## THE EDUCATIONAL REVIEW.

Its Contributors are of the foremost Educational Workers in Canada, and it will be found of great interest to teachers and others. Subscriptions Received by...

JUNE and JULY NUMBERS NOW ON SALE.
J. \& A. MMc MMILLAN, SAINT JOHN, N. B.


[^0] other prizes may be_obtained by applying to the President. The President will be glad to correspond with any student wishing information,

## TEACHERS AND SCHOOL TRUSTEES!

Our Stock of

## School Books, Maps,

## Globes stationery

Is Most Gomplete.
SEND FOR catalogue. N.A. W. MacKinlay, ${ }_{135}$ and 137 cranvilie strreet, Halifax, N. S.

FRANCIS \& VAUGHAN, WHOLESAL.K \& RETAIL
Boot \& Shoe Manufacturers, 19 King Street, North Side, Saint John, N. B.
Fine boots \& Shoes a Specialty.


Thornk Bros., Hatters and Furriers, 98 King Street, St. John, N. B.
A EUIT BUPPIY


SCHOOLS and STUDENTS
are to be had at
WILEY'S DRUG STORE,
(opposite Normal School) FREDERICTON. N. B.

## Chemical Apparatus

RE-A GENTS
Supplied to Teachers and Schools on favorable terms, by

## BROWN \& WEBB,

Falifax.
Physical and other Apparatus Imported to 0 rder.

## Upper Canada College. <br> $+$

Founded 1829.
Principal, G. R. Parkin, M. A, LL.D.
The College will re-open on September 14th. Full particulars about admission will be furnished on application to the Bursar.
Its large grounds, healthy site, splendid school buildings and efficient staff, combine to make the College a most desirable school for residential pupils.

Deer Park, Toronto, July, 1897.
Every Teacher and Pupil should see a copy of the pupils' paper of Canada

THE ENTRANCE
This litt'e paper, issued twice a month, is sold at 25 cents per year or 20 cents in elubs of two or more It has nuw a circulation of 17,500 .
Special reduced rate until September. 1897.
Subsciption to Sept. 1st, 1897 , at 15 cts. Send for a sample copy. Address :

The Entrance, $8 ;$ Winchester St., Toronto.
to per Cent. Discount Allowed to School Techers on

## OLD and SILVER

 WWATCHESAt A. \& J. HAY'S, 76 King Street ST. JOHN, N. B.

Br Getting

## A Half Tone Engraving

Of Groups, all can have copies of photo

## At Verv Little

$\rightarrow$ EXPENSE.

Send for Samples and Prices.

## F. C. Wesley Co. ST. JOHN, N. B.

## Blue Serges,

No Suit ever meets with more favor, gives better satisfaction, looks nicer, than a well tailored good Blue Serge. It has that about it which cleans and brushes up nicely and is always gentlemanly.
Our demands for serges in blue and black has been large. While the price of our blue serge suits is moderate ( $\$ 15$ upwards), you will find the tailoring high class inside and out.
A. GILMOUR, Merchant Tailor,

68 King Street,St, John, N. B.

# The Educational Review. 

Devoted to Advanced Methods of Education and General Culture.

| Published Monthly. | ST. JOHN, N. B., JULY-AUGUST, 1897. |
| :--- | :---: | :---: | :---: |

## THE EDUCATIONAL REVIEW.

Subscribers should promptly notify the REVIEW of change of address giving old as well as new address. Communications from New Brunswick should be addressed EDUCATIONAL REVIEW, St. John; from Nova Scotia and Newfoundland to W. T. Kennedy, Academy, Halifax from Prince Edward Island to J. D. Seaman, Charlottetown.

Printed by Barnes \& Co., St. Jobn, N. B., who are authorized to receive subscriptions and make contracts for advertising.

## CONTENTS:



No Review was issued in July.
The new text-book on Canadian History has been received and will be reviewed next month.

As the closing days in June may have brought many regrets to the conscientious teacher of opportunities not fully taken advantage of to do the best for pupils, so let the opening in August bring matured plans for better work, a determination to make this year a great stride in advance of last year in doing more for the pupil, and therefore in doing more for the teacher.

IT is gratifying to notice, as well as creditable to our public schools and University, that some of our young lady graduates are competing with such success in the United States. The success of Miss Shaw, of St. John, and the prompt recognition of it by the Boston school authorities, gives rise to some reflections. We have graduated many young ladies from our Maritime Colleges at a very great cost to the public. How many of these have been retained in the Provinces? They may be easily counted. Have any inducements been made to them to remain at
home? The answer may be given in the negative with perfect truth. The School Boards of the cities and towns in the Maritime Provinces have not been able to grasp the idea of the benefit of culture in a teacher. It looks to filling the position as cheaply as possible, as was proposed gravely, and, it might be added, ignorantly, to fill up the gaps in the high schools of one large city at a salary of $\$ 200$ per year. Thus our brightest and most highly cultured girls, educated at a great cost by people not by any means opulent, are permitted to do for others what is so much required at home. Can we afford to do this?

If the study of natural science is to be taken seriously in our schools, it seems desirable that pupils should be taught to use their reasoning powers here as well as in mathematics and language. Every branch of natural science, properly taught, has a great disciplinary value. There is as much mental exercise involved in the analysis of a plant as there is in the analysis of a sentence or in mastering a problem in geometry or algebra. And yet the idea is too prevalent that a knowledge of science may be picked up in some general or haphazard fashion, without any special trouble beyond a few directions about observation or assigning lessons from a text. book.

There is a growing necessity for a better definition of the regulation providing school privileges in New Brunswick. The undoubted spirit of it is not only that an open school shall be provided for all pupils, but such an one in addition as shall be suitable to the needs of the more advanced, as well as those requiring instruction of an elementary character. It is not ordinarily construed in this way, however, but by many School Boards is taken to mean that the school shall be kept open as long in the year as will insure non-interference by the inspector, and provided with as cheap a teacher as may be procured. For the sake of peace and good neighborhood, many ratepayers desiring an efficient and regular school refrain from active proceedings to insure them. They evidently have not taken into consideration that the denial of sufficient school privileges to their children may be unneighbourly and selfish. While the regulation
is believed to be sufficient at present by many, all doubt should be removed by authorizing the inspector to require School Boards to provide such a class of teacher as the needs of the district require, with the right of appeal to the Chief Superintendent. Such an alteration will work no hardship, but a great deal of benefit to the schools.

## TALKS WITH TEACHERS.

Owing to the number of difficulties that have arisen over the clause in the contract relating to its extension from year to year, failing notice at other specified times, the question has come up whether or not it might not be expedient to change it so that notice might be given by either party one month before the end of each school term.

I am sorry to say that the consideration of this change has been caused chiefly by the action of teachers in a variety of cases.

Some teachers have taken advantage of the contract and the ignorance of its provisions on the part of trustees in every conceivable way, and have used it to thrust their services upon an unwilling district. On the other hand, taking advantage of their irresponsibility as to property, they have violated its provisions in a number of cases, and left the district if a better opening offered. Again, owing to some informality in the notice, they have retained their places, sometimes by threatening legal proceedings, and in a few cases by actually taking them. It may be said, on the other hand, that the present wording of the contract has had the effect of giving greater permanency to the teachers in country districts, and has prevented many notionate trustees from making changes just for the sake of a change or experiment, and perhaps with a view to greater economy.

I regret to notice in the matter noted that the burthen of complaint is made regarding the action of teachers, though it may be possible that the other side has not been fully reported.

A contract is all very well in its way, but there are many things implied as well as expressed, one of which may be stated: A teacher should be an honorable man or woman. This is due to their profession, as well as to the public. That a great majority of them are goes without saying ; that a few of them are not, is equally obvious from reports that come in.

What kind of a man or woman is it who will persist in remaining in a district with any noticeable public sentiment against him or her ?

Some teachers are so sensitive on this point that they refuse to remain for fear there may be some hidden
feeling against them. This is erring in the opposite direction. Is a man fit to remain in a district who will knowingly take advantage of any of the terms of a contract? Is he a suitable person to hold a license? I am confident that if any case of a teacher leaving a district while still under contract were reported to the Education Office, that that teacher's government money would be withheld.

My own impression is that the contract is best as it is, but that more cognizance should be taken of any infringement of its provisions, especially on the part of teachers.

An instance, or a number of them, may be given of teachers giving notice to terminate the contract to avoid receiving the like, and when it was too late for the other party to take action, to withdraw the notice. Such procedure is only useful to show the dishonesty of the teacher, as every one should know that a notice once given cannot be recalled except with the consent of the other party.

Look carefully into your registers, if new ones, or watch for the official notices in the Review for changes in the course of instruction. There are two that I have heard of - Kennedy \& O'Hearn's Arithmetic, three parts ; supersedes Hall's. If I remember correctly, Part II. is devoted to Grades V. and V I., and Part III. to Grades VII. and VIII. Part I. has been in use for a year.
The Dominion Canadian History (Clement) has been prescribed, and, you will notice, adapted to the requirements of the different grades.

The changes in both texts go into effect at the beginning of the present term.

Such Arbor Day reports as these have a familiar sound: "Arbor Day was observed in this district by the planting of trees ;" "Arbor Day was observed according to regulation in this district."

It is needless to remark that such reports were not noticed. Some teachers failed to report at all, although a very excellent day's work was done. This is scarcely just to any teachers depending on the principal's report for recognition. There is a strong suspicion that the roll was called and a report made in addition in a few schools. Inquiry will be made, and it will be, I imagine, somewhat uncomfortable for any teacher found having done so, as it has the effect of two days instead of one.

I understand that some of the inspectors threaten not to receive any Arbor Day reports after the time specified by regulation. If they come straggling in at all times it greatly adds to the risk of losing them.

## New Academy Building, Windsor, N. S.

In this building all of the rooms have been arranged with windows to the left of scholars, and with the teacher's desk facing the narrow end of the room. Each school-room throughout the building has a coat room for boys and a separate one for girls. These rooms are well lighted, and are connected with the boys' or girls' entrance halls. The planning is such that boys or girls may each enter the building by their proper doors, pass through their coat rooms, and finally emerge in the school-room by different entrances. There can be no
boys' entrance halls, as well as two large top lights, which will be open to the skylights in the roof.

The library is at the end of the main hall on the first story, and is $33 \times 19$. The laboratory is situated over the library, and connects with the principal's room, the latter being about $33 \times 28$, and laboratory $33 \times 16$. On the opposite end of the building is a room for the teacher's use.

The third story contains a large convocation hall, which will hold 450 persons, and spaces for four extra large class-rooms. Small retiring or music rooms adjoin the platform. The basement contains large hoys' and

possibility of confusion, or offthe sexes meeting anywhere between the school-room and the street. Proper warmair supply and ventilation in the coat rooms are provided, so that all the clothes will be aired and dried in proper manner before the pupils leave the building. The main entrance on end elevation has been designed specially for the girl students and teachers, the four smaller entrances on front and rear being exclusively for boys. Four small staircases have been provided for the latter, and a large stair in the main hall for the girls.

The main hall is very wide and excellently lighted, as there are borrowed lights at the ends of the four
girls' play-rooms, with the usual toilet rooms adjoining. The usual coal and fuel rooms are provided. The system of heating is by hot-air furnaces in the basement, from which ducts are taken to the various rooms and halls. The ventilation is by large vent-ducts from each room to Emerson ventilators on the roof. The material for construction will be brick and freestone, with hardwood finish in the interior. The style adopted for the design is a bold Romanesque, which will be appropriate for the locality. As the building will be seen from almost every direction, and as there are so many towers and spires in the neighhorhood, a tower would be out of place. The cost of the building will be about $\$ 35,000$. Elliot \& Hopson, of Halifax, are the architects,

## Principal A. Cameron.

Principal A. Cameron is well known to readers of the Review. His vigorous and wholesome articles on English literature have been widely read and appreciated, not only by teachers, hut by the general public, and the records of his observations on astronomy, in which he is one of the best authorities in Canada, have commanded wide attention, not only in the Review, but in other Maritime Province journals. His connection with the Summer School of Science for the Atlantic Provinces dates from its beginning, and for the past two years he has been its president. He has been the principal of Yarmouth Academy for the past twentythree years. As a teacher he has an extraordinary power of arousing original, independent thought and interest, and his strong personality and inspiring methods of teaching have so impressed themselves on those who have come under his influence that it is easy to account for the feeling of respect with which they regard him. He takes no pains to conceal his contempt for shams, and thereby may have occasionally excited some antagonism ; but anyone who has the ingenuity and patience to get down to hard pan, cannot fail to respect the rugged sincerity of his convictions and his high ideal of plain, unvarnished truth. His eccentricities or whatever you may term them, may arouse your ire a score of times in as many hours, but in your oftrepeated analysis of him you invariably arrive at the same result-his integrity is like a rock, his devil, if he believes in one, is an impersonation of meanness and
deception which may take on as many garbs as that embodiment of $\sin$ is supposed to do. It may take you years to get acquainted with the man, or your first analysis may arrive at the result ; but in either case, whether the mental act be instantaneous or measured by years, your estimate will be - Here is a man.

