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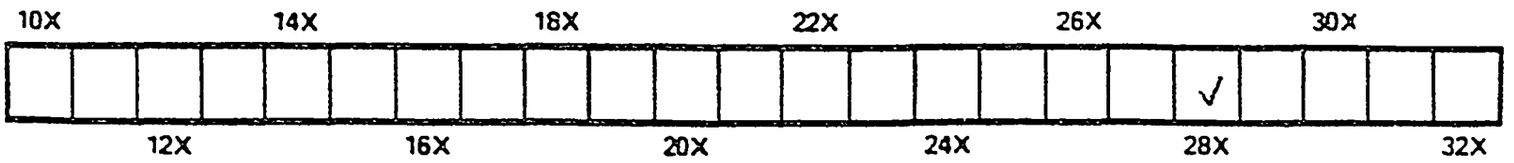

The Canada School Journal.

AND WEEKLY REVIEW.

VOL. X. TORONTO, AUG. 27, 1885. No 30.

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The Canada School Journal and Weekly Review.

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

—o—TERMS.—o—

THE SUBSCRIPTION price for THE CANADA SCHOOL JOURNAL is $2.00 per annum, *strictly in advance.*

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CANADA SCHOOL JOURNAL PUB. CO. (Limited)

Publishers.

The School.

In order to make room for Mr. Glashan's interesting paper on Science in the Schools, the programme of subjects for next Entrance Examinations, the Elementary Chemistry Lesson, and other matter of special interest, we are obliged to leave over this week Educational News and Notes, Literary Review and Chit-chat, and the Question Drawer, as well as Editorial and Practical matter.

We shall publish next week the new departmental regulations respecting teachers' certificates and the course of study in High Schools and Collegiate Institutes. The crowded state of our columns does not leave room in this number.

In the JOURNAL of July 30th appeared a set of arithmetical problems by Ceisdan, as one of the series prepared for the prize competition, which should have been marked as intended for Fourth Class, not for Third Class, as we were made to say by some clerical or printer's error.

We have received the first number of the *Hasting's Observer*, an eight-page weekly paper whose publication has been commenced at Hastings, Ont., by Mr. H. Morton. The first number is decidedly creditable both in appearance and in quality of contents. We wish the enterprising editor and proprietor ample success.

CORRECTIONS.

We regret to find that by some oversight the list of successful candidates at the recent Teachers' Examinations was left unfinished in our last number. We had fully intended that the list should be complete in one issue. By another blunder Inspector Fotheringham's article on The Permanency of the Teaching Profession was separated from Mr. John Munro's in favour of placing the Entrance Examination at the end of the Fifth Class, and Mr. Houston's address on The Study of English. The names of the writers were also omitted from the two papers first-named and the note which was intended to introduce all the papers became by some means transposed so as to appear after instead of before Inspector Fotheringham's article. We are chagrined at these indications of apparent carelessness, as we have made special efforts to avoid as far as possible such *errata.*

We have also to apologize for the late appearance of the last number. The delay was mainly due to some breakage in the press room. We shall do our best to be accurate and on time every week in the future.

LESSONS IN ELEMENTARY CHEMISTRY.

At the request of many teachers we commence in this number the re-publication of a very valuable series of lessons on Elementary Chemistry. These lessons were originally given in Gage's School Examiner, and were exceedingly popular, insomuch that the edition was exhausted, and hundreds of orders for back numbers could not be filled. The series consists of ten lessons, which will appear in ten consecutive numbers of THE SCHOOL JOURNAL. These lessons are understood to cover the whole ground gone over at the Normal Schools, and no teacher who is now in attendance at those schools, or who expects to attend either of them in the future can afford to be without these copies of the JOURNAL, as these papers are accessible in no other way. They will also be found of great service by all teachers, without regard to prospective examinations. All who are not already subscribers would do well to send in their names without delay, so as to be certain of securing the whole set containing the lessons.

In our next issue will appear the first of a course of lessons in Drawing, which are being specially prepared for THE CANADA SCHOOL JOURNAL, by Mr. William Burns, Drawing Master in the Brampton High School. Mr. Burns is a graduate

of the famous Kensington Art School. This is a sufficient guarantee of his thorough knowledge of the subject, while his experience as a teacher in this country will have given him the requisite knowledge of the requirements of teachers in Ontario schools. This course of lessons will extend over about three months, and commencing with Elementar, principles, will carry the inexperienced teacher over the ground necessary to enable him to prepare pupils successfully for at least the High School Entrance Examinations next December. In addition to the gradual development of the subject in the simplest and most approved style, Mr. Burns will be glad to answer any questions by correspondents, and to give any explanations that may be needed, in order to help those to whom the study is new to understand the principles involved, or master practical difficulties as they may arise. We expect also to furnish subscribers to THE JOURNAL, from time to time, with valuable papers on the subject of Drawing by other well-known teachers.

UPPER CANADA COLLEGE.

The pointed and emphatic resolutions adopted by the High School Masters' section of the recent convention will, it may be hoped, have their legitimate weight with the Minister of Education, the Government and the Legislature. The statements made in the resolutions are not the outcome of professional prejudice, nor even mere matters of opinion, but hard, indisputable facts. They show beyond all controversy that whatever reasons may have existed in the past, before the development of our efficient High School system, for the maintenance of such a school at the public expense, those reasons exist no longer. It is therefore simply an inexcusable waste of the public funds to continue to lavish on one High School, with no valid claim to superiority in any respect, an income which is probably equal to that of many—we may show how many in a subsequent number—of the city and county Collegiate Institutes, and which is urgently needed for other purposes of higher education.

If no effective defense of the College was made in the course of the debate, it was simply because no such defense is possible. The few speakers who essayed to say something in favour of its continuance were certainly not wanting in ability, and, given a better case, would not have failed to produce some telling arguments.

The fact that Upper Canada College has always a goodly number of pupils in training, may and probably does prove the need of another High School or Collegiate Institute for the accommodation of the western part of the city. It certainly utterly fails to prove that the perpetuation of Upper Canada College, is not both an injustice to Ontario tax-payers and an anomaly in our public school system.

Much stress is often laid by the few supporters of the College, upon the need of such an institution as it is claimed to be, to impart a higher class social and moral training, and to perpetuate the influences and traditions of the Rugbies and Etons of the old country. From this point of view, we are told, Upper Canada College is a school not for the city but for the whole province, and the only one of the kind to which parents can send their children with confidence that their manners and morals will be cultivated as carefully as their intellects. In this respect it is claimed, this time-honoured institution, with its residence, affords great advantages and safeguards which are sadly wanting in connection with the High Schools, which make no provision for such residence and supervision.

The training and influences indicated are, we heartily concede, of the very highest importance. Every parent who has the true interests of his children at heart will regard them as the first and most important of all considerations. But for this very reason he will refuse to make the state—represented as in this case, by a partisan minister to whom, as a member of a cabinet, political considerations will generally outweigh most others, the guardian of his child's moral well-being. Most thoughtful parents regard moral and religious culture as indissolubly connected. They are convinced that religion is the only sure and safe basis of morality. But in this country religious instruction has long since been, happily, taken out of the hands of the State. The latter is forbidden to lay its profane hand upon any part of the sacred ark. This is as it should be. The State has nothing to do with the social, moral or religious training of the young. This is a business too high for it and no parent, who rightly realizes his obligations will entrust so solemn a duty to political hands. The parent who sends his child from home for his education is bound to see that he is placed under the best influences and restrictions attainable. Hence it is that colleges of residence, supported on the true voluntary principle, and managed by Christian men bound to place the pupils under the best moral and religious influences, are multiplying and will continue to multiply. Surely those parents, generally wealthy, who are in the habit of patronizing Upper Canada College, do not require exceptional treatment. If no voluntary institution exists in the country which meets their views and in which they have confidence, let them put their hands in their pockets and found one. They may thus confer a boon at the same time upon their children and their country.

If the defenders of Upper Canada College as a provincial institution upon the grounds indicated should be disposed to reiterate the argument, they might be met on other grounds. The question might be brought down to the level of hard fact. Does any reasonable man believe that the Education Department, in the recent appointment for instance, is guided solely, or even chiefly, by regard to this special feature of the character of the institution. The matter is a delicate one to touch, but we may surely, without offense or odious insinuation ask the general question. There are, it is well known, many amongst the prominent educators in Ontario, who are men of high purpose and proved moral power, men who have shown themselves capable of moulding youthful character, imparting lofty impulses and stimulating to high endeavours. To what extent has the Education Department in recent appointments, been guided by such considerations as that of proved moral power in the educator. We frankly put the question and leave it to be answered by those who think the continuance of Upper Canada College defensible upon the grounds indicated.

Special Articles.

A PLEA FOR SCIENCE IN THE SCHOOL.

J. C. GLASHAN.

MR. PRESIDENT, LADIES AND GENTLEMEN, Three hundred years ago this very month there was sorrow in the family of Vincenzo Galilei of Florence. Galileo, the eldest son, had retufned from the University of Pisa without having taken his degree. For four years the family had submitted to many privations in order that out of a scanty income enough might be spared to support Galileo while he studied medicine, but a time had at length come when no more could be done for the student, and he must either leave the university, or obtain the Grand Duke's nomination to one of the forty free scholarships which had been founded for poor students. The father had petitioned the Grand Duke to grant his son one of these foundations, and had been refused. Wherefore? The father, although poor, was a Florentine nobleman, and his son, who had been born in Pisa, had, although but twenty-one years of age, already won for himself a name as the possessor of brilliant and varied talents. These very talents were the cause of the refusal. At this time the study of natural science meant the study of the writings of the ancient philosophers, and chiefly of Aristotle. The state of affairs may best be described in Galileo's own words:—"People . . . think that philosophy is a kind of book like the Æneid or the Odyssey, and that the truth is to be sought, not in the universe, not in nature, but (I use their own words) *by comparing texts*. If there arose any question respecting natural phenomena, it was settled by an appeal to Aristotle, and if any fact contradictory of received opinions obtruded itself, it was *demolished* by *a priori* reasoning, even as after the discovery of Jupiter's satellites, "the first philosopher of the faculty at Pisa," again to quote Galileo, "tried, now with logical arguments, now with magical adjurations, to tear down and argue the new planets out of heaven." What then was the horror of these professors at the unheard of audacity of a young student who, refusing unconditional surrender of his intellect and unquestioning acceptance of the dicta of the Great Master, Aristotle, proposed that men should search out the truth for themselves! What was their indignation, rising later to uncontrollable wrath, when this "wrangler" demanded that in questions concerning the facts of nature, nature's self should be questioned! And, to Galileo, the first warning of their wrath was this refusal to grant him the boon of free instruction.

