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THE CANADA SCHOOL JOURNAL

A Educational Journal devoted to Literature, Science, Art, and the advancement of the teaching profession in Canada.

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CANADA SCHOOL JOURNAL PUB. CO. (Limited),
OFFICE: Toronto, Ontario.

THE attention of teachers is invited to the article on "Discipline as a Factor in School Work," by Dr. Wickersham, commenced in our "Special" columns in this number. The subject is comprehensively treated by one who is evidently entitled to high rank as a thinker, as well as educator. This, when completed, will be followed by Mr. Wetherell's paper on "Conservatism and Reform in Educational Methods," and other good things still on hand from the Teachers' Association.

IN Leicester, England, a man was recently sentenced to fourteen days' imprisonment, with hard labor, for fraudulently obtaining remission of school fees by stating that he was out of work and starving when he was actually in the receipt of 26s. to 36s. a week. The case suggests a good many reflections with respect to the workings of the fee system to which so many in England cling so tenaciously. Amongst others the question arises how the system which tempts to such dishonesty and involves punishments so demoralizing, can do so much more for preserving the independence and self-respect of the lower classes, than the above-board free-school system.

WE are receiving many words of approval from our patrons, which are both gratifying and encouraging to us, and which show that the CANADA SCHOOL JOURNAL stands high in the appreciation of educators of all classes. The Superintendent of Schools in Springfield, Ill., himself the editor of a live educational paper, in soliciting an exchange, says: "I regard your JOURNAL as one of the very best I have ever read. . . I would appreciate the favor not alone as editor but as teacher and superintendent." We are still studying to improve the JOURNAL, and intend that it shall not only hold the high place it has attained, but shall move steadily onward and upward. The JOURNAL has an ambition, which we hope is not an unworthy one, to be *primus inter pares*.

It was in the latter days of the Second Empire that M. Victor Duruy was inspecting a school, the show boy of which was called upon by the master, in compliment to the Minister, to mention the principal glories of the Empire. The boy glibly answered, "The Mexican Expedition and the Crédit Mobilier." The Mexican Expedition had then failed, and the Crédit Mobilier had collapsed. The boy, who was supposed to be a budding Republican indulging in impertinence against the Empire, was promptly taken aside and punished. On reference to the authorized text-book, however, it was found that he had simply repeated what was there set down. Our school text-books are thus compiled under the influence of an Empire, but they are occasionally compiled under other influences; and their availability as engines of propagandism has not been entirely overlooked.—*The Week*.

Having gone so far *The Week* should go a little farther and point out how and for what our school text-books are being made engines of propagandism. It seems hardly fair to insinuate the charge without some proof. Moreover, *The Week* would be doing a journalist's duty and a service to the public in exposing any such abuse of trust by our text-book makers.

THE Berlin *News* strongly condemns the too common practice of Trustees who, in order to save fifty or a hundred dollars a year, discharge teachers of skill and experience and employ embryo doctors, lawyers and ministers in their places. This is to put a premium on novices, and discourage competent workmen. We hope the *News* exaggerates when it says that three-fourths of the number of young teachers have not the slightest idea of remaining in the profession for more than two or three years. It makes a good point, and one too much lost sight of by both parents and trustees, in the following: "It may be regarded as an axiom that a teacher cannot become acquainted with a school in less than a month. Equally true is the assertion that a school receives very poor attention during the last month a teacher remains in office. Thus we have a loss of nearly two months' pay owing to the short-sighted policy of trustees." These are considerations that would have much weight with a business man in engaging employees for any kind of work requiring skill and knowledge.

FRANCIS H. HOWARD, in a good article in the *N. E. Journal of Education*, on the question, "Can Citizenship be taught in

our Public Schools?" says: "The foundation principle of the *moral responsibility of each for others* may be inculcated from the very first. The youngest pupil may begin to feel that his good or bad behavior has its power to aid or hinder the aggregate good of all. He may be made to comprehend that even if he choose to do wrong and take the consequences, he yet owes something to his companions, and that his individual pleasure does not always constitute an individual *right*. Too frequently the aim of education has seemed to be the development of the individual as an integer, rather than a part, and too frequently the question of right doing has seemed to be but a blind obedience to a promulgated law. If the boy can be trained to feel that on him is placed, to a certain degree, the responsibility for the good behavior of his comrades, he has taken a long step in the path that leads to good citizenship and intelligent voting." The point is well taken. The child cannot too soon be taught that he lives in a world in which, whether he will or no, all his conduct has a bearing upon the welfare of others. Not even a school-boy can "live unto himself." It is impossible for him, however earnestly he may desire it, to divest himself of his relations to others, or to escape responsibility for the duties growing out of those relations. To impress this truth upon the mind, in its practical aspects as presented in the microcosm of the school, or the family, is one of the most effective modes of developing the conscience, and so giving that moral training the need of which is so much felt in these days.

We hope every teacher has read carefully and thoughtfully Mr. McHenry's able paper on the system of prize-giving. As we have said before we concur heartily with the views of the essayist in regard to the main point. So far as the giving of prizes and scholarships on the large scale at present adopted in Toronto and other universities, or, in fact, on any scale whatever, is concerned, Mr. McHenry's logic is unassailable. No one of the ends aimed at, or at least of the ends that should be aimed at, is, as Mr. McHenry shows, surely reached by these methods.

THE subject of motives upon which Mr. McHenry touches briefly but effectively, is one worthy of the deepest consideration. In it is involved, to a very great degree, the vexed question of moral training in the schools. "As a man thinketh in his heart, so is he." The motives determine the character. Place a boy or girl, young men or women, during the most susceptible and plastic years of life systematically under the influence of selfish or sordid motives in the discharge of their daily duties, and it is utterly unreasonable to look for noble character as the outcome. It should, of course, be borne in mind that one motive may be lower than another without being necessarily wrong or vicious. Emulation is, as the essayist intimates, in its proper place and use, perfectly legitimate. As the result of a good deal of thought and experience during a score of years of teaching and school management, the writer evolved for his own guidance a set of rules something like the following:

Never, under any circumstances, appeal to a motive believed to be in itself wrong or bad.

Amongst legitimate motives, always appeal to the highest which can be made effective in the given case.

Strive constantly to bring to bear, in the case of individual pupils, motives in an ascending scale, passing from a lower to a higher as soon as the higher can be made available.

Every thoughtful parent and teacher knows that there are stages of intellectual and moral development at which the higher class of motives, such as a sense of duty, love of study, desire for usefulness, etc., are wholly inoperative. Fear, a very low motive, may be the only one effective in certain cases. In such cases it may be right to begin with, but degrading to continue. It will be superseded or discarded by the skilful parent or teacher at the earliest possible moment, and, as a rule, we believe that moment, under right influences, will come very soon. The hope of reward is a better one, and may be the best, in many cases, during the earlier stages of school life. So the desire to excel, the desire to please, the sense of duty, the pleasure attending the exercise of mental power, love of knowledge, love of others, etc., should follow. It is unnecessary to add that the operation of this principle would utterly discredit prize-giving in high schools and colleges.

A "PROFESSIONAL MAN," writing in the *Truro (N.S.) Sun*, says:

"In consequence of the exceedingly low salaries given to teachers in these Maritime Provinces, it is a fact that when young men find themselves school-teachers, they are compelled to step on to some other profession in order to make a living."

We fear it is a fact in other than the Maritime Provinces. When will parents and trustees learn that to pay salaries too low to keep good men in the profession—and they are often good men, though not the best teachers, who step out and up—is the worst economy? No one who is making his teaching a stepping-stone to some other profession can do his best work. One year with a wide-awake, enthusiastic, stimulating teacher, whose whole heart is in his work, is worth more to a child than three under one who is a mere hireling, a "routine" man, whose best thoughts, if he has any, are given to something else than his pupils and his work.

A GOOD deal is being said and written just now about the evil involved in the turning away of so many young men in the country from farming and other industrial pursuits to city and professional life. The mistake is certainly a great and disastrous one. But those who are throwing the blame upon the schools, and crying out against the "over-education" of the day, are, we are persuaded, on the wrong scent. The source of the evil lies farther back. It is in the false notions and restless ambitions of the age. It may be true that there is something in the education gained in our high schools and colleges which begets a disrelish for farming, as too generally carried on, and with the associations which now surround it. But the true remedy is not in less education, but in improved farming and country life. Agriculture, horticulture, stock-raising, etc., are really scientific pursuits. Why should they

not be raised to their proper rank, and boys educated for them and led to look forward to them as their life-work?

DIVESTED of their associations with lives of unremitting, grinding toil, these may and should take place amongst the most delightful occupations. Toilsome they must always be. But hard work is the condition of success in any modern sphere of activity. There are, of course, some cases in which boys seem to be constitutionally lazy. They were "born so," and their natures are not easily changed. But we do not believe this is the case with the average healthy young man. It is not the hard, but the incessant toil he dreads; not the pursuit itself, but its concomitants of rough fare and congenial surroundings, from which the boy who has got some roused ambition and literary tastes recoils. With the labor-saving machinery of these days, by which one man can do the work of several, there should be no need, except, possibly, at special seasons, for the long hours which were a necessity to our fathers.

THERE is, it must be admitted, something in the tone and atmosphere of our upper schools and colleges which is unfriendly to rural life and pursuits. It is too generally assumed that those who are enjoying these advantages are fitting themselves for some less fatiguing, more remunerative, and, above all, more genteel occupation. This is wrong. The moral influence of the schools should be on the other side. They should aim to impart truer conceptions of the dignity of labor, and, above all, of tilling the soil. The land is the source of all our wealth. To develop its rich resources to their utmost, to contend with the many unfavorable conditions and the numerous enemies which attend the growing crops, is a work demanding high intelligence as well as muscular strength and unflinching vigilance. Poets and men of refined and elevated natures have always delighted in the sights and sounds, and often in the occupations, of rural life. It would seem as if but a higher standard of taste were required to make farming one of the most popular and fashionable, as it is one of the most independent and healthful, of pursuits. Teachers and professors should do much to cultivate this taste. Above all, they should constantly discountenance the narrow notion that education is valuable only or chiefly as a preparation for some "soft" situation, or profession, or as a means to any end outside of the man himself. Culture is its own end. It should be sought primarily, and, as far as possible, by every incipient man and woman, because it is a condition of the highest manhood and womanhood.

