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* Editorial Notes. *

ACCORDING to the report of the Minister of Education, just submitted to the Legislature, the school population of the Province of Ontario in 1890 was: boys, 259,519; girls, 237,046; total, 496,565. The figures for 1889 were 263,047, 237,768 and 500,815 respectively.

THE number of High Schools in the Province has risen to 120, and that of Collegiate Institutes to thirty-one. The largest of the latter is the Hamilton, with 677 names on the register. Next in order are Jarvis Street, Toronto; Jamieson Avenue, Toronto; London, and Owen Sound, with 634, 454, 441 and 423 respectively.

FEMALE still continue to gain on male teachers, being now sixty-seven per cent. of the whole number. While salaries in cities and towns have gone up considerably, in the rural districts there is not much improvement. Waterloo pays the highest average salary to male teachers, \$447; Essex leads for females with \$334; Frontenac, the lowest, \$290 for male; and Haliburton \$204 for female teachers.

THE average attendance of pupils in the rural districts was forty-seven per cent. of the registered attendance, in towns it was fifty-nine per cent., and in cities sixty-two per cent. These figures indicate a falling off as compared with those for 1889, in which the percentages were forty-seven,

sixty and sixty-four respectively. As we have not the Report before us, but are quoting from newspaper abstracts, we cannot vouch for the accuracy of the figures, nor can we say what reason, if any, is assigned for the falling off.

MANY teachers have been puzzled by the announcement that Drawing Books Nos. Five and Six have been prescribed for the next Entrance Examination. We learn, on inquiry at the Department, that No. VI. is an addition to the series, which is now in preparation. Some delay has occurred in its publication, but the examiners will be instructed to make due allowance for any disadvantage which pupils may suffer in consequence.

THE publishers of this journal (Grip Printing and Publishing Co.), request us to call the attention of our readers to the fact that they are prepared to make liberal arrangements with teachers and others for the publication of manuscript works on educational subjects. They will carefully examine all manuscripts sent them with a view to acceptance for publication by the firm. As they are making a specialty of educational publications they invite communications on the subject.

FROM the admirable and comprehensive report of the U.S. Commissioner of Education it appears that in twenty years the amount expended on the public schools in the United States has more than doubled. It is now \$140,000,000 per annum. Education now costs \$2.24 per head of population, as against \$1.56 in 1880, its cost far outrunning the gain in population. In elementary and secondary schools there are enrolled 12,688,973 pupils, forming 20.7 per cent. of the population. The Commissioner notes a relative falling off of attendance in the northern, but an immense counterbalancing gain in the southern States. It seems that the proportion of women teachers has grown from 57.2 in 1880 to 65.5 per cent. in 1890—a change nearly parallel to that which has taken place in Ontario.

THE Faculty of the Ontario College of Oratory have arranged for a special course

of lectures to be given in their College Assembly Room, No. 30 Arcade, corner Yonge and Gerrard streets. The following prominent educators are among the lecturers secured:—J.A. McLellan, M.A., LL.D., Jas. L. Hughes, Esq., T. M. Macintyre, M.A., Ph.D. and Dr. G. S. Ryerson. The first of this series of lectures was given by Dr. Ryerson, on Thursday, Feb. 25th, at 2.30 p.m. Subject—"Physiology of the Voice." Second lecture by Dr. Macintyre on Thursday, March 3rd, at 2.39 p.m. Subject—"Ethics of the English Drama." Third lecture by Jas. L. Hughes on Thursday, March 10th, at 2.30 p.m. Subject—"Self-Control in Oratory." Fourth lecture by Dr. McLellan, on Thursday, March 17th, at 2.30 p.m. Subject—"English Literature." These lectures are free to all who are interested in the subjects presented.

THE reception of the first number of the *Canadian Mute*, which is noticed in another column, reminds us of the noble and philanthropic work which is being done for a sadly afflicted class, by the excellent Institution at Belleville. Teachers have excellent opportunities for learning of the existence of deaf mutes, some of whom are, we dare say, yet to be found growing up destitute of all the blessings of light and education which may be had at this institution, and which must come as life from the dead to those who receive it. Every teacher should be familiar with the work of the Institution and should know that all deaf mutes between the ages of seven and twenty, not deficient in intellect, and free from contagious diseases, who are *bona fide* residents of the Province of Ontario, will be admitted as pupils, and that while parents, guardians or friends who are able to pay, are charged the sum of \$50 per year for board, deaf mutes whose parents, guardians or friends are unable to pay the amount charged for board will be admitted free. Clothing must be furnished by parents or friends, but tuition, books, and medical attendance are in all cases free. Teachers may often make themselves benefactors of a human soul, and earn its lasting gratitude, by pointing the way to the light which shines at Belleville and similar institutions, for those who must otherwise pass their lives in dismal darkness.

* Special Papers. *

ONTARIO SCHOOLS.

BY JOHN H. SANGSTER, M.D.

A PAPER READ AT THE TEACHERS' CONVENTION AT STRATFORD.

IN many respects Canada, and more especially the Province of Ontario, is, or claims to be, an exceptionally favored land, in none more so than with regard to its educational advantages. For forty years past we have hugged to ourselves the belief that we have the best devised school system in the world, and for now nearly twenty years we have again and again been assured, both by official pronouncements and party editorials, that our school methods are modernized and enlightened, our text-books unequalled, our departmental administration perfect, and our teachers both qualified and devoted. Has our educational advancement been commensurate with our facilities? Has our progress in building up a moral and intellectual nation been fully keeping pace with the improvements, or so-called improvements, in our educational machinery and appliances? If we have not been simply deluding ourselves with pleasant fancies, our public liberality, our advanced school legislation, our model text-books and improved teachers should, by this time, have produced tangible and even startling results. At least half of our adult population have received their Public and High School and Collegiate training within the past twenty years. How do these compare, morally and intellectually, with the generation of Canadians now verging on old age? How with the citizens of the United States, whose educational methods and means we have been wont to insist are inferior to our own? Are the Public school children of Ontario to-day more intelligent, more symmetrically developed, better taught, of higher promise, more fully informed, or of cleaner behavior than their parents were in their time? Are the High school and University scholars who have graduated since, say, 1881, not merely better filled or more systematically crammed with ancient or modern languages, or with the various ics and als and ologies, but intrinsically more intellectual, of larger mental capacity, of sterner integrity, of firmer moral fibre? Are they better equipped for the business of life, better prepared to become enlightened, patriotic citizens; are they more earnest, more steadfast, more intense than those of the last and preceding decades? If so, where is the evidence that such is the case? Is political partyism, which may be taken as the very antithesis of intelligence, less rampant or less virulent than of old, except to the extent that it has been modified by independent journalism, or checked by the inexorable logic of recent political disclosures? Are our public men and officials, most of whom are the immediate outcrop of our educational system, more public-spirited or less self-seeking than their predecessors were? Are vice, and ignorance, and irreligion less prevalent in our cities and towns? Are the great body of the people in our rural sections any less grossly superstitious, less credulous, less

gullible, less easily victimized by every political or professional or other knave who may decide to live by preying on them? And, apart from all mere national prejudice, do our people as a whole, in public or private virtue, in enterprise, in push, pluck, prudence, and perseverance, or in all or any of the elements of national greatness, surpass those of our race in other countries? If candour compels us to answer all or any of these questions in the negative, where are we to seek for the cause? If all the vast educational outlay of the Province, all our complicated and perfected educational contrivances, our multiplied checks and counter-checks, our boasted school legislation, our matchless methods and means have neither greatly advanced us beyond ourselves in the past nor placed us distinctly in the vanguard of all nations educationally—then common prudence suggests that we should anxiously ask why? Where are we to look for the broken cog in the machinery; where shall we find the overheated axle or the defective gearing that clogs the wheels of our educational progress?

POLITICS AND EDUCATION.

How such queries are to be answered is, of course, largely a matter of opinion. Some are disposed to insist that our comparative failure is largely, if not altogether, due to the bureaucracy of our system and the unhappy alliance between politics and education, which practically centralizes all patronage in Toronto, and makes professional preferment, at least in the higher grades, not a question of personal merit, but chiefly one of political complexion and support. Others are inclined to locate the fault in our High schools, with their procrustean tendencies and systems of over-stimulation and forced cram, which irreparably injures pupils by over-study at the most critical period of their lives, while it substitutes, in the masters, a safe mediocrity of effort and uniformity of aim for personal enthusiasm and the highest essays of teaching skill. Into these fields of discussion, tempting as they doubtless are, it is not my purpose now to enter. While freely expressing my opinion that evils—great and fatal evils—do flow from organic defects and anomalies in the higher and dominating parts of the system, I desire just now to address myself to you as Public school teachers, and to limit what I have to say to your personal characteristics and shortcomings in that capacity.

THE POWER OF THE TEACHER.

That within certain limits you have it in your power to make or mar the success of the whole, is not, I think, open to question. For such causes of weakness as are inherent to our system, but which lie beyond your control, you are not, in any sense, responsible. There do exist, however, causes of miscarriage which lie at your door, which pertain to you individually and collectively. If these are ever to be remedied at all, relief must come not from without the profession, but from within it; not from Acts of Parliament or departmental regulations, but from your own autogenetic, conscientious, self-sustained efforts. Speaking more directly to those of you who are yet young and plastic—who are just entering, it may be, on a

teacher's life—I propose to point out what are to-day reputed to be the prevailing faults to be met with among the teachers of our Province. It were certainly a more grateful duty to dwell only on the many excellences to be met with in your schools. These, however, are less likely to escape your notice. Partial friends, interested flatterers, vanity, self-conceit, all conspire to give us a great opinion of ourselves and of our work; all unite to emblazon our merits in crimson and gold, while they strive to conceal our defects beneath a coat of sober grey. Thus you will find many ready to give you whatever credit or commendation you may deserve. Be mine the more useful, though less gracious, task of setting forth the shortcomings and mistakes which may possibly belong to some among you, not captiously or malevolently, but lovingly, honestly, hopefully, and with an earnest prayer that you may never rest or feel at peace with yourselves until, with God's blessing, you shall have emancipated yourselves from defects and tendencies and modes of thought and rules of conduct which very largely discount, if, indeed, they do not altogether destroy, your usefulness as teachers.

A GRAVE MISAPPREHENSION.

Primarily, then, let me rectify a grave misapprehension on the part of many young teachers as to the general nature of the work to which you have devoted yourselves. There is a constant flow of hot young blood into your profession. Dissatisfaction with agricultural pursuits, the irksomeness of farm life, and the ever-increasing competition in all industrial employments annually drive our High school pupils by hundreds to become instructors of youth. Just as soon as they obtain the coveted third-class certificate they are eager to try their 'prentice hands at work of the nature of which they may be said to know little or nothing, and to care less. Hence, both in and out of the profession, there prevails a very general impression that anyone who can obtain a certificate can teach a school—that it is an easy thing to become a school teacher, and that school teaching is easy work. This is a serious mistake. It is unquestionably an easy thing to be a school-keeper—a thing so contemptibly easy that no one having status or aspirations above those of a human cabbage should be emulous of filling the role. It is but little, if any, more difficult to herd children in a school-room than to herd sheep or cattle or swine on the hillside, and is scarcely more dignified or reputable employment. Nor is either the trouble or the respectability of the work greatly enhanced by the effort, however successful it may prove, while herding children to merely instil into their receptive minds a modicum of useful knowledge. It may be admitted, then, that it is almost if not quite as easy to be a childherd as to be a shepherd, or a cowherd, or a swineherd, or, in other words, that to keep a school is easy work. But to teach a school—to be a real, living teacher, charged with the tensional electricity of high resolve—an exhaustless source of mental enlightenment and moral warmth to all around—developing his scholars while instructing them—more anxious that they shall become good

able men and women than merely learned girls and boys, and therefore moulding the character and fixing the principles, and elevating the affections and subduing the passions and forming the manners, and energizing and uplifting and intensifying the whole higher nature—to be a teacher in this sense is surely no easy matter, nor are such functions to be assumed in a light or frivolous spirit. Such work affords scope for the whole powers of the largest and noblest manhood or womanhood—demands on the part of all who would achieve success the rarest conceivable combination of gifts and graces. Probably in the truest meaning of the term, great teachers, like great poets, are “born, not made.” Since, however, nature only produces a great teacher now and then, while each of our many schools requires a teacher or keeper of some kind, it becomes a really important question. Now, art can supplement nature, if not in making eminent teachers, at least in improving the character of the supply. It is doubtless true that the highest qualities, the most vital requirements, of the living teacher can never be lectured or otherwise crammed into ordinary mortals. Nevertheless, the veriest school-keeper whose conscience can be aroused can be inspirited by higher motives, can be uplifted to greater conceptions of duty, can be stimulated to greater exertions and prepared to do better work.

THE FUNDAMENTAL FAULT.

