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THE CANADA
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SEPTEMBER, 1881.

RELIGIOUS INSTRUCTION IN THE PUBLIC SCHOOLS.*

BY DANIEL WILSON, LL.D., PRESIDENT UNIVERSITY COLLEGE, TORONTO.

CANADIANS are justly proud of their school system. It commends itself to approval on various grounds ; but on none more so than as a truly national system, available for all, without distinction of class or creed. But in its adaptation to the requirements of a country where no special creed or established form of religion is recognized, and to a Province in which the leading Protestant denominations and the Roman Catholic Church are all alike largely represented, it has been indispensable to secure the exclusion of everything that could be reasonably objected to by any of them as encroaching on their province of religious instruction. But does it necessarily follow that religion is excluded from our public schools and colleges as a thing which the State, and all who are under its control, are bound to ignore? That this is a question

which you view with sensitive jealousy I may assume to be proved by the request you have made to me to discuss it at this Convention.

The profession of the teacher is not only an honourable one ; it is also a most responsible one. If you fully realize what education is, your duties are only second to those of the Christian minister. You have entrusted to you the moulding and fashioning of the rising generation ; the making in no inconsiderable degree of the future of this young country. Is it then the intellect alone with which you have to deal? Will it be the fulfilment of your high duty to send forth the boy or the girl committed to your training

“A reasoning, self-sufficient thing ;
An intellectual all-in-all !”

In other words, can that be regarded as a perfect, or even in any true sense a satisfactory, system of education which deals only with the intellect, and

* A paper read at the Ontario Teachers' Convention held in Toronto, 11th August, 1881.

leaves to other sources—or to chance—the moral and religious elements?

I venture to assume that the great body of the teachers of Ontario are at one on this question. Knowledge is indeed power; but the fruit borne by the tree of knowledge is both good and evil. Moral and religious training must go hand in hand with intellectual culture in the education of our youth, if they are to be fitted for the citizenship of a free country. Do we then acknowledge that in any sense there is truth in the epithet "godless," applied to our Public School system? Are we content to speak of our Provincial system of education in its schools, collegiate institutes, and colleges, apologetically, as a mere compromise or evasion of a difficulty?

This I assume to be the question which you invite me to discuss; nor do I feel any reluctance in facing it. The system, as applied to the Provincial College over which I preside, has my fullest approval, and is, indeed, the only one that can be called truly national. But it is a system designed for the secular training of the rising generation in a community not less Christian than that of the Mother Country. There, indeed, a constituency has been found to elect an avowed Atheist as its representative in the House of Commons. It may be confidently assumed that no Bradlaugh, however high his intellectual attainments might be, could offer his services to any Canadian—nor indeed to any English—School-board, with the slightest chance of acceptance. The moral character of a teacher is indeed all-important; for it is not the formal inculcation of creeds and catechisms, but the daily, hourly, influence of precept and example which moulds the character and makes the man.

Here, then, I conceive, lies the distinction on which the development of our system of teaching should be based. It is no part of the duty of a

public school teacher to set forth denominational catechisms or creeds, or in any form to inculcate dogmatic theology. It is no disparagement to him to say that he is not the fit person for such dogmatic teaching. All matters of special denominational diversity of opinion; questions relating to the sacraments, to Church order, ministerial or priestly authority and power—in so far as they are in any sense a fit part of youthful education—pertain to the home-training, the Sunday school, or other Church organization. The attention now paid to Sunday school work is one of the most healthful features of the age; and to the Sunday schools of the various denominations may be safely confided the training of their own children in all which they specially value as distinctive in creed and Church order. But much still remains as the legitimate work of the teacher in the Public School.

The best of all moral culture is the informal teaching which goes on in the daily and hourly intercourse of the teacher with his pupils. If he has the lesson of love and constraining moral power in his own heart, he cannot fail to communicate it to them. "It droppeth like the gentle rain from heaven upon the place beneath." It is by teaching such as this that men like Arnold have left an endearing impress on a whole generation of Englishmen; while their memory is cherished with loving gratitude. No parliamentary enactment, no school law, no board of trustees, or minister of education can interfere with you, or prevent such vital moral training, were they so inclined; and the school board, which looks beyond the evidence of University honors, first-class certificates, and testimonials of acquirements, and insists, above all, on having a teacher of such high moral standing as ought to pertain to the man or woman who is to have the moulding

of the character and the forming the minds of their children, only shews thereby a proper sense of its responsibilities.

Canada is a Christian land. The parents of the rising generation desire no godless education for their children; and will gratefully recognize the services of the teacher, who, animated by a sense of the high trust confided to him, is ever ready, on the daily occasions which offer, to drop the wise and seasonable word. Speaking, as I now am, to teachers, I need not remind you of the art of instilling information. The gentle admonition, the tender, loving rebuke, the word in season, will do more to form the future man than all the formal, dogmatic routine of enforced lessons. A boy is reported to have responded to his Sunday school teacher's question: "What is persecution for righteousness' sake?" with the answer: "Being drove to school, and being drove to church!"

Not in formal routine, nor by enforced coercion, were God's statutes to be instilled into the youthful mind. "They shall be in thine heart," is the first requirement; "and thou shalt teach them diligently unto thy children; and shalt talk of them when thou sittest in thine house, and when thou walkest by the way," etc. And cannot you, in like informal, yet genial fashion, drop here and there the good seed as you go the round of daily scholastic toil? No one will object to your teaching courtesy, good manners, making your boys gentlemen. But the Christian is the true gentleman. The whole essential essence of true gentlemanly conduct lies in the golden rule to prefer another to yourself; and beyond this, in the example of Him who "came not to be ministered unto, but to minister, and to give His life a ransom for many." I address you as fellow-teachers, and would urge upon you that we cannot place too

high a standard before ourselves, or over-estimate the influence of our office as the instructors of the rising generation. To the teacher who recognizes in his daily work nothing beyond the impressing on the minds of his pupils correct orthography and syntax, accuracy in numbers, a facility in languages, and a mastery of Euclid, the return of the same routine, from year to year, can scarcely fail to become a wearisome task-work; and if so, then success, in any very high sense, is beyond his reach. A teacher, as you well know, if he is to succeed, must have his heart in his work; must feel it, however laborious, to be a pleasant duty. But if he realize fully the unquestionable truth that he has to a large extent the fashioning of these youthful minds, not merely in intellectual culture, but in moral worth, in purity of thought, in truthfulness, in manly sincerity—in all that makes the good citizen, he will then feel encouraged through many a weary hour, even as the husbandman who in the early seed-time is gladdened with the hopes of a rich harvest in store for him. The gentle poetess, Mrs. Hemans, in her visit to a girls' school, as she looks on—

"Childhood's lip and cheek
Mantling beneath the earnest brow of
thought,
Sees there what earth must nurture for the
sky,
What death must fashion for eternity."

In all the fashioning for a higher life, both here and hereafter, the teacher inevitably bears some part. It rests with himself how great and how beneficial a part he takes in giving a healthful bias to the eager, impressible minds left from day to day in his care, like clay in the hands of the potter, to fashion into vessels of honour or dishonour.

Trinity College, Dublin, is now adorned with a fine statue of Goldsmith; but had schools and colleges

done all for him that they might, a richer harvest would have been reaped from his genius, and a happier life secured for himself. Oxford will rear no monument to Shelley, for it is her shame that with that fine genius given her to train in the critical years of early manhood, she had no better antidote for the speculative doubts of a young inquirer than expulsion. It is with me, from year to year, a thing of intense hopefulness to scan the array of youthful aspirants who matriculate at college. Who knows but there may be a Goldsmith or Shelley among them, for whose intellectual and moral training we shall yet be called to give an account?

I was originally asked to take as the subject of this address to you "The Bible in the Public Schools." I preferred the more comprehensive title of "Religion in the Schools." As to the daily reading of the Scriptures, and the opening and closing of the school with prayer, the recommendation of their use "with a view to secure the Divine blessing, and to impress on the pupils the importance of religious duties, and their entire dependence on their Maker," was embodied in a regulation of the late Council of Public Instruction, and is still in force. But a discretion is wisely left to the trustees or school board, to whom this is only presented in the form of a recommendation.

This question receives interesting illustration from a case appealed to the Minister of Education in 1877. The practice had been to open the school daily with the Lord's Prayer, and to close with the Benediction. Certain Roman Catholic children, acting under the direction of their parents, refused to stand up along with the other children during those brief and simple exercises; and, with the very limited accommodation of a rural school, there was no other room to

insisted on their standing up. The trustees sustained this action of the teacher; and the inspector on being appealed to evaded the difficulty by stating that "if any objected, the law provided that they might retire."—which in this case meant to turn out of doors daily, in all weathers.

I confess to a difficulty in believing that this was a case for appeal to the Minister, or to the letter of the law. I have had a great deal of intercourse with both clergymen and laymen of the Church of Rome, and have had students of that faith under my care. I can scarcely doubt that a wise, conciliatory course on the part of the teacher, if he took the trouble to appeal to the good feeling of the parents, would, in such a case, remove all difficulties. Members of the Roman Catholic Church have no objections to the Lord's Prayer, but both Roman Catholics and Protestants resent coercion; and in such a case as that referred to, no less evil would be done to the Protestant than to the Catholic pupils, either by enforced conformity, or by any demonstrative dissent. If the moral and religious influence aimed at by the teacher exhausted itself in that brief daily service, and all the interval was nothing more than a literal effort at the prescribed tasks in the authorized text-books, then it would on the whole be better that the Lord's Prayer be omitted altogether than it be made the occasion of strife and sectarian division. Few things are more to be deplored than that, either by Separate Schools or by denominational separation in our Public Schools, the elements of sectarian antagonism should be prematurely developed in the minds of the rising generation before they are able to form an intelligent judgment on the questions in dispute.

As to the use of the Bible in our Public Schools, I will only add that in any school section where the entire com-

munity are so far of one mind that, without causing offence, the school can be opened daily—in accordance with the recommendation of the Council of Public Instruction—with the reading of the Scriptures and prayer, there can be no question as to its desirableness. But my own early recollections of the Bible as a school book do not greatly incline me to insist on its use as a "Reader" or lesson book; especially if by so doing a barrier is to be raised against the free use of our public schools by Catholic and Protestant alike. But where there is a teacher of high principle, with the constraining love of Christ in his heart, neither school regulations nor Acts of Parliament can shut out the Bible from the school; for its precepts will be hourly on his lips, and its principles in all his actions. It is no less important to add that we may feel well assured that neither Roman Catholic nor Protestant parents have any desire that such precepts or such principles should be withheld from their children.

There need be no clashing between the functions of the Christian minister and those of the school teacher, nor between the distinct and diverse work of the Sunday and the Public School. But without trenching in the slightest degree on the functions of either, the Bible is full of delightful lessons, which the wise teacher will not fail, whether formally or informally, to turn to account.

The Christian morals taught at our Public Schools should be altogether distinct from questions of sacramental grace, of baptism, or the eucharist. Questions of grave importance on which the Churches of Christendom are at issue can find no proper place in the national school system of a free people. But is there no such apt lesson as "Consider the lilies of the field, how they grow," or that of the sparrows—now no strangers in Can-

ada—"not one of which falleth to the ground without the will of our Heavenly Father;" or the young ravens that "neither sow nor reap, neither have they storehouse nor barn; and yet God feedeth them;" There is "the rain coming down on the mown grass," "the hen gathering her chickens under her wing," the good shepherd leaving his ninety and nine to go in search of the lost sheep; and all else of moral beauty and wisdom so aptly fitted to the young mind eager for knowledge; open to all impressions; and receiving the bias, for good or evil, on which the whole future life so often depends. He must have little in him of the true teacher who cannot turn to account the parable of the wise and foolish builders; or the story of the unforgiving servant; or the buried and useless talent.

All this, if done as the man or woman possessed of the true teaching faculty well knows how to do it, instead of involving any wearisome sermonizing, will give a life and charm to the whole work of the day. Nor need he pause on the threshold of higher moral lessons. He, too, may claim as his own that of the wondrous boy, disputing with the doctors in the temple; of the child set in the midst of his disciples; or the exquisite story of the prodigal son, so tender in its touching beauty and power. These, and so much else in the lessons of the Great Teacher, lie fully within the legitimate compass of your daily work. There is the Lord's prayer, Catholic in every sense, "Thy will be done on earth as in Heaven;" "Give us day by day our daily bread;" "Forgive us as we forgive;" "Amid temptations deliver us from evil." In all this there is surely ample room for a godly national system of education, which shall trench on no denominational creed or dogmatic teaching. Let me add that a manly courage in the confession of an honest faith may, with those whom

you are now training be largely influenced by your own example. If we never drop a hint of our belief in the Divine Fatherhood of a Personal God, or our recognition of His rule and governance, but speak only of force, law, evolution, or nature, such silence, be assured, speaks volumes. You cannot silence the teachings which such negation conveys.

I have referred to the lofty moral precepts, and to the apt lessons of the parables of the New Testament, as available to every teacher. But also, in an equally unobjectionable form, the skilful instructor will find many a suitable occasion to turn to account the lessons of Christ's own miracles: His stilling the tempest; His feeding the multitude in the wilderness; His speaking the word of power that healed the servant of the believing Centurion; the responsive faith of the man with the withered arm; the ten lepers, one only returning with gratitude to the healer; the daughter of Jairus; the widow of Nain; the brother and sisters of Bethany.

But above all, let me again say, we must teach by example. Let us apply to ourselves the parable of the talents, for the use of which an account had to be rendered. We, as teachers, hold a stewardship with no mean responsibilities. On your training may depend the moral standard by which the commerce of our young country shall be regulated; or that by which our future statesmen shall mould the decrees of our legislature, and inaugurate that righteousness which exalteth a nation. Your influence as teachers is enormous if you use it wisely. The minds of a young generation are submitted to you, unstained as the parchment on which you write what can never be wholly effaced; impres- sible as the wax by which its attestation is sealed. Ever remember how wonderfully observant children are. You teach them, whether you will or

no, by your daily life, in word and deed. Every display of temper; every tampering with the strictness of exact truth; every rude act or irreverent word, is so much of tares sown among the young wheat; to grow up at times rankly, and choke the good seed.

Dr. Arnold, one of England's model teachers, not only cultivated the utmost exactitude of truth; the yea, yea, and the nay, nay, even in trifles; but he repelled all asseveration in support of any statement made by a pupil, until at Rugby every boy abhorred the disgrace of telling Dr. Arnold a lie, because, said they, "he will believe us." I need not tell you that this rose from no easy credulity, but from the astute foresight which, by refusing to admit of the assumption that a boy would lie, made falsehood disgraceful and mean.

I will only add, in conclusion, that while I heartily sympathise in the daily reading of the Scriptures in our Public Schools, where it can be done without offence—not as a lesson book, but reverently as the word of God and the inspired embodiment of the Divine law, given to us to be "a lamp to our feet, and a light to our path."—I would not necessarily limit it to this. I have great faith in conciliatory co-operation; and it would seem to be by no means beyond the range of probabilities that a selection of approved Scripture lessons, unobjectionable to Catholics or Protestants, might be determined on for such a simple daily school service. Nevertheless, I do not regard this as an essential feature of our Public School system, nor its absence as constituting any real impediment to the conscious instructor legitimately using his influence, and inculcating anew the lessons of the Great Teacher:—"Blessed are the merciful, the peace-makers, the pure in heart." More than eighteen hundred years ago He abrogated the

law so truly accordant with our innate instincts:—"Thou shalt love thy neighbour and hate thine enemy;" yet the perfect law of love needs, no less than of old, to be still repeated. Rarely, indeed, will the day pass in which it may not be the privilege of the teacher to practically enforce the law of kindness, of forgiveness, of dis-

arming with gentle word and deed those "who despitefully use them;" that is, you may urge on your pupils, in the words of the Great Teacher, "that they may be the children of your Heavenly Father, who maketh His sun to rise on the evil and the good, and sendeth rain on the just and the unjust."

COMPULSORY EDUCATION.

BY MISS A. M. MACHAR (FIDELIS), KINGSTON.

COMPULSORY education is the natural complement of free education. If the State provides, at the public expense, a free education for all her children, it would seem to be her right also to insist on having all her children brought within reach of the advantages which she provides for them. In this there is nothing inconsistent with the liberty of the subject, any more than there is in placing the property of minors under the guardianship of Chancery, or in any other way protecting children from the consequences of their own defenceless condition and undeveloped judgment. If the State builds school-houses and pays teachers in order to secure, for the child of the poorest, free access to the education to which the very possession of reason gives him a natural claim, compulsory education is simply the following out of that action in standing between the careless and selfish parents of the children, whose lasting interests they are quite content to sacrifice to their temporary ease and gratification.

For, as we all know, there are, mainly, of course in the very lowest class, multitudes of parents who, in

the first place, are utterly incapable of estimating the value of education for their children, and, in the next, are utterly destitute of the firmness or the self-denial of insisting on their regular attendance at school, when that would in the least interfere with their own ease or convenience. In our cities, as is well known to every one who observes the condition of the poor, many children are systematically kept from attending school, that they may be sent out, half-clad in miserable rags, to beg what they can from those whose charity most lacks discretion, in order to maintain their wretched parents in drunken idleness. What becomes of such children it is only too easy to see. Their early habits of vagrancy and idleness become so fixed, that the best after-influences can hardly eradicate them; they can hardly be expected to escape the contamination of vice to which they are exposed, and they grow up ignorant and undisciplined, either to become in time frequent inmates of our prisons, or—if they escape this step to ruin—to live a miserable hand-to-mouth existence and become, in their turn, the parents of a similarly unhappy progeny.

