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Consolidating "THE EDUCATIONAL WEEKLY" and "THE CANADA SCHOOL JOURNAL."

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TORONTO, MARCH 1ST, 1888.

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J. E. WELLS, M.A. H. HOUGH, M.A.

Editor Manager Educational Dep't

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General Manager

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Editorial Notes.

Our thanks are due to the friends who send us occasionally poetic contributions. Our readers, the contributors themselves included, will no doubt agree with us that the poetical standard of the JOURNAL should be set pretty high, and that it is better for all concerned that productions falling short of that standard should not appear. Except in cases where the afflatus is overmastering it is probably better for inexperienced writers to try plain prose.

In this issue will be found the first of a series of lessons on the Entrance Literature for July. One of the selections will be treated in each subsequent number of the JOURNAL, so that the whole ground may be covered before the close of the schools. Several teachers of well-known ability have kindly consented to prepare the notes and exercises, each one taking a lesson. The result will be that no two lessons will be treated by the same writer, and our readers will get the benefit of a variety of methods, as well as of able discussions and analyses. Now is the time for every public school teacher to subscribe if he or she has not already done so.

WE are glad to note that the Toronto Principals' Association have emphatically expressed their dissent from the views and statements of the letters that recently appeared in The Globe over the signature of "A Principal." It was this writer, if we mistake not, who wished to see, amongst other things, a system of payment by results. Can he be aware that this system is condemned by the almost unanimous voice of teachers of all grades in England? It is the great bane of the English public school. It is, the profession in England being judges, a fruitful source of cramming in schools, of injustice to able and faithful teachers, and of cruel injury to children. Its early repeal must come.

DESCRIBING a very interesting and successful experiment in the manual training of school children, made last year in Springfield, Mass., an exchange observes," It could not be seen that the boys who spent half their school hours in manual work made less progress in their purely mental studies than the pupils who devoted the

in most cases more profitable, while under a proper system the other three might be utilized to excellent purpose in acquiring manual strength and dexterity.

No earnest worker is the worse for a little encouragement, and those who are faithfully trying to make the EDUCATIONAL JOURNAL equal to the very best of its class are gladdened by the words of hearty appreciation they are constantly receiving. We could quote warm commendations from all classes of educators, from college presidents and professors down to the teachers of the village and country schools, whose praise is still more welcome since it is them we are most anxious to please and to help. We may follow a common example some day by collating and quoting some of these expressions, though we prefer, as a rule, to let each number of the Journal speak for itself. But the approbation and none the less the criticism of our patrons is always grateful and often useful.

THE Principals' Association of Toronto has appointed a deputation to lay before the Committee on School Management their objections to a regulation recently passed by the Public School Board disapproving of detaining pupils after 4 p.m. The principals say that they experience great difficulty under this regulation, in carrying out the discipline of the schools. We don't believe in "keeping in" pupils for the purpose of studying neglected lessons, as in vogue in many schools. Lessons, in our opinion, should never be assigned as a task, or associated in any way with punishment in the child's mind. Anything which tends to create or intensify dislike of study cannot be too carefully avoided. A chief aim of the teacher should be to make the children love study. But for purposes of wise discipline it is absolutely necessary that the teacher should have some means of seeing the refractory child in quiet and alone, and it is difficult to see how this can be accomplished so well in any other way as by detaining the offender after school hours.

As every reader knows, we devote a considerable portion of space in each number to practical methods and suggestive hints for the actua work of the school-room. The cry of the younger whole of their time to their books." That is just teachers is still for "More!" This is a good what we should have anticipated. Half the six symptom. It shows that our young readers are hours spent by the average boy or girl over the honestly ambitious to do their work in the very books in the schoolroom is wasted. Three best manner. At the same time we feel like hours of energetic, wide awake study would be throwing in a word of caution. Don't rely upon

other teacher's plans. Get all the hints you can, sift the methods thoroughly, adopt them if you are able to use them effectively, or better still, adapt them to your own conditions and mental habits. But don't try to go upon anybody's crutches. Do your own thinking, exercise your own judgment, work out your own systems. No one can ever use successfully another man's method, till he has wrought them over in his own laboratory, and made them in effect his own. The truly active, wide-awake mind will find something useful, something suggestive in almost every plan presented, and will incorporate it in his own work. To such all these selections will be helpful. To the lazy imitator they may become positively harmful.

Apropos of the "Methods" referred to in another note, we would say that while we do not endorse every method and suggestion, even of those we ourselves present, but merely submit them as worth examination or trial, we make the selections with a good deal of care. This department of the Journal, though edited largely, more largely than pleases us, with the despised "scissors," costs far more labor than the inexperienced reader may suppose. He would, in fact, be astonished if he could see the pile of exchanges "gone through" in order to get the material for a single page of the Journal, and the number of "methods" rejected for every one chosen. Our tastes may be fastidious, or our judgment at fault, but, as a matter of fact, we would not give space to one tithe of the so-called "practical" matter which we find filling the columns of some of our contemporaries. We say this, not in disparagement of them, but in answer to the question, "Why don't you give us more methods?" It is our constant aim and hope to get from our own teachers more and more original matter of this kind. We request our friends to be on the look out for us and when they meet with a good thing at the Institutes or elsewhere to secure it for us if they can.

THE Boston Journal of Education has a good suggestion for the foundation or enlargement of school libraries. It says that a "Book Reception" was held by the Boston Young Men's Christian Association, at which hundreds of choice volumes were contributed, including many sets of popular authors. The attraction was a lecture by George W.Cable, on "Fiction as a Vehicle of Truth," and reserve seat tickets were sent to anyone applying therefor, the understanding being that each comer should bring a book suitable for the library. The enthusiasm was marked and the results highly satisfactory. The Journal asks "Why may not every high school and some grammar schools awaken much enthusiasm, create a healthy public sentiment toward the school, and lay the foundation of a valuable library in this way? The local press will be more than glad to aid in the enterprise, as would nearly every pulpit." We do not see why the plan might not work approving.

well in many a school section in Canada. The giver of a book would be very likely to fee thereafter a deeper interest in the schools, so that good might result in more than one direction.

THERE has of late been manifested a disposition on the part of many of the teachers of the University of Cambridge to refuse to admit women to the degrees of the University, though such refusal would seem to be singularly inconsistent with the course which has been already pursued in admitting them to certificates of having passed the various honor examinations. A memorial has been circulated setting forth that women ought to have a separate and independent University to themselves, with a separate degree founded on a curriculum specially chosen for women. That would be well and is no doubt desirable, in itself, but certainly should not prevent those women who have taken the regular course, or may hereafter prefer to do so, from receiving all the honors and degrees to which this proficiency may entitle them. The Spectator takes what seems to us clearly the right ground when it says: "We should not at all object to the University of Cambridge establishing, if it thought fit, a new diploma for women, one specially adapted, as its authorities might consider it, to average women's wants: but we do not think that that course would be at all satisfactory, unless at the same time all women who preferred it were admitted to the degrees now conferred upon men."

"I remember a case of a disturbance at Harvard, where a budding Socialist in a sophomore class, being called before President Walker, ventured to remark that he did not approve the law which he had just broken. The president discontinued the conversation by saying, so dryly that every drop of moisture appeared to be squeezed out of the words, 'We don't expect you to approve of the law, but to obey it;' and he sent him home to learn a lesson more useful to him than the calculus or the Greek tragedies."

WE find the above passage from an article by Bishop Huntingdon in The Forum, quoted with approval by some of our con-We don't agree with them temporaries. in their opinion. There was a huge fallacy in calling the youth a "budding socialist," for he is not a socialist but a free man who hesitates to bow to laws in whose making he has no voice and of whose principle he does not approve. There are no doubt many cases in family and even in school government in which it is necessary and therefore right to exact obedience to rules and commands whose reason cannot at the time be explained or understood. But when the president of a university undertakes to play the autocrat and tells a young man he does not expect him to approve the law he is required to obey, there is something wrong with the discipline. The teacher who can make his students both approve and obey the law attains far higher success as a disciplinarian than he who merely makes them obey without

Educational Thought.

MANY a child first conceives the idea of the beautiful from his school surroundings, and obtains his first idea of the refinements of life from his observation of his teacher's conduct and his association with his school-fellows who have been more fortunate in their home surroundings and training; and it is in the school that he begins to reach toward the higher life which is the result of true education.—Mrs. S. R. Winchell.

ALL the doors that lead inward, to the inner self are door southward—out of self, out of smallness, out of wrong. This is what George Macdonald says, and says truly. If we want to grow out of littleness, open the doors outward! "My salary," "my school," "my place," are favorite expressions with selfish teachers. It shows that all the lines of motives centre inward, whereas they should centre at some outward point. Self-care first, but others' good as an object. The end is wherever there is some work to be done.—The School Journal.

As to moral lessons in school it is better to have less of mere discussion and more of pure will training. This is secured in the well-disciplined school. The cardinal virtues of the school lie at the basis of every true, moral character. They are regularity, punctuality, silence (self-restraint), industry, and truthful accuracy. Every well-disciplined school inculcates these things. But the higher virtues—the "celestial virtues," faith, hope, and charity—must be taught by example rather than precept, and by the general demeanor of the teacher—the spirit of his work—rather than by any special training imposed on the pupils.—W. T. Harris, LL.D., in the Chautauquan for February.

THERE is no part of my professional career that I look back upon with more pleasure and satisfaction than the practice I always pursued in giving, each Saturday morning, familiar talks on such subjects as would conduce to make my pupils happier and better men. I have been more fully assured of the benefit resulting to many of my pupils from letters received and conversations I have had with past members of the school, who uniformly write or say:—"Much of what I studied in school is forgotten, but the words then spoken are treasured and remembered, and they have influenced and ever will influence me while life lasts."—Joshua Bates.

"THE State must provide for its own safety. A certain degree of instruction is necessary that citizens understand their rights and duties, and take their part intelligently as voters in the administration of public affairs. The instruction, or education of children is not primarily a function of the State; it is properly the right and the duty of parents, and those failing—and many do and will fail in this duty—the function devolves upon the State, as in a similar manner, and for similar reasons devolves upon it the duty of providing even food and clothing for the dependent classes of society. Taxation for public instruction, under this aspect of the case, is most just, and no citizen can complain."—Bishop Ireland (R.C.) of Minnesota.

ONE of the greatest enemies to self-education is excessive modesty, or distrust of one's own powers. And while their are many who fail because of the opposite extreme, there are many who doubt themselves so much as to wonder seriously whether it is ever worth their while going forward at all. Now as a rule, these people are the most worth cultivation. And there is no kindlier duty than to speak to them words of encouragement, and seek to rouse them to a worthy appreciation of the possibilities of their own nature. Probably we all cherish a secret grudge against our ancestors for not equipping us for the problems of life with a better apparatus; but we forget how very great a thing it is even to have a mind at all, and how even in the humblest soul there are elements of transcendent magnificence. Take even that which brings you to this printed page, that which therefore you certainly possess—the thirst for knowledge. To feel that is to be already great.—Drum-

Special Papers.

AN IDEAL EDUCATION OF GIRLS. BY MAY MACKINTOSH.

No ideal is practical at the first moment of its inception; no ideal springs, armed at all points, from the brain of its creator, as did Minerva from the head of Jove. Each ideal, as a block of marble, must pass under the developing touch of the sculptor Experience, before its value can be proved and the difficulties in its path duly estimated. But still, without ideals, even if not immediately practical, the civilization of the world would soon come to a standstill; and, therefore, there will always be some who, without despising the old, are ready also to reach forward to the new and untried; and it is to such that the present article principally addresses itself.

The subject under consideration naturally divides itself into the three following questions, with their

I. What is our present ideal of the education of girls?

2. Are the means employed for its carrying out in every detail suitable and sufficient?

3. Presupposing the full attainment of this ideal is there any possibility of future improvement?

Now, as to the first of these questions, What is our present ideal? That it is intellectually higher for girls and women as a class than that of a century ago, no one will deny. True, there were talented and remarkable women then; but these were exceptions, not the rule. But, when the housewifely talents of each period are considered, there seems to be some falling off in this respect in the later one. The tendency of the former period was to produce "notable housewives"; that of the latter is to give us women doctors, lawyers, speakers, writers, and generally well-educated women; but women who have little or no knowledge of household affairs. A tendency-be it observedfor, while there are women who neglect everything for intellectual culture, yet there are still many who keep up the traditions of their grandmothers right nobly.