Want of real, living interest in your work is probably the fundamental fault that pertains to a majority of you. I say fundamental, because it underlies and renders possible all or nearly all of the other defects and shortcomings in your professional capacity of which we have to complain. You are not in love with your work. This, though a great misfortune, can scarcely be a matter of surprise. In common with perhaps a majority of those yet in their novitiate, you have embraced the profession, not as a life work, but either as a stepping-stone to some other employment, or as an easy and reputable mode of gaining a livelihood. Such motives, if not lofty or strictly honorable, can scarcely be termed unworthy. Unhappily, however, they fill our schools with teachers who very soon find that they have missed their vocation, and who, having no special fitness for or interest in the labors they have assumed, soon learn to abhor their daily round of duties. Possibly thus to some of you school life has become hard, monotonous, hopeless drudgery. Should any of you really be in this pitiable plight, your only honest alternative is either to force yourselves to become interested in all that pertains to your school duties, or to change your occupation. If you do not and cannot love teaching, you are utterly out of place in the school-room. In that case do not teach another day. Burn your certificate and look elsewhere for a livelihood. You can earn bread and butter and raiment by other means, and any honest mode of support is more respectable than continuing to hang, as excrescences, on a profession to which you must feel you do not properly belong. Nay, it were better that you starve and die and be buried and forgotten, than continue to win an unhallowed subsistence by criminally wasting the precious oppor-

tunities of the children committed to your charge. Without a reasonable amount of love for and interest in your work, success therein is beyond your reach—you can never aspire to be anything above a mere school-keeper. If you are so dull, cold, selfish, apathetic, or heartless, that these requisites are not yours, then, as I have already suggested, in the first place strive by the help of God to reach them; earnestly pray that He will endow you with the desired qualities of heart and mind. Never, however, make the sorry blunder of supposing that you have but to ask to receive—that you have only humbly and devoutly to beseech your Heavenly Father for

SPECIAL GIFTS AND GRACES,

and that He is going to suspend the order of His governance to grant your request. God helps those who help themselves, and blesses them who bless themselves. Do not suppose the Almighty is going to work a miracle on your behalf. We are told to watch and pray. Jacob wrestled with the Angel of the Lord—would not let him go until He blessed him. If you are sincere and earnest in your prayer that God shall bless your work, and vouchsafe to give you certain characteristics of temper and temperament, show that you mean business—prove that you are at least trying, in some measure, to deserve His goodness by steady, determined, unceasing, and intelligent striving towards the desired end. The most acceptable and effectual prayers to God are not merely breathed from the hearts or uttered by the lips of suppliants, or thundered through fretted domes by cathedral choirs, but are conceived in the brain, and are wrought out in the actions, and are crystallized in the lives of true men and women. If you want God to enable you to overcome the paralysis of indifference, and to develop you into a real successful teacher, first get a clear conception of what a real successful teacher is, and then, while daily praying for Divine guidance and aid and support, strive with all your mind, with all your heart, and with all your soul, and with all your bodily powers, to become a real successful teacher; and even if you never quite attain to your ideal, you will approach more or less closely to it. God's blessing and help are assuredly yours if you thus seek them, while, on the contrary, to implore His blessing and then supinely wait for it, passively folding your hands expecting it to come, is merely to mock God. And if to you success does not seem worth the effort necessary to secure it—if you do not, and cannot, or will not, put your heart into your work as teachers—if, try your best, you can see nothing but the face of wearisome, repulsive, uncongenial duty in your daily pursuits—if, in a word, you know, or even strongly suspect, that you are not a teacher, and never will be a teacher, then, I repeat it, for humanity's sake, for God's sake, burn your certificate and change your avocation.

THE ESSENTIALS OF SUCCESS.

I have always remarked that unless you can and do take at least a reasonable degree of interest in your employment, your failure, your disastrous and disgraceful failure, is a foregone conclusion. I may go a step further, and remind you that the highest and

most valuable results in teaching are reached only by those whose interest in their work rises to the pitch of enthusiasm. Alas! how seldom now-a-days do we meet with teachers who are enthusiastic over their calling—who are interpenetrated with a vitalizing and fructifying sense of its innate grandeur, its inevitable obligations, and its noble potentialities. A cold, passive acquiescence, on the part of its individual members, is commonly the best we can expect when we venture in the presence of the profession to dilate on the glorious opportunities for good within the reach of even the humblest school teacher. Dull, dead flatness, and almost corpse-like insensibility are to-day the prevailing characteristics of only too many of our teachers. How are they to be aroused? How is the profession to be, not merely galvanized into a semblance of new life, but quickened, animated, enkindled to higher and broader phases of vitality and action? How are our teachers, and more especially our younger teachers, to be inspired and spurred to greater ardour and zeal? Your educational executive has answered these questions by the establishment of a School of Pedagogy, as though you had not, unfortunately, in the profession already “pedagogues” enough and to spare. Happily, this new ornament to our school system does not propose to make “pedagogues” of any of you not already possessed of first-class C qualifications—for which gracious limitation the great body of your membership may feel devoutly thankful. Even if in some unexplained way the few who can attend such an institution really become enthused by means of chapters on psychology, lectures on technics, and dry disquisitions on the ethics and metaphysics which underlie the teaching art, they can hardly be expected, when they emerge from their cold bath, to leaven the whole body of their associates with fervency and devotion. In fact, the profession is asking for bread, and the ruling powers have given it a stone; is numb and suffering from coldness in its extremities, and they have increased the rush of blood to its brain. What you require in the present crisis is not head but heart, is not technique but warmth, is not knowledge but glow, intensity, fervor, enthusiasm—sparks of Promethean fire not likely, I fear, to be caught from

THE ONTARIO SCHOOL OF PEDAGOGY.

A stream cannot rise above its source, nor can you expect the current of your professional supply to climb the lofty hill-top of enthusiasm, while its feeding springs lie deep and cold and dead in the adjacent valleys. In happier days education may once more be divorced from politics, and a practically irresponsible political chief may no longer be empowered to create offices to be filled by subservient followers, or to prostitute executive patronage to either the miserable exigencies of partyism, or the petty demands of private friendship. Then a healthier order of things may prevail. In the meantime it lies within your power to at least do something towards the betterment of the existing state of affairs. Perhaps your chief hope lies in your annual or semi-annual gatherings for mutual encouragement and support. At these institute meetings let your best men and women talk

much and earnestly to their younger associates. Let them unite in well-directed and sustained efforts to transfuse the strong wine of professional life into the veins of their juniors, fortifying the weak, correcting the faulty, uplifting the depressed, commending the successful, and stimulating and inspiring all. Peradventure, in giving to others they shall themselves receive, and all shall return to their labors refreshed and invigorated, nerved and braced, and awakened and thrilled, as by a mighty trumpet blast, to higher and to yet higher exertions.

(To be continued).

✻ English. ✻

Edited by Fred. H. Sykes, M.A., EDUCATIONAL JOURNAL, Toronto, to whom communications respecting this department should be addressed.

AIDS TO THE STUDY OF "THE MERCHANT OF VENICE."

BY J. W. TUPPER, B.A.

THERE are some who study literature texts without commentaries; there are those who study commentaries without texts. But the sensible plan is to study the text with all the ideas and suggestions that capable critics can give in aid of your independent judgment. Taking what aid others can give we resemble a man who looks at a landscape, not from one point of view, but from many. As he changes his point of view, new beauties of the scene flash upon him, and only to him is the landscape really known in all its charm. I trust that some may find new pleasure, as I have done, in the old play of "The Merchant of Venice," when guided by the clever hands of the critics I now bring forward.

The most valuable edition for the study of "The Merchant of Venice" is undoubtedly the new *Variorum* edited by H. H. Furness, Philadelphia, 1888. This work consists of the text, with annotations selected from all the commentators, and appendices dealing with the text, the date of composition, the source of the plot, the duration of the action, and containing articles from various sources on different points in the play. For ordinary school use the best editions are Rolfe's, published by Harper Bros., Clarendon Press, MacMillans' and Moffatt's.

The sources of the play are given in full in Hazlitt's "Shakspeare Library," Part I. Vol. I. This includes (1) the story of Giannetto from the Italian novel "Il Pecorone," (2) the tale "of a Jew who would for his debt have a pound of flesh of a Christian," taken from "The Orator" of Alex. Silvan; the story of the caskets from the "Gesta Romanorum"; (4) the poem of the "Northern Lord"; and (5) the verses on "Gernutus the Jew."

E. A. Abbot's "Shaksperian Grammar" is recommended as affording explanation of grammatical forms which have become more or less unfamiliar and obscure since the time of Shakspeare. F. G. Fleay's "Shakspeare Manual," Ingleby's "Shakspeare, the man and the book," and Dowdin's "Shakspeare Primer" give an insight into the versification of Shakspeare.

Information as to chronology may be found in nearly all the critics, but A. W. Ward's "History of English Dramatic Literature," Vol. I., is one of the best authorities.

An admirable criticism of the play is Moulton's in his "Shakspeare as a Dramatic Artist." The subject is considered under the heads of two stories borrowed for the play, the manipulation of them in their dramatization, and the complexity of the plot producing simplicity. The whole question of development of plot and characters is worked out with scholarly accuracy.

Besides this, Edward Dowden's "Shakspeare's Mind and Art," Ulrici's "Shakspeare's Dramatic Art," (translated in the Bohn Library), Hudson's "Shakspeare's Life, Art and Characters." Vol. I., Lloyd's "Critical Essays on the Plays of Shakspeare," Swinburne's "A Study of Shakspeare," R. G. White's "Shakspeare Scholar, Studies in Shakspeare," and "Life and Genius of Shakspeare," Elze's "Essays on Shakspeare," Mrs. Jamieson's "Char-

acteristics of Women," and Lady H. F. Martin's "Some of Shakspeare's Female Characters," furnish extensive information of the play and the characters.

A very interesting article by Mr. Lee in the *Gentleman's Magazine* for February, 1880, on the "Original of Shylock," should be consulted as giving valuable information on contemporary history and presenting with much skill a probable original for the famous Jew. The condition of the Jews in England is presented in a very attractive form in a paper in the *Athenaeum*, 1829, pp. 729 and 743. It explains the point of view from which the audience looked at such a play, and while the paper deals mainly with Barabas, in "The Jew of Malta," it also institutes some very interesting comparisons between the two characters of Barabas and Shylock. In the *University Magazine* for 1880, p. 46, is an article called "The Quality of Mercy," which is curious and instructive as presenting the characters of Portia and Shylock in a manner not usually given. It is a strong plea for the Jew, and contains some clever insinuations as to the much extolled excellencies of the fair lady of Belmont. As a companion study to this, the paper called "Shylock vs. Antonio," which recently appeared in THE EDUCATIONAL JOURNAL should be read. "A Study of Shakspeare in 'The Merchant of Venice'" is the subject of a very interesting article in the May and June numbers of *Fraser's Magazine* of 1850. It is considered in the relations of Portia and Bassanio, Bassanio and Antonio, Antonio and Shylock, Shylock and Portia, and Portia, Bassanio and Antonio.

D. J. Snider, in *The Journal of Speculative Philosophy*, Vol. VI. (Apl. and Oct. nos.) has an article on "The Merchant of Venice," which deals with the religious and philosophical elements of the play. The conflict between Christianity and Judaism, as personified in Antonio and Shylock, is well treated; the significance of the trial scene, where the might of the form of law is forcibly shown, is well brought out, and the character of Portia as subject to a dying father's command, and as a mediatrix in the adjustment of all parts of the drama is dwelt upon with considerable fullness and accuracy.

PROBLEMS IN GRAMMAR.

Third Series.*

WRITE notes on the function and form of the italicised words.

1. This is a friend of *John's*.
2. Have you a book of *mine*?
3. He is *but* a man.
4. I shall see *but* you.
5. I cannot *but* regret that you will be absent.
6. I had all *but* spoken to him.

NOTES TO PROBLEMS.

(Second Series.)

7. In "far-reaching" we have the participle become an adjective, but retaining its part of its verbal force. Hence the adverb *far* may naturally be used to modify it.

8. The noun "over-flow" shows a very common peculiarity in nouns derived from verbs, namely, their holding enough of their verbal force to admit of adverbial modification.

9. The compound noun "dead-beat" has arisen from the verb to beat. One is beat (*i.e.* beaten) when one is overcome with work, etc. So the noun *beat* arises to signify a worthless fellow. The use of *dead* as an intensive adverb is very common (*cf.* *dead tired, dead broke(n), etc.*) Hence we speak of "dead-beat" as a noun composed of the pp. *beat* (short form of *beaten*), and the intensive adverb *dead*.

10. The force of "dead" in "dead drunk" will be manifest from the preceding note. An adjective at first, it frequently has the function of an adverb and modifies adjectives.

11. *Dear me!* illustrates (1) the use of the objective case in exclamations. "Dear" has for many centuries been used in English as a mere interjection (exclamation), as in "Dear, but he was sorry." It is no doubt originally the adjective "dear" (precious), though some have attempted to see in "dear me" a corruption of the Italian *Dio mio, My God*, (see Century Dict.) The relation of "dear" to "me" is doubtful; I prefer to regard it as an independent interjection (=alas). "Me" is used to indicate the speaker's personal interest in the emotion expressed by "dear."

* Brief answers to these problems will be found in our next issue. Contributions of problems will be gladly received.

12. "March, hands down," The phrase "hands down" is a phrase adverbial to the verb "march"; "down" is an adverb modifying an understood verb,— "hands (pointing) down." Often such a phrase is a command, as when the teacher addresses his class. Then it is an abbreviation of "Put hands down."

ANSWERS.

