leinster Street Schools \$800 per annum, a change that will not affect the salaries of the present term. The following appointments were made: Misses M. Narraway and E. A. Powers to be assistants in Victoria School; Miss M. Cameron to the reserve staff; Miss E. A. Payson to grade 8, Victoria school; Mrs. Dieuaide to grades 5 and 6, boys, Waterloo street, at a salary of \$340 per annum; Mr. Henry Town to be principal of the Centennial School, at \$750; Mr. F. J. Sweeney, to grade 5, St. Malachi's school, and Mr. J. McKinnon to be vice-principal of the Albert school at a salary of \$450. The superintendent was instructed to arrange for the examination of eighth grade pupils so as in future to bring all candidates together, and ensure the most careful supervision of the work; awards and valuations to be made by the superintendent and teachers of the grammar and high schools jointly.

THE *Hamilton Times* gives the following information concerning the movements of teachers in the County of Lincoln:—Miss K. McCallister has taken the Muir settlement school.—Mr. Burtch, St. Anns, takes the Canfield School; salary, \$420.—Miss Annie Ness, of Grimsby, takes Elcho School.—Mr. Wm. Comfort succeeds Miss Collier in the McCaffery School.—Miss Davis retains her school on the Stone road.—The public School of Grimsby re-opened on Monday 3rd, with Mr. Anderson and Miss Lavelle, teachers.—Miss Effie Patterson, of Grimsby, has secured a school near St. Catharines.—Miss Sarah Park, of Grimsby, succeeds Miss Olman in the Caistor Central School.—Miss Burkholder, of Merritt Settlement School, leaves for Hamilton Ladies' College; Miss Collier succeeds her.—Mr. F. Coon, of Grimsby, takes Miss Park's school, the latter going to Smithville High School for second-class work.—Mr. H. Nelson resigns his school to attend Smithville High School to prepare for second-class examination; Mr. R. Railton, late of Smithville High School, takes his place.—Mr. A. H. Hipple, of Campden, ceases teaching school to study dentistry.

In the schools at Winnipeg the following presentations were made at Christmas, in addition to those to which we alluded in our last issue: At Louise Street School the teachers are Miss Morrissey and Miss DesBrisay, and the latter received at the hands of her class a purse accompanied by an address; at Pinkham Street School,

which is in charge of Miss Rogers and Miss Alice Tabot, the pupils exhibited their kindly feeling towards their teachers by presenting them with Christmas cards; at the Girls' Central School the Christmas presents given by the pupils to their teachers were: to Miss Sharpe, a lady's companion; Miss Christie, a plush collar box and a photograph frame; Miss Eyres, a plush perfume case; Miss Currie, a beautiful Christmas card and a lady's companion in plush and silk; Mr. Garrat's class presented him with a gentleman's companion and a nicely worded address; at the Dufferin School Miss McLeod received a pair of pretty vases, and Miss Parsons a card-receiver; at the Carleton School all the teachers were made the recipients of various presents from their pupils, including three handsome pieces of silverware presented to Miss Zinkan; at the Argyle Street school every teacher received various presents from the children; and at the Euclid Street school there was a grand and successful closing entertainment, on which occasion the pupils testified to the good will they bore to their teachers.

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