

PAGES

MISSING

The Educational Review.

Devoted to Advanced Methods of Education and General Culture.

PUBLISHED MONTHLY.

ST. JOHN, N. B., JUNE, 1890.

\$1.00 PER YEAR.

A. H. MacKAY, B. A., B. Sc.,
Editor for Nova Scotia.

ALEX. ANDERSON, LL.D.,
Editor for P. E. Island.

G. U. HAY, Ph. B.,
Editor for New Brunswick.

SUBSCRIPTION PRICE:
Twelve Numbers, \$1.00
Single Copies, 10 cents

Subscriptions payable in advance. Send money by money order, or by bank bill in a registered letter. All remittances acknowledged by postal card.

The REVIEW is issued from the office of Barnes & Co., St. John, to whom subscriptions may be paid if convenient.

CONTENTS:

EDITORIAL NOTES	1 2
EDITORIAL	3 4
Close of the Educational Year Salaries of Teachers Salaries of Inspectors	
OUR FLAG (Illustrated)	5 6
CONTRIBUTED ARTICLES	7 11
The Late Superintendent Montgomery Astronomical Notes (Mars) Notes on Teaching Music Hints for Country Teachers Educational Institute of N. B.	
SELECTED ARTICLES	11 14
Educational Opinion Personal Among the High Schools—Question Department Book Reviews Exchanges	15 17

The Educational Review is published about the 10th of each month. Any subscriber failing to receive it by the 20th should notify us of the fact. Subscribers wishing a change of address should give the **Former** as well as the **New** address.

In future all correspondence and business communications (including payment of subscriptions) from Nova Scotia and Newfoundland should be addressed to Editor EDUCATIONAL REVIEW, Halifax, N. S. All other communications, including subscriptions, should be addressed Editor EDUCATIONAL REVIEW, St. John, N. B.

EDITORIAL NOTES.

WITH this issue the REVIEW enters on its fourth year. We do not imagine that our success has been due to the excellence of our work. We know that many must have been supporting and helping on our circulation because they felt that a home educational press was a necessity, both from an educational and a patriotic point of view. We are quite conscious of the fact that we cannot write to suit the wants of the advanced specialist and the beginner. Nor did we hope to be equally interesting to the theorist, professors of universities, and teachers of our primary schools. We have attempted to distribute our attentions, while keeping all in touch with the current of educational life in our provinces. We must have succeeded to a very fair degree, judging by results. Yet we have not done all we expected; and our task therefore still remains before us. We expect to be

able to enlarge and give more special attention to series of short exercises on all the subjects of our school course. These we shall endeavor as far as possible to make of use to advanced as well as primary teachers. We shall also endeavor to remember that our Journal should always contain material for the general edification of all our readers, especially in the departments which appear more conspicuously neglected in the general newspaper.

While in the leading counties and sections of these provinces nearly all the teachers are patrons of the REVIEW as well as many others interested in education and elementary science, there are several sections and counties in which but comparatively few copies circulate. There are many good reasons why this should be so. Teachers may be supplied with foreign literature, may not require any literature at all, may not approve of our educational policy, may not be able to save a dollar from their too scanty salaries during a whole year, or, as we suppose the case generally is, are not aware of the existence and the "excellence" of the REVIEW. This last we propose to remedy: for we shall have very much pleasure in putting before any one who desires it, a copy of our paper. We cannot sufficiently thank our friends, many of them personally unknown to us, for their kind words and their assistance in extending our circulation. We trust that during the year now entered upon we shall be enabled to attain to something more in effectiveness than we have hitherto attempted; and we feel assured of the assistance of our friends in the future as in the past to help us to attain more nearly the ideal of an educational journal.

THE Nova Scotia Editor wishes specially to thank a number of teachers throughout the Province for their kind words, and their efforts to extend the influence of the REVIEW. With extended patronage the REVIEW can be still further improved.

LUNENBURG is fortunate in the appointment of H. H. Mackintosh, late Principal of the County Academy, to the inspectorship of the district; and in the succession of B. McKittrick, late Principal of Sydney Academy, to the County Academy.

A careful review of the advertising columns of this issue will repay our readers.

With the correspondent at Dayspring P.O., Lunenburg, N. S., who enclosed a dollar to the REVIEW, kindly send us his name in order that he may receive proper credit?

WE can now but barely refer to the reports of the Superintendent of Education for Nova Scotia. While the "registration" for the year has diminished, the "attendance" has been the greatest in the history of the province—a very healthy sign. The school sections have increased from 1869 to 1886. Total expenditure for education \$212,921.86, being an increase of \$1,735.57 during the year. Male teachers decreased eleven and female teachers increased thirty-seven. The salaries of male teachers of the first class increased on an average ten cents. Salaries of females of the first class decreased eighty two cents. Salaries of second class male decreased \$3.62; of female second class \$5.47; of third class males, decrease \$7.94; of third class females, decrease six cents. Heavy downward tendency in lower grades.

ARBOR DAY was observed throughout New Brunswick on the 16th of May. From the reports observed, in those districts where trees were planted, and other exercises appropriate to the day were carried out, the interest in this important work of decorating and making school grounds beautiful, is increasing year year by year.

IN Halifax a circular order was transmitted to all the schools by Secretary Wilson, ordering the schools to celebrate the 13th as Arbor Day, by addresses on arboriculture, or other exercises impressing the value of tree culture on the pupils, for one hour; the schools then to be dismissed for the purpose of planting trees. In the Academy an address was given by the Principal; and two trees were planted and dedicated to the late Principal Dr. Gilpin, and the late English Master, Mr. Waddell. At St. Patrick's High School, Albro Street School, Morris Street School, Richmond School, and at other schools, similar exercises were carried out.

THE St. John School of Music was opened by Miss Hitchens in September last. It comprised classes in vocal music only. Receiving considerable encouragement and patronage, it was thought advisable to add instrumental Music, elocution and French. There are now over thirty pupils in attendance. Miss Whitman, of the New England Conservatory, Boston, teaches Piano, Harmony, Theory. Miss Gerow, Graduate of the Detroit School of Oratory has charge of the Elocution; Miss Hitchens, pupil of L. P. Mor-

rill of Boston, one of their leading teachers, has charge of the vocal.

Such an institution is very much needed in St. John, and Miss Hitchens deserves success for the energy she has shown in establishing the school and conducting it so far with success.

A FEW months ago there was noticed in these columns a work on the Economic Mollusca of Acadia, by W. F. Ganong M. A., of Harvard University. It is a cheap and valuable publication, and the student in his vacation rambles along the sea-shore, or at the Science School, will find this an invaluable work, written in a popular vein, but it is a concise and scientifically accurate presentation of the subject. It is for sale by Barnes & Co., St. John, for fifty cents.

A DICTIONARY published fifty years ago may serve as a literary curiosity, but it can hardly serve now as a standard authority, so great have been the advances in philology and the coining of new words in arts and science especially. Yet a Chicago publishing house has reprinted Webster's Dictionary of 1847, copyright on it having expired by the lapse of 42 years. Teachers should be on their guard and not be deceived by attempts to impose on them a cheap reprint with defective vocabulary, and many of the commonest scientific words of to-day absent from its pages.

D. C. HEATH & Co., Boston, will shortly publish a manual on the Reproduction of Geographical Forms, divided in two parts—I. Treating of sand and clay-modelling with respect to geographical forms, and II. Of map-drawing and map projection. We have been permitted to see the proof sheets of this work, and think that in the hands of an intelligent teacher, excellent results may be accomplished. Although the directions contained in it are general rather than specific, sufficient valuable suggestions are given to invest the study of geography with a fascination to both teacher and pupil.

AN interesting contribution to Canadian history is contained in a paper presented to the Royal Society of Canada in 1889 by W. F. Ganong, on the Influence of Cartier's voyages on early Cartography. This has just been published in the Transactions of the Society, and with the maps accompanying it serve to illustrate an interesting period of early history.

At the recent meeting of the Royal Society in Ottawa the following papers were read: Illustrations of the Fauna of the St. John Group No 5, by G. F. Mathew; The evidence of a Nova Scotia Carboniferous Conglomerate, by E. Gilpin; and Southern Inverbrates on the Shores of Acadia, by W. F. Ganong.

CLOSE OF THE EDUCATIONAL YEAR.

The encœnial exercises of the N. B. University this year were even more brilliant than usual. There was a large gathering of representative men. Dr. Harrison gave an interesting sketch of the life and work of Sir Howard Douglas, the Alumni oration of Rev. J. deSoyres was a scholarly effort, and the conferring of the honorary degree of LL. D. on Lt.-Governor Sir Leonard Tilley called forth great enthusiasm.

The University deserves the hearty support and confidence of the people of New Brunswick, for it fulfils in a marked degree its true function of a Provincial University. It places a sound collegiate training within the reach of all classes of the public, and that, too, on the strictly non-sectarian lines which have been permanently adopted as the basis of our common school system. And the true interests of higher education will be best served, not by narrowing its course of study, but by enlarging the scope of its training by establishing additional chairs. This requires additional endowment; but among its graduates are men of influence and money. Although the University is a state institution there are many ways in which this influence and money could be used in behalf of their alma mater by graduates who may be able to trace much of their success in life to her influence. The University has recently been the subject of some very sharp criticism. If she is called upon to give reasons why she should be permitted to exist her graduates ought to answer.

The Halifax Ladies' College, under the Principalship of Miss Leach, has been enjoying an extraordinary run of popularity during the past year. Rev. Robert Laing, the real founder of the institution, has just been appointed Secretary by the Directors. He has accordingly resigned the pastorate of one of the largest churches in Halifax and accepted the position. As a man with power in addressing the public, as a scholar and as an educationist, he has probably no superior in these provinces. The Halifax Ladies' College has already taken its position as one of the leading institutions of the country.

Kings College is making great preparations for the celebration of its centenary about the end of June. There will be several ecclesiastical dignitaries present from the United States and elsewhere. A better attendance of students is anticipated after this event.

Dalhousie College is resting in the quietness of the summer vacation. Periodically one of the rooms is lit up with the eloquent orations and discussions of a

club of young Halifax lawyers, who are disporting themselves in the forensic gymnasium.

Dalhousie with all its funds for special purposes is reported as going behind to the tune of \$2,000 a year. This is due to the lack of an adequate fund for the general expenses. \$50,000 must be raised to meet the emergency.

Steps are being taken to form a more complete Natural History Museum in connection with the institution.