X.Y.Z.—I have failed to find any information on the matters you asked about some time ago. The battle referred to in "Bingen on the Rhine" was probably one of the many contests between the French and the natives in Africa. I cannot say what special combat was in Morris's mind in "Riding Together." We should be glad if our readers could throw any light on the subject. "Thé Ride to Aix" is entirely imaginary. There can be no doubt that in "After Death in Arabia," as in other of Sir Edwin Arnold's poems, there is a highly idealized representation of Eastern belief and sentiment, yet the basis of truth is not wanting to his poems, even when we look upon them as representations of Eastern faith.

R. S.—The writing of *our* or *or* in such words as "hono(u)r," is a matter of taste and nationality. Englishmen usually employ *our*, though the circulation of Webster's Dictionary in England is certainly winning adherents to the cause of *or*. According to the press, the recent census slips of the British Government spelled "labor" without the *u*. In the United States, outside of some ultra-fashionable sets, the orthography of Webster prevails, and *or* is consistently employed. In Ontario usage is divided, the H. S. Reader spells *or*, but the H. S. History *our*. When we consider that the object of the printed form should be to represent with some degree of accuracy the spoken word, the reason for the *or* spelling is conclusive.

ENQUIRER.—The pronunciation of *ch* in "Lochiel" (*loch el'*) and "Eccelfechan" (*ek k'l fech'an*) is difficult to indicate. Put the speech-organs to say *k*, but instead of stopping the breath as with *k*, continue to breathe. If you are familiar with German, use the German *ch* sound, which nearly represents the Scotch *ch*. Generally the pronunciation of the old Scotch *ch* is simply as *k*, which may be used in the words above.

TEACHER.—We regret being unable, after long search, to secure information about Gustavus Frankenstein.

SUBSCRIBER (A. C.)—In English Composition for Junior Matriculation an essay of about sixty lines is required, and, if you are taking honors, another of about ninety lines. The Greek alphabet can most easily be got and explained in any Greek grammar, for instance, in Goodwin's.

J. D. H.—The stanza (II, 2) of *The Bard* opens, you remember, with a reference to the last days of Edward III., when there was strife between the Parliament and the king's ministers, and little love from his sons for the dying king. The Black Prince ("sable warrior") had died a year before the old king, and the many men who courted the king's favor during his prime had left him in his infirm old age to swell the retinue of younger princes. The new order was beginning in joyful anticipation—like a gay pleasure-barge laden with youth and happiness—knowing not the rebellions and strife that were soon to rend the kingdom like a tornado.

The term "scansion" is used to denote the peculiar movement of poetry. Take the line,

(a) "When the British warrior queen."

You notice that on certain syllables there is a heavy stress of the voice, while on others there is a light stress. If we use — to mark the heavy stress and x to mark the light stress, we could represent the line above

— x — x — x —

Marking the scansion denotes, therefore, indicating, as I have done here, the kind and order of the syllables of a line, as regards stress.

Of course the arrangement of stresses has great variety in different poems.

(b) "Who sows the false shall reap in vain,"

x — | x — | x — | x —

Here the light syllable is always before the heavy; in (a) it was always after. The line (|) may be

used to denote each bar, as it were, of the line, or, as we usually say, each *foot*.

(c) "Mid pleasures and palaces though we may
× —' × | × —' × | × —' × | ×
room."

(d) "Bird of the wilderness."
—' × × | —' × ×

(e) "And against him the cattle stood black every
× × —' | × × —' | × × —' | × ×
one."

Names, of course, are given to these various measures: (a) is *Trochaic*, with four stresses; (b) is *Iambic*, with four stresses; (c) is *Amphibrach*, with four stresses; (d) is *Dactylic*, with two stresses; (e) is *Anapest*, with four stresses. For further information see Gummere's work on English Poetics.

"Eek," in Chaucer's Prologue, l. 5, means "too," "also."

M. M.—The purist would prefer in place of "My hair wants cutting badly," "My hair badly needs cutting," to avoid the possible mistake, "cutting badly." "Needs" is less ambiguous than "wants." He would likewise prefer "The infant that you admired died last Tuesday," to "The infant which," etc., since the relative clause is closely connected with its antecedent.

Contributors' Department.

PHYSICAL CULTURE.

BY A. C. MOUNTEER, SECRETARY ONTARIO COLLEGE OF ORATORY.

III.

THE OBJECTS AIMED AT IN THE EMERSON SYSTEM OF PHYSICAL CULTURE.

BEFORE considering the next object sought in this system, I must take time to emphasize the main point of my last letter, viz.:—*discriminate, DISCRIMINATE, DISCRIMINATE* between exercise that *replenishes* and that which *wastes* vitality. The kind of exercise needed for vital replenishment must be the first, last and only consideration, if physical benefit is to be secured.

This vital replenishment cannot be secured if the vital organs (the factory of life) are not healthy. Hence, the primary object sought in this system is a *healthy condition of the vital organs*. This, and this alone, will secure vital supply for the entire organism. I know I am not overstating the case when I say that there is not one adult in a hundred whose vital organs are as healthy as they might be. Why is this so?

First, they are from one to four inches below their *normal altitude*, among adults. There is no physical defect so general as this, and yet I feel sure this statement of the fact will be news to the majority who read it. No vital organ can properly perform its functions when below its normal altitude. The altitude of a vital organ is an unerring test of its vigor or lack of it. Dr. Emerson, of Boston, who is a physician of long experience, claims most emphatically, that he has never known a case of chronic dyspepsia where the vital organs were normally high. He has given us in his system a set of exercises, the definite object of which is to lift the vital organs and strengthen the muscles which support them. By this means all who follow the practice regularly will, without any effort, sustain their vital organs in a position that is conducive to health.

Second, the *muscles surrounding the vital organs are not properly developed*. This is due to incorrect positions in sitting, standing and walking, and also to incorrect habits of breathing. An experienced physician does not need to examine the stomach to ascertain if it is healthy. The muscles surrounding it furnish sufficient test. A dyspeptic can scarcely bear a touch over his stomach. On the other hand, if the muscles over this organ are as strong as they should be, the power of resistance at this point is almost as great as that at the chest. The Emerson System provides another set of exercises, the direct object of which is to strengthen the muscles surrounding the vital organs.

Another object sought in the Emerson System is

to obtain a maximum of result with a minimum of effort.

This object is gained, first, by *obeying the law of gravitation*. Like all other natural laws, we can never get beyond it. If we obey it, it works for us with an infinite power; if we resist it, it works against us with an omnipotence that makes our weakness sadly real.

Second, this object is gained by *developing due relationship between the different groups of muscles*. Upon this I will not enlarge, as the subject is too intricate to make thoroughly interesting in my limited space. Suffice it to say that without the recognition of such relationship any system of physical culture would be of comparatively little value.

The next object is *beauty*.

It is a false notion which many people have that "beauty is only skin deep." This erroneous conception must have been given to the world by the first inventor of face powders. If so, it was certainly a good business scheme, if we may infer anything from the present demand for such "counterfeits of beauty." "Why," ladies (and perhaps gentlemen) "do you spend your money for that which is not bread and your labor for that which satisfieth not?" You may have beauty "without money and without price" if you but go to the fountain. God has implanted within you forces, which, if developed in harmony with His divine laws, will make you *healthy* in body and soul. Then, if you are not physically beautiful, no human invention will make you so. You cannot separate health and beauty. That which produces one must necessarily produce the other. To this end, all of the movements in the Emerson System are in curves. Curved lines are certainly more beautiful than straight; and the Great Creator of all that is beautiful has so ordered the laws of our physical organism that if we would develop or retain healthy bodies we must take exercise in harmony with that which is beautiful. Our movements must be in curves.

The last, but not least, object sought in this system is to *develop the relationship of mind to body*.

It is through the body that the mind and soul manifest themselves. When the whole man is harmoniously developed then and then only will the body correctly represent the soul. How natural it is to form our opinions of the soul of man (or the real man) by his manifestations through the body! That we are often mistaken in our conclusions thus formed, but proves that the person has failed to preserve a harmonious development of mind and body. How sad that the body should thus misrepresent the soul! And yet how many of the brightest and noblest minds are almost utterly powerless because of their failure to develop a healthy, responsive body. Would that the men and women of this and all subsequent generations could each realize personal responsibility in this matter. We are responsible for our health or lack of it. There is no "mysterious visitation of Providence" in the ordinary illnesses that afflict us. We have ignorantly or lazily ignored the gracious laws of God which were intended for our benefit, and must suffer the consequences of such neglect or open violation. In my next, I will take up the third division of my subject; viz., How to attain the objects sought in the Emerson System.

For Friday Afternoon.

BY-AND-BY.

THERE'S a little mischief maker
That is stealing half our bliss,
Sketching pictures in a dream land
That are never seen in this.
Dashing from our lips the pleasure
Of the present, while we sigh;
You may know that mischief-maker,
For his name is "By-and-by."

He is sitting by our hearthstones,
With his sly, bewitching glance,
Whispering of the coming morn
As the social hours advance.
Loitering, 'mid our calm reflections,
Hiding forms of beauty nigh—
He's a smooth, deceitful fellow,
This enchanter, "By-and-by."

You may know him by his mincing,
By his sportive, careless air;
By his sly, obstructive presence,
That is straying everywhere;
By the trophies that he gathers
Where his sombre victims lie;
For a bold, determined fellow
Is this conqueror, "By-and-by."

When the call of duty haunts us,
And the present seems to be
All the time that ever mortals
Snatch from dark eternity,
Then a fairy hand seems painting
Pictures on a distant sky,
For a cunning little artist
Is the fairy, "By-and-by."

"By-and-by," the wind is singing;
"By-and-by," the heart replies;
But the phantom just above us,
Ere we grasp it, ever flies.
Listen not to idle charmer;
Scorn the very specious lie;
Only to the fancy liveth
This deceiver, "By-and-by."

—Selected.

GROWN-UP LAND.

GOOD morrow, fair maid, with lashes brown,
Can you tell me the way to Womanhood Town?

O this way and that way—never stop,
'Tis picking up stitches grandma will drop,
'Tis kissing the baby's troubles away,
'Tis learning that cross words never will pay,
'Tis helping mother, 'tis sewing up rents,
'Tis reading and playing, 'tis saving the pence,
'Tis loving and smiling, forgetting to frown;
O that is the way to Womanhood Town.

Just wait, my brave lad—one moment, I pray;
Manhood Town lies where—can you tell the way?

O by toiling and trying we reach that land—
A bit with the head, a bit with the hand—
'Tis by climbing up the steep hill Work,
'Tis by keeping out of the wide street Shirk,
'Tis by always taking the weak one's part,
'Tis by giving mother a happy heart,
'Tis by keeping bad thoughts and actions down;
O that is the way to Manhood Town.

And the lad and the maid ran hand-in-hand
To their fair estates in the grown-up land.

—Selected.

KEEP TRYING.

If boys should get discouraged,
At lessons or at work,
And say, "There's no use trying,
And all hard tasks should shirk,
And keep on shirking, shirking,
Till the boy became a man,
I wonder what the world would do
To carry out its plan?

The coward in the conflict
Gives up at first defeat;
If once repulsed, his courage
Lies shattered at his feet.
The brave heart wins the battle,
Because through thick and thin,
He'll not give up as conquered—
He fights, and fights to win.

So boys, don't get disheartened
Because at first you fail;
If you but keep on trying,
At last you will prevail;
Be stubborn against failure,
Try, try, and try again;
The boys who keep on trying
Have made the world's best men.

—Selected.

FLOWERS WITHOUT FRUIT.

PRUNE thou thy words, the thoughts control
That o'er thee swell and throng;
They will condense within thy soul,
And change to purpose strong.

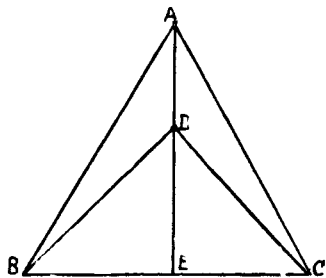
But he who lets his feelings run
In soft luxurious flow,
Shrinks when hard service must be done,
And faints at every woe.

✱ Mathematics. ✱

All communications intended for this department should be sent before the 20th of each month to C. W. Clarkson, B.A., Seaforth, Ont.

PROBLEMS, CORRESPONDENCE, ETC.

MR. L. G. CORNWELL, Ingersoll, sends the following method of finding the trigonometrical ratio of 15°.—



Make ABC equilateral, and within it draw BDC right angled at D and isosceles.
Then $\angle ABD = 15^\circ$; $\angle BAD = 30^\circ$
If $BE = 1$, $AB = 2$, $AD = \sqrt{3} - 1$, $BD = \sqrt{2}$
But $\text{Sin. } 15^\circ : \text{Sin. } 30^\circ = AD : BD$

$\therefore \sqrt{2} \text{ Sin. } 15^\circ = (\sqrt{3} - 1) \text{ Sin. } 30^\circ$
or $\text{Sin. } 15^\circ = (\sqrt{3} - 1) / 2\sqrt{2}$.

22. By G. W. THOMPSON, Millbank.

A man bought a farm for \$5,000, to be paid in four equal annual payments, interest 6 per cent.; the first payment to be made one year from date of purchase, and it to be the same amount, including interest, as each of the other three payments.