STILL, and in spite of all teachers or parents can do, there will always be a tendency on the part of the ambitious youth of the country to seek fame and fortune in the great cities. Well, why not? We want no caste notions in this hemisphere. The old customs that bind down the children to follow in the footsteps of their parents, so far as their life-occupations are concerned, are happily obsolete here. It is better so. We have no wish to revive them. Circulation is good. It prevents stagnation, restores equilibrium, and carries with it reviving and

stimulating influences. If the farmers' sons all remained on the farms, if tradesmen's children adhered to their fathers' trades, and business and professional pursuits were kept as preserves for the families of those engaged in them, the wheels of progress would soon begin to drag heavily. Deterioration is rapid in the cities. The infusion of fresh blood is as necessary to maintain vigorous life in scientific, professional, and business circles, as the atmospheric movements which save the congregated thousands from being poisoned by the foul gases they generate. The true philosophy is to keep the circulation complete, the movement reciprocal. For every stalwart youth the country sends to the city, the city should send back, at least, two of its punier products to find life and health in the country. Let doctors and lawyers, men of science and men of business in the cities educate their sons and daughters for rural pursuits. In numerous cases they are best fitted for this. Let the waifs of the streets be trained in industrial schools and fitted for lives of honest industry on country farms and in country workshops. Thus will the balance be preserved, the fitness of things be consulted, and the best results accomplished.

THE COMING CANADIAN RACE.

In an address to the Young Liberals of Seaforth a week or two since, Sir Richard Cartwright quoted the following panegyric pronounced upon Canada by Mr. David Wells, the distinguished American economist:

"North of Lakes Erie and Ontario, and of the River St. Lawrence, and east of Lake Huron, south of the 45th parallel of latitude, and included mainly in the present Dominion of Canada, there is as fair a country as exists on the American continent—nearly as large in area as New York, Pennsylvania and Ohio combined, and equal, if not superior, as a whole, to those States in agricultural capability. It is the natural habitat on this continent of the combing wool sheep. It is the land where grows the finest barley, which the brewing interest of the United States must have if it ever expects to rival Great Britain in its annual export of eleven millions sterling of malt product. It raises and grazes the finest of cattle, with qualities specially desirable to make good the deterioration of stock in other sections, and its climatic conditions, created by an almost encirclement of the great lakes, especially fit it to grow men. Such a country is one of the greatest gifts of Providence to the human race; better than bonanzas of silver, or rivers whose sands run gold."

Commenting upon this fine tribute to our national resources, Sir Richard goes on to describe the kind of men and women he thinks such a country ought to produce, as follows:

"I want to see my countrymen use their great advantages to develop themselves into the finest men, and my countrywomen into the fairest women, not only in North America, but in the whole world. If we cannot have quantity, let us make up for it in quality, and so I would like to see every young Canadian not only able to do a good day's work, but also able to think and speak and act for himself. Able to shoot and to swim and to ride, and to enjoy camp life in the open air. At home equally on the farm or in the workshop; in the library and the debating-room; in the gymnasium and in the glee club—and in my lady's parlor. Briefly, I would have my young Canadian countrymen so train and educate themselves as to grow into men worthy of inhabiting the land Mr. Wells so eloquently describes; and my young Canadian countrywomen so train and educate themselves as to fit themselves to be helpmates and guardians and household angels for such men, and yet, withal, continue to be true women still."

"Creatures not too bright or good,
For human nature's daily food,
But perfect woman, nobly planned,
To warm, to comfort, to command."

Had the address been spoken to a convention of teachers,

instead of to a political club, the quotation and the comment would have been no less apposite. It is not too much to say that with the members of the teaching profession, to a greater degree than with any other single class of workers, it rests to determine in what measure the typical Canadian of the future shall attain this and even a higher ideal. It is yet too soon for the Canadian type to be fully developed. But it is coming, and coming soon. Very few generations can pass before the word "Canadian" will mark a species of men and women distinguished by marked differences of form, feature, and mental characteristics alike from English, Scotch, Irish, and American ancestors. Mr. Wells's truthful description of the physical condition—the *habitat*—of the new race shows that it should be inferior in physical development to none under the sun. It behooves all true patriots, and, above all, the teachers, who have so much to do with forming the minds and morals of the next generation, to see to it, so far as in them lies, that the Canadian type shall be one of the noblest. The stock is of the very best. The Anglo-Saxon blood flows in the veins of the great majority, and in the stimulating atmosphere of the New World it flows faster than in that of the Old.

We should like to add a touch to the portrait of physical and intellectual vigor which the orator has so well drawn. The highest part of the character has been omitted or too lightly sketched. Something nobler and rarer, too, than any of the qualities named is indispensable to make men and women of the highest type. The foundation of all manly and womanly excellence must be laid in the moral nature. Where this is dwarfed and stunted, where it falls short of the highest development, there can be no true symmetry, no genuine nobility. Is the conscience clear? Does the sense of right sway all the other faculties? Is the whole inner nature sensitive to the lightest touch of moral obligation? Will the coming Canadian fear God and love righteousness, and hate iniquity in every form? Will he be pure-minded, and unselfish, and large-hearted? In this direction is to be found the true touchstone of noble character.

Special.

DISCIPLINE AS A FACTOR IN THE WORK OF THE SCHOOL-ROOM.

BY DR. J. P. WICKERSHAM.

(Read before the Pennsylvania Teachers' Association).

The work of a school may be roughly divided into two parts; first, instruction, and second, discipline. Instruction as we are thinking of it, consists in imparting knowledge and in conducting those educational processes which produce intellectual strength and culture. Discipline in the sense now intended includes both those influences which secure order in a school-room and those forces which tend to awaken and develop the moral nature of the young. In the first, the teacher appears as the builder-up of the mind, an instructor; in the second, as an executive officer administering a system of government.

An end of school discipline is order; but this is the least important of its ends, which comprehend in their fullness the high purposes of forming character and shaping life. The custom has been even among the teachers of wide reputation to look upon the discipline of the school rather as a means than as an end. Children in school, they hold, must be orderly or their studies will be interrupted and their progress in learning slow. This view is

partially correct, but in our conception it stops at the very beginning. A child attends school certainly not more to learn reading, writing, arithmetic, and other branches of knowledge, than he does to receive proper moral training. Habits like those of order, obedience, industry, politeness, if they can be acquired at school, and great principles such as honor, honesty, truthfulness, justice, charity, if they can be implanted in the youthful mind, surely outweigh in educational value any amount of what is called learning. And as discipline in schools well directed can do much to form moral habits and instil moral principles; it is not only the handmaid and helper of instruction, but has an end of its own quite independent of all others. Instruction seeks food for the intellect, discipline looks to the forces that control the feelings and the will; instruction busies itself in storing the memory with facts, in furnishing the understanding with principles, and in conducting the imagination through fields of beauty; discipline searches out motives, looks down into the human heart to find and master its springs of action, good or bad; instruction is pleased with fine recitations, good examinations, and graduates that stand at the head of their class; discipline demands conduct unexceptionable, character well formed, and a solid foundation of true manhood with which to go forth to meet the future; instruction makes scholars, discipline develops men. In this broad sense I propose to speak of discipline as a factor in the work of the school, supposing that the subject is of peculiar importance in this country at the present time.

As applied in the school-room, discipline assumes several different forms which admit of classification. There is a form which may be called the discipline of force; another, the discipline of tact; third, the discipline of consequences; and a fourth, the discipline of conscience. They differ somewhat in aim, but materially in method. As a whole they cover the subject historically, if not philosophically, and light must be thrown upon the most delicate and difficult work of the school-room by their discussion.

1. *The discipline of force.* If in a school, order alone be aimed at, by far the easiest and most summary way of securing it is by means of force. With the authority he possesses and his superior physical strength, a teacher can readily compel his pupils to sit motionless at their seats. They may not study, but they can be forced to remain still. Under such rule quiet will reign supreme. All disorderly conduct, all mischievous tricks, as well as all childish mirth and thoughtless noise, may be banished from the school-room. The deadening influence can be made to reach the playground, and all the exuberance of youthful spirit can be crushed out.

The school committees and school boards of the past, and a few who are not yet buried, have been accustomed to consider ability to keep order in a school as the highest qualification of a teacher. Such as these want a man who can govern a school, master its rough elements, whether he can teach it or not. Their ideal schoolmaster is one who possesses strength and courage, a kind of Hercules. Of that moral power which masters with a look, a shake of the head, or a word of admonition, whose very presence commands obedience, they have no conception. But in fact, to keep a school in order is the lightest of the teacher's tasks. A government of force is easily administered. A policeman with his club ought to be able to keep ten thousand children not only quiet but trembling; a teacher with a rod and ruler certainly should have no difficulty with fifty.

Still, it must be acknowledged that a discipline of force is the time-sanctioned method of governing a school. The school in all ages, whenever and wherever described, reveals to us the rod, the ferule, the ruler, the strap, and other like implements for punishing refractory children. No historic records reach back beyond the time when some form of bodily torture was not resorted to in school to preserve order. The use of the rod was common in the schools of Greece and Rome, and the wise Solomon thought it essential to the right bringing up of children in Judea. An old schoolmaster in Swabia, in a service of fifty-three years, according to his own faithful statement, administered 911,600 canings, 121,000 floggings, 209,000 custodies, 10,200 ear-boxes, 22,700 tasks, 136 tips with the rule, 700 boys to stand on peas, 6,000 to kneel on sharp edged wood, 5,000 to wear the fool's cap, 1,700 to hold the rod—in all, 1,282,036 cases of punishment. "Many a white and tender hand," says a writer in the *Spectator*, speaking of the Eton School, England, "which a fond mother had passionately kissed a thousand and a thousand times, have I seen whipped until it was covered with blood; perhaps for smiling or for going a yard and a half out of the gate, or for writing an o for an a or an a for an o." In this country, whippings and other forms of corporal punishment have been in use almost universally as a means of school

government; and even now we hear of cases in which a teacher finds it necessary to use the rod or ruler ten or twenty times a day.