Mr. Cameron was born near the scene of the Antiquary and of the exploit of Sir Ralph the Rover. He would not thank us to tell where that spot is, as every rearler of Scottish romance is supposed to know. His name is Aeneas Cameron, but, to save people the trouble of mispronouncing and misspelling it, generally uses only $A$. Cameron. He was educated, he tells us, for the last twentythree years at Yarmouth, N. S.; before that atSydney, C. B., for a year, and in various parts of Pictou County for five years; before that at Aberdeen, Dundee, Dublin, Edinburgh, etc. His Scottish birth and education may thus account for the sturdy independence of character which he possesses. and for his logical acuteness of reasoning. Mr. Cameron married Miss Robbins of Yarmouth, and his home-life is everything that a scholar and thinker might desire. His hobbies - as he calls them-are astronomy and English literature. He is a member of an institute of science and two astronomical societies. To spend an evening with him stargazing is a veritable delight, and he has been the means of arousing in many such an intense interest that it is no fault of his if they are not lovers of the stars. His acquaintance with English literature is extensive and accurate, and he has the power to arouse an intense interest in his subject, and send his students everywhere
over the field of literature in such a way that they do not return empty-handed. His teaching is strikingly original and suggestive. To develop interest and awaken thought is ever his goal, and he has no affection for word-mongering in any form. His students at the Summer School are students not for two weeks, but for fifty-two. His interest in the school is unflagging, and the extraordinary success of the session just closed at Yarmouth is a tribute to his influence as a teacher and president.

## Summer School of Science.

The eleventh session of the Summer School of Science for the Atlantic Provinces of Canada was held at Yarmouth, N. S., July 8th to 22 nd, inclusive. This session was the best in the history of the school. The number enrolled was 195. The largest previous enrolment was 121. Much enthusiasm was manifested in the classwork. A marked feature this year was the field work in geology and botany, conducted by Dr. Bailey and Prof. Brittain, respectively.

The several classes, with number enrolled and instructor, were as follows :

| Subject. No. |
| :---: |
| Botany ................... ... 75 |
| Chemistry ....... . ........ 24 |
| Civics. .......... . . ......... 13 |
| Expression . . . . . . . . . . . . . . . 29 |
| English Literature ........... 106 |
| Geology . ..................... 68 |
| Mineralogy............... ... 37 |
| Kindergarten .... ..... .. 26 |
| Music (Tonic-Sol-Fa) . . . . . . . 23 |
| Psychology. . . . . . . . . . . . . . 29 |
| Physics and Meteorology. . . 14 |
| Physiology and Hygiene..... 19 |
| Zoology and Entomology..... 22 |

> Instructor.
> Prof. Brittain, Fredericton
> W. H. Magee, Ph. D., Parrsboro
> J. B. Hall, Ph. D., Truro

> Mina A. Read, Truro
> Prin. Cameron, Yarmouth
> Prof. Bailey, LL.D.
Prof. Foldwell, M. Fredericton
> Prof. Coldwell, M.A., W olfville
> Mrs. Patterson, Truro
> Ada F. Ryan, Halifax
Prof. Murray, M.A., Halifax
> Prof. Murray, M.A., Halifax
Prin. Campbell, M. A., Truro
> S. A. Starrat, Yarmouth
> \{Prin. G. J. Oulton, M.A., Moncton
> $\left\{\begin{array}{l}\text { Prin. G. J. Ouiton, M. A., Moncton } \\ \text { Prin. F. A. Dixon, B. A., Dalhousie }\end{array}\right.$

The excursions this year were more than ordinarily enjoyable, and they were managed by the town free of cost to the members of the school.
With a view to increase, if possible, the number of teachers attending, petitions have been sent to the Superintendents of Education of the several Provinces asking certain advantages for teachers who attend the Summer School.

The next session of the school will be held at Moncton, N. B., July 7 th to 22 nd.

The officers for the ensuing year are :
Patrons-Prof. MacGregor, D. Sc., Halifax, N. S. Dr. G. F. Matthew, St. John, N. B. ; Judge Fitzgerald, Charlottetown, P. E. I.

President G. F. Oulton, M. A., Prin. High School, Moncton, N. B.

Vice-Presidents-F. A. Dixon, B. A., Dalhousie, N.B. ; A. E. Coldwell, M. A., Acadia College, Wolfville, N. S. ; W. H. Magee, Ph. D., Prin. High School, Parrsboro, N. S.

Secretary-Treasurer-J. D. Seaman, Prin. Prince street School, Charlottetown, P. E. I.

The following were enrolled as members of the school :

## Yarmouth.

A Cameron, S A Starratt, Geo H Cain, Hon L E Baker, Mrs L E Baker, T W Johns, Miss Flossie Johns, Rev R D Bambrick, Mrs R D Bambrick, Jas H Munro, Mrs A Cameron, W F Kempton, Royden K Durland, Seddie Cunningham, Mabel Cann, Mrs A G Cann, Frances L, Allen, Katherine Christie, Florence Tooker. E H Cameron. Mrs Edwd F Parker, Maria I Gewis, Anna C Kinney, Brown, Eudora E Hilton, Janie England, E May Lewis, Anna C Kinney, Una Murray, Jennie S Walker, Luella Raymond, D Turnbull, Bertha Ellenwood, Grae Lovitt, Lizzie M Hibbert, Mrs G Theo Goudey, Emily F Goudey, Grace G Murray, Laura Kinney, Miss J Chipman, Margaret Archibald, Amy Goudey, James Bingay, Agnes Webster, Lydia Killam, Mrs Jas W Bingay Crefry, E M Bingay, I M G Webster, Lydia Killam, Mrs Jas W Bingay, C A Cair, Mrs E J Vickery, Allen, Mrs T VanBuskirk Bingay, Jeanette A Cann, B A Richards, Mary Archibald, Sheldon S Poole, Alice E Clements, Ada Munro, Winnifred McGray, Mrs W D Ross, Beatrice Tonker, Rev C F Cooper Mrs J C Redding, Lilian J M Deinstadt, Ada Killam, Carrie Killam, Mrs J T Anderson, Beth Lovitt, George D'Entremont, Mrs J A Abloescher, Estella M Killam, Clive Pelton, Harry J Wyman, Norna B Bingay, Rev E D Millar, H J Guan, Mrs A F Brownrigg, Susie Bown, Laura Crawley, Mrs O A VonMetzke, Mrs Bradford Cann, Bradford Cann, Mrs A H Hood, Mrs B W Harris, Miss A E Robbins. Mrs C S P Robbins, Mrs Arthur S Cook, Mrs G G Sanderson, Mrs J W Manning, Bessie Palmer, Winnie Rodgers, Augustus Cann, Maria B Moody, Dora V T Tooker, Annie G Trask, Mrs W URowe, Benjamin Rogers, Janet MacKay, J Ross Millar, Mrs G Banks, Emilie F Raymond, Mrs Arthur Spinney, A W Horner, Rev Edwin Crowell, Mrs Jas Cann, Miss Lawson, W M Dustan, Mary S Bond, Margaret J Eakins, Maud Stanley Brown, Addie K Richards, Grace Orosby, Mrs Henry Haley, Mrs J Harry King, Mrs G W Grey, Mrs G F Kehoe, Mrs T P stubbert, Margaret W Burrell, Miss A G Moure, Mrs F Redding, Hannah Scott.

## Nova Scotia.

Miss M A Read, Mrs S A Patterson, Truro; A E Coldwell, M A, Wolfville; W H Magee, Ph D, Parrsboro; J B Hall, Ph D Truro; Miss Ada F Ryan, Halifax; W R Campbell, M A, Truro; A H MacKay, LL D, W © Murray, M A, Halifax: Evelyn Burnaby, Port Williams; Edwin F Burnaby, Lower Canaan; Mrs J M Owen, Annapolis; John Purney, Shelburne; Lily Lathern, Halifax; Louisa Wade, Sand Beach; M Belle Martin,
Annie E Etherington, Shelburne; Minnie J Davies, Barrington Head; Zela A Collie, Minnie V Ford, Milton, Queens Co; Margaret L, Doane, Chegoggin; Flora $G$ Morton, Kate Lew is, Nellie M Barss New Germany: Winnifred Moses, South Ohio: Olivia Bayer, Kentville: Winnifred $\mathfrak{G}$ Crowell, Barrington; Cora Durling, Springfirld, Annapolis (lo; Maude DeLong, New Germany; Mary Murphy, Annie A Bingay, Shelburne; Clara C Linton, Susie E Archibald, Truro; Margaret A Fulton, Foily Village, Col Co; K Lillian Wotton, Mary F O'Mullen, Parrsboro; Maggie M Mevicar, Annapolis; Laura Lynds, Folly Village, Col Co; Rev F A Currier, Chegoggin; J E Barteaux, Port Maitland: Lennie M Tedford, New Tusket; Miss Burgoyne, Windsor; Mary Moseley, Halifax; Katherine O'Brien, Noel, Hants Co; Mrs Willis, Halifax; D C Crosby, Port Maitland; Mrs Condon, Halifaz.

## New Brunswick.

J Brittain, Fredericton; G J Oulton, M A, Moncton; F A Dixon, B A, Dalhousie; L W Bailey, LL, D, Fredericton; Margaret M Brady. Moneton; Lily M Clarke, Fairville, St John; Mary E Hayes, Chas J Morrison, E Thompson, Miss J Wetmore, St John; Robt King, Sussex; Julia Neales, Woodstock; Percy G Hall, St John: Miss L A Lathern, Sackville.

## Prince Edward Island.

## J D Seaman, Miss C C Snaddon, Charlottetown.

 United States America.Miss J Wirt, Indianapolis.

## The 1897 Literature Class.

The psychology class was composed chiefly of Yarmouthians ; and when Professor Murray had finished the last of his delightful lectures, he complimented the members upon their alertness and sympathetic quickness of perception. Just as we were feeling a little lifted up with pride, he added, "I am sure that this is largely due to the influence and teaching of one person, whose name I need not mention - only don't make the mistake of letting your prophet be without honor in his own country." We can in no better way show our appreciation of the light "flashed from a living soul" upon ours, in our literature class, than by trying to shed some
of it abroad ; hence these notes to illustrate scientific English literature, as compared with ordinary notes, parsing, etc.

The members of the class this year numbered one hundred and six. Robert Browning was the chosen author. The first poem discussed was "Home Thoughts from Abroad," which brought up Browning as a nature poet ; the truth of his statement of the thrush repeating his song, which he mentions in another poem ; what exactly does noontide mean, and do the butter-cups, " the children's dower," awaken at noontide; what particular hour does any flower which closes at night choose for awakening? Compare "The fields look rough with hoary dew " with Tennyson's lines in "The Two Voices":

> "Sooner or later will gray prime Make thy grass hoar with early rime."

And to explain the "grass," take this from Shakespeare's Pericles, IV.1, 15 :
" I will rob Tellus of her weed,
To strew thy green with flowers."
In "Home Thoughts from the Sea," the past and present pronunciation of Trafalgar and Gibraltar, and Mr. Cameron's funny reading of the last lines, where "pray" and "Africa" are made to shyme, are all that I can recall.
"The Lost Leader" brought forth the questions, Who was the leader? Date of poem? When was Wordsworth made laureate? Who was the preceding laureate? Salary of laureate? Political government in Wordsworth's and Browning's times? The names of Wordsworth's poems showing that he was a poet of the common people? Politics of Milton and Shakespeare? Meaning of "riband"? Why different prepositions used in connection with the names of the four authors mentioned? "Rags were they purple, his heart had been proud," brought out several different possible meanings, and we were left to meditate upon the meaning of the last lines, and turned to "Pippa Passes." What meaning did the title at first convey? What is Pippa's full name? Compare the beautiful sunrise in the introduction with sunrises in Tennyson and elsewhere. It will be worth the trouble to look through Browning for an autumn one. Is it consistent with human nature and dramatic art to put the sentiments that Pippa expresses into the mouth of a simple factory girl ? In connection with this it was suggested that heredity might account for it, which was objected to on the ground that environment, etc., would counteract it. A discussion followed as to whether Lorenzo, in "The Merchant of Venice," was the kind of a man from whom one would expect such peetic speeches. Being in love
accounted for a good deal. Pippa's holiday, the fine morning, etc., may have put her in a similar ecstatic state. Why did Pippa call her day a "twelve-hours' treasure? "Thy long blue, solemn hours serenely flowing," and "Thy fitful, sunshine minutes, coming, going," are fine contrasting lines, and, a little further on, the line "Hinds drove the slow, white oxen up the hills," was picked out as a good illustration of onomatopreia.
"What were all earth else, with a feel of heaven;" give other instances of this use of "feel." The pronunciation of Asolo was shown by scanning the lines in which it occurs, and Browning ceded to be good authority for Italian pronunciation.