Now the State has a right to interfere to protect children from being thus ruined for life by their degraded parents, because it is evident that the growth of such a class—which simply means the increase of the idle and criminal population—is a serious injury to the well-being of the community. And the only way in which, at present, it can interfere for their protection, is by enforcing, by legal penalties, their being sent to the schools which it provides. For, be it borne in mind, the sole object of enforcing school attendance is not and should not be—the mere imparting of knowledge. The moral discipline of the school-room, the degree of self control and respect for authority which, when wisely exercised, it can hardly fail to infuse, by degrees, into the wildest and rudest children, is a more important object than the learning “of the three R’s,” not to speak of a smattering of all the “ologies.” It is not an object kept in nearly such prominence as it should be, and with so many young and inexperienced teachers as we have in Canada, it is hardly to be expected that this element of moral discipline should always be wisely or fully developed. Yet even such a degree of it as must be included, in the least favourable circumstances, in the government of any ordinary school, makes a wonderful difference. The teachers of any city Mission School well know the immensely greater difficulty of keeping under any kind of control those children who have been allowed from infancy to run wild as street Arabs, when compared with even the lowest class of children accustomed to attend school. The latter have, at least, some faint idea of order and respect for authority. The untamed “Arabs” have no conception of doing anything but what is right in their own eyes. And so the most benevolent and persistent attempts to bring them under religious influences

have often ended in failure. For the root idea of religion must necessarily be *obedience to authority*. And for this reason, the discipline of the family—as it should be—has been made the first step in the religious training of our race.

Since then, it is of the greatest importance to the well-being of the community that the children most destitute of home discipline and teaching should be brought under the training and educating influences of our schools, as otherwise, they are certain to become a prolific source of evil and heavy cost to the body politic—every thoughtful and patriotic man and woman must rejoice in the passing of an Act which puts it within the power of our local authorities everywhere, to enforce the attendance of children at school for a large portion of the year, and to punish non-attendance or truancy by fining the persons responsible for enforcing attendance and the parents or guardians of the children. A distinguished English author, in visiting Canada some years ago, remarked that it was an anomaly in our school system as compared with that of Great Britain, that in Britain schools were not free and yet education was compulsory, while with us, where the schools were free, education was not compulsory. This anomaly has now been disposed of by the amendment lately introduced into our school law to secure the regular attendance of children at school during twenty-two weeks in the year.

The Act applies to all children between the ages of seven and thirteen, who are required to attend some school during the whole of the school hours in each week, for the period of eleven weeks in each of the two terms of the public school year; unless there be some sufficient reason, such as illness or too great distance from school, to excuse their non-attendance. It is not, of course, necessary that they should attend a public school, if they

attend any other school in which elementary instruction is given, but it is obligatory that they should attend *some* school during that length of time. It would be more satisfactory if the time during which regular attendance is required were longer, especially when we consider the needs of the vagrant children on our streets. But we must be glad to have at least twenty-two weeks of regular attendance compulsory, and though this will not keep the begging children permanently at school, it may be made most useful, in connection with other influences, in breaking up habits of idle vagrancy, in awakening some germs of mental life, and developing some habits of obedience and self-control, which may serve as a basis, at least, for lifting the children to a somewhat higher plane.

But the question arises: How is this law to be enforced? For if some trouble be not taken to enforce it, it will only remain a dead letter on the statute book. Its enforcement is left very much at the good-will and pleasure of school boards and trustees, and its usefulness must depend entirely on the extent to which these bodies and functionaries are alive to the need and importance of taking active measures to enforce it. The law provides that school boards and trustees may appoint a truant officer to ascertain and report cases of non-attendance, and to notify parents and guardians of their liability for neglect of compliance with the law—five dollars being the penalty for the first offence, and the fine to be doubled on a repetition of it. But school boards will be very likely to treat the matter with a good deal of indifference, and truant officers, even when appointed, will find no little difficulty in accomplishing their task, unless the more intelligent and patriotic of our citizens take an active interest in giving them all the aid in their power. And no class have it in

their power to do more than those ladies who take so prominent a part in our various philanthropic societies, especially those which have for their object the uplifting of our sunken classes to a higher plane of morality and respectability. To begin with the children and take them young, is being more and more accepted as the most hopeful and economical method of elevating humanity, whether heathen and barbarian, or nominally civilized and Christian. Tramps—in other words idle and useless specimens of humanity who have grown up undisciplined and uncontrolled—are becoming a sort of fungus upon our Canadian life; and one which must more and more tend to demoralise it. It seems almost hopeless to reform a tramp! Infinitely easier and better it would be to prevent him; to take him in time and develop him into a good and useful citizen; and, humanly speaking, this might be done by bringing him early even under the regular discipline of ordinary school life. The increasing number of tramp-children who are to be seen infesting the streets of our cities and towns, and who, as it has been forcibly represented, graduate in vice with awful rapidity, is a subject of grave concern to thoughtful observers. Is there to be an ever-increasing proportion of an idle, depraved, unproductive class of society to hang like a dead weight upon our communities? Yet it must be so, if an ever-increasing number of children be allowed to develop into their natural result. Luther has well said: "It is hard to make old dogs tame, and old rogues upright, for young trees be more easily bent and trained, howbeit some should break in the attempt." It is not by any means an easy task to make even young rogues upright; but it is at least possible, with care and patience, while the other is, humanly speaking, well nigh impossible.

Of course, even compulsory educa-

tion will not, of itself, reform even juvenile tramps, and if left entirely to be enforced by cold official methods, dealing with truant children just as adult vagrants are dealt with by the police, it cannot be expected to do much for their *morale*. Indeed, the history of its enforcement in Britain records the most absurd instances of blundering on the part of the officials with whom its enforcement lay. As in most other sublunary affairs, the right man does not always get into the right place, and the wrong man is pretty sure to have unlimited capabilities for blundering. It is only those who, with some intelligent appreciation of what education is, unite a genuine interest in the children that are being ruined for want of any training but the worst, who can make this enactment the means of working any radical reform. But just this work may be done by such intelligent and patriotic women as are willing to devote a portion of their time to looking after individual families within the circle of their own observation, in which the children are either neglected from ignorance or indifference, or deliberately kept from school that they may go and beg from door to door in order to support the idle parents on misdirected "charity." To all who are willing thus to work for the salvation of these much wronged children, the new Act affords a most valuable ally. Some one has said that the most effectual kind of "moral suasion" is that which has authority behind to enforce it if need be. In future, those who endeavour to persuade selfish and indifferent parents to do their duty to their children in this respect, will have authority behind their persuasion. They can appeal to the law, and bring the truant officer to their aid, an argument which the most obtuse and blunted perception can sufficiently appreciate. In the same way, the most refractory and incorrigible child can

be compelled to submit for at least the eleven weeks in the half-year provided for by law. It seems matter for regret that the time during which school attendance is compulsory had not been made considerably longer. But at least, as has been already said, the eleven weeks in the half-year gives a chance for getting a hold on the children themselves. In that time, provided the children fall into the hands of a teacher with any fitness for teaching, latent ability and interest may be awakened, mental life may be developed, and the wildest child brought under, at least, some degree of discipline and training. Judicious individual influence may again come into play, to persuade to perseverance in the new line thus begun, to stimulate improvement by encouraging commendation, and also, when expedient and practicable, by some quietly-given assistance in the matter of clothes, which is often one of the stumbling-blocks for poor children placed at the school door sometimes even by the injudicious and thoughtless teacher, who will not infrequently go so far as to forbid children absolutely shoeless to come to school at all in summer weather, unless they can appear in what is to them an impossible luxury. Had such pedagogues been in authority in Scotland in days of old, some of the greatest names that have adorned her illustrious roll would assuredly never have been registered, at least, in her parish schools. Of course, this sort of petty tyranny will be made an end of by the enactment which makes attendance compulsory; since the State can neither provide shoes for barefooted children, nor compel their parents to procure them; as, if they are to be compelled to attend school, the schools must equally be compelled to receive them. It will probably be necessary, in some cases, that more school accommodation should be provided, for it is unfortu-

nately the case that the very class most urgently in need of free education is the very class often crowded out; and if taxpayers, many of whom pay largely to the education of other people's children, have a right to insist on *anything*, it is on this, that school accommodation be provided, first of all, for the class which most needs it, and that that class, which will otherwise become a pest to all good citizens—be *compelled* to take the benefit of it. It is earnestly to be hoped that school boards everywhere will, by prompt action, and the appointment of truant officers, do what they can to make the Act accomplish its intended purpose, and that all public-spirited and intelligent men and women, including the editors of our newspapers, will give their hearty co-operation to make it a success. But in no way can so much be done as by the kindly, persevering, judicious influence of Christian ladies, untiringly exerted in individual cases.

Something will have to be done, ere long, to follow up the Act, by providing means of coercion and beneficial punishment for children who shall prove refractory, even to the authority of their parents; or whose idle and vagrant habits have become so firmly fixed, that nothing but absolute coercion will break them. For such children, truant or industrial schools have been instituted in the United States and Great Britain, and with the most encouraging results. Such schools, in which the stigma of disgrace is of the mildest, and where teaching and training are the main objects, would be for the ordinary class of vagrant children or "child criminals," infinitely preferable to our Reformatories, where young criminals of all stages in crime must necessarily be thrown together, and where the more hardened naturally corrupt still further the beginners in evil. The truant schools are provided for either vagrant children or those whose parents plead

inability to compel them to attend school. Committal is usually for a long period—even four years—but on the child's improvement and good conduct he may receive a license permitting him to leave; which license, however, must be periodically renewed—an arrangement which gives the effect of a continued supervision of the child's conduct, since at any time the renewal of the license may be refused, and the child re-committed without further formality. In cases where the child's home-circumstances are such that it is not thought desirable for him to be returned to his home, provision is made for his being placed with suitable employers, as soon as he has reached a standard of education which relieves him of the obligation of attending school, though under the age limit. Many boys attain this standing in a wonderfully short time, shewing the good effect of placing them in circumstances where they are compelled to regular study and strongly incited to progress. This is the plan of procedure in Great Britain. In the United States it is somewhat different. The truant schools in the neighbourhood of New York are described fully, and in a most interesting manner, in a number of *Harper's Monthly* for last year. Our plan in establishing such schools might select from both methods that which seems most suitable to our own circumstances. Experience in both countries of such institutions fully shews that they produce the most beneficial effects. Certainly, unless active means are employed to secure the efficiency of this most needed enactment, we shall soon have a large class, who fear not God, nor regard man, growing up to a debased and reckless maturity, with the natural consequences to the well-being of the community. It behoves all who love the true interests of their country and their fellow-man to join heartily in fulfilling the present duty of timely prevention.

MÉTRES—ANCIENT AND MODERN.

BY THE REV. CHARLES PELHAM MULVANY, M.A., SCHOLAR TRINITY COLLEGE, DUBLIN.

THOSE who, as editors of any of the serials to which the verse-writers of Canada send so many contributions, are able to judge of the faults most frequently met with in the compositions submitted to them for publication, have observed that the point of weakness in much of what would otherwise be creditable literary work is rather in the form than in the matter. There is a want of knowledge of the laws of metrical rhythm, of the outward and visible form in which the Divine presence of poetry is to be invoked to manifest itself. The various species and sub-species of lyrical metre, the cadences of blank verse, so multi-form in tone and *timbre*, from Milton, Young and Cowper, to Keats, Shelley, Tennyson and Browning, are left to be learned by ear, unaided by any systematic study. Now, although it is absurd to attempt to teach by rule or system that "Art of Poetry" which is born, not manufactured, yet as in the case of the sister art of music, a knowledge of the laws under which the evolution of poetical form has manifested itself, cannot but be useful to those who practice the exercise so valuable as a mental discipline of condensing thought into its most attractive form of "ordered words." And even to those who never write poetry, to those who, like the most attractive women we meet, are appreciative and receptive rather than creative, it must add to the pleasure with which they watch every fresh development of the marvellous vitality of our literature, to clearly understand

the rhythmical laws under which its movement has taken place. No treatise on this subject has as yet been written in our language; a few thoughts thereon may, it is hoped, have interest for the readers of the CANADA EDUCATIONAL MONTHLY.

Mr. Herbert Spencer has shown in his "Essay on Progress" that music, poetry and dancing were originally parts of one and the same act of religious worship. This is proved by what is known of the Greek tragic chorus, which was at its beginning a hymn sung in honour of the God Dionysus, with a dancing accompaniment. So too the Hebrew psalms were probably sung during solemn ecclesiastical dances like that of David before the ark of God, and of which the modern "Processional hymn" among the Ritualists is a curious survival. In the conservative East the metrical form of the words sung has remained the same to this day, at least among Semitic races; the dance is still not what we understand by the word, but a solemn rhythmical movement in time to a slow and simple chant, resembling those known to us as Gregorian. Among Western nations, and to some degree among Eastern, the Aryan race, such as the Persian and Sanscrit-speaking peoples, both the dancing, the music, and the rhythmical words, have been differentiated into separate branches of art, and each of these has assumed increasingly complex forms, according to the well-known law by which all that is called Progress moves from the simple and homogeneous to

the complex and heterogeneous. This differentiation never took place with the Semitics, whose poetry may therefore be left out of account in our review of the history of metrical form.

The earliest Greek and Latin poetry shews signs of a past state of the literature when the poetry was still exclusively religious. The earliest known Latin versés were the Salian hymns. The Homeric hymns are survivals of the religious stage of Greek poetry, as is the solemn invocation of the Muse at the beginning of the *Iliad*. Still, these are merely survivals—the poetry of Homer is essentially secular and non-religious. From music it is not as yet differentiated. It was recited musically to the simple accompaniment of a lyre with four strings. From the time or tune necessitating some division into bars, arose the rhythm which we call *hexameter*, each line of which was complete in itself as a musical period, and had six bars or metres, hence the name *six-metre*. Each of these metres might consist either of two long notes, or of one long and two short ones, excepting the last bar or metre but one (the fifth); for the distinguishing feature of the musical and metrical movement was that the last two metres or feet were invariably of the same time, as may be exemplified in the words:

“Strawberry | Ice-cream.”

The other four bars or metres or feet may be either of two long syllables, or of one long with two short, and these may be blended or alternated in any proportions. Thus the first four feet may be each of two long syllables, which the Greeks called a *spondee* i.e. the *thumb* with its two long joints. As thus:

Boys and | girls de | light in | eating | straw-
berry | ice-cream.

Or, the first four feet may be each of one long syllable and two short, in

Greek a dactyl, i.e. a *finger* with one long joint and two short, as

Whose are the | funds that de | fray the ex-
pense of the | strawberry ice-cream?

Or, dactyls and spondees may be varied in any proportions, as

For ten | cents you can | get your | girl a |
strawberry ice-cream.

This capability of variation gives infinite freshness to this measure, in spite of the inevitable monotony of the last two feet, varied by an occasional substitution of a spondee in the fifth foot, as

Icecreams | never | yet were | made of | huckle |
berries.

The great narrative poems of Homer and Virgil were written in this metre, which has a majesty suited to what Mr. Mathew Arnold calls “the grand manner.” Its peculiar strength and grandeur are well described in words which we venture to translate from Schiller—

“Mightily sweepeth it on with swell of limitless surges!
All around as you gaze there is only the sky and the waters.”

The hexameter rhythm lent itself also to widely divergent styles of poetry; after the age of the Homeric poems it ceased to be associated with music, or with a language in which, like Greek, every vowel sound had its own musical notation of long and short. The quantity, i.e. the length or shortness of each syllable, in Latin was determined by a series of arbitrary rules which assumed a very complicated form, but may be mainly reduced to two:—1. Every vowel before another vowel is *short*, as *Delia*. 2. Every vowel before two consonants is *long*, as *Constance*.

In hexameters were written the charming idyls of Theocritus, of which it has been well said, “If such was Greek poetry in its decadence, what was Greek poetry in its prime?” the

magnificent fragment of a philosophic epic by Lucretius; the satirical verse, terse, self-contained, and stinging of Juvenal; and even a few of the less feeble of the early Christian hymns. This metre was naturalized in German literature by Goethe's "Hermann and Dorothea;" in English by "Evangeline;" and still more for those who care for something better than the cheap popular poetry, by Arthur Hugh Clough, in "Amours de Voyage." It is true that Mr. Mathew Arnold, in a letter addressed to the present writer, criticising certain translations from Virgil which appeared in the CANADA EDUCATIONAL MONTHLY of last year, expressed his conviction that "Hexameters would never be popular in England." "There is no market for such things on our side of the Atlantic, nor on yours." "No market"—very likely! Yet this old world metre with its associations with the oldest religion, and the oldest poetry of our race, can never wholly lose its charm for those who love poetical form for its own sake. For example, how perfect is the rhythm of the following lines from Clough's "Amours de Voyage:"—

"What is become of the brave who fall and die in the battle,
Die in the lost, lost fight for the cause that perishes with them?
Are they up borne from the field on the slumbering wings of the angels
Unto some far off home where the weary rest from their labours,
And the tired limbs have rest, and the bitter and burning moisture
Wiped from their generous eyes? or do they linger unhappy,
Pining and haunting the scene of their by-gone hope and endeavour?
Whether depart the brave? God knows, I certainly do not."

The ever-recurring sameness of the hexameters dactyl-and-spondee-ending, causes a modification of it in the alternation with a hexameter verse of a new and somewhat shorter form of the same rhythm, called the *Pentameter* or five-metre line, as thus:

Hi-diddle, diddle | for thus the cat we sing
 and the fiddle,
And of the | famous | cow | gyrating | over the |
 moon.

The pentameter line consists of two parts—the first has two feet—dactyls or spondees at pleasure—then a long syllable—the second part consists always of two dactyls followed by a long syllable. The measure thus formed of alternate hexameters and pentameters is one of great stateliness and grace. It was used by the older Hellenic writers as the vehicle for both mournful and amatory poetry, and was called Elegy and Elegiac verse. Schiller's exemplification of it is well-known—

The hexameter soars a fount with column of
 argent,
The pentameter falls gracefully back to its
 source.

Elegiac verse is little known as yet in English, with the exception of some most excellent philosophical poems in this metre by Clough.

The long metres, such as hexameter, originated with a simple and slow-timed variety of the religious dance to which they were chaunted in primitive times. Such also was the metre used for the aboriginal Latin poetry, the Saturnian, and that used for epic poetry in the great literature of the Sanscrit-speaking peoples of India. The latter consisted of a "Sloca," which was practically equivalent to two lines of the metre of Longfellow's "Hiawatha" read as one. Such is also the rhythm of the Scandinavian Edda. But the progress of the national religions, moving from simple to complex forms, necessitated a more rapid and elaborate dancing, with a quicker lyrical accompaniment. Hence, what is called lyric poetry as a distinct metrical form.