But the mighty work for which Galileo's genius had been bestowed on him was not thus to be stopped. Even as Luther, nearly sixty years before had appealed from Pope and cardinals to God's word, so Galileo appealed from Aristotle and the professors to God's works; and as the result of the first appeal has been an ever-increasing toleration of freedom of thought in religious matters, and a strengthening of the feeling of individual responsibility with a corresponding growth of Christian charity, the only true all-brother love, so the result of the second appeal has been a steady increase of liberty of opinion and action under the general restriction of not injuring others, and an enormous advance in the material prosperity and, as a consequence, in the civilization and morality of a large part of mankind. By sustaining Galileo's appeal, man has created science, and science has created the arts and manufactures that have changed the whole face of the earth and the conditions of existence. Science has increased almost beyond estimate the power of production, and by ever more and more throwing on machinery the heavier and more exhausting kinds of toil, it has lessened the severity of manual labor, and made the mechanic's life easier to him, and has left him more leisure and energy for self-culture. Steam and electricity are doing much to stamp out and obliterate old sectional and national prejudices by almost annihilating time and space, thus enabling populations to circulate freely and bringing men and nations closer together. By making emigration to the farthest lands a matter of a few weeks at most, by affording a ready means of rapid and certain intercourse between the most distant countries, by rendering easy the interchange of products between remotest regions, these daughters of science are rapidly peopling and civilizing the waste and barbarous places of the earth. They enable men to carry their knowledge and their skill to the market where it is most in demand; they save the life or soothe the suffering of the invalid by bearing him swiftly from rigorous skies, and they are making thousands happier and better by putting it in their power to see more of the grandeur and loveliness of earth.

But why speak of what science is doing for mankind in general, or for the vague and indefinite "other people!" Look around you and consider what science has done and is doing for each and all of you individually. Can any of you realize what your condition would have been had the state of affairs of three hundred years ago continued to the present time? Can you estimate the advance that has been made materially, mentally, and morally, since the time when the young Galileo had no other means of testing the isochronism of the vibration of Maestro Possenti's lamp, than by counting the beats of his pulse, since the time when the answer could be given in English borough—"Sir, according to the custom of this town, a man is of age when he knows how to reckon up to twelvepence, and he shall answer in a writ of right when he is of that age," since the time when the Italians could burn Giordano Bruno, the Swiss could burn Servetus, and the English, to go a little farther back, could burn Joan of Arc, and no man protest or even shudder at the horror?

Now, if the study of science has done so much, if science is the foundation of all natural progress in industry, in arts, in almost everything, if a nation's welfare and advancement depend upon its science, does it not behove us to ask ourselves what we as teachers are doing to foster a love of science and to further its study? To judge by our work, to judge by our programmes of instruction, the schoolroom might be said to be almost the only place into which science, true science, has not entered. Still, as in the days of Galileo, in the schoolroom, in the very place where the love of natural science should be strongest, is its influence least felt, and among teachers are to be found far too few of its cultivators. But here let me be clearly understood. I do not mean that in our schools, no instruction is given in the facts of science. Many of our reading-lessons, and most of our lessons on geography, are nothing else but descriptions of nature and of natural phenomena, and generalizations and reasonings based on these, but the study of these lessons is not science-teaching, and I wonder how it would even now fare in many a case with a pupil who should, like Galileo, appeal from the text-book to nature. By the proper teaching of science, I mean not merely instruction in the facts and principles of science and in the laws which govern natural phenomena, but also and chiefly discipline in the methods of science. Mere head-knowledge will do a man very little good, it is the habit of mind, the training in method that determines the character of a man. The facts and principles of science ought never to be presented to the young student in mere dogmatic fashion as acquired results. It is essential for his true progress that he shall feel the reality of the facts and generalizations he is dealing with; that he shall comprehend the mode in which these facts have been observed and disentangled, and in which the principles derived therefrom have been arrived at, the mode of reducing unorganized collections of observations to a systematic arrangement and presentation of them in a logical system exhibiting the mutual relations of the phenomena, that he shall be practised until thoroughly trained in all the processes of observing and thinking which are employed in the study of natural science, and that above all he shall be systematically exercised in methods of induction.

But, it may be answered, nature does all this without our aid. The very growth of the faculties of a child depends on exercise on the phenomena of nature. As soon as the child begins to see it is an observer, and as soon as it begins it move it is an experimenter; and the range of its experiments is continually extending, as the child grows and its mind develops. Each moment adds new experiences, new perceptions, and enlarges its knowledge of the world around it. Nature does this for all, but the work of the teacher is to supply what nature does not and cannot give—that communion with the master minds of our race which is to be got only by reading—only by the study of books. I freely acknowledge the importance of this study; I hold most strongly that the pursuit of science should never be divorced from literary culture, and that the crowning examples of scientific methods of study must be sought for in the writings of a Faraday, a Young, and a Newton, but I deny that nature does enough for the cultivation of the observing powers, or, unaided, teaches us to arrive at the truth respecting herself. In our journey through life thousands of objects impress themselves on our outward senses, that are never really observed by us. Nay, they may actually in some degree reach the inner sense, yet from ignorance, from carelessness, or from want of skill, we may never perceive these things as they really are, or as they would be seen by one whose observing powers had been duly

cultivated. And if a habit of observation be not inborn and active in us, will the discipline of literary culture engender it—will dogmatic teaching quicken it into life? No; rather will they foster in us a tendency to substitute reasoning for experiment in the study of nature, to reason from postulates based on ill-observed facts, to generalize from altogether insufficient data. This habit of mind was the very stumbling-block in the way of the ancient Greeks—this was the great obstacle to their progress in science. On every page which preserves the teachings of their philosophers we find physical phenomena taken as starting points, or used as illustrations of profound metaphysical doctrines; but a single misinterpretation of fact made a foundation for deduction, a simple sophistry applied to an observation often led to results which appear to us in the light of modern science most absurd, most monstrous, but which, because no one thought of submitting these results of *reasoning* to the test of experiment, were then accepted unhesitatingly, and as time passed on were held more and more firmly, until at length it required the genius of a Galileo to suspect that error lurked in them. And how much of error lies in all untrained observation has been well demonstrated by the experiments of Dr. Emile Yung, who found that in more than ninety per cent. of the persons he experimented on, expectation of any proposed sense-impression led to belief in its perception, and it is especially noteworthy that the subjects of his experiments whom he found to be accurate observers were, without exception, men trained in experimental science.

But even if facts are observed correctly, little progress will be made if the mind rests there. We must observe the phenomena under varied circumstances in order to be able to discover their relative importance, and the laws of that relation. The phenomenon which most forcibly strikes the notice of the untrained observer may not be that which is of chief importance, which the experienced student of Science would at once recognize as fundamental; and the ability to discriminate with accuracy and rapidity between the essential and the accidental is to be gained only by systematic and properly directed training. The scientific text-book is good in its place, but that place is at first only a secondary one. It is true that every science tends by a seemingly universal law to become more and more abstract; and, in proportion as it becomes exact, to become mathematical. But it is just as true that all the natural sciences began by observation or experiment, and whatever they may now have developed into, it is necessary in teaching them to go back to their beginnings, and to find a sure foundation for abstract notions in experience and observation. Empedocles was right when he declared that

"Wisdom increases to men according to what they experience."

And again was he right in a certain sense, though not in the sense in which he meant it, when he said—

"Surely by earth we perceive earth, and man knoweth water by water,
By air sees air the divine, by fire sees fire the destructive;
Yea, love comprehends love, and 'tis through strife dismal we know strife."

If the object of education is to help people to help themselves, to teach them how to learn, then we must not merely supply our pupils with the materials for thought, but we must show them how best to use these materials when collected, and how to penetrate from outward phenomena to the universal underlying laws. Let us do this—let us base our teaching on a groundwork of real knowledge, and the after progress of our pupils will rise upon a sure and a stable foundation. Then will science be accorded its rightful place, and scientific discoveries, fraught as they are with innumerable benefits to all God's creatures, will raise higher and higher the scale of civilization, and will hasten the coming of that golden age which poets dream of, as in the dim far distant past, but which assuredly lies in the certain future.

I believe the day is fast approaching when every teacher will recognize the need of a real and living knowledge of the world *in* which we live, and the laws of it *by* which we live, and will feel that to impart such a knowledge to his pupils is a sacred duty he owes to himself, to them, and to God. To God, for is it not a duty to Him who has placed us on this beautiful earth, and has given us powers to see, to understand, and to enjoy that earth—it is not a duty of reverence to use those powers to learn aright the lessons He has put before us?

But in all this scientific training of the intellect is there no place for the culture of the feelings and the imagination? is there no room for morality and religion? methinks I hear some one ask. There is room in abundance, there is ample scope for all these. Science is but a true and full knowledge of nature, and nature is all-embracing. We count a man truly educated in proportion to the dignity of his thoughts, the loftiness of his principles, the nobleness of his actions; and to cultivate such dignity, loftiness and nobility there are no other means equal to a study of nature, for it is no petty, quibbling knowledge that science offers us. To the student of receptive and imaginative mind I would say—Go learn of Dame Nature, and she will show you things more wonderful than the wildest fancies ever dreamed, nobler than the loftiest thoughts ever sung by poet of Hellas.

"To the solid ground
Of Nature trusts the mind which builds for aye."

To the student of morals I would say:

"One impulse from a vernal wood
May teach you more of man,
Of moral evil and of good,
Than all the sages can."