Had anyone tried the experiment with the sunbeam mentioned in the lines beginning "Aha, you foolhardy sunbeam," and with what success? Browning's black comparisons fall short of the strong "black as death," " black as night," "black as hell," etc., of other poets, when he only says of Phene's hair that it is "blacker than all except the black eyelash"; and in "The Ring and The Book" the barbaress can only speak of the tall, young girl's hair "as black as yon patch." We should like some notes on the line, "I wonder she contrives those lids no dresses." What is the meaning of the line, "Oh, save that brow its virgin dimness !"? Compare it with the epithet "lustrous front," applied later on to the same person. The thought of the nimbus around the head of a saint, as it would appear afar or near, came to me as I wrote the above.

What is a cicala?
"Nor yet cicala dared carouse No, dared carouse."
Why are the words repeated? Take note of Browning's use of "No." Luigi says " the very cicala laughs." Sebald's song,
"Let the watching lids wink !
Day's ablaze with eyes, think !"
reminded some one of Tennyson's Lady Godiva.
" God's in his heaven, All's right with the world!"
bade fair to excite a religious discussion, which was quietly settled by the preceptor reminding us of the "I am" of the Bible, and then trying to extract from us some quotations from "In Memoriam," which were probably these :
"O yet we trust that, somehow, good
Will be the final goal of all."
And
"That God, which ever lives and loves, One God, one law, one element, And one far-off, Divine event, To which the whole creation moves."

Compare Sebald's repetition of "God's in his heaven," and "Do you hear that ?" "Who spoke?" the awakening of his conscience, with this passage from "Clive":
"As for me, my homely breeding bids you - fire and go to hell!" 'Twere the muzzle touched my forehead. Heavy barrel, flurried wrist, either spoils a steady lifting. Thrice : then laugh at Hell who list-I can't ! God's no fable, either. Did this boy's eye wink once ? No ! There's no standing him and Hell and God-all three against me ; so, I did cheat?"

By the way, "Clive," and, I think, one other of Browning's poems reminds, you, by being in the same metre, of which of Tennyson's? Ottima says of Pippa, "She stoops to pick my double hearts-ease." Notice the name of the flower; Pippa mentions it towards the last of the poem.

In Part II. we talked over Jules's speech to Phene ; meaning of minion ; the impossibility of Jules putting his description into marble.
"Violet and parsley crowns to trample on." Why violet crowns? Quote from Macaulay's Essay on Pitt about the violet-crowned city. Discuss the characters of the students, judging from their talk. Schramm's "Nothing worth keeping is ever lost in this world" called forth quotations containing like sentiment. This quotation from The Ring and the Book, "I found this book, gave a lira for it, eight-pence English just," explains the word lire in the sentence " Models at three lire an hour." When Jules is rhapsodising over Phene's features he does not mention her nose. Is the nose a favorite feature with poets? What do you think of Lynette's nose, in the "Idylls of the King ?" In what literary book of the Bible is a woman's nose described, and how would you like to have one like it ?
"How passion seeks aid from its opposite passıon," and Hate and Love-
"I find them the very warders, Each of the other's borders,"
gave us some illustrative remarks upon such epithets as "excellent wretch," etc.

> "You creature with the eyes! If I could look forever up to them As now you let me," etc.,
showing the awakening of Phene's soul and intellect under the influence of a good man's love, reminded us of "Trilby " and of "Pygmalion and Galatea." Browning's essay on Shelley gives B.'s idea of the drama.

A little talk about whether Pippa's song had as good an influence over Luigi as over the others, and whether monsignor was as good as Pippa thought him, and some interesting remarks about hard-and-fast rules of gram-
mar, and the usages of the best authors, brought the class to an end.

If you are thinking of joining next year's literature class, buy a book now, if you have to deny yourself to do it ; study and mark it, if you have to go without sleep to do it ; and then, if you have my experience, you will find that you know little or nothing about it when you come to the class ; but the work will be much more interesting if you are at least familiar with the subject.

A '97 Member.

## Notes.

Dr. Bailey's lectures on "Rock Ruins," Pre-historic Man," and the " Geological History of the Bay of Fundy," were of more than ordinary interest. It is not always that the school is so fortunate as to secure the services of so eminent a scientist as the doctor. It is with pleasure that we are able to announce that Dr. Bailey purposes being with the school next year.

The kindergarten evening was one of the most enjoyable of the evening meetings. Mrs. Condon and Mrs. Patterson each gave interesting addresses on kindergarten work, and a class of young ladies illustrated the practical work of kindergartens by performing many of the actual class exercises.

The geologists of the school had a pleasant and profitable excursion to the Cream Pot gold mine at Chegoggin, recently opened, after being left for some time idle. To many of them this was their first visit to a gold mine, and, under the direction of Prof. Bailey, much was learned of gold and gold-bearing quartz.

Dr. MacKay, Superintendent of Education for Nova Scotia, spent several days with the school. By his encouraging words and enthusiasm in the work he did much to stimulate the members to prosecute their work of scientific research.

Mt. Allison University has offered to allow work done at the Summer School to count in the matriculating examination. This recognition of the work of the school is encouraging to its promoters, and should be an inducement to students to attend. We trust that other educational institutions will follow the example set by Mt. Allison.

At the closing meeting of the Summer School the hearty and unanimous thanks of the school were tendered the mayor, town council and citizens generally of Yarmouth for the right-royal reception given by them to the school ; to the school commissioners for the use of their building; to the concert and entertainment
committees for the excellent concert and the enjoyable entertainments provided; to the press for notices received; to the railway and steamboat authorities for courtesies extended.

Hon. L. E. Baker gave a garden party to the school on his spacious grounds.

The unanimous verdict of those attending the school was that at no place have the citizens done so much for the entertainment of the school as have the Yarmouthians, and
"We'll come back here another year,
The Summer School of Science."

## For the Review].

Kindergarten Examination in N. S.
These were successfully passed as follows :-
At the Normal School: Diplomas, Miss Margaret Stewart, Hampton, N. B. ; Miss Annie E. Fitch, Wolfville. Certificate, with honors, Miss Shaffner, Granville, Annapolis Cक力 ${ }^{\circ}$, Gertificate, Miss Gertrude Reinmuth, Truro, zaibal gay

Dartmonth Kindergarten: Diploma, Miss Bertha Anguin, Halifax. Certificate, with honors, Miss Edith Elliott, Dartmouth ; Certificate, Miss Rachel Wood, Halifax. 'amant

Miss Stewart's industry and close application are discemible in her papers, which were full. She has done credit to Victoria School, St. John, of which she is a graduate. She and Miss Anguin, of Dartmouth, gave "The Knights" (three Mother-Songs) a very careful analysis, and on some points Miss Anguin's was origiual. Miss Fitch's papers on the "Gifts" gave a well-considered analysis from the solid to the point, and her artistic nature will impress itself upon any kindergarten she may conduct. Miss Shaffner's answers to questions for first and second years, on "Education of Man," were good enough to win her honor certificate. Miss Anguin has taken the full two years' course, together with extensive practice in the kindergarten. Her papers showed a ripeness of thought that is only attained by a full course, for time is a sine qua non in the digestion of Froebel's subtle philosophy. Miss Elliott's honor certificate should, almost in fairness, have been a diploma, as she, like Miss Anguin, has done a large amount of work in the kindergarten, and she answered most of the second year's questions. Her intention to complete the full course of two years with Miss Hamilton will give special value to the diploma which she will win at its close. Miss Reinmuth, who is a German, did well in her papers, considering her incom-
plete knowledge of English. Miss Wood, Halifax, is happy in her management of the children in kindergarten practice, so that her papers, although some were good, do not fairly represent her.

The industry and ability, together with the pronounced individuality of the several papers, made the task of examination an interesting one. The questions, which were afterwards shewn to several competent judges, were pronounced searching and quite difficult, and there was a large number of them.

I have carefully inspected the work of these two training classes, at the tables and in circle, from time to time during the past year, and, in addition to the periodical examinations held by Mrs. Patterson and Miss Hamilton, I have also examined, at intervals, a large number of papers written in answer to questions, carefully framed, to test the knowledge and efficiency of the candidates. It is only right to say that the kindergarten examination of 1897 will compare favorably with any others in range and thoroughness.

> Cath. M. Condon,

## Pres. Froebel Institute of Nova Scotia.

## Kindergarten and Primary Department.

## The Child's Instinct of Self-Activity a Powerful Factor in Education.

The instinct of self-activity, common to all animated natures, and which is the first expression of every child's life, and is more or less demonstrative according to his physical vigor, marks the first steps necessary to childculture. To suppress this restless activity, or to let it waste itself in aimless endeavor, is one of the first mistakes made in education, and leads to mischief and destructiveness in the child; or, if he be of a phlegmatic temperament, may tend to idle listlessness, and sometimes even to low and degrading practices, for absolute suppression of an instinct is impossible. Now, how far does the general treatment of this irrepressible instinct fulfil the requirements of the law which governs its normal development?

Let us take some cases at three different stages of child-life. Here is an infant who is not allowed to creep on the floor, for fear he may take cold, or soil his handsome clothes. Free exercise, and the pleasure of finding, securing and playing with the odds and ends found on the most carefully-kept floor, with all its innocent but stimulating pleasure, is denied him. He is dandled in the nurse's arms, or, in some cases, simply held securely, without any intelligent attempt to help him use his senses. See the sad effects of suppressed activity in the incessantly moving, outstretched hands,
the restless eyes, and in the whole air of eager, unsatisfied longing to try his own powers, to handle things, feel them, turn them over and over, and learn the qualities of matter in the only way possible at that early age. As the senses are left untrained they act feebly and intermittently, instead of transmitting clear and distinct and pleasurable perceptions to the impressionable brain centres, there to be stored up, as the raw material of thought and feeling, for further development. The little victim of misplaced care and blind caution, when his helplessness no longer wins indulgence, is often treated with harshness for the exhibition of the very qualities which might naturally be supposed to spring from the early lack of training, which has practically left him in a primitive condition - that of savagery.

The child, a perfect nuisance at home, as soon as possible is relegated to the school. If it is a kindergarten department, he is probably soon a happy, wellbehaved child, for his exuberant life finds expression in finger and movement plays, marching, singing, dramatic representations of the life around him, and in work at the tables adapted to his inclination and ability. But, alas ! it is not always thus; sometimes a primary school, under a stern martinet who knows nothing of the "new education" and its genial methods, is his fate. He is stretched upon the Procrustean bed of scholastic drill, which never becomes less irksome. His attention is not on his work, because it is not suited to his stage of mental growth, for the untrained creature is still a savage in his instincts, and therefore hates application systematic habits. The teacher, in these over-crowded schools, is seldom able, even if willing, to give him the special care that his case demands. If of lymphatic temperament, slow and easy going, he is voted lazy, stupid and incapable of learning, and unless egged on to mischief by brighter children, who find him an easy prey, and then leave him in the lurch to bear the brunt of the teacher's wrath, he is usually left to get along with his tasks as best he may. This style of child often swells the ranks of pauperism, and smart criminals sometimes find him a useful tool. But nature, fond of startling surprises, sometimes humbles our shallow judgments by bringing out from the dunce's seat an Isaac Barrow or a Newton, to incite educators to caution and diligence in their treatment of instincts of the young child.

It is in its training of the child's self-activity, by its beautiful variety of method, suited to every grade of intelligence, from the tenderest age of infancy, through the family and the kindergarten, and through succeeding primary grades of the school, as in the admirable schools of St. Louis, that Froebel has shewn himself a pedagogic genius.

How much longer shall this waste of hisman energy go on, and our little ones be stunted, mentally and morally, because the divinely-implanted instinct of selfactivity, instead of being fostered and directed by parents and teachers, is distinctly ignored in education ?

Cath. M. Condon.

To those in need of of a good map of the Maritime Provinces of Canada, that published by A. \& W. MacKinlay, Halifax, can be recommended with confidence. It is large enough to allow all geographical features of importance to be marked, and these are indicated with a correctness and clearness of outline that makes the looking up of places a pleasure. In detail nothing seems to have been left to chance, or the possibility of errors being repeated from older maps. It has been carefully revised from the data furnished by recent surveys, so that it seems to be everything that can be desired in regard to fulness and accuracy. Such a map seems to be a necessity in every school-room and office in the Maritime Provinces, and its beauty of coloring and finish, apart from its usefulness, would make it a very fitting ornament. For the convenience of travellers it is also put up in a convenient book form.