Acadia College has just closed one of its most prosperous sessions, nineteen B. A.'s having been capped. Horton Academy is raising the standard of its work under the new Principal; so that Acadia will henceforward have from that feeder material of a more advanced character to begin with. There are seventy-five now enrolled in this Academy.

The closing exercises at the Mt. Allison Institution took place the last week in May, and as usual drew together a large number of its enthusiastic friends, who at each annual convocation assemble in increasingly large numbers. The work of the year has been such as to beget a still greater confidence in the administration of affairs under its able President, Dr. Inch, and to show that Mt. Allison is year by year keeping pace with educational growth, and increasing its appliances for the higher education.

The closing exercises of the New Brunswick Normal School took place on Friday, June 6th, and were of an interesting character. The excellent quality of the instruction given, was shown in the lessons conducted by the teachers of the different departments. Addresses in commendation of the important work of the school were delivered by several of the visitors present, among whom were His Honor Lieutenant-Governor Tilley, the Chief Superintendent of Education, and the Attorney General.

The public schools in New Brunswick close on the 30th of June for the summer vacation. Those in Nova Scotia a fortnight later. In New Brunswick, those teachers who attend the Educational Institute at Moncton, will close their schools on Wednesday, 25th of June. Full particulars of this meeting of the Institute will be found elsewhere in this issue. It promises to be an interesting session, and the ease with which Moncton is reached from all sections of the Province should draw together one of the largest provincial gatherings of teachers that has ever assembled here.

In Nova Scotia the Educational Association will meet this year at Halifax during the last week of the year. Although the winter season is not so pleasant for travelling it is more favorable in other respects than the summer for such an educational gathering. Those who attend will come with more vigor from the shorter term's work, the impressions received will be less likely to fade from the mind in the brief period before a return to work, and the longer school term between winter and summer vacations will give more opportunity to the teacher to put in practice what has been gained in the council of teachers.

The Nova Scotia Summer School of Science this year will meet at Parrsboro, July 21st, and continue in session two weeks. The promoters of this summer school have aroused and maintained an interest in it, which grows from year to year. This is the result of a very thorough organization, a careful administration on the part of its executive, and an unbounded enthusiasm on the part of both teachers and students in the subjects of the course. The approaching session promises to be attended by greater numbers than any previous one.

Summer schools and educational gatherings in other places will attract a few of our teachers. Very many will spend the vacation quietly and devote their leisure to the gaining of fresh strength for next year's work. Earnest teachers, and those who are sincerely desirous of the welfare of those committed to their charge, will make their vacation, whether it consists of work or play, a recreation indeed—devoting it to the invigoration of mind and body, and gaining, by communion with nature and with other minds, new ideas and purposes.

SALARIES OF TEACHERS.

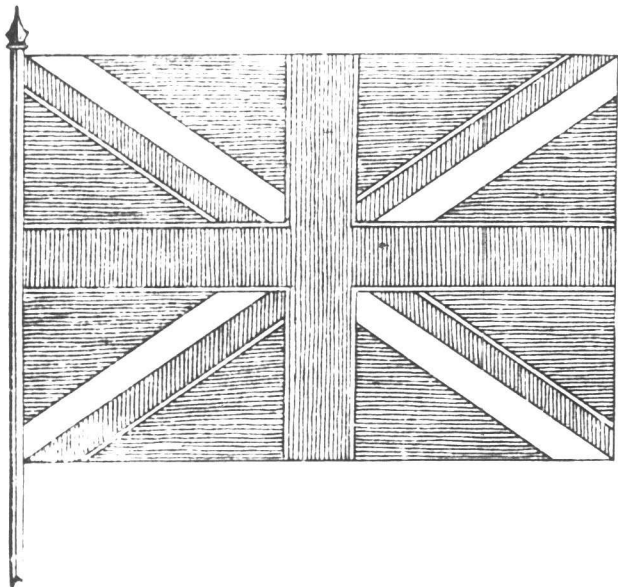
While on the whole the average salary of our teachers is not rising, we are glad to notice that when teachers excel in their profession there is an evident disposition on the part of intelligent communities to acknowledge such merit by larger pecuniary remuneration than ever before given in the history of the provinces. Intelligent men know the value of a superior teacher. But among our teachers are some honest ones who have no genius for teaching, and some whose hearts are in the work only so far as is necessary to earn a little money to make a start in some other business. These not only deservedly receive small remuneration, but their presence also tends to reduce the rate of remuneration of deserving teachers. These may be known by their

apathy in any educational effort which does not appear to be likely to increase their salary for the present, or perhaps for the next term. It is not the profession of their choice—merely a make-shift, or a necessity. He who discovers an expedient method of eliminating such individuals from the profession will be the greatest benefactor of his time from an educational point of view.

SALARIES OF INSPECTORS.

The development of the County Academies and High Schools of Nova Scotia specially distinguish the last few years of our history. We might also add, the stimulation of technical education, by the encouragement of agricultural and mining instruction. The inspector remains yet, however, one of the greatest potencies in the inspiration of both teachers and trustees, as well as being necessary as a supervisor and a statistician. But growth in some departments and the ligature in others may produce a very deformed organic whole. We have referred to the growing appreciation of teachers of special merit in some of our best schools of to-day. Several teachers in more than one county receive higher salaries than are paid inspectors. Now it is admitted on all hands that the inspector should be the first teacher in his county. But should a vacancy in the inspectorship of some counties occur to-day, the best teachers would feel that that appointment would be no promotion, on account of the low salary fixed in the olden time. Now the duties of the Inspector are more important than the duties of a teacher; and his influence should be enormously greater, and they are. Yet we find learned, skillful, energetic men worked nearly off their feet, on salaries which are not at all in keeping with the progress of to-day, not at all in proportion to the requirements of their positions, and not at all compatible with the most efficient discharge of their duties to the public. We have been inspired by no inspector in making this note. We just incidentally noticed that the salaries of skilled teachers have been raising, while those of inspectors being fixed by government have remained *in statu quo*. And we were not long in observing, as any business man at a glance can see, that if an efficient inspector has been appointed he should have an appropriate remuneration, one at least sufficient to enable him to be thoroughly equipped in every respect for the important—extremely important—functions of his position. We have no doubt but that our government will give this suggestion a careful consideration; and giving it a careful consideration we have confidence they will do right, even if our view should not be exactly entertained.

OUR FLAG.



THE UNION JACK.

The winds which press the rolling waves
 In phalanx o'er the deep,
 And from the Indian palm trees blow
 O'er Afric in their sweep,
 Until Columbia's mountain pines
 Sway on their rocky steep,
 Keep streaming in the endless gale
 O'er cloud-capped peak and distant sail,
 Our meteor flag.—Britannia, Hail!

— *Kaymah.*

TEACHER. When we hoist our flag on the 24th of May, or on the 1st of July, what do we really pay our respects to, when we honor the flag. Is it the cloth or the design?

S. No. Of course not. There may be better cloth and more beautiful designs which we never treat with similar respect.

T. Your argument is good. What do we really pay our respects to, then?

S. To what the flag represents.

T. What does the flag represent? The Queen, is it?

S. No. The flag was before the Queen was.

T. The government then? There was no flag before there was some kind of government.

S. I think it represents more than the government, although I can't say exactly what it is. We never think about the government when we cheer for the flag.

T. What do you think about, then, when you cheer for the flag?

S. Of the great things done by people who carried it as we do.

T. Very good. You have a very clear idea. The flag represents the people and what they did. Now what have the people done?

S. They won great victories over other peoples.

ANOTHER S. When they conquered other people they left them better off than they found them.

ANOTHER S. They made good laws.

ANOTHER S. They tried to become good and noble, to put down what was wrong and to help others to be good and noble.

T. Yes. A great many of them have been distinguished in that way; what more?

JACK. The people have also made their own government, so that the flag represents the government, the people, and what the people have done.

T. Capital, Jack. Your idea is quite comprehensive. What is our flag called?

S. The British flag.

ANOTHER S. The British Ensign.

ANOTHER S. The Union Jack.

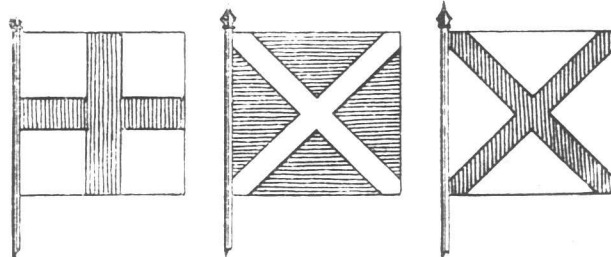
ANOTHER S. The Meteor flag of England.

JACK. The flag that braved a thousand years the battle and the breeze.

T. Well, you are right and wrong. We shall see how. While England's flag has braved the battle and the breeze for a thousand years, the *Union Jack* figured above has been in existence only eighty-nine years to date.

S. How is that?

T. The Union Jack is not England's flag any more than it is that of Scotland or Ireland. The English patron Saint was St. George; and St. George's cross was a red vertical and horizontally armed cross on a white banner. St. Andrew's cross was a white diagonally armed cross on a blue banner; St. Andrew was the patron Saint of Scotland. The patron Saint of Ireland was St. Patrick, whose cross is a diagonally armed red one on a white banner. And the English, Scotch and Irish, were once separate kingdoms, with their own banners. Here they are.



ENGLISH.

SCOTTISH.

IRISH.

In heraldry vertical shading lines represent red, horizontal shading lines blue, and the absence of any marking white.

T. When were England and Scotland united?

S. In 1603.

T. Well, it is then the first Union Jack came into existence. It was a Union of the banners of St. George and St. Andrew.

S. What was it like?

T. A blue banner with the St. Andrew's cross covered with the red cross of St. George. When was Ireland united to England and Scotland.

S. In 1801.

T. Well, on that occasion the red cross of St. Patrick was added to the Union Jack; and so that it would not cover out of sight the white cross of Scotland, the Scottish and Irish arms of the cross are matched alternately against each other.

THE EDUCATIONAL REVIEW.

S. Then the Union Jack is called the *Union*, because it is a union of the English, Scottish, and Irish crosses, and this represents the united three Kingdoms.

JACK. And the *Jack*, because it was the English Jack, the sailor, who won for it the most glory at first.

T. Very good.

S. It is not the English flag then.

T. No more than it is Scottish or Irish flag. The English cross is in front; but the whole blue field as well as the white cross is Scottish. It is the Scottish banner plus the cross of St. George and St. Patrick. It is now the British flag, the flag of the world-wide Empire.