Still, the young girl, during school-life, and especially before graduating, is excused from household duties, as of comparatively little im-"She has so many lessons!" must have a tendency to exalt school knowledge unduly, and to lessen her estimation of what she is asked to learn in relation to home and its comforts. Here, also, the moral element enters; if home—first her parents, and then, in due time, her own—is not the place of all others in which she wishes to shine, her character cannot fail to lose some of the most important elements of true wo-

manliness.

Small things show the direction of the wind; and when we see beautiful young girls and women coming down to breakfast with hair in papers, and in slovenly attire, we may assume that home is at least not their best loved and honored place. These habits are, unfortunately, by no means confined to the lowest ranks of society; and, through the carelessness and thoughtlessness of many who do not consider their full meaning, are still becoming more and more prevalent.

The present ideal, then, seems to tend to the ex-

altation of the intellectual above the domestic in practice; although many might not allow it, if the

question were squarely put to them.

We come, now, to our second question: Are the means employed to secure this ideal adequate for the purpose? Never before were such liberal opportunities for the acquirement of knowledge vouchsafed to women. Colleges have opened their doors, and no young girl, who feels a desire to continue her studies beyond the usual course, need feel disheartened as to ways and means of gaining the

Even from a monetary point of view, always the last factor in the progress of improvement, the outlook is brighter. Woman's intellectual work, now, is more adequately paid than ever before; though it has not as yet reached the standard of equal payment for an equal amount of work done, without regard to sex. Taking the ideal of the majority, and not that of the exceptional thinkers, therefore, it would seem safe to assume that the means at our disposal are fairly adequate to the end in view.

But our third question begins by presupposing the full attainment of this ideal of the majority, and then asks: Is there room for improvement? In answering this question in the affirmative, it suggests and requires answers to two others.

What are the proposed improvements?

(b) How can they be carried out?

First, then, What are proposed improvements? Some of them are already adopted here and there; but this article must be understood as referring to a scheme applicable to general use. The first point to be made is that girls, as well as boys, have The first a physical nature in addition to their mental and moral natures; and that exercise, and plenty of it, is as essential to the well-being of the one sex as the other.

The second point is, that there should be such a co-education of the sexes, both in and out of school
—and to this end, the parents must co-operate cordially with the teacher, if there is to be any good result—that the relation between all boys and girls should be healthy and natural. A little, but not too much, consideration of the girls as to be taken care of, on the boy's side; and a development of fortitude and courage on the side of the

girls, should be the result.

Boys and girls should have as many pursuits as possible in common. The beginnings of scientific research—as in after-school hunts after all the different kinds of trees in their vicinity, or in all the habits, etc., of the common animals, which they can observe and report on—are invaluable, as neither being too effeminate for the boy, nor too boisterous for the girl. Such constant association in work and play will go far toward preventing the premature sweet-hearting which so shortens the time set apart by Nature for the full and quiet development needed for the production of relatively perfect men and women.

This aping, by children, of their elders is the result of empty heads. and nothing worth doing with their time; but children who are rightly educated have not enough time for the enjoyment of all the wonderful things daily brought under their notice. and they certainly have not time to anticipate anything, however interesting, in the future, when the

present is so full.

In the exciting climate of America, and the still more exciting influences of business and social life, the great difficulty is to prevent our children growing up too fast—a difficulty proportionally greater with girls, inasmuch as their nervous excitability exceeds that of boys.

These points are suited to the first eleven or twelve years of a girl's life, according to her development; in fact, the education should be identical for both sexes up to this age. Both boys and girls should have certain household duties assigned to them, no matter how much additional service is paid for, or how large the establishment may be. We should not train our children to despise honest labor or those who perform it. If we tell the boys stories of the menial services performed by the pages and squires of old, before their knighthood, labor need not, and will not, seem degrading. Besides, only a worker can feel for those who work, and so learn, for the after-years, the secret of wisely governing them.

But now we are approaching the time when the

"Standing, with reluctant feet, Where the brook and river meet."

A great change, physical and mental, is before her. A wise mother, or—failing that greatest gift of God—a motherly friend, must tell her somewhat of the mysteries underlying life, and of the full, plain meanings of the life in families, hitherto recognized as a fact without realization of what its import might be.

Henceforth, the purpose of her education should be to lead her to consecrate herself-no weaker word will do-to the fulfilment of God's purpose in making her a woman. She must feel that she must take care of her body-not selfishly, but because, if her life be a completed one, she will one day be a wife and mother; and, therefore, dare not squander health which does not belong to herself alone. She must make the most of the special talents she possesses in obedience to the same guiding principle which makes her prepare herself to be a helpmate to her husband and a wise mother to her children. And, though the vocation of some a schulemaister like yerself."

women leads them out into the world to work. there are few who would not be infinitely richer by the possession of a knowledge of the domestic arts which make home comfortable and worthy its name.

The transition from girl to woman is, then, no slight change easily passed by. It is the turning-point of the life—a point that influences the subsequent character more than we give it credit for. great changes are the outcome of long, quiet development, if they are to be beneficial. Do we recognize this fact? Or, rather, is not this the time when parties, increased studies, and increased emulation, keep the nerves at an abnormal tension? Are the results of this course satisfactory? How many girls break down, not because their intellects are over-taxed, but that their brains being developed and their bodies neglected, the inevitable ad-

justment of the balance follows.

Now, if a girl at this period were kept at home for from one to two years, and taught how to manage a house in all its details, as the principal acquirement she was expected to make: if, in addition, she were encouraged to continue her investigations in natural history, drawing from nature, wherever possible; if the standard works of literature, beginning with good novels and portions of the poems of Spenser and Sir Walter Scott, were brought under her notice—not as subject-matter for diagrams, but as educative of a sound literary taste; if, occasionally, she was taken to the finest concerts and operas, or on excursions to different factories, where the whole process of manufacture, from beginning to end, might be seen and understood-would she lose much, or, indeed, anything, when compared, after half-a-dozen years had passed away, with the girl who had graduated two years before her?

No; the girl so trained, so shielded and surrounded by home influences at the most impressible time of her life, would for ever bless the true kindness and wisdom that so decided for her. Let us have all the intellectual development of the present time doubled, and trebled, if that be possible; but let us not lose the womanliness which will add another charm to the most varied acquirements. Of course, for the great army of working girls, this ideal must be modified to suit the cir cumstances; but its adoption by the more favored sisters would not be without its reaction benefiting

The great problem of the present day will be solved when women learn to receive the high privileges now accorded them without losing the virtues they have inherited from the past. No fitter summing up of the whole matter can be found than that contained in the noble words of Tennyson:

"The woman's cause is man's; they rise or sink Together, dwarfed or godlike, bond or free: For she that out of Lethe scales with man The shining steps of Nature, shares with man His nights, his days, moves with him to one goal, Stays all the fair young planet in her hands, If she be small, slight-natured, miserable, How shall men grow? but work no more alone,-Our place is much: as far as in us lies We two will serve them both in aiding her,-Will clear away the parasitic forms That seem to keep her up, but drag her down,-Will leave her space to bourgeon out of all Within her-let her make herself her own To give or keep, to live and learn and be All that not harms distinctive womanhood."

-Education.

MANY a foe is a friend in disguise, Many a trouble a blessing most true, Helping the heart to be happy and wise, With love ever precious and joys ever new. -Tupper.

A FARMER, bringing his son as a pupil was asked by the schoolmaster what he intended to make of

"Well, if he gets grace, we'll make him a minister."
"Ah!" returned the schoolmaster, "if he gets

no grace, what then?".
"Then," said the father, "he maun just become

Mathematics.

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

A SLIGHT omission was made in the heading of the first part of this column in the issue of Feb. 1st. The first eleven solutions belonged to the Entrance Examination Arithmetic given on page 283.

ARITHMETIC.

I. Find a number which leaves remainders I, 2, and 3 respectively when divided by 7, 8, and 9; and the sum of the three quotients = 570.

Solution: $-\frac{1}{7}$ of the No. = 1st Quotient $+\frac{1}{7}$ $\frac{1}{8}$ " = 2nd " $+\frac{2}{9}$ $\frac{1}{9}$ " = 3rd " $+\frac{3}{8}$ $(\frac{1}{7} + \frac{1}{8} + \frac{1}{9})$ of No. = 570 + $(\frac{1}{7} + \frac{2}{8} + \frac{3}{9})$ 72+63+56 of No. = 570+72+126+168504

 \therefore 191 times No. = 570 \times 504 + 366 = 287646. :. No = $287646 \div 191 = 1506$.

Remark: -In this solution we have a fair example of the Arithm tical Equation, in the use of which pupils in the Arithm tical Equation, in the use of which pupils in the second and third classes should be carefully drilled. Sometimes one hears the strange objection that such solutions are algebra in disguise; and the implied statement seems to be that every problem involving the use of the equation must be algebraical. The fact is quite the reverse, algebra is only generalised arithmetic, and algebraical equations are only a higher kind of arithmetical equations. The empirical, disorderly solutions too often seen, even in text-books, are really arithmetical equations so disquised that they travel income equations so disguised that they travel incog.

2. A might have got home in $\frac{1}{2}$ of the time he actually took, if he had only walked half a mile an hour faster than he did. Had he, however, gone half a mile an hour slower than he did he would have been $2\frac{1}{2}$ hours longer on the road than he really was. How for had he to walk?

Solution :-

Ist Case.—Time= $\frac{1}{6}$ actual time; rate would have been= $\frac{1}{6}$ actual rate; i.e., increase on actual rate would have been= $\frac{1}{4}$ actual rate = $\frac{1}{2}$ mile per hour.

Therefore actual rate must have been=2 miles per

hour.

and Case.—Decrease of rate would have been = 1/2 mile on a rate of 2 miles per hour; : decrease of speed = 1 actual rate.

∴ Decrease speed = ¾ actual rate; therefore increased time on the road = ⅓ actual time; in other words, the increase of time = ⅓ actual time = 2⅓ hours.

∴ actual time = 7⅓ hours at 2 miles per hour;

∴ distance traveled = 15 miles.

3 An hour after starting a train breaks down, and spends another hour on repairs. Afterwards it runs at three-fifths of its former rate and arrives three hours behind time. The conductor observes that if the mishap had occurred fifty miles nearer the terminus, he would have got his train in an hour and twenty minutes sooner.

Find the length of the trip.

Solution:—Decreased rate=\frac{3}{5} regular rate; therefore increased tim:=\frac{5}{5} regular time; that is the time lost = \frac{3}{5} regular time=\frac{4}{5} hours on 50 miles;

... schedule time=2 hours on 50 miles;

i.e. schedule rate = 25 miles an hour; consequently distance run before accident happened = 25 miles.

After the accident.—Loss of time = 3 regular time = 2 hours:

. regular time=3 hours; and regular rate = 25 miles per hour, : distance after mishap=75 miles. : whole trip=25+75 miles=100 miles.

Remark.—These two solutions illustrate the applica-tion of the important principle of *Inverse Ratio*. For any given distance, every increase of speed produces a decrease of time; and the fractions expressing the rate and the time are mutually reciprocal.

4. I have two debts, one of \$400 due in two years, the other of \$2,100 due in eight years, both without interest. I wish to give a mortgage without interest for the whole \$2,500. For what length of time should the instrument be drawn, supposing money is worth 5% per annum simple interest?

Solution.—Interest = $\frac{1}{100}$ principal = $\frac{1}{10}$ principal.

Therefore discount = $\frac{1}{10}$ principal. Thus the discount on \$2,100 for a year = \$100; and the interest on \$400 for a year = \$20. Now the interest must be so arranged as to cancel the discount. Hence we see by inspection as to cancer the discount. Hence we see by inspection that one way of accomplishing this end is to pay the \$2,100 a year before it is due, and the \$400 five years after it is due. And this arrangement will exactly coincide with the whole time, viz., eight years. Hence the mortgage may be drawn for \$2,500 and allowed to run seven years without interest.

5. There are not quite 200 oranges in a case. They

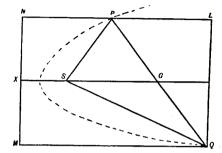
5. There are not quite 200 oranges in a case. They can be exactly counted by twos, threes, fours, fives, or sixes at a time. If counted by sevens, there will, however, be five left. Find the number in the case.