Upon an investigation made recently by a school board in one of our most enlightened States, it was found that a teacher in their employ was accustomed to whip his pupils for the following offences, as well as for those of a graver character: whispering, looking off the book, mis-spelling words, not standing in line, not folding arms, making faces, shuffling feet, and throwing paper balls.

It may as well be plainly said that this whole system of corporal punishment and bodily torture as it has been applied in the school-room is for the most part unnecessary, arbitrary, and demoralizing. Order can be secured by its means, but too often at the sacrifice of all that is best and noblest in the nature of a child. It marks a stage of darkness and barbarism in the art of bringing up children out of which we should have long since emerged. And yet the young must be taught to obey—their welfare, their success in life, the well-being of society, depend upon it. A school can not be suffered to run riot. Order, obedience, respect for authority, are lessons much needed by the American people, and must be taught at all hazards in the family and in the school. If to "spare the rod" is to "spoil the child," the rod should not be spared. Better a government of barbarism than no government at all. But to the true teacher no such sad alternative is presented. He may hold in reserve a certain degree of force, but he seldom finds occasion to use it. His school is orderly, his pupils obey him, but it is through love, not fear. He finds the worst that is in the boys yields more readily to the softening influences of kindness than to the hardening influences of punishment. The discipline of force may be necessary to teachers who are less skilful or who move on a lower plane, but to him it seems ill-adapted to its purpose, and often brutalizing in its effect.

2. *The discipline of tact.* That is a discipline of tact which preserves order in a school-room and promotes a healthy moral growth among the pupils by nice management. In contrast with the kind of discipline just spoken of, it substitutes strategy for force. A tidy school-room is a constant monitor. Order in arrangement of the furniture teaches in a most impressive way the lesson of order to the pupils. A world of school-room trouble may be avoided by nice management in seating the children, in calling out and dismissing classes, in opening and closing school, in hearing recitations, in giving help, and assigning lessons. Plenty of work, right in quality and quantity, is a panacea for a multitude of school-room ills. The pent-up mischief of a school may be easily converted into the innocent sports of the play-ground. Strict impartiality in his administration, on the part of the teacher, a well balanced sense of justice, skill in his work, willingness to do his duty, and love for children, will in themselves render scoldings and whippings almost unnecessary. If in addition the teacher have that keen insight into human nature which enables him to see the coming evil in embryo before it breaks forth and to guard against it; if he have that rare skill which can discover and direct, when likely to go wrong, the currents of feeling that ebb and flow in the school-room and constitute its life, he will want little else to make him a happy monarch on a peaceful throne.

But a few examples of the tact which avoids the causes that render so many school-rooms scenes of disorder and hard feeling will serve to illustrate and impress the subject. Two girls sit together in a school and are great friends. But their tongues are set loose, and they cannot resist the temptation to talk, and sometimes they talk loud. The teacher cautions them without effect. Shall he punish them? Thousands of children have been punished for a less offence. Better far to separate them until they amend their ways. A reading class is accustomed to read by turns from head to foot. Shrewdly counting the paragraphs ahead, and marking the place where they must begin reading, the boys at one end of the class talk and play tricks, while those at the other end are engaged in reading. I have seen a whole class punished for this kind of mischief. But how easily the evil is corrected by changing the method and calling upon each one promiscuously. The remedy will prove magical in its effects if the teacher is sure to call upon the first boy whose eyes leave the book. A stubborn girl one day, when told to go to the blackboard and solve a problem, refused outright to do so. She had been accustomed to work her arithmetic on her slate at her seat, and was determined not to conform to this new method of recitation. A teacher without tact would have used force, committed a blunder, made an enemy. But her teacher, knowing her disposition, simply proceeded with the recitation as if nothing had happened and allowed her to keep her seat unnoticed. As the teacher well knew, she could not bear to be left alone—to be

ignored, and by the time the next lesson was to be recited she was ready not only to go to the blackboard with the other members of the class, but to apologize to the teacher for her improper conduct.

At a certain academy in Pennsylvania, on Hallowe'en, a wagon belonging to the school was laboriously taken to pieces by some mischievous students, carried to the roof of the building, and after being reconstructed was left astride the apex. Next morning, as may well be supposed, the wagon was the talk of the school and the neighborhood. Hundreds gazed up at the unusual object, and wondered how it could have been got up and how it could be brought down. A convulsion was expected at the morning opening exercises, but the principal looked even more good-natured than usual and said nothing. But with that insight into character for which he was famous he quietly watched the actions of the students during the day, and by evening when the school again assembled he was confident he could name the parties who had taken the most prominent part in the trick that had created so much astonishment. So he said in a pleasant way that some ingenious persons had placed his wagon on top of the house, and as he wanted to use it he would like to have help in getting it down. He was sure any of those present would lend a hand. But as a special committee, he would appoint A. B., C. D., E. F., G. H., I. J., naming those who he knew had been most active in the work of the night before. A laugh rippled over the hall, followed by a cheer that nearly shook the building. The principal had a knowing look, but said nothing further. The boys named took of their coats and mounted the roof, and the wagon was soon in its old place under the shed without a break, and all was peace. How admirable the management! How effective the cure!

The principal of a boarding school in the State of Maryland was an adept in raising and fattening pigs, as well as training boys. One season he happened to have an exceedingly large and fine pig which he fed himself, and in looking at and admiring which he spent considerable time. On one of those occasions when the very air seems to breed mischief, the idea came into the heads of certain fun-loving boys among the students to dig a hole in the neighboring field and place the pig in it. How the thing was managed no one has told, but when morning came the pen was empty, and some hundred yards away there was a hole in the ground five or six feet deep, with the professor's favorite pig, dazed as much as a pig can be, at the bottom of it. The whole school visited and revisited the spot during the day, and the wonder continued to grow as to what would be done in the case. When all were assembled in the evening, the professor remarked without the least show of anger that one of his pigs in whose physical growth and intellectual improvement he had taken considerable interest, had been placed by some envious or less-gifted persons at the bottom of a hole in a field near by, as most of them were aware, and he supposed the best thing to do, although he was sorry to do it, was to bury him there. He had therefore provided some shovels and would ask some of the strongest boys to assist him in the work. The shovels were soon in the hands that had handled them before, and the whole school with some outside spectators was quickly drawn to the spot to witness the curious ceremony. The dirt was thrown in rapidly, and still more rapidly; but to the astonishment of most of the lookers-on, the pig readily shook it off and trampled it under his feet. The hole was soon half filled, but the pig was still erect and seemingly without any notion of being buried. In went the dirt faster and faster, but up went the pig with it until his white, fat back began to appear above the surface of the ground, when the whole crowd, beginning to see the joke, broke into laughter and cheers, until the happy porker with a satisfied grunt stepped out on solid ground and marched triumphantly towards his customary sty, where the professor with face wreathed in smiles was already awaiting him with his evening meal.

Between the ordinary treatment of such cases and fine strategy like this, there is as great a contrast as there is between the rude pictures of a comic almanac and the divine creations of a Raphael or an Angelo. Even if the incidents mentioned did not happen just as related, they serve to illustrate the kind of school management which flanks difficulties that are too formidable to be attacked in front, which turns evil to good, which makes one principle of human nature serve as a checkmate to another, which governs by a finer, higher, more effective power than force—tact.

3. *The discipline of consequences.* As in the moral government of the universe, punishment follows wrong-doing as a consequence, so the same principle may be applied in the government of the school. This is what is meant by the discipline of consequences. Without attempting to exhaust the subject or to define its exact limitations,

it may be said that God's system of discipline as administered through the laws of nature provides, on one side, that punishment invariably follows wrong-doing, that different degrees of wrong-doing are punished in proportion to their magnitude, that different kinds of wrong-doing have different kinds of punishment, and that all punishment is connected with wrong-doing as effect to cause; and, on the other side, that reward invariably follows right-doing, that different degrees of right-doing are rewarded in proportion to their merit, that different kinds of right-doing have different kinds of reward, and that reward is connected with right-doing as effect to cause.

It certainly cannot be necessary to enter into a lengthy argument to prove the general truth of these propositions. Here at least only brief mention can be made of the ground on which they rest.

We all know that we cannot do wrong without suffering punishment, and if we do right we will receive our reward. Some circumstances in our experience might lead us to question this conclusion, were it not that our reason tells us that a broader experience must verify it. Otherwise, the moral universe would be a chaos and God himself would be unthroned.

If wrong-doing and right-doing are a matter of degrees, the principles of eternal justice require that punishments and rewards should be graded accordingly. Even human laws and human justice recognize and apply this principle.

A man morally bad may be physically strong, healthy, rich or prosperous. A pious missionary on his way to introduce Christianity into heathen lands may embark in a leaky ship and be buried in the sea, while pirates in a staunch one incur no danger. The young, the beautiful, the promising sometimes suffer and die, while many who become a curse to society are allowed to live on prospering in their evil ways. The plague does not stop to spare the good man's house that lies in its dreadful path. And yet God is just, much that seems unjust being accounted for by the independent operation of the different kinds of natural laws. Physical laws have their own rewards and punishments; so have moral laws. The former can be obeyed, and the latter can be violated, or the reverse.