S. What is the British Ensign?

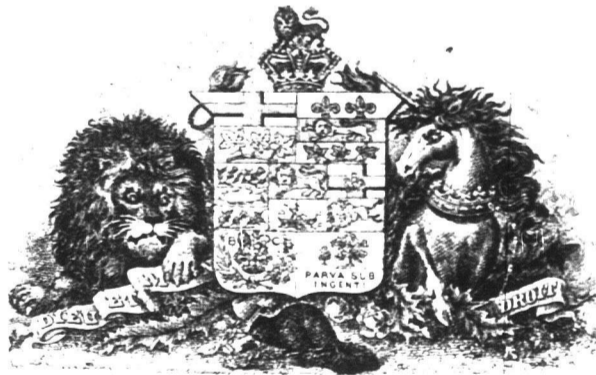
T. It is a red flag with the *Union* in the upper corner next the flag staff. The part most distant from the staff is called the fly. This flag is also known as the British Merchant Flag. The Naval Reserve Flag has a blue fly. The Man-of-War flag has a white fly divided by a St. George's cross the upper inner angle of which is filled with the *Union*. The flag of the Admiral of the Fleet is simply the *Union*; of the Lord Lieutenant of Ireland a union with a harp in the centre. There are many modifications of the flags to indicate particular kinds of service; but we are concerned only with the *Union Jack* and the Ensign.

S. Isn't there a modification of the Ensign which indicates the Dominion of Canada?

T. So there is. And as it is so near Dominion Day, I must let you know it. The Dominion Flag is simply the British Ensign with the Canadian Coat of Arms on the fly.

S. And what is the Canadian Coat of Arms?

T. Here it is, on the shield between the supporters, the Lion and the Unicorn.



Canada is made up of its provinces; and its Coat of Arms consists of those provinces "quartered," as the heraldic term is, on the one shield.

S. The Canadian Flag, then, represents the Empire generally and each Province in particular. Which of them are the Arms of Nova Scotia?

T. The fish with two thistles above and one below in the centre of the shield.

New Brunswick's is on the left. What is it?

S. A ship with a lion above it.

T. Prince Edward Island's at the bottom on the right?

S. The little tree under the great one.

T. British Columbia's to the left —?

S. The wreath and crown.

T. Manitoba's to the right of Nova Scotia's —?

S. The buffalo and red cross.

T. Quebec's, the upper right corner —?

S. The three maple leaves, lion and two fleur-de-lis.

T. Ontario's on the left side —?

S. The three maple leaves and red cross.

T. What is the tendency of civilization to break up countries into small independent states, or to unite small states into larger ones?

S. Union is the tendency.

T. What advantage is there, generally speaking, in union under one government?

S. All matters in the united countries will be settled by law, while if they were separate they might be settled by war.

T. Which is the most widely spread empire in the world?

S. The British Empire.

T. Is it united into one.

S. Yes, but not so closely as smaller states.

T. Would it be any advantage if all the world were united in one great state?

S. I think it would. They would settle matters then by their laws, and there would be, perhaps, no possibility of war; and there might be fairer trade.

T. Perhaps. What orders of governments subordinate to each other are covered by our flag, beginning with the smallest.

S. The School Section Corporation, then the County Municipality, then the Province, then the Dominion, then the Imperial Government.

T. What might come next?

S. Perhaps Tennyson's federation of the world and parliament of man.

T. Well, the *Union Jack* has evidently the lead in this great work of union. Hurrah for the *Union Jack*.

On last Tuesday, at Ottawa, at the opening meeting of the Royal Society, Rev. Principal Grant delivered an address, taking Australian Confederation for his theme. In the course of this address he said:

"Referring to the difficulties the Australians would have to overcome in effecting union, he pointed out that they had one advantage over us. No one of them doubted that Australia had a future. There was no party there that corresponded to our repealers, nationalists, or annexationists. 'We do not know,' he said, 'whether those who have lost faith or who never had faith in a great Canadian commonwealth are many or few; but whether few or many they are our supreme difficulty. What of this or any other difficulty, however? Every nation has difficulties of its own, and in struggling against and overcoming these, men are tested and men are made.'—*Herald* (Halifax.)

The Rev. Principal, who has been elected to the Presidency of the Royal Society, ought to be satisfied with the progress of unity in Nova Scotia; for we have just seen something better than a "repeal" government destroyed within the last month. We have seen it converted and endorsed by the country, and especially by the so-called "repeal" party, as a "non-repeal" government. This means a unanimous abandonment of such an agitation for the future.



The Late Superintendent Montgomery.

Died at Charlottetown on 14th May, Mr. Donald Montgomery, Superintendent of Education for Prince Edward Island. Never of robust health he had, during the last few years, suffered from an affection of the heart, but not so seriously as to interfere with the discharge of his duties. About the first of May he was prostrated by an acute attack, and though, at times, it was hoped that he would recover, temporarily at any rate, he died after a short but painful illness of a fortnight.

Mr. Montgomery was born at Valleyfield, P. E. I., about forty-five years ago. After teaching for some time he entered the Prince of Wales College and there prosecuted his studies for three years. As a student he was remarkable for his devotion to his work. He was able, assiduous, and painstaking. Having selected teaching as his life work he devoted himself heart and soul to it, and resolutely determined to equip himself in the best manner possible for the career of his choice. After completing his course with distinction he was appointed to the Grammar School at Harrington, and in the following year, a vacancy having occurred in the Normal School, he was selected as head-master. As a teacher he realized the expectations that were formed of him when a student. He was careful, diligent, methodical and intelligent.

Not having been appointed to the Normal School on the passing of the Education Act of 1876, Mr. Montgomery spent part of two years in law studies at Montreal, and when a vacancy occurred in the representation of the fourth district of Queen's County he was returned as its representative. In 1879, he was appointed Superintendent of Education. During these eleven years he has discharged his duties with tact, judgment, and precision, and as an executive officer has left nothing to be desired. Prince Edward Island, during his incumbency, has been singularly free from disputes between teachers, trustees and people, and elementary education has, upon the whole, made satisfactory progress.

Astronomical Notes.

MARS.

"Mars is too far off, too faint, and too near the Sun.
But just wait until next June."

So said the REVIEW's Astronomical Notes in June, 1889. "Next June" has come, and already many a star-gazer has "pointed to Mars, as he glowed like a ruddy shield on the —," not "on the Lion's breast," as he did some thirty years ago, when Maud's ghost pointed him out, but on the Scorpion's back.

There is a planet that has been, for the last three months and more, glowing somewhat like a ruddy shield on or near the Lion's breast, but that is not Mars, it is Saturn. And a fine pair he and Regulus have made during these months. With their contrasted colors of orange and blue, they have afforded to the naked eye of the star-gazer much the same kind of sight that a double star like Beta Cygni presents in the telescope.

Last June Mars was "too far off, too faint and too near the Sun," so near the Sun (this refers to his *apparent* distance) that on the 15th of that month he crossed the meridian only three minutes after the Sun and less than a degree from where the Sun crossed it. So faint, that it would have been easier to see the Pole-star in daylight than to have seen him. And so far off that there were two hundred and forty million miles between him and us. But on the 15th of this June his distance is only forty-six millions; his brightness—well that speaks for itself; and his apparent distance from the Sun is nearly as great as it can be. It was as great as it can be—that is 180° —at the end of May, the very time at which, according to some of our local almanacs, Mars was "too near the Sun to be seen."

With the help of the map in the May REVIEW it will be easy for the star-gazer to follow Mars in his motion among the stars. There may be, among the star-gazing readers of the REVIEW, some who have never yet observed this form of celestial motion. If so, and if you are one of them, go and observe it now, and then you will really know for the first time in your life why a planet was called a planet.

On the evening of June 12th you will find Mars half a degree south of Delta Scorpii—the six-point star close to his track on the map. Next evening he will be a little west of that, the evening after a little farther west, and so on until the beginning of July. He will then be more than three degrees west of Delta. During the first week of July there will be very little change in his position. When next a decided change is noticed, he will be found to be moving east—back toward Delta—but farther south than when his motion was retrograde. On July 26th he will be again directly south of Delta, but from two to three times as far from it as he was on June 12th. A fortnight later, on August 9th, he will be due north of Sigma Scorpii, that third magnitude star to the right of Antares. The distance between Mars and Sigma will be nearly a degree. At the same time you will find on the other side of Mars and half a degree away, the fifth magnitude star 19 Scorpii. On August 14th will occur the conjunction between Mars and Antares, the third one this year, and the nearest of the three. The distance will be about a degree and a half.

Less than a tenth of a degree to the north of Mars you will find at the same time another fifth magnitude star, α Scorpii.

Before the end of August Mars will have passed out of the region represented on our map. On the 26th of that month he will be just three degrees south of where he was on April 22nd, when he began retrograding. By that time his opposition season will be well over, but we shall have him as evening star until the end of July 1891, and may easily see him any clear evening until about the beginning of next June. Between the time of his leaving Scorpius in August, next, and the time when we shall be getting our last look at him as evening star, next May or June, he will travel through the constellations Ophiuchus, Sagittarius, Capricornus, Aquarius, Pisces, Aries, Taurus.

In the middle of June 1890 he is about a degree from Delta Scorpii, in the middle of June 1891 he will be about a degree from Epsilon Geminorum. That is quite a lot of travelling in a year for even a planet. Round the shortest way it is a matter of 140 degrees, but the planets are not allowed to go that far that way. Round the way they have to go, this is a distance of 220 degrees. Uranus is a planet as Mars is, but it takes him fifty years to travel over that much of the sky. A star is not a planet, but even the "fixed" stars are in motion—"proper motion" it is called. There is one of them, up near the Big Dipper, which has so much of this motion that it has been named the Runaway Star. With such a name we might expect something extraordinary in the travelling line, but it would take the Runaway Star more than 100,000 years to change its position in the heavens as much as Mars will do between this June and next.

While on his travels Mars meets with all the usual adventures. He passes the stars along his route, sometimes very near them and sometimes right over them. Last March he came very near running over Beta Scorpii. He also passes planets that are slower than himself, and is passed by those that are faster. In the middle of November next he will pass Jupiter, at the distance of a degree. The two planets will then be in Capricornus and for some days the pair will be the most conspicuous object in the evening sky.

The moon moves faster in the heavens than Mars and therefore passes him. She is nearer than he is and sometimes passes between him and us and occults him. It would be a fine sight to have an occultation of Mars when he is as big and bright as he is now.