Too often the eye of the moralist can see but evil, but misery and pain; to him all is vanity, there is naught but a terrible struggle for existence. Not so.

"For pleasure is spread through the earth
In stray gifts, to be claimed by whoever shall find.
Thus a rich loving-kindness, redundantly kind,
Moves all nature to gladness and mirth.
The showers of the spring
Rouse the birds and they sing;
If the wind do but stir for his proper delight,
Each leaf, that and this, his neighbor will kiss;
Each wave, one and t'other, speeds after his brother,
They are happy, for that is their right."

It has been well said by a great master:—"The habit of seeing; the habit of knowing what we see; the habit of discerning differences and likenesses; the habit of classifying accordingly; the habit of searching for hypotheses which shall correct and explain those classified facts; the habit of verifying these hypotheses by applying them to fresh facts; the habit of throwing them away bravely if they will not fit; the habit of general patience, diligence, accuracy, reverence for facts for their own sake, and love of truth for its own sake; in one word, the habit of reverent and implicit obedience to the laws of nature, whatever they may be—these are not merely intellectual but also moral habits, which will stand men in practical good stead in every affair of life, and in every question, even the most awful, which may come before us as rational and social beings."

To him who seeks to purify and ennoble his religious thoughts and feelings, I would say—turn to nature, and learn something of the true majesty, might, and glory of Him who reveals himself in His universe, as well in its minuteness as in its unthinkable vastness.

To all men Nature freely gives the invitation she gave to Agassiz, when

"'Come wander with me,' she said
'Into regions yet untrod,
And read what is still unread
In the manuscript of God.'

And he wandered away and away
With Nature, the dear old nurse,
Who sang to him, night and day,
The rhymes of the universe.

And whenever the way seemed long,
Or his heart began to fail,
She would sing a more wonderful song,
Or tell a more marvellous tale."

And truly wonderful are some of those tales. When you look up at the stars to-night, bethink yourselves what and where they are. The light which is just arriving from them, how long ago did it leave them, and what does it now tell? This great earth so solid beneath our feet, seems to us vast indeed, and a heart-throb lasts not a long time, yet light travels so fast that it could six times girdle this mighty orb while your heart beats but once. The sun, apparently so small, is in truth so large, that were our earth stopped in its annual course and hurled against it the blow would cause not much more disturbance on the farther side than an earthquake

in Japan would cause here. How far away must the sun be! yet it takes light but little more than eight minutes to traverse that tremendous distance. What must be the speed of light? It can travel farther in one minute than the ball as it rushes from the cannon's mouth could go in a year and a half; yet it takes light three years and a half to come from the nearest of those stars, while there are others you can see whose light, arriving only now, left them more than a thousand years ago.

But stranger than all this are the tales light tells. You know that the telephone conveys to you not merely the words out also the tones of a speaker's voice, so, light, though only a rush of waves, each so short that a thousand of the longest of them one after another would not measure the thickness of a single sheet of the paper I hold in my hand, that light reveals to us what the stars are made of, and what state they are in. It tells us that the stars we see with the naked eye, and a thousand times as many that the telescope discovers to us, all belong to one system in which our sun is a small star, and there are other systems as far removed from each other as systems, as the stars are from each other as stars. Some of these systems, when, perhaps ten thousand years ago, the light which is only now arriving with its story left them, were mere whirling rings of gas; others were condensed like our own system into separate suns, each shrouded like our own sun in heavy clouds of metallic vapors; and still other systems had sunk to slow-swinging clusters of fast cooling solid stars.

But the story of light ends not here. Within our own system it tells of at least one cold, dark, dead world, the companion of the star Algol, and it has told us of stars that have burst forth in terrible conflagration, such that were the like to happen to our own sun, this solid earth would, almost in the twinkling of an eye, return to the vapor from which it came.

Light tells us also of strange worlds where there are two suns, one blood-red, the other deepest emerald. Strange indeed must be the changes beheld by the dweller on a planet of such a system, as it swings slowly to and fro, his world now glowing a fiery red anon all pale green, and then flaming yellow, under the scorching glare of two suns.

But not of the stars alone are Nature's marvellous stories. She will tell of wonderful things on the earth; of the whirling dance of atoms in every leaping flame; of the clash of the grappling molecules as they build and unbuild in secret the forms of all visible things; of the fairy chains that are woven by the power that sculptures crystals; of the marvels of the magnet that man has taught to speak; of the stroke of the hurtling thunderbolt; of the crash of the down-rushing avalanche; of the awful fires of the volcano; of the mighty throes of the earthquake.

She will tell how the solid rocks unfold the tale of ancient life, and how that same life under different forms still throbs and pulses everywhere, from the eternal snows on the highest mountain peaks and in the wastes of farthest Greenland; from the boiling springs of New Zealand and the alkaline lakes of La Plata, to the deepest depths of ocean, where dwell, amid darkness and eternal silence, those strange fish who never rise to within a mile of the surface, and to whom daylight means death.

She will tell how every stagnant pool and every slimy puddle is peopled by countless myriads of living creatures to whom a water-drop is a vast dominion, and a day a lifelong age.

She will tell how at the bottom of the ocean, unmoved by the fiercest blasts of the tempest, unswayed by the rush of the mightiest tidal wave, lies the oozy mother of all living things, slow pulsing to and fro with earth's procession, each mighty throb lasting 26,000 years!

ELEMENTARY CHEMISTRY.

It is much to be regretted that Elementary Chemistry is not more extensively taught in our Public Schools. There is no subject on the programme more useful, and certainly none half so interesting. The time required need not be more than an hour a week, say the last hour on Friday afternoon. Nor must it be supposed that even that hour would be lost to other studies, for the change of thought would act much like the rotation of crops in agriculture. The introduction of experimental chemistry would brighten up the school, and would impart greater intelligence for the acquisition of other kinds of knowledge. With regard to the method of teaching it, perhaps we cannot do better than give a brief series of lessons. Example is better than precept. We may say, however, that a recitation of mere facts, or descriptions of apparatus and experiments, is worthless. It must never be forgotten that chemistry is peculiarly an experimental science, and while the value of the facts obtained is great, yet its chief value depends on the facilities which it affords for cultivating the powers of observation, and for teaching the methods of experimental induction. It is not expected of the teacher to make chemists, but to teach his pupils to understand, or at least to appreciate the methods and inductive logic of physical science. The elementary facts of chemistry can be efficiently taught only by leading the pupil to observe for himself the phenomena in which they appear, and any attempt to learn them by rote from a text-book will not only fail in its immediate object, but miss the chief end of education. The apparatus required need not cost much. But the cost would be much in another way. To teach chemistry in this way would not demand a very extensive knowledge of the subject on the part of the teacher, but it demands the power of seeing for himself, and of making the pupils see for themselves. We have, however, every confidence on the part of teachers, that these difficulties will be overcome. The importance of the subject both from a practical and from an educational point of view will gradually lead to the means of its attainments.

Exp. 1. Take a piece of fine platinum wire about 5 inches long and weigh it carefully. Hold in the flame of the spirit-lamp and observe that it glows as long as held there. Remove it, and it resumes its original state. Weigh it and the weight is the same as before heating. The change from cold to red-hot, and from red-hot to cold again is only a *temporary* change. The metal is unchanged in form and substance.

Exp. 2. Take a piece of magnesium ribbon about 5 inches long and carefully weigh it. Observe that it resembles the platinum in many respects such as lustre, tenacity, &c. Hold it in the flame of the spirit-lamp till it begins to glow. Remove it, holding it at an angle of 45°, and over a piece of blackened paper to receive the product of the combustion. Observe that it emits much light, gives out white fumes, and leaves a white substance behind which is utterly unlike the metal which produced it. Now carefully weigh the white substance, and it will be found that it does not weigh the same as the original magnesium. In this case the metal has undergone a *permanent* change.

Physical and Chemical Changes. The temporary change in the platinum wire is not accompanied by any change in composition, and is called a *physical change*, and heat, the force that produced it is called a *physical* force, the permanent change in the magnesium wire which is accompanied by an entire change in its composition is called a *chemical* change, and the force which produced it is called a *chemical* force. The science of chemistry is almost entirely occupied with the nature and effects of this force. Its operations are spoken of as *chemical* action.

Chemical Action Produced by Various Agents. In the preceding experiment chemical action was brought about by heat. It is also produced by other physical forces such as Light and Electricity, of which examples will occur further on. But it is more usually brought about by chemical force, that peculiar force already spoken of, called also Chemical Affinity, Chemical Attraction, and Chemism. We shall usually speak of it as chemical affinity.

Characteristics of Chemical Affinity.

Exp. 3. Take two tumblers and hold them mouth downwards for a few seconds over a spirit-lamp until they become slightly warm. Into one put a few drops of ammonia, into the other a few drops of hydrochloric acid and shake well. Now bring the tumblers together mouth to mouth. Observe, that whereas the contents of both were colorless gases, both are now filled with white fumes, which settles on the sides of the tumblers in the form of a white powder. (1). Hence *under the influence of Chemical Affinity colorless gases may unite to form a solid.*

Exp. 4. Fill a test-tube, to the height of about two inches, with water, and add as much calcium chloride as the water will dissolve. The solution in the test-tube is now said to be *saturated.* Take the same quantity of dilute sulphuric acid (1 of acid to 4 of water), and add it all at once to the solution of calcium chloride. Shake gently, and a white solid is formed. (2). Hence *under the influence of Chemical Affinity liquids often become solids.*

Exp. 5. Rub together in a mortar a small quantity of alum and acetate of lead. The mixture becomes liquid. (3). Hence *under the influence of Chemical Affinity solids may become liquids.*

Exp. 6. Take a thin slice of phosphorus, taking care to cut it under water. Dry well with blotting paper and do not handle after drying. Place it on a plate and sprinkle a little iodine upon it. Cover with a wide-mouthed bottle. The two substances will com-

bine, much heat being given out. (4) Hence *under the influence of Chemical Affinity heat is generally evolved.*

Exp. 7. Take a tea-spoonful of finely powdered loaf sugar, and two teaspoonfuls of finely powdered potassium chlorate, and mix them well together. Form them into a little heap on a piece of card-board placed on a tumbler. Dip a glass rod in sulphuric acid and bring it near the powder. As long as there is a measurable distance between the acid and the powder no change will take place, now bring the acid into actual contact with the mixture and it at once inflame, leaving a black mass of carbon on the plate.