## Specimens from United States Literature for Children.

The Great Round World, a weekly published in New York for children and supplementary reading in sehools, for the purpose of keeping the children posted in the contemporary politics and history of the world from week to week, has come to parties in these Provinces, asking for their patronage. Here is a paragraph from No. 1:
"The war in Cuba is very much like our own War of the Revolution. We fought the English because they taxed us, oppressed us, took the profit of our labors from us, and governed us through foreigners sent out from the mother country, who cared nothing about us.
" It is just the same in Cuba. The Spaniards are treating the Cubans just as the English treated us, and they are fighting to be free, just as we did."
"The Spaniards are such story-tellers, and I have no patience with people who don't tell the truth."
"Making one of those quick marches for which he (Maceo) is famous, he suddenly appeared in front of a little town on the Trocha, miles away from the spot where he was expected. Then there was skirmishing and confusion. The Spaniards ran hither and thither like frightened hens, doing their best to defend the town, which they felt sure Maceo was going to take. With every appearance of falling upon the town, Macco swept
right up to it. The Spaniards' knees were knocking together, because they thought they were dead men, when suddenly he turned his army aside, and crossed the Trocha between two smaller forts, whose garrison had flown to the aid of the town. The movement was so sudden that the Spaniards simply stood gaping, openmouthed, while the Cubans crossed the dreaded ditch, with flags flying and bands playing. That must have been a grand sight."
" If you remember, I told you about Venezuela, and how there was, for a little while, a chance of our having to go to war with England, because she claimed more land than belonged to her in Venezuela - which is a country in the north of South America."

In No. 4 is found the following: "We are helping the Spaniards, indirectly, now, you know, because under our treaty with Spain we must not give help to any of her colonies that are in revolt against her. It is therefore unlawful for us to send arms and men and supplies to the Cubans. In spite of the treaty a great many Americans are helping Cuba in this way, and boats are constantly going over from our ports carrying arms and men to Cuba. The government is bound to do all in its power to prevent this, and three of our revenue cutters are kept cruising up and down the coast, especially of Florida, to capture any vessels that are suspected of "filibustering," as this is called. So we are really doing police duty for Spain, and will have to keep on doing it until something is decided."

The children are never allowed to suspect that the main causes of the Cuban rebellion and sufferings are the machinations of American citizens.

## Specimens of Another Kind.

Prof. Woolsey, of Yale University, on the Venezuelan settlement, the New York Independent, December 24th :
"If we compare the adjustment which has been, or rather promises to be adopted (for Venezuelan action has not yet been taken), with that which the President recommended a year ago, we shall find, however, an essential difference between the two. Let us recall the latter for a moment. The United States had suggested arbitration to Great Britain, but the latter had declined it, not, it is true, in toto, but as applicable to the entire region in dispute.
"Regretting the refusal of the British government to arbitrate, 'upon grounds which, in the circumstances, seem to be far from satisfactory,' he (Cleveland) proposed a United States commission to determine the boundary line. After this should have been laid down, he advised that any claim of Great Britain to territory
on the Venezuelan side of it, should be resisted by the United States by every means in its power. No sooner said than done. Congress as one man voted all that the President proposed. The commission was duly appointed. It was excellent in its make-up, and tactful and conservative in its actions. And may we not find the principal proof of this in the fact that it never made a report? For it became sufficiently clear before long that the commission was a white elephant on the hands of the administration. Had our government taken a single step toward carrying out its programme of forcing its own line down the throat of the British lion, it would have caused a great commercial panic, would have drained the treasury of its gold, and would have brought about national bankruptcy, or sunk us again to a paper basis."
"Great Britain, amazed and grieved rather than angry at our serious attitude, was by no means inclined to add to her burdens by war with the United States, and especially by war over a trifle. Thus everything made for peace and a settlement, and the settlement appears to have come, but it is not on the lines of last, year's message. It recognizes the justice of the English contention, in behalf of their long established settlers, by exempting all who can prove fifty years' holding under the British flag from the operation of the arbitration.
"If we are to regard the Venezuelan settlement as a 'triumph of diplomacy,' as it has been called, in the light of the foregoing, it is a little puzzling to say which diplomacy has triumphed. Is it ours, which insisted on arbitration, and has got it, or is it the British, which refused arbitration unless the older settlements were exempted from it, and has accomplished that ?"
"Satisfactory as this main fact (peace) is, there is yet something curious and anomalous in the whole matter."

## Theosophy, et al.

We live, part of us, in the Middle Ages. Mrs. Besant is one of the mediævalists, if she does not belong rather to the time of Thales, when some wise fool would evolve out of his own imagination a theory of the universe, announce four primary elements, without the least evidence of his assertion, and their unquestioning disciples would accept their unsupported philosophy. Here Mrs. Besant comes and tells us a mass of theosophic nonsense, tells us of an astral body more subtile than ether, whose vibrations produce an aura of various colors-blue for devotion, yellow for intelligence, red for passion, brown for savagery. For all this there is not a particle of nineteenth century experimental laboratory proof. It is absolute imaginative invention. But she will find plenty of mediæval simpletons to believe her.-Independent, New York.

I find our journal very helpful, especially the notes on the natural sciences and English which appear from time to time.
E. D. G.

## Dalhousie and St. Andrews - A Coincidence.

There is a curious likeness between the most northerly and most southerly towns of New Brunswick, Dalhousie and St. Andrews. They stand where tidal rivers empty into salt bays, and circling about them are superb hill and sea views, though Dalhousie has the advantage as to hills. Prominent in their landscape are the Lower Carboniferous sandstones, which bear rich farms and wear into soft red cliffs, contrasting beautifully with the blue of the sea. Both places are summer resorts with big hotels and the colors and chatter of the summer visitor in the streets. All of this is due to similar physiographic environment. Both are extremely neat, with tasteful, old-fashioned residences and gardens, which shows something in common in their people, perhaps a large proportion of thrifty Scotch. Both are regularly laid out, on ample scale, for both were expected to be, and for a time were, the principal towns of their counties. But the grass grows and quiet reigns in their streets, though with them both there is the air of self-respecting submission to the fall from better days which so often makes both places and people charming. For both are being surpassed by neighbors far less attractive, but more happily situated for business, which in both cases happen to be about sixteen miles away at the head of navigation. One may trace yet other examples, some natural, some accidental. All of these things, physiography, history, people, accident, combine to produce in the two places an atmosphere not only remarkably alike, but extremely agreeable ; and we may speak affectionately of the one as the St. Andrews of the north and the other as the Dalhousie of the south, according to our point of view. -W. F. Ganong.

The school commissioner who asked when the salary list was read, "How many female clerks or mechanics have that much ?" must have ranked the training of the minds of children on the same level as selling a pair of gloves or soldering a waste pipe. The delicate task of cultivating a human intelligence requires different powers from those that guide a mechanic's hand, and is to be rewarded after a different fashion. The profession is one that calls for constant study, for vigorous health, for earnest pleasure in its work ; and these are necessary qualifications that cannot be maintained upon a pittance and the endless anxiety that is the result of that pittance. Where prices are resolutely kept down, or constantly reduced, there is no inducement to any one to spend years in careful and conscientious preparation, or the hours out of school in the study necessary to prevent intellectual rust. - Canada Educational Monthly.
"The paramount aim of education is to persuade children that the secrets of life which make it worth living are revealed to those only who travel on the paths of knowledge and right conduct." The truth is that school-work is divorced from life. We must, to a great extent, modify our curricula. We must get our teaching in real touch and sympathy with life itself, and not with one academic side of life. There can be little doubt that the present examination system has much to answer for in making a teacher's work conventional, dead and unreal.-School Review.

A tolerably large body of doctrine constituting the educational theory of the present time, or the science of pedagogy, has been evolved by the application of logical processes to inadequate and ill-considered premises, and in its development these potent factors have been ignored. On the other hand, the art of education is still more or less, and more rather than less, a hand-to-mouth business, in which a conservative adhesion to past traditions contends with what seems to be an inborn weakness for whatever is new and untried. - President Mendenhall.

Teachers must be reminded that there is no short or royal road to good teaching, other than the king's highway of good living. He who wishes to teach well must, first of all, try to live well. He who wishes to do something in his chosen life-work must aim to be something. He who wishes to have a good influence must first be a good influence. To teach a child to read, to write, to cipher, is something. It may be a great deal. But to teach him to live is far more. To think, to reason, to love truth, and to search for truth ; to love the right, and pursue it, alone if need be ; to love all that is lovely, and to hate only that which is hateful-this is not so easy as to turn Latin into English, or to do problems in algebra.-From Carlisle's Introduction to the Life of Thomas Arnold.

The college has no right to dictate or prescribe the courses of secondary schools. We find everywhere the best interests of four out of every five young men or women quite ignored that the remaining one may be cut and shaped and stretched and pushed into a mould which, after all, often represents but little more than a tradition. The scientific schools are the best exponents of what is sometimes called the new education. In contrast to what is still often, but in my judgment erroneously, designated as a "liberal education," I have ventured to claim for it that, even if "culture effect" be alone considered, it asks no odds of the old, while in the production of sound thinking and a virile intellectuality it is far and away ahead.-President Mendenhall.

## The Metric System.

On the 27th of May, 1897, the president of the British National Board of Trade introduced in the British House of Commons a bill for the compulsory adoption of the metric system. His effort was supported by all the Chambers of Commerce of Great Britain and Ireland, who sent forty-nine delegates in one body, and it bids fair to succeed. Russia has publicly stated that on the day the metric system is adopted by Britain it will be compulsory in Russia. Germany, Switzerland, Austria, Hungary, Roumania, Servia, Belgium, France, Spain, Portugal, Italy, Sweden, Norway, Mexico, Argentine Republic, Peru, Venezuela, and all Central and South America, all have the metric system obligatory at the present time.

Now the United States must not lag behind the world in this matter. Every American suffers from the present lack of uniformity between our weights and measures and the now almost universal metric. The merits of the metre (about a yard) and decimals thereof, the litre (about a quart) and decimals thereof, the gram (15 grains) and decimals thereof, are so quickly recognized and so readily comprehended that there is no reason why our country should not have the benefit of this labor saving and now almost universal system.

A bill to this effect was passed by the House of Representatives of the last U. S. Congress, but was reconsidered, and will probably come up again during the present session. It must come if America is to keep up her large rate of increase of foreign trade.-Hub Gore, Boston.

A contract has been entered into with the management of the Shore Line Railroad to convey the St. John County Institute, and as many from Charlotte as wish to join, by special train, leaving St. John (west) on Thursday at 7 a. m., and arriving in St. Stephen before $11 \mathrm{a} . \mathrm{m}$. , local. Teachers can return either on Saturday morning, Sept. 25 th, or by regular train on that afternoon. The fare has been fixed at $\$ 1.00$ for the round trip from all points. It was hoped to be able to obtain half that rate for Charlotte County teachers, but seemingly insurmountable difficulties presented themselves. Arrangements will be made to meet the train on its arrival in St. Stephen with street cars and carriages, if needed. The usual travelling arrangements will be made with other lines of travel converging to Calais and St. Stephen, including the Shore Line, which will give the usual arrangement to Charlotte County teachers outside the above special arrangement, which they can also avail themselves of. Everything points to a very large attendance, and, other conditions being favorable, a very successful institute will be held.

## QUESTION DEPARTMENT

## Larva of Papilio Asterias.

A correspondent from Cumberland or Westmorland sends a specimen of the stout, minutely knobbed grub or caterpillar of the Asterian Swallow-tailed Butterfly, which was found feeding on the foliage of the parsnip. Were I not so busy, I would be able to give here a cut of the butterfly itself. It bears some resemblance to its nearest relative, Papilio Turnus (the common Swal-low-tailed Butcerfly), figured in the Educational Review in Volume I., page 111. It is very much darker, however, but is distinguished by the long tail to each wing. It flies at the end of May, and through June, July and August. Its food plants are celery, carrot, parsley, and some other umbelliferous plants.

## Imago of Cicindela sex-guttata.

This beautiful, metallic green Tiger Beetle comes from Bear River, Annapolis County. It was found on the dry, dusty road, where it is by no means easy to catch. On each of its two shining green wing-covers are found four white spots, forming the outline of a four-sided figure at the end of the wing-cover. As a general rule, the upper and forward spot is wanting ; then each wingcover has but three spots; whence the Latin name above, which may be translated, "The six-spotted Tiger Beetle." It is not injurious to human interests, its tiger propensities being exercised against other insects.

The crustacean from the water of a drain in Sydney, Cape Breton, nearly allied to the shrimps, is unknown. These animals have not yet been studied in Nova Scotia.

## John Cabot.

Don't pronounce this word as if it were French. The name is of Italian origin, and has been spelled Caboto, or Cabotto. The final $t$ is therefore sounded, and the $o$ should be pronounced long, most probably.

Teacher.-(1) Two farmers, A and B, have 30 cows between them. They sell at different prices, but each receives the same sum. If A had sold his at B's price he would have received $£ 320$; if B had sold his at A's price he would have received $£ 245$. How many had each ?

If A had $x$ cows B would have 30 cows $-x$ cows.
If A sold his cows for $£ y$ each he would receive £xy. Then B would receive the same ; but as he had $30-x$ cows he must have received $£ \frac{x y}{30-x}$ for each of them.