All natural punishments and all natural rewards are the effects of causes to which they are linked by chains of adamant. When a physical law is broken the penalty must be paid; obedience to such a law is sure to meet with its reward. If a man eat too much, he will get dyspepsia; if he indulge too freely in strong drink, he will die a drunkard; if he holds his hand to the fire, it will burn; if he jumps from a house-top, he may break a limb or lose his life. In the case of broken moral law the consequences are different, but not less certain. The liar, the slanderer, the hypocrite, the thief, the murderer, in addition to the penalty they are apt to pay to violated human law, carry in their own bosoms the bitter sting that avenges their wrong-doing, or, if too callous to feel it, that hardness is in itself the most terrible of punishments. The prodigal wastes his substance, and must live on husks; the sluggard will not work, and "in harvest has nothing;" the miser gloats over his gold until his soul shrivels up, and the hardened sinner converts his very heart to stone, and dies worse than a brute.

In principle, Nature's discipline of consequences may be introduced into the school-room. Bad conduct may be punished and good conduct rewarded after the manner of what occurs under the Divine order in the world about us. It would be easy at least to substitute for the arbitrary punishments that have disgraced school government in all ages, a system that would go far towards meting out to each offence a natural punishment properly adjusted to it in kind and degree. What is to be thought of the moral effect of that kind of school discipline which whips a child or assigns him some disagreeable task for breaking a pane of glass, upsetting an inkstand, or coming late to school? Is the ruler or rod the proper punishment for a child who loses his book, misses his lesson, talks too loud, or pushes a school-fellow off the end of a bench? Did you ever know an instance in which by any form of bodily torture a lazy boy was made industrious, a quarrelsome boy peaceable, a mean boy honorable, or a mischievous boy quiet and orderly? The time has come for such a reform in school discipline as will free it from its arbitrary, illogical character and make it better accord with a sense of justice.

(Concluded in next issue).

Frank H. Cushing, of Zuñi Indian fame, has three Indians with him at his home in Massachusetts, assisting him in preparing a grammar and dictionary of the Zuñi language. Another subject for the schools!—*Journal of Education*.

Examination Papers.

EDUCATION DEPARTMENT, ONTARIO.—MID-SUMMER EXAMINATIONS, 1886.

THIRD CLASS TEACHERS.

ALGEBRA.

Examiner—J. C. GLASHAN.

1. Divide $\frac{x^3 + \frac{a^2}{x^2} - 2}{\frac{a^2}{x^2} + \frac{x}{x^2} - 2}$ by $\frac{a}{x} - \frac{x}{a}$. —(Value 10).

2. Simplify $\frac{1}{4(x-1)} - \frac{1}{4(x+1)} + \frac{1}{(x-1)^2(x+1)}$. (Value 10).

3. Simplify $\left(\frac{x+y}{x-y} - \frac{x-y}{x+y}\right) \div \left(\frac{x^2+y^2}{x^2-y^2} - \frac{x^2-y^2}{x^2+y^2}\right)$. (Value 10).

4. Prove that $\frac{a+b}{ab} \left(\frac{1}{a} - \frac{1}{b}\right) - \frac{b+c}{bc} \left(\frac{1}{c} - \frac{1}{b}\right) - \frac{c+a}{ca} \left(\frac{1}{c} + \frac{1}{a}\right)$ is the difference of two squares. (Value 10).

5. Resolve into linear factors $(a^2+bc+ca+ab)(b^2+ca+ab+bc)(c^2+ab+bc+ca)$. (Value 10).

6. Resolve into three factors $(x+y)^2(x^2+z^2) - (x+z)^2(x^2+y^2)$. (Value 10).

7. Show that there is only one value of x that will make $x^3 + 6x^2c + 8xc^2 + 10c^3$ equal to the cube of $x+2c$, and find that value. (Value 10).

8. Solve the equation $\frac{x-1}{x-2} - \frac{x-2}{x-3} - \frac{x-5}{x-6} - \frac{x-6}{x-7}$.

9. Solve the simultaneous equations $\frac{2x-y}{1} = \frac{2y-z}{2} = \frac{2z-u}{4} = \frac{2u-x}{8} = 15$. (Value 10).

10. Find a number less than 100 the sum of whose digits is 12, and whose digits, if reversed, form a number which is greater by 6 than half the original number.

DICTATION

Examiner—CORNELIUS DONOVAN, M.A.

Note for the Presiding Examiner—This paper is not to be seen by the candidates. It is to be read to them three times—first, at the ordinary rate of reading, they simply paying attention, to catch the drift of the passage; second, slowly, the candidates writing; third, for review.

Maximum, 50 marks.

Of his intellectual character, the constituent and fundamental principle was good sense; a prompt and intuitive perception of consonance and propriety. He saw immediately, of his own conceptions, what was to be chosen, and what to be rejected. But good sense alone is a sedate and quiescent quality which manages its possessions well, but does not increase them, and never gains supremacy. He had likewise genius; a mind active, ambitious and adventurous, always investigating, always aspiring, always endeavoring more than it can do. These benefits of nature he improved by incessant and unwearied diligence; he had recourse to every source of intelligence, and lost no opportunity of information. He read his compositions to his friends, and was never content with mediocrity when excellence could be attained. His method, as may be collected from his translation, was to write his first thoughts in his first words, and gradually to amplify, decorate, rectify and refine them. By perpetual practice, language had, in his mind, a systematic arrangement. He examined lines and words with minute and punctilious observation, and retouched every part with indefatigable

diligence. He was never elevated to negligence, nor wearied by impatience; he never passed a fault unamended by indifference, nor quitted it in despair.

PHYSICS.

Examiner—J. C. GLASHAN.

1. What are the chief distinctive properties of a solid, a liquid, and a gas?

"There is not the slightest difference in weight between a given quantity of water and the ice, or the steam, into which it may be converted." How could you prove this in any particular case, i.e. how could you weigh steam? (Value 15).

2. "When anything is weighed in water it will suffer a loss of weight exactly equal to the weight of its own bulk of water." Describe experiments putting to proof the truth of this statement.

"What will happen if the substance be lighter, bulk for bulk, than water?"

What practical applications are made of the fact which you have just stated? (Value 18).

3. By what experiments could you show that air in motion possesses energy?

What practical applications are made of this fact? (Value 12).

4. "The phenomena of heat are the effects of a rapid motion of the particles of matter." Give some reasons for so believing. (Value 15).

5. Describe how thermometers are filled and graduated.

A long vertical lead pipe, closed at the lower end, is nearly filled with water. Boiling water is placed on the outside of the pipe, almost immediately the water inside the pipe begins to sink. Why does it do so? After a time (the boiling water still pouring on) the water begins to rise in the pipe. Why does it do so? (Value 20).

6. "You have now learned what the electric current can do." State briefly what it can do and mention some practical applications of each of these powers. (Value 20).

LATIN GRAMMAR AND COMPOSITION.

Examiner—J. E. HODGSON, M.A.

1. (a) State the rules for the grammatical gender of nouns of declensions II. and IV. (Value 2).

(b) Give the gender and the genitive, singular and plural, of: *equus, exersitus,uber, fortis, funis, impetus, jus, litus, lis, nutus*. (Value 10).

2. Mention any peculiarities in the declension of: *—filius, filia, locus, plus, nihil, ullus*. (Value 6).

3. Give the other degrees of comparison of: *—saepe, repente, prope, posteris, plus, exiguus*. (Value 6).

4. Give the principal parts of: *—occido, occurro, nolo, negligo, meto, moror, levo, nascor*. (Value 8).

5. Analyze the following words, and account for their meaning therefrom: *—affligo, biduum, coerco, comineatus, coram, debeo, dimitto, dimico, incolumis, ingens*. (Value 10).

6. Decline the following combinations: *—fortis servus, tota urbs, omnis injuria, bina castra*. (Value 4).

7. Translate into Latin:—

(a) The bravery of our troops was worthy of praise. (Value 3).

(b) Return to Rome, my son, within eighteen days. (Value 4).

(c) Some were standing on shore, whilst others were rushing into the water. (Value 4).

(d) Cicero was again created consul during my absence. (Value 4).

(e) The city was captured by the Gauls and burnt. (Value 4).

(f) On the same day the ambassadors whom the enemy had sent to Caesar regarding peace, arrived at the camp and assured the distinguished Roman general that their countrymen would perform his orders. (Value 10).

(g) In the consulship of Lucius Domitius and Appius Claudius, Caesar set out from winter-quarters for Italy, as had been his yearly custom, and ordered the lieutenants whom he had placed in command of the legions, to see to the building and equipping of as many new ships as possible during the winter. (Value 15).

(h) When Caesar had proceeded a little further, he perceived that his men were being hard-pressed by the enemy, who had occupied a superior position, and were hurling weapons from all directions. (Value 10).

Practical.

'EDUCATION vs. SCHOOL ROUTINE.

If there is anything the teacher should pray to be delivered from, it is the confounding of education with school routine. Not as bad as this is the confounding of scholarship with mental development—but that too is bad. But routinism not only does not effect education, it actually hinders it. The teacher must wage a constant battle with what many consider the end. Hawthorne describes the railroad to Heaven very charmingly; he tells about the stations, the engineers, and all that. The only trouble was that they could not get a depot in Heaven, and so it was not certain the passengers ever arrived there. It was all good except this one point. Routinism makes a gathering of pupils beautiful to the eye; there are books, recitations, and all that, but it is by no means certain that the pupils are educated.

We visited a routine teachers' school once. We found her a little late that morning. She entered in haste in a few minutes, threw off her hat and called, "First class in reading, take your seats." Then seeing there was a visitor, paused, and gave him a rather ungracious welcome. We begged her to go right on and she did. The impression left on our mind was the same as when a company of soldiers is drilled. It was no new thing. The teacher had made the same remarks before and probably a good many times. "You read too fast," or "You read too slow," or "You didn't read loud enough." "Spell distance, benefit, cordial, etc." And finally ended up with, "Take the next six verses, you are excused." And the other exercises were of the same nature.