Very early in Greek literature this appears in the elaborate and beautiful metre called Sapphic, from the name of its inventor, the Lesbian poetess,

Sappho. Very little is known of Sappho—the tradition of her passionate friendship for her girl companions seems to be supported by the longest and best known fragment of her verse, which is evidently addressed to a girl. It was translated by Catullus, whose version introduced the Sapphic measure into Roman literature. The form of the metre is dactylic—each line begins with two feet of two syllables each—the first a *trochee*, i.e. one long and one short syllable—the second a spondee, followed by a dactyl and two trochees. The chief feature in the rhythm, however, is the accent thrown on the fourth and sixth syllables. This and the line consisting of not more than eleven syllables is the only rule in modern Sapphics.

As specimens of this metre in English we have some not very successful attempts by Southey, which were parodied by Canning, in the celebrated verses in the *Anti-Jacobin*—

“Weary knife grinder! whither art thou going?
Tears of compassion tremble on my eyelids,
Ready to fall as soon as you have told your
Pitiful story!”

The fourth line it will be seen is a dactyl, followed by a spondee, the exact form of the hexameter from

which this beautiful lyrical rhythm is evidently evolved. Poor Cowper at the paroxysm of his insanity wrote some dreadful verses in this form. They are full of the ghastly doctrinal delusions with which his brain was then clouded. He speaks of himself:

“Darned below Judas, who betrayed his
Master,
Earth disavows and Heaven would now dis-
own me,
Even Hell keeps closed her ever-hungry
mouths, all
Bolted against me!”

Horrible! but with a certain power. The prettiest specimen of English Sapphics is to be found in Mr. Swinburne's first volume, and some charming verses in the same strain by Mr. Charles Roberts, a contributor of verse to *Scribner*, and author of “Orion, and other Poems.” But the classical lyric measures did not pass with the Christianized Latin of the Middle Ages into popular use in the modern languages. They were saturated with the sensualism of the ancient culture, and recall instinctively the worship of Apollo and Aphrodite. How the transition from classical Latin to modern metrical forms was in reality effected it may be interesting to inquire in a future paper.

(To be continued.)

AMONG the languages of civilized nations English is the most widely spread. It is the mother-tongue of about 80,000,000 people; German, of between 50,000,000 and 60,000,000; French of between 40,000,000 and 50,000,000; Spanish, of 40,000,000; Italian of 28,000,000; and Russian, of between 55,000,000 and 60,000,000.

In Italy quite a movement is on foot to establish museums in different cities of that country. Rome, Palermo, Caserta, and Genoa have begun the work of organizing such collections, which are designed primarily for the use of teachers and of schools.

We learn from an Egyptian blue-book that there are in the land of the Pharaohs 5,370 schools, 5,725 teachers, and out of 850,000 children in the country, 140,000 go to school. Almost the whole of the schools are village schools, and the subjects taught are reading by the use of the Koran, the simple rules of arithmetic, and writing.

BELGIUM promises to become the great industrial teacher of Europe. Many foreigners are now attending her schools. She has 59 technical schools, 32 industrial schools and a higher commercial school—all receiving funds annually from the State.

LITERARY STYLE.—II.*

BY W. MATHEWS, LL.D., CHICAGO.

IF a man is a sham and a hypocrite, his manner will be sure to blab against him. It is a Frenchman, not a Puritan, who teaches that even the painter's work is deteriorated by his life. "What must the artist have on his canvas? That which he has in his imagination. What can he have in his imagination? That which he has in his life." So with literature; it is even more tell-tale than any other art. How easily do we distinguish between the passages which came from the author's heart and those in which his inspiration failed! What thoughtful reader does not know that any doubt or dogmatism, any langour in feeling or shallowness of insight, any distraction or loss of interest in the theme, any weariness of work or insatiable passion for it, all the shadows of his soul and all the intermissions of his sensibility, stamp themselves on the printed page as distinctly as if the writer had purposely told the world his secrets? Even when a writer tries to make a mask of his style, he almost inevitably betrays himself by a pet phrase or mannerism, like Macaulay's antitheses or Cicero's *esse videatur*. How admirably, with one stroke of the pen, did Sydney Smith characterize Jeffrey, when he wrote to a friend: "Jeffrey has been here with his *adjectives*, which always travel with him!" How vainly does Gibbon, that great master of the art of sneering, try to mask his hostility to Christianity by

suggestion and equivocation! Instead of asserting, he insinuates; and stabs Christianity, not directly, but by side-thrusts of parenthesis, inuendo and implication.

Again, there are writers, and those, too, of high ability, who betray themselves by certain tricks and devices of style which are purely mechanical, and which, by careful study, we can learn and imitate. Whatever the witchery of their manner, however wondrous their triumphs over the difficulties of expression, we can mark the process by which they achieve their results almost as easily as we can note the manner in which an artisan puts together the pieces of a watch. Macaulay, for example, by his *Essays* and his *History*, has won a popularity almost without parallel, because he expresses in vivid language thoughts easy to grasp, and because his power of lucid, swift, brilliant statement has never been surpassed. He is, too, a remarkably correct writer, uniting splendour and precision as few have done before. On the other hand, he is possessed with the very demon of mannerism, and his tricks of style are so transparent that the veriest novice may detect them. The peculiar swing and swell of his sentences, the epigrammatic antithesis and balanced clauses, the short sentences between the long, "that, like the fire of sharpshooters through cannon, break the volume of sound," are not the product of the highest art. Though pleasing at first, they tire at last by their unshaded brilliancy and unvarying mo-

* From "Literary Style, and other Essays," by W. Mathews, LL.D., author of "Getting on in the World," etc. Chicago: S. C. Griggs & Co., 1881.

notony. They remind one of the measured march of the grenadier to the music of the fife and drum, rather than of the free and lofty movement of the giant. Again, Macaulay's hatred of pronouns, limitations and qualifications; the lack of organic unity in his sentences—of flexibility, airiness and grace—and especially of those reticences, half-tones, and subtle interblendings of thought which are among the lamps of style; and last, not least, his Chinese lack of perspective, and his fondness for exaggeration and startling contrasts, greatly detract from the excellence of his style. As he himself says of Tacitus, "he stimulates till stimulants lose their power." Because it is thus obtrusive by its brilliancy, and constantly calls attention to itself, Macaulay's style is necessarily second-rate. The writer who perpetually strikes you as a great literary artist is not artist enough, just as the man who strikes you as crafty is never crafty enough, because he cannot hide his craft. The painter who works consciously, and who is always ready with a reason for every touch of his brush, instead of laying tint on tint at the mandate of a mysterious instinct, we may be sure is not a Raphael or a Titian. Shakspeare has no style, because he has so many styles—because he is forever coining new forms of expression, and breaking the moulds as fast as they are coined.

Here, had we space, we should like to speak of the serried strength of Barrow and the indignant brevity of Junius; of Burke, the materials of whose many-coloured style were gathered from the accumulated spoils of many tongues and of all ages; of Robert Hall, the stately, imperial march of whose sentences was fashioned after no model of ancient or modern times—a style the product not of art, but of a mind full to bursting with intellectual riches, and which, though often declamatory, never wea-

ries, because he never declaims only—there is the bolt as well as the thunder; of South, Fuller and Sydney Smith, the ivy-like luxuriance of whose wit conceals the robust wisdom about which it coils itself; of Walter Savage Landor, who handles the heavy weights of the language as a juggler his balls; of Froude, some of whose historical pictures are among the triumphs of English prose; of Huxley, in whose hands the hard, granitic vocabulary of science becomes malleable in such a union of sweetness with strength as to realize the Saturnian prodigy of "honey sweating from the pores of oak;" of Everett, whose level passages are never tame, and whose fine passages are never superfine; and, above all, of the three great masters of style, De Quincey, Ruskin and Newman, who have evoked, as with an enchanter's wand, the sweetness and strength of the English speech. Dr. Newman's diction, polished *ad unguem*, is the very acme of simplicity and clearness; but how the colourless diamond blade flashes as he brandishes it on the battlefield of controversy! Ask the ghost of poor Kingsley, if you doubt its edge! If we must go to other writers to see the full breadth and sweep of our language—the majestic freedom of its unfettered movement—we must go to Newman to see what it can do when it enters the arena a trained and girded athlete, every limb developed into its utmost symmetry, and every blow and every movement directed with definite purpose, and with most clear-sighted and deadly aim.

Again, how vividly are the seer-like nature and the exaggerated individualism of Emerson—his serene, Jove-like composure, and icy calmness of temperament—manifested in his disconnected sentences, which some wit has compared to Lucretius's "fortuitous concourse of atoms!" Of all the masters of language (we do not say of

style), he is the least sequacious. His verbal troops, like the old Continentals, his townsmen, who fought Pitcairn, never fire in companies, or even by platoons, but each "on his own hook," man by man. Individually complete and self-poised, like his ideal man, his sentences are combined merely by the accident of juxtaposition, and touch without adhering, like marbles in a bag. His language is densely suggestive, and abounds in those focalizing words and turns of expression peculiar to our day, which condense many rays of thought into one burning phrase. It abounds, too, in those happy phrases which are

"New as if brought from other spheres,
Yet welcome as if known for years."

Hardly any writer surpasses Emerson in what has been called the "polarization of language," by which effete terms are reinforced, and ordinary words are put to novel uses, and charged with unusual powers. But his style lacks repose, and, like Seneca's, wears by excessive epigram and point. Its main defect is, that, as De Quincey says of Hazlitt's manner, "it spreads no deep diffusions of colour, and distributes no mighty masses of shadow. A flash, a solitary flash, and all is gone." It is said that Coleridge, when told that Klopstock was the German Milton, said: "A *very* German Milton indeed!" A like exclamation is provoked when one hears the remark, so thoughtlessly made—than which nothing marks more clearly the prevalent insensibility to the differences of style—that Emerson is "the American Carlyle." As well might one compare the gentle gales that fan Lake Walden to the hoarse blast that blows in winter from Ben Lomond; the stream that ripples along the Concord meadows "with propulsion, eddy, and sweet recoil," to the brawling and turbid Highland torrent; the notes of the robin to the scream

of the northern eagle; or the cold, pitiless radiance of a sunlit iceberg to the lurid glare of the volcano, blazing with tyrannic fury through the silence and shadows of midnight, and hurling its sulphureous blackness against the starry canopy.

Of the few partial exceptions to the law that we have mentioned, Goldsmith is one of the most striking. Never was there a greater chasm between the man and the writer. Why is it that, carousing at college with midnight revellers and ale-house tipplers—fond all his life of coarse pleasures and gambling—at once a dandy and a sloven in his dress and life—he is never either finical, or coarse and slovenly in his writing? Whence come the artless but unapproachable graces of that style, as chaste as it is musical and fascinating? Why does his pen never for a moment betray the disorder of his life? "Like the squalid silk weaver, sending forth piece after piece of the purest white tissue, "poor Noll," says an English writer, "sends forth from his garret only the most snowy-white products, and circumstances of his outer life which strangely contrast with his inner life of thought. Irish to the backbone in his temperament and all his ways of life, he is yet English in almost every characteristic of his writings."

It is in this idiosyncratic peculiarity, this indefinable something which distinguishes one writer from another, and which can neither be imitated nor forged, that lies the priceless value of style. It is not, as it has been too often regarded, a cloak to masquerade in, a kind of ornament or luxury that can be indulged in at will—a communicable trick of rhetoric or accent—but the pure outcome of the writer's nature, the utterance of his own individuality. This sensibility of language to the impulses and qualities of him who uses it—its flexibility in accommodating itself to all the thoughts,

feelings, imaginations and aspirations which pass within him, so as to become the faithful expression of his personality, indicating the very pulsation and throbbing of his intellect, and attending on his own inward world of thought as its very shadow—and, strangest, perhaps, of all, the magical power it has to suggest the idea or mood it cannot directly convey, and to give forth an aroma which no analysis of word or expression reveals—is one of the marvels of human speech. Because language is thus the faithful mirror of our natures—because expression is literally the pressing out into palpable form of that which is already within us—it is plain that nothing can be more foolish than imitation. In the old text-books of rhetoric it used to be stated, in the words of Johnson, that whoever wished to obtain a perfect style should give his days and nights to the study of Addison. But we now know that a good style can never be acquired by aping the manner of another. The only effect of such copying is to annihilate individuality by substituting process for inspiration, mannerism for sincerity, and calculation for spontaneity. It was because he understood this that Rembrandt had such a horror of imitation, and condemned his pupils to solitary study, lest they should borrow one from another. All the virtues of style are, in their roots, moral. They are a product, a reverberation, of the soul itself, and can no more be artificially acquired than the ring of silver can be acquired by lead. If a man has a vulgar mind, he will write vulgarly; if a noble nature, he will write nobly: in every case, the beauty or ugliness of his moral constitution, the force and keenness or the feebleness of his logic, will be imaged in his sentences. "Language," as Goldwin Smith says, "is not an instrument into which if a fool breathe it will make melody;" to which we may

add, that it matters little that your violin is a genuine Cremona, and the warranted workmanship of Straduarus, unless you have the music of Paganini in your soul, with his masterly touch and his exquisite nervous organism, in vain will you seek to conjure from the instrument the startling notes, the tones of ecstasy or anguish, which the great magician of the bow evokes from its strings.

Of the various elements of the literary art, the most important are five, namely: simplicity, freshness or attractiveness, arrangement, choice of words, and careful preparation and finish. We might have added *clearness*, were not its necessity obvious; as Dr. Jortin says, "the man that is not intelligible is not intelligent." Our space will not allow us to dwell upon these qualities, and we must content ourselves with a word or two. Of all these elements of good writing, *freshness* is the most vital; it is the quality which is felt when we turn from Blair's page to Bushnell's, from Prescott to Motley. The best recipe for the acquisition of this quality is to keep one's life fresh and vigorous. To have one's page alive, he must be alive himself. He must be constantly acquiring fresh thought; else he will only dexterously repeat himself—become his own echo. We have not space to consider the next or logical element of style, important as it is, and pass, therefore, to the *choice of words*, of which it may be said that the simplest and most idiomatic are generally best. Joubert has well said that it is by means of familiar words that style takes hold of the reader and gets possession of him. "They beget confidence in the man who uses them: because they shew that the author has long made the thought or the feeling expressed his mental food; that he has so assimilated and familiarized them that the most common expressions suffice him in order to ex-

press ideas which have become everyday ideas to him by the length of time they have been in his mind." What is the secret of Spurgeon's power? Is it not that he uses the plain, nervous, sinewy Saxon; the vocabulary, not of books, but of the fireside and the market-place—not of the university, but of the universe? "The devil," he once said, "does not care for your dialectics and eclectic homiletics, or German objectives and subjectives; but pelt him with Anglo-Saxon in the name of God, and he will shift his quarters." In France the least lettered people make use of the same words as the greatest writers. Malherbe said, that he took his words from the porters of the grain market. Stendhal had such a horror of emphasis that, before setting himself to write, he read a page of the civil code. One of the chief faults of Gladstone, as a writer, is a kind of "dim magnificence" of style; he has a vast command of language which is grave and majestic, but of vague and uncertain meaning.

But what is meant by simplicity of style? Does it exclude beauty or tasteful ornamentation? Is the best style a colourless medium, which, like good glass, only lets the thought be distinctly seen; or may it, like a painted window which tinges the light with a hundred hues, afford a pleasure apart from the ideas it conveys? "He was so well dressed," said a person to Beau Brummell, "that everybody turned to look at him." "Then," said Brummell, "he was not well dressed." So of the garb of thought, it is said by some persons that it is most perfect when it attracts no attention to itself, and we see only the ideas which it habitates. What is the distinctive excellence of Scott? Is it not that we rise from his works with a most vivid idea of what is related, and yet are unable to quote a single phrase in the entire narration? Well-

dressed men and women are not those whose minds are absorbed in the art of dressing, but those who give simply the general impression that they are well-dressed, and nothing more. We do not look to tailors, milliners and mantua-makers for the best models of costume. That this is true of a large class of writings—those which simply convey information, or seek to explain rather than to suggest or symbolize truth, and depict it in attractive forms—all persons will admit; but that it is true of other kinds of composition—those which are generic to poetry, and address themselves to the imagination, and through the imagination to the reason—we are far from believing. There are many literary compositions which, if summoned to give an account of themselves, to explain their *raison d'être* upon any utilitarian principles, would be sorely puzzled. It is something above all practical use, like the song of the lark, the colours of the rainbow, the butterfly's painted wing, or the burning breast of the robin. Of all such writings style is the very essence. Scientific books may do without this charm, but these must please or go to the trunk-maker's. In a dwelling-house or a shop we are content with plain geometrical lines and rectangular proportions. But, to use the illustration of another, when the painter puts on his canvas an old legendary castle—some illustration of a scene which heroes have trodden or poets have sung—we not only pardon, but expect a different treatment. Then we are delighted if the moss and the ivy creep up the sides of the time-stained structure—if the thunder-cloud rests upon the ruined battlements, and the moonlight streams through the clefts of the crumbling walls, and we catch sight of smooth lawns and nooks of bright garden, and the gleam of a distant river, down which the eye loses itself in the woods. We cannot agree, therefore, with those who make

it a canon of style that, in writing, one's only aim should be to express his ideas as simply as possible. He should also try to express them as vividly and as elegantly as possible. Simplicity is no more inconsistent with elegance than is ornament with strength. The Damascus blade cuts none the less keenly because it is polished, nor is a column less strong when its sides are fluted and its capital carved. The plumage that makes the beauty of the eagle supports it in its flight. The "Provincial Letters" and the writings of Courier are examples of perfect simplicity and of perfect style. If a writer has sufficient wealth of imagination to justify an exhibition of his riches, we need not fear that the groundwork of good sense will be slighter for the delicate arabesques and exquisite traceries with which he beautifies his useful products. On the contrary, as Bulwer has said, "the elegance of the ornament not unfrequently attests the stoutness of the fabric. Only into the most durable tissues did the Genoese embroiderers weave their delicate tissues of gold; only on their hardest steel did the smiths of Milan damaskeen the gracious phantasies which still keep their armour among the heirlooms of royal halls."