There has been one occultation of him already this year—on April 9th—but it was chiefly for the benefit of the Sandwich Islands and thereabouts. There will be another on October 20th, but to see it well one ought to be out in the Indian Ocean near Kerguelen Island. Next year Mars will again be occulted twice, but neither of them will be visible here. But on July 11th, 1892, there will be one which will be visible here, and Mars will then be bigger and brighter than he has been this year even when at his best. If we happen to live until then and can manage to have a clear sky, we shall see the best occultation provided for this part of the earth since that of Jupiter last September—and that was spoiled to us by fog, or clouds, or smoke.

The wanderings of Mars among the stars and his meetings with the moon, the other planets, and the stars, during these

wanderings—these are matters that the star gazer can see for himself, and need not take merely at second hand from his books. That is why these matters are chiefly dwelt on here. For information on other matters of interest connected with Mars—his real motion, his orbit, his distance, his size, his moons, his physics, and his chemistry, and his geology; his continents, and ice caps, and seas, and canals; his days and months, and seasons, and years; his astronomers, and engineers, and farmers, and all the rest of the Martioli, those who cut the canals and planted the trees along them, and those who have been so long vainly signalling to us stupid terrestrials by means of huge beacon-lights which at this distance and in our best telescopes look like mere luminous points—for all these things the star gazer must go to books and magazine articles, and must take whatsoever he does take of them at second-hand.

Another fact that any one may learn by merely using his eyes, is that Mars varies in brightness.

Just now he is unusually bright. This is because he is unusually near. At present he is the nearest of all the heavenly bodies, except our moon. He has not been so near since November 1879, and will not be as near again until June 1892. In July and August 1892, he will be nearer and brighter than he is now.

If the orbit of Mars was a circle instead of an ellipse we would have him at his brightest once in every period of two years and two months; and at his brightest he would always be equally bright, and that would be as bright as he was in the middle of May this year. He would be brightest when in "opposition"—that is, when seen by us in the part of the sky opposite to the part where the sun is. When so situated, the earth is between him and the sun, and his distance from us is only the *difference* between his distance from the sun and ours. When not in "opposition," his distance from the earth is of course greater than this and he is then less bright.

All this is true of what really happens, except that when in opposition and brightest for the current season, he is not always equally bright. His orbit is an ellipse not a circle, therefore his distance from the sun is not always the same. Neither is the distance of the earth from the sun always the same. Therefore the difference of these distances is not always the same. And this difference is the distance between the earth and Mars at opposition when he is brightest. Therefore his brightest is not always equally bright. His mean opposition brightness is what he showed in the middle of May. Let us use this as his standard brightness, and call it 100. If his orbit was circular his brightness at opposition would always be this 100. But, as things are, his opposition brightness may be as low as 50, and as high as 240. When at the best this year—June 7th,—it was 120. At the last opposition in April 1888, it was less than 70. At the next one in August 1892, it will be 230. On this same scale, his brightness in the middle of each month of the present year is as follows:—January 9, February 9, March 25, April 50, May 100, June 117, July 80, August 50, September 33, October 23, November 17, December 13. Last summer and Autumn, when Mars was on the farther side of the sun, his brightness was less than 4. And so between August 1889 and August 1892 his brightness varies from 4 to 230.

Expressed in terms of star "Magnitude," the brightness of Mars varies from that of a second magnitude star, like the Pole star, to that of one whose magnitude is *minus* 2, that is, one which is three "magnitudes" brighter than a standard star of the first magnitude like Altair, or Aldebaran, or Antares. There is no star as bright as that (Sirius is about *minus* 1.3) but it is about the brightness of Jupiter at mean opposition.

A. CAMERON.

For the REVIEW.]

Notes for Teaching Music by the Tonic Sol-fa Notation.

SEVENTH PAPER.

A prominent feature in Tonic Sol-fa work has been the preparing pupils for the various certificates issued by the Tonic Sol-fa College, London, England. The preparation for these certificates secures systematic teaching, and is a great stimulus to teacher and pupils. The pupil who passes the requirements for the lowest or Junior Certificate, has made a fair beginning of his musical education, and yet this certificate is quite within the reach of the average pupil of nine or ten years who has received a careful course of twenty lessons of say forty minutes each.

REQUIREMENTS FOR THE JUNIOR CERTIFICATE.

1. Bring on separate slips of paper the names of three tunes and sol-fa from memory while pointing it on the modulator one of these tunes chosen by lot.

These or similar tunes may be learned for this requirement: the pupil should have a Home Modulator.

Key G—Moravia.

{	:D	d	s		m	d		d	:	m		r		
{	:M	s	:	f		m	:	r		d	:	—	—	
{	:M	s	:	f		m	:	d		d	:	m		r
{	:M	s	:	f		m	:	r		d	:	—		—

Key Eb—Innocents.

{	M	:	-	f		s	:	d ¹		t	:	l		s	:	—
{	D	:	-	r		m	:	s		f	:	m		r	:	—
{	M	:	-	f		s	:	d ¹		t	:	l		s	:	—
{	D	:	-	r		m	:	f		m	:	r		d	:	—

Key G—Harts.

{	S ₁	:	s ₁		d	:	d		r	:	r		m	:	—		
{	D	:	d		f	:	m	:	r		d	:	m		r	:	—
{	S	:		m	:	m		f	:	f		r	:	—			
{	M	:	f		s	:	f		m	:	r		d	:	—		

2. Sing on one tone to *laa*, or any other syllable, in perfectly correct time, any one of Nos. 1 to 9 of the "Elementary Rythms" taken by lot. Two attempts allowed. The pupil may *tautai* the exercise in place of the first attempt.

These nine rythms have been given as time exercises in former papers.

3. Sol-fa from the examiner's pointing on the

modulator a voluntary, moving at the rate of M.60, and consisting of at least twenty-four tones, including leaps to any of the tones of the scale, but neither transition nor the minor mode.

4. Sol-fa at first sight from the Tonic Sol-fa Notation a phrase of eight notes, or else the air of a "Single Chant," which has no tones out of the common major scale, and no tones shorter than a pulse.

5. The tones of a *Doh* chord being given by the examiner, tell by ear the Sol-fa name of any one tone of the scale he may sing to *laa*, or play on some instrument.

THE STANDARD SCALE.

While we can pitch *doh* high or low when we wish to sing a particular tune, we require to pitch the *doh* to bring the tune within the compass of the voice. The pitch of a tune, then, is shown by reference to the standard scale. For it a tone is taken high in a man's voice and low in a woman's voice. This tone is produced by 256 vibrations per second. Tuning-forks for singing give the higher octave of this note produced by 512 vibrations. We name this scale thus:

	d ¹	:	—		t	:	l		s	:	f		m	:	r		d	:	—
	C ¹	:	—		B	:	A		G	:	F		E	:	D		C	:	—

The order of the names descending is easily remembered. C¹, then the letters of *bag* and *fed* bring us down to C. M.60, M.45, mean Metronome 60, Metronome 45, which indicates that the rate of movement is sixty pulses per minute or forty-five pulses per minute. A metronome is an instrument on the same principle as the pendulum with moveable bob, which will give the number of vibrations per minute desired.

Songs should be introduced as soon as possible. The singing of musical exercises is only a means towards the singing of songs. It will be well for the teacher to know by heart many good songs adapted to the capacity of his pupils. For the teacher to sing over a good tune with interesting words will enliven the pupils when dull and will develop a taste for music. The singing of such a song might be a reward for any lesson well done. The songs taught to the pupils, however, should not embrace any difficulties that have not been mastered in the exercises, otherwise the tune must be taught by ear, which is a waste of time and hinders the progress in the proper and intelligent singing from notes.

School songs should therefore be carefully graded, and the musical and intellectual capacity of the class must guide the choice. The teaching of difficult classical music, or anything beyond the pupils, can not be defended. Young children should always be

learning pretty songs which they can remember and can sing in their play and for the pleasure of those at home. These songs should be easily within the compass of their voices, and should inculcate duty and call attention to the beauties of nature. Older pupils may study more elaborate pieces, but not too difficult, joined to poetry not too deep but worth remembering.

JAS. ANDERSON.

Mr. A. can post Home Modulators for 16 cents per dozen.

For the Review

Hints for Country Teachers.

To a young teacher, who is just entering upon her duties in an ordinary country school, the prospect is usually discouraging. The house will perhaps be small, the furniture will consist of a number of rough desks and seats, guiltless of paint, the teacher's desk barely long enough to hold the register, and which is already nearly full of copy books, pens, ink, and numerous other things, leaving the teacher quite at a loss as to where she will stow her own books. Then to complete the picture, a map or two, and a blackboard, much too small to be of very much benefit.

Now in face of these drawbacks, is it to be greatly wondered at, that a teacher should gradually lose courage and simply *hear* lessons?

I think there are many who resolve at the outset to "put in the time," thinking they will be more fortunate next term. Now this, of course, is not as it should be. No matter how uncongenial the surroundings may be, that does *not* excuse the teacher for not performing his or her duty.

Much may be done by the teacher to make up for the lack of necessary apparatus. If there are no maps, or, if there should be an important one missing, the teacher can draw it on the blackboard, even though it should occupy the greater part of the blackboard, leaving little room for other work. If colored crayons be used to mark the counties, boundaries, etc., it will enable the pupils to reproduce them more correctly.

Country teachers have many advantages which some of them do not seem to appreciate. I refer to the various flowers and forest trees of which they may easily obtain specimens.

Very little is known about forest trees—that is, by most country pupils. They see them growing everywhere, and are so accustomed to the sight, that they really do not seem to notice the difference between the hard-wood and soft-wood trees, until it is pointed out to them.

If any teacher wishes to secure the attention of the pupils while endeavouring to give lessons on forest

trees of New Brunswick, I may say that I have always found the following method quite successful:

Tell the pupils you intend giving them a few lessons on forest trees, and ask them to bring you specimens of, say four or five different kinds of trees. Small pieces are best, just large enough to show the grain and color of the wood, also if possible the bark. The children will be delighted, and will bring specimens, ranging from apple tree to oak, if they can get them. Then select one from the number for the first lesson; some familiar tree as maple, for example. Let each pupil examine it, and then ask what they have noticed in regard to color, bark, etc., (I usually compare hardwoods with softwoods. Pine presents a striking contrast to maple.) Tell the children the uses of the maple tree, how sap is obtained from it, which can be made into sugar, also the various uses to which the wood is applied, and describe its shape, height, its foliage, and where it grows most abundantly. Of course all this cannot be accomplished in one lesson. The lesson should not exceed fifteen minutes, but you will find on beginning the second lesson, that the children have not forgotten the preceding one. Before describing another tree to the class, review the ground you have gone over—the answers will in some cases be startling, but if the teacher carefully corrects mistakes, the class will be led to see their errors, and will be careful in that respect in future.