Solution.—L.C.M. of 2, 3, 4, 5, 6 = 60. Therefore number in the case is a multiple of 60, and less than 200; i.e. it must be 60, 120, or 180. And on dividing these three numbers by 7 we get remainders 4, 1 and 5 respectively.

∴ 180 must be the number in the case.

The two following problems were omitted from the devine

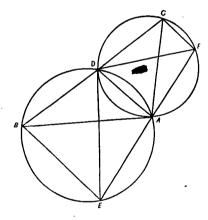
(2) The normal chord subtending a right angle at the focus of a parabola is divided by the axis in the ratio 2:3.



Solution: - Draw PQ a normal to the parabola at P, and QL perpendicular to the diameter thro. P. Then $SP=PL=\frac{1}{2}NL=\frac{1}{2}SQ$.

But SG=SP, ... we have $QG\cdot QP=SQ^2-SP^2=3SP^2$. $QP^2=SQ^2+SP^2=5SP^2$. QG:QP=3:5, i.e., PG:GQ=2:3.

(5.) ABC is a right-angled triangle. A point D is taken in the hyp., BC, and circles are described about ABD, ACD. If E, F are the middle points of the arcs AB, AC, remote from D, prove that EAF is a straight line.



Solution.—E is the middle point of BA \therefore Angle BDE = angle EDA, and \therefore angle BAE = angle

Also angle FDA=angle FDC=angle CAF=angle ACF. But angle EAD=angle BAD+angle BAE=angle BED+ angle BAE = angle BAD+ angle BAE = angle BED+ angle BAE.

And angle DAF = 180° - angle ADF - angle AFD

= 90° - angle CAF + 90° - angle ACD

= angle BAE or angle ABE + angle ABD or angle

∴ Angle EAD + angle DAF = angle ABE + angle BED + angle DEA + angle EAB.

= 2 right angles. : E, A, F are collinear.

CORRESPONDENCE.

DEAR SIR,—In the January number I notice a solution of the "bankrupt problem," on page 217. I think Mr. Flaherty's solution may be proved incorrect. Thus:—Bankrupt's liabilities = \$22857\frac{1}{2}, and his apparent assets = 80% of this sum = \$18285\frac{1}{2}. The problem says that on \$20,000 of his apparent assets he recovers only 80c. on the dollar. Now, where will this \$20,000 come from, if his total assets are only \$18285\frac{1}{2}? Yours truly,

JESSIE C. GERRIE.

INGERSOLL, Jan. 6'h.

[Perhaps he will apply for the appointment of a new liquidator a la Central Bank, or perhaps visit his cousins in the States. Will some of our correspondents examine this bankrupt and decide whether he is really "a fraud " or not.]

Mr. Wm. McKay, Rodgerville, contributed the following solution. We repeat the problem to which a solution was formerly given :- A and B put in \$3,400 not.

into business; A's money was in 12 months, and B's 16. On settlement A received \$2,070 as his share, and B \$1,920. What capital did each invest?

Let S = A's stock invested.

Then 3400 - S = B's.

S for 12 mo. = 12 S. for 1 mo.

S for 12 mo. = 12 S. for 1 mo. 3400 - S for 16 mo. = 54400 - 16 S for 1 mo. 54400 - 4 S. = total capital for 1 mo. (2070 + 1920) - 3400 = 590 gain. $\frac{12 \text{ S.}}{54400 - 4 \text{ S.}}$ or $\frac{3 \text{ S.}}{13600 - \text{ S.}}$ of $\frac{590}{1}$ = A's gain = 2070 - S.

$$\therefore \frac{3 \text{ S.}}{13600 - \text{S.}} \text{ of } \frac{590}{1} = \frac{2c70 - \text{S.}}{1}$$

or
$$\frac{1770 \text{ S.}}{13600 - \text{S.}} = \frac{2070 - \text{S.}}{1}$$

 $S^2 - 17440 S. + 28152000 = 0.$ (S - 1800) (S - 15640) = 0. $\therefore S = $1800 \text{ or } $15640 \text{ or } A\text{'s share.}$

and $3400 - {1800 \atop 15640} = {1600 \atop - 12240}$ B's share of

S may also be found by a similar treatment of B's share and gain.

Mono, Marnoch, Ont., sends for solution the following problems :

1. A cistern has two supplying pipes A and B, and a tap C. When the cistern is empty A and B are turned on, and it is filled in four hours. Then B is shut and C turned on, and the cistern is quite emptied in forty hours when, lastly, A is shut and B turned on, and in stxty hours afterwards the cistern is again filled. In what time could the cistern be filled by each of the pipes A and B singly?

2. A speculator borrowed \$5,000, which he immediately invested in land. Six months afterwards he sold the land for \$7,500, on a credit of twelve months, with interest. Money was at 6%. what is the speculator's profit at the end of twelve months, at which time he pays

3. How much may be gained by hiring money at 5% to pay a debt of \$6,400 due in 8 months, allowing the present worth of this debt to be reckoned by deducting 5°/ per annum discount.

The EDITOR has answered a number of private in-quiries after the plan of the English and the American Correspondence University. Their method of giving instruction by mail in science, mathematics, and langu-ages seems to be growing in favor with the large numbers of students who are unable totake a regular college course. Will Mr. Wm. Linton kindly repeat his problem which has been mislaid? Allour patrons will do us a favor by has been mislaid? All our patrons will do us a favor by making their special wants known. Occasionally we get hints that this column is pitched at too high a level, and sometimes hints of the opposite character. We must be guided by the actual necessfties of our sub-scribers. Friends keep us posted; and always send the questions as well as references to text-books.

NEGATIVE RESULTS.

THE moral sensibilities of pupils may be blunted or destroyed by unwise action on the part of teachers. An unmerciful punishment may inflican injury for life. Dr. Carpenter says:—"Not thing tends so much to prevent the healthful development of the moral sense as the infliction opunishment which the child feels to be unjustf and nothing retards the acquirement of the power of directing the intellectual processes so much as the emotional disturbance which the feeling of in-justice provokes." A pupil accustomed to see others treated brutally becomes hardened and loses that acute sympathy with suffering which is the impelling force to service when such duty is demanded. In cases where brutality is very frequent, children may learn even to take delight in suffering, thus nullifying moral culture, reversing the moral law, and developing a demoniac rather than a moral character. Denunciation, sarcastic remarks, calculated to wound the sensibilities, scoldings, uncharitableness, exhibitions of favoritism, unnecessary rules and commands, and all forms of caprice upon the part of the teacher, have a tendency to produce these negative moral results in the minds of the pupils. By a careless discipline and a slip-shod administration of justice in school, children grow up with little idea of selfcontrol, with their regulative faculties entirely undeveloped, and they often pass through life intent upon the gratification of personal desires, but entirely insensible to the welfare of others. - Johon-

English.

All communications intended for this column should be sent to W. H. Huston, care of THE EDUCATIONAL JOURNAL, Toronto, not later than the 5th of each month.

ENTRANCE LITERATURE.

"THE GULF STREAM."-SUGGESTIVE NOTES AND QUESTIONS.

By W. H. Huston, M.A., English Master, To-ronto Collegiate Institute.

To render the study of this extract interesting, it should be made to deal as much as possible with real things. To this end it will be well for the teacher, while considing the lesson, to have before his class a map of the world, or, better still, a large globe. The causes and effects of air currents and water-currents might be brought out by a judicious combination of question and explana-tion. A little time spent in the way of a les-son in Physical Geography, will form a desirable adjunct to the study of a selection that might otherwise prove somewhat tedious.

One of the first things to be made sure of in teaching any literary selection, is the acquisition by each member of the class of a general under-standing of the piece. The whole extract must, therefore, be read over by each pupil, either at home or in the class. It is often well, if the passage is read at home, to require the class to bring in, on paper, a very brief and general statement of its Several of these summaries might be read in the class for the common benefit; the others, or a few of them, if the teacher has not time to examine all, should be read by the teacher at home. If the extract is read in the class, the substance should be given orally. This is a good exercise, but for the sake of exactness it is absolutely necessary that the summaries of some of the extracts should be written on paper by the pupil, and afterwards carefully examined by the teacher.

After the meaning of the piece, as a whole, has been grasped, each paragraph should be studied separately, and the class should be asked to state the object of the paragraph, and also its subject. It is wonderful to what extent a boy or girl can, after a little practice, pick out, and state accurately and concisely, the central thought. Moreover, no exercise is better suited to the needs of our boys and girls whose fault in after life is likely to be not that they do not read enough, but that they do not grasp the meaning of what they read, much less think about it.

When the paragraphs have been considered, the extract should be gone over a third time, and each sentence, and afterwards each word, should be sentence, and alterwards each word, carefully examined as to its exact meaning, and the carefully examined as to its exact meaning, and the carefully examined as to its exact meaning, and the propriety of its position and use. may, and should, be frequently given in changing the syntactical construction of the members of each sentence, and the pupil should be continually asked to decide concerning the relative value of different modes of expression.

As in "The Gulf Stream" the connection of

the paragraphs, though well maintained, is somewhat obscure, a connected outline of paragraph subjects is subjoined :

The statement of the subject of discourse. II. The effect of ocean currents on climate. III.

The difference between land climates and sea climates.

IV. The effect of ocean climate on the inhabitants of the sea, and on the world at large.

V. The exemplification of this effect on the inhabitants of the sea.

VI. The exemplification of this effect on the world

VII. The general cause of ocean currents.

VIII. A modifying element.

IX. A particular result of this modifying cause seen in the Gulf Stream.

The Gulf Stream at its source.

XI. The Gulf Stream further from its source, and the manner in which its heat is retained.

XII. The amount of this heat.

XIII. The effect of the heat exemplified. X. V. The after bistory of the Gulf Stream.

QUESTIONS AND NOTES. PAR. 1.

A river in the ocean. What is peculiar about such a river? In what respects (according to this these?

paragraph) does the Gulf Stream resemble an ordinary river? In what are there differences?

the severest . . . overflows. Notice the similarity of the two clauses and the effect in the way of contrast.

Mississippi or the Amazon. Taese rivers are respectively the longest and the largest in the world.

The Gulf . . . seas. What quality is implied by this statement?

PAR. II.

Are among the most important. What other movements has the ocean?

Constant. Is this true?

Thus diminish. Explain more fully.

Extremes of. Why should these words not be omitted?

PAR. III.

The sea . . . land. What two meanings might be taken from this sentence?

Both. To what is the reference?
Latitude. What is the original meaning of the word? Compare it with that of longitude. Which is the greater (longer), the distance round the poles or that around the equator?

Varies. Compare the meaning of change and

With the elevation above. Explain what is meant. Account for the fact.

The other . . . below. Explain the reason of this phenomenon.

Zone. What does the word mean literally? Is it ever used with this meaning?

PAR. IV.

What does the word mean here? Creatures. Dry land. Why is dry used here? Almighty hand. Give the meaning in one

word. Decked the lily. Show what is meant. Why does the writer speak of the lily and the sparrow

rather than the rose and the robin? Which decked . . . surround it. Expl different tenses are used in this sentence.

Creatures . . *economy. What are the emphatic words? Write sentences containing the nouns of the sentence used in a sense different to that in which they are here employed.

Therefore. What is the reason referred to?

Safely. What is the danger referred to?

Offices and duties. Distinguish the meaning of offices and duties. Give other words bearing similar meanings.

Phenomena. Name any of these.

Exquisite. What would be the effect if dainty, fine, or beautiful, were substituted for this word?

Order . . . design. Explain what is referred. design. Explain what is referred to in the words order and design.

PAR. V.

Arctic seas. What is the literal meaning of Arctic? Would it be an improvement to substitute oceans for seas here?

Coasts. Why is the plural used? Is the statement of this sentence true of the western coast? Moderate. Distinguish as to meaning from regulate and govern.

As . . . currents. Would it be an improvement to insert the position of before these? Fishes. Why is this word here better than

fish?

By . . . waters. Improve the position of this phrase.

Delicate . . . productions. Such as are mentioned a little later.

Warmer. With what is the comparison? Thus . . . absence. Are both thus and the phrase by their absence required in the sentence? Thus . . Bermudas. These islands are noted for their mild climate? Where are they?

Shell-fish . . . formations. Give some information about these.

Same latitudes. What African countries are in the same latitud: as South Carolina?

PAR. VI.

No port . . . winter. How does winter affect the Canadian seaports?

Even. Show the appropriateness of this word here.