Exp. 8. Into a tumbler put a tea spoonful of baking soda, and the same quantity of finely powdered tartaric acid. However closely the solid particles are brought together by stirring or rubbing no action takes place. Now add water and effervescence immediately ensues, showing that chemical action is taking place, water added to the soda or acid *separately* does not cause any effervescence. The violent action observed on the addition of water to the mixed powders must, therefore, have been due to the mutual attraction of the two solids leading to chemical action: and this could only take place, when, by solution, the particles of each body were endued with greater mobility than in the solid state, and were thus enabled to get within the sphere of each other's attraction. (5). Hence we see that *Chemical Affinity acts only at inappreciable distances.*

(6). From the preceding experiments we see that *One of the most remarkable features of Chemical Affinity is the entire change of properties which it occasions in the substances dealt with—a change which no a priori reasoning could possibly predict.*

Thus, in the second experiment this is shown by the gain in weight; also by the fact that a new body has been produced, possessing characters which serve to distinguish it completely from the metal magnesium as well as from all other known substances.

Exp. 9. Fit a test-tube with a small flat cork, pierce in it two parallel slits with a penknife, and insert in one slit a slip of sheet zinc reaching nearly to the bottom of the tube, and in the other a slip of copper foil of the same length, taking care that they do not touch each other. Insert in each of the slips an end of a piece of fine copper wire about 2 feet in length, so that one wire shall be in contract with each piece of foil. Fill the tube with dilute sulphuric acid (1 part of acid to 12 of water), insert the cork so that the slips shall be in the acid. Such an arrangement is a simple form of a *galvanic cell.* After the zinc has been a few seconds in the acid remove it, put a drop of mercury on a plate and touch it gentle with zinc in three or four places, first on the one side then on the other, rub it with the finger till it is all covered with the mercury. The zinc is now said to be *amalgamated.* Place it again in the acid which now does not seem to affect it. Now join the free ends of the wires, taking care that they are quite bright, and observe that a gas rises from the copper. Bring both wires in contract with the tip of the tongue, and notice the sharp metallic taste. Rub a common darning needle with a magnet and suspend it horizontally by a fine silk thread, pass one wire above it and the other below, and join their ends. The needle is immediately deflected. This is the usual test for a galvanic current. (7). Hence see that *Chemical Action may give rise to a galvanic current.*

Evidences of Chemical Affinity. From the preceding experiments we see that the proof of chemical action taking place between bodies, when they are brought together, may consist in the occurrance of one or more of the following changes:—

1. *A change in the state of aggregation, consisting of a liquid into a solid, or vice versa.* This result is not, however, to be taken as evidence of chemical action, unless accompanied by other phenomena not produced by simply heating or cooling of the substances separately.
2. *A change of temperature, usually elevation.*
3. *The formation of a new substance possessing physical or chemical properties, or both, differing from those of the original substances.*
4. *The production of a galvanic current.*

Chemical Combination. In the preceding experiments we have seen that two substances brought together under certain conditions, unite to form a new substance differing entirely from the original ones. In the experiment of burning the magnesium ribbon, (exp. 2.) we saw that the white substance produced weighed *more* than the magnesium originally taken. Under the influence of heat the magnesium took to itself some other body which could only be derived from the air. The chemical action induced by heat was one of COMBINATION, or *the union of unlike kinds of matter producing a single new substance.*

Exp. 10. Accurately weigh enough mercuric oxide to cover the bottom of a clean, dry, not too thin test-tube, gently at first and then increase the temperature, taking care not to heat intensely any small spot of the tube, and loosely stopping its end with the thumb. Remove the thumb and quickly place inside the tube the glowing end of a splint of wood. It will burst into flame. If the heat be continued till all action is over, there remains in the tube nothing but pure mercury, which is found to weigh less than the mercuric oxide originally taken.

Chemical Decomposition. In the preceding experiment the chemical action brought about by heat resulted in DECOMPOSITION, *which consists in the separation, either partially or completely, of the constituents of a compound from one another.* In this case mercuric oxide has been *decomposed* into mercury and some other kind of matter seen to be driven off as a gas which is recognized by its property of kindling a glowing splint of wood. The gas is called OXYGEN.

Elements and Compounds. Since chemical action may result in either *combination* or *decomposition*, it follows that all substances in nature may be conveniently divided into two great classes:—

(*1*) *ELEMENTARY BODIES.* **Elements or simple substances are those out of which no other two or more essentially differing substances have been obtained.**

(*2*) *COMPOUND BODIES.* **Compounds are those bodies out of which two or more essentially differing substances have been obtained.**

Number of Elements. The researches of Chemists up to the present time have made known to us some sixty-four elements. Of these, or compounds of these with each other the whole mass of the globe, solid, liquid, and gaseous, is composed. And even comparatively few of them are found abundantly. The greater part of the Earth is made up of less than half a score of these elements, while several of the others are of such rare occurrence as to be of little interest except to chemists. It is important to guard carefully against the idea that the *elements* are *certainly* simple bodies. Chemists, at present, cannot prove them to be compounds, but it is not at all impossible that more powerful analysis may yet decompose them.

Teachers' Examintions.

EDUCATION DEPARTMENT ONTARIO, JULY EXAMINATIONS, 1885.

ARITHMETIC.

SECOND CLASS TEACHERS.

Examiner—J. J. TILLEY.

1. A man bought a house which cost him 4 per cent. on the outlay to put it in repair; it remained empty for a year, during which time he reckoned he was losing 5 per cent. on his total outlay. He then sold it for $1102, which paid for repairs and loss and also gave a profit of 10 per cent. on the cost price of the house. Find the cost price.

2. A railway train moving with uniform speed is met and passed in 5 seconds by an engine and tender 30⅔ feet long and running 30 miles an hour, the engine and tender return shortly afterwards and pass the train in 25 seconds after overtaking it. Find the length of the train.

3. A person invested $8420 in 8 per cent. stock on the 7th day of January at 109½, and on the 12th day of February of the same year sold it out at 117½, paying ¼ per cent, brokerage on each transaction. Find his gain per cent. on what the stock cost him—money being worth 8 per cent. per annum (360 days).

4. A merchant bought 3885 yds. of cloth and marked it at an advance of 33⅓ per cent. on cost; in selling the first half of it he gave only 35 inches for a yard, but in selling the remainder he gave 37 inches for a yard. He gained on the whole transaction $3897. What did the cloth cost him per yard?

5. I bought French goods for 7490 francs, and paid an import *ad valorem* duty of 15 per cent. I sold the goods for £420. Find my gain or loss in dollars and cents if the £=fr. 25 22=$4.87.

6. I invested in 7 per cent. stock at 78⅛, and having received a half-year's dividend I sold out at 79⅜, paying ⅛ per cent. brokerage

on each transaction, and increased my capital altogether by $292.50. How much did I invest?

7. In an election 15 per cent. of the constituency refused to vote; of two candidates, one received 45 per cent. of the votes in the constituency and was elected by a majority of 150; find the number of votes cast for each.

8. A person bought a quantity of goods for $224, payable in 2 months, and sold them at once for $274 payable in 4 months. Find the gain in ready money allowing trade discount at 6 per cent per annum.

9. A B, and C walk from P to Q, each at a uniform rate, A's rate being equal to $\frac{4}{5}$ of C's, and B's rate was 4 miles an hour. B started 45 minutes after A, and C started 27 minutes after B. They all arrived at Q at the same time. Find the distance from P to Q.

10. (i) A triangle, altitude 60 feet, is bisected by a line drawn parallel to the base. Find the perpendicular distance between the base and dividing line.

(ii) The areas of the several faces of a rectangular solid are 57, 27 and 19 square feet. Find its dimensions.

NOTE.—Eight questions will be considered a full paper, but the 5th and 10th must be taken.

GEOGRAPHY.

SECOND CLASS TEACHERS.

Examiner—JAS. F. WHITE.

1. Briefly explain:

(*a*) Why we have *four* seasons while there are but *two* within the trophics.

(*b*) Why some regions, like the Sahara, are rainless, while almost constant rains fall in other places, as Guiana.

(*c*) How the latitude of a place is determined.

2. Write a paper upon the various Territories of Canada, describing their position, extent, physical features, climate, resources, and settlement.

3. Sketch the southern coast of Europe, marking the adjacent islands, gulf or bays, straits, river mouths, and principal cities.

4. Name the British possessions in Africa, giving the position, products, and chief physical features of each.

5. "On the configuration of the coast-line depends much that relates to the climate as well as to the industry and commerce of a country." Show this dependence as fully as possible and illustrate by reference to different countries.

6. Choose *one* of the following countries and sketch its physical features; tell what races inhabit it, what languages are spoken, what its productions and industries are; and give an account of its political and social condition:—Egypt, Mexico, Germany, Brazil, Persia.

EUCLID.

SECOND CLASS TEACHERS.

Examiner.—J. DEARNESS.

1. When is one proposition said to be the converse of another?

State the converse proposition of I. 41, (If a parallelogram and a triangle be upon the same base, &c.).

Show by an example that the converse of a true proposition is not necessarily true.

2. If one side of a triangle be produced the exterior angle is greater than either of the exterior opposite angles. (I. 16.)

3. In the figure of the preceding, let AC be the side bisected in E, and produce BE to F; similarly bisect BC in H, join AH and produce it to L; join LB and FA and produce them to meet in M. Show that the triangle FML is quadruple of the triangle ABC.

4. Show whether the angles of a triangle can be changed without changing (shortening or lengthening) the sides.

Also whether the angles of a quadrilateral (as of a rombus) can be changed without changing the length of the sides.

5. If the vertical angle of an isosceles triangle is two-thirds of two right angles the square on the base is equal to three times the square on one of the equal sides.

6. If a straight line be divided into any two parts the square on the whole line is equal to the squares on the two parts together with twice the rectangle contained by the parts. (II. 4.)