23. By SUBSCRIBER.

If the import duties on brandy amount to 50 per cent. of the invoice price and 75c. a gallon; and if an importer has to pay \$225 for duty on 120 gals., find the invoice price per gal.

The following test questions are added, suitable for Primary and Junior candidates:

24. One number is $\frac{2}{3}$ of another and their G.C.M. is 555; what are the numbers? Ans.—1,665; 2,775.

25. Four watches gain 6, 15, 27 and 35 seconds a day respectively. They are set together, when will they be together again, all running uniformly? Ans.—43,200 days.

26. A sum of money in pounds, shillings and pence is multiplied by a certain number. The pence are now half what they were before, and the shillings and pounds each what the shillings were at first. Find the sum and the multiplier. Ans.—£9 19s. 8d.; multiplier, 2.

27. A number of two digits is to the number formed by reversing the digits as 23 : 32, and the numbers are both divisible by three; find the original number. Ans.—96.

28. A sum of money consists of x pounds and y shillings; and half the sum of y pounds and x shillings; find the sum. Ans.—£13 6s.

29. A hollow spherical shell weighs $\frac{7}{8}$ as much as a solid sphere of the same metal and the same radius. If the hollow space is also a sphere with the same centre, find the thickness of the shell in terms of its radius. Ans.— $\frac{1}{2}$.

30. In hot weather a metal rule supposed to be a yard long expands .05 of an inch in length too long, and in cold weather contracts .02 of an inch too short. A measurement made by this rule in hot weather differs from that made in cold weather by $3\frac{1}{2}$ inches, find in yards the correct length of the measurement. Ans.—50 yards.

31. At noon on a certain day a clock and a watch are set to true time, and they both go uniformly. It was midnight by the clock one second before it was midnight by the watch; and at any particular time the clock was as much wrong as the watch was when it came to show the same time. Find, in fractions of a second, how much the clock gains per day and how much the watch loses. Ans.—Clock gains $\frac{86400}{333}$; watch loses $\frac{86400}{331}$ sec.

THE RATIO OF THE DIAMETER TO THE CIRCUMFERENCE.

ARCHIMEDES, born about 287 B.C., is supposed to have been the first to give the approximate value of π . He is reported to have proved that it must lie between $3\frac{1}{4}$ and $3\frac{1}{3}$, or, expressing his figures in decimals, between 3.1428 and 3.1408. He therefore had it correct to two places, and his re-

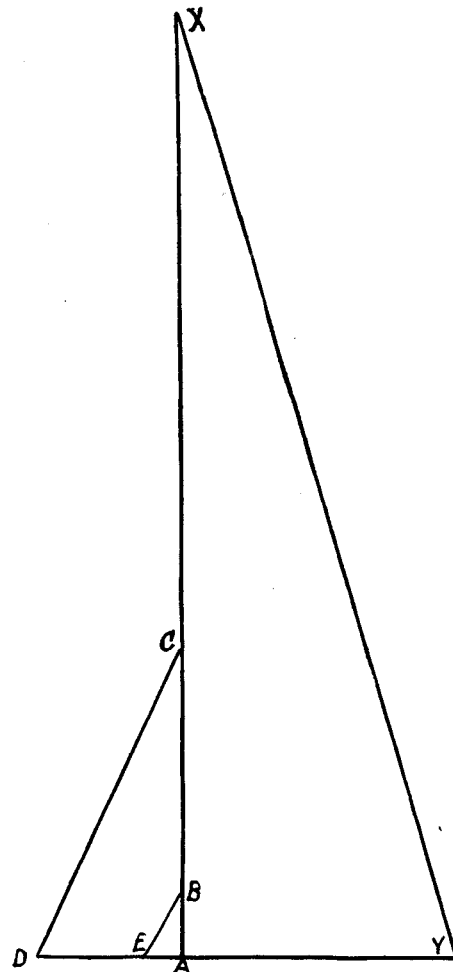
sult is still used in common arithmetical computations, and is so nearly correct that very perfect machinery, architecture, etc., may be constructed with this unit.

Adrian Metius, who lived in Holland in the sixteenth century, discovered the ratio $\frac{355}{113}$, which is correct within half a millionth, and is easily memorized by writing the numbers 113355. In recent times the value has been carried out by means of series to 600 or 700 places of decimals. The value of 20 places of decimals is this:

3.14159265358979323846, which is far beyond the requirements of even astronomical arithmetic, for it is stated that even ten places will give the circumference of the earth to the fraction of an inch, and "thirty places would give the circumference of the whole visible universe to a quantity imperceptible with the most powerful microscope."

Mathematicians have invented many different ways of finding this remarkable ratio, but all agree in showing that it cannot be expressed exactly in decimals, but may be carried to any required degree of approximation. A French calculator, for example, is reported to have carried it out to 660 decimal places with no indication that the end was nearer than before.

The following mechanical method is given by Dr. Chase in the proceedings of the American Philosophical Society, and requires only a divided rule, a square, and parallel rulers to construct the figure.

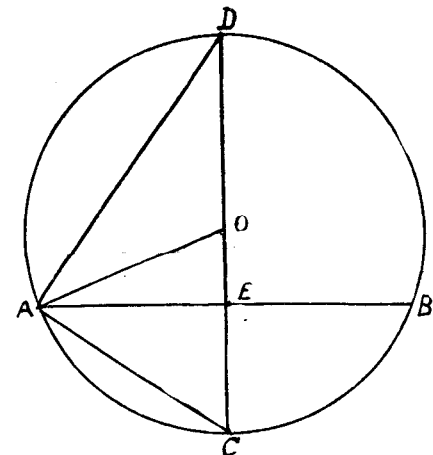


Let AC be the given diameter; divide AC into 20 equal parts and take AB=3 of these parts. Draw AD at right angles to AC and =9 parts. Join CD and draw BE parallel to CD meeting AD in E. Now produce AC to X, making AX=60 parts, and produce EA to Y, making EY=20 parts. Then the line XY is approximately the circumference of which AC is the diameter. A little calculation will show that the line XY = the line AC $\times 3.141585$, which is more nearly accurate than the number required for any application to the mechanical arts.

The geometrical methods depend upon the fact that if a polygon be described about the circle, or within the circle, the perimeter of the polygon approaches more and more nearly to the circumference of the circle as the number of the sides in the polygon is increased. Thus the perimeter of the inscribed square, the perimeter of the inscribed pentagon, the perimeter of the inscribed hexagon, etc., etc., form a series of numbers growing nearer

and nearer to the exact length of the circumference. When the number of sides is made very large the difference between the perimeter and the circumference becomes very small, and this difference may be made as small as we please by increasing and increasing the number of sides in the polygon. Now the line drawn from the angle of the circle, and it is comparatively easy to express the side of the polygon and hence the perimeter of the polygon in terms of this line. For example, if we place an equilateral triangle within the circle it is easily proved that the radius of the circle is $\frac{2}{3}$ of the perpendicular of the triangle; or, if the side = 2, the radius is $= 2 \div \sqrt{3} = 2 \div 1.732$; from which we can express the perimeter of the triangle in terms of the radius. If the square be inscribed the radius is half the diagonal, and we can again express the perimeter in terms of the radius. But the best starting point is the inscribed hexagon, since it is proved in the fourth book of Euclid that the side of the hexagon is exactly equal to the radius of the circle.

We need, however, in order to make a tolerably rapid approximation, the following proposition: Given the radius and the side of an inscribed polygon, to calculate the side of a polygon with twice as many sides as the given polygon.



Let AB be the given side; let E be its midpoint, draw the diameter CD through E, meeting the circumference in C; join AC, this is the side of the new polygon of double the number of sides. Join A with the centre, O. Now it is easily proved that $AC^2 = CD \cdot CE$, since CAD is a semicircle, and contains the right-angled triangle CAD. Now $CE = OC - OE = \text{Radius} - OE$, and $CD = 2 \text{ Radius}$.

$\therefore AC^2 = 2R(R - OE) = R(2R - 2OE)$

But $OE = \frac{1}{2} \sqrt{(4R^2 - AB^2)}$; and if we make the radius unity, or $R=1$, we get, by simplifying, these quantities:

$AC = \text{the s.d. rt. of } [2 - \sqrt{(4 - AB^2)}]$

If we now take this formula and begin with the hexagon whose side $AB=R=1$, we can find the side of a polygon with twelve sides. Applying the formula again we find the length of the side of a polygon with twenty-four sides, and so on. We have therefore the means of finding the perimeters of a series of polygons each drawing nearer and nearer to the circumference, though never actually reaching it.

Now if $\pi = \text{circumference} \div \text{diameter}$
 $= C \div 2R$, we have $\pi = \frac{1}{2}C$ when $R=1$;

and thus the semi-perimeter of each polygon inscribed is a nearer and nearer approximation to the value of π , and the following table results by the successive applications of the above formula for AC in terms of AB:

No. of sides.	Semi-perimeters.
6.....	3.0000000
12.....	3.10582854
24.....	3.13262861
48.....	3.13935026
96.....	3.14103198
192.....	3.14145255
384.....	3.14155772
768.....	3.14158471

This shows that 3.1415 is correct to four places, and that 3.14159 cannot be far wrong. Many series have been found by analytical methods that will yield additional figures with less labor, but they require higher and more difficult proofs. The preceding proof can readily be understood by any

One who has read the fourth book of Euclid, and is sufficient to show the impossibility of finding a straight line exactly equal in length to the circumference of a given circle. The squaring of the circle, or the finding of the side of a square whose area shall be the same as that of a given circle, belongs to the same category and is counted an insoluble problem, except by approximate solution. There are other elementary investigations extant. All, however, require a knowledge of geometry beyond the third book of Euclid, and therefore we shall be compelled to take the value of π on credit in our junior classes for some time to come. On the other hand, the mensuration of the circle is so common that the unit must be used even when the learner cannot understand how it is obtained.

School-Room Methods.

A LESSON ON PRACTICAL TEMPERANCE.

BY H. C. KREBS, EGG HARBOR CITY, N. J.

[We have been asked for a paper on Temperance for Fourth Class. The following, which we had clipped a few weeks since is very suggestive and helpful. The teacher may substitute or add statistics for Canada where practicable. Meanwhile will not some teacher send us a lesson based on the authorized text-book for Fourth and other classes? ED. JOURNAL.]

I HAVE a little question for you in arithmetic, boys and girls. You may get your slates quietly. With a ruler draw a line ten inches long. Make points at the end of each inch. Now write on your slates in a column:

1 inch = \$90,000,000 (public education).

That means that our country spends this enormous sum for the public schools. Suppose, John, you had \$90,000,000 in silver dollars, and you could count one every second—how many seconds would it take you?

"It would take 90,000,000 seconds."

How many minutes, Jane?

"1,500,000 minutes." Charles, how many hours?

"It would take 25,000 hours." How many days of twelve hours each? "2,083½ days." How many years? "About 5½ years."

That's right.

How much would two inches of our line be?

"\$180,000,000."

Correct. That is about what our country spends for boots and shoes. Write that in the column. Isn't it rather strange that our country should spend twice as much for boots and shoes as it does for the schools?

George, three inches of our line would represent how many dollars? "\$270,000,000."

Our country spends about as much as that for meat. It also spends about as much for iron and steel. We will put in the column \$270,000,000 for meat.

Six inches represents how many dollars, Charles? "\$540,000,000." Put that in the column, and write after it, "For bread."

Can anyone think of some other article that our country uses more than bread? "The country spends more for clothes." Do you think so boys?

You are right. Our country pays less for clothing than for iron and steel. Can no one tell me an article that costs the country more than bread? "There is none."

Seven inches represents how many dollars, George?

"It represents \$630,000,000."

What shall we write after that sum? (No answer.) I am almost ashamed to write it, but I must.

Here it is on the blackboard—" \$630,000,000 for tobacco." (Great surprise.)

Ought we not be ashamed to own that we spend many millions of dollars more for tobacco than for bread or meat?

Which is the most necessary to us, bread or tobacco? "Bread!" Tobacco or shoes? "Shoes." Tobacco or public schools? "Schools." Yet here our country spends seven times as much for tobacco as for schools. For every dollar spent for the public schools, seven are spent for tobacco. But there is something worse than this.

Ten inches represents how many dollars? "\$900,000,000."

What do you think I should write after that sum? I will write, "For liquor."

Is this a great and glorious country if it spends ten dollars for liquor every time it spends one for the public schools?

"No, sir! No, sir!"

Wait—don't be too hasty.

I must tell you that England averages over three times as much for liquor, for each person, as the United States.

There are ten countries in which the average expense for liquor, for each person, is greater than in our country.

Think of it! Almost two dollars for liquor for every dollar for bread. Five dollars for liquor for one dollar for boots and shoes.

Which does the more good, liquor or tobacco? (No answer.)

Let me put that question differently. Which does the more evil, liquor or tobacco? "Liquor."

Are there any persons who use neither liquor nor tobacco?

"Yes, sir; many persons."

Does it hurt them very much to be without it?

"No, sir; it does not hurt them at all."

Does it hurt some persons to use it? "Yes, sir; it makes them swear and murder and rob."

Which is the better, do you think—to run the risk of becoming a robber or a murderer, or to be sure of being a good, noble, healthy man? Would it be better to drink or to abstain? "To abstain."