To say, as some do, that the all-sufficing aim of writing is to make one's self understood with the smallest expenditure of words, is to adopt a Board of Trade or Corn Exchange standard. There are themes which require that we should draw upon the prismatic powers of language, and evoke its hidden melodies. Words can yield a music as thrilling as the strings of any instrument; they are susceptible of colours more gorgeous than the hues of sunset; they are freighted with associations of feeling which have gathered about them during hundreds of years; and, therefore, to use them for the conveyance of ideas only, as one con-

veys goods in a waggon, is not enough. Such a rule, if adopted, would reduce all our literature to the dull level of a Traveller's Guide—to the vocabulary of a courier, and the eloquence of an almanac. Arrangement and repetition, harmony and illustration—every grace and every charm—all that makes "L'Allegro" and the "Castle of Indolence," "The Stones of Venice" and "The Marble Faun," what they are—would be wanting. The cup you drink from, the dagger-hilt you handle, are not more useful though they be chased by Benvenuto Cellini; but was Cellini's labour useless? The truth is, however, that these devices and beauties of style, which are supposed to be separable from the thought, are not mere distinct decorations, but a part of its vivid presentation. Even in reading purely useful works, who has not a hundred times lamented their lack of style? Who ever read Grote's Greece without wishing that its author had known something of the cadence of a period, or Butler's Analogy without wishing its sentences were less involved and elliptical? Who can doubt that Locke's meaning is often made needlessly difficult by the ruggedness of his style, and that many of the wrong inferences drawn since his death from his system, and which would have shocked him had they been published in his lifetime, were due to that lack of verbal precision which the culture of euphony insures? We cannot sympathize, therefore, with the feeling of the poet Rogers, whom a single superfluous word, like the crumpled rose-leaf on the couch of the princess, made restless and captious. It was one of his peculiar fancies that the best writers might be improved by condensation. In vain did one warn him that to strip Jeremy Taylor or Burke of their so-called redundancies overlaying the sense, was like stripping a tree of its blossoms and foliage in order to bring out the massive pro-

portions of its trunk. "There," he exclaimed one evening, after condensing one of Burke's noblest passages (in which every word has its appointed task), "there, concentrated as it now is, it would blow up a cathedral!"

We are aware that there are persons who have no appreciation of the graces of literary composition. They would have every sentence trained down to its fighting weight; not a particle of adipose tissue, but all sinew only, tense, close-knit—for use and not for beauty. So there are persons who cannot feel the difference between a sonata of Beethoven and the Battle-Cry of Freedom, between a gravestone-cutter's cherub and the masterpieces of Raphael. But what does this prove? Only that they lack a sense, that is all. Napoleon belonged to this class. "What is called style, good or bad," said he to Madame de Rémusat, "does not affect me. I care only for the force of the thought." As well might he have said: "I care nothing for the arrangement of my soldiers in battle; I care only for the energy with which they fight." The fighting power of soldiers depends upon the tactical skill with which they are handled; and the force of ideas depends upon the way in which the verbal battalions that represent them are marshalled on the battle-fields of thought.

The last element of style we have named is *completeness in preparation and finish*. The most brilliant intellect cannot do without an accumulated fund of facts and ideas. Even the poet, who seems neither to toil nor to spin—whose creative exuberance appears to be innate—can use only materials which have been stored in his brain during years of thought, reading, and observation. Before Johnson began the *Rambler* he had filled a commonplace book with thoughts for his essays. Addison amassed three folios of manuscript materials before

he began the *Spectator*; and when a new publication was suggested to him after the *Guardian* was finished, he replied: "I must now take some time *pour me délasser*, and lay in fuel for a future work." Frederick W. Robertson spent his leisure hours in the study of geology, chemistry, and other sciences, to gain the materials of thought and illustration, and to give freshness to his sermons; and John Foster, for the same purpose, rambled many hours in the woods and fields. Scott did not hesitate to spend the leisure of a week in settling a point in history, or in gathering up the details of a bit of scenery which he wished to work into a poem or a novel. Again, the mastery of any important subject demands time. It cannot be accomplished by pressure or cramming, or by the most heroic extempore endeavour. The subject must be brooded over from day to day, till, by the half-conscious, half-unconscious processes of thought, all that is unessential, incongruous, or foreign, has been sloughed off; till all difficulties, surveyed again and again from new angles of vision, have been resolved, and that which was at first but a faint suggestion of truth, has surrounded itself, by a kind of elective affinity of ideas, with appropriate imagery and illustration, and stands out, at last, in bold relief and in full proportions before the mental eye. Then how simple and lucid the statement, how luminous the exposition! The stream of thought runs so clear as almost to seem shallow; it glides so noiselessly that few suspect the depth, the volume, and the majestic sweep and force of its movement. It is because there is to-day so little hard thinking that we have so little good writing. The poverty of style is due largely to the very activity and restless impatience of modern thought. It is because thought and feeling do not have a brooding time—because

opinions and sentiments, hastily entertained, are not allowed to take root undisturbed and in silence, and to gain strength from mere length of tenure—that so few writers master the secret of apt and vivid expres-

sion. A man of even the highest ability can no more say, "Go to, I will make a great essay, poem, or novel," than he can say, "Go to, I will make a religion."

(To be continued.)

MENTAL TRAINING.

BY W. A. DOUGLASS, B.A., TORONTO.

THE address of Professor Robins, of Montreal, at the recent meeting in Toronto of the Provincial Teachers' Association, does not perhaps on the face of it appear so important as it really is. The greater part of the teacher's energies is directed to the development of the intellectual powers; but any one who has observed teachers while with their classes must have noticed how often a subject, intended to develop one faculty, has been so taught as to develop another faculty.

For what purpose do we teach Grammar? To enable the child to use his mother tongue correctly, is the usual reply; but this is a very subordinate use, and he who teaches grammar mainly for that purpose makes a serious mistake and hence misses the principal, because most important, object to be attained while drilling in this subject—the object being the development of the logical faculty, the reasoning powers.

We have seen a teacher, not a backwoods teacher either, tell a class that a certain word was a certain part of speech, for such and such authors said so, and at examination if the word was not so parsed dire results in the way of "plucking" or low marking would follow. Here all that the pupils knew was that certain doctors, profes-

sors, and authors, by some process unexplained, had arrived at a certain conclusion, and if the pupil crowded that fact into his memory sufficiently long to reproduce it on his examination paper, that would be taken as a sufficient test of his skill in logical analysis, for a test in parsing is truly such.

The comparison of passage with passage, the examination of the relation of that particular word under consideration to the other words in the sentence in order to ascertain what function it fulfils—all these processes, truly logical, were over-looked, and the pupil asked to accept the dictum of certain writers by faith and not by sight. Crutches to walk with, bladders to swim with, are just as well adapted to develop the confidence and strength of the walker or swimmer as this method of training to develop intellectual strength.

In other subjects we see the result of this same method of training. We believe in the tradition of the elders and make for ourselves popes whose infallibility we accept without question. When asked for the reason for the hope that is in us, we quote the church, the party, or the sect. What certain leaders, whether political, ecclesiastical or social, decide, that is wise enough for us, and we exhibit the confidence of the child who said

"that is so, for my mother said so, and she is right whether it is so or it isn't so." For children, such confidence is admirable; but men must put away childish things, and they must learn to reason for themselves. An examination of our educational system according to the method which Professor Robins had in view and which he wished to inculcate by his address would make a vast change in many of our favourite subjects. ¹ne

greater part of the work in many of our universities consists in a slavish dependence on the memory, cramming into the mind the ideas as found in certain authors. History, literature, science, languages and even a large part of the mathematics are made to depend entirely on this faculty, so that of two students, one with strong retentive powers and another with strong logical powers; the chances of success are with the former.

"'TIS BETTER TO BE GOOD THAN FAIR."

BY JAMES BERRY BENSEL.

In the broad summer's sun I stand, and you where spring-time posies blow,
While softly, thro' your shading hand, you peer toward the time of snow,
Toward the autumn's gold and brown, toward the summer's splendid crown.

O, little girl! I would that I for you so loud and clear might sing;
You'd turn your face toward the sky with faith to see a lark on wing,
And turning upward so your face, God on your brow might shed his grace.

I only breathe a simple thought, within my plain and homely rhyme,
The greatest battles ever fought are those unknown to fame and time.
None reads upon the army-roll the struggle of a faithful soul.

To fight by day, to war by night, to plot and plan to hold and keep
Your lily soul in garments white, amid base things that crawl and creep,
To walk unstained in every place, with God's great glory on your face.

My little girl with sunlit hair, and spring-time shining through your eyes,
'Tis better to be good than fair, 'tis better to be true than wise.
Bear this in mind for me—he wins the noblest fight who slays his sins.

ARTS DEPARTMENT.

ARCHIBALD MacMURCHY, M.A., MATHEMATICAL EDITOR, C. E. M.

Our correspondents will please bear in mind, that the arranging of the matter for the printer is greatly facilitated when they kindly write out their contributions, intended for insertion, on one side of the paper ONLY, or so that each distinct answer or subject may admit of an easy separation from other matter without the necessity of having it re-written.

UNIVERSITY OF TORONTO,
ANNUAL EXAMINATIONS, 1881.
PROBLEMS (ALL THE YEARS).

Solutions by ANGUS MACMURCHY. (See C. E. MONTHLY for May-June, 1881.)

1. If a point O be taken in the interior of an equiangular triangle ABC , and if we drop perpendiculars OH, OI, OL on the three sides, the sum of these three perpendiculars is equal to the altitude of the triangle. (To be solved by geometry.)

Let OH, OI , etc., be perpendiculars on BC, CA , etc. Draw NON', MOM', POP' parallel to BC, AB and AC . Then by similar triangles, AD being the perpendicular on BC from A ,

$$\frac{OM}{OH} = \frac{AB}{AD}, \quad \frac{OM'}{OI} = \frac{AB}{AD}, \quad \frac{OP}{OL} = \frac{AB}{AD}.$$

Now, $OM = BN, OM' = PA, OP = PN$,

$$\therefore \frac{OH + OI + OL}{BN + NP + PA} = \frac{AD}{AB},$$

$$\therefore OH + OI + OL = AD.$$

2. Find θ and ϕ from the equations,

$$p \sin^2 \theta - q \sin^2 \phi = p, \quad p \cos^2 \theta - q \cos^2 \phi = q.$$

Investigate whether θ, ϕ can both be real for any real values of p and q .

$$q - p = p(\cos^2 \theta - \sin^2 \theta) - q(\cos^2 \phi - \sin^2 \phi) \\ = p(\cos^2 \theta - \sin^2 \theta) - q(\cos^2 \phi - \sin^2 \phi).$$

$$\therefore p \cos^2 \theta = q \cos^2 \phi.$$

$$\therefore \cos \theta = \left\{ \frac{q}{p} \left(\frac{q}{q-p} \right) \right\}^{\frac{1}{2}}, \quad \cos \phi = \left\{ \frac{p}{q-p} \right\}^{\frac{1}{2}}.$$

If p and q be both positive or both nega-

tive, then θ and ϕ are real or imaginary according as $q > < p$. If p be positive and q negative, or *vice versa*, then $p > < q$, θ and ϕ are both imaginary.

3. If lines be drawn from the angles of a triangle ABC to the centre of the inscribed circle cutting the circumference in D, E, F , shew that the angles DEF of the triangle formed by joining these points are respectively equal to

$$\frac{\pi + A}{4}, \quad \frac{\pi + B}{4} \text{ and } \frac{\pi + C}{4}.$$

Let O be the centre of the inscribed circle, then angle $EDF = \frac{1}{2}$ angle $BOC =$

$$\frac{1}{2} \left\{ \pi - \frac{B}{2} - \frac{C}{2} \right\} = \frac{1}{2} \left\{ \pi - \frac{1}{2}(\pi - A) \right\} = \frac{1}{4}(\pi + A).$$

4. Let $a_1, a_2, a_3 \dots$ be the lengths of the sides of a polygon $ABCD \dots$ inscribed in a circle, $p_1, p_2 \dots$ the lengths of the perpendiculars from any point P in the circle on the considered position. Then if the polygon be not reëntering, and if P be on the smaller arc cut off by a_1 ,

$$\frac{a_1}{p_1} = \frac{a_2}{p_2} + \frac{a_3}{p_3} + \dots + \frac{a_n}{p_n}.$$

Take a triangle ABC inscribed in a circle, P any point on the arc AB , then letting fall perpendiculars $PP_1 = p$ on $AB = a_1, PP_2 = p_2$ on $BC = a_2, PP_3 = p_3$ on $AC = a_3$, it is well known that the feet of these perpendiculars lie in a right line, and since the angle between any two lines equals angle between perpendiculars on those lines, we have since

$$\triangle PP_2P_1 + \triangle PP_1P_3 = \triangle PP_2P_3. \\ p_1 p_2 \sin B + p_1 p_3 \sin A = p_2 p_3 \sin C.$$

$$\text{But } \frac{\sin B}{a_3} = \frac{\sin A}{a_2} = \frac{\sin C}{a_1},$$

$$\therefore p_1 p_2 a_3 + p_1 p_3 a_2 = p_2 p_3 a_1,$$

$$\text{or } \frac{a_1}{p_1} = \frac{a_2}{p_2} + \frac{a_3}{p_3}.$$

To apply this to a case of polygon, join AC ; let $AC = q$, and $b_1 =$ perpendicular from A on AC .

$$\text{Then } \frac{a_1}{p_1} = \frac{a_2}{p_2} + \frac{b_1}{q_1}.$$

$$\text{Similarly, } \frac{b_1}{p_1} = \frac{a_3}{p_3} + \frac{b_2}{q_2},$$

$$\frac{b_2}{p_2} = \frac{a_4}{p_4} + \frac{b_3}{q_3},$$

.....

$$\frac{b_{n-1}}{p_{n-1}} = \frac{a_n}{p_n} + \frac{b_n}{q_n},$$

$$\frac{b_{n-3}}{p_{n-3}} = \frac{a_{n-1}}{p_{n-1}} + \frac{a_n}{p_n};$$

$$\text{add, and } \frac{a_1}{p_1} = \frac{a_2}{p_2} + \frac{a_3}{p_3} + \dots + \frac{a_n}{p_n}.$$

5. Prove that

$$\tan \frac{\pi}{2^{n+1}} \left\{ \tan \frac{\pi}{2^{n+1}} + 2 \tan \frac{\pi}{2^n} + \dots + 2^{n-2} \tan \frac{\pi}{2^3} + 2^{n-1} \cot \frac{\pi}{4} \right\} = 1.$$

$$\text{Since } 2 \cot 2A = \frac{\cot^2 A - 1}{\cot A} = \cot A - \tan A,$$

$$\therefore \cot A = \tan A + 2 \cot 2A \\ = \tan A + 2 \tan 2A + 2^2 \cot 2^2 A = \text{etc.}$$

$$\therefore \cot \frac{\pi}{2^{n+1}} = \tan \frac{\pi}{2^{n+1}} + 2 \tan \frac{\pi}{2^n} + 2^2 \tan \frac{\pi}{2^{n-1}} \\ + \dots + 2^{n-2} \tan \frac{\pi}{2^3} + 2^{n-1} \cot \frac{\pi}{4},$$

$$\text{or } 1 = \tan \frac{\pi}{2^{n+1}} \left\{ \tan \frac{\pi}{2^{n+1}} + 2 \tan \frac{\pi}{2^n} + \dots + 2^{n-2} \right\}.$$

N.B.—This problem may also be solved from the identity

$$\sin x = 2^n \cos \frac{x}{2} \cos \frac{x}{2^2} \dots \cos \frac{x}{2^n} \sin \frac{x}{2^n},$$

by taking logs of both sides, differentiating with respect to x , and putting $x = \frac{\pi}{2}$.

6. If $\frac{bx+cy+az}{cx+ay+bz} = 1$, shew that

$$\frac{b-c}{cy-bz} = \text{anal.} = \text{anal.}$$

we have

$$c(bx+cy+az) + abz = c(cx+ay+bz) + abz$$

$$\therefore abz - bcx - acz + c^2x = c^2y - acy - bcz + abz,$$

$$\text{i.e., } (b-c)(az-cx) = (c-a)(cy-bz),$$

$$\therefore \frac{b-c}{cy-bz} = \frac{c-a}{az-cx} = \text{etc. in same way.}$$

$$7. \text{ Solve } x^2 - yz = a. \quad (1)$$

$$y^2 - zx = b. \quad (2)$$

$$z^2 - xy = c. \quad (3)$$

(2) \times (3) - (1)² gives

$$x(3xyz - x^3 - y^3 - z^3) = bc - a^2, \text{ etc.} = \text{etc.}$$

$$\therefore \frac{x}{a^2 - bc} = \frac{y}{b^2 - ca} = \frac{z}{c^2 - ab} = \lambda \text{ say.}$$

from (1) $\lambda = (a^3 + b^3 + c^3 - 3abc)^{\frac{1}{2}}$,
whence x, y and z .

8. If n be any integer > 1 , shew that

$$\frac{\lfloor \frac{2n}{n} \rfloor}{n} < \left\{ 8n^2(2n^2 - 1) \right\}^{\frac{n}{3}}.$$

$$\text{We have } \frac{a_1 + a_2 + \dots + a_n}{n} > (a_1 a_2 \dots a_n)^{\frac{1}{n}},$$

$$\therefore \frac{n+1+n+2+\dots+2n}{n} > \left\{ \frac{\lfloor \frac{2n}{n} \rfloor}{n} \right\}^{\frac{1}{n}}$$

$$\text{or } \left\{ \frac{3n+1}{2} \right\}^n > \frac{\lfloor \frac{2n}{n} \rfloor}{n}.$$

$$\text{Now } \left\{ \frac{3n+1}{2} \right\}^3 < 8n^2(2n^2 - 1), n \text{ any}$$

integer > 1 for if $n=1$, the above inequality becomes $2^3=8$, but for all higher integral values of $n > 1$ this inequality holds,

$$\therefore \text{a fortiori } \frac{\lfloor \frac{2n}{n} \rfloor}{n} < \left\{ 8n^2(2n^2 - 1) \right\}^{\frac{n}{3}}.$$

9. Examine the statement that every even number is the sum of two prime numbers, and every odd number the sum of three prime numbers.