Enumerate the geometrical proposition expressed by the equation

$$(a+b+c)^2=a^2+b^2+c^2+2ab+2bc+2ca.$$

Construct it geometrically.

7. If a straight line be divided into any two parts, the squares on the whole line and on one of the parts are equal to twice the rectangle contained by the whole and that part together with the square on the other part. (II. 7.)

Show from the demonstrations of II. 4, and II. 7, that the square on the sum of two lines is as much greater than the sum of their squares as the latter is greater than the square of the difference.

Illustrate the same truth algebraically.

8. Divide a given straight line into two parts so that the rectangle contained by the whole and one of the parts shall be equal to the square on the other part. (II. 11.)

Shew algebraically that the square on the sum of the whole line and the lesser segment is equal to five times the square on the greater segment.

9. In every triangle the square on the side subtending any of the acute angles is less than the squares on the sides containing that angle by twice the rectangle contained by either of these sides and the straight line intercepted between the perpendicular let fall upon it from the opposite angle, and the acute angle. (II. 13.) Deal only with the case of the obtuse-angled triangle.

(Total 114. Count 100 marks a full paper.)

NOTE.—Symbols, except of operation, may be employed. Use capital letters with the diagrams. It is recommended that each step in the demonstration begins on a new line.

ENGLISH GRAMMAR.

SECOND CLASS TEACHERS.

Examiner.—JOHN SEATH, B. A.

1. Describe, in your own words, the function of the pronoun, explaining clearly the meaning of the expression, "used instead of a noun," and applying your description to each of the following:

I, thou, he, each, this, many.

2. "Inflections are changes of form which some parts of speech undergo according to differences in their meaning, or differences in the connection in which they are used"

(*a*) Classify according to the preceding definition *all* the inflections in the appended sentence.

(*b*) Give the name, and a suitable definition, for each inflection so classified.

(*c*) State, with reasons, which of these inflections modern English, might dispense with.

Knewest thou that these women's tempers were sorely tried by his excessive talking?

3. Rewrite the following statements, making such corrections as you consider necessary, and assigning your reasons therefor:

(*a*) *As* is used as a relative after *such, same, as many, so many, as much, so much.*

(*b*) Any set of words expressing the relations of an adverb is called an "adverbial phrase": as, "it is *all* over with you."

(*c*) When two clauses of a sentence joined by a conjunction are connected with a third clause by *than*, this last clause must be adapted in construction to both of the preceding: as, "I will do as much or more work than James" should be "I will do as much work as James or more."

4. Distinguish the meanings of:—

(*a*) *He has done the work* and *He has the work done.*

(*b*) *What shall you do to-morrow?* and *What will you do to-morrow?*

(*c*) *I told him I would not go* and *I told him I should not go.*

(*d*) *He knew who should betray him* and *He knew who would betray him.*

5. Classify and give the syntax of the italicized words in the following:—

(*a*) *To please* me, he put on his best coat and looked his *best.*

(*b*) He left me at home *in* poverty, *to* the surprise of the lord of the *manor's* family.

(*c*) Since my residence here, the fear of *being surprised* has made him *accustomed to come* early; he used *to come* late.

(*d*) He is out of breath *running* this *distance.*

6. Write out fully in the prose order each clause in the following, classifying it and giving its relation:—

When in the woods I wander all alone,
The woods that are my solace and delight,
Which I more covet than a prince's throne,
My toil by day and canopy by night;
(Light heart, light foot, light food, and slumber light,

These lights shall light us to old age's gate,
While monarchs, whom rebellious dreams affright,
Heavy with fear, death's fearful summons wait ;)
Whilst here I wander, pleased to be alone,
Weighing in thought the world's no happiness,
I cannot choose but wonder at its moan.
Since so plain joys the woody life can bless ;
Then live who may where honied words prevail,
I with the deer, and with the nightingale !

7. [*a*] Analyze each of the following, giving the force of the root-words, prefixes, and suffixes :—

[1] *prolonging, displeasure, suppression.*
[2] *reflection, prosperous, confidential.*

[*b*] Translate into a derivative each of the following :—

[1] *to lead in a wrong direction, to daze often, one who writes for the daily papers.*
[2] *to make great, a breaking up in different directions, a taking away from.*

8. Correct any errors in the following, giving in each case your reason :—

[*a*] The strongest effluvia I ever felt has come from the spot of which I did not know and did not then see.

[*b*] Mr. Smith presents his compliments to Mr. Jones, and finds he has a cap which is not mine. So, if you have a cap which isn't his, no doubt they are the ones.

[*c*] It was her firm belief that all unhappy marriages dated only from the wife : and that the coldness as well as the independence, and want of the adoring faculty generally in women, were the sole causes of matrimonial disagreement.

[*d*] He has now the management of the institution, and his success or otherwise will show who among them we are to consider responsible for its past record.

[*e*] Heaven forbid that I should refuse him, and he a gentleman.

[*f*] My intentions are good, but my execution faulty.

[*g*] My object in this communication is to express a hope that the members may, each as far as lies in his power, exert their influence to obtain its removal.

[*h*] I ne'er before, believe me, fair,
Have ever drawn your mountain air,
Till on the lake's romantic strand,
I found a fay in fairy land.

HISTORY.

SECOND CLASS TEACHERS.

Examiner—JAS. F. WHITE.

1. Sketch the history of England from the withdrawal of the Romans to the landing of the Conqueror, having regard especially to the geographical distribution and civilizing influences of the different races that occupied the country during that period.

2. Give an account of the relations that existed between England and Scotland during the Stuart rule.

3. What causes led to the passing of the Act of Union ? What were its principal terms, and what its effects ?

4. Write a concise account of the Wars of the Roses, showing their effect upon the liberty and social life of England.

5. Relate the important events of the reign of William III. Give an estimate of his personal character.

6. Discuss the views of government held by the Tudors and Stuarts respectively.

How did the circumstances of the time effect their endeavors to put these views into practice ?

7. Describe the circumstances under which the several provinces of the Confederation were settled.

8. Sketch the constitutional growth of Canada.

NOTE.—Not more than five questions, of which 7 and 8 must form two, are to be attended.

Educational Notes and News.

ENTRANCE EXAMINATIONS TO HIGH SCHOOLS AND COLLEGIATE INSTITUTES.

The following is the official programme for the next half-yearly Entrance Examinations :—

The next Entrance Examination to High Schools and Collegiate Institutes will be held on Monday, Tuesday, and Wednesday, December 21st, 22nd, and 23rd, 1885.

The following is the limit of studies in the various subjects : —

Reading.—A general knowledge of the elements of vocal expression, with special reference to emphasis, inflection, and pause. The reading, with proper expression, of any selection in the Reader authorized for Fourth Book classes. The pupil should be taught to read *intelligently* as well as *intelligibly*.

Literature.—The pupil should be taught to give for words or phrases, meanings which may be substituted therefor, without impairing the sense of the passage ; to illustrate and show the appropriateness of important words or phrases ; to distinguish between synonyms in common use ; to paraphrase difficult passages so as to show the meaning clearly ; to show the connection of the thoughts in any selected passage ; to explain allusions ; to write explanatory or descriptive notes on proper or other names ; to show that he has studied the lessons thoughtfully, by being able to give an intelligent opinion on any subject treated of therein that comes within the range of his experience or comprehension ; and especially to show that he has entered into the spirit of the passage, by being able to read it with proper expression. He should be exercised in quoting passages of special beauty from the selections prescribed, and to reproduce in his own words, the substance of any of these selections, or of any part thereof. He should also obtain some knowledge of the authors from whose works these selections have been made.

Orthography and Orthoëpy.—The pronunciation, the syllabication, and the spelling from dictation, of words in common use. The correction of words improperly spelt or pronounced. The distinctions between words in common use in regard to spelling, pronunciation, and meaning.

Writing.—The proper formation of the small and the capital letters. The pupil will be expected to write neatly and legibly.

Geography.—The form and the motions of the earth. The chief definitions as contained in the authorized text-book ; divisions of the land and the water ; circles on the globe ; political divisions ; natural phenomena. Maps of America, Europe, Asia and Africa. Maps of Canada and Ontario, including the railway systems. The products and the commercial relations of Canada.

Grammar.—The sentence in its different forms. Words : their chief classes and inflections. Different grammatical values of the same word. The meanings of the chief grammatical terms. The grammatical values of phrases and of clauses. The nature of the clauses in easy compound and complex sentences. The government, the agreement, and the arrangement of words. The correction, with reasons therefor, of wrong forms of words and of false syntax. The parsing of simple sentences. The analysis of easy sentences.

Composition.—The nature and the construction of different kinds of sentences. The combination of separate statements into sentences. The nature and the construction of paragraphs. The combination of separate statements into paragraphs. Variety of expression, with the following classes of exercises :—Changing the voice of the verb ; expanding a word or a phrase into a clause ; contracting a clause into a word or a phrase ; changing from direct into indirect narration, or the converse ; transposition ; changing *the form of a sentence ; expansion of given heads or hints into a* composition ; the contraction of passages ; paraphrasing prose or easy poetry. The elements of punctuation. Short narratives or descriptions. Familiar letters.

Drawing.—For the examination in December next, candidates in Drawing may submit to the examiners Books No. 2 or No. 3 of the Drawing Course for Public Schools. For June 1886, No. 3, No. 4 or No. 5 will be accepted ; after that date it is intended to take the numbers prescribed by the Regulations for the 4th Class.

History.—Outlines of English history as heretofore.

Examination papers will be set in Literature from the different series of authorized Readers as follows :—

New Ontario Readers.

DECEMBER, 1885.

1. Tom Brown	pp.	17— 22
2. Boadicea	"	35— 37
3. The Fixed Stars	"	93— 96
4. The Sky Lark	"	99—
5. Ye Mariners of England	"	193—194
6. The Heroine of Verchores	"	201—204
7. Marmion and Douglas	"	256—258
8. After Death in Arabia	"	272—274
9. The Capture of Quebec	"	233—239

JUNE, 1886.