Capes . . . Chesapeake. In what latitude are

This part of the coast. What part is meant? Snow-storms and gales. What is the difference between a storm and a gale?

Kept away. What is the force of this expression i

Bound. Explain.

Apparel. To what is the reference?

Fable of Antaus. Antaus, the son of Neptune and Terra (Earth), was a fabled monarch of Northern Africa. Being a giant of immense strength, he engaged in a conflict with Hercules. The latter, seeing that whenever Antæus touched the ground he received new strength from his mother earth, lifted him up in the air and squeezed him to death in his arme.

Sometimes falls. Explain what is meant.

PAR. VII.

Partly. What other cause is there? Immense evaporation. Explain its cause.

Enormous. Distinguish as to meaning from immense.

Proceeding far. To what does proceeding refer grammatically?

Diurnal motion. What is meant? Describe the other motions of the earth.

A thousand miles. Is this exactly correct?

Thirty degrees. How many degrees are the poles from the equator?

Trade winds. Why so called?

PAR. VIII.

Uniform and constant. Distinguish uniform and constant as to meaning.

PAR. IX.

From off. Are both words necessary?

And after . . . Cuba. Name the principal countries and islands passed by the Gulf Stream in its course.

PAR. X.

Ultramarine. The color prepared originally from a mineral brought from ultra mare, i.e., "beyond the sea."

As far . . . Carolina. Could the position of this clause be profitably varied?

In the one. Is the use of one inconsistent with they?

PAR. XI.

Cushion. Is this an appropriate word? Earth's Crust. Show that crust is a good

Suggestive. Of what?

Strikingly. What is meant by this word here? Convey. How does this word differ in meaning from carry, bring, conduct and fetch?

Dispense. Why is this word better than disberse ?

Non-conductors of heat. Heat passes slowly through some bodies, which are therefore called non-conducting.

PAR. XII.

Raise. What is meant by this word here? Column of atmosphere. Explain the word column as here used.

PAR. XIII.

On its way to Europe. To what does its refer?

Emerald Isle The emerald is a beautiful stone with a green tint.

Albion. What country is denoted by this word?

. Verd Islands. Azores . Point out these islands on the map.

Columbus first found. Is first in its proper position?

Mean position. Define mean as to its significations, and write sentences in which it has other meanings.

"QUESTIONS and Answers" and "Question Drawer" are crowded out of this issue.

Examination Papers.

COUNTY OF PEEL PROMOTION EXAMINATIONS.

JUNE, 1887. LITERATURE.

FIRST CLASS TO SECOND.

Note.—20 marks for each question; 50 marks count a full paper.

1. Explain: - Will has a great fund of stories. The lamb lingered near, and waited patiently till Mary did appear.

A darling little girl whose acts and thoughts are pure as whitest snow.

A trap was baited.

On the point of throwing it out of doors. She was quite annoyed.

- 2. Change the italicised words in the following without changing the meaning :- Floy was much pleased to see her brother enjoy her present. employed the whole of one morning in picking it to bieces.
- 3. Then wouldn't it be nicer For you to smile than pout, And so make sunshine in the house When there is none without.

Explain how you can make sunshine in the house when there is none without.

- 4. Repeat :- "Stop! Stop! little brook," or "What does little birdie say?"
- 5. Tell how the boys and girls improved the school house and school grounds.

LITERATURE.

SECOND CLASS TO THIRD.

1. Explain in your own words:

(a) "Alone, uncared for amid the throng of human beings.

(b) "Heeded the glance of her anxious eye."
(c) "Nor offered a helping hand to her."
(d) "Gayest laddie of all the group."

(e) "He paused and whispered."
(f) "Glad in the freedom of School let out." (g) "Somebody's mother bowed her head.

2. Give meanings of :- Carriage, hastened, slippery, recent, well content.

3. (a) Why was this old woman deserving of help?

(b) Who are meant by the "merry troop"?
(c) What is most to be admired in the "gayest laddie of all the group"?

4. What is a fable? Mention the names of three fables and give the substance of any one of

5. (a) Why was "the dog in the manger" a

mean cur?
(b) Why did the fox say the grapes were sour?

(c) If not sour—what was their taste? 6. Give meanings of :-

(a) "Not content with so slow an income."

(b) "Escaped through the meshes of the net." (c) "Too much freedom breeds contempt."
(d) "Honest fellow give this wise advice."

(e) "Tortoise plodded on and arrived at the goal."

(f) Luscious, vineyard, dizzy height.

7. Write sentences, using correctly the following words :- Bad, bade, hall, haul, prize, pries, rose,

COMPOSITION.

THIRD TO FOURTH CLASS.

1. Mr. Jones pays Mr. Brown \$30, which settles the account fully. Mr. Brown then pays Mr. Evans \$16 which settles only part of Mr. Evans' account. Write out Mr. Brown's receipt to Mr. Jones, and Mr. Evans' to Mr. Brown.

2. Write the following words supplying the omitted letters: He'd, you've, they've, 'mongst,

mayn't.

3. (a) Fill the blanks in the following sentences with raise, rise, rose, or risen :-

The river has -- a great deal. I saw the

- this stick. Has the dough ----? I can not -- as soon as you call me.

(b) Fill the blanks in the following sentences with site or sets :-

Court -- to-day. The boy on a box. while he — out the plants. Any one who in a draft may take cold. The hen — on nest while the girl --- the ten eggs under the

4. Write sentences using the following words correctly:—Lose, loose; bear, bare; fair, fare; born, borne; their, there; tail, tale; nay, neigh; lest, least; lead, led; bread, bred.

5. Open your Reader at page 221, and write in your own words the substance of the lesson.

COUNTY OF LAMBTON PROMOTION EXAMINATIONS.

JUNE, 1887. LITERATURE.

SECOND TO THIRD CLASS. Time, One Hour.

1. WRITE ten lines of Poetry from any piece in your Second Reader.

2. What is a Fable? Write in your own words

two Fables from Æsop.

3. Give Thackeray's answer to the question, "What is it to be a gentleman?"

4. "But it was soon over, and I then found myself at the bottom of a waterfall in a broad and quiet river. Here I travelled on more leisurely for some time. Then I was suddenly pushed into a narrow channel; and just as I was wondering how it would end I was plunged into a dark deep hole, where I had to grope and stumble amongst the spokes of a great wheel that went splashing round and round."

(1) What is the title of the lesson this is taken from? (2) What "was soon over"? (3) What is a "waterfall?" Name one. (4) Name a "broad a "waterfall?" Name one. (4) Name a "broad and quiet river." (5) What is meant by the "narrow channel"? (6) What is meant by the "great wheel"?

5. Re-write the following, putting other words in the place of those italicized:—"But I was not to stay there long that time." "A vast foaming billow shook me off from its crest." "A gust of "A gust of wind caught me and carried me aloft."

All to take 1, 2, 3, and either 4 or 5.

COMPOSITION. SECOND TO THIRD CLASS.

Time, 11/2 Hours.

1. Name six parts of a house, telling what they are made of; or where they are used; or what is their shape.

2. Fill blanks in the following: -Once where the — was very dry, a — crow — everywhere — for — but — could not — a — .

— she was — dead with — . She — a jug filled with -

3. Write words with each of the following to tell what sort of a thing it means:-Sugar, butter, a lior, paper, coal, water, glass, flour, rain, and dust.

4. Place words with the following to tell what each does:—A dog —. A soldier — farmer —. A bird —. A horse —.. -. Place words with the following to tell what they did:

The cat ____. The sea ____. The fire ____. The flower ____. Use differe Use different words in each case.

5. In each of the following combine the two sentences so as to make one:—(a) The man ran for a policeman. The man saw the murder. (b)

for a policeman. The man saw the murder. (b) The boy picked all the flowers. He saw the flowers in the garden. (c) This is the cow. The cow tossed my dog.

6. Write—("James hurt John," "Thomas struck Bill," "Mary learned her lesson,") by putting James, Thomas, and Mary at the end of the sentence instead of the beginning, and yet have the sentences mean the same as now. sentences mean the same as now.

7. Write a letter of at least eight lines to friend, telling him how you would like to spend your holidays.

Twelve marks for each, except 7, which is worth 20, if correct in form, spelling and grammar. 75 marks a full paper.

ARITHMETIC.

SECOND TO THIRD CLASS.

Time, Two Hours.

1. Express in words 20020020, and in figures, seventy-seven thousand and seven.

2. Simplify 947+863-279+4876-270+6890+

3. Multiply 520080 by 5004.

4. I bought three cows; for two of them I gave \$28 each; and for the other \$35. I gave in payment seventeen sheep at \$3.75 each, and the rest in money. How much money did I pay?

5. Make out the following bill:—25 yards of

cotton at 9 cents a yard; 36 yards of print at 15 cents; 4 dozen buttons at 10 cents a dozen; 5 spools of thread at 4 cents; 14 yards tweed at \$1.25 per yard; 12 yards gingham at 11 cents; and 4 yards braid at 2 cents.

6. If a man buys 80 cows at \$30 each, and sells

them at \$42 each, how much does he gain?

7. What number divided by 87 will give the same quotient as 3926745 divided by 783?
8. If 12 inches make one foot, how many feet are

there in 29738614500 inches?

9. James paid 18 cents for a slate, 14 cents for a book, 22 cents for a knife, and \$1.25 for a hat. He gave a \$4 bill to pay for them all. What change should he get back?

10. If a train runs 350 miles in 14 hours, how far will it go from 9 a.m. to 4 p.m.?

Perfect work required in 1, 2, 3, and 7, or no marks. No. 5 worth 20 marks; all others 10 each. 100 marks a full paper.

ARITHMETIC.

FIRST TO SECOND CLASS.

1. How many are 250+seven hundred and one +1101+four hundred and fifty-eight+one thousand and one+99?

2. Find the difference between 7120748 and 39804062.

3. Add 72043—10765+2341—7604+243—946+72—56

4. John has \$475. He gave James \$29, Harry, \$83, Mary, \$20, and the rest to Thomas. How much did Thomas get?

5. Three men build a factory which costs \$42750. The first gave \$111725, the second \$16480. How much did the third pay?

6. John has 440 sheep, James, 215, and William has as many as both. How many have they altogether?

7. Ben had 57643954 and lost 954289 marbles. How many had he left?

8. A man bought a watch and chain for 132 do!lars, and sold them for 200 dollars. He gained 16 do lars on the chain. How much did he gain on the watch?

9. How long a string do I need to go round a barn 80 feet long and 40 feet wide?

10. One of the townships has 9753 people in it. There are five times as many in the whole county. How many people live in Lambton?

Time, two hours. Each question valued at 12 marks, and 100 marks to be counted a full paper. Perfect work in 1, 2, 3, and 7, or no credit.

GEOGRAPHY.

THIRD TO FOURTH CLASS.

1. Name the continents in the Northern Hem-What bounds this hemisphere on the isphere. south?

2. What are the dimensions of the earth? Describe its motions; state the effects caused by these motions.

3. Name the Zones. In which of them do we live? Give a list of the chief animals found in each.

4 Through what waters would a schooner pass in going from Montreal to Chicago?

5. Name the provinces of Canada, and give the chief occupations of the people living in each.

6. Define canal, glazier, peninsula, repiblic, source of a river, torrent, sound, archipelago, rapids.

7. Name the cities of Ontario, and give their respective situations.

8. Make a list of the bays and gulfs on the eastern seaboard of Canada.

9. Name the rivers emptying into Lake Winnipeg, and the chief river of the St. Lawrence. 10. What states of the United States border on

Lake Erie, and the Atlantic Ocean respectively. Value, 75.—Any seven questions to count a full

School-Room Methods.

FOR A COMPOSITION.

DIRECTION.—Have pupils combine the sentences of each group into one, and then unite the whole to form a narrative.

- I. Willie was a poor boy. He was employed in Scotland to keep sheep. A severe snow storm overtook him.
- 2. He kept up a long time. The snow fell fast. He lost all traces of the road.
 Night found him alone on the hill with his sheep.
- 3. A fatal drowsiness came over him. He lay down among his sheep. He never expected to wake again.
- 4. More sheep came and huddled around him. Their bodies were warm. They kept him from freezing to death.
- 5. A party went in search of him. They found him. He was surrounded by a dozen old sheep. They wished to keep themselves warm. They kept warmth and life in Willie.

-N. Y. School Journal.