These lessons will help to train the observing powers of pupils and perhaps awaken in their minds more admiration for the noble forests which abound in "our own New Brunswick." CIE-CIE.

For the Review

Educational Institute of New Brunswick.

As advertised elsewhere in this number of the REVIEW, the Educational Institute of New Brunswick will be convened this year in Moncton. Always heretofore the meetings have been held either in Fredericton or St. John, and five-sixths of the members have come from the western half of the Province. It is hoped that there will be a large representation this summer from the eastern and northern counties,—while the teachers in the west and south will also gather in undiminished numbers at the metropolis of "the noble county of Westmorland."

According to the regulation, teachers are allowed to take the last three teaching days in June for attendance at the Provincial Institute, and the Provincial and County fund drafts are not diminished in the case of those reported as present at all the sessions. On this occasion, the Saturday will be taken for one of the teaching days, and Monday, the 30th of June, will be substituted for it as a holiday

The first session will be held in the vestry of the Methodist Church, on Thursday, commencing at two o'clock, eastern standard time,—when the enrolment of members will be made, the reports of the Executive and Special committees will be received, and the usual elections will take place.

On that evening there will be a public meeting in the Opera House, to be addressed by Mayor Sumner, of Moncton (who will extend a welcome to the Institute), W. J. Robinson, Esq., Chairman of the Board of School Trustees of Moncton, Dr. Inch of Mt. Allison College, Rev. W. Hinson, Rev. G. M. Campbell, Rev. J. M. Robinson, and others.

At this time also a short address will be given on behalf of the Provincial W. C. T. U. Music will be provided at this and other sessions.

On Friday and Saturday the following papers will be read and discussed:

“Patriotism—How can it be developed in Common Schools?” by Inspector Bridges.

“English in Advanced and High Schools,” by Mr. J. G. A. Belyea, B. A., of Shediac.

“A Scheme for Promoting Pupils in Graded Schools where there is no Local Superintendent,” by Mr. F. O. Sullivan, of St. Stephen.

“Hints on the Teaching of Geography,” by Mr. John March, M. A., of St. John.

“An Illustrative Lesson in Natural Science,” by Mr. John Brittain, of the Provincial Normal School.

In consequence of the ill health of the gentleman who was to have addressed the Institute on the subject of “Professional Progress,” the Secretary has consented to read a paper, if required, to occupy the time.

Gentlemen have been invited to open the discussion following the several papers.

The Executive Committee, at their January meeting, decided to propose that one afternoon be devoted to an excursion, perhaps to Shediac; but no further action has been taken in the matter, and it may be left to the consideration of the Institute.

By request of the Executive Committee of the “Alumni and Alumnae Association of the Provincial Normal School,” the Institute will assemble on Saturday morning a half hour later than usual, in order to allow time for the annual meeting of the Association.

Travelling arrangements have been made as follows. The Intercolonial Railway, Buctouche and Moncton Railway, N. B. and P. E. I. Railway, Chatham Branch, and Caraquet Railway will give free return tickets to members on presentation of certificates of attendance. These return tickets will be procured before returning over the roads named.

Members who travel by the N. B. Railway, or the Northern & Western (Canada Eastern Railway), must ask at the station where they take the train, for *excursion return tickets* for the Educational Institute, to St. John, Fredericton or Chatham Junction, as the case may be, for which they will pay one first-class fare. These may be purchased on the 25th, or 26th of June, (for the N. & W. Railway on the 24th also). Certificates of attendance must be shown also for the return journey on the last named road. The arrangement on the Shore-Line will probably be the same as on the N. & W. Railway. The Elgin & Havelock Railway, gives teachers the benefit of free return fare.

The Union Line of Steamers, and the Steamers “May Queen” and “Arbutus” will return members free on presentation of the usual certificate of attendance.

The limit of time for which the arrangement is good is July 3rd,—and on the N. & W. Railway, July 5th.

No answers have as yet been received from the managers of other railways and steamboats, to whom letters were mailed on the 18th of May.

HERBERT C. CREED, *Secretary.*

Fredericton, May 31st, 1890.

Vacation, Ambition, and Conscience.

“How shall we spend vacation?” becomes the important question as the school term draws to its close. Zealous school people are saying, “Go to a good summer school.” Doctors and friends are urging, “Forget all about school and recruit.” The tired but conscientious teacher who spent last vacation in a rowboat, under a swaying roof of leaves along the margin of some lake is asking, “Did I do right?”

Vacation is our free time for truth-seeking. We may seek it in thousands of pleasant and diverting ways, and the more we find of it, the more we shall want to take it home to our class-rooms. There is scarcely any way of spending vacation that will not make it a benefit to a teacher who loves her pupils. To spend two or three weeks at a good summer school is not a weariness of the spirit to a teacher who feels the greatness of her responsibilities, and earnestly desires to discharge them better year by year. She is sure to catch and impart some inspiration in meeting others of equal enthusiasm with her own, and from widely different localities—sure to get and to give some gleam of truth. The afterpart is to take this new bit of truth away to realms of quietude and rest, and nurse it, that something may come of it. Man is a ruminating animal, and, for the best assimilation of thought, he must lie down in the shade and chew the mental cud. To exchange the ten months'

role of teacher for the three weeks' role of pupil is in itself a rest for most minds. If the studies taken up are not too laborious, the teacher finds that "change of work is play." Then, when the summer school closes, there are still several weeks for absolute rest, the pleasure of which is enhanced by the consciousness of advantages enjoyed at the proper and only possible time.—*N. Y. School Journal*.

Tact in Governing.

Tact does not treat an entire class to a five-minute scold simply because one pupil has not done his work. When one boy is noisy or frivolous, tact does not attract the attention of a dozen industrious ones by a rasping reproof. Tact, having learned that silence is the surest cure for disorder, fixes his eye on the culprit and quietly awaits for him. During change of classes, or at any other odd moments, tact never lets go the reins, for he well knows the value of an ounce of prevention. Tact has few rules, but those he has strictly enforced. Tact makes conviction the foundation of obedience, but strengthens obedience by authority. "Underneath his silken glove there rests the hand of steel." Tact studies the good points of his pupils, and always aims to touch the lever that puts into operation the best that is in a boy; and as carefully avoids all necessary conflict with the bad that may be in him. Tact always does himself as much as he demands of his pupils—puts near work on the blackboard, never lounges, always speaks distinctly. Tact accords the same respect to his pupil's rights as he expects for his own. Tact is constantly increasing his knowledge of the subjects taught and improving his methods of presenting them. He thus brings live blood into every recitation, and does much towards removing the dull monotony that is likely to accompany routine work. Tact puts himself in good humor by taking note that the great body of his boys and girls are earnest, studious, and well disposed. This keeps him from wasting nerve and patience in fretting over the one dull, lazy, or refractory boy that is pretty sure to be found in every school.—*School News*.

No summer school has much value that does not require study. Teachers are not sponges, absorbing knowledge without personal effort. Hearing is one thing, thinking something else. Thinking requires effort, and effort means work. No teacher can go to a summer school and have a "good time" and nothing more.—*School Journal*.

Be punctual. You cannot enforce punctuality on others unless you set an example of it yourself.

Spread of the English Language.

At the opening of the present century there were, in round figures, 20,500,000 people who spoke the English language. They were chiefly in England. We were only a few millions in America. The French speaking people at that time numbered about 31,500,000, and the Germans exceeded 30,000,000. The Russian tongue was spoken by nearly 31,000,000 and the Spanish by more than 50,000,000.

The French speech is now used by 50,000,000 people, the German by about 70,000,000, the Spanish by somewhat more than 40,000,000, the Russian by about 70,000,000, the Italian by about 30,000,000, and the Portuguese by perhaps 13,000,000. The English language has enormously outgrown its competitors. It is used by nearly twice as many people as any one of the others, and its relative growth is sure to continue.

North America alone will soon have 100,000,000 English speaking people. There are 40,000,000 in Great Britain and Ireland. Australia will, a generation hence, have as many English people as England now has.

A Few Misused Words.

ALLUDE to, vulgarism for *refer to*, or *mention*; e. g. "the letter you allude to" though you have alluded to nothing, but have told your story straightforwardly, without hint or innuendo of any kind.

ALONE, for *only*, as, "I am not alone bound by honor."

AMONG, as, "He was there among the rest," for "was in the company," or "was with the rest."

AS, for (I.) *so* is almost universal. The rule is that the double *as* should be employed only when there is direct comparison. The most prevalent misuse is in connection with *soon*; (II.) for *that*, as, "I don't know as they do."

BE, means solely state, existence; but of all vulgarisms the most common is to use it to indicate motion; and, as a verb of motion naturally takes to after it, the confusion about the proper use of *be* induces a corresponding misuse of *to*, where no idea of motion is intended to be conveyed. "I have been to New York" is in no case right, but it is used in two senses: (1) "I was in New York; (2) "I went (or have gone) to New York." Many persons who do not say, "I was to Boston," find "I was *up* (or *down*) to Boston," unobjectionable; and others, who would not say, "I shall be to the theatre this evening," invariably say, "I have been to church this morning." "Pretty as she can be" is used as an emphatic phrase, whereas we

are all of us as pretty as we can be; it is not owing to man's intention or carelessness that he is ugly.

BENEFIT. There prevails an idea that the verb to benefit, in forming its past participle, doubles its final letter, giving rise to the curious-looking word *benefitted*. The fact is that the doubling takes place only in a syllable on which the accent is laid, and the purpose of it is to ensure the right pronunciation.

BUT. (1) We may say that a man is "old but vigorous," because vigor united with age is something unexpected; but we have no right to say, "old but respectable;" (2) "I do not doubt but that he will come." The *but* is wholly unnecessary, and a vulgarism.

CAN, for may. A mistress will say to a servant, "You can go out," meaning to give her permission to go out, the proper word for which is *may*. There is no question whether the girl *could* go out, *i. e.*, had the ability to do so.

CATCH, for reach, as: Catch a car.

CENTRE, for middle. This very simple word comes in for a good deal of maltreatment in our days. It means merely a *point*, never a line; as, "A gangway was left down the centre of the room."

COME OFF, for take place. "The concert will *come off* to-morrow." This vulgarism should never be heard beyond the cock-pit.

CONSIDER, for deem. It means to reflect upon, to take into consideration. We *deem* a man honest; we *consider* the question of his honesty. "Do you consider the dispute settled?" will ever be bad English, however generally sanctioned.

The Eye in Teaching.