1. Boadicea	pp.	35— 37
2. The Truant	"	46— 50
3. The Fixed Stars	"	93— 96
4. Lochinvar	"	169—170
5. A Christmas Carol	"	207—211
6. Riding Together	"	231—232
7. Marmion and Douglas	"	256—258
8. The Capture of Quebec	"	233—239
9. The Ride from Ghent to Aix	"	285—287

1.—*Selection from Ontario Reader.*

1. The Stage Coach.—*Dickens.*
2. The Lark at the Diggings.—*Reade.*
3. The Geysers of Iceland.—*Dufferin.*
4. The Story of LeFevre.—*Sterne.*
5. The Skater and the Wolves.—*Whitehead.*
6. The Ocean.—*Byron.*
7. Autumn Woods—*Bryant.*
8. Sir John Franklin.—*Punch.*
9. The Incident at Ratisbon.—*Browning.*
10. The Shipbuilders.—*Whittier.*
11. The Battle of the Baltic.—*Campbell.*
12. The Incident at Bruges.—*Wadsworth.*

2—*Selection from Royal Reader.*

1. Stanzas from "The Princess," p. 13.—*Tennyson.*
2. The Unwritten History of our Forefathers.—*Mackenzie.*
3. The Sky Lark.—*Hogg.*
4. The Soldier's Dream.—*Campbell.*
5. Goldsmith.—*Thackeray.*
6. The Charge at Waterloo.—*Scott.*
7. Harold Skimpole.—*Dickens.*
8. "He Giveth His Beloved Sleep."—*Browning.*
9. The Black Hole of Calcutta.—*Macaulay.*
10. Sunset Wings.—*Rossetti.*
11. The Black Prince at Crecy.—*Stanley.*
12. The Water Fairy.—*Swinburne.*

3.—*Selections from Canadian Reader.*

1. Ye Mariners of England.—*Campbell.*
2. The Taking of Roxburgh Castle.—*Scott.*
3. The Town Pump.—*Hawthorne.*
4. The Cloud.—*Shelley.*
5. The Sagacious Cadi—I. and II.—*Household Words.*
6. The Canadian Boat Song.—*Moore.*
7. Dare to do Right.—*Hughes.*
8. The Death of Wellington.—*Disraeli.*
9. The Psalm of Life.—*Longfellow.*
10. The Eve of Quatre Bras.—*Byron.*
11. The Burial of Sir John Moore.—*Wolfe.*

After the 1st January, 1886, the Literature will be selected exclusively from the new Ontario Fourth Reader, which will then be the only authorized Fourth Book. The selections will be changed from year to year.

TIME-TABLE OF THE EXAMINATION.

DECEMBER 21, 1885.

9 a.m. to 10:25 a.m	Geography.
10:35 a.m. to noon	History.
3 p.m. to 4 p.m	Literature.

DECEMBER 22, 1885.

9 a.m. to 11 a.m	Arithmetic.
11:10 a.m. to 12 noon	Orthography and Orthoëpy.
2. p.m. to 4 p.m	Grammar.

DECEMBER 23, 1885.

9 p.m to 10:45 p.m	Composition.
11 a.m. to 12:15 p.m	Writing.
11:15 a.m. to 12 noon	Drawing.

Reading to be taken on either day or on both days, at such hours as may best suit the convenience of the Examiners.

At a recent meeting of the Woodstock Public School Board, the members presented the Chairman, John Douglas, Esq., with a large portrait of himself, and an address, complimenting him on the value of his services in various positions connected with the educational work of the town for about half a century.

At a meeting of the Woodstock Public School Board, on the 7th of August, the following pithy communication from the booksellers of the town was read:—

WOODSTOCK, Aug. 7th, 1885.

To the Public School Board, Town of Woodstock:

GENTLEMEN,—We, the undersigned, have concluded not to tender for school supplies for the ensuing year for the following reasons:—

1. As the schools are "Free" in name, we think they should be "Free" in fact.

2. We consider the profits made by the School Board from supplying the scholars with books, amounting to several hundred dollars a year, to be of the nature of a special tax upon the booksellers of the town.

3. Two of the parties undersigned, viz., Dickenson & Co., and W. G. Boyes, state that, having each held the school contracts, there is no money in it, and that they don't do business for the benefit of the town.

4. As the school regulations state that the pupils must be "neat in their attire," the Board should not discriminate in favor of the "dry goods" trade of the town, but should be consistent and contract for the clothing of the pupils.

5. As the new "School Readers" are about being introduced, the present is the best time to change to the new system adopted by all the school boards in the Province except three, *i. e.* to supply directly to the scholar by the book dealers.

6. We would pray that the cruel and unprofitable monopoly, for our trade, be cancelled and a fair, just and reasonable system be established in its place.

As ratepayers we respectfully request your honorable body to consider the advisability of abolishing the contract system of supplying books, etc. We would be quite willing to assist the Board in disposing of any supplies they may have on hand, if they could not dispose of them directly to the scholars. We are, gentlemen, your obedient humble servants, Wm. G. Boyes, Dickenson & Co., G. A. Odell, James Gamlin.

In reply it was resolved:—"That the Board does not think it advisable to grant the request of the booksellers of the town with respect to the contract system, and that a Special Committee consisting of the Chairman of the Board, and the several chairmen of committees be empowered to deal with the matter, and if the parties still refuse to tender, that the Committee be instructed to ask for tenders from any party preferred to tender for the supplies needed, and report to the Board at the next meeting.

DEPARTMENTAL EXAMINATIONS.—*(Continued.)*

WINDSOR.—Third Class—A. Arner, D. Verdnyn, J. Abel, B. Chamberlain, J. Shuel, M. Windsor, F. Kerr, F. Malott, K. Shimers. L. Dewherst. Second Class—S. Ogle, A; F. Butterworth, B; A. Cote, B.

WOODSTOCK.—Third Class—A. Geddes, M. Moncur, L. Overholt, M. Rose, M. Tapping, M. Webster, D. Mathieson, E. Danbrook, D. Revel, R. Weaver, A. Palmer, C. Bertrand, N. Milmine, W. Robinson, C. Hendershot, J. Lewis, C. Lyster, C. Horsman, E. Bardwell. Second Class—E. Campbell, A; H. Douglass, A; M. McPherson, A; M. Markle, A; A. Stuart, A; A. White, A; I. Heeney, A; J. McDonald, A; J. Sherran, B; E. Whyte, A; A. Scott, B; E. Lang, B; S. Stephenson, B; J. Robson, B.

MADOC.—Third Class—D. Cornel, M. Breakell, I. Breakell, J. Sinclair, W. Wood.

MILTON.—Third Class—R. Anderson, D. Kingsbury, G. Logie, R. Meade, A. Nixon, W. Campbell, M. Robertson, A. Easterbrook. Second Class—A. Baynton, A; J. Baynton, B.

WOODSOCK COLLEGE (WOODSOCK).—Third Class—T. Jamieson. Second Class—N. Clark, A; G. Bentley, B; R. George, A; M. Best, B.

PICKERING COLLEGE.—Third Class—L. Green, E. Hughes, J. Vallentine, I. Andrew, W. Gormley. Second Class—M. Bowerman, B; E. Rogers, A.

WATFORD.—Third Class—R. Hay, O. Howard, J. Cowan, L. Gair, F. Brown, N. Hayhurst, J. Mitchell, J. Rogers.

PETROLEA.—Third Class—M. Brown, N. McFarlane, J. Buchannan, J. Sinclair, G. Christian. Stapleton, S. McWhorter, F. Brownscomb, B. Ross, A. Anderson, H. Cuthbertson, C. Temple-

ton. Second Class—J. Harley, A ; E. Sanson, A ; H. Simmons' A , J. Murdock, A ; E. Buchanan, A ; W. Lonergan, B ; W. Lewis' B ; J. Trott, A ; H. Eckardt, B ; N. Stapleton, B.

Loretto Convent (Lindsay).—Third Class—M. Warren, H. Foote, N. Sharpe, N. Foley, K. Twomey. Second Class M Tyrrell, B.

St. Joseph's Convent (Toronto). - Third Class M. Breen, Dunn, E. Clune, M. O'Byrne. Second Class—M. Delaney, B ; M. Shanahan, B ; K. Fitzgerald, B ; L. Cottam, B ; M. O'Rourke, B ; M. Breen, B.

FIRST CLASS.

The following candidates have passed the first-class examinations held at Toronto and Ottawa, July 1885 :—

NON-PROFESSIONAL.

GRADE C.

Jennie Louise Cubner, David A. Nesbitt, Allan C Smith, Alex Wheny, Guy Ambrose Andrews, Albert Barber, Martha Boddy, Herbert H. Burgess, Harry Boseley, Thos. James Collins, Elizabeth J. Cox, James B. Davidson, Chas. S. Falconer, Lewis, K Falls, Thos. T. Guardhouse, Fannie L. Gillespie, Albert E. Jewett, Jesse B. Kaiser, Edwin Loftus, William E. Long, Edwin Longman, Jessie McRae, Wilson S. Morden, James Sidney Philp, John Ritchie, Samuel B. Sinclair, Wilson R. Smith, Fred. L. Sawyer, Joseph A. Snell, James R. Stuart, David R. Weir, David J. Wright, Robert B. Watson, David Young.

GRADE B.

George Baird, sr., Neil W. Campbell, William W. Ireland, Hugh S. McLean, David Robb, Robert K. Row.

GRADE A.

William H. Harlton, William Irwin, Joseph A. Snell.

PROFESSIONAL

Elizabeth J. Cox, John Ritchie, Samuel B. Sinclair, Catharine Pilson, Robt. C. Rose, Thos. A. Craigh, Thos. Swift, Henry Bewell, David A. Burgess, Harold Clark, Alex. C. Casselman, Walter H. Davis, Amelia Harris, Allen Hutchison, David H. Lent, Alfred Orr, Alvin Orton, Sylvester Moyer, John G. McKechnie, Samuel R. Reynolds, Thos. W. Standing, Wilson Taylor, David M. Walker, Edward W. Bruce, Robert J. Sangster.