The propositions appear to be true for all primes up to 100. We do not know of any formula expressing primes only, such as required here. The converse, however, is very obvious.

10. Sum the series

$$\frac{1^2}{2} + \frac{2^2}{4} + \frac{3^2}{6} + \dots \text{to infinity.}$$

$$\begin{aligned} \text{Let } 4S &= 4 \left\{ \frac{1^2}{2} + \frac{2^2}{4} + \dots \right. \\ &\quad \left. + \frac{n^2}{2n} + \dots \right\}, \\ \frac{4n^2}{2n} &= \frac{2n(2n-1)}{2n} + \frac{2n}{2n} = \frac{1}{2n-2} \\ &\quad + \frac{1}{2n-1}, \end{aligned}$$

$$\begin{aligned} \therefore 4S &= \frac{1}{0} + \frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots \\ &= \infty. \therefore S = \frac{\infty}{4} \end{aligned}$$

Sum the series

$$\tan^{-1} \frac{4}{1.5} + \tan^{-1} \frac{6}{5.11} + \tan^{-1} \frac{8}{11.19} = \dots$$

to n terms.

This question appears to be erroneous. We suggest that it should be

Sum the series

$$\tan^{-1} \frac{4}{1+1.5} + \tan^{-1} \frac{6}{1+5.11} + \tan^{-1} \frac{8}{1+11.19} + \dots \text{to } n \text{ terms.}$$

$$\tan^{-1} \frac{4}{1+1.5} = \tan^{-1} \frac{5-1}{1+1.5} = \tan^{-1} 5 - \tan^{-1} 1$$

$$\tan^{-1} \frac{6}{1+5.11} = \tan^{-1} 11 - \tan^{-1} 5,$$

etc. = etc.,

$$\tan^{-1}$$

$$\left\{ \frac{2(n+1)}{1+(n^2+n-1)\{(n+1)^2+(n+1)-1\}} \right\}$$

$$= \tan^{-1} \{(n+1)^2+(n+1)-1\}$$

$$- \tan^{-1}(n^2+n-1),$$

$$\therefore S_n = \tan^{-1} \left\{ \frac{n(n+3)}{(n+1)(n+2)} \right\}.$$

11. P, Q, R, S are the middle points of the sides of a quadrilateral taken in order; the intersection of PR and QS lies in the same straight line with the points which bisect the diagonals of the quadrilateral.

Let $ABCD$ be the quadrilateral, take O

point of intersection of AB and CD produced as origin, and let

$$\frac{x}{2a} + \frac{y}{2b} = 1 \text{ be } n \text{ of } AD,$$

$$\frac{x}{1a^1} + \frac{y}{2b^1} = 1 \text{ } n \text{ of } BC.$$

Then UV middle points of diagonals are (a, b^1) and (a^1, b) . Also, T the intersection of PR and QS is $\frac{a+a^1}{2}, \frac{b+b^1}{2}$; $\therefore T$ lies on the right line UV , and bisects it.

12. An ellipse is inscribed in any triangle, and the polars of the middle points of the sides are drawn; the triangle formed by the three polars is of constant area.

If S be the area of the triangle formed by the three lines, $a_1x + b_1y + c_1 = 0$,

$$a_2x + b_2y + c_2 = 0, \quad a_3x + b_3y + c_3 = 0;$$

then

$$2S = \frac{(a_1, b_2, c_3)^2}{(a_2, b_3)(a_3, b_1)(a_1, b_2)} \quad (\text{Salmon's Conics, } \S 39, \text{ 6th ed.})$$

$$(a_1, b_2, c_3) \text{ standing for } \begin{vmatrix} a_1 & a_2 & a_3 \\ b_1 & b_2 & b_3 \\ c_1 & c_2 & c_3 \end{vmatrix}.$$

and so for (a_2, b_3) , etc.

$$\text{Let } \frac{xx_1}{a^2} + \frac{yy_1}{b^2} - 1 = 0, \text{ etc., be the polars}$$

of points $P(x_1, y_1), Q(x_2, y_2), R(x_3, y_3)$, with respect to the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} - 1 = 0$, and let

$$\Delta = \begin{vmatrix} \frac{x_1}{a^2} & \frac{y_1}{b^2} & -1 \\ \frac{x_2}{a^2} & \frac{y_2}{b^2} & -1 \\ \frac{x_3}{a^2} & \frac{y_3}{b^2} & -1 \end{vmatrix} = -\frac{1}{a^2 b^2} \begin{vmatrix} x_1 & y_1 & 1 \\ x_2 & y_2 & 1 \\ x_3 & y_3 & 1 \end{vmatrix}$$

$$= -\frac{2[\text{area } PQR]}{a^2 b^2}.$$

$$\therefore 2S = \frac{4}{a^2 b^4} (PQR)^2 = \frac{(x_2, y_2)(x_3, y_3)(x_1, y_1)}{a^2 b^4}$$

$$\therefore S = \frac{a^2 b^2 (PQR)^2}{4(QOR)(ROF)(POQ)}$$

where O is centre of the ellipse. Now, let

ABC be a triangle circumscribed to an ellipse, the eccentric angles of the points of contact being α, β, γ ; let P, Q, R be the middle points of its sides, and O as before centre of the ellipse. If $x_1, y_1, x_2, y_2, x_3, y_3$ be the co-ordinates of A, B, C , then

$$8(QOR) = \begin{vmatrix} -1, x_1, y_1 \\ 1, x_2, y_2 \\ 1, x_3, y_3 \end{vmatrix}$$

$$\text{and } \frac{x_1}{a} = \frac{\cos \frac{\beta + \gamma}{2}}{\cos \frac{\beta - \gamma}{2}}, \quad \frac{y_1}{b} = \frac{\sin \frac{\beta + \gamma}{2}}{\cos \frac{\beta - \gamma}{2}},$$

whence substituting,

$$\text{area } QOR = \frac{ab}{4} \tan \frac{\beta - \gamma}{2}.$$

\therefore polar area = S

$$= \frac{16a^2b^2 [PQR]^2}{a^2b^2 \tan \frac{\beta - \gamma}{2} \tan \frac{\gamma - \alpha}{2} \tan \frac{\alpha - \beta}{2}}$$

$$\text{But } -b \tan \frac{\beta - \gamma}{2} \tan \frac{\gamma - \alpha}{2} \tan \frac{\alpha - \beta}{2} = (ABC) = 4(PQR);$$

$$\therefore \text{polar area} = \frac{16a^2b^2(PQR)^2}{4a^2b^2(PQR)} = (ABC) = \text{area of original triangle.}$$

13. Through any two points A and B on an equilateral hyperbola lines are drawn parallel respectively to the polars of B and A : a circle may be described passing through the intersection of these lines, through A and B , and through the centre of the hyperbola.

Let A, B be points on the hyperbola, $xy=c$, centre O , then equations of sides of quadrilateral $OACB$ are

$$OA, \frac{x}{x_1} - \frac{y}{y_1} = 0; \quad AC, \frac{x}{x_1} + \frac{y}{y_1} = C';$$

$$OB, \frac{x}{x_2} - \frac{y}{y_2} = 0; \quad BC, \frac{x}{x_2} + \frac{y}{y_2} = C'';$$

whence α, α' being angles AO, B, ACB

$$\tan \alpha = \frac{-\frac{1}{x_1y_2} + \frac{1}{x_2y_1}}{\frac{1}{x_1x_2} + \frac{1}{y_1y_2}};$$

$$\tan \alpha' = \frac{+\frac{1}{x_1y_2} - \frac{1}{x_2y_1}}{\frac{1}{x_1x_2} + \frac{1}{y_1y_2}};$$

$$\therefore \tan \alpha + \tan \alpha' = 0; \quad \alpha + \alpha' = \pi.$$

\therefore Quadrilateral $OACB$ is inscriptible in a circle.

NOTE.—We are indebted to Professor Frisby for the solution of this problem.

14. The locus of the foot of the perpendicular drawn from the focus of a parabola on the normal is another parabola.

Let $y^2 = 4mx$ be = n of parabola. The length of perpendicular from $(m, 0)$ on normal $2m(y - y') + y'(x - x') = 0$ is

$$\rho = \frac{y'(x' + m)}{\sqrt{y'^2 + 4m^2}} = \sqrt{\{x'(x' + m)\}}.$$

Now, θ being angle made with the axis by perpendicular,

$$\sin \theta = \sqrt{\frac{m}{x' + m}}, \quad \cos \theta = \sqrt{\frac{x'}{x' + m}},$$

$$\therefore \rho = \frac{m \cos \theta}{\sin^2 \theta}$$

$$\therefore \rho^2 \sin^2 \theta = mp \cos \theta$$

$$y^2 = mx = n \text{ of locus.}$$

RECENTLY in a book-store in the City of Mexico, a tourist from Yankeeland found a Spanish history of the United States, with the imprint of a Madrid publishing house. Its five hundred pages of miscellaneous reading matter furnished him with much very curious information. Lincoln's emancipation proclamation was made to relate to Indians instead of negroes. An incident of Indian

bravery in King Philip's time was located in the War of the Rebellion. The characters in "Mrs Henriquetes Becker Stowe's" "Uncle Tom's Cabin" were given as historical. The pictures were as queer as the text. Lincoln was shewn with a cabinet party composed of Indian chiefs, New York was a small straggling village, and Washington had a monarch's crown on his head.

CONTEMPORARY OPINION ON EDUCATIONAL TOPICS.

HARVARD LECTURES ON
PEDAGOGY.*

TEACHERS AND NORMAL SCHOOLS.

THE professor said, in opening, that the German system of training teachers had been adopted partially by France and the United States, though it had reached a higher state of perfection in Germany than elsewhere. As regards our own country, or that part of it where public education is in any state of advancement, we have better buildings for schools, better organization, and a better class of men and women engaged in teaching, than in France or England. Still we are deficient as compared with Germany, and the nature of that deficiency is indicated in a saying that has been frequently quoted, that "in America, as brick and mortar accumulate, teaching begins;" that is, with us externals are prior and superior to internal administration. In Germany it is otherwise; the system is paramount, and external conditions quite subordinate. The school-work there has been uniform. An element of permanency and steadiness characterizes the administration. Teachers' salaries, though small as compared with ours, go on without change for twenty years. The wisdom of the statesmen who conduct the government, and the profession of teachers of every grade, is combined in the matter of school administration, and all act together upon a common understanding and to a common end. The most sensitive barometer of the tendency of affairs in any country is the condition of the schools. In them all classes have a common concern, and this because the schools develop individual character, and the totality of individual character constitutes the national character. If even under a Monarchy the

prosperity of the country is recognized, as it is in Germany, to be bound up in the welfare of the schools, not less but more clearly should it be recognized in a Republic; and this consideration is the more urgent in view of the present and prospective social conditions of our own country.

The system of normal teaching in Germany so thoroughly permeates the whole, that cases are common of teachers who began teaching in the lowest grade of the primary schools, and rose through each successive grade, studying constantly meanwhile, and reaching at length the grade, first of student, and then of professor, in the best universities. This constant daily training in the art of instructing the minds of others found its proper fruition in teaching of the highest grade; and the earlier experience was not a loss but a gain to the teacher in his work as a professor in the university—the system of teaching being governed by common principles throughout. In all grades of instruction the stress is laid on these three elements—philology, psychology, and ethics. These are held to be fundamental, so much so, and so generally so, as regards teaching, that even clergymen have to pass an examination in them before being licensed to enter upon their profession. In adopting and adhering to this policy, the underlying assumption is that there is a science of teaching; if there is such a science, then teaching is a profession; if not, it is merely a handiwork.

The view which is taken of this vital question depends very much upon the system of philosophy which is generally accepted. In England and this country it has been founded very much on the theory of Locke and others of his school, that all knowledge is derivable through the senses; that the mind originally is but a piece of blank paper on which the senses may write, and that there is nothing

* By Prof. G. S. Hall. Reprinted from the *New England Journal of Education*.

in the mind that was not first in the senses. The antagonistic or rival theory recognizes that ideas are innate, and are to be developed by education as a germ develops by growth. According to Locke's theory, the aim of the teacher has been to present facts to the mind of the pupil, assuming that if the facts were all grasped and utilized by the mind, the work of the educator would be complete. The other theory aims not to force the facts upon the mind, but to stimulate or encourage the mind to the exercise of its innate powers.

The first question for the educator, then, is of psychology:—What is the human mind, how does it work, and what are its faculties? From the days of Aristotle to modern times a theory in regard to the operation of the mind has always been assumed—not always the same theory identically, but some theory and investigation into psychology has proceeded on that basis. In physics this method of searching for knowledge has long since been abandoned, and the study of any particular science is no longer conducted upon a theory accepted beforehand, but attention is given solely to the facts or phenomena. And herein is the application of psychology to education. While introspection is not disallowed wholly, the beginning is made by studying the life of infancy, for here certainly only the spontaneous and natural method in education has sway; and infancy is studied moreover upon the anthropological side, on the theory that each child passes through all the stages in its development that the race had passed through.

The idiosyncracies of the mind and insanity, especially of incipient stages, are fruitful fields of study in psychology. The study of physiology must go hand in hand with that of psychology, and the matter of physical education is always important, in order that in the work of education the physical force of the child may be economized. Under the normal system of education, and under a competent teacher, it will prove that the desire of the pupil to learn will outrun the desire of the teacher to convey knowledge. Such a teacher is a sympathetic

teacher—one who enters fully into the child's mind, and who does not fear that by coming down to the child's level in mental exercises and explorations he shall so lose his dignity that he cannot recover it; and if it happens that he has been one to whom the acquisition of knowledge has been a matter of difficulty rather than of ease, that experience of his own will stand him in good stead in respect to devising little expedients of help for the pupil, and removing little hindrances that a teacher whose experience as a student has been different might not apprehend or appreciate. The best quality in a teacher is a natural one, and a thorough teacher always makes a mission of his work.

ORAL COMPOSITION.

WE are indebted for this expressive term to Mr. G. W. Johnson, Head Master of the Hamilton Model School. In a paper which he read before the Wentworth Teachers' Association, and which was afterwards published in the CANADA EDUCATIONAL MONTHLY, he says:—"Oral composition *only* can be taught to junior classes, and it is of equal importance with written to more advanced classes. Pupils should be taught *both* methods, so that, in future life, they may write the simplest business letter without exposing their ignorance, and 'open their mouth without putting their foot in it.'" The whole of Mr. Johnson's suggestive essay, which will be found in the number of the above-mentioned magazine for May-June last, is worthy of the attention of all teachers, dealing, as it does, with a subject which has been as much neglected as it is of practical importance. In many schools, indeed, it may be said, the pupils are taught everything except to think and to express their thoughts with correctness, precision and ease. The master is satisfied if he obtains an answer to his question which is substantially accurate, without regard to the mode of expression. Sometimes the teacher himself sets a bad example by his own careless manner of speech, and thus, though grammar and composition are taught at stated hours, the real object of those studies is, in practice, forgotten.

The complaint, we know, is nothing new, nor are teachers generally unaware of the defect which gives occasion to it. Some of them have conscientiously endeavoured to grapple with the difficulty, and various plans have been tried for that purpose. Of most of these we have only heard, so that we cannot speak from experience of their success. But there is one method which we have had the pleasure of witnessing in operation, and which seems to be admirably adapted for the end in view. We refer to the system introduced a few years ago into Mrs. Lovell's "Young Ladies' Institute" [Montreal], and which has already yielded such excellent results. Its basis is the constant direction of training and study to preparation for the actual duties of life and society. The pupil's powers of thought having been exercised by reading and reflection, she is encouraged to express her own ideas in conversation. From time to time discussions are engaged in on matters connected with literature, history, art and the events of the day and, with every fresh effort, new confidence is won and a higher degree of excellence attained. Those of our readers who have been present at any of Mrs. Lovell's *conversazioni* cannot fail to have been surprised and pleased at the happy result of her training. It shews that the "Art of Conversation" can be really taught and made an unflinching auxiliary to instruction in all other branches. It is at once a stimulant to mental application and a test of progress, while it imparts to arduous duties an animation and a satisfaction which rarely accompany isolated study.

As we said, we can only write from personal knowledge of this single instance of an attempt to make school studies of practical value in social intercourse. Living in a large city, surrounded by persons of culture and refinement, several of whom were glad to second her efforts, Mrs. Lovell was able to

surmount some difficulties which, in other circumstances, might have proved a barrier to success. But even with these advantages no teacher need be told that the task was not an easy one. It is an undertaking which demands rare gifts, moral as well as mental. Besides those varied qualifications, without which it would be vain to hope for success, it requires patience, insight and the power of drawing out what is best in character and intellect. Such being the nature of the work, it is an interesting question whether the system could be beneficially adopted in ordinary schools. First of all, it would be necessary to make some modifications in the training of the teachers themselves. For, hitherto, in the course pursued, there has been little opportunity for the development of those powers on whose right exercise success would mainly depend. In fact, expression, as the co-efficient of knowledge, has been sadly neglected up to the present in English education. Elocution, though quite necessary, is a different thing. Debates, of the more public kind, are mostly monopolized by gentlemen, and, besides, skill in debate does not necessarily imply skill in conversation. The latter is a domestic and social art, and calls for a manner, a tone of voice, a logic and rhetoric which are quite alien to the public platform or club-room. Its culture, however, is no less necessary, but rather, as it serves the interests of a larger number, it is of much greater importance. That all educationists will eventually come not only to look at the matter from this standpoint, but to make "oral composition" one of their prominent studies, we have some reason to hope. If those who stand at the head of the profession lead the way, the rest will ultimately follow, and meanwhile it is something to know that one lady has made the experiment with success, and proved the practicability of the system.—*Montreal Gazette*.