Now, boys, this much is sure—if you don't drink you won't become drunkards. If you don't drink or smoke, you can save your body from becoming diseased through liquor or tobacco. If you don't drink you will save money. If you don't drink, you will stand a better chance to become a good, great, noble man.

There is another point of view from which we want to consider this question. An ordinary smoker uses how many cigars a day? "Ten!" "Six!" "A dozen!" Well, let us say five—that is surely a low estimate. These five cigars cost how much? "Twenty-five cents."

Right. How many dollars would that be in a year? "\$91.25." A piano would cost about \$300. How many years would it take to buy a piano, if that money were saved? "A little more than three years." How many suits of clothes could he buy in one year for his three boys, at \$10 a suit? "Three suits for each."

Suppose he were to save that money for twenty years, what would it amount to? "\$1,825." Could he build a house with that money? "Yes, sir." Yes; and I'll tell you what else he could do with it. He could buy 900 pairs of boots and give them to 900 poor boys who have none. He could buy 1,825 good books, and make that many boys happy.

He could give his whole family a trip to Europe, and have some money left. He could send his three boys away to school for two years, and start them on the road to greatness.

And how could all this be done?

"By not smoking."

How much could that man save by not smoking for twenty years? "\$1,825."

Now, some of you said that some men smoke twelve cigars per day. How much could such men save in twenty years? "\$4,380."

Now I'll write on the board beside our column of figures these mottoes: "Boys, don't drink." "Boys, don't smoke." Let every boy obey these mottoes, and he will be well started on the road to greatness and nobility.—*The School Journal.*

HISTORY.

THE chief objects to be kept in mind in teaching history are: (1) to create an interest in history and a taste for reading it; (2) to teach important facts of history so that they will be remembered; (3) to show the relation of past events to the present in such a way as to prepare pupils for the varied duties of life; (4) to cultivate the powers of memory, imagination, and reflection; (5) to cultivate language.

PREPARATORY WORK.—Story-telling and story-reading should precede the formal study of history, and may be begun very early in the course. True stories of celebrated persons, especially of their child life, will be interesting and instructive to children in the primary school. During the fourth and fifth years in school the stories should continue to be largely about persons, and may be somewhat disconnected; that is, no special effort need be

made to follow in chronological order the history of our country, the main purpose being to make enduring impressions upon the pupils, of the principal characters in history, and to create an interest in them. The story may be sometimes told by the teacher, and sometimes read after a few of the principal facts have been told. Sometimes one pupil may read the history to the rest, and sometimes—perhaps oftener than in any other way—the pupils may read in turn at sight. All of these exercises should be followed by talking and writing upon the subjects given, in order to encourage attention, to fix the points in the minds of the pupils, and to cultivate the power of expression.

During the sixth and seventh years in school, story telling and reading should be continued, but in a more systematic manner and with a wider purpose in view than during the preceding years. To teach what history is, and to lead the pupils into the possession of historical ideas as a basis for subsequent study, will now be the purpose of the teacher. Ideas of peaceful life, of war, and of government, are best gained by observation of present affairs, by reading and hearing what has transpired in the past, and by comparing what is heard with what is known from observation.

Begin, then, by calling the attention of pupils to the necessary accompaniments of peaceful life—useful employments, schools, government, religion, etc. Lead them to state in detail what they see in everyday life about them, and what is transpiring at the present time in places remote from them. Several talks of this kind will bring out all the essential ideas of peaceful life, and make the pupils realize that history is a real thing of the present as well as of the remote past. When this has been done, lead them to compare the present condition of their neighborhood and country with what it was in early colonial times. Have them read stories of the early settlements, dwelling especially upon the privations that were endured, the absence of schools, railroads, the telegraph, the primitive home life, and the means of travel.

The local history of the town or neighborhood should be first considered. There are few places which have not most interesting stories connected with them. The more personal and real these stories are, the better. After the pupils have read and talked about the early history of their own neighborhood and State, let them do the same with the history of other places, it being kept constantly in mind that the story should convey a vivid impression of real life. Pictures will aid the pupil to get a clear idea of some things which cannot be well described by words. Photographs of places, and pictures cut from illustrated papers and pasted upon cardboard, coins, relics of every description,—all will be found to be a valuable aid to the teacher of history.

The same method of teaching ideas of war should be used as is used in teaching ideas of peace. In the stories read and talked about, the causes of wars, their necessity, and the methods of warfare should be considered. It would not be well at this stage to dwell much upon campaigns and battles.

Ideas of government, the objects of government, the different kinds of government, the duties of citizens, should be taught in connection with stories illustrating both peace and war, and with what exists in their own town, State and country.—*Prince's Courses and Methods.*

THE REASON WHY.

TO BE RECITED BY A LITTLE GIRL.

"WHEN I was at the party,"
Said Betty (aged just four),
"A little girl fell off her chair,
Right down upon the floor;
And all the other little girls
Began to laugh, but me—
I didn't laugh a single bit,"
Said Betty, seriously.

"Why not?" her mother asked her,
Full of delight to find
That Betty—bless her little heart—
Had been so sweetly kind.
"Why didn't you laugh, darling?
Or don't you like to tell?"
"I didn't laugh," said Betty,
"Cause it was me that fell!"

—*Mary E. Bradley, in St. Nicholas.*

The Educational Journal.

Published Semi-monthly.

A JOURNAL DEVOTED TO LITERATURE, SCIENCE, ART
AND THE ADVANCEMENT OF THE TEACHING
PROFESSION IN CANADA.

J. E. WELLS, M.A. Editor.

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* Editorials. *

TORONTO, MARCH 1, 1892.

DR. SANGSTER'S LECTURE.

THE lecture delivered before the Teachers' Convention at Stratford, a few weeks since, by Dr. Sangster, was so exceptionally able and vigorous, that, with the consent of the author, we have decided to publish it in full, notwithstanding its length. In so doing we do not of course endorse every opinion expressed by Dr. Sangster. The question of the relative merits of a political as compared with a non-political head of the Education Department, is one fairly open to debate, and there is a good deal to be said on both sides. Though we are inclined to think that it would be on the whole preferable that the Superintendent of the Educational Work of the Province should be free from the influences and entanglements of party politics, we admit that there is a good deal to be said in favor of having the occupant of so responsible an office in a position in which he can be held directly responsible by the representatives of the people.

From Dr. Sangster's disparagement of pedagogical schools we must distinctly dissent. If teaching is the difficult and ex-

alted profession which Dr. Sangster makes it, and in this view we most heartily concur, it surely needs to be treated as such, and a course of distinctly professional training is no less desirable for it than for any other profession. We do not doubt, nevertheless, that the courses and methods of these institutions, as usually conducted, are open to criticism in the directions indicated by Dr. Sangster.

But these matters are touched upon only incidentally in Dr. Sangster's paper. The substance of it is addressed directly to the teachers of Ontario, and the appeal is a most forceful and ennobling one. We would wish that every teacher and every would-be teacher in Ontario, above all every one who is comparatively young and new to the profession, would read it carefully and thoughtfully from beginning to end. We only regret that our space will not admit of its publication in full in one number. Yet the division will not be wholly disadvantageous, as it will afford the better opportunity for careful reading and reflection.

CORPORAL PUNISHMENT.

THERE is something touching in the faith which many good people, especially among the English and Scotch, have in the virtue of the rod and other implements of corporal chastisement, as great and indispensable moral agencies in the school. Lamentations over the intellectual and moral decadence which are sure to follow from the tendency to the disuse of these appliances, are loud and frequent. Even a prelate of the Established Church of England takes up the refrain in the columns of a great magazine, while the echoes from newspaper editors and correspondents are unceasing. The arguments urged in support of this old practice are in the main unconvincing and some of them amusingly absurd. A mother and a governess, whose hearts must be of stone, tie up a little girl of nervous temperament in a dark closet, and re-open it hours after, to find the child dead of pain and suffocation. The catastrophe, some of the papers would have us believe, was primarily due to the fact that the child's mother was absolutely forbidden by the father to whip the child, the inference being that had whipping been allowed, the fatal act of cruelty would not have been perpetrated. Now, we have always held that the use of the rod by a judicious and loving parent is, as a rule, necessary and salutary in early childhood, though the lesson of obedience should have been learned and the necessity done away with, by the time the child is four or five years old. But one shudders to think what must often happen when *such* a mother,

not to say *such* a governess, may use the rod or strap at pleasure.

A writer in the Toronto *Mail* of recent date refers to the cases of the punishment inflicted by a Chicago schoolmistress upon a young girl, whom for three days she kept locked up, during school hours, in a dark closet; of a teacher in one of the city schools who punished a girl of fourteen by making her stand the whole of school time, dinner hour included, for two days, and of another teacher who punished a pupil by making her walk up and down stairs during dinner hour, from the basement to the top flat, ten times, the girl fainting on the tenth trip. The writer thinks that these and other "fancy" punishments are only the natural outcome of the rosewater sentiment of the day, which opposes corporal punishment.

For our own part we want no better argument than that such cruelties afford for refusing to entrust the right to use corporal punishment to such hands. Just think, parents, of entrusting to persons capable of devising and inflicting such tortures, the right to flog your little son or daughter at pleasure!

The best and sufficient argument for the abolition of corporal punishment in the schools is the fact that numbers of the best schools in the world, best in respect to both teaching and discipline, are now carried on without resort to physical violence of any kind. What further demonstration is needed?

EDITORIAL NOTES.

WE are sorry to find that we have unwittingly "crowded out" the programme of the next annual meeting of the Ontario Teachers' Association which we promised to give in this number. As the meeting does not take place until April, the programme will, we suppose, be in pretty good time in next issue.

THE London *Telegraph* waxes righteously sarcastic over the disgraceful smallness of the salaries sometimes offered to teachers. It says:

The teaching profession, especially the female branch of it, is looking up. An assistant mistress is wanted for a school in Wilts for four months, and the munificent salary of 5s. per week is offered. The authorities of an infant school in the neighbourhood of Greenwich are even more reckless. They are anxious to have the services of an ex-pupil teacher, are prepared to spare no expense to secure an efficient one, and therefore, offer no less than £17 10s. per annum. If this goes on, assistant schoolmistresses will soon rise, in the matter of salary, to the level of match-box makers in the East end.

* Literary Notes. *

IN the February number of *Babyhood* Dr. Wm. H. Flint discusses the dislikes of children to certain articles of food and the means of overcoming such antipathies. Of equal value to mothers is an article on "Colic," by Dr. C. L. Dodge, in which the causes, symptoms and treatment of that common ailment are clearly described. "Ought Obedience to be Enforced?" "The Tyranny of Whims," "Talking about Children in Their Hearing," etc., are some of the other topics discussed. The medical editor furnishes advice concerning such "Nursery Problems" as the voracious appetite often seen in children, the desirability of giving fruit to infants, the treatment of eczema, etc. The "Nursery Helps and Novelties" contain a large number of useful hints. \$2 per year. Address for sample copies the Babyhood Publishing Co., 5 Beekman St., New York.

THE contents of the *March Arena* are sufficiently varied to interest all lovers of serious literature. The Rev. Minot J. Savage contributes a remarkable paper on psychical research, giving many thrilling stories for the truth of which he vouches. Prof. Joseph Rhodes Buchanan, the well-known author of "New Education," and other notable scientific and educational works, writes thoughtfully on "Full-orbed Education." Henry Wood contributes a paper of great ability and interest, entitled "Revelation through Nature." Gen. J. B. Weaver writes on "The Threefold Contention of Industry." Hamlin Garland describes in his graphic manner the Farmer's Alliance members of the present Congress. Hon. Walter Clark, LL.D., Associate Justice of the Supreme Court of North Carolina, furnishes a masterly argument in favor of governmental control of the telegraph and telephone. William Q. Judge, of New York, answers Moncure D. Conway's recent article on "Madame Blavatsky at Adyar." Charles Schroeder institutes a comparison between Christianity and Buddhism. Nellie Booth Simmons' "Battle Hymn of Labor," which occupies four pages, is one of the best poems of the month. Miss Will Allen Dromgoole contributes a story of East Tennessee, entitled "The War of the Roses." The editor discusses "The Dead Sea of the Nineteenth Century," a thoughtful paper on the increasing misery of the very poor in our great cities.

THE *North American Review* for March is vital with thought and suggestion on affairs of moment by men high in the councils of the Nation. Dr. Cyrus Edson contributes a most readable and practical article on the subject, "Do we Live too Fast?" He counsels an observance of the laws of health in the way of exercise as a remedy for national evils. The Belgian minister at Washington, Alfred le Ghait, gives a hopeful view of the results as to Africa in his article, "The Anti-Slavery Conference." The Hon. Wm. M. Springer makes clear the needs and certain benefits of "A Monetary Conference." The article by Col. George R. Davis, Director-General of the Exhibition, on "The World's Columbian Exposition,"

will attract attention. There are other able political and financial articles by prominent statesmen. Lady Blake, the wife of the Governor-General, writes with enthusiasm of "The Highlands of Jamaica," arguing their fascinations and their qualities in the way of health-giving. The Right Hon. W. E. Gladstone continues his scholarly papers on "The Olympian Religion." In the notes and comments are suggestions as to some of the newest features in modern progress and thought, including an article on the nature of consumption, as less hereditary than contagious, and the care to be taken at health resorts. An unpublished letter written by Henry Clay on the telegraph in its early days, is of interest. Julien St. Botolphe defines what seems to be the solution of the problem of navigating the air.