Then we have

$$
\frac{x^{2} y}{30-x}=320 \text { and } 30 y-x y=245
$$

Solving this equation $x=16$.
(2) If a carriage wheel $14 \frac{2}{3} \mathrm{ft}$. in circumference take one second more to revolve, the rate of the carriage per hour will be $2 \frac{2}{3}$ miles less ; how fast is the carriage travelling?

$$
\text { Let } x=\text { the number of miles per hour. }
$$

Then $5280 x=$ " feet
But the number of revolutions will $=\frac{5280 x}{14 \frac{2}{3}}$
Then 1 revolution will take $\left\{3600 \div \frac{5280 x}{14 \frac{2}{3}}\right\}$ sec.

$$
\text { " } 1 \quad \text { " } " \quad \frac{10}{x} \sec \text {. }
$$

At the slower rate 1 revolution would take $\left\{1+\frac{10}{2}\right\} \mathrm{sec}$
In one hour the number of revolutions would be
$\frac{3600}{1+\frac{10}{2}}$, and the distance would be $\frac{3600 \times 14 \frac{2}{3}}{1+\frac{10}{2}} \mathrm{ft}$.

$$
\begin{aligned}
& \text { or } \frac{3600 \times 14 \frac{2}{3}}{\left(1+\frac{10}{4}\right) 5200} \text { miles per hour. } \\
& \text { Then } x-\frac{3600 \times 14 \frac{2}{3}}{\left(1+\frac{10}{6}\right) 5280}=2 \frac{2}{3} \\
& x=6 \frac{2}{3} .
\end{aligned}
$$

(3) Given a square and one side of a rectangle which is equal to the square, find the other side. Let AB be one side of the rectangle and BC at right angles to AB be equal to one side of the square. Join CA and from $C$ draw $C D$ at right angles to $C A$ to meet $A B$ produced. Then BD will be the required side. Because ACD is a right angle it can easily be shown that a semicircle can be described about ACD. Then, as in II., $14, \mathrm{AB} . \mathrm{BD}=\mathrm{CB}^{2}$.
(4) If two sides of a triangle are unequal, and if from their point of intersection three straight lines are drawn, namely, the bisector of the vertical angle, the median, and the perpendicular to the base, the first is intermediate in position and magnitude to the other two.

In the figure on page 94 (Hall \& Stevens) let AD be perpendicular to BC .

Then angle $\mathrm{DAC}=$ the complement of angle ACD , and " $\mathrm{DAB}=$ " " ABD ; but " ACD is greater than angle ABC ; therefore angle DAC is less than angle DAB .
Therefore angle BAD is greater than half the vertical angle BAC.
Therefore AD lies within the angle PAC.
Then by exercise 12 AP lies between AD and AX , and by exercise 3 it is intermediate between them in magnitude,
(5) Construct a triangle, having given the perpendicular from the vertex on the base, and the difference between each side and the adjacent segment of the base.

Let AD be the given perpendicular and let the two given differences be X and Y . On AD as base describe the triangle ABD , having angle ADB a right angle, and the difference of AB and $\mathrm{BD}=\mathrm{X}$. Also on the other side of AD describe a triangle ADC , having the angle ADC a right angle, and the difference of AC and $\mathrm{DC}=\mathrm{Y}$. Then ABC is the required triangle.
J. B. M.- ABC is any triangle : required to draw a straight line parallel to the base BC, and meeting the other sides in D and E, so that DE may be equal to the difference of BD and CE .

Produce BC to F. Bisect the angles ACF, ABF by CO, BO. Draw OED parallel to BC, meeting AE in E and AB in D . Then $\mathrm{DO}=\mathrm{BD}, \mathrm{EO}=\mathrm{EC}$. That is, DE is the difference between BD and CE.

Note.-If the line to be drawn parallel is to be equal to the difference between BD and DE, as stated (probably unintentionally), the sixth book of Euclid will be required. In that case find a fourth proportion to $(A B+2 B C), A B$, and $B C$, and it will be the required line.
P. M. G.-(1) Hamblin Smith's Arith., page 101, Quest. 4.

Note. There are three exercises on this page numbered 4. Which is meant?
(2) Hamblin Smith's Arith., page 108, Ex. 12.

$$
\sqrt{11 \frac{3}{4} \frac{7}{9}}=\sqrt{5 \frac{76}{49}}=\frac{24}{7}=3 \frac{3}{7} .
$$

(3) Hamblin Smith's Arith., page 109, Ex. 17.

$$
761 \frac{4}{7}=76.82352941+
$$

$$
\text { The square of which is } 8.7649+
$$

(4) Hamblin Smith's Arith., page 113, Ex. 16.

$$
\sqrt[3]{3 \frac{1}{5}}=\sqrt[3]{3.2}=1.473+
$$

(5) Kennedy \& O'Hearn's Arith., page 27, Quest. 5.

Note.-This Arithmetic consists of three parts.
Which part is meant ?
A. L. G.-(1) Hamblin Smith's Arith., page 166, Ex 5.

Amount which the work falls behind daily

$$
=\left(\frac{1}{8}+\frac{1}{2}+\frac{1}{8}-\frac{1}{8}-\frac{1}{10}\right) \text { of a day's work ; }
$$

Therefore in 84 days it falls behind
$84 \times\left(\frac{1}{6}+\frac{1}{7}+\frac{1}{8}-\frac{1}{8}-\frac{1}{10}\right)$ of a day's work, $=17.6$ days' work ;
Therefore the part which 17 men must do more $=$ .6 of a day's work ;
Therefore the part which 1 man must do more $=$ $\frac{-6}{17}=\frac{3}{85}$.
(2) Hamblin Smith's Arith., page 182, Ex. 18.

Sum on which $\$ .80$ is int. for $8 \mathrm{mos} .=\$ 20$.;
Therefore sum on which $\$ 20.80$ is int. for $8 \mathrm{mo}=$

$$
\$ \frac{20.80 \times 20}{.80}=\$ 5.20
$$

Int. on $\$ 20$. for $8 \mathrm{mo}=\$ 80$.
" $\$ 100$, " $12 \mathrm{mo}=\$ 6$,
S. B. A.-(1) Hamblin Smith's Arith., page, 146, Ex. I., 4.

In 8505 days there are 1417 weeks and three days over ;

Therefore the first number appeared on a Friday.
8505 working days $=\frac{8505 \times 7}{6}$ ordinary days $=27 \mathrm{yrs}$. and 61 days nearly.

27 years and 61 days from Monday, June 18th, 1877, is Friday, April 19th, 1850.

Note-In making the calculation the leap years are to be taken into account.
(2) Hamblin Smith's Arith., page 146, Ex. 1, 5.

The time between 9 hr . 13 min . A. M. on June 26, 1858, and midnight on Dec. 31, 1873, is 5667 d. 14 hr . 47 min .

Now 29 d .12 hr .47 m .30 sec . is contained in 5667 d . 14 hr .47 min .191 times and 26 d .19 hr .34 min .30 sec . over.

Therefore there were 191 full moons, and the last one occurred 26 d .19 hr .34 min .30 sec . before $12 \mathrm{P} . \mathrm{M}$. of Dec. 31, or at $4 \mathrm{hr} .25 \mathrm{~min} .30 \mathrm{sec} . \mathrm{A} . \mathrm{M}$. of Dec. 4.
(3) Produce a given straight line AB to C , so that the rectangle contained by the sum and difference of AB and AC may be equal to a given square.

Let D be the side of the given square.
Draw $\mathrm{BE}=\mathrm{D}$ at right angles to AB from the point B . With the centre A and the distance AE, describe a circle and let AB produced meet the circumference in C. Then the rectangle contained by the sum and difference of $\mathrm{AB}, \mathrm{AC}$

$$
\begin{aligned}
& =\text { difference of squares on } \mathrm{AC}, \mathrm{AB}(\mathrm{II} . \mathrm{B}) \\
& =\text { " " } \mathrm{AE}, \mathrm{AB} \text {, } \\
& =\text { squares on } \mathrm{BE}=\text { square on } \mathrm{D} \text {. }
\end{aligned}
$$

(4) Shew that the sum of the squares on the diagonals of any quadrilateral is less than the sum of the squares on the four sides by four times the square on the line joining the middle points of the diagonal.
Let A B C D be a quadrilateral, and let $O, P$ be the middle points of its diagonals. Join OP, BP, DP.
Then, by Ex. to II., 13, the sum of the squares on AB and $\mathrm{BC}=$ twice sum of squares on $\mathrm{BP}, \mathrm{CP}$; and sum of squares on $\mathrm{CD}, \mathrm{DA}=$ twice sum of squares on DP, CP;

Therefore sum of squares on the four sides is equal twice sum of the squares on BP, DP, with four times squares on CP. But sum of squares on $\mathrm{BP}, \mathrm{DP}=$ twice sum squares on BO, OP (II., 13, Ex.)

Therefore sum of squares on the four sides $=4$ times sum of squares on $\mathrm{BO}, \mathrm{OP}, \mathrm{CP}$.

Also square on $\mathrm{AC}=4$ times square on CP (II., 2, Ex.)
and " " $\mathrm{BD}=4$ " BO (II.,2, Ex.)
Therefore sum of squares on the four sides $=$ sum of squares on diagonals with four times square on OP.

## SCHOOL AND COLLEGE

Teachers may take notice that Labor Day, the first Monday in September, is a school holiday.

Hon. W. W. Stetson, Supt. of Education, Maine, has kindly consented, upon request, to take for his subject at the United Institute, in St. Stephen, "The Literary Qualifications of the Common School Teacher."

Few pupils failed to pass the official (N. B.) High School entrance examinations. This either speaks well for the efficiency of the schools or denotes easy papers, perhaps both.

Congratulations to Mr. Geo. J. Trueman, the popular and efficient principal of the St. Martins' Superior School, who entered into the bonds of matrimony during the vacation.

Mr. C. H. Acheson has been appointed to succeed Mr. R. B. Wallace, the late efficient principal of the Milford Superior School, who retires for rest and a change of occupation.

In St. Stephen Miss McIntosh, a graduate of the University, has been appointed High School assistant. Miss Phillips has resumed her duties, and Miss McKenzie has been appointed to succeed Miss Carter, who has been granted a six months' leave of absence.

St. John young ladies have again taken a prominent place at McGill College, Montreal. The results of the recent associate of arts examinations have been declared, and in the list of successful young ladies appear the names of four from the Victoria Girls' High School. They are Miss Lulu Z. Roderick, with 676 marks ; Miss L. Maude Kavanah, with 647 marks ; Miss Edna Waterbury Gilmour, 637 marks, and Miss Katie R. Lander, 588 marks. All are well to the head of the list.-St. John Globe.

A large and much interested audience listened to Dr. MacKay's lecture in the Truro Normal School at the closing in June. His references to the subject of education and early home training were exceedingly practical and forcible, and shewed how necessary it was that our people should be well grounded and rooted in the technical side of their callings and occupations, and that they should receive an education calculated to enable them to attain the highest success in these. We are fortunate in having a Superintendent of Education imbued with such sentiments. Such a man must eventually prove a blessing to the farmer, the mechanic and others in the more practical walks of life,-Colchester Sun,

The Semi-Annual Conference of the Chief Superintendent (N. R.) with the Inspectors was held in Fredericton July 29 th.

At the recent session of the Summer School at Yarmouth Mrs. C. M. Condon was elected an honorary member, as President of the Froebel Institute, in consideration of her educational services.

It is believed that no schools in the Province (N. B.) entered more heartily into, or had a more profitable observation of Arbor Day, than those of St. Martins. The grounds were fenced and laid off in trees, shrubs and flower beds in a most artistic manner, reflecting the greatest credit upon principal, teachers, trustees and pupils.

Principal Brodie, of St. Andrews, by means of a very high-class entertainment, has again added to the apparatus and furnishing of his already artistic school room. A handsome flag and pole have also been donated by the citizens. It is pleasant to note the excellent feeling existing in St. Andeews among teachers, pupils and citizens.

The Kings County, N. B., Teachers' Institute will be held in the Grammar School building, Sussex, on Thursday and Friday, Sept. 2nd and 3rd, beginning at 10 a. m . on Thursday. The following programme has been arranged : First day - Mathematics, Milton Price ; science, R. King ; vertical writing, Miss Hannington ; practical lesson, Miss Wetmore ; public meeting in the evening. Second day-Primary arithmetic, Miss Duke; advanced arithmetic, Mr. C. Kelly. Subjects for discussion : Co-operation as a Factor in Educational Work ; Grading Examinations. Practical lesson, Miss Darling; Language Criticism. The usual rates on railways.

Frank H. Eaton, Esq., M. A., of Kentville, N. S., has been appointed inspector of Victoria, B. C., city schools, out of 67 candidates from all parts of America. Mr. Eaton was a graduate and for a long time one of the governors of Acadia. He held the position for many years of teacher of mathematics in the N. S. Normal School, and was afterwards mathematical master in the Cambridge, Mass., High School. He was also president of the Summer School of Science for the Atlantic Provinces. Mr. Eaton is a ripe scholar, and a gentleman who will do honor to his native Province in the new sphere to which he has been appointed. The Review extends its warmest congratulations, with the hope that many years of active and vigorous work are in store for him in the Pacific Province.

Mr. Marshall Maxwell has been appointed as successor to Mr. W. J. Richardson in St. Andrews. Mr. Richardson retires to enter upon the study of the law, fol lowed by the best wishes of all.