AN EXERCISE IN DECIMALS.

BY WM. S. HOWELL,

DIVIDE 20.36736 by 300, 6000, 20, 90000, etc., by

short division or mentally.

Pupils who have been taught to divide by cutting off the cyphers in the divisor, will try to do the above class of problems by the same method cutting the same number of figures from the right hand of the dividend. They will thus get their decimal point in the wrong place.

Teach that cutting off cyphers from the right hand of a whole number is removing the decimal point just so many places to the left in it, and that when they cut off from the divisor they should remove the decimal point in the dividend the same number of places to the left.

In division of decimals I always leave the points in their own proper places, and denote the " point removed" by a comma, thus: 400),02.3428

7,000)4,263.56 ,609.08

This method of using points, shows not only what is to be done, but also how it is done; besides errors in placing the decimal point in the quotient are more easily detected, and avoided. The reduction to decimals of such vulgar fractions as $\frac{10}{1000}$, $\frac{10}{200000}$, $\frac{10}{700000}$, etc., may readily be done by the above method.

4,000),017.00, ,004.25, 20,000),0016. ,0008. etc. 17 4000

I believe this is a good addition to the ordinary run of drill exercises in decimals, and as it is one that I have never seen treated of, I thought it might be of interest to my fellow teachers.

SOME NUMBER WORK.

FIRST PRIMARY "B" CLASS, OWOSSO FOURTH WARD .- MISS GOULD, TEACHER.

THE teacher stood at the board and wrote very rapidly the following: $-1+1\times6\div3+4-2=$. As soon as the sign of equality was made nearly every pupil of the class of twenty-five put up a hand to give notice that he was ready with an answer. We give but one more equation to show the character

of the work; $25 \div 5 - 3 \times 8 \div 4 - 2 = ?$ After a number of these had been worked with remarkable facility and accuracy, the class solved problems which were given by the teacher, and which were but easy home-like applications of the abstract number work.

The pupils next passed to the board and wrote numbers Arabic and Roman; the former to 500, the latter to 100.

The class then added the following:-

24 236 233 121 134 220 200 31

The class next stepped back to position. The teacher asked all of them to close their eyes while she put the following equation on the board :-- 2 X $8 \div 4 - 2 + 7 =$ At a signal all looked and the strife was animated to see which should be first to give the correct answer. After one or two more of these exercises the pupils were excused, having been at lively work for fifteen minutes.

The movements of the class were rapid but quiet, the teacher's tone low, and the pupils were not permitted to stand idle a moment. The class not permitted to stand idle a moment. at this time had had nearly one year's work in school. Rapidity and accuracy of work had been made prominent parts of training. The teacher stood before her class a portion of the time, and in other parts of the room part of the time. The time occupied in the recitation was about fifteen minutes .- The Moderator.

SOME EXAMINATIONS IN ARITHMETIC.

[Notes taken during a morning spent with Assistant Superintendent Jones, of New York city, in his examination of primary classes.]

SIXTH GRADE.

The children of this grade had learned to write numbers up to ninety. Many of the numbers they had learned were written on the board out of their regular order.

After a little preliminary talk, calculated to make the children feel happy and at ease, a row of boys were asked to stand, and each boy read the number to which the superintendent pointed. Among the numbers written was 07, which puzzled one little fellow, but his next neighbor read it aright, and when asked why he called it seven, said,

"Because the nought is on the left hand side."
"And what does nought mean?" asked the

superintendent.

Nought means nothing," was the reply

"Now let us see how well you can add," said the superintendent, taking up the numeral frame.

First he moved out two balls on the top wire, and

one on the next below, and the boys said very readily, "Three,"

Two more on the third wire were moved out under the three, and the boys said. "five," and so they went on by twos to nine, but at thirteen they began to falter, and only a few were able to climb up to seventeen and nineteen. Again they started with two and went along very nicely over the even numbers to the teens, where their difficulties again increased as they approached twenty, showing that their small minds were getting beyond their depths. Beginning with ten the superintendent moved one ball away and asked how many were left.

" Nine," was the ready answer.

Another was subtracted and then another until the whole row was moved across, and the class came down to nothing with great alacrity.

FIFTH GRADE.

This class had learned to read numbers up to nine hundred, and among the combinations put on the board to test their powers of perception were 001, 060, 006, 608, 901.

But the girls had been drilled on these, and were not to be caught by noughts at the left.

Then followed a little mental arithmetic, some-

thing like this :-

"Three cents and two cents are how many?"
"Five cents." "And two more?" "Seven."
"And three more?" "Ten." "And four more?" etc., up to twenty-five.
"What do we call twenty-five cents? this little

girl."

"A quarter of a dollar."

"Suppose your mother sends you out to buy something, and gives you a quarter, and you spend three cents, how many will you have left?" "Twenty-two cents."

"And suppose you spend three more out of that, how many will you have left?"
"Nineteen."

" If you spend two more?"

"Seventeen."

"And two more?"

"And three more?" etc., down to two.

"And now suppose, having two cents left, you go out and spend three, how many will you have left?

This was too much for the bright little girls. They all said, "none," and had to be told that if they had only two cents they couldn't spend three.

"Now tell me how much two apples at two cents

apiece will cost?"
"Four cents."

"How much will five apples cost at one cent apiece?" "At two cents apiece?" "Bought six apples at two cents apiece, how much did I pay?

SECOND GRADE.

(Skipping the intervening grades, Supt. Jones went to the second grade, next to the highest in the primary,)

The girls here had learned to multiply with one figure, and were beginning to work with two. The superintendent gave them the following examples in written arithmetic:-

1. Suppose a man buys 7,569 barrels of flour, and pays \$9.00 per barrel, how much does he pay?

2. Suppose a man has money in two banks, in one he has \$49,298, and in the other \$78,307, how much more has he in one than in the other?

Note. - Superintendent Jones frequently "catches" a class by giving the larger number after the smaller, but this class was not to be caught that way.

A man bought a house for \$27,060, furniture for \$4,709, a stable for \$15,875, horses for \$1,050, and a carriage for \$1,897, how much did all cost?

The teacher was then requested to hear them in the multiplication table, which she did, asking, "How much are three eights, six nines, seven threes? etc.

FIRST GRADE.

Two classes in the first grade were examined, one of boys and one of girls.

The girls were tested with the following :-

1. A man has \$78,096 which he is going to divide among twenty-five girls. How much will each girl get? Every girl got the answer.

2. I want to divide four apples among a number of boys, giving a quarter to each boy. How many boys must there be to receive the apples after taking one quarter away?

On this the girls failed. Having all they could do to take care of the sixteen quarters they forgot about the one that was withdrawn and answered "sixteen" instead of fifteen.

3. A lady gave her little girl a party and bought a gallon of ice cream to treat them with. How many little girls must there have been to eat up the cream if each girl ate a gill?*

The teacher was then asked to give the class a couple of examples, and she gave the following:

1. Bought 706 tons of coal and paid 590 cents a ton; how much did the coal cost?

2. Bought ½ gallon vinegar at five cents per pint; how much did it cost?

The boys of the same grade were given the fol-

I. A man had one-half a dollar and one dime; how many oranges could he buy if each orange cost one-half a dime?

2. A man worked all the month of February, and another man worked all the month of March. Each received a dollar a day; how much more did one receive than the other?

3. Two boys made snowballs, and standing back to back threw them in opposite directions. One boy threw his snowball seventy-five feet, the other threw his one hundred feet. How far would a boy have to walk from the time he picked up the first one until he picked up the second?

All the classes mentioned were examined in spelling by their teachers, and their writing, both on slates and in copy-books, was shown to the superintendent before the work in arithmetic began.—N. Y. School Journal.

[&]quot;A problem which Superintendent Jones used to give last year. was as follows:—"A man had three cats which were fond of catching rats. The first could catch as many rats as it had eyes and feet; the second as many as it had eyes, ears, and feet, and the third three times as many as did both of the others, how many did the third one catch?"

BUSINESS NOTICES.

WE direct attention to the advertisement, 16th page, of the "Concise Imperial Dictionary," It is our intention to handle this Dictionary in connection with the JOURNAL, and we offer it in the best binding, and the EDUCATIONAL JOURNAL for one year, both for \$5.50, plus 14 cents for postage. Subscribers who are paid in advance may deduct the amount they paid for one year. send the balance, and have the book at once.

TEACHERS' INSTITUTES.

THE Semi-Annual Meeting of the West Victoria Teachers' Aassociation, will be held in Woodville, on Thursday and Friday, March 1st and and.

The Peel Association will meet at on the same days.

The Waterloo Association will meet at Galt. on Thursday and Friday, March 8th and 9th.

The North Simcoe Association will meet at on the same days.

Dr. McLellan will attend the West Victoria and North Simcoe Associations; Mr. Tilly those of Peel and Waterloo.

We regret that we have been unable to learn the places at which the Peel and North Simcoe Associations are to meet.

Editorial.

TORONTO, MARCH 1ST, 1888.

MORAL TRAINING: WHAT IS IT?

THE vexed question of religious teaching in the schools is, we observe, again being discussed in the Toronto Ministerial Association. This is well. There is no better mode of eliciting truth than that of full, frank, friendly discussion. We cannot but think it must be because there has not been enough of such discussion in the past, or that many ministers and others have not sufficiently attended to the teachings of reason and experience in the matter, that it can, at this late day be seriously proposed to have the civil Government of a Canadian province engage in the distinctive work of the Christian Church.

But while there are still serious differences of opinion as to the propriety of religious instruction being made compulsory in all schools, there is probably none as to the duty of insisting upon having a sound and positive moral training imparted in them. However out of place it may be for the secular authority to pronounce upon the fitness of its licensed teachers to expound the Scriptures religiously, it is certainly in its power to inquire into the moral character of every applicant for license. It has, in fact, always professed to do so, with what degree of strictness we must leave our readers to judge. It is, however, a most interesting and important question, "What is the kind and extent of the positive moral training that is being imparted in the public schools of Canada?" It might be useful if inspectors, and others who have op portunities for observation, would state their and hourly incidents of school life.

views and impressions. What is being done? What is being left undone? In regard to the latter, whose is the blame, and what the remedy?

But what is included in moral training? We are constantly meeting with statements and opinions in regard to this with which we cannot concur, or, rather, which seem to us to be partial and misleading, if not radically defective. It is said, for instance, that in every well-conducted school a process of moral training must be going on continuously. The children are constrained to form habits of order, of obedience, of submission to authority, of mental industry, and so on, and they cannot do this, it is said, without receiving a most valuable moral training in the process.

Habit, no doubt, is an important factor in the formation of character, or, perhaps more correctly bears an important relation to it. But habit, whether of bodily or of mental action, is not morality-it most assuredly is not the highest and best part of morality. It may seem a truism, but it is, nevertheless, we are persuaded, worth saying, that morality stands primarily related to motive. In other words, that can be no true moral training which does not operate directly upon the moral nature, the conscience, that sense of right and wrong which is the highest attribute of humanity, whether in childhood or in adult age. Other things being equal, the test of genuine morality must be applied to the principle or motive that underlies and regulates the conduct. Every one knows that the same action in two different individuals may be prompted by very different motives. It is conceivable, for instance, that several school children of the same age may be equally orderly, industrious, and obedient; but that in one the habit may be the almost mechanical outcome of careful training from early years; in another it may be prompted by fear of punishment; in another by love of praise, or hope of reward, or ambition to excel; and, in another, from a strict sense of duty, a desire to do right because it is right, and so on. Nor can it be doubted that there is equally wide variety in the class of motives habitually appealed to by different teachers, and that the value of the moral training imparted by them should be graded accordingly.

Without enlarging upon this obvious distinction, the point we wish to make will be, we think, obvious. And it is one which cannot be made too clear or put too strongly. The only moral training which is worthy of the name and which can be relied on to afford a solid basis of good character, is the training of the conscience. The truly moral habit in youth or age, is the habit of asking at all times, and under all circumstances, as the first and the ruling question, Is it right? And this habit every not this majority be still better qualified for the teacher worthy of the name will strive assidu- position at twenty-one years of age than at sixously to form in every pupil, not so much by reiterated precepts or preachments, as by con stant practical appeals to the conscience as the supreme guiding principle in all the little daily

Contributors' Department.

HOW TO REGULATE THE SUPPLY.

BY W. J. SIPPRELL, WOLVERTON.