It seemed to us that the teacher had not prepared for meeting her class; it was an old story—it was simply hearing recitations. Now a teacher who comes to school feeling that a routine of things is to be gone through with before she is free, is all wrong. She belongs to those pupils soul and body for a certain period of the day, and the rest of the time she must prepare for that meeting, that encounter; she may put the exercises that she will have into a fixed form—this is not routinism. It is not the routine that educates, it is the teacher. She must generate power, train habits, and cultivate tastes. But routinism does not do this, it prevents it. —N. Y. School Journal.

MARKS FOR CORRECTING EXERCISES.

X	(through a word or figure) to indicate bad spelling or inaccurate work.
Δ	to indicate the omission of a word, a statement, or an example.
—X	" that a wrong word or expression is used.
—	" a fault in grammar.
()	" words wrongly arranged.
I I	" a fault in punctuation.
—	(surrounding a word) to mark that as correction the declension, or principal parts and tense of the word, must be written out.
W	(in the margin) means that facts are mis-stated.
A	" means that the pupil is to ask for an explanation in class.
R	" means that rule or explanation is to be written by the pupil.
	" indicates a fault in composition or method, and that the passage or problem be re-written.
L	(at end of an exercise) means that the pupil is to look at last corrections and correct again. —N. Y. School Journal.

PRONUNCIATION OF "U."

The Brooklyn Magazine says that "ninety-nine out of every hundred Northerners will say institoot for institute, dooty, for duty—a perfect rhyme to the word beauty. They will call new and news, noo and noos—and so on through the dozens and hundreds of similar words. Not a dictionary in the English language authorizes this. In student and stupid, the "u" has the same sound as in cupid, and should not be pronounced stoo-dent and stoop-id, as so many teachers are in the habit of sounding them. It is a vulgarism to call a door a doah—as we all admit—isn't it as much a vulgarism to call a newspaper a noospaper? One vulgarism is Northern and the other Southern, that's the only difference.

When the London *Punch* wishes to burlesque the pronunciation of servants, it makes them call the duke the dook, the tutor the tootor, and a tubo a tooh. You never find the best Northern speakers, such as James Russell Lowell, George William Curtis, Robert C. Winthrop, Dr. Phillips Brooks, and men of that class saying noo for new. Toosday for Tuesday, avonoo for avenue, or calling a dupe a doop. It is a fault that a Southerner never falls into. He has slips enough of another kind, but he doesn't slip on the long "u."

A CHAPTER OF "DON'TS."

N. Y. School Journal.

Don't expect, when you receive a new class, to correct all the faults at once. Make a list of the more glaring, and attack one at a time, patiently and perseveringly.

Don't fail to enter the class-room each morning with a pleasant face, even if home cares are troubling; the aching heart must not be manifest in the school-room.

Don't neglect to enter into a pupil's enjoyment. Laugh whenever you can, even if the order of the school-room be somewhat interrupted at times. A teacher who laughs more than she scolds is apt to have a greater hold upon her pupils.

Don't raise your voice when incited to rebuke. A reproof is just as effective in a low tone, while a control of the voice induces a control of the temper.

Don't dismiss a pupil with the echo of a just received scolding in his ears. Detain him, if possible, till something pleasant has been said.

Don't call a pupil "stupid" if he does not understand your explanations. Want of attention should always be censured, but not want of comprehension. Throw a different light upon the subject, or allow other lessons to intervene, and then resume the clearing up of the obscurity.

Don't discourage a poor penman, by obliging him to recopy his work continually. Find out his prominent faults—which will be, probably, improper spacing, want of uniformity in small letters, a neglect to bring letters to the line, etc., etc. Request him to copy his work with reference to some one of these particulars. Often the other faults will be corrected by reason of the care given to one.

Don't keep a class "ciphering" for hours. (N. B.—Ciphering means making nothings). Some teachers think that scores of examples must cover every exigency. Often it is better to forego slate exercises, substituting reading and reasoning examples from the text-book.

Don't give examples yourself, as an invariable rule. Give class the terms involved, and ask members to frame examples. It is surprising to note the difficulty they find in doing so.

Don't give rules in grammar to be memorized until pupils can furnish illustrations involving the rule. Then don't require rules, for it will not be needful.

Don't give examples of false syntax, continually—better not at all. A pupil should learn that "I seen it" is wrong in the same manner that he learns it is wrong to speak crossly, or profanely—long before any rules or reasons are given.

Don't give long lists of lengths of rivers, populations of cities, etc., to be committed to memory. Confine yourself to requiring an enumeration of a very few of the more important. It is of greater consequence to know what has caused a city to be populous than to know its population.

Don't lay any stress upon dates of battles, except the very decisive ones. Give special attention to the cause and effect of the engagement, controlling and parallel events in other countries, and biographies of leading men.

Don't allow the reading class to take its seat until it has extracted the "thought from the written page." Mere word-calling can be as effectively accomplished from the columns of the spelling-book.

Don't think that good spellers can be made by conning words in columns of spelling-book. The examination papers and compositions will show how many words in ordinary use are misspelled, yet such words are not commonly found in the text-book. Again, how many of the words in the speller are not encountered, even in an extensive course of reading? Still less frequently do they occur in ordinary conversation and writing.

Don't adopt the method of any and every teacher, as an infallible rule. Even the good methods presented in the JOURNAL need modifying and adopting to suit the condition of the class, or the individuality of the pupil.

E. G. B., Brooklyn,

For Friday Afternoon.

FOR DECLAMATION.

'Tis the part of a coward to brood
O'er the past that is withered and dead;
What though the heart's roses are ashes and dust?
What though the heart's music be fled?
Still shine the grand heavens o'erhead,
When the voice of an angel thrills clear on the soul,
"Gird about thee thine armor, press on to the goal!"

If the faults or the crimes of thy youth
Are a burden too heavy to bear,
What hope can rebloom on the desolate waste
Of a jealous and craven despair?
Down, down with the fetters of fear!
In the strength of thy valor and manhood arise,
With the faith that illumines and the will that defies.

"Too late!" through God's infinite world,
From His throne to life's nethermost fires—
"Too late!" is a phantom that flies at the dawn
Of the soul that repents and aspires.
If pure thou hast made thy desires,
There's no height the strong wings of immortals may gain
Which in striving to reach thou shalt strive for in vain.

Then up to the contest with fate,
Unbound by the past which is dead!
What though the heart's roses are ashes and dust?
What though the heart's music be fled?
Still shine the fair heavens o'erhead;
And sublime as the angel who rules in the sun
Beams the promise of peace when the conflict is won!

—By the late Paul H. Hayne.

TRUE HEROISM.

A STORY FOR REPRODUCTION BY PUPILS.

There are heroes among the pupils. Here is an instance among many that might be written:

Two boys were in a school-room alone together, and exploded some fireworks contrary to the master's express prohibition. The one boy denied it. The other, Ben Christie, would neither admit nor deny it, and was severely flogged for his obstinacy. When the boys got alone again—

"Why didn't you deny it?" asked the real offender.

"Because there were only we two, and one of us must have lied," said Ben.

"Then why not say I did it?"

"Because you said you didn't, and I would spare the liar."

The boy's heart melted. Ben's moral gallantry subdued him. When school re-assembled the young culprit marched up to the master's desk, and said:

"Please, sir, I can't bear to be a liar—I let off the squibs." And he burst into tears.

The master's eyes glistened on the self-accuser, and the undeserved punishment he had inflicted on the other boy smote his conscience. Before the whole school, hand in hand with the culprit, as if he and the other boy were joined in the confession, the master walked up to where young Christie sat, and said, aloud:

"Ben, Ben, lad—he and I beg your pardon. We are both to blame."

The school was hushed and still, as other schools are apt to be when something true and noble is being done—so still that they might have heard Ben's big boy-tears dropping on his book, as he sat enjoying the moral triumph which subdued himself as well as all the rest. And when, from want of something else to say, he gently cried, "Master forever!" the loud shout of the scholars filled the old man's eyes with something behind his spectacles which made him wipe them before he sat down again.

Educational Notes and News.

To lie to a child is to plant a weed in a garden of flowers.

In Bengal there were in 1880, 20 colleges with about 2000 students.

The Seaforth High School building will be enlarged and otherwise improved.

The great thing to be minded in education is, what habits you settle.—*Locke*.

The Dutton High School building will shortly be completed and the school formally opened.

The Stratford Art School Board have secured the services of Miss J. Donovan, of Toronto, as assistant teacher.

The total number of lady students attending McGill University, Montreal, at the present session is sixty-six.

J. D. McKay, hitherto a student at the Elora High School, has been appointed principal of the Markham Public Schools.

There were seventy-one applicants for the position of headmaster of Kendall Grammar School, recently vacant, in England.

In 1879-80, 1291 candidates passed the examinations at the University of Calcutta, 1495 at Madras, and 659 at Bombay.

The Imperial University of Japan, at Tokio, comprises five colleges, representing the departments of law, medicine, engineering, literature, and science.

The Seaforth High School building will be enlarged and otherwise improved, a by-law to loan the Board \$5,500 having been recently approved by the ratepayers.

The average wages of female teachers in Virginia (hundreds of whom are colored) are \$26.88 per month, against only \$16.28 for white women in the schools of Maine.—*New York Post*.

There were in India, in 1880, about 70,000 government and private schools, giving instruction to nearly 200,000 pupils. The expenditure on government schools was upwards of \$8,000,000.

The Elgin County Teachers' Association is to hold its 26th semi-annual meeting in the Collegiate Institute, at St. Thomas, on the 19th and 20th inst. A good programme of exercises is published.

At the request of the East Kent teachers, Mr. Dearness, of London, attended their convention in Ridgeway, and addressed a public meeting in the Presbyterian Church on educational subjects.

Charleston lost its best school-house in the earthquake. The Craft school was built two years ago at a cost of \$20,000, and was wrecked, it appears, solely on account of the material used in its construction.