Miss Jean Scott, one of our most successful teachers, has been appointed as assistant in the Milltown High School.

Horace G. Perry has been appointed principal of the Superior School, Centreville, Carleton Co. ; Aaron Perry, principal of the Superior School, Penobsquis, Kings Co., and H. Judson Perry, principal of the Superior School, Bloomfield, Kings Co.

The French department of the N. B. Normal School, under Prof. Belliveau, opened on Wednesday, Aug. 4th, with an attendance of eighteen students.

The school house burned some time since at Little Ridgeton, Charlotte Co., has arisen from its ashes in more than its former beauty and convenience. It has been built from plans furnished by the Board of Education, and is creditable to the district and all concerned.
A. G. Maggs, B. A., has severed his connection with the Sussex. N. B., Grammar School, to take a postgraduate course at Harvard University, where he has been awarded a scholarship of the value of $\$ 150$.
N. B. schools begin this term Thursday, August 12, in country districts, and two weeks from that date in cities and towns.

The following is the result of the recent U. N. B. matriculation examinations. None passed in Division 1; 27 passed in Division 2; 15 in Division 3, and 6 failed.

Division Second - John B. DeLong, Fredericton Grammar School ; Wallace Bagnall, St. John Grammar School ; Elodie C. Bourque, Moncton High School ; Thos. H. Lunney, St. John Gramma ${ }_{6 i}^{\mathrm{r}}$ School ; Guy J. McAdam, Woodstock Grammar School!; Harry S. Devlin, St. John Grammar School ; Etta G. Phillips, Fredericton Grammar School ; Geo. Howard, St. Andrews' Grammar School ; Annie H. Whittaker, Victoria School, St. John ; Edgar H. Crawford, Campbellton Grammar School ; Angus D. Firth, Campbellton Grammar School ; Lulu Roderick, Victoria School, St. John; Raleigh Trites, Sussex Grammar School ; Helen B. Flaglor, Victoria School, St. John ; John W. Clawson, St. John Grammar School ; Roland Thompson, St. John Grammar School ; Clyde F. Lutz, Campbellton Grammar School ; Fred E McIntyre, St. John Grammar School ; Edna M

Gilmour, Victoria School, St. John ; Murray M. Millmore, Woodstock Grammar School ; Joseph Price, Campbellton Grammar School ; Jane G. Strong, Fredericton Grammar School ; L. Maud Kavanah, Victoria School, St. John ; R. Leslie Ellis, Bathurst Grammar School ; Maurice D. Coll, St. John Grammar School ; Wiley Manning, St. John Grammar School ; Kathleen Phair, Fredericton Grammar School.

Division Third-Richard L. Earle, St. John Grammar School ; Thos. M. Eddy, Bathurst Grammar School ; Alice DeWolfe, St. Stephen High School ; Alice S. Queen, Woodstock Grammar School ; Alma E. Sawyer, St. Stephen High Sehool ; Harold S. Beek, St. Stephen High School ; Mary McRae, Campbellton Grammar School ; Ida A. Keagin, Victoria School, St. John; Laura G. Emery, Victoria School, St. John ; Wm. M. Baker, St. John Grammar School ; Leonard E. Slipp, Sussex Grammar School ; Elmor C. Hibbard, St. Andrews' Grammar School ; Mina Colwell, Victoria School, St. John ; Sarah J. McVay, St. Stephen High School ; Jesse G. Vince, Woodstock Grammar School.

## High School Leaving Examinations.

Division Second-Emily M. McAvity, Victoria School, St. John ; Chester Martin, St. John Grammar School ; Katherine F. Wisdom, Victoria School, St. John.

Division Third-C. H. Montgomery, St. John Grammar School.

Of five candidates who presented themselves for this examination three passed in Division II., one in Division III., and one failed.

## BOOK REVIEWS.

A Smaller History of Greece by William Smith, LL. D. Revised, enlarged and partly re-written by C. S. Brownson, Instructor in Greek, Yale University. Pages 423 ; cloth. Publishers Harper \& Bros., New York. The researches of modern scholars have done so much to correct beliefs regarding Greek history, literature and antiquities, that this revised volume will be received with satisfaction by students. Noteworthy omissions have been supplied, and the inaccuracies of the old edition corrected, while at the same time the plan of the original has been preserved. An entirely new series of maps and illustrations has been engraved for the work. The type is clear and distinct, and a pronouncing vocabulary is added which will be greatly appreciated by the reader.

Shakespeare, the Boy, by William J. Rolf, Litt. D. Pages 251 ; cloth. Publishers Harper \& Bros., New York. This volume, which is illustrated, contains sketches of the home and school life, the games and sports of Shakespeare,-with the manners, customs and folk-lore of the time. It is the expansion into a volume of a series of articles written originally by the author for the Youth's Companion. The book is intended for young people, but all students of Shakespeare will be interested in the glimpses of rural life in England which the author presents, and it will help all to a better understanding of the many illusions in the works of the great poet.

Alexander Pope, by Samuel Johnson; edited by Kate Stephens. Pages 197, boards. Publishers, Harper \& Bros., New York. The editor, if she has done nothing more, has presented us with a neat and convenient volume of Johnson's estimate of Pope, and thus contributed to make our English literature more generally known and read.

Domestic Science Readers, Book VI., by Vincent T. Murch ${ }^{\text {. }}$. Pages 260; boards. Price 1s. 6d. Publishers Macmillan \& Co., Bedford Street, Strand, London. This reader is written in the same interesting style which characterizes the others of this series. It treats of the warming, ventilation and cleaning of houses and the preparation of food. The language used in this series can be grasped by young people of average intelligence, and the entertaining and instructive way that valuable information is given is a reason that the books should be placed in the hands of the young.

Vertical Rolnd Hand Writing Books, by H. W. Shaylor. Ginn \& Co.. publishers, Boston. This series, consisting of six copy-books, has much to recommend it in the way of neatness and legibility. It is distinctly a round hand, can be written freely and with speed, but its greatest excellence is its naturalness, beauty and plainness.

Philips Semi-Upright Copy Books, published by Geo. Philips \& Son, London. This series of twelve copy books is sold at the low price of two pence each. The series is graded carefully, so that the difficulties are successively and easily mastered. To those who prefer a medium between the slanting and vertical styles these books have much to recommend them.

The Finch Primer, by Adelaide V. Finch. Pages 90. illustrated. Publishers Ginn \& Co., Boston. This fresh candidate for honors among readers lays down the excellent maxims that a primer should consider the environment of the child at different seasons of the year, should inculcate a love of home, nature and kindness to animals; and should leave the teacher perfectly free to use her own method, blackboard and book work going hand in hand. The primer makes the pupil acquainted with three hundred words, printed in script at first, roman being gradually introduced. The book is valuable for the suggestions and impetus it should give to primary teachers to do original blackboard work at all seasons of the year, and seizing upon every opportunity that presents itself in the child's surroundings to make it an object lesson instead of the dreary method of toiling through a primer with such inane phrases as "This is a cat."

A Laboratory Course in Wood Turnine, by Michael Joseph Golden, M. E., Professor of Practical Mechanics, Purdue University, Indiana. Pages 69, illustrated. Publishers Harper \& Bros., New York. The object of this manual is to furuish exercises to give command of the commonly used tools, and will be an excellent help to students, and institutions where manual training is taught.

Elementary Classics: Virgil's Georgics, Book IV. by T. E. Page, M. A., Suetonius' Stories of the Coesars, by H. Wilkinson, M. A. Price 1s. 6d. each. Publishers Macmillan \& Co., London. These convenient editions, published with notes, introduction and vocabularies, are designed to furnish students of Latin with easy and interesting reading.

The Fifth Book of Xenophon's Anabasis, edited by Alfred G. Rolfe. Pages 115 ; price 45 cents. Ginn \& Co., publishers, Boston. This volume is one of Ginn's "School Classics," edited under the supervision of W. C. Collar and John Tetlow. The Fifth Book is chosen on account of its interest and the ease with which it can be translated,- the object being to provide suitable material for sight reading in Greek. The excellence of the printing of the Greek text leaves nothing to be desired.

An Experiment in Education, by Mary R. Alling Aber. Pages 244 ; cloth. Publishers Harper \& Bros., New York. The author of this experiment tells us that it was an outcome of the conviction, derived from her ten years experience of teaching, that "bad mental habits and mental life devoid of habit were legitimate products of our processes of education." * * * "The aim of the experiment was to see if the child may not be introduced at once to the foundations of all learning -the natural and physical sciences, mathematics, includ ing language and history-and at the same time be given a mastery of such elements of reading, writing and number as usually constitute primary education." The experiment was first tried in Boston, with a school of nine children between the ages of five and a half and seven years, and in the following year at Englewood, Illinois. The method was to allow the fullest play to the imagination and observation of the children, developing ideas of number, geography, natural science, reading, etc., as they went along, just as any bright, intelligent primary teacher would proceed, but in a much more extended way. No effort was made to restrain the child from advancing easily as far as possible. Thus when one of the children was reading from the leaflet describing the palmate veining of the cotton-plant, she was asked by a visitor what palmately-veined means. The child drew on the board a fairly correct outline of a cotton-plant leaf, inserted its palınate veining, and turning to the visitor pointed to that veining. In all studies the same plan was pursued to make the children acquainted with science, history, literature, at the same time they were mastering the three R's. The book is well worth reading; if only to awake teachers to the fact that time and mental power may be gained by opening up to their pupils as they go along some of the "superior knowledge" which under a judicious teacher may be brought within their mental grasp.

The Study of French, by Alfred F. Eugène and H. E. Duriaux. Pages 312 ; price 3s. 6d. Publishers Macmillan \& Co., London and New York. The plan of this book is very clear and simple. Principles are sparingly introduced and abundant practice is rigidly insisted upon,

Hygiene for Beginners, by Ernest S. Reynolds, M. D., London. Pages 235 ; cloth ; price 2s, 6d. Publishers Macmillan \& Co., London and New York. This primer is designed for popular use and for young students. It begins by giving as much, in outline, of physiology and anatomy as shall aid in understanding the principles that govern the laws of health. These are stated in plain, simple language and contain what the general public should know if they wish to preserve health and escape disease.

Algebra for Beginners, Todhunter \& Loney, published by Macmillan \& Co. This revision of an old standard work should give it new life. Simple equations are introduced immediately after division. The sets of examples have been broken up, enlarged and distributed among the explanatory matter. The latter is made clearer by the introduction of questions or examples after almost every statement. There are good chapters on square root and factors, suljects to which teachers have to devote considerable attention.

Theory of Physics, by Joseph H. Ames, Ph. D., published by Harper \& Brothers, New York. The adoption of a uniform examination system in the Nova Scotia High Schools has greatly stimulated the study of most of the academic subjects. It is a comparatively easy matter for a good teacher to drill pupils thoroughly in mathematics, English or history, and at the same time to deeply interest in these studies the more earnest pupils. It is much more difficult to do so in the case of the scientific subjects. To procure apparatus for the study of physics is not easy. Many things in sound, heat and mechanics may be simply illustrated. For the rest it is probably wiser to confine oneself to the mathematical parts of the subject and to a verbal explanation of the chief laws and their bases. To teachers wishing to follow this plan, and at the same time to acquire a much wider knowledge than can be obtained from Gage, the book whose title is printed above, will be decidedly useful. In five hundred pages, duodecimo, the chief laws of the great science are developed with force and, for the most part, with considerable clearness. The style of exposition is such that one would suppose the book to be taken down word for word from lectures given to college students. Teachers should therefore be able to derive important assistance in arranging their own lessons. One does not find tedious, detailed accounts of instruments. These the author has endeavored to describe only so far as is necessary for the understanding of general principles. Thus the book is specially adapted for the large number of students who wish to include some knowledge of physics in their education, but do not wish to or cannot take a laboratory course in college. An account is given of the dissociation theory of electrolysis. In Prof. Ames' book a statement of the facts established concerning the Roentgen rays is given. Johns Hopkins Univerity does considerable work in the study of light, and teachers should welcome the account of interference phenomena as affording convincing proofs of the soundness of the undulatory theory.
T. C. M.

## August Magazines.

John Muir, the author of "Mountains of California." and our greatest authority upon American forestry, contributes to the August Atlantic a paper on The American Forests. It is an appreciative description of the beauty and wealth of our great forests and a plea for their preservation by the national government The mid-summer Century is a travel number. Among the interesting features is an illustrated article by John Mnir-an account of the wonders which one may see in a thirteen days' trip to Alaska from Tacoma.... In the St. Nicholas is a paper by Gustav Kobbé " On the Grand Banks and Elsewhere," in which the methods of catching cod and halibut by hardy Nova Scotian and United States fishermen are described....In the Forum President Thwing, of Western Reserve University, contributes a paper on "Emerson's 'The American Scholar' Sixty Yerrs After," in which he argues that sixty years have brought no change in the duties of the scholar,the duties of self-trust, trust in humanity, and trust in American humanity. Dr. Friedrich Paulsen in another article on "The Evolution of the Educational Ideal," treats of the present and future aspects of his subject. He lays special stress on the tendency everywhere to the nationalization of education.... In Appleton's Popular Science Monthly Authropology as a University Study is proposed by Prof. John S. Flagg to take the place that philosophy occupied in the old scholastic system, but with a hroad basis of accurate knowledge pre-supposed.