ONTARIO SCHOOL OF ART.

GRADE A.

The following, having now taken all the proficiency certificates, in grade A, are entitled to full certificates :—Certificate, grade A.—Marilla Adams, Maud Hughes. Shading from flat examples.—Jennie Brayley, Edith Dawkins, A. J. Faulds, R. A. Gray, Charles May, A. Mueller, Lillie Moore, W. N. Stevenson. Shading from "round."—T. A. Bellamy, Jennie Brayley, R. Crockett, A. J. Faulds, F. C. Gordon, L. H. Graham, H. N. Harrison, S. A. Hegler, Martha Logan, A. Mueller, A. McDonald. Outline from the "round."—Edith Dawkins. Drawing from flowers, etc.—Jennie Brayley, R. Crockett, A. J. Faulds, Hannah Freeman, L. H. Graham, R. A. Gray, L. G. Lorriman, Lillie Moore, A. Mueller. Advanced perspective—Jennie Brayley, T. A. Bellamy, R. Crockett, A. J. Fauids, N. W. Ford, L. H. Graham, W. G. Galbraith, R. A. Gray, H. N. Harrison, L. G. Lorriman, Martha Logan, A. Mueller, Angus Martyn, W. N. Stevenson. Advanced geometry—W. G. Galbraith, R. A. Gray, L. G. Lorriman, James H. Parkham. Drawing from dictation—Kate Allan, Lizzie Barron, Jennie Brayley, T. A. Bellamy, R. Crockett, Jane W. Chrisholm, Edith, Dawkins, Hannah Freeman, A. J. Faulds, N. W. Ford, R. H. Graham, W. G. Galbraith, F. C. Gordon, R. A. Gray, R. W. Hicks, A. G. Henderson, Mary Hunter, Martha Logan, L. G. Terriman, Tillie Moore, A. Mueller, J. A. Macpherson, A. McDonald, Mary McKindley, J. A. E. Payne, G. Riches, W. N. Stevenson, Jennie Whitelaw. Industrial design—T. A Bellamy, A. J Faulds, Maud Hughes, A. Mueller. Machine drawing.—W. G. Galbraith, R. A. Gray, Maud Hughes, Mary Hunter, J. A. Macpherson, W. N. Stevenson. The work done by some of the students entitle the candidate to a teacher's certificate. Shading from flat examples (elementary). T A. Bellamy, R. Crockett, L. H. Graham, Mary Huntes, S A Hegler, Mary McKindley. Industrial design.—Kate Allan, R. Crockett, Edith Dawkins, R. A. Gray, P. C. Gordon, Mary Hunter, Martha Logan, Tillie Moore, J. A. Macpherson, in the following subjects entitles the candidate to an elementary certificate which will count in the final examination, but does not J. A. E. Payne, G. Riches, W. N. Stevenson, Jennie Whitelaw. Machine drawing—Marilla Adams, T. A. Bellamy, Edith Dawkins, L. H. Graham, R. W. Hicks, L. G. Lorriman, A Mueller, Angus Martyn, Lizzie Oile, G. Riches, Jennie Whitelaw.

GRADE B.

Teachers' Certificates.—Bertha Appleton, Ira D Bronis, David Bean, Lydia Barr, Aggie Barr, Mina Bee, Maud Bell, Alex. Batchart, Louis C. Bellsmith, Thomas Beath, Carrie S. Brown, John Burchill, Lizzie Barron, R. W. Currie, A E. Caverhill, W. F. Chapman, C. A. Chant, A. Crichton, E M Chapman, Robert Coates, Jane. W. Chisholm, M. G. Dippel, Chas. W. DeRose, Eva Drake, J. Dodds, Chas. Eggleton, John Eddington, Hannah Freeman, R. S. Fralick, Eliza S. Fitzgerald, Margaret T. Gowens, Annie Gormley, L. H. Graham, F. C. Gordon, R. E. Harrison, Lizzie Hegles, Hattie E. Hanna, H. N Harrison, Clara Holtorf, T. M. Henry, Mary Hunter, John C. Hamilton, Alex. R. Innis, Florence J. King, Alice Kirk, D. Harman Lent, W. A. Moore, May C. Moyer, R. W. Murray, Sylvester Moyer, Maud, Morrison, Tillie Moore, M. McClure, M. C. Nutting, N. A. Northcott, Gussie Preston, James H. Parkham, E. H. Roberts, W S Rose, Lilias P. Rankin, Jeannie M. Roddick, August Stoltz, Thomas W. Stout, Christina M. Smiley, W. H. Stevens, R. Sanderson, A. H. Sinclair, A. S. Tilley, Hattie E. Walrong, Marcella Warren, Edward Ward, Bertha G. Watson, A. H. Young, George Young. Freehand Drawing.—Rose K. Atkinson, Grace E. Beckett, M. C. Black, Louise E. Cumming, Annie Chown, Jean Cruickshank, Ellen Cody, W S. Fraser, Martha Freeman, Fanny, W. Gibson, Maud Horner, John M. Johnston, John H. Kemp, Alice Kipp, Eliza Laing, Hannah Lund, Charles May, M L. Moore, Mary Miller, Phemia MacNeil, Alex. McDonald, Christina M. MacArthur, John Phillips, Isabella S. Pringle, Jennie Pattison, Llewellyn Ross, John Rogers, Sarah E. Simpson, Isabel A. Sutherland, Thomas O. Steele, Adine Wickham, Maggie Whiteside. Geometry.—Rose K. Atkinson, Mary Butterworth, James Bowie, Grace E. Beckett, Elizabeth Beckett, Louise E. Cummings, Annie Chown, J. G. Carruthers, W. S Copeland, James M. Cole, Jean Cruickshank, Ellen Cody, George Deacon, W. S. Fraser, Margaret Gillin, Fanny W. Gibson, Maud Horner, John M. Johnston, Solomon H. Jeffery, John Kelly, Alice Kipp, Eliza Laing, W. H. Liddle, M. L. Moore, Mary Miller, J. H. Markle, J. C. Morrison, John McKechnie, Aggie McMurchie, Alex. McIntosh, Christina M. MacArthur, Isabella J. McDougall, Mary S. Pyper, J. S. Rowatt, Maggie Reddin, Llewellyn Rees, John Rogers, Catharine Reid, Armstrong Spence, Maggie Smyth, Isabella A. Sutherland, G. A. Swayze, W. G. Shepherd, T. B. Scott, S. B. Sinclair, Sarah E. Simpson, Alex. Wilkinson, W. R. Wilkinson. Perspective.—Elizabeth Beckett, James Bowie, Louise E. Cummings, Annie Chown, J. G. Carruthers, W. S. Copeland, James M. Cole, Jean Cruickshank, W. S. Fraser Maud Horner, John M. Johnston, Solomon H. Jeffery, John H. Kemp, John Kelly, Alice Kipp, W. H. Liddle, Hannah Lund, G Lawe, Eliza Laing, J. C. Morrison, John McKechnie, Christina M. MacArthur, Isabella J. McDougall, Mary S. Pyper, Isabella S. Pringle, Charles Riches, John Rogers, Catherine Reid, Mary Ross, J. S. Rowat, Maggie Reddin, Llewellyn Rees, T. B. Scott, S. B. Sinclair, Armstrong Spence, Maggie Smyth, R. H. Tinsdale, W R Wilkinson, Alex. Wilkinson, Maggie Whiteside. Model Drawing.—Grace E. Beckett, Jean Cruickshank, Ellen Cody, J. G. Carruthers, Martha Freeman, Margaret Gillin, J. M. Johnston, John H. Kemp, Alice Kipp, G. Lawe, M. L. Moore, Mary Miller, Isabella J. McDougall, Chas. May, Aggie McMurchie, Phemia MacNeil, John Phillips, Llewellyn Rees, May Ross, T. B. Scott, Sarah E. Simpson, Maggie Smyth, Isabel A. Sutherland. Blackboard and memory drawing.—James Bowie, Grace E. Beckett, James M. Cole, Ellen Cody, Louise E. Cummings, Annie Chown, J. G. Carruthers, W. S. Fraser, Martha Freeman, Fannie W Gibson, Maud Hornet, Solomon H. Jeffery, John Kelly, W H Liddle, Hannah Maria Lund, G Lawe, J. H Markle, Mary Miller, John McKechnie, Aggie McMurchie, May Ross, J. S. Rowatt, W. G. Shepherd, Armstrong Spence, Isabel A Sutherland, G. A. Swayze, Alex. Wilkinson, Maggie Whiteside Addie Wickham.

Miscellaneous.

A TRUANT EPISODE.—(*Continued.*)

"It seems to me I did—once," said the old man, absently. "But it takes timbers and boards and nails, and a saw."

"Oh dear me!" laughed the amiable old lady. "Just hear him talk! Why, I can made the nicest house you ever saw out of stones and brick. That is the way we girls always do in the school-yard. Just lay them in rows for walls, don't you know?"

Her aged companion busied himself industriously, bringing her bits of rock, which she formed into intersecting chains upon the ground, with here and there a break between. When they paused to rest she proudly designated the boundaries of the parlor, sitting-room, and kitchen, which she had constructed.

"Now, you can go in the parlor and sit down, and I shall stay in the sitting-room and knit," and she brought forth her work from the capacious reticule. "But there! How many times will I have to tell you not to walk over the walls, but come through the doors. There! You've gone out over the walls, and now you are coming through a window. Oh dear, oh dear!"

"Stuff and nonsense! What's the difference?" retorted the old man, irascibly. "That's right, now. Go to bawling, will you, just like a silly girl!"

"I'm not crying, and I'm no sillier than you"; and the old lady bridled. "I'd thank you to behave yourself, or I'll go straight home and tell my——" She broke off suddenly, and looked vaguely about at earth and sky in startled questioning.

"There, there, don't get huffy. We'll play war," he added, a bright thought striking him. "This is the battle of Bunker Hill. You are the Tories, and here I come with my canon. Boom! Boom!"