PUBLIC SCHOOL DEPARTMENT.

[Contributed to, and under the management of, Mr. S. McAllister, Headmaster of Ryerson School, Toronto.]

ORDER.

BY J. O. MILLER, MADOC.

AMONG the many great questions of the day, perhaps none is of more importance to the teacher than how to obtain and maintain order. Of course by this we do not mean how often the use of the rod is necessary. Alas! those happy days have passed away; and there are probably few amongst us who could tell the exact number of diurnal floggings necessary to the maintenance of attention in the school-room. Doubtless many of us often long for the opportunity to give vent to the pent up vials, and to administer the strap all round; but our professional reputation is at stake, and we must perforce discover some other means of restraining the unruly spirits of both teacher and pupil.

It is comparatively easy to imagine perfect order. Any one who has seen a well-drilled regiment of soldiers go through the manual exercise can easily conceive a regiment of school-children doing the same thing. Theoretically, order is not hard to obtain. A few leading principles must be applied; directions must of course be given; commands must be issued; and the result is—confusion. *Quæ nocent docent*, and any teacher who has tried the above method can easily bear witness to the truth of the assertion. A few suggestions on this important point may therefore be of some value.

First, let us consider the subject as it affects the teacher. Good order depends upon the teacher, and upon him alone. It is perhaps superfluous to add that to obtain it requires long, strong, and continuous effort. How necessary therefore is it, that his bodily health should be perfect! We think that teachers are too apt to neglect this all-important fact. We often complain that we cannot teach so

well on wet, dismal days, as on bright ones; and often the fault is laid at the door of the children. Beyond a doubt, wet weather depresses the spirits, causes us to feel restless and ill at ease. If this is the case, how much more is it so when we are suffering from colds or other slight indisposition. The teacher should guard with the greatest care his bodily health. In order that the mental faculties may have full play, it is absolutely necessary that they be unencumbered by bodily ailments.

But this is not all; mental depression is worse than bodily affliction. How can the teacher hope for a successful day's work if he goes into the school-room with his mind pre-occupied. In order to obtain positive attention, wherein consists *order*, his flow of animal spirits must be good; all cares and anxieties must (for the time being, at least) be put aside; his whole soul must enter into his work. Discouragement and want of immediate success must be boldly met. The consideration of "ways and means" must never be allowed to occupy the mind during school-hours: keep these things for "home-work." Concentrate every effort on the subject under consideration. Be cheerful and hopeful. Do not let the balance of the mind be disturbed by anything. If we thought that teachers ever lost temper we should advise them not to do so; but of course they never do this; therefore, we wish to insist on the improvement of the temper rather than to advise against the loss of it.

Affability in the teacher is essential to voluntary obedience on the part of the children. School education is but a continuation of home training, and, except in rare cases, children have been accustomed to habitual kindness from their parents. When a child first comes to school it observes the teacher

to the exclusion of every one and everything else; and if it sees in him "the great unlovable," distrust and fear at once take possession of it, and a barrier is thus raised against its intellectual process, which it is very difficult to overcome. We think that teachers often neglect the fact that it is absolutely necessary for them to gain the affections and confidence of their pupils. To do this, it is not necessary, not even desirable, that endearing epithets should be used either in school or out of it. Uniform kindness is all that is required. Sympathy with a child's failings is sure to receive confidence in return; that accomplished, the key to its inmost nature is obtained. Gill says on this point, "Discipline animated by the spirit of kindness, is proverbial for its influence. It has charms for the worst natures, it has subdued the most obstinate tempers. Where it exists, the children will be incited to praiseworthy conduct, they will be put upon the path of self-improvement, offences will be prevented, unnecessary temptations will not be thrown in the way of the weak, and severity will be avoided—severity whether in exacting more than the children can bear, or in the infliction of brutal punishment." Very often the child is not a very pleasant object for the affectionate regard of the teacher, nevertheless its mind is subject to the same susceptibilities as that of the more favoured one, and both ought, in this respect, to be treated alike. Some teachers consider such treatment below their professional dignity. Grant this fallacy for the sake of argument. The question then arises—How is the very young child to be made to understand the rules of professional etiquette? No; the teacher who takes this ground is unworthy of the care of these little minds, and does not understand the wide scope of his profession.

But if the minds of the children are thus to be drawn out and educated, we must not neglect their bodily comforts. Of course ventilation plays an important part in this respect. How many of our schools possess that inestimable thing a good thermometer? We are inclined to think that in winter our school-rooms are kept too warm. And this

applies more especially to schools in rural districts. As a general thing, farmers keep their houses too hot, and when the children come to school they complain of the cold, if the school-room is not so warm as the house. They must be educated to this. We recall a case in our own experience. At the commencement of the very cold weather, the children complained of the coldness of the room, though the thermometer would register about 60° to 65° Fahr. They were told that it was not healthy for them to study hard in a very warm room. Before the winter was over, they would at once complain if the room happened to get over-heated. There can be no doubt that too great heat causes lethargy and dulness, and teachers would find the beneficial result of keeping a thermometer in the school-room.

Again, under the most favourable external circumstances, the busy little minds require variety and rest. The minds of young children will not bear the strain of continuous labour. They must have frequent relaxation. In a school where singing is taught—and we are sorry to see it taught in so few of our schools—a chorus, in which all can join, has a splendid effect. The little bodies are eased and rested by standing (or marching), while singing; the little minds are relieved; there is general relaxation; the exercise cannot be surpassed for its benefit to the lungs (on the assumption always that the room is well-ventilated); and the animation depicted in each face tells its worth. Another very good plan is to allow frequent recesses of one or two minutes—every three-quarters of an hour is sufficient. Our plan has been to allow the pupils in these intervals to turn round in their seats, and whisper quietly until the bell rings for work to recommence. This plan, besides the original idea of giving a rest, also does away with a great deal of talking which would otherwise be indulged in. These are only a few hints. The ingenious teacher will readily adapt and discover others perhaps more suited to his particular requirements. After all, the highest order is only obtained where pupil and teacher mutually recognize the fact that certain work is to be performed.

by each. If the pupil is certain that the teacher will do his part, he has by that alone a stimulus given him to do his share faithfully. On the part of the pupil there must be complete confidence towards the teacher; there must be affection, for children are properly ruled only through their affections; they must understand the meaning of the word *duty*, and be prepared to apply its principles to their work in the school-room. On the part of the teacher there must be a complete and even awe-inspiring sense of the greatness of his work, and of the responsibility resting upon him; there must be reciprocal confidence and affection; there must be uniform kindness and affability; there must be the complete absence of the least seeming partiality; we may go further, and say that there must be deep religious sentiment. When teacher and pupil are imbued with these things we may then, and not until then, look for perfect order in the school-room.

SHORT-HAND IN SCHOOLS.

FOR a hundred years men have been using the steam engine, for fifty years the locomotive, about thirty years ago telegraphing was adopted, almost yesterday the telephone was introduced, and the gain to the world from all these has been inestimable. Add to these photography, printing, the sewing machine, and the thousand and one appliances that utilize heat, light and electricity, and the mind is amazed at the contrast between the world of to-day and the world of the days of Cæsar.

What the locomotive is to the dray cart, what the telegraph is to the letter carrier, such is short-hand writing to the present system of long-hand. With simplicity in the form of the letter, with harmony between the sound and the spelling, the pencil or pen of the writer proceeds at a rapidity that keeps pace even with the tongue of the most ready speaker, and thoughts that come rushing with headlong force are caught on the wing, and ere they escape are pinned to the page.

Probably nothing could produce such a revolution in our educational system as the

introduction of the use of short-hand. The benefits would be threefold:

- 1st. Ease in learning to read.
- 2nd. Time saved in learning to spell.
- 3rd. Time saved in writing.

How much would be saved from the time, now far too short to give a youth an adequate training, it is impossible to state with accuracy. A president of one of our universities estimates that in the time which he spent learning to spell he could have learned a foreign language.

There is quite a demand for short-hand writers. Most of our large offices, legal or commercial, keep a writer skilled in this art. The manager of a bank, railroad, telegraph company, large business firm, or law office, can get through his correspondence in one-fifth the time that it would require if he did not use this excellent art.

So great would be the benefit from its adoption that our educational authorities should commence its introduction at once, with the ultimate aim of using it universally.

In all our cities and towns where teachers can be obtained, there is no reason why trustees should not see that instruction is given in this subject. French, German, and many other subjects are taught that do not possess half the claim for public recognition that phonography does. The great obstacle that prevents its introduction is simply an indolent conservatism.

W. A. D.

TORONTO, September, 1881.

EDUCATION IN ENGLAND.

THE Annual Report of Earl Spencer and Mr. Mundella, the heads of the Education Department in England, on the condition of Elementary Education for the year ending August 31st, 1880, is before us. From it we learn that there were in that year 17,614 schools in England and Wales under the charge of 31,422 certificated teachers, 7,652 assistant teachers, and 31,570 pupil teachers. The number of scholars registered was 3,895,824, and the number in average attendance 2,750,916, or 71 per cent. of the registered attendance. Of those in attendance 54 per cent. were boys and 46 per cent.

girls; 29 per cent. were under seven years of age, 37 per cent. between seven and ten, and 34 per cent. above ten. It is gratifying to know that the attendance in the upper classes is increasing. About one in every nine of the whole population of England and Wales attends school regularly, the actual figures being 10.8 per cent. The cost for educating each scholar in average attendance was \$10.42. The salaries of male teachers averaged \$590, of female teachers, \$356. The Report notices the fact that there is an increasing proportion of the latter class. The average cost of school accommodation, including site, for each scholar in average attendance was \$26. Military drill is taught to boys in 1,203 schools, cookery to girls in 276 schools, and singing by ear to 85.14 per cent. of all the scholars. School accommodation was provided for above four million scholars, so that there is no longer a want of the necessary means of acquiring the elements of education in the country.

The Report is a very encouraging one, inasmuch as it shews an improvement in almost every item, even in that of teachers' salaries.

TORONTO PUBLIC SCHOOLS.

Special Examination, for Mr. Alderman Hallam's Medals, July 4, 1881.

CANADIAN HISTORY—FIRST DIVISION.

1. Name three of the earliest explorers of Canada, the countries from which they came, and the parts they visited, with dates.
2. State briefly what you know of the United Empire Loyalists.
3. Sketch in a few words the career of General Brock.
4. By what Act, and for what purpose, were the Clergy Reserves established? How were they finally disposed of?
5. (a) In the Dominion Parliament, what course is usually taken by the Ministry when defeated?
(b) What power does the House possess, by the exercise of which Ministers would be forced to take this course?
(c) Was this power held by the House of Assembly under the *Constitutional Act*? Explain fully.

6. What were the chief causes that led to the Canadian Rebellion?

7. By what Act was Confederation effected, what provinces were united under it, and what additions have since been made?

8. Explain the following terms as used in Parliament:—Bill, Act, to adjourn, to prorogue, to dissolve.

9. By whom are the following appointed: Governor-General, Lieutenant-Governors, Dominion Senators, Speaker of the Senate, Speaker of the House of Commons?

10. Give the dates of the following events in Canadian history:—Confederation, introduction of Parliaments, first Fenian raid, taking of Quebec.

CANADIAN GEOGRAPHY.

1. How many counties are there in the Province of Ontario? Name those bordering on Lake Ontario.
2. Going by the Grand Trunk from Toronto to London, through what counties would we pass? Name the principal towns on Lake Huron and the Georgian Bay.
3. What rivers empty into the east side of Georgian Bay, and of what lakes are they the outlets?
4. What is the length, and give the lake expansions of the Ottawa River? Name the counties touching on the east side of the Ottawa.
5. What tributaries are received by the St. Lawrence in the Province of Quebec?
6. Name the principal islands in the Ottawa, and in the St. Lawrence, east of Montreal. Where is Ha-Ha Bay? What lake is emptied by the Richelieu river?
7. Give the western boundary of Nova Scotia. Name its principal mountain range. What of the mineral productions of Nova Scotia?
8. Name the counties and their capitals of Prince Edward Island.
9. What are the chief rivers of British Columbia? Where are Victoria and Westminster situated?
10. In what direction from Toronto is Winnipeg, Sable Island, Hudson Bay? What are the chief exports of Ontario?

HIGH SCHOOL DEPARTMENT.

INTERMEDIATE EXAMINATIONS.

AS the names and qualifications of the sub-examiners will prove a matter of interest to our readers, and as this year the Department has not announced them, we give a complete list with the subject allotted to each, and some other particulars connected with the examinations.

SUB-EXAMINERS.

Algebra.—Messrs. J. Brown, M.A., U. C. C.; A. K. Blackadar, M.A., Civil Service; C. H. Koye, B.A., Student; — Leonard, U. C. C.

Arithmetic.—Messrs. G. B. Sparling, B.A., U. C. C.; C. A. Barnes, B.A., P. S. I.; W. E. Sprague, Model School, Cobourg; C. Moses, P. S. I.; — Lafferty, M.A., Wilberforce Institute.

Euclid.—Prof. A. R. Bain, M.A. Cobourg; — McDougall, B.A., Teacher; T. H. Gilmour, B.A., Law Student; W. J. Hendry, Model School, Yorkville; T. H. Reditt, B.A., Model School, Prescott.

English Grammar.—A. Johnston, M.A., Law Student; — Baird, B.A., Theological Student; — Dawson, B.A., Law Student; — Fergusson, M.D.; D. C. Ross, B.A., Law Student.

Composition.—Rev. C. H. Mockridge, M.A.; F. W. Mills, M.A., M.D.

Dictation.—W. A. Donald, B.A., Barrister.

Geography.—D. V. McTavish, B.A., Barrister; G. Inglis, B.A.; Rev. A. Grant, B.A.
History.—J. D. Cameron, B.A., Law Student; J. A. Culham, B.A., Law Student; R. P. Echlin, B.A.

Literature.—W. Dale, B.A.; Rev. Sept. Jones, M.A.; E. B. Brown, B.A., Barrister.

Natural Philosophy.—Patterson, B.A., Barrister; A. W. Reid, B.A.

Chemistry.—A. McGill, B.A., Assistant Univ. Laboratory; — Carneth, B.A. Student.

Book-keeping.—J. Dearness, P. S. I.; M. J. Fletcher, B.A., Law Student.

Latin.—W. H. Vandersmissen, M.A., U. C. T.; Rev. F. H. Wallace, B.A.

French.—S. C. Smoke, B.A., Law Student; W. H. Furrer, B.A., U. C. C.

German.—W. H. Tracer, B.A., U. C. C.

MODE OF CONDUCTING THE EXAMINATION.

After the papers and bundles have been counted by the Department, and arranged for the examination, the sub-examiners assemble to receive instructions from Mr. Tilley, who appears to act as manager. There is then a conference of those to whom each subject is assigned, to talk over what should be considered full answers, the values to be given for partial answers, and to settle other details. The examiners then read *separately* the subjects assigned to them, and when an examiner has finished a bundle, he is required to pass it to an examiner of one of the other subjects of the same group, having first put on the outside envelope his initials and the percentage obtained by the candidate. The last examiner in the group is expected to add up the marks obtained by the candidate in the group. After the papers belonging to a school have been examined in all subjects, the bundles are taken into a room where the additions are checked, etc., preparatory to the results being entered in the books of the Department. Each sub-examiner is required to report any irregularities that may occur in the papers he reads. The bundles belonging to the smaller schools are examined first, in order to allow those whose duty it is to enter results, to get to work as soon as possible. One of the arithmetic and one of the algebra examiners are generally detailed for this work after the first week. When the papers in any subject are all examined, those set free turn in to assist in examining the subjects that are in arrears. No examiner is supposed to work more than forty-four hours a week or more than eight hours a day, except to make up lost time. The examiner may put in the specified number of hours any time during the day or night, and his remuneration de-

pends not on the number of papers he examines, but in the time he spends in examining. Such is a brief sketch of the *modus operandi*, which to our mind seems to be pretty complete. But there are

OBJECTIONS TO THE OPERATION OF THE FOREGOING.

1. According to regulation, we believe, each examiner is to work eight hours a day on all days but Saturdays, for which day four hours is regarded as the proper amount of time. As a matter of fact, however, members do work ten and twelve hours a day, and in this way make up lost time and secure other advantages. The regulation we submit is a proper one, and in the interests of the candidates and the Department, should be strictly enforced. No man can do justice to the papers and examine ten hours a day for any length of time. Every teacher knows this. True, the candidate can appeal; but matters should be so arranged that appeals would be unnecessary. We may say in passing that this year a very great amount of dissatisfaction prevails in regard to the valuation of the answers, and we prophecy a considerable alteration in some of the results.

2. There is no limitation to the number of papers one examiner may read each day; and at the late examination, we are credibly informed, no less than 120 different sets of answers, each set averaging six or seven sheets, were read in nine hours by one examiner. Arithmetic and algebra papers may be examined more quickly than the others; but the subjects we refer to were not mathematical. The Minister expects, the candidates hope for, and the country pays for, careful work. Both the length of time to be devoted each day and the maximum number of papers should be fixed and strictly observed.

3. No one should be appointed a sub-examiner who has not had experience both as teacher and examiner. Quite a large number of the gentlemen whose names we have given above, never taught a day, and cannot have a proper conception of the degree of accuracy and mental development to ex-

pect. The tendency is to err by going to one extreme or the other—to be too severe or too lenient. In the matter of selection, the line is drawn at University Graduates, Model School Masters, and Public School Inspectors. To the latter two no objection can be offered, so long as they possess the requisite amount of scholarship, but a B.A. with Honors is not the only qualification of an examiner. It is, to say the least, very improper to appoint as examiners raw graduates—men or boys who have just gone through the mill themselves and have not had that mental exaltation that so frequently characterizes the class, toned down by a little experience. We would respectfully suggest, too, to the Minister, that all the brains and scholarship of the Public School profession are not in the possession of Model School Masters. We do not attribute to the Department any other motive than a desire to maintain a high standard in the Examining Board, but we should like to see thereon more Public School Inspectors and Public School Masters. If there are any loaves and fishes, they plainly belong to the faithful and able teacher, not to the fledgling lawyer, however high may be his attainments as a scholar. Mankind is always going from one extreme to the other. In the anxiety to secure a high scholastic standard, the absolute necessity for teaching experience and examining ability is left out of sight in too many instances.