The eye of the teacher has an influence he cannot over estimate. It is of the utmost importance that he train himself to look the school squarely in the eye, that he so command a view of the school that whenever a child looks up he may meet the eye of the teacher. The place for the teacher, almost invariably, is at his desk with his face to the school as a whole. There is rarely an excuse for the teacher to have his back to any pupil in the room. In doing blackboard work he is tempted to stand with his back to the school but the occasions for this are not numerous.

The object in facing the school is not primarily for the sake of discipline, though it has this for its aim secondarily. It is largely because the eye is the most economical force to use in commanding attention. Attention the teacher must have; he cannot command it by any order or rule laid down. It must be won by

the teacher, and it must be won by the exercise of some force. The play of the voice is one of the forces, but this requires energy of mind, expenditure of nerve force. Physical activity may secure it, as may personality in physical sympathy, but these are naturally exhaustive. Keeness of intellect, brightness of wit, may hold the attention, but this is a constant draft in its way. While the teacher needs, by way of variety, all of these resources, that which is most economical is the eye. The teacher can put more life, energy and personality into the eye with less draft upon intellect or nerve force than any other way. It is a study to know how to do it. It is high art to do it. Great skill is required but it pays a hundred fold.—*Ed. Gazette.*

In Geography.

Have pupils mold in sand, clay, or putty, a relief map of North America. Then place the molded map before them for written descriptions. The teacher, alive to the slightest mistake, watches pupils as they talk with their pens, and as we so often have said, never allows a second answer to be written until the first is correct. Questions to be written on the board, or given orally. Pupils must get all their answers from the relief map. Tell me one thing about the coast of North America? What is the difference between the eastern and western coasts? The northern and southern coasts? Which coast has the most indentations? Tell me one thing about the western coast? One about the eastern coast? How many highlands are there in North America? Where are the highlands?—*School Journal.*

Physical Drill for Public Schools.

We quote a portion of the preface by the Supervisor of the Halifax Schools of the above named book which was noticed in the April REVIEW, because it so admirably sums up some facts which all our teachers should know. The importance of the subject and the history of the efforts to do something practical in this department are shortly but clearly outlined in the paragraph.

"Almost every great writer on education has given much prominence to the importance of physical culture, both as a thing desirable in itself, and as a means leading to an end—that end being greater possibilities in intellectual and moral development. Judging by estimates of examiners, even our youngest teachers can discourse eloquently on both headings of the text—"A Sound Mind in a Sound Body;" yet in practice the second heading is very generally ignored even by those who are considered our ablest teachers.

Proper care for the bodies of their pupils is most shamefully neglected by most instructors. The *harmonious development* of

the physical powers is seldom thought of. Too often the present or future health of the child is sacrificed for the sake of a display of mental ability, that may, for the time being, increase the reputation of the teacher or gratify the vanity of the short-sighted parent.

School calisthenics cannot take the place of or be considered as important as those absorbing out-of-door games, so in harmony with child nature in the development which they secure, yet calisthenics is an important auxiliary to such agencies as ventilation, light, frequent and judicious changes of study and position, etc., in preserving the highest educational vigour in the classroom. All the voluntary muscles are so connected with the brain that its health and growth are very much increased by their systematic exercise.

Resolutions were passed by the N. S. Educational Association in 1885, and by the Halifax School Commissioners in 1888, affirming the necessity of more attention to physical education in schools. Supervisor McKay and R. J. Wilson, Secretary of the School Commissioners, were appointed a committee by the Halifax Board. The result was the preparation of an excellent manual of physical exercises, by Sergeant-Major Bailey.

Examining Slate Work.

A question usually arises about examining slate work, to what extent is it best to examine, and how can it be done without the loss of much time. When the exercise is mere copying, or lists of words, a look at the slate as a whole, with here and there a commendation for neatness, or a correction of prominent mistakes, is sufficient. We have seen two ways of doing this rapidly, which have proved good. Let each child take his slate in both hands and hold it as he would his reader. The teacher can pass quickly up and down the aisles and see the work at a glance: at the same time the school presents an orderly appearance. Another way, especially adapted to primary schools, is to have the pupils of one row rise and pass down the right-hand aisle to the teacher, letting her look at the work, then passing around the left-hand side to their respective places, when the next row will rise and proceed in the same way. There need be no confused group, but rather a continuous procession; it also gives the little folks a change of position and motion.—*Popular Education*.

Govern your own pupils. Do not show weakness by asking the principal or school board to come to your assistance, unless in a great emergency. The teacher who is continually referring cases of discipline to the principal or board cannot long maintain control of her school.—*Greenwood's Principles of Education*.

Manitoba's New School Law.

The department is to consist practically of the Government, but the technical work is vested in the Advisory Board of five. Two nominated by the Government, one elected by the Provincial School Trustees, one by the Teachers, and one by the University Council.

Religious exercises in the public schools shall be conducted according to the regulations of the Advisory Board. The time for such religious exercises shall be just before the closing hour in the afternoon. In case the parent or guardian notifies the teacher that he does not wish such pupil to attend such religious exercises, then such pupil shall be dismissed before such religious exercises take place. Religious exercises shall be held in a public school entirely at the option of the school trustees for the district, and upon receiving written authority from the trustees it shall be the duty of the teachers to hold such religious exercises. The public schools shall be entirely non-sectarian, and no religious instruction or exercises shall be allowed therein except as above provided. The Act came into effect on May first.—*Manitoba Colonist*.

The *Writer* gives these four lines concerning the proper use of *shall* and *will*:

In the first person, simply, *shall* foretells;
In *will* a threat or else a promise dwells;
Shall in the second or the third doth threaten,
Will simply then foretells the future feat."

Paraphrasing is a kind of exercise that has several uses.

1. To bind the student's attention closely to every word and phrase, meaning and shadow of meaning.
2. To enable the teacher to tell whether the student has accurately and fully understood the passage.

Paraphrase the following:

"How happy is he born and taught
That serveth not another's will—
Whose armour is his honest thought,
And simple truth his utmost skill."

This may be changed to prose as follows:

"How happy by birth, as well as by education, is the man who is not obliged to be a slave to the will of another—whose only armour is his honesty and simple goodness, whose best and utmost skill lies in plain straight-forwardness."

Never find fault unless compelled to do so. The withholding of praise will soon be regarded as an expression of displeasure. So you will save time and temper.

EDUCATIONAL OPINION.

The value of an education is not to be estimated in dollars and cents. Knowledge cannot be weighed in a commercial scale. The primary question is not whether a man can make ten dollars per week, uneducated, or twenty dollars per week, educated: it is, how can he make the most of himself, how can he best develop his personality, how can he accomplish the greatest good for the greatest number?

A bright young fellow recently asked, "What good will it ever do me to study algebra?" He was measuring the value of knowledge by this little tape-measure, whose divisions are the symbol $\$$. It was explained to him that the "good" consisted in the mental advancement accruing from disciplining the mind to systematic reasoning: that while he might never use what he learned in the exact form in which he learned it, and while he might apparently forget it, yet the effect of his study would remain through life in the ability to think better and to grapple more successfully with difficult questions. An esteemed friend recently put this thought neatly when he said that while he could not now recollect what particular food he ate for dinner a month ago, yet that food went towards building up the wasted physical tissues, and so while he could not now remember the formulas and principles of the higher mathematics which he studied in college years ago, yet those formulas and principles helped to build up his mind and to make him intellectually the man he has become.—*U. S. Education Report*.

Our Normal School is doing excellent and efficient work, but no one will deny that its efficiency would be increased by lopping off the work that properly belongs to the high schools and making it in reality what it is in name. The local government contributes liberally to the maintenance of our schools and academies, and wholly supports the Normal School, thus practically paying twice, to a certain extent, for the same work. From a business point of view this would be considered extravagant. Let each institution do its own peculiar work, and we will have better teachers and better schools.—*Truro Guardian*.

The New Brunswick base ball league, which consists of clubs made up mainly of imported players, will have little effect in the promotion of healthful sport in the province, nor will the winning club bring much glory to the city which supports it. It is all just a matter of money. What we want is less of the professional and more of the amateur in the games for the young and rising generation.—*St. Croix Courier*.

PERSONAL.

The University of New Brunswick has conferred the Degree of B.Sc., on Mr. Philip Cox, Principal of the Newcastle High School. This is a deserved recognition of Mr. Cox's abilities as a working naturalist. He is a recognized authority on the birds of the province, and is a close student in other branches of natural science.

Prof. Maxime Ingres, of the Ingres-Coutellier School of Modern Languages, is writing a series of articles on Public Instruction in France in the *St. John Daily Sun*. Prof. Ingres shows an intimate knowledge of the history of education in France, and the ease with which he uses the English language gives evidence of a ripe scholarship.

Mr. Edward Fulton, B. A., (Dalhousie) at present supplying Dr. Hall's place in the Truro Normal School, has been admitted to the senior class of Harvard. Graduation with honors from Dalhousie, we are informed, will admit to the post-graduate course at Harvard.

Principal Campbell sends us a large bouquet of *Viola pubescens* from the Salmon River, Truro. He also says the species is quite abundant on the St. Mary's River, Guysboro, N. S.

Herr Lothar Bober, of the Conversation School of Modern Languages, has large classes in German, in Pictou and New Glasgow.

The Halifax Teachers' Association, are now specially studying Botany under the direction of Principal Ida M. Creighton of Compton Avenue School.

Dr. Burwash, professor of natural science at Mount Allison, has accepted a chair in Victoria College, Coburg, Ont.

Mr. John Nicholson, a graduate of McGill College, has been appointed Superintendent of Education for Prince Edward Island.

AMONG THE HIGH SCHOOLS.

One hundred and one students stood the terminal examination in the Truro Academy, instead of seventy as formerly reported. A musical and literary entertainment given by the students, under the leadership of Miss Griffin, added more than one hundred dollars to the funds.

Halifax Academy opens with two hundred and fifteen students. The attendance last term was ten per cent larger than ever before. Military drill as in the new physical exercise book has been introduced.

Pictou Academy opens with over one hundred and seventy.

QUESTION DEPARTMENT.

There is a stack of hay in the shape of a cone 15 ft. high. A owns two thirds, B, one third. How much must A take from the top in order to get his share.

The solidity of a cone = $\frac{1}{3}$ area of base \times perp. ht.

Let C = circumference of base of cone.

c = " " " " A's share.

H = height of cone.

h = " " A's share.