The Industrial Institute and College of Mississippi is said to be the first institution under State auspices in the Union where girls can work their way through college and acquire joint education of head, heart, and hand.

In arithmetic, one boy thought twice 5 made 11, because we carried one for every ten. Another wondered how if twice 11 are 22, twice 10 could be 20, too. Another who was reproved for being so slow in multiplication replied that Carlyle said fools multiplied rapidly.—*Teachers' Telephone*.

The corner stone of the additional building to the Woodstock College, was laid October 29th, by Mrs. McMaster, of Toronto, wife of Senator McMaster. After the laying of the stone an excellent lecture on "Culture" was delivered by Rev. Dr. McArthur, of Calvary Baptist Church, New York.

The attendance at the Toronto free night schools is as follows:—Parliament, males, 147; females, 51. Bathurst, males, 138; females, 35. Niagara, males, 89; females, 25. Elizabeth, males, 70; females, 21. Bolton avenue, males 67; females, 34. Jesse Ketchum, males, 65. Mabel, males, 20. Total, males, 596; females, 166.

We are pleased to hear that John R. Sinclair, one of this year's graduates of our Collegiate Institute has won the First Year Proficiency Scholarship given by the Senate of Knox College to University students who purpose studying for the Presbyterian ministry after graduating at the University. The value of the scholarship is \$60.

That is a poor recitation in which every pupil does not recite while each pupil recites. No explanation should go on by any pupil in which every fellow does not share as a co-partner. The teacher

will manage to this end. At any moment, the pupil reciting should be open to criticism, and liable to interruption by the teacher, who may take the answer out of the very mouth of that pupil, and ask it of any member of the class. Every member of the class should be just as much interested in the pupil reciting as is every member of a base ball nine interested in the man at the bat. True management of any recitation will make it just as exciting, and just as much fun as a base ball game can possibly be.—*Normal Exponent*.

Teacher to little pupil:

"Where are you going, Nellie?"

"Papa is going to take us to Florida again."

"Can you tell what the Capital of Florida is?"

"Yea'm. It's the money they get from boarders."

Out of about one thousand students who presented themselves for examination from the Liverpool centres in connection with the Science and Art examination of South Kensington, upwards of two hundred were women. Two young ladies passed in magnetism and electricity, twelve in inorganic chemistry, and two in agriculture. One lady, who passed the elementary examination last year in machine construction and drawing, was again successful in a more advanced stage of the same subject.

Little Stuart has spent his first day at school.

"What did you learn?" was his auntie's question.

"Didn't learn anything."

"Well, what did you do?"

"Didn't do anything. There was a woman wanted to know how to spell 'cat' and I told her."

A member of the Stratford Collegiate Institute Board last week addressed a circular to parents, asking their views on the efficiency of the teaching staff and soliciting suggestions as to any changes that would in their opinion seem desirable. A list of suggestive questions is appended for the parent to answer. This move is probably a new departure in the history of Canadian school boards, and bears on the face of it the stamp of a primitive simplicity.—*Stratford Beacon*.

The Board of Trustees of London, Ont., have imposed a fee of \$40 per annum upon pupils living outside the city limits. This virtually debar the inhabitants of East Middlesex from High School privileges. The question now is whether the inhabitants of this riding shall establish a High School for themselves, or accept a proposition which is under discussion to pay their share towards the maintenance of the London Institute, on condition that their children shall be admitted at the same rates as those of the residents in the city.

From a hygienic point of view, corporal punishment is not to be encouraged. When a teacher "thrashes" a pupil, he or she is generally in anger, and from this very reason, is not able to accurately gauge the amount of force that is meted out. A sharp blow on the ear has caused incurable deafness, and it has more than once occurred that a boy or girl has been ruined for life by corporal punishment inflicted at school. We are pleased to see that this method of correction is deprecated in the last report of the Massachusetts School Board, wherein it is stated that "a teacher who finds it necessary to use corporal punishment to any appreciable extent, gives evidence of a want of ability to control."—*Annals of Hygiene*.

The Bursar of University College has received from a liberal donor, who withholds his name, the handsome gift of \$2,000 to found a scholarship, the interest of which is to be annually awarded for the special encouragement of the study of the Natural Sciences, and as such to be given to a student in actual attendance at the College who shall manifest the greatest ability in the diligent pursuit of that department of knowledge. The donor further adds:—"It is also my wish that this scholarship shall bear the name of the 'Daniel Wilson' scholarship, and so be associated with the name of one whose example will furnish an honorable incentive to the young men of Canada to follow his steps."

The *American Journal of Education*, St. Louis, is making a strong fight for longer terms of schools and better wages for teachers. It demands of the States nine months of school each year, and that the minimum salary paid to teachers be \$50 per month. The former demand is based on the argument that a tax necessary for the support of the schools for that length of time would be less than that required for the support of paupers, criminals, inebriates, etc., due to ignorance. The increase of teachers' salary is asked in the belief that it would call to the school-room more competent and efficient instructors, elevate the standard of the profession, and

enhance the results desired to be obtained by popular education. The zeal with which the Journal engages in this work is commendable.—*Chicago Current*.

Mr. B. N. Davis, B.A., Queen's University, has resigned the Headmastership of Trenton High School, and is going to study law. Mr. D. C. Little, B.A. Toronto University, formerly Classical Master, has received the appointment to the Headmastership.

When the father will, he can be a splendid teacher for his child; when the mother will, she can make the sewing room or the kitchen eloquent with those memories of lessons learned, and of problems tried, which every scholar knows all about and keeps as his dearest treasure; when father and mother both will, they can uphold the hands of the teacher, and the three, working together, will make an irresistible power to leave the world better and purer after they have dropped out of the struggle.—*Pennsylvania School Journal*.

Mark Blanford, of the Georgia Supreme Court, has a son who was recently engaged in a stupendous task to master Greek. One night the young man was poring over his lesson, perplexed and in dire distress. In the room was a negro boy, whose business around the place was to curry and feed the horses, black boots, and do similar work. The negro listened for quite a while to the wails of the young student and then said:

"Marse Bob, I can read that for you."

"You," exclaimed the young man. "You're a fool; this is Greek."

"Can't help it," replied the negro, "I can read it."

The book was handed to him and the negro read right along. When he had finished Judge Blanford said:

"Where in the mischief did you learn to read Greek?"

"At the Atlanta University," quietly responded the negro.—*Atlanta Constitution*.

Correspondence.

WHAT'S IN A TRILLION?

In teaching notation and numeration to our pupils we often make use of the terms *trillion*, *billion*, etc. Do we give them a proper conception of the enormous numbers implied by these terms? Have teachers, generally, even a fair idea of what these terms mean? Let us look at a trillion—the English billion—in the concrete! A trillion seconds! Five times the number elapsing since Creation, accepting the chronology of the Bible as we understand it! A trillion cents! One on top of another, they make a pile nearly a million miles high; as a necklace, they would encircle the earth about 625 times; cast into a pyramid, they would make a monument 140 yards square and higher than the spire of St. James' Cathedral, Toronto; in parallel rows, they would extend over 249 square miles, leaving little curvilinear quadrangles aggregating 53 square miles; to lift them would require every man, woman and child on the American continent. A trillion bricks would build 800 such pyramids as the Sphinx. A trillion words! Had 20 Woman Suffrage orators started at the English Reformation to utter that many, they could have exhausted every word in the human languages and would not finish the job till the time we expect the world to acknowledge our ability—more than a century hence. I am quite satisfied that one teacher with whom I was speaking had not an adequate conception of the term *trillion*, for she said the generosity of her trustees was a "trillion" times less noticeable than the bashfulness of a book-agent—an allusion to my one time occupation, no doubt. Noticing my incredulous look, she flung at me the well-known aphorism from *Buileau* *Le vrai n'est pas toujours le vraisemblable*: Truth oft lacks verisimilitude.

Tuscorora, Brant Co.

J. H. CLARY.

Question Drawer.

Questions relating to matters of fact are answered by the editor. All others are left, as a rule, for correspondents.

QUESTIONS.

In 1881 I took a professional Second B. Can I obtain Second A without further professional training?

SUBSCRIBER.

(a) What is meant by "word picture" as used in the first question in Literature (Coleridge) in the late Third Class Examination?

(b) What sum of money must be divided among A, B and C so that A may have \$1.44; C, \$1.25, and that B may have as much per cent. more than A as C has more than B?

(c) Paid three sums of money in succession, each of which took $\frac{1}{4}$ of the money I had before paying it less 50 cents, after which I had \$33 $\frac{1}{2}$ left. How much had I at first?

QUAKER.

(a) Name the five great maritime powers in the world, giving names in order.

(b) What metals are found in Cornwall, England? How do these metals appear in nature?

A SUBSCRIBER.

Will some one of your numerous readers send for publication in the CANADA SCHOOL JOURNAL a "Time Table" for a school of four classes (viz., 1, 2, 3, 4). Third and fourth being senior departments, and first and second junior departments.

WILL KING.

(a) The fore wheel of a waggon is 10 $\frac{1}{2}$ ft. in circumference, and turns 440 times more than the hind wheel, which is 11 $\frac{1}{2}$ ft. in circumference; find the distance travelled over in feet.

(b) What is the population of the following places. Toronto, Montreal, Quebec, Hamilton, Kingston, London (Eng.) and India?

S. POOL.

1 Divide the fraction $\frac{17}{18}$ into two such parts that 4 times one of them added to 5 $\frac{1}{2}$ times the other may make 1 $\frac{1}{2}$.

2. A, B, C and D together do a work for which A, by himself, would require 2 hours less than B. A and B together could do it in $\frac{8}{11}$ of the time C and D together would take. A and C in $\frac{2}{3}$ of the time B and D would take, and B and C $\frac{5}{6}$ of the time A and D would take. Find the time each person, singly, would require to do the work. (*From CANADA SCHOOL JOURNAL, Nov. 5th, 1885.*)

3.