4. The sub-examiners should be required to devote all their time to the examination while it lasts. As a matter of course some of the law students, by working late and early, had four or five hours to devote to their own office work and the attractions of Osgoode Hall. How can one feel satisfied with the eight or nine hours examining of a young man who devotes four or five other hours of the same day to other work, and that too amid the tropical heat of last July. This must be altered. The Minister cannot but see the impropriety of the course we object to.

5. Mr. Tilley, it is said, allots to the different sub-examiners the subjects they are to

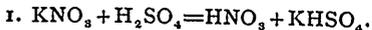
take, without consulting their wishes or their capabilities. Any one who reads the list we have given will see that there have been, in several instances, efforts made to insert round pegs in square holes. The examiners should be chosen—not hap-hazard as seems to be the fashion now—but with a view to the examination of certain subjects, and the man best fitted for a subject should be detailed therefor. With the highly praiseworthy design of evoking a spirit of rivalry amongst the sub-examiners, Mr. Tilley posts every morning on the black-board the total number of papers read by each sub-examiner on the previous day. What effect this mode of procedure has on the quality of the work, we are not prepared to say. We fear, however, that Mr. Tilley's little contrivance savours somewhat of childishness, and may work positive injury. We have no desire to be captious in our objections to the present mode of conducting this examination; but having the public interest at heart, we desire to see corrected, as far as possible, the defects to which we have drawn attention. If the Intermediate—this pestilent visitor of our High Schools—is to be maintained, let us try to reduce its evils at the very fountain source.

EDUCATION DEPARTMENT,
ONTARIO.

JULY EXAMINATIONS, 1881.

INTERMEDIATE.—CHEMISTRY.

Examiner—E. Haanel, Ph.D.



(i.) Give, first, the names of the compounds entering into the reaction represented by above equation, and second, the names of the elements, with their combining weights, entering into the constitution of these compounds.

(ii.) Represent, by diagram, the necessary apparatus for conducting the experiment indicated by the equation.

(iii.) What effect would H_2SO_4 , HNO_3 and KNO_3 , each have upon a solution of blue litmus?

2. It is required to make $3\frac{1}{2}$ pounds of HNO_3 by experiment 1. (ii.) How much H_2SO_4 is required?

3. Explain the principle of Davy's safety lamp.

4. It is required to prepare the elements hydrogen and nitrogen for class purposes:

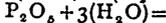
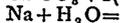
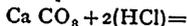
(i.) Describe the apparatus and name the substances needed for the preparation of each of the elements.

(ii.) Write out the equations representing the reactions occurring in their elimination.

(iii.) Describe the experiments you would perform to demonstrate their distinguishing properties.

5. Assign reasons for assuming that charcoal, graphite and diamond are different modifications of the same element.

6. Complete the following equations:



7. Coal gas and phosphorus burn with a luminous sulphur and hydrogen with a non-luminous flame. Account for this difference.

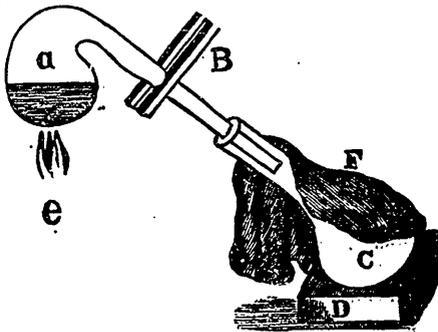
8. A certain quantity of zinc furnished, when treated with sulphuric acid, $3\frac{3}{4}$ pounds of zinc sulphate. How much zinc was employed? $\text{Zn} = 65$.

INTERMEDIATE CHEMISTRY,
JULY, 1881.

Answers to Questions.

1. (i.) [a] Potassium nitrate; Sulphuric acid; Nitric acid; Hydrogen Potassium Sulphate.

[b] Potassium=39.1; Nitrogen=14; Oxygen=16; Hydrogen=1; Sulphur=32.



(ii.) a. Retort containing Potassium nitrate and Sulphuric acid. B. Forceps of retort

holder. C. Receiver. D. Block of wood serving as support for receiver. e. Source of heat. F. Cloth kept wet with cold water.

(iii.) H_2SO_4 and HNO_3 would change the blue of the solution of litmus to red. KNO_3 would not affect the colour of the solution of litmus.

$$2. 98 : 63 = X : 3\frac{1}{2}.$$

$$X = \frac{686}{126} = 5.44 \text{ lbs. of } H_2SO_4.$$

3. To affect chemical union between substances capable of combining, it is requisite that they be raised to a certain temperature termed the "temperature of ignition," which differs for different substances. To prevent the flame of Davy's lamp from raising the temperature of explosive gases into which the lamp may be immersed to the temperature of ignition, Davy surrounded the flame of his lamp by wire gauze. The gauze admits the explosive gases to the flame, but confines their combustion within the gauze, the conductivity of the latter (by distributing and radiating the heat resulting from combustion) preventing the gases exterior to it from reaching the temperature required to explode them.

4. (i.) *Apparatus for the preparation of Hydrogen.*

(1) A wide mouthed bottle capable of holding a pint or more.

(2) A paraffined cork bored through twice and fitting gas tight into the mouth of bottle (1).

(3) A funnel tube long enough to reach within an inch of the bottom of bottle (1), fitted into one of the borings of the cork.

(4) A glass tube 6 inches long, bent at right angles, one limb of which is pushed through the other boring of the cork far enough to clear its lower surface.

(5) Rubber tubing to connect tube, (4) with gas bag or other apparatus for storing the hydrogen.

Apparatus for the preparation of Nitrogen.

(a) A pneumatic trough provided with shelves and filled with water to cover the shelves one inch.

(2.) A porcelain capsule containing some phosphorus.

(3.) A tubulated bell jar placed over capsule (2) and resting on shelves of trough (1).

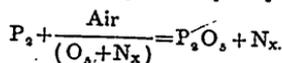
Substances necessary for the preparation of Hydrogen.

Granulated zinc or sheet zinc in scraps, sulphuric acid and water.

Substances necessary for the preparation of Nitrogen.

Air and phosphorus.

(ii.) $Zn + H_2SO_4 = ZnSO_4 + H_2.$



(iii.) To demonstrate the low specific gravity of Hydrogen:

(a) Decant the gas upward from one bell jar to another.

(b) Fill soap bubbles with the gas.

(c) Suspend an inverted beaker from one arm of the beam of a balance, counter-balancing it with weights placed in the scale-pan attached to the other arm of the beam. Allow hydrogen to stream up into the beaker. The scale-pan will now descend, proving the hydrogen to be lighter than air.

The combustibility of Hydrogen may be demonstrated:

(a) By igniting the hydrogen streaming through a glass tube with narrow bore, or

(b) By igniting the gas contained in a bell jar, holding the jar mouth downward and applying the light at the mouth.

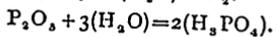
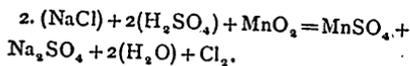
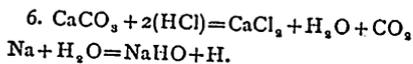
To prove that Hydrogen is not a supporter of combustion, plunge an ignited wax taper upward into a bell jar filled with hydrogen and held as described in (b) previous answer.

Properties of Nitrogen are wholly negative. It is neither combustible nor a supporter of combustion. This is readily demonstrated,

by plunging a lighted wax taper through the tubulure of a bell jar containing the gas. The taper will be extinguished and the nitrogen fail to ignite.

5. (a) The compounds which charcoal, graphite and diamond are capable of forming with other elements are identical.

(b) For the formation of any of these compounds the same proportion by weight of charcoal, graphite or diamonds is necessary.



7. [Only incandescent solids and liquids furnish a continuous spectrum, therefore] Substances, the product of combustion of which is solid (rendered incandescent by the heat eliminated during combustion), burn with a luminous flame; those, the product of combustion of which is gaseous, with a non-luminous flame. The product of combustion of phosphorus is solid P_2O_5 ; in the case of coal gas the product of the first stage of combustion is water gas and *solid carbon*. The products of combustion of Sulphur and Hydrogen are gaseous, *i.e.*, sulphur dioxide and water gas respectively.

$$8. 161 : 65 = 3\frac{3}{4} : X.$$

$$X = \frac{975}{644} = 1.513 \text{ lbs of zinc.}$$

CONTEMPORARY LITERATURE.

GOLDSMITH'S DESERTED VILLAGE; COWPER'S THE TASK (Book III.—The Garden); and the DE COVERLEY PAPERS, from the *Spectator*—edited with Lives, Notes, Introductory Chapters and Examination Questions, by William Williams, B.A., Head Master Collingwood Collegiate Institute. One vol. 18mo. Toronto: Canada Publishing Co., 1881.

THE contents of this manual, prepared by Mr. Williams for the English Literature Series of the Canada Publishing Co., embrace the portions of the English authors of the eighteenth century prescribed for University Matriculation and the Departmental Examinations for Teachers' Certificates. The work is a convenient compend for the use of students who seek a critical acquaintance with the writings of Goldsmith, Cowper and Addison; and its compilation bespeaks the growing interest of our educational authorities in a department of study which has hitherto been too much neglected. The general introduction, which occupies eleven pages, is a very full and appreciative summary of the literary history of the eighteenth century—that very interesting and important chapter in the annals of our literature. Mr. Williams

writes in a pleasant style, not quite free from mannerism, but he is at least free from the jejune barrenness into which most so-called "Manuàls" have boiled down this delightful subject. "We have changed all that," since Taine's great work became popularized. The "Chronological Parallel," a new and useful feature common to several of the text books we have recently reviewed in the MONTHLY, is helpful to the student in realizing the literary "situation." The "Life of Goldsmith," short as it necessarily is, we find worthy of such praise as we are seldom able to give to a Canadian biography in one of these text books. Mr. Williams has told, in his own words and with his own thoughts, the old but charming story of the Irish parson's boy. Such a study as that here given cannot fail to impress and attract the student who reads in Mr. William's version the history of this most lovable of poets. The "Life of Cowper" is good also; but though well adapted for its purpose, of giving a clear idea of Cowper's position in the eighteenth-century literature, we find it less original in thought than the other "Lives" in the volume, while it is sometimes expressed in a slipshod manner.

For instance, it is said, at p. xvii., "Like Byron and Wordsworth, he is one of the most subjective of poets." *Why subjective?* By a subjective poet we understand one whose poems are the reflex of the inner life of the soul—one who does not describe Nature as Nature beautiful in itself, but Nature as the embodiment or interpretation of mental conditions. Such was Shelley in all his poetry; such, as Mr. Williams says, was Wordsworth in all his. Such was Byron, never; nor ever was Cowper such, except in his hymns and those poems which are most morbid and least poetical. The "Life of Addison" is effective, and the subject is fully brought before us. Mr. Williams contrasts the degree of the realistic fidelity of Addison's and of Steele's picture of the period, and maintains that though less pleasing, Steele's coarser conception is probably nearer the truth than Addison's. We believe this view to be both original and true.

The Notes in all the authors are full and well chosen, calculated to interest students, and to make easier the intelligent study of this portion of our literature. These are well supplemented by the exercises contained in the "Questions for Examination," which are clear, and thoroughly break up the ground gone over in the rest of the volume. A valuable feature is the "epitome," or *precis* of each poem given in the Notes. Altogether, the volume is a most creditable one both to editor and publishers. Mechanically, the work is well turned out, the type being clear and open, and the proof reading evidently well attended to.

DICTIONARY OF EDUCATION AND INSTRUCTION; A Reference Book and Manual on the Theory and Practice of Teaching, by Henry Kiddle and A. J. Schenl. New York: Steiger & Co.; Toronto: Willing & Williamson.

THIS work is based upon the Cyclopædia of Education, or, more particularly, is a compilation of the article on Pedagogy and Didactics. The special objects aimed at are—(1) to supply a brief compendium of the theory and practice of teaching, in a series of clear and definite articles, alphabetically

arranged, so as to be easily referred to or systematically studied; (2) to encourage in this way the study by teachers of the principles and practice of their profession; (3) to afford a convenient class manual of pedagogy for use in Normal Schools, etc.; (4) to supply a useful hand-book to parents in the home education of their children.

The work presents that attractive typographical appearance and systematic arrangement which usually characterize the publications of this enterprising house. The articles include references, more or less extended, on nearly every conceivable subject connected with the teacher's work; and, to facilitate their use, they are supplied with indented sub-titles. Without particularizing, we think that the object of the work is fairly attained; and to those not in possession of the Cyclopædia, we cordially recommend the Dictionary as worthy a place in every teacher's library.

AN ORATION IN DEFENCE OF AULUS LICINIUS ARCHIAS, by Marcus Tullius Cicero, with Notes, Vocabulary, etc., by D. C. McHenry, M.A., Principal of Cobourg Collegiate Institute. Toronto: Gage & Co., 1881.

THE subject of University Text-books has great interest for all those who concern themselves with the growth of Canadian scholarship. Of late we have reviewed several of them, and in doing so have endeavoured to avoid unjust censure as well as undue praise, believing that in the pure air of criticism alone can native Canadian scholars attain that good repute which seems so little believed in by some at the head of Canadian education. Mr. McHenry's duties, in the present instance, as editor of a classical manual for University classes and the High Schools and Collegiate Institutes, have been creditably performed, the notes being specially good and the vocabulary well compiled. The "Life of Cicero" is in correct and readable English, the facts of the biographical sketch are well marshalled and have evidently been assimilated after thorough study. Mr. McHenry's style is plain and unambitious. The life of Cicero might

have been more fully and sympathetically treated, a few more pages being added. The only statement we feel bound to demur to in the "Life" is where we are told, at page 7, that "the summary punishment of certain of the conspirators, without trial, eventually proved the ruin of Cicero." Now, we hold that Cicero did indeed commit a grievous political mistake in making himself the tool of the Senate on the occasion referred to. It gave Clodius a good cry against Cicero with the mob of the forum. They and the popular party no doubt regarded the slaughter of the comrades of Catiline as one more instance of those high-handed methods of suppressing political opponents, of which the execution of Saturnius and his partizans, and of Caius Gracchus and his supporters, had set the precedent. Cicero's action in the matter caused his exile, but by no means his ruin. The Catilinians were never a popular faction. The Roman liberals, the populace as well as their leaders, knew perfectly well that the movement was simply Catiline out of office plotting against Catiline in office. The Catilinian leaders all belonged to aristocratic houses. Juvenal alludes to this in his Satires:—

Cethegus! Catiline! what ranked more high
Than your proud titles of nobility?

The execution of these men was an unconstitutional thing, done by a body who were always trenching on the constitution, and it was thus far unpopular, no doubt. But it was by no means so thoroughly unpopular, with the whole Roman people, as the execution, under similar circumstances, of Mr. Parnell would be unpopular with the whole Irish people. Cicero got over that unpopularity and was never farther from "ruin" than on the day of his triumphal return, the day to which allusion is made in the noble lines which we believe ought to be read by all young people who study Cicero's career:

Roma "Parentem,"
Roma "Patrem Patriæ" Ciceronem, libera,
dixit!

Parent and Father of his Fatherland,
Rome hailed him, Rome when free!

The real cause of Cicero's ruin dates surely from the time when he became an accomplice after the fact in the murder of Cæsar, and when he so misread the signs of the times as to side with the senatorial oligarchy.

We especially commend in Mr. McHenry's book the short Miscellaneous Tables given for the benefit of students. These are clear, brief, and likely to be most useful. The analysis of the argument in English at the heading of the notes in each chapter is also to be commended. In such a manual as this we regret the absence of some slight sketch of Cicero's literary form, the flow and structure of his long rolling sentences, the frequent use of antithesis and alliteration. This, however, can be still more effectively done orally, by an appreciative teacher.

We could have wished that the publishers work had been as well done as the editor's. The type of the Latin text is in a very battered condition,—a defect which must seriously add to the risks of myopia and other forms of eye diseases, of which bad type, indistinct print, and delapidated stereotype plates, are but too certainly, in main part, the cause.

CÆSAR'S BELLUM BRITANNICUM (Lib. IV., c. 20-36; V., c. 8-23), and the nine intervening chapters, with Explanatory Notes, a copious Vocabulary, and numerous Grammatical References, by J. Murison Dunn, B.A., LL.B. (University of Toronto), Head Master Welland High School. Toronto: Canada Publishing Co., 1881.

THIS volume consists of a very readable sketch of Cæsar's life—one calculated to induce thoughtful students to take enough interest in that extraordinary career to read those most interesting biographies of the greatest Cæsar recently produced by Trollope and Froude. Mr. Dunn's sketch occupies five pages, and is a good summary of the facts in the life of Cæsar. The text is well and legibly printed, and the proof reading has been carefully attended to. The binding and general get up of the book is creditable to the publishers. The Notes

seem to us to have the unusual excellence—unusual in manuals of this kind—of not giving too much help to young students, and yet supplying a certain interest to the running comment on the grammatical details. For instance, at page 68, in describing the *sudes* or stakes driven into the Thames bank in order to check Cæsar's march upon London, Mr. Dunn adds the fact that these stakes were still to be seen in the time of Bede, in the eighth century. This is just what breaks the monotony only too usual in text books of the kind. An analysis in English is given by the editor of the progress of the narrative at the head of each chapter, which is helpful to the young scholar. The Vocabulary certainly has the merit of not attempting too much. It might with advantage have been the compiler's endeavour to give still more etymology than he has done. This is a fault common to all the text books we have seen of late, yet we are free to confess our conviction that nothing puts life into the dry bones of grammatical study, and what Carlyle called "gerund-grinding," better than some insight into the history and inner life of language. Instead of adding to the difficulty of using a vocabulary, such a plan would, we believe, make the study both easier and pleasanter. A special feature in the notes, which we heartily commend, is the thoroughness with which reference is made to Harkness's and to Smith's Smaller Latin Grammars. The text book, on the whole, is creditable to the industry and scholarship of the editor.