His gentle face shuddered. "I never could play that. War is too dreadful," she said. "Poor little Jimmie Hale. Such a pleasant-tempered, gay young lad he was, but they brought him back from the Mexican War with a bullet hole in his breast. Deary me how mixed up I am. That wasn't Jimmie Hale. That was a brown-bearded, gallant man, and—Jimmie—why, Jimmie is a boy, and gave me the book the teacher gave him on last prize-day." She smiled mistily.

"Well," said her companion, impatient of these reminiscences, "if war don't suit you, how would you like to have a game of mumblepeg?"

"What?" Her curiosity was aroused, and her voice expressed warm interest.

"Mumblepeg." He drew from his pocket an old jack-knife, very loose in the joints, and opened one of the blades.

"First you place it across the palm of your hand and toss it up over—so?" The knife turned a somersault in the air, and the blade was deeply buried in the ground. He pulled it out with an air of triumph. "Then you place it on the back of the hand and toss it up again." The knife revolved anew in the air, but fell flat upon its side.

"Whenever one misses it's the other's turn. But I'm just showing you now, you know. The one who beats gets all the marbles. Next time comes this," and holding the blade between his finger and thumb, he essayed to give it a dexterous flip in the air, but failing to make it describe the proper curve, the sharp blade descended upon his hand, cutting a deep gash in the palm. He made light of the injury, and endeavored to staunch the blood with his red handkerchief. But his companion, greatly distressed, hurried him down to the shallow brooklet, and after bathing the wound in the little stream, wound her own handkerchief tenderly about the hand.

Standing there, she turned, and looking off to the southeast, espied white shafts gleaming amid a setting of green.

"I declare! There's a graveyard. Let us go and see it. I love graveyards; don't you?" cried the old lady, excitedly.

"Pooh! Don't care much about them. Girls always have such queer notions," returned the old man; but he accompanied her as she set eagerly off in the direction of the cemetery. Over the rough and stony ground they labored, plodding through clayey embankments and across narrow ditches. Reaching level ground at last, and roaming along streets and by-ways, they came at length to the old mission church, quaint and ancient, with its rude Moorish architecture and thick adobe walls. They paused and gazed for a moment at the aged structure, before entering the decrepit gate which led to the burying ground of the old mission.

A policeman, who had been standing in the shadow of the church and closely following their movements, drew from his pocket a copy of the afternoon paper, and re-read the following notices:

AGED PEOPLE LOST.

A gentleman, residing at 1,887 Howard street, has reported to the police that his father, aged 82, and childish, left home early this forenoon on an errand to the market near by, and has not since returned. Information leading to the discovery of his whereabouts will be thankfully received.

An aged lady is also reported lost from her residence, 1,793 Folsam street. She was attired in a plain black bombazine, and carried in her hand an embroidered reticule, tied with black ribbon.

"Guess I'll go across the street and telephone down to the central station," soliloquized the officer.

Meanwhile the singular pair pursued their way along the tangled paths which intersected the old cemetery. A strange hush reigned throughout the place. Here and there a startled bird flew from its nest.

"We might play hide and seek among the stones," suggested the old man, artlessly.

The old lady looked at him severely. "You must be a very wicked boy to think of such a thing. Let us walk about and spell the names and verses on the stones, and smell the flowers," she added gently.

"I don't like to do that," said her companion, peevishly. "The names are too hard and long, 'F-r-a-n-c-i-s-c-a M-a-r-i-a-D-e-R-i-m-e-g-n-a.' What a queer name. And when did she die?—1835. What year is this?"

"'36, isn't it?" came the doubtful response.

"Pshaw! That was last year or the year before. Let me see! I was born in——"

"Oh, don't talk dates. I never could keep the absurd things in my head," said the old lady, smiling. "Just look at this cunning little grave, all covered with myrtle and pansies. It must have been a baby—a sweet little baby. But here are some naughty weeds that are trying to choke out the flowers."

She carefully uprooted the noxious intruders and bent forward to decipher the lettering upon the stone. Then she started wildly, and looked around her. A low wail burst from her lips. In that moment the burden of the forgotten years descended upon her.

Dropping upon her knees, she flung her arm protectingly over the tiny mound, and laid her withered face among the blossoms.

"My darling! Mother's precious!" she cried. "Gone so long from these empty arms. When will I see you again, my dearest?" And she mourned and sobbed in a tearless anguish.

The voice of the old man, absently repeating some familiar words, fell upon her ear:

And God shall wipe away all tears from their eyes, and there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain.

The tears gushed in a sudden shower from her faded blue eyes and over her wrinkled cheeks, once round and fresh with the bloom of youth.

"My graves, my graves, if they had only let me have my graves! They would not let me come," she moaned. "They feared the memories they would call back would be too much for my old heart. It is many a long year since I have seen them. The young and strong have little thought beyond the busy, active world, in which they live. But the heart of old age is buried in the tomb, and the mind lives only in memories of the past."

Her tone had passed from passionate, protesting pain to the voice of one sunk in gentle reverie. She touched the small mound with a caressing hand:

"My baby lies here," she murmured, "my beautiful, dimpled, laughing baby, who would have been a strong man were he with me to-day on earth. Here my two daughters were laid side by side, their fair faces full of the promise of a noble womanhood. And there," pointing to the long, grassy mound with the tall, white stone at its head, "they placed my husband's body, washed ashore from the wreck of the Vulcan, twenty years ago. Ah, the grief was once so bitter, but Time has softened it, and I can look forward now to soon rejoining the dear hearts who are awaiting me."

The burden of the forgotten years had returned, but after the first shock had passed away the awakened memories brought only peace and healing, effacing all knowledge of the days of weakness which had intervened.

The old man sat with his chin resting in his hands. The look of vacancy had vanished from his face, and his eyes, fastened upon the inscription on the tall, white stone, sought to arrest some clue which eluded the clouded intellect. She followed the direction of his eyes.

"Yes, it was a worthy name. San Francisco never had a better citizen, nor California a State Treasurer more honest and incorruptible."

"Ah, yes; I knew him well," the old man responded, sadly. He remained absorbed in grave reflections for some moments. Then he arose and began to cull roses from the long branches which ran riot along the paths and embraced gnarled trees. He tastefully arranged them in bunches, mistily veiled beneath the silvery grasses which grew in wild profusion throughout the neglected spot. Returning to where he had left his companion, he presented them to her with a certain courtly grace and somewhat pompous air, in curious contrast with his bowed shoulders and tottering steps.

"Madam, I beg you will accept these flowers to beautify these sacred mounds. I doubt if you have recognized me, madam. I am John A. Meredith, former United States Senator. It can never be said that John A. Meredith, was deficient in a proper courtesy to the gentler sex, either in the days of his prime, when he wielded the sceptre of political power, or when he has reached the era of feeble old age, and the world which once did him homage has forgotten him."

As they turned to go she cast one loving glance back toward the neglected graves. At the gate he offered her his arm with an air of gentle breeding; she leaned heavily upon it, for her old feet had not traveled so far for many a year, and she was faint and weary.

The policeman who was idly leaning against a lamp-post outside, nodded intelligently to a richly-dressed woman who had just alighted from a carriage a block away, and was approaching in breathless haste. Her countenance brightened as she perceived the dignified, elderly couple who were coming through the gate.

"Well, Elza?" said the old lady in calm interrogation.

"Mother, mother! You don't know how we have worried about you. Why did you leave here and where have you been?"

"Madam," interrupted the tall, white-haired old gentleman in reverent tones. "We have been visiting the graves of our departed friends. Your mother is fatigued from her walk. Allow me to call your carriage."

The officer anticipated his movement. As they stood waiting on the sidewalk, the younger woman looked from one old face to the other, with moist eyes and tremulous inquiry. The old man saw her look and interpreted it aright.

"Yes, my dear," he replied. "It sometimes pleases the hand of Time to weave mists about worn and weary brains. But in God's good time the light returns, never again to wane until replaced with the glorious beacon of Eternity."—*Flora Haines Apponji, in Chicago Current.*

SOPHIE PEROWSKAJA.

Written by Joaquin Miller, on the execution of Sophie Perowskaja, who planned the assassination of Alexander II., Czar of Russia, in 1881. She met death unflinchingly, asking that no mercy be shown her, because she was a woman, and declaring that she was glad to die for the cause of liberty. —ED. JOURNAL.

Down from her high estate she stept;
A maiden, gently born.
And by the icy Volga kept
Sad watch, and waited morn;
And peasants say that where she slept
The new moon dipped her horn.
Yet on, and on, through shoreless snows
Stretched towards the great North Pole
The foulest wrong the good God knows
Rolls as dark as rivers roll,
While never once for all these woes
Upspeaks one human soul.
She toiled; she taught the peasant, taught
The dark-eyed Tartar. He,
Inspired with his lofty thought,
Rose up and sought to be,
What God at the creation wrought,
A man! God-like and free,
Yet e'er before him yawns the black
Siberian mines? And, oh,
The knout upon the bare white back!
The blood upon the snow!
The gaunt wolves, close upon the track,
Fight o'er the fallen so!

* * * *

The storm burst forth! From out that storm
The clean, red-lightning leapt,
And lo, a prostrate loyal form!
Like any blood, his crept
Down through the snow, all smoking warm,
And Alexander slept!
Yes, one lies dead—for millions dead!
One red spot in the snow.
For one long damning line of red;
While exiles endless go—
The babe at breast, the mother's head
Bowed down, and dying so!
And did a woman do this deed
Then build her scaffold high,
That all may on her forehead read
Her martyr's right to die!
Ring Cossack round on royal steed!
Now lift her to the sky!
But see! From out the black hood shines
A light few look upon!
Poor exiles, see! from dark deep mines,
Your star at burst of dawn!
A thud! a creak of hangman's line—
A frail shape jerked and drawn!

* * * *

The Czar is dead; the woman's dead;
About her neck a cord,
In God's house rests his royal head—
Hers in a place abhorred;
Yet I had rather have her bed
Than thine, most royal lord
Yea, rather than be the woman dead,
Than this now living Czar,
To hide in dread, with both hands red,
Behind great bolt and bar
While, like the dead, still endless tread,
Sad exiles tow'rd their star. —JOAQUIN MILLER.