## The New Staff at Edgehill.

Miss Lefroy, the new Principal at Edgehill, Windsor, has completed Miss Lefroy, the new Prin task has been speedily and sucressfully acher staff. This responsible -askeration of Miss Beale, the Principal of complished by the cordial con-operation College at Cheltenham, whom Miss Lefroy has worked tor Ladive years. With Miss Beale's concurrence, Miss Lefroy has secured a governess from Cheltenham to come with her to Edgehill, so that in September next there will be a migration, as it were, of three of the present or former staff of the first Ladies' College in England to Edgehill, in Windsor, N. S., viz.. Miss Lefroy, with Miss Danby and Miss Gildea as her assistants. The staff at Fdgehill now consists of Miss Gilanche Lefroy, Principal; Miss Danby, holding from the University of Cambridge, Higher Certificates in English Language, Literature and Anglo-Saxon; Euclid: Algebra; Arithmetic.-Certificate in Theory, History and Practice of Teaching. Miss Danby has had eight years teaching experience-two in the Ladies' Coll.. Cheitenham, as assistant teacher, and six years in the High School orm, Baker si.. Lnndon Eng., as Head Mathematical Teacher; also as Form Mistress-Latin and French.
Miss Lobbau, B. A.. of London University, with one years' experience in teaching Classics and Mathematics for the "London Intermediate Arts course "; Violin and Elementary German.
Miss Gildea-University of Cambridge Certificate in Theory, History and Practice of Teaching: Hisher Cambridge Certificate in Divinity; French: Fngliah Literature; History and in Arlthmetic. Has had one year's exper'ence as Assistant Teacher in Cheltenham Ladies Coll. ; one vear as Honse Governess in the College, with a contingent of twenty flve young ladies; four years' experience in Miss Chreimann's system of flve young ladies; Pour years Fancy Needlework.
Physical Cuiture, Plainand Oxford University, Junior and Senior Examina miss Beckmish. French: Botany: Geology, with Distinction in Reli tions in English, French; Botany and Senior examinations. Holds 1 st gious Knowledge, in both Junior and in English Language, Literature Class Higher Cambridge Certincan and Constitutional History; Geog and Anglo-Saxon; English, Prench and Commercial; also Certificates raphy-Historica Mons Beckingham has had four years' experience in in mathematios.
private tuition. Language Mistress, probably a French lady, is not ygt
The Modern Lat
appointed. Department remains under Miss K. Manners' charge, with one change. Miss Florence Manners, from England, taking Miss Lillian Manners' place. Miss lrving continues as assistant in Piano and Theory. Miss Shaver remains in charge of the Art Department. Miss Danby has also been a Teacher of Drawing in the High School, Baker St, London. Friends of Edgehill will be glad to know that Miss Lefroys faminy connectlon with Canada is not only close, but distinguished. The Bisnop of Nova Scotia announced Miss Lefroy as the niece of the Vice-Chancellor of the University of Oxford, but he did not mention the more interesting association to Canadians, that Miss Lefroy's father, a retired officer, was a cousin of the late General Sir Henry Lefroy, for many years in charge of the Magnetical Observatory at Toronto, subsequently Governor of Bermuda, and well known to many in Halifax. General Lefroy married a daughter of the late Sir John Beveriey Robinson, Chief Justice of Upper Canada Miss Lefroy comes intimately associated with the history of the country.

## NOVA SCOTIA.

Pass list of pupils taking and passing the County Academy Entrance Examination at their respective High Schools :

Acadia Mines: Lenfest Ruggles, Principal. Candidates, nine.
1 Lily McCulloch, 2 Henry Dunlap, 3 Maggie Ferguson, 4 Aubrey Smith, 5 Viola Johnson, 6 Roy Smith.

Arichat: D. H. Campbell, Principal. Candidates, seven
1 Melville John Fixott, 2 Sydney Ansell Campbe 1, 3 Daniel Joseph Sutherland, 4 Cassie Ingley, 5 Dora Edith Campbell, 6 Evangelinu Benoit.

Bear River: W. J. Shielde, Principal. Candidates, eight.
1 Ethel May Purdy. 2 Lizzie Estella Chute, 3 Effie Lysle Vidits, 1 Ethel May Purdy. ${ }^{2}$ Lizzie Estella Chute,
4 Magqie Harris, 5 Ethel Lizzie Clarke, 6 Nellie Beatrice Dunn, 7 Brenda 4 Maggle Harris, 5 Ethel Lizzie Clarke, 6 Nel
Sutherland Davis, 8 Annie Charlotte Yorke.
utherland Davis, 8 Annie Charlotte Yorke. Candidates, seventeen.
Bridgewater: R. F. Mortor, Principal. Candidates, seventeen.
1 Carrie Euphemia Shand, 2 Mary Ethel Logan, 8 Jeanie Hunter Duff, 4 Harold Archibald Marshall, 5 Archibald Peindel, 6 Andrew Arthur Gow, 4 Harold Archibald Marshall, Sutcliffe Davison, 9 Vera Croucher Curll, 10 Valeria Freeman. 11 Maud Margaret McMillan.

Great Village: William P. Fraser, Princlpal. Candidates, seven.
1 Emma Davidson, 2 Mary Spencer.
Lockport: Edward E. Mack, Principal. Candidates, twenty.
1 Marie Carten, 2 Leard Payzant, 3 George Capstick, 4 Carrie Payzant, 5 Lulu McKenna, 6 Laura Quinn, 7 Mary Anderson, 8 Frances Zant, 5 Lulu Makenna, 9 Mabel Hiltz, 10 Lizzie McKenna. 11 Kate Quinn, 12 Hilton Skerry, is Bertha Dav, 14 Randolph Eisenhaur, 15 Ellie Eisenhaur.

Middleton: O. P. Goucher, Principal. Candidates, nine.
1 Alfred Henry Smallwood, 2 William Kenneth Phillips.
Milton, Queen's County: Albert C. McLeod, Principal. Candidates, eleven.

1 Mattie Burnaby, 2 Mabel McLeod, 3 Fred. Burnaby, 4 Clifford Ford, 5 Sadie Kempton, 6 Arthur Kempton, 7 Frank Burnaby, 8 Blanche Brown.

North Sydney : William A. Creelman, Principal. Candidates ten.
1 Marcella Matthews, z Jessie Skinner, 3 Alberta Jackson, 4 Robert Ingranam, 5 Mary Bayley, 6 Edith McLearn, 7 Annie Moore, 8 Warren Moffatt. 9 Belle Lawley, 10 Thomas Lawley.

Oxford: W. R. Slade. Principal. Candidates, twenty
1 Bessie Ross, 2 Gus-ie Hunter. 3 Arthur McPherson, 4 Willie Ross, 5 Norma Wood, 6 Edith Smith, 7 Elmer MeIntosh. 8 Maggie Miller.

Parrsboro: William H. Magee, M. A , D. Sc., Principal. Candidrtes, twenty-flive.

1 Marie Warren, 2 Sadie M. Cook, 3 Carrie King, 4 W Dennis McMin Whare 6 Chandler, 7 Alice Murphy, 8 Lizzie Laughlin. 5 Horace Leadd, 9 William L. Rand, 10 Gordon L. K-arney.

Port Morien. Frank H, Beattie, Principal. Candidates, eleven.
Port Morien: Krank Malins McLean, 3 Ada Martell, 4 Arthur Fergusnn, 1 Sadie McRury, \& Dolina McLean, 3 Ada Martell, 4 Arthur Fergusnn, 5 Tena McAulay, ${ }^{\text {Aulay, }} 9$ Frank
Aulay, 9 Frank Peters. 'school, Halifax: Sister M. Evaristus, Principal. St. Patrick's Girls'
Candidates, fifty-three.
1 Minnie McLeod, 2 Violet Hunt, 3 Annie Musgrave, 4 Bridgie Mulchay,
Mary Dempsey, 6 Eva Rockett. 7 Mary Lynch, 8 Frances Famning, 5 Mary Dempsey, 6 Eva Rockett. Ellie Pitman, 12 Ethel Flaun, 13 Mag9 Aileen O'Toote, 14 Aileen Mahoney, 15 Maggie Johnston, 16 Nora Delaney, gie Sheehan, 14 Aileen Maheney, 16 Gertrude McGrath, 16 Ellie Joyce, 19 Mary O'Hearn, 20 Eva McCarthy, 17 Gertrude McGrath. 18 EllieJoyce, 23 Mary Gorman, 24 Nora Larkins, 21 Mabel Brown, 22 Ada Lovett, Lynch, 27 Ettie Costello, 28 Florrie Johnston, 29 Aileen Mooney, 30 Maggie Gallivan.

A few more high schools took the same examination, but they have been dilatory in reporting. The Cuunty Academy high schools will be reported as usual in the Educational Journal.

## NIORRIN COLLEGE,

QUEBEC, P.Q.

## The season of $1897-98$ of Morrin College will begins on Monday, Sept. 20th,

## The Examination for Matriculation will Commence on Wednesday, September $15^{\text {th }}$, at 9 a. m .

This Institution, which is affiliated to McGill University in Arts, has been renrganized and fully equipped for
by the University for the degree of A. B.
Eight Scholarships have been estabished, four to be awarded to Dollars each, and four of Twenty-F the Ordinary Examinations under the Matriculants passing the A. A., or Hor. Holders of any of these Scholarconditions sempted from the payment of tuition fees.
ships are ex mpted from the paymentation may be had on application
To PRINCIPAL MACRAE, A. M, D. D.
5 College Court, Quebec.
Or to Prof. Crocket, 2 College Court,
(S'gned.) Archd. Laurie, Sec.-Treasurer Board of Governors,

# EDGEHILL CHURCH SCHOOL FOR GIRLS,\% \% <br> INCORPORATED 1891. <br> क्न <br> WINDSOR, N. S. <br> Right Rev. Bishop Courtney, D. D., Chairman Board of Trustees. <br> Miss Lefroy, of Cheltenham Ladies' College, England, Principal; eight resident experienced governesses from England, Housekeeper, Matron and Trained Nurse. 

## Board with Tuition in English Department, $\$ 188$.

Music, Art, Physical Culture, Etc., are extras.<br>Preparation for the Universities.<br>Year begins September 15th, 1897.

For Calendar Apply to Dr. Hind.

## HALIFAX LADIES' COLLEGE, <br> IN AFFILIATION WITH DALHOUSIE UNIVERSITY.

Among the strong points of this College are some which are of permanent importance in the education of girls ; we invite the attention of parents to the following:

## 1 ThOROUGH TEACHING.

In all departments,-English, Modern Language, Classics, Mathematics, Sciences, Art and Music. The teachers, (mostly University Graduates,) are well trained specialists in their several subjects and their culture and experience is of incalculable benefft in attaining good results.
II Ample Acccmodation.
The classrooms are large, well-lighted, well-heated, well-ventilated and separated from the dwelling part of the buildings. The bedrooms, [one for every two students] open off airy corridors, and the dinning hall and bublic rooms are spacious.

## III Wholesome Home Life.

The arrangements are pre-eminently educative, healthful and refining. Religious instruction is carefully attended to, habits of punctuality and regularity is insisted on and unremitting attention is given to general manner and tone. The regular and healthy routine of the college life with its plentiful and wholesome diet, maintains excellent health among the students,
IV Results.
The high standing of this college has already become well-known by the positiods its graduates have attained in universities and in educational and social circles.

## Address, Rev. Robert Laing, Halifax, N. S.

## United Institute

September 23rd and 24th, 1897.
$\qquad$

FIRST SESSION. Thursday, Sept. 23rd, $11 \mathrm{a} . \mathrm{m}$. Opening Address to Institute, J. R. Inch, Esq., LL. D., Chief Supt. Education, New Brunswick.
SECOND SESSION, Thursday, Sept. $23,2 \mathrm{p} . \mathrm{m}$. Paper: "Attention, The Best Means to Secure it." H. S. Bridges, Esq., Ph. D., Supt. St. John City Schools; Address: "Nature Observations in the Common School," A. H. MacKay Esq., LL. D. Chief Supt. Education, Nova Scotia.
EVENING SESSION, Thursday, Sept. 23,8 p. m. Public Educational Meetingin the Rink-Addresses of Welcome to teachers-Mayors of St. Stephen, Calais and Milltown; Addresses on Educational Topics, Hon. W. W. Stetson, Chief Supt. Education, Maine; A. H. MacKay Esq., LL. D., Chief Supt. Elucation, Nova Scotia; J. R. Inch, Esq., LL. D., Chief Supt. Education, New Brunswick.
THIRD SESSION, Friday, September 24, 8 a. m. Excursion to St. Croix Island; Historical Addresses on the Island, James Hannay, Esq., James V room, Esq., Rev. W. O. Raymond and others.
FOURTH SESSION, Friday, Sept. 24, 2 p. m. Address: "What does the Teacher Owe the Pupils" Hon. W. W. Stetson, Chief Supt. Education,

Maine; Practical lesson to a class of pupils on Minerals, Miss Jessie Whitlock, St. Stephen; Address: Superannuation of Teachers, G. W. Ganong, Esq., M. P.