THE *Atlantic Monthly* for March opens with an article by the Rev. Brooke Herford, the popular Boston clergyman, on "An Old English Township," in which he embodies, in a delightful way, the chances and changes of a settlement in Lancashire, Singleton by name, with which Mr. Herford is thoroughly familiar. Mr. Crawford continues his serial of Italian life, "Don Orsino," and Miss Isabel F. Hapgood has a vividly written paper on Russian travel, called "Harvest-Tide on the Volga." Miss Agnes Repplier contributes an interesting essay on "The Children's Poets," in which she seeks to demonstrate that it is not necessary for children to understand poetry to enjoy it; and that very often children do not understand precisely the infantile kind of poetry which is written for them, but prefer poems like Tennyson's "Lady of Shalott," which not all grown people comprehend. Joel Chandler Harris has a short dialect story, called "The Belle of St. Valerien." Edith Thomas, under the fanciful title of "The Little Children of Cybele," describes in a half-serious, half-fanciful fashion, the habits of the swallow, the squirrel, the tortoise, the chipmunk, and other dumb pensioners of nature, interspersed here and there with short poems, also by Miss Thomas. The most important article in the number, however, is "Why the men of '61 fought for the Union," by Major General Jacob Dolson Cox. Another important article is by Professor George Herbert Palmer, of Harvard University, who writes on "Doubts about University Extension," a scholarly paper, which will command the attention of the many persons interested in the work of university extension throughout the country. There are other interesting papers and stories.

* Question Drawer. *

VARIOUS SUBSCRIBERS.—The examination in Agriculture will be based on the first seven chapters of the authorized text-book.

W.H.C.—We have not received a copy of the report of the N.E.A., and do not know whether it is yet published or not. You had better write to the Secretary.

G.L.—We can find nothing in the law or regulations empowering a teacher to dismiss his school for a day, or part of a day, because of the smallness of the number in attendance.

INQUIRER.—In cities, towns, and incorporated villages the schools have holidays during the week following Easter Sunday, but in townships they do not, save on the public holidays, viz., Good Friday and Easter Monday.

M.G.M.—No. 1 is sent to the Mathematical Editor. We do not quite understand what you mean by Ontario Act Course in Drawing. Do you refer to Art Schools under direction of Education Department, or to some other school? No. 3 answered elsewhere.

J.A.C.—Candidates for Entrance are to submit their copy-books, showing their work in Writing for at least three months, and their drawing books, Nos. 5 and 6. Drawing and Writing in any blank exercise book will be accepted if the prescribed course is covered.

J.A.C.—The School Act leaves it to the Minister of Education to determine the dates at which Normal School terms shall open or close. It has not yet been decided whether the Normal School year shall be divided into two terms as heretofore, or shall have but one session in the year.

A SUBSCRIBER.—We should suppose that the authorized Drawing Books would be the best guide for the teacher in preparing pupils for the Entrance Examination in that subject. There are, of course, many hand-books in elementary drawing. Perhaps some practical teacher could recommend one or more.

No. 15.—If we understand your question, the courses which you describe will, we have no doubt, qualify you for Specialist's Certificate and for entrance into School of Pedagogy, respectively. But it is better to address all such questions directly to the Education Department and get an official reply. No. 3 *re* Drawing Book is answered in editorial note.

"TEACHER" asks us to recommend a book in Geography suitable for Primary classes. He is, of course, aware that the Public School Geography is the only one authorized for use in the Public Schools. If he wishes one better adapted to aid him in private preparation, perhaps some teacher who has examined different Primary Geographies will kindly advise.

C.F.C.—Professor Morse had suggested the possibility of laying an Atlantic cable as early as 1843. In 1854 Mr. Cyrus Field and others began to discuss the practicability of the project. After several unsuccessful attempts a cable was first successfully laid by the Atlantic Telegraph Company in 1858, but this continued in operation only a few weeks. In 1865, the *Great Eastern* was enlisted in the service, but in consequence of a breakage was obliged to return to England, leaving nearly 4,000 tons of cable at the bottom of the Atlantic; but the following year she not only successfully laid a new cable, but fished up the end of the lost one and completed the laying of it. Several others have since been laid.

T.B.T.—Columbus sailed from the port of Saltes, near Palos, on the S.-W. coast of Spain, but delayed a month at the Canaries to refit.

The evidence that the Norsemen visited (and colonized) Greenland long before the days of Columbus is conclusive. Two sources may be mentioned, viz., the historical and other literature of the Scandinavians, and the language of the Greenlanders themselves. The Icelandic histories, too, e.g., the *Landnama* book, show that Iceland was colonized by Ingolf, a Norwegian, as early as A.D. 870.

It seems difficult to determine precisely what portion of the Low Countries was included in the term "Spanish Netherlands," as the period referred to was one of struggle with varying success, on the part of Spain, for the conquest of the Netherlands. Perhaps if you had given us the reference to your quotation we might have been able to give a more definite answer.

Will some teacher of the subject kindly name, for the information of our correspondent, one or two of the best text-books on Book-keeping for use in junior classes?

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO.—
ANNUAL EXAMINATIONS, 1891.

JUNIOR LEAVING AND PASS MATRICULATION.

LATIN GRAMMAR AND COMPOSITION.

Examiners: { A. J. BELL, M.A., PH.D.,
WILLIAM DALE, M.A.,
JOHN FLETCHER, M.A.

NOTE.—Candidates will take sections A and B, and any five questions of section C.

A.

Translate into Latin :

1. He thought that the boy would die, but all the rest thought that he would live.
2. Don't you think that he ought to have forgotten how much they had injured him?
3. I asked him which of his friends was favored by the king?
4. No one was so cruel as to wish them to be put to the sword.
5. I believe that the government ought to have ascertained the position of the enemy.

B.

6. Translate into Latin :

Elated with this victory he encamped that night upon the field (*locus*) of battle, intending upon the following day to go in pursuit of the enemy who had immediately withdrawn from the neighborhood (*locus*). At dawn, accordingly, he began the march, but had not advanced far, before ambassadors from the enemy made their appearance (*appareo*). Flinging themselves at his feet, they implored him with tears in their eyes (*fleo*) to spare their countrymen. They acknowledged that by the injuries they had inflicted upon them they had deserved death; that they hardly dared even to ask for peace. They begged that their offences (*maleficium*) might not prove their ruin (*pernicies*).

C.

7. Write down the nom. sing. of *nautis*, *deabus*, *omine*, *ossis*, *muneris*, *plebi*, *pectore*, *noctis*, *virtute*, *multitudine*.
8. State the gender of nouns in question 7, giving the rule in each case.
9. Parse (giving the principal parts of verbs) *cadet*, *caedet*, *jaciere*, *det*, *ferret*, *quaeratur*, *quetur*, *verere*, *victus*, *vinctus*.
10. Give the principal parts of *veto*, *augeo*, *audeo*, *tego*, *texo*, *vendo*, *veneo*, *veto*, *jaceo*, *tollo*.
11. What verbs take *ut* with subjunc. for the English infinitive?
Translate: They will never persuade you not to do it.
12. State the syntax of verbs of fearing.
Translate: I was afraid that he was not likely to do you much good.
13. State the common forms for the negative imperative.
Translate: Do not lose such an opportunity.
14. What is a dependent question?
Translate: Have you told them the nature of the danger?

ENGLISH COMPOSITION.

Examiners: { W. J. ALEXANDER, PH.D.
T. C. L. ARMSTRONG, M.A., LL.B.
JOHN E. BRYANT, M.A.

Write an essay on any one, but on one only, of the following subjects:

- (a) The Social Condition of England in the time of Richard I. as represented in "Ivanhoe."
- (b) The character of Richard I. as represented in "Ivanhoe" and its variations from the Richard of History.
- (c) Chivalry and the customs connected therewith.
- (d) The Newspaper in Modern Life.
- (e) City and Country Life Compared.
- (f) The Trial of Warren Hastings.

WEST MIDDLESEX PROMOTION
EXAMINATION.

FROM 1ST TO 2ND CLASS.

DECEMBER 21 AND 22, 1891.

LITERATURE.

1. Write a sentence about each of these animals: Lamb, cow, mouse, mink.
2. Tell something that each of the following birds can do; Swallow, hen, duck.
3. Put a suitable word in each of these blanks: _____ will snap at us; _____ planted a plum stone; _____ builds a snug nest.
4. Form sentences containing each of the following words: New, dear, sea, see, maid.
5. Write the first stanza of "Drive the Nail Aright."
Values—8, 6, 6, 10, 10.

DRAWING.

1. Draw the second design in the third horizontal row on the inside of the right hand cover.
2. Draw the bird on the left hand side of page 42.
The presiding examiner will see that the pupils do not have their books till they are done with the literature.
Values—5, 5.

FROM 2ND TO 3RD CLASS.

LITERATURE.

1. Somebody's Mother.—Tell the story of this poem in your own words.
2. Grandmamma.—(a) Write the first stanza of this piece. (b) Give the meaning of quaint, placid brow, peaceful even.
3. Elephants.—(a) Mention the work that elephants do in India. (b) Tell the story of the tame elephant that was building the wall.
4. The Boy and the Wolf.—(a) Tell this fable in your own words. (b) What is a fable? (c) What lesson did you learn from this fable?
5. "And this is not all; they took out their purses and contributed a large sum of money for him; not that they could ever repay the service he had done them; they knew that; but to show him in some way besides in mere words, that they felt grateful."
(a) From what lesson is this extract taken?
(b) What service had he done them?
(c) Explain the italicized words and phrases.
6. Write the "Morning Hymn."—"Father, help thy little," etc. Name four things that a child should shun.
7. Compose sentences containing these phrases correctly used: Serves as a blanket, resist the pleasure, descending eagerly, easily, tamed, luscious prize.
8. Write the last stanza of the "Song of the Grass." (a) What is "I'll" a contraction of? Why is "Him" written with a capital letter?
Values—10, 14, 14, 14, 12, 14, 7, 14. Five additional marks for neatness.

FROM 3RD TO 4TH CLASS.

LITERATURE.

1. Put the necessary capitals and marks in the following:
 - (a) strathroy dec. 21st 1891.
 - (b) Snub him shouted barnstable hold on tom he rises already shall we pull in and finish him tom cried barnstable a few sets from your bayonet would do it.
2. Give in your own words the meaning of
 - (a) A child of beauty rare.
 - (b) The dam that did thee year
No kinder could have been.
 - (c) Our cottage is hard by.
3. In your own words tell what you know of the rhinoceros under the following heads: (1) Where found. (2) Kinds, and how distinguished. (3) Description. (4) Food. (5) How it overcomes its enemies.
4. Write sentences to show that each of the following words has two meanings. Present, account, eruption, volume, composed.

5. Substitute suitable words or phrases for the italicized words in these sentences: (a) It suddenly burst forth into a violent eruption that resulted in one of the most appalling disasters that ever happened. (b) The great majority of the people thus assailed fled through the gates remotest from the scene of combat.

6. Tell what Peter Hubert saw in the Park of Fontainebleau.

7. Write the stanza that describes the Village Blacksmith, and the one that tells how he spends his Sundays.

8. What is the difference between *sly* and *wary*? Show, by two examples from your lesson, that the crocodile is sly. What is meant by Fatal rush, Beguiled by the deceiver, Repeat this manoeuvre constantly, A feigned retreat?

9. Write five lines that tell what prayer is.

Write the stanza that tells that prayer is not made by man alone.

10. Use these words correctly in sentences: sincere, sublimest, saints, pleads, intercedes, contrite, unexpressed, detached.

Values—10, 6, 13, 10, 8, 9, 8, 14, 9, 8. Five marks for neatness.

FROM 2ND TO 3RD CLASS.

ARITHMETIC.

1. Multiply 43627347 by 54, using factors.
2. Find the value of $(302 \times 23) + (894 \times 24) + (962 \times 73)$.
3. Divide 893467296 by 3976 and prove your work.
4. A lady bought 6 pounds of sugar at 16 cents a pound, 12 pounds of tea at 45 cents a pound, 16 quarts of milk at 7 cents a quart, 17 pounds of butter at 23 cents a pound, and 18 baskets of grapes at 65 cents a basket. How much did she spend?
5. Divide 9364729 by 63, using factors.
6. There are 52 weeks in a year. 450 persons visit a certain museum every week. How many persons visit the museum in five years at that rate?
7. When hay is selling at \$15 a ton, how many tons must be sold so that the proceeds will buy 12 cows at \$45 each, and 7 horses at \$135 apiece?
8. Of what number is 758 both divisor and quotient?
9. Multiply 864737 by 3079.
10. A grocer wishes to pack 78480 eggs in boxes for shipment. How many boxes will be required, each box holding 30 dozen eggs?
Values—10, 10, 20, 15, 15, 15, 15, 15, 15. Five marks for neatness.

FROM 3RD TO 4TH CLASS.

ARITHMETIC.