THE article in your last issue will no doubt create a great interest, especially among the younger members of the profession, of whom the writer is one.

To many, if not to all, the proposal is a matter of vital importance; to the young aspirants it would be no doubt somewhat of a drawback while by the older ones already engaged in teaching it would be welcomed as a step toward the elevation of the profession, in mental if not in financial attainment. The great majority of our young teachers are entering the profession simply to make it a means to what by them is considered a higher end, as Medicine, Law, or Theology. Why is it thus?

Why is teaching fast becoming a mere steppingstone towards some other sphere of life? There are various reasons: Teaching as a profession is not remunerative enough to retain men after they are made by experience efficient workmen, and become naturally desirous of a larger salary. Were it not for the youth who are constantly pressing forward, legally prepared according to the Regulations of the Department to teach. and who offer their services at any price, this would not be the case, for were their time of preparation lengthened they-would become more matured and efficient, and beginning at a later age would necessarily expect the wage of a man and not of a child.

But of greater importance than the financial elevation of the profession is its mental and moral elevation. Are young men and women capable of elevating the children when they are but children themselves.? I remember when just entering the profession being introduced by a friend to an old man, who upon learning that I was a teacher, exclaimed, "A boy among boys." Though only nineteen years of age at that time, I considered myself a man because I was a teacher. But since I have grown more experienced and learned more of what teaching should mean, I can, looking back on my first year's work, see that the old man was right, and that the work I did was to a great extent that of a boy among boys.

Not until men reach an age of maturity are they allowed to enter many of our important positions-Why should the same maturity not be required in a sphere of life of vital importance, not only to individuals but to the nation? True, some are as well prepared to teach at sixteen as others are at twenty-one. But even if the majority were so fitted at sixteen, and those who are not fitted till they reachtwenty-one were the minority, would teen, both as regards mental ability, and the still more necessary qualification, discretion?

To many of our young students about to enter the profession the fixing of the legal age for entering at twenty-one would present some drawbacks. Many, whose finances are limited, could not maintain themselves at school until that age, consequently they would be obliged to grasp something yielding quicker returns. Others who were determined to adopt the profession as their life work would not allow this obstacle to hinder them, but would illustrate the motto, "Where there's a will there's a way." Hence in a short time our schools would be filled with men and women who, knowing this to be their life work, would put forth all their energies for success. Since perseverance is an important and necessary characteristic of the efficient teachers the regulation in question would cause all those who had not sufficient courage to go on to the end to withdraw, and would thus save them from failure after having commenced and left their damaging influence in the schools.

All will agree that the work of the teacher is not now as it used to be. In former times, a fair knowledge of reading, writing and arithmetic, seemed sufficient for all practical purposes; but now he who would gain influence in life, who would become useful to society and a blessing to himself and others, must not be content with meagre or superficial acquirements. He must be able to bring to his life work, of whatever kind, a well-stored mind and fully developed reasoning and perceptive faculties. The development of these faculties should begin in childhood under close and careful training, and be continued under wise direction until the pupil reaches maturity. Are those who are themselves but boys and girls, whose faculties are not yet fully developed, capable of directing the minds of others? Should children, reared in homes where they have ever been under the training and guardianship of those whose minds are matured, be placed under the tutorship of those whose own minds are still undeveloped, inexperienced, and incapable? That was a pertinent question of the little girl on shipboard, who on being asked by a gentleman to go with him to shore, responded with, "Can you swim?" The same question in another form should be put to every one who asks to be entrusted with the mental and moral guardianship of numbers of children and youth.

But some will say that by fixing the age at twenty-one, instead of eighteen, we are cutting off many of the young who are unable to continue their studies to so late a period, and who. if allowed to enter the profession earlier, would become, after a few years' experience, capable and useful teachers. This may be true, but the number of those thus cut off would be small, while those to whom it was possible to maintain themselves until twenty-one, would find this regulation a benefit rather than an injury, not only because they would bring to the work greater mental abilities, but having attained wisdom and discretion, they would be able to so succeed in the work from the outset as not to find it so disagreeable as many now do.

The teaching profession, the profession of all professions in influence, is injured by the with- metaphor—the very mother tongue of poetry—the into very dry and "wooden" sticks indeed!

drawal of many who failed, simply because by reason of immaturity they were not fitted for the cares and responsibilities of the teacher.

The above is submitted with all due respect to the young candidate and coming teacher. The writer is but of legal age himself, and has not been wholly unsuccessful as a teacher. But he knows that if he had not commenced the work until now, he might in a much shorter time have become a more efficient teacher.

HOW NOT TO DO IT. BY FIDELIS.

DR. BAIN AND THE ENGLISH CLASSICS.

"In this life we want nothing but facts, sir, nothing but facts ! "-MR. GRADGRIND, in Hard Times.

An amusing example of the "wooden" style of criticism is that afforded by the "efforts" at poetic criticism indulged in by the logical and erudite Professor Alexander Bain, of Aberdeen, one of the last people, one would think, to undertake the rôle of poetic critic. Here, however, is a sample of the entertainment in store for his readers, a sample given by a writer in the "Contributor's Club" of the Atlantic Monthly. It is taken from an elaborate critique of Shelley's "Skylark." He thus proceeds to vivisect the two exquisite lines-

"In the golden lightning Of the sunken sun.

whereupon he thus discourses: "The 'golden lightning' seems a doubtful conjunction. The meaning is made more consistent if we read 'lightening,' an emendation actually adopted by Chambers. The 'sunken sun' scarcely contributes to a picture of glorification (sic); the word 'sunk' is associated with depression and pathos. No doubt the poet sought to vary the common designation of the 'setting sun'."

Here is another equally entertaining, on Milton-

> "The broad circumference Hung on his shoulders like the moon."

Such a metaphor as this is too much for the rational Dr. Bain, and he accordingly remarks, with grave disapprobation—"Anything comparable to the moon could not be supposed to be on the back of any imaginable figure!" The term, 'moon-faced," would, it may be supposed, The term, equally come under the disapprobation of this severely scientific critic.

Dryden's great Ode on St. Cecilia's Day fares no better-

> " From harmony, from heavenly harmony, The universal frame began.

"Dryden," he says, "has probably been caught by the double meaning of 'harmony,' namely, as musical quality and an orderly arrangement, being opposed to confusion or chaos. At all events, as regards the two first lines (sic), he has made the mistake of referring, without any authority, the origin of the world to music!"

One feels inclined to exclaim with the old Scotchman, "Do ye no ken a figger o' speech?" We can imagine the havoc such a critic would make with Shakespeare's metaphors—" A hand open as day to melting charity;" "The native hue of resolution sicklied o'er with the pale cast of thought;" and many another strong and find equally hard to square with scientific facts.

greater part of poetical diction must be indeed high sounding nonsense!"

Yet this book—the value of which as a guide to poetical criticism may surely be guaged in no slight degree by the above extracts—is actually prescribed as a text-book by our educational authorities, and a text-book, too, for the guidance of our young teachers! Of course the book is not absolutely destitute of good points. Its system of approaching literature rather from the side of concrete illustration than that of abstract principles, is, so far, good. But the best system in the world would not make a man who was blind to color and form a good art critic, and neither can it make a good literature critic out of a mere logician. There are certain qualities that don't, ordinarily, at least, "go together."

A writer in the Nineteenth Century, Mr. Churton Collins, has lately called attention to the "wretched system of word-mongering and pedantry," in which real criticism, as the teaching of literature, has been "killed by philology." By this system, literature "had been regarded, not as the expression of art and genius, but as mere material for the study of words—as mere pabulum for philology." Even rhetorical criticism, as a subject of teaching, is confined to what is known in elementary schools as analysis. "Æsthetic and philosophical criticism is without recognition at

Of course, as Mr. Collins remarks, the "interpretation of literature includes verbal analysis, analysis of form and style, analysis of sentiment, ethics, and thought." But, as he goes on to say, the mistake commonly made is to attach too much importance to the first, to deal with the second very inefficiently, and to neglect the third altogether.

In Canada we need to be on our guard against this narrow and mechanical kind of literatureteaching, and certainly such a book as that of Dr. Bain is utterly misleading, so far as criticism of imaginative literature is concerned. In order truly to teach or to criticise any literature into which imagination largely enters, it is necessary to possess some imagination, and no one so entirely destitute of it can be a safe guide in the flowery paths of literature. Mr. Collins tells us, truly enough, that "you cannot expound the 'Ode to a Skylark,' or the 'Eve of St. Agnes,' though Dr. Bain, as we have seen, tries to do the first atter a notable manner. But the man who has no poetry in himself cannot teach others to appreciate its beauties, any more than the man who "has no music in himself" can help others to appreciate that divine art. Such a teacher of literature can only make masters pe dants, and scholars prigs.

The writer quoted from the Atlantic Monthly is not the only one who has called public attention to the vicious principles of Dr. Bain's criticism. Mr. Barrett, in the London Academy, has discussed the two books on "Teaching English," and "English Composition and Rhetoric," and declares, very plainly, that "the chief object that seems likely to be served by them is that they should be examples to the end of time, of how English' never should be taught, and never could be taught." We would earnestly commend this matter to our educational authorities, as one of no little consequence to the future of Canadian literature and Canadian culture. We have not too many poetical and imagination-fosvivid figure, which this critical Gradgrind would tering influences in this new country, and the teacher who should draw from such criticisms It is little wonder if he finds some of Bacon's the idea that poetical imagery is to be squared—noblest sentences "high sounding nonsense." à la Gradgrind—with prosaic fact, would teach To a man who has so little comprehension of our "young ideas" (pace Dr. Bain) to "shoot"

Literature and Science.

BETTER THAN GOLD.

BETTER than grandeur, better than gold, Than rank or titles a hundredfold, Are a healthy body, a mind at ease, And simple pleasures that always please.

A heart that can feel for a neighbor's woe, And share in his joy with a friendly glow, With sympathies large enough to infold All men as brothers, is better than gold.

PREHISTORIC RESEARCHES IN SOUTH-EASTERN SPAIN.

Two Belgian engineers, Messrs. Siret, are about to publish the important results of their extensive archæological researches in Spain, which extend over the coast from Carthagena to Almeria. The oldest remains belong to the neolithic period. There is not a trace of metal to be found in these projects to the implements consist of There is not a trace of metal to be found in these ancient habitations. The implements consist of polished axes, perforated shells, pottery, grinding stones, chipped flints, and primitive walls of stone. In another class of sites which belong to a more recent period, remains of copper and a few bronze implements were found. The inhabitants lived in stone houses, the stones being cemented by earth. Flint implements, particularly arrow heads and knives, ornamented pots, bone points, and numerous copper celts, were found in the houses. Cremation was practiced to a considerable extent by the people of that period. Copper ores and by the people of that period. Copper ores and scorize proved that they practised the art of smelting.

In a later period fortified villages, with walls made of stone and mud, were built on the tops of the hills. In the space surrounded by the walls, the ruins of burnt houses, implements, remains of grain which was kept in clay pots, cloth made of broom, and handmills were found. Flint was used only for making saws. The dead were buried in natural caves, or in stone boxes under the houses

or near them.

At the end of the copper period the inhabitants still lived on the tops of steep hills, in fortresses. The implements consisted of the same material, but, besides, moulds for casting copper, ivory, gold, and silver, were found. Over twelve hundred graves belonging to this period were opened. All of them were situated in the houses, and consisted either of small chambers of stone, of stone boxes, or of huge clay pots with rounded bottom and wide or nuge clay pots with rounded bottom and wide mouth. The largest of these are over three feet long and two feet wide. The skeletons are doubled up, hands and knees being pressed against the chin. Sometimes husband and wife are found in the same urn. The study of this vast amount of material will be righly interesting. Virchow points out that part of this ancient culture is probably due to Phenician influence.—Zeitschr, fur Ethmalise 1887 No. 21: Science nolgie, 1887, No. v; Science.

"A CRISIS IN TRIOLETS."