## St Stephen Loca Time.

All United Meetings to be held in Rink, St. Stephen. Chárlotte county teachers will meet in Mark's street building on Thursday, September 23rd at 10 a . m., for routine business.
Travelling arrangements will be made by which it is hoped the St. John teachers will be able to reach St. Stephen in time for the opening session. Particulars will be published later. Reduced travelling rates will be sought on all trains and boats into St. Stephen and Calais except the C. P. R.
Teachers desirous of secnring accommodation will communicate with P. G. McFarlane, Esq., chairman of the reception committee, between the 10th and 20th of September.

At the Public Meeting, Supt. Stetson will speak on "Free Text Books." Music will be provided at this session.
The excursion to St. Croix Island will leave the upper wharf, Calais, at 8 a. m., September 24th, if fine.

Visitors will be Welcome at all Meetings.
William S. Carter, Georgie B. Meredith,
President. Iva Yerxa,
Secretaries.

# MANCHESTER, ROBERTSON \& ALLISON. SAINT JOHN, N. B. <br> <br> The Largest Dry Goods House <br> <br> The Largest Dry Goods House <br> <br> In the MARITIME PROVINCES <br> <br> In the MARITIME PROVINCES <br> Every DEPARTMENT is at all times replete with a large and well assorted stock of the Latest Goods <br> Dress Goods, Household Linen, Cottons, Trimmings, Gloves, Hosiery, Corsets, Ladies' Underwear, Silks, Velvets, <br> Mantles, Cloaks, Furs, Millinery, House Furnishings, Curtains, Portiers, Curtain Poles, Tapestry, Brussels and Wool Carpets, Linoleums, Oilcloths, Men's Furnishings, Men's Cloths, Ladies' "Heptonette" Rainproof Cloaks. <br> The Best Value in St. John in Men's \& Boys' Ready-made CLOTHING <br> 27 \& 29 King Street, 37 to 43 Germain Street, ST. JOHN, N. B. 

# University of Neu Brunsulick. \%. 

Full information soncerning these Departments is given in the University Calendar Copies of whish may be Obtained from the Undersigned.

At the beginning of the Academical year, 1897-98, on the 30th day of September next, the Scholarships for the Counties of Restigouche, Gloucester, Northumberland, Kent, Westmorland, Albert, Charlotte, St. John, Kings, Queens, Sunbury, York, Carleton and Victoria will be vacant.
The Departments of CIVIL and ELECTRICAL
ENGINEERING are now open to properly qualified students.

WILLIAM WILSON, B. A., Fredericton, N. B., Registrar

## TEACHERS--ATTENTION!

"PERFECTING IS OUR DESTINY; BUT PERFECTION IS NEVER OUR LOT." We Intend, nevertheless, to get as near to it ás we can in our "COMMON SChOOL ARITHMETIC" BY KENNEDY AND O'HEARN.

To the teacher sending us, on or before the 13th of next September, the Largest List of Errors from the last edition of the three parts, we will present a copy of Webster's International Dictionary (latest unabridged edition). The teacher sending us the second largest list will receive a copy of the Concise Imperial Dictionary. If two lists are equal and higher than any
other, the first prize will be awarded to the one first received and the second prize to the other.

Competitors will receive credit for all errors of any description which they may note, such as mistakes in spelling, construction of sentences, ambiguity, wrong answers, improbable statements, inaccurate reasoning, serious omissions, failure to express explanations in the briefest and clearest form, typographical errors, etc.

COMPETITORS ARE REQUIRED TO GIVE THE PAGE AND LINE IN WHICH THE ALLEGED ERROR OCCURS.
A SELECT COMMITTEE OF EXPERTS WILL BE SELECTED TO AWARD THE PRIZES.
T. C. ALLEN \& CO., HALIFAX.

# MOUNT ALLISON EDUCATIONAL INSTITUTIONS, SACKVIIIF, N. B. 

## University of Mount Allison College.

 dAvid Allison, Ll.D., presidient. TTHE University of Mount Allison College 1 offers to students, whether desiring to course limited to special studies, advantartial course limited to special studies, advantages brilliant record of Mount Allison men at some of the leading Universities of England, Scotland, $G \cdot$ rmany and United States, as well as the success of her under-graduates in competitive examinations elsewhere, establish beyond question the thoroughness and comprehensiveness of the education received at this Unversity.A Gymnasium erected and furnished with all modern appliances for physical development, during the past year, has proved to be an important auxiliary to the educational work. Further efforts will be made during the present year to increase the efficiency of the Institution and to add to the comfort of students. The new University Residence construcued and furnished with every provision for comfort, convenience and health, is now ready for occupation.
The next term opens September 27th. 1894 Send for Calendar.

Mount Allison Ladies' College, Owens Art Institution and Conservatory of Music. OER 30 years of progressive Educational rivalled position in this instirution an unstruction is imparted on subjects ranging from the primary English branches through the whole UniversityCurriculum to the Degree of B,A. Young ladies studying for the purpose of qualifying themselves to teach may here combine the accomplishments with the thorough drill necessary to their profession.
Elocution is taught by one of the most accomplished graduates of the Boston School of Oratory. The Conservatory of Music is under the direction of a strong staff of experienced teachers, representing the best conservatories and teachers on both sides of the Atlantic. The courses of instruction embrace instrumental music (Piano-forte, Pipe Organ and Violin), Vocal Culture, Class Singing, Harmony, Analysis, Composition, etc. The Fine Arts Department is under the direction of Prof. John Hammond, K.C.A., an exhibitor in the Paris Salon; Royal Academy, London; National Academy of Design, New York, etc, Art stuconstant contact with the which comes with constant contact with the splendid paintings
which constitute the Owen's gallery. which constitute the Owen's gallery.

Mount Allison Wesleyan Academy.
JAMES M. PALMER, M. A., HEAD MABTER. NO Institution of learning in the country has had a more successful history and none is more worthy of patronage for the future. Many of the most prominent men now in professional, commercial and political ife in Canada, and in other lands, had their training at Mount Allison Academy. The arrangements for the future are such as will guarantee a continuation and extension of the lish and Commercial Edication is imparted and students are prepared for College Matricanation ands are prepared for College Matricdesirable, students can take, in addition to desirable, students can take, in addition to classes and lectures in College. Every care is classes and lectures in College. Every care is as to ensure their comfort and happiness.
The building is commodious, well heated throughout by the hot water system, and comfortably furnished.
Expenses very moderate.
For particulars apply to the Principal.

## IMcGILL UNIVERSITY, montreal.

## The Curriculum comprises

> COURSES IN ARTS, including the Donalda Special Course for Women. APPLIED SCIENCE, Medicine,

LAW,
Veterinary Science.
Copies of the Calendar containing full information may be obtained on application.

## EXHIBITIONS AND SCHOLARSHIPS <br> (value from $\$ 90$ to $\$ 125$.)

Will be offered in competition at the opening of the session, September, 1897.

Copies of the circular giving full particulars of subjects required, etc., can be obtained on application to

# ACADIA UNIVERSITY, HORT®N ACADETNY 

The Academy prepares for University Matrimercial, Mechanical or Agricultural life. Its well equipped Clanual Agricultural life, Its and the N. S. School of Horticulture, in its immediate neighborhood, give it exceptional advantages.
The Seminary provides a thorough Literary training which prepares for Provincial Certificates or advanced standing in the University.

First Class instruction in Piano, Vocal and Instrumental Music, Painting and Drawing, Elocution, Shorthand and Typewriting are
provided.

The Building is First Class in all its appointmei ts and provides the young women with a beantiful and comfortable home

The College provides a strong Arts Course with a large number of options after the Second year
The character of the work done is shown by the large number of its graduates filling important places in the Dominion of Canada and portant places in the United States.


FOR CFLENDAR GIMING FULL INFORTMATION WRITE TO
Wolfville, N, S.
A. COHOON, Sec. Ex. Committee,

\section*{Ontario Mutual LIFE COMPANY. TENWTY-EIGHTH YEAR <br> | Income. | Assets. | Assurance in Force. |
| :---: | :---: | :---: |
| $\$ 9,698.89$ | $\$ 6,216.00$ | $\$ 52,1,650.00$ |
| $38,794,30$ | $81,105.00$ | $1,634,156,00$ |
| $31,802.22$ | $907,489.73$ | $9,774,54300$ |
| $760,403.24$ | $3,404,907.69$ | $20,000,000.00$ | E. M. SIPPRELL,} St. John, N. B.

## UNION TEACHERS' AGENCIES of AMERICA <br> Rev. L. D. Bass, D. D. Manager.

Pittsburg, Pa. Toronto, Canada, New Orieans, La,, New York, N. $\dot{Y}_{.}$Washington, D. C., San Francisco, Cal., Chicago, Ïll., st, Louis, Mo., Denver, Colorado.
There are thousands of positions to be filled within the next few months.
Address all applications to Union Teachers' Agencies, Saltsburg, Pa.
F. E. HOLTKAN \& GO, WALL PAPBRS, w WINDOW SAADBS, 52 KING STREET, SAINT JOHN, N. B.

## Teachers Ulanted.

New Brunswick and Nova Scotia teachers wishing to change locality or get a higher salary should register in the Maritime Teachers' Agency

Send Stamps for Particulars.
MARITIME TEACHERS' AGENCY SHEDIAC, N. B.
 Anyone sending a sketch and description may quickly ascertain, free, whether an invention is probably patentabie. Commumicating patente conflential. Oldest agency in America. We have a Washington office. in America. Patents taken through Munn \& Co. receive special notice in the

## SCIENTIFIC AMERICAN,

beautifully illustrated, largest circulation of beautiontific journal, weekly, terms $\$ 3.00$ a year ol.50 six months. specimen copies and

MUNN \& CO., 361 Broadway, New York.

## BARNES \& CO.e <br> P. O. BOX 44 . mook Nvo voe Printers"e

Stationers - Booksellers
Mail Orders Promptly Attended to.
84 Prince WM. Street,
SAINT JOHN, N. B.

## SELBY <br> 23 Richmond St., Wes, TORONTO. <br> \& Co.. Kindergarten Goods, and School Supplies. we are the only agents in Canada for the <br> MILTON BRADLEY CO., SPRINGFIELD, MASS. educational publishing co., - new york.

HERMES' DRAWING COPIES
For excellency of workmanship and design these copies are unsurpassed. 400 parts to select from. Rudiments, Landscapes, Flowers and Fruit, Ornaments, Animals, the Human Form

- Price per part 20 C. We have reduced these to 10 cents a part. Send for one.
$\begin{array}{ll}\text { Boquet of Song, } & 75 \mathrm{cts} \\ \text { Drawing Simplified, } & 100 \\ \text { Elementary Drawing Simplified, } & 75\end{array}$
Vertical Script, Word Builder, 14
Wewing \& Weaving Occupation, ea.
The Little Artist,
T In the Child's World, by Emille Poulsson. $\$ 2.00$. Oil Crayons, 6 and 12c. Send for our catalogues of Books, Kindergarten and School Supplies and Send for our catalog Supplementary Readers.

C. J. ELDERKIN, $\qquad$ Teachers' and Office Desks, Script Sentence Builder, 14c.

SCHOOL DESKS
Factory: City Road. St. John, N. B.

## also Wholesale Mattress Manufacturer

## The Very Best

## FOUNTAIN PEN

## "Waterman's Ideal."

## ITS POIN'SS OF

EXCELENCE ARE:
The Unsurpassed Quality of its Gold Pens
The Reliability of its Feed, which has been proved by ten years' use, and The Superiority of its New Style of Holder.
(For sale By NELSON \& CO.,
Cor. King and Charlotte Sts.,
Saint John, N. B.
V. B.-Complete Illustrated Catalogue sent Post Free on Application.

## THE MANCHESTER FIRE

ASSURANCE CO, Established 1824.
Capital, $\$ 10,000,000.00$ Insurance effected on Buildings, Furniture and Stocks at lowest rates.
w. H. WHITE, Gen Agent for New

Brunswick No. 3 King street. Telephone, No. $651 . \quad$ St. John, N. B.

## DLAGS FOR

SCHOOL BUILDINGS.
Dominion, British and Saint George Ensigns

UNION and FORT JACKS. Flags with special Desigus Made to Orier
A. W. ADAMS, North Market Wharf - St. John, N. B.


[^0]:    The Calendar containing full particulars of the courses of instruction, examinations, $\lceil$ requlations, $\boldsymbol{\eta}$ exhibitions, bursaries, medals, and