1. Find the value of $(967 \times 37) + (94 \times 57) + (524 \times 65) + (86 \times 43)$.
2. Divide 6437326478 by 8964 and prove.
3. The sum of \$125 was paid as a week's wages to an equal number of men, women and boys. The men received \$1.25, the women 75 cents, and the boys 50 cents each per day. How many were there of each class?
4. A map is drawn on a scale of 5 miles to an inch, and a township is represented on it by a square whose side is 1 inch. How many acres are there in the township?
5. A man buys a house for \$8,000. The taxes and insurance for the year amount to \$375. He rents the house for \$37 a month, and at the end of the year sells it for \$50 less than he paid for it. How much did he gain?
6. Define measure, multiple, and give a measure and also a multiple of 8. Give a common measure of 8 and 10, and also a common multiple of these numbers. Find the L.C.M. of 16, 18, 24, 36, 42, 48, 70, 75, 150.
7. How many cans holding 4 gal. 1 qt. 1 pt.; each can be filled out of 5 barrels containing 31 gal. 2 qt. each?
8. A farmer had a field of corn consisting of 132 rows and each row contained 96 hills, and each hill had an average of 5 ears of corn; if it takes 8 ears of corn to make a quart, what is the produce of the field worth at 45c. a bushel?

9. A grain merchant shipped 8,500 bushels of barley at a cost of 6 cents a bushel (for shipping); he sold it at 75 cents a bushel and gained \$340 on the lot. How much did he pay per bushel?

10. Complete the following statement of school attendance:

School	Jan.	Feb.	March	April	May	June	Total
A.....	2517	3514	2495	2443	3468	3455	
B.....	1376	1312	1416	1290	1306	1387	
C.....	5448	4457	5429	4449	3423	3437	
D.....	318	319	326	297	282	304	
E.....	423	589	425	436	409	397	
F.....	965	864	962	859	884	973	
Total...							

Values—10, 15, 10, 15, 15, 16, 12, 12, 15, 18.
Five marks for neatness.

* Hints and Helps. *

CULTIVATION OF THE ÆSTHETIC SENSE.

BEEB.

"To send children into a hard, practical world well equipped in scholarship and the power of helping themselves is a good thing—a necessary thing. But to send them forth with eyes opened to see beauty, with ears trained to discern fine harmonies in nature and art, with a taste for refinement that will instinctively turn away from coarseness in any form, is not only to give them a life-long means of personal enjoyment, but a panoply of protection for their moral nature."—*Teachers' Institute.*

A beautiful work it is teaching eyes to see beauty, and ears to hear harmony. God's world is so full of wonder, and beauty, and music; and little children have in their hearts such a longing, tender love for pretty things, that we have only to say, "Look," or "Listen."

Each season in her turn, unpacks treasures rich and rare. Winter the gem-lover is with us, and could Earth be more magnificent! Beautiful is she in the daytime, in robes of gleaming whiteness, decked with jewels sparkling in the radiance of the ball of light that guides all her wanderings; more beautiful in the evening, when in her lofty, dome-roofed palace, with its drapings of amethyst, sapphire, ruby, and gold, the Sun in all his gorgeous robes of crimson, looks down upon her from between the parted curtains; most beautiful at night, when millions of diamonds glitter upon her snowy wrappings and crystal pendants hang from all her trees, when "the slumbering breeze forgets to breathe," and

"In full orb'd glory yonder moon divine
Rolls through the dark blue depths,"

and "the golden balls of heaven are tossed through the night by the Hand that made them!"

The little folks had "Twinkle, twinkle, little star," this morning. There were certainly some tiny star-gazers last night. To-night the bright eyes will look "way up high," to see the "twinkle" and "the dark blue sky," and perhaps to count the stars, for Charlie told us he had tried. Lady Moon cannot fail to attract attention and she will be more attractive than ever, when we have read "Lady Moon, Lady Moon," and thought that high above the world she is obeying the dear Father. It will be easy for the children to see the old elm tree story: the wild winter morning, with its drifting snow; the tall, sturdy, leafless trees are so near; the mowers resting beneath the shade of the tree; the birds building their nests amid its branches, are pretty pictures. The little folks, though sorry for the grand old tree, cannot but admire Old Winter's giant strength.

"The Song of the Sleigh," "The Squirrel," and "Shapes of Snow Flakes," can speak forcibly to the second class. I fancy there are but few children who are not fond of animals. For months, three squirrels have lived in our wood-pile. At first, I must confess, I was much alarmed for the safety of the little creatures, as they persisted in racing along the fence, and over the porch, in full sight of some of the most out-and-out boys to be found. One day I fancied there was something troubling one of my boys in the class (he was only fifteen). I made enquiries and found he had in his

pocket "nothing, only a squirrel." I asked him to give it to me. "It isn't one of yours." We all laughed at the idea of the squirrels being mine. Reluctantly he freed the trembling prisoner—a chipmunk. He wasn't one of my best boys, but there was a gleam of goodness in him, and when a beautiful white chrysanthemum dropped out of his book a few mornings after, when he rose to read, I was actually glad. Our squirrels are doing some very good teaching; even in the stormiest days, they venture out for a frolic.

Charlie brought a flying-squirrel whose life had been ruthlessly sacrificed to give a few moment's sport to two young men. Nobody scorned to go to the platform to examine the curiosity at recesses and at noon. The boys and girls are learning to see and I know they *hear* too.

"Old Winter," "Jack Frost," "See the Snow is Falling Fast," "Little Star," have each a pretty thought or two that a look outside makes plain. (*These are our songs*).

We may scatter germs of the beautiful, with so little effort, and with such pleasure and profit to those about us and to ourselves.

Having been particularly struck with the beauty of Monday morning, I offered my older pupils the following exercise:—"Write on a slip of paper, any thing of beauty you noticed this morning." I spent a very pleasant ten minutes examining the papers.

"Early in the morning, in the east, the moon was shining, and below it the sun was rising. I saw a pretty squirrel running over the snow-banks, and a span of horses were out at a trough for water.

The sun was shining on the snow-flakes."—ELLA.
"I think the sky was very pretty this morning; it was many colors, blue, white, purple, green, gray, pink, and yellow. In one place (the south-east) the sky down at the horizon, was just like a lake, and the bushes and trees rising against the clouds, made it look more like a lake, and the more I looked, the plainer it seemed. One could imagine they saw the waves and the gulls flying over them.

Last night, the sky was very pretty, too. It was all over yellow and red clouds about as big as the moon and the sky was fleecy and white.

The snow was very pretty before the sun went down. It was all over glistening flakes that shone like silver."—BERTIE.

"This morning when I got up, the frost on the trees and fences was very pretty while it hung all in little bits from the trees."—FLORA.

"Very early in the morning the stars were shining brightly.

There was the white smoke coming out of the chimneys.

The frost was glittering on the snow.

There was a long, blue cloud stretching across the south."—BESSIE.

"This morning, when I was coming to school, the sun was shining on the snow and looked very pretty.

Before daylight this morning, the moon was shining very brightly in the dark blue sky.

I noticed that the smoke was going straight up.

I saw a mirage, C—village seemed quite close."—ARTHUR.

Spring, with its birds, flowers, rippling waters, sweet sounds and balmy winds, offers splendid opportunities for the cultivation of the æsthetic sense, and one can scarcely begin too early, to prepare for catching the opportunities. The readers have capital spring and summer lessons.

A MANUAL OF PUNCTUATION AND SOME MATTERS OF TYPOGRAPHY

DESIGNED FOR PUPILS, TEACHERS, AND
WRITERS.

BY JAMES P. TAYLOR, LINDSAY.

(Continued.)

THE PERIOD.

THE period, or full point, is used at the end of every sentence that is neither exclamatory nor interrogative.

It is used after a heading or a sub-heading; after the address of a letter, and after a signature; and after the name and description of a book, before the author's name, on a title page.

It is put after every abbreviated word, and after Roman numerals, and sometimes between Roman numerals, to facilitate the reading of them.

Periods are also used to denote an omission in a quotation. If part of a sentence be omitted, three

periods are used; if a complete sentence be left out, four periods are used; but, if a paragraph be left out, a line of five or six periods is generally used.

The period is also employed for leaders in tabular work, to carry the reader's eye to the proper place; and before decimals, and between pounds and shillings and pence.

THE NOTE OF INTERROGATION.

RULE I.

THE interrogation point is put after a direct question.

1. What are those queer-looking things yonder?
2. And how if I refuse to shoot on such a wager?
3. You will stop for supper?
4. Have you ever used the expression, "plain as a pike-staff"?

RULE II.

When a sentence contains more than one question, and each question requires a distinct answer, the point of interrogation is put after each question; but, if one answer suffices for all the questions, one note of interrogation is put at the end.

EXAMPLES.

1. Where are you going?—to Bristol, to Bath, to Plymouth, or to Falmouth?

2. Wherein is he good, but to taste sack and drink it? wherein neat and cleanly, but to carve a capon and eat it? wherein cunning, but in craft? wherein crafty, but in villainy? wherein villainous, but in all things? wherein worthy, but in nothing?

3. Do you fancy that you can again deceive me, cheat me, and hold me up to ridicule?

4. Ah! whither now are fled those dreams of greatness, those busy, bustling days, those gay-spent, festive nights, those veering thoughts, lost between good and ill, that shared thy life?

a. When in a quotation an expression occurs, that is doubtful or merits a denial, the transcriber sometimes puts after it, in brackets, a note of interrogation; as, "The Captain fed the crew on fresh beef [?] during the whole voyage."

THE NOTE OF EXCLAMATION.

NOTE I.

THE note of exclamation is used after interjections, and sentences expressing wonder, a wish, or surprise.

EXAMPLES.

1. Ah! So you have made a discovery, since yesterday?

2. "Very miserable! indeed! exclaimed the stranger; "and how happens that?"

3. Give you a reason on compulsion! if reasons were as plenty as blackberries, I would give you no man a reason upon compulsion, I.

4. Stop, thief! stop, thief!—a highwayman!

5. May Shakespeare live on in the love of each generation that grows up in England!

6. Now let me point out, and show you what wonders *chance* can do!

a. Between *O* and *Oh*, there is a difference. The first is properly used in a direct address, but the latter is never so used. Immediately after *O*, the note of exclamation should not be put; but, if it begins a sentence that is highly passionate or exclamatory, a note of exclamation may close the sentence. After *Oh*, the mark is immediately placed, although, when the sentence requires at its close the same mark, the note may be omitted after *Oh*.

EXAMPLES.

1. O my child, my dear child!

2. Mother, O mother, my heart calls for you.

3. O Hal, I prithee, give me leave to breathe awhile.

4. Oh! I'm the chief of Ulva's Isle.

5. Oh! what is man, when at ambition's height?

6. Oh! ancient fisherman, go up to yonder cot!

b. When a sentence is interrogative in form, but exclamatory in force, the note of exclamation is put after it; as, "How could he have been so foolish!"

BELIEVE me, the talent of success is nothing more than doing what you can do well, and doing well whatever you do.—*H. W. Longfellow.*

LET every man be occupied, and occupied in the highest employment of which his nature is capable, and die with the consciousness that he has done his best.—*Sidney Smith.*

Primary Department.

SPELLING.

RHODA LEE.

SOME people are possessed of the idea that the phonic system of teaching reading makes bad spellers. We have proved the contrary in our schools, and have the best of all proofs to the contrary, that of practical experience. The correct spelling of words is best acquired through the sight medium, the order of the letters being fixed by a mental picture;

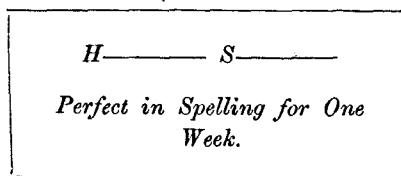
That which strikes the eye
Lives long upon the mind; the faithful sight
Engraves the knowledge with a beam of light.

This is most successfully accomplished by frequent reading of the word, and as the phonic system without doubt makes the quickest and best readers, it cannot fail in the end to make good spellers.

But yet we will admit that when we begin giving definite spelling lessons on the unphonetic words contained in the second part of the first book there is considerable difficulty experienced.

We were discussing our many difficulties and limited successes in spelling one evening recently—Lilian, Helen and I. "Spelling," said Helen, "is the plague of my life! I take only light words, four of which were in the lesson of the previous day, and still I have some children who make four and five mistakes every morning." "I would make a boy like that take his slate home for his father's inspection and signature," said Lilian. We discussed that plan for a time, and agreed that it might do in extreme cases, but even then would only have effect for a short time.

"Girls," I said, "I did not intend telling you of my new plan until I had given it a longer trial. It is only two weeks old in my class, and is at present working like magic, so you may as well try it too. I bought a package of cheap calling-cards and filled them out in this way, leaving a blank at the top for the name of the pupil;



All having had no mistakes during the week took home a card on Friday night. Having no printed monthly reports in this grade it is considered a great honor to take home the card, and every child in the class is doing his best to obtain one."

Lilian scoffed a little at this, and thought the old plan of "keeping in" after school would be very much less trouble and more successful, but we argued her out of that.