Now, man to man, and steel to steel,
A Chieftain's vengeance thou shalt feel.

What kind of a phrase is "man to man," and how would you parse the first "man"?

4. How did Scott prepare himself for writing "The Lady of the Lake," and wherein does his selection of subjects for his literary works differ from that of other authors?

SUBSCRIBER.

ANSWERS.

SUBSCRIBER.—Yes, by passing non-professional examination.

A SUBSCRIBER.—(a) The answer depends upon what is taken as the basis of maritime power. According to the number of armored steamers, the order is Great Britain, France, Turkey, Russia, United States. Reckoning ships of all classes, Great Britain, France, Russia, Sweden and Norway, United States. Reckoning by number of men, Great Britain, France, Russia, Turkey, Italy. Reckoning by annual expenditure, Great Britain, France, Russia, United States, Germany. These arrangements are based upon the statistics for 1880, the last we have at hand.

(b) Copper and tin are the most important, but lead, iron, silver, cobalt and antimony are also found. Copper and tin are found in veins, varying in thickness from 30 feet to less than a quarter of an inch, running through the granite and sandstone. Tin is also found in the gravel, and veins of lead, silver, etc., in the sandstone.

S. POOL.—(b) Toronto, in round numbers, 100,000; Montreal, 150,000; Quebec, 62,000; Hamilton, 36,000; Kingston, 14,000; London (Eng.) This depends upon what is meant by London, i. e., how many of the surrounding villages and parishes are included in it. There is no definite boundary. But within the limits adopted in the last census, which includes the area under the operation of the "Metropolis Local Government Act," the population in 1881 was 3,816,483. India, in round numbers, 254,000,000.

Answer to John Ireland's problem in No. 20, SCHOOL JOURNAL: The quantity is— $1\frac{1}{2}$.

Literary Chit-Chat.

Science announces that hereafter it will devote a supplement every fourth week to education, pedagogics, and the bibliography of education.

Mrs. Burnett's charming story, "Little Lord Fauntleroy," which has been running in *St. Nicholas*, is published in book form by Messrs. Charles Scribner & Sons.

"The Wisdom of Edmund Burke" is to be the title of a forthcoming volume, containing selections from Burke's writings on political questions. The editor is E. A. Parkhurst.

Miss Rosa Cleveland will, it is said, retire from the editorship of *Literary Life*. Ill health is assigned as the cause, but disagreement with the publisher is also understood to have occurred.

Holman Hunt, the great English artist, has a beautiful home at Fulham, in which he passes only a part of his time. The counter attraction consists of a house and studio which he has built just outside of Jerusalem.

Those who have read Miss Alcott's "Little Men" will be anxious to know something of the after history of those charming little fellows. In "Jo's Boys and How They Turned Out," the authoress gives the information.

George Alfred Townsend dictates, it is said, almost every line of his work to a stenographer. So does Joseph Howard, jr. George Augustus Sala writes with a fine pen and makes manuscript so small and close that it is read with difficulty. Sala works in the morning and sometimes well along toward the middle of the afternoon.

St. Nicholas for November is the first number of a new volume. It is quite up to the usual mark, which is a good deal to say. There is Miss Alcott's charming little story, "The Blind Lark;" some of Hugo's Tales to his grandchildren, the opening chapter of a serial by Frances Courtenay Baylor; "The Brown's in the Gymnasium," by Palmer Cox; another "Historic Girl," by E. S. Brooks; "Doll's Lullaby," by Helen Gray Carr, and other good things too numerous to mention, with the usual complement of fine illustrations.

The *Youth's Companion* celebrates this year its sixtieth anniversary. Its contributors are the most noted writers of this country and of Europe. Among them are W. D. Howells, J. T. Trowbridge, Prof. Huxley, the Duke of Argyll, the Marquis of Lorne and Princess Louise, Archdeacon Farrar, C. A. Stephens, Admiral David Porter, Lieut. Schwatka, and many others. We do not wonder that the *Companion*, with such contributors, has nearly 400,000 subscribers. It costs but \$1.75 a year, and a subscription sent now is credited to January, 1888.

Teachers' Associations.

WEST LANITON TEACHERS' ASSOCIATION.—The regular half-yearly meeting of this Association was held in Sarnia, on Thursday and Friday, 21st and 22nd ult. There was a large attendance of teachers and citizens of the town, and considerable interest was displayed in the subjects discussed, especially in that of the Kindergarten. Music by a class of teachers in training, under the leadership of Mr. W. McAlpine, also added much to the success of the convention. After routine business, Mr. J. Robinson explained how he would teach Greatest Common Measure and Least Common Multiple by factoring. He would begin by showing the class how to find the prime factors of numbers, and then to select from these factors the ones which give the G. C. M. and L. C. M. A discussion followed, in which Messrs. Grant, Howell, and Brebner took part. Dr. Logic, being called upon, read an essay on "Hygiene in the School-room." The necessity for care in the selection of a school site, also the proper ventilation, heating, etc., of buildings was dwelt upon, after which the trouble which gives rise to diseases of the eye were explained, and the proper way to avoid these was pointed out.

In the afternoon, Mr. J. J. Matthews gave his views on "Arithmetic to Third Class." The various parts of that subject which he would take up with this class were indicated, and methods of teaching then explained. In all parts of the work he would give questions of as practical a character as possible. Mr. D. D. Moshier next explained his manner of giving and correcting lessons in Dictation. The time devoted to the lesson and also the amount of it was referred to, after which a number of questions were asked and explanations given. After a recess of ten minutes, Mr. Brebner gave his views on the College of Preceptors, pointing out what he considered the good and the bad points in the scheme. Considerable discussion followed, Messrs. Grant and Bucke taking a favorable view of the scheme, and Messrs. Evans, Howell, and Moshier opposing it. Finally it was decided to postpone the discussion till after Mr. Boyle was heard regarding the Ontario Educational Society.

There was a large attendance in the evening to listen to Dr. Thompson's lecture on "How the Worlds were Built, or, God's Wonders in Creation." The lecture, which was specially prepared by Dr. Thompson for the occasion, was one of the best with which the Association has yet been favored. A short address was also given by Mr. Tibb, and several selections of excellent music by the choir.

On Friday, Mr. Brebner explained the different scales of Notation. He then indicated various points in the decimal scale where mistakes sometimes occur in teaching this branch of arithmetic. Mrs. Newcomb was then called upon to explain the Kindergarten system of education. She began by explaining the methods adopted in these schools to awaken and develop the faculties of the children, illustrating her remarks with reference to "gifts" which are used to amuse and instruct the child in color, form, etc. All of these exercises are accompanied with songs by the children. Miss K. Cameron, of Petrolia, showed her method of conducting a Reading Lesson, having a second class present. The lesson selected was taken from the Second Reader, entitled "Cotton." After explaining the lesson by showing the class the cotton in the raw, and also in the manufactured state, she proceeded with the reading, in which both teacher and class acquitted themselves well. Mr. David Boyle, of Toronto, gave an address on the Ontario Educational Society, showing the aims and objects of the society.

In the afternoon, Mr. Grant criticised the scheme unfavorably. Mr. Phillips followed, taking a favorable view of the principle of such societies. Mr. Boyle made some explanations on points objected to by teachers present. Mr. Brebner addressed the meeting on some of the difficulties in connection with the working of the society, but taking a favorable view of it in other respects. The discussion was adjourned. Mrs. Newcomb delivered an interesting lecture on the theory of the Kindergarten system. She also explained the methods adopted in conducting the classes. Mrs. Newcomb stated that in the Kindergarten at Hamilton three hours each day was the length of time children were required to attend. Mr. J. J. Bell took up "English Literature," his object being to show how he would teach it to a class. He exemplified his method by asking questions regarding various points in the extract which he had selected, a number of teachers having consented to act as pupils for the occasion. After a short discussion on the Ontario Educational Society, it was resolved to drop the subject for the present, and the Association adjourned at 4 p.m. The next meeting of the Association is to be held in Petrolia.

THE WEST BRUCE TEACHERS' ASSOCIATION.—The autumn meeting was held in the Model School here on Thursday and Friday, 23rd and 29th ult. The meeting opened with the usual exercises, and the reading and confirming of the minutes of the spring meeting.

The president, N. D. McKinnon, of Underwood, presided at all the sessions. A reading, "Nobody's Child," by Thomas W. Powell, was well received.

English grammar in Public Schools was discussed by Dr. McLellan. We have two parties taking opposite views, the one regarding grammar as useless, the other analysis as the only thing necessary. The teacher should carefully guard against these extremes. Such writers as Grant White and Colonel Parker do much harm. The study of grammar alone is not sufficient; language must also be studied. Words must be studied in company with their fellows in sentences. Analysis also has a place, as the sentence and thoughts in it can be fully understood only by the mind mentally dividing the sentence into its several elements.

The president reported for the delegation to the P. T. Association. The College of Preceptors, he said, was the matter that attracted most attention, though many other interesting matters were discussed. Mayor Howland's address on the necessity for industrial education, also President S. McAllister's address on the improvement introduced into educational matters through the influence of the P. T. Association, were, he said, both interesting and instructive.

A song, "Nelson," was sung in good style by Professor Jones, and was greeted with loud applause.

Mr. Freer, B.A., read a paper on English Literature. Ancient and modern plans of teaching were contrasted. Defects in ancient methods and improvements in modern were well indicated. Extracts and selections should be first understood as a whole. Parts should be committed to memory and recited. The spirit of the author should be imbibed and the leading thoughts traced and their relation pointed out. The force of words, their meanings and derivations, should be learned. Portions of the selections should be paraphrased orally and in writing. Nice distinctions should be noticed and similar constructions selected or given from memory. Thoughts well expressed should receive attention; the language and arrangement should be closely examined. Brevity, terseness, diffuseness, and similar qualities should be discovered and fully discussed. The committing of selections to memory would strengthen the memory, improve the language, supply thoughts and images, and refine the soul. The careful study of the selections would give freedom and choice in the use of language, a taste for literature and a means of culture and refinement supplied only by the study of literature.