Then sol. of cone = $\frac{1}{3} C^2 \times 0.758 \times 15$

$= \frac{1}{3} C^2 \times 0.758$

And sol. of A's share = $\frac{1}{3} c^2 \times 0.758 \times h$

$= \frac{1}{3} c^2 \times 0.758$

Since A's share = $\frac{2}{3}$ of whole cone

$\therefore \frac{1}{3} \frac{c^2}{C^2} \times 0.758 = \frac{2}{3} \times \frac{1}{3} C^2 \times 0.758$

Divide by 0.758 $\frac{c^2}{C^2} = \frac{2}{3} C^2$

Multiply by 3 $3 \frac{c^2}{C^2} = 2 C^2$

$h = \frac{10 \sqrt{3}}{c}$

Again, in a cone, sections made by planes parallel to the base are curves similar to the base; and the ratio between the two curves is equal to the ratio of their distances from the apex of the cone.

That is $C : c :: H : h$

In this case $C : c :: 15 : h$

$C = 15$

$\therefore c = \frac{h}{3}$

Substitute this value of c in $h = \frac{10 \sqrt{3}}{c}$

That is $h = \frac{10 \sqrt{3}}{\frac{h}{3}}$

$h = \frac{10 \sqrt{3} \times 3}{h}$

$h^2 = 2250$

$h = \sqrt{2250}$

$\therefore h = 15.1$ Ans.

BOOK REVIEWS.

PRACTICAL LESSONS IN GERMAN CONVERSATION. A companion to all German Grammars, by A. L. MOSSNER, M. A., Ph. D., D. Lit., Librarian and Professor of Modern Languages in Queen's College, Belfast. Pp. xi + 231. Boston, D. C. Heath & Co., Publishers, 1889. This volume is one which may be a companion to any German Grammar as its title page implies, and will be found a valuable companion for any German student. The German conversation is on one page faced by the English on the other. The conversation appears to be admirably selected with a view apparently to cover all the most likely topics of conversation. While our cousins across the border are very energetic in publishing books in superior form, we notice that many of them are of British authorship, and this one. The idea appears to be to get a good book, altogether independent of the nationality of the author, a principle of which every intelligent man must approve.

SESSENHEIM, from Goethe's "Die Leiden des Werthers," edited with an introduction and notes by H. C. O. HASL. Ph. D. pp. 83, paper. Boston, D. C. Heath & Co., 1889. One of the most interesting romances of the immortal German author,

based on his own experience at Sessenheim near Strasburg, in the university in which he finished his studies in law, 1771.

A PRIMER OF SCHOOL MANAGEMENT. Pedagogical Primer Series, No. 1, pp. 45, paper. C. W. BARDEEN, Syracuse, N. Y., 1890. A small, cheap, concisely expressed summary of an extensive subject. The Pedagogical Primer Series has opened up well in P. S. No. 1.

EXERCISES IN FRENCH SYNTAX, by F. STORR, Head master Modern Subjects Merchants' Schools, London. Boston, D. C. Heath & Co., Publishers. This is a small book of about 100 pages, containing explanations of difficulties of French syntax. The grouping is excellent, and it cannot fail to be a great acquisition to a French student.

CLASSICS FOR CHILDREN. Heroic ballads, with poems of war and patriotism, edited with notes by D. H. MONTGOMERY, pp. vi + 316. Boston, U. S. A., Ginn & Company, 1890. Selections from standard English, Scottish, Irish, American, and other patriotic and martial poems.

THE BEST ELIZABETHAN PLAYS. Edited with an introduction by William R. THAYER. Boston, Ginn & Co., Publishers. The selection comprises *The Jew of Malta*, by Marlowe, *The Jew of Seville*, by Beaumont and Fletcher, *The Merry Wives of Windsor*, by Fletcher and Shakespeare, and *The Revenger's Tragedy*, by Webster. It thus furnishes not only the best specimen of the dramatic works of each of the two Elizabethan Poets who rank next to Shakespeare, but also a general view of the development of the English Drama from its rise in Marlowe to its last strong expression in Webster. This volume appeals to the general reader who wishes to get, in a small compass, the best products of the Elizabethan Drama, exclusive of Shakespeare, and also to the students in academies or colleges, who are studying this most important period of English Literature. It is a work equally well adapted to the library and to the class room.

THE ALCESTIS OF EURIPIDES, AND VIRGIL'S ÆNEID, BOOK III, with introduction, notes and a complete vocabulary. These are the latest publications in the Elementary Classics Series by MacMillan & Co., London, and New York. Students will regard with pleasure any additions to this cheap and excellent series. The little volumes just published are as admirable in typographical excellence and literary finish as their predecessors.

AMERICAN FARMS, by J. R. ELLIOTT, Annapolis Co., N. S. This very readable book is the latest in Putnam's well known series of *Questions for the Day*, and no public question is of wider scope. For it relates to the whole agricultural interest throughout the world, though dealing especially with Canada and the United States. The author is in downright earnest, and has marshalled an array of facts and figures to prove that the farmer is everywhere being pressed to the wall by the other classes of the community in consequence of his not acting in political concert with his own class as the others do, and as they can more conveniently do, from the fact that they are collected in cities and towns, and thus able to act more *en masse*. Farmers should study this book, and learn the dangers that threaten them, and how, if possible, to confront or avoid them. The present is a time of wholesale migration from the country into towns, as well as of the development of giant industries, and if, as the author contends, the farmer is placed at a heavy political disadvantage, it is the interest of the community at

large, that the wrong should be righted. Mr. Elliott puts in a strong plea for the rights of agriculture, and his statements should be weighed, and if erroneous combated. The question in fact, is one that concerns all thoughtful minds. The numerous references and questions show that the writer has sought to elucidate his subject from all sources, and invest it with the interest it deserves, and, the result is, as before said, to produce a very readable, and instructive work.

BOOKS RECEIVED.

FIRST GREEK GRAMMAR SYNTAX, by W. Gunion Rutherford, MacMillan & Co., London, and New York.
ROBERT BROWNING, C. W. Bardeen, Syracuse, N. Y.
HOW TO PRESERVE HEALTH, American News Co., N. Y.

PUBLICATIONS RECEIVED.

In *Century* for June is begun a cleverly written story—The Anglomaniacs. . . . Among the subjects treated in the Popular Science Monthly for June are—Education and Crime, Tin and its Native land, Animal and Plant Lore. . . . St. Nicholas for June is an exceedingly good number, both in illustrations and reading matter. . . . *Wide Awake* for June is a bright and readable number and will be enjoyed by young folks. . . . The Toronto *Educational Journal* commences its fourth volume with a new and appropriate heading and is otherwise much improved in appearance. . . . The *Maritime Medical News*, although a native production, seems to take rank with medical journals of a greater constituency. . . . The April number of the *American Naturalist* has an interesting article on the history of Garden Vegetables. . . . The April *Microscope* has an illustrated article on "A Busy Man's Microscopical Laboratory. . . . We have not seen the *American Geologist* since March. . . . *Science* in its weekly rounds is filled with a great variety of interesting scientific news. . . . *L'Enseignement Primaire* of Quebec is specially interesting to us, partly, we suppose, on account of the difference in our systems of education.

Making Money in Vacation.

About one year ago I procured instructions for plating with Gold, Silver and Nickel, and devoted my summer vacation to plating. In 43 days I cleared \$391.10, a sufficient amount to pay my expenses for the college year. At nearly every house I plated spoons, castors or jewelry, and find it pleasant, instructive and profitable. My brother in 19 days cleared \$162.40. Knowing that there are many desiring an education who have not the necessary means I trust that my experience will be to such, a joyful revelation. By sending 25 cents to The Zanesville Chemical Co., Zanesville, Ohio, you will receive directions for making Gold, Silver and Nickel solutions, with the necessary instructions for using them and in an hour's practice you will be quite proficient.

NELLIE B.—

NOVA SCOTIA SUMMER SCHOOL OF SCIENCE.

The Fourth Annual Session of the Nova Scotia Summer School of Science will be held at Parrsboro, N. S., from July 21st to August 2nd, 1890. Opening address in the Skating Rink, July 21st, 7.30 p. m. The course of study includes:

ZOOLOGY, 8 lectures—By Principal A. H. MacKay, Halifax Academy; assisted by John Brittain, Esq., N. B. Normal School, Fredericton.

BOTANY, 8 lectures—By Inspector Lay, Amherst; assisted by Prin. Creighton, Compton Avenue School, Halifax.

MINERALOGY, 8 lectures—By A. J. Pinco, A. M., Truro; assisted by Miss Mary Dwyer, St. Mary's School, Halifax.

PHYSICS, 8 lectures—By Principal E. McKay, New Glasgow.

CHEMISTRY, 8 lectures—By Prof. A. E. Caldwell, Acadia College, Wolfville; assisted by W. T. Kennedy, Esq., Halifax Academy.

PHYSIOLOGY, 8 lectures—By Prof. Burwash, Mt. Allison College, Sackville.

GEOLOGY, 4 lectures—By Prof. Kennedy, Kings College, Windsor.

ASTRONOMY, 4 lectures—By Principal Cameron, Yarmouth Academy.

TONIC SOL-Fa—Miss A. F. Ryan, St. Mary's School, Halifax.

ELOCUTION—By Miss H. E. Wallace, Acadia Seminary, Wolfville.

MODERN LANGUAGES—By Herr Lothar Bober, Halifax.

It is only in very exceptional circumstances that teachers and science students can take a holiday excursion so cheap, so profitable, and so delightful and refreshing as that here offered. Class fees from \$2.00 to \$6.00; board, \$6.00, with free or one-third return tickets. For a person living 100 miles from Parrsboro, \$15.00 will easily cover necessary expenses—including apparatus, etc.

Laboratory and Field work will be made the basis of all the science teaching.

There will be an opportunity of acquiring a theoretical and practical knowledge of Tonic Sol-fa.

The talented elocutionist of Acadia Seminary has consented to give a course of lessons on "Voice Culture and the Teaching of Reading."

Herr Lothar Bober, whose classes include the leading educationists of Halifax and Truro, and who is most favorably known in Fredericton and St. John, will illustrate the true method of acquiring a conversational mastery of modern languages.

The attention of teachers and science students in the Maritime Provinces is invited to the professional and practical advantages of this Summer School.

For a calendar giving full particulars regarding text-books, their cost, apparatus, etc., recommendations from the lecturers, etc., address

A. MCKAY,
Secretary Summer School of Science,
Halifax, N. S.

Halifax, 7th February, 1890.