Helen seldom volunteers a suggestion, but this time she gave us an excellent one. The idea was to leave the lessons of the book at times and take up the names of articles in daily use at home, school and elsewhere. Her spelling lesson of the day before had been on the names of the things necessary to making a Christmas cake—flour, sugar, butter, eggs, raisins, currants, soda and spice being the words. Another lesson had

been upon the names of different parts of the body—bones, teeth, mouth, head, eyes, tongue, fingers, and elbows. Still another on articles of clothing—cap, hood, jacket, mittens, shoes, vest, apron, collar, etc. These spelling lessons were extremely interesting, and both practical and profitable.

Reviews were recommended as impressing old lessons. One method of conducting these was to distribute slips of paper on which the words, about twenty in number, were to be written. Papers then collected were marked, the perfect ones filed, and the others returned for correction. The file will not fill very rapidly at first, but teachers who have adopted this plan of review have found it helpful.

METHODS IN MULTIPLICATION.

ARNOLD ALCOTT.

(Continued from last number).

To be effective a teacher must be interesting. To be interesting she must have a variety of plans based on scientific methods. In other words, new presentations of subjects stimulate thought, and are therefore attractive.

Along this line of thought more plans for the development of multiplication suggest themselves to me as being fitting material for this article. As I have said in previous numbers, addition and multiplication are so closely allied as to be inseparable in teaching that aims to be scientific. The following plan recommends itself as a black-board exercise which may be used as a drill on two times table in multiplication, and the table of two in addition. Teacher puts on the black-board a line of figures, thus:—

123456789 with the two's underneath.
22222222

We may point to nine for multiplication by two; 2 and 9 for addition. After a short time the percept two, that is the line of figures containing the twos may be erased, and the answers given as before.

Another device is to arrange the digits in the form of a circle, thus:—with the multiplier, or a constant addend in the centre, and use as in the preceding exercise.

The following plan is, however, one of the best for rapid thought work in drill. The teacher puts on the board a line of figures, thus, 847596321, and tells the class to multiply whatever figure she points to by two, and add one; thus, pointing to 9, the answer would be 19; to 3, the answer would be 7, and so on. Again, multiply by 3 and add 2; by 4 and add 3; by 6 and add 4; and so on, according to the particular table on which drill work is needed. The carrying figure, of course, should be at least one less than the multiplier to preserve correct ideas of number. I cannot speak in too high terms of the foregoing as an excellent device.

The following rather novel plan works splendidly in a Second Book class. The teacher puts on the black-board a number, thus, 87698, and the children are required to multiply that by 2, and put down the

work, all the time keeping their eyes on the black-board, and never once glancing at their slates. Of course this requires greater precision of work, and deeper concentration of thought.

If there is one old saying which appeals to the teacher more than another it seems to me to be that "necessity is the mother of invention." How many times have we to study carefully, to plan, to turn inside out and upside down the mental material in order to prepare it to the best advantage, so as to present it in the most fascinating fashion. The previous plans having been tried and proven in my own class, I one day was wishing I had another new one, when I thought I shall try to develop the ear a little more, and so I decided to read out the figures of a number slowly, and to require the pupils to multiply, and carry of course, and to place their answers as I read the figures. Of course, I began to name the figures at the right hand side of the number first, thus, in the number 47632 I would say 2, 3, 6, 7 and 4, the scholars meanwhile writing on their slates 4, to the left of it 6, to the left of it 2, and so on. In this, as in the former exercise, pupils are not to look at their slates, but to keep their eyes to the front, in order to give variety, to train in concentration of thought, and in neat work without watching.

The plans and devices given in these two articles on multiplication have been chiefly for stimulating interest, and rapidity from black-board work. In future numbers I hope to present the subject of slate work and examples extensively before my readers.

Book Notices, etc.

College Requirements in Algebra. A Final Review.
By G. P. Tibbets, A.M. Ginn & Co. 1892.

This little book contains the entrance papers of a number of U. S. Universities and will prove useful for review for Third Class and Pass Matriculation classes in Ontario. C. C.

Moffatt's Geography of Asia. Reprinted from Moffatt's New Geography. Edited by Thomas Page and revised by Rev. E. Hammonds, M.A., Vice Principal Battersea Training College.

A large amount of matter is here compressed into a small space. It consists largely of lists of names, physical features, etc., though there is no dearth of explanatory notes. The teacher may find the book of assistance in selecting the principal features to be dealt with in his class. B.

About England, or First Lessons in English Geography. By M. J. Barrington-Ward, M.A., F.R.G.S., F.L.S. London: Geo. Bell & Sons; New York, Covent Garden. Price 1s. 4d.

A very pleasing little volume this is, (paper, binding, and type excellent,) consisting of geography lessons in narrative form. The physical features are taught by imaginary trips in boats or balloons, or the child is transformed into a flying giant, and sees everything for himself. A similar treatment of Ontario by the Canadian teacher would enable him to hold the attention of primary classes, as it is difficult or impossible to do by the old methods. B.

Tales from Herodotus, with attic dialectical forms.
By G. S. Farnell, M.A., Assistant Master of St. Paul's School. Macmillan & Co.

At the last revision of the University Curriculum it was much regretted that no Atticized edition of

Herodotus, or portions of Herodotus, was in existence. No more delightful book for the beginner of any language can be imagined. This desideratum is exactly supplied by Mr. Farnell's little book, and it is much to be desired that a substitution of this for the Xenophon can be made. Better still, perhaps, it could be substituted for half of the prescribed Xenophon. Macmillan's "Elementary Classics" should be more generally used, particularly the Page's Horace. They are perfect school books.

SUPPLEMENTARY READING IN ENGLISH LITERATURE.

THE following table outlines the supplementary course of reading in English Literature taken up by the pupils of Strathroy Collegiate Institute during the autumn term of 1891:

FORM VI.

- I. Arnold's "Sweetness and Light."
- II. Spenser's "Faerie Queen," Canto I.
- III. Shakespeare's "Midsummer Night's Dream."

FORM V.

- I. Tennyson's "Elaine," or "In Memoriam."
- II. Carlyle's "Essay on Burns."
- III. Ruskin—"Beauty"—"Mountains"—"Pines."

FORM IV.

- I. Shelley's "Skylark" and "Ode to the West Wind."
- II. Browning's "Incident of the French Camp." "How they Brought the Good News." "The Boy and the Angel."
- III. Macaulay's "Lord Bacon," or De Quincey's "Joan of Arc."

FORM III.

- I. Byron's "Childe Harold," Canto I.
- II. Wordsworth's "Michael" and "Tintern Abbey."
- III. Irving's "Sleepy Hollow," or Lamb's Tales from Shakespeare.

FORM II.

- I. Coleridge's "Ancient Mariner."
- II. Mrs. Browning's "The Cry of the Children."
- III. Addison's "Spectator," Essays 1, 2, 8.
- IV. Dickens' "Cricket on the Hearth," or Church's "Story of the Iliad."

FORM I.

- I. Byron's "Prisoner of Chillon."
- II. Poe's "Annabel Lee," "The Bells," "The City in the Sea."
- III. Dickens' "Christmas Carol," or Addison's "Sir Roger de Coverley" (1 to 6.)

This course of reading is supplemental to that prescribed for the annual examinations. The books used will be found in Maynard's English Classic Series (each copy, 15 cts.) Pupils will secure each one number of the series, and a system of exchange will be arranged so that all the numbers designated for the respective forms may be read within the time appointed. At least forty minutes a week in each class will be employed by the teacher of English Literature in discussing difficulties in the foregoing texts. The best readers in the various classes will be called upon from time to time to read aloud the most impressive passages in the selected texts. At least once a month an essay will be expected from each pupil on some topic connected with this course of reading. At the school examination a portion of the paper on English Literature will be based on these supplementary selections, and at the end of the term each pupil will be expected to certify that the course outlined in the foregoing scheme has been completed.


THE Copp, Clark Company, Limited, have just issued a new volume of Henderson Classics. It contains Bellum Gal-

licum, Books III. and IV., with notes, maps, charts, vocabulary and exercises, by J. Henderson, M.A. Students in Caesar who have this volume in their hands will find little left to be desired.

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"I TELL yez, Mary Ann," said Micky Dolan as he sat down to his supper, "it is not for me to be uncharitable till me felly-man; but whin Dinis O'Brien, wid his wood-leg, takes to carryin' a cane besides, it looks to me loike too much shtoyle and extravagance, so it do."—*Washington Star.*



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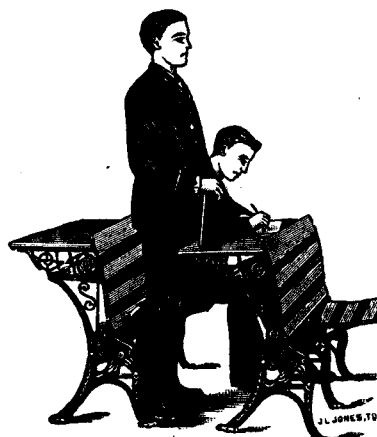
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OFFICIAL CALENDAR

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E D U C A T I O N
D E P A R T M E N T

March:

- Minutes of County Council to Depart-
 ment, due. [P.S. Act, sec. 114.]
- Inspectors' Annual Reports to Depart-
 ment, due. [P.S. Act, sec. 155 (5).]
- Inspectors' summary, township and vil-
 lage Reports to Department, due.
- Auditors' Reports on the School Ac-
 counts of High School Boards, and
 the Boards of cities, towns, villages
 and townships to Department, due.
- Financial Statements of Teachers' Asso-
 ciations to Department, due.
- Separate School Supporters to notify
 Municipal Clerk. [S.S. Act, sec. 40.]
- Night Schools close (session 1891-2).

**Literature Selections for the Entrance
 Examinations.**
 1892.

<i>Fourth Reader.</i>	
Lesson IV	The Little Midshipman.
" VII	Boadicea.
" XIV	Lament of the Irish Emi- grant.
" XVI	The Humble Bee.
" XXI	Oft in the Silly Night.
" XXII	'Tis the Last Rose of Sum- mer.
" XXXIV	Death of Little Nell.
" XXXVII	The Bell of Atri.
" XLI	Making Maple Sugar.
" XLIX	The Mound Builders.
" L	The Prairies.
" LXXIX	The Capture of Quebec.
" LXXX	Waterloo.
" LXXXIII	The Influence of Beauty.
" LXXXV	Marmion and Douglas.
" XC	Mercy.

Selections for Memorization.

Lesson XIII	The Bells of Shandon.
" XXXI	To Mary in Heaven.
" XL	Ring out Wild Bells.
" XLII	Lady Clare.
" XLVI	Lead Kindly Light.
" LXVI	Before Sedan.
" LXXIII	The Three Fishers.
" CCIX	The Forsaken Merman.
" CIII	To a Skylark.
" CV	Elegy written in a Country Churchyard.

EXAMINATIONS 1892.

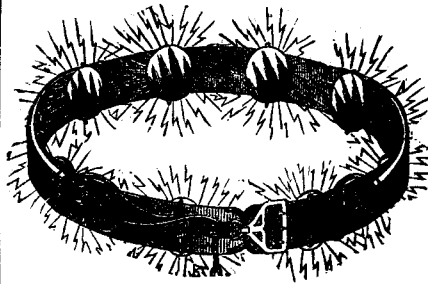
- April:
- Applications for examination for
 specialists' certificates of all
 grades, to Department, due.
- May:
- Exceptions for specialists' certifi-
 cates (except commercial) at the
 University of Toronto begin.
 Notice by candidates for the High
 School Entrance, and Public
 School Leaving examinations to
 Inspectors, due.
 - Notice by candidates for the De-
 partmental Primary, and the High
 School Leaving and University
 Matriculation examinations, to
 Inspectors, due.
- June:
- Notice by candidates for kindergar-
 ten examinations, due.
 - High School Entrance and Public
 School Leaving examinations be-
 gin.
- July:
- Kindergarten examinations at Ham-
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 - Departmental, Primary and High
 School Leaving and University
 Matriculation examinations begin.

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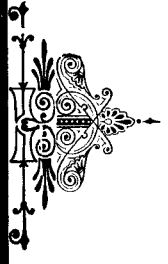
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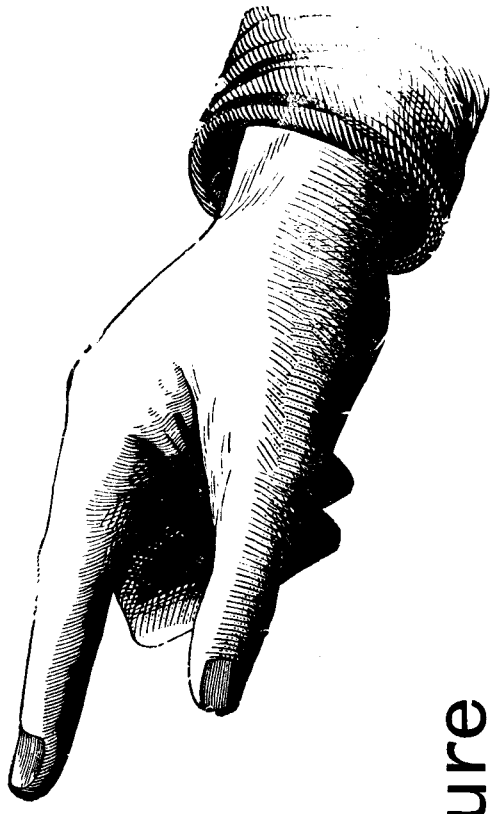
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