In "Victorian Poets',' Mr. Stedman remarks that an heroic crisis is needed to turn the British Muse to more serious, ambitious and creditable work than the composition of ballades, rondeaux, and vers de societé. To this Mr. Andrew Lang has retorted in Longman's Magazine that broken national eggs are too high a price to pay for better poetical omelettes, and that even if the eggs be broken, there is no guarantee that the omelette will be improved. Our Civil War did very little for American poetry, he thinks. To this criticism Mr. Stedman replies in The Critic of Feb. 11, under the heading of "A Crisis in Triolets." He says:—"Mr. Lang's graveand-gay deprecation of a confessedly empirical prescription for the benefit of new English poetry scription for the benefit of new English poetry scarcely betrays a close reflection upon the nature of "an heroic crisis," or upon the history of our American crisis in particular. The latter did not begin, as he implies, with the War for the Union in 1861. That was the beginning of the end. It began with the first issue of Garrison's Liberator, A.D. 1831. Thereafter, for thirty years, we had our time of storm and stress. American passion, thought, imagination, were intensely stimulated. who thinks that an easy one,

There was a radical and transcendental movement in politics, social discussion, literature. The ferment certainly gave impulse and motion to the natural powers of Whittier, Emerson, Longfellow, Lowell, Whitman, and of various minor, and within their limits, genuine poets, and it begat memorable works in prose. . . . Our own recent Muse plainly has her failings, both native and—im-Our own recent ported. There is, however, something to justify a cackle, if not a crow, in a good deal of the American prose-fiction (as compared with the miscellaneous prose-fiction of England),—including that which springs up in sections where our crisis has which springs up in sections where our crisis has cleared away a pretty black pine forest, and has given the chance for a new and various "growth." Whether a veritably heroic crisis is impending yonder may be a question. But there seems to be already a crisis in triolets and their kind. Mr. Lang "piteously" implores his correspondents to send him no more ballades, exclaiming, "They are now a drug in the poetic market." They are, indeed, and should be, since what iterative imitator can excel those written long since by Mr. Lang himself and by two or three other begetters of the vogue?

For Friday Afternoon.

THE SINGING SAND.

ALONG the beach, Where each to each
The wavelets talked in whispered speech, With idly loitering steps I strayed, Harkening the murmur that they made, Like tar-off words and laughter blent With many a wind-blown instrument.

On either hand The sunny strand Was one wide reach of glaring sand; A silent waste without a stir; A bit of desert, as it were, Desolate, voiceless, in the heat, But for the water at its feet.

"Ah, why," I sighed,
"Is one denied
Color and life and voice beside?
Why one have waves with foamy crest,
And white sails on its buoyant breast, While yet the other can but show One idler's footsteps, to and fro?"

Just then anear My well-schooled ear A musical new sound could hear-A resonant, grinding sound, yet sweet, That seemed to come from 'neath my feet, And I was quick to understand I walked the fabled singing sand.

Ah, then, no more That lifeless shore It's look of blank desertion wore; My fancy on its margin drew The prow of many a bark canoe, Rude wigwams rose, and here and there Upcurled blue smoke on the blue air.

I seemed to see How blithe and free
Ran dusky children in their glee;
How grizzled women, old and bent,
Toiled at the fire or in the tent, While warriors, sprawling at their ease, Looked on and smoked their pipes in peace.

A vanished race, With scarce a trace But legend now in all the place; Yet what a busy-peopled shore, If spirit eye but scanned it o'er! What print of keel and foot and hand Here on the Indian's singing sand! -Clara Doty Bates.

A FRESHMAN hesitates overthe word connoisseur. "What do you call a man that pretends to know everything?" "A professor," replies the student,

HELP ONE ANOTHER. "HELP one another," the snowflakes said,

As they cuddled down in their fleecy bed; "One of us here would not be felt, One of us here would quickly melt; But I'll help you and you help me, And then what a big white drift we'll see!"

"Help one another," the maple spray Said to its fellow leaves one day: "The sun would wither me here alone, Long enough ere the day is gone; But I'll help you and you help me, And then what a splendid shade there'll be!"

"Help one another," the dewdrop cried, Seeing another drop close to its side; "This warm south breeze would drive me away, And I should be gone ere noon to-day; And I'll help you and help you me, And we'll make a brook and run to the sea."

"Help one another," a grain of sand Said to another grain just at hand; "The wind may carry me over the sea, And then, O, what will become of me?
But come, my brother, give me your hand, We'll build a mountain and there we'll stand." —Chambers's Journal.

ORDER.

CONCERT RECITATION FOR PRIMARY CLASS.

WE have a place for everything, And everything in time; A time to work, a time sing-Yes, soon our voices chime.

A time to play we ne'er forget; We love to have it come; A time to sleep, a time to eat, They help make up the sum.

We have a place for all our things, And all our things in place, A place for hats, and hoops, and strings, And one where we may race.

A place for books, and ink, and pen,-When study hours are o'er We put them up with care, and then We're off to play once more.

But when we hear the tinkling bell, Which says that school's begun, We leave the play we love so well, And for our places run.

THE LITTLE BOY AND THE OWL.

I WENT one day To have a play, Up in my father's wood; I'saw some quails And lazy snails, And ate some berries good.

I spied an owl. And he did growl,
And said, "It will not do."
He blinked his eye And said, "I'll fly
And scare you—you—you—you!"

He came so near That I could hear, "I'm after you—you—you!"
He snapped his bill, And screamed until
I cried, "Boo—hoo—hoo—hoo!"

He said, "You run For 't is no fun To come so near my nest."
I said, "I will;" So down the hill, Be sure, I did my best.

-C. W Posten.

"Does my question embarrass you?" asks a tutor. "Not at all, it is the answer that bothers

Hints and Helps.

THE INFINITIVE.

BY B. F. TWEED, LL.D.

FORMERLY the infinitive was regarded as a mode of the verb. It is now, however, treated by grammarians as a verbal noun. It is simply the name of the act expressed by the word. It may be used in most of the relations of an ordinary noun.

It differs from an ordinary noun in the following particulars: (a) It is capable of showing whether the action named is complete or incomplete. (b) It may be limited in the same manner as the verb from which it is derived. (c) It is used only in the singular number, and not used in the possessive case. It is, in fact, the connecting link between the noun and the verb, having the syntax of the noun and admitting the limitations of the verb.

Every verb has two infinitives—the simple, or root form, as "write," and the form in ing, as

writing.

The preposition "to" is not a part of the infinitive, or verbal noun, but forms, when prefixed to the verbal noun, a phrase; and this phrase, like all phrases composed of a preposition and a noun, may perform the office of a noun, adjective, or

The particle (now commonly called a verbal adjective) is the connecting link between an adjective and a verb, having the syntax of an adjective, but admitting the limitations of the verb.—Exchange.

FIRST STEPS IN WRITING.

WHEN it becomes necessary to teach children the forms of letters give them drawing lessons pure and simple. Set them at tasks of copying forms of all kinds. The outline of a leaf, a profile on the board; anything except pure geometrical drawing. If time cannot be found for drawing, use the half of the writing hour for that purpose.

One of my writing classes some years since did not get along as I wished, and I divided both the class and the writing hour into two parts. To one of the halves of the class I gave a drawing lesson for thirty minutes and let them write during the remainder of the time. The other half of the class wrote during the whole time. I was rather sur-prised to find the pupils in the drawing class excelling the others in their writing in a remarkable manner. I began to think that they had an especial "knack" for good writing. When they were in advance of the others in a marked degree I reversed my experiment, and gave the others half drawing and half writing. The advanced half took the whole hour in penmanship. In due season the second part overtook the others and passed them as easily as they themselves had been passed. Perfectly satisfied with the result, I divided the writing hour, taking half of it for a drawing lesson. The rapid progress of the class more than justified the adoption of the method.

If the primary teacher will hold fast to the idea that writing is a method of doing something which is to be learned, instead of something to be done, the teacher in the higher grades will have little trouble in making the handwriting beautiful. - Child

Culture.

POLITENESS TO PUPILS.

THE longer I teach the more thoroughly I become convinced that the teacher who is on the best social terms with her children obtains the best results, and not she who dares not relax her dignity long enough to give a smile or a pleasant word. Still less she who treats them as if she could not place any confidence in them, and even forgets herself at times, so far as to say, "You are lying to me," "Now, don't lie," etc., as I have heard on more than one occasion. Twice to-day have I seen my theory brought into practice. In the first case, a boy who last year was pronounced a disagreeable fellow, entered the room; was pleasantly greeted by his teacher and engaged in a short conversation about a social event. Only a few senwere exchanged, and as he turned away she asked, "Can I do anything for you, Harry?"
"Nothing, thank you;" and that "rude boy"
went to his seat feeling like a man and a gentle-

man, and to my certain knowledge that teacher Educational Notes and News. never complains of rudeness from him.

In the second case, a boy, just beginning the study of History, came to his teacher with a simple little story of Penn's dealings with the Indiansstale to her, no doubt, but fresh and new to him. She appreciated that fact, and he was received just as he had expected to be, with a bright smile and a hearty interest in what interested him. She sent him away with a face wreathed in smiles, and he will feel a real desire to find new facts for a teacher who shows appreciation of his efforts. I mentally resolved that hereafter if I felt no interest in those old, new things, I would assume it, feeling that the "end would justify the means." But I contend further, that the teacher who can feel no pleasure in the pleasures of her pupils has stayed too long in the schoolroom, and should step aside and make room for those of gentler hearts and sweeter tempers, who will treat pupils as reasonable beings and inspire a perfect confidence and respect.

Try it, you tired, grumbling, fault-finding teachers, and see if it does not bring peace to your

souls.—School Moderator.

DISCERNING TEACHER.

A TEACHER had charge of a school in a country town, early in her career, and among her scholars was a boy about fourteen years old, who cared very little about study, and showed no interest, apparently, in anything connected with school. Day after day he failed in his lessons, and detentions after school hours and notes to his widowed mother, had no effect. One day the teacher had sent him to his seat, after a vain effort to get from him a correct answer to questions in grammar, and feeling somewhat nettled, she watched his conduct. Having taken his seat, he pushed the book impatiently aside, and espying a fly, caught it with a dexterous sweep of the hand, and then betook himself to close inspection of the insect. For fifteen minutes or more the boy was thus occupied, heedless of surroundings, and the expression of his face told the teacher that it was more than idle curiosity that possessed his mind. A thought struck her, which she put into practice at the first opportunity

that day.

"Boys," said she, "what can you tell me about flies?" And calling some of the brightest by name, she asked them if they could tell her something of a fly's constitution and habits. They had very little to say about the insect. They had often caught one, but only for sport, and did not think it worth while to study so common an insect. Finally she asked the dunce, who had silently, but with kindling eyes, listened to what his schoolmates hesitatingly said. He burst out with a description of the head, eyes, wings, and feet of the little creature, so full and enthusiastic that the teacher was astonished and the whole school struck with wonder. He told her how it walked and how it ate, and many things which were entirely new to his

teacher; so that when he had finished she said:—
"Thank you! You have given us a real lesson in natural history, and you have learned it all your-

After the school closed that afternoon she had a long talk with the boy, and found that he was so fond of going into the woods and meadows, and collecting insects and watching birds, that his mother thought he was wasting his time. The teacher, however, wisely encouraged him in his pursuit, and asked him to bring beetles and butternillars to school and tell what he flies and caterp llars to school, and tell what he knew about them. The boy was delighted by this unexpected turn of affairs, and in a few days the listless dunce was the marked boy of the school. Books on natural history were procured for him, and a world of wonder opened to his appreciative eyes. He read and studied and examined; he soon understood the necessity of knowing something of mathematics, geography, and grammar, for the successful carrying on of his favorite study, and he made rapid progress in his classes. In short, twenty years later he was eminent as a naturalist, and owed his success, as he never hesitated to acknowledge, to that discerning teacher.—Central

WHEN thou feelest a disposition to sin seek a

A REPORT of the whereabouts of 2,619 womengraduates of twelve female colleges, gives 928, or 38 per cent. of them, as having married; 949, or per cent., as employed in teaching; 133 in other occupations at wages, and 539, or 20 per cent., as in no paying employment.

IN 1885, Germany, with all her great universities and boasted culture, spent for the education of her people, \$40,000,000; England, \$35,000,000; France, \$15,000,000; Austria, \$9,000,000, and Russia, 5,000,000. The United States that year spent \$100,000,000 for education, or as much, practically, as those five nations combined.—Jour-nal of Education.

ACCORDING to a writer in the Contemporary Review, Austria-Hungary has nine high schools of commerce, eleven intermediate schools, and fortytwo schools intended principally for clerks. The most important of the high schools is in Vienna, and is known as the Handels Akademie. It gives two courses of instruction, the one occupying three vears and the other two years.