Mr. Powell endorsed fully the ideas developed so clearly in Mr. Freer's paper. We should be proud of the English language and master it. The paper read breathed the right spirit.

Dr. McLellan emphasized in strong language the methods advocated in Mr. Freer's paper, and especially the necessity of cultivating the memory in youth. The English, he said, is the strongest language spoken, may be made as musical as the French or Italian, and possesses the best literature in the world.

A reading, "Maiden Martyr of Scotland," was well rendered by Miss E. M. Thomson.

Alexander McLeod opened the discussion on Teachers' Union. He strongly condemned the underbidding and undermining practised by some teachers.

Mr. McClung considered teachers should do something to protect themselves against unprincipled men in and out of the profession, and should also aim at rendering situations more permanent and information respecting them more easily obtained. Positions are, he said, often secured and kept through political, religious, or social influences. Salaries are not always in proportion to work done.

S. D. Bradley had no faith in unions. Teachers were themselves to blame for losing situations. Some teachers were now paid more than they deserved. Good teachers were usually well treated.

Mr. Cameron considered Mr. McClung rather extreme in his remarks. Teachers usually held positions as long as they wanted them. Everything will be satisfactory when the people are properly educated.

Mr. Smith would like to hear from the young teachers; they were most interested in the matter.

Mr. Powell regretted that teachers are not always true to themselves and one another, but was afraid union would fail in making teachers honorable who are not so by nature. He also thought union would be of little avail in securing increase of salary. He had still some faith in the law of supply and demand. Mr. H. A. Stewart could not see that much could be done by forming a union. Underbidding could not be punished, nor could salaries be forced up except by natural causes. The Association adjourned at 5 p.m.

In the evening Dr. McLellan lectured in the A. O. F. hall to a fair-sized audience on "Influence of Education in National Life."

On Friday, Mr. R. Strothers read an essay on the late Dr. Ryerson. The salient points of the essay were the doctor's early education and difficulties with his father respecting religious matters; his management of the *Christian Guardian* his sympathy for the teachers; his comprehensive grasp of our educational system; and the liberal treatment he received from the Provincial Government during his declining years. The secretary read a circular showing that only \$4425.00 has yet been contributed to the Ryerson memorial fund, and that at least \$3000 more would be required. The Association authorized the secretary to receive all contributions toward the fund and forward them to the M. F. committee. All interested should send in their contributions as soon as possible. The object is a worthy one and appeals to the purest and loftiest instincts of our nature.

On the question of the proposed College of Preceptors, Mr. Powell said he had given the matter some attention, but did not fully comprehend it in all its bearings. The changes proposed were unquestionably radical in many respects. Principal Dickson's scheme was, however, only an outline and could be modified. He gave a short account of the history of the movement and dwelt upon the leading feature of the scheme, paying special attention to the advantages teachers would derive from the formation of the proposed college.

Mr. Freer favored the movement. Teachers should have more direct control of educational matters than they at present possessed. They wanted unity of action, increase of professional spirit and independence. Education should if possible be placed outside the influence of politics. Men of experience and independence should direct and control the examination of teachers.

Dr. McLellan considered the proposed changes too sweeping. They asked the government to surrender some of its most important functions. A college of preceptors would do much to improve the teachers' position and for the cause of education. But teachers must be contented with moderate concessions on the part of the Government.

Mr. McClung believed the move was in the right direction, and, though difficulties existed, urged upon the Association to declare in favor of the proposed college.

Mr. Powell moved, seconded by Mr. Freer, "That in the opinion of the teachers of West Bruce in convention assembled, it is desirable, for the purpose of promoting sound learning, and of advancing the cause of education, that a college of preceptors be established, based upon the principles and embracing the main features of the scheme outlined by Principal Dickson at the last annual meeting of the O. T.'s Association in Toronto."

The resolution was passed almost without opposition. Only two votes were cast against it.

Professor Jones sang: "Our Homes," and was tendered the thanks of the Association. He responded and sang, "Good-bye." The professor's singing was a very pleasing feature of the whole programme.

Miss Powell's pupils gave a short exhibition in drill and calisthenics. They acquitted themselves well and performed the exercises with military precision, although the eldest could not have been more than eight years of age.

S. D. Bradley gave an essay on "Home." The influences of home and its Associations were clearly indicated by well chosen illustrations. The mother's advice, the father's counsel, the sister's sympathy and the brother's encouragement, each received due attention and was made to play a part in the formation of character, and in the future destiny of the individual and the race.—Condensed from Report by F. C. Powell.

Literary Reviews.

LIGHT ON THE MYSTERIES OF NATURE AND THE BIBLE, in the form of **LETTERS TO OUR CHILDREN**. By J. A. Cunningham. Volume I. (Cincinnati: Standard Publishing Company, 1886.)

These letters, the author informs us, were written specially for the benefit of his own children in the course of twelve years during which his business kept him most of the time from home, but were also intended for the guidance, good, and government of all children. The letters are well conceived, excellent in spirit, and full of instruction. The language in which some of the scientific portions are couched seems to us rather beyond the range of the ordinary vocabulary of children, but this is, perhaps, unavoidable from the nature of the subject; and there is much that is within the comprehension of all, and can scarcely fail to interest all.

ARITHMETIC. By Charles Penderbury, M.A., F.R.A.S., Senior Mathematical Master of St. Paul's School, formerly Scholar of St. John's College, Cambridge; author of "Lenses and Systems of Lenses, Treated after the Manner of Gauss." (Cambridge: Deighton, Bell & Co. London: G. Bell & Sons.)

This is a work of 460 pp., in which the author treats with such fulness as his limits allow "so much of the science of Arithmetic as is needful for school use and for the Civil Service and other examinations. The book follows mainly the English order and methods. Proportion and percentages are treated by the unitary method. Everything like an arbitrary rule is avoided. The examples of all kinds are very numerous, there being nearly 8,000 in all.

HAND-BOOK OF ZOOLOGY: With examples from Canadian Species, Recent and Fossil. By Sir J. William Dawson, LL.D., F.R.S., etc. Third Edition, Revised and Enlarged. (Dawson Brothers, Publishers, Montreal, 1886.)

The object of this manual, as explained by the distinguished author, is to furnish to students, collectors, and summer tourists in Canada, an outline of the classification of the Animal Kingdom, with examples taken, as far as possible, from species found in this country. Fossil animals are included as well as those which are recent, because many types not represented in our existing fauna, occur as fossils in our rock formations; and because one important use of the teaching of Zoology, is that it may be made subsidiary to geological research.

Directions for collecting and preparing specimens are appended. This work in the previous editions is, no doubt, too well known to make special reference to its merits necessary, even did not the high reputation of its author afford an ample guarantee of its excellence. The present edition is beautifully printed, the illustrations are numerous and first-class in character, and the flexible binding is substantial and extremely neat.

FIRST STEPS IN SCIENTIFIC KNOWLEDGE. Complete in seven Parts:—1, Animals; 2, Plants; 3, Stones and Rocks; 4, Physics; 5, Chemistry; 6, Animal Physiology; 7, Vegetable Physiology. By Paul Best, Member of the Institute and ex-Minister of Public Instruction of France. Translation by Madame Paul Best. Revised and corrected by Wm. H. Greene, M.D., Professor of Chemistry in the Philadelphia Central High School (J. B. Lippincott Company, Philadelphia.)

The above transcript of the title-page is sufficient introduction to this valuable little work. The name of the author is sufficient guarantee for its scientific authority, the arrangement of its parts for the comprehensiveness of its plan. When we add that the style is simple and clear, and admirably adapted to the comprehension of the child of ordinary intelligence, and that illustrations abound on almost every page, we have said about all that needs to be said to convince our readers of the excellence of the book. We could wish a copy were in the hands of every child above the age of ten in the Public Schools. One should be on the table of every family where the parents desire their children to acquire a love of knowledge and to become intelligent members of society. Half a million copies were, we are told, sold in France within three years after its first appearance, and the second edition of the translation followed the first almost immediately in England. In the edition now before us the Natural History has been slightly enlarged by the introduction of several American species, omitted in the original and in the English edition, and a few inaccuracies concerning other species met with in the United States have been corrected.

STORIES OF GREEK HEROES BY NIEBUHR. Arranged as a First Reading Book, with Notes and Vocabulary, by A. R. Lechner, Senior Master of Modern Languages, Modern School, Bedford.

FRENCH POETRY FOR SCHOOLS. Edited by James Boileau, B.A. (Univ. Gall.) Senior French Master in Dulwich College and Examiner in French to the Intermediate Education Board, etc.

TRIPERTITA. (Second Series.) A course of easy Latin exercises for Preparatory Schools. Arranged to suit the threefold division of the year. By Frederick T. Holden, M.A., late of Emmanuel College, Cambridge Assistant Master at Cargilfield Preparatory School, Edinburgh.

The above little works, each of them neat and attractive in form and admirably adapted for their respective uses in preparatory classes, come to us from the prolific press of Rivington's, Waterloo Place, London.

HOW TO STRENGTHEN THE MEMORY; or, Natural and Scientific Methods of Never Forgetting. By M. L. Holbrook, M.D., Editor of "The Herald of Health," author of "Hygiene of the Brain," "Eating for Strength," "Fruit and Bread, etc." (New York: M. Holbrook & Co.)

This seems to be really a very suggestive and useful little book. It does not contain, as one might fear, one of the complicated systems of artificial mnemonics, but a series of simple and natural methods. They are all easy and adapted to every class of readers. Many of them have, no doubt, suggested themselves to most students, but even such will gain an additional advantage from having the principles stated in clear and simple language and with methodical arrangement.