COWPER'S TASK (Book III.—The Garden), with an Introduction and Philological and other Notes, by G. Edmund Shaw, B.A., U.C.T., Master of Modern Languages, Toronto Collegiate Institute. Toronto: Copp, Clark & Co., 1881.

MR. SHAW has told the touching story of Cowper's life in a manner which exhibits a genuine sympathy with the poet's genius and gives a just estimate of his literary work. The seven pages of the Introduction are pleasant reading, and give the leading facts of Cowper's career so as to awaken the interest of those for whom the book is designed. There are a few evidences of hasty writing; for in-

stance, in the sentence, "The year after the publication of the hymns, Cowper began, at the request of Mrs. Unwin, longer poems than he had hitherto attempted." The verb "began" would be better in its place at the beginning of the final clause. We consider, also, that the expression, "and which," though used by some good writers, is inelegant. Mr. Shaw on two occasions uses this form of conjunction. A noteworthy feature of the book is the insertion, after the Introduction, of a series of extracts from the leading biographies of Cowper, such as those of Mr. William Benham, Mr. Goldwin Smith, and M. Taine. These are calculated to be of no little benefit to the young people who are to make their first acquaintance with Cowper from this excellent little volume. The Notes seem to us singularly good, being prepared with thorough accuracy and care, and explaining everything that at all required explanation. Much interesting etymological information, also, is given. The remarks on the scansion of the "Task" throws considerable light on a subject which ought to be carefully dwelt upon for the benefit of all beginners in the study of English poetry—that of the metrical form of the poem. It would perhaps be as well to explain in all cases what is meant by the words "trochee," "spondee," "anapæst," etc. This volume also contains Goldsmith's "Deserted Village," with a useful Introduction and Notes by Mr. J. W. Hales, M.A., Professor of English Literature at King's College, London. The publisher's part of the text book is creditably done, but in this portion of the book we note that the proof reading is occasionally defective. The Introduction to the "Deserted Village," by Mr. J. W. Hales, is much briefer than Mr. Shaw's Introduction to Cowper; in our opinion it is too scant and sketchy. The story of the poet's youth, which so fully exemplified the truth that "the Boy is father of the Man," is not told. We note a few lapses in the Latin quotations of the notes which competent proof reading might have avoided. At page 60, line 13, there is an unpleasant repetition of the word "writer." The estimate of Goldsmith's literary position on the whole is well given. Of the two Lives of the Poets, we think that, both in literary form and in fulness of detail, the better essay is that of Mr. Shaw. We specially commend his portion of the book. Of the various editions we have seen of "The Task," Mr. Shaw's, in our opinion, is by far the best.

EDITORIAL NOTES.

DERELIGIONIZING THE NATION.

OUR readers, we doubt not, will be grateful to President Wilson, of University College, for the timely service he has done the cause of religion and morals by discussing, at the recent Provincial Teachers' Convention, the subject of "Religious Instruction in the Public Schools." In the address, which we publish elsewhere in our columns, though the distinguished lecturer was discreet and conciliatory, there is no mistaking the earnestness with which he appealed to the teaching profession to place the weight of their influence, in their contact with youth, on the side of Christianity, and to be mindful of the effect of that "best of all moral culture"—"the informal teaching which goes on in the daily and hourly intercourse of the teacher with his pupils." Of course, Dr. Wilson fully appreciates the difficulty of giving any prominence in the schools to religious instruction. Rather than that its introduction should be made a rock of offence, he would even omit the brief daily service prescribed by law for the opening and closing exercises. His great reliance seems to be on teaching by example, and on the inculcation of moral truth through the influences of a good life, each day reverently consecrated to the high duties of a teacher's calling. Beyond this, however, Dr. Wilson is seemingly fain to go, though he is extremely sensitive on the point of raising a sectarian stumbling-block, which would make the schools the theatre of unkindly strife, and undo much of the work which education is relied upon to perform. The following quotation from his address attests the reality of his religious convictions, and indicates how far removed he is from the position of the advocates of godless education, or from indifferentism in regard to the inculcation of moral truth in our

schools and colleges. He says: "If we never drop a hint of our belief in the Divine Fatherhood, of a Personal God, or our recognition of His rule and governance, but speak only of force, law, evolution, or nature, such silence, be assured, speaks volumes. *You cannot silence the teachings which such negation conveys.*" And here, we conceive, is the grand mistake we are making, in so rigidly insisting upon a purely secular school training for our youth. It is not only that we are withholding religious instruction from those who, at a critical period of life, are the wards of the nation, but that we are positively disowning the influence that, in the individual and the nation alike, "makes for righteousness," and are giving play the while to the forces which will most fatally subvert it. The matter is a serious one; and Dr. Wilson's paper will be of supreme service if it leads to the reconsideration of the whole question of the Bible in the Public Schools, from which, we are inclined to think, it has been too hastily ejected, without thought of the consequences which the act entails. However this may be viewed, we cannot but feel that, in times like these, this divorce of all religion from the schools is fearfully imperiling the future moral and religious life of the nation. If religion is to have no place in the schools, and its lessons are never to be brought before the mind of youth, at a time when habits are being formed and the mental complexion of each individual soul is taking on its colour for eternity, what chance will there be for the recognition of its obligations and claims when youth has given place to manhood, and the twigs have become the set limbs, which no influence can afterwards divert from the line of their growth? We have no desire to act the rôle of the fanatical alarmist on this question, and we need scarcely say that we do not broach

it in the interest of sectarianism, still less in that of cant. Neither do we conceal from ourselves whatever difficulties are likely to arise in a return, in the moral administration of schools, to "the old paths." These difficulties we feel, however, are more apprehensive than real. They loom large in the eyes of him who recalls bygone strife; but the concession of Separate Schools to the communion who make use of them removes much of the apprehended trouble. Dissent to the re-introduction into the schools of religious instruction can only now come from the Jew and the Infidel. How small an element of disaffection this will be for the State to consider, may be said to be ludicrously insignificant. Whatever its extent, however, we are bound to keep faith with it; and if it would not adapt itself to the present permissive clause which regulates attendance, or to that which would have to be enacted, in view of the placing of religious instruction on the school time-table, few, we daresay, would object to the State giving separate educational facilities to those who had the courage to rank themselves with the class who might claim such aid.

But the matter of immediate moment is, to have the subject of the elimination of all religious instruction from the schools reconsidered, for eliminated it assuredly is. The opening and closing prayers are we fear but a mockery; for too often the service is undertaken in the most perfunctory fashion, like the calling of the roll, and with as little impression produced as is made by that conventional morning task. The opening exercises slurred over, what chance occurs during the day to bring God and His providence, or even a lesson in the simple Christian virtues, to the minds of the pupils in school? Let the masters whose time-tables are choked with subjects they cannot overtake, and whose every energy is strained to keep up in the educational race-heats that each school is bound to enter for, say. Yet religion has a prescriptive right of possession in the schools, and it has there as much recognition as if the nation were infidel and the Scriptures a fable. We of course will be told that there

are other agencies for imparting religion, and that among these we have the family and the Sunday school. But the reply unfortunately to this is, that, as a rule, *there* it is not taught, If any one doubts this, just let him test the knowledge of sacred things the average boy acquires at the average Sunday school. No! this neutrality in religion and evasion of duty, are matters we do not see the mischief of; and few have a notion of the dangers that must await the state that thus disowns its belief. Yet with manifest inconsistency, we speak of ourselves as historically a Christian nation and a Protestant people! Alas! but for the sects, in reality, we might be both. One thing, however, it is safe to add—that with this continued ignoring of the life, the teaching, and the religious force of the Christianity we profess, it is easy to foresee what, in another generation and with the continuance of the present atheistic régime, will be the result.

THE CHANGE IN THE PRINCIPALSHIP OF U. C. COLLEGE.

A NEW turn of the Education Office crank has led to the retirement of Mr. Geo. R. R. Cockburn from the principalship of Upper Canada College and places Mr. J. M. Buchan, High School Inspector, in the position. We will not say that we were unprepared for some such move on the part of Mr. Crooks, though we had little hope that what our erratic Minister of Education would do would either be in the right direction or that he would choose the right time to do it. On the latter point, few, we imagine, will say that a change in the principalship on the opening day of the term, with all that a change in the head of the institution at the present time implies, is either an ingenuous, well-considered act, so far as its patrons are concerned, or one calculated to be of benefit to the institution, so far as the staff and the smooth working of matters in the College are likely to be affected. Of the change itself, we may say that we see in it the beginning of the end—at least an end of the institution as a separate and exclusive preserve for the education of blue-blooded Cana-

diandom, with all its traditional claims to social prestige and to dignified, unsweating success. For the new appointment means, we take it, that the institution is to be brought into line with the High School system of the Province, with which the new principal is largely identified, and in the working of which he has had great experience. The question now arises, seeing that the College is to be so transformed, will the country acquiesce in Toronto having two High Schools, or rather Collegiate Institutes; and if so, will the existing Institute be content to see this new one have any advantage over it in endowment, or in the extent of the staff with which it is to be worked? This is a question that we doubt not will exercise the minds of all masters of High Schools; and it will furnish a new grievance to the country members of the Local House which will be sure to be ventilated, to Mr. Crooks's certain disquietude, next session. Rather than this change, we would personally have preferred to see Upper Canada College retire with dignity from its encounter with the inevitable, or to have it turn its attention, as Mr. Goldwin Smith suggested, to the education, with the facilities which Toronto University affords, of students of the other sex. Meantime, we can only wait further developments, and wish Mr. Buchan the success which ought to wait upon the efforts which we are sure he will put forth in the direction the authorities—whether of the University Senate or of the Education Department—have decided upon. In the present state of feeling against the institution, any change would be eyed with disfavour; and for that reason Mr. Buchan's assumption of his duties as principal claim, from his friends at least, consideration. Mr. Cockburn, we must not omit to say, has at the same time our sympathies. He is at present the victim of fate and of Mr. Crooks, though he must long have foreseen that he, if not the College with him, was doomed. His long service to the institution, however, and the general excellence which has marked the administration of his *régime*, entitle him to the consideration of more than officialdom. He has, we believe, honestly and faithfully

done his duty to the College; and though not a man of superlative scholarship, nor a devotee of the cloistered cell, he has made an acceptable headmaster, and maintained a tolerable record for the institution under his charge. Of late years he has been hard pressed by the competition and the successes of the High Schools and Collegiate Institutes; and if these have paled the lustre of his own achievements, it only proves how anomalous has been the position of the College, and how unwise it is to court distinction for it in its present isolation from the general ranks of our Secondary Schools.

SCHOOL AND COLLEGE CALENDARS.

THE scholastic year begins once more, and with it we have the usual crop of College Calendars, two of them emanating from those active centres of culture, Queen's University, Kingston, and Victoria University, Cobourg. In contrast with the activity shewn by these institutions, our Provincial University seems to fall behind in the race. Referring to Queen's University, we note that its faculty has just been augmented by the acquisition of a Canadian graduate of Oxford University, Mr. Jno. Fletcher, who has been appointed to the chair of Classics in "Queen's." Of Victoria University, our readers will be glad to know that we have enlisted the Chemistry professor, Dr. Haanel, in the work of THE MONTHLY—this noted chemist having kindly sent us solutions to the Chemistry paper which he prepared for the last Intermediate Examination, and to be found elsewhere in our columns. We have also the Calendar of the Protestant Episcopal Divinity School, Toronto. The extent of its course, and the liberal spirit exhibited in the choice of theological text-books, are to be commended, and contrast favourably with the dogmatic narrowness of the administration of other Anglican Colleges. The growth of Educational institutions in the interest of the fair sex is evidenced by the appearance of Calendars from the Ottawa Ladies' College, and the Wesleyan Female College at Hamilton, both of

which indicate a varied course of study and an efficient staff to teach and direct it. From Brantford, Whitby, and St. Catharines Collegiate Institutes we have the annual announcements covering the courses of study etc. in connection with these Secondary schools. In the Brantford Calendar we note a comparative table, contrasting the number of, and the honors taken by, the successful candidates with those of other High Schools and Collegiate Institutes. While not denying Mr. Hodgson the credit of his school's record, we deprecate this method of advertising the Institute, by making invidious comparisons, which tend to break up the *esprit de corps* of the profession, and which do not, after all, fairly determine the general merit of either master or school. Having said this, let us do justice to Mr. Hodgson, by re-stating the record of the school at the June examinations, which we are reminded we had given incorrectly in our last issue. The result should be, number of Candidates passed, 16; number of 1st. class honors, 10; of 2nd. class, 20; and number of scholarships, 2. St. Catharines, as usual, presents a strong and attractive programme, with a staff extensive and competent. Whitby sends us a carefully prepared Calendar, the Institute being under good management, which is now further strengthened by the recent accession to the staff of Mr. Harstone, B.A., as Mathematical master, and of Mr. A. G. Henderson, who takes charge of the Commercial and English department of the school.

Now that Mr. Buchan has accepted the Principalship of Upper Canada College, it will be in order to speculate upon the man likely to succeed him in the Inspectorate. It is given out that the Minister of Education is going to try to get along with two instead of three High School Inspectors, a suggestion some time ago made in these columns, and one that might well be acted upon, so long, at any rate, as inspection of the High Schools and Institutes means no more than it does at present. Of course, if Departmental duties are to be added, in giving

attention to Examination appeals, serving on the Central Committee, besides inspecting the Normal and the Separate schools, three men will still be required to overtake the work. In that case, there must be another appointment. Who the coming man will be, many will be curious to know. If he is to be drawn, as we take it he must be, from the ranks of the Head Masters of High Schools or Collegiate Institutes, there are not many eligible as the successor of Mr. Buchan, whose speciality is "Moderns" and who is particularly strong in "English." The one man who occurs to us as being the most fit for the office, is Mr. Seath, of St. Catharines. He is not a "Moderns" man—Classics and Natural Science are his specialities—but there is no one, we venture to say, better up in "English." The fear, however, is that, were the position offered to him, he would decline to accept it. Next after him, as a specialist in English, the name of Mr. Williams, of Collingwood, will occur to most of our readers. His claims being undoubtedly good, Mr. Williams would stand well in the running. The names of Mr. Armstrong, late of Hamilton, Mr. Chase, late of Galt, and perhaps a few other Under Masters, will also occur to those who associate the office with a proficient in "English." But both of these gentlemen we have named have recently retired from the profession, and are not likely to be in the race. Whoever the new appointee will be, we can but express the hope, that he will be the best man for the post.

THE ANNUAL meeting of the CANADA EDUCATIONAL MONTHLY Publishing Company was held at the offices of the Company in Toronto on the 13th of August last. A large attendance testified to the enthusiastic interest in the enterprise on the part of the stockholders, and much gratification was expressed at the excellent financial position of the Company, at the good work THE MONTHLY was doing, and at the prospect of greatly increased influence for the publication, consequent upon its rapidly-extending

circulation and the high favour with which it is received by the profession. The officers of last year were re-elected, as were the Directors, to whose number some additions were made, likely to prove advantageous to the undertaking.

FROM the Canada Publishing Company, Toronto, we have to acknowledge receipt of a copy of their new Map of the Dominion in the series of admirable school maps which are now being rapidly prepared for this house. As a bit of cartography we have not seen anything superior to it, and its immediate introduction into the schools must, we think, instantly follow an inspection of the work. It is projected on a generous scale (the map is 8 ft. 6 in. by 4 ft. 7 in.), is accurately constructed—each province occupying its proper relative position—and it is boldly and distinctly coloured. In the map the schools have at last a desideratum supplied which both teachers and pupils will be grateful for. Trustees can make no better investment than this capital five dollars worth.

TORONTO COLLEGIATE INSTITUTE, we learn, is about to lose the services of its Science Master, Mr. Henry Montgomery, M.A., who resigns, with the view, we understand, of accepting a chair in one of the Colleges in the States. He is to be succeeded, it is announced, by Mr. George Acheson, of Stamford, a graduate of Toronto University and a gold medallist in his subject. Mr. Montgomery has our good wishes, and we exceedingly regret to find that so admirable a specialist in the departments of Botany and Zoology is to be allowed to remove from the country. We trust that *THE MONTHLY*, even occasionally, may have the benefit of a continuance of Mr. Montgomery's contributions.

THE latest literary outrage is a Penny issue of Scott's novels, abridged and edited by *Miss Braddon!* Think of it, a Braddonized edition of Scott!

MATHEMATICS IN OUR SCHOOLS.

To the Editor C. E. Monthly.

SIR,—It is now so generally felt by teachers, trustees and parents that the preponderance of mathematical studies in all our schools has become a fruitful source of numerous evils, not the least of which is the discouragement—possibly for life—caused some of the finest intellects, that a practical remedy should at once be sought. It appears that two of the three High School Inspectors express in a public report the opinion that too much attention is paid to the study of mathematics. I am not aware whether or not they have proposed a remedy. The latter however is obvious enough. If papers of another character are set at the Intermediate Examinations which control, it is well known, the whole teaching in our High Schools, the unhealthy and unsymmetrical culture of this department will at once be checked. The problem is indeed the simplest possible. With the convictions prevalent in the entire Province on this subject, it seems incomprehensible that this state of things should continue for another year.

But if whenever one individual with a mathematical bias so strong as to dominate every other sort of culture leaves the Central Committee, another with an equal degree of the same is appointed in his place; if to that member is assigned the duty of setting the papers in mathematics then the desired change will probably continue to be remote. Why should not the entire teaching profession send such a determined protest to the Minister of Education as would be practically irresistible? The trustees would join in this; in fact the parents also; and it would have the support of the public generally. If it be in the general interest let the standards of examination be raised as often as may be; but unless much that has in all ages been considered best in human life is to be crushed, let this plague of mathematics cease.

Yours truly,

NOT A TEACHER.