AT the congress of the Association for the Advancement of Women, recently held in New York, Dr. Julia Holmes Smith, of Chicago, spoke strongly in condemnation of the marking system in schools. "Women," she said, "are responsible for an evil which is sapping the life of their children, insomuch that they do not protest against, yes, and put a stop to, percentage and cramming for examinations. We sacrifice ever so much of the force of a nation when we press the children for examinations. Let the teachers study for themselves the capacity of their children. Education is not a question of marks—it is a question of the development of all the powers; and teaching by the marking system defeats the true aim of education; the acquirements are obtained by unnatural pressure and are easily forgotten, and as for development, that is actually retarded."

A FURTHER proof of the overcrowded market is afforded by a case near Sheffield. The Bradwell School Board was in want of a master, and, at a meeting last Friday, it was announced that no fewer than 228 applications had been received for the post, at a salary of £50 per annum with half the grant, making a total of about £90 a year. Among the applicants, four were members of the Royal College of Preceptors, and several Masters of Arts. Still further, in face of many applications, to make the bargain a good one for the Board, a member moved a resolution of which he had given notice to the effect that the schoolmaster should be required to enter into an agreement, in case of inability to perform his duties, to provide an efficient substitute, and be responsible for his salary and conduct. This was duly seconded, and will be considered at the next meeting, when the appointment will be made. - The Schoolmaster, London, Eng.)

ANENT the payment-by-results system, the Falkirk Herald contains a clever parody on the "Song of the Shirt," suggested by some of Mr. Duncan's remarks at the Dundee Congress, on the difficulties of small rural schools. The following is the last verse:-

Grant! Grant! Grant! get the highest grant you

The school that earns the highest grant is the school that leads the van.

And teachers all must harden the heart and fearlessly use the tawse,

That School Board men may boast of the Grant, and claim a loud applause.

O, ye who pay the rates! parents of girls and boys,

It is not money you grudge to pay, it is your chil-

dren's joys.
Gold! gold! gold! compared with your children's health.

How vile the dross, when their sunny smiles are all a poor man's wealth.

Drive sordid greed from out your hearts and your mandate firmly plant,
That the children's good be the highest aim, instead of the cry for "Grant,"

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Candidates should notify the presiding Inspector, not later than the 24th May, of their intention to present themselves for examination. All notices to the Department for intending Candidates must be sent through the presiding Inspector.

The presiding Inspector will please give sufficient public notice respecting the Examinations.

The Head Masters of Collegiate Institutes and High Schools will please send the applications of their Candidates to their Local Public School Inspector, and in case of there being more than one Inspector in a County, to the one within whose jurisdiction the School is situated, toone within whose jurisdiction the School is situated, together with the required fee of Five Dollars from each Candidate, or Ten Dollars if the Candidate applies for the First C. as well as Second Class Examination. A fee of Five Dollars is also required from each Candidate for a First Class Certificate, Grade C, which is to be sent with form of application to the Secretary of the Educational Department.

Where the number of candidates necessitates the use of more rooms than one, those taking the University examination are, in order to prevent confusion, to be seated in the same room.

NON-PROFESSIONAL TURBS AND THE

MON-L KOLESSIONAL	THIRD AND SECOND CLASSES
	AND I. C.
DAYS AND HOURS.	THIRD CLASS SUBJECTS.
Tuesday, 3rd July.	
A.M. 8.40-8.55	Reading Regulations
P M. 2.00-4-30E	listory and Geography.
Wednesday, 4th Iuly,	· •
A. M. 0 co-11.30	rithmetic and Mensuration,
P.M. 2.co-4.30E	Inglish Grammar.
Thursday, 5th July.	
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Friday, 6th July.
A.M. 9.00-10.15...
10.20-11.30.
P.M. 2.00-3.30...
                                                    . Reading and Orthoëpy.
. Drawing.
. Bookkeeping.
. Precis Writing and Indexing.
3.35-5.05...
Saturday, 7th July.
A.M. 9.00-10.30.
                                                     Latin Authors.
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Latin Composition and Grammar,
French do
German do
         P.M. 2.00-4-30....
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                                                  EXAMINATION.
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Tuesday, 3rd July.

A.M. 8.40-8.55.
9.00-11.30

P.M. 2.00-4.30.

Wednesday, 4th July.

A.M. 9.c0-11.00

P.M. 2.00-4.30.

Thursday 5th ville. . Reading Regulations.
. English Poetical Literature
. History and Geography. .. Arithmetic P.M. 2.00-4.30.

Thursday, 5th july.

A.M. 9.00-11.30

P.M. 2.00 4.30

Friday, 6th July.

A.M. 9.00-11.30

P.M. 2.10-4.03.

Saturday, 7th July.

A.M. 9.00-11.30

P.M. 2.00-3.30

P.M. 2.00-3.30 . English Grammar. . Algebra. . Chemistry. . Euclid. Botany. Physics. P.M. 2.00 3.30 German Authors.
3 35:5-35 do Composition and Grammar.
Tuesday, 10th July.
A.M. 9.00-11 30 ... English Composition and Prose Literature

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DAYS AND HOURS.

Tuesday, 10th July.
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. English Composition and Prose Literature
. Greek—Pass (for matriculants only).Latin Composition.French Authors.do Composition and Grammar. Wednesday, 18th Yuly.
A.M. 9.00-10.30 ... G
P.M. 2.00-4.30 ... G
TORONTO, February, 1888. ... German Authors.
... do Composition and Grammar.
... Greek Authors.

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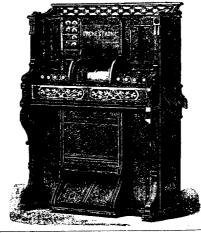
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Western Assurance Company

SHAREHOLDERS' MEETING.

THE thirty-seventh annual meeting of the Shareholders of the Western Assurance Company was held at its offices at noon yesterday. A. M. Smith, Esq., the President, occupied the chair. The Managing Director was appointed to act as Secretary, and read the following

DIRECTORS' REPORT :

In submitting the Annual Statement of the accounts of

In submitting the Annual Statement of the accounts of the Company for the year ending 31st December last, the Directors are pleased to be able to congratulate the Shareholders upon the prosperous condition of its affairs which these indicate, as well as the evidence they bear of its continued growth in public favor and confidence.

The net income from premiums, as shown by the Revenue Account, amounted to \$1,630,096.96, while the interest receipts were \$40,135.26, and after payment of losses and expenses, as well as making provision for all unadjusted and unsettled claims, there remains a profit balance of \$99,030.98. This result is the more gratifying from the fact that recently-published statistics show that the past year has not been generally a profitable one that the past year has not been generally a profitable one in either Fire or Marine Insurance business, owing to the losses, both in Canada and the United States, having considerably exceeded the average of previous

years.

The Assets of the Company being taken at their mar-The Assets of the Company being taken at their market value on 31st December, it has been necessary to write off some \$14,000 for depreciation of these, to meet the shrinkage in values which has been common to most securities during the year. After providing for this and the payment of two half-yearly dividends, at the rate of ten per cent. per annum, the sum of \$40,000 has been added to the Reserve Fund, the total surplus funds now amounting to \$775, 317.81. The amount necessary to re-issue or run off the current risks of the Company is estimated at \$534,030, which, deducted from the surplus

re-issue or run off the current risks of the Company is estimated at \$534,030, which, deducted from the surplus as above, shows a net surplus over and above Capital and all liabilities of \$241,287.81.

Your Directors take this opportunity of acknowledging the efficiency of the Officers and Staff of the Company, as well as their appreciation of the services of its Acests throughout its extensive field of uperations, to Agents throughout its extensive field of operations, to whose energy and zeal is attributable, in a great measure, the favorable showing which is presented by the accompanying accounts.

REVENUE ACCOUNT.		- 1
Fire Premiums \$1,291,649 89 Marine Premiums 574,365 61	* • • • • • • • • • • • • • • • • • • •	
Less Re-Assurance	\$1,866,015 235,918	50
Interest Account	\$1,630,096 40,135	
	\$1,670,232	22
Fire Losses, including an appropriation for all losses reported to 31st Dec.,		
Marine Losses, including an appropria- tion for all losses reported to Dec. 31st,	744,400	33
'87	329,464	''
and all other charges	497,336 99,030	
-		
	\$1,670,232	22
PROFIT AND LOSS ACCOUNT	`•	l
Dividend paid, July, 1887\$25,000 00 Dividend payable Jan. 9,1888 25,000 00		
Description to the	\$50,000	
Depreciation in investments	14,104	
Balance	40,000 317	
Rolance from last man	\$104,422	48
Balance from last year Profit for the year as above	\$ 5,391	50
Tione we the year as above	99,030	98
Liabilities.	\$104,422	48
Capital stock paid up		
Losses under adjustment	141,854	76
Dividend payable Jan. 9th, 1888	25,000	00
Reserve Fund\$775,000 00 Balance, profit and loss317 81	•	
317 81	775.317	81
Assets.	\$ I 442,172	
United States bonds	(
Dominion of Canada stock		
	146,297	25



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Re-assurance due from other companies Interest due and accrued Agents' balances and sundry accounts	25,556 23 5,493 64 171,340 69
-	

\$ 1,442,172 57

A. M. SMITH. President. J. J. KENNY.

Managing Director. Western Assurance Offices, TORONTO, Feb. 14th, 1888.

AUDITORS' REPORT.

To the President and Directors of the Western Assurance Company.

GENTLEMEN,—We hereby certify that we have audited the books of the Company for the year ending 31st December, 1887, and have examined the vouchers and securities in connection therewith, and find them correct, and the above statements agree with the same.

R. R. CATHRON, JOHN M. MARTIN, Auditors.

TORONTO, Feb. 14, 1888.

The President, in moving the adoption of the report, offered his congratulations to the Shareholders on the prosperous statement which had just been read by the Managing Director, to whose unceasing energy and care, assisted by a thoroughly loyal and experienced staff, they were largely indebted for the satisfactory report just put in their hands. It would be noticed that the net premi-ums were some \$245,000 over those of the previous year, the business in each branch showing a considerable in-crease; and while the net profit was not equal to that of crease; and while the net profit was not equal to that or 1886, he thought he was quite safe in saying that the statement, comparatively speaking, was a better one than that presented at the last Annual Meeting, for it must be borne in mind that the fire losses in Canada and the United States have exceeded by several millions those of

the preceding year, while Marine disasters on the lakes during the fall months were exceptionally numerous and heavy. It was, therefore, with no little satisfaction that he presented a report showing a profit balance on the year's transactions of close upon \$100,000. While the Directors had continued their policy of requiring a thorough inspection and supervision of the business of the Company, believing judicious expenditure in this direction to be true economy, it would nevertheless be gratifying to the Shareholders to note that the ratio of expenses to premiums was a fraction lower than that of last year, being thirty and one-half per cent., a figure which compares favorably with that of other companies transacting similar business. It was, he thought, unnecessary for him to refer to the amount written off the value of securities to bring them to their market value at the close of the year, which, considering the extent of the Company's investments and the general reduction in values since the last report, must be considered a very moderate sum. The total assets are now \$1,442,172, of which nearly \$700.000 or close upon one-half are invested in the preceding year, while Marine disasters on the lakes sum. The total assets are now \$1,442,172, of which nearly \$700,000, or close upon one-half, are invested in United States and Canadian Government Securities, a financial exhibit which he was sure the Shareholders would agree with him justified their pride in the Western as a Canadian institution, and must command for it an increasing share of the patronage of the insuring public so liberally bestowed upon it in the past.

Mr. William Gooderham, the Vice-President, seconded the adoption of the report, which was carried unanimously and on motion of Mr. James Scott research.

mously, and on motion of Mr. James Scott, seconded by Mr. Robert Thompson. a vote of thanks was passed to the President, Vice-President, and Board of Directors, for their services and attention to the interests of the

Company during the past year.

Messrs. F. J. Stewart and William Anderson having Messrs. F. J. Stewart and William Anderson having been appointed scrutineers, the election of Directors for the ensuing year was proceeded with, and resulted in the unanimous re-election of the following gentlemen:—Messrs. A. M. Smith, William Gooderham, Hon. S. C. Wood, Robt. Beaty, A. T. Fulton, Geo. A. Cox, Geo. McMurrich, H. N. Baird, J. J. Kenny.

At a meeting of the Board of Directors held subsequently, Mr. A. M. Smith was re-elected President and Mr. William Gooderham Vice-President.