If you want the Best

laboratory CHEMISTRY, PHYSICS, or ZOOLOGY, for High School or College; a most attractive GEOLOGY for High School or for supplementary reading; or a GENERAL HISTORY that will intensely interest the student in his work; or bright conversational LESSONS IN LATIN;—if you want a series of Language Lessons, an ENGLISH GRAMMAR or LITERATURE, that will give the best working knowledge of these subjects with the least expenditure of time;—if you want a practical ARITHMETIC with a little theory and much practice for High Schools;—or a set of AIDS FOR NUMBER by a skilful and experienced teacher of children; or STUDIES AND GAMES FOR THE KINDERGARTEN, or charming NATURE READERS for supplementary reading; or a set of new, practical, well graded DRAWING or MUSIC BOOKS;—if you are a teacher or student of MODERN LANGUAGES and want the brightest, best selected of *modern nouvelles in French and German*; the most scholarly editions of classic poems and dramas; the most attractive READERS for beginners; the most thorough and compact FRENCH, GERMAN or ITALIAN GRAMMAR;—if you want MAPS of any kind; or any book *useful in education or about education*, such as the most readable editions of ROUSSEAU, PESTALOZZI, ROSMINI, or CAMPAYRE, in clear, compact, handsome and useful editions; the most progressive and scholarly educational works of the present time, already approved and adopted by thousands of our superior teachers,

Send for our Descriptive
Catalogue and Price List.

D. C. HEATH & Co., Publishers, Boston, New York & Chicago,

GINN & COMPANY

INVITE ATTENTION TO

ALLEN & GREENOUGH'S LATIN SERIES.

Grammar, Caesar, Cicero, Virgil, and Ovid, with full introductions, notes, vocabulary, exercises, and illustrations. Ginn & Davis's Beginners Latin Book. Cicero's Prose. Virgil's Aeneid.

There is no work of this size and scope which so completely fulfills the requirements of the American College and University.

This series of manuals is the only one of its kind in the United States. Ginn & Davis's Latin Book, published in 1885, is the only one of its kind in the United States.

The Publishers' Latin Book, published in 1885, is the only one of its kind in the United States.

GOODWIN & WHITE'S GREEK SERIES.

Grammar, Lessons, Beginners' Greek Book, and the play of Cæsar & Darius's Beginners' Latin Book. Analysis with vocabulary, and Seymour's Prose with illustrated vocabulary.

A knowledge of Greek is an essential part of the education of every student of the University of Massachusetts.

WENTWORTH'S MATHEMATICAL SERIES.

The most popular books of the past decade. Arithmetics, Algebra, Geometry, Trigonometry, etc.

In the United States there are not less than 300 colleges and 1,000 secondary schools. The Algebra, Geometry, Trigonometry, and all of these, and the books may be found in leading institutions in Great Britain, France, and a China, Japan, and the Hawaiian Islands.

GAGE & WILLIAMS' NATURAL SCIENCE.

Elements of Physics (Gage), Introduction to Physical Science (Gage), Introduction to Chemical Science (Williams), Laboratory Manual of General Chemistry (Williams).

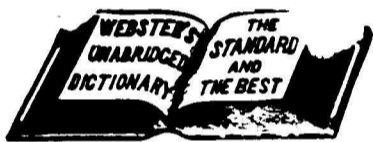
These are not only examined but studied by the Physical Science and Chemistry students of the leading universities of the United States.

The Gage & Williams' Natural Science, Williams' Chemical Science, and many others.

Also many other valuable text books described in our full catalogue, which is sent free on application.

GINN & COMPANY, Boston, New York, Chicago and London.

WEBSTER



ANCIENT AND MODERN. DON'T BE DUPED

A second edition of Webster's Unabridged Dictionary is being offered to the public at a very low price. The body of the book, from A to Z, is a cheap reprint, page for page, of the edition of 1847, which was in its day a valuable book, but, in the progress of language, for over forty years, has been completely superseded. It is now reproduced, by key-type, errors and all, by a photographic process, is printed on cheap paper and flimsily bound. It is advertised to be the substantial equivalent of an eight to twelve dollar book, while in fact it is a literal copy of a book which in its day was retailed for about \$7.00, and that book was much superior in paper, print, and binding to this imitation, and was then the best Dictionary of the time instead of an antiquated one. A brief comparison, page by page, between the reprint and the latest and enlarged edition will show the great superiority of the latter. No honest dealer will allow the buyer of such a book to suppose that he is getting the Webster which to-day is accepted as the Standard and The Best.

There are several other reprints, differing in minor particulars, but don't be duped, the body of each is a literal copy of the 1847 edition.

WHAT THE PAPERS SAY.

The New York Times says:

"Only those who are ignorant of the great advances that have been made in dictionaries are likely to buy this reprint at any price."

The American Bookseller of N. Y. says:

"The etymologies are utterly mislead-

ing and naturally so, for when the Webster of 1847 was issued Comparative Philology was in its cradle. The definitions are imperfect, requiring condensation, rearrangement, and additions. The vocabulary is defective, some of the commonest words of to-day especially scientific terms for which no entry is most often consulted, being entirely absent. In no one of these three prime requisites of a dictionary as the Webster reprint a trustworthy guide, or rather, it is a misleading one."

This reprint is not intended for intelligent men. It is made expressly to be foisted by all the arts of the book-buyer on those who have been precluded from a knowledge of what developments lexicography has undergone during the last forty-two years. This is the crudest form of this most vexatious enterprise. The Buffalo Christian Advocate says:

"Don't be duped. Thousands are more likely to buy the flashy, fraudulent advertisements of 'The Original Webster's Unabridged Dictionary,' which is offered for three or four dollars."

If any of our readers wish to invest in a purchase which they will be likely afterward to regret, they will do so after being fully notified.

The Journal of Education, Boston says:

"Teachers cannot be too careful not to be imposed on, since the very things which make a dictionary valuable in school are wanting in this old-time reprint. Any high school dictionary which can be purchased for a dollar and fifty cents is worth more for school use than this."

Many other prominent journals speak in similar terms and legitimate publishers write us in strong condemnation of this attempt to foist an obsolete book on the public.

The latest and the best, which bears our imprint on the title page, has over 2,000 pages with illustrations on almost every page.

G. & C. MERRIAM & CO.,
SPRINGFIELD, MASS.

IT PAYS ADVERTISERS TO KEEP POSTED.



days for a book of more than 200 pages devoted to Newspaper Advertising, and containing information valuable alike to experienced and intending advertisers.



pay for a year's subscription to PRINTERS' INK, a journal no advertiser alive to his own interests can afford to be without.

Issued twice a month and containing articles bearing on every branch in advertising. In fact the trade journal of American advertisers. A sample copy will be sent for Five Cents. Address

GEO. P. ROWELL & CO'S
Newspaper Advertising Bureau,
10 Spruce St., New York.

1889. FALL—WINTER. 1890.

COMPLETE IN EVERY DEPARTMENT.

OUR STOCK OF

DRY AND FANCY GOODS,

Specialties in DRESS GOODS, including newest designs in DRESS ROBES, Ladies' WRAPS and JACKETS in CLOTH, PLUSH AND FUR, also FURLINED CLOAKS, TRIMMED MILLINERY, FUR BOAS and MUFFS.

STAPLE GOODS AT LOW PRICES.

Custom Tailoring in Ladies' and Gentlemen's Outside Garments by skilled workmen on the premises. Samples on application.

The Largest Showrooms in the Lower Provinces.

WHOLESALE AND RETAIL

W.M. CUMMINGS & SONS, = Commercial St. Truro, N. S.

MCGILL UNIVERSITY,
MONTREAL.

The Calendar for the Session of 1889-90 contains information respecting conditions of Entrance, Course of Study, Degrees, etc., in the several Faculties and Departments of the University, as follows:—

FACULTY OF ARTS—(Opening Sept. 16th, 1889).
DONALDA SPECIAL COURSE FOR WOMEN—(Sept. 16th).
FACULTY OF APPLIED SCIENCE—Civil Engineering, Mechanical Engineering, Mining Engineering, and Practical Chemistry. (Sept. 16th).

FACULTY OF MEDICINE—(Oct. 1st).
FACULTY OF LAW—(Oct. 1st).
MCGILL NORMAL SCHOOL—(Sept. 2nd).

Copies of the Calendar may be obtained on application to the undersigned.

The complete Calendar, with University Lists, Examination Papers, &c., will shortly appear, and may also be had of the undersigned.

Address McGill College.

12th ANNUAL MEETING
OF THE
EDUCATIONAL INSTITUTE
OF NEW BRUNSWICK.

MONCTON,
June 26, 27 and 28—1890.

Six Sessions, opening at 2 o'clock, standard time, on Thursday, closing at about noon on Saturday.

Ordinary sessions in the Vestry of the Methodist Church.

Public Meeting on Thursday evening in the Opera House. Platform speeches by prominent speakers. Addresses on Scientific Temperance Instruction.

Papers and discussions at subsequent sessions, on subjects previously announced, with the addition of others.

For Terms of Membership see Regulation 23, Manual of the School Law, '84.

Travelling arrangements as usual. For particulars see communication on another page.

HERBERT C. CREED,
Fredericton, May 30, Secretary.

J. W. BRAKENRIDGE, B.C.L., Act'g Secretary.

—IN PRESS—

Will be ready this month.

PHYSICAL DRILL

—FOR—

PUBLIC SCHOOLS.

In Four Parts, with Illustrations.

BY

SERGT-MAJOR D. BAILEY,

Military Gymnastic Instructor.

PUBLISHERS:

T. C. ALLEN & CO.

Halifax, N. S.

Catarrh, Catarrhal Deafness, Hay Fever.

A new Home Treatment. Sufferers are not generally aware that these diseases are contagious, or that they are due to the presence of living parasites in the lining membrane of the nose and eustachian tubes. Microscopic research however, has proved this to be a fact, and the result is that a simple remedy has been formulated whereby catarrh, catarrhal deafness and hay fever are permanently cured in from one to three simple applications made at home by the patient once in two weeks. N.B.—For catarrhal discharges peculiar to females (whites) this remedy is a specific. A pamphlet explaining this new treatment is sent on receipt of ten cents by A. H. DIXON & SONS, 303 West King St., Toronto, Canada.—*Scientific American.*

Sufferers from catarrhal troubles should carefully read the above.

HARVARD UNIVERSITY.

SUMMER SCHOOLS.

Harvard University offers summer instruction in the following departments, viz.:

Four courses in Chemistry, two in Experimental Physics, three in Geology, two in Topography; also courses in Botany, French, German, Physical Training and Medicine.

Except the courses in Medicine and the advanced courses in Geology, they are open to both men and women.

For information, address Secretary of Harvard University, Cambridge, Mass.

